sanitation

April 1, 2005

RE: Issuance of Final Environmental Impact Statement and Notice of Completion in support of the New Comprehensive Solid Waste Management Plan and Department of Sanitation ULURP Applications C050175PSK, C050176PSK, C050174PSQ and C050173PCM

Dear Involved Agency/Interested Party:

The New York City (City) Department of Sanitation (DSNY) issued a Draft New York City Comprehensive Solid Waste Management Plan for the next twenty-year planning period (New SWMP) in October 2004. DSNY, as lead agency for the environmental review, encloses a Final Environmental Impact Statement (FEIS) for the New SWMP and the accompanying Notice of Completion for the FEIS pursuant to the City Environmental Quality Review Procedures and the State Environmental Quality Review Act in October 2004. The FEIS also supports the above-referenced DSNY Uniform Land Use Review Procedure (ULURP) applications for the four proposed Converted Marine Transfer Stations. In preparation for the FEIS, DSNY issued a Draft Scoping Document in May 2004 and a Final Scoping Document and Draft EIS (DEIS) in October 2004 after conducting an enhanced public participation process that included ten public scoping meetings and a public comment period which ran from May 17 to July 11, 2004. The enhanced public participation process continued with eight DEIS public hearings in December 2004 and a DEIS public comment period which ran from October 22, 2004 to January 24, 2005. Additional outreach was conducted in connection with ULURP public hearings held in January 2005.

The FEIS will also be available at twenty-two public repositories and on the DSNY website (www.nyc.gov/sanitation), and will be available by contacting DSNY, all as set forth in the enclosed Notice. The FEIS Statement of Findings will also appear on the DSNY website. A second distribution of the Notice will be mailed to an expanded distribution list shortly.

As set forth in the enclosed FEIS and Notice, the New SWMP is a plan for the management of all of the solid waste generated in the City. In particular, the New SWMP proposes to award a 20-year contract for the processing and marketing of recyclables and the development of a recyclables processing facility in the City, the development of four Converted Marine Transfer Stations (MTSs) (rather than eight as previously contemplated), the award of up to five contracts with private transfer station operators for barge or rail export of DSNY-managed waste, and an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed waste at the Essex County Resource Recovery Facility in New Jersey. In addition, the New SWMP makes available the West 59th Street MTS in Manhattan for putrescible commercial waste export from the City.

Sincerely,

Harry Szarpanski

Harry Szarpanski

Enclosures (FEIS and Notice of Completion)

c: Commissioner John J. Doherty
Robert Orlin, Deputy Commissioner
Distribution List

(Over)

Distribution List (w/FEIS and Notice):

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sanitation

State Environmental Quality Review Act/City Environmental Quality Review
NOTICE OF COMPLETION OF FINAL ENVIRONMENTAL IMPACT STATEMENT

April 1, 2005

Name of Action: New Comprehensive Solid Waste Management Plan

CEQR #: 03DOS004Y

SEQRA Classification: Type I

Lead Agency: New York City Department of Sanitation, 125 Worth Street, NY, NY 10013

Location: City-wide

This notice is issued pursuant to Article 8 (State Environmental Quality Review Act - SEQRA) of the Environmental Conservation Law; 6 NYCRR Part 617, the regulations implementing SEQRA; and the City Environmental Quality Review procedures set forth in Executive Order 91 of 1977 as amended (43 RCNY Chapter 6) and Chapter 5, Title 62 of the Rules of the City of New York (CEQR). The Department of Sanitation for the City of New York (DSNY), being the agency having principal responsibility for carrying out the Action, is the lead agency for conducting the environmental review of the Action. DSNY has caused a Final Environmental Impact Statement (FEIS) to be completed for the New York City Comprehensive Solid Waste Management Plan for at least the next 20 years (2005-2025) (New SWMP), together with related solid waste management and Recyclables processing facility development and procurement (collectively, the Proposed Action). The FEIS is available for public inspection at the offices of the Department through the Contact Person listed below and on the Department's website http://nyc.gov/sanitation.

For further information or to obtain a compact disc (CD) of the FEIS, please contact:

Harry Szarpanski, Assistant Commissioner
New York City Department of Sanitation
Bureau of Long Term Export
44 Beaver Street, 12th Floor
New York, NY 10004
Phone: (917) 237-5520 Fax: (212) 269-0788

In addition to the New SWMP approval, the Proposed Action in the Draft New SWMP encompasses, among other things the following:

- Siting of four new marine transfer stations (Converted MTSs) to containerize waste for Long Term Export,

- Contracting with several private waste transfer stations for barge and/or rail export of DSNY-managed Waste, which may involve facility modifications at certain of these transfer stations; and

- Contracting for development of a Recyclables processing facility at the South Brooklyn Marine Terminal in Brooklyn, and developing a City-owned a Recyclables acceptance facility in Manhattan.

These actions require various discretionary approvals as further described below.

The draft scope of work for the Environmental Impact Statement (EIS) was presented at public scoping meetings held between June 15 and July 1, 2004. The period to receive public comments on the proposed EIS scope of work remained open until July 11, 2004. A Draft EIS (DEIS) was issued on October 22, 2004, together with the Final Scope, and, thereafter, eight public hearings on the DEIS were held during the period December 1 to December 20, 2004. Copies of the DEIS were circulated and made available on the DSNY website and at 22 public repositories throughout the City. Public comments on the DEIS were accepted by DSNY throughout an extended public comment from October 22, 2004 through January 24, 2005. The questions and concerns received on the DEIS have been addressed in the April 1, 2005 Final Environmental Impact Statement (FEIS). A Findings Statement, to be issued in accordance with CEQR/SEQRA, will appear on the Department's website. Comments on the FEIS are requested and will be received by DSNY for at least 10 days after the filing of this Notice. All comments should be sent to the Contact Person listed above.

Background

DSNY has developed a new comprehensive long-term plan for the City's solid waste that builds on the continuation of the City's successful recycling, composting and waste prevention programs already in place. The proposed New SWMP and the status of the City's programs designed to reduce the quantity of waste exported are described in the Draft New SWMP document, which is separate from the FEIS. The New SWMP would provide for the management of all solid waste generated in New York City for the 20-year planning period, as required under the Environmental Conservation Law for the permitting of new solid waste management facilities. The New SWMP incorporates certain elements of the existing SWMP, which was approved in 1992 and subsequently amended, and proposes changes to the City's Long Term Export Program for DSNY-managed Waste, to the City's Recycling Program, and to management of commercial waste in the City. The Planning Unit is the City of New York.

Approximately 50,000 tons per day (tpd) of waste is generated in New York City. Waste that DSNY collects from residents, not-for-profit institutions and other City, state and federal agencies, as well as waste from special DSNY operations such as street and lot-cleaning operations consists of refuse (mostly collected from curbside) and source-separated recyclables (collectively, DSNY-managed waste). In FY 2002, this DSNY-managed waste averaged approximately 11,123 tpd of refuse and 2,555 tpd of separately collected recyclables: newspaper

and mixed paper; metal, glass and certain plastics (MGP) and yard wastes. DSNY-managed refuse is exported from the City under short-term contracts entered into for the phased closure of the City's Fresh Kills landfill, which closed completely in March 2001 pursuant to state law. DSNY delivers about 38% of this refuse in collection vehicles directly to disposal facilities or private transfer stations outside of New York City, about 14% to a private transfer station in the Bronx where it is loaded onto rail for further transport, and approximately 48% of this refuse to other private transfer stations in the City, which load it onto truck trailers for further transport out of the City for disposal. The current export contracts result in approximately 6000 tpd of DSNY-managed waste being transported through the private truck-to-truck transfer stations in the City. Under a 20-year contract DSNY delivers much of the recyclable paper to the West 59th Street MTS for transport by barge to a private paper mill on Staten Island, while DSNY delivers the remaining paper and the MGP to other private recyclables handling and processing facilities in Queens, Brooklyn, the Bronx and New Jersey. DSNY also collects leaves and yard waste seasonally for composting. Other DSNY and City managed wastes that are recycled (derelict vehicles, auto tires, lot cleaning, asphalt and asphalt millings from road resurfacing, interagency road material reuse, etc.) totaled approximately 2,840 tpd in FY2002. Commercial carters collect waste generated by the private sector, such as commercial construction and demolition debris (C&D debris), soil and rock from excavations (clean fill), and refuse and source-separated recyclables from business establishments (collectively, Commercial Waste). In 2003, commercial waste quantities generated in the City averaged approximately 7,248 tpd of putrescible waste (having organic matter that causes odors), 2,641 tpd of designated recyclable waste (mainly paper and metal); 8,626 tpd of non-putrescible C&D debris (excluding clean fill), and 19,069 tpd of clean fill material. Much C&D debris, and virtually all clean fill material, is recycled. Other waste generated in the City but not managed by DSNY includes medical waste, dredge spoils, and biosolids from water pollution control plants.

Description and Location of Proposed Action

The Proposed Action for Long Term Export has the following specific elements.

- For the entire Bronx wasteshed, enter into a long-term contract with one or two private waste companies for truck-to-rail disposal of DSNY-managed Waste from existing transfer stations in the Bronx.

- For the Brooklyn wasteshed formerly served by the Greenpoint MTS (Brooklyn CDs 1, 3, 4 and 5), enter into a long-term contract with one or two private waste companies for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from existing transfer stations in Brooklyn.

- For the Brooklyn wasteshed formerly served by the Hamilton Avenue MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18, as well as limited quantities of Commercial Waste, will be received and containerized.

- For the Brooklyn wasteshed formerly served by the Southwest Brooklyn MTS, develop a City-owned Converted MTS on the adjacent site of the former Southwest Brooklyn Incinerator, where DSNY-managed Waste from Brooklyn CDs 11, 12, 13 and 15, as well as limited quantities of Commercial Waste, will be received and containerized.

- For the Manhattan wasteshed, Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12, enter into a long-term service agreement with the Port Authority of New York and New Jersey for the use of the Essex County Resource Recovery Facility in Newark, New Jersey to receive and process DSNY-managed Waste delivered in City collection vehicles.

- For the Manhattan wasteshed formerly served by the East 91st Street MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Manhattan CDs 5, 6, 8 and 11, as well as limited quantities of Commercial Waste, will be received and containerized.

- For the Queens wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with a private transfer station for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Queens CDs 1 through 6.

- For the Queens wasteshed formerly served by the North Shore MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Queens CDs 7 through 14, as well as limited quantities of Commercial Waste, will be received and containerized.

- For the four wastesheds served by Converted MTSs, enter into 20-year service agreements with one or more waste management companies, for transport of containerized waste by barge directly from an MTS to disposal facilities or to intermodal facilities for transloading to railcars or a larger barge, and for disposal at an appropriately permitted out-of-City facility.

Section 40.3.1.1 of the FEIS describes the capacity that DSNY proposes to permit at each of the four Converted MTSs. This proposal is subject to approval by NYSDEC as part of its review of Part 360 Solid Waste Facility permit applications for the Converted MTSs. Table 1 provides additional information on the location of proposed Long Term Export facilities.

Rail export from certain of the private transfer stations in the Proposed Action would require use of off-site, in-City, existing intermodal facilities that do not require discretionary approvals, identified in Table 2.

Table 1
Proposed Draft New SWMP Long Term Export Facilities and Potential Contractors

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Converted MTS[1]	DSNY, Hamilton Avenue Converted MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 7	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Converted MTS[1]	DSNY, Southwest Brooklyn Converted MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Converted MTS[1]	DSNY, East 91st Street Converted MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Converted MTS[1]	DSNY, North Shore Converted MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck-to-Rail TS	Waste Management, Harlem River Yard, 98 Lincoln Avenue, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Rail TS[2]	Allied Waste Services, East 132nd Street Transfer Station, Bronx and Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Barge TS	Waste Management, 485 Scott Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1,3, 4 and 5
Truck-to-Rail TS	Allied, 72 Scott Avenue-598 Scholes Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Truck-to-Rail/Barge TS[3]	Waste Management, 30-58 Review Avenue, Queens and the LIRR Maspeth Rail Yard, Maspeth Avenue and Rust Street Queens	Queens 2	Queens CDs 1 through 6
Waste-to-Energy Facility[4]	Port Authority of New York and New Jersey, Essex County RRF, Newark, New Jersey,	NA	Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12

Notes:

(1) From among the selected proposers responding to DSNY's MTS RFP, DSNY will award one or more contracts for the acceptance, transport and disposal of containerized waste from the Converted MTSs.

(2) This facility would include use of an off-site intermodal rail yard, as noted in the Table, where containers would be loaded onto railcars.

(3) Pending the outcome of negotiations between DSNY and Waste Management, the Review Avenue Transfer Station would be modified to operate as either a truck-to-barge or a truck-to-truck-to-rail facility. If operated in a truck-to-rail mode, an off-site intermodal rail yard, as noted in the Table, would be required, where containers would be loaded onto railcars.

(4) The Essex County RRF is a permitted and operating WTE facility in Newark, New Jersey. DSNY-managed Waste would be delivered in collection vehicles to this facility or via hopper barges from the existing MTSs, if an enclosed barge unloading facility (EBUF) were to be developed in the vicinity of the Essex County RRF some time in the future.

LIRR = Long Island Railroad

Table 2
Proposed Draft New SWMP Long Term Export – Potential Support Facilities

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Support Facilities			
Intermodal Truck-to-Truck-to-Rail Yard [(1)]	Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Intermodal Yard Truck-to-Truck-to-Rail [(1)]	LIRR, Maspeth Rail Yard, Maspeth Avenue and Rust Street, Queens	Queens 2	Queens CDs 1 through 6

Note:
(1) Both the East 132nd Street Truck-to-Truck-to-Rail Transfer Station in the Bronx and the Review Avenue Truck-to-Truck-to-Rail Transfer Station in Queens would dray containers between their respective transfer stations and intermodal rail yards that are in the respective project service areas but not at the same sites as the transfer stations. These intermodal yards are existing facilities that would receive non-discretionary permits from DSNY for handling solid waste and, as such, are not subject to environmental review. However, the movement of containers on tractor chassis between the transfer stations and the intermodal yard is subject to an environmental review that is reported in the FEIS section reporting the environmental review of the respective transfer station.
LIRR = Long Island Railroad

The Proposed Converted MTSs would be subject to zoning performance standards, solid waste management facility permit standards under 6 NYCRR part 360, and local Air and Noise Code standards. The facilities would have state-of-the-art odor controls that neutralize odor rather than mask it with a scent, and would be equipped with sufficient ventilation to maintain negative air pressure to prevent the escape of untreated air from building openings. Sufficient on-site queuing areas and tipping bays would be provided at all proposed Converted MTS facilities to prevent the queuing of DSNY trucks on public streets. The barges serving the converted MTSs could carry up to 48 intermodal containers and would be towed by tugboat to intermodal facilities, where the containers would be transloaded to trains or ocean-going vessels for transport to out-of-City disposal facilities. The primary objective of this element of the Proposed Action is the containerization of waste and the long-distance export of that waste in containers by barge or rail.

The Proposed Action for Recycling has the following specific elements.

- Develop a materials processing facility at the 30th Street Pier (in Brooklyn Community District 7) through a public-private partnership involving a 20-year service agreement with a private Recyclables processor; and

- Develop a Recyclables acceptance facility at the former DSNY MTS facility on Pier 52 at Gansevoort Street in the Hudson River Park.

Table 3 provides additional information on the location of these facilities.

Table 3
Proposed Action Recycling Facilities

Facility Type	Operator/Owner, Facility Name, and Address	Community District
Recyclables Processing/Acceptance[1]	Hugo Neu Corporation, 30th Street Pier at the South Brooklyn Marine Terminal, Brooklyn	Brooklyn 7
Recyclables Acceptance[2]	DSNY, Former site of Gansevoort MTS, Pier 52, Manhattan	Manhattan 2

Notes:

(1) This 30th Street Pier at SBMT is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. Curbside Recyclables from other boroughs would be delivered by barge. Recyclables would be transferred from this facility by barge. As a recycling facility, it is expected to qualify for a solid waste management facility registration rather than a permit. However, the waterfront construction requires USACE Section 10/404 permits and the NYSDEC Article 15/25 permits that are subject to environmental review.

(2) The timetable for designing, permitting and constructing this facility, which would receive truck deliveries of DSNY MGP Curbside Recyclables collected in Manhattan for barge transfer to the 30th Street Pier at SBMT for processing, is approximately seven years. Accordingly, the environmental review of this facility is deferred until more detailed design information is available. However, an analysis of the potential for off-site traffic, air quality and noise impacts from directing DSNY's Manhattan Recyclables collection vehicles to this destination was conducted.

A proposed change to DSNY's recycling program would be a 20-year contract for the receipt, processing and marketing of source-separated recyclable MGP and a portion of the City's paper. DSNY would procure services from a new private recyclables recovery and processing facility to be built by Hugo Neu Corporation (HNC) at the 30th Street Pier in the South Brooklyn Marine Terminal (SBMT). Approximately 85% of the recyclables would be delivered by barge to this facility, and 75% will leave post-processing via barge. DSNY trucks collecting curbside recyclables in the Bronx would tip this material at the existing HNC facility in the Bronx from which it would be transported by barge to the SBMT facility. DSNY trucks collecting curbside recyclables in northern Brooklyn and Queens would tip this material at HNC's facility in Long Island City, from which it would be transported by barge to the SBMT facility. Only Brooklyn Community Districts 9, 14, and 15 will deliver recyclables via collection trucks to the SBMT facility.

In addition, DSNY proposes to construct and operate a recyclables acceptance facility (recyclables handling and recovery facility under 6 NYCRR §360-12) at the former DSNY MTS facility on Pier 52 at Gansevoort Street in the Hudson River Park or at another location on the Manhattan waterfront, at which MGP and certain paper would be transferred to barge for transport to the HNC facility at the SBMT in Brooklyn for processing. This recyclables acceptance facility would require amendment of the Hudson River Park Act and would be the subject of a supplemental environmental review, as appropriate, once a facility design is

developed. DSNY would no longer deliver recyclable paper to the West 59th Street MTS in Manhattan, but would take it instead to the new recyclables acceptance facility for further transport by barge.

The elements of the Proposed Action for Commercial Waste are intended to achieve a more balanced distribution and reduce effects from Commercial Waste transfer operations in those CDs that currently have the greatest number of transfer stations. These actions are:

- Make the existing Manhattan West 59th Street MTS site available to private waste management companies to use for the transfer of Commercial Waste collected by private carters in Manhattan. The facility could be: (i) refurbished and used in conjunction with an EBUF; or (ii) redeveloped as a containerization facility.

- Design measures to encourage private carters to deliver Commercial Waste during the 8:00 p.m. to 8:00 a.m. time period to the four proposed Converted MTSs that are elements of the Proposed Action for Long Term Export (Hamilton Avenue and Southwest Brooklyn, Brooklyn; East 91st Street; Manhattan; and North Shore, Queens).

- Negotiate arrangements with the owners/operators of the selected private transfer stations in the Bronx, Brooklyn and Queens that submitted proposals in response to the Brooklyn, Queens and Bronx RFPs and Brooklyn request for a Best And Final Offer that are potential elements of the Proposed Action to require Commercial Waste (in addition to DSNY-managed Waste) processed at these facilities to be containerized and exported from the project service area by barge and/or rail.

Other Elements of the Draft New SWMP

In the context of refining and improving Existing Programs, the Draft New SWMP also discusses new initiatives in waste reduction, reuse and recycling. These include, among other things, conducting a comprehensive waste characterization study, undertaking an electronics recycling effort, adding a website for the NYC Stuff Exchange, expanding the NY Wa$teMatch industrial materials exchange program, and enhancing education and outreach efforts. As authorized under the Existing SWMP DSNY will use the Staten Island Transfer Station now under construction at 310 West Service Road for the long term export by rail of DSNY-managed Waste, when the facility and rail connection are complete.

Required Approvals

The New SWMP requires approval by the New York City Council and the New York State Department of Environmental Conservation (NYSDEC). In addition, the New SWMP elements related to the siting of the four proposed Converted MTSs require discretionary approval for a Site Selection Action from the New York City Planning Commission pursuant to Uniform Land Use Review Procedure (ULURP). The Department of Sanitation must approve the proposed long term contracts for transport and disposal of DSNY-managed waste, the proposed long-term contract for receipt and marketing of metal, glass and plastic recyclables and paper, and proposed construction of a pier at the Hugo Neu MGP Recyclables Acceptance facility. Certain other

approvals are required: *U.S. Army Corps of Engineers*: Section 10 (River and Harbors Act) for structures and work in navigable waters of the United States; Section 103 of the Marine Protection Research and Sanctuaries Act; Section 404 (Clean Water Act) for discharging of dredged or fill material in waters of the United States; and Section 401 (Clean Water Act) Water Quality Certification. From the *New York State Department of Environmental Conservation*, the following approvals have been identified as required: Article 27, Title 7 of the Environmental Conservation Law (ECL) Permit to construct and operate a solid waste management facility; Article 15, Title 5 (Protection of Waters) Permit for excavation in or fill of navigable waters; Article 15, Title 5 ECL (Protection of Waters) Section 401 Water Quality Certification; Article 25 ECL (Tidal Wetlands); Article 36 ECL (Flood Plain Management) approval for construction in a floodplain; Article 17 ECL (State Pollutant Discharge Elimination System (SPDES) General Permit (Section 402 of Clean Water Act) for stormwater discharges from construction activity; Coastal Zone Consistency Certification (19 NYCRR §600). From the *New York State Department of State*, approval may be needed under Article 42 of the State Executive Law (Waterfront Revitalization of Coastal Areas and Inland Waterways); Consistency with the Federal Coastal Zone Management Act (15 CFR Part 930); review by the New York State Office of Parks, Recreation and Historic Preservation; and review under Section 106 (National Historic Preservation Act) and New York State Historic Preservation Act Section 14.09. The *New York State Office of General Services* must approve the transfer to the City of a small amount of underwater land to accommodate the proposed footprint of the East 91st Street MTS. Certain other approvals may also be required, as summarized in Sections 1.7 and 2.5 of the FEIS.

Environmental Review

The FEIS provides an environmental review of the above noted sites/facilities that are elements of the Proposed Action for the New SWMP. (Final site selection for certain elements of the Proposed Action is dependent upon the outcome of current procurement actions by DSNY.) The FEIS also considers a range of Alternatives to the Proposed Action elements, including the No Action Alternative. Sections 1.3.3 and 1.4.4 of the FEIS provide additional information on the scope of Alternatives considered to the Proposed Actions for Long Term Export and Recycling, respectively. Environmental reviews were also conducted for a number of these Alternative sites/facilities considered during development of the Draft New SWMP.

In compliance with CEQR/SEQRA, the FEIS addressed: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Community Facilities and Services; Open Space; Cultural Resources; Urban Design, Visual Resources, and Shadows; Neighborhood Character; Natural Resources; Hazardous Materials; Water Quality; Waterfront Revitalization Program; Infrastructure, Solid Waste and Sanitation Services, and Energy; Traffic, Parking, Transit, and Pedestrians; Air Quality; Odor; Noise; Public Health; and Construction Impacts. Several of these facilities are existing permitted facilities that require no modifications or permit approvals for exporting DSNY-managed Waste by barge or rail, while others require only minor modifications not requiring environmental review, and still others would require discretionary permits or major modifications requiring environmental review. As such, the level of environmental review conducted for these facilities varied. The analysis for the proposed Converted MTSs conservatively used current conditions (with no waste activities at these currently permitted facilities) as the baseline against which to compare future conditions, rather than comparing future build conditions with past activity at these MTS sites. Use of the Staten

Island Transfer Station was the subject of an Environmental Impact Statement as part of the 2000 SWMP Modification. This facility is fully permitted and is under construction. The Essex County Resource Recovery Facility is a permitted and operating waste-to-energy facility and therefore did not require analysis.

Mitigation

The only potential impacts that were estimated to be significant without mitigation were with respect to traffic and noise, and all such impacts could be mitigated and are proposed to be mitigated. For the Proposed Action, the following measures were identified to mitigate estimated significant adverse impacts related to traffic and noise, respectively:

- Traffic signal timing adjustments would mitigate estimated traffic impacts identified at: (1) three intersections near the Southwest Brooklyn Converted MTS, and at two intersections near the Southwest Brooklyn Converted MTS using the Alternative route analyzed in the FEIS in response to comments received during public meetings on the ULURP application for this facility; (2) two intersections near the Hamilton Avenue Converted MTS; (3) two intersections near the East 91st Street Converted MTS; (4) two intersections near the North Shore Converted MTS; and (5) one intersection near the Scott Avenue/Scholes Street Truck to Rail TS.
- A reduction in the number of DSNY and other City agency vehicles making deliveries to the facility during the facility peak hour would be required to mitigate estimated traffic impacts identified at one intersection near the East 132nd Street TS and Oak Point Rail Yard.
- A restriction on the number of Commercial Waste vehicles delivering waste to the Southwest Brooklyn, Hamilton Avenue, East 91st Street and North Shore Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along the routes to these facilities between 8:00 p.m. and 8:00 a.m.
- DSNY Collection vehicles from Queens CD 9 en route to the North Shore Converted MTS will be routed further on the Van Wyck Expressway to Exit 14, Linden Place to mitigate estimated off-site noise impacts at receptors along College Point Boulevard.
- A restriction on the number of relayed DSNY collection vehicles delivering waste between the hours of 1:00 a.m. and 5:00 a.m., and construction of a louvered fence on both sides of the facility ramp, will mitigate estimated on-site noise impacts at property boundary points of the North Shore Converted MTS; and
- A restriction on the number of relayed DSNY collection vehicles delivering waste to the: (1) Hamilton Avenue and East 91st Street Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along routes to these facilities between 2:00 a.m. and 5:00 a.m.; and (2) Southwest Brooklyn Converted MTS will mitigate estimated on-site noise impacts at two off-site noise sensitive receptors between 2:00 a.m. and 3:00 a.m.

Alternatives

Alternatives to the Long Term Export elements of the Proposed Action that were considered included the No Action Alternative as well as conversions of four other existing DSNY MTS sites to Converted MTSs to containerize waste: West 135th Street MTS in Manhattan; the West 59th Street MTS in Manhattan; the Greenpoint MTS in Brooklyn; and the South Bronx MTS in the Bronx. In addition, an Alternative was considered that would involve the development of a new truck to rail facility in Brooklyn Community District 1 to serve the Brooklyn portion of the former Greenpoint MTS wasteshed. The FEIS also analyzed the alternative of refurbishing and reactivating the existing MTSs to supply DSNY-managed waste in open hopper barges to an enclosed barge unloading facility (EBUF) in the New York/New Jersey harbor region where it would be containerized for transport to disposal sites, although no location for such an EBUF has been identified. The FEIS incorporates the results of the investigation conducted for the 2004 Comprehensive Commercial Waste Management Study concerning four potential sites for truck-to-rail/barge transfer stations in Manhattan. DSNY in 2000 had previously evaluated the technical feasibility and environmental impacts associated with developing each of 24 export facility options on 15 different sites, pursuant to the 2000 SWMP Modification Final Environmental Impact Statement. DSNY's consideration of alternatives also evaluated the information obtained through a Request for Expressions of Interest to Provide Waste Disposal Capacity on February 17, 2004, that sought expressions of interest to (1) sell or otherwise provide to DSNY, for its exclusive use, permitted waste disposal capacity in New York State; (2) sell or otherwise provide to DSNY, for its exclusive use, land in New York State that is suitable to serve as a site for a waste disposal facility; and/or (3) serve as a host community for a disposal facility located in New York State that would receive waste managed by DSNY.

The repositories for the FEIS are located as follows:

Repository Location	Repository Address	Days and Hours of Operation	Phone Number
Manhattan Community Board 8 Office	505 Park Avenue	call for days and hours	(212) 758-4340
NYCDEP Office of Environmental Coordination	100 Gold Street, Manhattan	M-F, 9-5	(212) 788-9956
96th Street Regional Public Library	112 East 96th Street	M/Th 12-8;Tu/F 1-6; W 10-4; Sa 10-5; closed Sun	(212) 289-0908
Manhattan Community Board 9 office	565 West 125th Street	call for days and hours	(212) 864-6200
George Bruce Public Library	518 West 125th Street	M 10-6; W 12-8; Th 11-6; F 1-6; Sa 10-5; closed Tu/Sun	(212) 662-9727
Manhattan Community Board 4 Office	330 West 42nd Street, 26th Floor	call for days and hours	(212) 736-4536
Riverside Public Library (Community Bd 7)	127 Amsterdam Avenue at West 65th Street	M 10-6; W 12-8; Th 1-8; F 1-6; Sa 10-5; Closed Tu/Sun	(212) 870-1810
Brooklyn Community Board 7 office	4201 4th Avenue	call for days and hours	(718) 854-0003

Repository Location	Repository Address	Days and Hours of Operation	Phone Number
Sunset Park Public Library	5108 4th Avenue at 51st	M 1-8; T, Th/F 1-6; W 10-6; Sa 10-5; closed Sun	(718) 567-2806
Brooklyn Community Board 11 Office	2214 Bath Avenue	call for days and hours	(718) 266-8800
New Utrecht Public Library	1743 86th Street at Bay 17th Street	M/Th 1-6; Tu 1-8; W/F 10-6; Sa 10-5;	(718) 236-4086
Brooklyn Community Board 1 Office	435 Graham Avenue	call for days and hours	(718) 389-0009
Leonard Public Library	8 Devoe Street at Leonard Street	M 1-8; Tu/Th/F 1-6; W 10-6; closed wkend	(718) 486-3365
Queens Community Board 2 Office	43-22 50th Street, Woodside	call for days and hours	(718) 533-8773
Court Square Public Library	25-01 Jackson Avenue, Long Island City	M 12-7; Tu 1-6; W 10-6; Th/F 12-6; closed wkend	(718) 937-2790
Queens Community Board 7 Office	45-35 Kissena Boulevard, Flushing	call for days and hours	(718) 359-2800
Mitchell-Linden Public Library	29-42 Union Street, Flushing	M/Th 1-8, Tu 1-6, W/F 10-6; closed wkend	(718) 539-2330
Bronx Community Board 2 Office	1029 East 163rd Street	call for days and hours	(718) 328-9125/6
Hunts Point Regional Public Library	877 Southern Boulevard at Tiffany Street	M 12-7; Tu/Th 10-6; W/F 1-6; Sa 10-5; closed Sun	(718) 617-0338
Bronx Community Board 1 Office	384 East 149th Street	call for days and hours	(718) 585-7117
Woodstock Public Library	761 East 160th Street, west of Prospect Avenue	M/Tu 10-6; W 11-6; Th 12-7; F 1-6; closed wkend	(718) 665-6255
St. George Library Center	5 Central Avenue, S.I.	Call for days and hours	(718) 442-8560
Office of the Borough President	Borough Hall, Room 120, S.I.	M-F, 9-5	(718) 816-2200

Harry Szarpanzki, Assistant Commissioner
New York City Department of Sanitation
Bureau of Long Term Export

To: Distribution list

FINAL
ENVIRONMENTAL IMPACT STATEMENT

FOR

THE NEW YORK CITY
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

Prepared by:

NEW YORK CITY DEPARTMENT OF SANITATION

CEQR No: 03-DOS-004Y

April 1, 2005

Table of Contents

EXECUTIVE SUMMARY ES-1

CHAPTER 1 PROPOSED ACTION 1-1

1.1 INTRODUCTION 1-1
1.2 PURPOSE AND NEED 1-2
1.3 PROPOSED ACTION - LONG TERM EXPORT 1-3
1.3.1 Existing Conditions/No Action 1-3
1.3.2 Long Term Export - Proposed Action 1-6
1.3.3 Alternatives to the Proposed Action 1-14
1.4 PROPOSED ACTION - RECYCLING FACILITIES 1-18
1.4.1 Existing Conditions/No Action 1-21
1.4.2 Recycling Proposed Action 1-21
1.4.3 Advantages of the Proposed Action - Recycling Facilities 1-25
1.4.4 Alternatives to the Proposed Action 1-26
1.5 PROPOSED ACTION - COMMERCIAL WASTE MANAGEMENT 1-27
1.5.1 Existing Conditions 1-27
1.5.2 Proposed Action - Commercial Waste Management 1-29
1.5.3 Advantages of the Proposed Action 1-30
1.5.4 Other Commercial Waste Initiatives 1-31
1.6 PUBLIC REVIEW PROCESS - CEQR AND SEQRA 1-34
1.6.1 Long Term Export 1-35
1.6.2 Preparation of the DEIS 1-35
1.7 REQUIRED ACTIONS, PERMITS AND APPROVALS 1-38
1.7.1 Federal 1-38
1.7.2 New York State 1-38
1.7.3 New York City 1-39
1.8 PUBLIC OUTREACH PROCESS/ENVIRONMENTAL JUSTICE 1-39
1.8.1 Introduction 1-39
1.8.2 The EJ Program 1-40

CHAPTER 2 DESCRIPTION OF FACILITY SITES 2-1

2.1 INTRODUCTION 2-1
2.1.1 Overview 2-1
2.1.2 General Information, Plan Policies and Key Assumptions – Proposed Plan Long Term Export Facilities 2-7
2.2 SITE DESCRIPTIONS – PROPOSED PLAN FACILITIES LONG TERM EXPORT 2-17
2.2.1 Hamilton Avenue Converted MTS, Brooklyn 2-17
2.2.2 Southwest Brooklyn Converted MTS, Brooklyn 2-28
2.2.3 East 91st Street Converted MTS, Manhattan 2-41
2.2.4 North Shore Converted MTS, Queens 2-55
2.2.5 52nd Street Barge Staging Area, Brooklyn 2-68
2.2.6 Harlem River Yard Barge to Rail Intermodal Yard 2-72
2.2.7 65th Street Intermodal Yard, Brooklyn 2-76
2.2.8 Harlem River Yard Truck to Rail TS 2-84
2.2.9 East 132nd Street TS 2-92
2.2.10 Scott Avenue Truck To Barge TS, Brooklyn 2-100
2.2.11 Scott Avenue/Scholes Street Truck To Rail TS 2-109
2.2.12 Review Avenue Truck To Rail/Barge TS 2-116
2.2.13 Collection Vehicle Transport To Essex County WTE Facility 2-129

Table of Contents

2.3 PROPOSED PLAN RECYCLING FACILITIES 2-132
2.3.1 30th Street Pier At The South Brooklyn Marine Terminal 2-132
2.3.2 Gansevoort Recyclables Acceptance Facility 2-136
2.4 ALTERNATIVES CONSIDERED – LONG TERM EXPORT FACILITIES 2-139
2.4.1 South Bronx Converted MTS, Bronx 2-139
2.4.2 Greenpoint Converted MTS, Brooklyn 2-146
2.4.3 West 135th Street Converted MTS, Manhattan 2-154
2.4.4 West 59th Street Converted MTS, Manhattan 2-162
2.4.5 Existing South Bronx MTS, Bronx 2-171
2.4.6 Existing Southwest Brooklyn MTS, Brooklyn 2-173
2.4.7 Existing Greenpoint MTS, Brooklyn 2-175
2.4.8 Existing Hamilton Avenue MTS, Brooklyn 2-176
2.4.9 Existing West 135th Street MTS, Manhattan 2-178
2.4.10 Existing West 59th Street MTS, Manhattan 2-181
2.4.11 Existing East 91st Street MTS, Manhattan 2-183
2.4.12 Existing North Shore MTS, Queens 2-185
2.4.14 215 Varick Avenue Transfer Station 2-194
2.4.15 Steel Style Shipyard 2-203
2.5 SUMMARY OF POTENTIALLY APPLICABLE PERMITS FOR SITES CONSIDERED 2-208

CHAPTER 3 OVERVIEW OF STUDY METHODOLOGIES FOR SITE-SPECIFIC ANALYSES 3-1

3.1 INTRODUCTION 3-1
3.2 ANALYSIS YEARS AND FUTURE NO-BUILD CONDITIONS 3-2
3.3 DEFINITION OF SITES AND STUDY AREAS 3-3
3.3.1 Site Definition 3-3
3.3.2 Study Area Delineation 3-3
3.3.3 Maps and Figures 3-5
3.4 LAND USE, ZONING, AND PUBLIC POLICY 3-6
3.5 SOCIOECONOMIC CONDITIONS 3-11
3.6 COMMUNITY FACILITIES AND SERVICES 3-12
3.7 OPEN SPACE 3-13
3.8 CULTURAL RESOURCES 3-15
3.9 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 3-16
3.10 NEIGHBORHOOD CHARACTER 3-18
3.11 NATURAL RESOURCES 3-19
3.11.1 Introduction 3-19
3.11.2 Previous Studies and Literature - Types and Sources of Information Collected 3-20
3.11.3 Current Ecological Field Studies - Types and Sources of Information Collected 3-21
3.11.4 Screening Methodology 3-22
3.11.5 Impact Analysis Methodology 3-22
3.11.6 Typical Mitigation Measures 3-23
3.12 HAZARDOUS MATERIALS 3-24
3.12.1 Introduction 3-24
3.12.2 Definition of Study Area 3-24
3.12.3 Types and Sources of Information Collected 3-25
3.12.4 Screening Methodology 3-25
3.12.5 Historical Land Use Review 3-25
3.12.6 Regulatory Agency List Review 3-26
3.12.7 Site and Surrounding Area Reconnaissance 3-27
3.12.8 Impact Analysis Methodology 3-27
3.12.9 Typical Mitigation Measures 3-30
3.13 WATER QUALITY 3-31
3.13.1 Introduction 3-31
3.13.2 Review of Existing Water Quality Data 3-31
3.13.3 Pollutant Loadings 3-31

Table of Contents

3.13.4 Modeling Evaluation of Stormwater Impacts 3-34
3.14 WATERFRONT REVITALIZATION PROGRAM 3-35
3.14.1 Introduction 3-35
3.14.2 Governing Policy 3-35
3.15 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 3-41
3.15.1 Introduction 3-41
3.15.2 Water Supply 3-41
3.15.3 Sanitary Sewage and Stormwater 3-42
3.15.4 Solid Waste 3-42
3.15.5 Energy 3-43
3.16 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 3-44
3.16.1 Introduction 3-44
3.16.2 Background 3-44
3.16.3 Operational Assumptions 3-45
3.16.4 Trip Generation 3-47
3.16.5 Screening Methodology 3-59
3.16.6 Data Collection 3-59
3.16.7 Data Compilation 3-61
3.16.8 Analysis 3-61
3.16.9 Impact Analysis Methodology 3-64
3.16.10 Typical Mitigation Measures 3-66
3.16.11 Transit and Pedestrians 3-67
3.17 AIR QUALITY 3-69
3.17.1 Introduction 3-69
3.17.2 Air Quality Standards and Impact Significance Criteria 3-70
3.17.3 Regulatory Setting 3-79
3.17.4 Methodology Used to Estimate Potential On-site Impacts 3-80
3.17.5 Methodology Used to Estimate Potential Off-Site Impacts 3-88
3.17.6 Combined Impact Analysis 3-97
3.17.7 Mitigation Measures 3-98
3.18 ODOR 3-99
3.18.1 Introduction 3-99
3.18.2 Overview 3-99
3.18.3 Odor Impact Criteria 3-102
3.18.4 Odor Analysis 3-105
3.18.5 Sampling Program 3-106
3.18.6 Odor Modeling Methodology 3-112
3.18.7 Mitigation Measures 3-122
3.19 NOISE 3-123
3.19.1 Introduction 3-123
3.19.2 Background 3-123
3.19.3 Criteria 3-126
3.19.4 Noise Sources 3-130
3.19.5 Screening Methodology 3-130
3.19.6 Noise Monitoring 3-133
3.19.7 Impact Analysis 3-135
3.19.8 Combined Impact Analysis 3-141
3.19.9 Typical Mitigation Measures 3-142

CHAPTER 4 ENVIRONMENTAL REVIEW: HAMILTON AVENUE CONVERTED MTS 4-1
4.1 INTRODUCTION 4-1
4.2 LAND USE, ZONING, AND PUBLIC POLICY 4-2
4.2.1 Existing Conditions 4-2
4.2.2 Future No-Build Conditions 4-8
4.2.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-10
4.3 SOCIOECONOMIC CONDITIONS 4-11

Table of Contents

4.3.1 Existing Conditions 4-11
4.3.2 Future No-Build Conditions 4-18
4.3.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-19
4.4 COMMUNITY FACILITIES AND SERVICES 4-20
4.4.1 Existing Conditions 4-20
4.4.2 Future No-Build Conditions 4-20
4.4.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-20
4.5 OPEN SPACE 4-24
4.5.1 Existing Conditions 4-24
4.5.2 Future No-Build Conditions 4-26
4.5.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-26
4.6 CULTURAL RESOURCES 4-27
4.6.1 Existing Conditions 4-27
4.6.2 Future No-Build Conditions 4-28
4.6.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-28
4.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 4-30
4.7.1 Existing Conditions 4-30
4.7.2 Future No-Build Conditions 4-37
4.7.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-37
4.8 NEIGHBORHOOD CHARACTER 4-39
4.8.1 Existing Conditions 4-39
4.8.2 Future No-Build Conditions 4-41
4.8.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-41
4.9 NATURAL RESOURCES 4-42
4.9.1 Existing Conditions 4-42
4.9.2 Future No-Build Conditions 4-47
4.9.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-47
4.10 HAZARDOUS MATERIALS 4-51
4.10.1 Existing Conditions 4-51
4.10.2 Future No-Build Conditions 4-54
4.10.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-54
4.11 WATER QUALITY 4-55
4.11.1 Existing Conditions 4-55
4.11.2 Future No-Build Conditions 4-58
4.11.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-61
4.12 WATERFRONT REVITALIZATION PROGRAM 4-63
4.12.1 Introduction 4-63
4.12.2 Consistency Assessment 4-65
4.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 4-78
4.13.1 Existing Conditions 4-78
4.13.2 Future No-Build Conditions 4-82
4.13.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-82
4.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 4-84
4.14.1 Introduction 4-84
4.14.2 Existing Conditions 4-84
4.14.3 Future No-Build Conditions 4-94
4.14.4 Potential Impacts with the Hamilton Avenue Converted MTS 4-99
4.15 AIR QUALITY 4-113
4.15.1 Definition of the Study Areas 4-113
4.15.2 Existing Conditions 4-113
4.15.3 Future No-Build Conditions 4-114
4.15.4 Potential Impacts with the Hamilton Avenue Converted MTS 4-114
4.16 ODOR 4-125
4.16.1 Existing Conditions 4-125
4.16.2 Future No-Build Conditions 4-125
4.16.3 Potential Impacts with the South Bronx Converted MTS 4-125

Table of Contents

4.17 NOISE 4-128
4.17.1 Existing Conditions 4-128
4.17.2 Future No-Build Conditions 4-131
4.17.3 Potential Impacts with the Hamilton Avenue Converted MTS 4-132
4.18 COMMERCIAL WASTE TO THE HAMILTON AVENUE CONVERTED MTS 4-144
4.18.1 Existing Conditions 4-144
4.18.2 Future No-Build Conditions 4-144
4.18.3 Potential Impacts of Sending Commercial Waste to the Hamilton Avenue Converted MTS ... 4-144

CHAPTER 5 ENVIRONMENTAL REVIEW: SOUTHWEST BROOKLYN CONVERTED MTS 5-1

5.1 INTRODUCTION 5-1
5.2 LAND USE, ZONING, AND PUBLIC POLICY 5-2
5.2.1 Existing Conditions 5-2
5.2.2 Future No-Build Conditions 5-8
5.2.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-8
5.3 SOCIOECONOMIC CONDITIONS 5-10
5.3.1 Existing Conditions 5-10
5.3.2 Future No-Build Conditions 5-12
5.3.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-12
5.4 COMMUNITY FACILITIES AND SERVICES 5-14
5.4.1 Existing Conditions 5-14
5.4.2 Future No-Build Conditions 5-14
5.4.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-14
5.5 OPEN SPACE 5-17
5.5.1 Existing Conditions 5-17
5.5.2 Future No-Build Conditions 5-19
5.5.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-19
5.6 CULTURAL RESOURCES 5-20
5.6.1 Existing Conditions 5-20
5.6.2 Future No-Build Conditions 5-21
5.6.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-21
5.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 5-22
5.7.1 Existing Conditions 5-22
5.7.2 Future No-Build Conditions 5-31
5.7.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-31
5.8 NEIGHBORHOOD CHARACTER 5-32
5.8.1 Existing Conditions 5-32
5.8.2 Future No-Build Conditions 5-34
5.8.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-34
5.9 NATURAL RESOURCES 5-35
5.9.1 Existing Conditions 5-35
5.9.2 Future No-Build Conditions 5-40
5.9.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-40
5.10 HAZARDOUS MATERIALS 5-43
5.10.1 Existing Conditions 5-43
5.10.2 Future No-Build Conditions 5-46
5.10.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-47
5.11 WATER QUALITY 5-48
5.11.1 Existing Conditions 5-48
5.11.2 Future No-Build Conditions 5-52
5.11.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-54
5.12 WATERFRONT REVITALIZATION PROGRAM 5-56
5.12.1 Introduction 5-56
5.12.2 Consistency Assessment 5-58
5.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 5-73

Table of Contents

5.13.1 Existing Conditions 5-73
5.13.2 Future No-Build Conditions 5-76
5.13.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-76
5.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 5-78
5.14.1 Introduction 5-78
5.14.2 Existing Conditions 5-78
5.14.3 Future No-Build Conditions 5-88
5.14.4 Potential Impacts with the Southwest Brooklyn Converted MTS 5-89
5.14A TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS – ALTERNATE ROUTE 5-107
5.14a.1 Introduction 5-107
5.14a.2 Existing Conditions 5-107
5.14a.3 Future No-Build Conditions 5-122
5.14a.4 Potential Impacts with the Southwest Brooklyn Converted MTS 5-131
5.15 AIR QUALITY 5-151
5.15.1 Definition of Study Areas 5-151
5.15.2 Existing Conditions 5-151
5.15.3 Future No-Build Conditions 5-152
5.15.4 Potential Impacts with the Southwest Brooklyn Converted MTS 5-152
5.15A AIR QUALITY- ALTERNATE ROUTE 5-163
5.15a.1 Definition of Study Areas 5-163
5.15a.2 Existing Conditions 5-163
5.15a.3 Future No-Build Conditions 5-164
5.15a.4 Potential Impacts with the Southwest Brooklyn Converted MTS 5-164
5.16 ODOR 5-170
5.16.1 Existing Conditions 5-170
5.16.2 Future No-Build Conditions 5-170
5.16.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-170
5.17 NOISE 5-174
5.17.1 Existing Conditions 5-174
5.17.2 Future No-Build Conditions 5-177
5.17.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-178
5.17A NOISE – ALTERNATE ROUTE 5-194
5.17a.1 Existing Conditions 5-194
5.17a.2 Future No-Build Conditions 5-194
5.17a.3 Potential Impacts with the Southwest Brooklyn Converted MTS 5-196
5.18 COMMERCIAL WASTE TO THE SOUTHWEST BROOKLYN CONVERTED MTS 5-202
5.18.1 Existing Conditions 5-202
5.18.2 Future No-Build Conditions 5-202
5.18.3 Potential Impacts of Sending Commercial Waste to the Southwest Brooklyn Converted MTS 5-202

CHAPTER 6 ENVIRONMENTAL REVIEW: EAST 91ST STREET CONVERTED MTS 6-1

6.1 INTRODUCTION 6-1
6.2 LAND USE, ZONING, AND PUBLIC POLICY 6-2
6.2.1 Existing Conditions 6-2
6.2.2 Future No-Build Conditions 6-8
6.2.3 Potential Impacts with the East 91st Street Converted MTS 6-10
6.3 SOCIOECONOMIC CONDITIONS 6-11
6.3.1 Existing Conditions 6-11
6.3.2 Future No-Build Conditions 6-17
6.3.3 Potential Impacts with the East 91st Street Converted MTS 6-18
6.4 COMMUNITY FACILITIES AND SERVICES 6-20
6.4.1 Existing Conditions 6-20
6.4.2 Future No-Build Conditions 6-20
6.4.3 Potential Impacts with the East 91st Street Converted MTS 6-20
6.5 OPEN SPACE 6-24

Table of Contents

6.5.1 Existing Conditions 6-24
6.5.2 Future No-Build Conditions 6-28
6.5.3 Potential Impacts with the East 91st Street Converted MTS 6-28
6.6 CULTURAL RESOURCES 6-29
6.6.1 Existing Conditions 6-29
6.6.2 Future No-Build Conditions 6-33
6.6.3 Potential Impacts with the East 91st Street Converted MTS 6-33
6.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 6-34
6.7.1 Existing Conditions 6-34
6.7.2 Future No-Build Conditions 6-39
6.7.3 Potential Impacts with the East 91st Street Converted MTS 6-39
6.8 NEIGHBORHOOD CHARACTER 6-47
6.8.1 Existing Conditions 6-47
6.8.2 Future No-Build Conditions 6-49
6.8.3 Potential Impacts with the East 91st Street Converted MTS 6-49
6.9 NATURAL RESOURCES 6-51
6.9.1 Existing Conditions 6-51
6.9.2 Future No-Build Conditions 6-55
6.9.3 Potential Impacts with the East 91st Street Converted MTS 6-56
6.10 HAZARDOUS MATERIALS 6-59
6.10.1 Existing Conditions 6-59
6.10.2 Future No-Build Conditions 6-60
6.10.3 Potential Impacts with the East 91st Street Converted MTS 6-60
6.11 WATER QUALITY 6-62
6.11.1 Existing Conditions 6-62
6.11.2 Future No-Build Conditions 6-67
6.11.3 Potential Impacts with the East 91st Street Converted MTS 6-68
6.12 WATERFRONT REVITALIZATION PROGRAM 6-70
6.12.1 Introduction 6-70
6.12.2 Consistency Assessment 6-70
6.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 6-86
6.13.1 Existing Conditions 6-86
6.13.2 Future No-Build Conditions 6-89
6.13.3 Potential Impacts with the East 91st Street Converted MTS 6-89
6.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 6-92
6.14.1 Introduction 6-92
6.14.2 Existing Conditions 6-92
6.14.3 Future No-Build Conditions 6-102
6.14.4 Potential Impacts with the East 91st Street Converted MTS 6-107
6.15 AIR QUALITY 6-120
6.15.1 Definition of the Study Areas 6-120
6.15.2 Existing Conditions 6-120
6.15.3 Future No-Build Conditions 6-121
6.15.4 Potential Impacts with the East 91st Street Converted MTS 6-121
6.16 ODOR 6-132
6.16.1 Existing Conditions 6-132
6.16.2 Future No-Build Conditions 6-132
6.16.3 Potential Impacts with the East 91st Street Converted MTS 6-133
6.17 NOISE 6-137
6.17.1 Existing Conditions 6-137
6.17.2 Future No-Build Conditions 6-141
6.17.3 Potential Impacts with the East 91st Street Converted MTS 6-142
6.18 COMMERCIAL WASTE TO THE EAST 91ST STREET CONVERTED MTS 6-159
6.18.1 Existing Conditions 6-159
6.18.2 Future No-Build Conditions 6-159
6.18.3 Potential Impacts of Sending Commercial Waste to the East 91st Street Converted MTS 6-159

Table of Contents

CHAPTER 7 ENVIRONMENTAL REVIEW: NORTH SHORE CONVERTED MTS 7-1

7.1 INTRODUCTION 7-1
7.2 LAND USE, ZONING, AND PUBLIC POLICY 7-2
7.2.1 Existing Conditions 7-2
7.2.2 Future No-Build Conditions 7-8
7.2.3 Potential Impacts with the North Shore Converted MTS 7-8
7.3 SOCIOECONOMIC CONDITIONS 7-10
7.3.1 Existing Conditions 7-10
7.3.2 Future No-Build Conditions 7-16
7.3.3 Potential Impacts with the North Shore Converted MTS 7-17
7.4 COMMUNITY FACILITIES AND SERVICES 7-18
7.4.1 Existing Conditions 7-18
7.4.2 Future No-Build Conditions 7-18
7.4.3 Potential Impacts with the North Shore Converted MTS 7-18
7.5 OPEN SPACE 7-21
7.5.1 Existing Conditions 7-21
7.5.2 Future No-Build Conditions 7-21
7.5.3 Potential Impacts with the North Shore Converted MTS 7-23
7.6 CULTURAL RESOURCES 7-24
7.6.1 Existing Conditions 7-24
7.6.2 Future No-Build Conditions 7-25
7.6.3 Potential Impacts with the North Shore Converted MTS 7-25
7.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 7-26
7.7.1 Existing Conditions 7-26
7.7.2 Future No-Build Conditions 7-33
7.7.3 Potential Impacts with the North Shore Converted MTS 7-33
7.8 NEIGHBORHOOD CHARACTER 7-34
7.8.1 Existing Conditions 7-34
7.8.2 Future No-Build Conditions 7-36
7.8.3 Potential Impacts with the North Shore Converted MTS 7-36
7.9 NATURAL RESOURCES 7-37
7.9.1 Existing Conditions 7-37
7.9.2 Future No-Build Conditions 7-43
7.9.3 Potential Impacts with the North Shore Converted MTS 7-43
7.10 HAZARDOUS MATERIALS 7-47
7.10.1 Existing Conditions 7-47
7.10.2 Future No-Build Conditions 7-49
7.10.3 Potential Impacts with the North Shore Converted MTS 7-49
7.11 WATER QUALITY 7-50
7.11.1 Existing Conditions 7-50
7.11.2 Future No-Build Conditions 7-55
7.11.3 Potential Impacts with the North Shore Converted MTS 7-55
7.12 WATERFRONT REVITALIZATION PROGRAM 7-57
7.12.1 Introduction 7-57
7.12.2 Consistency Assessment 7-59
7.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 7-72
7.13.1 Existing Conditions 7-72
7.13.2 Future No-Build Conditions 7-75
7.13.3 Potential Impacts with the North Shore Converted MTS 7-75
7.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 7-78
7.14.1 Introduction 7-78
7.14-2 Existing Conditions 7-78
7.14.3 Future No-Build Conditions 7-90
7.14.4 Potential Impacts with the North Shore Converted MTS 7-96
7.15 AIR QUALITY 7-110

7.15.1 Definition of the Study Areas 7-110
7.15.2 Existing Conditions....7-110
7.15.3 Future No-Build Conditions....7-111
7.15.4 Potential Impacts with the North Shore Converted MTS....7-111
7.16 ODOR 7-122
7.16.1 Existing Conditions....7-122
7.16.2 Future No-Build Conditions....7-122
7.16.3 Potential Impacts with the North Shore Converted MTS....7-122
7.17 NOISE 7-126
7.17.1 Existing Conditions....7-126
7.17.2 Future No-Build Conditions....7-130
7.17.3 Potential Impacts with the North Shore Converted MTS....7-131
7.18 COMMERCIAL WASTE TO THE NORTH SHORE CONVERTED MTS 7-147
7.18.1 Existing Conditions....7-147
7.18.2 Future No-Build Conditions....7-147
7.18.3 Potential Impacts of Sending Commercial Waste to the North Shore Converted MTS....7-147

CHAPTER 8 ENVIRONMENTAL REVIEW: 52ND STREET BARGE STAGING AREA 8-1

8.1 INTRODUCTION.... 8-1
8.2 LAND USE, ZONING, AND PUBLIC POLICY 8-2
8.2.1 Existing Conditions.... 8-2
8.2.2 Future No-Build Conditions.... 8-9
8.2.3 Potential Impacts with the 52nd Street Barge Staging Area 8-11
8.3 SOCIOECONOMIC CONDITIONS 8-13
8.3.1 Existing Conditions....8-13
8.3.2 Future No-Build Conditions....8-17
8.3.3 Potential Impacts with the 52nd Street Barge Staging Area 8-18
8.4 COMMUNITY FACILITIES 8-20
8.4.1 Existing Conditions....8-20
8.4.2 Future No-Build Conditions....8-20
8.4.3 Potential Impacts with the 52nd Street Barge Staging Area 8-20
8.5 OPEN SPACE....8-23
8.5.1 Existing Conditions....8-23
8.5.2 Future No-Build Conditions....8-23
8.5.3 Potential Impacts with the 52nd Street Barge Staging Area 8-25
8.6 CULTURAL RESOURCES....8-26
8.6.1 Existing Conditions....8-26
8.6.2 Future No-Build Conditions....8-29
8.6.3 Potential Impacts with the 52nd Street Barge Staging Area 8-30
8.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS....8-31
8.7.1 Existing Conditions....8-31
8.7.2 Future No-Build Conditions....8-35
8.7.3 Potential Impacts with the 52nd Street Barge Staging Area 8-35
8.8 NEIGHBORHOOD CHARACTER 8-36
8.8.1 Existing Conditions....8-36
8.8.2 Future No-Build Conditions....8-38
8.8.3 Potential Impacts with the 52nd Street Barge Staging Area 8-39
8.9 NATURAL RESOURCES 8-40
8.9.1 Existing Conditions....8-40
8.9.2 Future No-Build Conditions....8-44
8.9.3 Potential Impacts with the 52nd Street Barge Staging Area 8-44
8.10 HAZARDOUS MATERIALS....8-47
8.10.1 Existing Conditions....8-47
8.10.2 Future No-Build Conditions....8-48
8.10.3 Potential Impacts with the 52nd Street Barge Staging Area 8-48

Table of Contents

8.11 WATER QUALITY 8-49
8.11.1 Existing Conditions....8-49
8.11.2 Future No-Build Conditions....8-54
8.11.3 Potential Impacts with the 52nd Street Barge Staging Area 8-54
8.12 WATERFRONT REVITALIZATION PROGRAM....8-56
8.12.1 Introduction....8-56
8.12.2 Consistency Assessment 8-58
8.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 8-70
8.13.1 Existing Conditions....8-70
8.13.2 Future No-Build Conditions....8-74
8.13.3 Potential Impacts with the 52nd Street Barge Staging Area 8-74
8.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 8-76
8.14.1 Introduction....8-76
8.15 AIR QUALITY 8-77
8.15.1 Existing Conditions....8-77
8.15.2 Future No-Build Conditions....8-78
8.15.3 Potential Impacts with the 52nd Street Barge Staging Area 8-78
8.16 ODOR 8-84
8.17 NOISE 8-85
8.17.1 Existing Conditions....8-85
8.17.2 Future No-Build Conditions....8-88
8.17.3 Potential Impacts with the 52nd Street Barge Staging Area....8-88

CHAPTER 9 ENVIRONMENTAL REVIEW - HARLEM RIVER YARD BARGE TO RAIL INTERMODAL YARD. 9-1

9.1 INTRODUCTION.... 9-1
9.2 LAND USE, ZONING, AND PUBLIC POLICY 9-2
9.3 SOCIOECONOMIC CONDITIONS 9-2
9.4 COMMUNITY FACILITIES AND SERVICES 9-2
9.5 OPEN SPACE.... 9-2
9.6 CULTURAL RESOURCES.... 9-3
9.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS.... 9-3
9.8 NEIGHBORHOOD CHARACTER 9-3
9.9 NATURAL RESOURCES 9-3
9.9.1 Existing Conditions.... 9-3
9.10 HAZARDOUS MATERIALS 9-7
9.11 WATER QUALITY 9-7
9.12 WATERFRONT REVITALIZATION PROGRAM.... 9-7
9.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 9-7
9.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 9-7
9.15 AIR QUALITY 9-8
9.15.1 Definition of Study Areas 9-8
9.15.2 Existing Conditions.... 9-8
9.15.3 Future No-Build Conditions.... 9-9
9.15.4 Potential Impacts with the Harlem River Yard Barge to Rail Intermodal Yard.... 9-9
9.16 ODOR 9-12
9.17 NOISE 9-12
9.17.1 Existing Conditions....9-12
9.17.2 Future No-Build Conditions....9-14
9.17.3 Potential Impacts with the HRY Barge to Rail Intermodal Yard....9-14

Table of Contents

CHAPTER 10 ENVIRONMENTAL REVIEW: 65TH STREET INTERMODAL YARD 10-1

10.1 INTRODUCTION 10-1
10.2 LAND USE, ZONING, AND PUBLIC POLICY 10-2
10.3 SOCIOECONOMIC CONDITIONS 10-2
10.4 COMMUNITY FACILITIES AND SERVICES 10-2
10.6 CULTURAL RESOURCES 10-2
10.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 10-2
10.8 NEIGHBORHOOD CHARACTER 10-3
10.9 NATURAL RESOURCES 10-3
10.10 HAZARDOUS MATERIALS 10-3
10.11 WATER QUALITY 10-3
10.12 WATERFRONT REVITALIZATION PROGRAM 10-3
10.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 10-3
10.15 AIR QUALITY 10-3
10.16 ODOR 10-4
10.17 NOISE 10-4

CHAPTER 11 ENVIRONMENTAL REVIEW - HARLEM RIVER YARD TRUCK TO RAIL TS 11-1

11.1 INTRODUCTION 11-1
11.2 LAND USE, ZONING, AND PUBLIC POLICY 11-2
11.3 SOCIOECONOMIC CONDITIONS 11-2
11.4 COMMUNITY FACILITIES AND SERVICES 11-2
11.5 OPEN SPACE 11-2
11.6 CULTURAL RESOURCES 11-2
11.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 11-3
11.8 NEIGHBORHOOD CHARACTER 11-3
11.9 NATURAL RESOURCES 11-3
11.10 HAZARDOUS MATERIALS 11-3
11.11 WATER QUALITY 11-3
11.12 WATERFRONT REVITALIZATION PROGRAM 11-3
11.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 11-4
11.15 AIR QUALITY 11-4
11.16 ODOR 11-4
11.17 NOISE 11-4

CHAPTER 12 ENVIRONMENTAL REVIEW - EAST 132ND STREET SITE 12-1

12.1 INTRODUCTION 12-1
12.2 LAND USE, ZONING, AND PUBLIC POLICY 12-3
12.3 SOCIOECONOMIC CONDITIONS 12-3
12.4 COMMUNITY FACILITIES AND SERVICES 12-3
12.5 OPEN SPACE 12-4
12.6 CULTURAL RESOURCES 12-4
12.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 12-4
12.8 NEIGHBORHOOD CHARACTER 12-4
12.9 NATURAL RESOURCES 12-5
12.10 HAZARDOUS MATERIALS 12-5
12.11 WATER QUALITY 12-5
12.12 WATERFRONT REVITALIZATION PROGRAM 12-5
12.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 12-6
12.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 12-6
12.14.1 Existing Conditions 12-7
12.14.2 Future No-Build Conditions 12-17
12.14.3 Potential Impacts with the East 132nd Street Truck to Rail TS 12-22
12.14.4 Potential Impacts with the Oak Point Rail Yard 12-38

Table of Contents

12.15 AIR QUALITY 12-39
12.15.1 Existing Conditions....12-39
12.15.2 Future No-Build Conditions....12-40
12.16 ODOR 12-43
12.17 NOISE 12-44

CHAPTER 13 ENVIRONMENTAL REVIEW - SCOTT AVENUE TRUCK TO BARGE TS 13-1

13.1 INTRODUCTION....13-1
13.2 LAND USE, ZONING, AND PUBLIC POLICY 13-2
13.3 SOCIOECONOMIC CONDITIONS 13-2
13.4 COMMUNITY FACILITIES AND SERVICES 13-2
13.5 OPEN SPACE....13-3
13.6 CULTURAL RESOURCES....13-3
13.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 13-3
13.8 NEIGHBORHOOD CHARACTER 13-3
13.9 NATURAL RESOURCES 13-3
13.10 HAZARDOUS MATERIALS 13-3
13.11 WATER QUALITY 13-4
13.12 WATERFRONT REVITALIZATION PROGRAM....13-4
13.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 13-4
13.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 13-4
13.15 AIR QUALITY 13-5
13.16 ODOR 13-5
13.17 NOISE 13-5

CHAPTER 14 ENVIRONMENTAL REVIEW: SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TS....14-1

14.1 INTRODUCTION....14-1
14.2 LAND USE, ZONING, AND PUBLIC POLICY 14-3
14.2.1 Existing Conditions....14-3
14.2.2 Future No-Build Conditions....14-10
14.2.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-10
14.3 SOCIOECONOMIC CONDITIONS 14-12
14.3.1 Existing Conditions....14-12
14.3.2 Future No-Build Conditions....14-16
14.3.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-16
14.4 COMMUNITY FACILITIES AND SERVICES 14-19
14.4.1 Existing Conditions....14-19
14.4.2 Future No-Build Conditions....14-19
14.4.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-19
14.5 OPEN SPACE....14-22
14.5.1 Existing Conditions....14-22
14.5.2 Future Baseline Conditions....14-23
14.5.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-23
14.6 CULTURAL RESOURCES....14-25
14.6.1 Existing Conditions....14-25
14.6.2 Future No-Build Conditions....14-28
14.6.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-29
14.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 14-30
14.7.1 Existing Conditions....14-30
14.7.2 Future No-Build Conditions....14-33
14.7.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS....14-33
14.8 NEIGHBORHOOD CHARACTER 14-34
14.8.1 Existing Conditions....14-34
14.8.2 Future No-Build Conditions....14-34

Table of Contents

14.8.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-36
14.9 NATURAL RESOURCES 14-37
14.9.1 Existing Conditions 14-37
14.9.2 Future No-Build Conditions 14-41
14.9.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-41
14.10 HAZARDOUS MATERIALS 14-43
14.10.1 Existing Conditions 14-43
14.10.2 Future No-Build Conditions 14-47
14.10.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-47
14.11 WATER QUALITY 14-49
14.12 WATERFRONT REVITALIZATION PROGRAM 14-50
14.12.1 Introduction 14-50
14.12.2 Consistency Assessment 14-52
14.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 14-62
14.13.1 Existing Conditions 14-62
14.13.2 Future No-Build Conditions 14-66
14.13.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-66
14.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 14-69
14.14.1 Existing Conditions 14-69
14.14.2 Future No-Build Conditions 14-79
14.14.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-84
14.15 AIR QUALITY 14-97
14.15.1 Definition of Study Areas 14-97
14.15.2 Existing Conditions 14-97
14.15.3 Future No-Build Conditions 14-98
14.15.4 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-98
14.16 ODOR 14-109
14.16.1 Existing Conditions 14-109
14.16.2 Future No-Build Conditions 14-109
14.16.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-109
14.17 NOISE 14-113
14.17.1 Existing Conditions 14-113
14.17.2 Future No-Build Conditions 14-116
14.17.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS 14-117

CHAPTER 15 ENVIRONMENTAL REVIEW - REVIEW AVENUE SITE 15-1

15.1 INTRODUCTION 15-1
15.2 LAND USE, ZONING, AND PUBLIC POLICY 15-3
15.3 SOCIOECONOMIC CONDITIONS 15-3
15.4 COMMUNITY FACILITIES AND SERVICES 15-3
15.5 OPEN SPACE 15-3
15.6 CULTURAL RESOURCES 15-3
15.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 15-3
15.8 NEIGHBORHOOD CHARACTER 15-4
15.9 NATURAL RESOURCES 15-4
15.10 HAZARDOUS MATERIALS 15-4
15.11 WATER QUALITY 15-4
15.12 WATERFRONT REVITALIZATION PROGRAM 15-4
15.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 15-4
15.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 15-5
15.14.1 INTRODUCTION 15-5
15.14.2 EXISTING CONDITIONS 15-5
15.14.3 FUTURE NO-BUILD CONDITIONS 15-15
15.14.4 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO BARGE TS 15-20
15.14.5 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO RAIL TS 15-20

Table of Contents

15.14.6 POTENTIAL IMPACTS WITH THE MASPETH RAIL YARD 15-35
15.15 AIR QUALITY....15-37
15.15.1 DEFINITION OF STUDY AREAS 15-37
15.15.2 EXISTING CONDITIONS....15-37
15.15.3 FUTURE NO-BUILD CONDITIONS 15-37
15.15.4 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO BARGE TS 15-38
15.15.5 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO RAIL TS 15-41
15.16 ODOR....15-48
15.16.1 EXISTING CONDITIONS....15-48
15.16.2 FUTURE NO-BUILD CONDITIONS 15-48
15.16.3 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TS 15-48
15.17 NOISE 15-52
15.17.1 EXISTING CONDITIONS....15-52
15.17.2 FUTURE NO-BUILD CONDITIONS 15-55
15.17.3 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO BARGE TS 15-57
15.17.4 POTENTIAL IMPACTS WITH THE REVIEW AVENUE TRUCK TO RAIL TS 15-60

CHAPTER 16 ENVIRONMENTAL REVIEW: COLLECTION VEHICLE TRANSPORT TO OUT-OF-CITY WASTE-TO-ENERGY FACILITIES 16-1

16.1 INTRODUCTION....16-1
16.2 LAND USE, ZONING, AND PUBLIC POLICY 16-2
16.3 SOCIOECONOMIC CONDITIONS 16-2
16.4 COMMUNITY FACILITIES AND SERVICES 16-2
16.5 OPEN SPACE....16-2
16.6 Cultural Resources....16-2
16.7 Urban Design, Visual Resources, and Shadows 16-2
16.8 Neighborhood Character....16-2
16.9 Natural Resources....16-2
16.10 Hazardous Materials 16-3
16.11 Water Quality 16-3
16.12 Waterfront Revitalization Program....16-3
16.13 Infrastructure, Solid Waste and Sanitation Services, and Energy....16-3
16.14 Traffic, Parking, Transit, and Pedestrians....16-3
16.15 Air Quality....16-3
16.16 Odor....16-3
16.17 Noise....16-4

CHAPTER 17 ENVIRONMENTAL REVIEW: MANHATTAN CURBSIDE RECYCLABLES TO 30TH STREET PIER AT SOUTH BROOKLYN MARINE TERMINAL....17-1

17.1 INTRODUCTION....17-1
17.2 LAND USE, ZONING, AND PUBLIC POLICY 17-2
17.3 SOCIOECONOMIC CONDITIONS 17-2
17.4 COMMUNITY FACILITIES AND SERVICES 17-2
17.5 OPEN SPACE....17-2
17.6 CULTURAL RESOURCES....17-2
17.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 17-3
17.8 NEIGHBORHOOD CHARACTER 17-3
17.9 NATURAL RESOURCES 17-3
17.9.1 Existing Conditions....17-3
17.9.2 Future No-Build Conditions....17-9
17.9.3 Potential Impacts with MCR to the 30th Street Pier at SBMT....17-9
17.10 HAZARDOUS MATERIALS 17-12
17.11 WATER QUALITY 17-12
17.11.1 Existing Conditions....17-12
17.11.2 Future No-Build Conditions....17-17

Table of Contents

17.11.3 Potential Impacts with MCR to the 30th Street Pier at SBMT....17-18
17.12 WATERFRONT REVITALIZATION PROGRAM....17-20
17.12.1 Introduction....17-20
17.12.2 Consistency Assessment....17-22
17.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY....17-33
17.14.1 Introduction....17-33
17.14.2 Existing Conditions....17-33
17.14.3 Future No-Build Conditions....17-33
17.14.4 Potential Impacts with MCR to the 30th Street Pier at SBMT....17-33
17.15 AIR QUALITY....17-36
17.16 ODOR....17-36
17.17 NOISE....17-36
17.17.1 Existing Conditions....17-37
17.17.2 Future No-Build Conditions....17-37
17.17.3 Potential Impacts with MCR to the 30th Street Pier at SBMT....17-38

CHAPTER 18 ENVIRONMENTAL REVIEW: MANHATTAN CURBSIDE RECYCLABLES TO GANSEVOORT RECYCLABLES ACCEPTANCE FACILITY....18-1

18.1 INTRODUCTION....18-1
18.2 LAND USE, ZONING, AND PUBLIC POLICY....18-2
18.3 Socioeconomic Conditions....18-2
18.4 COMMUNITY FACILITIES AND SERVICES....18-2
18.5 OPEN SPACE....18-2
18.6 CULTURAL RESOURCES....18-2
18.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS....18-2
18.8 NEIGHBORHOOD CHARACTER....18-3
18.9 NATURAL RESOURCES....18-3
18.10 HAZARDOUS MATERIALS....18-3
18.11 WATER QUALITY....18-3
18.12 WATERFRONT REVITALIZATION PROGRAM....18-3
18.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY....18-3
18.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS....18-3
18.14.1 Introduction....18-3
18.14.2 Existing Conditions....18-4
18.14.3 Future No-Build Conditions....18-4
18.14.4 Potential Impacts with MCR to the Gansevoort Recyclables Acceptance Facility....18-4
18.15 AIR QUALITY....18-7
18.15.1 Definition of Study Area....18-7
18.15.2 Existing Conditions....18-7
18.15.3 Future No-Build Conditions....18-8
18.15.4 Potential Off-Site Air Quality Impacts with MCR to the Gansevoort Recyclables Acceptance Facility....18-8
18.16 ODOR....18-11
18.17 NOISE....18-11

CHAPTER 19 ENVIRONMENTAL REVIEW: SOUTH BRONX CONVERTED MTS....19-1

19.1 INTRODUCTION....19-1
19.2 LAND USE, ZONING, AND PUBLIC POLICY....19-2
19.2.1 Existing Conditions....19-2
19.2.2 Future No-Build Conditions....19-9
19.2.3 Potential Impacts with the South Bronx Converted MTS....19-9
19.3 SOCIOECONOMIC CONDITIONS....19-12
19.3.1 Existing Conditions....19-12
19.3.2 Future No-Build Conditions....19-14
19.3.3 Potential Impacts with the South Bronx Converted MTS....19-15

Table of Contents

19.4 COMMUNITY FACILITIES AND SERVICES 19-18
19.4.1 Existing Conditions 19-18
19.4.2 Future No-Build Conditions 19-18
19.4.3 Potential Impacts with the South Bronx Converted MTS 19-20
19.5 OPEN SPACE 19-21
19.5.1 Existing Conditions 19-21
19.5.2 Future No-Build Conditions 19-21
19.5.3 Potential Impacts with the South Bronx Converted MTS 19-23
19.6 CULTURAL RESOURCES 19-24
19.6.1 Existing Conditions 19-24
19.6.2 Future No-Build Conditions 19-26
19.6.3 Potential Impacts with the South Bronx Converted MTS 19-26
19.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 19-27
19.7.1 Existing Conditions 19-27
19.7.2 Future No-Build Conditions 19-31
19.7.3 Potential Impacts with the South Bronx Converted MTS 19-37
19.8 NEIGHBORHOOD CHARACTER 19-38
19.8.1 Existing Conditions 19-38
19.8.2 Future No-Build Conditions 19-40
19.8.3 Potential Impacts with the South Bronx Converted MTS 19-41
19.9 NATURAL RESOURCES 19-42
19.9.1 Existing Conditions 19-42
19.9.2 Future No-Build Conditions 19-48
19.9.3 Potential Impacts with the South Bronx Converted MTS 19-49
19.10 HAZARDOUS MATERIALS 19-52
19.10.1 Existing Conditions 19-52
19.10.2 Future No-Build Conditions 19-55
19.10.3 Potential Impacts with the South Bronx Converted MTS 19-55
19.11 WATER QUALITY 19-56
19.11.1 Existing Conditions 19-56
19.11.2 Future No-Build Conditions 19-61
19.11.3 Potential Impacts with the South Bronx Converted MTS 19-62
19.12 WATERFRONT REVITALIZATION PROGRAM 19-64
19.12.1 Introduction 19-64
19.12.2 Consistency Assessment 19-66
19.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 19-79
19.13.1 Existing Conditions 19-79
19.13.2 Future No-Build Conditions 19-82
19.13.3 Potential Impacts with the South Bronx Converted MTS 19-82
19.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 19-84
19.14.1 Introduction 19-84
19.14.2 Existing Conditions 19-84
19.14.3 Future No-Build Conditions 19-103
19.14.4 Potential Impacts with the South Bronx Converted MTS 19-115
19.15 AIR QUALITY 19-140
19.15.1 Definition of Study Areas 19-140
19.15.2 Existing Conditions 19-140
19.15.3 Future No-Build Conditions 19-141
19.15.4 Potential Impacts with the South Bronx Converted MTS 19-141
19.16 ODOR 19-153
19.16.1 Existing Conditions 19-153
19.16.2 Future No-Build Conditions 19-153
19.16.3 Potential Impacts with the South Bronx Converted MTS 19-153
19.17 NOISE 19-156
19.17.1 Existing Conditions 19-156
19.17.2 Future No-Build Conditions 19-159

19.17.3 Potential Impacts with the South Bronx Converted MTS 19-159
19.18 COMMERCIAL WASTE TO THE SOUTH BRONX CONVERTED MTS 19-169
19.18.1 Existing Conditions 19-169
19.18.2 Future No-Build Conditions 19-169
19.18.3 Potential Impacts of Sending Commercial Waste to the South Bronx Converted MTS 19-169

CHAPTER 20 ENVIRONMENTAL REVIEW: GREENPOINT CONVERTED MTS 20-1

20.1 INTRODUCTION 20-1
20.2 LAND USE, ZONING, AND PUBLIC POLICY 20-2
20.2.1 Existing Conditions 20-2
20.2.2 Future No-Build Conditions 20-9
20.2.3 Potential Impacts with the Greenpoint Converted MTS 20-9
20.3 SOCIOECONOMIC CONDITIONS 20-12
20.3.1 Existing Conditions 20-12
20.3.2 Future No-Build Conditions 20-18
20.3.3 Potential Impacts with the Greenpoint Converted MTS 20-19
20.4 COMMUNITY FACILITIES AND SERVICES 20-21
20.4.1 Existing Conditions 20-21
20.4.2 Future No-Build Conditions 20-21
20.4.3 Potential Impacts with the Greenpoint Converted MTS 20-21
20.5 OPEN SPACE 20-24
20.5.1 Existing Conditions 20-24
20.5.2 Future No-Build Conditions 20-24
20.5.3 Potential Impacts with the Greenpoint Converted MTS 20-24
20.6 CULTURAL RESOURCES 20-27
20.6.1 Existing Conditions 20-27
20.6.2 Future No-Build Conditions 20-28
20.6.3 Potential Impacts with the Greenpoint Converted MTS 20-30
20.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 20-31
20.7.1 Existing Conditions 20-31
20.7.2 Future No-Build Conditions 20-35
20.7.3 Potential Impacts with the Greenpoint Converted MTS 20-35
20.8 NEIGHBORHOOD CHARACTER 20-41
20.8.1 Existing Conditions 20-41
20.8.2 Future No-Build Conditions 20-43
20.8.3 Potential Impacts with the Greenpoint Converted MTS 20-43
20.9 NATURAL RESOURCES 20-44
20.9.1 Existing Conditions 20-44
20.9.2 Future No-Build Conditions 20-49
20.9.3 Potential Impacts with the Greenpoint Converted MTS 20-50
20.10 HAZARDOUS MATERIALS 20-53
20.10.1 Existing Conditions 20-53
20.10.2 Future No-Build Conditions 20-56
20.10.3 Potential Impacts with the Greenpoint Converted MTS 20-56
20.11 WATER QUALITY 20-58
20.11.1 Existing Conditions 20-58
20.11.2 Future No-Build Conditions 20-63
20.11.3 Potential Impacts with the Greenpoint Converted MTS 20-64
20.12 WATERFRONT REVITALIZATION 20-66
20.12.1 Introduction 20-66
20.12.2 Consistency Assessment 20-68
20.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 20-80
20.13.1 Existing Conditions 20-80
20.13.2 Future No-Build Conditions 20-83
20.13.3 Potential Impacts with the Greenpoint Converted MTS 20-83

Table of Contents

20.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 20-86
20.14.1 Introduction....20-86
20.14.2 Existing Conditions....20-86
20.14.3 Future No-Build Conditions....20-96
20.14.4 Potential Impacts with the Greenpoint Converted MTS 20-101
20.15 AIR QUALITY 20-115
20.15.1 Definition of the Study Areas 20-115
20.15.2 Existing Conditions....20-115
20.15.3 Future No-Build Conditions....20-116
20.15.4 Potential Impacts with the Greenpoint Converted MTS 20-116
20.16 ODOR 20-127
20.16.1 Existing Conditions....20-127
20.16.2 Future No-Build Conditions....20-127
20.16.3 Potential Impacts with the Greenpoint Converted MTS 20-127
20.17 NOISE 20-131
20.17.1 Existing Conditions....20-131
20.17.2 Future No-Build Conditions....20-134
20.17.3 Potential Impacts with the Greenpoint Converted MTS 20-135
20.18 COMMERCIAL WASTE TO THE GREENPOINT CONVERTED MTS....20-142
20.18.1 Existing Conditions....20-142
20.18.2 Future No-Build Conditions....20-142
20.18.3 Potential Impacts of Sending Commercial Waste to the Greenpoint Converted MTS 20-142

CHAPTER 21 ENVIRONMENTAL REVIEW: WEST 135TH STREET CONVERTED MTS....21-1

21.1 INTRODUCTION....21-1
21.2 LAND USE, ZONING, AND PUBLIC POLICY 21-2
21.2.1 Existing Conditions....21-2
21.2.2 Future No-Build Conditions....21-10
21.2.3 Potential Impacts with the West 135th Street Converted MTS....21-10
21.3 SOCIOECONOMIC CONDITIONS 21-13
21.3.1 Existing Conditions....21-13
21.3.2 Future No-Build Conditions....21-19
21.3.3 Potential Impacts with the West 135th Street Converted MTS....21-20
21.4 COMMUNITY FACILITIES AND SERVICES 21-22
21.4.1 Existing Conditions....21-22
21.4.2 Future No-Build Conditions....21-22
21.4.3 Potential Impacts with the West 135th Street Converted MTS....21-22
21.5 OPEN SPACE....21-26
21.5.1 Existing Conditions....21-26
21.5.2 Future No-Build Conditions....21-26
21.6 CULTURAL RESOURCES....21-31
21.6.1 Existing Conditions....21-31
21.6.2 Future No-Build Conditions....21-32
21.6.3 Potential Impacts with the West 135th Converted MTS....21-32
21.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS....21-35
21.7.1 Existing Conditions....21-35
21.7.2 Future No-Build Conditions....21-41
21.7.3 Potential Impacts with the West 135th Street Converted MTS....21-47
21.8 NEIGHBORHOOD CHARACTER 21-50
21.8.1 Existing Conditions....21-50
21.8.2 Future No-Build Conditions....21-52
21.8.3 Potential Impacts with the West 135th Street Converted MTS....21-53
21.9 NATURAL RESOURCES 21-54
21.9.1 Existing Conditions....21-54
21.9.2 Future No-Build Conditions....21-60

Table of Contents

21.9.3 Potential Impacts with the West 135th Street Converted MTS 21-61
21.10 HAZARDOUS MATERIALS 21-64
21.10.1 Existing Conditions 21-64
21.10.2 Future No-Build Conditions 21-66
21.10.3 Potential Impacts with the West 135th Street Converted MTS 21-66
21.11 WATER QUALITY 21-67
21.11.1 Existing Conditions 21-67
21.11.2 Future No-Build Conditions 21-70
21.12 WATERFRONT REVITALIZATION PROGRAM 21-74
21.12.1 Introduction 21-74
21.12.2 Consistency Assessment 21-76
21.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 21-88
21.13.1 Existing Conditions 21-88
21.13.2 Future No-Build Conditions 21-91
21.13.3 Potential Impacts with the West 135th Street Converted MTS 21-91
21.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 21-94
21.14.1 Introduction 21-94
21.14.2 Existing Conditions 21-94
21.14.3 Future No-Build Conditions 21-105
21.14.4 Potential Impacts with the West 135th Street Converted MTS 21-111
21.15 AIR QUALITY 21-124
21.15.1 Definition of the Study Areas 21-124
21.15.2 Existing Conditions 21-124
21.15.4 Potential Impacts with the West 135th Street Converted MTS 21-125
21.16 ODOR 21-136
21.16.1 Existing Conditions 21-136
21.16.2 Future No-Build Conditions 21-136
21.16.3 Potential Impacts with the West 135th Street Converted MTS 21-136
21.17 NOISE 21-140
21.17.1 Existing Conditions 21-140
21.17.2 Future No-Build Conditions 21-144
21.17.3 Potential Impacts with the West 135th Street MTS 21-146
21.18 COMMERCIAL WASTE TO THE WEST 135TH STREET CONVERTED MTS 21-160
21.18.1 Existing Conditions 21-160
21.18.2 Future No-Build Conditions 21-160
21.18.3 Potential Impacts of Sending Commercial Waste to the West 135th Street Converted MTS 21-160

CHAPTER 22 ENVIRONMENTAL REVIEW: WEST 59TH STREET CONVERTED MTS 22-1

22.1 INTRODUCTION 22-1
22.2 LAND USE, ZONING, AND PUBLIC POLICY 22-2
22.2.1 Existing Conditions 22-2
22.2.2 Future No-Build Conditions 22-10
22.2.3 Potential Impacts with the West 59th Street Converted MTS 22-12
22.3 SOCIOECONOMIC CONDITIONS 22-14
22.3.1 Existing Conditions 22-14
22.3.2 Future No-Build Conditions 22-20
22.3.3 Potential Impacts with the West 59th Street Converted MTS 22-21
22.4 COMMUNITY FACILITIES AND SERVICES 22-23
22.4.1 Existing Conditions 22-23
22.4.2 Future No-Build Conditions 22-23
22.4.3 Potential Impacts with the West 59th Street Converted MTS 22-23
22.5 OPEN SPACE 22-27
22.5.1 Existing Conditions 22-27
22.5.2 Future No-Build Conditions 22-30
22.5.3 Potential Impacts with the West 59th Street Converted MTS 22-30

Table of Contents

22.6 CULTURAL RESOURCES 22-31
22.6.1 Existing Conditions 22-31
22.6.2 Future No-Build Conditions 22-34
22.6.3 Potential Impacts with the West 59th Street Converted MTS 22-34
22.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 22-35
22.7.1 Existing Conditions 22-35
22.7.2 Future No-Build Conditions 22-43
22.7.3 Potential Impacts with the West 59th Street Converted MTS 22-44
22.8 NEIGHBORHOOD CHARACTER 22-47
22.8.1 Existing Conditions 22-47
22.8.2 Future No-Build Conditions 22-49
22.8.3 Potential Impacts with the West 59th Street Converted MTS 22-49
22.9 NATURAL RESOURCES 22-51
22.9.1 Existing Conditions 22-51
22.9.2 Future No-Build Conditions 22-57
22.9.3 Potential Impacts with the West 59th Street Converted MTS 22-57
22.10 HAZARDOUS MATERIALS 22-60
22.10.1 Existing Conditions 22-60
22.10.2 Future No-Build Conditions 22-61
22.10.3 Potential Impacts with the West 59th Street Converted MTS 22-61
22.11 WATER QUALITY 22-62
22.11.1 Existing Conditions 22-62
22.11.2 Future No-Build Conditions 22-67
22.11.3 Potential Impacts with the West 59th Street Converted MTS 22-67
22.12 WATERFRONT REVITALIZATION PROGRAM 22-69
22.12.1 Introduction 22-69
22.12.2 Consistency Assessment 22-71
22.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 22-84
Existing Conditions 22-84
22.13.2 Future No-Build Conditions 22-87
22.13.3 Potential Impacts with the West 59th Street Converted MTS 22-87
22.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 22-90
22.14.1 Introduction 22-90
22.14.2 Existing Conditions 22-90
22.14.3 Future No-Build Conditions 22-98
22.14.4 Potential Impacts with the West 59th Street Converted MTS 22-103
22.15 AIR QUALITY 22-112
22.15.1 Definition of the Study Areas 22-112
22.15.2 Existing Conditions 22-112
22.15.3 Future No-Build Conditions 22-113
22.15.4 Potential Impacts with the West 59th Street Converted MTS 22-113
22.16 ODOR 22-125
22.16.1 Existing Conditions 22-125
22.16.2 Future No-Build Conditions 22-125
22.16.3 Potential Impacts with the West 59th Street Converted MTS 22-125
22.17 NOISE 22-129
22.17.1 Existing Conditions 22-129
22.17.2 Future No-Build Conditions 22-131
22.17.3 Potential Impacts with the West 59th Street Converted MTS 22-133
22.18 COMMERCIAL WASTE TO THE WEST 59TH STREET CONVERTED MTS 22-142
22.18.1 Existing Conditions 22-142
22.18.2 Future No-Build Conditions 22-142
22.18.3 Potential Impacts of Sending Commercial Waste to the West 59th Street Converted MTS 22-142

Table of Contents

CHAPTER 22A ENVIRONMENTAL REVIEW – 215 VARICK AVENUE SITE 22A-1

22A.1 INTRODUCTION 22A-1
22A.2 LAND USE, ZONING, AND PUBLIC POLICY 22A-1
22A.3 SOCIOECONOMIC CONDITIONS 22A-1
22A.4 COMMUNITY FACILITIES AND SERVICES 22A-1
22A.5 OPEN SPACE 22A-1
22A.6 CULTURAL RESOURCES 22A-1
22A.8 NEIGHBORHOOD CHARACTER 22A-2
22A.9 NATURAL RESOURCES 22A-2
22A.10 HAZARDOUS MATERIALS 22A-2
22A.11 WATER QUALITY 22A-2
22A.12 WATERFRONT REVITALIZATION PROGRAM 22A-2
22A.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 22A-2
22A.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 22A-2
22A.15 AIR QUALITY 22A-3
22A.16 ODOR 22A-3
22A.17 NOISE 22A-3

CHAPTER 22B ENVIRONMENTAL REVIEW – STEEL STYLE SHIPYARD 22B-1

22B.1 INTRODUCTION 22B-1
22B.2 LAND USE, ZONING, AND PUBLIC POLICY 22B-1
22B.3 SOCIOECONOMIC CONDITIONS 22B-1
22B.4 COMMUNITY FACILITIES AND SERVICES 22B-1
22B.5 OPEN SPACE 22B-1
22B.6 CULTURAL RESOURCES 22B-1
22B.8 NEIGHBORHOOD CHARACTER 22B-2
22B.9 NATURAL RESOURCES 22B-2
22B.10 HAZARDOUS MATERIALS 22B-2
22B.11 WATER QUALITY 22B-2
22B.12 WATERFRONT REVITALIZATION PROGRAM 22B-2
22B.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 22B-2
22B.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 22B-2
22B.15 AIR QUALITY 22B-3
22B.16 ODOR 22B-3
22B.17 NOISE 22B-3

CHAPTER 23 ENVIRONMENTAL REVIEW: EXISTING SOUTH BRONX MTS 23-1

23.1 INTRODUCTION 23-1
23.2 LAND USE, ZONING, AND PUBLIC POLICY 23-2
23.3 SOCIOECONOMIC CONDITIONS 23-2
23.4 COMMUNITY FACILITIES AND SERVICES 23-2
23.5 OPEN SPACE 23-2
23.6 CULTURAL RESOURCES 23-2
23.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 23-3
23.8 NEIGHBORHOOD CHARACTER 23-3
23.9 NATURAL RESOURCES 23-3
23.10 HAZARDOUS MATERIALS 23-3
23.11 WATER QUALITY 23-3
23.12 WATERFRONT REVITALIZATION PROGRAM 23-4
23.13 INFRASTRUCTURE. SOLID WASTE AND SANITATION SERVICES, AND ENERGY 23-4
23.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 23-4
23.15 AIR QUALITY 23-4
23.16 ODOR 23-5
23.17 NOISE 23-6
23.17.1 Potential Impacts with the Existing South Bronx MTS 23-8

Table of Contents

CHAPTER 24 ENVIRONMENTAL REVIEW: EXISTING SOUTHWEST BROOKLYN MTS 24-1

24.1 INTRODUCTION 24-1
24.2 LAND USE, ZONING, AND PUBLIC POLICY 24-2
24.3 SOCIOECONOMIC CONDITIONS 24-2
24.4 COMMUNITY FACILITIES AND SERVICES 24-2
24.5 OPEN SPACE 24-2
24.6 CULTURAL RESOURCES 24-3
24.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 24-3
24.8 NEIGHBORHOOD CHARACTER 24-3
24.9 NATURAL RESOURCES 24-3
24.10 HAZARDOUS MATERIALS 24-4
24.11 WATER QUALITY 24-4
24.12 WATERFRONT REVITALIZATION PROGRAM 24-4
24.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 24-4
24.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 24-5
24.15 AIR QUALITY 24-5
24.15.1 Potential Impacts with the Existing Southwest Brooklyn MTS 24-5
24.16 ODOR 24-10
24.17 NOISE 24-11
24.17.1 Existing Conditions 24-11
24.17.2 Future No-Build Conditions 24-11
24.17.3 Potential Impacts with the Existing Southwest Brooklyn MTS 24-13

CHAPTER 25 ENVIRONMENTAL REVIEW: EXISTING GREENPOINT MTS 25-1

25.1 INTRODUCTION 25-1
25.2 LAND USE, ZONING, AND PUBLIC POLICY 25-2
25.3 SOCIOECONOMIC CONDITIONS 25-2
25.4 COMMUNITY FACILITIES AND SERVICES 25-2
25.5 OPEN SPACE 25-2
25.6 CULTURAL RESOURCES 25-2
25.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 25-3
25.8 NEIGHBORHOOD CHARACTER 25-3
25.9 NATURAL RESOURCES 25-3
25.10 HAZARDOUS MATERIALS 25-3
25.11 WATER QUALITY 25-3
25.12 WATERFRONT REVITALIZATION 25-4
25.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 25-4
25.14 TRAFFIC AND TRANSPORTATION 25-4
25.15 AIR QUALITY 25-4
25.16 ODOR 25-5
25.16.1 Potential Impacts with the Existing Greenpoint MTS 25-5
25.17 NOISE 25-7
25.17.1 Existing Conditions 25-7
25.17.2 Future No-Build Conditions 25.7
25.17.3 Potential Impacts with the Existing Greenpoint MTS 25-9

CHAPTER 26 ENVIRONMENTAL REVIEW: EXISTING HAMILTON AVENUE MTS 26-1

26.1 INTRODUCTION 26-1
26.2 LAND USE, ZONING, AND PUBLIC POLICY 26-2
26.3 SOCIOECONOMIC CONDITIONS 26-2
26.4 COMMUNITY FACILITIES AND SERVICES 26-2
26.5 OPEN SPACE 26-2
26.6 CULTURAL RESOURCES 26-3
26.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 26-3

Table of Contents

26.8 NEIGHBORHOOD CHARACTER 26-3
26.9 NATURAL RESOURCES 26-3
26.10 HAZARDOUS MATERIALS 26-4
26.11 WATER QUALITY 26-4
26.12 WATERFRONT REVITALIZATION PROGRAM 26-4
26.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 26-4
26.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 26-5
26.15 AIR QUALITY 26-5
26.16 ODOR 26-5
26.16.1 Potential Impacts with the Existing Hamilton Avenue MTS 26-5
26.17 NOISE 26-8
26.17.1 Existing Conditions 26-8
26.17.2 Future No-Build Conditions 25-8
26.17.3 Potential Impacts with the Existing Hamilton Avenue MTS 26-10

CHAPTER 27 ENVIRONMENTAL REVIEW: EXISTING WEST 135TH STREET MTS 27-1

27.1 INTRODUCTION 27-1
27.2 LAND USE, ZONING, AND PUBLIC POLICY 27-2
27.3 SOCIOECONOMIC CONDITIONS 27-2
27.4 COMMUNITY FACILITIES AND SERVICES 27-2
27.5 OPEN SPACE 27-2
27.6 CULTURAL RESOURCES 27-2
27.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 27-3
27.8 NEIGHBORHOOD CHARACTER 27-3
27.9 NATURAL RESOURCES 27-3
27.10 HAZARDOUS MATERIALS 27-3
27.11 WATER QUALITY 27-4
27.12 WATERFRONT REVITALIZATION PROGRAM 27-4
27.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 27-4
27.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 27-4
27.15 AIR QUALITY 27-5
27.16 ODOR 27-5
27.16.1 Potential Impacts with the Existing West 135th Street MTS 27-5
27.17 NOISE 27-8
27.17.1 Existing Conditions 27-8
27.17.2 Future No-Build Conditions 27-8
27.17.3 Potential Impacts with the Existing West 135th Street MTS 27-10

CHAPTER 28 ENVIRONMENTAL REVIEW: EXISTING WEST 59TH STREET MTS 28-1

28.1 INTRODUCTION 28-1
28.2 LAND USE, ZONING, AND PUBLIC POLICY 28-2
28.3 SOCIOECONOMIC CONDITIONS 28-2
28.4 COMMUNITY FACILITIES AND SERVICES 28-2
28.5 OPEN SPACE 28-2
28.6 CULTURAL RESOURCES 28-3
28.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 28-3
28.8 NEIGHBORHOOD CHARACTER 28-3
28.9 NATURAL RESOURCES 28-3
28.10 HAZARDOUS MATERIALS 28-3
28.11 WATER QUALITY 28-4
28.12 WATERFRONT REVITALIZATION PROGRAM 28-4
28.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 28-4
28.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 28-4
28.15 AIR QUALITY 28-5

28.16 ODOR 28-5
28.16.1 Potential Impacts with the Existing West 59th Street MTS 28-5
28.17 NOISE 28-8
28.17.1 Existing Conditions 28-8
28.17.2 Future No-Build Conditions 25.8
28.17.3 Potential Impacts with the Existing West 59th Street MTS 28-10

CHAPTER 29 ENVIRONMENTAL REVIEW: EXISTING EAST 91ST STREET MTS 29-1

29.1 INTRODUCTION 29-1
29.2 LAND USE, ZONING, AND PUBLIC POLICY 29-2
29.3 SOCIOECONOMIC CONDITIONS 29-2
29.4 COMMUNITY FACILITIES AND SERVICES 29-2
29.5 OPEN SPACE 29-2
29.6 CULTURAL RESOURCES 29-3
29.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 29-3
29.8 NEIGHBORHOOD CHARACTER 29-3
29.9 NATURAL RESOURCES 29-3
29.10 HAZARDOUS MATERIALS 29-3
29.11 WATER QUALITY 29-4
29.12 WATERFRONT REVITALIZATION PROGRAM 29-4
29.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 29-4
29.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 29-4
29.15 AIR QUALITY 29-5
29.16 ODOR 29-5
29.16.1 Potential Impacts with the Existing East 91st Street MTS 29-5
29.17 NOISE 29-7
29.17.1 Existing Conditions 29-7
29.17.2 Future No-Build Conditions 29-7
29.17.3 Potential Impacts with the Existing East 91st Street MTS 29-9

CHAPTER 30 ENVIRONMENTAL REVIEW: EXISTING NORTH SHORE MTS 30-1

30.1 INTRODUCTION 30-1
30.2 LAND USE, ZONING, AND PUBLIC POLICY 30-2
30.3 SOCIOECONOMIC CONDITIONS 30-2
30.4 COMMUNITY FACILITIES AND SERVICES 30-2
30.5 OPEN SPACE 30-2
30.6 CULTURAL RESOURCES 30-2
30.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 30-3
30.8 NEIGHBORHOOD CHARACTER 30-3
30.9 NATURAL RESOURCES 30-3
30.10 HAZARDOUS MATERIALS 30-3
30.11 WATER QUALITY 30-3
30.12 WATERFRONT REVITALIZATION PROGRAM 30-4
30.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 30-4
30.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 30-4
30.15 AIR QUALITY 30-4
30.15.1 Potential Impacts with the Existing North Shore MTS 30-5
30.16 ODOR 30-9
30.16.1 Potential Impacts with the Existing North Shore MTS 30-9
30.17 NOISE 30-11
30.17.1 Existing Conditions 30-11
30.17.2 Future No-Build Conditions 30-11
30.17.3 Potential Impacts with the Existing North Shore MTS 30-13

Table of Contents

CHAPTER 31 MESEROLE STREET TRUCK TO RAIL TS 31-1

31.1 INTRODUCTION 31-1
31.2 LAND USE, ZONING, AND PUBLIC POLICY 31-2
31.2.1 Existing Conditions 31-2
31.2.2 Future No-Build Conditions 31-9
31.2.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-9
31.2.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-9
31.3 SOCIOECONOMIC CONDITIONS 31-10
31.3.1 Existing Conditions 31-10
31.3.2 Future No-Build Conditions 31-12
31.3.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-12
31.3.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-13
31.4 COMMUNITY FACILITIES AND SERVICES 31-14
31.4.1 Existing Conditions 31-14
31.4.2 Future No-Build Conditions 31-16
31.4.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-16
31.4.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-16
31.5 OPEN SPACE 31-17
31.5.1 Existing Conditions 31-17
31.5.2 Future No-Build Conditions 31-18
31.5.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-18
31.5.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-18
31.6 CULTURAL RESOURCES 31-20
31.6.1 Existing Conditions 31-20
31.6.2 Future No-Build Conditions 31-23
31.6.3 Potential Impact with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-24
31.6.4 Potential Impact with the IESI NY Corporation Truck to Rail TS 31-24
31.7 URBAN DESIGN, VISUAL RESOURCES, AND SHADOWS 31-25
31.7.1 Existing Conditions 31-25
31.7.2 Future No-Build Conditions 31-26
31.7.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-26
31.7.4 Potential Impact with the IESI NY Corporation Truck to Rail TS 31-26
31.8 NEIGHBORHOOD CHARACTER 31-31
31.8.1 Existing Conditions 31-31
31.8.2 Future No-Build Conditions 31-31
31.8.3 Potential Impacts with the TransRiver Marketing Company, L.P Truck to Rail TS 31-33
31.8.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-33
31.9 NATURAL RESOURCES 31-34
31.9.1 Existing Conditions 31-34
31.9.2 Future No-Build Conditions 31-38
31.9.3 Potential Impacts with TransRiver Marketing Company, L.P. TS 31-38
31.9.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-39
31.10 HAZARDOUS MATERIALS 31-40
31.10.1 Existing Conditions 31-40
31.10.2 Future No-Build Conditions 31-43
31.10.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-43
31.10.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-43
31.11 WATER QUALITY 31-44
31.12 WATERFRONT REVITALIZATION PROGRAM 31-45
31.12.1 Introduction 31-45
31.12.2 Consistency Assessment for TransRiver Marketing Company, L.P. TS 31-47
31.12.3 Consistency Assessment for IESI NY Corporation TS 31-56
31.13 INFRASTRUCTURE, SOLID WASTE AND SANITATION SERVICES, AND ENERGY 31-57
31.13.1 Existing Conditions 31-57
31.13.2 Future No-Build Conditions 31-60

31.13.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-60
31.13.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-62
31.14 TRAFFIC, PARKING, TRANSIT, AND PEDESTRIANS 31-64
31.14.1 Existing Conditions 31-64
31.14.2 Future No-Build Conditions 31-74
31.14.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS 31-79
31.14.4 Potential Impacts with IESI NY Corporation TS 31-91
31.15 AIR QUALITY 31-92
31.15.1 Definition of Study Areas 31-92
31.15.2 Existing Conditions 31-92
31.15.3 Future No-Build Conditions 31-93
31.15.4 Potential Impacts with the TransRiver Marketing Company, L.P. TS 31-93
31.15.5 Potential Impacts with IESI NY Corporation TS 31-101
31.16 ODOR 31-103
31.16.1 Existing Conditions 31-103
31.16.2 Future No-Build Conditions 31-103
31.16.3 Potential Impacts with the TransRiver Marketing Company, L.P. TS 31-103
31.17 NOISE 31-106
31.17.1 Existing Conditions 31-106
31.17.2 Future No-Build Conditions 31-109
31.17.3 Potential Impacts with the Trans River Marketing Company L.P Truck to Rail TS 31-110
31.17.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS 31-114

CHAPTER 32 CONSTRUCTION IMPACTS 32-1

32.1 INTRODUCTION 32-1
32.2 CONSTRUCTION SCHEDULE 32-1
32.3 CONSTRUCTION ACTIVITIES AND EQUIPMENT 32-2
32.3.1 Construction Activities 32-2
32.3.2 Construction Equipment 32-3
32.4 POTENTIAL CONSTRUCTION IMPACTS 32-4
32.5 CONSTRUCTION IMPACTS TO THE MARINE ENVIRONMENT 32-8
32.5.1 Benthic Communities 32-8
32.5.2 Epibenthic Communities 32-16
32.5.3 Adult Finfish 32-20
32.5.4 Ichthyoplankton 32-22
32.6 OPERATIONAL IMPACTS 32-34
32.6.1 Benthic Communities 32-35
32.6.2 Epibenthic Communities 32-36
32.6.3 Adult Finfish 32-36
32.6.4 Ichthyoplankton 32-37
32.7 OVERVIEW OF MARINE ENVIRONMENTAL IMPACTS 32-38

CHAPTER 33 PUBLIC HEALTH EVALUATION 33-1

33.1 INTRODUCTION 33-1
33.2 AIR POLLUTION 33-2
33.2.1 Air Pollutants of Concern 33-2
33.2.2 Health Effects of Air Pollutants of Concern 33-2
33.2.3 Public Health Assessment of Air Pollutants of Concern 33-13
33.3 PUBLIC HEALTH EVALUATION OF NOISE 33-18
33.4 PUBLIC HEALTH EVALUATION OF ODORS 33-20
33.5 VERMIN CONTROL MEASURES 33-21
33.6 PUBLIC HEALTH CONCERNS OF HOST COMMUNITIES 33-22
33.6.1 Introduction 33-22
33.6.2 Traffic and Respiratory Health 33-22

Table of Contents

33.6.3 Asthma Causes and Triggers 33-27
33.6.4 Asthma Morbidity and Mortality in Host Communities 33-32
33.7 CONCLUSIONS 33-35

CHAPTER 34 EVALUATION OF THE PROPOSED ACTION 34-1

34.1 POTENTIAL IMPACTS OF THE PROPOSED PLAN 34-1

CHAPTER 35 UNAVOIDABLE ADVERSE IMPACTS 35-1

CHAPTER 36 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES 36-1

CHAPTER 37 GROWTH-INDUCING ASPECTS OF THE SWMP 37-1

CHAPTER 38 REFERENCES/BIBLIOGRAPHY 38-1

CHAPTER 39 LIST OF PREPARERS 39-1

39.1 INTRODUCTION 39-1
39.2 PRIME AND SUBCONSULTANT RESPONSIBILITIES 39-1
39.3 PREPARERS 39-2
39.3.1 HDR 39-2
39.3.2 PB 39-4
39.3.3 HydroQual 39-6
39.3.4 EEA 39-7
39.3.5 Urbitran 39-8
39.3.6 Cambridge Environmental 39-9

CHAPTER 40 – RESPONSIVENESS SUMMARY 40-1

40.1 INTRODUCTION 40-1
40.2 COMMENT INDEX 40-3
40.3 COMMENTS AND RESPONSES 40-76
40.3.1 GENERAL COMMENTS 40-76
40.3.2 COMMENTS AND RESPONSES 40-148
40.3.3 INVOLVED AGENCY COMMENTS 40-277
40.3.4 COMMENTS ON COMMERCIAL WASTE STUDY 40-322
40.3.5 TRANSFER, TRANSPORT AND DISPOSAL PLAN 40-400
40.3.6 ENHANCED ENVIRONMENTAL JUSTICE PUBLIC PARTICIPATION PLAN AND INTERIM IMPLEMENTATION REPORT 40-432

Table of Contents

VOLUME III: APPENDICES (ON CD-ROM IN BACK OF VOLUME II)

Appendix A – Agency and Utility Correspondence
Appendix B – Demographic and Socioeconomic Data
Appendix C – Essential Fish Habitat Assessment for DSNY Eight MTSs
Appendix D – Commercial Waste to the MTS Summary Report
Appendix E – Off-site Noise Analysis TNM Results
Appendix F – Phase II Site Investigation Reports
Appendix G – Compendium of Comments
Appendix H – Selected Outreach Material for Enhanced Public Participation
Appendix I – Commercial Waste Management Study
Appendix J – Collection Vehicle Odor Sampling Report
Appendix K – Truck Simulation Summary Report
Appendix L – Equipment-induced Vibrations Memo
Appendix M – Tonnages Memo
Appendix N – Construction Schedules

List of Tables

EXECUTIVE SUMMARY

TABLE ES-1 PROPOSED DRAFT NEW SWMP FACILITIES AND POTENTIAL CONTRACTORS ES-11
TABLE ES-1 (CONTINUED) ES-12
PROPOSED DRAFT NEW SWMP FACILITIES AND POTENTIAL CONTRACTORS ES-12
TABLE ES-2 DRAFT NEW SWMP ALTERNATIVES ES-18
TABLE ES-3 SUMMARY OF AIR QUALITY, TRAFFIC, ODOR AND NOISE ANALYSES FOR PROPOSED ACTION FACILITIES AND CONTRACTS ES-21
TABLE ES-4 SUMMARY OF IMPACT ANALYSES PROPOSED ACTION FACILITIES AND CONTRACTS ES-22

CHAPTER 1

1.3-1 FACILITIES UTILIZED FOR INTERIM EXPORT 1-5
1.3-2 NEW SWMP LONG TERM EXPORT FACILITIES AND POTENTIAL CONTRACTORS 1-10
1.3-3 NEW SWMP LONG TERM EXPORT – POTENTIAL SUPPORT FACILITIES 1-13
1.3-4 NEW SWMP LONG TERM EXPORT – ALTERNATIVE CONSIDERED 1-16
1.3-5 ALTERNATIVES CONSIDERED IN THE 2000 SWMP FEIS 1-20
1.4-1 RECYCLING FACILITIES 1-24
1.6-1 LIST OF PUBLIC REPOSITORIES 1-37

CHAPTER 2

2.1-1 PROPOSED PLAN FACILITIES AND ALTERNATIVES 2-3
2.1-2 EXPECTED CONVERTED MTS AVERAGE THROUGHPUTS 2-11
2.1-3 PRIVATE TRANSFER STATION CAPACITIES 2-13
2.5-1 FEDERAL, CITY AND STATE PERMIT ACTION DETERMINATION 2-209
2.5-2 FEDERAL, CITY AND STATE PERMIT ACTION DETERMINATION 2-211

CHAPTER 3

3.13-1 STORMWATER RUNOFF QUALITY FOR VARIOUS STUDIES 3-33
3.14-1 LOCAL WATERFRONT REVITALIZATION POLICIES AND SUBPOLICIES & THEIR APPLICABILITY 3-37
3.16-1 AVERAGE PEAK DAY FACILITY LOAD ALLOCATION 3-48
3.16-2 PEAK HOUR TRIPS 3-51
3.16-3 ANNUAL GROWTH RATES FOR STUDIED AREAS 3-62
3.16-4 LOS CRITERIA FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS 3-64
3.16-5 SIGNIFICANT IMPACTS FOR SIGNALIZED AND UNSIGNALIZED INTERSECTIONS 3-65
3.17-1 NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS (G/M^3) 3-72
3.17-2 ANNUAL AND SHORT-TERM GUIDELINE CONCENTRATIONS 3-76
3.17-3 BACKGROUND CONCENTRATIONS 3-78
3.17-4 CO BACKGROUND LEVELS 3-79
3.17-5 TUGBOAT EMISSION FACTORS 3-86
3.17-6 CEQR CO SCREENING THRESHOLDS 3-89
3.17-7 THERMAL STATE CONDITIONS FOR LIGHT DUTY GASOLINE TRUCKS 3-95
3.17-8 REASONABLE WORST-CASE METEOROLOGICAL CONDITIONS 3-96
3.17-9 EIGHT-HOUR PERSISTENCE FACTORS 3-97
3.18-1 ODOR CLASSES AND EXAMPLES 3-101
3.18-2 ODOR LIMITS OF STATE AND LOCAL AGENCY JURISDICTIONS 3-103
3.18-3 BACKGROUND SAMPLING RESULTS 3-104
3.18-3 SUMMARY OF ODOR PANEL EVALUATION RESULTS FALL 1998 AND SUMMER 1999 SAMPLING EVENT FROM FAN EXHAUST 3-109
3.18-4 SUMMARY OF ODOR PANEL EVALUATION RESULTS SUMMER 2004 SAMPLING EVENT FROM COLLECTION VEHICLES GARAGE 3-109
3.18-5 SUMMARY OF ODOR PANEL EVALUATION RESULTS FALL 1998 AND SUMMER 1999 SAMPLING EVENT FROM FULL AND EMPTY BARGES 3-110
3.18-6 H_2S SAMPLING RESULTS 3-111
3.18-7 SUMMARY OF EMISSION RATES 3-114

3.18-8 MODELED ODOR EMISSION RATES/FACTORS NEW YORK CITY ZONING REGULATION MAXIMUM PERMITTED SOUND PRESSURE LEVEL (IN DECIBELS) 3-118
3.19-1 NEW YORK CITY ZONING REGULATION MAXIMUM PERMITTEDSOUND PRESSURE LEVEL (IN DECIBELS) 3-129
3.19-2 NEW YORK CITY ZONING REGULATION MAXIMUM PERMITTEDSOUND PRESSURE LEVEL ..... (CURRENT OCTAVE BAND) (IN DECIBELS) 3-129

CHAPTER 4

4.3-1 1990-2000 POPULATION 4-13
4.4-1 COMMUNITY FACILITIES AND SERVICES 4-21
4.5-1 PUBLIC PARKS AND OPEN SPACES 4-24
4.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 4-57
4.11-2 EXISTING PERMITTED DISCHARGES 4-60
4.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 4-60
4.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 4-61
4.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOWS OWLS HEAD WATER POLLUTION CONTROL PLANS FISCAL YEAR 2003 4-80
4.14-1 HCM ANALYSIS - EXISTING CONDITIONS 4-93
4.14-2 HCM ANALYSIS - FUTURE NO-BUILD CONDITIONS 4-98
4.14-3 WEEKDAY AND WEEKEND TRAFFIC 4-108
4.14-4 HCM ANALYSI - 2006 FUTURE BUILD CONDITIONS 4-109
4.14-5 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WITH MITIGATION 4-110
4.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA 4-113
4.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 4-115
4.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS HAMILTON AVENUE CONVERTED MTS 4-117
4.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 4-119
4.15-5 ESTIMATED POLLUTANT CONCENTRATION NEAR SELECTED ROADWAY INTERSECTIONS 4-123
4.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 4-125
4.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 4-127
4.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 4-130
4.17-2 EXISTING NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR 4-131
4.17-3 OFF-SITE NOISE TRAFFIC VOLUME 4-132
4.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (LEQ) 4-134
4.17-5 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS (L_{MAX}) 4-135
4.17-6 ZONING CODE ANALYSIS PREDICTED SPECTRAL NOISE LEVELS (L_{MAX}) AT THE PROPERTY BOUNDARY 4-136
4.17-7 CURRENT NOISE CODE ANALYSIS 4-138
4.17-8 OFF-SITE NOISE SCREENING RESULTS 4-139
4.17-9 OFF-SITE NOISE ANALYSIS TRUCK SIMULATION 20TH STREET WEST OF 4TH AVENUE 4-142
4.17-10 OFF-SITE NOISE ANALYSIS USING TRUCK SIMULATION DATA AND ADJUSTED COLLECTION VEHICLES 20TH STREET WEST OF 4TH AVENUE 4-143

CHAPTER 5

5.4-1 COMMUNITY FACILITIES AND SERVICES 5-15
5.5-1 PUBLIC PARKS AND OPEN SPACES 5-17
5.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 5-50
5.11-2 EXISTING PERMITTED DISCHARGES 5-52
5.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 5-54
5.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 5-55
5.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOW OWLS HEAD WATER POLLUTION CONTROL PLANT FISCAL YEAR 2003 5-75

List of Tables

5.14-1 HCM Analysis- Existing Conditions 5-86
5.14-2 HCM Analysis - Future No-Build Conditions 5-93
5.14-3 Weekday and Weekend Traffic 5-102
5.14-4 HCM Analysis- 2006 Future Build Conditions 5-103
5.14-5 HCM Analysis - 2006 Future Build Conditions with Mitigation 5-104
5.14A-1 HCM Analysis- Existing Conditions 5-119
5.14A-2 HCM Analysis - Future No-Build Conditions 5-129
5.14A-3 Weekday and Weekend Traffic 5-145
5.14A-4 HCM Analysis- 2006 Future Build Conditions 5-146
5.14A-5 HCM Analysis - 2006 Future Build Conditions with Mitigation 5-148

5.15-1 Representative Ambient Air Quality Data 5-151
5.15-2 Emission Sources Considered for On-Site Air Quality Analysis 5-153
5.15-3 Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions 5-155
5.15-4 Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions 5-157
5.15-5 Maximum Estimated Pollutant Concentrations Near Selected Roadway 5-161
5.16-1 Odor Sources Included in Odor Analysis 5-171
5.16-2 Highest Predicted Odor Concentration(s) from On-Site Sources 5-173
5.17-1 Existing Hourly (Monitored) Noise Levels On Site 5-176
5.17-2 Existing Noise Levels (L_{EQ}) at the Nearest Noise-Sensitive Receptor 5-177
5.17-3 Off-Site Noise Traffic Volume 5-178
5.17-4 Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{EQ}) 5-179
5.17-5 Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{MAX}) 5-182
5.17-6 CEQR Analysis Existing and Predicted Noise Levels (L_{EQ}) at the Nearest Noise-Sensitive Receptor 5-186
5.17-7 Zoning Code Analysis Predicted Spectral Noise Levels (L_{MAX}) at the Property Boundary 5-188
5.17-8 Current Noise Code Analysis 5-189
5.17-9 Off-Site Noise Screening Results 5-191
5.17-10 Off-Site Noise Analysis TNM Results 5-193
5.17A-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE(1) SOUTHWEST BROOKLYN CONVERTED MTS 5-195
5.17A-2 OFF-SITE NOISE TRAFFIC VOLUME 5-196
5.17A-3 OFF-SITE NOISE SCREENING RESULTS 5-197
5.17A-4 OFF-SITE NOISE ANALYSIS TNM RESULTS 5-197
5.17A-5 COMBINED ONJ-SITE AND OFF-SITE NOISE ANALYSIS 5-199

CHAPTER 6

6.3-1 1990-2000 Population 6-13
6.4-1 Community Facilities and Services 6-21
6.5-1 Public Parks and Open Spaces 6-27
6.6-1 Cultural Resources in the Study Area 6-32
6.11-1 Existing Water Quality Conditions and Standards 6-64
6.11-2 Existing Permitted Discharges 6-65
6.11-3 Estimated Existing Pollutant Loads and Runoff Flows 6-67
6.11-4 Impervious Area and Estimated Pollutant Loads 6-68
6.13-1 Average Monthly Dry Weather and Average Flows Wards Island Water Pollution Control Plant Fiscal Year 2003 6-88
6.14-1 HCM Analysis- Existing Conditions 6-100
6.14-2 HCM Analysis - No-Build Conditions 6-106
6.14-3 Weekday and Weekend Traffic 6-116
6.14-4 HCM Analysis - 2006 Future Build Conditions 6-117
6.14-5 HCM Analysis - 2006 Future Build Conditions with Mitigation 6-118

List of Tables

6.15-1 Representative Ambient Air Quality Data 6-120
6.15-2 Emission Sources Considered for On-Site Air Quality Analysis 6-122
6.15-3 Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions 6-124
6.15-4 Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air . Pollutants from On-Site Emissions 6-126
6.15-5 Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections 6-130
6.16-1 Odor Sources Included in Odor Analysis 6-133
6.16-2 Highest Predicted Odor Concentration(s) from On-Site Sources 6-136
6.17-1 Existing Hourly (Monitored) Noise Levels On Site 6-140
6.17-2 Existing Noise Levels (Leq) at the Nearest Noise-Sensitive Receptor 6-141
6.17-3 Off-Site Noise Traffic Volume 6-142
6.17-4 Equipment Modeled in the Noise Analysis and Reference Noise Levels (Leq) 6-143
6.17-5 Equipment Modeled in the Noise Analysis and Spectral Noise Levels (Lmax) 6-144
6.17-6 CEQR Analysis Existing and Predicted Noise Levels (Leq) at the Nearest Noise-Sensitive Receptors 6-147
6.17-7 Zoning Code Analysis Predicted Spectral Noise Levels (L_{MAX}) at the Property Boundary 6-149
6.17-8 Current Noise Code analsysis with Refined On-Site Queuing Collection Vehicle Utilization Factors 6-151
6.17-9 Off-Site Noise Screening Results 6-152
6.17-10 Off-Site Noise Analysis Truck Simulation 6-155
6.17-11 Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles - York Avenue between East 90TH Street and East 91ST Street 6-156
6.17-12 combined On-Site and Off-Site Noise Analysis Existing and Predicted Noise Levels (L_{EQ}) at the Nearest Noise-Sensitive Receptor with East 91ST Street Converted MTS 6-158
6.17-13 Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles York Avenue between East 90th Street and East 91st Street 6-158

CHAPTER 7

7.3-1 1990-2000 Population 7-12
7.4-1 Community Facilities and Services 7-19
7.5-1 Public Parks and Open Spaces 7-21
7.11-1 Existing Water Quality Conditions And Standards 7-52
7.11-2 Existing Permitted Discharges 7-53
7.11-3 Estimated Existing Pollutant Loads And Runoff Flows 7-55
7.11-4 Impervious Area And Estimated Pollutant Loads 7-56
7.13-1 Average Monthly Dry Weather and Average Flows Tallman Island WPCP Fiscal Year 2003. 7-74
7.14-1 HCM Analysis- Existing Conditions 7-88
7.14-2 HCM Analysis- Future No-Build Conditions 7-94
7.14-3 Weekday and Weekend Traffic 7-105
7.14-4 HCM Analysis 2006 Future Build Conditions 7-106
7.14-5 HCM Analysis 2006 Future Build Conditions with Mitigation 7-108
7.15-1 Representative Ambient Air Quality Data 7-110
7.15-2 Emission Sources Considered for On-Site Air Quality Analysis 7-112
7.15-3 Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions 7-114
7.15-4 Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions 7-116
7.15-5 Estimated Pollutant Concentration Near Selected Roadway Intersections 7-120
7.16-1 Odor Sources Included in Odor Analysis 7-122
7.16-2 Highest Predicted Odor Concentration(s) from On-Site Sources 7-125
7.17-1 Existing Hourly (Monitored) Noise Levels On Site 7-128

List of Tables

7.17-2 EXISTING NOISE LEVELS (LEQ) AT THE NEAREST NOISE-SENSITIVE RECEPTOR 7-129
7.17-3 OFF-SITE NOISE TRAFFIC VOLUME 7-130
7.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ})....7-132
7.17-5 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS (L_{MAX}) 7-134
7.17-6 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR 7-137
7.17-7 ZONING CODE ANALYSISPREDICTED SPECTRAL NOISE LEVELS (L_{MAX}) AT THE PROPERTY BOUNDARY 7-138
7.17-8 CURRENT NOISE CODE ANALYSIS 7-139
7.17-9 OFF-SITE NOISE SCREENING RESULTS 7-140
7.17-10 OFF-SITE NOISE ANALYSIS TRUCK SIMULATION COLLEGE POINT BOULEVARD - NORTH OF ROOSEVELT AVENUE 7-143
7.17-11 OFF-SITE NOISE ANALYSIS TRUCK SIMULATION COLLEGE POINT BOULEVARD - SOUTH OF SANFORD AVENUE 7-144
7.17-12 OFF-SITE NOISE ANALYSIS USING TRUCK SIMULATION DATA AND ADJUSTED COLLECTION VEHICLES COLLEGE POINT BOULEVARD - NORTH OF ROOSEVELT AVENUE 7-146
7.17-13 OFF-SITE NOISE ANALYSIS USING TRUCK SIMULATION DATA AND ADJUSTED COLLECTION VEHICLES COLLEGE POINT BOULEVARD - SOUTH OF SANFORD AVENUE 7-146

CHAPTER 8

8.3-1 1900-2000 POPULATION 8-5
8.4-1 COMMUNITY FACILITIES AND SERVICES....8-21
8.5-1 PUBLIC PARKS AND OPEN SPACES....8-23
8.6-1 CULTURAL RESOURCES IN THE STUDY AREA 8-30
8.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 8-51
8.11-2 EXISTING PERMITTED DISCHARGES....8-52
8.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 8-54
8.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS....8-55
8.13-1 AVERAGE MONTHLY DRY WEATHER FLOWS OWLS HEAD WATER POLLUTION CONTROL PLANT....8-72
8.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA....8-77
8.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 8-78
8.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 8-81
8.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 8-82
8.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE....8-87
8.17-2 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 8-88
8.17-3 CURRENT NOISE CODE ANALYSIS 8-89

CHAPTER 9

9.15-1 HRY BARGE TO RAIL INTERMODALYARD 9-8
9.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS HRY BARGE TO RAIL INTERMODAL YARD 9-11
9.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE....9-15
9.17-2 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ})....9-16
9.17-3 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR....9-18

CHAPTER 12

12.14-1 HCM ANALYSIS - EXISTING CONDITIONS 12-13
12.14-2 HCM ANALYSIS - FUTURE NO BUILD CONDITIONS EAST 132ND STREET SITE 12-21
12.14-3 WEEKDAY AND WEEKEND TRAFFIC EAST 132ND STREET TRUCK TO RAIL TS 12-33
12.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS.... 12-34
12.14-5 HCM ANALYSIS - 2006 BUILD MITIGATION.... 12-37

List of Tables

12.15-1 Representative Ambient Air Quality Data 12-40
12.15-2 Estimated Pollutant Concentrations Near Selected Roadway Intersections 12-42
12.17-1 Off-Site Noise Traffic Volume 12-46
12.17-2 Off-Site Noise Screening Results 12-47

Chapter 14

14.3-1 1990-2000 Population 14-14
14.4-1 Community Facilities 14-20
14.5-1 Public Parks and Open Spaces 14-23
14.13-1 Average Monthly Dry Weather and Average Flows Newtown Creek Water Pollution Control Plant Fiscal Year 2003 14-63
14.14-1 HCM Analysis - Existing Conditions 14-77
14.14-2 HCM Analysis- Future No-Build Conditions 14-83
14.14-3 Weekday and Weekend Traffic 14-93
14.14-4 HCM Analysis- 2006 Future Build Conditions 14-94
14.14-5 HCM Analysis- 2006 Future Build Conditions with Mitigation 14-95
14.15-1 Representative Ambient Air Quality Data 14-97
14.15-2 Estimated Pollutant Concentrations Near Selected Roadway Intersections 14-99
14.15-3 Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions 14-102
14.15-4 Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions 14-103
14.15-5 Estimated Pollutant Concentrations Near Selected Roadway Intersections 14-107
14.16-1 Odor Sources Included in Odor Analysis 14-109
14.16-2 Highest Predicted Odor Concentration(s) from On-Site Sources 14-112
14.17-1 Existing Hourly (Monitored) Noise Levels On Site 14-115
14.17-2 Off-Site Noise Traffic Volume 14-117
14.17-3 Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{EQ}) 14-118
14.17-4 CEQR Analysis Existing and Predicted Noise Levels (L_{EQ}) at the Nearest Noise-Sensitive Receptor 14-120
14.17-5 Off-Site Noise Screening Results 14-121

Chapter 15

15.14-1 HCM Analysis(1)— Existing Conditions 15-12
15.14-2 HCM Analysis(1)— Future No Build Conditions 15-19
15.14-3 Weekday And Weekend Traffic 15-32
15.14-4 HCM Analysis(1)— Future Build Conditions 15-33
15.15-1 Representative Ambient Air Quality Data 15-38
15.15-2 Emission Sources Considered For On-Site Air Quality Analysis(1) 15-39
15.15-3 Highest Estimated Concentrations Of The Criteria Pollutants From On-Site Emissions
15.15-4 Emission Sources Considered For On-Site Air Quality Analysis(1) 15-42
15.15-5 Highest Estimated Concentrations Of The Criteria Pollutants From On-Site Emissions
15.15-6 Estimated Pollutant Concentrations Near Selected Roadway Intersections 15-47
15.16-1 Odor Sources Included In Odor Analysis 15-48
15.16-2 Highest Predicted Odor Concentration(S) From On-Site Sources 15-51
15.17-1 Existing Hourly (Monitored) Noise Levels On Site(1) 15-56
15.17-2 Off-Site Noise Traffic Volume 15-57
15.17-3 Equipment Modeled In The Noise Analysis And Reference Noise Levels (Leq) 15-58
15.17-4 Off-Site Noise Screening(1) Results 15-59
15.17-5 Equipment Modeled In The Noise Analysis And Reference Noise Levels (Leq) 15-60

List of Tables

CHAPTER 17

17.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 17-14
17.11-2 EXISTING PERMITTED DISCHARGES 17-15
17.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 17-17
17.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 17-18
17.17-1 OFF-SITE NOISE TRAFFIC VOLUME 17-38
17.17-2 OFF-SITE NOISE SCREENING RESULTS 17-39

CHAPTER 18

18.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA 18-7
18.15-2 MAXIMUM ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 18-10
18.17-1 OFF-SITE NOISE TRAFFIC VOLUME 18-12
18.17-2 OFF-SITE NOISE SCREENING RESULTS 18-13

CHAPTER 19

19.4-1 COMMUNITY FACILITIES AND SERVICES 19-20
19.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 19-58
19.11-2 EXISTING PERMITTED DISCHARGES 19-61
19.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 19-61
19.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 19-62
19.13-1 AVERAGE MONTHLY DRY WEATHER FLOWS HUNTS POINT WATER POLLUTION CONTROL .. PLANT FISCAL YEAR 2002 19-81
19.14-1 HCM ANALYSIS - EXISTING CONDITIONS 19-96
19.14-2 HCM ANALYSIS - FUTURE NO-BUILD CONDITIONS 19-111
19.14-3 WEEKDAY AND WEEKEND TRAFFIC 19-131
19.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS 19-132
19.14-5 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WITH MITIGATION 19-137
19.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA 19-140
19.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 19-142
19.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 19-144
19.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR . POLLUTANTS FROM ON-SITE EMISSIONS 19-146
19.15-5 MAXIMUM ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 19-150
19.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 19-153
19.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 19-155
19.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 19-158
19.17-2 OFF-SITE TRAFFIC VOLUME 19-160
19.17-3 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 19-161
19.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS 19-162
19.17-5 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 19-164
19.17-6 ZONING CODE ANALYSIS PREDICTED SPECTRAL NOISE LEVELS (LMAX) AT THE PROPERTY BOUNDARY 19-165
19.17-7 CURRENT NOISE CODE ANALYSIS 19-166
19.17-8 OFF-SITE NOISE SCREENING RESULTS 19-168

CHAPTER 20

20.3-1 1990-2000 POPULATION 20-14
20.4-1 COMMUNITY FACILITIES AND SERVICES 20-22
20.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 20-60

List of Tables

20.11-2 EXISTING PERMITTED DISCHARGES 20-62
20.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 20-63
20.11- 4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 20-65
20.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOWS NEWTOWN CREEK WATER POLLUTION CONTROL PLAN FISCAL YEAR 2003 20-82
20.14-1 HCM ANALYSIS - EXISTING CONDITIONS 20-93
20.14-2 HCM ANALYSIS - FUTURE NO-BUILD CONDITIONS 20-100
20.14-3 WEEKDAY AND WEEKEND TRAFFIC 20-110
20.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS 20-111
20.14-5 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WITH MITIGATION 20-112
20.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA GREENPOINT CONVERTED MTS 20-115
20.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 20-117
20.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 20-119
20.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 20-120
20.15-5 ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 20-125
20.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS GREENPOINT CONVERTED MTS 20-127
20.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 20-130
20.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 20-133
20.17-2 OFF-SITE NOISE TRAFFIC VOLUME 20-134
20.17-3 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 20-135
20.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS (L_{MAX}) 20-136
20.17-5 ZONING CODE ANALYSIS PREDICTED SPECTRAL NOISE LEVELS (L_{MAX}) AT THE PROPERTY BOUNDARY 20-138
20.17-6 CURRENT NOISE CODE ANALYSIS 20-139
20.17-7 OFF-SITE NOISE SCREENING RESULTS 20-141

CHAPTER 21

21.3-1 1990-2000 POPULATION 21-15
21.4-1 COMMUNITY FACILITIES AND SERVICES 21-23
21.5-1 PUBLIC PARKS AND OPEN SPACES 21-27
21.6-1 CULTURAL RESOURCES IN THE STUDY AREA 21-34
21.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 21-69
21.11-2 EXISTING PERMITTED DISCHARGES 21-72
21.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 21-72
21.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 21-73
21.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOWS NORTH RIVER WATER. POLLUTION CONTROL PLANT FISCAL YEAR 2003 21-90
21.14-1 HCM ANALYSIS - EXISTING CONDITIONS WEST 135TH STREET CONVERTED MTS 21-102
21.14-2 HCM ANALYSIS - FUTURE NO-BUILD CONDITIONS 21-109
21.14-3 WEEKDAY AND WEEKEND TRAFFIC 21-120
21.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WEST 135TH STREET CONVERTED MTS 21-121
21.14-5 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WITH MITIGATION 21-123
21.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA 21-124
21.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 21-126
21.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 21-128
21.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 21-130
21.15-5 MAXIMUM ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 21-134
21.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 21-136
21.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 21-139
21.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 21-143
21.17-2 EXISTING NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR 21-144

List of Tables

21.17-3 OFF-SITE NOISE TRAFFIC VOLUME 21-145
21.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 21-147
21.17-5 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS (L_{MAX}) 21-148
21.17-6 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR 21-150
21.17-7 ZONING CODE ANALYSIS PREDICTED SPECTRAL NOISE LEVELS (L_{MAX}) AT THE PROPERTY BOUNDARY 21-151
21.17-8 CURRENT NOISE CODE ANALYSIS 21-152
21.17-9 OFF-SITE NOISE SCREENING RESULTS 21-153
21.17-10 OFF-SITE NOISE ANALYSIS TRUCK SIMULATION WEST 133RD STREET BETWEEN BROADWAY AND 12TH STREET 21-156
21.17-11 OFF-SITE NOISE ANALYSIS TRUCK SIMULATION WEST 132ND STREET BETWEEN ....BROADWAY AND 12TH STREET 21-156
21.17-12 COMBINED ON-SITE AND OFF-SITE NOISE ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE WEST 132ND STREET APARTMENT BUILDING NOISE-SENSITIVE RECEPTOR 21-158
21.17-13 COMBINED ON-SUITE AND OFF-SITE NOISE ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE WEST 133RD STREET APARTMENT BUILDING NOISE-SENSITIVE RECEPTOR 21-159

CHAPTER 22

22.3-1 1990-2000 POPULATION 22-16
22.4-1 COMMUNITY FACILITIES AND SERVICES 22-24
22.5-1 PUBLIC PARKS AND OPEN SPACES 22-27
22.6-1 CULTURAL RESOURCES IN THE STUDY AREA 22-34
22.11-1 EXISTING WATER QUALITY CONDITIONS AND STANDARDS 22-64
22.11-2 EXISTING PERMITTED DISCHARGES 22-65
22.11-3 ESTIMATED EXISTING POLLUTANT LOADS AND RUNOFF FLOWS 22-67
22.11-4 IMPERVIOUS AREA AND ESTIMATED POLLUTANT LOADS 22-68
22.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOWS NORTH RIVER WATER . POLLUTION CONTROL PLANT FISCAL YEAR 2003 22-86
22.14-1 HCM ANALYSIS - EXISTING CONDITIONS 22-97
22.14-2 HCM ANALYSIS- FUTURE NO-BUILD CONDITIONS 22-102
22.14-3 WEEKDAY AND WEEKEND TRAFFIC 22-110
22.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WEST 59TH STREET CONVERTED MTS 22-110
22.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA 22-112
22.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 22-114
22.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 22-117
22.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS MAXIMUM ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 22-119
22.15-5 MAXIMUM ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS 22-123
22.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 22-125
22.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 22-128
22.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 22-132
22.17-2 OFF-SITE NOISE TRAFFIC VOLUME 22-133
22.17-3 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 22-134
22.17-4 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND SPECTRAL NOISE LEVELS (L_{MAX}) 22-135
22.17-5 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS (L_{EQ}) AT THE NEAREST NOISE-SENSITIVE RECEPTOR WITH REFINED ON-SITE QUEUING COLLECTION VEHICLE UTILIZATION FACTOR 22-138
22.17-6 ZONING CODE ANALYSIS PREDICTED SPECTRAL NOISE LEVELS (L_{MAX}) AT THE PROPERTY BOUNDARY 22-139
22.17-7 CURRENT NOISE CODE ANALYSIS 22-140
22.17-8 OFF-SITE NOISE SCREENING RESULTS 22-141

List of Tables

CHAPTER 23

23.16-1 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 23-5
23.16-2 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 23-5
23.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 23-9
23.17-2 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 23-10
23.17-3 CURRENT NOISE CODE ANALYSIS 23-11

CHAPTER 24

24.15-1 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 24-6
24.15-2 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 24-7
24.15-3 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 24-8
24.16-1 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 24-10
24.16-2 EXISTING SOUTHWEST BROOKLYN MTS 24-10
24.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 24-13
24.17-2 EXISTING NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 24-15
24.17-3 CURRENT NOISE ANALYSIS 24-17

CHAPTER 25

25.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS EXISTING GREENPOINT MTS 25-5
25.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 25-6
25.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 5-10
25.17-2 CURRENT NOISE CODE ANALYSIS 25-11

CHAPTER 26

26.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 26-6
26.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 26-7
26.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 26-11
26.17-2 CURRENT NOISE CODE ANALYSIS 26-12

CHAPTER 27

27.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 27-6
27.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 27-7
27.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 27-10
27.17-2 EXISTING NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 27-12
27.17-3 CURRENT NOISE CODE ANALYSIS 27-13

CHAPTER 28

28.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 28-6
28.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SSITE SOURCES 28-7
28.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 28-10
28.17-2 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 28-12
28.17-3 CURRENT NOISE CODE ANALYSIS 28-13

List of Tables

CHAPTER 29

29.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 29-5
29.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SSITE SOURCES 29-6
29.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS 29-9
29.17-2 CEQR ANALYSIS EXISTING AND PREDICTED NOISE LEVELS AT THE NEAREST NOISE-SENSITIVE RECEPTOR 29-11
29.17-3 CURRENT NOISE CODE ANALYSIS 29-13

CHAPTER 30

30.15-1 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 30-5
30.15-2 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS 30-7
30.15-3 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS 30-8
30.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 30-9
30.16- 2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 30-10
30.17-1 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVELS (L_{EQ}) 30-13
30.17-3 CURRENT NOISE CODE ANALYSIS 30-15

CHAPTER 31

31.4-1 COMMUNITY FACILITIES 31-14
31.13-1 AVERAGE MONTHLY DRY WEATHER AND AVERAGE FLOWS NEWTOWN CREEK WATER POLLUTION CONTROL PLANT FISCAL YEAR 2003 31-59
31.14-1 HCM ANALYSIS - EXISTING CONDITIONS 31-72
31.14-2 HCM ANALYSIS- FUTURE NO-BUILD CONDITIONS 31-78
31.14-3 WEEKDAY AND WEEKEND TRAFFIC 31-88
31.14-4 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS 31-89
31.14-5 HCM ANALYSIS - 2006 FUTURE BUILD CONDITIONS WITH MITIGATION 31-90
31.15-1 REPRESENTATIVE AMBIENT AIR QUALITY DATA TRANSRIVER MARKETING COMPANY, L.P. TS 31-92
31.15-2 EMISSION SOURCES CONSIDERED FOR ON-SITE AIR QUALITY ANALYSIS 31-94
31.15-3 HIGHEST ESTIMATED CONCENTRATIONS OF THE CRITERIA POLLUTANTS FROM ON-SITE EMISSIONS TRANSRIVER MARKETING COMPANY, L.P. TS 31-96
31.15-4 HIGHEST ESTIMATED NON-CANCER HAZARD INDEX AND CANCER RISK OF TOXIC AIR POLLUTANTS FROM ON-SITE EMISSIONS TRANSRIVER MARKETING COMPANY, L.P. TS 31-98
31.15-5 ESTIMATED POLLUTANT CONCENTRATIONS NEAR SELECTED ROADWAY INTERSECTIONS TRANSRIVER MARKETING COMPANY, L.P. TS 31-102
31.16-1 ODOR SOURCES INCLUDED IN ODOR ANALYSIS 31-103
31.16-2 HIGHEST PREDICTED ODOR CONCENTRATION(S) FROM ON-SITE SOURCES 31-105
31.17-1 EXISTING HOURLY (MONITORED) NOISE LEVELS ON SITE 31-108
31.17-2 OFF-SITE NOISE TRAFFIC VOLUME 31-110
31.17-3 EQUIPMENT MODELED IN THE NOISE ANALYSIS AND REFERENCE NOISE LEVEL (L_{EQ}) TRANSRIVER MARKETING COMPANY L.P. TRUCK TO RAIL TS 31-111
31.17-4 OFF-SITE NOISE SCREENING RESULTS TRANSRIVER MARKETING COMPANY L.P. TRUCK TO RAIL TS 31-113

CHAPTER 32

32.5-1 POTENTIAL IMPACTS TO MARINE COMMUNITIES AT CONVERTED MTSS 32-9
32.5-2 ORGANISMS COLLECTED IN BENTHIC GRABS AT THE PROPOSED CONVERTED MTSS IN THE PROPOSED ACTION 32-10
32.5-3 SHANNON-WEAVER INDEX AND RANK OF BENTHIC IMPACT AT CONVERTED MTSS 32-14
32.5-4 CONSTRUCTION ACTIVITY AND POTENTIAL IMPACTS 32-15

List of Tables

32.5-5 DEGREE OF EXPECTED BENTHIC IMPACTS 32-15
32.5-6 EPIBENTHIC ORGANISMS COLLECTED AT EACH CONVERTED MTS APRIL 2003 – FEBRUARY 2004 32-17
32.5-7 ADULT FINFISH SENSITIVITY TO SUSPENDED PARTICLES AND NOISE ASSOCIATED WITH MARINE CONSTRUCTION 32-21
32.5-8 NUMBER OF ADULT FINFISH COLLECTED AT EACH CONVERTED MTS JANUARY – DECEMBER 2003 32-23
32.5-9 LIFE HISTORY CHARACTERISTICS OF FINFISH FOUND IN THE CENTRAL PART OF THE MID-ATLANTIC BIGHT 32-25
32.5-10 FINFISH LARVAE COLLECTED AT PROPOSED CONVERTED MTS 33-30
32.6-1 EXISTING AND PROPOSED PLATFORM COVERAGE AT PROPOSED CONVERTED MTS 33-34

CHAPTER 33

33.2-1 NYSDEC TOXICITY BENCHMARKS FOR HAPS 33-16
33.6-1 ASTHMA PREVALENCE AMONG CHILDREN 4 TO 5 YEARS OLD 33-33
33.6-2 ASTHMA PREVALENCE AMONG ADULTS 33-33
33.6-3 HOSPITALIZATION RATES FOR SELECTED ZIP CODES 33-34

CHAPTER 34

34.1-1 TONNAGE ALLOCATION FOR LONG-TERM EXPORT OPTIONS 34-2
34.1-2 PROPOSED ACTION LONG-TERM EXPORT ESTIMATED ANNUAL COSTS FOR WASTE TRANSFER, TRANSPORTATION AND DISPOSAL BY SCENARI 34-4
34.3-1 TONNAGE ALLOCATION FOR LONG-TERM EXPORT OPTIONS A THROUGH D 34-10
34.4-1 PROPOSED ACTION LONG-TERM EXPORT ESTIMATED ANNUAL COSTS FOR WASTE TRANSFER, TRANSPORTATION AND DISPOSAL BY OPTION 34-13

CHAPTER 40

40.3-1 CONVERTED MTSS DSNY AND COMMERCIAL WASTE ANTICIPATED CAPACITY REQUIREMENTS AND CAPACITIES EVALUATED IN THE NEW SWMP DEIS 40-78
40.3-2 CONVERTED MTSS DSNY-PROPOSED WEEKLY AND DAILY PERMIT LIMITS 40-79
40.3-3 CONVERTED MTS DSNY-PROPOSED EMERGENCY PERMIT LIMITS 40-80
40.3-4 PRIVATE VENDOR ROUND TRIP TRANSFER STATIONS TRACTOR TRAILER MILEAGE TO PORTAL OF EGRESS 40-299
40.3-5 CONVERTED MTS AVERAGE THROUGHPUTS(1) 40-402
40.3-6 PHASING OF COMMERCIAL WASTE INTO CONVERTED MTS SYSTEM WASTE STREAMAVERAGE DAILY TONNAGE 40-403
40.3-7 PHASING OF COMMERCIAL WASTE INTO THE CONVERTED MTS SYSTEM DAILY CONTAINERS REQUIREMENTS 40-403
40.3-8 IN-CITY HARBOR BARGE REQUIREMENTS PHASE 1 40-405
40.3-9 IN-CITY HARBOR BARGE REQUIREMENTS PHASE 2 40-405
40.3-10 IN-CITY HARBOR BARGE REQUIREMENTS PHASE 3 40-406
40.3-11 IN-CITY HARBOR BARGE REQUIREMENTS PHASE 4 40-406
40.3-12 MAXIMUM AMOUNT OF RAILCARS AND CONTAINERS REQUIRED FOR SYSTEM 40-407
40.3-13 MAXIMUM AMOUNT OF OCEAN-GOING BARGES AND CONTAINERS REQUIRED FOR SYSTEM 40-409
40.3-16 PUBLIC SCOPING MEETING LOCATIONS 40-438
40.3-17 DEIS HEARING LOCATIONS 40-441
40.3-18 INFORMATIONAL MEETING/ULURP HEARING LOCATIONS 40-443

List of Figures

EXECUTIVE SUMMARY

FIGURE ES-1 LOCATIONS OF DRAFT NEW SWMP LONG TERM EXPORT FACILITIES AND WASTESHEDS SERVED....ES-7

CHAPTER 1

1.3-1 LONG TERM EXPORT FACILITIES AND WASTESHEDS 1-8

CHAPTER 2

2.2.1-1 SITE LOCATION – HAMILTON AVENUE CONVERTED MTS 2-18
2.2.1-2 FACILITY FOOTPRINT – HAMILTON AVENUE CONVERTED MTS 2-21
2.2.1-3 ARTIST'S RENDERING - HAMILTON AVENUE CONVERTED MTS 2-23
2.2.1-4 PLAN VIEW - HAMILTON AVENUE CONVERTED MTS 2-25
2.2.1-5 BUILDING SECTION VIEW - HAMILTON AVENUE CONVERTED MTS 2-26
2.2.1-6 GANTRY SECTION VIEW - HAMILTON AVENUE CONVERTED MTS 2-27
2.2.2-1 SITE LOCATION – SOUTHWEST BROOKLYN CONVERTED MTS 2-30
2.2.2-2 FACILITY FOOTPRINT – SOUTHWEST BROOKLYN CONVERTED MTS 2-33
2.2.2-3 ARTIST'S RENDERING - SOUTHWEST BROOKLYN CONVERTED MTS 2-35
2.2.2-4 PLAN VIEW - SOUTHWEST BROOKLYN CONVERTED MTS 2-37
2.2.2-5 BUILDING SECTION VIEW - SOUTHWEST BROOKLYN CONVERTED MTS 2-38
2.2.2-6 GANTRY SECTION VIEW - SOUTHWEST BROOKLYN CONVERTED MTS 2-39
2.2.3-1 SITE LOCATION – EAST 91ST STREET CONVERTED MTS 2-42
2.2.3-2 FACILITY FOOTPRINT – EAST 91ST STREET CONVERTED MTS 2-47
2.2.3-3 ARTIST'S RENDERING- EAST 91ST STREET CONVERTED MTS 2-49
2.2.3-4 PLAN VIEW - EAST 91ST STREET CONVERTED MTS 2-50
2.2.3-5 BUILDING SECTIONS VIEW - EAST 91ST STREET CONVERTED MTS 2-51
2.2.3-5 BUILDING SECTIONS VIEW - EAST 91ST STREET CONVERTED MTS 2-52
2.2.3-6 GANTRY SECTION VIEW - EAST 91ST STREET CONVERTED MTS 2-53
2.2.3-7 RAMP SECTION VIEW - EAST 91ST STREET CONVERTED MTS 2-54
2.2.4-1 SITE LOCATION – NORTH SHORE CONVERTED MTS 2-56
2.2.4-2 FACILITY FOOTPRINT – NORTH SHORE CONVERTED MTS 2-61
2.2.4-3 ARTIST'S RENDERING - NORTH SHORE CONVERTED MTS 2-63
2.2.4-4 PLAN VIEW - NORTH SHORE CONVERTED MTS 2-65
2.2.4-5 BUILDING SECTION VIEW - NORTH SHORE CONVERTED MTS 2-66
2.2.4-6 GANTRY CRANE VIEW - NORTH SHORE CONVERTED MTS 2-67
2.2.5-1 SITE LOCATION - 52ND STREET BARGE STAGING AREA, BROOKLYN 2-69
2.2.5-2 FACILITY FOOTPRINT – 52ND STREET BARGE STAGING AREA 2-73
2.2.5-3 PLAN VIEW – 52ND STREET BARGE STAGING AREA 2-75
2.2.6-1 PLAN VIEW - LOADING AREA - HRY BARGE TO RAIL INTERMODAL YARD 2-76
2.2.6-1 PLAN VIEW - LOADING AREA - HRY BARGE TO RAIL INTERMODAL YARD 2-77
2.2.7-1 SITE LOCATION - 65TH STREET INTERMODAL YARD, BROOKLYN 2-79
2.2.7-2 FACILITY FOOTPRINT - 65TH STREET INTERMODAL YARD, BROOKLYN 2-81
2.2.7-3 PLAN AND SECTION VIEW - 65TH STREET INTERMODAL YARD, BROOKLYN 2-83
2.2.8-1 SITE LOCATION - HARLEM RIVER YARD SITE 2-85
2.2.8-2 FACILITY FOOTPRINT – HARLEM RIVER YARD SITE 2-87
2.2.8-3 PLAN VIEW – HARLEM RIVER YARD 2-91
2.2.9-1 SITE LOCATION - EAST 132ND STREET SITE 2-93
2.2.9-2 FACILITY FOOTPRINT - EAST 132ND STREET SITE 2-95
2.2.9-3 PLAN VIEW - EAST 132ND STREET SITE 2-97
2.2.9-4 SITE LOCATION OAK POINT RAIL YARD 2-99
2.2.10-1 SITE LOCATION – SCOTT AVENUE TRANSFER STATION 2-102
2.2.10-2 FACILITY FOOTPRINT – SCOTT AVENUE TRANSFER STATION 2-103
2.2.10-3 PLAN VIEW – SCOTT AVENUE TRUCK TO BARGE TS 2-107
2.2.11-1 SITE LOCATION – SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TS 2-110

List of Figures

2.2.11-2 Facility Footprint Scott Avenue/Scholes Street Truck To Rail Ts 2-113
2.2.11-3 Plan View - Scott Avenue/Scholes Street Truck To Rail Ts 2-115
2.2.12-1 Site Location - Review Avenue Site 2-117
2.2.12-2 Facility Footprint Review Avenue Truck To Barge Ts 2-119
2.2.12-3 Plan And Section View - Review Avenue Truck To Barge Ts 2-121
2.2.12-4 Facility Footprint Review Avenue Truck To Rail Ts 2-125
2.2.12-5 Site Location - Maspeth Rail Yard 2-128
2.3.1-1 Site Location – 30th Street Pier At Sbmt 2-133
2.3.1-2 Plan View – 30th Street Pier At Smbt 2-134
2.3.2.-1 Site Location – Gansevoort Recyclables Acceptance Facility 2-137
2.4.1-1 Site Location – South Bronx Converted Mts 2-140
2.4.1-2 Facility Footprint – South Bronx Converted Mts 2-143
2.4.1-3 Plan And Section View - South Bronx Converted Mts 2-145
2.4.2-1 Site Location – Greenpoint Converted Mts 2-147
2.4.2-2 Facility Footprint – Greenpoint Converted Mts 2-151
2.4.2-3 Plan And Section View - Greenpoint Converted Mts 2-153
2.4.3-1 Site Location – West 135th Street Converted Mts 2-156
2.4.3-2 Facility Footprint – West 135th Street Converted Mts 2-159
2.4.3-3 Plan And Section View - West 135th Street Converted Mts 2-161
2.4.4-1 Site Location – West 59th Street Converted Mts 2-163
2.4.4-2 Facility Footprint – West 59th Street Converted Mts 2-167
2.4.4-3 Plan And Section View - West 59th Street Converted Mts 2-169
2.4.13-1 Site Location – Meserole Street Truck To Rail Ts 2-188
2.4.13-2 Facility Footprint – Meserole Street Truck To Rail Transfer Station 2-191
2.4.13-3 Plan And Section View - Meserole Street Truck To Rail Transfer Station 2-193
2.4.14 -1 Site Location – 215 Varick Avenue Transfer Station 2-196
2.4.14 -2 Facility Footprint – 215 Varick Avenue Transfer Station 2-197
2.4.15-1 Site Location – Steel Style Shipyard 2-204
2.4.15-2 Facility Footprint – Steel Style Shipyard 2-205

CHAPTER 3

3.16-1 Wastesheds For Converted Mtss 3-49
3.16-2 Nycdot Designated Truck Routes - Bronx 3-54
3.16-3 Nycdot Designated Truck Routes - Brooklyn 3-55
3.16-4 Nycdot Designated Truck Routes – Manhattan 3-56
3.16-5 Nycdot Designated Truck Routes - Queens 3-57

CHAPTER 4

4.2-1 Land Use In The Primary Study Area - Hamilton Avenue Converted Mts 4-3
4.2-2 Land Use In The Secondary Study Area - Hamilton Avenue Converted Mts 4-4
4.2-3 Zoning - Hamilton Avenue Converted Mts 4-6
4.2-4 Planned Development Sites - Hamilton Avenue Converted Mts 4-9
4.3-1 Census Tracts - Hamilton Avenue Converted Mts 4-12
4.4-1 Community Facilities And Services - Hamilton Avenue Converted Mts 4-23
4.5-1 Open Space/Parkland - Hamilton Avenue Converted Mts 4-25
4.6-1 Cultural Resources - Hamilton Avenue Converted Mts 4-29
4.7-1 Urban Design And Visual Quality- Hamilton Avenue Converted Mts 4-31
4.7-2 Urban Design And Visual Quality- Hamilton Avenue Converted Mts 4-31
4.7-3 Urban Design And Visual Quality- Hamilton Avenue Converted Mts 4-33
4.7-4 Urban Design And Visual Quality- Hamilton Avenue Converted Mts 4-33
4.7-5 Urban Design And Visual Quality- Hamilton Avenue Converted Mts 4-35
4.8-1 Neighborhood Location - Hamilton Avenue Converted Mts 4-40
4.9-1 Floodplains - Hamilton Avenue Converted Mts 4-43
4.9-2 Wetlands - Hamilton Avenue Converted Mts 4-45

List of Figures

4.10-1 HAZARDOUS MATERIALS SITES - HAMILTON AVENUE CONVERTED MTS 4-52
4.11-1 AMBIENT WATER QUALITY STATIONS - HAMILTON AVENUE CONVERTED MTS 4-56
4.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - HAMILTON AVENUE CONVERTED MTS 4-59
4.12-1 COASTAL ZONE BOUNDARY - HAMILTON AVENUE CONVERTED MTS 4-64
4.13-1 EXISTING WPCP DRAINAGE AREA - HAMILTON AVENUE CONVERTED MTS 4-79
4.14-1 TRAFFIC ANALYSIS STUDY AREA - HAMILTON AVENUE CONVERTED MTS 4-85
4.14-2 DSNY COLLECTION VEHICLE ROUTES - HAMILTON AVENUE CONVERTED MTS 4-87
4.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - HAMILTON AVENUE CONVERTED MTS 4-89
4.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - HAMILTON AVENUE CONVERTED MTS 4-90
4.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - HAMILTON AVENUE CONVERTED MTS 4-91
4.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - HAMILTON AVENUE CONVERTED MTS 4-95
4.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - HAMILTON AVENUE CONVERTED MTS 4-96
4.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - HAMILTON AVENUE CONVERTED MTS 4-97
4.14-9 TRUCK TRIPS PER HOUR 4-101
4.14-10 2006 FUTURE BUILD TRAFFIC VOLUMES - AM PEAK - HAMILTON AVENUE CONVERTED MTS 4-102
4.14-11 2006 FUTURE BUILD TRAFFIC VOLUMES - FACILITY PEAK - HAMILTON AVENUE CONVERTED MTS ... 4-103
4.14-12 2006 FUTURE BUILD TRAFFIC VOLUMES - PM PEAK - HAMILTON AVENUE CONVERTED MTS 4-104
4.14-13 2006 NET TRAFFIC - AM PEAK - HAMILTON AVENUE CONVERTED MTS 4-105
4.14-14 2006 NET TRAFFIC - FACILITY PEAK - HAMILTON AVENUE CONVERTED MTS 4-106
4.14-15 2006 NET TRAFFIC - PM PEAK - HAMILTON AVENUE CONVERTED MTS 4-107
4.15-1 ON-SITE AIR QUALITY ANALYSIS - HAMILTON AVENUE CONVERTED MTS 4-116
4.15-2 OFF-SITE AIR QUALITY INTERSECTIONS STUDIED - HAMILTON AVENUE CONVERTED MTS 4-121
4.16-1 POTENTIAL ODOR SOURCES - HAMILTON AVENUE CONVERTED MTS 4-126
4.17-1 NOISE SOURCES AND RECEPTORS - HAMILTON AVENUE CONVERTED MTS 4-129
4.17-2 MOBILE NOISE ANALYSIS INTERSECTIONS ANALYZED - HAMILTON AVENUE CONVERTED MTS 4-141

CHAPTER 5

5.2-1 LAND USE IN THE PRIMARY STUDY AREA - SOUTHWEST BROOKLYN CONVERTED MTS 5-3
5.2-2 LAND USE IN THE SECONDARY STUDY AREA - SOUTHWEST BROOKLYN CONVERTED MTS 5-4
5.2-3 ZONING - SOUTHWEST BROOKLYN CONVERTED MTS 5-7
5.3-1 CENSUS TRACTS - SOUTHWEST BROOKLYN CONVERTED MTS CENSUS TRACTS 5-11
5.4-1 COMMUNITY FACILITIES AND SERVICES - SOUTHWEST BROOKLYN CONVERTED MTS 5-16
5.5-1 OPEN SPACE/PARKLAND - SOUTHWEST BROOKLYN CONVERTED MTS 5-18
5.7-1 URBAN DESIGN AND VISUAL QUALITY - SOUTHWEST BROOKLYN CONVERTED MTS 5-25
5.7-2 URBAN DESIGN AND VISUAL QUALITY - SOUTHWEST BROOKLYN CONVERTED MTS 5-25
5.7-3 URBAN DESIGN AND VISUAL QUALITY - SOUTHWEST BROOKLYN CONVERTED MTS 5-27
5.7-4 URBAN DESIGN AND VISUAL QUALITY - SOUTHWEST BROOKLYN CONVERTED MTS 5-27
5.7-5 URBAN DESIGN AND VISUAL QUALITY - SOUTHWEST BROOKLYN CONVERTED MTS 5-29
5.8-1 NEIGHBORHOOD LOCATION- SOUTHWEST BROOKLYN CONVERTED MTS 5-33
5.9-1 FLOODPLAINS - SOUTHWEST BROOKLYN CONVERTED MTS 5-37
5.9-2 WETLANDS - SOUTHWEST BROOKLYN CONVERTED MTS 5-38
5.10-1 HAZARDOUS MATERIALS SITES - SOUTHWEST BROOKLYN CONVERTED MTS 5-44
5.11-1 AMBIENT WATER QUALITY STATIONS - SOUTHWEST BROOKLYN CONVERTED MTS 5-49
5.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - SOUTHWEST BROOKLYN CONVERTED MTS 5-53
5.12-1 COASTAL ZONE BOUNDARY - SOUTHWEST BROOKLYN CONVERTED MTS 5-57
5.13-1 EXISTING WPCP DRAINAGE AREA - SOUTHWEST BROOKLYN CONVERTED MTS 5-74
5.14-1 TRAFFIC ANALYSIS STUDY AREA - SOUTHWEST BROOKLYN CONVERTED MTS 5-79
5.14-2 DSNY COLLECTION VEHICLE ROUTES - SOUTHWEST BROOKLYN CONVERTED MTS 5-81
5.14-3 EXISTING TRAFFIC ROUTES –AM PEAK SOUTHWEST BROOKLYN CONVERTED MTS 5-81
5.14-4 EXISTING ROUTES - EXISTING TRAFFIC ROUTES –FACILITY PEAK SOUTHWESTBROOKLYN CONVERTED MTS 5-82
5.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-85
5.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-90
5.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - SOUTHWEST BROOKLYN CONVERTEDMTS .. 5-91
5.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-92

List of Figures

5.14-9 TRUCK TRIPS PER HOUR 5-95
5.14-10 2006 BUILD TRAFFIC VOLUMES - AM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-96
5-14.11 2006 FUTURE BUILD TRAFFIC VOLUMES - FACILITY PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-97
5.14-12 2006 FUTURE BUILD TRAFFIC VOLUMES - PM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-98
5.14-13 2006 NET TRAFFIC - AM PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-99
5.14-14 2006 NET TRAFFIC - FACILITY PEAK - SOUTHWEST BROOKLYN CONVERTED MTS 5-100
5.14A-1 TRAFFIC ANALYSIS STUDY AREA – SOUTHWEST BROOKLYN CONVERTED MTS 5-108
5.14A-2 EXISTING AND PROPOSED SANITATION TRUCK ROUTES – SOUTHWEST BROOKLYN CONVERTED MTS 5-111
5.14A-3 EXISTING TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5113
5.14A-4 EXISTING TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-114
5.14A-5 EXISTING TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-115
5.14A-6 EXISTING TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-116
5.14A-7 EXISTING TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-117
5.14A-8 EXISTING TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-118
5.14A-9 FUTURE NO-BUILD TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-123
5.14A-10 FUTURE NO-BUILD TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-124
5.14A-11 FUTURE NO-BUILD TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS ... 5-125
5.14A-12 FUTURE NO-BUILD TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS ... 5-126
5.14A-13 FUTURE NO-BUILD TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-127
5.14A-14 FUTURE NO-BUILD TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-128
5.14A-15 2006 BUILD TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-133
5.14A-16 2006 BUILD TRAFFIC VOLUMES – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-134
5.14A-17 2006 BUILD TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-135
5.14A-18 2006 BUILD TRAFFIC VOLUMES – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-136
5.14A-19 2006 BUILD TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-137
5.14A-20 2006 BUILD TRAFFIC VOLUMES – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-138
5.14A-21 2006 NET TRAFFIC – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-139
5.14A-22 2006 NET TRAFFIC – AM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-140
5.14A-23 2006 NET TRAFFIC – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-141
5.14A-24 2006 NET TRAFFIC – FACILITY PEAK – SOUTHWEST BROOKLYN CONVERTED MTS..... 5-142
5.14A-25 2006 NET TRAFFIC – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-143
5.14A-26 2006 NET TRAFFIC – PM PEAK – SOUTHWEST BROOKLYN CONVERTED MTS 5-144
5.15-1 ON-SITE AIR QUALITY ANALYSIS - SOUTHWEST BROOKLYN CONVERTED MTS 5-154
5.15-2 OFF-SITE AIR QUALITY INTERSECTIONS STUDIED - SOUTHWEST BROOKLYN CONVERTED MTS 5-160
5.15A-1 ON-SITE AIR QUALITY ANALYSIS – SOUTHWEST BROOKLYN CONVERTED MTS 5-167
5.16-1 POTENTIAL ODOR SOURCES - SOUTHWEST BROOKLYN CONVERTED MTS 5-172
5.17-1 NOISE SOURCES RECEPTORS - SOUTHWEST BROOKLYN CONVERTED MTS 5-175
5.17-2 MOBILE NOISE ANALYSIS INTERSECTIONS STUDIED - SOUTHWEST BROOKLYN CONVERTED MTS 5-192
5.17A-1 MOBILE NOISE ANALYSIS INTERSECTIONS STUDIED - SOUTHWEST BROOKLYN CONVERTED MTS 5-198

CHAPTER 6

6.2-1 LAND USE IN THE PRIMARY STUDY AREA - EAST 91ST STREET CONVERTED MTS 6-3
6.2-2 LAND USE IN THE SECONDARY STUDY AREA - EAST 91ST STREET CONVERTED MTS 6-4
6.2-3 ZONING - EAST 91ST STREET CONVERTED MTS 6-7
6.2-4 PLANNED DEVELOPMENT SITES - EAST 91ST STREET CONVERTED MTS 6-9
6.3-1 CENSUS TRACTS - EAST 91ST STREET CONVERTED MTS 6-12

List of Figures

6.4-1 COMMUNITY FACILITIES AND SERVICES - EAST 91ST STREET CONVERTED MTS 6-23
6.5-1 OPEN SPACE/PARKLAND - EAST 91ST STREET CONVERTED MTS 6-26
6.6-1 CULTURAL RESOURCES - EAST 91ST STREET CONVERTED MTS 6-31
6.7-1 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-35
6.7-2 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-35
6.7-3 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-37
6.7-4 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-37
6.7-5 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-41
6.7-6 URBAN DESIGN AND VISUAL QUALITY- EAST 91ST STREET CONVERTED MTS 6-41
6.7-7 SHADOW DIAGRAM - EAST 91ST STREET CONVERTED MTS 6-46
6.8-1 NEIGHBORHOOD LOCATION - EAST 91ST STREET CONVERTED MTS 6-48
6.9-1 FLOODPLAINS - EAST 91ST STREET CONVERTED MTS 6-52
6.9-2 WETLANDS - EAST 91ST STREET CONVERTED MTS 6-54
6.10-1 HAZARDOUS MATERIAL SITES - EAST 91ST STREET CONVERTED MTS 6-61
6.11-1 AMBIENT WATER QUALITY STATIONS - EAST 91ST STREET CONVERTED MTS 6-63
6.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - EAST 91ST STREET CONVERTED MTS 6-66
6.12-1 COASTAL ZONE BOUNDARY - EAST 91ST STREET CONVERTED MTS 6-71
6.13-1 EXISTING WPCP DRAINAGE AREA - EAST 91ST STREET CONVERTED MTS 6-87
6.14-1 TRAFFIC ANALYSIS STUDY AREA - EAST 91ST STREET CONVERTED MTS 6-93
6.14-2 DSNY COLLECTION VEHICLE ROUTES - EAST 91ST STREET CONVERTED MTS 6-95
6.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - EAST 91ST STREET CONVERTED MTS 6-97
6.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - EAST 91ST STREET CONVERTED MTS 6-98
6.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - EAST 91ST STREET CONVERTED MTS 6-99
6.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - EAST 91ST STREET CONVERTED MTS 6-103
6.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - EAST 91ST STREET CONVERTED MTS 6-104
6.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - EAST 91ST STREET CONVERTED MTS 6-105
6.14-9 TRUCK TRIPS PER HOUR 6-108
6.14-10 2006 BUILD TRAFFIC VOLUMES - AM PEAK - EAST 91ST STREET CONVERTED MTS 6-110
6.14-11 2006 BUILD TRAFFIC VOLUMES - FACILITY PEAK - EAST 91ST STREET CONVERTED MT 6-111
6.14-12 2006 BUILD TRAFFIC VOLUMES - PM PEAK - EAST 91ST STREET CONVERTED MTS 6-112
6.14-13 2006 NET TRAFFIC - AM PEAK - EAST 91ST STREET CONVERTED MTS 6-113
6.14-14 2006 NET TRAFFIC - FACILITY PEAK - EAST 91ST STREET CONVERTED MTS 6-114
6.14-15 2006 NET TRAFFIC - PM PEAK - EAST 91ST STREET CONVERTED MTS 6-115
6.15-1 ON-SITE AIR QUALITY ANALYSIS - EAST 91ST STREET CONVERTED MTS 6-123
6.15-2 OFF-SITE AIR QUALITY INTERSECTIONS STUDIED - EAST 91ST STREET CONVERTED MTS 6-128
6.16-1 POTENTIAL ODOR SOURCES - EAST 91ST STREET CONVERTED MTS 6-134
6.17-1 NOISE SOURCES AND RECEPTORS - EAST 91ST STREET CONVERTED MTS 6-138
6.17-2 MOBILE NOISE ANALYSIS – INTERSECTIONS ANALYZED - EAST 91ST STREET CONVERTED MTS 6-153

CHAPTER 7

7.2-1 LAND USE IN THE PRIMARY STUDY AREA - NORTH SHORE CONVERTED MTS 7-3
7.2-2 LAND USE IN THE SECONDARY STUDY AREA - NORTH SHORE CONVERTED MTS 7-4
7.2-3 ZONING - NORTH SHORE CONVERTED MTS 7-7
7.3-1 CENSUS TRACTS - NORTH SHORE CONVERTED MTS 7-11
7.4-1 COMMUNITY FACILITIES AND SERVICES - NORTH SHORE CONVERTED MTS 7-20
7.5-1 OPEN SPACE/PARKLAND - NORTH SHORE CONVERTED MTS 7-22
7.7-1 URBAN DESIGN AND VISUAL QUALITY- NORTH SHORE CONVERTED MTS 7-27
7.7-2 URBAN DESIGN AND VISUAL QUALITY- NORTH SHORE CONVERTED MTS 7-27
7.7-3 URBAN DESIGN AND VISUAL QUALITY- NORTH SHORE CONVERTED MTS 7-31
7.7-4 URBAN DESIGN AND VISUAL QUALITY- NORTH SHORE CONVERTED MTS 7-31
7.8-1 NEIGHBORHOOD LOCATION - NORTH SHORE CONVERTED MTS 7-35
7.9-1 FLOODPLAINS - NORTH SHORE CONVERTED MTS 7-39
7.9-2 WETLANDS - NORTH SHORE CONVERTED MTS 7-40
7.10-1 HAZARDOUS MATERIAL SITES - NORTH SHORE CONVERTED MTS 7-48
7.11-1 AMBIENT WATER QUALITY STATIONS - NORTH SHORE CONVERTED MTS 7-51

List of Figures

7.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - NORTH SHORE CONVERTED MTS 7-54
7.12-1 COASTAL ZONE BOUNDARY - NORTH SHORE CONVERTED MTS 7-58
7.13-1 EXISTING WPCP DRAINAGE AREA - NORTH SHORE CONVERTED MTS 7-73
7.14-1 TRAFFIC ANALYSIS STUDY AREA - NORTH SHORE CONVERTED MTS 7-79
7.14-2 DSNY COLLECTION VEHICLE ROUTES - NORTH SHORE CONVERTED MTS 7-81
7.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - NORTH SHORE CONVERTED MTS 7-84
7.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - NORTH SHORE CONVERTED MTS 7-85
7.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - NORTH SHORE CONVERTED MTS 7-86
7.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - NORTH SHORE CONVERTED MTS 7-91
7.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - NORTH SHORE CONVERTED MTS 7-92
7.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - NORTH SHORE CONVERTED MTS 7-93
7.14-9 TRUCK TRIPS PER HOUR 7-97
7.14-10 2006 BUILD TRAFFIC VOLUMES - AM PEAK - NORTH SHORE CONVERTED MTS 7-98
7.14-11 2006 BUILD TRAFFIC VOLUMES - FACILITY PEAK - NORTH SHORE CONVERTED MTS 7-99
7.14-12 2006 BUILD TRAFFIC VOLUMES - PM PEAK - NORTH SHORE CONVERTED MTS 7-100
7.14-13 2006 NET TRAFFIC - AM PEAK - NORTH SHORE CONVERTED MTS 7-101
7.14-14 2006 NET TRAFFIC - FACILITY PEAK - NORTH SHORE CONVERTED MTS 7-102
7.14-15 2006 NET TRAFFIC - PM PEAK - NORTH SHORE CONVERTED MTS 7-103
7.15-1 ON-SITE AIR QUALITY ANALYSIS - NORTH SHORE CONVERTED MTS 7-113
7.15-2 OFF-SITE AIR QUALITY INTERSECTIONS STUDIED - NORTH SHORE CONVERTED MTS 7-118
7.16-1 POTENTIAL ODOR SOURCES - NORTH SHORE CONVERTED MTS 7-123
7.17-1 NOISE SOURCES AND NOISE-SENSITIVE RECEPTORS - NORTH SHORE CONVERTED MTS 7-127
7.17-2 MOBILE NOISE ANALYSIS INTERSECTIONS ANALYZED- NORTH SHORE CONVERTED MTS 7-141

CHAPTER 8

8.2-1 LAND USE IN THE PRIMARY STUDY AREA - 52ND STREET BARGE STAGING AREA 8-3
8.2-2 LAND USE IN THE SECONDARY STUDY AREA - 52ND STREET BARGE STAGING AREA 8-4
8.2-3 ZONING - 52ND STREET BARGE STAGING AREA 8-7
8.2-4 PLANNED DEVELOPMENT SITES - 52ND STREET BARGE STAGING AREA 8-10
8.3-1 CENSUS TRACTS - 52ND STREET BARGE STAGING AREA 8-14
8.4-1 COMMUNITY FACILITIES AND SERVICES - 52ND STREET BARGE STAGING AREA 8-22
8.5-1 OPEN SPACE/PARKLAND - 52ND STREET BARGE STAGING AREA 8-24
8.6-1 CULTURAL RESOURCES - 52ND STREET BARGE STAGING AREA 8-28
8.7-1 URBAN DESIGN AND VISUAL QUALITY - 52ND STREET BARGE STAGING AREA 8-33
8.7-2 URBAN DESIGN AND VISUAL QUALITY - 52ND STREET BARGE STAGING AREA 8-33
8.8-1 NEIGHBORHOOD LOCATION - 52ND STREET BARGE STAGING AREA 8-37
8.9-1 FLOODPLAINS- 52ND STREET BARGE STAGING AREA 8-41
8.9-2 WETLANDS- 52ND STREET BARGE STAGING AREA 8-43
8.11-1 AMBIENT WATER QUALITY STATIONS- 52ND STREET BARGE STAGING AREA 8-50
8.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - 52ND STREET BARGE STAGING AREA 8-53
8.12.1 COASTAL ZONE BOUNDARY - 52ND STREET BARGE STAGING 8-57
8.13-1 EXISTING WPCP DRAINAGE AREA - 52ND STREET BARGE STAGING AREA 8-71
8.15-1 ON-SITE AIR QUALITY ANALYSIS - 52ND STREET BARGE STAGING AREA 8-79
8.17-1 NOISE SOURCES AND RECEPTORS - 52ND STREET BARGE STAGING AREA 8-86

CHAPTER 9

9.9-1 FLOODPLAINS – HARLEM RIVER YARD BARGE TO RAIL INTERMODAL YARD 9-4
9.9-2 WETLANDS - HARLEM RIVER YARD BARGE TO RAIL INTERMODAL YARD 9.5
9.17-1 NOISE SOURCES AND RECEPTORS - HARLEM RIVER YARD SITE BARGE TO RAIL OPTION 9-9

List of Figures

CHAPTER 12

12.14-1 TRAFFIC ANALYSIS STUDY AREA - EAST 132ND STREET SITE 12-8
12.14-2 EXISTING TRAFFIC VOLUMES - AM PEAK - EAST 132ND STREET SIT 12-10
12.14-3 EXISTING TRAFFIC VOLUMES -FACILITY PEAK - EAST 132ND STREET SITE 12-11
12.14-4 EXISTING TRAFFIC VOLUMES - PM PEAK - EAST 132ND STREET SITE 12-12
12.14-5 DSNY COLLECTION VEHICLE ROUTES - EAST 132ND STREET SITE..... 12-16
12.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - EAST 132ND STREET SITE 12-18
12.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - EAST 12-19
12.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - EAST 132ND STREET SITE 12-20
12.14-9 TRUCK TO RAIL DRAY ROUTE - EAST 132ND STREET SITE 12-24
12.14-10 TRUCK TRIPS PER HOUR - EAST 132ND TRUCK TO RAIL TS..... 12-24
12.14-11 2006 BUILD TRAFFIC VOLUMES - AM PEAK - EAST 132ND STREET SITE 12-26
12.14-12 2006 BUILD TRAFFIC VOLUMES - FACILITY PEAK - EAST 132ND STREET SITE 12-27
12.14-13 2006 BUILD TRAFFIC VOLUMES - PM PEAK - EAST 132ND STREET SITE 12-28
12.14-14 2006 NET TRAFFIC - AM PEAK - EAST 132ND STREET SITE..... 12-30
12.14-15 2006 NET TRAFFIC - FACILITY PEAK - EAST 132ND STREET SITE 12-31
12.14-16 2006 NET TRAFFIC - PM PEAK - EAST 132ND STREET SITE 12-32

CHAPTER14

14.2-1 LAND USE IN THE PRIMARY STUDY AREA- SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-4
14.2-2 LAND USE IN SECONDARY STUDY AREA - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-5
14.2-3 ZONING - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-9
14.3-1 CENSUS TRACTS – SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-13
14.4-1 COMMUNITY FACILITIES AND SERVICES - SCOTT AVENUE/SCHOLES STREET.....TRUCK TO RAIL TRANSFER STATION 14-21
14.5-1 OPEN SPACE/PARKLAND - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-24
14.6-1 CULTURAL RESOURCES - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-27
14.7-1 URBAN DESIGN AND VISUAL QUALITY - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-31
14.7-2 URBAN DESIGN AND VISUAL QUALITY - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-31
14.8-1 NEIGHBORHOOD LOCATION - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-35
14.9-1 FLOODPLAINS - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-39
14.9-2 WETLANDS - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-40
14.10-1 HAZARDOUS MATERIALS SITES - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-4
14.12-1 COASTAL ZONE BOUNDARY - SCOTT AVENUE/SCHOLES STREET TRANSFER STATION 14-51
14.13-1 EXISTING WPCP DRAINAGE AREA - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-64
14.14-1 TRAFFIC ANALYSIS STUDY AREA - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14.70
14.14-2 DSNY COLLECTION VEHICLE ROUTES - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-72
14.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-74
14.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION..... 14-75
14.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TRANSFER STATION 14-76

List of Figures

14.14-6 Future No-Build Traffic Volumes - AM Peak - Scott Avenue/Scholes Street Truck To Rail Transfer Station 14-80
14.14-7 Future No-Build Traffic Volumes - Facility Peak - Scott Avenue/Scholes Street Truck To Rail Transfer Station 14-81
14.14-8 Future No-Build Traffic Volumes - PM Peak - Scott Avenue/Scholes Street Truck To Rail Transfer Station 14-82
14.14-9 Truck Trips Per Hour 14-86
14.14-10 2006 Build Traffic Volumes - AM Peak - Scott Avenue/Scholes Street Truck To Rail Ts 14-87
14.14-11 2006 Build Traffic Volumes - Facility Peak - Scott Avenue/Scholes Street Truck To Rail Ts 14-88
14.14-12 2006 Build Traffic Volumes - PM Peak - Scott Avenue/Scholes Street Truck To Rail Ts .. 14-89
14.14-13 2006 Net Traffic - AM Peak - Scott Avenue/Scholes Street Truck To Rail Ts 14-90
14.14-14 2006 Net Traffic - Facility Peak - Scott Avenue/Scholes Street Truck To Rail Ts 14-91
14.14-15 2006 Net Traffic - PM Peak - Scott Avenue/Scholes Street Truck To Rail Ts 14-92
14.15-1 On-Site Air Quality Analysis - Scott Avenue/Scholes Street Truck To Rail Ts 14-100
14.15-2 Off-Site Air Quality Analysis Intersections Studied - Scott Avenue/Scholes Street Truck To Rail Ts 14-106
14.16-1 Potential Odor Sources - Scott Avenue/Scholes Street Truck To Rail Ts 14-110
14.17-1 Noise Sources And Receptors - Scott Avenue/Scholes Street Truck To Rail Ts 14-114

CHAPTER 15

15.14-1 Traffic Analysis Study Area – Review Avenue Ts 15-6
15.14-2 Existing Traffic Volumes – AM Peak – Review Avenue Ts 15-9
15.14-3 Existing Traffic Volumes – Facility Peak – Review Avenue Ts 15-10
15.14-4 Existing Traffic Volumes – PM Peak – Review Avenue Ts 15-11
15.14-5 Truck Routes – Review Avenue Ts 15-14
15.14-6 Future No-Build Traffic Volumes – AM Peak – Review Avenue Ts 15-16
15.14-7 Future No-Build Traffic Volumes – Facility Peak – Review Avenue Ts 15-17
15.14-8 Future No-Build Traffic Volumes – PM Peak – Review Avenue Ts 15-18
15.14-9 Truck Trips Per Hour 15-21
15.14-10 – Proposed Dray Truck Route To Maspeth Railyard 15-24
15.14-11 Truck Trips Per Hour 15-25
15.14-12 2006 Build Traffic Volumes – AM Peak – Review Avenue Ts 15-26
15.14-13 2006 Build Traffic Volumes – Facility Peak – Review Avenue Ts 15-27
15.14-15 2006 Net Traffic – AM Peak – Review Avenue Ts 15-29
15.14-16 2006 Net Traffic – Facility Peak – Review Avenue Ts 15-30
15.14-17 2006 Net Traffic – PM Peak – Review Avenue Ts 15-31
15.14-18 Truck Trips Per Hour Maspeth Rail Yard Truck To Rail Ts 15-36
15.15-1 On-Site Air Quality Analysis – Review Avenue Truck To Barge Transfer Station 15-40
15.15-2 On-Site Air Quality Analysis – Review Avenue Truck To Rail Transfer Station 15-43
15.15-3 Off-Site Air Quality Intersections Studied – Review Avenue Transfer Station 15-45
15.16-1 Potential Odor Sources – Review Avenue Truck To Barge Transfer Station 15-49
15.16-2 Potential Odor Sources – Review Avenue Truck To Rail Transfer Station 15-50
15.17-1 Noise Sources And Receptors – Review Avenue Truck To Barge Transfer Station 15-53
15.17-2 Noise Sources And Receptors – Review Avenue Truck To Rail Transfer Station 15-54

List of Figures

CHAPTER 17

17.9-1 FLOODPLAINS - 30TH STREET PIER AT SBMT 17-7
17.9-2 WETLANDS - 30TH STREET PIER AT SBMT 17-8
17.11-1 AMBIENT WATER QUALITY STATIONS - 30TH STREET PIER AT SBMT 17-13
17.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - 30TH STREET PIER AT SBMT 17-16
17.12-1 COASTAL ZONE BOUNDARY - 30TH STREET PIER AT SBMT 17-21
17.14-1 TRUCK TRIPS PER HOUR 17-34
17.14-2 DSNY COLLECTION VEHICLE ROUTES - 30TH STREET PIER AT SBMT 17-35

CHAPTER 18

18.14-1 TRUCK TRIPS PER HOUR 18-5
18.14-2 DSNY COLLECTION VEHICLE ROUTES - GANSEVOORT RECYCLABLES ACCEPTANCE FACILITY 18-6
18.15-1 OFF-SITE AIR QUALITY INTERSECTION ANALYZED -GANSEVOORT RECYCLABLES ACCEPTANCE FACILITY 18-9

CHAPTER 19

19.2-1 LAND USE IN THE PRIMARY STUDY AREA - SOUTH BRONX CONVERTED MTS 19-3
19.2-2 LAND USE IN THE SECONDARY STUDY AREA - SOUTH BRONX CONVERTED MTS 19-4
19.2-3 ZONING - SOUTH BRONX CONVERTED MTS 19-7
19.2-4 PLANNED DEVELOPMENT SITES - SOUTH BRONX CONVERTED MTS 19-10
19.3-1 CENSUS TRACTS - SOUTH BRONX CONVERTED MTS 19-13
19.4-1 COMMUNITY FACILITIES AND SERVICES - SOUTH BRONX CONVERTED MTS 19-19
19.5-1 OPEN SPACE/PARKLAND - SOUTH BRONX CONVERTED MTS 19-22
19.7-1 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-29
19.7-2 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-29
19.7-3 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-33
19.7-4 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-33
19.7-5 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-35
19.7-6 URBAN DESIGN AND VISUAL QUALITY - SOUTH BRONX CONVERTED MTS 19-35
19.8-1 NEIGHBORHOOD LOCATION - SOUTH BRONX CONVERTED MTS 19-39
19.9-1 FLOODPLAINS - SOUTH BRONX CONVERTED MTS 19-44
19.9-2 WETLANDS - SOUTH BRONX CONVERTED MTS 19-45
19.9-3 VEGETATIVE COVER - SOUTH BRONX CONVERTED MTS 19-46
19.10-1 HAZARDOUS MATERIALS SITES - SOUTH BRONX CONVERTED MTS 19-53
19.11-1 AMBIENT WATER QUALITY STATIONS - SOUTH BRONX CONVERTED MTS 19-57
19.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - SOUTH BRONX CONVERTED MTS 19-60
19.12-1 COASTAL ZONE BOUNDARY - SOUTH BRONX CONVERTED MTS 19-65
19.13-1 EXISTING WPCP DRAINAGE AREA - SOUTH BRONX CONVERTED MTS 19-80
19.14-1 TRAFFIC ANALYSIS LOCATIONS - SOUTH BRONX CONVERTED MTS 19-85
19.14-2 EXISTING TRAFFIC VOLUMES - AM PEAK - SOUTH BRONX CONVERTED MTS 19-90
19.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - SOUTH BRONX CONVERTED MTS 19-91
19.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - SOUTH BRONX CONVERTED MTS 19-92
19.14-5 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - SOUTH BRONX CONVERTED MTS 19-93
19.14-6 EXISTING TRAFFIC VOLUMES - PM PEAK - SOUTH BRONX CONVERTED MTS 19-94
19.14-7 EXISTING TRAFFIC VOLUMES - PM PEAK - SOUTH BRONX CONVERTED MTS 19-95
19.14-8 DSNY COLLECTION VEHICLE ROUTES - SOUTH BRONX CONVERTED MTS 19-102
19.14-9 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - SOUTH BRONX CONVERTED MTS 19-105
19.14-10 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - SOUTH BRONX CONVERTED MTS 19-106
19.14-11 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - SOUTH BRONX CONVERTED MTS 19-107
19.14-12 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - SOUTH BRONX CONVERTED MTS 19-108
19.14-13 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - SOUTH BRONX CONVERTED MTS 19-109
19.14-14 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - SOUTH BRONX CONVERTED MTS 19-110
19.14-15 TRUCK TRIPS PER HOUR 19-117

List of Figures

19.14-16 2006 Future Build Traffic Volumes - Am Peak - South Bronx Converted Mts 19-119
19.14-17 2006 Future Build Traffic Volumes - Am Peak - South Bronx Converted Mts 19-120
19.14-18 2006 Future Build Traffic Volumes - Facility Peak - South Bronx Converted Mts 19-121
19.14-19 2006 Future Build Traffic Volumes - Facility Peak - South Bronx Converted Mts 19-122
19.14-20 2006 Future Build Traffic Volumes - Pm Peak - South Bronx Converted Mts 19-123
19.14-21 2006 Future Build Traffic Volumes - Pm Peak - South Bronx Converted Mts 19-124
19.14-22 2006 Net Traffic - Am Peak - South Bronx Converted Mts 19-125
19.14-23 2006 Net Traffic - Am Peak - South Bronx Converted Mts 19-126
19.14-24 2006 Net Traffic - Facility Peak - South Bronx Converted Mts 19-127
19-14-25 2006 Net Traffic - Facility Peak - South Bronx Converted Mts 19-128
19.14-26 2006 Net Traffic - Pm Peak - South Bronx Converted Mts 19-129
19.14-27 2006 Net Traffic - Pm Peak - South Bronx Converted Mts 19-130
19.15-1 On-Site Air Quality Analysis - South Bronx Converted Mts 19-143
19.15-2 Off-Site Air Quality Intersections Studied - South Bronx Converted Mts 19-148
19.16-1 Potential Odor Sources - South Bronx Converted Mts 19-154
19.17-1 Noise Sources And Receptors - South Bronx Converted Mts 19-157

Chapter 20

20.2-1 Land Use In The Primary Study Area - Greenpoint Converted Mts 20-3
20.2-2 Land Use In The Secondary Study Area - Greenpoint Converted Mts 20-4
20.2-3 Zoning - Greenpoint Converted Mts 20-6
20.2-4 Planned Development Sites - Greenpoint Converted Mts 20-10
20.3.1 Census Tracts - Greenpoint Converted Mts 20-13
20.4-1 Community Facilities And Services - Greenpoint Converted Mts 20-23
20.5-1 Open Space/Parkland - Greenpoint Converted Mts 20-25
20.6-1 Cultural Resources - Greenpoint Converted Mts 20-29
20.7-1 Urban Design And Visual Quality - Greenpoint Converted Mts 20-33
20.7-2 Urban Design And Visual Quality - Greenpoint Converted Mts 20-33
20.7-3 Urban Design And Visual Quality - Greenpoint Converted Mts 20-37
20.7-4 Shadow Diagram - Greenpoint Converted Mts 20-40
20.8-1 Neighborhood Location - Greenpoint Converted Mts 20-42
20.9-1 Floodplains - Greenpoint Converted Mts 20-46
20.9-2 Wetlands - Greenpoint Converted Mts 20-47
20.10-1 Hazardous Materials Sites - Greenpoint Converted Mts 20-54
20.11-1 Ambient Water Quality Stations - Greenpoint Converted Mts 20-59
20.11-2 Permitted Outfalls And Cso Locations - Greenpoint Converted Mts 20-61
20.12-1 Coastal Zone Boundary - Greenpoint Converted Mts 20-67
20.13-1 Existing Wpcp Drainage Area - Greenpoint Converted Mts 20-81
20.14-1 Traffic Analysis Study Area - Greenpoint Converted Mts 20-87
20.14-2 Existing Traffic Volumes - Am Peak - Greenpoint Converted Mts 20-90
20.14-3 Existing Traffic Volumes - Facility Peak - Greenpoint Converted Mts 20-91
20.14-4 Existing Traffic Volumes - Pm Peak - Greenpoint Converted Mts 20-92
20.14-5 Dsny Collection Vehicle - Greenpoint Converted Mts 20-95
20.14-6 Future No-Build Traffic Volumes - Am Peak - Greenpoint Converted Mts 20-97
20.14-7 Future No-Build Traffic Volumes - Facility Peak - Greenpoint Converted Mts 20-98
20.14-8 Future No-Build Traffic Volumes - Pm Peak - Greenpoint Converted Mts 20-99
20.14-9 Truck Trips Per Hour 20-103
20.14-10 2006 Future Build Traffic Volumes - Am Peak - Greenpoint Converted Mts 20-104
20.14-11 2006 Future Build Traffic Volumes - Facility Peak - Greenpoint Converted Mts 20-105
20.14-12 2006 Future Build Traffic Volumes - Pm Peak - Greenpoint Converted Mts 20-106
20.14-13 2006 Net Traffic - Am Peak - Greenpoint Converted Mts 20-107
20.14-14 2006 Net Traffic - Facility Peak - Greenpoint Converted Mts 20-108
20.14-15 2006 Net Traffic - Pm Peak - Greenpoint Converted Mts 20-109
20.15-1 On-Site Air Quality Analysis - Greenpoint Converted Mts 20-118
20.15-2 Off-Site Air Quality Intersections Studied - Greenpoint Converted Mts 20-124

List of Figures

20.16-1 Potential Odor Sources - Greenpoint Converted Mts 20-128
20.17-1 Noise Sources And Receptors - Greenpoint Avenue Converted Mts 20-132

Chapter 21

21.2-1 Land Use In The Primary Study Area - Lower Elevation - West 135th Street Converted Mts 21-3
21.2-2 Land Use In The Primary Study Area - Upper Elevation - West 135th Street Converted Mts 21-4
21.2-3 Zoning - West 135th Street Converted Mts 21-7
21.2-4 Planned Development Sites - West 135th Street Converted Mts 21-11
21.3-1 Census Tract - West 135th Street Converted Mts 21-14
21.4-1 Community Facilities And Services - West 135th Street Converted Mts 21-25
21.5-1 Open Space/Parkland - West 135th Street Converted Mts 21-29
21.6-1 Cultural Resources - West 135th Street Converted Mts 21-33
21.7-1 Urban Design And Visual Quality- West 135th Street Converted Mts 21-36
21.7-2 Urban Design And Visual Quality- West 135th Street Converted Mts 21-36
21.7-3 Urban Design And Visual Quality- West 135th Street Converted Mts 21-39
21.7-4 Urban Design And Visual Quality- West 135th Street Converted Mts 21-39
21.7-5 Urban Design And Visual Quality- West 135th Street Converted Mts 21-43
21.7-6 Urban Design And Visual Quality- West 135th Street Converted Mts 21-43
21.7-7 Urban Design And Visual Quality- West 135th Street Converted Mts 21-45
21.7-8 Shadow Diagram - West 135th Street Converted Mts 21-49
21.8-1 Neighborhood Location - West 135th Street Converted Mts 21-51
21.9-1 Floodplains - West 135th Street Converted Mts 21-56
21.9-2 Wetlands - West 135th Street Converted Mts 21-57
21.9-3 Significant Habitat - West 135th Street Converted Mts 21-59
21.10-1 Hazardous Materials Sites - West 135th Street Converted Mts 21-65
21.11-1 Ambient Water Quality Stations - West 135th Street Converted Mts 21-68
21.11-2 Permitted Outfalls And Cso Locations - West 135th Street Converted Mts 21-71
21.12-1 Coastal Zone Boundary - West 135th Street Converted Mts 21-75
21.14-1 Traffic Analysis Study Area - West 135th Street Converted Mts 21-95
21.14-2 Existing Traffic Volumes - Am Peak - West 135th Street Converted Mts 21-97
21.14-3 Existing Traffic Volumes - Facility Peak - West 135th Street Converted Mts 21-99
21.14-4 Existing Traffic Volumes - Pm Peak - West 135th Street Converted Mts 21-100
21.14-5 Dsny Collection Vehicle Routes - West 135th Street Converted Mts 21-101
21.14-6 Future No-Build Traffic Volumes - Am Peak - West 135th Street Converted Mts 21-106
21.14-7 Future No-Build Traffic Volumes - Facility Peak - West 135th Street Converted Mts 21-107
21.14-8 Future No-Build Traffic Volumes - Pm Peak - West 135th Street Converted Mts 21-108
21.14-9 Truck Trips Per Hour 21-112
21.14-10 2006 Build Traffic Volumes - Am Peak - West 135th Street Converted Mts 21-113
21.14-11 2006 Build Traffic Volumes - Facility Peak - West 135th Street Converted Mts 21-114
21.14-12 2006 Build Traffic Volumes - Pm Peak - West 135th Street Converted Mts 21-115
21.14-13 2006 Net Traffic Volumes - Am Peak - West 135th Street Converted Mts 21-116
21.14-14 2006 Net Traffic Volumes - Facility Peak - West 135th Street Converted Mts 21-117
21.14-15 2006 Net Traffic Volumes - Pm Peak - West 135th Street Converted Mts 21-118
21.15-1 On-Site Air Quality Analysis - West 135th Street Converted Mts 21-127
21.15-2 Off-Site Air Quality Intersections Studied - West 135th Street Converted Mts 21-132
21.16-1 Potential Odor Sources - West 135th Street Converted Mts 21-137
21.17-1 Noise Sources And Receptors - West 135th Street Converted Mts 21-141
21.17.2 Mobile Noise Analysis Intersections Analyzed - West 135th Street Converted Mts 21-154

List of Figures

CHAPTER 22

22.2-1 LAND USE IN THE PRIMARY STUDY AREA - WEST 59TH STREET CONVERTED MTS 22-3
22.2-2 LAND USE IN THE SECONDARY STUDY AREA - WEST 59TH STREET CONVERTED MTS 22-4
22.2-3 ZONING - WEST 59TH STREET CONVERTED MTS 22-8
22.2-4 PLANNED DEVELOPMENT SITES - WEST 59TH STREET CONVERTED MTS 22-11
22.3-1 CENSUS TRACTS - WEST 59TH STREET CONVERTED MTS 22-15
22.4-1 COMMUNITY FACILITIES AND SERVICES - WEST 59TH STREET CONVERTED MTS 22-26
22.5-1 OPEN SPACE/PARKLAND - WEST 59TH STREET CONVERTED MTS 22-28
22.6-1 CULTURAL RESOURCES - WEST 59TH STREET CONVERTED MTS 22-33
22.7-1 URBAN DESIGN AND VISUAL QUALITY- WEST 59TH STREET CONVERTED MTS 22-36
22.7-2 URBAN DESIGN AND VISUAL QUALITY- WEST 59TH STREET CONVERTED MTS 22-36
22.7-3 URBAN DESIGN AND VISUAL QUALITY- WEST 59TH STREET CONVERTED MTS 22-41
22.7-4 URBAN DESIGN AND VISUAL QUALITY- WEST 59TH STREET CONVERTED MTS 22-41
22.7-5 SHADOW DIAGRAM - WEST 59TH STREET CONVERTED MTS 22-45
22.8-1 NEIGHBORHOOD LOCATION - WEST 59TH STREET CONVERTED MTS 22-48
22.9-1 FLOODPLAINS - WEST 59TH STREET CONVERTED MTS 22-53
22.9-2 WETLANDS - WEST 59TH STREET CONVERTED MTS 22-54
22.9-3 SIGNIFICANT HABITAT - WEST 59TH STREET CONVERTED MTS 22-56
22.11-1 AMBIENT WATER QUALITY STATIONS - WEST 59TH STREET CONVERTED MTS 22-63
22.11-2 PERMITTED OUTFALLS AND CSO LOCATIONS - WEST 59TH STREET CONVERTED MTS 22-66
22.12-1 COASTAL ZONE BOUNDARY - WEST 59TH STREET CONVERTED MTS 22-70
22.13-1 EXISTING WPCP DRAINAGE AREA - WEST 59TH STREET CONVERTED MTS 22-85
22.14-1 TRAFFIC ANALYSIS STUDY AREA - WEST 59TH STREET CONVERTED MTS 22-91
22.14-2 DSNY COLLECTION VEHICLE ROUTES - WEST 59TH STREET CONVERTED MTS 22-93
22.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - WEST 59TH STREET CONVERTED MTS 22-95
22.14-4 EXISTING TRAFFIC VOLUMES - PM PEAK - WEST 59TH STREET CONVERTED MTS 22-96
22.14-5 FUTURE NO-BUILD TRAFFIC VOLUMES AM PEAK - WEST 59TH STREET CONVERTED MTS 22-100
22.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - WEST 59TH STREET CONVERTED MTS 22-101
22.14-7 TRUCK TRIPS PER HOUR - WEST 59TH STREET CONVERTED MTS 22-104
22.14-8 2006 FUTURE BUILD TRAFFIC VOLUMES - AM PEAK - WEST 59TH STREET CONVERTED MTS 22-106
22.14-9 2006 FUTURE BUILD TRAFFIC VOLUMES - PM PEAK - WEST 59TH STREET CONVERTED MTS 22-107
22.14-10 2006 NET TRAFFIC - AM PEAK - WEST 59TH STREET CONVERTED MTS 22-108
22.14-11 2006 NET TRAFFIC - PM PEAK - WEST 59TH STREET CONVERTED MTS 22-109
22.15-1 ON-SITE AIR QUALITY ANALYSIS - WEST 59TH STREET CONVERTED MTS 22-115
22.15-2 OFF-SITE AIR QUALITY INTERSECTIONS STUDIED - WEST 59TH STREET CONVERTED MTS 22-121
22.16-1 POTENTIAL ODOR SOURCES - WEST 59TH STREET CONVERTED MTS 22-126
22.17-1 NOISE SOURCES AND RECEPTORS - WEST 59TH STREET CONVERTED MTS 22-130

CHAPTER 23

23.17-1 NOISE SOURCES AND RECEPTORS – EXISTING SOUTH BRONX CONVERTED MTS 23-7

CHAPTER 24

24.17-1 NOISE SOURCES AND RECEPTORS - EXISTING SOUTHWEST BROOIKLYN MTS 24-12

CHAPTER 25

25.17-1 NOISE SOURCES AND RECEPTORS - EXISTING GREENPOINT MTS 25-8

CHAPTER 26

26.17-1 NOISE SOURCES AND RECEPTORS - EXISTING HAMILTON AVENUE MTS 26-9

List of Figures

CHAPTER 27

27.17-1 NOISE SOURCES AND RECEPTORS - EXISTING WEST 135TH STREET MTS 27-9

CHAPTER 28

28.17-1 NOISE SOURCES AND RECEPTORS - EXISTING WEST 59TH STREET MTS 28-9

CHAPTER 29

29.17-1 NOISE SOURCES AND RECEPTORS - EXISTING EAST 91ST STREET MTS 29-8

CHAPTER 30

30.17-1 NOISE SOURCES AND RECEPTORS - EXISTING NORTH SHORE MTS 30-12

CHAPTER 31

31.2-1 LAND USE IN THE PRIMARY AREA - MESEROLE STREET TRANSFER STATION 31-3
31.2.2 LAND USE IN THE SECONDARY STUDY AREA - MESEROLE STREET TRANSFER STATION..... 31-4
31.2-3 ZONING - MESEROLE STREET TRANSFER STATION..... 31-7
31.3-1 CENSUS TRACTS - MESEROLE STREET TRANSFER STATION 31-11
31.4-1 COMMUNITY FACILITIES AND SERVICES - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION .. 31-15
31.6-1 CULTURAL RESOURCES - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-22
31.7-1 URBAN DESIGN AND VISUAL QUALITY - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION.... 31-27
31.7-2 URBAN DESIGN AND VISUAL QUALITY - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION ... 31-27
31.7-3 URBAN DESIGN AND VISUAL QUALITY - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION.... 31-29
31.7-4 URBAN DESIGN AND VISUAL QUALITY - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION.... 31-29
31.8-1 NEIGHBORHOOD LOCATION - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION..... 31-32
31.9-1 FLOODPLAINS - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-36
31.9-2 WETLANDS - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-37
31.10-1 HAZARDOUS MATERIALS SITES - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION..... 31-41
31.12-1 COASTAL ZONE BOUNDARY - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-46
31.13-1 EXISTING WPCP DRAINAGE AREA - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-58
31.14-1 TRAFFIC ANALYSIS STUDY AREA - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-65
31.14-2 DSNY COLLECTION VEHICLE ROUTES - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-67
31.14-3 EXISTING TRAFFIC VOLUMES - AM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION . 31-69
31.14-4 EXISTING TRAFFIC VOLUMES - FACILITY PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-70
31.14-5 EXISTING TRAFFIC VOLUMES - PM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION.. 31-71
31.14-6 FUTURE NO-BUILD TRAFFIC VOLUMES - AM PEAK - MESEROLE STREET TRANSFER STATION 31-75
31.14-7 FUTURE NO-BUILD TRAFFIC VOLUMES - FACILITY PEAK - MESEROLE STREET TRANSFER STATION .. 31-76
31.14-8 FUTURE NO-BUILD TRAFFIC VOLUMES - PM PEAK - MESEROLE STREET TRANSFER STATION..... 31-77
31.14-9 TRUCK TRIPS PER HOUR 31-82
31.14-10 2006 BUILD TRAFFIC VOLUMES - AM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-82
31.14-11 2006 BUILD TRAFFIC VOLUMES - FACILITY PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-83
31.14-12 2006 BUILD TRAFFIC VOLUMES - PM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION..... 31-84
31.14-13 2006 NET TRAFFIC - AM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-85
31.14-14 2006 NET TRAFFIC - FACILITY PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-86
31.14-15 2006 NET TRAFFIC - PM PEAK - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-87
31.15-2 OFF-SITE AIR QUALITY ANALYSIS INTERSECTIONS STUDIED - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-100
31.17-1 NOISE SOURCES AND RECEPTORS - MESEROLE STREET TRUCK TO RAIL TRANSFER STATION 31-107

List of Acronyms/Definitions

Acronyms	
ACM	asbestos-containing material
AFF	Auxiliary Field Force
AGC	annual guideline concentration
AML	acute myelogenous leukemia
ANSI	American National Standards Institute
AQMD	Air Quality Management District
ASI	American Stevedoring
ASTM	American Society for Testing and Materials
ATR	automatic traffic recorder
AWMA	Air and Waste Management Association
BAFO	Best and Final Offer
BAT	Brooklyn Army Terminal
BHD	Brooklyn Highway Datum
BIC	Business Integrity Commission
BMP	best management practice
BMU	barge maintenance unit
BOD	biochemical oxygen demand
BOEDC	Bronx Overall Economic Development Corporation
BPIP	Building Profile Input Program
BQB	Brooklyn, Queens and Bronx
BQE	Brooklyn-Queens Expressway
BTU	British thermal unit
BTU/year	British thermal units per year
C&D	construction and demolition
CAAA	Clean Air Act Amendment
CBD	central business district
CBS	Chemical Bulk Storage
CCA	chromated copper arsenate
CD	community district
CDNS	Community District Needs Statement.
CEPO	Council Environmental Protection Order
CEQR	City Environmental Quality Review
CERCLA	Federal Comprehensive Environmental Responsibility and Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CFR	Code of Federal Regulations
cfs	cubic feet per second
cm	centimeter
CMP	State Coastal Management Program
CMWP	Comprehensive Manhattan Waterfront Plan
CO	carbon monoxide

Acronyms	
COHb	carboxyhemoglobin
CR/SRO	community residence/single room occupancy
CSO	combined sewer overflow
CWMS	Commercial Waste Management Study
DAR	NYSDEC's Division of Air Resources
dB	decibel
dBA	A-weighted decibel
DDSO	developmentally disabled service office
DEIS	Draft Environmental Impact Statement
DFL	defacto left
DOHMH	New York City Department of Health and Mental Hygiene
DPM	diesel particulate matter
DSNY	New York City Department of Sanitation
D/T	dilutions-to-threshold
DT	detection threshold
EAS	Environmental Assessment Statement
EB	eastbound
EBUF	enclosed barge unloading facility
EDZ	Economic Development Zone
EEA	Energy and Environmental Analysts, Inc.
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EJ	Environmental Justice
ERNS	Emergency Response Notification System
ESA	Environmental Site Assessment
EWVIDC	East Williamsburg Valley Industrial Development Corporation
EZ	Empowerment Zone
FAQ	frequently asked question
FAR	floor area ratio
FDNY	New York City Fire Department
FDR or FDR Drive	Franklin D. Roosevelt Drive
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FY	Fiscal Year
g/hr	grams per hour
g/kw-hr	grams per kilowatt-hour
g/sec-m^2	grams per second per squared meter
g/veh-mile	grams per vehicle-mile
gpd	gallons per day
H_2S	hydrogen sulfide
HAP	hazardous air pollutant

Acronyms	
HC	hydrocarbon
HCM	Highway Capacity Manual
HCM 2000	2000 Highway Capacity Manual
HDDV	heavy duty diesel vehicle
HDGV	heavy duty gasoline vehicle
HHDDV	heavy, heavy duty diesel vehicle
HNC	Hugo Neu Corporation
HRY	Harlem River Yard
HRYITDC	Harlem River Yard Intermodal Transportation and Distribution Center
HVAC	heating, ventilation and air conditioning
Hz	hertz
I&I	infiltration and inflow
IDA	Industrial Development Agency
in/hr	inches per hour
IRT	Interborough Rapid Transit
ISCST3	Industrial Source Complex Short Term
km	kilometer
L	left movement
L_5	5^{th} percentile noise level
L_{10}	10^{th} percentile noise level
L_{50}	50^{th} percentile noise level
L_{90}	90^{th} percentile noise level
lb/hp-hr	pounds per horsepower-hour
lb/ton	pounds per ton
lbs/day	pounds per day
LC	lot clearing
LDC	Local Development Corporation
LDGV	light duty gasoline vehicle
LEL	lower explosive limit
L_{eq}	equivalent sound level
$L_{eq(1)}$	one-hour equivalent sound level
LEV	low emission vehicle
LIE	Long Island Expressway
LIRR	Long Island Rail Road
LL74	Local Law 74, effective December 19, 2000, enacted by the City Council, requiring a comprehensive assessment of commercial solid waste management in New York City
L_{max}	maximum sound level
L_{min}	minimum sound level
LOAEL	lowest observed adverse effect level
LOS	level of service
Lp	sound pressure level

Acronyms	
LPC	Landmarks Preservation Commission
LR	left right movement
LT	left through movement
LTR	left, through and right movements
m	meters
m/s	meters per second
m^3/sec	cubic meters per second
~~m/s~~	~~meters per second~~
MCR	Manhattan Curbside Recyclables
MF	membrane filter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/m^3	milligrams per cubic meter
mgd	million gallons per day
min	minute
ML	mainline
mph	miles per hour
MPN/100 ml	most probable number per 100 milliliters
MRF	materials recovery facility
MSL	mean sea level
MSW	municipal solid waste
MTA	Metropolitan Transportation Authority
MTS	marine transfer station
NA	Not applicable
NAAQS	National Ambient Air Quality Standard
NB	northbound
NFRAP	no further remediation action planned
NGVD	National Geodetic Vertical Datum
NH_3-N	ammonia
NHP	NYSDEC's Natural Heritage Program
NO	nitric oxide
NO_2	nitrogen dioxide
(NO_3 + NO_2)	NO_3 = Nitrate; NO_2 = Nitrite
(NO_3+NO_2)-N	nitrate plus nitrite nitrogen
NOAEL	no observed adverse effect level
NO_X	nitrogen oxides
NPL	USEPA's National Priorities List
NR	National Register of Historic Places
NURP	Nationwide Urban Runoff Program
NWI	National Wetland Inventory
NY&A	New York & Atlantic Railway
NYCAC	New York City Administrative Code
NYCCAI	New York City Childhood Asthma Initiative
NYCDCP	New York City Department of City Planning

Acronyms	
NYCDEP	New York City Department of Environmental Protection
NYCDOF	New York City Department of Finance
NYCDOH	New York City Department of Health
NYCDOT	New York City Department of Transportation
NYCDPR	New York City Department of Parks and Recreation
NYCEDC	New York City Economic Development Corporation
NYCHA	New York City Housing Authority
NYCL	New York City Landmark
NYCRR	New York Codes, Rules and Regulations
NYCT	New York City Transit
NYMTC	New York Metropolitan Transportation Council
NYPD	New York City Police Department
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOT	New York State Department of Transportation
NYSR or SRHP	New York State Register of Historic Places
O_3	ozone
OCD	other City department
OEC	New York City Office of Environmental Coordination
OGS	Office of General Services
OPRHP	Office of Parks, Recreation and Historic Preservation
OR	odds ratio
OSHA	Occupational Safety and Health Administration
OU	odor unit
OU/m^3	odor units per cubic meter
OU/sec	odor units per second
$OU/sec\text{-}m^2$	odor unit per second per squared meter
PAH	polycyclic aromatic hydrocarbon
Pb	lead
PCB	polychlorinated biphenyl
PCE	passenger car equivalent
PDEIS	Preliminary Draft Environmental Impact Statement
PM	particulate matter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
PM_{10}	particulate matter less than 10 microns in diameter
PO_4	phosphate
ppb	parts per billion
ppm	parts per million
psi	pounds per square inch
R	right movement
RCNY	Rules of the City of New York
RCRA	Resource Conservation and Recovery Act

Acronyms	
RCRIS	Resource Conservation and Recovery Information System
RFP	Request for Proposals
RRF	resource recovery facility
S/NR	State and National Registers of Historic Places
SB	southbound
SBE	Service-Based Enumeration
SBMT	South Brooklyn Marine Terminal
SCFWH	Significant Coastal Fish and Wildlife Habitat
sec/veh	seconds per vehicle
SEQRA	State Environmental Quality Review Act
SGC	short-term guideline concentration
SHBLK	self-help bulk
SHPO	State Historic Preservation Office
SHS	self-help site
SIL	significant impact level
SIRR	Staten Island Railroad
SMIA	Significant Maritime and Industrial Area
SNWA	Special Natural Waterfront Area
SO_2	sulfur dioxide
SO_X	sulfur oxides
SPDES	State Pollutant Discharge Elimination System
SPL	sound pressure level
SR	service road
SRHP or NYSR	New York State Register of Historic Places
STV	screening threshold value
SUV	sport utility vehicle
SVOC	semi-volatile organic compound
SWL	sound power level
SWMP	Solid Waste Management Plan
T	through movement
TAGM	Technical and Administrative Guidance Memorandum
TCB	truck-to-container-to-barge
TCLP	Toxicity Characteristic Leaching Procedure
TNM	Traffic Noise Model
TNM 2.1	Traffic Noise Model Version 2.1
TOC	total organic carbon
tpd	tons per day
tpy	tons per year
TR	through right movement
TRI	Toxic Release Inventory
TS	transfer station
TSP	total suspended particulate
µg DPM/m^3	micrograms of DPM per cubic meter

Acronyms	
µg/L	micrograms per liter
µg/m^3	micrograms per cubic meter
µm	microns
ULURP	Uniform Land Use Review Procedure
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USF&WS	United States Fish and Wildlife Service
UST	underground storage tank
UTM	Universal Transverse Mercator
v/c	volume-to-capacity
VOC	volatile organic compound
WB	westbound
WPCP	water pollution control plant
WRP	waterfront revitalization program
WTE	waste-to-energy

Definitions	
208 Model	New York Harbor Seasonal Steady State Water Quality 208 Model
1992 SWMP	The City's first Comprehensive Solid Waste Management Plan, adopted in 1992
1996 SWMP or 1996 SWMP Modification	Modifications to the 1992 SWMP that were adopted by the City Council and approved by the state in 1996, focusing on further expansion of recycling and more extensive environmental review of the proposed Brooklyn Navy Yard WTE project and the rehabilitation of the Southwest Brooklyn incinerator project
2000 FEIS	Final Environmental Impact Statement of November 2000
2000 SWMP or 2000 SWMP Modification	Modifications to the 1992 SWMP that were adopted by the City Council and approved by the state in 2000, focusing on defining the City's plan to address the closure of its last remaining landfill at Fresh Kills on Staten Island
2001 CEQR Technical Manual	October 2001 CEQR Technical Manual
2001 Plan	February 2001 Final Comprehensive Solid Waste Management Plan Modification and Final Environmental Impact Statement
Allied, BFI	Allied Waste Systems, Inc., which may also be referred to as Allied/BFI, BFI of New York, or BFI of New Jersey
Alternative(s)	An alternative to the Proposed Action evaluated in the New SWMP DEIS
AWMA Odor Subcommittee	AWMA Subcommittee on the Standardization of Odor Measurement
BQB RFPs	Requests for Proposals To Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from the Bronx, Brooklyn and Queens
Bronx RFP	DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from the Bronx, issued December 22, 2003
Brooklyn BAFO	Best and Final Offer to Receive, Transfer, Transport and Dispose of Department of Sanitation Managed Waste from Brooklyn Formerly Delivered to the Greenpoint Marine Transfer Station.

Definitions	
Brooklyn RFP	DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Brooklyn Formerly Delivered to the Greenpoint Marine Transfer Station
City	New York City
City Council	The legislative body of the City of New York
Commercial Waste	The wastes, including recycled material, generated in the City by business establishments and construction activity and collected by private carters that are respectively defined in the DSNY Rules as Putrescible Waste and Non-Putrescible Waste
Converted MTS	One of DSNY's eight marine transfer stations, modified to containerize waste for out-of-City export by barge or rail
Curbside Recyclables	Paper and MGP collected through the Curbside Program
Curbside Recycling Program or Curbside Program	The collection of source-separated materials designated by DSNY as recyclables from residences, City agencies and non-profit institutions housed in tax-exempt property
Draft New SWMP	Draft Comprehensive Solid Waste Management Plan, September 2004
DSNY-managed Waste	Solid waste that DSNY collects from all residential households in the City and the institutional waste of City, state and federal agencies that DSNY collects and/or for which DSNY arranges disposal
DSNY TS Rules	DSNY Transfer Station Operational Requirement Rules
EJ Community	Census block groups with populations that meet the EJ Policy criteria
EJ Policy	NYSDEC's policy guidance on Environmental Justice (EJ) and Permitting issued in March 2003
EJ Program	DSNY's enhanced public participation and outreach program
Existing Programs	Ongoing programs approved in the 1992 SWMP, as amended, that will continue under the New SWMP
Existing SWMP	1992 comprehensive Solid Waste Management Plan, as amended

Definitions	
Fill Material	Waste as defined in DSNY Rules that is typically comprised of clean material consisting of earth, ashes, dirt, concrete, rock, gravel, asphalt millings, stone or sand
IESI	IESI Corporation
Interim Export	Short-term DSNY contracts with in- and out-of-City transfer stations and out-of-City disposal sites for export of DSNY-managed Waste
Long Term Export Program	Those facilities and services pertaining to the export of DSNY-managed Waste from the City that is a component of the Proposed Action
MGP	Metal, glass and plastic defined as Recyclables by DSNY
MTS RFP	DSNY's Request for Proposals to Transport and Dispose of Containerized Waste from One or More Marine Transfer Stations, issued December 22, 2003
New Initiatives	New activities described in the Draft New SWMP that are enhancements to Existing Programs
New SWMP	The new Comprehensive Solid Waste Management Plan for the period 2005 through 2024 prepared pursuant to 6 NYCRR Part 360-15
Non-Putrescible Waste	Waste as defined in DSNY Rules that is typically comprised of inert waste generated from commercial and residential demolition, new construction and renovation projects, and contains inorganic materials, some of which are recycled. The non-recycled fraction is processed by the City's non-putrescible transfer stations for shipment to disposal facilities. This waste is also referred to as construction and demolition (C&D) debris to distinguish it from fill material, which is a subset of non-putrescible waste comprised of materials such as excavated fill, stone rubble and road millings that are graded into materials such as sand and aggregate and stockpiled at fill material transfer stations in the City and reused in other building projects.
Onyx	Onyx Waste Services, Inc.

Definitions	
Paper	Material made of paper that DSNY defines as a Recyclable
Part 360 Noise Code	6 NYCRR Part 360-1.14(p)- operational requirements related to solid waste management facilities
Proposed Action	Actions in three major categories – Long Term Export, Recycling, and Commercial Waste – proposed to be implemented under the New SWMP that are subject to environmental review
Proposed Plan	The Draft New SWMP
Proposed Plan Facilities	Those facilities and contracts that would be implemented under the Proposed Action
Putrescible Waste	Waste as defined in DSNY Rules that is typically comprised of material generated by business establishments and collected by private carters in the City that may be delivered to putrescible transfer stations or recycled, which may contain organic matter
Queens RFP	DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Queens Formerly Delivered to the Greenpoint Marine Transfer Station
Recyclables	Materials defined by DSNY as recyclable such as Paper and MGP
Rules	Rules of the City of New York
Sampling Protocol	Sampling Protocol for the Department Barge Odor Study, finalized on October 2, 1998, and updated on June 18, 1999
Sludge Composting EIS	Final Generic Environmental Impact Statement for the New York City Sludge Management Plan, dated May 1992
Study	Commercial Waste Management Study
TransRiver, American Ref-Fuel	TransRiver Marketing Company, L.P., which may also be referred to as American Ref-Fuel Company LLC or ARC/TRM
Waste Management, WMX	Waste Management of New York, LLC
Zoning Resolution	New York City's Zoning Resolution

EXECUTIVE SUMMARY

FOR THE

FINAL
ENVIRONMENTAL IMPACT STATEMENT

FOR

THE NEW YORK CITY
COMPREHENSIVE SOLID WASTE MANAGEMENT PLAN

Prepared by:

NEW YORK CITY DEPARTMENT OF SANITATION

CEQR No: 03-DOS-004Y

April 1, 2005

EXECUTIVE SUMMARY

1.0 INTRODUCTION

The New York City (City) Department of Sanitation (DSNY) is proposing a draft New Comprehensive Solid Waste Management Plan (Draft New SWMP) for the next 20-year planning period. As lead agency principally responsible for undertaking the action, DSNY has caused this Final~~Draft~~ Environmental Impact Statement (F~~D~~EIS) to be prepared in accordance with the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617) and City Environmental Quality Review procedures (CEQR) set forth in Executive Order 91 of 1977, as amended, and Rules of Procedure for CEQR found in Section 6, Title 62 of the Rules of the City of New York (RCNY). The F~~D~~EIS is intended to support the adoption of the New SWMP and its related approvals, which together constitute the Proposed Action. As further discussed below, the Draft New SWMP incorporates elements of the existing SWMP and includes major changes to the City's Long Term Export Program for DSNY-managed Waste,[1] to the City's Recycling Program, and to management of Commercial Waste[2] in the City.

A Draft New SWMP, published in October 2004, describes the Proposed Action that, in summary, is to:

- Improve DSNY's Curbside Recycling Program through the award of a 20-year processing contract and the development of a new in-City Recyclables processing facility as well as a Manhattan Recyclables acceptance facility.
- Implement the City's Long Term Export Program through: the development of four Converted Marine Transfer Stations (Converted MTSs); award up to five contracts with private transfer stations for barge or rail export of DSNY-managed Waste for disposal; and, enter into an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed Waste at a waste-to-energy (WTE) facility in Newark, New Jersey.

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[1] DSNY collects and disposes of Putrescible and Non-Putrescible Waste from all residences in the City, institutions, not-for-profit organizations, lot cleaning operations, and other City, state and federal agencies (DSNY-managed Waste).

[2] Commercial Waste is those wastes, including recycled material, generated in the City by business establishments and construction activity, and collected by private carters, that are respectively defined in DSNY's Rules as Putrescible Waste and Non-Putrescible Waste. Most, but not all, Commercial Waste generated is processed through the City's putrescible and non-putrescible transfer stations.

- Provide the capacity for barge export of Putrescible Commercial Waste from the City at one existing Manhattan MTS as well as at the four Converted MTSs.

For environmental review purposes, the ~~New SWMP~~DEIS evaluated a reasonable range of facilities and sites as Alternatives to the Proposed Action, including. ~~This FDEIS provides~~ a comprehensive environmental review of 17 sites/facilities, as applicable, that are the Proposed Action in the Draft New SWMP.[3] Subsequent to publication of the DEIS, three (3) of these 17 sites/facilities are no longer part of the Proposed Action, and are now considered Alternatives, resulting in 14 sites/facilities that are part of the Proposed Action[4]. Section 1.3 of this FEIS provides additional details on the Alternatives considered to the Proposed Action. ~~Comprehensive e~~This FEIS also contains environmental reviews ~~were also conducted~~, as applicable, for the ~~16~~17 other Alternative sites/facilities considered during development of the Draft New SWMP, including two additional potential Long Term Export facility site options, referenced in this FEIS that, if selected as part of the Proposed Action, would be the subject of supplemental environmental reviews.

[3] The number does not include the Essex County Resource Recovery Facility, proposed to receive waste from two of three Manhattan wastesheds, because this is an existing permitted facility in New Jersey that is not subject to environmental review under CEQR. Final site selection for certain elements of the Proposed Action is dependent upon the outcome of current procurement actions by DSNY.

[4] Referring to Table ES-2, this total includes the Review Avenue Truck to Rail and Truck to Barge options as two separate facilities, the Oak Point and Maspeth Railyards as separate facilities, and also includes the two recycling facilities that are elements of the Proposed Action.

2.0 PURPOSE AND NEED

In accordance with the requirements of New York State's Solid Waste Management Act (New York Environmental Conservation Law, Section 27-0707), and implementing regulations (6 NYCRR Subpart 360-15), the City's first Comprehensive Solid Waste Management Plan, approved in 1992 ~~(1992 SWMP)~~, as amended by the 1996 and 2000 SWMP Modifications (Existing SWMP), ~~established~~ provides the framework for its solid waste management and recycling programs ~~over a 10-year period~~through April 2005. Approved modifications to the 1992 SWMP (1996 SWMP Modification) focused on further expansion of recycling. In 2000, further approved amendments to the SWMP (2000 SWMP Modification) were made, which principally focused on the City's plan to address the closure of the Fresh Kills Landfill on Staten Island. ~~The 1992 SWMP, as amended (Existing SWMP), expires at the end of October 2004.~~ The City and the City Council have requested that the New York State Department of Environmental Conservation (NYSDEC) extend the Existing SWMP to cover the period between the submittal of the Draft New SWMP to the City Council and its adoption and the approval of the adopted Draft New SWMP by NYSDEC.

Each day, the City's 8.1 million residents, commuters, visitors, businesses and residential and commercial construction activity generate very large and diverse quantities of solid waste material. The Draft New SWMP sets forth a plan for the long-term management of the City's solid waste in a cost-effective and environmentally responsible manner and, in addition to the Proposed Action, incorporates by reference the Existing SWMP to support Existing Programs, including the New Initiatives described in the Draft New SWMP. These Existing Programs and New Initiatives, approved pursuant to the Existing SWMP, are, therefore, not part of the Proposed Action that is subject to environmental review in this F~~D~~EIS.

The City's existing solid waste management system:

- Recycles or disposes of approximately 14,000 tons per day (tpd) or 4,240,000 tons per year (tpy) of DSNY-managed Waste currently generated in the City;

- Recycles or disposes of approximately 10,000 tpd (3,000,000 tpy) of Putrescible Commercial Waste that is generated, and approximately 6 million to 8.3 million tpy of Non-Putrescible Commercial Waste that is currently generated; and

- Provides for the management of Biosolids, Medical Waste and Dredge Spoils and Fresh Kills closure construction and end use.

3.0 PROPOSED ACTION

The following section describes the Proposed Action for Long Term Export, Recycling and Commercial Waste Management. The FDEIS also evaluates the reasonable Alternatives that were considered.

Long Term Export

The City has long recognized the importance of moving quickly to develop a more permanent system of waste export, to address both the rising cost of nearby landfill disposal as well as the current over-reliance on a truck-dependent system. In July of 2002, Mayor Bloomberg announced a plan to establish a system that would take advantage of the City's waterways and existing infrastructure. The plan called for the physical conversion of the City's existing Marine Transfer Stations (MTSs) to enable waste to be containerized on ~~site, making the waste suitable for~~site for export out-of-City by barge and rail. ~~export.~~

The Proposed Action for Long Term Export builds on the Mayor's previously announced plan, but offers an expedited timeframe, a lower cost and reduced reliance on complex MTS conversions outlined initially. The Proposed Action adheres to the two main principles of the Mayor's earlier plan: the containerization of waste and the long-distance export of that waste in containers by barge or rail by primarily relying on a mix of Converted MTSs and private transfer stations with the addition of the existing Essex County Resource Recovery Facility (Essex County RRF) in Newark, New Jersey, where waste would be delivered in collection vehicles. The Proposed Action for Long Term Export is:

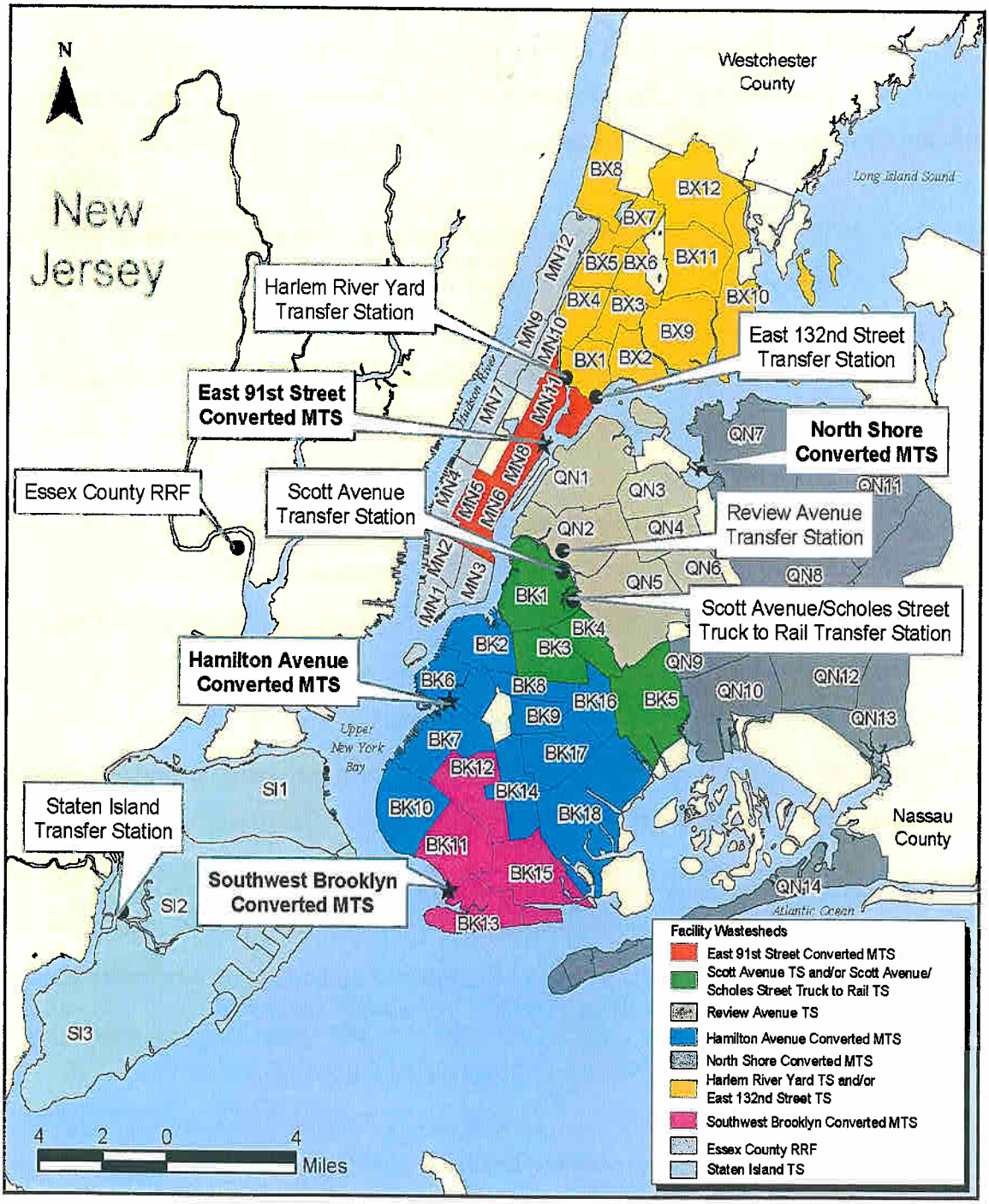
- For the entire Bronx wasteshed, enter into a long-term contract with one or two private transfer station waste companies for truck-to-rail disposal of DSNY-managed Waste from the Bronx.
- For the Brooklyn wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with one or two private transfer stations for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Brooklyn CDs 1, 3, 4 and 5.

- For the Brooklyn wasteshed formerly served by the Hamilton Avenue MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18 will be received and containerized.
- For the Brooklyn wasteshed formerly served by the Southwest Brooklyn MTS, develop a City-owned Converted MTS on the adjacent site of the former Southwest Brooklyn Incinerator, where DSNY-managed Waste from Brooklyn CDs 11, 12, 13 and 15 will be received and containerized.
- For the Manhattan wasteshed, Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12, enter into a long-term service agreement with the Essex County RRF in Newark, New Jersey to receive and process DSNY-managed Waste delivered in City collection vehicles.
- For the Manhattan wasteshed formerly served by the East 91st Street MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Manhattan CDs 5, 6, 8 and 11 will be received and containerized.
- For the Queens wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with a private transfer station for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Queens CDs 1 through 6.
- For the Queens wasteshed formerly served by the North Shore MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Queens CDs 7 through 14 will be received and containerized.
- For the four wastesheds served by Converted MTSs, enter into 20-year service agreements with one or more waste management companies, for transport of containerized waste by barge directly from an MTS to disposal facilities or to intermodal facilities for transloading to railcars or a larger barge, and for disposal at an appropriately permitted out-of-City facility.

Figure ES-1, Locations of Draft New SWMP Long Term Export Facilities and Wastesheds Served, identifies the boroughs and CDs that would be assigned to specific facilities.

In the Bronx and Brooklyn CDs 1, 3, 4 and 5, shown in Figure ES-1 and noted in Table ES-1, the decision as to whether DSNY contracts for export of DSNY-managed Waste generated in these wastesheds ~~with~~ through one or ~~two potential~~ more private transfer stations will be determined by ~~upcoming~~ DSNY negotiations with the ~~proposing~~ private waste management companies pursuant to the Long Term Export Program procurements now underway in the Bronx, Brooklyn and Queens. The procurement documents issued to implement the Proposed Action have specified that the facilities must be located within the wasteshed they will serve and that all waste received at those facilities (including Commercial Waste) be exported by barge or rail. All contracts entered into for the purpose of implementing the Proposed Action would define the amounts, types and origins of the waste a facility could receive.

Figure ES-1
Locations of Draft New SWMP Long Term Export Facilities and Wastesheds Served



Recycling

Through the first half of 2002, DSNY collected and recycled metal, glass and plastic (MGP) and Paper materials sufficient to divert 20% of the DSNY-managed Waste (curbside/containerized) waste stream from disposal. The program flourished in many respects, and compared favorably with the recycling programs of other major cities throughout the United States.

On July 1, 2002, the City's recycling program, having incurred budget cuts in the aftermath of the events of September 11, 2001 and the subsequent economic recession, temporarily suspended glass and plastic recycling. Diversion rates suffered; however, plastic and glass recycling programs were restored in Fiscal Year (FY) 2003 and FY 2004, respectively, and funding for composting and other services was restored in FY 2005.

Moving forward, cost-effective recycling programs are now an even greater priority. To address this priority, the Proposed Actions for recycling will commit the City to a 20-year contract for processing MGP. This long-term commitment will facilitate the development of state-of-the-art processing infrastructure in the City, which, in turn, will generate the consistent streams of materials necessary to foster reliable secondary materials markets. The 20-year contract also ushers in a new era of waterborne transportation of Recyclable materials, mirroring the transportation goals of the Draft New SWMP as a whole. Consistent with the commitment to emphasize waterborne transport as an element of the Draft New SWMP, the City will also develop a Recyclables acceptance facility in Manhattan that would transport Manhattan Recyclables by barge to the newly proposed Recyclables processing facility in Brooklyn.

Accordingly, the Proposed Action for recycling has the following new elements.

- Develop a materials processing facility at the 30th Street Pier (in Brooklyn Community District 7) through a public-private partnership involving a 20-year service agreement with a private recyclables processor; and
- Develop a Recyclables acceptance facility in Manhattan.

Commercial Waste

Commercial Waste management is as complex a system as the DSNY-managed Waste counterpart. The volume of Putrescible and Non-Putrescible Commercial Waste managed in the City is even larger, accounting for nearly 75% of the City's total waste stream. Commercial Waste is managed by the private sector through a system of private carters and private transfer stations. Both elements of the systems are subject to regulation – the private carters by the City's Business Integrity Commission (BIC), and the private transfer stations by DSNY and NYSDEC.

Except for that portion of Commercial Waste carted directly out of the City, waste export occurs through a network of land-based transfer stations, points at which waste from local collection trucks is transferred for long-haul export. These transfer stations are generally located in M3 districts (districts reserved for heavy industry) which are well buffered from residential communities. However, waste trucks traveling to and from these transfer stations often pass through residential communities on their way to the designated truck routes.

Two features of the current Commercial Waste management system have served as the focus of recent concern. The first is that Manhattan has no private transfer stations, despite the fact that over 40% of the City's Putrescible Commercial Waste is generated in Manhattan. As a result, although some waste is driven directly out of the City, most of Manhattan's Commercial Waste is driven to another borough before it is exported from the City. Further, because only one of the City's 19 private putrescible transfer stations exports waste by means other than transfer trailer, the export of waste—not just its collection—creates truck traffic.

To achieve a more balanced distribution and reduce effects from Commercial Waste transfer operations in those Community Districts (CDs) that currently have the greatest number of transfer stations, the following measures are proposed:

- Assess the feasibility of providing the site of the existing Manhattan West 59th Street MTS to private waste management companies to use for the transfer of Commercial Waste collected by private carters in Manhattan. The facility could be: (i) refurbished and used in conjunction with an enclosed barge unloading facility (EBUF); or (ii) redeveloped as a containerization facility.

- ~~Design~~ Develop measures to encourage private carters to deliver Commercial Waste during the 8:00 p.m. to 8:00 a.m. time period to the four Converted MTSs that are elements of the Proposed Action for Long Term Export (Hamilton Avenue and Southwest Brooklyn, Brooklyn; East 91st Street; Manhattan; and North Shore, Queens).

- Negotiate arrangements with the owners/operators of the selected private transfer stations in the Bronx, Brooklyn and Queens that submitted proposals in response to the BQB Requests for Proposals (RFPs) and Brooklyn Best and Final Offer (BAFO) and that are potential elements of the Proposed Action to require Commercial Waste (in addition to DSNY-managed Waste) processed at these facilities to be containerized and exported from the project service area by barge and/or rail.

Table ES-1 lists the 15 Proposed Action facilities and/or potential contractors evaluated, as applicable, in this FDEIS.

3.1 Major Advantages of the Draft New SWMP

Combined, the principal elements of the Draft New SWMP constitute a comprehensive and balanced approach to addressing the City's long-term waste export needs. The major advantages of the Draft New SWMP are described below.

Long Term Export

The following considerations guided formulation of the Long Term Export Program:

- Reducing the City's dependence on transport by transfer trailer to disposal sites is a priority. Approximately 93% of all truck-transferred DSNY-managed Waste is disposed in landfills, and most of the landfills under contract are within a radius of 200 miles of the City. A combination of factors is causing the depletion of this capacity and an increase in disposal price. The recent re-bidding of some Interim Export contracts that rely on truck transport to landfills has reflected an average increase of 19% over the initial contract prices.

Table ES-1
Proposed Draft New SWMP Facilities and Potential Contractors

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Long Term Export Facilities			
Converted MTS	DSNY, Hamilton Avenue Converted MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 7	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Converted MTS	DSNY, Southwest Brooklyn Converted MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Converted MTS	DSNY, East 91st Street Converted MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Converted MTS	DSNY, North Shore Converted MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck-to-Rail TS	Waste Management, Harlem River Yard, 98 Lincoln Avenue, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Rail TS(1)	Allied Waste Services, East 132nd Street Transfer Station, Bronx and Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Barge TS	Waste Management, 485 Scott Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Truck-to-Rail TS	Allied, 72 Scott Avenue-598 Scholes Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Truck-to-Rail/Barge TS (1)(2)	Waste Management, 30-58 Review Avenue, Queens and the LIRR Maspeth Rail Yard, Maspeth Avenue and Rust Street, Queens	Queens 2	Queens CDs 1 through 6
Waste-to-Energy Facility (3)	Port Authority of New York and New Jersey, Essex County RRF, Newark, New Jersey	NA	Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12
~~**Long Term Export Potential Support Facilities**~~			
~~**Barge Staging Area** (4)~~	~~DSNY, 52nd Street Barge Staging Area, 52nd Street and 1st Avenue, Brooklyn~~	~~Brooklyn 7~~	~~NA~~
~~**Intermodal Barge-to-Rail Yard** (5)~~	~~Harlem River Yard, East 132nd Street and St. Anns Avenue, Bronx~~	~~Bronx 1~~	~~NA~~

Table ES-1 (Continued)
Proposed Draft New SWMP Facilities and Potential Contractors

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
~~Intermodal Barge-to-Rail Yard (5)~~	~~NYCEDC, 65th Street Intermodal Yard, Brooklyn~~	~~Brooklyn 10~~	~~NA~~
Recycling Facilities			
Recyclables Processing Facility (64)	30th Street Pier at the South Brooklyn Marine Terminal (SBMT), Brooklyn	Brooklyn 7	City-wide
Truck to Barge Marine Transfer Station (75)	Former site of Gansevoort MTS, Pier 52, Manhattan	Manhattan 2	Manhattan CDs 1 through 12

Notes:

(1) Both the East 132nd Street Truck-to-Truck-to-Rail Transfer Station in the Bronx and the Review Avenue Truck-to-Truck-to-Rail Transfer Station in Queens would dray containers between their respective transfer stations and intermodal rail yards that are in the respective project service areas but not at the same sites as the transfer stations. These intermodal yards are existing facilities that would receive non-discretionary permits from DSNY for handling solid waste and, as such, are not subject to environmental review. However, the movement of containers on tractor chassis between the transfer stations and the intermodal yard is subject to an environmental review that is reported in the FDEIS section for each respective transfer station.

(2) Pending the outcome of negotiations between DSNY and Waste Management, the Review Avenue Transfer Station would be modified to operate as either a truck-to-barge or a truck-to-truck-to-rail facility.

(3) The Essex County RRF is a permitted and operating WTE facility in Newark, New Jersey. As such, the facility itself is not subject to environmental review in this FDEIS. DSNY-managed Waste would be delivered in collection vehicles to this facility or via hopper barges from the existing MTSs, if an EBUF were to be developed in the vicinity of the Essex County RRF some time in the future. The routing of DSNY collection vehicles to bridge and tunnel portals leaving the City is subject to environmental review and is reported in Chapter 16 of this FDEIS.

~~(4)The 52nd Street Barge Staging Area historically served the existing MTSs as a location where barge movements between individual MTSs and Fresh Kills could be staged. A replacement in kind of the pier structure is proposed. Its purpose in the Long Term Export Program will be more limited; principally, a supply storage facility and a location to temporarily moor barges that are scheduled for maintenance at other facilities.~~

~~(5)Two~~ An ~~intermodal barge to rail facilities at Harlem River Yard and the 65th Street Rail Yard, respectively, may be constructed as transload facilities to move containers between the Converted MTSs and railheads. DSNY has modified its Rules to allow a non discretionary permit by registration process for intermodal facilities handling containerized waste that is not subject to environmental review. However, the USACE Section 10/404 permits and the NYSDEC Article 15/25 permits pertaining to waterfront construction are subject to environmental review. Note that there are other existing intermodal facilities that may be used for intermodal transfer of containers from the Converted MTSs.~~

~~(6)~~(4) This 30th Street Pier at SBMT is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. ~~Curbside Recyclables from other boroughs would be delivered by barge.~~ Recyclables would be transferred from this facility by barge. ~~As a recycling~~This facility~~, it~~ is ~~not~~ subject to regulation under 6 NYCRR Part 360 Regulations through a registration process. ~~as a solid waste facility. However, the~~ The waterfront construction requires USACE Section 10/404 ~~permits~~ and ~~the~~ NYSDEC Article 15/25 permits, ~~that~~ and these are subject to environmental review.

Notes for Table ES-1 (continued):

~~(7)~~(5) The timetable for designing, permitting and constructing this facility, which would receive truck deliveries of DSNY MGP Curbside Recyclables collected in Manhattan for barge transfer to the 30th Street Pier at SBMT for processing, is approximately seven years. Accordingly, the environmental review of this facility is deferred until more detailed design information is available However, an analysis of the potential for off-site traffic, air quality and noise impacts from directing DSNY's Manhattan Recyclables collection vehicles to this destination was conducted.

LIRR = Long Island Rail Road
NYCEDC – New York City Economic Development Corporation
NA = Not Applicable

- Remote disposal capacity remains available, but truck-based transfer is not economically viable.
- Developing a barge/rail transport system capable of accessing this remote capacity could offset potential increases in disposal costs.
- Developing a long-term solution that is equitable to the greatest extent possible.
- An alternative to long-distance transport, the delivery of DSNY-managed Waste in collection trucks to a regional WTE facility, achieves an approximately 75% reduction in the volume of waste (ash residue and non-processible waste) disposed in landfills, and reduces the potential impact of landfill price inflation. A long-term disposal contract with a WTE facility can provide a buffer against inflationary price increases that are likely to affect regional landfill capacity.

The proposed Long Term Export Program is a comprehensive plan that balances the City's need to export waste over the long term with the environmental benefit of significantly reducing the transfer trailer traffic associated with Interim Export. Its major advantages include the following:

- DSNY-managed Waste delivered to private transfer facilities in the Bronx, Brooklyn and Queens will be exported by barge or rail and, depending on the outcome of negotiations, the Commercial Waste processed at these facilities may also be exported by barge or rail.
- The in-City facilities proposed would be developed on either existing MTS or private transfer station sites.
- The proposed combination of facilities provides the City with redundancy in the DSNY-managed Waste system that accommodates future increases in waste generated in the City as a function of population growth. Occasional conditions that may affect certain components of the system will not disrupt future waste export.

- Use of existing private transfer station and Essex County RRF capacity: (i) allows some components to be implemented on a faster timetable; and (ii) avoids City investment in new capital projects.

- The Converted MTSs will provide capacity that could be available to containerize Commercial Waste for barge/rail export.

- The projected economics of the Proposed Action are less costly to the City than four alternative scenarios that were evaluated and the Mayor's original plan.

Recycling

The major advantages of the Proposed Action to develop a Recyclables processing facility are that it:

- Commits the City to maintain its Curbside MGP Program over the next 20-years.

- Creates a relationship in which the processor has economic incentives to expand product markets, and thereby increase the net recovery rate for MGP. Historically, DSNY has had considerable difficulty in establishing stable and cost-effective relationships with the contractors that have processed its Curbside MGP, in part due to the practice of contracting for a five-year term with a short-notice cancellation clause. This created economic uncertainty for the contractor and discouraged investments in facility upgrades to improve recovery rates. The 20-year term of the service agreement removes these disincentives and will create a relationship in which the processor has economic incentives to expand product markets and increase the net recovery rate for MGP processed.

- Enhances the opportunity to produce and market new products by recovering materials that are now marginal. The City's Curbside MGP have high proportions by weight of glass, particularly mixed-color broken glass, a material that does not have economic markets. Better technology to be used in the materials processing facility, in addition to aggressive research and development – both afforded by a long-term contract – will address this situation.

- Secures competitive price terms for the City and stabilizes costs over the long term.

- Creates a waterborne transportation network that is consistent with the City's goal of reducing truck traffic. An estimated 85% of the Recyclable materials will be delivered to the new Recyclables processing facility via barge, and 75% will leave post-processing via barge. This is a shift that will help reduce truck traffic on City streets and improve the local environment.

- Creates significant local employment opportunities through creation of an estimated 160 construction jobs and 100 permanent jobs when facility operations commence.

The major advantages of the Proposed Action to develop a Recyclables acceptance facility in Manhattan are that it:

- Eliminates the need for Recyclables collection vehicles to travel from Manhattan to acceptance or processing facilities in other boroughs or New Jersey;
- Facilitates the relocation of the recycled Paper barge operation now based at the West 59th Street MTS to Gansevoort, which will enable the West 59th Street MTS site to be potentially developed for export of Commercial Waste; and
- Results in a more equitable distribution of transfer facilities among the City's boroughs.

Commercial Waste

These Proposed Actions, if fully implemented, would facilitate the City's transition from an almost wholly truck-based waste export system to a predominantly rail- and/or barge-based export system for the City's Putrescible Waste.

Developing the West 59th Street MTS site for transfer of a portion of Manhattan-generated Commercial Waste would:

- More equitably distribute the impacts of Commercial Waste transfer among the City's boroughs;
- Reduce the volume of transfer trailer truck traffic in the City;
- Provide the site most proximate to midtown, a major generator of Commercial Waste; and
- Shorten carters' current travel time from the end of their midtown collection route to their tipping locations in other boroughs, resulting in a decline in the overall duration of commercial collection operations and fewer vehicle miles traveled in the City.

The advantages of using the Converted MTSs to containerize Commercial Waste include that it:

- Capitalizes on unused capacity during the hours when private carter collection operations occur. As DSNY would tip during the day and private carters at night, there is minimal potential for conflict in terms of processing both waste streams at the Converted MTSs.
- Potentially removes approximately 178 transfer trailers from the City's streets that would otherwise be transporting waste for export. As containerization facilities, the four Converted MTSs have potentially available capacity for processing up to approximately 3,915 tpd of Commercial Waste.

The advantages of requiring private transfer station owners/operators who are containerizing and exporting DSNY-managed Waste by barge and/or rail to also containerize and export by barge or rail any Commercial Waste processed at their respective facilities are that it:

- Reduces outbound transfer trailer traffic from the private transfer stations, thus reducing truck traffic in these communities; and
- Accelerates the conversion of the City's private transfer network towards a barge- and/or rail-based system that will have long-term economic and environmental benefits for the City.

4.0 SELECTION AND ENVIRONMENTAL REVIEW OF THE PROPOSED ACTION AND CONSIDERATION OF ALTERNATIVES

4.1 Siting Criteria and Site Screening

The types of sites considered for the Proposed Action were: (i) existing MTS sites as locations for the Converted MTSs; (ii) existing truck-receiving privately owned solid waste transfer sites that are currently capable of exporting or can be modified to export by barge, rail or truck-to-rail; and (iii) new sites that could be developed as truck-receiving solid waste transfer sites that would be capable of exporting by barge, rail or truck-to-rail.

Table ES-2 identifies the ~~13~~ 17 Alternatives considered for detailed environmental review in this F~~D~~EIS. The existing MTSs in Manhattan also are considered as Alternatives to the Gansevoort acceptance facility Proposed Action. Section 1.3 of this FEIS provides additional discussion on the Alternatives considered.

4.2 Environmental Review of Proposed Action and Alternatives

As this F~~D~~EIS demonstrates, the Draft New SWMP Plan would enable export of DSNY-managed Waste and some of the City's Commercial Waste in an efficient and environmentally sound manner. Any impacts associated with the Proposed Action are capable of being mitigated. This summary conclusion is supported by the comprehensive environmental reviews, as applicable, of the Proposed Action and Alternatives in Chapters 4 through 31 of this F~~D~~EIS. In compliance with CEQR/SEQR, these environmental reviews addressed: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Community Facilities and Services; Open Space; Cultural Resources; Urban Design, Visual Resources, and Shadows; Neighborhood Character; Natural Resources; Hazardous Materials; Water Quality; Waterfront Revitalization Program; Infrastructure, Solid Waste and Sanitation Services, and Energy; Traffic, Parking, Transit, and Pedestrians; Air Quality; Odor; and Noise.

Table ES-2
Draft New SWMP Alternatives

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Barge Staging Area	DSNY, 52nd Street Barge Staging Area, 52nd Street and 1st Avenue, Brooklyn	Brooklyn 7	NA
Intermodal Barge-to-Rail Yard (1)	Harlem River Yard, East 132nd Street and St. Anns Avenue, Bronx	Bronx 1	NA
Intermodal Barge-to-Rail Yard	NYCEDC, 65th Street Intermodal Yard, Brooklyn	Brooklyn 10	NA
Converted MTS	DSNY, South Bronx Converted MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Converted MTS	DSNY, Greenpoint Converted MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5; Queens CDs 1 through 6
Converted MTS	DSNY, West 135th Street Converted MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Converted MTS	DSNY, West 59th Street Converted MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1, 2, 3, 4 and 7
Truck-to-Rail TS	IESI or TransRiver Marketing, Meserole Street Transfer Station, 568 Meserole Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Existing MTS	DSNY, South Bronx MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Existing MTS	DSNY, Greenpoint MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5; Queens CDs 1 through 6
Existing MTS	DSNY, Hamilton Avenue MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 6	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Existing MTS	DSNY, Southwest Brooklyn MTS, Bay 41st Street and Shore Parkway, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Existing MTS	DSNY, West 135th Street MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Existing MTS	DSNY, West 59th Street MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1, 2, 3, 4 and 7
Existing MTS	DSNY, East 91st Street MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Existing MTS	DSNY, North Shore MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck to Rail TS(2)	Varick Avenue Transfer Station, 215 Varick Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5
Intermodal Facility(2)	Steel Style, 401 South Water Street, New Windsor, New York	N/A	To Be Determined

Notes for Table ES-2:

N/A = Not Applicable.

(1) An intermodal barge-to-rail facility at Harlem River Yard was proposed as a transload facility to move containers between the Converted MTSs and railheads. DSNY has modified its Rules to allow a non-discretionary permit by registration process for intermodal facilities handling containerized waste that is not subject to environmental review. However, the USACE Section 10/404 permits and the NYSDEC Article 15/25 permits pertaining to waterfront construction are subject to environmental review. Note that there are other existing intermodal facilities that may be used for intermodal transfer of containers from the Converted MTSs.

(2) This FEIS includes site descriptions of the 215 Varick Avenue truck-to-rail transfer station in Brooklyn and the Steel Style intermodal site in New Windsor, New York. These facilities were not reviewed in the DEIS, but could potentially become elements of the Long Term Export program as an outcome of the procurement processes DSNY is currently conducting. In that case, these facilities would be subject to environmental review, as required.

Table ES-3 summarizes the results of technical evaluations of potential air (on-site and off-site), traffic, odor, and noise (on-site and off-site) impacts of the Proposed Action Facilities. Several of these facilities are existing permitted facilities that require either no modifications, minor modifications, or major modifications for exporting DSNY-managed Waste by barge or rail. As such, the level of environmental review conducted for these facilities varied. A description of the analyses undertaken for each element of the Proposed Action is described in more detail in this FDEIS.

For the Proposed Action, the following measures were identified to mitigate estimated adverse impacts:

- Traffic signal timing adjustments would mitigate estimated traffic impacts identified at : (1) three intersections near the Southwest Brooklyn Converted MTS, and at two intersections near the Southwest Brooklyn Converted MTS using the Alternative route analyzed in the FEIS in response to comments received during public meetings on the ULURP application for this facility; (2) two intersections near the Hamilton Avenue Converted MTS; (3) two intersections near the East 91st Street Converted MTS; (4) two intersections near the North Shore Converted MTS; and (5) one intersection near the Scott Avenue/Scholes Street Truck to Rail TS.
- A reduction in the number of DSNY and other City agency vehicles making deliveries to the facility during the facility peak hour would be required to mitigate estimated traffic impacts identified at one intersection near the East 132nd Street TS and Oak Point Rail Yard.~~; and~~
- A restriction on the number of Commercial Waste vehicles delivering waste to the Southwest Brooklyn, Hamilton Avenue, East 91st Street and North Shore Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along the routes to these facilities between 8:00 p.m. and 8:00 a.m.
- DSNY Collection vehicles from Queens CD 9 en route to the North Shore Converted MTS will be routed further on the Van Wyck Expressway to Exit 14, Linden Place to mitigate estimated off-site noise impacts at receptors along College Point Boulevard.
- A restriction on the number of relayed DSNY collection vehicles delivering waste between the hours of 1:00 a.m. and 5:00 a.m., and construction of a louvered fence on both sides of the facility ramp, will mitigate estimated on-site noise impacts at property boundary points of the North Shore Converted MTS; and
- A restriction on the number of relayed DSNY collection vehicles delivering waste to the: (1) Hamilton Avenue and East 91st Street Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along routes to these facilities between 2:00 a.m. and 5:00 a.m.; and (2) Southwest Brooklyn Converted MTS will mitigate estimated on-site noise impacts at two off-site noise sensitive receptors between 2:00 a.m. and 3:00 a.m.

Table ES-4 provides a summary of the impact assessments for the Proposed Action across all remaining environmental review categories.

Table ES-3
Summary of Air Quality, Traffic, Odor and Noise Analyses for Proposed Action Facilities and Contracts

	Air Quality									Traffic	Odor	Noise	
	On-Site						Off-Site						
	CO	NO_2	PM_{10}	$PM_{2.5}$	SO_2	HC	CO	PM_{10}	$PM_{2.5}$			On-Site	Off-Site
Hamilton Avenue Converted MTS, Brooklyn(1)	X	X	X	X	X	X	X	X	X	X^M	X	S	X^M
Southwest Brooklyn Converted MTS, Brooklyn(1)	X	X	X	X	X	X	X	X	X	X^M	X	X	X^M
East 91st Street Converted MTS, Manhattan(1)	X	X	X	X	X	X	X	X	X	X^M	X	X	X^M
North Shore Converted MTS, Queens(1)	X	X	X	X	X	X	X	X	X	X^M	X	X^M	X^M
Harlem River Yard Truck to Rail TS, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
East 132nd Street Transfer Station, Bronx	PA	PA	PA	PA	PA	PA	S	X	X	X^M	PA	X	S
485 Scott Avenue, Brooklyn	PA	PA	PA	PA	PA	PA	PA	PA	PA	S	PA	PA	PA
72 Scott Avenue-598 Scholes Street, Brooklyn	X	X	X	X^M	X	X	S	X	X	X^M	X	X	S
30-58 Review Avenue, Queens	X	X	X	X^M	X	X	S	X	X	X	X	S	S
Essex County Resource Recovery Facility, New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Staten Island Transfer Station, Staten Island	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
~~**52nd Street Barge Staging Area, Brooklyn**~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~X~~	~~S~~	~~N/A~~
~~**Harlem River Yard Barge to Rail TS, Bronx**~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~X~~	~~X~~	~~N/A~~
Oak Point Rail Yard, Bronx	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	X^M	N/A	N/A	S
~~**65th Street Intermodal Yard, Brooklyn**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
Maspeth Rail Yard, Queens	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	S	N/A	N/A	S
30th Street Pier at the SBMT, Brooklyn	N/A	N/A	N/A	N/A	N/A	N/A	S	N/A	S	S	N/A	N/A	S
Gansevoort Recyclables Acceptance Facility, Manhattan	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	S	N/A	N/A	S
~~**85 Edgewater Road, Bronx**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~**Long Island City, 30-27 Greenpoint Avenue, Queens**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~

Notes:

(1) Restrictions on deliveries of Commercial Waste during certain hours and at certain locations along routes to this facility are required between 8:00 p.m. and 8:00 a.m. to mitigate the potential for off-site noise impacts.

X = Analysis found no significant impact.

X^M = Analyzed with a mitigated impact.

S = Below screening threshold for analysis.

N/A = Analysis not applicable to this site.

PA = Analysis in this FEIS not required based on prior environmental review.

~~U = Unmitigatible Impact.~~

Table ES-4
Summary of Impact Analyses
Proposed Action Facilities and Contracts

Site/Facility Option	Land Use, Zoning, and Public Policy	Socioeconomic Conditions	Community Facilities and Services	Open Space	Cultural Resources	Urban Design , Visual Resources, and Shadows	Neighborhood Character	Natural Resources	Hazardous Materials	Water Quality	Waterfront Revitalization	Infrastructure, Solid Waste and Sanitation Services, and Energy
Hamilton Avenue Converted MTS, Brooklyn	N	N	N	N	N	N	N	N	N	N	N	N
Southwest Brooklyn Converted MTS, Brooklyn	N	N	N	N	N	N	N	N	N	N	N	N
East 91st Street Converted MTS, Manhattan	N	N	N	N	N	N	N	N	N	N	N	N
North Shore Converted MTS, Queens	N	N	N	N	N	N	N	N	N	N	N	N
Harlem River Yard Truck to Rail TS, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
East 132nd Street Transfer Station, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
485 Scott Avenue, Brooklyn	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
72 Scott Avenue-598 Scholes Street, Brooklyn	N	N	N	N	N	N	N	N	N	N/A	N	N
30-58 Review Avenue, Queens	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
Essex County RRF, New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Staten Island Transfer Station, Staten Island	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
~~**52nd Street Barge Staging Area, Brooklyn**~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~	~~N~~
~~**Harlem River Yard Barge to Rail TS, Bronx**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
Oak Point Rail Yard, Bronx	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
~~**65th Street Intermodal Yard, Brooklyn**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/~~	~~N/A~~	~~N/A~~	~~N/A~~
Maspeth Rail Yard, Queens	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30th Street Pier at the SBMT, Brooklyn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A	N	N/A	N/A
Gansevoort Recyclables Acceptance Facility, Manhattan	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
~~**85 Edgewater Road, Bronx**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
~~**Long Island City, 30-27 Greenpoint Avenue, Queens**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~

Notes:
N indicates no adverse impact.
~~MI indicates a significant mitigated environmental impact.~~
N/A indicates not analyzed.
PA = Analysis in this FEIS not required based on prior environmental review.

5.0 PUBLIC REVIEW PROCESS –CEQR AND SEQRA

Adoption and approval of the Draft New SWMP will provide the basis on which the facilities selected for development by the City could receive permits. The City's commitment of resources to develop and operate the facilities would be predicated upon the findings presented in the ~~Final Environmental Impact Statement (~~FEIS~~)~~ that, consistent with social, economic, and other essential considerations of City and state policy, from among the reasonable Alternatives, the Proposed Action is one that minimizes or avoids significant adverse environmental effects to the maximum extent practicable, and that adverse effects would be minimized or avoided by incorporating identified mitigative measures, as practicable (2001 CEQR Technical Manual: pages 1 through 11; Section 270, Agency Findings).

Pursuant to CEQR/SEQRA rules and procedures, the DSNY is designated as lead agency. Involved agencies with discretionary approval of the Draft New SWMP are the City Council and the New York State Department of Environmental Conservation (NYSDEC). Agencies interested in the Long Term Export Program elements of the Proposed Action and assessments of facilities and services related to that program that are included in this FD~~D~~EIS are listed below.

Federal Agencies

- United States Army Corps of Engineers (USACE)
- United States Environmental Protection Agency (USEPA), Region 2

New York State Agencies

- Department of State
- Office of Parks, Recreation and Historic Preservation (OPRHP)
- Office of General Services (OGS)

New York City Agencies

- City Office of Environmental Coordination (OEC)
- Department of Environmental Protection (NYCDEP)
- Department of Transportation (NYCDOT)

- City Planning Commission
- New York City Economic Development Corporation (NYCEDC)
- Landmarks Preservation Commission (LPC)
- Department of Health (NYCDOH)
- Department of Parks and Recreation (NYCDPR)

The purpose of this FDEIS is to provide decision-makers with an understanding of the potential environmental consequences of the Proposed Action so that they may make an informed decision about the actions they are asked to undertake. In addition, this FDEIS provides the basis to make reasoned comparisons of the Alternatives to the Proposed Action.

A series of Public Scoping Meetings were held between June 15 and July 1, 2004 to solicit comments and concerns from the public and regulatory agencies regarding the proposed approach to evaluation of the Proposed Action (see Chapter 1, Section 1.8, Public Outreach Process/Environmental Justice, for a description of the public participation and outreach program). In addition to comments received at the Scoping Meetings, written comments were accepted until July 11, 2004. The Final Scoping Document was revised ~~to address the public~~in consideration of the comments received. The DEIS was issued on October 22, 2004.

As part of the Environmental Impact Statement (EIS) process, ~~an~~ this FEIS ~~will be~~was prepared after: (1) a public comment process extending from October 22, 2004 to January 24, 2005 (a period of 94 days); and (2) eight public hearings on ~~this~~ the DEIS~~.~~, held in the communities potentially affected by the Proposed Action, to solicit comments and concerns from the public and regulatory agencies on the DEIS. Additionally, public hearings on ULURP applications for the four Converted MTSs were held by the Community Boards of the Community Districts potentially affected by these elements of the Proposed Action.

Following the close of the DEIS comment period, all comments received at the public hearing and in writing were reviewed and are addressed in Chapter 40 of this FEIS. This FEIS also includes necessary revisions, additions and clarifications to the document, as well as categorized responses to comments received. Issuance of this FEIS is required for: (1) City Council adoption and NYSDEC approval of the Final New SWMP; (2) City Planning Commission approval of the

pending ULURP applications; and (3) approval by the appropriate issuing authorities of other permits required to implement the Proposed Action.

~~A public hearing to provide an opportunity for the public to comment on the DEIS will be held no sooner than 30 days after the distribution of the DEIS.~~ The ~~DEIS~~ FEIS is available at DSNY's website: www.nyc.gov/sanitation. Copies of the ~~DEIS~~ FEIS can be viewed at the Public Repositories listed in Table 1.6-1 of Chapter 1. Compact disks of the ~~D~~FEIS can be obtained by sending a mail or fax request to Assistant Commissioner, Harry Szarpanski P.E., DSNY Bureau of Long Term Export, 44 Beaver Street, New York, New York 10004, fax number (212) 269-0788.

~~Following the close of the DEIS comment period, all comments received at the public hearing and in writing will be reviewed and addressed in the FEIS. The FEIS will include necessary revisions, additions and clarifications to the document, as well as categorized responses to comments received. Issuance of the FEIS is required for City Council adoption of the Final New SWMP.~~

The FEIS findings ~~will be~~are used to support all other public actions and approvals inclusive of anticipated potential permit actions. These potential actions are listed in Chapter 1, Section 1.7 of the DEIS. Additionally, Chapter 2, Section 2.5 provides a table listing the possible applicability of permit requirements to specific sites.

6.0 OVERVIEW OF ~~D~~FEIS CHAPTERS

Chapter 1, Proposed Action, describes the purpose and need, defines the Proposed Action, and identifies the Alternatives considered and the involved and interested public agencies.

Chapter 2, Description of Facility Sites, provides, in Sections 2.2 through 2.4, a description of the important characteristics of each of the 17 Proposed Action sites at which potential export facilities were considered, and describes the 14 Alternative sites for which detailed environmental reviews, as applicable, were conducted. Section 2.5 provides a summary of potentially applicable permits for these sites.

Chapter 3, Overview of Study Methodologies for Site-Specific Analyses, describes, in Sections 3.2 through 3.19, the analytical methods that were applied, consistent with CEQR/SEQRA requirements, to evaluate the potential environmental impacts of the Proposed Action and Alternatives. CEQR/SEQRA requirements were refined in a process of consultation with interested agencies and applied consistently to all site/facility options.

Chapter 3 describes the methodologies used to conduct environmental reviews in the categories:

- Definition of Study Areas
- Analysis Years and Baseline Conditions
- Land Use, Zoning, and Public Policy
- Socioeconomic Conditions
- Community Facilities and Services
- Open Space
- Cultural Resources
- Urban Design, Visual Resources, and Shadows
- Neighborhood Character
- Natural Resources
- Hazardous Materials
- Water Quality
- Waterfront Revitalization Program
- Infrastructure, Solid Waste and Sanitation Services, and Energy
- Traffic, Parking, Transit, and Pedestrians

- Air Quality
- Odor; and
- Noise

Chapters 4 through 31 report the results of the impact analyses in the above-listed categories for each Proposed Action and Alternative.

Chapters 32 through ~~39~~ 40 discuss the following:

- Chapter 32, Construction Impacts
- Chapter 33, Public Health Evaluation
- Chapter 34, Evaluation of the Proposed Action
- Chapter 35, Unavoidable and Adverse Impacts
- Chapter 36, Irreversible and Irretrievable Commitment of Resources
- Chapter 37, Growth-Inducing Aspects of the Proposed Action
- Chapter 38, References/Bibliography
- Chapter 39, List of Preparers
- Chapter 40. Responsiveness Summary

Appendices included in Volume III of this FD EIS include:

- Appendix A – Agency and Utility Correspondence
- Appendix B – Demographic and Socioeconomic Data
- Appendix C – Essential Fish Habitat Assessment of Eight MTS Sites
- Appendix D – Commercial Waste to the MTS Summary Report
- Appendix E – Off-Site Noise Analysis TNM Results
- Appendix F – Phase II Site Investigation Reports
- Appendix G –Compendium of Comments
- Appendix H – Selected Outreach Material for Enhanced Public Participation
- Appendix I – Commercial Waste Management Study
- Appendix J – Collection Vehicle Odor Sampling Report
- Appendix K – Truck Simulation Summary Report
- Appendix L – Equipment-Induced Vibration Memo
- Appendix M – Tonnages Memo
- Appendix N – Preliminary Construction Schedules

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CHAPTER 1 PROPOSED ACTION

1.1 Introduction

The New York City (City) Department of Sanitation (DSNY) is proposing a New Comprehensive Solid Waste Management Plan (Draft New SWMP) for the next 20-year planning period. As lead agency principally responsible for undertaking the action, DSNY has caused this Final~~Draft~~ Environmental Impact Statement (F~~D~~EIS) to be prepared in accordance with the State Environmental Quality Review Act (SEQRA) and its implementing regulations (6 NYCRR Part 617) and City Environmental Quality Review procedures (CEQR) set forth in Executive Order 91 of 1977, as amended, and Rules of Procedure for CEQR found in Section 6, Title 62 of the Rules of the City of New York (RCNY). The F~~D~~EIS is intended to support the adoption of the Draft New SWMP and its related approvals, which together constitute the Proposed Action. As further discussed below, the Draft New SWMP incorporates elements of the existing SWMP and includes major changes to the City's Long Term Export Program for DSNY-managed Waste,[1] to the City's Recycling Program, and to management of Commercial Waste[2] in the City.

A Draft New SWMP, published in October 2004, describes the Proposed Action that, in summary, is to:

- Improve DSNY's Curbside Recycling Program through the award of a 20-year processing contract and the development of a new in-City Recyclables processing facility as well as a Manhattan Recyclables acceptance facility.
- Implement the City's Long Term Export Program through: the development of four Converted Marine Transfer Stations (Converted MTSs); award up to five contracts with private transfer stations for barge or rail export of DSNY-managed Waste for disposal; and, enter into an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed Waste at a waste-to-energy (WTE) facility in Newark, New Jersey.

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[1] DSNY collects and disposes of Putrescible and Non-Putrescible Waste from all residences in the City, institutions, not-for-profit organizations, lot cleaning operations, and other City, state and federal agencies (DSNY-managed Waste).

[2] Commercial Waste is those wastes, including recycled material, generated in the City by business establishments and construction activity and collected by private carters that are respectively defined in DSNY's Rules as Putrescible Waste and Non-Putrescible Waste. Most, but not all, Commercial Waste generated is processed through the City's putrescible and non-putrescible transfer stations.

- Provide the capacity for barge export of Putrescible Commercial Waste from the City at one existing Manhattan MTS as well as the four Converted MTSs.

Sections 1.3, 1.4 and 1.5 describe the Proposed Action for Long Term Export, Recycling and Commercial Waste Management, respectively, as well as the reasonable Alternatives that were considered.

The SEQRA/CEQR environmental review process is intended to ensure that the protection and enhancement of the environment, and human and community resources be given appropriate weight with social and economic considerations in determining public policy, and that those factors be considered together in reaching decisions on the Proposed Action. The FDEIS provides a means for agency decision makers and the public to systematically consider significant adverse environmental impacts, alternatives and mitigation. The FDEIS facilitates the weighing of social, economic and environmental factors early in the planning and decision-making process.

1.2 Purpose and Need

In accordance with the requirements of New York State's Solid Waste Management Act (New York Environmental Conservation Law, Section 27-0707) and implementing regulations (6 NYCRR Subpart 360-15), the City's first Comprehensive Solid Waste Management Plan, approved in 1992 (1992 SWMP) established the framework for its solid waste management and recycling programs over a 10-year period. Approved modifications to the 1992 SWMP (1996 SWMP Update and Modification) focused on further expansion of recycling. In 2000, further approved amendments to the SWMP (2000 SWMP Modification) were made, which principally focused on the City's plan to address the closure of the Fresh Kills Landfill on Staten Island. The 1992 SWMP, as amended (Existing SWMP), expires at the end of October 2004. ~~The~~ At the request of the City and the City Council, ~~have requested that~~ the New York State Department of Environmental Conservation (NYSDEC) extended the 1992 SWMP, as amended, (Existing SWMP) ~~to cover the period between the submittal of the Draft New SWMP to the City Council and its adoption and the approval of the adopted Draft New SWMP by NYSDEC~~through April 2005.

Each day, the City's 8.1 million residents, commuters, visitors, businesses and residential and commercial construction activity generate very large and diverse quantities of solid waste material. The Draft New SWMP sets forth a plan for the long-term management of the City's solid waste in a cost-effective and environmentally responsible manner and, in addition to the Proposed Action, incorporates by reference the Existing SWMP to support Existing Programs, including the New Initiatives described in the Draft New SWMP. These Existing Programs and New Initiatives approved pursuant to the Existing SWMP are therefore not part of the Proposed Action that is subject to environmental review in this FDEIS.

The City's existing solid waste management system:

- Recycles or disposes of approximately 14,000 tons per day (tpd) or 4,240,000 tons per year (tpy) of DSNY-managed Waste currently generated in the City;
- Recycles or disposes of approximately 10,000 tpd (3,000,000 tpy) of Putrescible Commercial Waste that is generated, and approximately 20,000 tpd to approximately 27,700 tpd (6 million to 8.3 million tpy) of Non-Putrescible Commercial Waste that is currently generated; and
- Provides for the management of Biosolids, Medical Waste and Dredge Spoils and Fresh Kills closure construction and end use.

1.3 Proposed Action – Long Term Export

1.3.1 Existing Conditions/No Action

Since delivery of waste to the Fresh Kills Landfill ceased in 2001, the City has relied on interim export contracts for disposal (Interim Export). Under these existing Interim Export contracts, all DSNY-managed Waste is: (i) tipped at in-City, private transfer stations and transferred primarily by trailer (except for approximately 1,4800 tpd transferred by rail from the Harlem River Yard in the Bronx) to out-of-City disposal sites; or (ii) direct-hauled in collection vehicles to out-of-City transfer stations or disposal facilities. For purposes of environmental review, Interim Export constitutes Existing Conditions/No Action. If the Draft New SWMP were not adopted, DSNY would continue the export of DSNY-managed Waste from the City under Interim Export

Contracts, the No Action Alternative. Interim Export contracts are for three year period and can be extended in accordance with their terms for two one-year extensions. After expiration of the term these contracts would be re-bid, as necessary.

Under the Interim Export contracts as they currently exist, significant numbers of DSNY collection vehicles deliver to private transfer stations within the City, where the waste is transferred to private long-haul transfer trailers for transport to disposal facilities. Existing transfer stations are located in manufacturing zoned areas and their distribution is uneven throughout the City. The areas of the City where private transfer stations are relatively concentrated experience correspondingly more heavy truck traffic as a consequence of transfer trailer traffic. For example, the East Williamsburg Industrial Park in Brooklyn Community District #1 has three transfer stations currently utilized by Interim Export for approximately 2400 tpd of Brooklyn's DSNY-managed Waste. This volume represents about 20% of the City-wide DSNY-managed Waste exported. Based on recent figures, DSNY vehicles delivered an average of approximately 909 tons per day to the Waste Management transfer station at 485 Scott Avenue in approximately 83 collection vehicles per day, requiring 42 daily outbound transfer trailers trips[3]. DSNY delivered approximately 1394 tpd to the Waste Management transfer station at 123 Varick Avenue in approximately 127 collection vehicles per day, requiring about approximately 64 daily outbound transfer trailers trips. DSNY delivered 92 tpd to the Allied/BFI transfer station at 598 Scholes Street in approximately 9 collection vehicles per day, requiring approximately 5 outbound transfer trailers trips. On an annual basis, the Interim Export contracts result in approximately 6000 tpd of DSNY-managed putrescible waste being transported through the City's truck-to-truck transfer stations.

Table 1.3-1 lists both the in-City and out-of-City transfer stations or disposal sites that currently receive waste delivered by or on behalf of DSNY and the maximum capacity available at each facility under current Interim Export contracts.

[3] Truck figures are estimates based on tonnages reported for the period August through December, 2004, using 11 tons per DSNY collection vehicle and 22 tons per transfer trailer, as per the Preliminary Mayor's Management Report for FY 2005. Numbers have been rounded up.

Table 1.3-1
Facilities Utilized for Interim Export

Borough Served	Facility Name/Operator	Facility Address	Maximum Capacities Available for DSNY-managed Waste (tpd)
Bronx	**Waste Management/ Harlem River Yard**	98 Lincoln Street, Bronx, NY	1,800
	Waste Services	920 East 132nd Street, Bronx, NY	1,500
Brooklyn	**Waste Management of NY**	215 Varick Street, Brooklyn, NY	1,400
		485 Scott Avenue, Brooklyn, NY	1,400
	IESI NY Corp.	110 50th Street, Brooklyn, NY	1,000
		577 Court Street, Brooklyn, NY	500
	BFI – Waste Services	598-636 Scholes Street, Brooklyn, NY	220
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	500
	LIPCo (Covanta)	1499 Route 1 North, Rahway, NJ(1)	125
	ONYX Waste Services, Inc.	301 Maltese Drive, Totowa, NJ	250
Manhattan and Staten Island	**Waste Management of NY**	666 South Front Street, Elizabeth, NJ	625
		864 Julia Street, Elizabeth, NJ	635
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	200
	TransRiver Marketing L.P.	American Ref-Fuel, Essex County, NJ(1)	1,700
Queens	**ONYX Waste Services, Inc.**	30-35 Fulton Street, Patterson, NJ	1,000
		301 Maltese Drive, Totowa, NJ	480
		264 Broadway, Jersey City, NJ	350
	Solid Waste Transfer and Recycling	444 Frelinghuysen Avenue, Newark, NJ	1,025
	Tully Environmental	127-20 34th Avenue, Queens, NY	900
	TransRiver Marketing L.P.	American Ref-Fuel, Hempstead, NY(1)	150
	Waste Management of NY	38-50 Review Avenue, Queens, NY	958

Note:
(1) Denotes a WTE facility
tpd = tons per day

1.3.2 Long Term Export – Proposed Action

The City has long recognized the importance of moving quickly to develop a more permanent system of waste export, to address both the rising cost of nearby landfill disposal as well as the current over-reliance on a truck-dependent system. In July of 2002, Mayor Bloomberg announced a plan to establish a system that would take advantage of the City's waterways and existing infrastructure. The plan called for the physical conversion of the City's existing Marine Transfer Stations (MTSs) to enable waste to be containerized on site, making the waste suitable for out-of-City barge and rail export.

The Proposed Action for Long Term Export, described herein, builds on the Mayor's previously announced plan, but offers an expedited timeframe, a lower cost and reduced reliance on complex MTS conversions outlined initially. The Proposed Action adheres to the ~~two main~~ principles of the Mayor's earlier plan: the containerization of waste and the long-distance export of that waste in containers by barge or rail by primarily relying on a mix of Converted MTSs at existing MTS sites and existing private transfer stations with the addition of the use of ~~existing~~ the Essex County Resource Recovery Facility (Essex County RRF) in Newark, New Jersey, ~~where~~ to which waste would be delivered in collection vehicles.

The Proposed Action for Long Term Export has the following specific elements.

- For the entire Bronx wasteshed, enter into a long-term contract with one or two private ~~transfer station~~ waste companies for truck-to-rail disposal ~~for~~ of DSNY-managed Waste from existing transfer stations in the Bronx.
- For the Brooklyn wasteshed formerly served by the Greenpoint MTS (Brooklyn CDs #1, #3, #4 and #5), enter into a long-term contract with one or two private ~~transfer station~~ waste companies for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from existing transfer stations in Brooklyn ~~CDs 1, 3, 4, and 5~~.
- For the Brooklyn wasteshed formerly served by the Hamilton Avenue MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18 will be received and containerized.

- For the Brooklyn wasteshed formerly served by the Southwest Brooklyn MTS, develop a City-owned Converted MTS on the adjacent site of the former Southwest Brooklyn Incinerator, where DSNY-managed Waste from Brooklyn CDs 11, 12, 13 and 15 will be received and containerized.

- For the Manhattan wasteshed, Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12, enter into a long-term service agreement with the Port Authority of New York and New Jersey for the use of the Essex County RRF in Newark, New Jersey to receive and process DSNY-managed Waste delivered in City collection vehicles.

- For the Manhattan wasteshed formerly served by the East 91st Street MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Manhattan CDs 5, 6, 8 and 11 will be received and containerized.

- For the Queens wasteshed formerly served by the Greenpoint MTS, enter into a long-term contract with a private transfer station for truck-to-rail or truck-to-barge disposal of the DSNY-managed Waste from Queens CDs 1 through 6.

- For the Queens wasteshed formerly served by the North Shore MTS, develop a City-owned Converted MTS on the same site, where DSNY-managed Waste from Queens CDs 7 through 14 will be received and containerized.

- For the four wastesheds served by Converted MTSs, enter into 20-year service agreements with one or more waste management companies, for transport of containerized waste by barge directly from an MTS to disposal facilities or to intermodal facilities for transloading to railcars or a larger barge, and for disposal at an appropriately permitted out-of-City facility.

Figure 1.3-1, Locations of Draft New SWMP Long Term Export Facilities and Wastesheds Served, identifies the boroughs and CDs that would be assigned to specific facilities.

Table 1.3-2 lists the potential Long Term Export facilities proposed in the Draft New SWMP. In the Bronx and Brooklyn CDs 1, 3, 4 and 5, noted in Table 1.3-2, the decision as to whether DSNY contracts for export of DSNY-managed Waste generated in these wastesheds with one or two potential transfer stations will be determined by upcoming negotiations with the proposing companies.

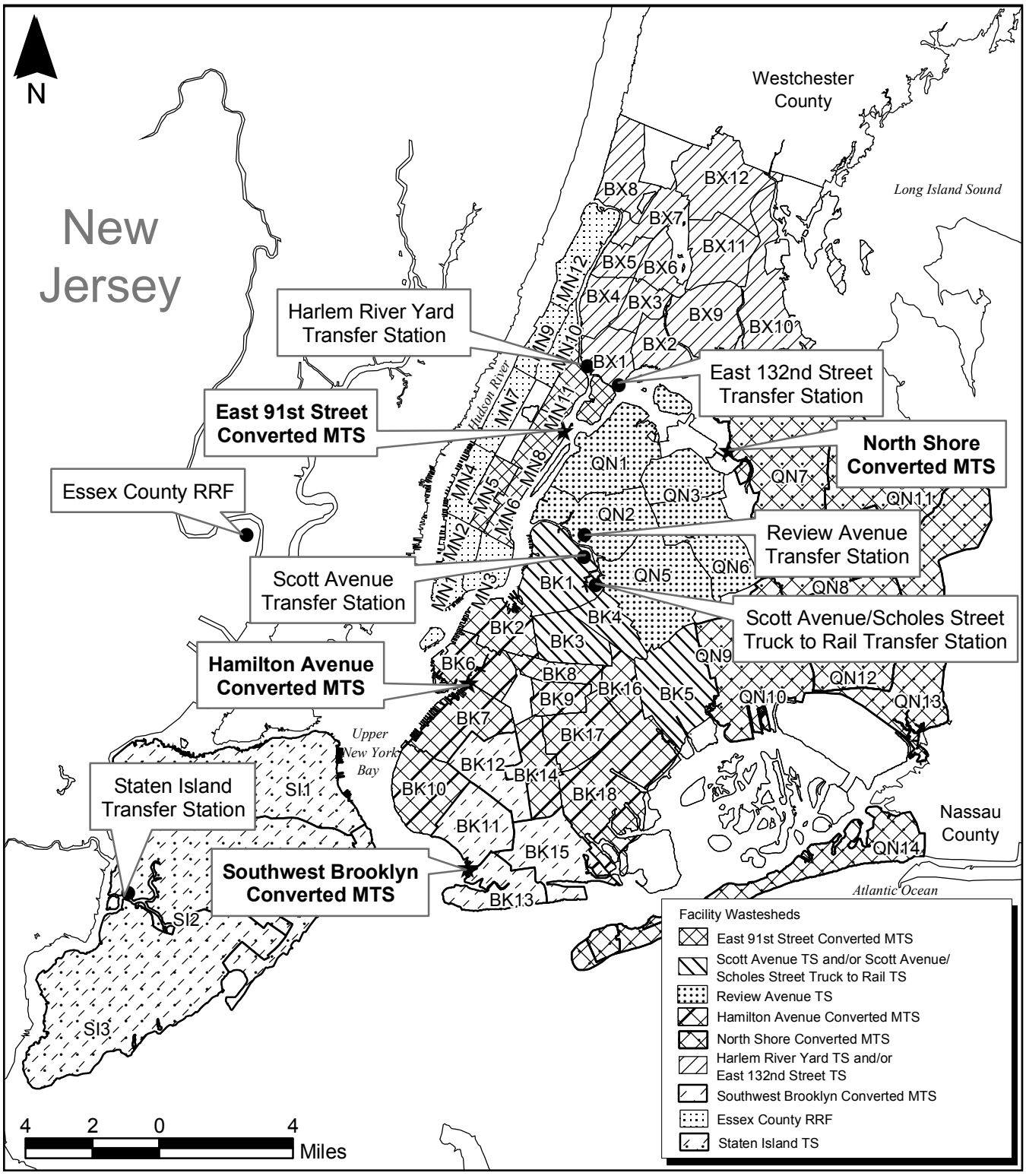


Figure 1.3-1
Long Term Export Facilities and Wastesheds

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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Table 1.3-2
Proposed Draft New SWMP Long Term Export Facilities and Potential Contractors

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Converted MTS[1]	DSNY, Hamilton Avenue Converted MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 7	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Converted MTS[1]	DSNY, Southwest Brooklyn Converted MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Converted MTS[1]	DSNY, East 91st Street Converted MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Converted MTS[1]	DSNY, North Shore Converted MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck-to-Rail TS	Waste Management, Harlem River Yard, 98 Lincoln Avenue, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Rail TS[2]	Allied Waste Services, East 132nd Street Transfer Station, Bronx and Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Barge TS	Waste Management, 485 Scott Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1,3, 4 and 5
Truck-to-Rail TS	Allied, 72 Scott Avenue-598 Scholes Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Truck-to-Rail/Barge TS[3]	Waste Management, 30-58 Review Avenue, Queens and the LIRR Maspeth Rail Yard, Maspeth Avenue and Rust Street Queens	Queens 2	Queens CDs 1 through 6
Waste-to-Energy Facility[4]	Port Authority of New York and New Jersey, Essex County RRF, Newark, New Jersey,	NA	Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12

Notes:

(1) From among the selected proposers responding to DSNY's MTS RFP, DSNY will award one or more contracts for the acceptance, transport and disposal of containerized waste from the Converted MTSs.

(2) This facility would include use of an off-site intermodal rail yard, as noted in the Table, where containers would be loaded onto railcars.

(3) Pending the outcome of negotiations between DSNY and Waste Management, the Review Avenue Transfer Station would be modified to operate as either a truck-to-barge or a truck-to-truck-to-rail facility. If operated in a truck-to-rail mode, an off-site intermodal rail yard, as noted in the Table, would be required, where containers would be loaded onto railcars.

(4) The Essex County RRF is a permitted and operating WTE facility in Newark, New Jersey. DSNY-managed Waste would be delivered in collection vehicles to this facility or via hopper barges from the existing MTSs, if an enclosed barge unloading facility (EBUF) were to be developed in the vicinity of the Essex County RRF some time in the future.

LIRR = Long Island Rail~~r~~Road

Development of the Converted MTSs will also require support facilities such as ~~a barge staging area and~~ intermodal facilities for transloading containerized waste to railcars or larger barges that are subject to review in this F~~D~~EIS. Rail export from certain of the private transfer stations in the Proposed Action would require use of off-site intermodal facilities.

Currently, Interim Export contracts provide for disposal of all DSNY-managed Waste. The principal features of Interim Export are:

- DSNY contracts with 21 private transfer stations (located both within and outside the City) or out-of-City disposal facilities, to provide sufficient capacity to dispose of approximately 12,500 tpd on an average daily basis.
- 48% of DSNY-managed Waste is moved to out-of-City disposal sites by transfer trailers.
- 14% of DSNY-managed Waste is moved to out-of-City disposal sites by rail.
- 38% of DSNY-managed Waste is moved to out-of-City disposal sites in DSNY collection vehicles.[4]

The following considerations guided the formulation of the Long Term Export Program:

- Reducing the City's dependence on transport by transfer trailer to disposal sites is a priority. Some 93% of all truck-transferred DSNY-managed Waste is disposed in landfills and most of the landfills under contract are within a radius of 200 miles of the City. A combination of factors is causing the depletion of this capacity and an increase in disposal price. The recent re-bidding of some Interim Export contracts that rely on truck transport to landfills has reflected an average increase of 19% over the initial contract prices.
- Remote disposal capacity remains available, but truck-based transfer is not economically viable.
- Developing a barge/rail transport system capable of accessing this remote capacity could offset potential increases in disposal costs.
- Developing a long-term solution that is equitable to the greatest extent possible.
- An alternative to long-distance transport, the delivery of DSNY-managed Waste in collection trucks to regional WTE facilities, achieves an approximately 75% reduction in the volume of waste (ash residue and non-processible waste) disposed in landfills, and reduces the potential impact of landfill price inflation. A long-term disposal contract with a WTE facility can provide a buffer against inflationary price increases that are likely to affect regional landfill capacity.

[4] Includes Interim Export from Manhattan and Staten Island.

The proposed Long Term Export Program is a comprehensive plan that balances the City's need to export waste over the long term with the environmental benefit of significantly reducing the transfer trailer traffic associated with Interim Export. Its major advantages include the following:

- DSNY-managed Waste delivered to private transfer facilities in the Bronx, Brooklyn and Queens will be exported by barge or rail and, depending on the outcome of negotiations, the Commercial Waste processed at these facilities may also be exported by barge or rail.
- The in-City facilities proposed would be developed on either existing MTS or private transfer station sites.
- The proposed combination of facilities provides the City with redundancy in the DSNY-managed Waste system that accommodates future increases in waste generated in the City as a function of population growth. Occasional conditions that may affect certain components of the system will not disrupt future waste export.
- Use of existing private transfer station and Essex County RRF capacity: (i) allows some components to be implemented on a faster timetable; and (ii) avoids City investment in new capital projects.
- The Converted MTSs will provide capacity that could be available to containerize Commercial Waste for barge/rail export. (This advantage is addressed in more detail in Section 1.5.2.)
- The projected economics of the Proposed Action are less costly to the City than four alternative scenarios that were evaluated (see Chapter 34) and the Mayor's original plan.

Table 1.3-3 lists the support facilities that may be required for the implementation of the Long Term Export Program. These facilities include~~: (i) the 52nd Street Barge Staging Facility that would be used as a temporary mooring facility for flat bed barges being routed to maintenance facilities; and (ii)~~ several in-City intermodal facilities that are potential locations, depending on the outcome of the City's negotiations with selected waste management companies, for providing services and facilities to transload containerized waste between barges shuttling to/from the Converted MTSs and railcars or larger ocean-going barges. This F~~D~~EIS also presents an environmental review of these facilities, as applicable.

Table 1.3-3
Proposed Draft New SWMP Long Term Export – Potential Support Facilities

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Support Facilities			
~~Barge Staging Area (1)~~	~~DSNY, 52nd Street Barge Staging Area, 52nd Street and 1st Avenue, Brooklyn~~	~~Brooklyn 7~~	~~NA~~
~~Intermodal Barge-to-Rail Yard (2)~~	~~Waste Management, Harlem River Yard, East 132nd Street and St. Anns Avenue, Bronx~~	~~Bronx 1~~	~~NA~~
Intermodal Truck-to-Truck-to-Rail Yard (3)	Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 2	Bronx CDs 1 through 12
~~Intermodal Barge-to-Rail Yard (2)~~	~~NYCEDC, 65th Street Intermodal Yard, 65th Street Rail Yard, Brooklyn~~	~~Brooklyn 10~~	~~NA~~
Intermodal Yard Truck-to-Truck-to-Rail (3)	LIRR, Maspeth Rail Yard, Maspeth Avenue and Rust Street, Queens	Queens 2	Queens CDs 1 through 6

Notes:

~~(1) The 52nd Street Barge Staging Area historically served the existing MTSs as a location where barge movements between individual MTSs and Fresh Kills could be staged. A replacement-in-kind of the pier structure is proposed. Its purpose in the Long Term Export Program will be more limited; principally, a supply storage facility and a location to temporarily moor barges that are scheduled for maintenance at other facilities.~~

~~(2) Two intermodal barge-to-rail facilities at Harlem River Yard and the 65th Street Rail Yard may be constructed as transload facilities to move containers between the Converted MTSs and railheads. DSNY has instituted a ministerial process to register intermodal facilities handling containerized waste that is not subject to environmental review. However, the USACE Section 10/404 permits and the NYSDEC Article 15/25 permits pertaining to waterfront construction are subject to environmental review. Note that there are other existing intermodal facilities that may be used for intermodal transfer of containers from the Converted MTSs.~~

(3) Both the East 132nd Street Truck-to-Truck-to-Rail Transfer Station in the Bronx and the Review Avenue Truck-to-Truck-to-Rail Transfer Station in Queens would dray containers between their respective transfer stations and intermodal rail yards that are in the respective project service areas but not at the same sites as the transfer stations. These intermodal yards are existing facilities that would receive non-discretionary permits from DSNY for handling solid waste and, as such, are not subject to environmental review. However, the movement of containers on tractor chassis between the transfer stations and the intermodal yard is subject to an environmental review that is reported in the FDEIS section reporting the environmental review of the respective transfer station.

~~NYCEDC = New York City Economic Development Corporation~~

LIRR = Long Island Rail Road

1.3.3 Alternatives to the Proposed Action

In July 2002, Mayor Michael Bloomberg completed an evaluation of the Long Term Export Program and directed DSNY to evaluate waste containerization and export from the City's eight existing Marine Transfer Stations (MTSs). The Long Term Export Program was an element of the City Council and State approved 2000 SWMP Modification supported by an October 2000 FEIS that analyzed long term export options at some 20 different sites with 25 different facility options across the City. (The 2000 SWMP Modification and supporting FEIS are available from DSNY on request.) The Mayor's decision to pursue containerization at the MTSs was made after a determination that insurmountable problems prevented the implementation of the Linden EBUF project. The Linden project, a key component of the 2000 SWMP Modification, would have received waste from five existing MTSs, three in Manhattan, Hamilton Avenue IN Brooklyn and North Shore in Queens. The Alternatives evaluated in the 2000 SWMP FEIS were not acceptable substitutes for Long Term Export from the three Manhattan and the North Shore MTS wastesheds, which comprised four of the five MTSs wastesheds that the Linden Project would have served.

In July 2002, the Mayor announced that the City would move in a new direction by redeveloping all eight of the MTSs as facilities capable of containerizing waste for intermodal transport by barge or rail to out-of-City disposal facilities (Converted MTSs). Since that announcement, DSNY has worked diligently with other City agencies to implement the Mayor's policy directive, while also considering other Alternatives. As a result of that effort, the Draft New SWMP proposes to implement four Converted MTS projects, not eight. Other Long Term Export options have been identified to serve the West 135th and West 59th Street wastesheds in Manhattan, and the wastesheds formerly served by the South Bronx and Greenpoint MTSs. These options are now part of the Proposed Action, because DSNY believes they can be implemented more quickly, are more cost effective than developing Alternative Converted MTSs for those wastesheds and also avoid adding new in-City waste transfer capacity, particularly in the Bronx and Brooklyn where there is a relative concentration of private waste transfer stations.

Table 1.3-4 lists the Alternatives to the Proposed Action that ~~were considered and that~~ are also reviewed in this F~~D~~EIS. These Alternatives include: (i) conversions at four other existing MTSs sites; (ii) the development of a new truck-to-rail facility in Brooklyn CD 1 that was a proposal submitted in response to DSNY's Request for Proposals (RFP) procurement for private transfer station capacity for the Brooklyn portion of the Greenpoint wasteshed; and (iii) the use of the existing MTSs, assuming substantial refurbishing of these facilities, to supply waste in open hopper barges to an enclosed barge unloading facility (EBUF) in the New York/New Jersey harbor region where it would be containerized for transport to disposal sites, although the location of such an EBUF has not been identified.

In addition to the Alternative sites referenced in Table 1.3-4, Volume V of the Commercial Waste Management Study (CWMS or Study),[5] Manhattan Transfer Station Siting Report, investigated four potential sites for truck-to-rail/barge transfer stations in Manhattan and concluded that three of these sites were technically infeasible, and that the fourth posed very significant land use constraints that would have to be overcome. None of these four sites currently serve or are permitted as waste transfer facilities. Facility conceptual designs and site plans were prepared to determine the feasibility of using each site as a minimum 1,000 tpd transfer station. Based on the conceptual designs developed for the sites, three of the four the sites were found to be technically problematic for use as waste transfer facilities for the reasons identified below. The Draft New SWMP includes the potential use of the West 13th Street (Gansevoort) site as a Recyclables processing facility. The technical difficulties with the three remaining sites, as reported in the CWMS are summarized below.

West 140th Street

- There is insufficient property to ramp trucks up to the required site level; and
- The existing rail elevation (+30') determines the building elevation (+44'). The building elevation (+44') is substantially higher than the existing road (+10') and there is insufficient room to ramp up to the facility at an acceptable grade.
- Approximately 100,000 cubic yards of backfill would be required to construct a facility at the same elevation as the existing rail line;

[5] The CWMS is available on the DSNY website: www.nyc.gov/sanitation and on a~~, in~~ compact disk ~~form as an Appendix to the Draft New SWMP and in print form at the Public Repositories listed in Table 1.6-1~~within the CWMS Study in Appendix I of this FEIS.

Table 1.3-4
New SWMP Long Term Export – Alternatives Considered

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Alternatives			
Converted MTS	DSNY, South Bronx Converted MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Converted MTS	DSNY, Greenpoint Converted MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5; Queens CDs 1 through 6
Converted MTS	DSNY, West 135th Street Converted MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Converted MTS	DSNY, West 59th Street Converted MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1 through 4 and 7
Truck-to-Rail TS	IESI or TransRiver Marketing, Meserole Street Transfer Station, 568 Meserole Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Existing MTS	DSNY, South Bronx MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Existing MTS	DSNY, Greenpoint MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5; Queens CDs 1 through 6
Existing MTS	DSNY, Hamilton Avenue MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 6	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Existing MTS	DSNY, Southwest Brooklyn MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Existing MTS	DSNY, West 135th Street MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	Manhattan CDs 9, 10 and 12
Existing MTS	DSNY, West 59th Street MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	Manhattan CDs 1 through 4 and 7
Existing MTS	DSNY, East 91st Street MTS, East 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Existing MTS	DSNY, North Shore MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14

West 140th Street (continued)

- Backfilling would eliminate the existing access road;
- A new ramp providing truck access between the transfer station and West 144th Street would interfere with the current access to an existing facility in the northeast section of the site;
- On-site truck maneuvering room would be severely constrained and is considered to be insufficient -- outbound commercial trucks would have tight turning radii and minimal queuing distance prior to the outbound scale;
- Employee traffic would be mixed with collection truck traffic entering and leaving the site and there is limited on-site parking (the maximum number of parking stalls that fit on the design is seven).

Pier 42 On The East River

- Queuing would be limited to only one truck on site.
- The relatively small size of the site would cause potential problems in locating an outbound scale and parking on site, and in providing adequate maneuvering room for trucks, front-end loaders and a gantry crane.
- Since the gantry crane cannot permanently project over the U.S. Pierhead Line, the crane would need to retract when not in use.
- There is no room for ramps. Therefore, it would have to be a single level facility and containers would have to be filled with waste using a less efficient lift and load operation. this is not clear
- There is no access to the dock. This limitation will not allow for waste processing equipment stock to be located at the dock level.
- All access to the Pier 42 site is gained by a proposed access drive at the intersection of South and Montgomery Streets. The intersection is currently signalized. South Street is a local, two-way, four-lane surface street that runs parallel to the elevated FDR Drive. Montgomery Street is a two-way, two-lane roadway featuring a wide, painted, center median.
- South Street is designated by the City as a local truck route between State Street and Pike Slip. To access the site, trucks will be required to travel along South Street between Pike Slip and Montgomery Street, which is a section of South Street that is not designated as a local truck route. For these movements to occur, the designation of South Street as a local truck route will need to be extended, by the City, to the Montgomery Street intersection. This may be difficult to accomplish because the neighborhoods along the north side of South Street are heavily residential and are located in the "Zone E – Lower East Side" limited truck zone.

West 30th Street

- The City, along with Friends of the High Line and other groups, are supporting use of the High Line as a pedestrian trail before the Surface Transportation Board.
- Interconnecting with the existing elevated rail line would require construction of a processing facility and platform at the same elevation as the rail line and require providing a ramp up from the ground level.
- The site's limited size does not accommodate the structural arrangements necessary to connect to the existing overhead rail and, therefore, rail operations would not be feasible.
- There is insufficient storage area for waste;
- There is no room on site for parking;
- There is no room for container storage; and
- The available square footage of the conforming portion of the site would severely limit queuing and maneuvering space.
- West 30th Street is the only street available for the trucks to access the site. At the location of the site, West 30th Street is a one-way eastbound street. The intersection of 12th Avenue and West 30th Street is a signalized intersection. Twelfth Avenue is designated by the City as a local truck route, as well as West 30th Street between Broadway and 11th Avenue. However, the section of West 30th Street used by traffic traveling to the proposed facility is not designated as a local truck route. For operation of trucks to occur on West 30th Street between 12th Avenue and 11th Avenue, the City will need to extend the truck route designation to this section.
- The intersection of West 30th Street and 11th Avenue is a signalized intersection. Eleventh Avenue is a one-way southbound street at the intersection with West 30th Street, and is designated by the City as a local truck route. Upon exiting the facility, trucks must travel onto West 30th Street. Access to the network of local truck routes can be gained via West 30th Street, 11th Avenue, 10th Avenue and West 23rd Street. The addition of the truck traffic expected at this facility may impact the operation of the site intersections.

The fourth site, the former site of the Gansevoort MTS was found to be problematic because of land use issues but is an element of the Proposed Action for Recycling that would serve as a Recyclables Acceptance facility for Recyclables from Manhattan and as recycling education center.

During the re-procurement of Interim Export contracts for DSNY-managed Waste from Manhattan awarded in November 2004, DSNY established that the LIPCo/Covanta waste-to-energy facility in Rahway, New Jersey, had insufficient capacity to serve as a primary disposal facility. This facility was awarded an Interim Export contract for backup capacity in the amount

of 125 tpd, substantially less than is generated in any of Manhattan's three wastesheds. Moreover, the facility operates from 5:30 a.m. to 5:00 p.m. on weekdays and from 5:30 a.m. to 12 noon on Saturdays, which is not consistent with DSNY's needs.

Also, DSNY had, in the 2000 Final Environmental Impact Statement (2000 SWMP FEIS), evaluated the technical feasibility and environmental suitability of 24 export facility options on 15 different sites, as the basis for preparing the 2000 SWMP Modification. These 2000 FEIS Alternatives are listed in Table 1.3-5. In the 2000 SWMP FEIS, DSNY evaluated: (1) sites capable of accommodating an Enclosed Barge Unloading Facility (EBUF) (barge receiving with barge or rail export) as proposed by respondents to a procurement process that were identified through an RFP issued by DSNY; (2) existing truck-receiving MSW transfer sites that could export (or be modified to export) by barge, rail, or truck to rail; and (3) new sites that could be developed as truck-receiving MSW transfer sites that would be capable of exporting by barge, rail, or truck to rail. Twenty sites were initially identified but the number was reduced to 15 in an initial screening process. A total of 25 facility options at the 15 sites were evaluated in the 2000 SWMP FEIS. These site/facility alternatives are listed in Table 1.3-5. They were identifies through processes that included the following:

- Conducting a generic economic assessment that provided a comparative economic analysis of alternatives;
- Issuing a Request for Expressions of Interest that elicited 34 responses from private companies presenting conceptual proposals for export services;
- Issuing in 1997 an MTS RFP that identified the available EBUF options to receive waste from the City's existing MTSs; and
- Conducting investigations of available rail transfer station options.

In terms of alternatives considered, the development of the 2000 SWMP was an exhaustive process. Those sites that remained feasible following the Mayor's redirection of current SWMP planning in 2002 are evaluated in this FEIS. DSNY's consideration of alternatives also evaluated the information obtained through a Request for Expressions of Interest (RFEI) to Provide Waste Disposal Capacity on February 17, 2004, that sought expressions of interest to (1) sell or otherwise provide to DSNY, for its exclusive use, permitted waste disposal capacity in

Table 1.3-5
Alternatives Considered in the 2000 SWMP FEIS

Type of Facility	Location/ Borough	Export Mode	New or Permitted Facility
EBUF	Waste Management, Harlem River Yard, 132nd Street and Lincoln Avenue, Bronx	Rail	New (1)
EBUF	American Marine Rail, 500 Oak Point Avenue, Bronx	Rail	New
EBUF	Waste Management, Erie Basin, Beard and Halleck Streets, Brooklyn	Barge	New (2)
EBUF	BFI, 65th Street and upper New York Bay, Brooklyn	Rail	New
EBUF + Truck Receiving	Republic Services, Inc., 920 E. 132nd Street, Bronx	Barge or Rail	New (3)
EBUF	Port Ivory Recycling and Transfer Alliance, located on Arthur Kill along Richmond Terrace and Western Avenue, near Port Ivory	Rail	New
EBUF + Truck Receiving	Waste Management, Harlem River Yard, 132nd Street and Lincoln Avenue, Bronx	Rail	New (4)
Truck Receiving	Waste Management, Harlem River Yard, 132nd Street and Lincoln Avenue, Bronx	Rail	Permitted
Truck Receiving	Department-proposed facility, 500 Oak Point Avenue, Bronx	Rail	New (5)
Truck Receiving	Republic Services, Inc., 920 E. 132nd Street, Bronx	Rail	Permitted (6)
Truck Receiving	Republic Services, Inc., 920 E. 132nd Street, Bronx	Barge	New (7)
Truck Receiving/ MTS Replacement in Kind	DSNY South Bronx MTS, Farragut Street, Bronx	Barge	New (8)
Truck Receiving/ MTS Conversion	DSNY South Bronx MTS, Farragut Street, Bronx	Barge	New (9)
Truck Receiving/ MTS Conversion	DSNY Greenpoint MTS, N. Henry and Kingsland Avenue, Brooklyn	Barge	Permitted
Truck Receiving / Conversion to Barge	Waste Management, Inc. 485 Scott Avenue, Brooklyn on Newtown Creek	Barge	Permitted (10)
Truck Receiving/ MTS Conversion	DSNY Southwest Brooklyn MTS, Shore Parkway at Bay 41st Street, Brooklyn	Barge	Permitted (11)
Truck Receiving/ MTS Conversion	DSNY Hamilton Avenue MTS, Hamilton Avenue in the vicinity of Second Avenue at the Gowanus Canal, Brooklyn	Barge	Permitted (11)

Table 1.3-5 (continued)
Alternatives Considered in the 2000 SWMP FEIS

Type of Facility	Location/ Borough	Export Mode	New or Permitted Facility
Truck Receiving/ MTS Conversion	DSNY 59th Street MTS, West 59th St at the Hudson River, Manhattan	Barge	Permitted (11)
Truck Receiving/ MTS Conversion	DSNY 91st Street MTS, East 91st Street at the East River, Manhattan	Barge	Permitted
Truck Receiving/ MTS Conversion	DSNY 135th Street MTS, West 135th Street and 12th Avenue, Manhattan	Barge	Permitted (11)
Truck Receiving/ MTS Conversion	DSNY North Shore MTS, 31st Avenue and 122nd Street, Queens	Barge	Permitted (11)
Truck Receiving	Waste Management, Review Avenue Transfer Station, Review Avenue, Queens	Barge or Rail	Permitted (12)
Truck Receiving	DSNY, 310 West Service Road, Fresh Kills Landfill, Staten Island	Rail with Interim Truck	New (13)
Truck Receiving	Pier 42, East River, Manhattan	Barge	New
Truck Receiving	W. 30th Street and 11th Avenue, Manhattan	Rail	New
Truck Receiving	140th Street/Henry Hudson Parkway, Manhattan	Rail	New
Truck Receiving	The Elmhurst Gas Tank Site on the Conrail Hell Gate Line, 7751 through 7801 57th Avenue, Elmhurst, Queens	Rail	New

Notes:

Source: FEIS for the 2000 SWMP (Notes reflect status of sites in 2000 FEIS.)

(1) The barge receiving facility was evaluated as an addition to a permitted truck receiving/rail export facility at this site. As an EBUF, it would only receive barge-delivered waste.

(2) Two different size facility options were considered at this site.

(3) The barge receiving facility was evaluated as an addition to a permitted truck receiving rail/truck-to-rail export facility at this site. As an EBUF and truck receiving facility, it would receive waste delivered by both barge and truck. The EBUF includes two options for export by either barge or rail.

(4) The barge receiving facility was evaluated as an addition to a permitted truck receiving rail/truck-to-rail export facility at this site. As an EBUF and truck receiving facility, it would receive waste delivered by both barge and truck.

(5) The truck-to-rail facility evaluated that was evaluated at this site is neither proposed nor endorsed by AMR.

(6) The facility now exports by both rail and truck. If selected by the Department for long term export, it would be required to export all Department-managed waste by rail. Truck-to-rail export is accomplished by draying containers a short distance from the facility site to the Oak Point rail yard.

(7) This facility option was evaluated based on barge export of all waste received by truck.

(8) Formerly used by the Department as an MTS, but closed since 1997, this facility is evaluated as a replacement in-kind of the former MTS.

(9) At the Department's closed MTS site, this new facility was evaluated based on containerizing waste for export by barge. Two different size facility options were evaluated.This facility was evaluated in the 2000 FEIS based on modifications to enable operation as a truck to barge facility.

(10) The MTS conversion option evaluated the construction of a substantially modified facility for containerizing waste at the Department's existing MTS site.

(11) This facility currently exports by truck. It was evaluated based on modifications to enable export by barge or rail. The barge and rail options are evaluated as different facility types.

(12) This facility was evaluated as a new transfer station at Fresh Kills which would export by rail after the completion of interconnections with the Staten Island Railroad and freight lines in New Jersey.

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State that is suitable to serve as a site for a waste disposal facility; and/or (3) serve as a host community for a disposal facility located in New York State that would receive waste managed by DSNY. No practicable alternatives emerged from this RFEI.

Chapter 2 of this FDEIS provides detailed descriptions of the design features and operations of the Draft New SWMP Long Term Export Facilities, Support Facilities and Alternatives. In addition, this FEIS includes site descriptions of the 215 Varick Street truck-to-rail transfer station in Brooklyn and the Steel Style intermodal site in New Windsor, New York. These facilities were not reviewed in the DEIS, but could potentially become elements of the Long Term Export program, as outcome of the procurement processes DSNY is currently conducting. In that case, these facilities would be subject to environmental review, as required.

1.4 Proposed Action – Recycling Facilities

1.4.1 Existing Conditions/No Action

Through the first half of 2002, DSNY collected and recycled metal, glass and plastic (MGP) and Paper materials sufficient to divert 20% of the DSNY-managed Waste (curbside/containerized) waste stream from disposal. The program flourished ~~in many respects,~~ and compared favorably with the recycling programs of other major cities throughout the United States.

On July 1, 2002, the City's recycling program, having incurred budget cuts in the aftermath of the events of September 11, 2001 and the subsequent economic recession, temporarily suspended glass and plastic recycling. Diversion rates suffered; however, plastic and glass recycling programs were restored in Fiscal Year (FY) 2003 and FY 2004, respectively, and funding for composting and other services was restored in FY 2005.

1.4.2 Recycling Proposed Action

Moving forward, cost-effective recycling programs are now an even greater priority. To address this priority, the Proposed Actions for recycling will commit the City to a 20-year contract for processing MGP. This long-term commitment will facilitate the development of state-of-the-art

processing infrastructure in the City, which, in turn, will generate the consistent streams of materials necessary to foster reliable secondary materials markets. The 20-year contract also ushers in a new era of waterborne transportation of Recyclable materials, mirroring the transportation goals of the Draft New SWMP as a whole. Consistent with the commitment to emphasize waterborne transport as an element of the Draft New SWMP, the City will also develop a Recyclables acceptance facility in Manhattan that would transport Manhattan Recyclables by barge to the newly proposed Recyclables processing facility in Brooklyn.

Accordingly, the Proposed Action for recycling has the following new elements.

- Develop a materials processing facility at the 30th Street Pier (in Brooklyn Community District 7) through a public-private partnership involving a 20-year service agreement with a private Recyclables processor; and
- Develop a Recyclables acceptance facility in Manhattan.

1.4.2.1 Recyclables Processing Facility

The City plans to enter into an agreement with the Hugo Neu Corporation (HNC) for the acceptance, processing and marketing of the MGP and a portion of the mixed Paper[6] (Curbside Recyclables) collected by DSNY. As part of the agreement, HNC will finance the development of a materials processing facility on City-owned land at the 30th Street Pier in the South Brooklyn Marine Terminal (SBMT).

In addition, HNC will use its existing regional network of waterfront acceptance facilities and its own fleet of barges to transport material to the new facility at SBMT. Recyclable material will arrive at the new materials processing facility as follows:

- DSNY trucks collecting Curbside Recyclables in the Bronx will tip this material at HNC's existing acceptance facility in the Bronx, where HNC will transfer material to barge for transport to SBMT.

[6] This is the portion that is not already committed to Visy Paper (NY), Inc. (Visy), for processing in its recycled paper mill on Staten Island.

- DSNY trucks collecting Curbside Recyclables in Staten Island CDs will tip this material either at the new Staten Island Transfer Station for consolidation into transfer trailers that will drive to SBMT or at HNC's existing acceptance facility in Jersey City, where HNC will transfer material to barge for transport to SBMT.

- DSNY trucks collecting Curbside Recyclables in northern Brooklyn and Queens CDs will tip this material at HNC's existing acceptance facility in Long Island City, where HNC will transfer material to barge for transport to SBMT.

- DSNY trucks collecting Curbside Recyclables in Manhattan CDs will tip this material at a Manhattan acceptance facility. Until the new acceptance facility is on line, trucks from southern Manhattan will tip at HNC's existing acceptance facility in Jersey City; trucks from northern Manhattan will tip at HNC's existing facility in the Bronx where HNC will transfer this material to barge for transport to the 30th Street Pier at SBMT, when this facility is developed.

- DSNY trucks collecting Curbside Recyclables in southern Brooklyn CDs will drive to SBMT and tip directly at the materials processing facility.

1.4.2.2 Manhattan Recyclables Acceptance Facility

DSNY proposes to develop a Recyclables acceptance facility in Manhattan. The West 59th Street MTS is currently the transfer site for the mixed Paper which DSNY collects in Manhattan CDs and Visy Paper, Inc. barges to its ~~recycled paper~~ mill on Staten Island for recycling paper into boxboard.

As described in the Proposed Actions for Commercial Waste (see Section 1.5.2), DSNY is proposing to reserve the West 59th Street MTS to facilitate the export of a portion of Manhattan's Commercial Waste by barge. To maximize the throughput capacity required for this scenario, the truck-to-barge operation for mixed Paper would need to be relocated. To facilitate this relocation, as well as to reduce the number of vehicle miles traveled by DSNY trucks, DSNY proposes to develop a Recyclables acceptance facility in lower Manhattan. This proposal would also fulfill the goal of the Draft New SWMP to distribute waste management facilities more equitably in all five boroughs.

The most promising location for this Manhattan Recyclables acceptance facility is the former site of DSNY's Gansevoort MTS on Pier 52 in Manhattan Community District 2. The Gansevoort MTS has not been used by DSNY since 1991. For this proposed project to move forward, several issues must be resolved, such as acceptable integration of the facility design (including an environmental education center) and operation into the plans for the Hudson River Park, and amendment of the Hudson River Park Act.

Table 1.4-1 lists all of the facilities that would be elements of the Recycling Program in the Draft New SWMP, including those that are part of the Proposed Action and reviewed in this FDEIS, as well as those facilities that are elements of Existing Programs.

Table 1.4-1
Proposed Action Recycling Facilities

Facility Type	Operator/Owner, Facility Name, and Address	Community District
Recyclables Processing/Acceptance[(1)]	Hugo Neu Corporation, 30th Street Pier at the South Brooklyn Marine Terminal, Brooklyn	Brooklyn 7
Recyclables Acceptance[(2)]	DSNY, Former site of Gansevoort MTS, Pier 52, Manhattan	Manhattan 2

Notes:

(1) This 30th Street Pier at SBMT is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. Curbside Recyclables from other boroughs would be delivered by barge. Recyclables would be transferred from this facility by barge. As a recycling facility, it is not subject to regulation as a solid waste facility. However, the waterfront construction requires USACE Section 10/404 permits and the NYSDEC Article 15/25 permits that are subject to environmental review.

~~(3)~~(2) The timetable for designing, permitting and constructing this facility, which would receive truck deliveries of DSNY MGP Curbside Recyclables collected in Manhattan for barge transfer to the 30th Street Pier at SBMT for processing, is approximately seven years. Accordingly, the environmental review of this facility is deferred until more detailed design information is available. However, an analysis of the potential for off-site traffic, air quality and noise impacts from directing DSNY's Manhattan Recyclables collection vehicles to this destination was conducted.

1.4.3 Advantages of the Proposed Action – Recycling Facilities

1.4.3.1 Recyclables Processing Facility

The major advantages of the Proposed Action to develop a Recyclables processing facility are that it:

- Commits the City to maintain its Curbside MGP Program over the next 20-years.
- Creates a relationship in which the processor has economic incentives to expand product markets, and thereby increase the net recovery rate for MGP. Historically, DSNY has had considerable difficulty in establishing stable and cost-effective relationships with the contractors that have processed its Curbside MGP, in part due to the practice of contracting for a five-year term with a short-notice cancellation clause. This created economic uncertainty for the contractor and discouraged investments in facility upgrades to improve recovery rates. The 20-year term of the service agreement removes these disincentives and will create a relationship in which the processor has economic incentives to expand product markets and increase the net recovery rate for MGP processed.
- Enhances the opportunity to produce and market new products by recovering materials that are now marginal. The City's Curbside MGP have high proportions by weight of glass, particularly mixed-color broken glass, a material that does not have economic markets. Better technology to be used in the materials processing facility, in addition to aggressive research and development – both afforded by a long-term contract – will address this situation.
- Secures competitive price terms for the City and stabilizes costs over the long term.
- Creates a waterborne transportation network that is consistent with the City's goal of reducing truck traffic. An estimated 85% of the Recyclable materials will be delivered to the new Recyclables processing facility via barge, and 75% will leave post-processing via barge. This is a shift that will help reduce truck traffic on City streets. ~~and improve the local environment.~~
- Creates significant local employment opportunities through creation of an estimated 160 construction jobs and 100 permanent jobs when facility operations commence.

1.4.3.2 Manhattan Recyclables Acceptance Facility

The major advantages of the Proposed Action to develop a Recyclables acceptance facility in Manhattan are that it:

- Eliminates the need for Recyclables collection vehicles to travel from Manhattan to acceptance or processing facilities in other boroughs or New Jersey.

- Facilitates the relocation of the recycled Paper barge operation now based at the West 59th Street MTS to Gansevoort, which will enable the West 59th Street MTS site to be potentially developed for export of Commercial Waste.
- Results in a more equitable distribution of transfer facilities among the City's boroughs.

1.4.4 Alternatives to the Proposed Action

The No Action Alternative to the Proposed Action for Recycling to help develop and contract on a long-term basis with ~~an~~ centralized MGP Recyclables processing facility, built by HNC at the South Brooklyn Marine Terminal, would be the continuation of the status quo arrangement by which MGP Recyclables are delivered to several metropolitan area MGP processing facilities by DSNY collection vehicles pursuant to short-term contracts. The No Action Alternative would not involve the development of a state of the art facility with processing equipment, economies of scale, and the barge transport capability of the HNC centralized processing facility at the SBMT that is expected to improve the economics of MGP recycling. ~~for processing MGP from Curbside collection that would not result in the economic benefits to the Curbside Recycling Program afforded by the Brooklyn Recyclables processing facility.~~

Several other alternatives were considered as a result of a Request for Proposals (RFP), issued by DSNY in 2003 for services to accept, process and market MGP and Paper Recyclables. In addition to the HNC processing facility at the SBMT that is the Proposed Action, DSNY received two other proposals deemed responsive, but lacking certain advantages afforded by the HNC proposal. Therefore, these alternative proposals were not the subject of a detailed environmental review in this FEIS for the following reasons: (i) one proposal would have utilized two locations on Staten Island to receive MGP, but the delivery of MGP from the rest of the City to Staten Island presented logistical and transport problems for DSNY; and (ii) the second proposal offered two sites for acceptance facilities that were in close proximity to each other in Brooklyn, but DSNY delivery to these locations would be less efficient compared to delivery to other facilities more evenly distributed in the City. A third proposal was deemed non-responsive for technical reasons.

The Alternatives –to developing a Recyclables acceptance facility at the site of the former Gansevoort MTS would be continueding delivery of Manhattan MGP to facilities in New Jersey and the Bronx or potentially using another existing MTS facility in Manhattan. The environmental review in this FDEIS of the existing MTSs as Alternatives for Long Term Export evaluates the potential for significant adverse impacts associated with using the existing MTSs for Long Term Export. The potential for impacts associated with use of the existing MTSs as Recyclables acceptance facilities would be less than the impacts analyzed because of the lower number of DSNY collection vehicles associated with delivery of Recyclables to these sites, compared to those associated with delivery of DSNY-managed Waste to these sites. Therefore, no additional environmental review of this Alternative is required.

1.5 Proposed Action – Commercial Waste Management

1.5.1 Existing Conditions

Commercial Waste management is as complex a system as the DSNY-managed Waste counterpart. The volume of Putrescible and Non-Putrescible Commercial Waste managed in the City is even larger, accounting for nearly 75% of the City's total waste stream. Commercial Waste is managed by the private sector through a system of private carters and private transfer stations. Both elements of the systems are subject to regulation – the private carters by the City's Business Integrity Commission (BIC), and the private transfer stations by DSNY and NYSDEC. NYSDEC also regulates registered recycling facilities.

Except for that portion of Commercial Waste carted directly out of the City, waste export occurs through a network of land-based transfer stations, points at which waste from local collection trucks is transferred for long-haul export. These transfer stations are generally located in M3 districts (districts reserved for heavy industry) which are well buffered from residential communities. However, waste trucks traveling to and from these transfer stations often pass through residential communities on their way to the designated truck routes.

Local Law 74 of 2000 (LL74) amended the Administrative Code to require that DSNY contract with a consultant to conduct a comprehensive study of Commercial Waste management in the City. DSNY conducted a series of public meetings in November and December of 2002 to solicit comments, and issued a Draft Study Scope of Work on March 3, 2003 for further public comment. Comments were received and reviewed, and a Final Study Scope was issued on July 31, 2003.

In September 2002, the consultant began work on detailed analyses of a range of Commercial Waste management issues. DSNY submitted the report, including Volumes I through VI of the CWMS, to the Mayor and the City Council in March 2004. The Study extensively characterized the City's Commercial Waste management system, providing information on the quantity of Commercial Putrescible, Non-Putrescible and Fill Material generated in the City, recycled, and disposed in- and out-of-City; the locations and operations of the City's Putrescible, Non-Putrescible and Fill Material Transfer Stations;[7] and the effects of transfer stations located in geographical proximity in certain CDs in the City.

The Study included recommendations involving changes in current practices, laws and regulations affecting the design and operation of privately owned and operated transfer stations in the City. These recommendations addressed improvements in the environmental control systems and practices used at existing permitted transfer stations in the City that have the benefit of improving potential effects associated with the operation of these facilities. The complete Study can be accessed on DSNY's website: www.nyc.gov/sanitation and is also included on a compact disk as Appendix E of the Draft New SWMP. Printed copies of the Study are available at the List of Repositories in Table 1.6-1.

There are currently 58 private waste transfer station facilities in the City with 65 permits. This is down from 220 transfer stations in 1990, shortly after the 1988 increase in tipping fees for Commercial Waste at the Fresh Kills Landfill and at certain City MTSs. Approximately one third of the facilities accept Putrescible Waste, one-third accept construction and demolition (C&D) debris, and one-third accept clean Fill Material (some facilities accept more than one

[7] These types of transfer stations are permitted under DSNY's Operating Rules.

category of materials). As discussed in more detail in the Study, these facilities are located in Manufacturing Districts (M1, M2 and M3), and therefore, are not distributed evenly among the eCity's 59 CDs. For example, Community District 1 in Brooklyn has 14 facilities with 17 permits, while Bronx Community District 2 has 8 facilities and Queens Community District 7 has 5 facilities. At present, ~~only one~~ two ~~facilit~~facilities~~y~~, ~~at~~ Harlem River Yards in the Bronx and 920 East 132nd Street by draying to Oak Point Yard, uses rail to transport putrescible waste out of the City. There are two registered sites for the intermodal transfer of containerized solid waste, where sealed containers may be delivered by truck, and transloaded onto a railcar for further transport without being opened or undergoing any processing.

Two features of the current Commercial Waste management system have served as the focus of recent concern. The first is that Manhattan has no private transfer stations, despite the fact that over 40% of the City's Putrescible Commercial Waste is generated in Manhattan. As a result, although some waste is driven directly out of the City, most of Manhattan's Commercial Waste is driven to another borough before it is exported from the City. Further, because only ~~one~~ two of the City's 19 private Putrescible Transfer Stations exports waste by means other than transfer trailer, the export of waste—not just its collection—creates truck traffic.

1.5.2 Proposed Action – Commercial Waste Management

To achieve a more balanced distribution and reduce effects from Commercial Waste transfer operations in those CDs that currently have the greatest number of transfer stations, the following measures are proposed:

- Make the existing Manhattan West 59th Street MTS site available to private waste management companies to use for the transfer of Commercial Waste collected by private carters in Manhattan. The facility could be: (i) refurbished and used in conjunction with an EBUF; or (ii) redeveloped as a containerization facility.
- Design measures to encourage private carters to deliver Commercial Waste during the 8:00 p.m. to 8:00 a.m. time period to the four Converted MTSs that are elements of the Proposed Action for Long Term Export (Hamilton Avenue and Southwest Brooklyn, Brooklyn; East 91st Street; Manhattan; and North Shore, Queens).
- Negotiate arrangements with the owners/operators of the selected private transfer stations in the Bronx, Brooklyn and Queens that submitted proposals in response to the BQB RFPs and that are potential elements of the Proposed Action to require Commercial Waste (in addition to DSNY-managed Waste) processed at these facilities to be containerized and exported from the project service area by barge and/or rail.

1.5.3 Advantages of the Proposed Action

These Proposed Actions, if fully implemented, would facilitate the City's transition from an almost wholly truck-based waste export system to a predominantly rail- and/or barge-based export system for the City's Putrescible Waste.

1.5.3.1 West 59th Street MTS Site for Commercial Waste Transfer

Developing this site for transfer of a portion of Manhattan-generated Commercial Waste would:

- More equitably distribute the impacts of Commercial Waste transfer among the City's boroughs;
- Reduce the volume of transfer trailer truck traffic in the City;
- Provide the site most proximate to midtown, a major generator of Commercial Waste; and
- Shorten carters' current runtime from the end of their midtown collection route to their tipping locations in other boroughs, resulting in a decline in the overall duration of commercial collection operations and fewer vehicle miles traveled in the City.

1.5.3.2 Commercial Waste Transfer at Four Converted MTSs

The advantages of using the Converted MTSs to containerize Commercial Waste include that it:

- Capitalizes on unused capacity during the hours when private carter collection operations occur. As DSNY would tip during the day and private carters at night, there is minimal potential for conflict in terms of processing both waste streams at the Converted MTSs.
- Potentially removes approximately 178 transfer trailers from the City's streets that would otherwise be transporting waste for export. As containerization facilities, the four Converted MTSs have potentially available capacity for processing up to approximately 3,772 ~~915~~ tpd of Commercial Waste.

1.5.3.3 Containerization and Rail Export from Private Transfer Stations

1.5.3.3 Containerization and Rail Export from Private Transfer Stations

The advantages of requiring private transfer station owners/operators who are containerizing and exporting DSNY-managed Waste by barge and/or rail to also containerize and export by barge or rail any Commercial Waste processed at their respective facilities are that it:

- Reduces outbound transfer trailer traffic from the private transfer stations, thus reducing truck traffic in these communities; and
- Accelerates the conversion of the City's private transfer network towards a barge- and/or rail-based system that will have long-term economic and environmental benefits for the City.

1.5.4 Other Commercial Waste Initiatives

In addition, there are several other related actions that DSNY has taken, or will be taking, with respect to the private transfer station industry and Commercial Waste management that form an important part of the Draft New SWMP, although detailed environmental review necessarily has been or will be conducted separately, because these measures have independent utility or are the subject of ongoing litigation. Many of these measures derive from DSNY's continuing effort to ensure that the Commercial Waste management industry meets applicable regulatory and performance standards while minimizing impacts on residents and the City.

In 2003, DSNY adopted rules to encourage the use of intermodal facilities such as rail yards or port facilities where sealed containers of solid waste may be transloaded for further transport via rail or barge. By providing a process for such facilities to obtain DSNY registrations, DSNY seeks to encourage such intermodal transport and reduce the truck traffic and related impacts associated with long-haul transfer trailer transport of solid waste.

DSNY's regulation of commercial solid waste transfer stations has been the subject of litigation brought both by community groups and ~~by~~ the industry. DSNY adopted temporary rules in 2003 prohibiting the siting of most new transfer stations while the CWMS was being prepared. Following the release of the CWMS in 2004, DSNY has taken certain steps to implement many

of its recommendations and comply with judicial rulings and concerns regarding the need for additional siting restrictions on transfer stations (see DSNY~~'s~~ website, www.nyc.gov/sanitation).

1.5.4.1 New Siting Rules for Transfer Stations

In May 2004, DSNY initiated a rulemaking process~~,~~ that became final on ~~expected to be final by early~~ November 7, 2004, ~~to~~ amending the ~~rules~~ DSNY ~~administers for~~ rules on the siting of private putrescible and non-putrescible transfer stations and for potential expansions of existing facilities. A separate environmental review was undertaken for this rulemaking, which has independent utility from the Draft New SWMP and was motivated, in part, by litigation over the proper interpretation of Local Law 40 of 1990. In brief, the rules ~~will~~ create five categories of siting restrictions that vary by Community District, depending on the number of the City's transfer stations that are currently in each Community District. The rules effectively set a cap on new capacity for any kind of private transfer station in two CDs that currently have the largest number of such facilities: Brooklyn Community District 1 and Bronx Community District 2. Thus, new capacity in such districts would require a corresponding offsetting reduction in permitted transfer station capacity in the same Community District.

In addition, a buffer would be required between a new putrescible transfer station and an existing transfer station. Buffer distance requirements from a new transfer station to sensitive receptors (defined as residence districts, schools, parks and hospitals) ~~would be increased~~ are greater for districts that currently have the highest number of transfer stations. The new rules would generally allow a new transfer station in a light manufacturing (M1) district, subject to buffer requirements and zoning performance standards, as was the case until 1998. However, a new transfer station would not be permitted in an M1 district in a Community District that already has at least three transfer stations in M1 districts. The rules would apply to all applications and include more stringent standards for obtaining a variance. More information on this rule-making is available on DSNY's website at www.nyc.gov/sanitation.

DSNY's transfer station siting rule amendments encourage the use of barge or rail to transport solid waste. Specifically, an applicant would not be prohibited from siting a new transfer station within the buffer distance to another transfer station, if the new facility uses a vessel or rail to transport at least 90% of the waste received. In addition, in obtaining offset waste tonnage for

new capacity to be sited in the two CDs with an overall cap on new capacity, an applicant that uses vessel or rail to transport at least 90% of the waste received could utilize offset tonnage from a different permitted waste type. For example, existing permitted tonnage for C&D debris could be used to offset new Putrescible Waste capacity.

1.5.4.2 New Operating Rules for Transfer Stations

In addition, in August 2004, following certain recommendations outlined in the CWMS, DSNY announced proposed amendments to operating rules for new transfer stations. These rules, which were published in final form on March 17, 2005 and take effect April 16, 2005, were the subject ~~are the subject~~ of a separate environmental review, as they are independent of the Draft New SWMP. The operating rules, which would apply to existing as well as new transfer stations, ~~would~~ require putrescible transfer stations to upgrade odor and dust control and ventilation systems. Non-putrescible transfer stations ~~would~~ have to implement measures to reduce the tracking of dirt offsite, control dust, and ensure that visible air emissions from off-road diesel equipment do not exceed certain opacity standards or leave the property boundary. More information on this rule-making is also available on DSNY's website at www.nyc.gov/sanitation.

1.5.4.3 Enhanced Permit and Inspection Capability

DSNY has stated that it will work with the City Council to amend the Administrative Code to increase the fees charged for annual permits for putrescible and non-putrescible transfer stations. The additional revenue will help pay for additional expertise and training of the inspection staff to enforce air emission standards and to approve and oversee the proper facility use of enhanced odor and ventilation systems, among other things. Such legislation would be the subject of a separate environmental review.

1.5.4.4 Seek to Alleviate Transfer Station Truck Traffic near Residences

In coordination with community groups and the City Department of Transportation (NYCDOT), DSNY proposes to undertake a study of transfer station truck traffic that passes near residential areas in certain parts of the City with the greatest number of transfer stations, to identify practical

opportunities to minimize the impacts associated with such traffic. Such measures might include near-term initiatives such as enhanced enforcement of existing truck route restrictions, improved signage, targeted waste hauling truck prohibitions along designated roadways and/or other steps.

1.5.4.5 Define Authority Needed to Reduce Transfer Station Capacity in Certain Districts

Once ~~DSNY's~~ the Converted MTSs ~~conversion program becomes~~ are operational, DSNY proposes to work with community groups and the transfer station industry to explore, in a systematic way, how legal and regulatory mechanisms, whether under current law or requiring local legislation, might be used appropriately to ~~reduce~~ further reduce the number of transfer stations in areas of the City with the greatest concentration of ~~such~~ those facilities. As appropriate, any necessary environmental review would be undertaken ~~separately~~ prior to taking final action on ~~such a~~ any proposed reduction in transfer station capacity.

1.6 Public Review Process – CEQR and SEQRA

Approval of the Proposed Action will provide the basis upon which the proposed Long Term Export Program and, if applicable, other solid waste management policies or programs, can be implemented. The City's commitment of resources to these programs is predicated upon the findings presented in the F~~D~~EIS that, consistent with social, economic and other essential considerations of state and City policy, and from among the reasonable Alternatives, the Proposed Action is one that minimizes or avoids significant adverse environmental effects to the maximum extent practicable. In addition, any potential significant adverse effects disclosed would be minimized or avoided by incorporating mitigative measures that are identified as practicable (2001 CEQR Technical Manual, pages 1 through 11, Section 270, Agency Findings). Pursuant to CEQR/SEQRA rules and procedures, DSNY is lead agency for the environmental review of the Draft New SWMP; involved agencies with discretionary approval of the Draft New SWMP are the City Council and NYSDEC. The City planning Commission has discretionary approval of the Uniform Land Use Review Procedure (ULURP) applications pending for the Converted MTSs.

1.6.1 Long Term Export

Agencies interested in the Long Term Export Program elements of the Proposed Action and assessments of facilities and services related to that program that are included in the FDEIS are listed below.

1.6.1.1 Federal Agencies

- United States Army Corps of Engineers (USACE)
- United States Environmental Protection Agency (USEPA), Region 2

1.6.1.2 New York State Agencies

- Department of State
- Office of Parks, Recreation and Historic Preservation (OPRHP)
- Office of General Services (OGS)

1.6.1.3 New York City Agencies

- City Office of Environmental Coordination (OEC)
- Department of Environmental Protection (NYCDEP)
- Department of Transportation (NYCDOT)
- City Planning Commission
- New York City Economic Development Corporation (NYCEDC)
- Landmarks Preservation Commission (LPC)
- Department of Health (NYCDOH)
- Department of Parks and Recreation (NYCDPR)

1.6.2 Preparation of the FDEIS

The purpose of the FDEIS is to provide decision makers with an understanding of the potential environmental consequences of the Proposed Action so that they may make an informed decision about the actions they are asked to undertake. In addition, the FDEIS provides the basis to make reasoned comparisons of the Alternatives to the Proposed Action. ~~An~~ The initial step in the Environmental Impact Statement (EIS) process, ~~is~~ the preparation of the Draft Environmental Impact Statement (DEIS) for public comment, has been completed.

A series of Public Scoping Meetings were held between June 15 and July 1, 2004 to solicit comments and concerns from the public and regulatory agencies regarding the proposed approach to evaluation of the Proposed Action (see Section 1.8, Public Outreach Process/Environmental Justice, for a description of the public participation and outreach program). In addition to comments received at the Scoping Meetings, written comments were accepted until July 11, 2004. The Final Scoping Document was revised ~~to address~~in consideration of the public comments received.

~~An issuance of a Notice of Completion of the DEIS is required to initiate consideration of any required permit actions and approvals. A~~ As part of the Environmental Impact Statement (EIS) process, this FEIS was prepared after: (1) a public process extending from October 22, 2004 to January 24, 2005 (a period of 94 days); and (2) eight ~~P~~public ~~H~~hearing(s) on ~~to provide an opportunity for the public to comment on~~ the DEIS, held in the communities potentially affected by the Proposed Action, to solicit comments and concerns from the public and regulatory agencies on the DEIS. Additionally, public hearings on ULURP applications for the four Converted MTSs were held by the Community Boards of the Community Districts potentially affected by these elements of the Proposed Action.

Following the close of the DEIS comment period, all comments received at the public hearing and in writing were reviewed and are addressed in Chapter 40 of this FEIS. This FEIS also includes necessary revisions, additions and clarifications to the document, as well as categorized responses to comments received. Issuance of this FEIS is required for: (1) City Council adoption and NYSDEC approval of the Final New SWMP; (2) City Planning Commission approval of the pending ULURP applications; and (3) approval by the appropriate issuing authorities of other permits required to implement the Proposed Action.

~~will be~~ ~~were~~ ~~held within approximately 30 days of the distribution of the DEIS~~~~during the period of December 1 to December 20, 2004.~~ The FEIS is available at DSNY's website: www.nyc.gov/sanitation. Copies of the ~~D~~FEIS ~~will~~ can be ~~available for viewing~~viewed at ~~DSNY, Bureau of Long Term Export, 44 Beaver Street, 12th Floor, New York, New York, and at the List of~~Public Repositories listed in Table 1.6-1. Compact disks of the FEIS can be obtained by sending a mail or fax request to Assistant Commissioner, Harry Szarpanski P.E., DSNY Bureau of Long Term Export, 44 Beaver Street, New York, New York 10004, fax number (212) 269-0788.

~~Issuance of an FEIS is required for final approval of required permits.~~ These FEIS findings are ~~will be~~ used to support all other public actions and approvals inclusive of the anticipated potential permit actions listed in Chapter 1, Section 1.7 of this FEIS. Additionally, Chapter 2, Section 2.5 provides a table listing the possible applicability of permit requirements to specific sites.

Table 1.6-1
List of Public Repositories

Repository Location	Repository Address	Days and Hours	Phone Number
Manhattan			
Manhattan CB 8 Office	505 Park Avenue	call for days and hours	(212) 758-4340
96th Street Public Library	112 East 96th Street	call for days and hours	(212) 289-0908
Manhattan CB 9 Office	565 West 125th Street	call for days and hours	(212) 864-6200
George Bruce Public Library	518 West 125th Street	call for days and hours	(212) 662-9727
Manhattan CB 4 Office	330 West 42nd Street, 26th Floor	call for days and hours	(212) 736-4536
Riverside Public Library	127 Amsterdam Avenue	call for days and hours	(212) 870-1810
Brooklyn			
Brooklyn CB 7 Office	4201 4th Avenue	call for days and hours	(718) 854-0003
Sunset Park Public Library	5108 Fourth Avenue at 51st Street	call for days and hours	(718) 567-2806
Brooklyn CB 11 Office	2214 Bath Avenue	call for days and hours	(718) 266-8800
New Utrecht Public Library	1743 86th Street	call for days and hours	(718) 236-4086
Brooklyn CB 1 Office	435 Graham Avenue	call for days and hours	(718) 389-0009
Leonard Public Library	8 Devoe Street	call for days and hours	(718) 486-3365
Queens			
Queens CB 2 Office	43-22 50th Street, Woodside	call for days and hours	(718) 533-8773
Court Square Public Library	25-01 Jackson Avenue, Long Island City	call for days and hours	(718) 937-2790
Queens CB 7 Office	45-35 Kissena Boulevard, Flushing	call for days and hours	(718) 359-2800
Mitchell-Linden Public Library	29-42 Union Street, College Point	call for days and hours	(718) 539-2330
Bronx			
Bronx CB 2 Office	1029 East 163rd Street	call for days and hours	(718) 328-9125/6
Hunts Point Public Library	877 Southern Boulevard	call for days and hours	(718) 617-0338
Bronx CB 1 Office	384 East 149th Street	call for days and hours	(718) 585-7117
Woodstock Public Library		call for days and hours	(718) 665-6255
Staten Island			
St. George Library Center	5 Central Avenue	call for days and hours	(718) 442-8560
Office of the Borough President Attn: Nicholas Dmytryszn	Borough Hall, Room 120	M-F, 9:00 a.m. – 5:00 p.m.	(718) 816-2200

1.7 Required Actions, Permits and Approvals

Potential major permit approvals for the Proposed Action that are known to be required are listed below. If subsequent approvals or permit actions are identified, a determination will be made by DSNY and the respective interested/involved agency(ies) as to what subsequent environmental assessments and determinations are required, if any.

1.7.1 Federal

1.7.1.1 U.S. Army Corps of Engineers

- Section 10 (River and Harbors Act) for structures and work in navigable waters of the United States;
- Section 103 of the Marine Protection Research & Sanctuaries Act;
- Section 404 (Clean Water Act) for discharging of dredged or fill material in waters of the United States; and
- Section 401 (Clean Water Act) Water Quality Certification.

1.7.2 New York State

1.7.2.1 Department of Environmental Conservation

- Article 27, Title 7 (6 NYCRR 360) Environmental Conservation Law solid waste permit to construct and operate a solid waste management facility;
- Article 15, Title 5 (6 NYCRR 608 – Protection of Waters) Environmental Conservation Law permit for the disturbance of a streambed or banks or excavation in or fill of navigable waters;
- Article 15, Title 5 (6 NYCRR 608 – Protection of Waters) Section 401 Water Quality Certification;
- Article 25, (6 NYCRR 661 – Tidal Wetlands Act) Environmental Conservation Law;
- Article 36 (6 NYCRR 500 – Flood Plain Management) Environmental Conservation Law permit for a facility located in a floodplain;
- Article 17, State Pollutant Discharge Elimination System (SPDES) General Permit (Section 402 of Clean Water Act) for stormwater discharges from construction activities; and

- Coastal Zone Consistency Certification (19 NYCRR 600).

1.7.2.2 Department of State

- Article 42 of the State Executive Law;
- Consistency with Federal Coastal Zone Management Act (15 CFR Part 930);
- New York State Office of Parks, Recreation and Historic Preservation (OPRHP); and
- Consultation under Section 106 (National Historic Preservation Act) and New York State Historic Preservation Act Section 14.09 compliance requirements.

1.7.2.3 Office of General Services

- Use of Lands Under Water

1.7.3 New York City

1.7.3.1 City Planning Commission

- Consistency with local Waterfront Revitalization Program (WRP); and
- Conformance with the Uniform Land Use Review Procedure (ULURP) for a Site Selection Action will be required in connection with the development of the four Converted MTSs. ~~at the existing MTS sites~~.

1.7.3.2 Department of Environmental Protection

- Sewer connection permit under Title 24 of the New York City Administrative Code (NYCAC) and Title 15 of the RCNY; and
- Industrial Pre-Treatment Approval.

1.8 Public Outreach Process/Environmental Justice

1.8.1 Introduction

NYSDEC issued policy guidance on Environmental Justice (EJ) and Permitting in March 2003 (EJ Policy). The Policy applies to certain NYSDEC permitting actions where NYSDEC is the

lead agency, including the permits for New SWMP Long Term Export facilities sought by DSNY under 6 NYCRR Part 360. This section describes DSNY's enhanced public participation and outreach program (EJ Program)~~, now underway~~ for the Draft New SWMP Long Term Export facility permitting processes that are part of the Proposed Action under consideration in this document. The EJ Program focuses on: the Public Scoping Meetings held for the Draft New SWMP DEIS; the Public Hearings that DSNY ~~will hold~~ held on the Draft New SWMP DEIS; and the Hearings expected to be held by NYSDEC on the ~~New SWMP facility permits, including~~ permits required to develop the four Converted MTSs~~, and other potential private waste containerization facilities~~.

The EJ Policy is being implemented in the potential EJ Communities that are identified in project area maps appended as Attachment A to the Final Scoping Document. These project area maps were prepared using the USEPA database, as prescribed in the EJ Policy, to identify the census block groups with populations that meet the EJ Policy criteria (EJ Community). The project area maps also identify the facilities in the project area that would be included in an environmental burden analysis conducted in the event that significant impacts from the project are found. The maps also provide information about the environmental review analyses ~~to be~~ provided in ~~the~~ this FD~~D~~EIS. The EJ Communities would be the focus of the EJ Program described herein. For reference, a copy of the NYSDEC EJ Policy is included as Attachment B to the Final Scoping Document.

The EJ Policy is specifically intended to ensure that the Draft New SWMP Long Term Export facility permitting processes and the environmental review for the Draft New SWMP Long Term Export facilities that are part of the Proposed Action consider EJ issues and promote the participation of EJ Communities in this process. Both the Draft New SWMP, and the facilities to be developed as part of the Draft New SWMP is implemented, are subject to environmental review pursuant to CEQR/SEQRA. The Converted MTSs also require permits and other authorizations that would be issued by NYSDEC, the USACE and other parties.

1.8.2 The EJ Program

DSNY, as lead agency for the FD~~D~~EIS for the Proposed Action, is implementing an EJ Program to provide opportunities for citizens to be informed about and involved in the review of the Long Term Export facility permitting portions of the Proposed Action. The EJ Program described

herein includes enhanced public outreach, information dissemination and community meetings accessible to each EJ project area. Upon completion of these activities, including outreach that will be implemented after the issuance of this FEIS, DSNY will submit a written certification to NYSDEC that it has complied with the outreach plan, and ~~will submit~~ a report detailing the activities that occurred~~ing~~ in each EJ project area.

1.8.2.1 Public Scoping Phase

DSNY, as a basis for enhancing the participation of EJ Communities in Public Scoping Meetings, has completed the following:

- Identified stakeholders to the EJ projects in the Proposed Action (including Alternatives to the Converted MTSs);
- Distributed and posted written information on the EJ projects in the Proposed Action (including Alternatives to the Converted MTSs) and related permit review processes in an easy-to-read format, and translated, as appropriate;
- Complied with the CEQR timetable for advance notice of the Scoping Meetings;
- Established easily accessible document repositories near or in potential EJ Communities at which draft Part 360 Solid Waste Facility Permit applications for the Converted MTSs are available for review by the public;
- Conducted 10 Public Scoping Meetings in project areas potentially affected by the Proposed Action or Alternatives;
- Published all comments received; and
- Issued a summary of comments and responses in Attachment C of the Final Scoping Document.

Because nine of the ten potential Long Term Export facility project areas for the Proposed Action are located within EJ Communities, DSNY implemented the EJ Program in all ten project areas, beginning with Public Scoping Meetings in locations accessible to each of the EJ project areas. Locations for written information include, but are not limited to:

- Official document repositories;
- Public libraries;
- Community liaison offices within pertinent state and federal agencies;
- Borough halls; and

- Legislative offices.

In addition, the following toll-free hotline ~~has been~~ was established: 1-888-NYC-SWMP. Messages are ~~to be~~ being documented and substantive comments considered by DSNY.

~~In the same time frame as the publication of the DEIS, DSNY will submit final permit applications for the Converted MTS projects,[8] addressing all comments received in consultation with NYSDEC. The final permit applications for the Converted MTS projects were placed in the document repositories for public review, along with any NYSDEC Notices of Complete Application or Notices of Hearing that are issued subsequent thereto.~~

1.8.2.2 DEIS Publication Phase

The DEIS ~~will identify~~identified on project area maps the facilities that potentially place an environmental burden on the EJ Community. The facilities and land uses shown on the project area maps, in addition to the Proposed Action Long Term Export facilities and Alternatives, include private waste transfer stations and major industrial or transportation facilities (including rail yards and DSNY garages) or utilities infrastructure (such as power plants, substations, water pollution control plants [WPCPs], etc.). The maps are not intended to imply that all facilities have the same potential effects on their environs, however, or that potential effects are identical to those impacts predicted for the Proposed Action Long Term Export facilities and Alternatives. The maps serve as a starting point to provide the community with information that may be relevant to the EJ process. As such, they are not intended to depict the type or extent of any environmental burden in the EJ Community.

If potentially significant adverse impacts ~~are~~ were disclosed for a Proposed Action Long Term Export facility in the DEIS, appropriate evaluation of existing facilities in the EJ project area that may impose similar environmental burdens ~~will be~~would have been presented.

On issuance of the DEIS, enhanced public participation and outreach efforts ~~will~~ continued to provide a flow of up-to-date information, ~~that will include~~ including the following:

- **One-page topical fact sheets, including frequently asked questions (FAQs):** Distributed and posted on the DSNY website and translated, at a minimum, into Spanish. Other dominant non-English languages ~~will be~~ were identified through conversations with stakeholders and materials ~~will be~~were translated, as appropriate.
- **Flyers/mailings:** Copies of mailings and public notices ~~will be~~were posted throughout potential EJ Communities. Mailings ~~will be~~were distributed to stakeholders after the Public Scoping Meetings and prior to the DEIS Hearing (three mailings in total).
- **Public notices:** These notices ~~will be~~were published in mainstream and local newspapers read both by the general public and by residents in potential EJ Communities. Lists of weekly and monthly newspapers ~~will be~~were compiled with the assistance of stakeholders and CD offices.
- **Electronic/websites:** The DSNY website (www.nyc.gov/sanitation) ~~will~~ posts project-related documents and information. ~~Other websites (including the New York City Environmental Justice Alliance, www.nyceja.org) will be invited to link to the DSNY website.~~

Public information materials are tailored to each EJ Community and: (1) describe the facility permitting activities that are part of the Proposed Action; (2) describe the design and operation of the Proposed Action Facilities, including Alternatives considered; (3) answer FAQs; and (4) present other pertinent information on the permitting process.

1.8.2.3 NYSDEC Permit Review Process Information Dissemination

Using the DEIS Hearings as an opportunity to inform the public about the NYSDEC permit review process, the format for the DEIS Public Hearings for the Converted MTSs was augmented with Power Point presentation slides and handouts that contained information about the state environmental permit applications (solid waste management facility, air and marine resources) for the Converted MTSs under review by the NYSDEC, and available at the public repositories for the Converted MTS EJ project areas. The slides provided information about the NYSDEC permit review process and details on how and when, as part of DSNY's DEIS public comment period, to submit comments on the state environmental permit applications provided for review in the public document repositories. A handout was distributed that expanded on the

[8] ~~Development of permits (where applicable) for the private transfer stations that are part of the Proposed Action is the responsibility of the companies selected to develop these facilities. These permitting activities will proceed on s a separate schedule from the permitting of the Converted MTSs.~~

information in the Power Point presentation and provided targeted information for each Converted MTS EJ project area on the location, contact information, and hours for its public document repository.

DSNY Uniform Land Use Review Procedure (ULURP) applications for each of the Converted MTSs were the subject of public hearings in January 2005 in the community boards in which the Converted MTSs are proposed to be sited. DSNY's presentation included information about the NYSDEC permit review process and the availability and contents of the state environmental permit applications on file for each of the Converted MTSs. Handouts that described the permit review process were provided to the hearing attendees. The DSNY presentations were followed by question and answer sessions at which attendees were given the opportunity to ask questions about the NYSDEC permit review process and DSNY's state environmental permit applications for the Converted MTSs.

These Permit Review Process Informational Meetings/ULURP Hearings were also the subject of Public Notices published as display advertisements in local newspapers for the Converted MTS communities in the last week of December 2004, including in Our Town (proposed East 91st Street Converted MTS, Manhattan) and the College Point/Whitestone Courier (proposed North Shore Converted MTS, Queens). A flyer targeted to each Converted MTS community was mailed to stakeholders for these communities in the last week of December 2005. The flyer provided information on the: (1) NYSDEC permit review process; (2) DSNY's state environmental permit applications on file and under review by NYSDEC; (3) public document repositories for the Converted MTS community; and (4) an invitation to the Permit Review Process Informational Meeting/ULURP Hearing held by the affected community boards. The EJ stakeholder lists were expanded to include those who provided comments on, or attended the Permit Review Process Informational Meetings/ULURP Hearings.

1.8.2.43 ~~Joint Public~~Permit Hearing Phase

The outreach ~~documents~~materials ~~have been and~~ will continue to be distributed widely through various mailings ~~and the DEIS Public Hearings that will be held within or near the~~to potential EJ

~~Community~~ Communities ~~where the Proposed Action facilities~~ in which the four proposed Converted MTSs would be located. These hearings will be ~~Joint Hearings~~ held ~~with the participation of~~by NYSDEC and ~~also invite~~will provide an opportunity for public comment on the Part 360 Solid Waste Facility Permit and other permit applications that will be before NYSDEC for consideration. The ~~Joint H~~ permit hearings will also be the subject of enhanced, targeted outreach that will comply with CEQR requirements. (Note that any permitting actions for those private transfer stations that are part of the Proposed Action will proceed on a separate schedule.) ~~It is anticipated that, after DEIS publication and prior to the DEIS Hearing, NYSDEC would issue Notices of Complete Permit Applications for the Converted MTSs that are part of the Proposed Action.~~ Key stakeholders ~~will be~~were informed of the DEIS publication, will receive notice of this FEIS, and will be informed of the ~~Joint Hearings~~ permit hearings no fewer than two weeks in advance.

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CHAPTER 2 DESCRIPTION OF FACILITY SITES

2.1 Introduction

2.1.1 Overview

This chapter describes the sites and operations for which the results of environmental reviews are presented in Chapters 4 through 31. Sections 2.2 through 2.4 describe each site and the facility considered for that site.

Most site descriptions contain a Site Location figure that identifies the approximate boundaries of the site and shows the surrounding neighborhood, and a Facility Footprint figure that provides an aerial view of the existing site and, where applicable, a footprint of the facility superimposed on the site. A cross-section view of the proposed processing building interior and a gantry crane section view ~~is~~ are also included, where applicable. These graphics are provided to facilitate the readers' understanding of existing site conditions and any changes that would occur with development of the facility. Renderings of the Proposed Plan Converted MTS's are also included. The site description also identifies the approximate distance of residential districts, schools and parks from the site. Zoning maps and related materials, as well as detailed information on schools and parks are in subsections of the environmental review chapters on each site. The sites under consideration may include multiple parcels under varied ownership and may extend beyond the property boundaries of parcels on which the subject facility is located. For purposes of analysis, the primary and related parcels are considered a single entity.

The site descriptions are grouped into the following sections:

- Section 2.2 presents descriptions of the Proposed Plan Facilities for the Long Term Export Program, subdivided into sites where: (1) Converted MTSs would be developed (along with site descriptions for support facilities that are subject to environmental review, such as the 65th Intermodal Yard[1] and the Harlem River Yard

[1] Note that the Converted MTSs may use other intermodal facilities than those noted here to transload containerized waste to railcars or coastal barges. These other intermodal facilities exist and do not require new or modified permits in order to service barge deliveries of DSNY-managed Waste. Although DSNY issues permits to intermodal facilities that handle containerized waste, the permit is a ministerial action not subject to environmental review under DSNY's Rules.

Barge to Rail Intermodal Yard); and (2) existing or new private transfer stations would be used, and modified or developed if necessary, to export containerized waste by barge or rail[2]. If a private transfer station's intermodal facility is located on a separate site, that site is also subject to environmental review and the description of that intermodal site is incorporated into the respective transfer station site description.

- Section 2.3 presents descriptions of the Proposed Plan Recycling Facilities for acceptance and/or processing of DSNY's Curbside Recyclables[3].

- Section 2.4 presents descriptions of Alternative sites and facilities considered for the Long Term Export Program.

Table 2.1-1 lists all of the facilities in each of the above referenced categories that are reviewed in this FDEIS or part of the New SWMP, and the wasteshed served by each facility. Note that for both the Bronx wasteshed and the Brooklyn CD 1, 3, 4, and 5 wasteshed, two private Transfer Stations are designated in each respective wasteshed as Proposed Plan Facilities. DSNY is undertaking negotiations on the terms of a 20-year Service Agreement with the companies proposing these respective sites. The outcome of the negotiations for a service contract in each wasteshed would result in a contract award to one or both companies for all, or a portion of, the waste generated in each wasteshed.

This chapter also addresses the potential applicability of the major permits referenced in Section 1.6 to the individual sites described in Sections 2.2, 2.3 and 2.4. The potential major permitting requirements for all of these sites are summarized in Section 2.5.

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[2] These facilities are designated pursuant to an evaluation of proposals received in response to three Requests for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from the Bronx, Brooklyn and Queens, respectively, (BQB RFPs) conducted by DSNY.

[3] Note that pursuant to Title 6 of the New York Codes, Rules and Regulations (NYCRR) Sections 360-12.1 and 1.8(h), the New York State Department of Environmental Conservation (NYSDEC) authorizes recycling facilities by registration. Accordingly, recycling facilities conforming to this regulation are exempt from environmental review for purposes of solid waste facility permitting. However, the construction-related activities, such as dredging and pier construction, require permits and are subject to environmental review. Furthermore, the potential traffic, off-site air and off-site noise impacts that would be associated with changes in the delivery of Curbside Recyclables by DSNY collection vehicles from current destinations to a new facility(ies) are also evaluated in this FDEIS.

Table 2.1-1
Proposed Plan Facilities and Alternatives

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Proposed Plan Facilities – Long Term Export			
Converted MTS	DSNY Hamilton Avenue Converted MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 7	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Converted MTS	DSNY Southwest Brooklyn Converted MTS, Shore Pkwy at Bay 41st Street, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Converted MTS	DSNY East 91st Street Converted MTS, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Converted MTS	DSNY North Shore Converted MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Barge Staging Area (1)	DSNY 52nd Street Barge Staging Area, 52nd Street and 1st Avenue, Brooklyn	Brooklyn 7	N/A
Intermodal Barge-to-Rail Yard (2)	Harlem River Yard, East 132nd Street and St. Anns Avenue, Bronx	Bronx 1	N/A
Intermodal Barge-to-Rail Yard (2)	NYCEDC, 65th Street Intermodal Yard, Brooklyn	Brooklyn 10	N/A
Truck-to-Rail TS	Waste Management Harlem River Yard, 98 Lincoln Avenue, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Rail TS	Allied Waste Services, East 132nd Street Transfer Station, Bronx	Bronx 1	Bronx CDs 1 through 12
Truck-to-Barge TS	Waste Management, 485 Scott Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5
Truck-to-Rail TS	Allied, 72 Scott-598 Scholes, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5
Truck-to-Rail/Barge TS (3)	Waste Management, 30-58 Review Avenue, Queens	Queens 2	Queens CDs 1 through 6
Waste-to-Energy Facility (4)	American Ref-Fuel, Essex Resource Recovery Facility, Newark, NJ	N/A	Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12

Table 2.1-1 (continued)
Proposed Plan Facilities and Alternatives

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Proposed Plan Facilities – Long Term Export			
Truck-to-Rail Transfer Station [5]	DSNY Staten Island Transfer Station __ West Service Road, Staten Island	Staten Island 2	Staten Island CDs 1 through 3
Intermodal Yard Truck-to-Truck-to-Rail Yard [6]	Oak Point Rail Yard, Oak Point Avenue and Barry Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Intermodal Yard Truck-to-Truck-to-Rail [6]	LIRR Maspeth Rail Yard, Maspeth Avenue and Rust Street, Queens	Queens 2	N/A
Proposed Plan Facilities – Recycling Facilities			
Recyclables Processing Facility [7]	30th Street Pier at the South Brooklyn Marine Terminal, Brooklyn	Brooklyn 7	City-wide
Truck to Barge Marine Transfer Station [8]	Former site of Gansevoort MTS, Pier 52, Manhattan	Manhattan 2	Manhattan CDs 1 through 12
Bronx Recyclables Acceptance Facility [9]	85 Edgewater Road, Bronx	Bronx 2	Bronx CDs 1 through 12
Queens/Brooklyn Recyclables Acceptance Facility [9]	Long Island City, 30-27 Greenpoint Avenue, Queens	Queens 2	Queens CDs 1 through 14
Alternatives – Long Term Export			
Converted MTS	DSNY South Bronx Converted MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Converted MTS	DSNY Greenpoint Converted MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5; Queens CDs 1 through 6
Converted MTS	DSNY West 135th Street Converted MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	
Converted MTS	DSNY West 59th Street Converted MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	

Table 2.1-1 (continued)
Proposed Plan Facilities and Alternatives

Facility Type	Owner, Facility Name, and Address	Community District	Wasteshed Served – Community Districts
Alternatives – Long Term Export			
Truck-to-Rail TS	IESI or Ref-Fuel Meserole Street Transfer Station, 568 Meserole Street, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5
Existing MTS	DSNY, South Bronx MTS, Farragut Street, Bronx	Bronx 2	Bronx CDs 1 through 12
Existing MTS	DSNY, Greenpoint MTS, North Henry and Kingsland Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4, and 5; Queens CDs 1 through 6
Existing MTS	DSNY, Hamilton Avenue MTS, Hamilton Avenue at Gowanus Canal, Brooklyn	Brooklyn 6	Brooklyn CDs 2, 6, 7, 8, 9, 10, 14, 16, 17 and 18
Existing MTS	DSNY, Southwest Brooklyn MTS, Brooklyn	Brooklyn 11	Brooklyn CDs 11, 12, 13 and 15
Existing MTS	DSNY, West 135th Street MTS, West 135th Street and 12th Avenue, Manhattan	Manhattan 9	
Existing MTS	DSNY, West 59th Street MTS, West 59th Street and Marginal Street, Manhattan	Manhattan 7	
Existing MTS	DSNY, East 91st Street MTS, 91st Street and York Avenue, Manhattan	Manhattan 8	Manhattan CDs 5, 6, 8 and 11
Existing MTS	DSNY North Shore MTS, 31st Avenue and 122nd Street, Queens	Queens 7	Queens CDs 7 through 14
Truck-to-Rail TS	Waste Management, 215 Varick Avenue Transfer Station, 215 Varick Avenue, Brooklyn	Brooklyn 1	Brooklyn CDs 1, 3, 4 and 5
Intermodal Yard	Steel Style Inc. 401 South Water Street New Windsor, New York	N/A	N/A

Notes for Table 2.1-1 :

(1) The 52nd Street Barge Staging Area historically served the existing MTSs as a location where barge movements between individual MTSs and Fresh Kills could be staged. The 52nd Street Barge Staging Area may be used for temporary staging of barges between the Converted MTSs and various intermodal destinations and storage of marine supplies.

(2) Two intermodal barge-to-rail facilities, one at Harlem River Yard and one at the 65th Street Rail Yard, may be constructed as transload facilities to transfer containers between the Converted MTSs and railheads. DSNY issues a non-discretionary permit to intermodal facilities handling containerized waste that are not subject to environmental review. However, the USACE Section 10/404 permits and the NYSDEC Article 15/25 permits pertaining to waterfront construction are subject to environmental review. Note that there are other existing intermodal facilities that may be used for intermodal transfer of containers from the Converted MTSs.

(3) Pending the outcome of negotiations between DSNY and Waste Management, the Review Avenue Transfer Station would be modified to operate as either a truck-to-barge or a truck-to-truck-to-rail facility.

(4) The Essex County Resource Recovery Facility (RRF) is a permitted and operating waste-to-energy facility in Newark, New Jersey. As such, the facility itself is not subject to environmental review in this FDEIS. DSNY-managed Waste would be delivered in collection vehicles to this facility or via hopper barges from the existing MTSs if an enclosed barge unloading facility (EBUF) were to be developed in the vicinity of the Essex County RRF some time in the future. The routing of DSNY collection vehicles leaving the City is subject to environmental review and is reported in Chapter 16 of this FDEIS.

(5) The Staten Island Transfer Station was approved in the 2000 SWMP, based on an environmental review in the 2000 Plan FEIS. The facility is fully permitted and under construction. It is not reviewed in this FDEIS but is listed because it is part of the New SWMP.

(6) Both the East 132nd Street Truck-to-Truck-to-Rail Transfer Station in the Bronx and the Review Avenue Truck-to-Truck-to-Rail Transfer Station in Queens would dray containers between the respective transfer stations and intermodal rail yards that are in the project service areas, but not at the same sites as the transfer stations. These intermodal yards are existing facilities that would receive non-discretionary permits from DSNY for handling solid waste and, as such, are not subject to environmental review. However, the movement of containers on tractor chassis between the transfer stations and the intermodal yards is subject to an environmental review that is reported in this FDEIS.

(7) This 30th Street Pier at SBMT is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. Curbside Recyclables from other boroughs would be delivered by barge. Recyclables would be transferred from this facility by barge. As a recycling facility, it is not subject to regulation as a solid waste facility. However, the waterfront construction requires USACE Section 10/404 permits and the NYSDEC Article 15/25 permits that are subject to environmental review.

(8) The timetable for designing, permitting and constructing this facility, which would receive truck deliveries of DSNY MGP Curbside Recyclables collected in Manhattan for barge transfer to the 30th Street Pier at SBMT for processing, is approximately seven years. Accordingly, the environmental review of this facility is deferred until more detailed design information is available.

(9) These are existing facilities that currently receive truck deliveries of DSNY Curbside Recyclables for transfer by barge to a processing facility. As such they are not subject to environmental review and are listed here to indicate that they are facilities included in the New SWMP.

2.1.2 General Information, Plan Policies and Key Assumptions – Proposed Plan Long Term Export Facilities

All the Proposed Plan Facilities and Alternatives reviewed in this FDEIS would export DSNY-managed Waste in containers by barge or rail to out-of-City disposal sites.

All of the Converted MTS sites that are Proposed Plan Facilities are the locations of existing MTSs that would be replaced by a Converted MTS designed to containerize waste at the same site. Except for the Southwest Brooklyn site, the existing MTSs at these locations will be demolished as an element of the Proposed Action. Three Converted MTS sites[4] also contain existing incinerators—Southwest Brooklyn, Greenpoint and Hamilton Avenue. These incinerators are in the process of being demolished. These demolitions are separate actions with independent utility that have been subject to environmental review. Each Converted MTS and private transfer station in the Proposed Plan would serve a discrete wasteshed that is identified in Table 2.1-1 and in the respective site description.

2.1.2.1 General Design Features:

The four Converted MTSs that are Proposed Plan Facilities have a common three-level processing building design. Collection vehicles enter a tipping floor at the uppermost level and tip loads of waste onto the second-level loading floor approximately 12 feet below. On the loading floor, waste is sorted and pushed by front end loaders through slots in the floor slab located directly over intermodal containers, located on the first level inside the processing building. A tamper device working from the loading floor evens and densifies the waste in the containers, which are then lidded with leak-proof gasketed covers and moved by trolley to the external pier level of the facility. A gantry crane on the pier loads/unloads full/empty containers on/off of a flatbed barge moored to the pier. Each barge has a capacity for 48 containers. Tug

[4] The Hamilton Avenue and Southwest Brooklyn Converted MTSs are Proposed Plan facilities. The Greenpoint Converted MTS is an Alternative.

boats move full/empty barges directly to/from an out-of-City disposal site[5] or between the Converted MTS and an intermodal transload facility where they are loaded onto railcars or a larger barge for transport to a disposal facility.

The intermodal containers are approximately 20 feet long, 12 feet high and 8½ feet wide. They are capable of holding approximately 62 cubic yards of refuse. The density of the waste entering the container is approximately 450 pounds per cubic yard. Tamping of the waste in the container is expected to compact the waste to approximately 700 pounds per cubic yard. On average, it is estimated that each container will contain approximately 22 tons of waste.

Each Converted MTSs has four loading slots for containers. Typically, two slots would be active during periods of average waste delivery and three slots active during peak waste deliveries. One loading slot would be maintained as a spare for flexibility and redundancy within the system. Under peak operating conditions, the Converted MTS design[6] would enable ten containers to be filled within an hour using three out of four loading slots, equating to an hourly throughput rate of 220 tons.

Subject to the outcome of negotiations between DSNY and the proposers selected pursuant to the MTS Containerization RFP, containerized waste will be transported by barge from the Converted MTSs directly to: (i) a disposal site; or (ii) intermodal terminals in the New York harbor region, where the containers will be transloaded to railcars or a larger barge for transport to an out-of City disposal facility. The intermodal yards would be either existing facilities not subject to environmental review or a modified or new facility that is reviewed in this FDEIS.

[5] The procurement of transport and disposal arrangements whereby private companies would service the Converted MTSs was the subject of a DSNY Request for Proposals to Transport and Dispose of Containerized Waste from the Converted MTSs. DSNY has completed an evaluation of these Proposals but definitive contractual arrangements for transport and disposal services have not been negotiated.

[6] Due to site constraints, the design of the West 59th Street Converted MTS differs substantially from the other Converted MTSs. For details, see the site description in Section 2.4.

This FDEIS incorporates the results of a review[7] of the potential environmental impacts associated with containerizing commercial waste from the Converted MTSs and exporting it to an out-of-City disposal facility by barge or rail. This environmental review concludes that varying quantities of commercial waste can also be processed at each of the ~~converted~~ Converted MTSs without significant adverse impacts.

The design and operation of each of the Proposed Plan private transfer stations varies. At the Harlem River Yard and 78 Scott Avenue-594 Scholes Street facilities, containerized waste would be loaded onto on-site rail cars. At the East 132nd Street and Review Avenue (truck-to-rail option[8]) facilities, waste would be containerized at the transfer station and drayed to an intermodal facility located within the same wasteshed as served by the facility. At the 485 Scott Avenue and the Review Avenue (truck-to-barge) facilities, containers would be loaded on site onto flatbed barges for shipment to another intermodal transfer facility. More specific details are provided in each site description.

DSNY's BQB RFPs established a policy objective of requiring private transfer stations that are awarded DSNY Long Term Export Contracts to also export by barge or rail any commercial waste they process at such a facility. DSNY's ability to achieve this policy will be determined in future negotiations between the DSNY and the BQB Proposers.

All of the private Transfer stations included as Proposed Plan Facilities are existing permitted facilities. With the exception of HRY Truck-to-Rail TS,[9] these transfer stations would require varying types of modifications. These modifications may involve both expansion of existing permitted capacities and physical changes to the site and facilities to enable containerization and barge or rail export.

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[7] See Volume III, Commercial Waste Management Study, Summary Report: Commercial Waste Processing and Analysis of Potential Impacts, included as Appendix D to this FDEIS.

[8] See Note #6 in Table 2.1-1 on the environmental review status of these facilities.

[9] Note that the Harlem River Barge-to-Rail Intermodal Yard is a new facility (separate from the HRY Truck to Rail TS) that would transload containers delivered from the Converted MTSs from barge to rail.

2.1.2.2 Capacities of Converted MTSs in the ~~Proposed~~ New SWMP

To define the average and peak hourly capacity parameters for design of the Converted MTSs,~~,~~ historical data regarding truck and tonnage arrival rates from FY 1998 were evaluated and analyzed. Based on this analysis, it was determined that a Converted MTS would be designed with a tipping floor to accommodate 30 collection vehicles per hour and a loading level to process and containerize 220 tons of MSW per hour. If the facility were to operate at full capacity over an entire day (that is 3 shifts with productivity of 6.5 hours per shift) it would process 4,290 tons of waste. Under normal or average conditions, the Converted MTS would not approach this level of processing.

For this F~~D~~EIS, scale-house data from 1998 (1997 in the South Bronx) were used to identify the Average Peak ~~Daily tonnage~~ton per day (average of the highest day in each of 52 weeks – typically Monday or Tuesday). A 20% contingency was applied to that Average Peak ~~Daily Tonnage~~ ton per day to allow for fluctuations in waste deliveries. The purpose of applying this contingency was to build in an element of conservatism in the environmental review. In addition, each Converted MTS was evaluated for the capability to receive deliveries of commercial waste as determined in the Commercial Waste Study mandated by Local Law 74 (LL74) of 2000.[10] This evaluation assumed that commercial waste deliveries were limited to the hours of 8:00 p.m. to 8:00 a.m. to avoid conflicts with processing of DSNY-managed Waste, which is primarily collected and delivered in the 8:00 a.m. to 8:00 p.m. time period. This evaluation also considered the noise impacts of collection vehicle traffic passing sensitive receptors located on truck routes and local streets used to access the Converted MTSs. At several Converted MTSs the evaluation identified hours, typically the quietest nighttime hours, during which it would be necessary to limit commercial collection vehicle traffic to avoid noise impacts. Accordingly, the tonnages of commercial waste that are shown as containerized at certain Converted MTSs reflect reduced deliveries to avoid noise impacts at sensitive receptors (typically residential buildings on the routes leading to an MTS or on lots located near the

[10] See Volume III, Commercial Waste Management Study, Summary Report: Commercial Waste Processing and Analysis of Potential Impacts, included as Appendix D to this F~~D~~EIS.

Converted MTSs). This FDEIS is not definitive on the issue of processing commercial waste at the Converted MTSs, however, because the feasibility of exporting commercial waste from the Converted MTSs is primarily driven by economic and institutional factors that would be addressed in policy measures to facilitate the use of these facilities by commercial carters that would be adopted in the Proposed New SWMP.

Although the design capacity of the Converted MTSs is 4,290 tpd,[11] Table 2.1-2 presents expected average throughput capacities at the Converted MTSs in the Proposed New SWMP for DSNY-Managed managed Waste and Commercial Waste. It also shows the Average Peak Day tonnagetons per day with including a 20% contingency that is used in this FDEIS analyses for purposes of conservatism. There would be occasions, subject to permit limits, when the full design capacity of the Converted MTSs would be required to deal with upset conditions in the City's waste management system. The classic example of this is a snow emergency. Also, unanticipated outage conditions in one element of the system could require temporary shifts in waste deliveries among the Converted MTSs.

Table 2.1-2
Expected Converted MTS Average Throughputs
Proposed Draft New SWMP Facilities

Converted MTS Location	DEIS FEIS Evaluated Off-Site Average Peak Day with Contingency TPD	Commercial Tonnage (Noise Constrained) TPD	Total
Hamilton Avenue	2,248	1,306 1,274	3,554 3,522
SW Brooklyn	1,388	828 718	2,216 2,106
East 91st Street	1,093	780	1,873
North Shore	2,672	1,000	3,672

[11] The West 59th Street Converted MTS in Manhattan has a design capacity of 2,145 tpd because of a unique site configuration.

~~2.1.2.2~~ 2.1.2.3 *Capacities of Private Transfer Stations*

All but one[12] of the seven private transfer stations included in the Proposed Plan or considered as Alternatives is an existing facility. Of the five existing facilities, four would require permit modifications to facilitate barge or rail export and/or expansions of their existing permitted capacities. Several of these facilities have been the subject of environmental reviews in recent years. Where past environmental reviews have been performed, it is possible to limit scope of the environmental review that is required in this F~~D~~EIS. Table 2.1-3 provides a summary of the permitted status of these facilities, proposed capacity expansions (if applicable), other required permit modifications (if applicable), and DSNY wastesheds served. It also includes the average peak tpd of DSNY-managed Waste deliveries assumed in the environmental review, and the tpd capacities evaluated in this F~~D~~EIS for both on- and off-site potential impact analyses, taking into account the applicability of prior environmental reviews.

[12] Meserole Street Truck to Rail TS would be a new facility and was considered as an Alternative.

Table 2.1-3
Private Transfer Station Capacities

Facility	Community District Location/ Wasteshed Served	Current Permitted Capacity (TPD)	Proposed Expansion Increment (TPD)	Other Permit Modifications	Average Peak Day DSNY Waste Evaluated (TPD)	Commercial Waste Processed (Yes/No)	Capacity Analyzed for On-Site Impacts (TPD)	Capacity Analyzed for Off-Site Impacts (TPD)
Waste Management, Harlem River Yard Barge to Rail Intermodal Yard, Bronx	N/A	N/A	N/A	N/A	N/A	N/A	2,800	N/A
Waste Management, Harlem River Yard, Truck-to-Rail TS, Bronx	Bronx 1/ Bronx CDs 1 through 12	4,000	None	None	2,337	Yes	Not Required[1]	1,147[2]
Allied Waste Services, East 132nd Street, Truck-to-Rail TS, Bronx	Bronx 1/ Bronx CDs 1 through 12	2,999	None	Minor addition of lidding facility	2,337	Yes	Not Required[3]	1,565[4]

Table 2.1-3 (continued)
Private Transfer Station Capacities

Facility	Community District Location/ Wasteshed Served	Current Permitted Capacity (TPD)	Proposed Expansion Increment (TPD)	Other Permit Modifications	Average Peak Day DSNY Waste Evaluated (TPD)	Commercial Waste Processed (Yes/No)	Capacity Analyzed for On-Site Impacts (TPD)	Capacity Analyzed for Off-Site Impacts (TPD)
Waste Management, 485 Scott Avenue, Truck-to-Barge TS, Brooklyn	Brooklyn 1/ Brooklyn CDs 1, 3, 4 and 5	1,500	None	Containerization Floor Plan, Lidding Area and Bulkhead and Platform for loadout of Containers onto Barges	1,114	Yes	Deferred[5]	Not Required[6]
Allied Waste Services, 72 Scott-598 Scholes, Truck-to-Rail T S, Brooklyn	Brooklyn 1/ Brooklyn CDs 1, 3, 4 and 5	220	1,148	Consolidation of operations among three separate facilities, Rail Improvements	1,114	Yes	1,368	637

Table 2.1-3 (continued)
Private Transfer Station Capacities

Facility	Community District Location/ Wasteshed Served	Current Permitted Capacity (TPD)	Proposed Expansion Increment (TPD)	Other Permit Modifications	Average Peak Day DSNY Waste Evaluated (TPD)	Commercial Waste Processed (Yes/No)	Capacity Analyzed for On-Site Impacts (TPD)	Capacity Analyzed for Off-Site Impacts (TPD)
Waste Management, 30-58 Review Avenue, Truck-to-Rail/Barge TS, Queens	Queens 2/ Queens CDs 1 through 6	958	242	Containerization Floor Plan, Lidding Area and (for Barge Option) Bulkhead and Platform for loadout of Containers onto Barges	1,464	Yes	1,200[7]	530[8]
IESI or American Ref-Fuel, Meserole Street Truck-to-Rail TS, Brooklyn	Brooklyn 1/ Brooklyn CDs 1, 3, 4 and 5	0	2,000	Development of new waste transfer station with Rail Improvements	2,000	Yes	2,000	2,000

Notes:

(1) Approval of currently permitted capacities at Harlem River Yard, considering the on-site effects of processing DSNY-managed Waste, was based on Negative Declarations in prior EAS reviews. Therefore, no additional review is required.

(2) This is the potential tpd increment between the average of what is currently exported from the Harlem River Yard and, pending the outcome of contract negotiations between DSNY and the company, the potential to export all Bronx waste from this site.

(3) Approval of currently permitted capacities at East 132nd Street, considering the on-site effects of processing DSNY-managed Waste, was based on Negative Declarations in prior EAS reviews.

Notes for Table 2.1-3 (continued)

(4) This is the potential tpd increment between the average of what is currently exported from East 132nd Street and, pending the outcome of contract negotiations between DSNY and the company, the potential to export all Bronx waste from this site.

(5) The export of containers by barge from 485 Scott Avenue would reduce out-bound transfer trailer impacts, thus reducing impacts associated with on-site traffic. Details on the barge loadout design will be developed by Waste Management and may require a supplemental EIS in the future to support required permit modifications.

(6) 485 Scott Avenue currently provides Interim Export service to DSNY for the same wasteshed, based on a Negative Declaration in a prior EAS review. Under Long Term Export, the number of outbound truck trips would be less, reducing the potential impacts. Therefore, no additional review is required.

(7) 38-50 Review Avenue currently provides Interim Export service for the same Queens wasteshed. However, the increment in proposed permitted capacity and development of a container-to-barge loadout design will require a new environmental review.

(8) This is the potential tpd increment between the average of what is currently exported from the Review Avenue TS and, pending the outcome of contract negotiations between DSNY and the company, the potential to export Queens waste from CDs 1through 6 from this site.

2.2 Site Descriptions – Proposed Plan Facilities Long Term Export

2.2.1 Hamilton Avenue Converted MTS, Brooklyn

2.2.1.1 Description of Existing Site

The existing Hamilton Avenue MTS site is located off of Hamilton Avenue, at the mouth of the Gowanus Canal in Brooklyn. The site is bounded by the elevated Gowanus Expressway to the north and east, 17th Street to the south and the Gowanus Canal to the west. Figure 2.2.1-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 625 and Lot 2, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 7.4 acres and consists largely of upland. In addition to the existing MTS, the site is also occupied by other existing DSNY facilities, including the former Hamilton Avenue incinerator. A contract has been awarded to demolish the incinerator and work is commencing; an environmental remediation program was conducted prior to demolition. The Hamilton Avenue MTS site is roughly triangular in shape. The northeastern boundary of the site follows the configuration of the elevated Gowanus Expressway and is approximately 650 feet in length. The southern boundary of the site is approximately 850 feet in length. The western side of the site is approximately 225 feet in length and follows the Gowanus Canal shoreline.

The site is located within an M3-1 zoning district, which allows for heavy industrial uses. This district is bounded by Gowanus Canal and Bay to the north and northwest and the Gowanus Expressway/Hamilton Avenue and 3rd Avenue to the east and southeast. This M3-1 zoning district extends to the south, terminating at 58th Street. The M3-1 zone is bounded by M1-2 and M2-1 zones to the north of the site, which allow for light and medium industrial uses, respectively. To the east and south of the site, the M3-1 zone is bounded by an M1-2D zoning district, which allows residential uses with the authorization of the City Planning Commission.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | HydroQual | URBITRAN | PB | EEA | Cambridge Environmental Inc

Figure 2.2.1-1 Site Location

Hamilton Avenue Converted MTS

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Further east and south of the site are the R6 and R5 zoning districts that characterize the Gowanus/Sunset Park neighborhoods. North and west of the site, in Red Hook, is another M3-1 zoning district that follows the north side of the Gowanus Canal into New York Bay.

The site is bordered by transportation and municipal functions on the northeast and eastern edges and commercial activities on the south side. An active City Department of Transportation (NYCDOT) asphalt plant and storage yard is located northeast of the site. Hamilton Avenue, a heavily-traveled arterial, and the elevated Gowanus Expressway define the eastern boundary of the site, and a large, two-story parking lot/garage associated with a Home Depot on 19th Street borders the site on the south side. Various businesses providing automotive services and warehouses are located on the northeastern side of Hamilton Avenue, including DSNY's Brooklyn 2 Garage. A new Lowe's Home Improvement store opened earlier this year on the Gowanus Canal near 12th Street, a few blocks north of the site.

For the area between ¼-mile and ½-mile of the site, large-lot industrial uses line both sides of Gowanus Bay and Canal southwest and northeast of the site. The area southeast of 3rd Avenue, in Park Slope, is almost exclusively residential, with ground-floor commercial uses located on the avenues. The large Red Hook Houses complex is located west of Clinton Street, between Lorraine Street and West 9th Street, where it dominates the northwestern portion of the ¼-mile to ½-mile area. Vacant lots and large parkland areas surround the complex. A small portion of the large Carroll Gardens/South Brooklyn (Gowanus) neighborhood is included in the area northwest of the canal.

There are no City, state or nationally designated landmarks or historic districts within ½-mile of the site, or archaeological resources on the site.

2.2.1.2 Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.2.1-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the Converted MTS superimposed on the site. Figure 2.2.1-3 illustrates the final rendering of the Hamilton Avenue Converted MTS. Figures 2.2.1-~~3~~ 4, -5 and -6 (Plan ~~and~~ View, Section View, and Gantry Section View) shows the processing building interior and details of the gantry cranes.

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning
Aerial Photos taken August 2002

50 0 50 Feet

Figure 2.2.1-2 Facility Footprint

Hamilton Avenue Converted MTS

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Figure 2.2.1-3 Artist's Rendering
Hamilton Avenue Converted MTS

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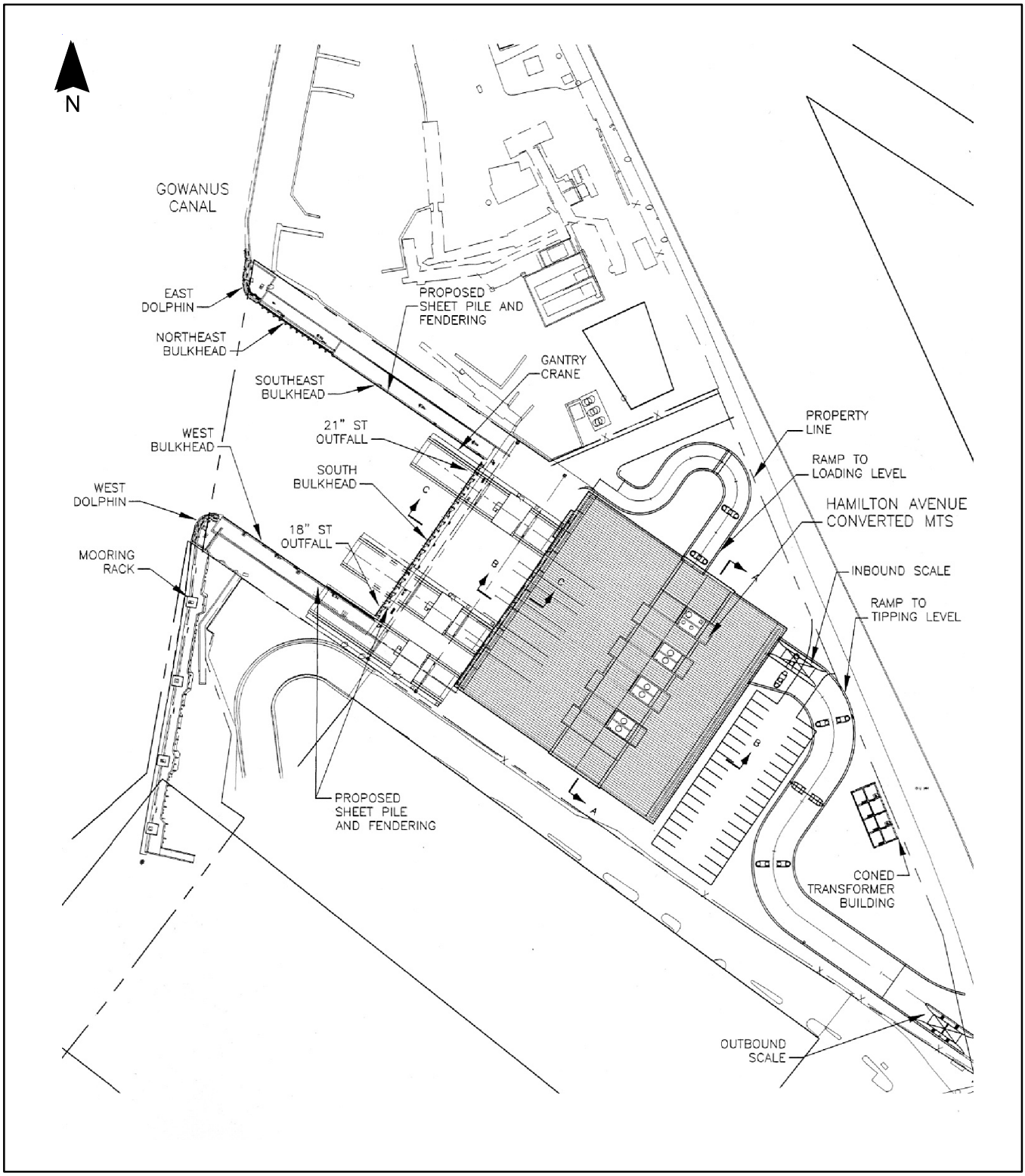
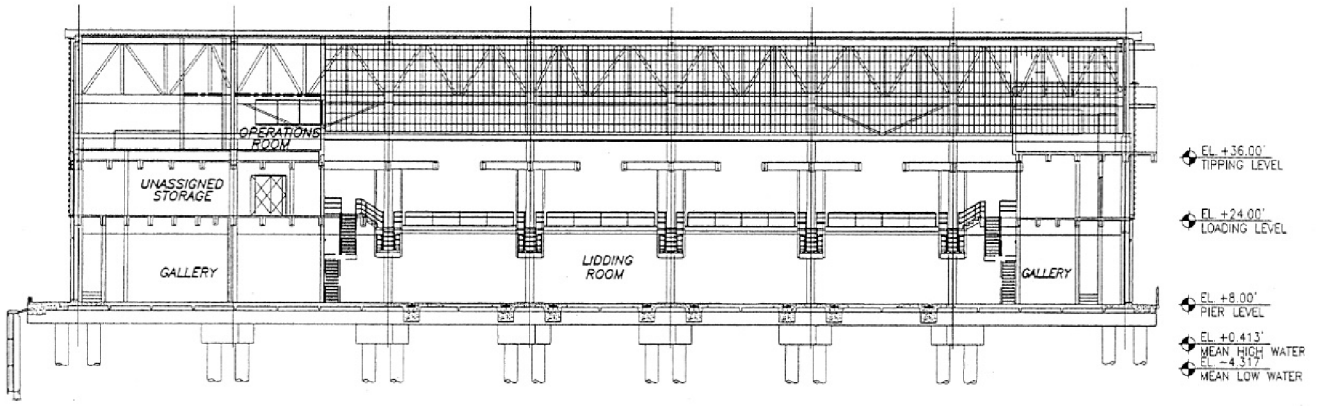
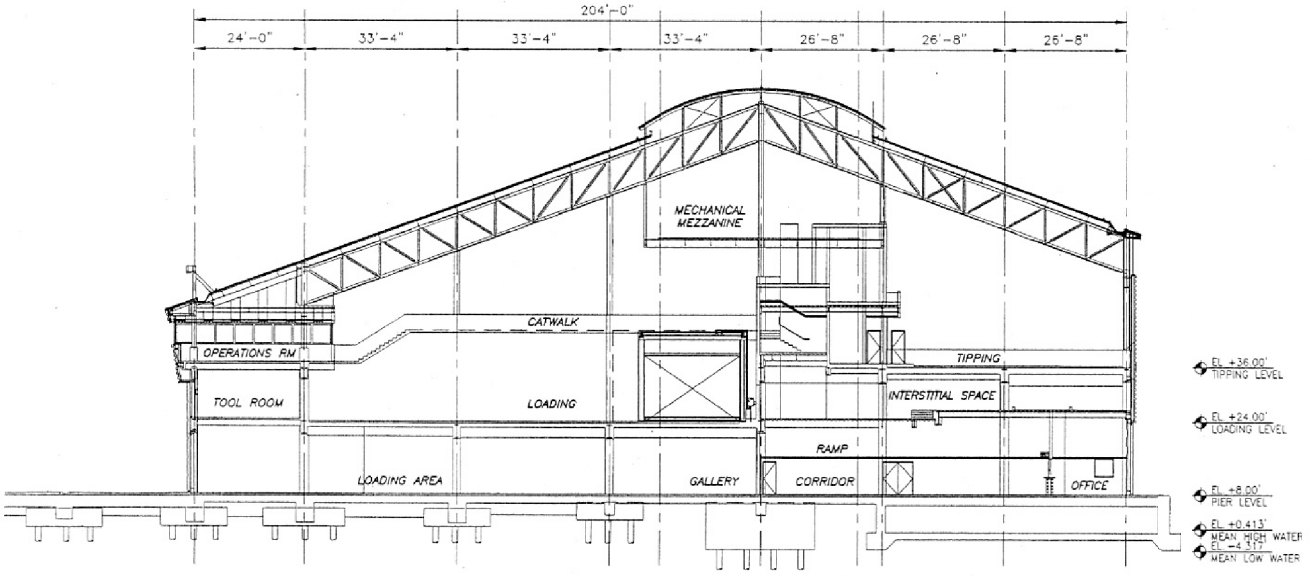


Figure 2.2.1-4 Plan View
Hamilton Avenue Converted MTS

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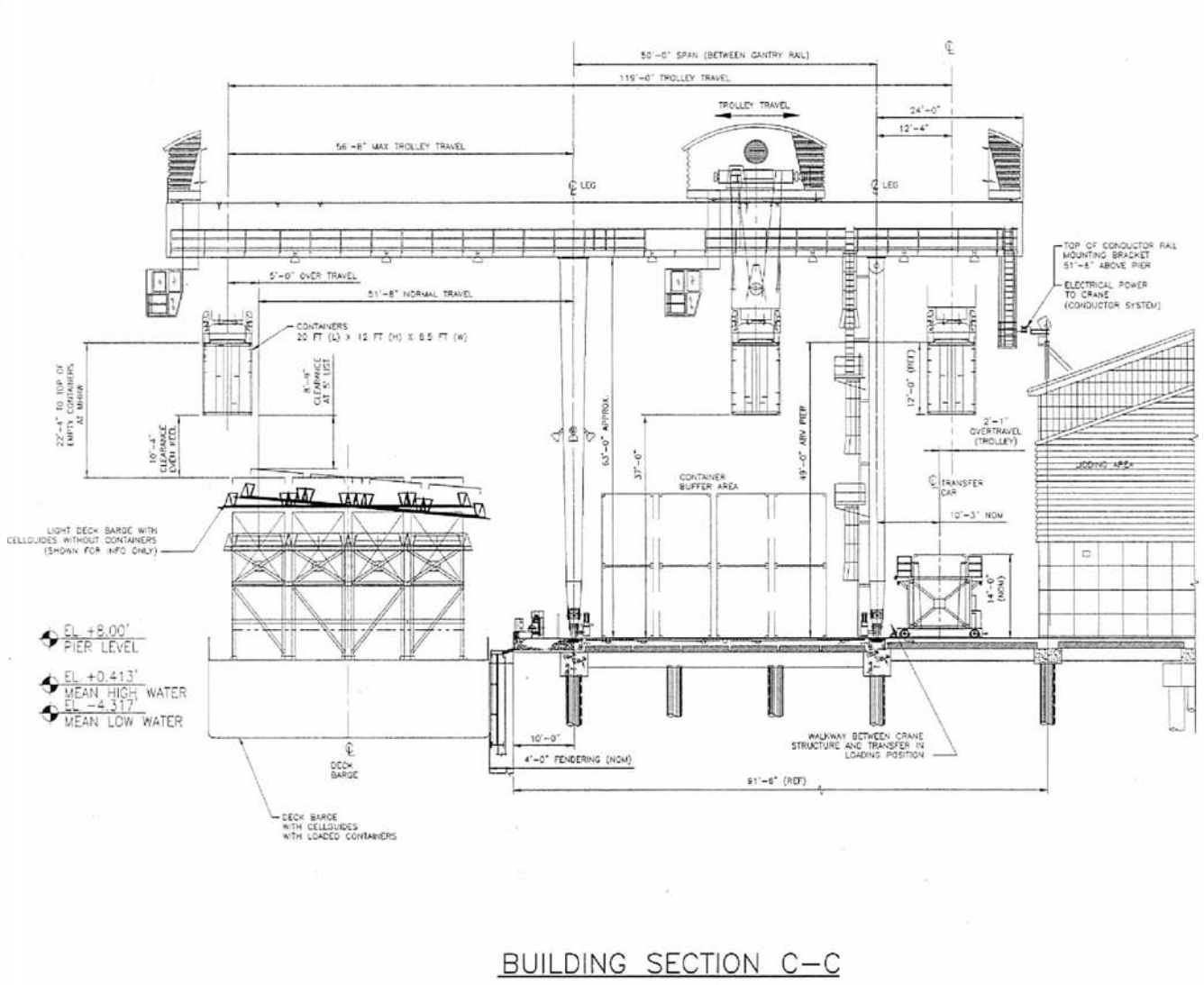
BUILDING SECTION A–A



BUILDING SECTION B–B

Figure 2.2.1-5 Building Section View
Hamilton Avenue Converted MTS

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BUILDING SECTION C–C

Figure 2.2.1-6 Gantry Section View
Hamilton Avenue Converted MTS

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DSNY-managed Waste would be delivered to the Hamilton Avenue Converted MTS by a variety of collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., City Department of Parks and Recreation [NYCDPR], City Housing Authority [NYCHA] and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.

The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slap located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and gross payload of 1,308 tons) would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.2.2 Southwest Brooklyn Converted MTS, Brooklyn

2.2.2.1 Description of Existing Site

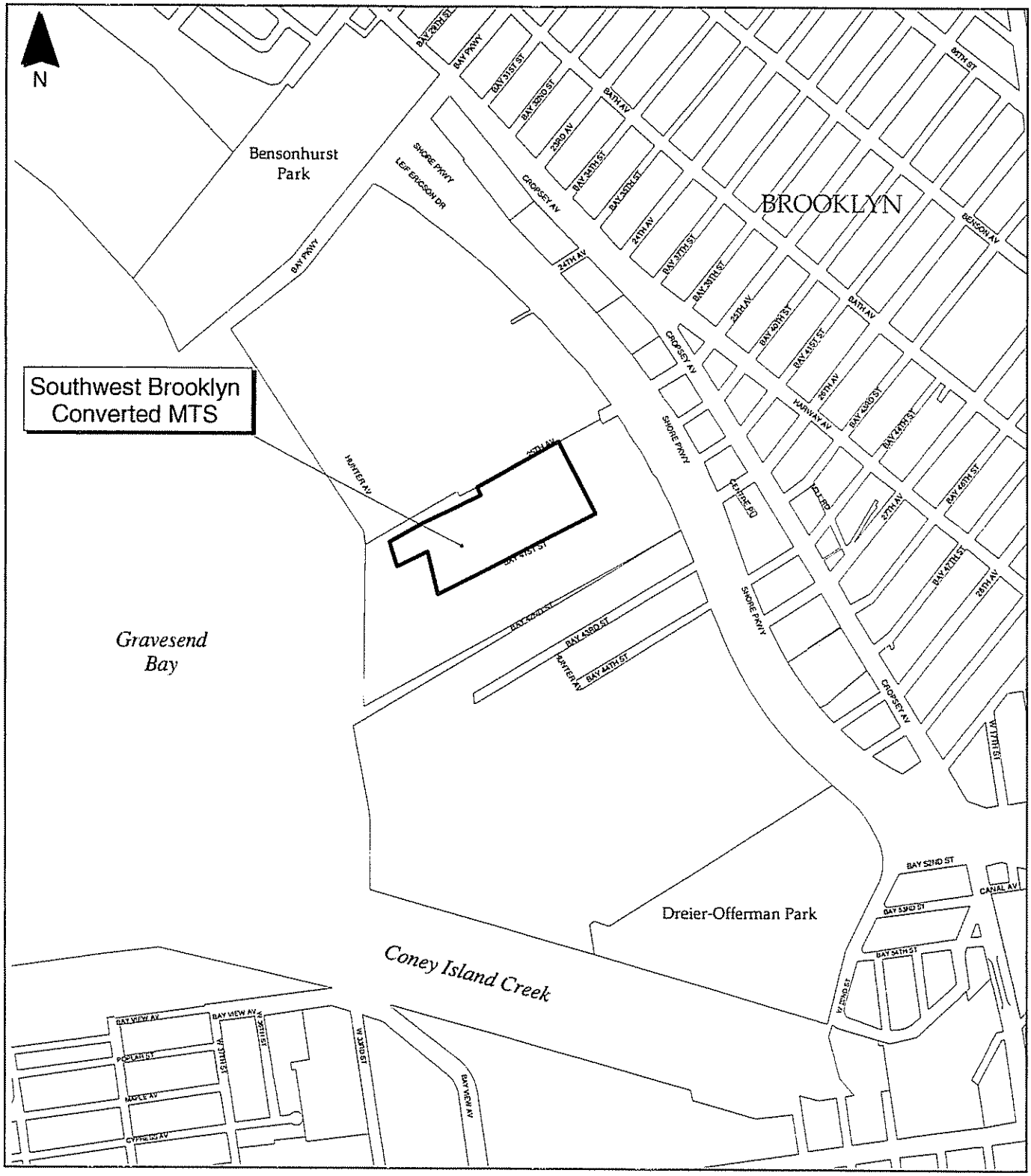
The existing Southwest Brooklyn MTS site is located at Bay 41st Street and the service road of the Shore (Belt) Parkway in the Bensonhurst section of Brooklyn in Community District 11. The site is bounded to the north by 25th Avenue (extended), to the south by Bay 41st Street (extended), to the east by the DSNY CD 11 garage facility and to the west by Gravesend Bay.

Figure 2.2.2-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 6943, Lot 30, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The site location is approximately 6.4 acres of the total 23.5-acre DSNY-owned lot, running an average of approximately 350 feet along its north-south parallel and approximately 600 feet from east to west. The existing Southwest Brooklyn MTS, located within Lot 30, is roughly rectangular in shape and covers an additional 0.6 acres along the Gravesend Bay waterfront. The existing incinerator, located adjacent to the existing MTS within the upland portions of the site, currently occupies approximately 1.3 acres. The incinerator is in the process of being demolished; an environmental remediation program was conducted prior to demolition. The DSNY CD 11 garage facility, two salt storage sheds and a self-help site (SHS) occupy the remainder of the DSNY-owned lot.

The site is located at the southern end of an M3-1 zoning district that extends about ½-mile along the waterfront from Bay Parkway to Bay 41st Street. Immediately south of the site is a small M1-1 zoning district and further south is a C3 commercial zoning district. Beyond these industrially-zoned waterfront areas, most of the surrounding residential communities (Bensonhurst, Gravesend and Coney Island [east and south of the site]) are zoned for medium density residential uses (R4, R5 and R6) and contain a mix of housing types, parks and marinas. Within the larger residentially-zoned district to the northeast is a small C8-1 zoning district that allows automotive-related uses in a few blocks between Cropsey and Bath Avenues.

Directly to the northeast and east of the site are DSNY facilities, including one salt shed and DSNY garage. Other land uses within ¼-mile of the site include the Nellie Bly Amusement Park, a neighborhood feature for decades, which is on the same block and fronting Shore Parkway, 500 feet east of the site. Fuel oil tanks and buildings associated with the Bayside Fuel Oil Corporation are located north of the site near Shore Parkway, as are the Atlantic Express Bus Company and various other automobile repair services. Further north-northwest of the site is a variety of commercial uses surrounded by fairly large parking areas. These uses include several banks; a shopping area with regional retail establishments, such as Best Buy and Toys "R" Us; several automobile service establishments; and a motel on the equivalent of 24th Avenue south of the Bay Parkway-Shore Parkway intersection.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN DD EEA Cambridge Environmental Inc

Figure 2.2.2-1 Site Location

Southwest Brooklyn Converted MTS

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East of Shore Parkway within the ¼-mile area is a dense residential area, including the 167-unit Regina Pacis Residence for Senior Citizens on Bay 37th Street, various apartment houses and three-story row houses.

South of the site are several yacht clubs, including the Williamsburg Yacht Club and Marina where boats are moored south of Bay 41st Street. On Bay 44th Street and Hunter Avenue is a home for handicapped children. Across Hunter Avenue to the east are another assisted living facility and the Brooklyn School for Special Children. An unfinished residential development once known as "Rose Cove" stands within the primary study area north of and adjacent to Dreier-Offerman Park at Bay 44th Street and West Shore. This residential development was designed originally to include three buildings and some town homes, the remains of which are not publicly accessible. The model structures now stand vacant and dilapidated. The property is not being developed at this time.

The area between ¼-mile and ½-mile is characterized by waterfront, municipal parks and largely residential uses inland to the east. Bensonhurst Park is located southwest of the southern end of the Leif Ericson Drive Shore Road park system north of Bay Parkway and northwest of the site, while Dreier-Offerman Park, a large 73-acre waterfront public park, and the Coney Island Boat Basin are located south of the site along Coney Island Creek.

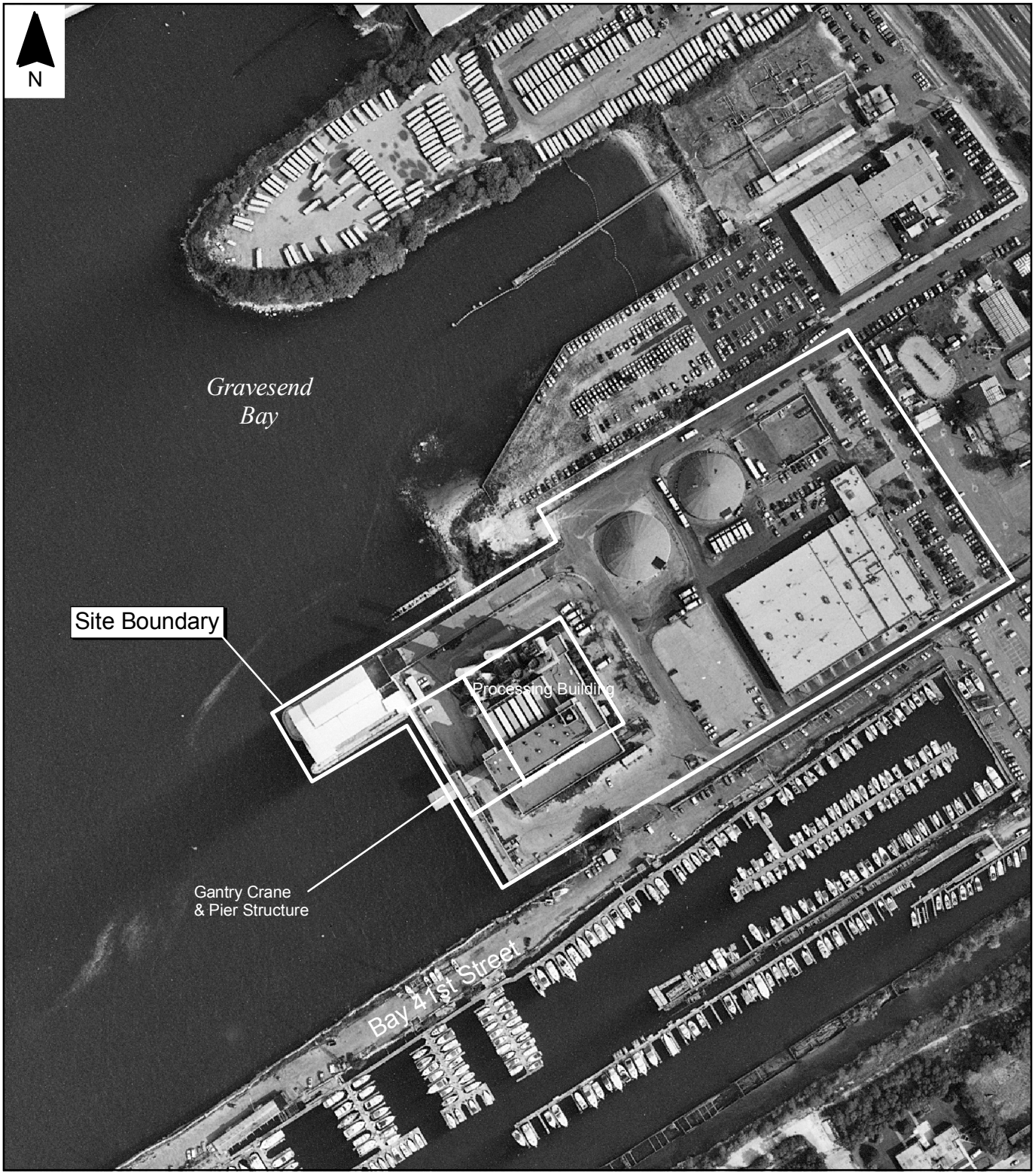
The remainder of the area lies northeast of Shore Parkway, where the land use pattern is primarily residential, consisting of single- and multi-family housing, mostly detached and semi-detached homes. The area also contains apartment towers, such as the Contello Towers Co-op, Sections I and II (between Shore Parkway and Cropsey Avenue at Bay 44th Street); senior housing; schools; and religious institutions; as well as some local professional offices, light industrial uses and automotive services, with a concentration along Bath Avenue. East of Cropsey Avenue on either side of 25th Avenue are the buildings, storage areas and parking areas associated with New York City Transit's (NYCT's) Ulmer Park bus depot.

To reduce the potential for damage to the seawall of the Marine Basin Marina, a property adjacent to the MTS site to the east, as a result of increased wake resulting from the construction of the Converted MTS or tugboat operations associated with the facility, a DSNY consultant recommended the installation of a kingpile bulkhead wall. Consequently, the Converted MTS project would include the construction of a kingpile bulkhead wall to ensure that the marina is not impacted by pile driving activities, construction-related dredging and tugboat prop wash (wake) during Converted MTS operations. The proposed kingpile bulkhead wall extends 290 feet south into the ocean from the southeast corner of the existing pier to an existing channel buoy. The buoy delineates the limits of the navigable channel for tugs coming to the Converted MTS and is the eastern limit for the proposed dredge area. To improve the stability of the Marina seawall, the top of the sheeting between the kingpiles would be close to the existing ocean bottom and rip-rap or concrete groins would be installed perpendicular to the kingpile wall the Marina seawall. In addition, the angle of the proposed wall was designed to decrease the probability that tide, current and waves would erode the base of the Marina seawall.

There are no City, state or nationally designated landmarks or historic districts within a ½-mile radius of the site, nor are there any archaeological resources on the site.

2.2.2.2 Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.2.2-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the Converted MTS superimposed on the site. Figure 2.2.2-3 depicts the current rendering of the Southwest Brooklyn Converted MTS. Figures 2.2.2-~~3,~~ 4, -5 and -6 (Plan ~~and~~ View, Section View and Gantry Section View) shows the processing building interior and details of the gantry crane.



200 0 200 Feet

Site Delineations are approximate.
Aerial Photos taken August 2002

Figure 2.2.2-2 Facility Footprint

Southwest Brooklyn Converted MTS

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Figure 2.2.2-3 Artist's Rendering
Southwest Brooklyn Converted MTS

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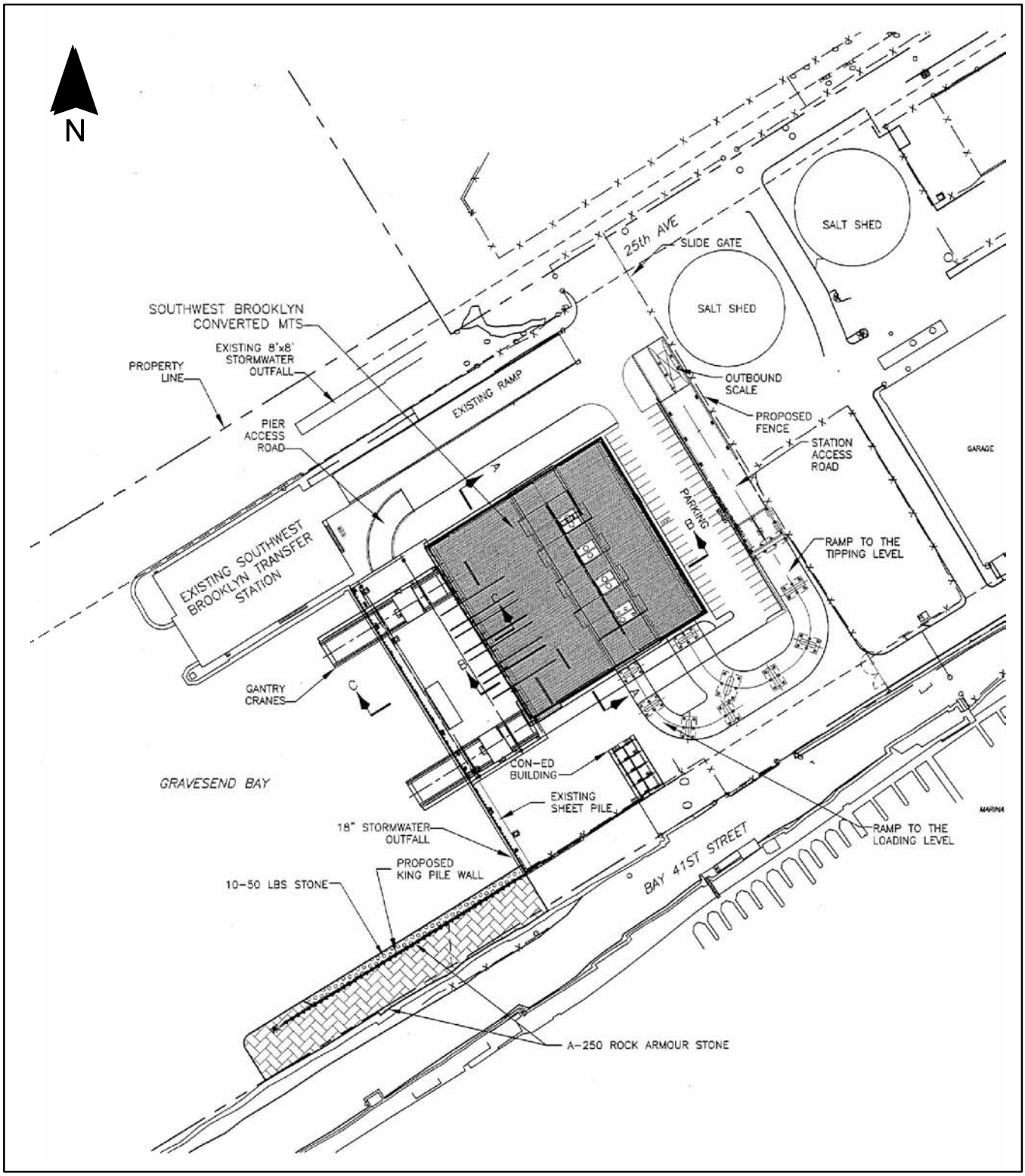
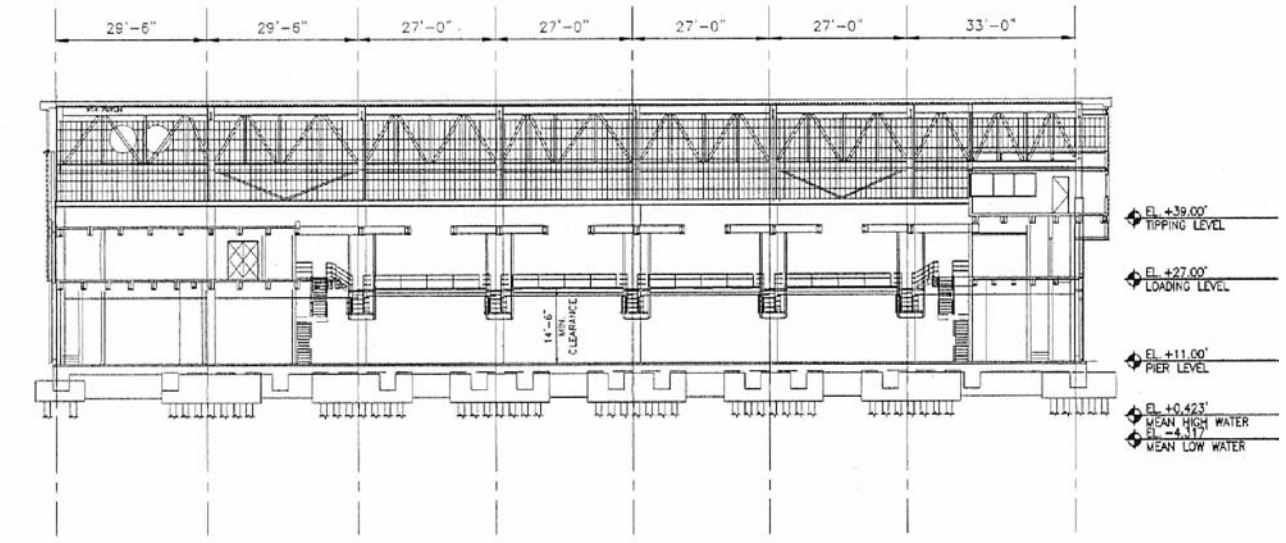
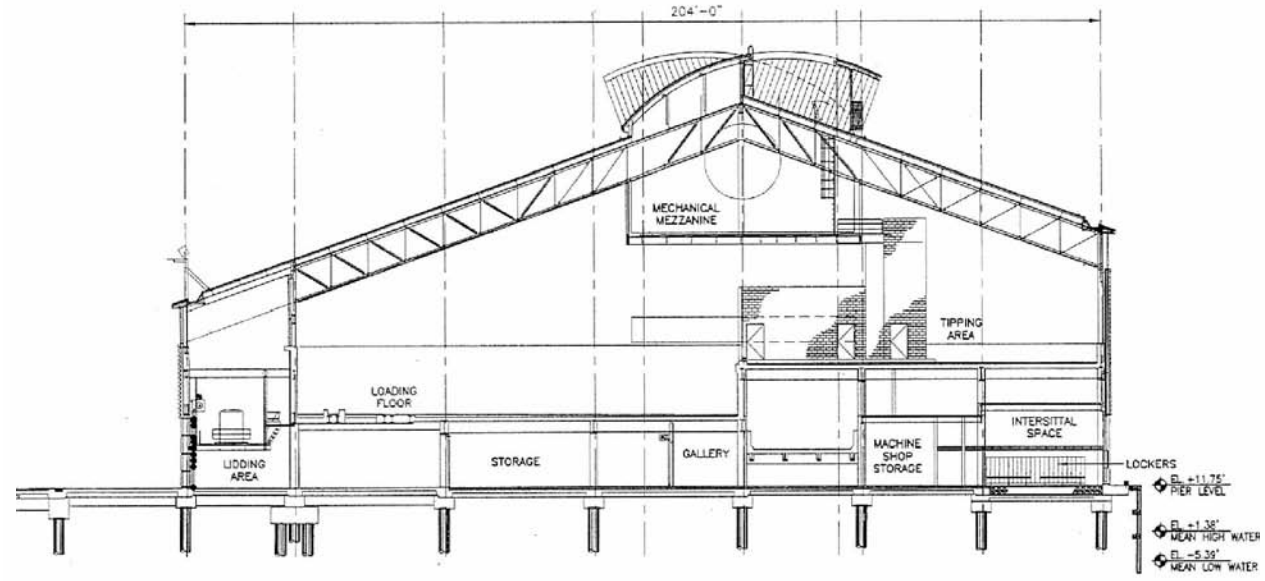


Figure 2.2.2-4 Plan View
Southwest Brooklyn Converted MTS

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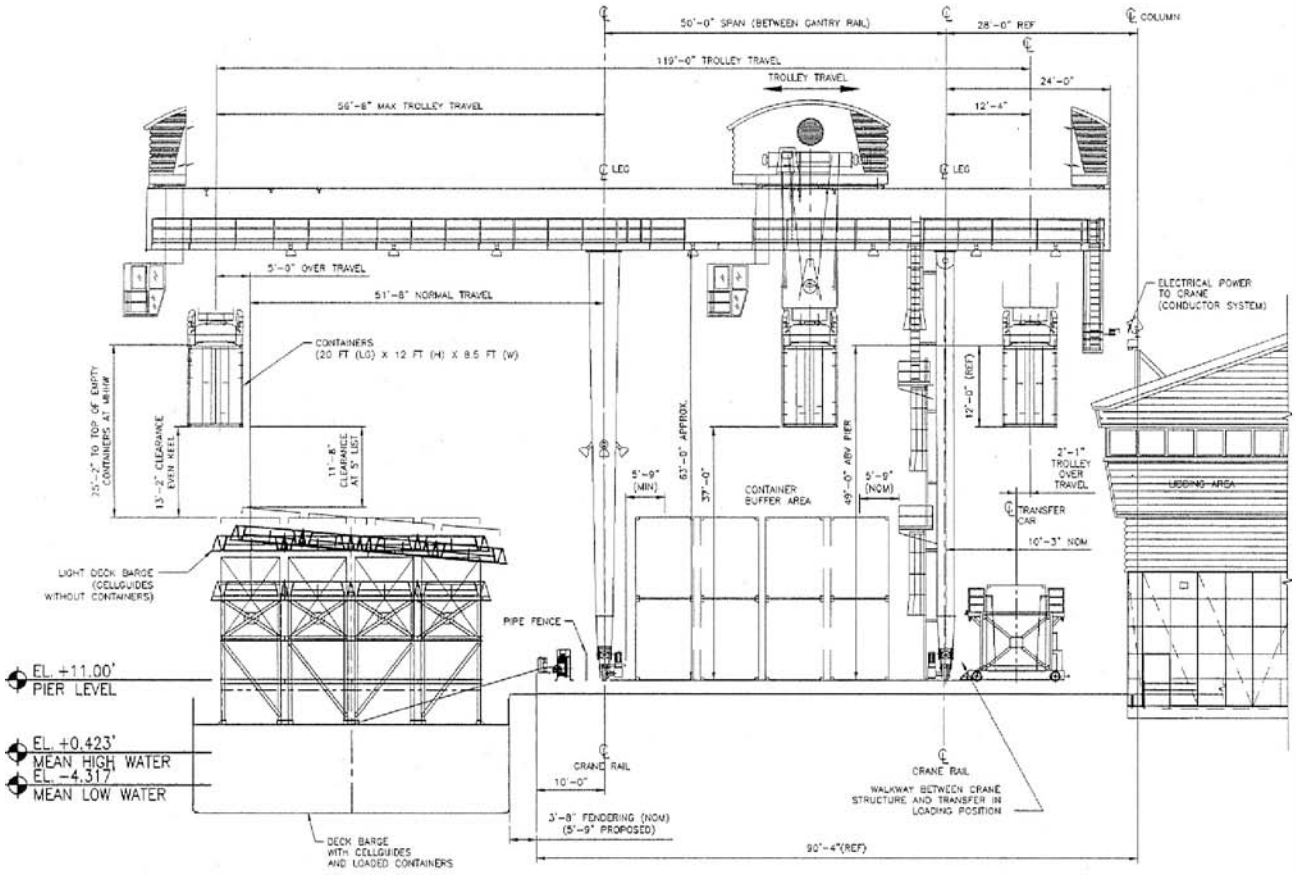
BUILDING SECTION A–A



BUILDING SECTION B–B

Figure 2.2.2-5 Building Section View
Southwest Brooklyn Converted MTS

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BUILDING SECTION C–C

Figure 2.2.2-6 Gantry Section View
Southwest Brooklyn Converted MTS

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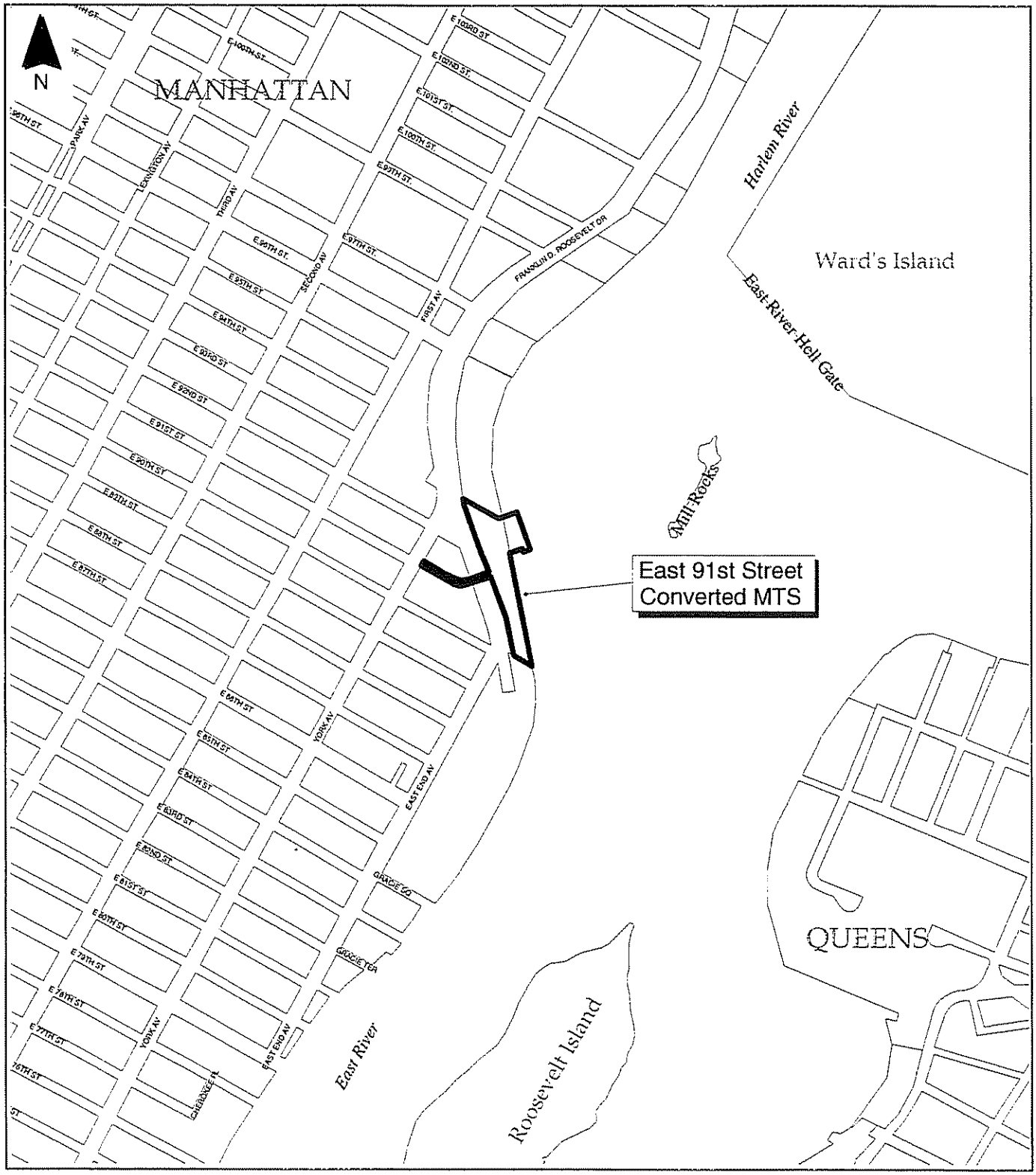
DSNY-managed Waste would be delivered to the Southwest Brooklyn Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., the NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.

The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.2.3 East 91st Street Converted MTS, Manhattan

2.2.3.1 Description of Existing Site

The existing East 91st Street MTS site is located in the Upper East Side of Manhattan in Community District 8. The site is bounded by the East River to the north and east, Carl Schurz Park to the south and the Franklin D. Roosevelt (FDR) Drive to the west. Figure 2.2.3-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 1587, Lot 27, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.



Site delineations and study areas are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Hydroqual PB Cambridge Environmental Inc

Figure 2.2.3-1 Site Location

East 91st Street Converted MTS

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The gross acreage of the DSNY-owned lot is approximately 3.07 acres. The East 91st Street MTS site is roughly rectangular in shape. The western boundary of the site conforms to the existing configuration of the FDR Drive. The northern boundary of the MTS site extends approximately 240 feet in an east-west direction to meet the U.S. Pierhead Line, the eastern border along the U.S. Pierhead Line is approximately 1,000 feet in length, the western border along the U.S. Bulkhead Line measures approximately 1,400 feet in length and the southern border measures approximately 128 feet in length.

The MTS site is located within a small irregularly-shaped M1-4 (light industrial) zoning district, which extends from East 90th to East 93rd Streets along the shoreline, between the FDR Drive and the East River waterfront. It continues west of the site to York Avenue between East 90th and East 92nd Streets to encompass most of the Asphalt Green Recreational Center. Beyond the site on all sides are high-density residential zoning districts that allow for high-rise development. The northern portion of Asphalt Green is situated within a large R7-2 zoning district that extends about one mile to the north. Immediately south of the site is an R10A high-density residential district and is surrounded by other high-density residential districts (R8, R8B and R10) within a ½-mile radius. There are also a wide array of discrete commercial (C84, C28, C1-9, C4-6) zones further west and northwest of the site throughout the ½-mile radius.

The area within a ¼-mile radius of the site is comprised of open space and recreational land uses, with fairly dense residential and commercial areas. The site is on the waterfront with the FDR Drive separating it from the mainland street network, which in the vicinity of the site includes the northern termini of East End Avenue and York Avenue. Carl Schurz Park, the setting of Gracie Mansion, the mayor's formal residence, lies immediately to the south of the site and runs adjacent to the western side of the FDR Drive to East 84th Street. The park provides a buffer to residential uses adjacent to it on East End Avenue. At its northern end nearest the site, the park extends over the FDR Drive to the waterfront, where public access to the waterfront is provided adjacent to the site via a waterfront promenade, which crosses beneath the existing MTS access ramp. A commuter ferry pier is located just south of the existing MTS at East 90th Street. The park and promenade extend south along the water beyond the primary study area.

Asphalt Green, another major open space within the ¼-mile-radius area, stretches between East 90th and East 92nd Streets east of York Avenue. It is a sports and training complex, featuring indoor and outdoor facilities, including a soccer field, basketball courts, running track, aquatic center and fitness center. Access to the existing MTS site is provided by an unmapped drive that crosses through the Asphalt Green complex from the intersection of East 91st Street and York Avenue. The landmark Municipal Asphalt Plant, which now houses a gymnasium, is also part of the complex. (See Section 6.6 for additional discussion of cultural resources in the study area).

The remainder of the ¼-mile-radius area is primarily residential, with multi-story towers on the west side of East End Avenue facing the river and row houses lining the cross-streets. A few blocks feature ground-floor commercial space along York Avenue and First Avenue. The study area's strongly residential nature is only somewhat interrupted by the presence of a few warehouses and auto-related uses between East 89th Street, East 92nd Street and York and First Avenues. A gourmet grocery (Eli's) with a restaurant above (The Vinegar Factory) and an arts and crafts shop are located on the north side of East 91st Street (a local route for DSNY and other agency collection vehicles leaving the site) just west of York Avenue, and a pizzeria is located on the south side of the street. On the local inbound truck route (East 90th Street between York and First Avenues) there is a combination of residential buildings and automobile-related uses (e.g., car rental, automobile repair and parking garages). Beth Israel Hospital (North) is located in the area on East End Avenue and East 87th Street, and the High School of Teaching and P.S. 66 are located on East 88th Street, between York and First Avenues. Stanley M. Isaacs Park is located on both sides of East 91st Street, east of First Avenue.

Land use within the ¼-mile- to ½-mile-radius area is generally characterized by residential uses, with ground-floor commercial uses lining the avenues except for the portion of the study area north of East 95th Street, where Metropolitan Hospital and associated parking is located at East 97th Street, along with J.H.S. 99 and other institutional uses east of First Avenue, north of the Metropolitan Hospital complex, and the School of Cooperative Technical Education at East 97th Street, to the south.

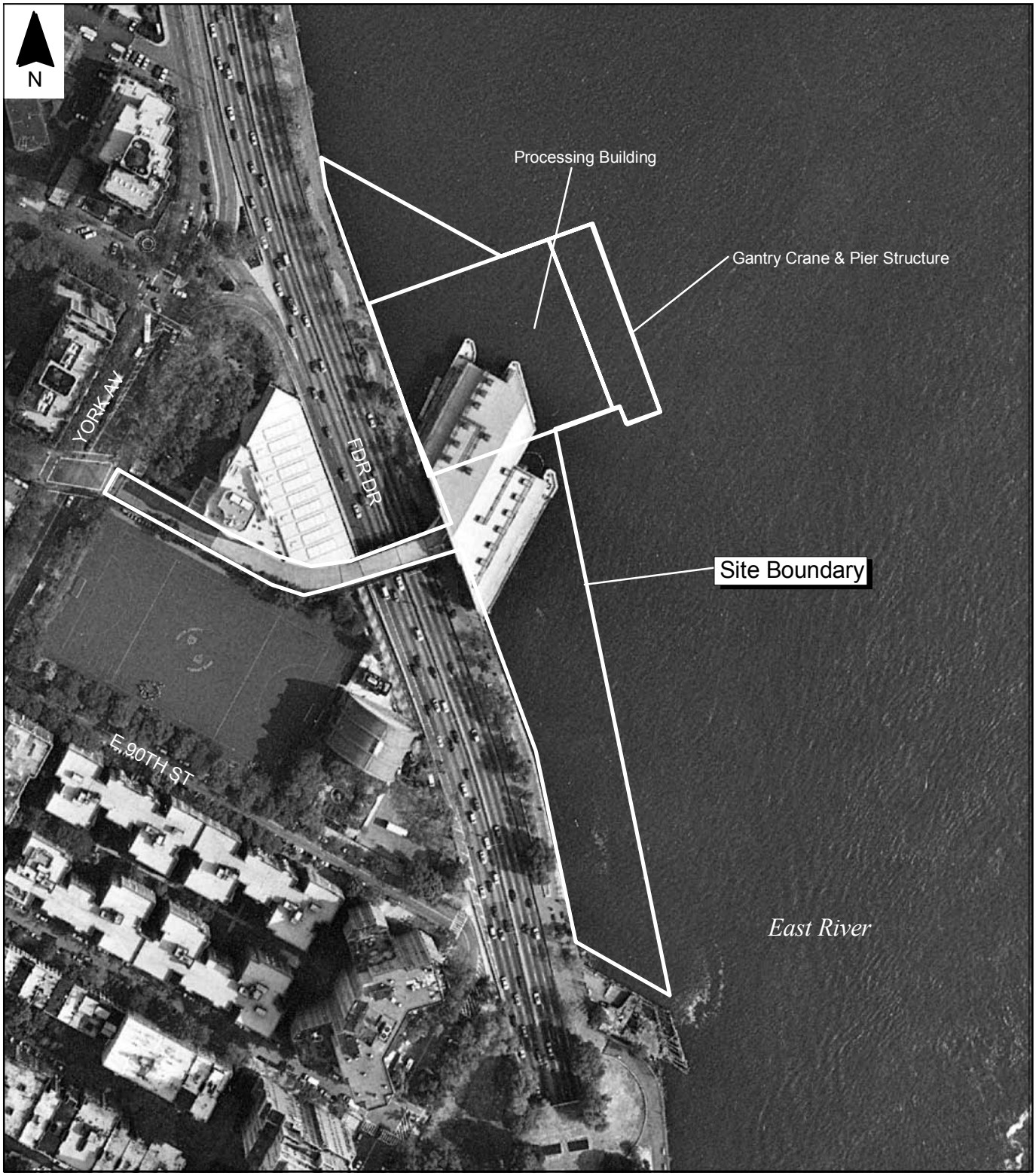
One historic district and 13 other historic properties are located within ½-mile of the site, representing different stages of the neighborhood's development over the last 200 years. The two closest historic resources are: (1) Asphalt Green Recreation Center (New York City Landmark [NYCL] and National Register of Historic Places [NR]), across the FDR Drive from the site; and (2) Gracie Mansion (NYCL, New York State Register of Historic Places [NYSR or SRHP] and NR), located south of the site at East 88th Street. Asphalt Green, built in 1944, was the Municipal Asphalt Plant. It was the first successful American use of the parabolic arch form in reinforced concrete. Gracie Mansion was built at the turn of the 19th century as a country house for Archibald Gracie, a successful Scottish merchant who settled in New York. It was acquired by the City in 1896 and later became an official residence for the New York City mayor in 1942.

No archaeologically significant resources are located on the site.

2.2.3.2 East 91st Street Converted MTS

The East 91st Street Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.2.3-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the Converted MTS superimposed on the site. The East 91st Street Converted MTS extends beyond the water grant line, which will require an underwater land grant from the NYS Office of General Services. Figure 2.2.3-3 depicts the current rendering of the East 91st Street Converted MTS. Figures 2.2.3-~~3, 4~~, -5 and -6 (Plan ~~and~~ View, Section View and Gantry Section View) shows the processing building interior and details of the gantry crane. The ramp that carries collection vehicle traffic across Asphalt Green Park and the FDR Drive is part of the existing MTS. The existing ramp would be demolished and replaced with a new one with wider dimensions and a higher grade (slope) to accommodate queuing DSNY collection vehicles, utilities and appropriate noise barriers. (See Figure 2.2.3-7. Ramp Section View.) The new ramp would require a structural support that would result in a larger depth of the structure to support the wider ramp, utilities, appropriate noise barriers and a new outbound scale, but that would maintain the same clearance over the FDR Drive that exists today.

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Site delineations and study area boundaries are approximate.
Aerial Photos taken August 2002

100 0 100 Feet

Figure 2.2.3-2 Facility Footprint

East 91st Street Converted MTS

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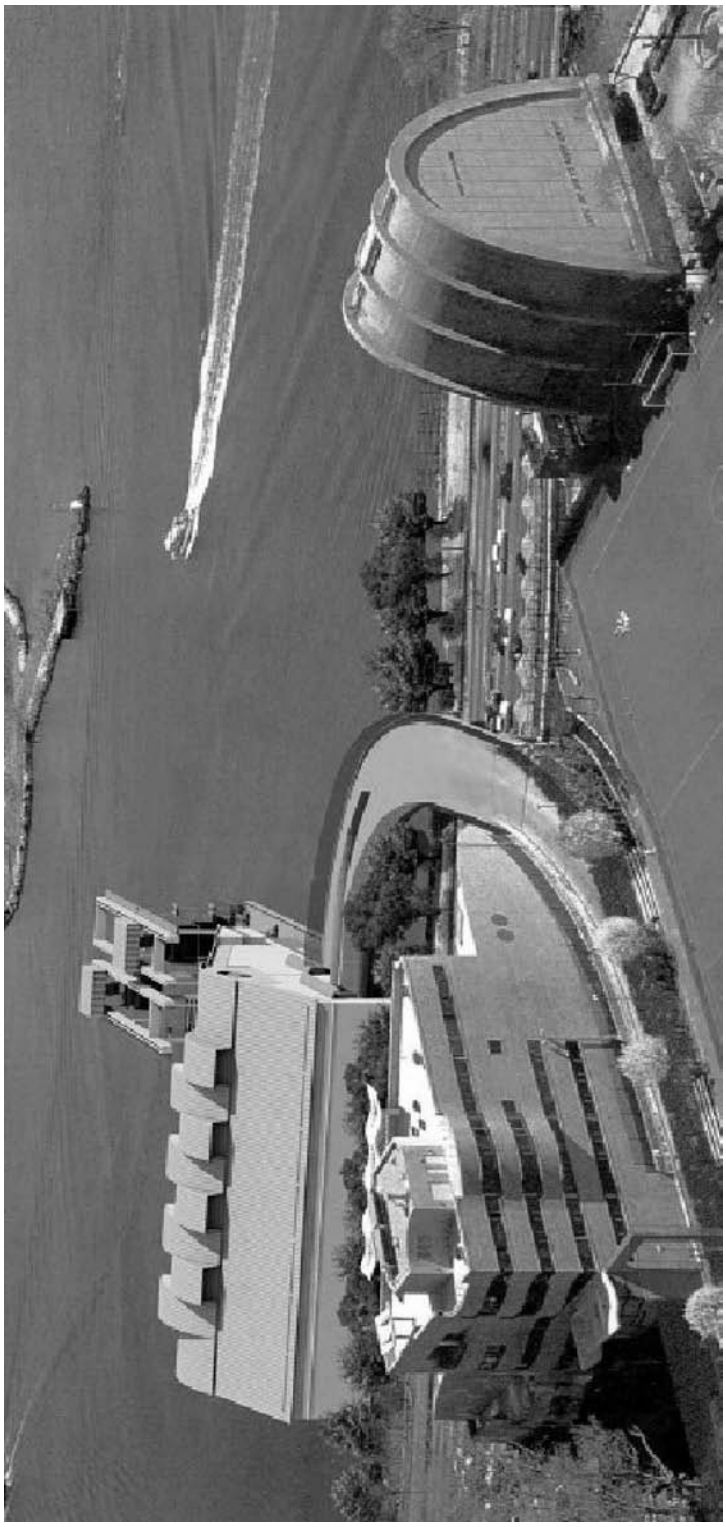


Figure 2.2.3-3 Artist's Rendering
East 91st Street Converted MTS

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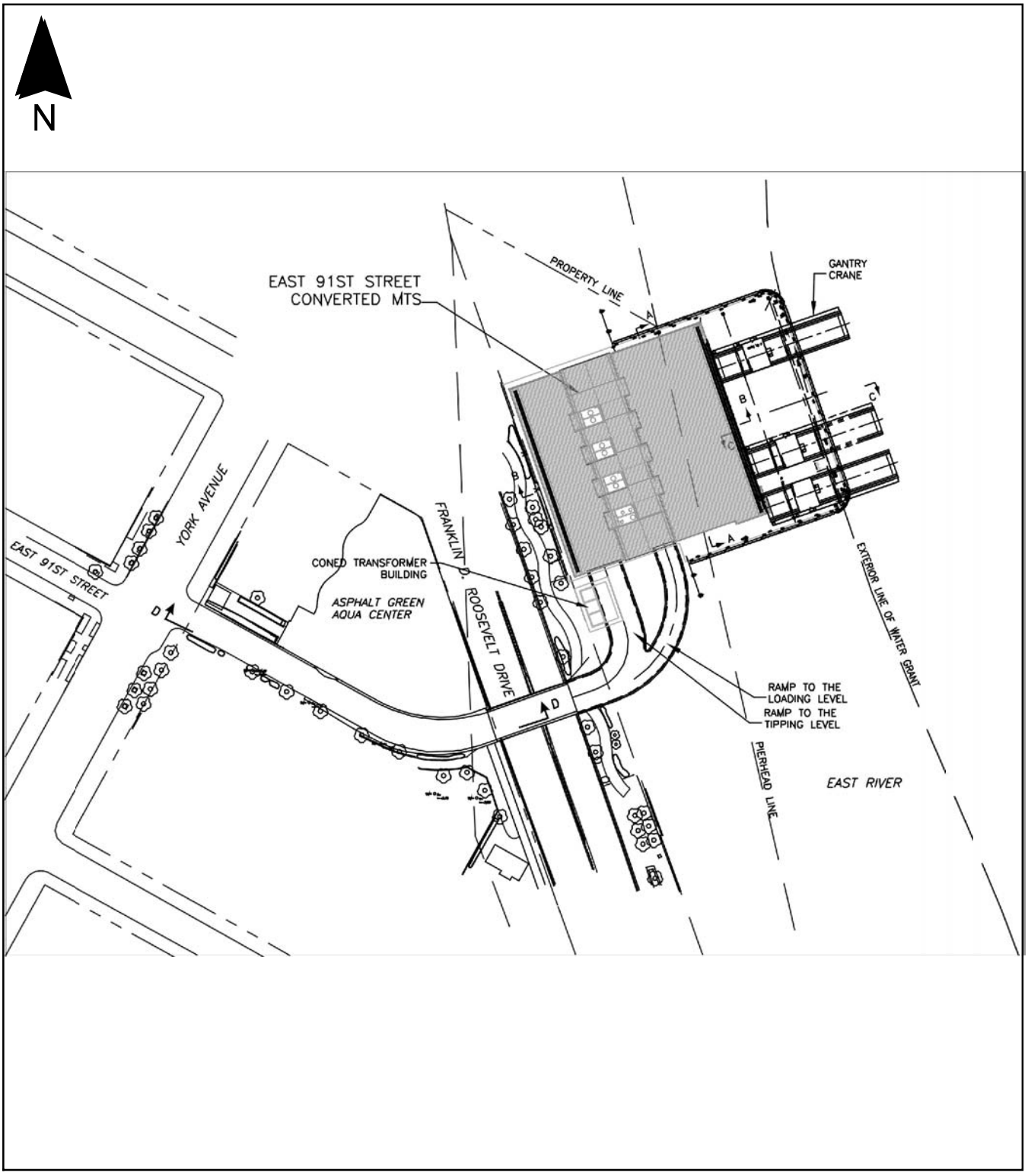
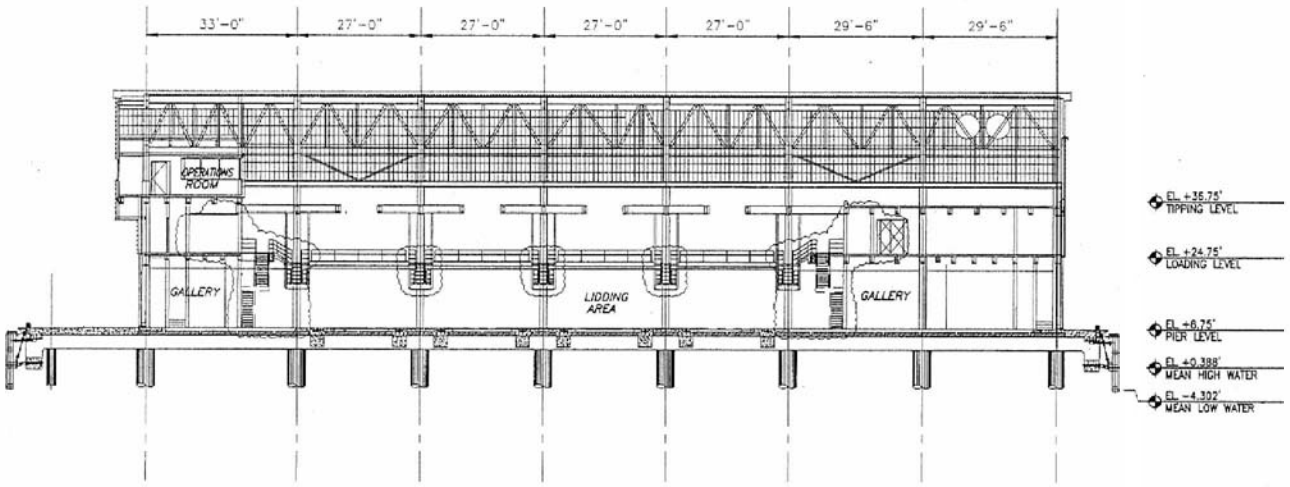
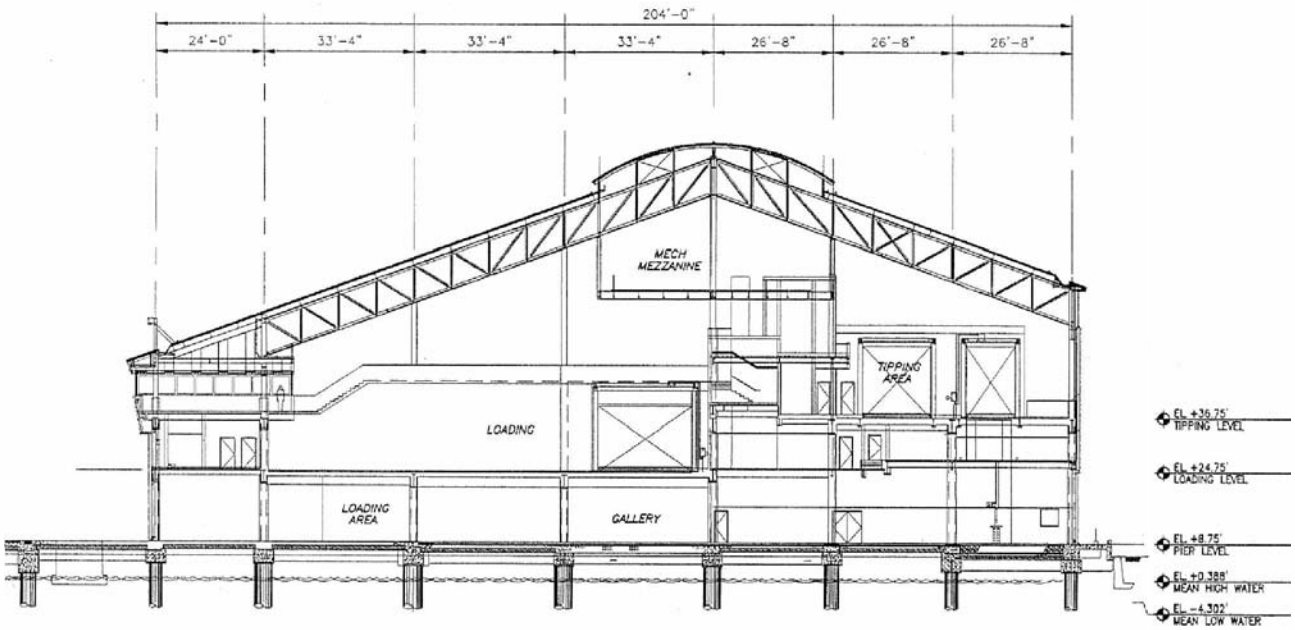


Figure 2.2.3-4 Plan View
East 91st Street Converted MTS

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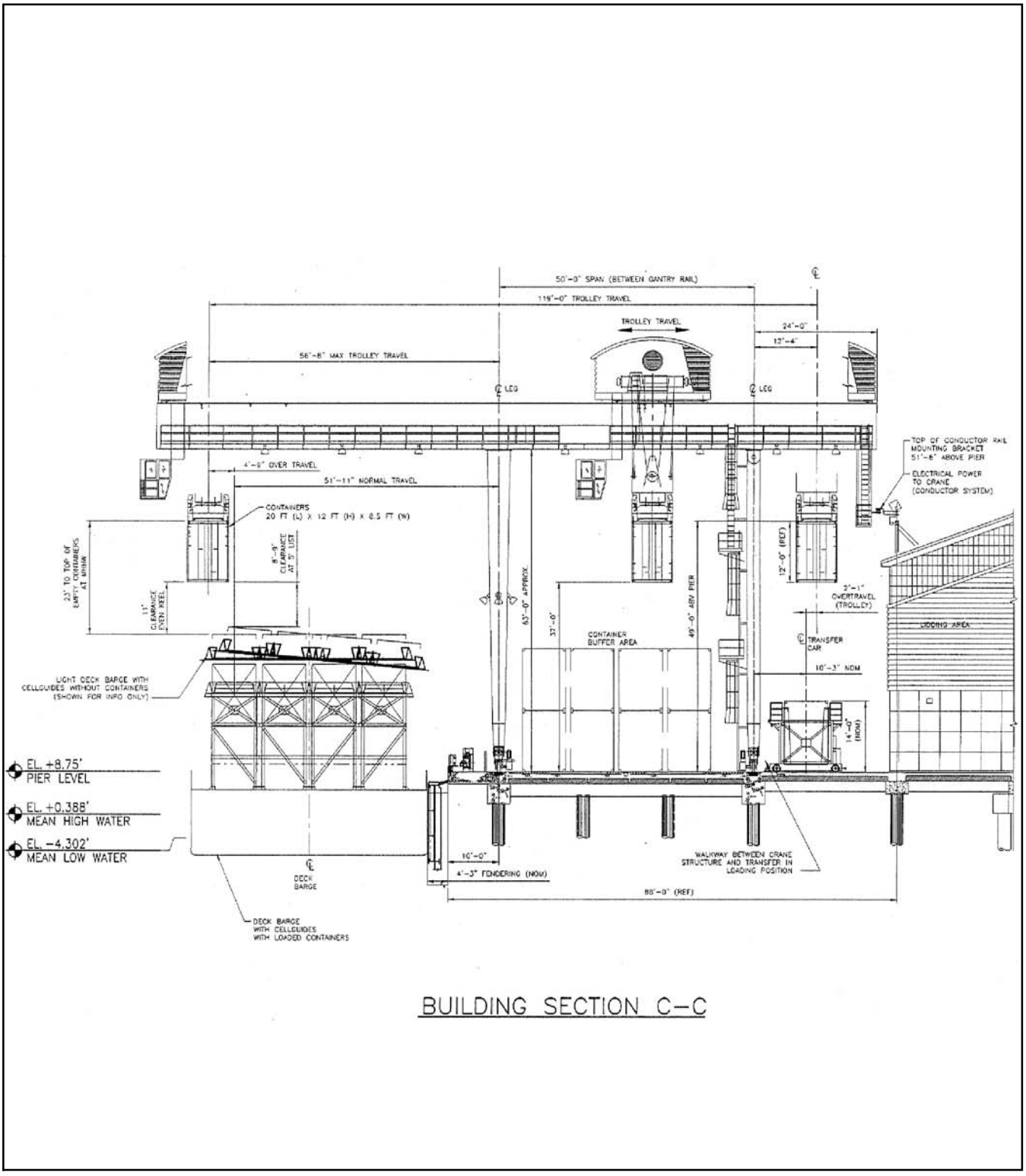
BUILDING SECTION A–A



BUILDING SECTION B–B

Figure 2.2.3-5 Building Section Views
East 91st Street Converted MTS

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BUILDING SECTION C–C

Figure 2.2.3-6 Gantry Section View
East 91st Street Converted MTS

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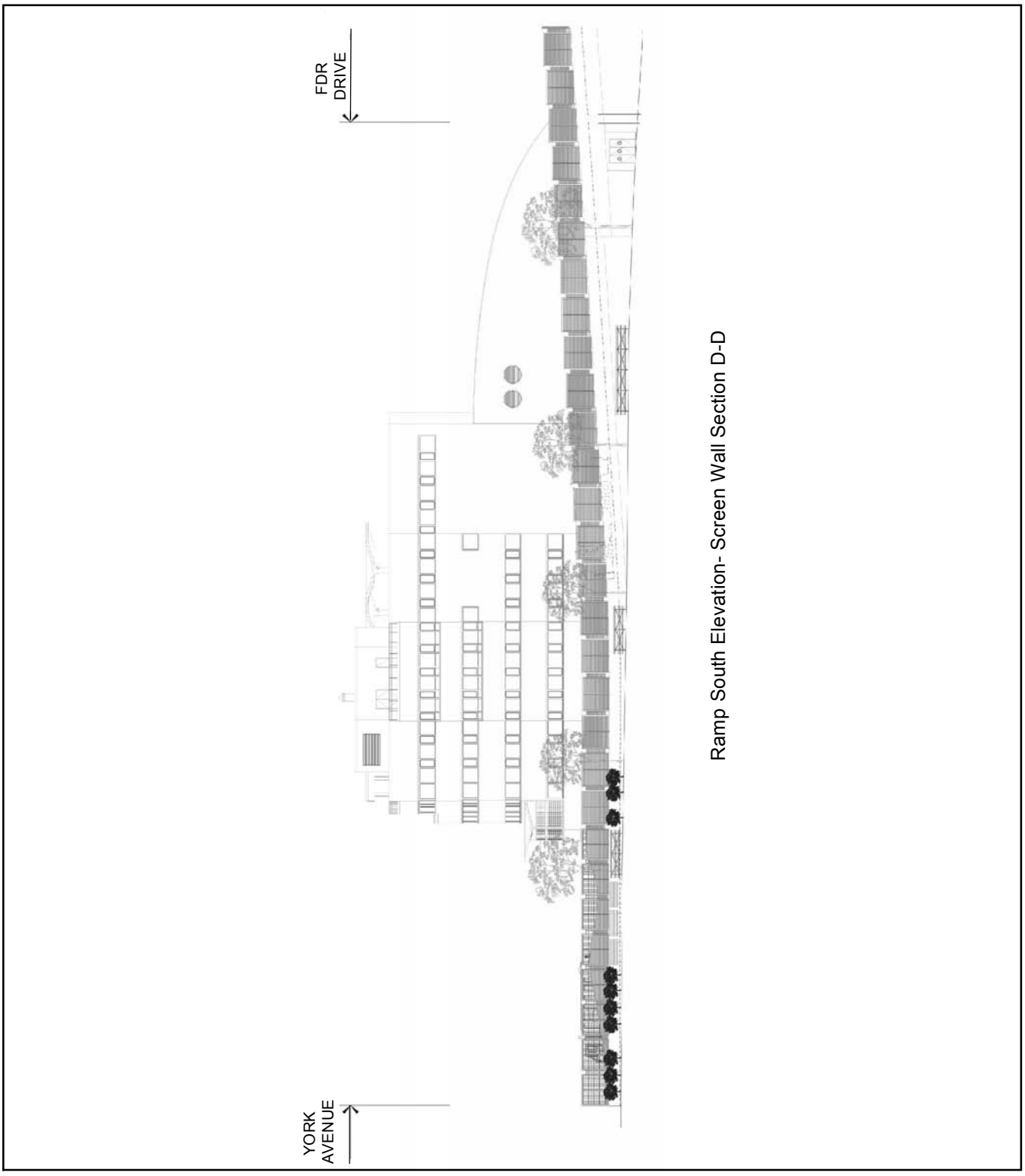


Figure 2.2.3-7 Ramp Section View
East 91st Street Converted MTS

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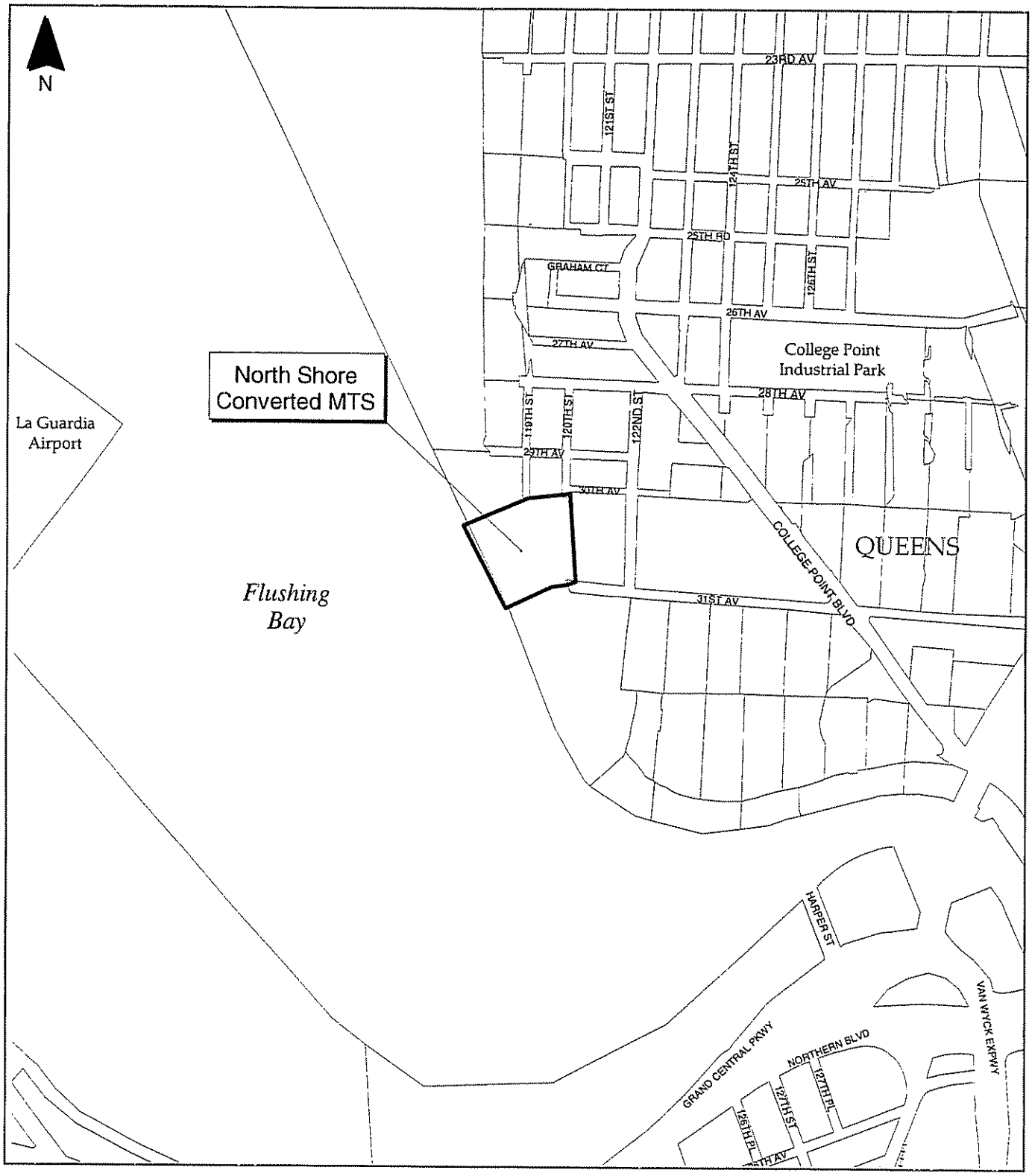
DSNY-managed Waste would be delivered to the East 91st Street Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.

The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.2.4 North Shore Converted MTS, Queens

2.2.4.1 Description of Existing Site

The existing North Shore MTS site is located in the College Point section of Queens in Community District 7. It is bounded by 30th Avenue to the north, 31st Avenue and 120th -Street to the east and Flushing Bay to the west. Figure 2.2.4-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 4346 and Lot 75, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 2.2.4-1 Site Location
North Shore Converted MTS

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The gross acreage of the DSNY-owned lot, which includes the site and is bounded by 122nd Street, is approximately 12.5 acres, of which approximately 7.5 acres are upland. DSNY's District 7 garage occupies the majority of this acreage; the remaining five acres are made up of water that extends to the U.S. Pierhead Line. The North Shore MTS site is roughly rectangular in shape, with a bend beyond the U.S. Bulkhead Line extending south. The northern boundary of the MTS site measures approximately 1,000 feet in length to the U.S. Pierhead Line, the southern boundary is approximately 800 feet in length, the eastern border along 120th Street is approximately 550 feet in length and the western border along the U.S. Pierhead Line is approximately 560 feet in length.

The site is located on the western edge of a heavy industrial M3-1 zoning district along Flushing Bay, which extends north approximately to 30th Avenue and east to Ulmer Street. Bordering the M3-1 zone to the north is an M1-1 zone, which allows for light industrial uses and extends from Flushing Bay to beyond ½-mile from the site. M1 zoning districts, often buffers for adjacent residential and commercial districts, serve this function to the residentially-zoned areas north of the site. These include a variety of residential zoning districts such as R4, R5B, R4-1 and R3X.

The area within a ¼-mile radius of the site is primarily characterized by heavy industrial land uses, with some residential uses located in the northern section. The western half of the primary study area is part of Flushing Bay, while the eastern half contains a variety of land uses, mostly industrial. Industrial and manufacturing uses and their associated offices, warehouses/storage facilities and parking areas are concentrated to the south and east of the site. Commercial establishments are found throughout the primary study area, with a large number of automobile parts and service shops lining both sides of College Point Boulevard between approximately 27th and 28th Avenues and around 119th and 120th Streets, north of the site. East of and adjacent to the site is the DSNY Queens District 7 garage and, north of the garage, Vassilaros Coffee Roasting Company. A large Consolidated Edison facility is located on the block due east of the site and the district garage, with storage and parking on the western end, closest to the site. Residential uses are located north of the site from 29th Avenue to 28th Avenue west of 120th Street and north of 28th Avenue, where it is almost entirely residential between College

Point Boulevard and the bay. The residential area contains single-family detached housing, two-family housing and some late 20th-century row housing. Nursing home facilities built between 1955 and 1971 are located on the western ends of the three blocks between 25th Avenue and 27th Avenue.

South of and adjacent to the site is the Ferrara Brothers Building Materials Company on 31st Avenue. Behind their offices is the materials storage and truck loading area. Several of the mapped streets in the area are not open to the public, but instead serve the concrete and asphalt companies located there. A Home Depot store has been recently constructed east of Ferrara Brothers near College Point Boulevard, introducing large-scale retail activity to the area.

A portion of the College Point Industrial Park to the east of the site lies in the primary study area. The park begins at College Point Boulevard and extends eastward and southward from about 26th Avenue to about 31st Avenue. Warehouses, busing facilities and storage/parking areas are located within that portion of the park within the study area, while the remainder of the park features such prominent businesses as The New York Times printing facility.

The northern portion of the ¼-mile- to ½-mile-radius area is almost exclusively residential with the exception of major industrial uses in the area between 120th Street and the shore. Enterprises such as Sunrise Oil and an active boat yard and parking are found there. The northern residential portion of the study area east of 119th Street contains more multi-family apartment housing than in the residential areas nearer to the site. Machine shops and small manufacturers are scattered throughout. Public School No. 29, built in 1928, is located just outside the study area, on the south side of 23rd Avenue between 125th and 126th Streets. As mentioned, a new Home Depot is situated west of College Point Boulevard, south of 31st Avenue. Except for the Full Gospel New York Church at 130-30 31st Avenue, industrial uses, including the City's impound lot south of 28th Avenue, characterize most of the remaining secondary study area east of College Point Boulevard. Large manufacturers, such as The New York Times printing facility, are located to the east on the perimeter of the secondary study area.

Southeast of the site, the area consists of large privately owned lots of industrial waterfront and warehouses as well as the former Metropolis nightclub at the southern end of 124th Street. Most of these properties are accessible only via private drives. The secondary study area also includes the southern shore of Flushing Bay, where the City Bureau of Highways' Queens asphalt plant is located, as is the Flushing Meadows Corona Park, which extends south of the bay. The study area extends westward across the bay to include a small portion of the eastern edge of LaGuardia Airport.

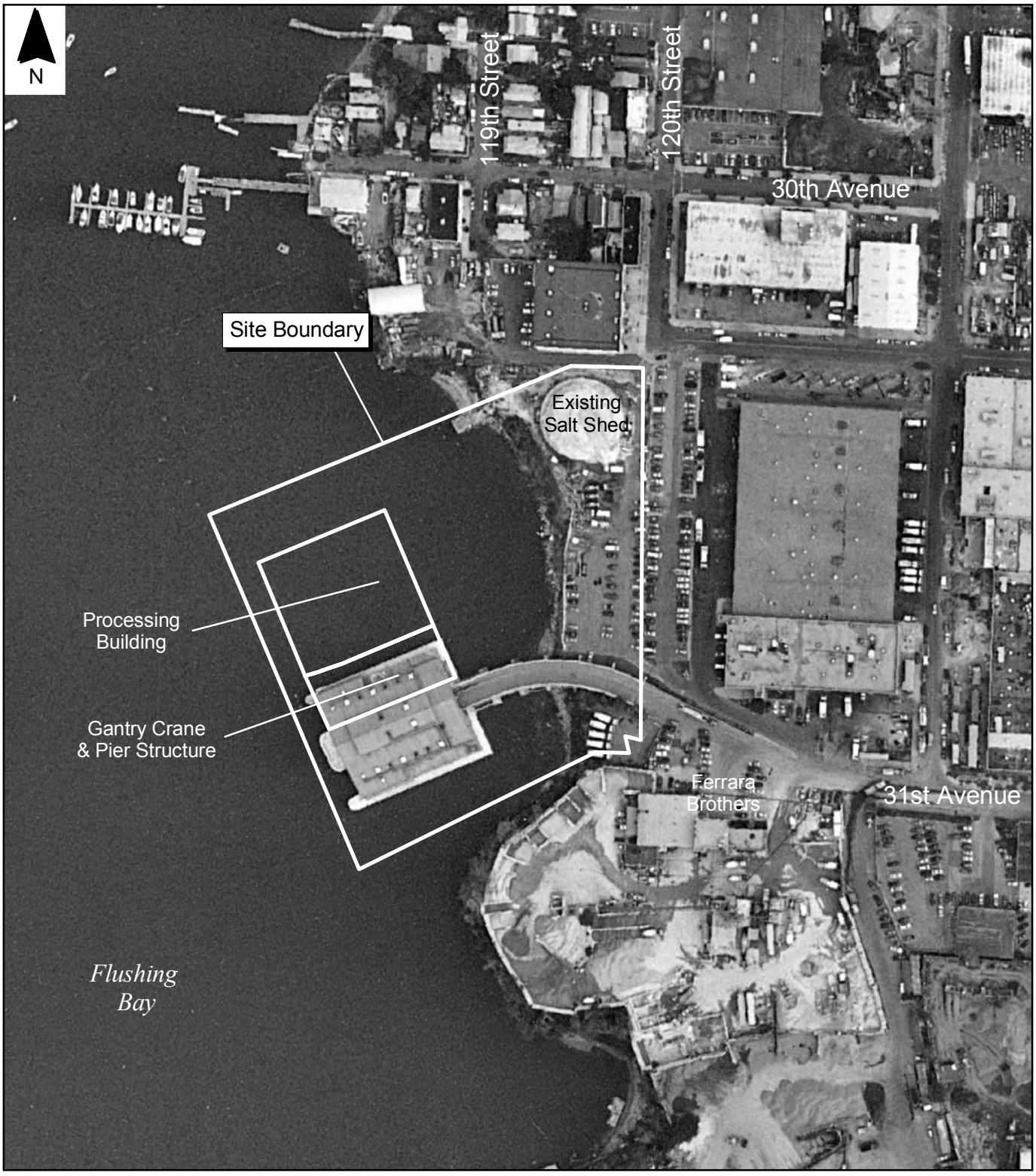
No designated historic landmarks or districts are within the study area nor are there archaeologically significant resources located on the site.

2.2.4.2 North Shore Converted MTS

The North Shore Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.2.4-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the Converted MTS superimposed on the site. Figure 2.2.4-3 depicts the current rendering of the North Shore Converted MTS. Figures 2.2.4-~~3, 4~~, -5 and -6 (Plan ~~and~~ View, Section View and Gantry Crane View) shows the processing building interior and details of the gantry crane.

DSNY-managed Waste would be delivered to the North Shore Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.

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Site delineations are approximate.
Aerial Photos taken August 2002

Figure 2.2.4-2 Facility Footprint

North Shore Converted MTS

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Figure 2.2.4-3 Artist's Rendering
North Shore Converted MTS

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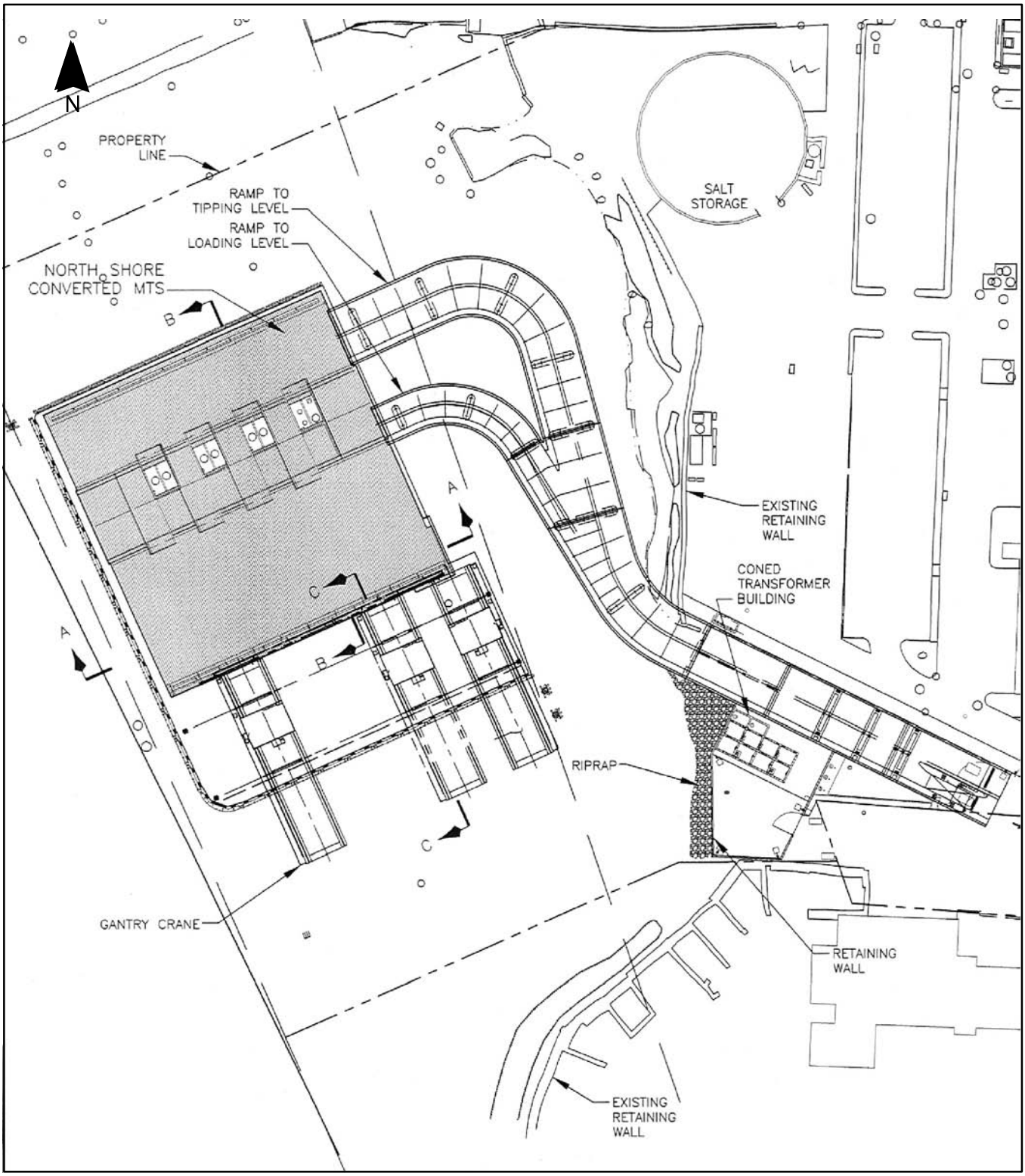
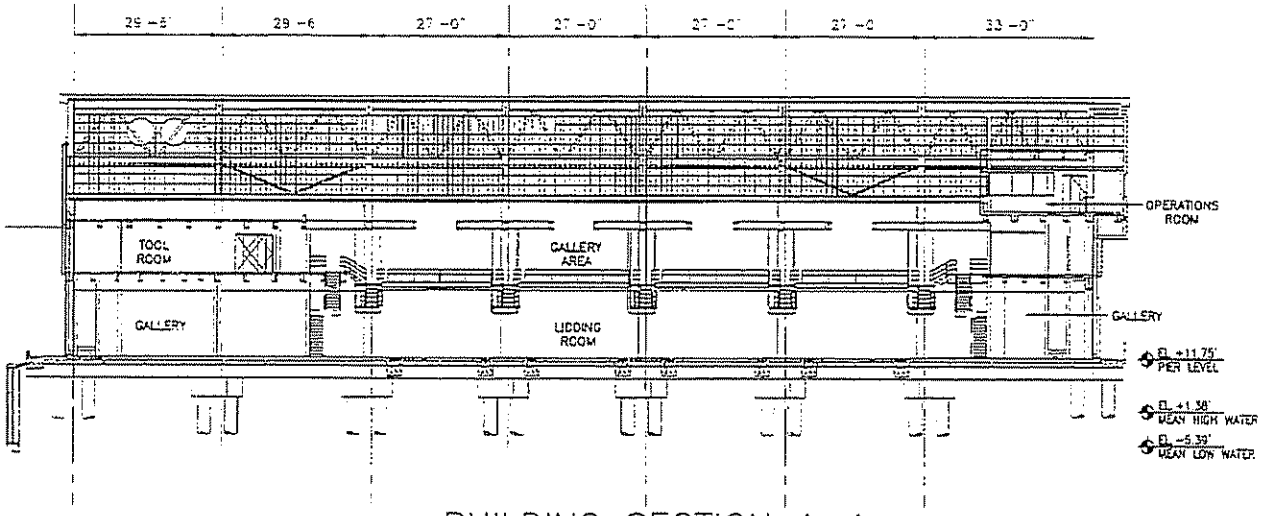
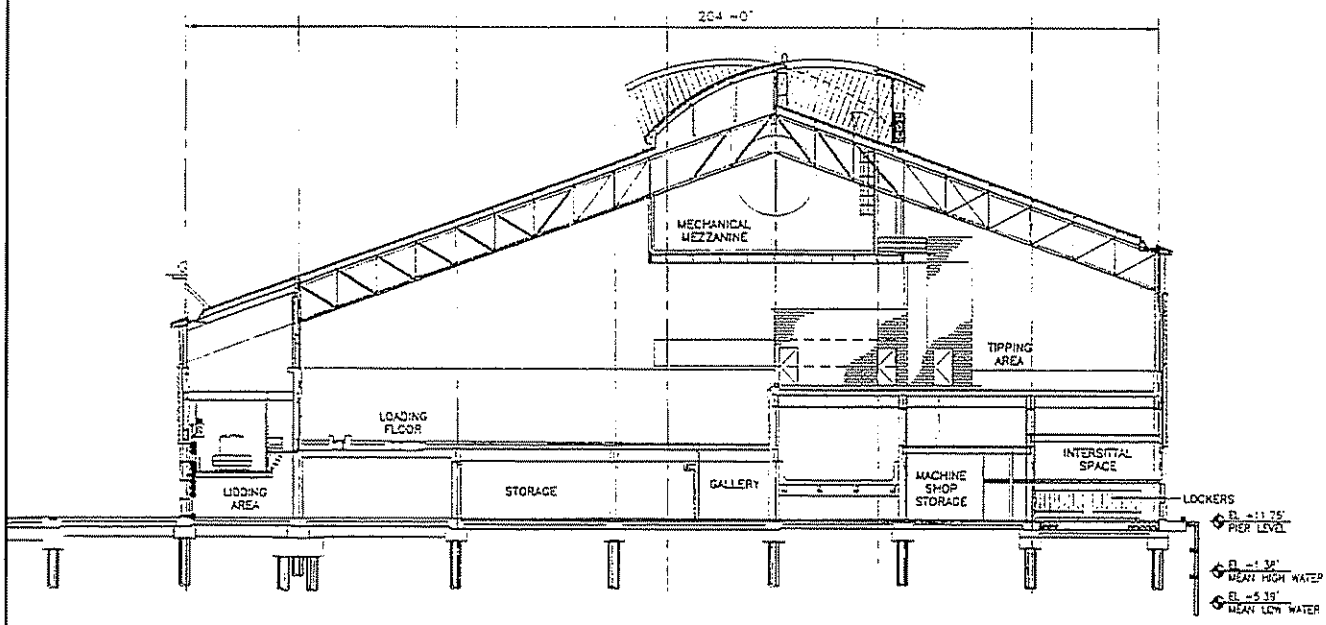


Figure 2.2.4-4 Plan View
North Shore Converted MTS

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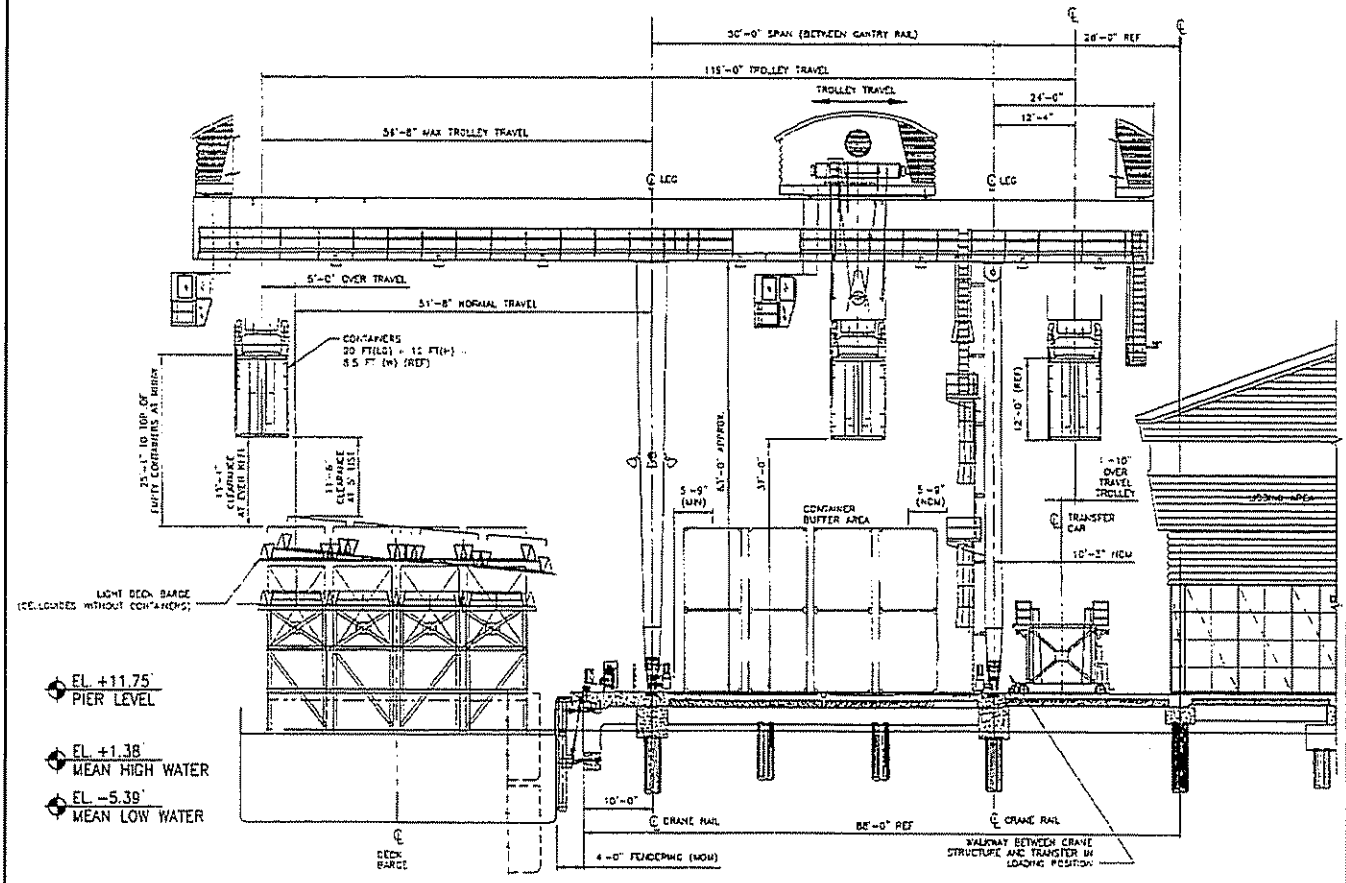
BUILDING SECTION A–A



BUILDING SECTION B–B

Figure 2.2.4-5 Building Section View
North Shore Converted MTS

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BUILDING SECTION C–C

Figure 2.2.4-6 Gantry Section View
North Shore Converted MTS

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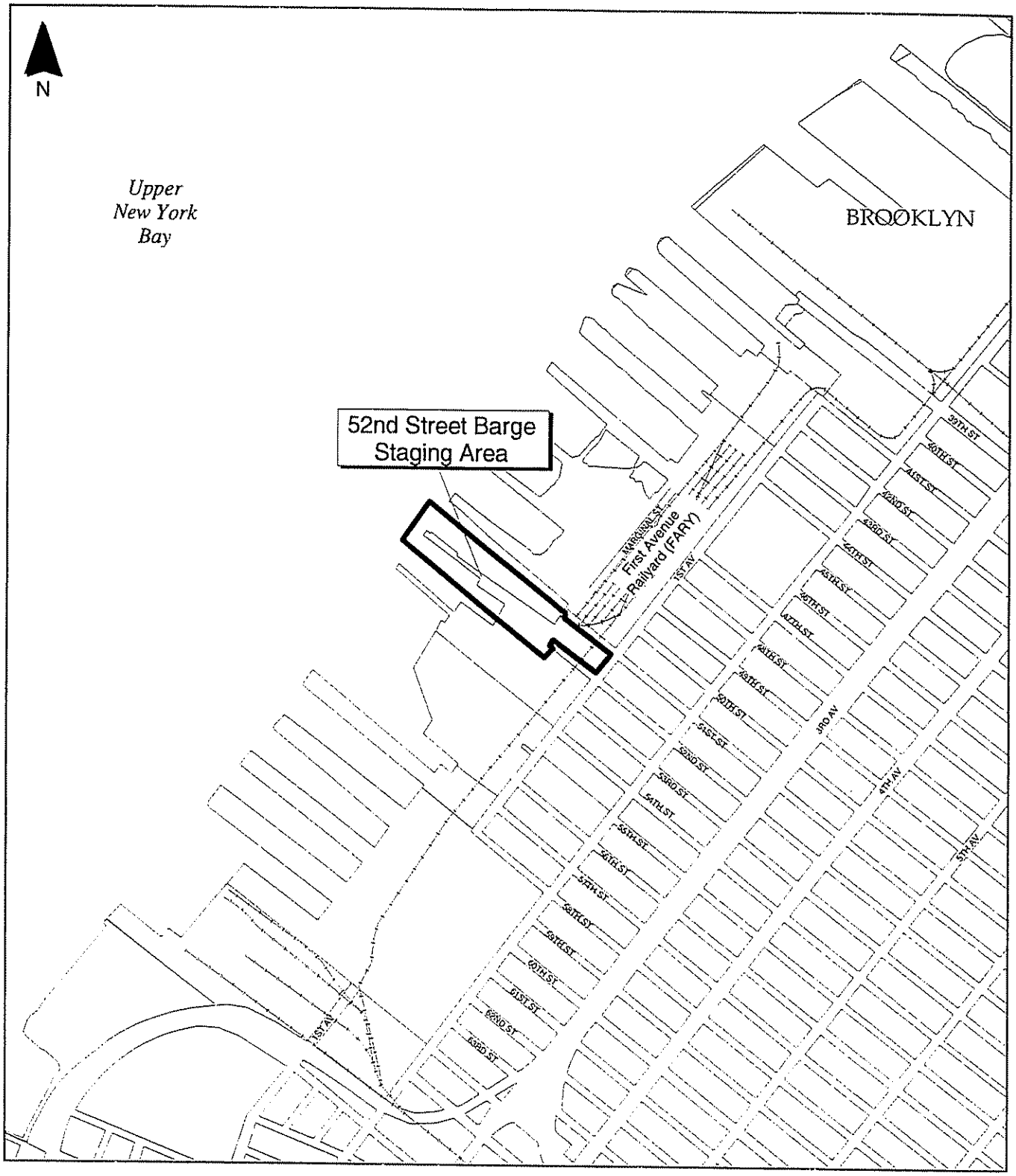
The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.2.5 52nd Street Barge Staging Area, Brooklyn

The 52nd Street Barge Staging Area may serve as a support facility for the Converted MTSs. Its principal uses would be for storage of marine supplies required by the Converted MTSs, temporary mooring of -barges scheduled for maintenance, and temporary staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations).

2.2.5.1 Description of Existing Site

The existing 52nd Street Barge Staging Area is located within the Sunset Park section of the industrial Brooklyn waterfront in Community District 7, just south of Bush Terminal and north of the Brooklyn Army Terminal. It is bounded on the east by First Avenue and on the north, south and west by the Upper New York Bay. Figure 2.2.5-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 803, Lot 5 based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

800 0 800 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 2.2.5-1 Site Location

52nd Street Barge Staging Area

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Currently, the site contains a DSNY vehicle maintenance facility and a storage facility for sand and salt, as well as a parking lot for employees.

The site and most of the area within a ¼-mile of site lie within a large M3-1 zone, which extends southward to 57th Street. This M3-1 zone extends east toward Second Avenue, west to the shoreline and northward to the South Brooklyn Terminal. A mixed-use M1-2D zoning district and a small M1-2 zoning district on 54th Street are located east of Second Avenue. Immediately south of this light industrial district is an R6 zoning district, which encompasses Lutheran Medical Center. Small portions of R6A and R6B zoning districts allowing medium contextual residential development are situated southeast of the site along Second Avenue.

Along First Avenue, the land uses are characterized by light industrial activities, warehousing and some commercial space. A series of five- to six-story warehouses is located between First Avenue and the waterfront, north of 51st Street. These structures include loading piers and parking areas for trucks and autos.

Warehouses, factories, automotive repair shops, parking lots and several vacant lots are located between First and Second Avenues. The First Avenue Rail Yard north of 51st Street includes several unused railroad spurs that run parallel to First Avenue. South of the site is the Brooklyn Wholesale Meat Market, consisting of three buildings at 5600 First Avenue, between 55th and 56th Streets. Individual meat and poultry wholesales occupy two of the buildings and a processor and distributor of frozen meals leases the third.

Residential uses within ¼-mile of the site consist of two- and three-story single- and multi-family attached structures east of Second Avenue. Similarly, community facilities within ¼-mile of the site are generally located east and southeast of the site, along Second Avenue. The Lutheran Medical Center (including its associated mental health clinic), the Augustana Lutheran elder care facility, a five-story parking structure and the Martin Luther Playground are located at Second Avenue at 55th and 56th Streets.

The general land use pattern found within ¼-mile of the site extends to ½-mile from the site. Industrial uses housed in large industrial loft buildings are located on the blocks nearest the waterfront, while a mix of residential, commercial and lighter industrial activities characterize the blocks east of Second Avenue. Rows of single-family attached homes and two- and three-story row houses line most of the blocks, along with isolated storefronts and auto repair shops between Second and Third Avenues, between 42nd and 46th Streets.

No significant elements of architectural or historical significance are located on the site, but several historic resources are located within ½-mile of the site. Bush Terminal, to the north, consists of a collection of red brick buildings built in the early 1900s to serve the bustling intermodal industrial complex. They are clustered on either side of 43rd Street, between Marginal Street and First Avenue. SHPO determined that Bush Terminal (not the deteriorated piers) is eligible for listing on the New York State and National Registers of Historic Places (NYSR and NR), and the Landmarks Preservation Commission (LPC) concurs that the complex is eligible for City landmark designation.

The Brooklyn Army Terminal south of the site is listed on NYSR and NR and appears to be eligible for LPC designation. The original complex of eight structures (two remain) was designed by Cass Gilbert, architect of the Woolworth Building and other City landmarks.

The expansive Sunset Park Historic District, which is listed on the NR for its uniform 19th-century residential development, is a large district roughly bounded by Fourth Avenue, 38th Street, Seventh Avenue and 64th Street, approximately ½-mile east of the site.

The former 18th Police Precinct House and Stable (4302 Fourth Avenue), approximately 4,000 feet northeast of the site, currently houses the Sunset Park School of Music. A designated City landmark, it is one of several station houses in Brooklyn designed by City Police Department (NYPD) architect George Ingram in the late 19th century to resemble a medieval fortress.

2.2.5.2 *52nd Street Barge Staging Area*

The 52nd Street Barge Staging Area would be a replacement-in-kind of the existing pier. It would be used for storage of marine supplies, temporary mooring of barges needing repair, and temporary staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations). The existing pier structure consists of a concrete deck supported by timber piles and substructure elements. Figure 2.2.5-2 (Facility Footprint) provides an aerial view of the existing site, including the existing pier. Figure 2.2.5-3 (Plan View) shows the plan for the reconstructed pier.

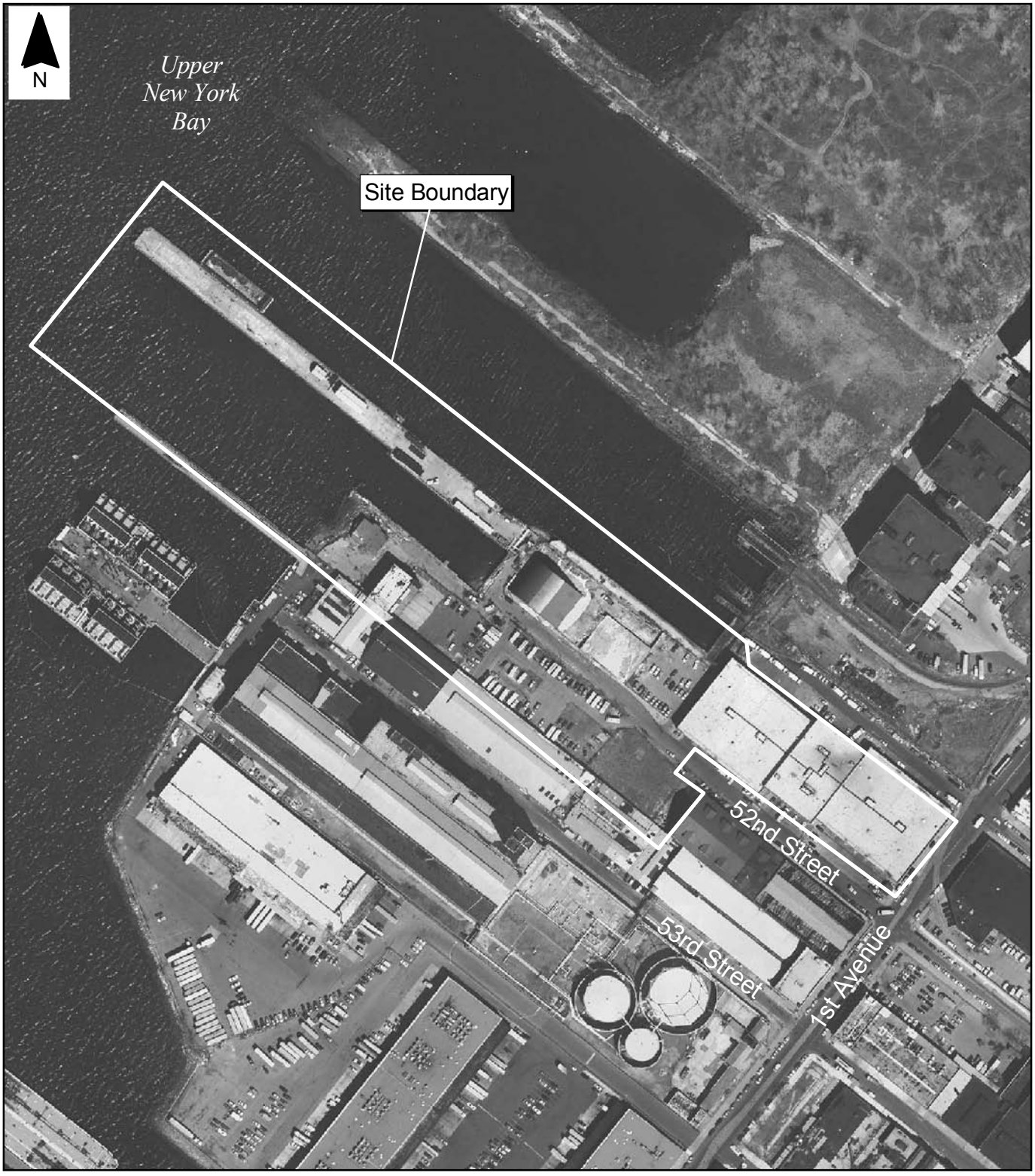
2.2.6 Harlem River Yard Barge to Rail Intermodal Yard

The Harlem River Yard (HRY) Barge to Rail Intermodal Yard may serve as a support facility for the Converted MTSs. It would function as an intermodal transload facility where barges with containerized waste from the Converted MTSs would be unloaded, containers placed on railcars, and train sections for transport to out-of-City disposal facilities assembled. Returned empty containers would be loaded on barges and towed back to the Converted MTSs.

2.2.6.1 *Description of Existing Site*

On a property contiguous to the existing HRY TS, a new facility would be developed to transload containers of DSNY-managed Waste delivered by barges from Converted MTSs to rail cars in the HRY. The new facility would be located south of the existing HRY TS. Figure 2.2.8-1 in the HRY Truck to Rail TS section shows the approximate boundaries of the site and surrounding neighborhood.

This site was evaluated as the location of a proposed enclosed barge unloading facility (EBUF) in the 2000 SWMP FEIS. The gross acreage of the lot is approximately 18 acres. The site is bounded on the northeast side by a primary branch of the through-track rail line to the Oak Point Link running through the development, on the west by the Harlem River, and on the south and southeast by the Harlem River.



Site Delineations are approximate.
Aerial Photos taken 2001-2002

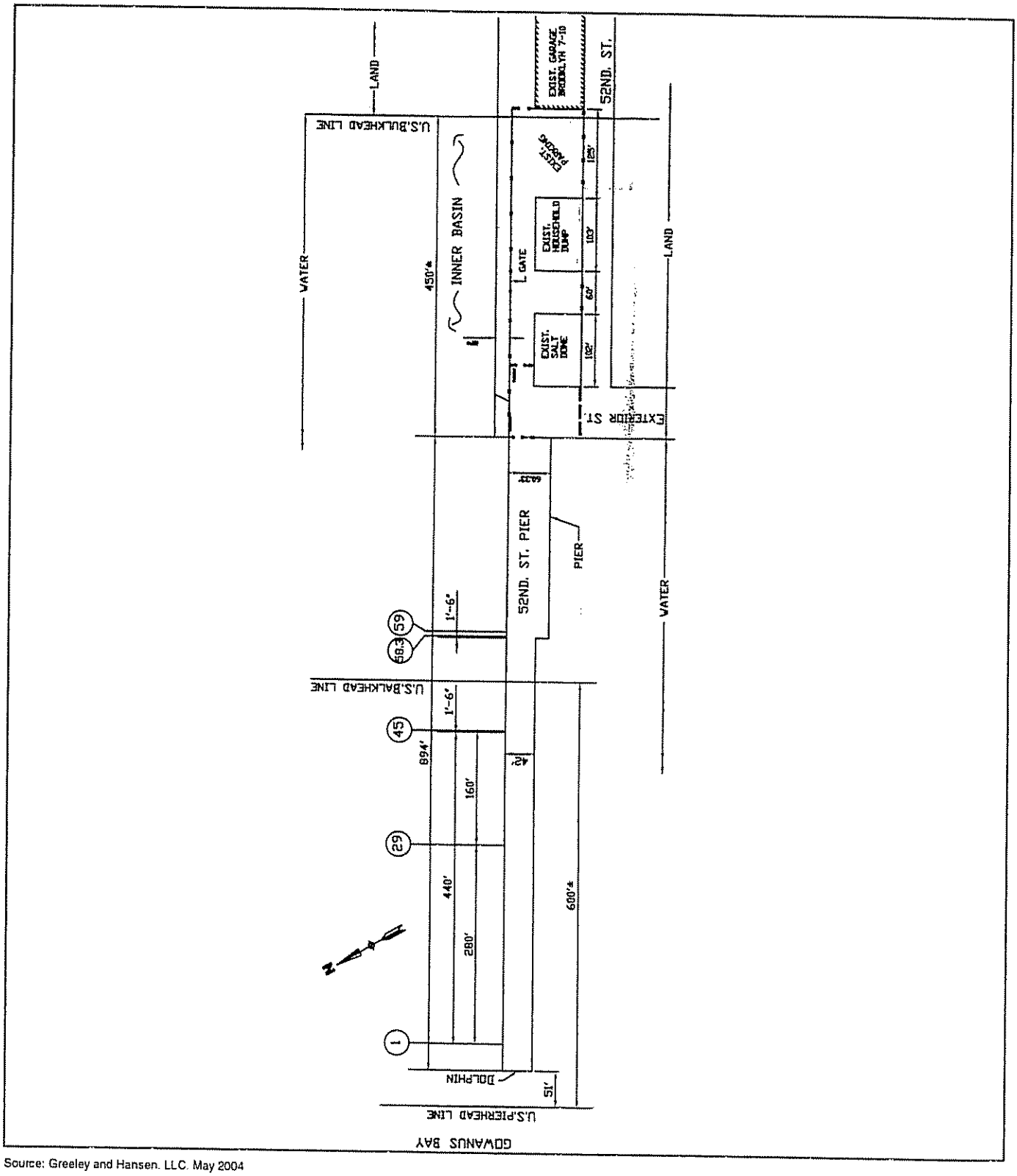
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Figure 2.2.5-2 Facility Footprint

52nd Street Barge Staging Area

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Source: Greeley and Hansen. LLC. May 2004

Figure 2.2.5-3 Plan View

52nd Street Barge Staging Area

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The site is located in a heavily industrialized area that is zoned M3-1. Across 132nd Street to the northeast lies a light manufacturing zone (M1-2), with a residential zone (R6) beyond the Major Deegan Expressway more than ½-mile from the site. Across the Harlem River in Manhattan lies the Harlem River Drive, bordered by light manufacturing (M1-2) and medium-density apartment-house (R7-2) zones. Land use on Randalls Island to the south across Bronx Kill is also designated R7-2.

2.2.6.2 HRY Barge to Rail Intermodal Yard

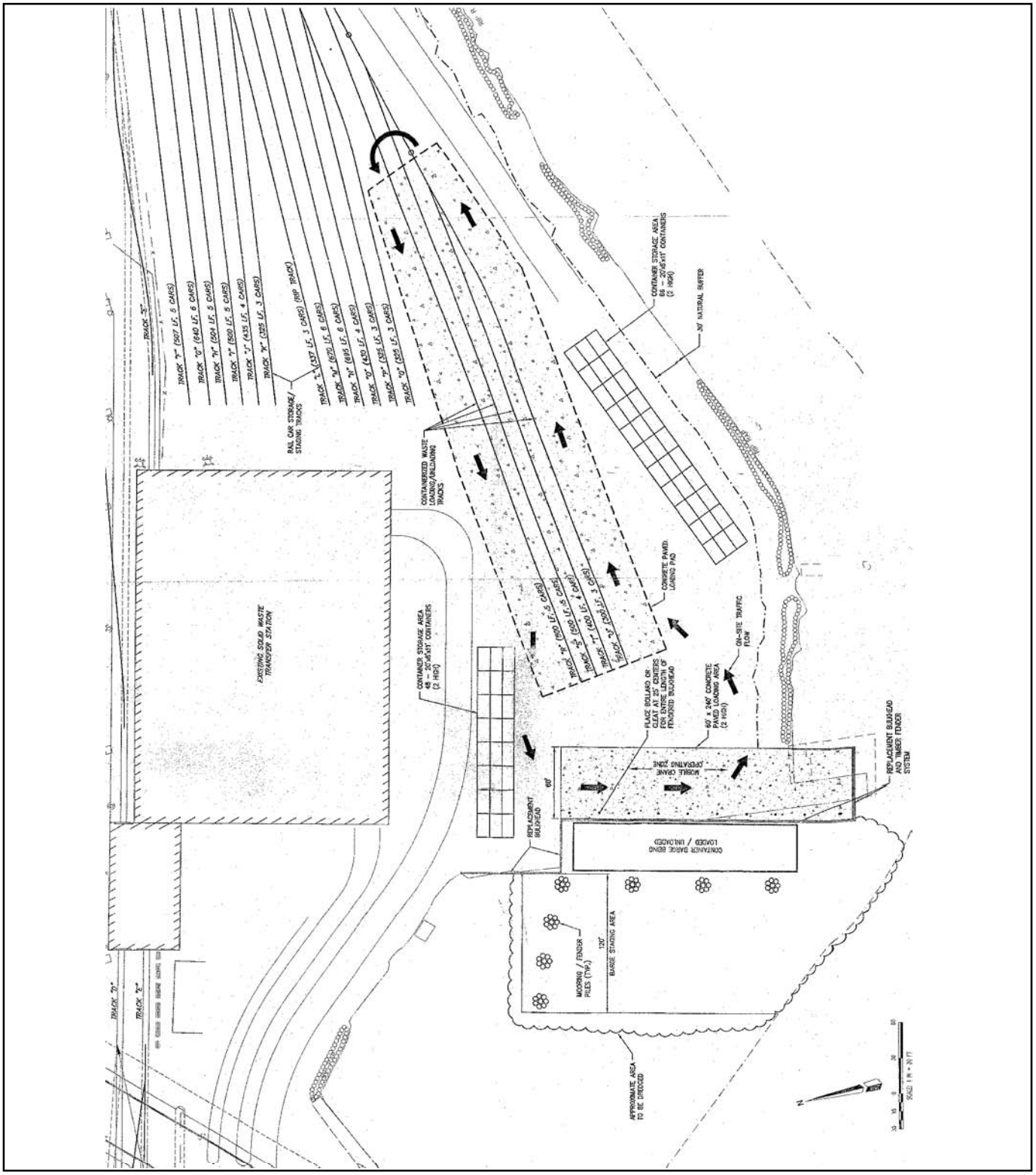
The site development would include a barge staging area with pile fendering, a barge mooring area adjacent to a replacement bulkhead for servicing barges, an adjacent 60-foot by 200-foot concrete pad for crane operations in unloading and loading barges, four rail spurs with capacity for 17 rail cars, and two designated storage areas for intermodal containers with capacity for 114 container units. A crane would unload containers from a barge moored at the bulkhead onto a yard jockey (tractor) that would move the container into position where a container handler unit would move the container from the chassis to a rail car. When a section of cars is loaded with full containers, it would be switched to a train-assemble track elsewhere in the HRY complex. Figure 2.2.6-1 (Plan View) shows the layout for this facility.

2.2.7 65th Street Intermodal Yard, Brooklyn

The 65th Street Intermodal Yard, Brooklyn may serve as a support facility for the Converted MTSs. It would function as an intermodal transload facility where barges with containerized waste from the Converted MTSs would be unloaded, containers placed on railcars, and train sections for transport to out-of-City disposal facilities assembled. Returned empty containers would be loaded on barges and towed back to the Converted MTSs.

2.2.7.1 Description of Existing Site

The 65th Street Intermodal Yard is an existing intermodal yard owned by and under the control of NYCEDC, and currently leased by Canadian Pacific Railway. Under a proposal responding to DSNY's MTS-RFP, a waterfront area of the existing intermodal transload facility would be sublet to an MTS proposer and developed to service barges from the Converted MTSs.



Source: Earth Tech, April 30, 2004

Figure 2.2.6-1 Plan View
Loading Area
Harlem River Yard Barge to Rail Intermodal Yard

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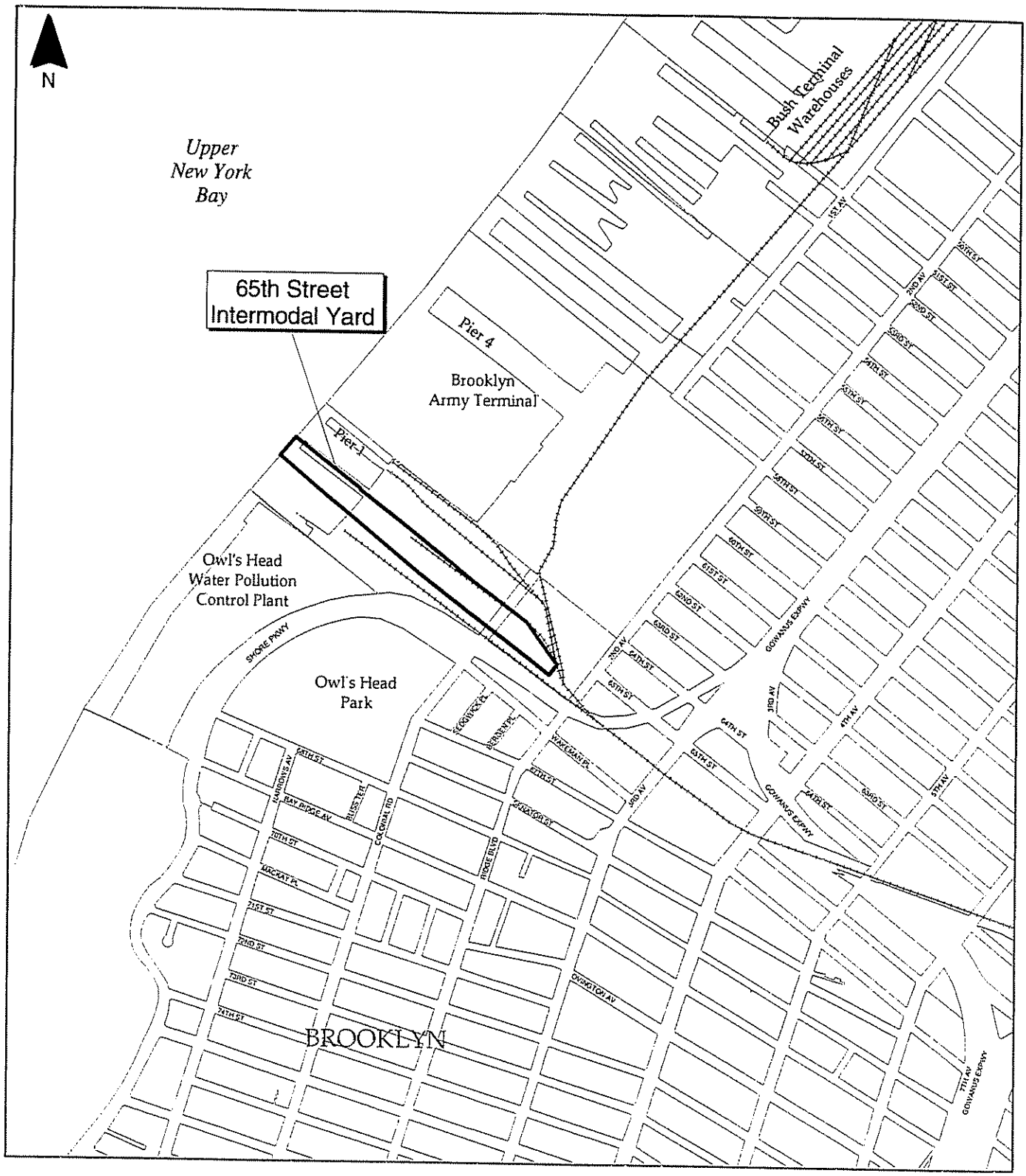
NYCEDC has completed an $8 million improvement program to upgrade rail facilities at this property. This program included the construction of two new gantry float bridges and the installation of 10 tracks on the south side of the site, and three tracks on the north side. NYCEDC will issue an RFP for a long-term lease shortly.

The 65th Street Intermodal Yard is in the industrial waterfront area bordering Bay Ridge and Sunset Park, Brooklyn. It is in Brooklyn CD 10 near the border of Brooklyn CD 7. Based on City tax maps, the site is comprised of Lot 2 of Block 5804. The yard interconnects with the Bay Ridge Line, a freight line that crosses Brooklyn to interconnect with the CSX and CP rail systems at Fresh Pond Yard in Queens. The Bay Ridge Line is owned by the Long Island Rail Road (LIRR) and is operated by the New York & Atlantic Railway (NY&A) under a lease agreement for use for freight traffic.

The intermodal site is comprised of approximately 12 upland acres of the 33-acre City property managed by NYCEDC and five acres over water between the U.S. Bulkhead Line and the U.S. Pierhead Line that would be developed for barge staging. The site is zoned M2-1 and is on the Upper New York Bay waterfront adjacent to the Brooklyn Army Terminal. The waterfront portion of the site is occupied by the ruins of two railroad float bridges and timber piles that would have to be removed before the waterfront could be dredged for barge reception.

Figure 2.2.7-1 (Site Location) shows the location of the 65th Street intermodal site. On the west, the property is bounded by the Upper New York Bay. It is bounded on the north, east and south by the 65th Street Rail Yard facilities. Immediately to the east, NY&A is planning to develop a rail-to-truck intermodal facility. Immediately to the south are a series of tracks that lead to the waterfront, where a float bridge terminal is being developed. Further to the south is the Owl's Head Water Pollution Control Plant (WPCP) and the Shore Parkway.

The site is level and unpaved except for the gravel service roads that run through it. In some areas near the water and the Owl's Head facility, the surface growth has been stripped away to reveal bare soil. The waterfront edge of the site is overgrown with grasses and scrub, and remains of piers protrude through the water's surface. The only existing on-site structures aside from a chain-link fence around the perimeter are five 80-foot-tall rail yard lighting fixtures.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR Hydroqual URBITRAN DP EEA Cambridge Environmental Inc

Figure 2.2.7-1 Site Location

65th Street Intermodal Yard

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Designated parklands – Shore Road Park and Owl's Head Park – are located to the southeast of the site. The closest of these, Shore Road Park, is land located under Shore Parkway and, as such, is a visual resource to the community, but not useable parkland. Owl's Head Park would be approximately 800 feet from the location of the transload facility. The Brooklyn Army Terminal Day Care Center (58th Street and 1st Avenue) is approximately 500 feet from the site boundary. Residentially-zoned areas interspersed within commercial and industrial zones are located to the northeast of the site.

2.2.7.2 65th Street Intermodal Yard

Figure 2.2.7-2 (Facility Footprint) is an aerial photograph of the existing site. As indicated in this figure, development of the 65th Street Intermodal Yard would not affect any existing structures. Figure 2.2.7-3 (Plan View) depicts the proposed facility. DSNY containers delivered by barge from Converted MTSs would be transloaded to rail. This would occur on an existing bulkhead at the facility and would probably require some refurbishing and new container handling equipment. The 65th Street Intermodal Yard facility would be capable of handling an average of 190 containers per day, or a capacity of 4,000 tpd.

At the intermodal facility, barges with loaded containers would be moored into position. The hostler driver would then be signaled to pull into the load/offload position next to the barge. Loaded containers would be placed on the chassis of the hostler for drayage to the rail loading area, where the intermodal equipment operator would signal the next hostler to move into loading/unloading position adjacent to the next railcar in the block of railcars with empty containers. Transloading of the loaded container from the chassis to the next open position on the railcar would then occur. Empty containers are placed on the truck chassis for drayage to the barge loading/offloading area. Empty containers would be placed on the barge for return to the MTS.



Site delineations are approximate.
Aerial Photos taken 2001-2002

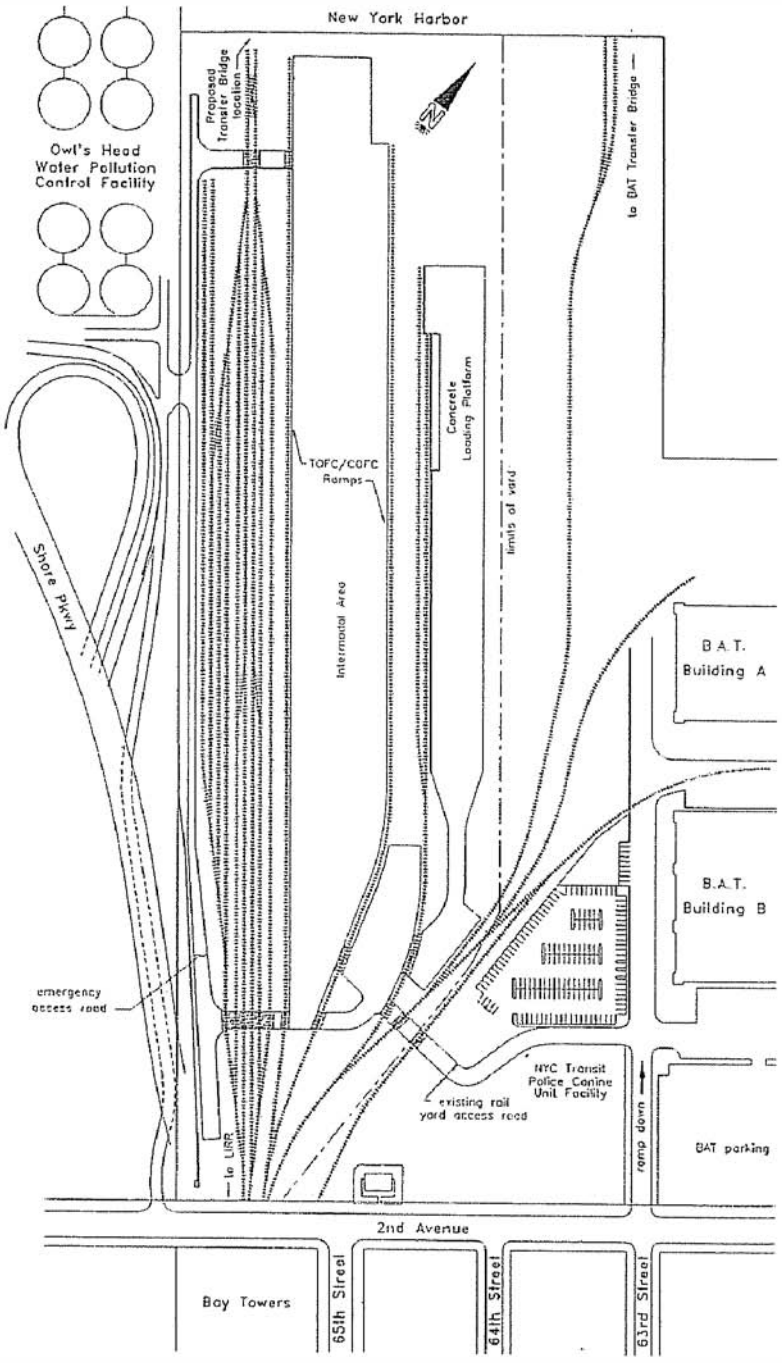
300 0 300 Feet

Figure 2.2.7-2 Facility Footprint

65th Street Intermodal Yard

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Source: 65th Street Rail Yard Access Study

HDR, HydroQual, URBITRAN, PB, EEA, Cambridge Environmental Inc	**Figure 2.2.7-3 Plan View** **65th Street Intermodal Yard** **CITY OF NEW YORK** **DEPARTMENT OF SANITATION**	THE CITY OF NEW YORK DEPARTMENT OF SANITATION

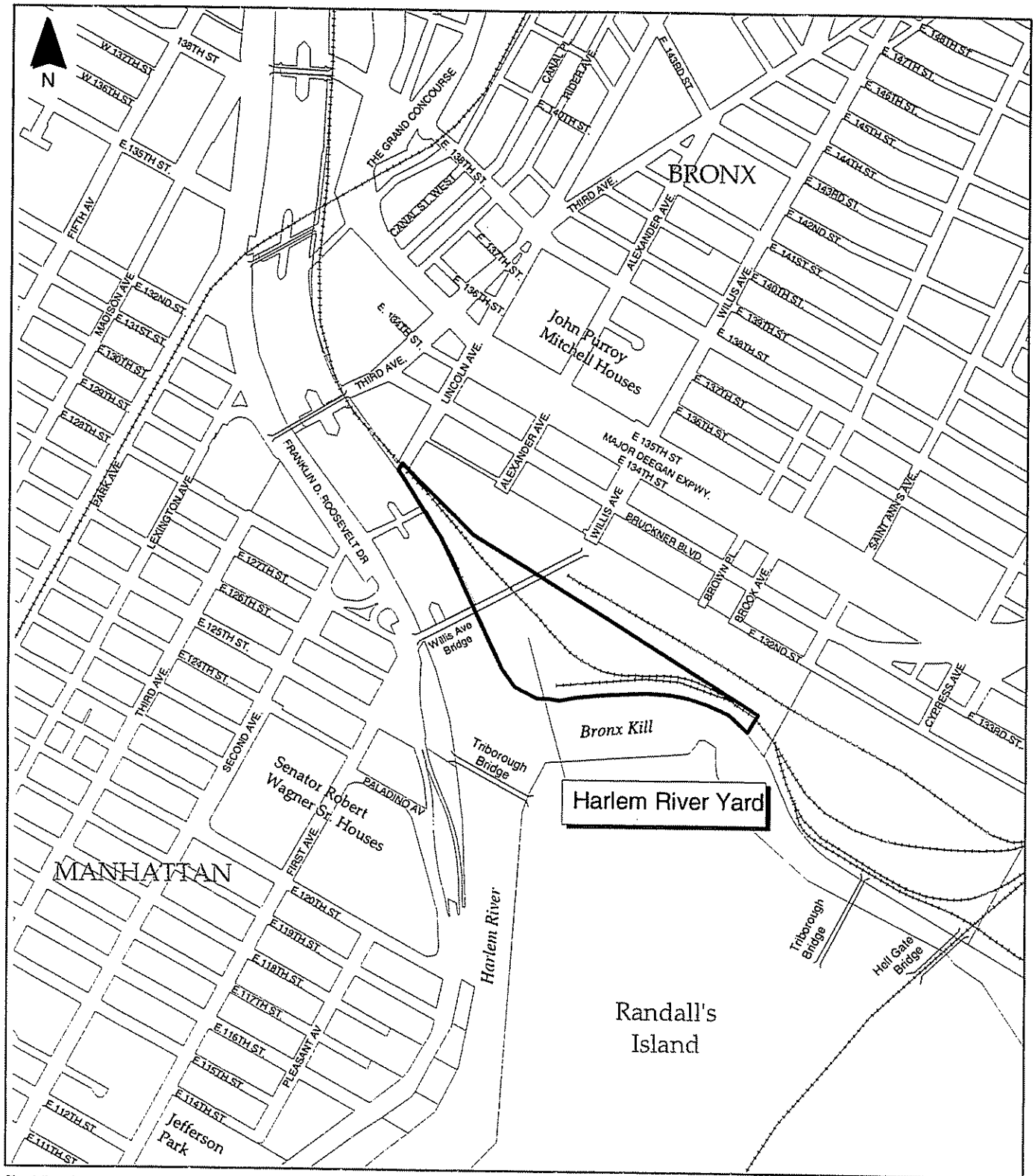
2.2.8 Harlem River Yard Truck to Rail TS

2.2.8.1 Description of Existing Site

The Harlem River Yard (HRY) Site is an existing permitted transfer station located at 98 Lincoln Avenue. The site is located in the southwestern portion of the Harlem River Yard Intermodal Transportation and Distribution Center (HRYITDC) property in the south Bronx. The entrance to the site is at Lincoln Avenue. The HRY Site is bounded on the northeast side by a primary branch of the through-track rail line to the Oak Point Link running through the development, on the west by the Harlem River, and on the south and southeast by the Harlem River. Figure 2.2.8-1 (Site Location) shows the location of the site. Figure 2.2.8-2 (Facility Footprint) shows an aerial map with major features of the site.

The property is located directly northeast of the Harlem River and Bronx Kill. As such, the aquifer at this site is tidally influenced, brackish in quality and as a result, is not used as a potable water source. No wetlands are located on the site; however, tidal wetlands are present along the north shore of the Bronx River.

The site is located in a heavily industrialized area that is zoned M3-1. Across 132nd Street to the northeast lies a light manufacturing zone (M1-2), with a residential zone (R6) beyond the Major Deegan Expressway more than ½-mile from the site. Across the Harlem River in Manhattan lies the Harlem River Drive, bordered by light manufacturing (M1-2) and medium-density apartment-house (R7-2) zones. Land use on Randalls Island to the south across Bronx Kill is also designated R7-2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 2.2.8-1 Site Location

Harlem River Yard

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Site Delineations are approximate
Aerial Photos taken 2001-2002

400 0 400 800 Feet

Figure 2.2.8-2 Facility Footprint

Harlem River Yard

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The property is situated at an approximate elevation of 10 feet NGVD. The 100-year tidal surge or 100-year floodplain is at elevation 11 feet NGVD. All waste handling components of the facility's operation have been placed at elevation 12 feet NGVD or higher, leaving a minimum one-foot buffer. In addition, the tipping floors are located in an elevated building so that uncontained solid waste is handled well above the floodplain at elevation 19 to 21 feet NGVD.

Access to the site is via designated truck routes, including Bruckner Boulevard between Third Avenue and Willis Avenue, Bruckner Boulevard north of East 138th Street, East 138th Street, East 149th Street, Third Avenue, and Willis Avenue.

As reported in the 2000 SWMP FEIS, the study area for the Harlem River Yard Barge to Rail Intermodal Yard is very industrial in nature as it is part of one of the city's few remaining active industrial waterfronts. The area has not noticeably changed in terms of land use, population or zoning in the four years since publication of the 2000 SWMP FEIS. No significant adverse environmental impacts were predicted on the area's land use, socioeconomics, community facilities, open space, cultural resources, neighborhood character or urban design in the 2000 SWMP FEIS, which evaluated an intermodal EBUF at this site. Therefore, the less intensive Harlem River Yard Barge to Rail Intermodal Yard reported on in this FDEIS would, likewise, be expected to have no impacts.

NYCDCP, in March of 2005, approved a rezoning of approximately 15 blocks in the Port Morris section of the Bronx to allow mixed use development on underutilized blocks north of the HRY site. Development related to this potential rezoning is projected to occur by 2014 at the earliest, well beyond 2006 when the Proposed Action is expected to be implemented. Therefore, this rezoning and development were not included in the Future No-Build Condition analyzed in this FDEIS.

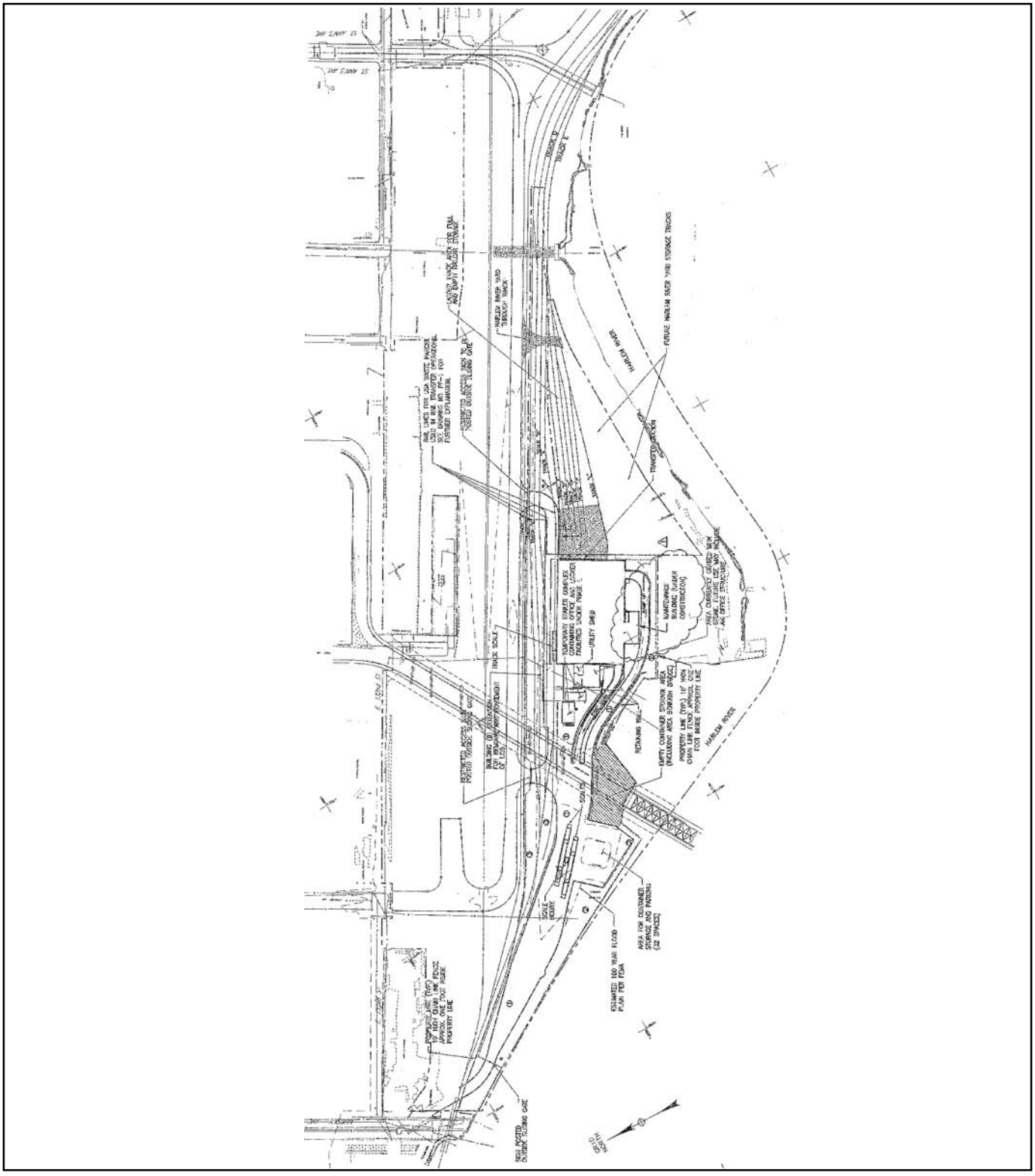
2.2.8.2 *HRY Truck to Rail TS*

The HRY Truck to Rail TS is permitted at 4,000 tpd. A 1993 FEIS supported permit approvals of the original 3,000 tpd facility. An application for a 1,000 tpd increase in capacity (to 4,000 tpd total) in October 2003, with an EAS dated August 2003 to support the 1,000 tpd increase has been approved. The EAS includes an evaluation of the $PM_{2.5}$ impacts associated with the 1,000 tpd increment in capacity. A Negative Declaration finding for that EAS has been issued by DSNY as the lead agency. NYSDEC has also approved the permit expansion.

The facility is currently contracted to accept up to 1,800 tpd of Bronx DSNY-managed Waste under interim export and DSNY delivers approximately 1,381 tpd on an average peak day. In response to DSNY's Bronx RFP, the HRY Truck to Rail TS proposes to accept all of the Bronx DSNY-managed Waste long term, which is approximately 2,337 tpd (average peak day analyzed in this FDEIS, increased by an additional 20% contingency). To accomplish this, the HRY Truck to Rail TS requires no increase in capacity, but does require a minor modification for additional equipment.

The HRY Truck to Rail TS was also the subject of an EAS in 2001 for Interim Export that evaluated the receipt of all of the Bronx DSNY-managed Waste (56 collection vehicles during the peak hour of 11:00 a.m. to 12:00 p.m.). Traffic analyses were completed at multiple locations and PM_{10} analyses were completed at two intersections. $PM_{2.5}$ was not analyzed and CO and mobile noise analyses were screened out.

The existing facility is a direct truck-to-rail facility where putrescible waste is loaded directly from the tipping and processing floor into containers on rail cars within the transfer station building. The complete transfer facility consists of an enclosed 69,600-square-foot steel-framed transfer building that includes an extension for lidding operations, maintenance and utility buildings, access roads and ramps, weigh station and scales, and employee and visitor parking lots. Figure 2.2.8-3 provides a plan view of the existing facility.



Source: TAMS Consultants, Inc, March 29, 2004

Figure 2.2.8-3 Plan View (Overall Site)

Harlem River Yard

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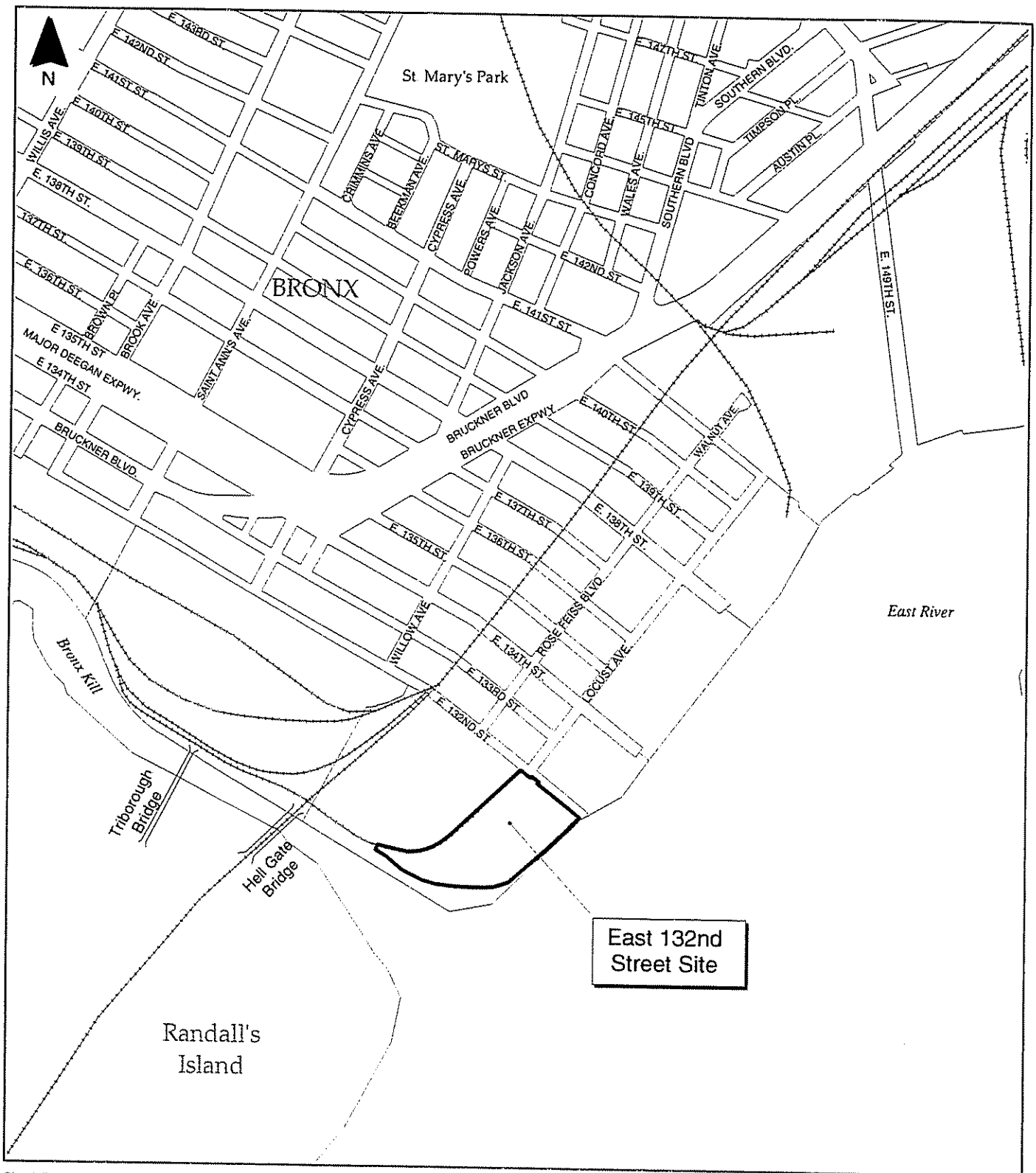
2.2.9 East 132nd Street TS

2.2.9.1 Description of Existing Site

The East 132nd Street TS is an existing permitted facility in the Port Morris section of the South Bronx in CD 1, which is in the extreme southeastern corner of the Bronx. The site is bounded on the north by 132nd Street, on the east by the East River, on the south by the Bronx Kills and on the west by the Harlem River Yard. Based on City tax maps, the site is comprised of Lots 30 and 62 in Block 2538 and Lot 650 in Block 2538. The site and immediately surrounding area is zoned M3-1 for heavy industry. There are no residentially zoned districts, schools or parks within an approximate 2,000-foot radius of the site. There are no registered historic structures or significant architectural resources in the area. Figure 2.2.9-1 (Site Location) shows the location of the East 132nd Street Site.

East 132nd Street serves as the access road for the site. Employee parking is on the northern side of the property, where the site entrances and exits are located. The used portion of the site is entirely paved. The site is enclosed by fencing and has direct access to the East River.

Out-of-service rail tracks traverse the southwestern boundary and the middle of the site. These rails could not be used for direct rail export to an out-of City disposal facility because the East 132nd Street facility does not currently have rail access to the Harlem River Yard due to an agreement between the developer of the Harlem River Yard complex and the original developer of the truck-to-rail transfer station there. Under Long Term Export, DSNY-managed Waste would be containerized and then drayed to the Oak Point Rail Yard where containers would be loaded onto rail cars.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 2.2.9-1 Site Location

East 132nd Street Site

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Figure 2.2.9-2 (Facility Footprint) provides an aerial view of the site and its features. Figure 2.2.9-3 (Plan View) depicts a layout of the existing facility. The processing building, which is approximately 450-foot-long and varies in width from 100 to 200 feet, provides approximately 67,500 square feet of space. It includes a two-story administrative wing on its western side. A 10,200-square-foot elevated tipping gallery on the eastern side of the processing building is accessed by collection vehicles via an inclined ramp. There are eight truck bays within the gallery for unloading. The building provides a 44,000-square-foot processing floor, 10 feet below the tipping gallery. Front-end loaders and excavators move waste dumped on the processing floor to conveyors feeding two baling units or a compactor.

On-site container storage areas can accommodate approximately 800 empty/full containers, each being approximately 20 feet long, 8 feet wide and 9½ feet high.

The facility currently exports waste by truck. The waste is hauled directly to a disposal facility by:

- Compacting waste into bales (with approximate dimensions of 45 inches by 40 inches by 40 inches) that are then placed on flatbed tractor-trailers and covered.
- Loading waste into walking floor or tipping transfer trailers that deliver to a disposal destination.

2.2.9.2 East 132nd Street Truck to Rail TS

The East 132nd Street Truck to Rail TS is currently permitted at 2,999 tpd based upon a negative declaration finding on an EAS completed in 1994 for that capacity. It is currently contracted to accept up to 1,500 tpd of Bronx DSNY-managed Waste under interim export. The quantities of DSNY-managed Waste delivered to this facility for interim export average approximately 1,033 tpd. In response to the DSNY's RFP to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from the Bronx (Bronx RFP), the East 132nd Street Truck to Rail TS proposes to accept all of the Bronx DSNY-managed Waste long term, which is approximately 2,337 tpd (the average peak day analyzed in the MTS Environmental Evaluation increased by an additional 20% contingency).



Site delineations are approximate.
Aerial Photo taken 2001-2002

200 0 200 Feet

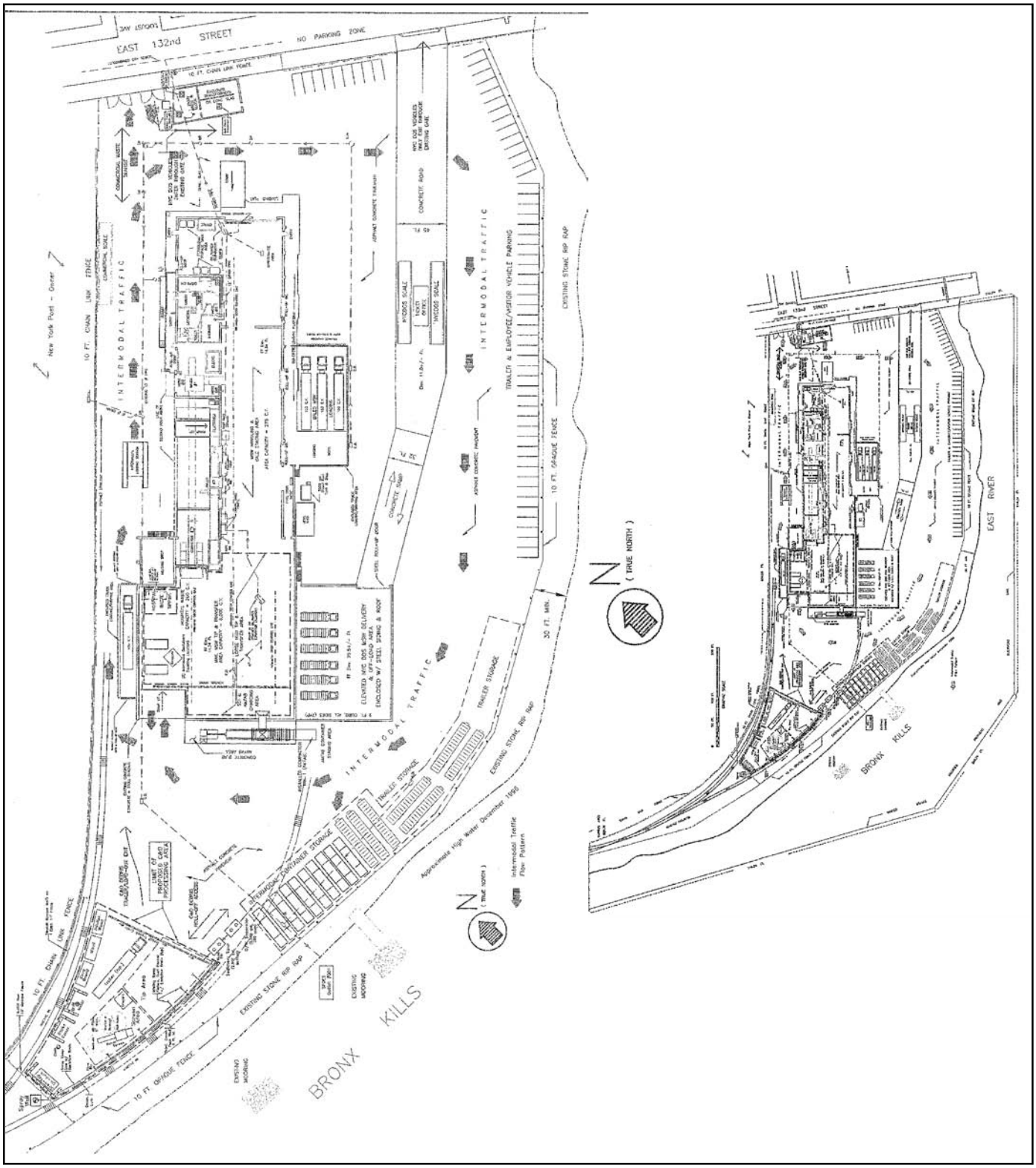
Figure 2.2.9-2 Facility Footprint

East 132nd Street Site

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FEIS

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Source: Holt Consulting, October, 21 2002

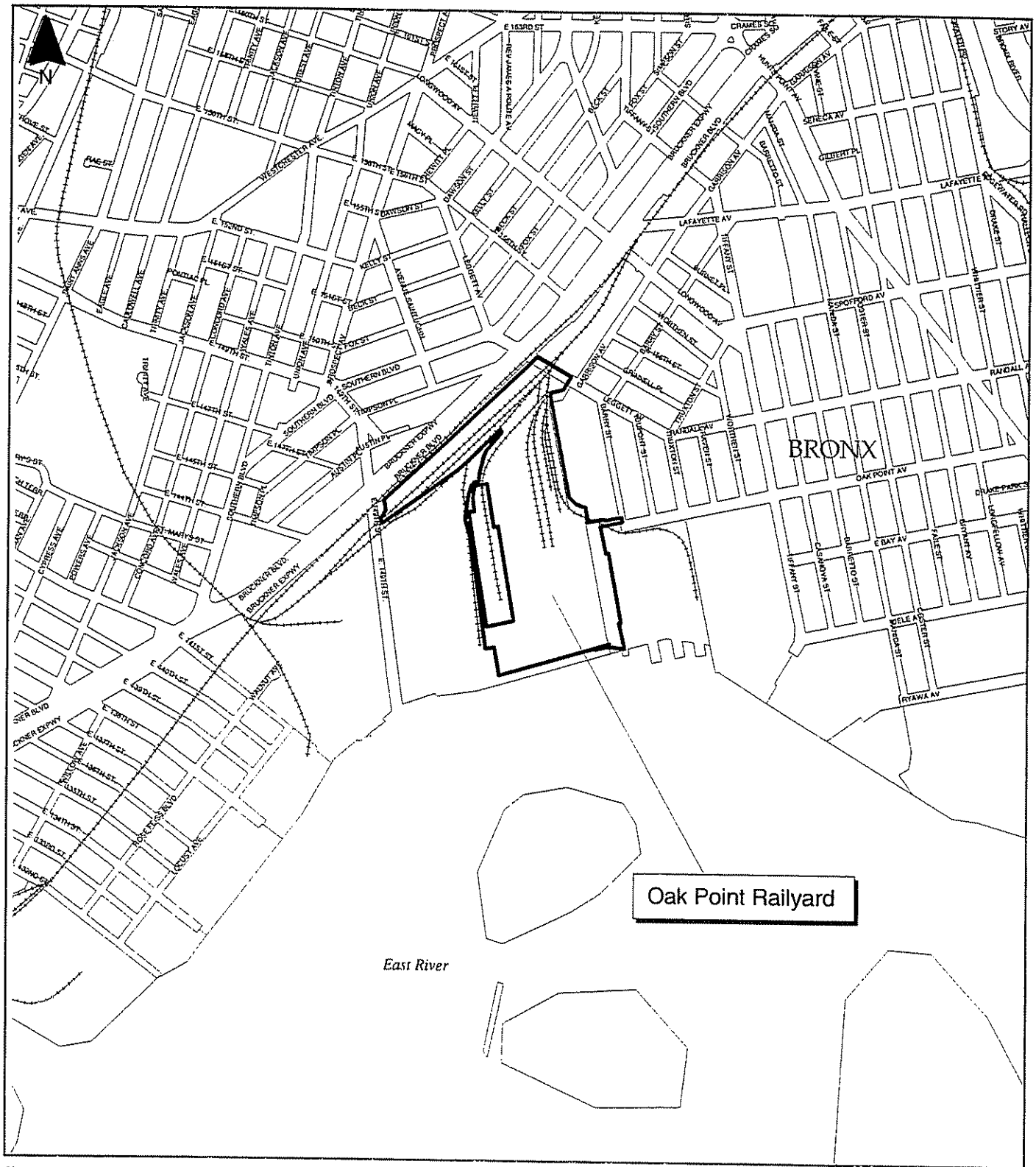
HDR, HydroQual, URBITRAN, PB, EEA, Cambridge Environmental Inc	**Figure 2.2.9-3 Plan View** **East 132nd Street Site** **CITY OF NEW YORK** **DEPARTMENT OF SANITATION**	THE CITY OF NEW YORK DEPARTMENT OF SANITATION

To accomplish this, the East 132nd Street Truck to Rail TS requires no increase in capacity, but does require a minor permit modification to add container lidding outside of the building. Lids would be placed on the open-top containers that are loaded inside of the processing building and driven a short distance on site (less than 250 feet) from the enclosed truck loading area to the intermodal lidding station, where a crane would place a lid on the container. The lid would be secured with latches by facility personnel. There would be no increase in air emissions from the facility because no diesel-generating equipment is associated with the lidding operation. Since containers would be lidded shortly after exiting the processing building, any increase in odors that may occur during this period would not be significant. Noise generated from this lidding operation was measured at a facility with a similar operation. See Chapter 12 for a discussion of the on-site noise analysis results.

This facility was also the subject of an EAS in 1997 for interim export that evaluated the receipt of all Bronx DSNY-managed Waste. At that time, no off-site PM_{10} or $PM_{2.5}$ analyses were performed. The 2000 SWMP FEIS evaluated on-site, but not off-site, impacts related to delivery of all Bronx waste to this site under a variety of different export scenarios, e.g., EBUF, truck-to-barge, truck-to-rail. The EAS for Interim Export, updated in 2001, evaluated sending only a portion of the Bronx waste (24 collection vehicles during the peak hour between 11:00 a.m. to 12:00 p.m.) to the East 132nd Street Truck to Rail TS because that EAS focused more on analyzing all of the Bronx waste to Harlem River Yard. Traffic analyses were completed at multiple locations, and PM_{10} analyses were completed at two intersections. $PM_{2.5}$ was not analyzed, and CO and mobile noise analyses screened out. The increment of waste to be analyzed for off-site impacts in this FDEIS is 1,565 tpd (2,337 tpd minus 1,033 tpd plus 20% contingency).

2.2.9.3 Oak Point Rail Yard

Under Long Term Export, DSNY-managed Waste would be containerized and then drayed to the Oak Point Rail Yard, where the containers would be loaded onto rail cars. The Oak Point Rail Yard is approximately 2½ miles from the East 132nd Street Truck to Rail TS site in Bronx Community District 2. (See Figure 2.2.9-4, Site Location). Access to the Oak Point Rail Yard is provided via Oak Point Avenue off of Bruckner Boulevard. At the Oak Point Rail Yard, the



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 1000 Feet

HDR | Hydroqual | URBITRAN | DP | EEA Cambridge Environmental Inc

Figure 2.2.9-4 Site Location

Oak Point Railyard

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container would be loaded onto a rail car and a train section dispatched daily to an out-of-City disposal destination. Empty containers returned by train to the Oak Point Rail Yard are drayed back to the transfer station and stored at the site. Each train travels to a disposal facility and returns empty in an approximate seven-day or more cycle.

The trucking of containers of DSNY-managed Waste to Oak Point Rail Yard is considered part of this FDEIS, since, at present, all waste from the 132nd Street Truck to Rail TS goes out by transfer trailer. However, the review is limited to off-site impacts of draying to the Oak Point Rail Yard, since the Oak Point Rail Yard has been permitted as an intermodal yard, and any changes in this permit would be subject to DSNY's new rules as a non-discretionary action. The Bronx RFP issued by the DSNY requires that proposers commit to exporting all waste (both DSNY and commercial) processed at their facility by rail or barge. Although historically some waste processed at the East 132nd Street Truck to Rail TS was containerized and drayed to Oak Point Yard for export by rail, currently all waste moves out via transfer trailer. Thus, the draying of full containers of waste and return of empty containers between the East 132nd Street Truck to Rail TS and the Oak Point Rail Yard equivalent to the fully permitted capacity of the facility (2,999 tpd) would be a change in the existing condition.

2.2.10 Scott Avenue Truck to Barge TS, Brooklyn

2.2.10.1 Description of the Existing Site

The existing Scott Avenue Truck to Truck TS is a permitted facility located at 485 Scott Avenue. The site comprises several buildings, open lots and processing areas, and covers an area of 9.75 acres. The facilities and property are owned by Waste Management. The site is located in the Williamsburg Industrial Park section in Brooklyn, New York. The entrance to the site is at the intersection of Gardner Avenue and Thomas Street. The elevated Brooklyn-Queens Expressway (BQE) Kosciusko Bridge traverses the eastern portion of the site. Figure 2.2.10-1

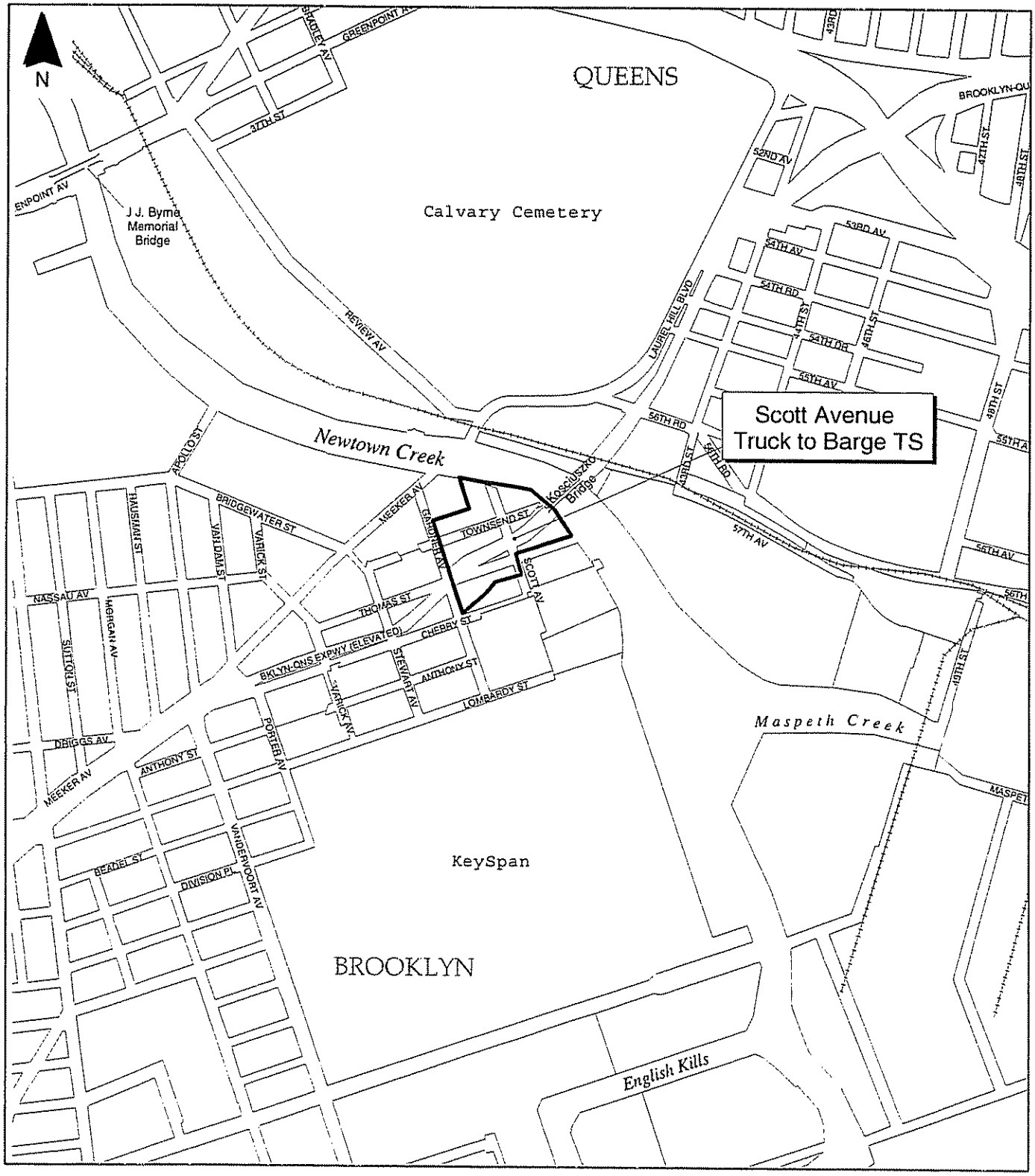
(Site Location) shows the location of the site. Figure 2.2.10-2 (Facility Footprint) shows an aerial map with major features of the site.

The property abuts Newtown Creek. As such, the aquifer at this site is tidally influenced, brackish in quality and, as a result, is not used as a potable water source. No wetlands are located on the site or in the surrounding area.

The site is located in a heavily industrialized area that is zoned M3-1. The northern perimeter of the property is bounded by Newtown Creek. Properties to the south include warehouses, open lots, truck parking lots and other heavy manufacturing and industrial facilities. Properties to the east include factories, truck parking lots, construction yards and other properties associated with heavy industrial uses. Properties to the west include Newtown Creek, a building supply and equipment rental facility, importer warehousing and related truck parking and other heavy industrial uses.

Access to the site is via designated truck routes including Vandervoort Avenue, Lombardy Street, Metropolitan Avenue, Grand Street, Norman Avenue and McGuinness Boulevard. The blocks and lots which comprise the site and the functions they are used for are listed below.

- Block 2798, Lot 1 – Vehicle parking and recyclables storage.
- Block 2798, Lot 30 – One-story building with office and space for equipment repair and storage; two-story building which houses offices, toilets and equipment repair, and storage.
- Block 2799, Lot 1 and Block 2803, Lot 1 – The outdoor yard is used for glass crushing operations and C&D processing operations.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | Hydroqual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 2.2.10-1 Site Location

Scott Avenue Truck to Barge TS

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Site delineations are approximate.
Aerial Photos taken 2001-2002

100 0 100 200 Feet

Figure 2.2.10-2 Facility Footprint

Scott Avenue Truck to Barge TS

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- Block 2803, Lots 14 and 25 – Material storage and truck parking.

- Block 2802, Lot 1 – Access area.

- Block 2802, Lots 10, 11 and 14 – Three-story building which houses the mixed solid waste processing and transfer; processing, baling and transfer of commingled recyclables.

- Block 2808, Lots 3 and 25 – Baled recyclables storage and bale washing.

Newtown Creek is a NYSDEC-designated littoral zone. The existing property is currently situated between 7.5 feet and 22 feet Brooklyn Highway Datum (BHD) or 10.06 to 24.56 feet mean sea level (MSL). The 100-year tidal surge or 100-year floodplain is at elevation 10 feet MSL (7.44 feet BHD). All waste handling components of the facility's operation have been placed at elevation 7.5 feet BHD or higher to minimize the risk of flooding at the site.

2.2.10.2 Scott Avenue Truck to Barge TS

The existing Scott Avenue Truck to Truck TS is currently permitted at 1,500 tpd with a negative declaration and EAS for that capacity dated January 2003. The Scott Avenue Truck to Truck TS is currently contracted to accept up to 1,400 tpd of DSNY-managed Waste under Interim Export. In response to the DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Brooklyn Formerly Delivered to the Greenpoint Marine Transfer Station (Brooklyn RFP), the Scott Avenue Truck to Truck TS proposes to accept all of the Brooklyn DSNY-managed Waste long term, which is approximately 900 tpd. To accomplish this, the Scott Avenue Truck to Truck TS requires no increase in capacity, but does require a minor modification for barge loading and container lidding to operate as a Truck to Barge TS.

This facility was also the subject of an EAS in 1998/1999 for Interim Export. At that time, no off-site $PM_{2.5}$ analysis was performed and there is not enough available information to determine if a PM_{10} analyses was performed. The EAS for Interim Export, updated in 2002, assumed

continuation of the 1998/1999 EAS action, so no traffic, $PM_{2.5}$, CO or mobile noise analyses were completed since there was no net change. PM_{10} was analyzed at four locations. The 2000 SWMP FEIS evaluated this facility as a truck-to-barge operation.

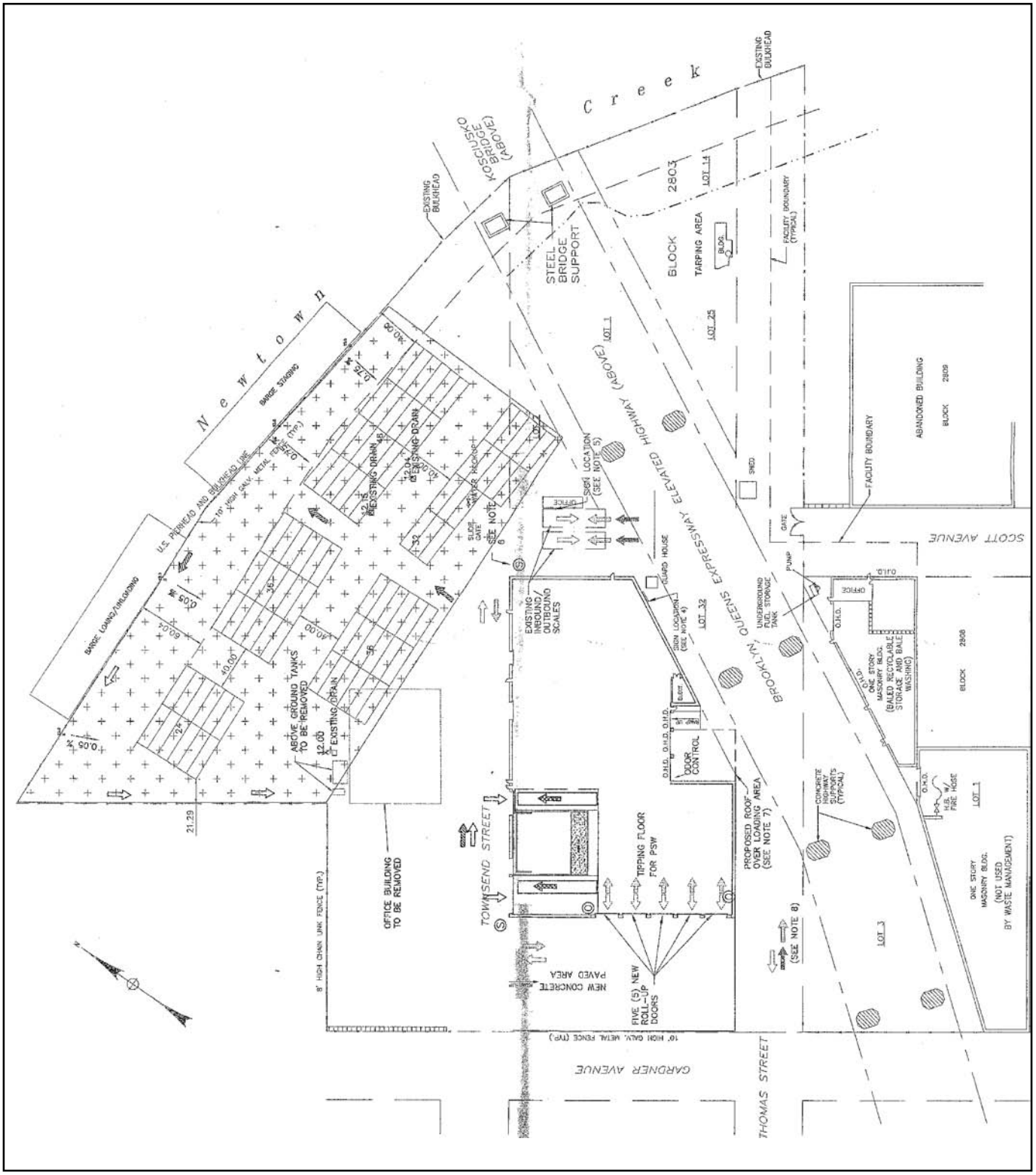
The quantities of DSNY-managed Waste delivered to the facility under Interim Export average approximately 1,114 tpd. The Scott Avenue Truck to Barge TS would take 900 tpd, which is a decrease in tonnage. Therefore, no off-site analyses are required.

The Scott Avenue Truck to Barge TS would be a direct container-to-barge facility, where putrescible waste is loaded directly from the tipping and processing floor into containers and then transported from the transfer building across the property to waiting shuttle barges for transport to a container handling facility. At the container handling facility, containers would be loaded onto ocean going barges for long-haul transport to a final disposal facility.

The facility consists on an enclosed 52,492-square-foot masonry transfer building, including maintenance and office areas; access roads; tipping bays; loading bays; two scales, a scale house and a loading scale inside the building; and employee and visitor parking areas. Figure 2.2.10-3 (Plan View) shows the existing facility. All waste is received, handled and processed within the transfer station building.

Modifications to the facility would be made to accommodate containerizing the waste, and container handling and barge loading operations. Site features changed would include demolition of the office and maintenance building, relocating the functions to the main transfer building, and removing recycling areas from the main building (which would be replaced by an additional enclosed loadout area in the north side of the building).

The putrescible waste processing building, which also houses various pieces of mobile and stationery equipment used in the transfer process, is one story, approximately 30 feet high, with new roll-up doors, a 12,000-sq-ft tipping floor, unauthorized waste storage areas, a concrete paved floor, ramps, loading docks and processing equipment. The access ramp consists of 12 inches of concrete with reinforcing bars, and the sections of floor in the building subject to the heaviest loading conditions are concrete.



Source: TAMS Consultants, Inc, March 29, 2004

Figure 2.2.10-3 Plan View

Scott Avenue Truck to Barge TS

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The putrescible waste processing area consists of five tipping bays for simultaneous processing of waste. Modifications to the facility would include the addition of a bay, equipped with a scale for loading purposes. Crushed and compacted putrescible waste would be loaded into containers on chassis in these bays and weighed prior to being moved to the barge link across the yard.

Vehicular access and egress to the facility is at Thomas Street at the intersection of Gardner Avenue. Incoming trucks queue off the street and on the facility along the inbound access road beneath the elevated BQE. Approximately 10 to 12 vehicles can safely be queued single-file along the access road without encroaching on Gardner Avenue. Since the scale house can process up to 45 vehicles per hour, including movement on and off each of the scales, the peak volume can be managed safely and efficiently. Once unloading is completed, the truck pulls forward and exits the processing building, proceeds to the outbound scale to be weighed, and then exits the facility.

After weighing, the driver is directed to unload at the designated unloading area. A wheel loader and/or grapple pushes and spreads the tipped waste. Refuse in the processing area is then crushed and/or compacted. Movable container chassis equipped with containers will be positioned in scale-equipped container pits. Wheel loaders or grapples lift the loose crushed or compacted putrescible waste into containers, which are then covered securely with lids. The container is then moved on a chassis to the barge loading area on Newtown Creek. The barge loading area would have a reconstructed bulkhead and fender system, and the adjacent Newtown Creek area would be dredged to allow for barge operations. Reach stackers would be used to lift the containers from the chassis, which are then either staged for loading onto shuttle barges or loaded directly onto the shuttle barges for transport.

Shuttle barges would be used to initially remove containerized waste from the facility. The shuttle barges would be towed to and from American Stevedoring (ASI) in Red Hook, Brooklyn. At ASI, the lidded containers are transferred, using overhead cranes, onto ocean-going barges, which would be towed to and from Port Weanack in Virginia. There, lidded containers would be unloaded and either temporarily staged or loaded directly onto tractor-trailer chassis for transfer to the Charles City County Landfill for disposal.

2.2.11 Scott Avenue/Scholes Street Truck to Rail TS

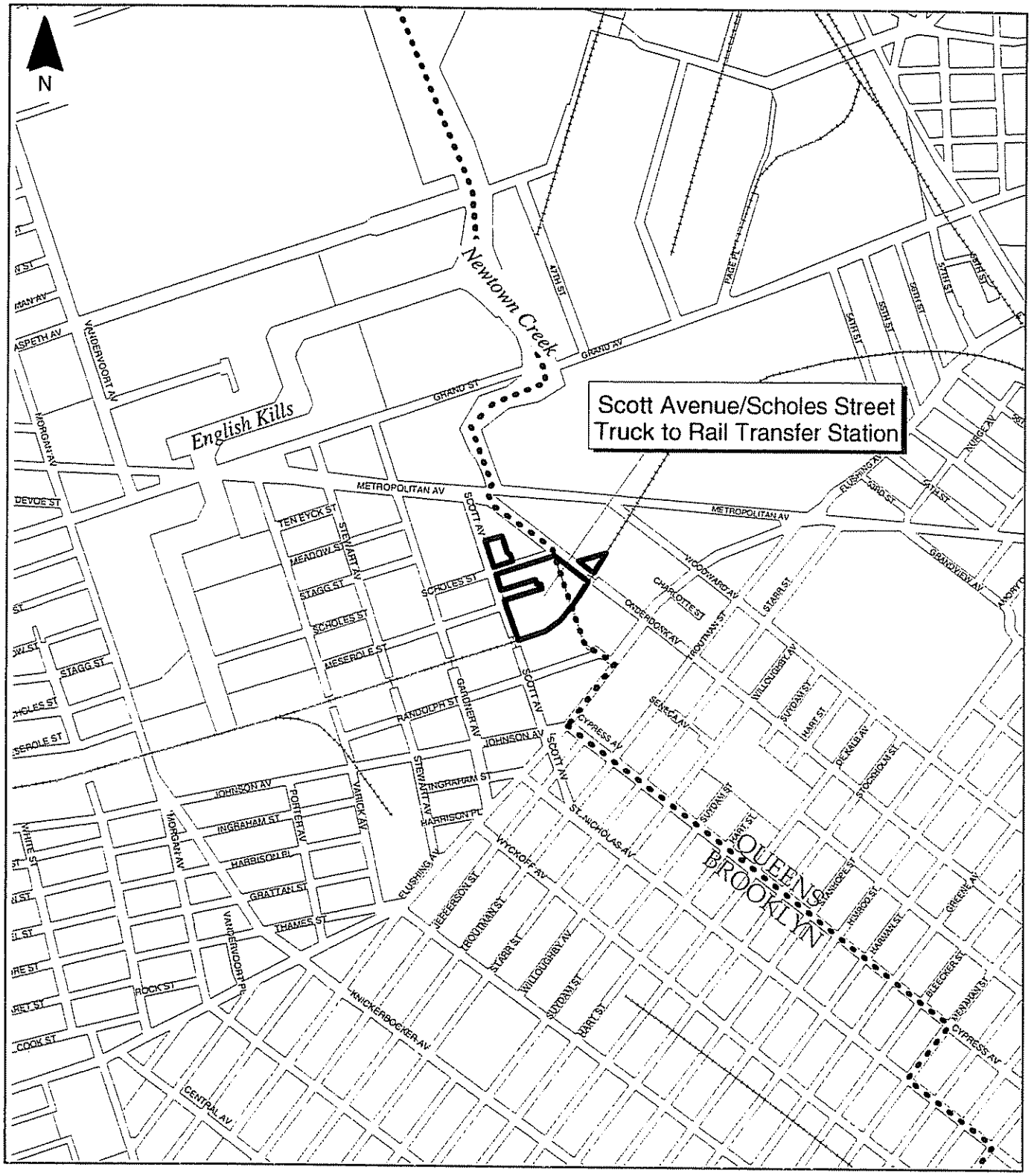
2.2.11.1 Description of Existing Site

The Scott Avenue/Scholes Street Truck to Rail TS site is located at 72 Scott Avenue/598 Scholes Street in Community District 1 near the Brooklyn/Queens border, in the predominantly industrial section of East Williamsburg, Brooklyn. It is generally surrounded by English Kills on the west, Newtown Creek on the east and LIRR tracks to the east and south. The area is also characterized by abundant parking lots and garage facilities, some of which are leased by DSNY for trucks and other equipment storage. Figure 2.2.11-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 2990, Lot 1 and Tax Block 2979, Lot 5, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

Currently, the site contains a processing facility for commingled recyclables, putrescible waste processing area, and wastepaper baling plant, owned by Allied Waste Services. The 598 Scholes Street site is currently permitted to handle 1,450 tpd of source-separated recyclables, and 220 tpd of putrescible waste. The buildings occupy a 106,700-square-foot area with several loading docks and rail access to the southeast.

The site is located within an M3-1 zoning district. This M3-1 zone extends north of the site along English Kills, east into Queens and south of the site where there are M1-2 and M1-1 zoning districts as well. The M1 zones act as a buffer between the residential and the heavier manufacturing districts and feature both residential and light manufacturing (e.g., distribution) activities. The nearest residential district, R5B, is located approximately ¼-mile east of the site.

The Scott Avenue/Scholes Street site is situated on the Brooklyn/Queens border which separates East Williamsburg, Brooklyn to the west and Maspeth, Queens to the east. South of the site are several private waste transfer stations (including BFI Waste Systems facilities on Scholes Street and Gardner Avenue, and Waste Management of New York facilities on Stewart Avenue and Varick Avenue), as well as a DSNY parking lot on Meserole Street, a new CD 1 and 4 garage under construction on Varick Avenue and an existing garage on Johnson Avenue.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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EEA Cambridge Environmental Inc
Hydroscience
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Figure 2.2.11-1 Site Location
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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The English Kills canal located ¼-mile east of the site is approximately 200 feet wide and connects with Newtown Creek at the Brooklyn/Queens boundary. The LIRR tracks pass immediately south of the site between Meserole and Randolph Streets. The NY&A operates freight trains on these tracks, with a terminal nearby in Bushwick (to the west).

North and south of the existing site are scrap metal yards and plastic manufacturing facilities, window and door manufacturing, lumber yards and hydraulic equipment leasing companies. Development surrounding the site is primarily low density with open parking lots and low-scale masonry buildings ranging from two to four stories in height.

The area surrounding the Scott Avenue/Scholes Street site includes some vacant land to the north on Gardner and Stewart Avenues, as well as lots undergoing construction. Some sites have been rehabilitated to accommodate new industrial loft space and community facilities such as a Peter Jay Sharp Center for Opportunity on Porter Street. The other community facilities include a fire station on Morgan Avenue and a daycare center on Knickerbocker Street.

There is a mix of residential, industrial and some commercial uses further from the site. Industrial uses located nearly ½-mile from the site tend to be of lighter intensity than those found within ¼-mile of the site. These uses include printers, auto salvage and repair shops and food product manufacture and distribution companies. The nearest residential area, Bushwick, which is ½-mile east of the site along Willoughby and Starr Streets, is characterized by three- and four-story apartment buildings as well as single-family homes and townhouses.

According to published sources, no historic structures are located on the site. However, within ½-mile of the site there are three early 20th-century historic districts and one individual property that are listed on the NYSR and NR. The Vander Ende-Onderdonk House (a.k.a., The Adrian and Anne Wyckoff Onderdonk House), located nearly ¼-mile east of the site, is a City landmark and listed on the NYSR and NR. It is the oldest Dutch-American fieldstone house in the City, and houses the Greater Ridgewood Historical Society. The three historic districts within ½-mile of the site (or just beyond) are all intact groupings of late 19th-century/early 20th-century working class rowhouse and tenement housing. They are all in the bisected neighborhood of Ridgewood,

which spans the Queens and Brooklyn border. The Willoughby-Suydam Historic District covers 1½ blocks composed of 50 three-story brick tenements built between 1904 and 1906. Located more than ¼-mile southeast of the site, the district is listed on the NYSR and NR. The Stockholm-DeKalb-Hart Historic District covers 2½ blocks, approximately ½-mile east of the site. The central portion of this district is designated by LPC as the Stockholm Street Historic District.

2.2.11.2 Scott Avenue/Scholes Street Truck to Rail TS

The Scott Avenue/Scholes Street Truck to Rail TS would require an increase in its currently permitted putrescible waste capacity and would add rail export to the facility's waste shipping capabilities. Figure 2.2.11-2 (Facility Footprint) shows the features of the site on an aerial photograph. Figure 2.2.11-3 (Plan View) depicts a layout of the existing facilities on the site.

The capacity of the facility would be increased to 1,368 tpd. This would include the 560 tpd of putrescible capacity that would be transferred to the Scott Avenue/Scholes Street Truck to Rail TS from a nearby facility on Thames Street that would be shut down. In addition, Allied proposes that the permitted capacity of 388 tpd of C&D at 594 Scholes Street and 200 tpd from glass, tire and yard waste at 575 Scholes Street be transferred to the Scott Avenue/Scholes Street Truck to Rail TS. The permit application and EAS for the expansion to 1,368 tpd was submitted in September 2003, with supplemental traffic analyses submitted in March 2004 to support the expansion. The site is currently contracted to accept up to 220 tpd of DSNY-managed Waste under Interim Export, and has proposed to accept 891 tpd of DSNY-managed Waste under Long Term Export.

This facility was also the subject of an EAS in 1998-1999 for Interim Export at its permitted 220 tpd capacity. At that time, no off-site $PM_{2.5}$ analysis was performed. The updated EAS in 2002 assumed a continuation of the previous tonnage, so no traffic, $PM_{2.5}$, CO or mobile noise analyses were completed. PM_{10} was analyzed at four locations. This analysis will, therefore, provide a complete on- and off-site environmental review for 1,368 tpd capacity, reflecting the proposed phase-in from truck to on-site rail export.



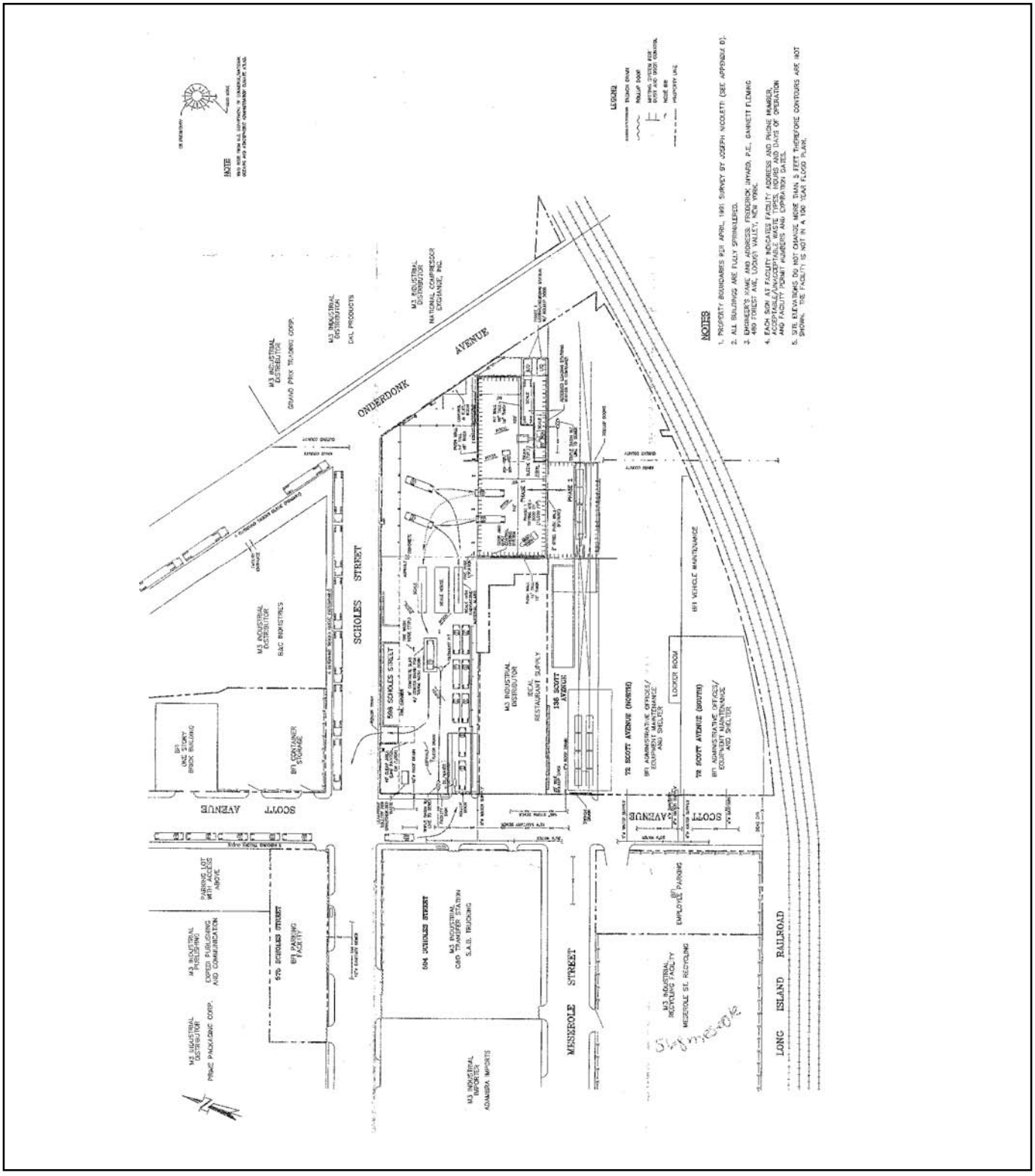
Site Delineations are approximate.
Aerial Photos taken 2001-2002

300 0 300 Feet

Figure 2.2.11-2 Facility Footprint
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Source: Gannett Fleming Engineers, PC, September 2003

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Figure 2.2.11-3 Plan View Scott Avenue/Scholes Street Truck to Rail Transfer Station

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2.2.12 Review Avenue Truck to Rail/Barge TS

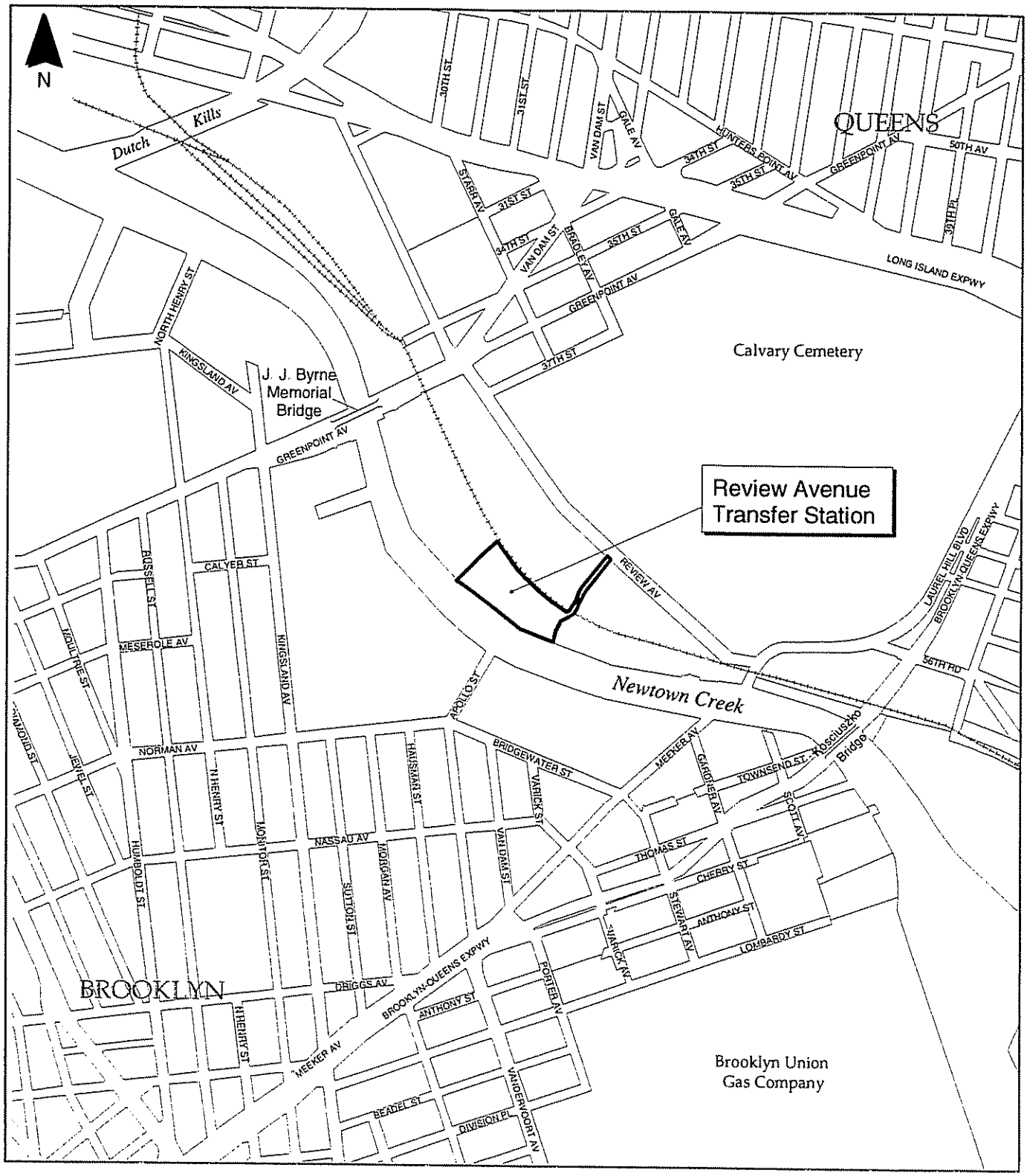
2.2.12.1 Description of Existing Site

The Review Avenue TS site is located at 38-50 Review Avenue in Queens and is adjacent to Newtown Creek. The facility and property are owned by Waste Management of New York. The site is in the West Maspeth section of Queens in Queens Community District 2 in a heavily industrialized area across Newtown Creek from the Greenpoint section of Brooklyn. It is bounded by the Montauk branch of the LIRR on the north and Newtown Creek to the south. Industrial and warehouse buildings are on the site's eastern and western borders. Laurel Hill Boulevard is farther to the east and Greenpoint Avenue is farther to the west. Calvary Cemetery is approximately 520 feet to the north of the site. There are no schools or parks within a ¼-mile radius.

The site is comprised of approximately four upland acres. Access to the site is via an easement that extends from Review Avenue between two warehouses and over the LIRR right-of-way. Based on City tax maps, the site is comprised of all or portions of Lots 300, 308, 309 and 1366 within Block 312. Figure 2.2.12-1 (Site Location) shows the location of the site.

The site and the immediately surrounding area are zoned M3-1 for industrial/heavy manufacturing use under a "Use Group 18" designation. The site is currently permitted to handle 958 tpd of putrescible solid waste as a truck-transfer facility. Newtown Creek is an NYSDEC-designated littoral zone and a portion of the existing property is within the 100-year floodplain.

DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Queens Formerly Delivered to the Greenpoint Marine Transfer Station (Queens RFP), requires that proposers commit to exporting all waste processed at their facility (both DSNY and commercial) by rail or barge. In its response, the proposer offered two alternatives, one for barge and one for rail.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 2.2.12-1 Site Location

Review Avenue Site

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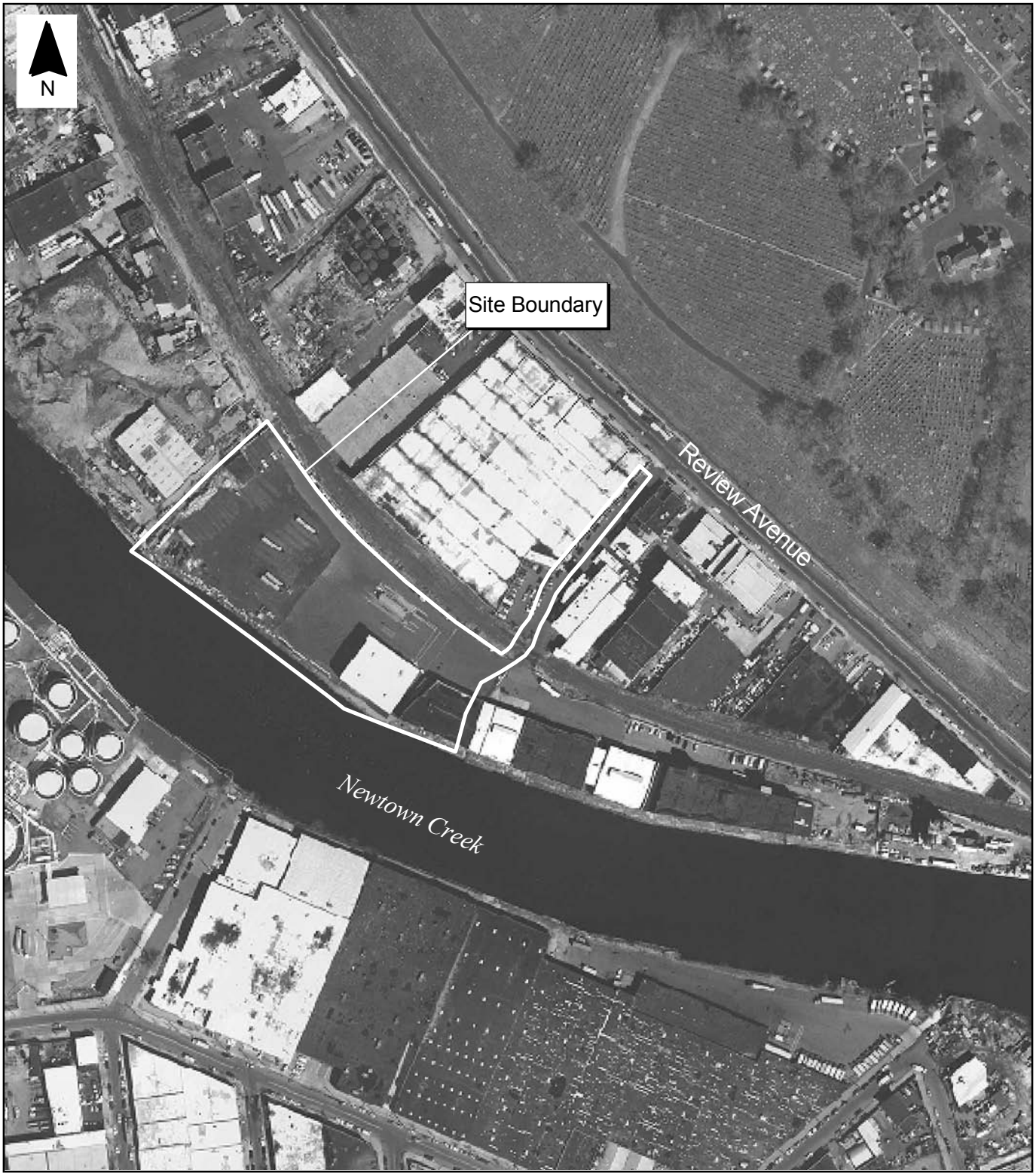
2.2.12.2 *Review Avenue Truck to Barge TS*

Review Avenue is currently permitted as a Truck to Truck TS at 958 tpd. The existing facility has a 13,800-square-foot processing building that includes a 1,600-square-foot tipping floor, access roads, inbound and outbound scales, on-site queuing for up to 25 vehicles, and employee and visitor parking areas. The existing facility is currently used for interim export of DSNY-managed Waste. Waste is unloaded onto the tipping floor using wheel loaders. The waste is pre-crushed by wheel loaders and placed into transfer trailers for out-of-City disposal.

A permit application to modify the facility for barge transport and a capacity expansion from 958 to 1,200 tpd is proposed and was submitted in January 2003. The facility was subject to EAS review for Interim Export in June 2000, which did not evaluate $PM_{2.5}$. The facility would be modified to enable lidding of containers and transport of containerized waste by barge and would require a permit modification to do so. Since Review Avenue was evaluated in the 2000 SWMP FEIS as a truck-to-barge operation at a planned average peak capacity of 1,200 tpd (37 collection vehicles during the peak hour), no on or off-site analysis is required except for $PM_{2.5}$,which was not evaluated in the 2000 SWMP FEIS.

Waste Management, in its response to the DSNY's Request for Proposals to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Queens Formerly Delivered to the Greenpoint Marine Transfer Station (Queens RFP), has proposed Review Avenue as a Truck to Barge TS to accept all of the DSNY-managed Waste generated in Queens CDs 1 through 6, an average of approximately 1,200 tpd. Figure 2.2.12-2 (Facility Footprint) shows the existing facility on an aerial photograph of the existing site. Figure 2.2.12-3 (Plan View) depicts the layout of the facility equipment and structures.

Development of the Review Avenue Truck to Barge facility would involve expanding the processing building to include a lidding operation, the addition of a stick crane for loading/unloading barges, a container handler, the repair/rehabilitation of the bulkhead, and dredging of material from Newtown Creek.



Site delineations are approximate.
Aerial Photos taken 2001-2002

200 0 200 Feet

Figure 2.2.12-2 Facility Footprint

Review Avenue Truck to Barge Transfer Station

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Source: TAMS Consultants, Inc, March 29, 2004

Figure 2.2.12-3 Plan View

Review Avenue Truck to Barge Transfer Station

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Collection vehicles would access the facility via an existing easement from Review Avenue. The easement is approximately 30 feet wide, accommodating two lanes of traffic at the Review Avenue entrance, and narrows to 16-feet and a single lane to cross over the LIRR right-of-way. The LIRR crossing has automated signalized crossing gates. In addition traffic signals would be installed on either side of the LIRR right-of-way to control the passing movements of inbound and outbound collection vehicles. The LIRR grade crossing is also the means of access used by existing businesses located on the south side of the LIRR and to the east of the facility.

Two inbound queuing lanes, one running parallel to the LIRR right-of-way/easement on the south side of the LIRR, and the second running towards the northeast corner of the modified processing building, provide queuing space for approximately 25 inbound collection vehicles between the scalehouse and the LIRR crossing. After weighing, collection vehicles would enter the 40-foot wide by 40-foot long tipping floor via entrances on both the north and south sides of processing building. There is adequate space on the tipping floor for vehicles to tip completely inside the processing building. Wheel loaders would move the waste from the tipping gallery to the storage area on the east side of the building. The waste would be loaded from the storage area into empty containers (40' long by 8' wide by 9'- 6" high) on chassis that are stationed on the north side of the building. Each container holds approximately 18 tons of waste. An overhead electric crane would place the lids on the containers while inside the processing building. Vehicles would exit the processing building, cross the outbound scale and the LIRR grade crossing and then follow the easement onto Review Avenue. The design of the modified facility includes room for storage of 144 containers on the site in the paved area located on the northwest area of the site.

Yard tractors would move the containers approximately 200 feet to the on-site barge loading/unloading area. Reach stackers would be used to: lift the container from the chassis and place the container either: (1) on a shuttle barge that would transport the containers along Newtown Creek to the ASI Terminal in Red Hook, Brooklyn; or (2) onto the on-site container staging area for loading onto barges for out-of-City transport using stick cranes. Dredging of Newtown Creek would be required to provide sufficient draft to moor harbor barges at the bulkhead. Refurbishing of, and improvements to, the bulkhead would be required to provide moorings for the barges.

2.2.12.3 Review Avenue Truck to Rail TS

Collection vehicles would access and exit the Review Avenue Truck to Rail TS along the same route as the Review Avenue Truck to Barge TS via an existing easement from Review Avenue.

Two inbound queuing lanes, one running parallel to the LIRR right-of-way/easement on the south side of the LIRR and the second running towards the northeast corner of the modified processing building, provide queuing space for approximately 25 inbound collection vehicles between the scalehouse and the LIRR crossing. After weighing, collection vehicles will enter the 40-foot wide by 40-foot long tipping floor via entrances on both the north and south sides of processing building. There is adequate space on the tipping floor for vehicles to tip completely inside the processing building. Wheel loaders will move the waste from the tipping gallery to the storage area on the east side of the building. The waste will be loaded from the storage area into empty containers (20' long by 8'-6" wide by 11' high) on chassis that are stationed on the north side of the building. An overhead electric crane will place the lids on the containers while inside the processing building. Vehicles will exit the processing building, cross the outbound scale and the LIRR grade crossing, and then follow the easement onto Review Avenue. The design of the modified facility includes room for storage of 144 containers on the site in the paved area located on the northwest area of the site.

Figure 2.2.12-4 (Facility Footprint) shows the existing facility on an aerial photograph of the existing site. Figure 2.2.12-3 (Plan and Section View) depicts the layout of the Review Avenue Truck to Barge TS facility equipment and structures. The Review Avenue Truck to Rail TS would require the same modifications as the Review Avenue Truck to Barge TS for lidding containers that would be drayed to the Maspeth Rail Yard; however, there would be no improvements for barge loading/unloading.

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Site delineations are approximate.
Aerial Photos taken 2001-2002

200 0 200 Feet

Figure 2.2.12-4 Facility Footprint

Review Avenue Truck to Rail Transfer Station

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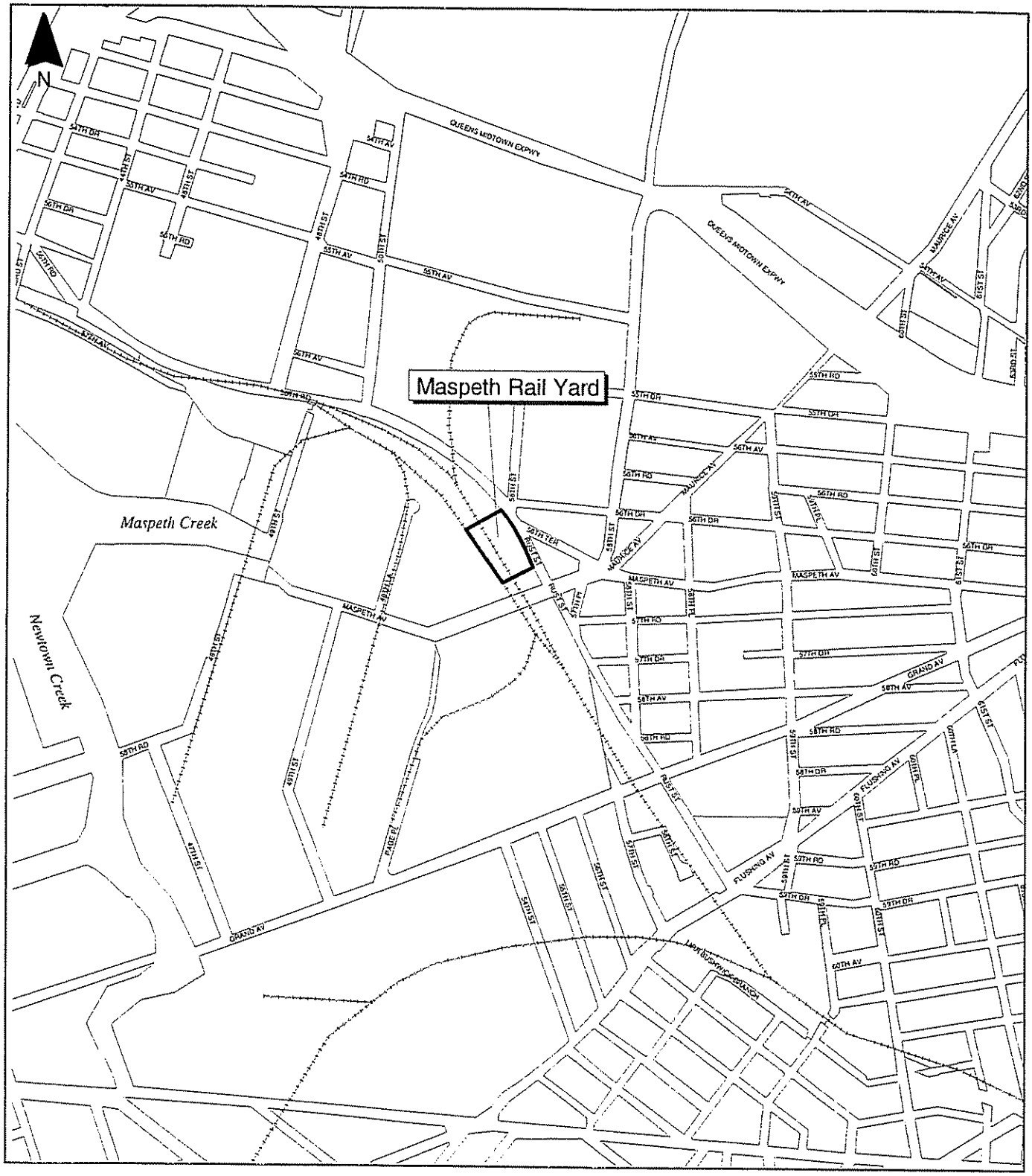
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2.2.12.4 Maspeth Rail Yard

Under the Review Avenue Truck to Rail TS Alternative, DSNY-managed Waste would be containerized and then drayed on chassis by yard tractors to the Maspeth Rail Yard, where the containers would be loaded onto railcars. The Maspeth Rail Yard is approximately 1½ miles from the Review Avenue Truck to Rail TS site in Queens Community District 2. Figure 2.2.12-5 (Site Location) shows the location of the Maspeth Rail Yard site.

Access to the Maspeth Rail Yard is provided via Maspeth Avenue off of Rust Street. At the Maspeth Rail Yard, containers would be unloaded from the chassis and placed onto railcars. Full containers would be brought to the rail yard only when a train is available for loading and would not be stored at the Maspeth Rail Yard. Once a group of railcars is fully loaded, a locomotive would be used to pull the string of railcars off site to a final out-of-City disposal destination. Empty containers returned by train to the Maspeth Rail Yard would be either staged or placed directly on chassis for the return dray back to the Review Avenue Truck to Rail TS and stored at the site. On average, trains carrying empty containers would be returned to the transfer station once per day. In addition, one loaded train would leave the Maspeth Rail Yard per day of operation. With a daily throughput of 1,200 tpd and a railcar capacity of 72 tons, approximately 17 cars can be loaded per day at maximum capacity. Each train travels to an out-of-City disposal facility and returns empty in an approximate 13-day or more cycle.

The trucking of containers of DSNY-managed Waste to Maspeth Rail Yard is considered part of this FDEIS, since, at present, all waste from the Review Avenue Truck to Rail TS goes out by transfer trailer. However, the review is limited to off-site impacts of draying to the Maspeth Rail Yard, since the Maspeth Rail Yard has been permitted as an intermodal yard and any changes in this permit would be subject to DSNY's new rules, as a non-discretionary action. The Queens RFP issued by the City requires that proposers commit to exporting all waste (both DSNY and commercial) processed at their facilities by rail or barge. Thus, the draying of full containers of waste and return of empties between the Review Avenue Truck to Rail TS and the Maspeth Rail Yard equivalent to the proposed fully permitted capacity of the facility (1,200 tpd) would be a change in the Existing Condition. Off-site traffic and noise impact analyses were performed for the equivalent of 1,200 tpd in round-trip truck traffic and results are reported in this FDEIS.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual DB PE

Figure 2.2.12-5 Site Location

Maspeth Rail Yard

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The 2000 SWMP FEIS analyzed a truck-to-barge design for this site at a capacity of 2,300 tpd, which included off-site air quality (PM_{10} and CO), traffic and noise analyses assuming 56 collection vehicles during the peak hour. The 56 collection vehicles assumption is equivalent to operating at 1,200 tpd and draying containers to the Maspeth Rail Yard. The 2000 FEIS will be referred to as sufficient for evaluating impacts associated with the current proposal, except for $PM_{2.5}$, which is reported in this FDEIS.

2.2.13 Collection Vehicle Transport to Essex County WTE Facility

2.2.13.1 Description of the Action

The out-of-City waste-to-energy (WTE) facility is the Essex County Resource Recovery Facility (RRF) located on Raymond Boulevard in Newark, New Jersey, off the New Jersey Turnpike South. It is an existing permitted facility with a capacity of 2,800 tpd that can accept waste from the City, and, as such, no environmental review of this site is required in this FDEIS. Currently DSNY-managed Waste from Manhattan is disposed there under Interim Export contracts.

Any required environmental review would be limited to the evaluation of off-site impacts associated with collection vehicle traffic as it leaves the City to reach the Essex County WTE Facility in New Jersey.

2.2.13.1.1 Traffic

Under CEQR, the objective of a traffic analysis is to determine whether a proposed action can be expected to have a significant impact on street and roadway conditions and on parking facilities. According to the 2001 CEQR Technical Manual, a proposed action that would typically result in fewer than 50 new peak hour passenger car (or equivalent) trip ends is unlikely to have significant traffic impacts. The CEQR guidelines for traffic analysis state that a waste collection vehicle is roughly equivalent to 1.5 passenger cars. Hence, the threshold for potential impacts becomes 33 collection vehicles.

DSNY does not envision a change in post collection routing of DSNY collection vehicles now going to the Essex County WTE Facility. Implementation of this Proposed Action under a 20-year service agreement will not materially change DSNY collection operations While it would change the post-collection destinations of some DSNY collection vehicles, truck routes and dumping schedules would remain substantially the same under the Long Term Plan as under existing Interim Export contracts. This is because DSNY collection vehicles would still be routed to the nearest Hudson River crossing on their way to New Jersey.

Although no change in daily loads is projected, this FDEIS assumes a 20% increase in loads by the implementation year of 2006. Since the average peak number of daily loads in Manhattan is 222 (as of FY 2003), the 20% increase represents just 88 two-way trips over the entire day. When divided between the three Hudson River crossings and converted to an hourly basis, peak hour volume increases at any one intersection would always be below the 33-truck threshold. Therefore, no traffic impacts are anticipated and no traffic analysis is required.

2.2.13.1.2 Air Quality

Carbon Monoxide. The 2001 CEQR Technical Manual contains screening criteria to determine whether a proposed action is likely to significantly increase levels of CO. That criteria level is set at 100 vehicles. If the number of vehicles generated by a proposed action does not exceed 100 vehicles in a single peak hour, no further air quality analysis of CO is required to conclude that the action would not significantly increase CO levels. As noted previously, the maximum additional increment of DSNY trucks assumed was 88 for the entire day, so no CO analysis is required.

Particulate Matter. The 2001 CEQR Technical Manual does not contain screening criteria for mobile sources of PM_{10} or $PM_{2.5}$. To measure the effects of PM_{10} emissions, DSNY modeled existing traffic and anticipated project generated-traffic at four worst-case intersections to determine if the project would contribute to any exceedances of ambient air quality standards for PM_{10}. For $PM_{2.5}$, the NYCDEP has established an interim screening threshold of

21 diesel-fueled vehicles per hour. The Proposed Action generates fewer than 21 heavy-duty diesel-fueled vehicles at any facility or intersection, or on any street segment, so no further analysis of $PM_{2.5}$ is required to conclude that it would not have a significant adverse impact on air quality.

2.2.13.1.3 Noise

The Long Term Plan would generate a small number of additional truck trips (a 20% increase) over Existing Conditions. The 2001 CEQR Technical Manual establishes criteria for determining noise impacts. According to CEQR guidelines, an initial screening can be performed using passenger car equivalents (PCEs). For noise analysis, a waste collection vehicle is equivalent to 47 collection vehicles. If the ratio of PCEs between the Future Action and Existing Conditions is equal to or greater than two at any receptor location selected (a 100% increase), a detailed noise analysis is warranted at that location. This FDEIS assumes a 20% increase in loads and, therefore, a similar increase in truck trips. This increase, however, is well below the 100% increase required to trigger a more detailed noise analysis. Therefore, no significant adverse noise impacts are anticipated and no further noise analysis is necessary.

In summary, no environmental review of this element of the Proposed Plan is required in this FDEIS.

2.3 Proposed Plan Recycling Facilities

2.3.1 30th Street Pier at the South Brooklyn Marine Terminal

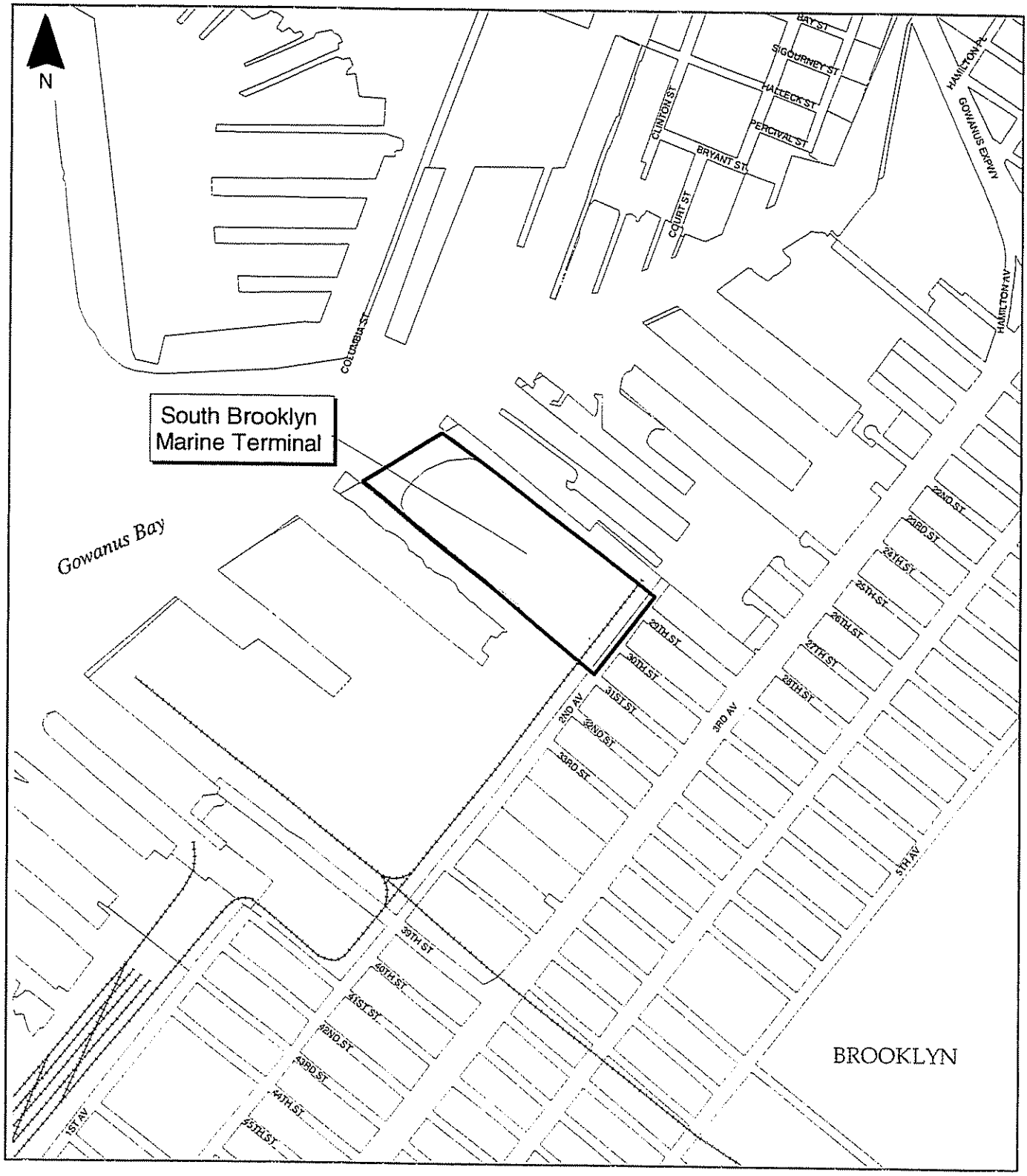
2.3.1.1 Description of the Existing Site

Located along Gowanus Bay in the South Brooklyn Marine Terminal (SBMT) in Tax Block 662, Lot 1, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data,* the 30th Street Pier site is bounded by Second Avenue to the east and the U.S. Pierhead Line to the west. The 29th Street Pier and the 31st Street Pier abut the site to the north and south, respectively. The site is zoned M3-1 between Second Avenue and the U.S. Bulkhead Line, M2-1 between the U.S. Bulkhead Line and the U.S. Pierhead Line, use group 18 (which allows for all manufacturing uses) The site is located in Brooklyn CD 7. The site was used for loading and off-loading marine vessels and long-term import/export cargo storage and processing, office space, and trailer inspections and repair. Figure 2.3.1-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood.

Development of the 30th Street Pier at the SBMT for the acceptance and processing of Recyclables would involve removal of an undetermined amount of piling remnants and other underwater debris from the recent demolition of the finger piers that formerly abutted the 30th Street Pier, and dredging of an estimated 40,000 cubic yards of material. The 30th Street Pier at the SBMT would require construction of two, 400-foot-long-by-60-foot-wide docks constructed on 100'- to 120'-deep piles to support equipment, a fendering system, and sheetpiling to prevent washout.

2.3.1.2 Description of the 30th Street Pier at the SBMT

As shown in Figure 2.3.1-2 (Plan View), the preliminary site plan for the proposed 30th Street Pier at the SBMT consists of:



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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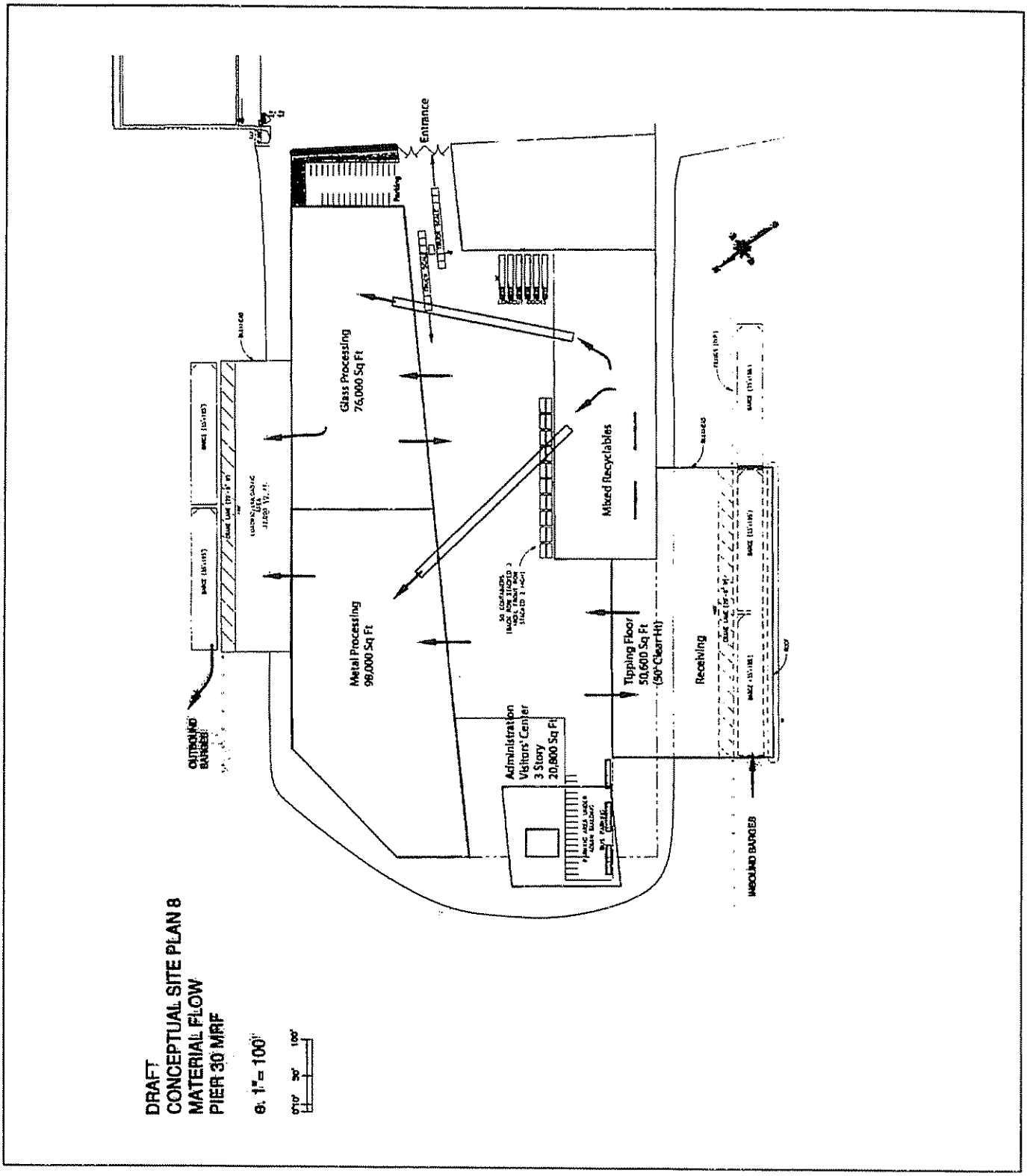
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Figure 2.3.1-1 Site Location

30th Street Pier at SBMT

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Figure 2.3.1-2 Plan View

30th Street Pier at SBMT

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- An approximately 50,000-square-foot enclosed receiving building and tipping area capable of unloading two barges with an overhead crane and receiving truck loads of recyclables;

- An approximately 60,000-square-foot processing area for segregating mixed recyclables, and a 50,000-square-foot area for baling and storage of plastics, paper, non-ferrous metal and residue;

- An approximately 96,000-square-foot area for metals processing, and an approximately 76,000-square-foot glass processing area;

- An approximately 32,000-square-foot loading area for outbound barges, capable of loading two barges with an overhead crane. Note that the area for loading outbound barges would not be enclosed in the current plan. This area is for metal and glass.

- On-site container storage for approximately fifty 20-foot-long shipping containers;

- Loadout docks for outbound transfer trailers;

- Two, 80-foot-long truck scales for weighing inbound and outbound vehicles; and

- An approximately 20,000-square-foot, three-story administration/visitor's center with space for visitor and bus parking.

- To prevent the escape of litter into the surrounding water body, the enclosed barge unloading building would be equipped with the following:

- Enclosed processing areas wherever wind-blown litter could present a problem;

- Fencing and regular housekeeping of the site perimeter as needed to prevent the escape of litter into the waterway;

- Booms and/or a skimmer boat as needed and operating personnel using dip nets to control litter in the enclosed barge unloading/loading area.

In addition, inbound barges carrying mixed MGP will be equipped with netting/fencing to avoid windblown litter from full barges.

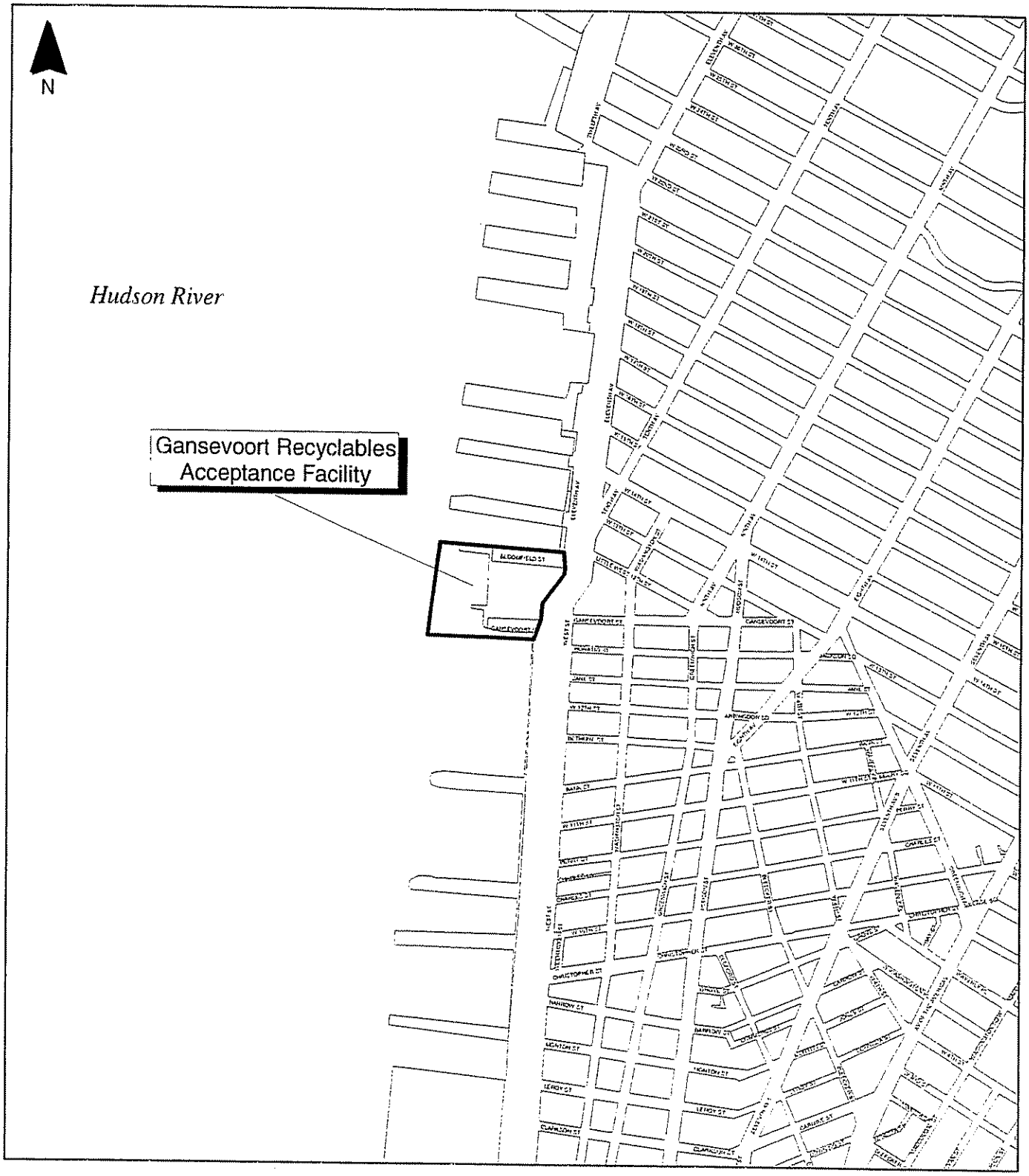
The majority of inbound recyclables (an estimated 85%) are expected to be delivered to the 30th Street Pier Recycling Facility at SBMT by barge. Some recyclables from South Brooklyn collection districts may be delivered directly in DSNY collection vehicles. It is expected that most glass and ferrous metals will be exported from the facility by barge (these two materials comprise an estimated 75% of mixed MGP). Depending on market conditions, plastics, non-ferrous metals and residue from processing operations may leave the site by truck.

2.3.2 Gansevoort Recyclables Acceptance Facility

2.3.2.1 Description of the Existing Site

Located on Block 651, Pier 52 along the Hudson River, the former Gansevoort Street MTS site is bounded by a pedestrian walkway along the West Side Highway to the east and the U.S. Pierhead Line to the west. Bloomfield Street and Gansevoort Street abut the site to the north and south, respectively. The site is located in Manhattan CD 2. The site is zoned M3-2, Use group 18, which allows for all manufacturing uses. The site was formerly used as an MTS, but was closed down in July 1991. Figure 2.3.2-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood.

Development of a new facility at Gansevoort Street for the acceptance and processing of Recyclables would involve the removal of the existing structures on the site. The NYCEDC is currently in the planning stages for converting much of the Gansevoort property into parkland with recreational activities. These recreational areas will include a rocky beach, open market along Bloomfield Street, concession stand, a lawn area, a boat drop off and marina, and a stop for water taxis. . This plan is a part of a larger plan to convert the waterfront from Battery Park City to West 59th Street into park facilities between the U.S. Pierhead Line and the western boundary of West 11th and West 12th Streets. Fire Department Marine Company One, Manhattan's only remaining waterside fire station, will remain on Pier 53 adjacent to the Gansevoort property to the north.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 2.3.2-1 Site Location

Gansevoort Recyclabels Acceptance Facility

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The site is adjacent to public parks on Pier 51 that include a new maritime-themed playground, a water play area, climbing equipment and slides and viewing scopes, which have been open to the public since Spring 2003.

2.3.2.2 Description of the Gansevoort Recyclables Acceptance Facility

NYCEDC is in the planning stages for the Gansevoort Recyclables Acceptance Facility. Once a design is developed, the Gansevoort Recyclables Acceptance Facility will be the subject of a future environmental review. The facility is not subject of permitting as a solid waste facility; however, its construction will likely require Section 10/404 permits from the USACE and Article 15.25 permits from NYSDEC. The environmental review of this facility is be limited to the impact analyses required to support these permit applications and also addresses the off-site impacts associated with traffic, air quality and noise.

2.4 Alternatives Considered – Long Term Export Facilities

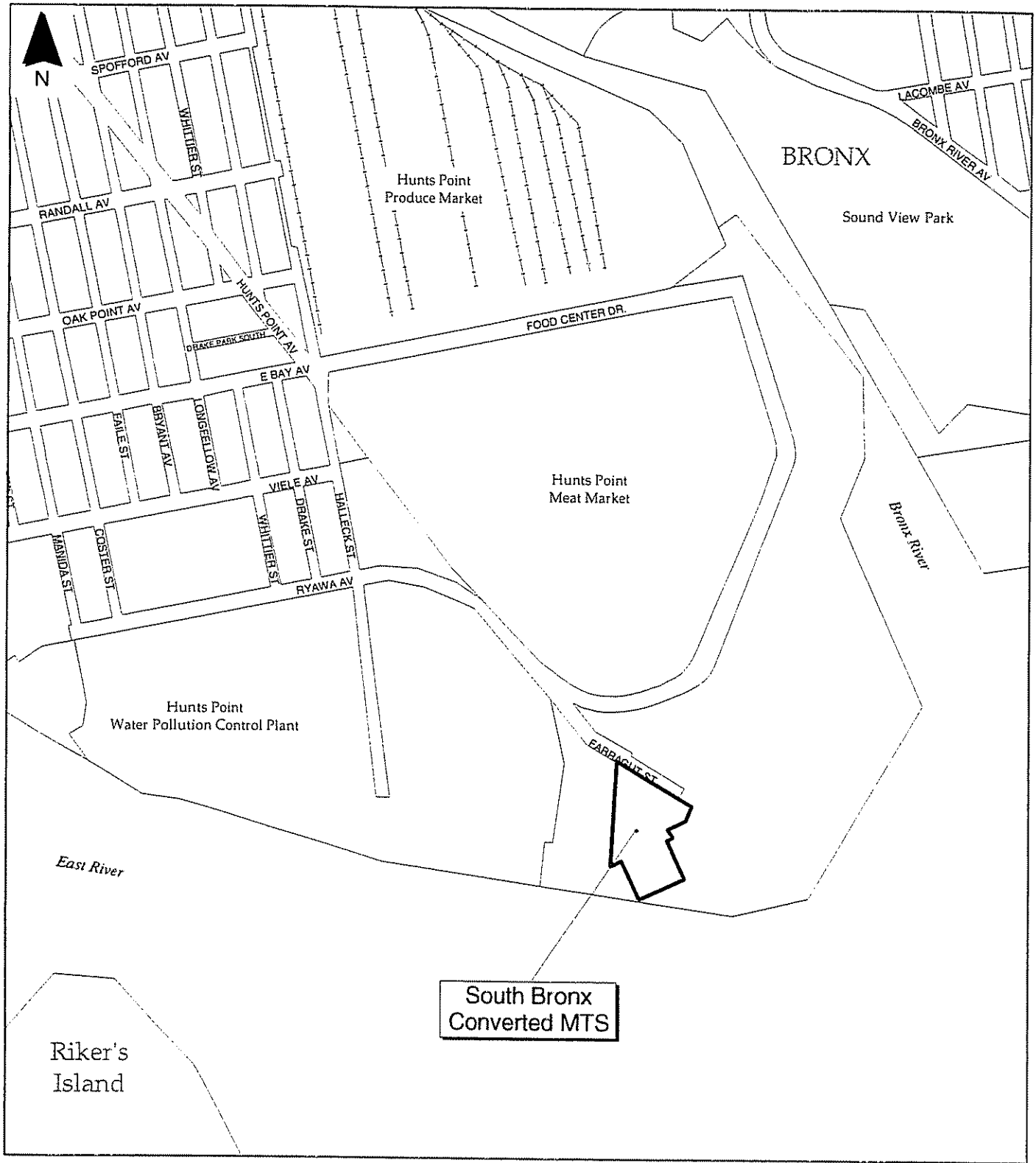
2.4.1 South Bronx Converted MTS, Bronx

2.4.1.1 Description of Existing Site

The existing South Bronx MTS site is located in the Hunts Point area of the South Bronx in Community District 2. This site is bounded by Farragut Street (formerly Hunts Point Avenue) to the north, the East River to the east and south, and the 30-acre site of the relocated Fulton Fish Market (now under construction), to the west. Figure 2.4.1-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The gross acreage of the DSNY-owned lot is approximately 8.6 acres of upland area. In addition to the MTS, other existing DSNY facilities, including a salt storage shed and a DSNY SHS, occupy the roughly triangular project site. An active SHS on the site is comprised of a paved area surrounded by concrete walls topped with cyclone fencing. Accessed through a 30-foot sliding gate facing Farragut Street, the SHS accepts materials such as tires, metal, wood, C&D materials and glass from non-commercial vehicles. An office trailer is also located within this area.

The northern boundary follows Farragut Street and is approximately 400 feet in length. The eastern boundary is approximately 420 feet in length. The southern boundary is located along the East River and is approximately 380 feet in length. The site is located within Tax Block 2781, Lots 301 and 306, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

Most of the Hunts Point peninsula is zoned for manufacturing, the heaviest industrial uses allowed along the Bronx River and East River waterfronts. The Hunts Point Food Market dominates the eastern portion of the peninsula and is the primary distribution point for meat and produce in the City.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 2.4.1-1 Site Location
South Bronx Converted MTS

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The site and surrounding properties within both the primary and secondary study areas fall within an M3-1 heavy industrial district that extends north to approximately East Bay Avenue and Randall Avenue, where it abuts an M1-1 light industrial district. The M1-1 light industrial zoning district provides a buffer between the M3-1 district and the Hunts Point neighborhood (zoned R6) located in the northeastern section of the peninsula. This residential area is comprised of approximately 20 blocks, located roughly between Longfellow, Garrison, Tiffany and Randall Avenues, about one mile from the site.

All property immediately adjacent to the site is owned by the City or its agencies (e.g., DSNY, Department of Correction, NYCDEP and NYCEDC). The relocated Fulton Fish Market is under construction on the parcel west of the site, and scheduled to open in early 2005. When completed, all 50 of the wholesale fish companies that operate in Lower Manhattan will move to the new state-of-the-art facility in Hunts Point.

Other land uses within ¼-mile of the site include a one-story, vacant goods distribution warehouse operated formerly by National Foods located opposite the site, across Farragut Street. This facility is part of the City-owned Hunts Point Market, the wholesale food market and distribution center built in the 1970s that covers approximately the entire eastern half of the Hunts Point peninsula. The Hunts Point Market serves as the primary distribution point for meat and produce within the tri-state area. The meat market is located within the primary and secondary study areas, while the produce market extends north from East Bay Avenue.

Moored at the foot of Halleck Street, south of the Fish Market, is the Vernon C. Bain Center (Prison Barge). It is a reserve facility that can accommodate up to 80 inmates. Abutting the east side of the MTS site is a small paved area near the East River's edge that is used informally by local residents as a point of public access for fishing and viewing the water.

Several one-story market buildings and a two-story cold storage warehouse building are located in the ¼-mile to ½-mile area, north-northeast of the site within the Hunts Point Market. Paved storage and parking areas that surround these distribution warehouses are separated from Farragut Street by wire fencing. Major food distribution businesses including National Foods, Krasdale Foods, and Bazzini Nut Corporation are located off Food Center Drive.

Additional Department of Correction vacant property is to the west of the site. Further west, just within the ½-mile area, is the Hunts Point WPCP operated by NYCDEP. Private industrial and heavy commercial uses, such as auto salvage yards, are located on Ryawa Avenue, Halleck Street, Drake Street and Whittier Street.

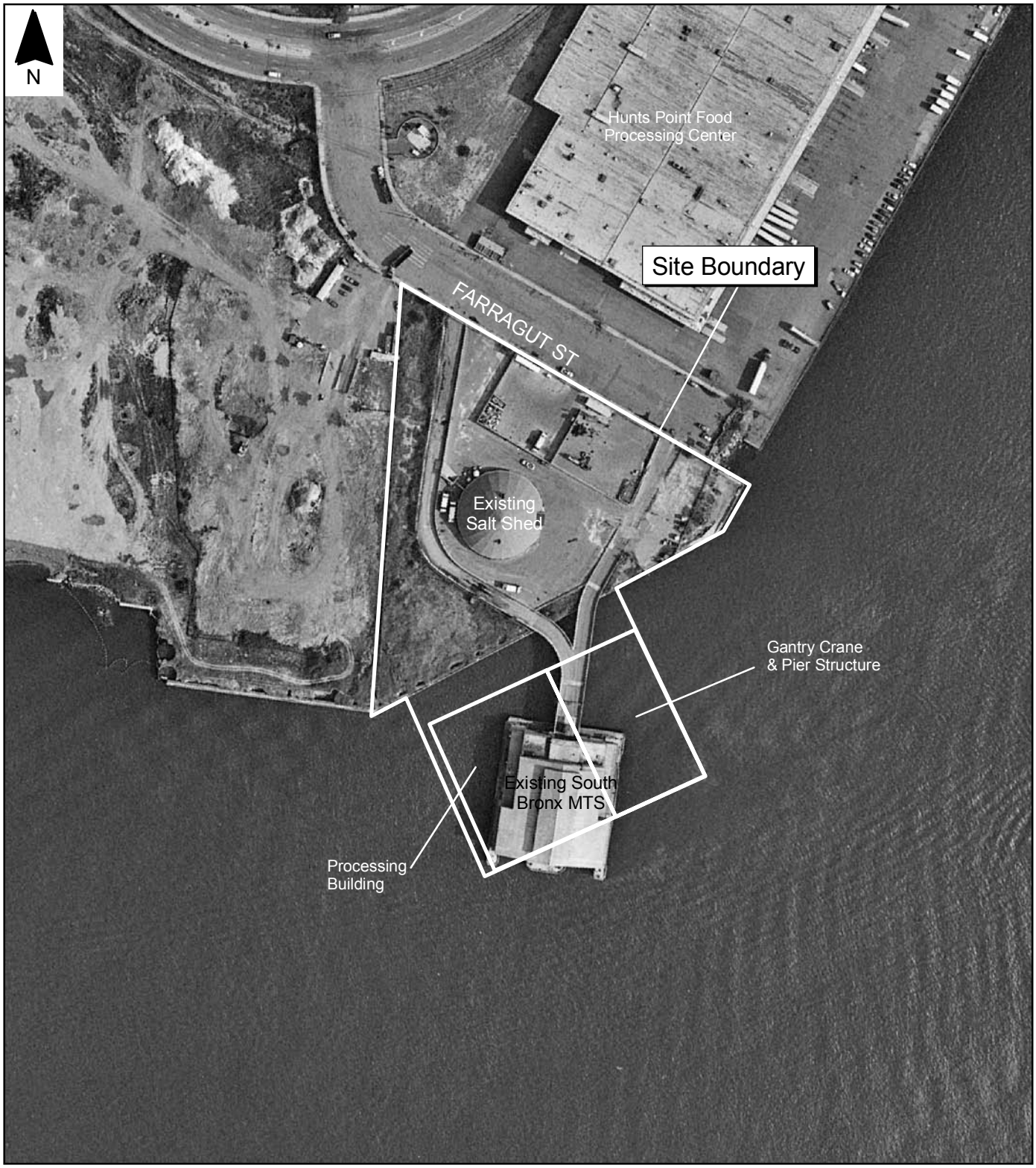
There are no City, state or nationally designated landmarks or historic districts within a ½-mile radius of the site.

Beyond the ½-mile area to the northwest and east, respectively, the Hunts Point peninsula contains additional industrial uses and the Hunts Point residential community (with approximately 11,400 residents).

2.4.1.2 South Bronx Converted MTS

The South Bronx Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.4.1-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the South Bronx Converted MTS superimposed on the site. Figure 2.4.1-3 (Plan and Section View) depicts its layout and the processing building interior.

DSNY-managed Waste would be delivered to the South Bronx Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.



Site delineations are approximate
Base Map Source: New York City Department of Planning
Aerial Photos taken August 2002

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Figure 2.4.1-2 Facility Footprint

South Bronx Converted MTS

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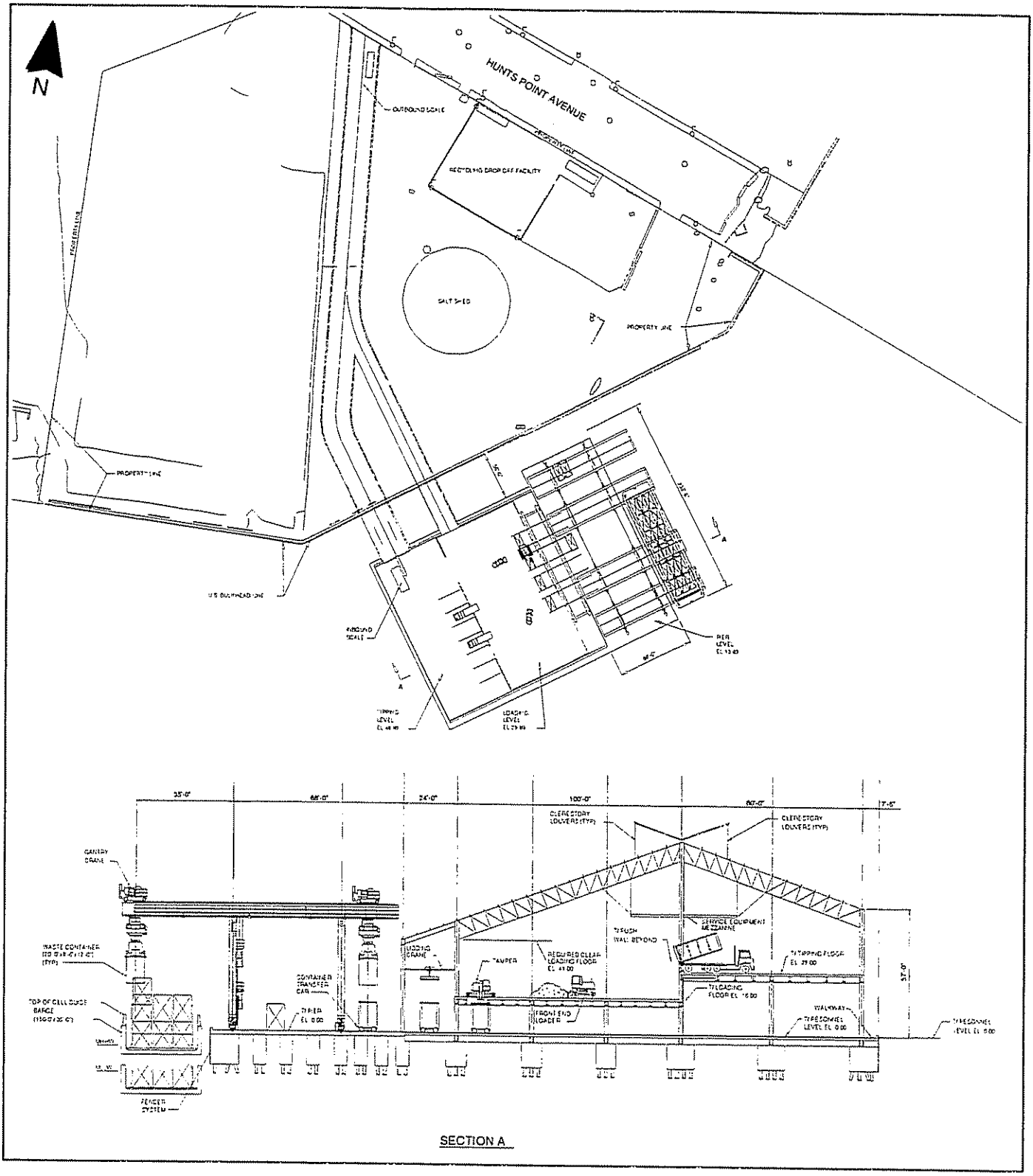


Figure 2.4.1-3 Plan and Section View

South Bronx Converted MTS

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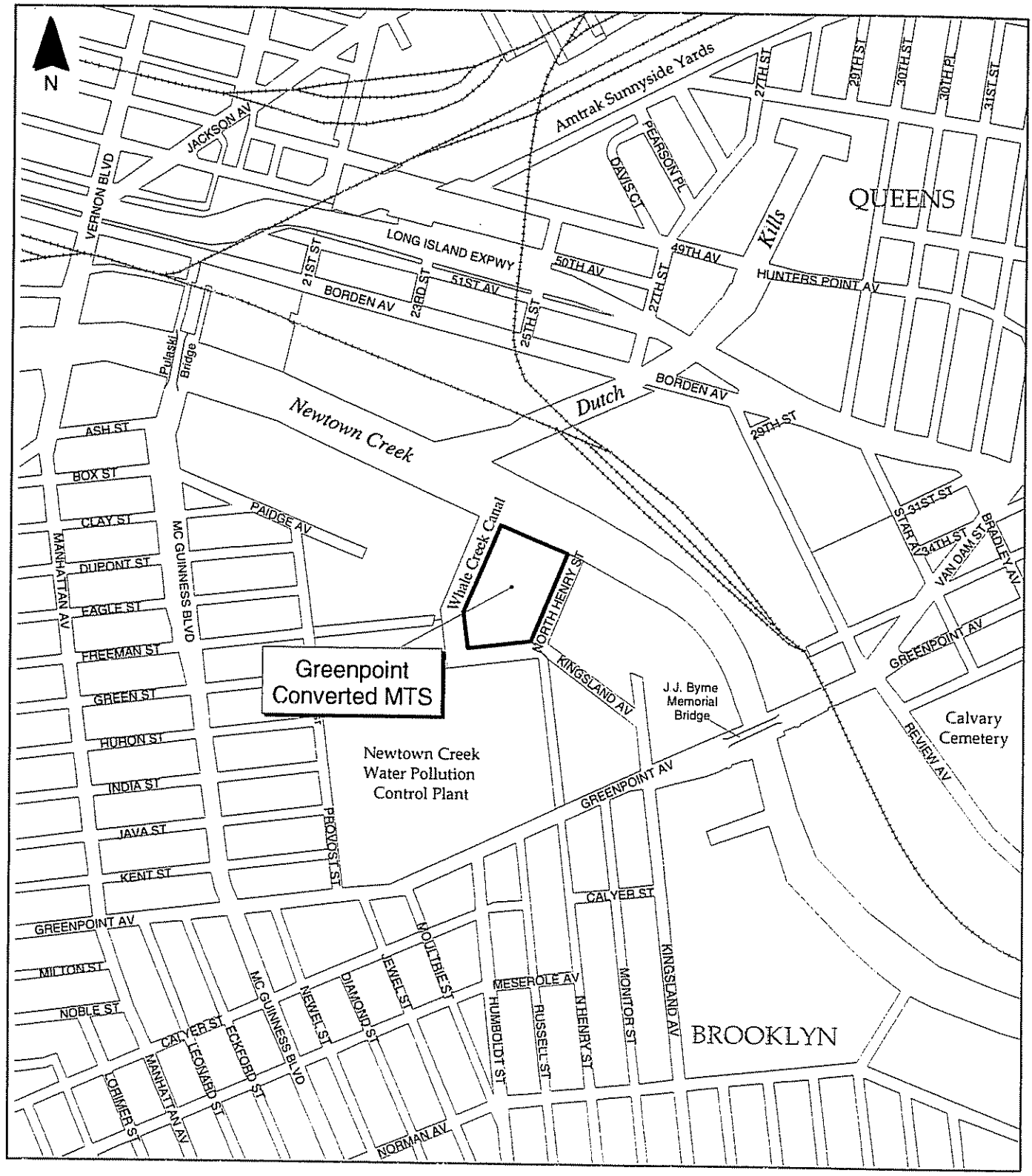
The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.4.2 Greenpoint Converted MTS, Brooklyn

2.4.2.1 Description of Existing Site

The existing Greenpoint MTS site is located on the heavily industrial Newtown Creek in the Greenpoint section of Brooklyn in Community District 1. The site is bounded by Newtown Creek to the north, Whale Creek Canal to the west, Kingsland Avenue (Green Street) to the south and North Henry Street to the east. Figure 2.4.2-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 2508 and Lot 1, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 6.3 acres, of which approximately 3.5 acres is upland. The existing Greenpoint MTS and the former Greenpoint incinerator occupy most of the irregularly-shaped site. A contract has been awarded to demolish the incinerator and work is commencing. An environmental remediation program was conducted prior to



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 2.4.2-1 Site Location

Greenpoint Converted MTS

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demolition. The remaining 2.8 acres consist of water that extends to the pier and bulkhead line. The northern boundary of the site along the U.S. Pierhead Line measures approximately 400 feet, the southern boundary along Green Street is approximately 350 feet in length, the eastern boundary along North Henry Street is approximately 500 feet in length and the western and northern boundary along Whale Creek is approximately 750 feet in length.

The site is located in a large M3-1 zoning district, which allows for heavy industrial uses along the entire length of Newtown Creek. This zoning district encompasses NYCDEP's expanded Newtown Creek WPCP, situated to the south and west of the site, as well as an active NYCDOT asphalt plant to the east of the site. In Queens, an M3-2 zoning district spans the Newtown Creek shoreline from the northern border of Dutch Kills to Manhattan Avenue, and an M3-1 zoning district extends from the eastern shore of the Dutch Kills, for about a mile south to Metropolitan Avenue. In Brooklyn, the M3-1 zoning district is primarily bordered by additional light and medium manufacturing zoning districts (M1-1 and M1-2) providing a buffer area between the heavier industrial uses on the waterfront and the residential districts further inland. On the northern side of the Creek, in Queens, the heavy M3-1 and M3-2 zoning districts are also bounded by M1-1, M1-3, M1-4 and M2-1 manufacturing zones, specifically. A small R6A district is located ½-mile northwest of the site at the edge of the Long Island City Mixed Use Special Purpose District and a small portion of a larger R4 zoning district (which encompasses Calvary Cemetery) is located ½-mile southeast of the site.

The area within ¼-mile of the site is comprised almost exclusively of heavy industrial uses concentrated along Newtown Creek and dominated by the Newtown Creek WPCP. The WPCP, which occupies a large area immediately south of the site, is currently being expanded to the east and to the north (west of Whale Creek Canal), across from the site. An NYCDOT asphalt production facility and private recycling center for construction debris and fill are located east of the site on Kingsland Avenue. The Queens side of Newtown Creek is also characterized by industrial uses such as Case Paper Manufacturers, The Exhibit Company and numerous warehouses fronting on Borden and Review Avenues across from the site.

In addition to the uses bordering the site, the blocks south of the site along the west side of Provost Street are almost exclusively warehouses. Most of these are active, though there are some vacant warehouse buildings and vacant lots scattered throughout. Southeast of the site beyond a private recycling center and WPCP sites are Metro Fuel Oil Depot petroleum outdoor-loading facilities.

Within the ¼-mile to ½-mile area, heavy industrial uses are concentrated along both sides of Newtown Creek and Dutch Kills, and in about half of the area in Brooklyn, particularly south of Greenpoint Avenue. West of the site within the ½-mile area is a residential area comprised mostly of three- to four-story apartment buildings, whose ground-floor commercial uses line McGuinness Boulevard and Manhattan Avenue. In this area, an apartment building recently converted from industrial uses stands west of Provost Street on Dupont Street. South of Meserole Avenue, in the southern portion of the study area, residential uses are interspersed with active warehouses.

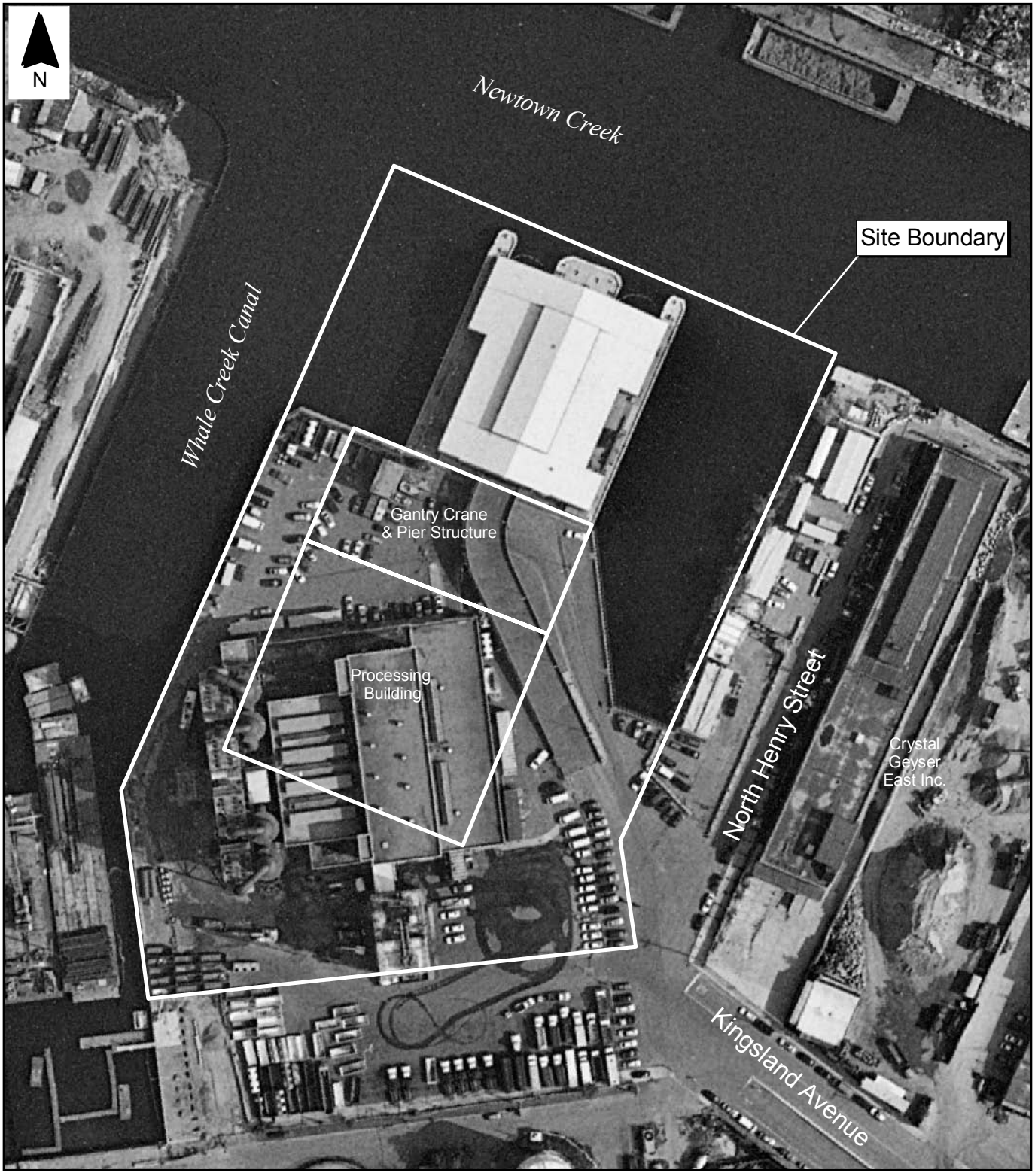
The portion of the ½-mile area that lies north of the site in Queens is comprised almost entirely of industrial uses and warehouses with the exceptions of the Salvation Army Veterans Residence northwest of the site at 21st Street and Borden Avenue, and some commercial uses north of the site along 49th Avenue and east of the site along Greenpoint Avenue.

There are no City, state or nationally designated landmarks, historic districts within ½-mile of the site or archaeological resources on the site.

2.4.2.2 Greenpoint Converted MTS

The Greenpoint Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.4.2-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the Greenpoint Converted MTS superimposed on the site. Figure 2.4.2-3 (Plan and Section View) depicts its layout and the processing building interior.

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Site Delineations are approximate.
Aerial Photos taken August 2002

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Figure 2.4.2-2 Facility Footprint

Greenpoint Converted MTS

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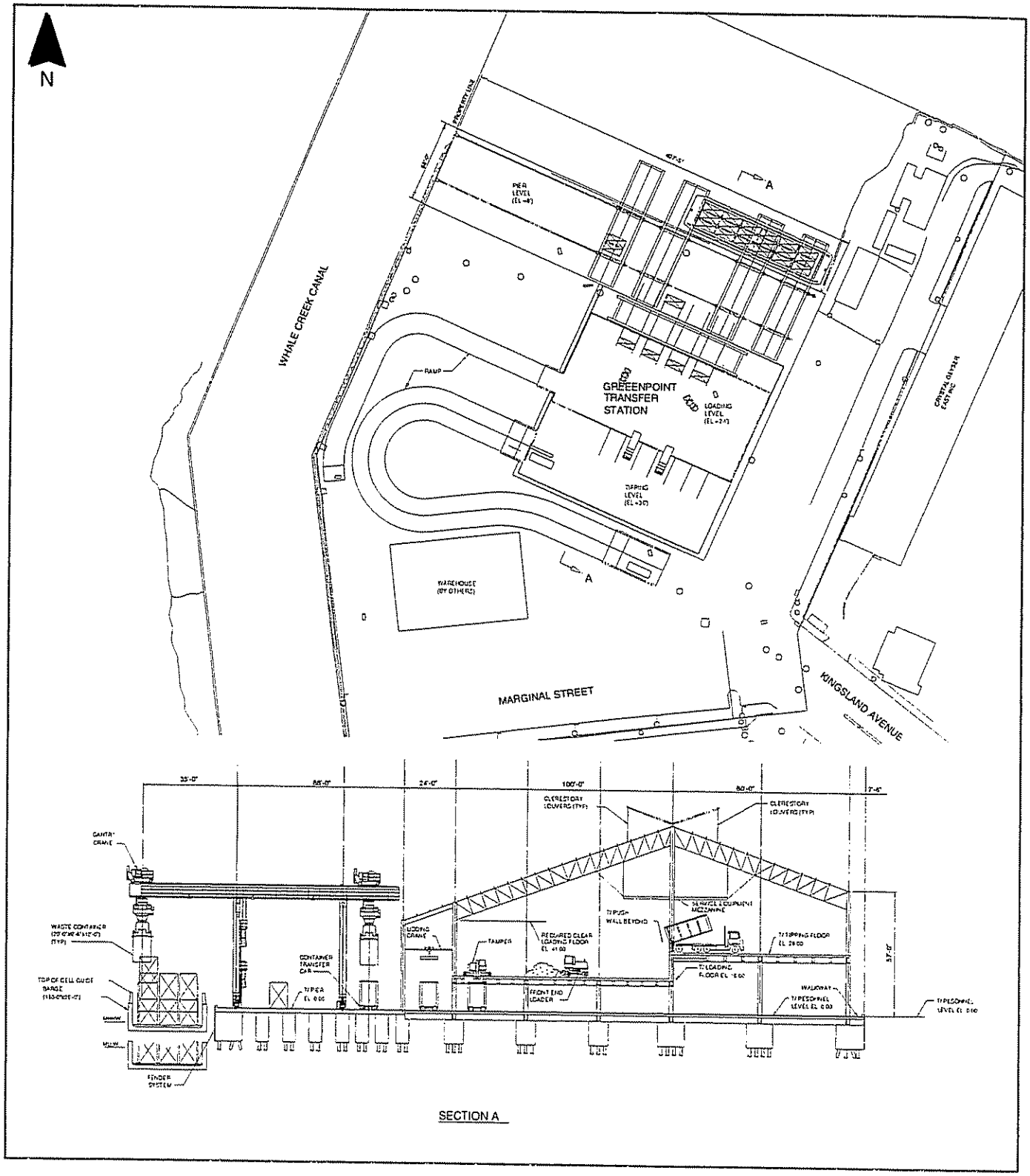


Figure 2.4.2-3 Plan and Section View

Greenpoint Converted MTS

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DSNY-managed Waste would be delivered to the Greenpoint Converted MTS by a variety of collection vehicles, primarily consisting of packer and dual-purpose trucks, including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.

The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.4.3 West 135th Street Converted MTS, Manhattan

2.4.3.1 Description of Existing Site

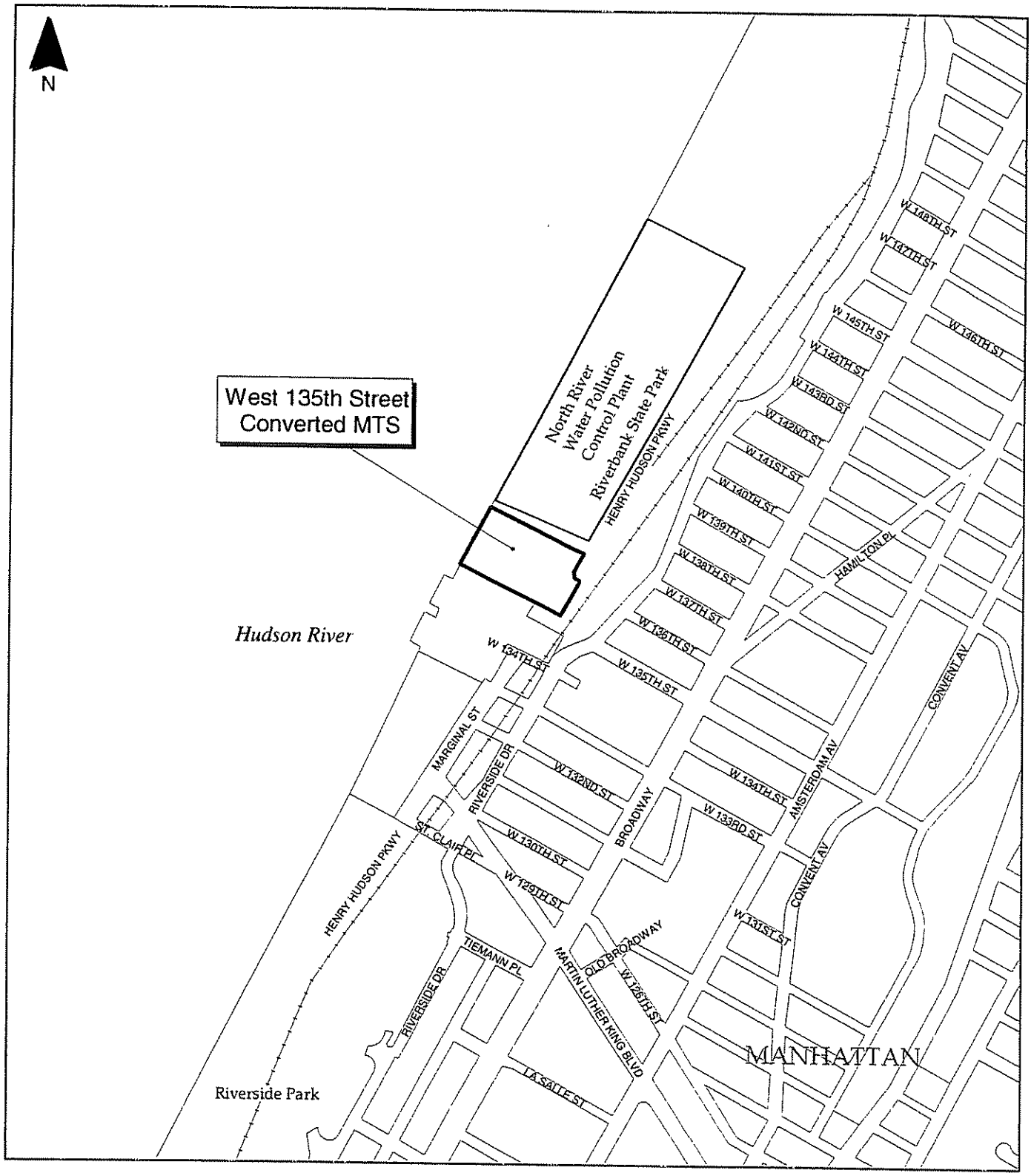
The existing West 135th Street MTS is located at the end of West 135th Street, west of the elevated Henry Hudson Parkway on the Hudson River, in the Manhattanville section of Manhattan in Community District 9. It is constructed almost entirely over water on a

pile-supported structure, just south of the North River WPCP, which has Riverbank State Park on its roof. Figure 2.4.3-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 2101 and Lots 117 and 120, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the site is approximately five acres. The northern boundary of the MTS site measures approximately 600 feet in length to the U.S. Pierhead Line, the eastern border along U.S. Bulkhead Line is roughly 400 feet in length, the site's southern border is approximately 700 feet in length and the western site border along the U.S. Pierhead Line is approximately 420 feet in length.

The site is located in an M1-1 zoning district, which allows light industrial uses. This zoning district extends along the waterfront from West 133rd to West 145th Streets and east to Riverside Drive, and includes the North River WPCP/Riverbank State Park. South of West 133rd Street and east of the site there are several industrial zoning districts (M2-3, M1-2 and M3-1) that extend south to St. Clair Place and inland east of Broadway (between West 133rd and West 135th Streets). Beyond the immediate industrial zoning districts are high-density residential zoning districts (R8 and R7-2), with commercial overlays along Broadway and Amsterdam Avenue.

The area within a ¼-mile radius of the site is characterized by light industrial land uses with some residential, with open space and recreational uses adjacent to the site. Two major roadways, the Henry Hudson Parkway and Riverside Drive, separate the site from upland elevated areas to the east by providing a buffer of about 450 feet between the site and residential uses. In addition, these residential upland areas sit at a higher elevation than the site and do not have direct access to it via the cross streets. Most streets around the site are dead-end or one-way and directed away from the site. Essentially, the only way to access the site is to approach West 135th Street from the south via 12th Avenue, which runs between St. Clair Place and 137th Street under Riverside Drive.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 2.4.3-1 Site Location

West 135th Street Converted MTS

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Immediately north of and adjacent to the site is the City's North River WPCP between West 135th and West 145th Streets, upon which Riverbank State Park is located. The park is an active recreation facility encompassing 28 acres of playing fields and courts, a café, cultural center and amphitheater. (See Section 21.5 for more detail on the park.) Adjacent to the WPCP, at grade level below the Henry Hudson Parkway, is a staging area used by the NYCDEP for ongoing construction at the plant. A variety of other uses are also below the parkway, including the 26th Precinct Police Station at West 135th Street, various warehouses, vacant buildings and commercial establishments. Immediately to the south of the site is a Consolidated Edison natural gas pumping facility. A narrow portion of Riverside Park runs just to the east of the site, along the western edge of Riverside Drive and at the same elevation as Riverside Drive and the residential area adjacent to it.

The undeveloped piers and shore area south of the site located between West 125th and West 133rd Streets, known as "Harlem Piers," are publicly owned property currently used as informal public waterfront access and the subject of a current NYCEDC redevelopment plan.

East of Riverside Drive the area is almost entirely residential. These upland areas are comprised of apartment buildings generally six to seven stories tall except for River View Towers on Riverside Drive north of West 139th Street, which is 24 stories tall. Toward the southern portion of the primary study area, particularly around Broadway, there are ground-level commercial uses and various automotive repair, garage and warehouse storage spaces on the cross streets, including NYCT's Manhattanville Bus Depot (between West 132nd and West 133rd Streets).

Additional land uses located between a ¼-mile and ½-mile radius of the site are generally characterized as residential, with related uses such as schools, churches and libraries, and commercial uses along Broadway and Amsterdam Avenue, the north-to-south arteries. City College, located east of the site on Amsterdam Avenue, covers the area along the eastern perimeter of the secondary study area from about West 130th to West 140th Streets. Grant's Tomb, a national landmark and tourist attraction, is located south of the secondary study area at West 122nd Street and Riverside Drive.

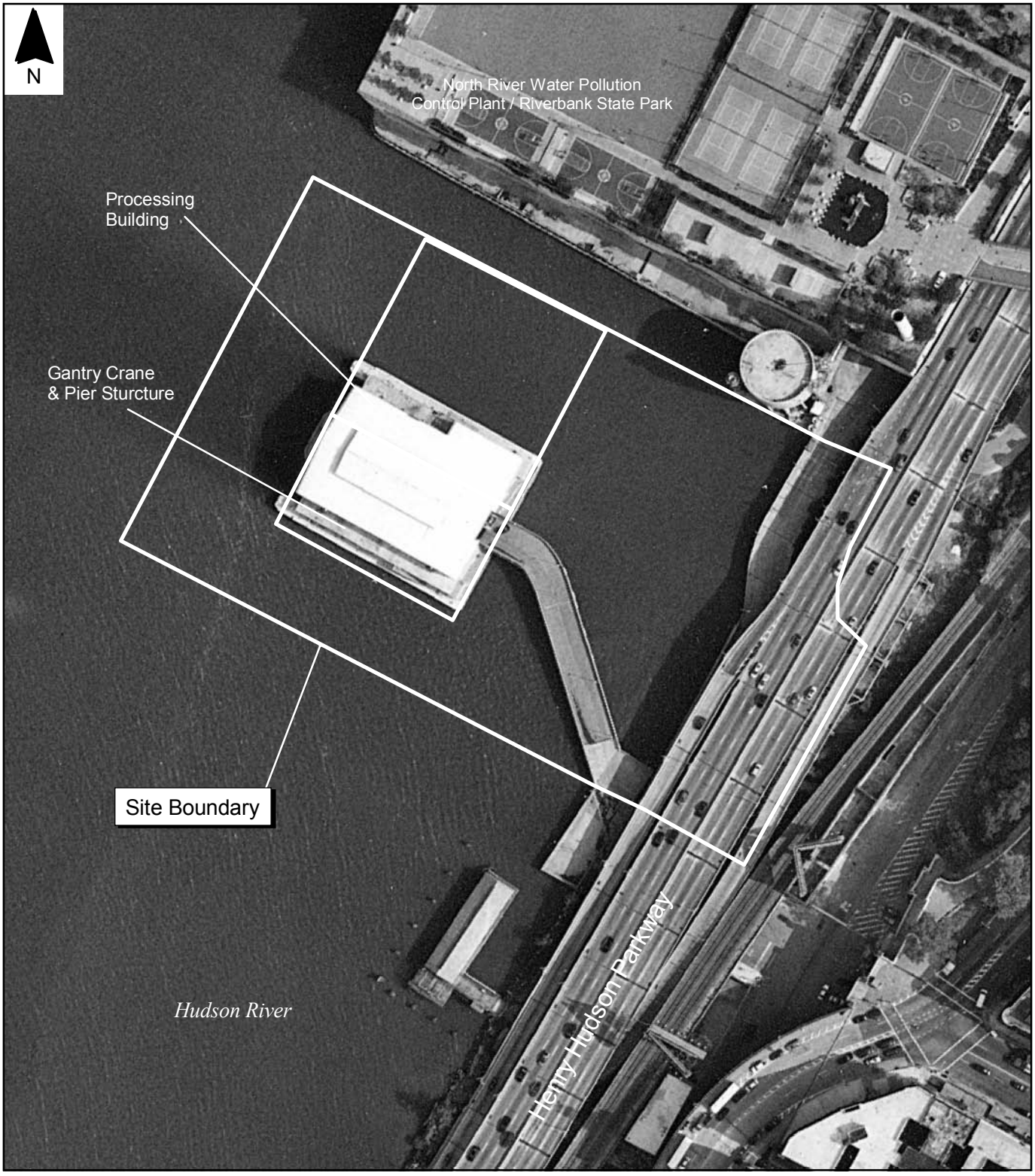
One historic district and several historic properties are located within approximately ½-mile of the site. These properties are designated City landmarks and listed on the State Registers of Historic Places. These properties are: the Hamilton Heights Historic District (including the Alexander Hamilton House), northeast of the MTS; the Croton Aqueduct Gatehouse, at the junction of West 135th Street and Convent Avenue; the IRT Manhattan Valley Viaduct, on Broadway between West 135th and West 122nd Streets; Our Lady of Lourdes Roman Catholic Church, northeast of the site on West 142nd Street; the New York Public Library, Hamilton Grange Branch, northeast of the site on West 145th Street; City College, City University of New York, on Convent Avenue between West 138th and 140th Streets; St. Mary's Protestant Episcopal Church, southeast of the site near West 126th Street; the Hamilton Theater on Broadway and West 146th Street; Riverside Park and Drive south of 129th Street; and the 137th Street IRT Subway on Broadway, east of the site.

No archaeologically significant resources are located at the site or within the study area.

2.4.3.2 West 135th Street Converted MTS

The West 135th Street Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.4.3-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the West 135th Street Converted MTS superimposed on the site. Figure 2.4.3-3 (Plan and Section View) shows the processing building interior.

DSNY-managed Waste would be delivered to the West 135th Street Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building, at the entrance to the tipping floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.



Site delineations are approximate.
Aerial Photos taken August 2002

80 0 80 Feet

Figure 2.4.3-2 Facility Footprint

West 135th Street Converted MTS

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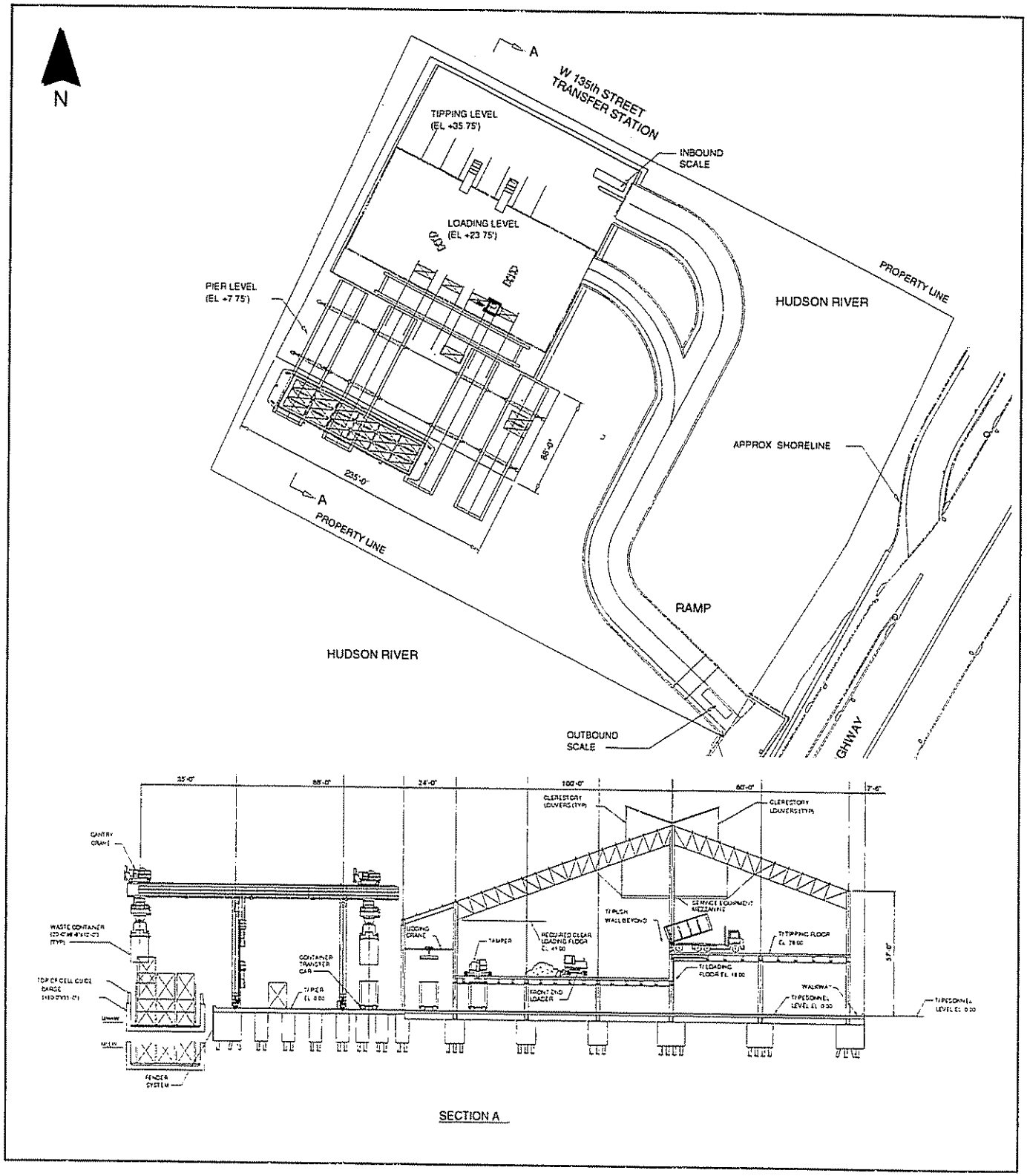


Figure 2.4.3-3 Plan and Section View

West 135th Street Converted MTS

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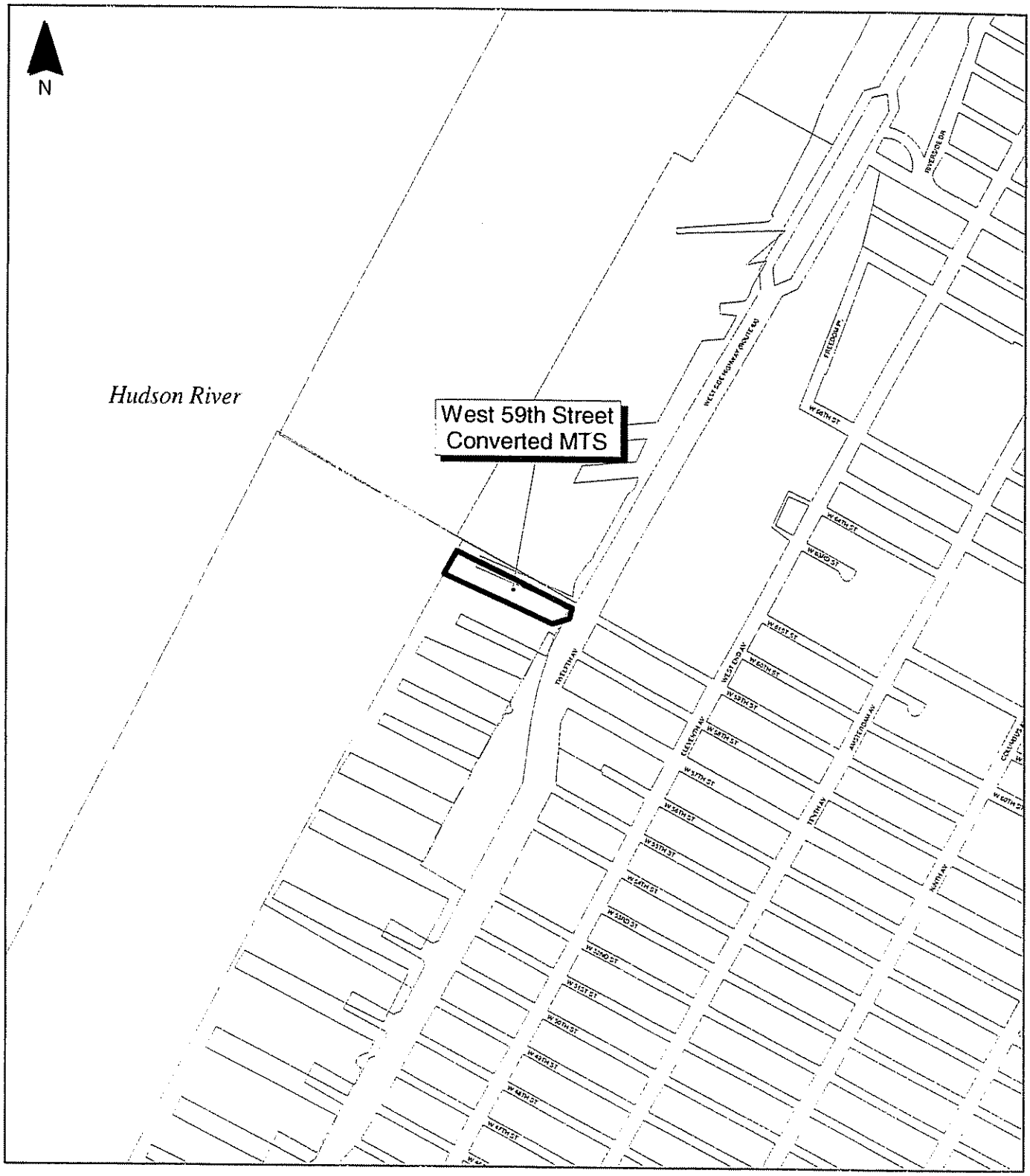
The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level of the building, 16 feet below the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers. When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open, and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

2.4.4 West 59th Street Converted MTS, Manhattan

2.4.4.1 Description of Existing Site

The existing West 59th Street MTS site is located in the Clinton section of Manhattan in Community District 4, at the end of West 59th Street and the Hudson River. Figure 2.4.4-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 1109, Lot 99, based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The gross acreage of the DSNY-owned lot is approximately 2.8 acres. The site boundary extends approximately 780 feet from the U.S. Pierhead Line to 12th Avenue and approximately 160 feet from north to south along the U.S. Pierhead Line. Approximately 0.3 acre of the site is located on land and 2.5 acres are located over the Hudson River.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 2.4.4-1 Site Location

West 59th Street Converted MTS

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The site is located at the northern edge of an M2-3 manufacturing zone, which extends south along the Hudson River waterfront to the Gansevoort Peninsula and then continues south to Battery Park City. Adjacent to the site's northern boundary is a large R10 zoning district that covers the waterfront and the residential portion of the new Riverside South Development.

Directly northeast of the site is a C4-7 zoning district and an M1-6 zoning district. Beyond these immediate districts, much of the area within ½-mile northeast of the site is zoned for high-density residential uses (R8) and a varied mix of commercial and industrial activities.

Southeast of the site, the immediate area is predominantly zoned for a range of industrial uses (M1-5 and M3-2). Within ½-mile of the site there is a mix of commercial and high-density residential (R8 and R9) districts, further to the east and south. In addition, there are two Special Purpose Districts that are in the general site vicinity: (1) the Clinton Special Purpose District, which extends west to 12th Avenue and West 59th Street; and (2) the Lincoln Square Special Purpose District, which extends south to West 60th Street and 10th/Amsterdam Avenues. These Districts were created to preserve and strengthen the residential character of the Clinton neighborhood and to preserve, protect and promote the unique cultural and architectural character of the Lincoln Center area.

Land uses in the site's immediate vicinity are varied and in flux. While the areas to the south and east remain largely dominated by transportation and utility uses, much of the waterfront is being redeveloped for public park use and mixed residential and commercial uses to the northeast and east. The site itself is within the designated Hudson River Park boundary, and plans for the park extend as far north as Pier 97 (at West 57th Street).

The elevated Miller Highway dominates the study area immediately surrounding the site (as it touches down to grade at West 57th Street), as does the massive Consolidated Edison generating plant across 12th Avenue and the large surface parking lot north of West 59th Street. In addition to the plant, Consolidated Edison occupies Pier 98 at the end of West 58th Street immediately south of the site for fuel transfer operations. Just south of Consolidated Edison's pier is Pier 97, which DSNY uses for vehicle parking and various storage operations. Pier 97 is also planned to

be rehabilitated in the future as part of the Clinton Cove Park and may include passive and active recreational areas. Piers 95 and 96 at the end of West 55th and West 56th Streets, respectively, are under construction as part of the Hudson River Park's "Clinton Cove Park," which will feature a boathouse and other waterfront amenities. This section of park is scheduled to open in 2005.

East of 12th Avenue between West 58th and West 57th Streets is the expansive ArtKraft Sign Corporation Factory, as well as other industrial activities located along the side streets. Interspersed with these one- and two-story warehouses are parking garages and surface lots. A large site has been cleared for the new DSNY District (4 and 7) Garage construction across 12th Avenue and spanning West 55th to West 57th Streets. It is scheduled to be completed by 2005. Further east, the pattern changes with a mix of century-old low-rise tenement buildings and recent high-rise apartment towers that have come to characterize the Clinton neighborhood.

Directly north of the site is an unbuilt section of Riverside Park South, which will connect the developing upland residential and commercial development north of West 59th Street to the waterfront under the elevated Miller Highway structure. The northern section, between West 66th and West 72nd Streets, is already completed and features expansive lawn areas, landscaped waterfront walkways and seating. The park segment between West 62nd and West 66th Streets (Phase 3) is actively under construction and due to be completed in 2005. The proposed park ends at West 59th Street, where the upland area is restricted to street right-of-way such that the adjacent bicycle/pedestrian path is the only physical and visual link between Riverside Park South and the emerging Hudson River Park to the south.

The West End Towers Park is a relatively new park on West End Avenue between West 63rd and West 64th Streets that is privately owned, though open to the public,. De Witt Clinton Park is located south of the site between West 52nd and West 54th Streets and 11th and 12th Avenues.

The Riverside South Development will ultimately extend from West 59th to West 72nd Streets on the site of the former Penn Central Yards. In conjunction with the park, the northern segments between West 66th and West 72nd Streets were completed first. Construction continues as a new ABC studio is rising at West 66th Street.

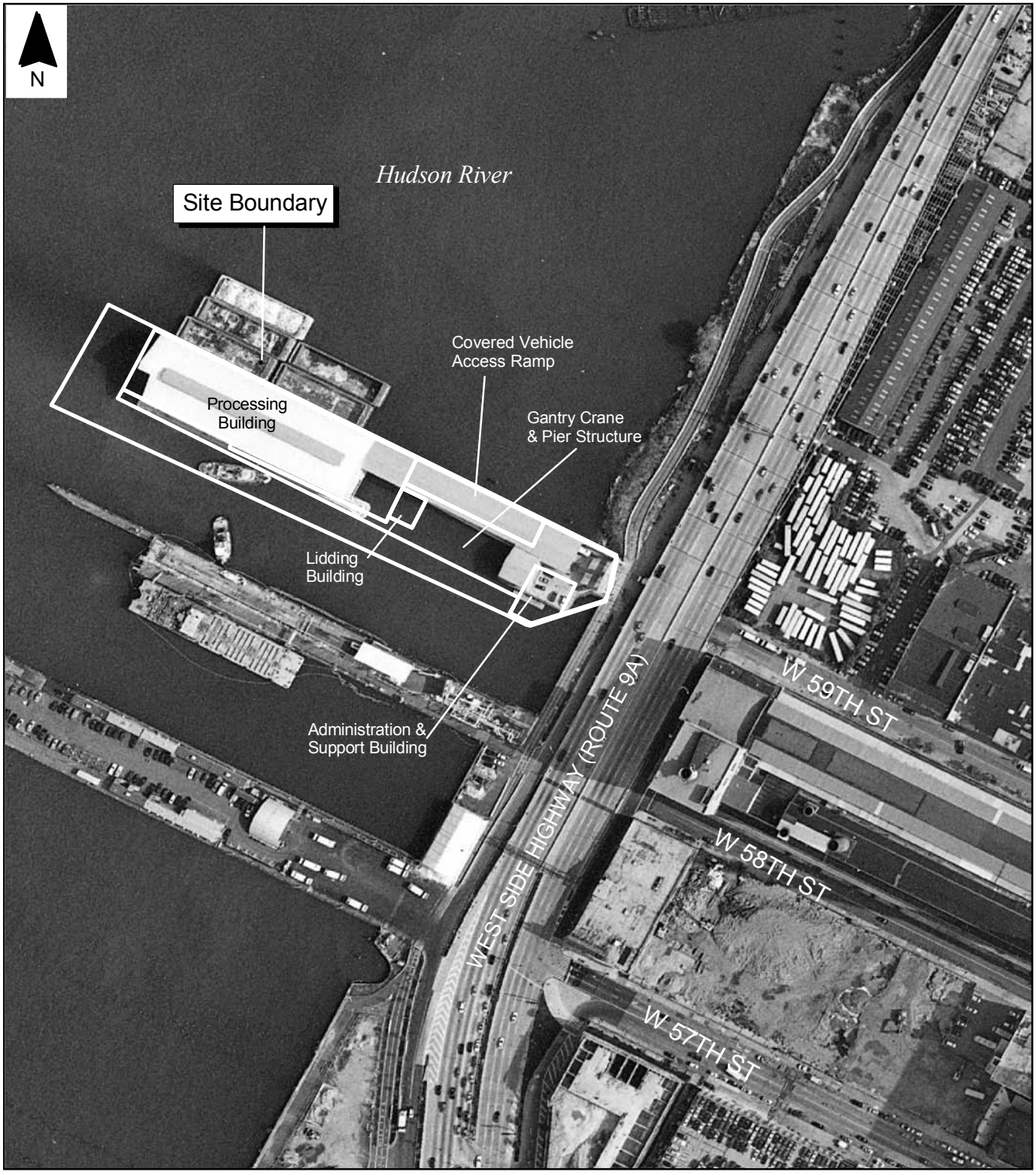
Several landmarks are located within a ½-mile radius of the site. The original Interborough Rapid Transit Company powerhouse is located on West 59th Street approximately 600 feet east of the site. The Church of St. Paul the Apostle is located along West 59th Street, approximately ½-mile east of the site, and the 69th Street Transfer Bridge/New York Central Railroad is located at West 69th Street and the West Side Highway, approximately ½-mile north of the site. The rehabilitation of the 69th Street Transfer Bridge as a ferry terminal is currently being considered as part of the overall development of the Riverside South Complex. This ferry terminal would alleviate commuter congestion problems along the subway lines that serve the area (along 8th Avenue).

No archaeologically significant resources are located on the site.

2.4.4.2 West 59th Street Converted MTS

The West 59th Street Converted MTS would be designed and built with the capability to containerize DSNY-managed Waste for export to out-of-City disposal facilities for the foreseeable future. Figure 2.4.4-2 (Facility Footprint) provides an aerial view of the existing site with a footprint of the West 59th Street Converted MTS superimposed on the site. Figure 2.4.4-3 (Plan and Section View) shows the processing building interior.

DSNY-managed Waste would be delivered to the West 59th Street Converted MTS by a variety of waste collection vehicles, primarily consisting of packer and dual-purpose trucks, and including collection vehicles operated by DSNY and other City agencies (e.g., NYCDPR, NYCHA and non-profit institutions). To enter the Converted MTS, waste delivery vehicles would ascend a ramp to an elevated tipping floor. Waste would be weighed and recorded on an inbound scale located inside of the building at the entrance to the tipping-floor level. After weigh-in, trucks would be directed to one of six tipping bays to discharge waste onto the loading floor. Empty vehicles would exit the building and cross over an outbound scale at the bottom of the ramp.



Site delineations are approximate.
Aerial Photos taken August 2002

100 0 100 Feet

Figure 2.4.4-2 Facility Footprint

West 59th Street Converted MTS

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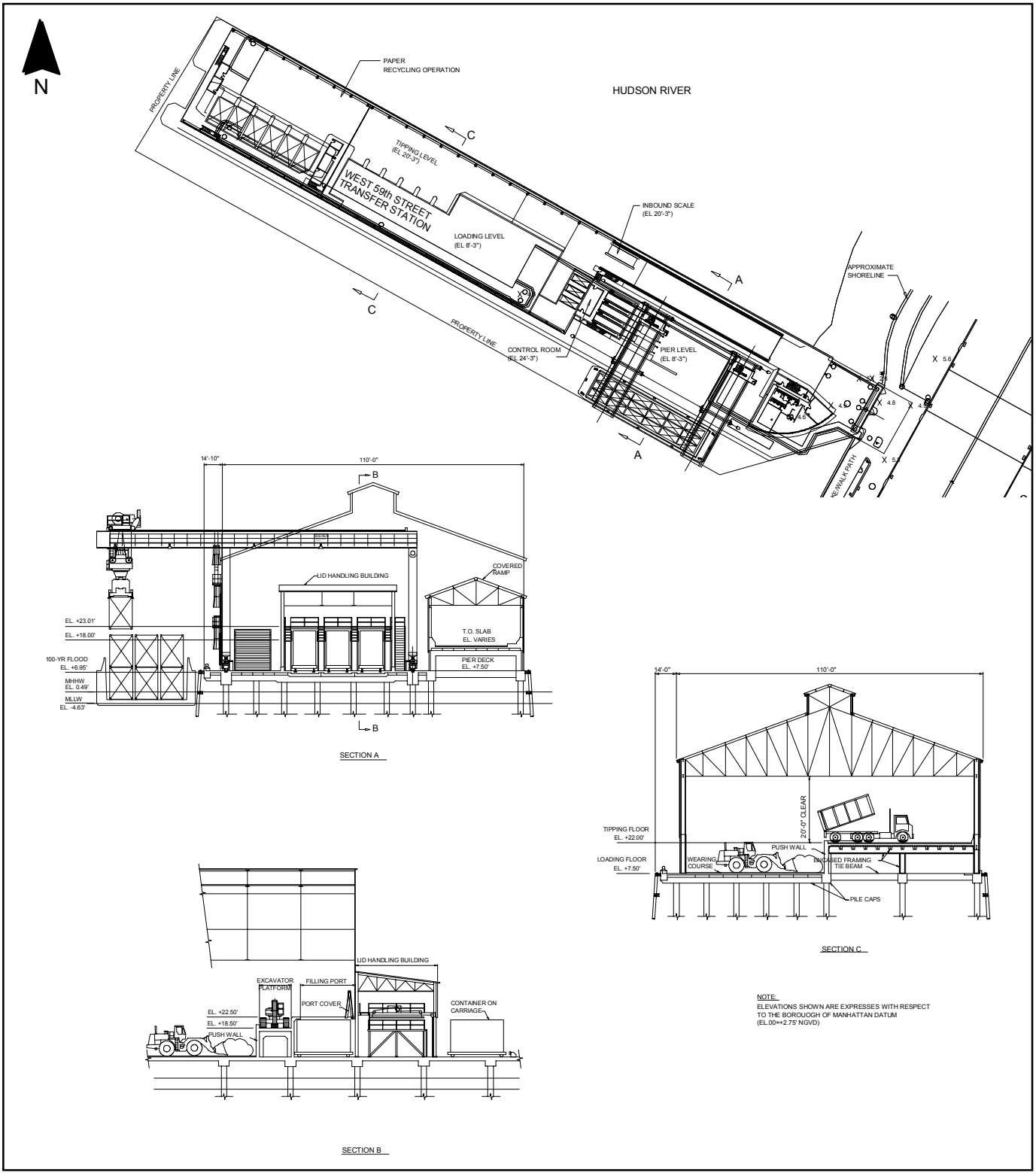


Figure 2.4.4-3 Plan and Section View

West 59th Street Converted MTS

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The Converted MTS would also accept recyclable paper from DSNY collection vehicles and private haulers. The recyclable material would be handled in a separate area from the solid waste processing and storage area. The delivery vehicles for recycling operations would share the inbound and outbound ramp with solid waste delivery vehicles.

The loading floor would be 12 feet below the tipping floor. On the loading floor, front-end loaders would push the waste towards the eastern push wall. After the waste has been moved, an excavator located on an elevated platform 12 feet above the loading floor at the eastern push wall would load and tamp the waste into slots in the floor slab located over open-top containers. The containers would be mounted on shuttle cars that would move on tracks at the pier level at the same elevation as the loading floor. A tamper device working from the loading floor would even and densify the waste in the containers.

When loading is complete, the open-top containers would be moved into position at the enclosed lidding area of the processing building and would be securely lidded with a gasketed steel lid via pressure from a bridge crane with a spreader device. Then, the overhead door to the lidding area would open and the sealed containers would move via motorized shuttle cars onto the outdoor pier level. Gantry cranes would then load the containers onto a barge moored to the pier. The barges, with a containerized waste payload of approximately 1,056 tons (and a gross payload of 1,308 tons), would be towed to intermodal facilities, where the containers would then be transloaded to either trains or ocean-going vessels for transport to out-of-City disposal facilities.

The West 59th Street MTS site is evaluated in this FDEIS with: (1) a Converted MTS for the acceptance and processing of both DSNY-managed Waste and Commercial Waste; and (2) an existing MTS facility that would receive waste delivered in DSNY collection vehicles and load the waste into hopper barges for out-of-City disposal. If the site were selected to receive, transfer and transport commercial waste only, a supplemental environmental review would reassess the potential for adverse impacts based on a more complete understanding of Commercial Waste transfer operations at this site.

2.4.5 Existing South Bronx MTS, Bronx

2.4.5.1 Description of Existing Site

See Section 2.4.1.1, Description of Existing Site, for the Existing South Bronx MTS site.

2.4.5.2 Existing South Bronx MTS

The Existing South Bronx MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming collection vehicles and to monitor the Existing South Bronx MTS operation.

The Existing South Bronx MTS would require complete refurbishment to become operational.

A scale is located at the Existing South Bronx MTS building entrance to record and report the weight of the solid waste prior to its receipt. The scale, which has a 30-foot-long platform, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. Leading to the Existing South Bronx MTS building is a ramp that is sized to accommodate the loadings exerted by the collection vehicles and to provide passage of vehicular traffic in both directions.

The Existing South Bronx MTS building is supported by a series of pilings embedded below the East River. The pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams in turn support a steel frame that supports the reinforced concrete slab that forms the tipping floor.

The design of the 12-bay tipping floor provides for the accommodation of traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 120 feet wide by 140 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing South Bronx MTS. In addition, the internal height of the structure allows sufficient headroom for the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

Provisions have been included to ensure that the tipping procedure occurs in a safe and efficient manner. Along the entire length of the tipping floor, a truck wheel curb, approximately 1 foot by 1 foot, has been installed. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

All solid waste delivered to the Existing South Bronx MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing South Bronx MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing South Bronx MTS is equipped with an air conditioning system in its administrative areas. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related supply duct work.

To prevent traffic to and from the Existing South Bronx MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The width of the facility roadway allows for two-way traffic flow and for cars to proceed to the South Bronx Existing MTS parking area.

The parking lot includes space for approximately 12 vehicles. This is more than adequate room for the number of employees assigned to the Existing South Bronx MTS.

2.4.6 Existing Southwest Brooklyn MTS, Brooklyn

2.4.6.1 Description of Existing Site

See Section 2.2.2.1, Description of Existing Site, for the Existing Southwest Brooklyn MTS site.

2.4.6.2 Existing Southwest Brooklyn MTS

The Existing Southwest Brooklyn MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming collection vehicles and to monitor the Existing Southwest Brooklyn MTS operation.

The existing ramp is sized to accommodate the loadings exerted by the collection vehicles and to provide passage of vehicular traffic in both directions. It has a load-bearing capacity of 40 tons. A scale is located at the Existing Southwest Brooklyn MTS to record and report the weight of solid waste prior to its receipt. The scale is connected to a computerized data record keeping system that maintains an accurate accounting of all weights.

The Existing Southwest Brooklyn MTS structure is supported by a series of pilings embedded within Gravesend Bay. The pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams in turn support a steel frame that supports the reinforced concrete slab that forms the tipping floor. The tipping floor has a slight pitch to allow drainage to inlets and piping located under the tipping floor, which has a load bearing capacity of 40 tons.

The design of the six-bay tipping floor provides for the accommodation of the traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 48 feet wide by 114 feet long. This size provides adequate room for the collection vehicles to enter, back up, unload and exit the Existing Southwest Brooklyn MTS. In addition, the internal height of the structure allows for sufficient headroom so the collection vehicles can end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

All solid waste delivered to the Existing Southwest Brooklyn MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing Southwest Brooklyn MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing Southwest Brooklyn MTS is equipped with an air conditioning system in its administrative areas. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related supply duct work.

To prevent traffic to and from the Existing Southwest Brooklyn MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The width of the facility ramp allows for two-way traffic flow and for cars to proceed to the Existing Southwest Brooklyn MTS parking area. The parking lot includes space for approximately 10 vehicles.

The asphalt road surface design is adequate to withstand the expected loads and is sloped to facilitate drainage. To accommodate stormwater runoff, catch basins and underground/under ramp piping are provided.

2.4.7 Existing Greenpoint MTS, Brooklyn

2.4.7.1 Description of Existing Site

See Section 2.4.2.1, Description of Existing Site, for the Existing Greenpoint MTS site.

2.4.7.2 Existing Greenpoint MTS

The Existing Greenpoint MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming collection vehicles and to monitor the Existing Greenpoint MTS operation.

The ramp is sized to accommodate the loadings exerted by the collection vehicles and to provide passage of vehicular traffic in both directions. To record and report the weight of the solid waste prior to receipt at the Existing Greenpoint MTS, a scale is located at the Existing Greenpoint MTS entrance. The 30-foot-long scale is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. Scale capacity is limited to the existing ramp and tipping floor maximum capacity of 40 tons.

The Existing Greenpoint MTS structure is supported by a series of pilings embedded within Newtown Creek. The pilings, which form the foundation, support a steel frame that supports the reinforced concrete slab that forms the tipping floor. The tipping floor has a slight pitch to allow drainage to a holding tank, then to a sump pit that discharges to the municipal sewer system.

The design of the 12-bay tipping floor provides for the accommodation of the traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 80 feet wide by 160 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing Greenpoint MTS. In addition, the internal height of the structure provides sufficient headroom for the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

To provide a comfortable working environment, the Existing Greenpoint MTS is equipped with an air conditioning system in its administrative areas. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related duct work.

To prevent traffic to and from the Existing Greenpoint MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The de-mapped portion of Kingsland Avenue can also accommodate vehicles, if required. The width of the Existing Greenpoint MTS roadway allows for two-way traffic flow.

The asphalt road surface design is adequate to withstand the expected loads and is sloped to facilitate drainage. To accommodate stormwater runoff, catch basins and underground/under ramp piping are provided.

2.4.8 Existing Hamilton Avenue MTS, Brooklyn

2.4.8.1 Description of Existing Site

See Section 2.2.1.1, Description of Existing Site, for the Existing Hamilton Avenue MTS site.

2.4.8.2 Existing Hamilton Avenue MTS

The Existing Hamilton Avenue MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming collection vehicles and to monitor the Existing Hamilton Avenue MTS operation.

To record and report the weight of the solid waste prior to receipt at the Existing Hamilton Avenue MTS, a scale is located at its entrance. The scale, which has a 30-foot-long platform, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. Beyond the scale is the ramp that provides access to the tipping floor. The existing ramp is sized to accommodate the loading exerted by the collection vehicles and to provide passage of vehicular traffic in both directions. The existing ramp and tipping floor maximum loading capacity is 40 tons.

The Existing Hamilton Avenue MTS structure is supported by a series of pilings embedded within Gowanus Canal. The pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams, in turn, support a steel frame that braces the reinforced concrete slab that forms the tipping floor.

The design of the 12-bay tipping floor (six per slip) provides for the accommodation of traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 185 feet wide by 178 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing Hamilton Avenue MTS. In addition, the internal height of the structure allows sufficient headroom for the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

Provisions have been included to ensure that the tipping procedure occurs in a safe and efficient manner. Along the entire length of the tipping floor, a truck wheel curb, approximately 1 foot by 1 foot, has been installed. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

All solid waste delivered to the Existing Hamilton Avenue MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing Hamilton Avenue MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing Hamilton Avenue MTS is equipped with a portable air conditioner in the office. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a dust control solution pump, odor-suppressant pumps and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related duct work.

To prevent traffic to and from the Existing Hamilton Avenue MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp and scale. The width of the Existing Hamilton Avenue MTS roadway allows for one-way traffic flow and for cars to proceed to the Existing Hamilton Avenue MTS parking area. The parking lot includes space for approximately 10 vehicles. This is adequate room for the number of employees assigned to the Existing Hamilton Avenue MTS.

The asphalt road surface design is adequate to withstand the expected loads and is sloped to facilitate drainage. To accommodate stormwater runoff, catch basins and underground/under ramp piping are provided.

2.4.9 Existing West 135th Street MTS, Manhattan

2.4.9.1 Description of Existing Site

See Section 2.4.3.1, Description of Existing Site, for the Existing West 135th Street MTS site.

2.4.9.2 *Existing West 135th Street MTS*

The Existing West 135th Street MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming collection vehicles and to monitor the Existing West 135th Street MTS operation.

To record and report the weight of the solid waste prior to entering the tipping floor, a scale is located just inside the entrance of the Existing West 135th Street MTS. The scale, which has a 30-foot-long platform and a 60-ton capacity, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. Scale capacity is more than adequate as the ramp and tipping floor maximum loading capacity is 40 tons.

The Existing West 135th Street MTS is supported by a series of piles embedded within the Hudson River. The piles, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams in turn support a steel frame that supports the reinforced concrete slab that forms the tipping floor. The tipping floor has a slight pitch to allow drainage to an oil/water separator and then to a sludge tank that discharges to the municipal combined storm-sewer system.

The design of the 12-bay tipping floor provides for the accommodation of traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 120 feet wide by 140 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing West 135th Street MTS. In addition, the internal height of the structure allows for sufficient headroom allowing the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

Provisions have been included to ensure that the tipping procedure occurs in a safe and efficient manner. Along the entire length of the tipping floor, a truck wheel curb, approximately 1 foot by 1 foot, has been installed. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

All solid waste delivered to the Existing West 135th Street MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing West 135th Street MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing West 135th Street MTS is equipped with an air conditioning system in its administrative areas. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related duct work. This system is enhanced by the MSA Gas Monitors (Model Toxguard SX), which measure the level of CO within the tipping area.

A parking lot is located just south of the ramp entrance, and can accommodate roughly 10 to 12 cars. To prevent traffic to and from the Existing West 135th Street MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The width of the facility roadway allows for two-way traffic flow.

2.4.10 Existing West 59th Street MTS, Manhattan

2.4.10.1 Description of Existing Site

See Section 2.4.4.1, Description of Existing Site, for the Existing West 59th Street MTS site.

2.4.10.2 Existing West 59th Street MTS

The Existing West 59th Street MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming refuse vehicles and to monitor the Existing West 59th Street MTS operation.

To record and report the weight of the solid waste prior to receipt at the Existing West 59th Street MTS, a scale is located at the existing MTS entrance. The scale, which has a 30-foot-1½-inch-by-15-foot platform and a 40-ton capacity, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. Beyond the scale is a covered ramp that provides access to the tipping floor. The ramp is sized to accommodate the loadings exerted by the collection vehicles and to provide passage of vehicular traffic in both directions.

The Existing West 59th Street MTS structure is supported by a series of pilings embedded within the Hudson River. The pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams in turn support a steel frame that braces the reinforced concrete slab that forms the tipping floor. The tipping floor (elevation 22.5 feet) has a slight pitch to allow drainage to a sump pit, which discharges to the city sewer system. The loading capacity of the existing floor and ramp is 40 tons.

The design of the 14-bay tipping floor, of which 12 bays are functional and/or utilized, provides for the accommodation of traffic flow. The dimensions of the floor are approximately 50 feet wide by 300 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the facility. In addition, the internal height of the structure allows for sufficient headroom for the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

Provisions have been included to ensure that the tipping procedure occurs in a safe and efficient manner. Along the entire length of the tipping floor, a truck wheel curb, approximately 1 foot by 1 foot, has been installed. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

To provide a comfortable working environment, the Existing West 59th Street MTS is equipped with an air conditioning system in its enclosed areas that are normally occupied, excluding the tipping floor. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is equipped with supply air fans, exhaust air fans and related duct work. This system is enhanced by an MSA Gas Monitor, Model 516, which measures the percent lower explosive limit (LEL) and the level of CO within the tipping area.

To prevent traffic to and from the Existing West 59th Street MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the 30-foot-wide ramp scale and on-site roadway leading to the scale. The width of the facility roadway allows for two-way traffic flow and for cars to proceed to the Existing West 59th Street MTS parking area. The parking lot includes space for approximately six vehicles. This is adequate room for the number of employees assigned to the Existing West 59th Street MTS.

2.4.11 Existing East 91st Street MTS, Manhattan

2.4.11.1 Description of Existing Site

See Section 2.2.3.1, Description of Existing Site, for the Existing East 91st Street MTS site.

2.4.11.2 Existing East 91st Street MTS

The Existing East 91st Street MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the facility. The function of the tipping floor level is to offload all incoming refuse vehicles and to monitor the Existing East 91st Street MTS operation.

To record and report the weight of the solid waste prior to receipt at the Existing East 91st Street MTS, a scale is located at the facility entrance. The scale, which has a 30-foot-long platform and a 40-ton capacity, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. The existing ramp and tipping floor maximum loading capacity is 40 tons.

The Existing East 91st Street MTS structure is supported by a series of pilings embedded within the East River. The pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams in turn support a steel frame that supports the reinforced concrete slab that forms the tipping floor. The tipping floor has a slight pitch to allow drainage to the municipal sewer system.

The design of the tipping floor provides for the accommodation of traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 50 feet wide by 300 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing East 91st Street MTS. In addition, the internal height of the structure allows for sufficient headroom allowing the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one would be processed at a time. Along the entire length of the tipping floor, a truck wheel

curb, approximately 1 foot by 1 foot, has been installed in order to ensure that the tipping procedure occurs in a safe and efficient manner. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

All solid waste delivered to the Existing East 91st Street MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing East 91st Street MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing East 91st Street MTS is equipped with an air conditioning system in those areas that are occupied, excluding the tipping floor. A dust control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a solution pump, an odor-suppressant pump and related piping. To provide fresh outside air, the tipping area is also equipped with supply air fans, exhaust air fans and related duct work.

To prevent traffic to and from the Existing East 91st Street MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The width of the facility roadway allows for two-way traffic flow.

2.4.12 Existing North Shore MTS, Queens

2.4.12.1 Description of Existing Site

See Section 2.2.4.1, Description of Existing Site, for the Existing North Shore MTS site.

2.4.12.2 Existing North Shore MTS

The Existing North Shore MTS is a two-story structure with the lower level designated as the barge level and the upper level identified at the tipping floor level. The function of the barge level is mainly to secure all barges to the MTS. The function of the tipping floor level is to offload all incoming refuse vehicles and to monitor the Existing North Shore MTS operation.

At the entrance to the Existing North Shore MTS is a 35-foot-wide ramp that provides worker/vehicle access from street level. The existing ramp is sized to accommodate the loadings exerted by the collection vehicles and to provide passage of vehicular traffic in both directions. The existing ramp has a load capacity of 40 tons.

To record and report the weight of the solid waste prior to receipt at the Existing North Shore MTS, a scale is located at the tipping floor entrance. The scale, which has a 30-foot-long platform, is connected to a computerized data record keeping system that maintains an accurate accounting of all weights. The weighing system is located within the Weighmaster Room. Materials from the SHS would be weighed upon delivery to the Existing North Shore MTS or at the vendor's facility.

The Existing North Shore MTS structure is supported by a series of pilings embedded within Flushing Bay. The steel pilings, which form the foundation, are connected by reinforced concrete pile caps and beams. The caps and beams, in turn, support a steel frame that braces the reinforced concrete slab that forms the tipping floor. The tipping floor has a slight pitch to allow drainage to a collection tank which, in turn, discharges to the municipal sewer system.

The design of the 12-bay tipping floor provides for the accommodation of the traffic flow in a safe and efficient manner. The dimensions of the floor are approximately 80 feet wide by 130 feet long. This size provides adequate room for the collection vehicles to enter, back up, discharge and exit the Existing North Shore MTS. In addition, the internal height of the structure provides sufficient headroom for the collection vehicles to end dump without hitting an overhead structure. Several collection vehicles can be accommodated simultaneously, but generally only one or two would be processed at a time.

Provisions have been included to ensure that the tipping procedure could occur in a safe and efficient manner. Along the entire length of the tipping floor, a truck wheel curb has been installed. In addition, each bay is separated by a barrier. These features allow each collection vehicle to back up and deliver its contents directly into the barge. Signs are also posted in visible areas to remind drivers of potential safety hazards.

All solid waste delivered to the Existing North Shore MTS would be placed directly into the barges. Each barge undergoing the loading procedure would be moored internally and covered by the Existing North Shore MTS structure. The structure provides sufficient protection from outside forces until the waste can be secured with netting.

To provide a comfortable working environment, the Existing North Shore MTS is equipped with an air conditioning system in its administrative areas. A dust-control system is provided within the tipping area to suppress the airborne transport of fugitive dusts. This system includes a spray pump, a deodorizer pump and related piping. The tipping area is equipped with supply air fans, exhaust air fans and related duct work.

To prevent traffic to and from the Existing North Shore MTS from impeding the surrounding environs, space is available on site for the staging of collection vehicles. The space includes the ramp, scale and on-site roadway leading to the scale. The width of the Existing North Shore MTS roadway allows for two-way traffic flow and for cars to proceed to the Existing North Shore MTS parking area. The parking lot includes space for approximately 15 vehicles, which is adequate room for the number of employees assigned to the Existing North Shore MTS.

2.4.13 Meserole Street Truck to Rail TS

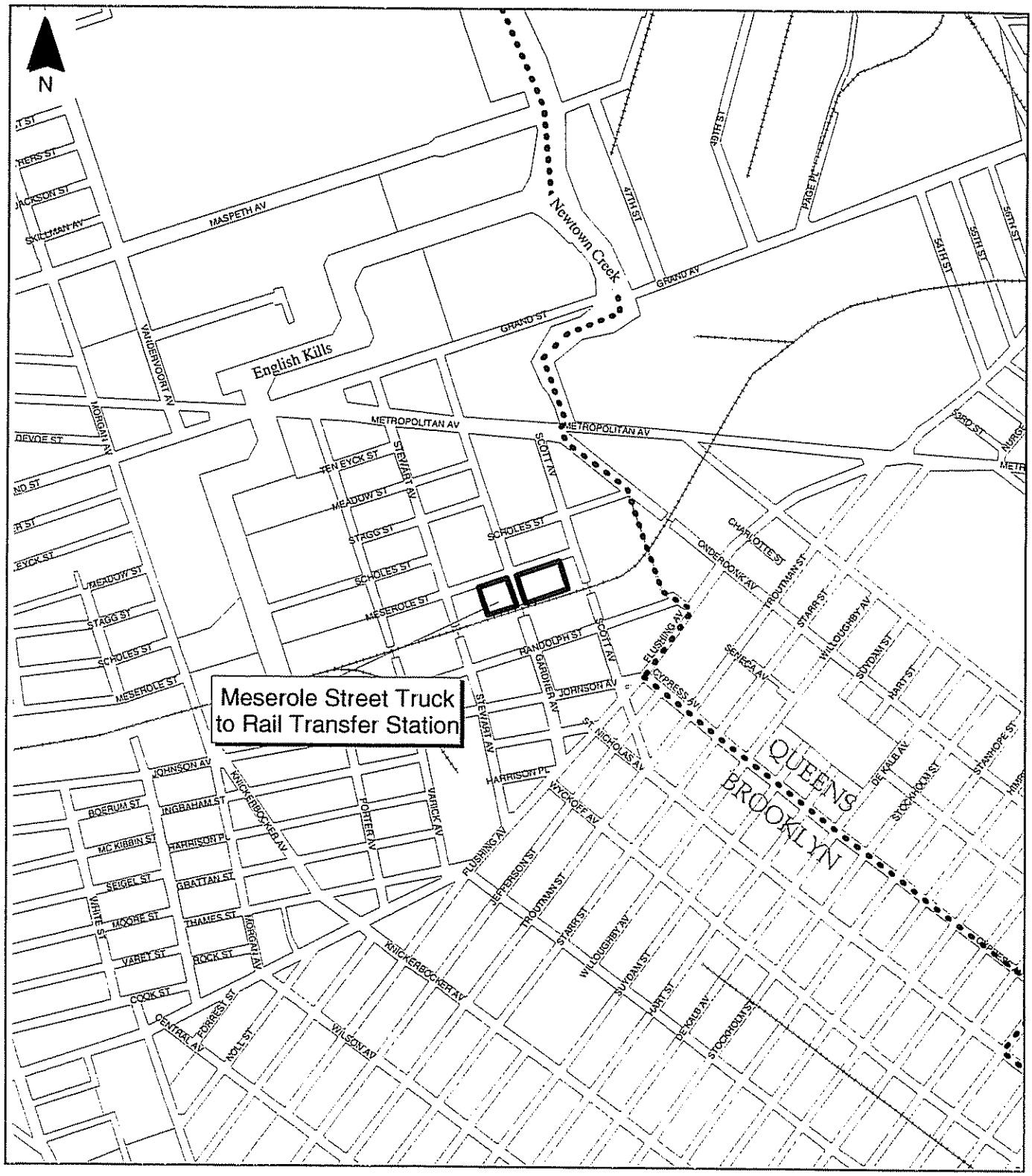
2.4.13.1 Description of the Existing Site

The Meserole Street Truck to Rail TS site is located in Community District 1 near the Brooklyn/Queens border, in the predominantly industrial section of East Williamsburg, Brooklyn. It is generally surrounded by English Kills on the west, Newtown Creek on the east and LIRR tracks to the east and south. The area is also characterized by abundant parking lots and garage facilities, some of which are leased by DSNY for trucks and other equipment storage. Figure 2.4.13-1 (Site Location) shows the approximate boundaries of the site and the surrounding neighborhood. The site is located within Tax Block 2978, Lot 1 and Tax Block 2977, Lot 1 based on a review of 2002 New York City Department of Finance *Real Property Assessment Data*.

The site contains two parcels on either side of Gardner Avenue. 568 Meserole Street contains the Meserole Street (paper) Recycling Facility on the southeast corner of Gardner Avenue and Meserole Street. The Filco Carting Company's truck parking lot occupies most of the lot at 111 Gardner Avenue, on the southwest corner of Gardner Avenue. The existing buildings on the site would be demolished to accommodate new facility construction.

The site is located within an M3-1 zoning district. This M3-1 zone extends north of the site along English Kills, east into Queens and south of the site where there are M1-2 and M1-1 zoning districts as well. The M1 zones act as a buffer between the residential and the heavier manufacturing districts and feature both residential and light manufacturing (e.g., distribution) activities. The nearest residential district, R5B, is located approximately ¼-mile east of the site.

The site is situated just west of the Brooklyn/Queens border, which separates East Williamsburg, Brooklyn, to the west and Maspeth, Queens, to the east. South of the site are several private waste transfer stations (including Allied Waste Systems facilities on Scholes Street and Gardner Avenue, and Waste Management of New York facilities on Stewart Avenue and Varick Avenue), as well as a DSNY parking lot on Meserole Street, a new CD 1 and 4 garage under construction on Varick Avenue and an existing garage on Johnson Avenue.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | URBITRAN | EEA Cambridge Environmental Inc | HydroQual | DD

Figure 2.4.13-1 Site Location

Meserole Street Truck to Rail Transfer Station

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The English Kills canal located ¼-mile east of the site is approximately 200 feet wide and connects with Newtown Creek at the Brooklyn/Queens boundary. The LIRR tracks pass immediately south of the site between Meserole and Randolph Streets. The NY&A operates freight trains on these tracks, with a terminal nearby in Bushwick (to the west).

North and south of the existing site are scrap metal yards and plastic manufacturing facilities, window and door manufacturing, lumber yards and hydraulic equipment leasing companies. Development surrounding the site is primarily low density with open parking lots and low-scale masonry buildings ranging from two to four stories in height.

The area surrounding the site includes some vacant land to the north on Gardner and Stewart Avenues, as well as lots undergoing construction. Some sites have been rehabilitated to accommodate new industrial loft space and community facilities, such as a Peter Jay Sharp Center for Opportunity on Porter Street. The other community facilities include a fire station on Morgan Avenue and a daycare center on Knickerbocker Street.

There is a mix of residential, industrial and some commercial uses further from the site. Industrial uses located nearly ½-mile from the site tend to be of lighter intensity than those found within ¼-mile of the site. These uses include printers, auto salvage and repair shops and food-product manufacture and distribution companies. The nearest residential area, Bushwick, which is ½-mile east of the site along Willoughby and Starr Streets, is characterized by three- and four- story apartment buildings as well as single family homes and townhouses.

According to published sources, no historic structures are located on the site. However, within ½-mile of the site there are three early 20th-century historic districts and one individual property that are listed on the NYSR and NR.

The Vander Ende-Onderdonk House (a.k.a., The Adrian and Anne Wyckoff Onderdonk House), located nearly ¼-mile east of the site, is a City landmark, and listed on the NYSR and NR. It is the oldest Dutch-American fieldstone house in the City, and houses the Greater Ridgewood Historical Society.

The three historic districts within ½-mile of the site (or just beyond) are all intact groupings of late 19th-century/early 20th-century working class rowhouse and tenement housing. They are all in the bisected neighborhood of Ridgewood, which spans the Queens and Brooklyn border.

The Willoughby-Suydam Historic District covers 1½ blocks composed of 50 three-story brick tenements built between 1904 and 1906. Located more than ¼-mile southeast of the site, the district is listed on the NYSR and NR.

The Stockholm-DeKalb-Hart Historic District covers 2½ blocks, approximately ½-mile east of the site. The central portion of this district is designated by LPC as the Stockholm Street Historic District.

2.4.13.2 Meserole Street Truck to Rail TS

Two different companies have proposed to develop a truck-to-rail transfer station at the site. TransRiver Marketing Company, LLP is proposing a completely new truck to on-site rail facility, with 2,000 tpd of capacity. Waste received at the Meserole site would be transported by rail to a proposed American Ref-Fuel WTE facility located in Niagara, New York. The on-site operations would include truck tipping, use of a grapple to load the waste into intermodal shipping containers, and the loading of full containers onto waiting rail cars located inside the transfer facility. Of the proposed capacity, only 1,000 tpd would be utilized by DSNY-managed Waste, with the balance used by commercial accounts. No permit applications or environmental review documents have been filed for the site. Therefore, this FDEIS evaluates the facility at the proposed 2,000 tpd capacity. A new 200-foot-by-200-foot building would be constructed with a concrete tipping floor, push walls, rail line loading dock and two scales. All tipping and loading operations would occur inside the building. Figure 2.4.13-2 (Facility Footprint) shows the site boundary on an aerial photograph. Figure 2.4.~~14~~13-3 (Plan and Section View) shows the building interior.



Site Delineations are approximate.
Aerial Photos taken 2001-2002

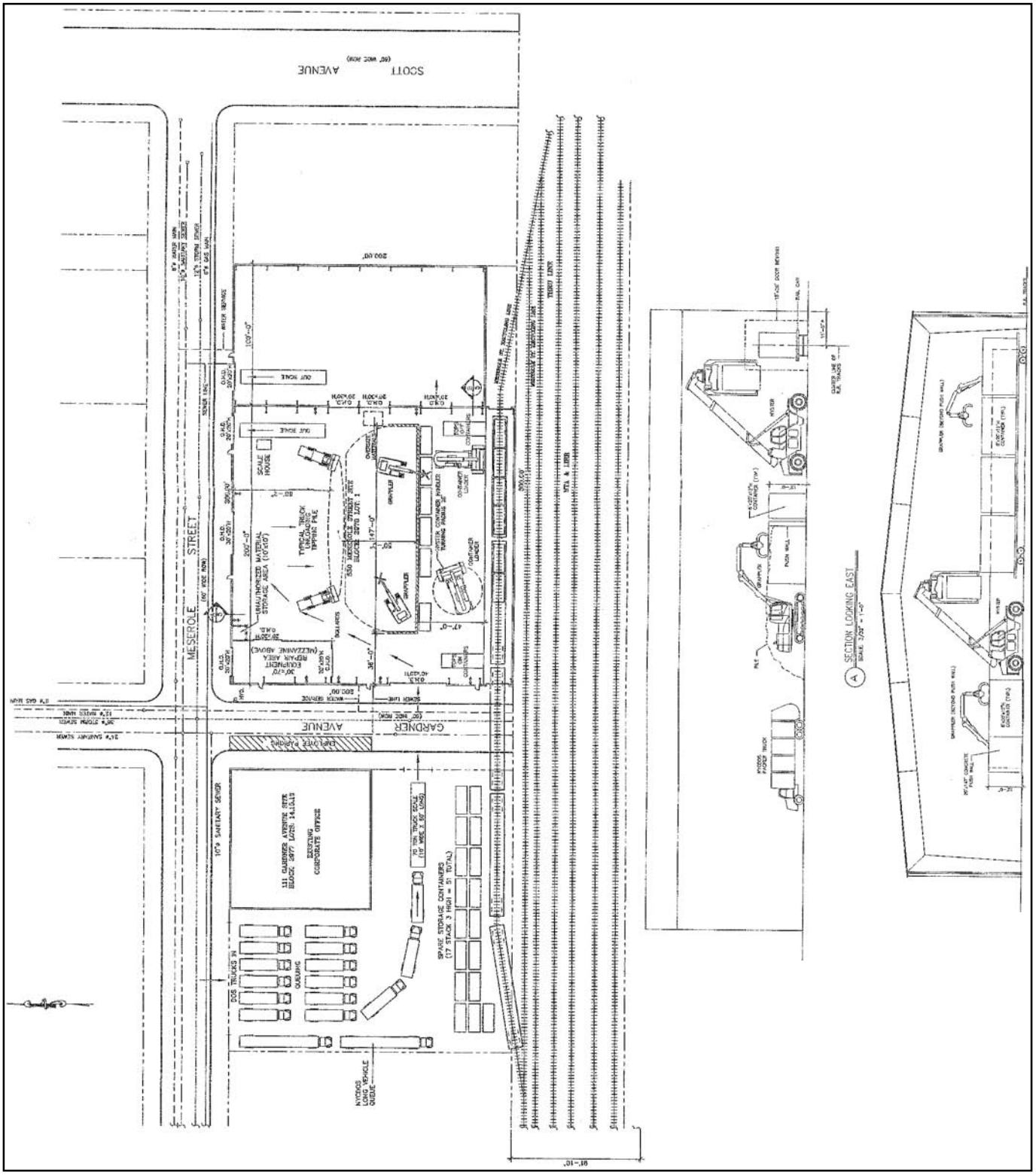
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Figure 2.4.13-2 Facility Footprint

Meserole Street Truck to Rail Transfer Station

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Source: Galli Engineering, PC, March 6, 2004

Figure 2.4.13-3 Plan and Section View

Meserole Street Truck to Rail Transfer Station

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IESI is proposing a new truck to on-site rail facility, with 2,000 tpd of capacity. Limited design, permit or EAS information has been provided; therefore the analysis of this proposal will utilize the TransRiver Marketing Company's proposed design as the basis for environmental review. If IESI is the selected proposer and a modified design is identified, the modifications will be evaluated in a supplemental EIS.

2.4.14 215 Varick Avenue Transfer Station

This site is an Alternative that could potentially be selected by DSNY for Long Term Export by rail of DSNY-managed Waste from the former Brooklyn portion of the Greenpoint MTS wasteshed, Brooklyn CDs 1, 3, 4 and 5. It was not reviewed in the DEIS, because at the time of DEIS publication, it had not yet been identified as a potential rail export site. As part of the Long Term Export procurement being conducted by DSNY, in February 2005, a request for best and final offers was issued in connection with the negotiation of contracts with one or more private transfer stations in this wasteshed for Long Term Export services. In response to this request, the 215 Varick Avenue Transfer Station site was proposed as a truck-to-rail facility for this wasteshed. Because it has not been evaluated in this FEIS, a future decision to contract for the use of this site would be subject to environmental review before DSNY could implement a Long Term Export contract. Furthermore, any final decision on this site, assuming adoption and approval of the New SWMP, would result in termination of the existing Interim Export under which waste from Brooklyn CDs 4, 8 and 15, 17 and 18 is exported via transfer trailer from this site to out-of-City disposal facilities.

2.4.14.1 Description of Existing Site

The 215 Varick Avenue Transfer Station site is an existing permitted facility in the East Williamsburg section of Brooklyn, in Brooklyn Community District #1 on Varick Street near the intersection of Metropolitan Avenue. The facility and property are owned by Waste Management and it currently receives DSNY-managed Waste under Interim Export. No wetlands are located on the site or in the surrounding area. The site is bounded by industries on the north, south and east and by the English Kills on the west. Flushing Avenue is farther to the south and southeast and Metropolitan Avenue is farther to the north. There are no schools within a ¼-mile radius.

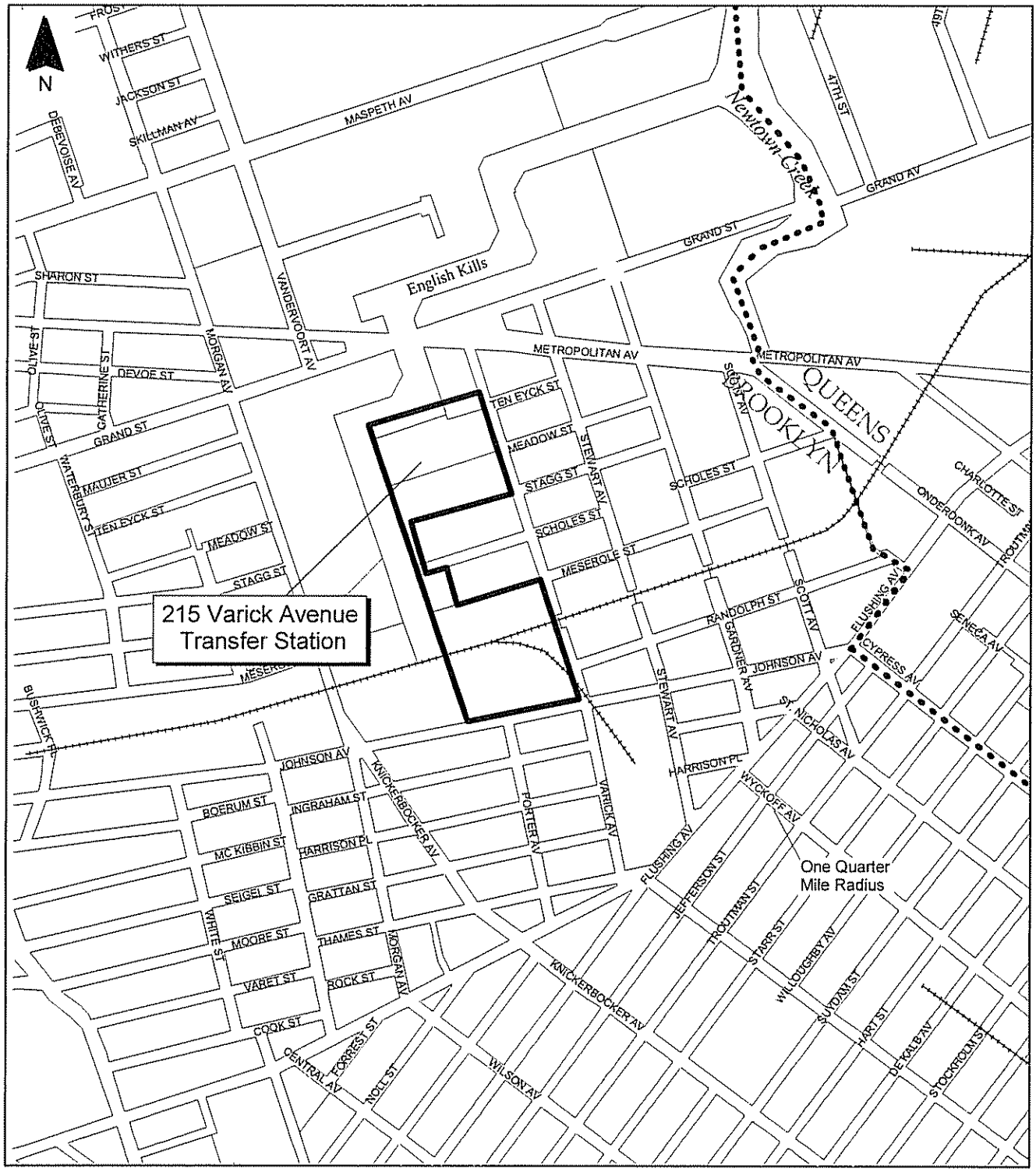
The 6.4 acre Cooper Park is located approximately ¼ mile from the site to the northwest; occupying an entire block between Morgan Avenue, Sharon Street, Maspeth Avenue and Olive Street.

The site is comprised of approximately 4.6 acres and is located between Varick Street and the English Kills, a tributary of Newtown Creek. Of the 4.6 acres of property, approximately 1.5 acres are occupied by buildings. Based on City tax maps, the site is comprised of all or portions of Lots 1, within Block 2950.

The site and the surrounding properties are zoned M3-1 for industrial/heavy manufacturing use under a "Use Group 18" designation. Figure 2.4.14-1 (Site Location) shows the location of the site. Figure 2.4.14-2 (Facility Footprint) shows an aerial view of the site and its major features.

The existing property is currently situated between 6 and 10 feet Brooklyn Highway Datum (BHD). The 100-year tidal surge or 100-year flood plain is at elevation 7.44 feet BHD according to FEMA floodplain maps. All waste handling components of the facility's operation have been placed at elevation 7.5 feet BHD or higher.

Access to the site is via NYCDOT-designated truck routes, including Varick Avenue, Meadow Street and Ten Eyck Street. Designated NYCDOT through truck routes between the transfer station and other regions of the service area include the Long Island Expressway and the Brooklyn-Queens Expressway. All vehicles accessing the site use the Varick Avenue entrance gate.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 2.4.14-1 Site Location

215 Varick Avenue Transfer Station

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Site Delineations are approximate.
Aerial Photos taken 2001-2002

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Figure 2.4.14-2 Facility Footprint

215 Varick Avenue Transfer Station

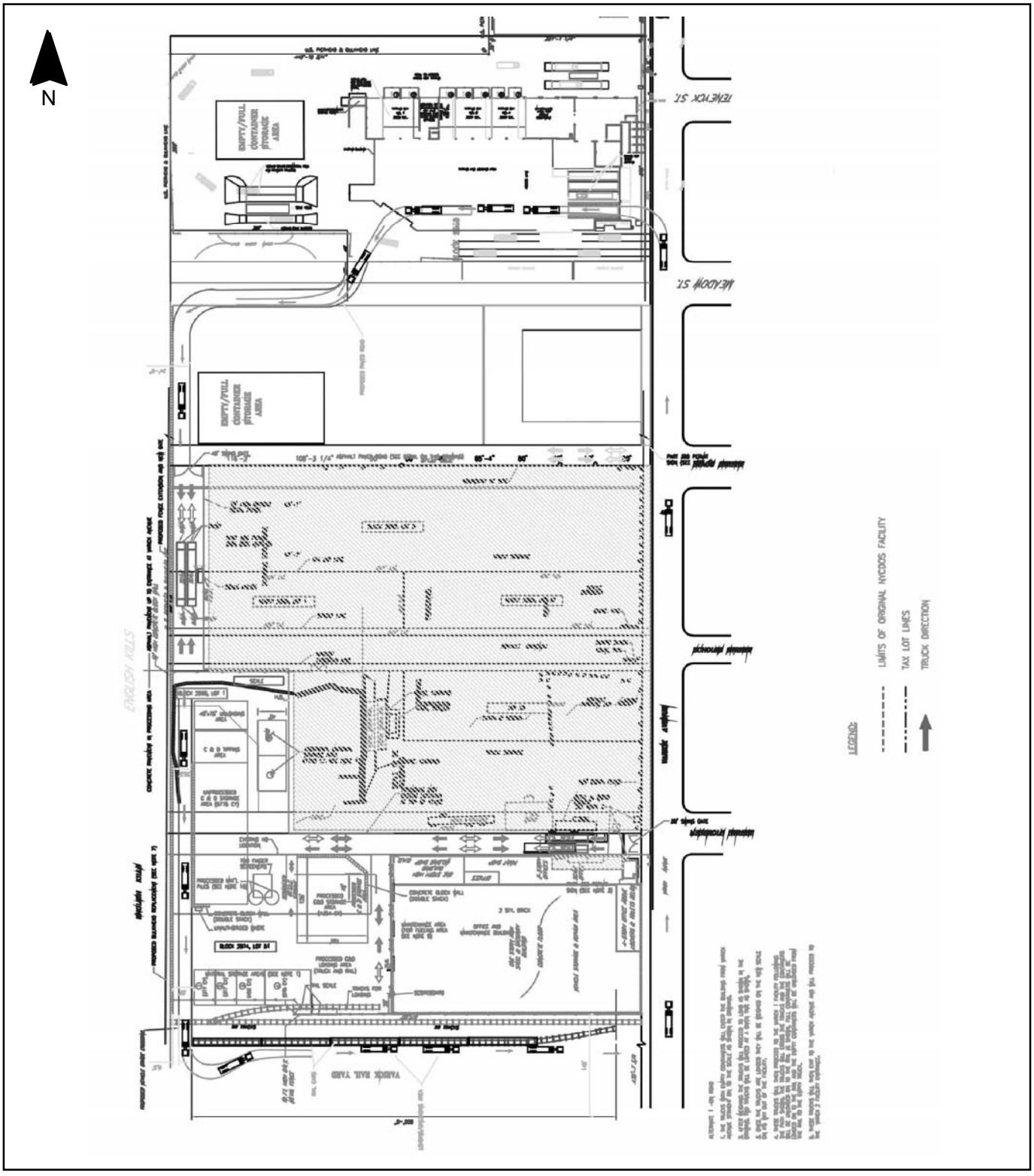
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2.4.14.2 Varick Avenue Transfer Station

The Varick Avenue Transfer Station is currently permitted to handle 4,250 tpd of putrescible solid waste as a truck-to-truck transfer facility. Of this 4,250 tpd, the facility currently accepts and processes approximately 1,400 tpd of DSNY-managed Waste under Interim Export from Brooklyn CDs 4, 8, 15, 17, and 18 for export by transfer trailer, and also processes approximately ,1,100 tpd of construction and demolition (C&D) debris at 123 Varick Avenue (C&D permit for 5,249 tpd) and exports the C&D debris that goes to a landfill for disposal out by rail (80-90% of C&D processed). On February 11, 2005, DSNY issued a Best and Final Offer (BAFO) to Receive, Transfer, Transport and Dispose of Department of Sanitation-Managed Waste from Brooklyn Formerly Delivered to the Greenpoint Marine Transfer Station (Brooklyn BAFO). Among other things, DSNY's Brooklyn BAFO requires that proposers commit to exporting all waste processed at their facility (both DSNY-managed Waste and commercial waste) by rail or barge. In response to the BAFO, the proposer offered the Varick Avenue Transfer Station to accept the anticipated average peak day volume of 1,140 tpd of DSNY-managed waste and export it by rail. Currently, putrescible waste processed at the Varick Avenue Transfer Station is processed into transfer trailer trucks for transport it to one of Waste Management's disposal facilities

Under the proposed operation, the facility would operate as a truck-to-container-to-rail facility, where precrushed and/or compacted waste would be loaded into containers. The containers would be transported by tractors with flatbed chassis from the transfer building on Waste Management property along English Kills to an existing expanded on-site rail yard, less than of a mile away. There, the containers would be loaded onto railcars and transferred to the New York and Atlantic Railroad's Metropolitan Yard for transport to one of Waste Management's disposal facilities. Figure 2.4.14-3 provides a Plan View of the proposed facility. Since the proposed facility and its operations are the subject of current, ongoing negotiations with DSNY, the facility description is presented in this FEIS based on available information to date.



Source: Prepared for Waste Management by TAMS Consultants Inc, January 2005

HDR, HydroQual, URBITRAN, PB, EEA, Cambridge Environmental Inc	**Figure 2.4.14-3 Plan View** **215 Varick Avenue Transfer Station** **CITY OF NEW YORK** **DEPARTMENT OF SANITATION**	THE CITY OF NEW YORK DEPARTMENT OF SANITATION

The complete transfer facility consists of an enclosed, 64,300-square-foot area, access roads, nine scales and two scale houses, office space and various storage areas. All waste is received, handled, and processed within the transfer station building.

Incoming waste hauling vehicles are weighed at one scale house, located at the southwest corner of the property, while outbound vehicles are weighted at the second scale house located at the exit onto Varick Avenue at Ten Eyck Street. There are four scales inside the enclosed processing building for weighing empty and loaded trucks. There are roll-up doors at the entrances to the truck unloading areas and the loading dock area.

The main processing area consists of a 29,000 square foot tipping and loading area floor. The floor is sloped from the edge of the tipping and loading area toward a trench drain to allow water to drain. The enclosed building is equipped with five roof exhaust fans and a high pressure atomizing mist deodorant system is operated throughout the building.

Traffic flow is and would remain one-way. Collection vehicles access to and egress from the transfer facility is currently via Varick Avenue. Collection vehicles enter the site via the entrance at the intersection of Varick Avenue and Meadow Street. Under the proposed operation, outgoing collection vehicles would exit the site via the driveway closest to Ten Eyck Street at the northeast section of the property. Tractor chassis carrying empty containers would approach the building by heading north on Varick Avenue from the rail yard 1,200 feet away, then turn left into the property at the Varick Avenue/Meadow Street entrance, and exit with loaded containers at the southwest corner of the property to travel parallel to English Kills to the on-site Varick Avenue Transfer Station rail yard.

All incoming vehicles entering the facility would be weighed prior to proceeding to the truck unloading areas or to the tipping and loading area. Upon entering the facility, waste hauling vehicles would queue along the south side of the transfer station building in two rows leading to the scales. Once weighed, they would be directed to the truck unloading areas on the north side of the processing building for inspection and unloading. After visual inspection for unauthorized materials, the waste hauling vehicles would unload, and exit the facility by passing over scales on the north side of the building and turning onto Varick Avenue.

Tipped waste is currently pushed from the tipping floor using wheel loaders. The proposed operation would use the same wheel loaders to load empty containers located on chassis within the processing building where outbound transfer trailers are currently positioned. Tractor chassis would move containerized waste from the transfer station to the on-site railyard, exiting the transfer building and proceed to the southwest corner of the property, travel along the western border of the property adjacent to English Kills where they would turn south and travel along English Kills to the on site Varick Avenue Transfer Station rail yard.

At the on-site Varick Street Transfer Station rail yard, the loaded containers would be placed onto railcars, from which empty containers would be unloaded. Proposed modifications to the on-site rail yard include construction of approximately 600 feet of additional track, parallel and to the south of, the existing on-site track. New York and Atlantic Railroad would send a shuttle railcar to connect to and move the train sections from Varick Avenue east to Fresh Pond Yard. From Fresh Pond Yard, CSX would pull the rail cars to the Oak Point junction in the Bronx. At Oak Point, CSX would classify the rail cars and pull the rail cars to Petersburg, Virginia, where Norfolk Southern would pick up the train and pull the rail cars for the last portion of the trip to the Atlantic Landfill in Waverly, Virginia.

Empty, sealed containers would be returned to the Varick Avenue Transfer Station on site railyard. Yard jockeys with empty containers would enter the facility through the existing southernmost door fronting Varick Avenue and pass over a scale inside the building for weighing. Next, the lids would be removed from the containers within the processing building using either an overhead crane or mobile equipment. The yard jockeys would move the open containers to the loading area where waste would be loaded into the containers. The containers would be securely relidded, the outside of the containers would be cleaned, and the loaded yard jockeys would be reweighed on a relocated scale, located at the rear of the transfer station building.

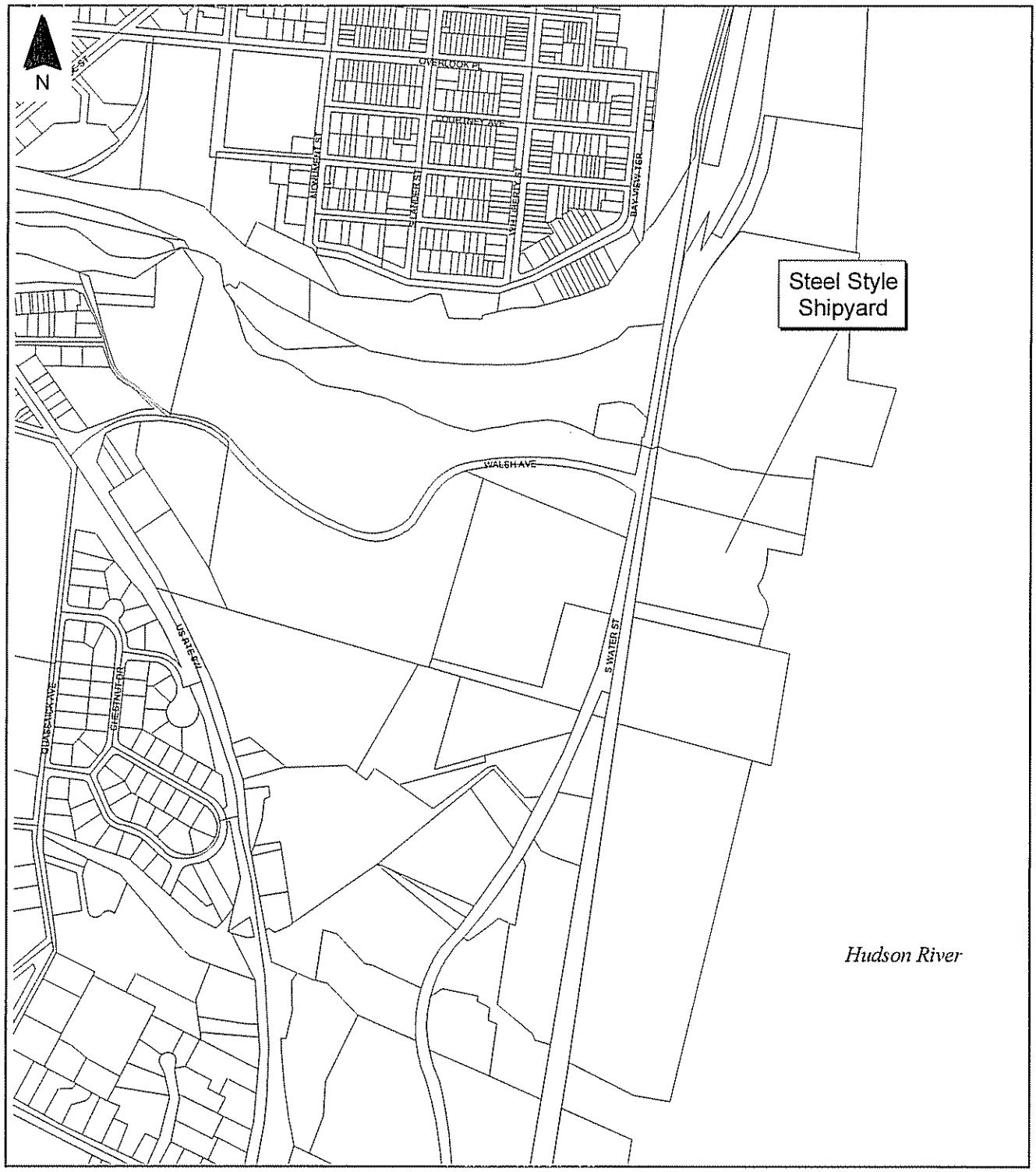
2.4.15 Steel Style Shipyard

DSNY is procuring transport and disposal services for containerized waste from the Converted MTSs. This will require barge delivery of containers to an intermodal terminal where the containers can be transloaded to ocean-going barge or railcars. Any intermodal facilities in New York State that would be used for this purpose and that would also require permit modifications are subject to environmental review. The Steel Style site had not been identified as a potential intermodal terminal at the time of the DEIS publication. If this site were to be selected as a facility for intermodal transfer of barged containers to rail, assuming permits were required for on-site construction, it would be subject to environmental review.

2.4.14.1 Description of Existing Site

The Steel Style Shipyard site is located on the west bank of the Hudson River at 401 South Water Street in New Windsor, New York. The facility and property are owned by Steel Style, Inc. The site is a 35-acre site located, approximately 25 miles north of New York Harbor. Figure 2.4.15-1 shows the location of the site. Figure 2.4.15-2 shows an aerial view of the site and its major features. Currently, limited information is available on the site. If this site were selected by DSNY as part of the Proposed Action, further information would be required and would be the subject of a future environmental review.

Currently, there are two piers at the site approximately 700 feet long and 70 feet wide. Some repairs to these piers would be required to operate a barge handling facility. The depth at the piers is approximately eight feet, so dredging would be required in order to berth harbor barges. According to the terminal operator, if both rail and marine improvements were made, there would be sufficient capacity to move about 132 one-way containers per day of DSNY-managed Waste by rail to and from Steel Style Shipyard to the CSX River Line for movement to the final destination.



Base Map Source: New York State Department of Planning

200 0 200 Feet

HDR URBITRAN EEA HydroQual PB

Figure 2.4.15-1 Site Location

Steel Style Shipyard

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Aerial Photos taken 2001

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Figure 2.4.15-2 Facility Footprint

Steel Style Shipyard

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2.4.15.2 Steel Style Facility

The existing Steel Style facility has two short rail spurs that are located on the northern portion of the property. The CSX River Line is a single track railroad (on a double track right-of-way) as it passes the site. Just south of Steel Style, there is a double-ended passing siding on the location of the second main track. The lead track onto the Steel Style site comes off the north end of the passing siding and runs north by the main gate of Steel Style to the small two-track facility on the north end of Steel Style.

A proposed conceptual design for the potential modifications to the site is not currently available. At this time, it is assumed that containers would not be able to be unloaded directly from barges onto railcars at the piers. The containers would be moved to the on-site rail sidings and loaded onto railcars. However, to accommodate the loading and unloading of railcars by either a sideloader or gantry crane, it would be necessary to configure at least two long tracks at the site. Based on the available space for tracks, there would be sufficient capacity to move approximately 132 one-way containers per day of DSNY-managed Waste by rail to and from Steel Style Shipyard to the CSX River Line for movement to the final destination.

2.5 Summary of Potentially Applicable Permits for Sites Considered

Table 2.5-1 and Table 2.5-2 provide a summary of the major permits that will or may be required to undertake the development of each site/facility described in this chapter.

Table 2.5-1
Federal, City and State Permit Action Determination

Option	Federal			New York State Department of Environmental Conservation					
	Section 10[1]	Section 404[2]	Section 401[3]	6 NYCRR Part 608[4]	6 NYCRR Part 661[5]	Article 17[6]	Article 17[7]	6 NYCRR Part 360[8]	6 NYCRR Parts 201/212[9]
Hamilton Avenue Converted MTS	X	X	X	X	X	X	X	X	X
Southwest Brooklyn Converted MTS	X	X	X	X	X	X	X	X	X
East 91st Street Converted MTS	X	X	X	X	X	X	X	X	X
North Shore Converted MTS	X	X	X	X	X	X	X	X	X
52nd Street Barge Staging Area	X	X	X						
HRY Barge to Rail Intermodal Yard	X	X	X						
65th Street Intermodal Yard									
HRY Truck to Rail TS								X	
East 132nd Street TS								X	
Scott Avenue TS, Brooklyn								X	
Scott Avenue/Scholes Street Truck to Rail TS								X	
Review Avenue Truck to Rail/Barge TS								X	
Collection Vehicle Transport to Essex County WTE									
30th Street Pier at the SBMT	X	X	X						
Gansevoort Recyclables Acceptance Facility	X	X	X					X	
South Bronx Converted MTS	X	X	X	X	X	X	X	X	X
Greenpoint Converted MTS	X	X	X	X	X	X	X	X	X
West 135th Street Converted MTS	X	X	X	X	X	X	X	X	X
West 59th Street Converted MTS	X	X	X	X	X	X	X	X	X

Table 2.5-1 (continued)
Federal, City and State Permit Action Determination

Option	Federal			New York State Department of Environmental Conservation					
	Section 10[1]	Section 404[2]	Section 401[3]	6 NYCRR Part 608[4]	6 NYCRR Part 661[5]	Article 17[6]	Article 17[7]	6 NYCRR Part 360[8]	6 NYCRR Parts 201/212[9]
Existing South Bronx MTS[10]									
Existing Southwest Brooklyn MTS[10]									
Existing Greenpoint MTS[10]									
Existing Hamilton Avenue MTS[10]									
Existing West 135th Street MTS[10]									
Existing West 59th Street MTS[10]									
Existing East 91st Street MTS[10]									
Existing North Shore MTS[10]									
Meserole Street Truck to Rail TS[10]						X	X	X	X

Notes:

(1) Section 10 (River and Harbors Act) for structures and work in navigable waters of the U.S.

(2) Section 404 (Clean Water Act) for discharging of dredged or fill material in waters of the U.S.

(3) Section 401 (Clean Water Act) Water Quality Certification.

(4) Article 15, Title 5 (6 NYCRR 608 - Protection of Waters) Environmental Conservation Law permit for the disturbance of a stream bed or banks or excavation in or fill of navigable waters.

(5) Article 25, (6 NYCRR 661 – Tidal Wetlands Act) Environmental Conservation Law.

(6) Article 17, SPDES General Permit (Section 402 of Clean Water Act) for storm water discharges from construction activities.

(7) Article 17, SPDES General Permit (Section 402 of Clean Water Act) for storm water discharges from industrial activities.

(8) Article 27, Title 7 (6 NYCRR 360). Environmental Conservation Law solid waste permit to construct and operate a solid waste management facility.

(9) 42 USC Section 7401 (6 NYCRR 201 and 212). Federal Clean Air Act prevention and control of air contamination and air pollution from general process emission sources.

(10) Existing MTSs may require permit modifications and/or renewals for operations.

Table 2.5-2
Federal, City and State Permit Action Determination

Option	New York State			New York City	
	Department of State			Department of Sanitation	Department of City Planning
	15 CFR Part 930[1]	19 NYCRR Part 600[2]	Section 106[3]	Sections 16-130/16-131[4]	Waterfront Revitalization[5]
Hamilton Avenue Converted MTS	X	X	X	X	X
Southwest Brooklyn Converted MTS	X	X	X	X	X
East 91st Street Converted MTS	X	X	X	X	X
North Shore Converted MTS	X	X	X	X	X
52nd Street Barge Staging Area	X	X			
HRY Barge to Rail Intermodal Yard	X	X			
65th Street Intermodal Yard	X	X			
HRY Truck to Rail TS					
East 132nd Street TS				X	
Scott Avenue TS, Brooklyn				X	
Scott Avenue/Scholes Street Truck to Rail TS				X	
Review Avenue Truck to Rail/Barge TS	X	X		X	X
Collection Vehicle Transport to Essex County WTE					
30th Street Pier at the SBMT	X	X			X
Gansevoort Recyclables Acceptance Facility	X	X			X

Table 2.5-2 (continued)
Federal, City and State Permit Action Determination

Option	New York State			New York City	
	Department of State			Department of Sanitation	Department of City Planning
	15 CFR Part 930[1]	19 NYCRR Part 600[2]	Section 106[3]	Sections 16-130/16-131[4]	Waterfront Revitalization[5]
South Bronx Converted MTS	X	X	X	X	X
Greenpoint Converted MTS	X	X	X	X	X
West 135th Street Converted MTS	X	X	X	X	X
West 59th Street Converted MTS	X	X	X	X	X
Existing South Bronx MTS[6]					
Existing Southwest Brooklyn MTS[6]					
Existing Greenpoint MTS[6]					
Existing Hamilton Avenue MTS[6]					
Existing West 135th Street MTS[6]					
Existing West 59th Street MTS[6]					
Existing East 91st Street MTS[6]					
Existing North Shore MTS[6]					
Meserole Street Truck to Rail TS				X	

Notes:

(1) Consistency with Federal Coastal Zone Management Act (15 CFR Part 930).

(2) Coastal Zone Consistency Certification (19 NYCRR 600).

(3) New York State Office of Parks, Recreation and Historic Preservation Consultation under Section 106 (National Historic Preservation Act) and New York State Historic Preservation Act Section 14.09 compliance requirements.

(4) Putrescible Solid Waste Transfer Station permit, pursuant to Sections 16-130 and 16-131 of the Administrative Code of the City of New York and DSNY rules adopted thereto.

(5) Consistency with Local Waterfront Revitalization Program.

(6) Existing MTSs may require permit modifications and/or renewal for operations.

CHAPTER 3 OVERVIEW OF STUDY METHODOLOGIES FOR SITE-SPECIFIC ANALYSES

3.1 Introduction

This SWMP FDEIS documents the assessment of the potential social, economic and environmental effects that may result from the Proposed Action and Alternatives, as applicable, and identifies measures that could be applied to mitigate potentially adverse impacts. These impact assessments were guided by standards, regulations and guidelines established under SEQRA (6 NYCRR Part 617) and CEQR (Executive Order No. 91, Chapter 5: Rules of Procedure for CEQR, the 2001 CEQR Technical Manual). The effects of the Proposed Action are assessed against the Existing Conditions, as defined below, and Future No-Build Conditions (2006) at the specific sites and the respective study areas (defined later in this chapter). For purposes of evaluating the effect of the Proposed Action on DSNY's waste collection and transfer operations (exclusive of waste disposal operations), Future No-Build Conditions are assumed to be the same as Existing Conditions. Where other developments or changes outside of the Proposed Plan Facilities, and Alternatives, when applicable, are expected to occur at a site by 2006, they are discussed in the applicable sections of Chapters 4 through 31.

This chapter describes the issues pertaining to and the data collection and analysis methods used for each type of environmental analysis documented in this SWMP FDEIS. The assumptions made and methods used for each type of environmental analysis were applied consistently to all sites, as applicable, except as noted otherwise in Sections 3.2 through 3.19. Discussions of methodology are not repeated in Chapters 4 through 31, which document the site-specific environmental analyses. A copy of the technical backup for the analyses in this FDEIS is available upon request in *.pdf and *.txt format on compact disk.

3.2 Analysis Years and Future No-Build Conditions

An environmental evaluation typically determines the potential impacts of implementing a proposed action in a particular build year by comparing that action to the conditions that would likely exist in that build year if the action were not implemented (Future No-Build Condition). A Future No-Build Condition is a projected baseline for the Build year (which, in this case, is 2006) that assumes the continuation of relevant Existing Conditions, realization of other known planned development activity and expected changes in population and traffic.

The City has been taking interim export actions to assure that all DSNY-managed Waste is exported out of the City following the closure of Fresh Kills Landfill in December 2001. Existing Conditions reflect interim export of waste from each of the five boroughs to out-of-City disposal sites as of January 2003 when the DEIS analysis commenced. The Future No-Build Condition developed for the SWMP FDEIS consists of: (1) Existing Conditions; (2) known planned development activity; and (3) updated traffic and population data. Future No-Build Conditions are the conditions against which potential site-specific impacts associated with the Proposed Plan Facilities or Alternatives are identified and to which they are compared for each site (presented in Chapters 4 through 31).

3.3 Definition of Sites and Study Areas

3.3.1 Site Definition

As noted in Section 2.1.1, the definition of site boundaries for purposes of environmental review may extend beyond the boundaries of the primary parcel in which the Proposed Plan Facilities, or Alternatives, as applicable, would be located.

The sites are illustrated in the figures presented in Chapter 2. These site boundaries may differ from the sites described in permits for the existing MTS facilities, as provided in DSNY engineering reports. It is also important to note that the sites for the Converted MTSs may not include all DSNY facilities and/or operations in contiguous properties, such as salt sheds and garages.

3.3.2 Study Area Delineation

Assessments of Existing Conditions, anticipated Future No-Build Conditions and potential effects of the Proposed Action and Alternatives, as applicable, focused on study areas and sensitive receptors. Study areas for each type of environmental analysis were defined to include areas and sensitive receptors that could be affected by the Proposed Action and Alternatives, as applicable, and, therefore, vary among the different environmental assessments performed.

For the analysis of land use, zoning, and public policy; community facilities and services; open space; and cultural resources, the study areas were delineated in a conventional manner according to a radial distance measured from the boundaries of each site. For land use, zoning, and public policy; and community facilities, the primary study area is defined as the area within a ¼-mile radius of the site, and a secondary study area is defined as the area between ¼-mile and ½-mile of the site. Detailed descriptions are provided and detailed analyses were performed for the primary study areas, while generalized descriptions are given and generalized analyses were performed for secondary study areas. Open space and cultural resources conditions are analyzed within a single study area defined by a ½-mile radius.

There are some deviations to these conventional study areas, however. If community facilities, historic resources, and open spaces and parklands were within 250 feet (the length of the short side of a typical city block) of the outside boundary of the secondary study area, they were included in the inventory. The study area for archaeological sensitivity and potential impact — one component of the cultural resources analysis — is comprised of only the site, however, because any project-related subsurface disturbance would be limited to the site.

The study areas for the remaining analyses vary from these limits to comply with specific regulatory requirements and to reflect the reasonable foreseeable potential for significant impacts, given the sensitivity of existing land uses. Study areas for socioeconomic conditions, urban design, and neighborhood character analyses were defined in a manner that is consistent within each type of analysis, as appropriate to the available data (e.g., census data) and/or to encompass the area of potential impact in its entirety. Methods of defining these particular study areas are described in greater detail in Sections 3.5, 3.9 and 3.10.

Analyses of traffic and transportation, air quality, odor, and noise were performed without the utilization of such study areas, per se. Rather, these environmental analyses were undertaken in a manner that incorporates data describing various points. These may be the locations of sensitive receptors related to specified screening criteria or modeling protocol, as in the case of on-site noise, air quality and odor or, as in the case of traffic and off-site noise and air quality analyses, of critical intersections within a reasonable distance of the site.

The study areas for the remaining analyses — infrastructure, solid waste and sanitation services, and energy; natural resources; water quality; waterfront revitalization; and hazardous materials — vary to comply with specific regulatory requirements and to reflect the reasonable foreseeable potential for significant impacts, given the sensitivity of Existing Conditions.

Sections 3.4 through 3.19 provide descriptions of analytical methodologies for each category of environmental analysis. Some methods of defining study areas are also described in greater detail where necessary.

3.3.3 Maps and Figures

The graphic figures illustrating this SWMP FDEIS are derived from computerized GIS base maps developed by the NYCDCP. This mapping information, contained on the BYTES of the BIG APPLE™ disks, was initially compiled for government use by NYCDCP. The City and NYCDCP make no representation as to the accuracy of the information or its suitability for any purpose. The City, NYCDCP and DSNY disclaim any liability for errors that may be contained therein.[1]

[1] • Map Sources: The files on these disks are derived from the tax block/lot geography files. The tax lot files are digitized and maintained by the NYCDCP Computer Information Services/Geographic Systems Section. The primary sources for these files are the City Department of Finance (NYCDOF) tax maps, the Borough President topographic maps, and the NYCDCP sectional maps. These files are schematic representations of the tax lot outlines and should not be used for applications that require precise measurements.

• Spatial Accuracy: The tax lot files were created for thematic mapping for planning applications at the NYCDCP. Spatial accuracy was not of primary concern in their creation. A limited set of control points was used to loosely fit the lines to the New York East State Plane Coordinate System.

• Legal vs. Physical features: These files are a representation of the City's tax blocks. Tax blocks are not identical to physical blocks. Boundaries of tax blocks are not usually located at the curb line of a street. Many properties include areas under bodies of water. Most highways and many other features are not represented in these files because their depiction does not arise from the delineation of tax blocks.

3.4 Land Use, Zoning, and Public Policy

Land uses, zoning and development trends on the site and in the primary and secondary study areas, as well as pertinent public policies, are characterized and then assessed to determine whether the Proposed Action and Alternatives, as applicable, would be compatible with and/or could affect these conditions. If necessary, mitigation measures were then identified.

Data were collected on existing land uses, zoning patterns, recent development trends and proposed developments in the sites' primary and secondary study areas through consultation with the Borough offices of the NYCDCP, community district liaisons and the NYCEDC; research of published sources of information; and field reconnaissance. The descriptions of Future No-Build Conditions reflect the development potential of underdeveloped sites in the study areas, as well as information obtained from the DSNY, NYCDCP and the City Office of Environmental Coordination (OEC) concerning planned and programmed improvements in the study areas.

The Converted MTSs are considered "Use Group 18" land uses according to the City Zoning Resolution. According to the zoning code, "Use Group 18 consists primarily of industrial uses that: (1) either involve considerable danger of fire, explosion or other hazards to public health or safety, or cannot be designed without appreciable expense to conform to high performance standards with respect to the emission of objectionable influences; and (2) normally generate a great deal of traffic, both pedestrian and freight."

Maps of existing land uses and zoning on the sites and within the primary and secondary study areas appear in the site-specific discussions in Chapters 4 through 31. Table 3.4-1 provides information from the City Zoning Resolution summarizing the characteristics of the types of zoning districts that are found at the sites analyzed. It is presented here as a reference for all zoning discussions in the subsequent chapters.

Table 3.4-1
Zoning District Characteristics

Manufacturing Districts								
Zone	**Type of Zone**	**Description**	**Typical Uses**	**Max. Permitted Floor Area Ratio (FAR)**	**Initial Setback Distance**	**Max. Permitted Height of Front Wall of Building within Permitted Setback (Standard)**	**Sky Exposure Plane (ratio) Dictating Max. Permitted Height of Front Wall or Building beyond Setback (Standard)**	**New Community Facility and Residential Uses Permitted**
M3-2	Central manufacturing area	M3 districts permit heavy industries that generate noise, traffic and pollutants Usually located near the waterfront, they are buffered from residential areas by light and medium industrial M1 and M2 districts.	In theory, nearly all industrial uses can locate in any manufacturing zone if they meet the respective performance standards required in the Zoning Resolution for each M1, M2 or M3 zone. For example, more noise and vibration are allowed in M2 districts than M1 districts except when they border on a residential district; smoke is permitted and industrial activities need not be entirely enclosed.	2.0 for commercial or manufacturing	15-foot setback for wide streets; 20 feet for narrow streets	60 feet high (or 4 stories)	5.6 to 1 vertical distance for wide streets; 2.7 to 1 for narrow streets	No
M3-1	Heavy manufacturing use							
M2-3	Typically located only in Manhattan Central Business District (CBD)	M2 districts occupy the middle ground between light and heavy industrial areas Permits commercial and general industrial uses.		5.0 for commercial or manufacturing		85 feet high (or 6 stories)		
M2-2	Waterfront manufacturing area							
M2-1	Most widely mapped M2 districts; mainly in older manufacturing areas			2.0 for commercial or manufacturing		60 feet high (or 4 stories)		
M1-4	Located mainly in Manhattan CBD	M1 permits low-bulk commercial and light industrial uses and requires high performance standards that limit impacts from noise, vibration, smoke and other effects		2.0 for commercial or manufacturing 6.5 for community facilities				Yes
M1-3	Older industrial areas			5.0 for commercial or manufacturing 6.5 for community facilities		85 feet high (or 6 stories)		
M1-2	Light industrial district			2.0 for commercial or manufacturing 4.8 for community facilities		60 feet high (or 4 stories)		
M1-1	Located adjacent to low density residential areas			1.0 for commercial or manufacturing 2.4 for community facilities		30 feet high (or 2 stories)	1 to 1 vertical distance for narrow and wide streets	

Table 3.4-1 (continued)
Zoning District Characteristics

Commercial Districts								
Zone	**Type of Zone**	**Description**	**Typical Uses**	**Max. Permitted FAR**	**Initial Setback Distance**	**Max. Permitted Height of Front Wall of Building within Permitted Setback (Standard)**	**Sky Exposure Plane (ratio) Dictating Max. Permitted Height of Front Wall or Building beyond Setback (Standard)**	**New Community Facility and Residential Uses Permitted**
C8-3	Automobile showrooms and offices	C8 districts form a bridge between commercial and manufacturing uses, and are appropriate for heavy uses that are land-consuming but not labor intensive. These districts are mainly mapped along major traffic arteries where concentrations of automotive uses have developed.	Automobile showrooms, automotive service facilities and warehouses Housing is not permitted.	2.0 for commercial 6.5 for community facilities	15-foot setback for wide streets; 20 feet for narrow streets	85 feet high (or 6 stories)	5.6 to 1 vertical distance for wide streets; 2.7 to 1 for narrow streets	New community facilities are permitted No new residential uses
C8-1	Automotive sales and service			1.0 for commercial 2.4 for commercial facilities		30 feet high (or 2 stories)	1 to 1 vertical distance for narrow and wide streets	
C3	Waterfront recreation areas	C3 zones permit waterfront recreation and uses related to boating and fishing	Marinas, boat repair shops and public or private beaches (with dressing rooms and refreshment stands)	0.5 for commercial 1.0 for community facilities 0.5 for residential				Yes
C2-2 on R8	Commercial overlay	C2 zones are Local Service Districts	Residential and Commercial (Retail and Services)	2.0 for commercial; 6.5 for community facilities; 4.8 to 6.0 for residential		85 feet high (or 6 stories)	5.6 to 1 vertical distance for wide streets; 2.7 to 1 for narrow streets	
C2-2 on R7-2				2.0 for commercial; 6.5 for community facilities; 2.8 to 3.4 for residential		60 feet high (or 4 stories)		
C2-2 on R7-1								
C2-2 on R5				1.0 for commercial; 2.0 for community facilities; 1.0 to 1.25 for residential		30 feet high (or 2 stories)	1 to 1 vertical distance for narrow and wide streets	
C2-2 on R4								
C1-2 on R8		C1 zones are Local Retail Districts		2.0 for commercial; 6.5 for community facilities; 4.8 to 6.0 for residential		85 feet high (or 6 stories)	5.6 to 1 vertical distance for wide streets; 2.7 to 1 for narrow streets	
C1-2 on R7-2				Same as C2 on R7		60 feet high (or 4 stories)		
C1-4 on R7-1								
C1-2 on R7-1								
C1-4 on R6				2.0 for commercial; 4.8 for community facilities; 2.0 to 2.4 for residential				
C1-3 on R6B								
C1-3 on R6								
C1-1 on R6								
C1-3 on R5				Same as C2 on R5		30 feet high (or 2 stories)	1 to 1 vertical distance for narrow and wide streets	
C1-1 on R5								

Table 3.4-1 (continued)
Zoning District Characteristics

Residential Districts							
Zone	**Type of Zone**	**Description**	**Max. Permitted FAR**	**Initial Setback Distance**	**Max. Permitted Height of Front Wall of Building within Permitted Setback (Standard)**	**Sky Exposure Plane (ratio) Dictating Max. Permitted Height of Front Wall or Building beyond Setback (Standard)**	**New Community Facility and Residential Uses Permitted**
R8	General residence district	R8 is a high-density district – the highest density mapped in the Bronx – served by mass transit	4.8 to 6.0	15-foot setback for wide streets; 20 feet for narrow	85 feet high (or 9 stories)	5.6 to 1 vertical distance for wide streets; 2.7 to 1 for narrow streets	Yes
R7-2	General residence district	R7 is a medium density apartment house district.	2.8 to 3.4		60 feet high (or 6 stories)		
R7-1	Differs from R7-2 only in the amount of parking required for new dwelling units						
R6	General residence district	R6 districts are appropriate for medium density housing. Typical R6 development usually is between three and twelve stories.	2.0 to 2.4				
R6B		Differs from R6 primarily in lot coverage and height and setback regulations					
R5	General residence district	R5 designation applies to medium density districts containing apartment buildings, and two- and three-family row houses. R5 districts, which allow a variety of housing types, provide another transitional step from low to higher density areas.	1.0 to 1.25	None	Street level	1 to 1 vertical distance for narrow and wide streets	
R4-1	Detached and Semi-Detached Residence District	R4 district permit the same variety of housing type as R3-2 zones, but with a 50 percent increase in building bulk	0.75				
R4	General residence district						
R3-1	Detached and Semi-Detached Residence District	Permits only detached or semi-detached. Generally mapped to follow existing patterns of development.	0.5				
R3-2	General residence district	Allows for a variety of housing types, including garden apartments, row houses and an occasional apartment house surrounded by extensive open space					
R3X	Detached Residence District						

Table 3.4-1 (continued)
Zoning District Characteristics

Special Purpose Districts	
Zone	**Description**
BR	This Special Purpose District is the "Bay Ridge District." It was established to protect the existing scale and character of the Bay Ridge community. It distinguishes the scale of development in the midblock from that on the avenue frontage, encouraging two- and three-family homes in the midblock. Special setbacks, curb cuts, open space, tree planting and ground floor commercial requirements have been included to preserve the character of the existing street wall.
NA-1	This Special Purpose District is "Natural Area District 1." The purpose of a special natural area district is to preserve unique natural characteristics, such as aquatic, biologic, geologic and topographical features having ecological and conservation values. The City Planning Commission must certify that all new development in mapped natural area districts meets applicable preservation standards.
SRD	This Special Purpose District is the "South Richmond Development District." It was established to guide the development of predominately vacant land in the southern half of Staten Island. The special district maintains the densities established by the underlying zones and ensures that new development is compatible with existing communities

Public plans and policies relevant to the sites and study areas were reviewed to determine consistency with the various facilities under consideration. These typically include:

- NYCDCP Plans for the Borough Waterfronts ("Reach Plans");
- Fiscal Year (FY) 2004 Community District Needs Statements (CDNSs);
- NYCEDC Strategic Plan for the Redevelopment of the Ports of New York;
- 197-a Plans;
- Rezoning proposals; and
- Other local NYCDCP studies and plans.

3.5 Socioeconomic Conditions

Demographic characteristics of the sites and study areas are based on the most current, publicly-available data from the United States Census Bureau and data collected from NYCDCP, New York Metropolitan Transportation Council (NYMTC), NYCEDC, and other agencies. To reflect the study area conditions as accurately as possible with existing data, each demographic study area is comprised of all census tracts that meet any of the following criteria: (1) the tract in which the site lies; (2) a tract which lies entirely within ¼-mile of the site; or (3) a tract with at least 50% of its area lying within ¼-mile of the site as long as that portion of the tract contains residential areas that share connectivity with the site (i.e., transportation and pedestrian access).

Data selected to describe the demographic conditions of the site and study area include current estimates and future projections of population (by age, race and sex), as well as household, housing, income, poverty and employment characteristics. Existing and Future No-Build demographics conditions of the study area (including the site) are compared among the City and the borough(s) containing a census tract that is included in the study area. The data for census tracts comprising the study area were summed or averaged, as appropriate, except for median values (such as median incomes), which were reported only for the most populous census tract in the study area. Although discussed in Chapters 4 through 31, only general and brief tables describing socioeconomic conditions are included within the text, while tables containing greater detail are presented in Appendix B and referred to throughout the text.

The economic conditions description and impact assessment was based on a larger area, usually within ½-mile of the site. This entailed the review of available economic information typically retrieved from public policy data sources described in Section 3.4: Land Use, Zoning, and Public Policy. Other specific economic and policy sources include:

- State Empowerment Zone (EZ) Policy;
- City (Economic Development Zone (EDZ) Policy;
- City Industrial Retention Program Policies (e.g., Industrial Development Agency [IDA]); and
- NYCDCP Information on Major Economic Development Projects.

3.6 Community Facilities and Services

Community facilities are public or publicly funded facilities, including schools, hospitals and other medical centers, libraries, day care centers, religious institutions, fire, police and emergency medical services. Adverse effects generally could result when a project either:

- Alters the use or the conditions of a community facility (e.g., disrupts existing traffic patterns within communities near the facility and, thereby, alters the facility's access/egress routes); or
- Causes a change in population that could affect the types and/or levels of service needed by a community.

The analysis of community facilities utilizes the primary and secondary study areas, including any facilities within 250 feet of the outside boundary of the secondary study area and community facilities along truck routes where a significant number of project-generated trucks would converge. An inventory of community facilities and services was based on data available in the Selected Facilities & Program Sites in New York City and CDNSs (FY 1999 and 2004), and the Sanborn Building and Property Atlas. This inventory was used to determine if any community facilities would be displaced by the Proposed Action and Alternatives, as applicable, or would potentially experience other adverse impacts due to proximity to or use on the sites. Information concerning police, fire and emergency medical services, including their capacity to accommodate projected demand, was obtained from the responsible agencies. (Letters from the New York City Fire Department [FDNY] are contained in Appendix A.)

3.7 Open Space

Open space is defined as publicly or privately owned land that is publicly accessible for active and/or passive recreational pursuits. In accordance with CEQR guidelines, an analysis of both direct and indirect impacts to open space was conducted. A direct impact would physically change, diminish or eliminate an open space or reduce its utilization or aesthetic value. (This would include a facility siting that causes increased air or noise emissions, odors or shadows that could adversely affect use of the resource.) An indirect impact could result from a facility siting that would introduce a substantial new user population that would create or exacerbate over-utilization of existing open spaces.

CEQR requirements for a full open-space analysis are related principally to new residential or commercial projects with significant numbers of additional residents or employees who may utilize open spaces. Because the Proposed Plan Facilities and Alternatives, as applicable, would employ fewer than the CEQR screening threshold of 500 employees, no quantitative assessment is required. However, the potential impact the Proposed Plan Facilities and Alternatives, as applicable, would have on traffic, air, odor and noise conditions of nearby open spaces are assessed.

The study area for analysis of potential open space impacts includes the area located within a ½-mile radius of the site boundary (or within 250 feet of it).

The inventory of parks and open spaces is based on information provided through consultation with NYCDPR, including the Parklands Office, Parks' Capital Division, and GreenThumb.[2] Field visits were used to verify the locations of the public parks and to identify passive open spaces and privately owned open spaces that may not have been identified through initial inventory procedures. (A letter from NYCDPR is attached in Appendix A.)

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[2] Playgrounds were included on the list of publicly accessible open space only if they were operated, at least in part, by NYCDPR. Similarly, only those community gardens listed on the registers of GreenThumb as remaining indefinitely as public access gardens were included in this inventory of public open spaces.

The Future No-Build Conditions of open spaces and parks are assumed to be the same as Existing Conditions except for those parks identified by NYCDPR as currently funded for improvement. Future No-Build Conditions include those planned improvements for which funding has been identified by NYCDPR but not those "wish-listed" improvements for which funding has not been identified.

3.8 Cultural Resources

According to CEQR, cultural resources include:

- Buildings, structures, sites, objects, districts and landscapes of architectural, aesthetic, historic and/or archaeological significance; and
- Properties listed or eligible for listing on the National and/or State Registers of Historic Places or for local landmark designation.

In general, the cultural resources analysis (excluding archaeological resources) is based on the primary and secondary study areas and includes those resources within 250 feet of the outside boundary of the secondary study area. The study area for archaeological sensitivity and potential impact is comprised of only the sites, however, because any facility-related subsurface disturbance would be limited to the site.

Information on cultural resources was obtained through an inspection of the sites and study areas, through research of available archival documentation and data available from the City Landmarks Preservation Commission (LPC) and the State Historic Preservation Office (SHPO). (Agency correspondence is provided in Appendix A.) The assessment of potential impacts on historic and archaeological resources includes:

- Research and documentation of the historic overview of the study areas;
- Identification of historic resources on site and in the study areas and determination of any direct or indirect project-related effects;
- A Stage IA report defining the site's archaeological potential, where required by SHPO, based on review of available literature, historic atlases and state files on areas of archaeological sensitivity; and
- A Stage IB report defining an archaeological testing plan, as necessary, prepared in consultation with the LPC and SHPO.

If mitigation is required, the appropriate measures would be developed in consultation with LPC and SHPO.

3.9 Urban Design, Visual Resources, and Shadows

The urban design and visual quality of an area are defined by both built and natural features. Though manufacturing zones typically do not possess sensitive urban design features or visual resources, a waterfront site or unique setting (even if industrially zoned) may contain a significant viewshed or other visual resource requiring assessment for potential impacts. Study area boundaries generally are coterminous with the boundaries of the neighborhood character study area for each respective site. The study area includes the site and adjacent properties, as well as the area encompassing the broader development pattern, urban design context and view corridors, of which the site may be an integral part.

The following components of the site and site environs were considered in the urban design/visual resources assessment:

- Existing buildings (massing, bulk, materials, orientation), structures and open spaces on the site;
- Existing buildings, structures and open spaces adjacent to the site;
- Existing neighborhood context of the site, with special consideration given to both the built environment (including building types/functions, styles, materials, orientation and massing) and the un-built environment (including the widths of roads, open space, landscaping and borders/buffers);
- Areas that are linked to the site visually (i.e., the area is visible from the site or the site is visible from the area); and
- Existing view corridors, including views through the site to aesthetically important objects and places, and views of the site from public areas such as parks or other important places.

Other issues specific to a site may also be considered in the urban design and visual resources assessment. For example, if there are plans for public parks, access improvements, community facilities or economic development projects within visual proximity of the site, the study area includes these locations for consideration of potential project-related impacts on these planned public developments. Additionally, the aesthetic character of areas traversed by truck routes within the study area is described generally, in accordance with CEQR guidelines. Existing and future views of historic properties in the study area from residential areas and other sensitive locations (e.g., parks) are also described, as applicable. If the facility casts new shadows or

substantially increases existing shadows on a publicly accessible open space or park, historic resource (if the features that make the resource significant depend on sunlight) or important natural feature, shadow studies would be performed (per CEQR guidelines) to illustrate the times and extent of the potential impact. Where a significant impact is identified, mitigation would be proposed, in consultation with the relevant parties/agencies. The impacts of shadows from the Proposed Plan Facilities and Alternatives, as applicable, on the water are addressed in the natural resources sections of Chapters 4 through 31. The analysis of potential urban design and visual quality includes the following:

- An inventory of the site and study area to identify sensitive visual resources;
- Identification of an impact and description of appropriate mitigation if the Proposed Plan Facility or Alternative, as applicable, would eliminate or substantially limit views from an adjacent waterfront neighborhood, public park, landmark structure or district, or natural resource (e.g., vegetation, topography, geologic formations, wetlands, rivers or other water resources) that is deemed to have aesthetic value; and
- Assessment of the effects of increased truck activity at visually sensitive locations along truck routes and description of any significant impacts.

3.10 Neighborhood Character

For each site, a unique set of major contributing factors, including some of the conditions assessed for other environmental categories, creates the integral context and feeling of a neighborhood. Typically, a site's immediate neighborhood is defined in terms of population, urban design and visual characteristics, area history, on-site and proximal land uses, and the transportation network that supports these uses and often defines the physical boundaries of the neighborhood. Other conditions that may characterize the neighborhood of a particular site could include parks, public access to the waterfront, community facilities and/or economic development projects.

Each site-specific neighborhood character study area or "neighborhood" is defined as the area that contains the site, possesses the defining neighborhood character and does not extend beyond physical buffers (e.g., major arterial corridors) that effectively separate the area from its surroundings. Additionally, these neighborhoods were defined to include the truck routes analyzed in the Traffic, Parking, Transit, and Pedestrians sections of Chapters 4 through 31. The dimensions and shape of study areas for analysis of neighborhood character, therefore, vary from site to site.

Assessment of potential effects of the Proposed Plan Facilities and Alternative Facilities, as applicable, on neighborhood character is derived from the other pertinent environmental analyses documented in this SWMP FDEIS and from field reconnaissance of the study area. If the Proposed Plan Facilities and Alternative Facilities, as applicable, would potentially result in significant direct or indirect change(s) to a factor contributing to the study areas' neighborhood character, the degree and type of such change is reported and necessary mitigation measures are identified. The potential for an adverse cumulative effect of individual impacts is examined.

3.11 Natural Resources

3.11.1 Introduction

The sites are located in manufacturing-zoned areas and are, therefore, unlikely to contain significant ecologically sensitive areas or appropriate habitats for threatened and endangered species. However, because many of these sites are on the City's waterfront, potential effects to surface water bodies and habitats were considered. Existing terrestrial and water resources were characterized based on information derived from site visits, data research and coordination with the NYSDEC Natural Heritage Program (NHP). Any significant effects of the facilities (i.e., from the in-water construction of piers or bulkheads) is noted in Chapters 4 through 31 and appropriate mitigation measures identified.

A natural resource is defined by CEQR as "plant and animal species and any area capable of providing habitat for plant and animal species or capable of functioning to support environmental systems and maintain the City's environmental balance." Natural resources consist of water resources; wetland resources; upland resources; built resources; and significant, sensitive or designated resources. The types of natural resources present on each site vary, depending on location, and required evaluation on an individual basis. For the purposes of CEQR assessment, the City's natural resources are categorized as follows:

- Wetlands: freshwater and tidal wetlands;
- Water Resources: surface waters (oceans, rivers, bays, streams, estuaries, ponds, lakes) and groundwater, drainage systems and floodwater systems/floodplains;
- Terrestrial Resources: beaches, dunes, bluffs, thickets, grasslands, old meadows, fields, woodlands and forests, gardens and other ornamental landscaping;
- Built Resources: piers, waterfront structures and ruins that are habitats for marine species and nesting and foraging areas for birds, beach and flood protection structures and other structures offering habitat to various species; and
- Plant and Animal Species and Habitats.

The limits of the study area for the assessment of natural resources of each site were determined by the potential effects of the facility and the resource in question. In all cases, the entire project site was inventoried for these resources based on NYSDEC mapping and information from the NYSDEC NHP. If such resources were identified on the site and were determined likely to be disturbed by the Proposed Plan Facilities and Alternatives, as applicable, additional assessments were made, including the following activities:

- Collection of detailed identification of natural resources that could be impacted directly or indirectly by siting or modifying the Proposed Plan Facility or Alternative Facility, as applicable;
- Field studies and documentary research to determine the value of the affected natural resource, and its relationship to neighboring resources and to the overall area ecosystem;
- Detailed analysis of the construction and operation activities of the Proposed Plan Facility or Alternative Facility, as applicable, and its interaction with, and impacts on, the affected natural resource and the environmental support systems; and
- Development of construction-period and long-term mitigation, which could include techniques to control siltation and erosion during construction, re-vegetation programs, slope and surface protection, water pollution controls, wetlands replacement, etc.

3.11.2 Previous Studies and Literature – Types and Sources of Information Collected

Field investigations of all the sites were conducted during the period January 1999 through July 1999 by a team of terrestrial and aquatic ecologists who observed the extent of the resource, the context of its surrounding and the area where the Proposed Plan Facility and Alternative Facility, as applicable, would be. Field notes and observations were used to characterize the resources in the study area. A literature search was also conducted to identify any potentially valuable or sensitive resources. U.S. Geological Survey Topographic Maps, Federal Emergency Management Agency (FEMA) Flood Plain Maps, National Wetland Inventory, and State Wetland Maps were used to identify and outline potential natural resource areas, wherever appropriate.

Information and data pertaining to the aquatic resources at each site were obtained from the literature and from the results of prior field studies. Over the past 20 years, the Converted MTS sites have had extensive aquatic biology programs conducted either on site, substantially

contiguous to the site or in sufficiently close proximity to warrant inclusion. The existing database covering marine resources of the Converted MTS sites is sufficient to make scientifically sound judgments on the relative project impacts for each of the facilities, given the comparatively modest alterations to the local marine resources.

Each Proposed Plan Facility or Alternative Facility site, as applicable, was examined for the presence or absence of tidal wetlands. The tidal wetlands assessment combined aerial photographic analyses, topography mapping and tidal wetlands mapping. Field investigations were conducted to determine consistency with these data sources.

Additionally, the NYSDEC NHP was contacted to determine whether rare species of plants and wildlife or unique habitats were reported as occurring on or adjacent to each site. NHP provides a database listing that identifies the species and/or habitats with state, heritage and global rankings and other information related to the species. The database list is confidential and cannot be released without written permission from NHP.

The United States Fish and Wildlife Service (USF&WS) was also contacted for any federally listed endangered or threatened species known to be within any of the project areas. Notification of project activity follows the guidelines under Section 7 of the Consultation of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 531 et. seq.). Response letters from both the USF&WS and NHP typically indicated the presence or absence of rare species and whether further on-site analyses were required. Pertinent species information provided by these agencies is included in each of the site descriptions in this SWMP FDEIS, as are separate narrative descriptions. Essentially, these sections were tailored to the amount of background information available pertaining to each site and to the severity of expected impacts.

3.11.3 Current Ecological Field Studies - Types and Sources of Information Collected

During the fall of 2002, DSNY conducted ecological field studies at the Converted MTS sites. This decision reflected the desire to have sufficient data available to answer any potential regulatory agency questions or concerns. A scope of ecological studies was developed and presented to the relevant review agencies, their comments incorporated, and a final version published. The field studies started in January 2003 and were completed in December 2003.

3.11.4 Screening Methodology

Each Proposed Plan Facility and Alternative Facility site, as applicable, was assessed for Existing and Future No-Build Conditions to determine the value of the natural resource as demonstrated by the variety and density of its species; its use for recreation, open space or commerce; its relationship to neighboring resources and to the overall area ecosystem; or its role in ecosystem cleansing or storm and flood management. Environmental systems that support the natural resources in the study area were examined for each site. A detailed description of the construction and operational activities associated with each Proposed Plan Facility and Alternative Facility site, as applicable, along with an analysis of its interactions with the natural resources and the environmental system that supports it is provided in Chapters 4 through 31.

3.11.5 Impact Analysis Methodology

Both the short-term and long-term impacts of the Proposed Plan Facility and Alternative Facility site, as applicable, on the natural resources were evaluated. Direct impacts are identified as those that intervene or alter the resource immediately by impacting the site conditions, such as filling or draining areas; construction of bulkheads, piers and other structures in the water; or removal of vegetation. Indirect impacts are those that affect a natural system or another resource that supports the resource under study, such as alterations of groundwater flow or quality, and increases in the transport of silt and sediments. The direct or indirect physical effects of the Proposed Plan Facilities and Alternative Facilities, as applicable, were assessed because they modify the functioning of the resource. In addition, the effects were evaluated and expressed in the context of the scarcity or abundance of the resource.

Impacts were predicted by analyzing changes that resulted from similar programs in the past. Where there was no direct comparison to a past project available, the impacts were predicted based upon generalized experience and modeling calculations.

3.11.6 Typical Mitigation Measures

Mitigation techniques can be applied during construction to control erosion and siltation, maintain existing drainage patterns and avoid activities that unnecessarily cause temporary or permanent damage. Such techniques include:

- Using silt fences, hay bales, mulches and other covers to limit areas of soil exposure and to stabilize slopes.
- Installing temporary drainage systems including sediment traps for the duration of the construction.
- Avoiding dredging in contaminated areas. Where this is not practical or feasible, such techniques as silt screens, turbidity curtains and modified dredging methods, such as restricting dredging to the areas of low current velocity, can be used.
- Limiting de-watering wherever possible; disposing of such waters properly so as to maintain the existing drainage system and avoid surface water pollution.
- Limiting construction to periods during which breeding or spawning does not take place.

3.12 Hazardous Materials

3.12.1 Introduction

As part of the CEQR process, this SWMP FDEIS includes a hazardous materials assessment that determines if:

- The Proposed Plan Facility and Alternative Facility site, as applicable, could lead to the increased exposure of people or the environment to hazardous materials;
- There is any presence of existing hazardous materials on the sites (some sites may have hazardous materials from existing uses or residual contamination from past uses when there was less regulation of uses and disposal of such materials);
- Construction activities associated with the Proposed Plan Facility and Alternative Facility site, as applicable, could result in human exposure to hazardous materials or a threat to the environment; and
- The Proposed Plan Facility and Alternative Facility site, as applicable, could introduce an "at-risk population" to exposure to hazardous materials.

Activities that could lead to exposure include:

- Excavation or grading that creates fugitive dust from contaminated soils;
- Demolition of buildings or structures that contain hazardous materials;
- The introduction of new activities or processes that use hazardous materials; and
- The introduction of a new population to an area that contains hazardous materials.

3.12.2 Definition of Study Area

The site is the focus of the study area in the CEQR evaluation of hazardous materials exposure to humans and the environment; however, potential contamination by hazardous materials is not limited by property boundaries. Chapter J (Hazardous Materials), Section 310 of the 2001 CEQR Technical Manual indicates that the study area for hazardous materials includes all other areas that might have affected or that might be affecting the site. This is defined to include at least the adjacent properties and, generally, properties within 400 feet of the site. The study area for record searches of spills and hazardous waste sites is defined as that which is

within a 1,000 foot radius from the site. The study area for record searches of underground storage tanks (USTs) includes the site and adjacent properties. If the facility involves excavation for utilities, the path of those utilities would become part of the study area. Final design plans would determine the need for additional underground utilities.

3.12.3 Types and Sources of Information Collected

In accordance with Chapter J, Section 322 of the 2001 CEQR Technical Manual, federal and state agency database searches were performed for all sites and properties within a minimum of a 1,000-foot radius of the sites. Many of the federal and state records were available on computer databases through commercial service firms. Local records (i.e., FDNY, DSNY, NYCDEP) were obtained as a result of filing Freedom of Information requests. Detailed maps and tables of the record searches were compiled and reviewed.

3.12.4 Screening Methodology

The screening methodology applied for hazardous materials follows the guidelines set forth in Chapter J, Section 320 of the 2001 CEQR Technical Manual, which includes:

- Historical land use review;
- Regulatory agency list review; and
- Site and surrounding area reconnaissance.

3.12.5 Historical Land Use Review

The historical land use review seeks to identify past activities on the sites and adjacent properties that may have involved the use or disposal of hazardous materials. In accordance with Chapter J, Section 321 of the 2001 CEQR Technical Manual, this review extends back for at least 50 years at each site. The Sanborn historical fire insurance atlases are valuable sources for identifying historical land use in the City. Historical atlases for each of the sites were either purchased or reviewed in the City Public Library. These documents (generally available since the early 1900s) indicate the structures present, buried gasoline tanks that exist and the identification of uses (e.g., company name for industrial properties) at the time of preparation.

A search of the City Building Department's records was made to identify new building applications, records of major alterations, demolition records, certificates of occupancy and other records of or plans for additions and changes on file for the subject property. In addition, a search of FDNY records for each site was conducted to identify the presence of underground or above-ground storage tanks.

Where feasible, interviews with individuals knowledgeable of past uses at the subject site were conducted. Based upon the above-mentioned information sources, history of site uses that identifies the potential for the prior usage of hazardous materials was compiled and is presented in Chapter 4 through 31.

3.12.6 Regulatory Agency List Review

The regulatory agency list review involves accessing records of City, state and federal agencies that regulate the storage, handling, emissions and spill cleanup of hazardous materials. These records include:

- United States Environmental Protection Agency's (USEPA's) National Priority List (NPL) and Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list, which was reviewed to determine if the property or surrounding properties within the search radius appear on the lists. The NPL contains sites that are targeted for USEPA-mandated cleanup under the federal Comprehensive Environmental Responsibility and Compensation and Liability Act (CERCLA), which authorizes identification and remediation of uncontrolled hazardous waste sites. The CERCLIS list contains potential hazardous waste sites for which there is not enough information to determine if the site should be included on the NPL.
- The Resource Conservation and Recovery Information System (RCRIS) list identifies registered hazardous waste generators, transporters and treatment, and storage and disposal facilities, as defined by the federal Resource Conservation and Recovery Act (RCRA), which regulates management and disposal of hazardous wastes currently generated, treated, stored, disposed or distributed. Inclusion on the RCRIS Notifiers List does not, in and of itself, indicate that the site is a source of contamination. For example, all dry cleaning establishments in the City are on the RCRIS list.

- The Emergency Response Notification System (ERNS), a compilation of hazardous substance spills reported to federal and state authorities.
- NYSDEC databases, which will be reviewed to determine if: (1) the site or nearby sites are on the Inactive Hazardous Disposal Site Registry and are therefore subject to a state consent order for assessment and possible cleanup; (2) there have been any large-scale landfilling operations on or near the site; and (3) there are records of leaking USTs, major oil storage facilities, petroleum bulk storage facilities, chemical bulk storage facilities or solid waste management facilities. Records of spills are listed as Active (under investigation) or Closed (no further action required).

This review is a routine part of the initial assessment that, as defined in the 2001 CEQR Technical Manual, is often referred to as a Phase I Environmental Site Assessment and does not include any testing for contamination. If warranted, Phase II subsurface testing will be recommended to confirm the presence of or to characterize the extent of potential contamination. Phase II is described in more detail in Section 3.12.9.

3.12.7 Site and Surrounding Area Reconnaissance

Following completion of the historical land use review and the review of regulatory agency records, visits were made to the sites to observe and document Existing Conditions and note any signs of the presence of potential hazardous materials, their usage and contamination. A reconnaissance survey of surrounding properties was also taken, though it was less detailed than the site survey. The reconnaissance surveys were performed in accordance with the guidelines of Chapter J, Section 323 of the 2001 CEQR Technical Manual.

3.12.8 Impact Analysis Methodology

The 2001 CEQR Technical Manual indicates that the following two questions be applied in determining if a significant adverse impact would occur from the presence of hazardous materials:

- Is there the potential for human exposure to contaminants? This includes future on-site occupants, off-site occupants and construction workers, and

- Is there potential for environmental exposure to contaminants? This includes contaminants entering on-site or surrounding natural resources or exacerbating existing environmental contamination.

If both questions can be answered "no," it is unlikely that a potential for significant impacts exists. If the answer to either question is "yes," then a significant impact might occur. The site specific radius map indicates only those sites which may create a significant impact to redevelopment or reuse through on-site or off-site pathways. All other sites within the applicable study area radius are shown in the Toxics Targeting Computerized Environmental Report located in the technical backup to this FEIS, which is available upon request.

The potential risk is dependent upon the nature and extent of contamination and the Proposed Actions at the site. The methodology outlined in the 2001 CEQR Technical Manual (Chapter J, Section 400) was used in assessing the significance of impacts. If a potential for contamination was found during this Phase I Assessment, then Phase II surface and subsurface investigations may be recommended as part of the construction phase of project implementation in order to confirm the presence and extent of the contamination and to identify appropriate mitigation measures.

Given that the transfer and export of MSW are not inherently hazardous activities and that Existing Conditions are not likely sources of soil or groundwater contamination, it is anticipated that any potential impact identified during an individual site's Phase I evaluation would rise to a level of significance only if on-site construction was undertaken. In these instances, a process of further detailed analysis, referred to as a Phase II investigation, would be conducted. Phase II investigations would be necessary if soil disturbance from new construction occurs and the Phase I investigation identified the likelihood of hazardous material contamination from previous land uses. Project land parcels that have yet to be acquired would also be properly tested prior to any grading/excavation or construction activities.

The Phase II investigation may include several physical investigations that confirm the presence, type and extent of potential contamination. A Phase II sampling and testing plan is prepared based on findings resulting from the Phase I or Preliminary Assessment (which indicates the

potential presence of contaminants of concern). Subsurface testing may include the following: (1) soil gas sampling with probes to test for volatile compounds; (2) soil borings to sample and test for a full range of potential contaminants; and (3) the installation of groundwater monitoring wells to test for groundwater contamination. Magnetometer or ground penetrating radar may be useful in locating buried storage tanks, underground piping, etc. The Phase II sampling protocol would be submitted to NYCDEP/NYSDEC for review and approval prior to conducting the investigation.

The results of the Phase II investigation would be the basis for determining the necessity to mitigate contamination prior to commencing construction. If elevated levels of contamination exist, the soil would require appropriate remediation to ensure that no significant impacts to on- and off-site occupants would occur. If unexpected contamination is encountered during construction (e.g., discovery of leaking underground tanks, etc.), then mitigation measures would be developed with the concurrence of regulatory agencies that have the appropriate jurisdiction (NYSDEC, NYCDEP, FDNY).

Construction on the site without the proper precautionary measures (e.g., worker Health and Safety Plan) and removal of associated contaminated material and USTs can also result in exposure to hazardous vapors or workers could come into contact with potentially contaminated soils. Therefore, a NYCDEP- and/or NYSDEC-approved site-specific Health and Safety Plan would be prepared on the basis of the site sampling analysis and the expected risk of worker exposure to any identified contaminants prior to any site disturbance (grading/excavation) or construction activities.

If any excavated soil was removed from a site, the soil would be properly tested in accordance with all applicable NYSDEC regulations prior to determining re-use and/or disposal options. Any tanks discovered during excavation would be removed in accordance with all applicable regulations, prior to construction. The contractor would maintain appropriate remediation measures, such as dust suppression, during grading/excavation and construction activities at the site.

Demolition and construction activities may disturb surfaces with lead-based paint and asbestos-contaminated material. Lead and asbestos would be handled in accordance with all applicable rules and regulations of the Occupational Safety and Health Administration (OSHA), and the City, state and federal governments.

3.12.9 Typical Mitigation Measures

Mitigation of potential adverse impacts to eliminate or reduce the sources of impacts to acceptable levels can include reduction or removal of contamination or altering the Proposed Plan Facility and Alternative Facility site, as applicable. Appropriate mitigation measures would be selected on a case-by-case basis. Consultation with the NYCDEP and/or NYSDEC would be advised in selecting appropriate mitigation measures. In the case of a Phase II investigation, such investigation results in recommended mitigation measures that are specific to a project. If contaminated soil exists or is found, it will be removed and disposed of at a regulated disposal facility in a manner that minimizes exposure to workers and the public, in general.

In the City, inactive, underground fuel oil tanks can be closed by first removing any residual fuel oil and tank bottoms, and then by either filling the tank with a concrete slurry or other approved inert material, or excavating and disposing of it off site following applicable standards.

3.13 Water Quality

3.13.1 Introduction

The water quality analysis evaluates the impacts that the Proposed Plan Facilities and Alternative Facilities, as applicable, would have on surface water and identified mitigation, if applicable. For each site, Existing Conditions, No-Build Conditions and potential impacts associated with the Proposed Plan Facilities and Alternative Facilities, as applicable, (Future Build Conditions) were evaluated. Recent water quality data in the vicinity of each site was summarized and compared to local water quality standards. A mathematical model of New York Harbor was used to predict the potential impacts of the Proposed Plan Facilities and Alternative Facilities, as applicable, upon future water quality conditions. The water quality study area includes the receiving water body that is adjacent or as close as possible to each site.

3.13.2 Review of Existing Water Quality Data

As part of the Harbor Survey Program, NYCDEP designated monitoring stations throughout New York Harbor, including the Hudson and East Rivers, which are sampled routinely. Water samples are typically analyzed for conventional pollutants and additional water quality parameters. In addition, ambient metals concentration data are available from sampling conducted during 1991 by Battelle Ocean Sciences for Region 2 of the USEPA. For each of the sites, data from the nearest monitoring stations were compiled and summarized to develop a profile of No-Build water quality conditions. These data were compared to the corresponding NYSDEC water quality standards and guidance values. In addition, NYSDEC information on existing permitted discharges in the vicinity of each site was investigated.

3.13.3 Pollutant Loadings

At each Proposed Plan Facility and Alternative Facility site, as applicable, stormwater runoff would be discharged directly into the adjacent surface waters after passing through an oil/water separator. The volume of stormwater runoff and the associated pollution loading were calculated

using precipitation data and available databases on stormwater pollutant concentrations. The estimated pollutant loading was developed for each site by calculating a runoff flow and assigning an average stormwater concentration for each water quality parameter. The runoff flow was calculated using the following equation:

$$Q_R = CIA;$$

where:

Q_R = Runoff flow (cubic feet per second [cfs]);
C = The runoff coefficient;
I = The average rainfall intensity (inches per hour [in/hr]); and
A = Site area (acres).

The runoff coefficient, C, is directly related to the amount of impervious surface, such as buildings, roads, parking lots or other similar features that water does not infiltrate. To be conservative in the analysis of potential impacts to surface water, it was assumed that all site runoff would discharge to surface waters; therefore, the runoff coefficient is equal to one. The average rainfall intensity, I, is calculated from rainfall data measured at Central Park between 1969 and 2002. These data were analyzed to determine statistics on the duration and intensity of storm events.

For each site, pollutant loading for each water quality parameter was calculated by assigning a pollutant concentration to the runoff flow. Table 3.13-1 presents average concentrations for conventional pollutants and selected metals in urban stormwater runoff. Pollutant concentrations have been determined from the National Urban Runoff Program (NURP) and additional stormwater databases. These additional databases included studies funded by the Washington Council of Governments, the Federal Highway Administration (FHWA), and Santa Clara County, California. Studies in Jamaica Bay (Jamaica Bay Combined Sewer Overflow Facility Planning Project, O'Brien and Gere, 1994), Alley Creek (East River Combined Sewer Overflow Facility Planning Project, URS Consultants and Lawler, Matusky & Skelly, 1996) and the Outer Harbor areas of the City (Outer Harbor CSO Facility Planning Project, Hazen and Sawyer and HydroQual, Inc., 1993) provided additional stormwater runoff data.

Table 3.13-1
Stormwater Runoff Quality for Various Studies

Pollutant	National Stormwater Data				NYC Stormwater Data			Average
	I[1]	II[2]	III[3]	IV[4]	V[5]	VI[6]	VII[7]	
Conventional Pollutants (mg/L) [12]								
BOD [9]	9	5	14	8	12	10	18	11
Total Suspended Solids	100	26	93	66	25	–	55	61
NH_3-N [10]	--	0.26	--	–	–	–	0.41	0.34
(NO_3+NO_2)-N [11]	0.68	0.50	0.66	0.62	–	–	0.79	0.65
Total Phosphorus	0.33	0.26	0.29	0.29	–	–	0.53	0.33
Dissolved Phosphorus	0.12	0.16	--	–	–	–	–	–
Coliform Bacteria (MPN/100 ml) [13]								
Total Coliform	--	--	--	–	175,000	75,000	265,000	172,000
Fecal Coliform	21,000	--	--	2,000	37,000	20,000	92,000	34,000
Heavy Metals (µ/L) [14]								
Copper	34	–	39	31	–	–	–	35
Lead	144	18	234	37	–	–	–	28[8]
Zinc	160	37	217	200	–	–	–	154

Notes:

(1) USEPA, 1983. Final Report of the Nationwide Urban Runoff Program. USEPA Water Planning Division, Washington, D.C.

(2) T.R. Schueler, 1987. Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs. Metropolitan Washington Council of Governments. Washington D.C.

(3) E.D. Driscoll, 1990 Pollutant Loadings and Impacts from Highway Stormwater Runoff. Volume III: Analytical Investigation and Research Report. Federal Highway Administration, McLean, VA.

(4) Loads Assessment Report, Santa Clara County Urban Runoff Program, Woodward Clyde Consultants, 1991.

(5) Jamaica Bay Combined Sewer Overflow Facility Planning Project. O'Brien & Gere Engineers, Inc., 1993.

(6) Outer Harbor CSO Facility Planning Project. Hazen and Sawyer, P.C. and HydroQual, Inc., 1993.

(7) East River Combined Sewer Overflow Facility Planning Project. URS Consultants, Inc. & Lawler, Matusky, & Skelly Engineers, 1996.

(8) Lead concentrations monitored in the 1970s and early 1980s reflect leaded gasoline use. As a result, stormwater data for II and IV were used to develop average concentrations.

(9) Biochemical oxygen demand

(10) NH_3-N = Ammonia

(11) (NO_3+NO_2)-N = Nitrate plus nitrite nitrogen

(12) = mg/L = milligrams per liter

(13) = MPN/100 ml = most probable number per 100 milliliters

(14) = µ/L = micrograms per liter

The average data from these programs were deemed representative of stormwater from the sites. The three metals analyzed —copper, lead and zinc— are the predominant metals typically found in stormwater.

3.13.4 Modeling Evaluation of Stormwater Impacts

For each site, the impacts of estimated stormwater pollutant loadings were evaluated using the New York Harbor Seasonal Steady State Water Quality 208 Model (208 Model). This model was developed under Section 208 of the Clean Water Act to help state and local water quality management agencies integrate water quality activities and goals into a predictive tool. The 208 Model was used to predict incremental changes in dissolved oxygen levels caused by biochemical oxygen demand (BOD) and incremental increases in the concentrations of other pollutants, such as fecal coliforms, nutrients, total suspended solids and heavy metals. The application of the 208 Model to heavy metals is deemed conservative because only dispersion is considered in determining concentrations. Other reactions that decrease ambient metal concentrations were not included in the analysis. These other chemical and physical reactions may include complexation, oxidation, absorption and settling to sediments.

To evaluate the potential impacts of operations at each site, Future Build water quality conditions were estimated by combining the incremental difference in water quality calculated by the model with the existing data. These estimated water quality conditions were compared with applicable NYSDEC water quality standards and guidance values for the applicable waterways.

3.14 Waterfront Revitalization Program

3.14.1 Introduction

Many of the Proposed Plan Facility and Alternative Facility sites are located within the designated coastal zone boundary established by the New York State Department of State, pursuant to the Federal Coastal Zone Management Act of 1972 and the New York State Waterfront Revitalization and Coastal Resources Act of 1981.

3.14.2 Governing Policy

"The New Waterfront Revitalization Program," prepared by the NYCDCP, identifies ten primary coastal policies that provide for local implementation of the state Coastal Management Program (CMP) in the event that a municipality adopts a local WRP, as is the case with the City.

Developed by the City, the goal of WRP is to foster responsible development of the City's waterfront. The WRP embodies the policies of federal and state coastal management legislation. Its policies cover a comprehensive range of waterfront planning and environmental issues that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

Under the WRP, there are ten primary policies that address: (1) residential and commercial redevelopment; (2) water-dependent and industrial uses; (3) commercial and recreational boating; (4) coastal ecological systems; (5) water quality; (6) flooding and erosion; (7) solid waste and hazardous substances; (8) public access; (9) scenic resources; and (10) historical and cultural resources. These ten policies are further broken down into several subpolicies under each primary policy. The new policies and subpolicies simplify and clarify the consistency review process without eliminating any policy components required by federal and state law.

Each of the sites was evaluated for compliance and consistency with these ten primary waterfront policies and the 32 subpolicies set forth within the WRP. These evaluations include consistency with the WRP and additional discussion or clarification. As necessary and required, appropriate mitigation measures to achieve consistency of a facility with applicable WRP policies were identified and discussed.

In general, each of the WRP policies is either applicable to the Proposed Plan Facilities and Alternative Facilities, not applicable to any of them or applicable on a strictly site-specific basis. A description of all of the policies and subpolicies and their general applicability to the Converted MTSs is provided in Table 3.14-1. In general, under the WRP, the consistency of a Proposed Action needs to be demonstrated with respect to each applicable policy or subpolicy. Policies or subpolicies that are identified as not applicable are those in which the consistency of a Proposed Action does not need to be demonstrated.

In addition, a comprehensive plan for the management of the City's waterfront has been set forth in "The New York City Comprehensive Waterfront Plan – Reclaiming the Water's Edge" prepared by NYCDCP. Likewise, individual waterfront plans for the boroughs have also been developed to address activities and the development of facilities within the coastal zone boundary and provide recommendations for future activities within this zone. These are also considered with regard to solid waste management activities that may occur within the coastal zone boundary area.

Table 3.14-1
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy Number	Policy Description	Applicability to Proposed Action
Policy 1	Support and facilitate commercial and residential redevelopment in areas well-suited to such development.	
	1.1 Encourage commercial and residential redevelopment in appropriate coastal zone areas.	Never
	1.2 Encourage non-industrial development that enlivens the waterfront and attracts the public.	Never
	1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.	Always
Policy 2	Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.	
	2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.	Site Specific
	2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.	Site Specific
	2.3 Provide infrastructure improvements necessary to support working waterfront uses.	Always
Policy 3	Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.	
	3.1 Support and encourage recreational and commercial boating in New York City's maritime centers.	Never
	3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.	Always
	3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.	Always

Table 3.14-1 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy Number	Policy Description	Applicability
Policy 4	Protect and restore the quality and function of ecological systems within the New York City coastal area.	
	4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.	Always
	4.2 Protect and restore tidal and freshwater wetlands.	Always
	4.3 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.	Always
	4.4 Maintain and protect living aquatic resources.	Never
Policy 5	Protect and improve water quality in the New York City coastal area.	
	5.1 Manage direct or indirect discharges to waterbodies.	Always
	5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.	Always
	5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.	Site Specific
	5.4 Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.	Always
Policy 6	Minimize loss of life, structures and natural resources caused by flooding and erosion.	
	6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.	Always

Table 3.14-1 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy Number	Policy Description	Applicability
Policy 6	6.2 Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.	Never
	6.3 Protect and preserve non-renewable sources for beach nourishment.	Never
Policy 7	Minimize environmental degradation from solid waste and hazardous substances.	
	7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.	Always
	7.2 Prevent and remediate discharge of petroleum products.	Always
	7.3 Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.	Site Specific
Policy 8	Provide public access to and along New York City's coastal waters.	
	8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.	Always
	8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.	Always
	8.3 Provide visual access to coastal lands, waters and open space where physically practical.	Site Specific
	8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.	Always

Table 3.14-1 (Continued)
Local Waterfront Revitalization Policies and Subpolicies and Their Applicability

Policy #	Policy Description	Applicability
Policy 8	8.5 Preserve the public interest in and use of lands and waters held in public trust by the state and city.	Site Specific
Policy 9	Protect scenic resources that contribute to the visual quality of the New York City coastal area.	
	9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.	Always
	9.2 Protect scenic values associated with natural resources.	Always
Policy 10	Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.	
	10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.	Always
	10.2 Protect and preserve archaeological resources and artifacts.	Always

3.15 Infrastructure, Solid Waste and Sanitation Services, and Energy

3.15.1 Introduction

The SWMP FDEIS evaluates the potential impacts associated with the development of the Proposed Plan Facilities and Alternative Facilities, as applicable, on existing infrastructure, energy, and solid waste systems for each site in accordance with CEQR guidelines. The analyses include:

- An inventory of existing utility infrastructure (water, sewer, electric and gas) servicing each site;
- A comparison of the estimated Proposed Plan Facilities and Alternative Facilities, as applicable-generated demand on water, sewage, electric, gas and solid waste systems with the infrastructure available to meet these demands;
- A qualitative examination of the need for additional infrastructure and utilities and the generation of solid waste during the construction period; and
- Identification of any significant impacts on the existing infrastructure and energy systems and examination and recommendation of mitigation measures, where appropriate.

3.15.2 Water Supply

The description below of the existing water supply distribution system and its conditions is based upon drawings and information from NYCDEP Bureau of Water and Sewer Operations. For sites currently staffed or in use, the water demand was based upon the current number of on-site employees and a per capita (gallons per day [gpd] per employee) water usage. For the Proposed Plan Facilities and Alternative Facilities, as applicable, water demand was based upon the number of employees and the volume of water to be used for tipping floor washdown and dust control. The employee demand would be 25 gpd per person for all shifts, with an average demand of 2,000 gpd required for tipping floor washdown and dust control. The process water estimates, obtained from the 2001 CEQR Technical Manual for comparable facilities, were compared to the amount of water supplied by the system and their effects on the system's capacity analyzed.

3.15.3 Sanitary Sewage and Stormwater

For each WPCP affected by the Proposed Plan Facility and Alternative Facility, as applicable, the dry weather flow and the average flow, which includes the sanitary and Stormwater flows received by the WPCP during wet weather for the latest 12 months were used. Sewage generation within the applicable WPCP was then projected for the Future No Build scenario through the use of the "New York City Water Demand and Wastewater Flow Projections, August 1998" prepared by NYCDEP.

Sewage generation, due to the facility was based upon all water used on the sites being sent to the WPCP, along with an estimate of process or facility water usage. The incremental generation was estimated with regard to both the average annual and the highest monthly dry weather flows, and the impact on the WPCP's ability to meet the flow limits of its SPDES permit was analyzed. In addition, the additional sewage flows from the proposed facilities were evaluated for their potential to increase combined sewer overflows (CSOs) within the specific WPCP drainage areas.

3.15.4 Solid Waste

The effects of the each Proposed Plan Facility and Alternative Facility, as applicable, on the City's solid waste infrastructure and the conduct of City solid waste management activities were examined. In addition, a review was conducted of the conformance of each Proposed Plan Facility and Alternative Facility (as applicable) with the regulations and permitting of solid waste management facilities by NYSDEC and DSNY.

The future daily volumes of solid waste generated were estimated based on each employee generating 1.3 pounds per day for each shift. This solid waste generation was based on estimates provided within the 2001 CEQR Technical Manual for similar facilities. This volume of waste was compared to the estimated volume of waste, and the impacts analyzed.

3.15.5 Energy

Consolidated Edison's capacity to supply electricity to the Proposed Plan Facilities and Alternative Facilities, as applicable, was determined, and the current on-site demand estimated. Electricity consumption projections for the Proposed Plan Facilities and Alternative Facilities, as applicable, were calculated for the processing equipment (cranes, shuttle cars, etc.), auxiliary equipment and facility lighting. Power consumption projections for the Proposed Plan Facilities and Alternative Facilities, as applicable, was determined from data provided by vendors, consultants and equipment suppliers, based on the 24-hour operation of the process and ancillary equipment. Comparisons were made between this estimated new demand and available capacity for the area network. At Proposed Plan Facilities and Alternative Facilities, as applicable, in which anticipated incremental electrical demands would exceed 1.5% of the network projections, modifications to the network may be required.

Natural gas requirements for the Proposed Plan Facilities and Alternative Facilities, as applicable, were compared with infrastructure capacities projected by Consolidated Edison and Keyspan Energy. The possible impacts of the Proposed Plan Facilities and Alternative Facilities, as applicable, and the policies governing the conduct of solid waste management activities in the City were also assessed.

3.16 Traffic, Parking, Transit, and Pedestrians

3.16.1 Introduction

Traffic, parking, transit, and pedestrians analyses determine if the Proposed Plan Facilities and Alternative Facilities, as applicable, would generate measurable additional traffic in or near the areas surrounding the sites, when additional traffic would be generated and what impacts it would have on intersections and roadways. The results of the analysis are also used in determining impacts on air quality, noise quality, socioeconomic conditions, neighborhood character, community facilities and open space and parklands. The 2001 CEQR Technical Manual guidelines state that if a proposed action generates additional traffic, further analysis may be required. Pursuant to these guidelines, analyses were performed to quantify what impacts, if any, the Proposed Plan Facilities and Alternative Facilities, as applicable, would have upon traffic conditions. The approach taken was to:

- Quantify the level of vehicle trip generation projected for each Proposed Plan Facility and Alternative Facility, as applicable;
- Determine whether detailed traffic analysis is required, based upon the 2001 CEQR Technical Manual guidelines, given the level of trip generation projected;
- Define Existing, Future No-Build Conditions and Future Build Conditions in the study areas of each applicable site;
- Identify and quantify any potentially significant impacts on intersections and approaches to intersections in the study areas of each site;
- Suggest reasonable mitigation measures to alleviate traffic impacts that would be generated by the proposed facilities;
- Identify high accident locations where safety is a concern based upon the 2001 CEQR Technical Manual guidelines; and
- Suggest reasonable mitigation measures to improve safety at high accident locations.

3.16.2 Background

All of the Proposed Plan Facilities and Alternative Facilities, as applicable, would generate an increase in employee vehicle trips, and an increase in DSNY and other agency collection vehicle traffic ~~from~~ compared to Existing Conditions.

New vehicle trips generated by the Proposed Plan Facilities and Alternative Facilities, as applicable, could potentially cause ~~deterioration~~ a decrease in the level of service (LOS) at intersections along the facility access routes in the vicinity of the sites and along local roads near district garages. LOS levels are based upon the average stopped delay calculated for an intersection.

3.16.2.1 CEQR Guidelines

To determine if a detailed traffic analysis is required, the 2001 CEQR Technical Manual guidelines propose comparing the volume of new vehicle trips generated by the proposed action with the analysis thresholds that are specified in the 2001 CEQR Technical Manual. Further analysis may not be required if the proposed action is projected to generate 50 or fewer peak hour vehicular trip ends. Peak hour vehicular trip ends are conservatively considered herein as passenger car equivalents (PCEs).

The 2000 Highway Capacity Manual (HCM 2000) defines a PCE as "the number of passenger cars displaced by a single heavy vehicle of a particular type, under specified roadway, traffic and control conditions." The 2001 CEQR Technical Manual defines waste collection vehicles as a light truck with a PCE factor of 1.5.

3.16.3 Operational Assumptions

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the facility they are servicing or to the intersection nearest the facility, if streets adjacent to the facility are not designated truck routes. It is assumed that DSNY and other agency collection vehicles currently abide by the rules and regulations set forth in NYCDOT Title 34 and that these vehicles will continue to follow Title 34 in the future. Therefore, collection vehicles are assumed to proceed to the closest designated truck route upon completion of their collection route in order to deliver waste to a Proposed Plan Facility and Alternative Facility, as applicable. DSNY and other agency collection vehicles would also follow truck routes on trips returning from their designated unloading facility, whether returning to the CD to collect additional waste or returning to the district garage at the end of a shift.

3.16.3.1 Existing DSNY Operations

DSNY has designated 59 CDs in the City from which waste is collected and transported by truck to a designated facility. Currently, waste is exported to local commercial waste vendors in and around the City under interim export activities. DSNY schedules its collections and deliveries based upon three operational periods: priority, non-priority and relay.

- Priority loads are assumed for analysis purposes to originate in the center of the CD and are delivered by DSNY collection vehicles to the transfer station. The collection vehicles then return to the CD to collect additional residential waste.
- Non-priority loads are also assumed to originate in the center of the CD and are delivered to the transfer station by DSNY collection vehicles. The collection vehicles then return to the district garage.
- Relay loads return to the district garage and during the relay shift are driven to a disposal facility and unloaded. Relay loads originate at the district garage and DSNY collection vehicles return to the district garage.

Relay loads comprise the bulk of the load deliveries to commercial vendors in Manhattan, Brooklyn and Queens under the Interim Export program. Most commercial waste vendors do not fall within a travel distance that allows priority and non-priority loads from CDs in these three boroughs. Non-priority loads comprise the bulk of the loads delivered to commercial waste vendors in the Bronx.

3.16.3.2 Future No-Build Conditions

Future No-Build Conditions assume that there would be no changes to the existing ~~department~~ DSNY operations in the projected Build year for the project. Traffic volumes are assumed to increase according to growth rates for each section of the City, as designated by CEQR. The Future No-Build Condition also incorporates additional traffic generated by other projects in the area that would be completed by the time the proposed project is completed.

3.16.3.3 Future DSNY Operations

Based upon the capacity and location of the Proposed Plan Facilities and Alternative Facilities, as applicable, DSNY developed allocations of the total number of loads that would be delivered to each facility from each CD, and the tonnage associated with the loads. The number of loads each facility would generate on an average peak day are listed in Table 3.16-1. Where applicable, the number of loads generated by an Alternative Ffacility that was analyzed was based on the increment between the number of DSNY-managed loads currently received by each facility under the Interim Export Program and the number of loads the facility would receive in the future.

Figure 3.16-1 shows the proposed wastesheds for the Proposed Plan Facilities. DSNY would continue to schedule its collections and deliveries based upon the three operational periods described in Section 3.16.3.1. To account for the difference in daylight hours, DSNY's main collection shift would be from 6:00 a.m. to 2:00 p.m. from April 16 through November 14, and from 7:00 a.m. to 3:00 p.m. from November 15 through April 15.

The Proposed Plan Facilities would receive waste 24 hours per day, six days per week (Monday through Saturday) with a peak day each week (typically Monday or Tuesday, depending on the ~~Converted MTSF~~facility) when the tonnage is, on average, approximately 10% to 15% higher than the weekly average. The loads and tons allocated to the Proposed Plan Facilities and Alternative Facilities, as applicable, were based upon this average peak day tonnage, which represents typical worst-case conditions in terms of DSNY collection vehicle deliveries.

3.16.4 Trip Generation

Using DSNY's 1998 MTS scale data for all Converted MTSs (except for the South Bronx Converted MTS, which is based on FY 1997 data), the temporal distribution of waste deliveries to the Converted MTSs was calculated for the average peak day. It was assumed that Proposed Plan Facilities and Alternative Facilities, as applicable, would have a waste delivery temporal distribution similar to the waste delivery temporal distribution of the existing MTSs when they were in operation in 1998.

Table 3.16-1
Average Peak Day Facility Load Allocation

Facility	Total Number of Net Loads of DSNY Collection Vehicles
Hamilton Avenue MTS[1]	267
Southwest Brooklyn MTS[1]	166
East 91st Street MTS[1]	130
North Shore MTS[1]	329
52nd Street Barge Staging Area	NA
65th Street Intermodal Yard	NA
East 132nd Street Site[2]	374
Scott Avenue TS[3]	0
Scott Avenue/Scholes Street Truck to Rail TS	125
Review Avenue Truck to Barge TS	81
Review Avenue Truck to Rail TS[2]	225
Collection Vehicle Transport to Out-of-City WTE Facilities[4]	0
MCR to 30th Street Pier at South Brooklyn Marine Terminal	60
MCR to Gansevoort Recyclables Acceptance Facility	108
South Bronx MTS[1]	363
Greenpoint MTS[1]	423
West 135th Street MTS[1]	222
West 59th Street MTS[1]	124
Meserole Street Truck to Rail TS	225

Notes:

(1) The total number of loads from DSNY collection vehicles is the same for both the Converted MTSs and the Existing MTSs.

(2) Total number of loads from DSNY collection vehicles includes dray trips to a rail yard.

(3) Future Condition DSNY-managed Waste deliveries to the Scott Avenue TS are less than Existing Condition deliveries to the facility. Therefore, no traffic analysis was performed at this site because Existing Conditions are worse than Future Conditions.

(4) Future Condition DSNY-managed Waste deliveries to out-of-City waste-to-energy facilities would remain the same as Existing Conditions. Therefore, no traffic analysis was performed at this site because there is no change between Existing and Future Conditions.

WTE = waste-to-energy
TS = Transfer Station
RRF = Resource Recovery Facility
MCR = Manhattan Curbside Recyclables
NA = Not Applicable

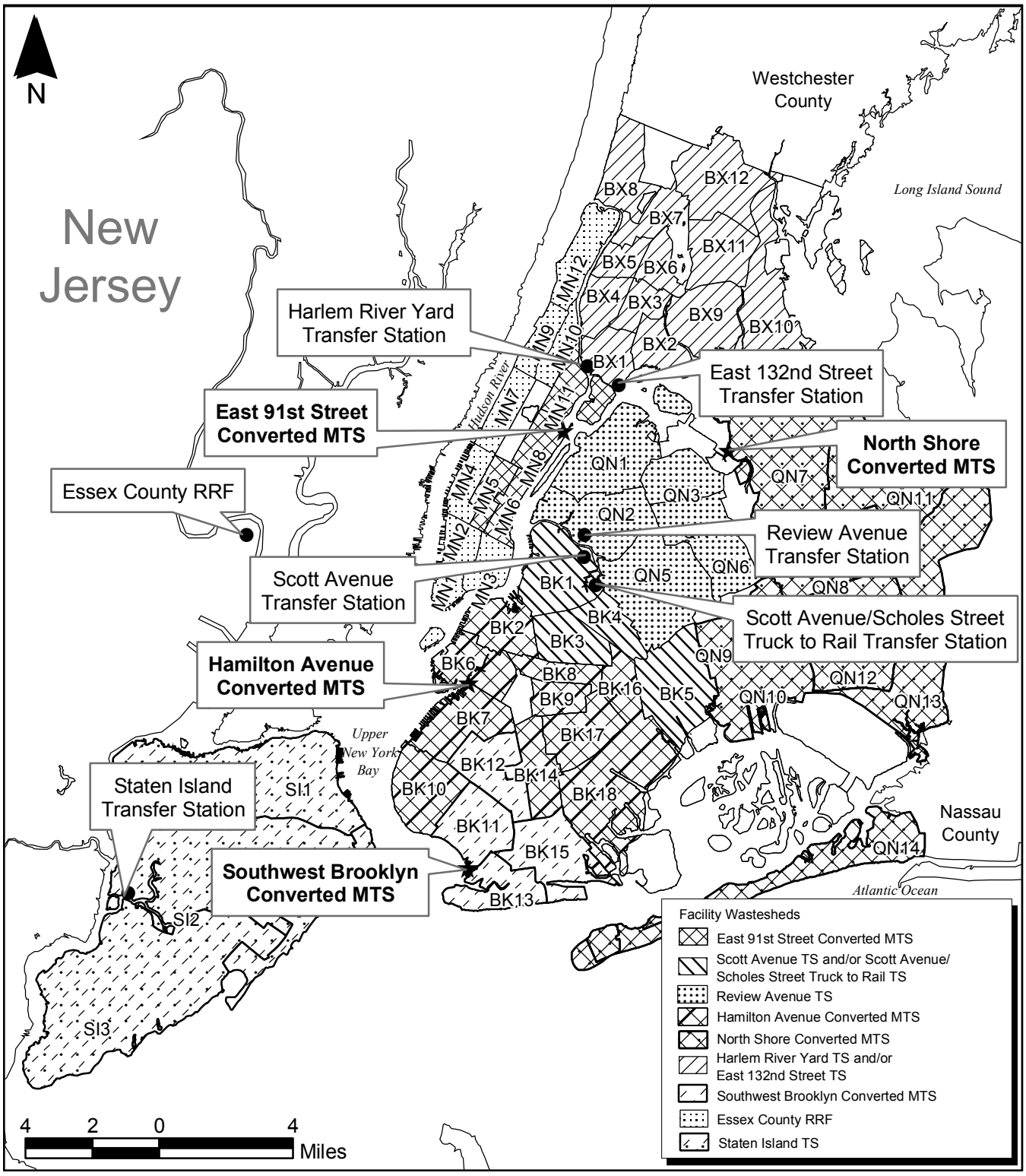


Figure 3.16-1

Long Term Export Facilities and Wastesheds

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Using this average temporal distribution and the load allocation for the Converted MTSs, the temporal distribution of waste deliveries to the facilities was calculated in terms of priority, non-priority and relay loads. To be conservative, trip totals were increased by 20% to account for daily and seasonal variations. Following the approach described above, the facility's peak delivery hours and corresponding projected peak hour with the highest number of collection vehicles were identified. Table 3.16-2 illustrates the total number of inbound and outbound DSNY and other City agency collection vehicles generated during the Facility peak hour at each of the Proposed Plan Facilities and Alternative Facilities, as applicable. Table 3.16-2 also illustrates the total PCEs generated by each Proposed Plan Facility and Alternative Facilities, as applicable during the Facility peak hour.

Additionally, Proposed Plan Facilities and Alternative Facilities, as applicable, would generate vehicles trips from employees traveling to and from the facility during a shift change. Converted MTSs are assumed to operate in the future using a three-shift operational structure: 12:00 a.m. to 8:00 a.m.; 8:00 a.m. to 4:00 p.m.; and 4:00 p.m. to 12:00 a.m. Private facility staffing was either provided by the vendor or assumed based on facility design and operations. Employee shift changes are assumed to occur one-half hour before and one-half hour after the start of a shift. For conservative purposes, all arriving employees are assumed to arrive one-half hour before the start of their shift and all exiting employees are assumed to depart within one-half hour after the end of their shift. The number of employee trips was quantified based on the staffing plans of the Proposed Plan Facilities and Alternative Facilities, as applicable. All Converted MTSs were conservatively assumed to generate 40 trips per shift change, one trip per employee, for all employees traveling to and leaving from the Converted MTSs. If a peak hour analyzed for traffic fell partially within the time period of~~during~~ a shift change, only a portion of employee-generated trips were used in the analysis. Employee trips at Alternative ~~facilities~~ Facilities that currently receive DSNY-managed Waste were based on the projected increase in number of employees that would be required to staff the facility to process additional increments of DSNY-managed Waste.

Table 3.16-2
Peak Hour Trips

Facility	Facility Peak Hour	Peak Hour DSNY Collection Vehicles Inbound[1]	Peak Hour DSNY Collection Vehicles Outbound[2]	Total Peak Hour PCEs Generated[3]
Hamilton Avenue[4] MTS	9:00 a.m. – 10:00 a.m.	32	30	93
Southwest Brooklyn MTS[4]	10:00 a.m. – 11:00 a.m.	27	27	81
East 91st Street MTS[4]	9:00 a.m. – 10:00 a.m.	28	28	84
North Shore MTS[4]	10:00 a.m. – 11:00 a.m.	39	38	116
52nd Street Barge Staging Area	NA	0	0	0
65th Street Intermodal Yard	NA	0	0	0
East 132nd Street Site[5]	11:00 a.m. – 12:00 p.m.	45	43	138
Scott Avenue TS[6]	NA	NA	NA	NA
Scott Avenue/Scholes Street Truck to Rail TS	10:00 a.m. – 11:00 a.m.	19	18	56
Review Avenue Truck to Barge TS	10:00 a.m. – 11:00 a.m.	10	10	30
Review Avenue Truck to Rail TS[5]	10:00 a.m. – 11:00 a.m.	16	16	54
Collection Vehicle Transport to Out-of-City WTE Facilities[7]	NA	NA	NA	NA
~~MCR~~ BCR to 30th Street Pier at South Brooklyn Marine Terminal[8]	6:00 a.m. – 7:00 a.m.	5	5	15
MCR to Gansevoort Recyclables Acceptance Facility[8]	6:00 a.m. – 7:00 a.m.	7	7	21
South Bronx MTS[4]	11:00 a.m. – 12:00 p.m.	64	58	183
Greenpoint MTS[4]	9:00 a.m. – 10:00 a.m.	61	54	173
West 135th Street MTS[4]	9:00 a.m. – 10:00 a.m.	30	30	90

Table 3.16-2 (Continued)
Peak Hour Trips

Facility	Facility Peak Hour	Peak Hour DSNY Collection Vehicles Inbound[1]	Peak Hour DSNY Collection Vehicles Outbound[2]	Total Peak Hour PCEs Generated[3]
West 59th Street MTS[4]	9:00 a.m. – 10:00 a.m.	21	21	63
Meserole Street Truck to Rail TS	10:00 a.m. – 11:00 a.m.	34	33	101

Notes:

(1) Represents the number of collection vehicles the Proposed Action would generate during the peak hour traveling to the Facility.

(2) Represents the number of collection vehicles the Proposed Action would generate during the peak hour leaving the Facility.

(3) DSNY collection vehicles must be multiplied by a factor of 1.5 to convert to PCEs.

(4) The total number of loads from DSNY collection vehicles is the same for both the Converted MTSs and the Existing MTSs.

(5) Vehicles include dray trucks used to transport containers from a facility to an intermodal yard. Dray vehicles must be multiplied by a factor of 2.0 to convert to PCEs.

(6) Future Build Condition DSNY-managed Waste deliveries to the Scott Avenue TS are less than Existing Condition deliveries to the facility. Therefore, no traffic analysis was performed at this site because there is no net increase in truck traffic.

(7) Future Condition DSNY-managed Waste deliveries to out-of-City waste-to-energy facilities would remain the same as Existing Conditions. Therefore, no traffic analysis was performed at this site because there is no change between Existing and Future Conditions.

(8) Indicates a facility at which there are several hours during which the peak hour number of DSNY collection vehicles are predicted to arrive at the facility.

WTE = waste-to-energy
TS = Transfer Station
BCR = Brooklyn Curbside Recyclables
RRF = Resource Recovery Facility
MCR = Manhattan Curbside Recyclables
NA = Not Applicable

The number of commercial waste collection vehicles that could potentially make deliveries to the Converted MTSs was based on the available capacity at each facility between 8 p.m. and 8 a.m. It was assumed that commercial waste collection vehicles would carry an average of 11 tons per truck of commercial waste to the Converted MTSs. The number of commercial waste collection vehicles that would make deliveries to each Converted MTS was later adjusted based on constraints from the off-site noise analysis. The revised number of commercial trucks that could potentially make deliveries without causing off-site noise impacts was then analyzed. Truck routes and the origin of commercial waste loads are discussed in Section 3.16.4.2.

3.16.4.1 Traffic Study Area

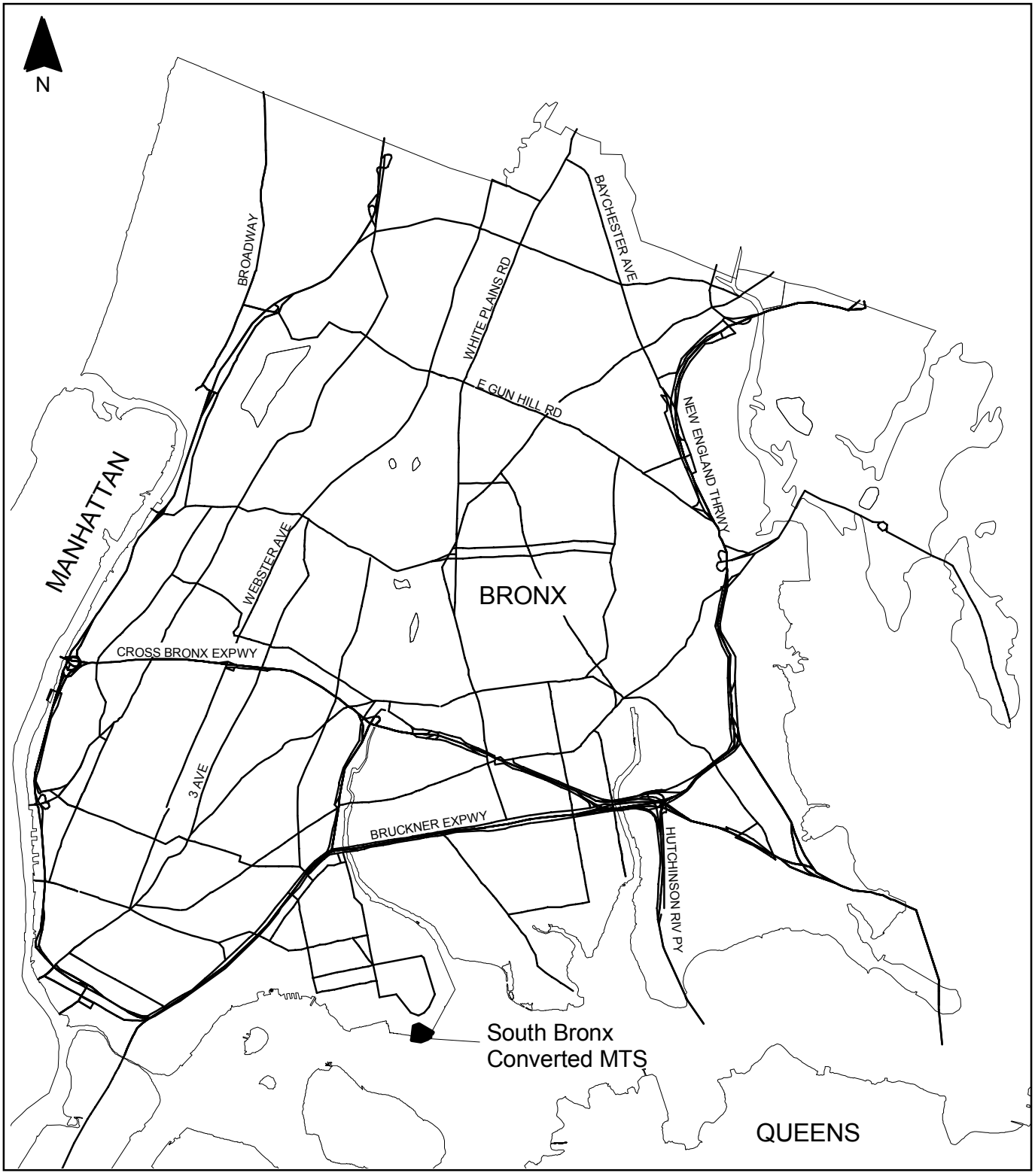
The study areas include DSNY-assigned collection vehicle routes from each CD and district garage to each facility. The study areas include areas in close proximity to the district garages as well as areas close to the facilities. Figures 3.16-2 through 3.16-5 depict the NYCDOT major and local truck routes for each borough of the City analyzed in the SWMP ~~D~~FEIS. Employee routes were assumed to be along major highways and local roadways.

The traffic study area also included intersections and locations that could be considered high accident locations and problematic from a safety viewpoint. "A high accident location is one where five or more pedestrian accidents occur in any one year in the most recent three-year period for which data is available" as defined by the 2001 CEQR Technical Manual.

3.16.4.2 Traffic Assignment in Study Area

After the initial routes to the facilities were determined, the following steps were taken:

1. The location of the centroid of each CD and the location of each district garage were plotted. The centroid is a location in the center of a CD where all priority and non-priority DSNY collection vehicle trips are assumed to originate.
2. Existing routes to commercial waste vendors under interim export from the centroid of each CD and the district garages were plotted on a site-specific map, as were any CEQR-defined areas of concern or critical intersections.
3. Proposed routes to the facilities from the centroid of each CD and the district garages were plotted on the same site-specific map as the existing truck routes.
4. Existing and future collection vehicle routes were compared to determine the portions of the routes that overlapped.
5. The study area was finalized once the routes were finalized. The study area included an area around the facility where additional collection vehicle traffic would be generated in excess of the CEQR-specified analysis threshold. Intersections within the study area were screened for further analysis using the procedure described in Section 3.16.5.



Site delineations are approximate.

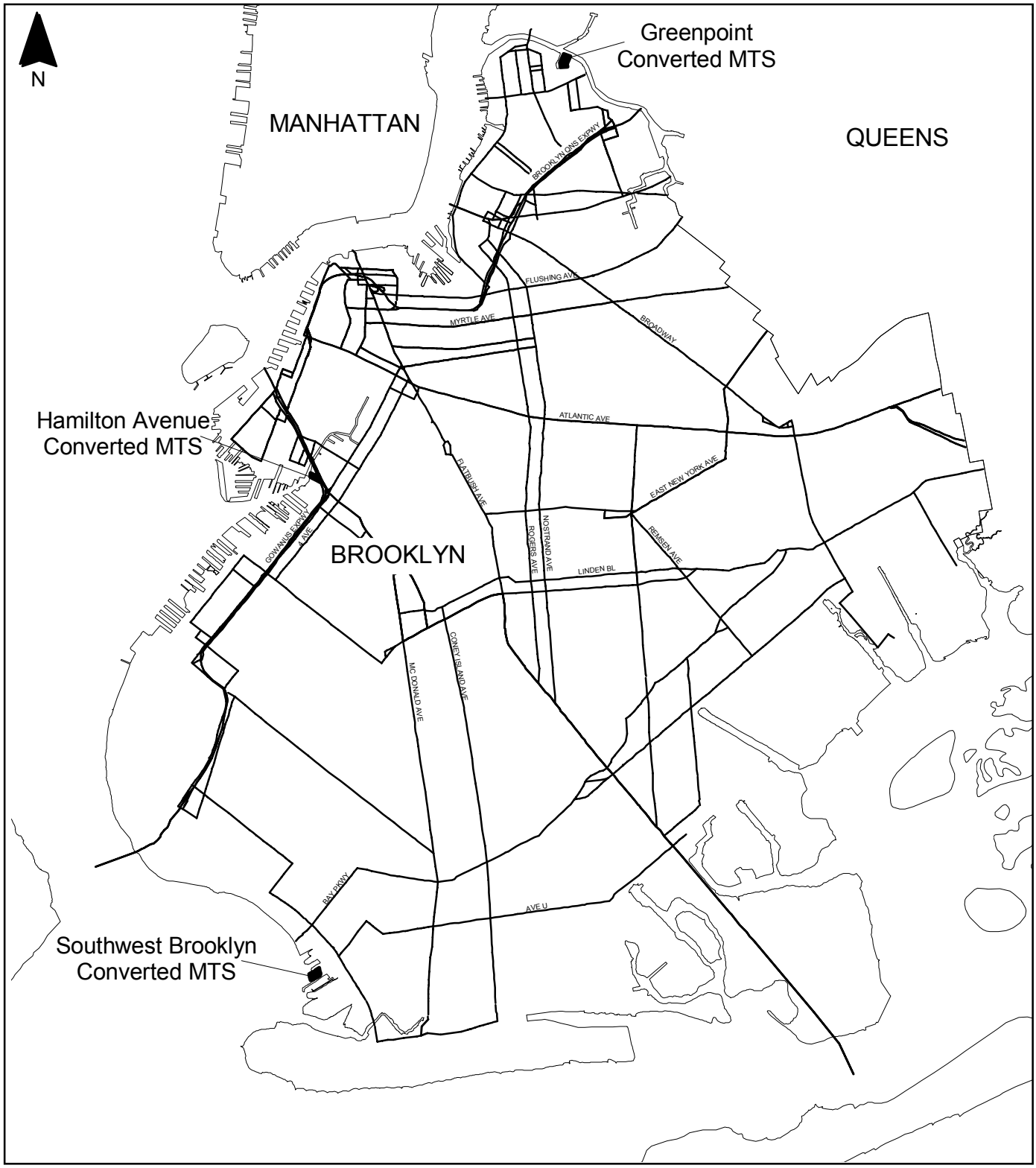
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 3.16-2 NYCDOT Designated Truck Routes - Bronx

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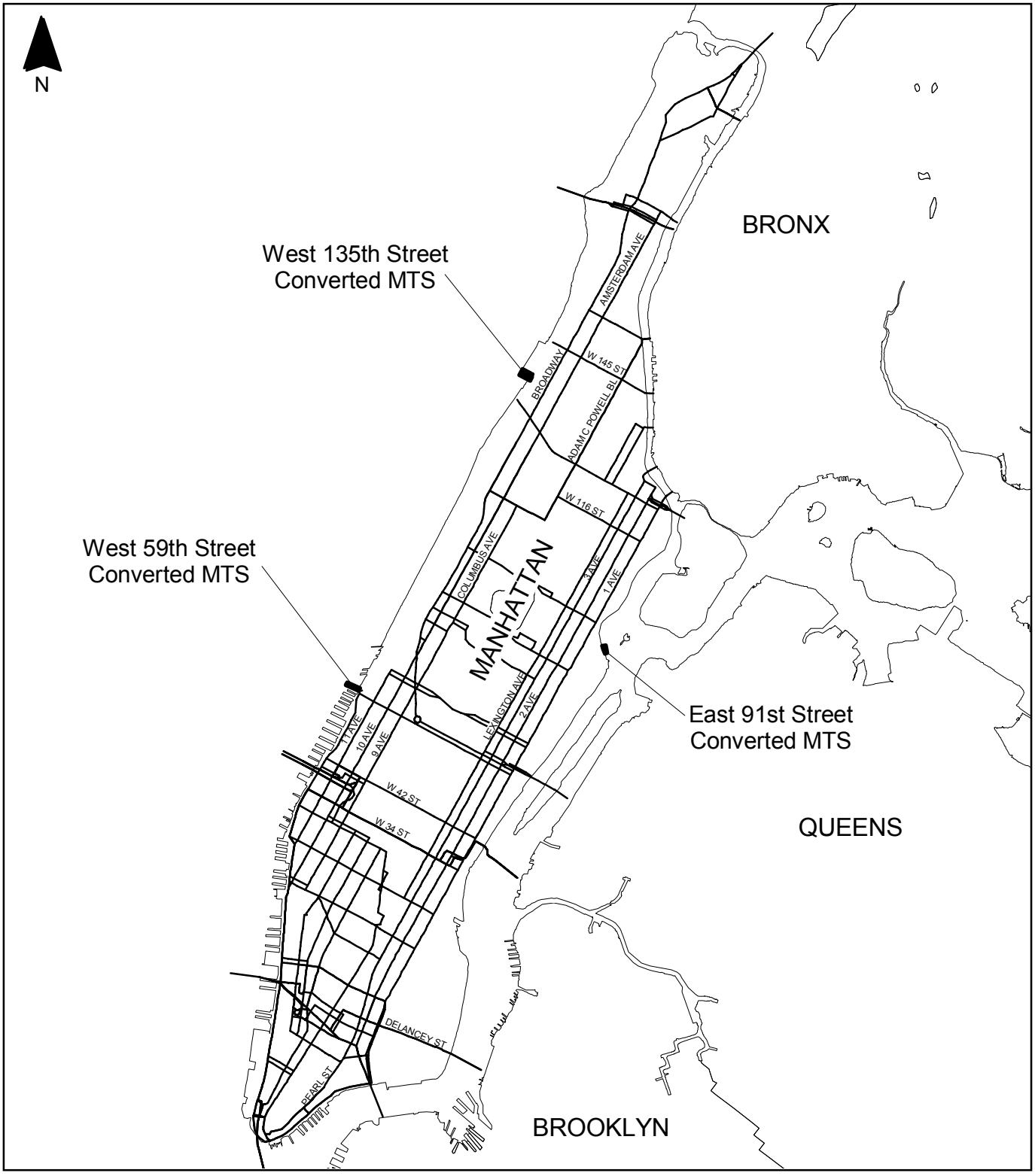


Site delineations are approximate.

1 0 1 Miles

Figure 3.16-3 NYCDOT Designated Truck Routes - Brooklyn

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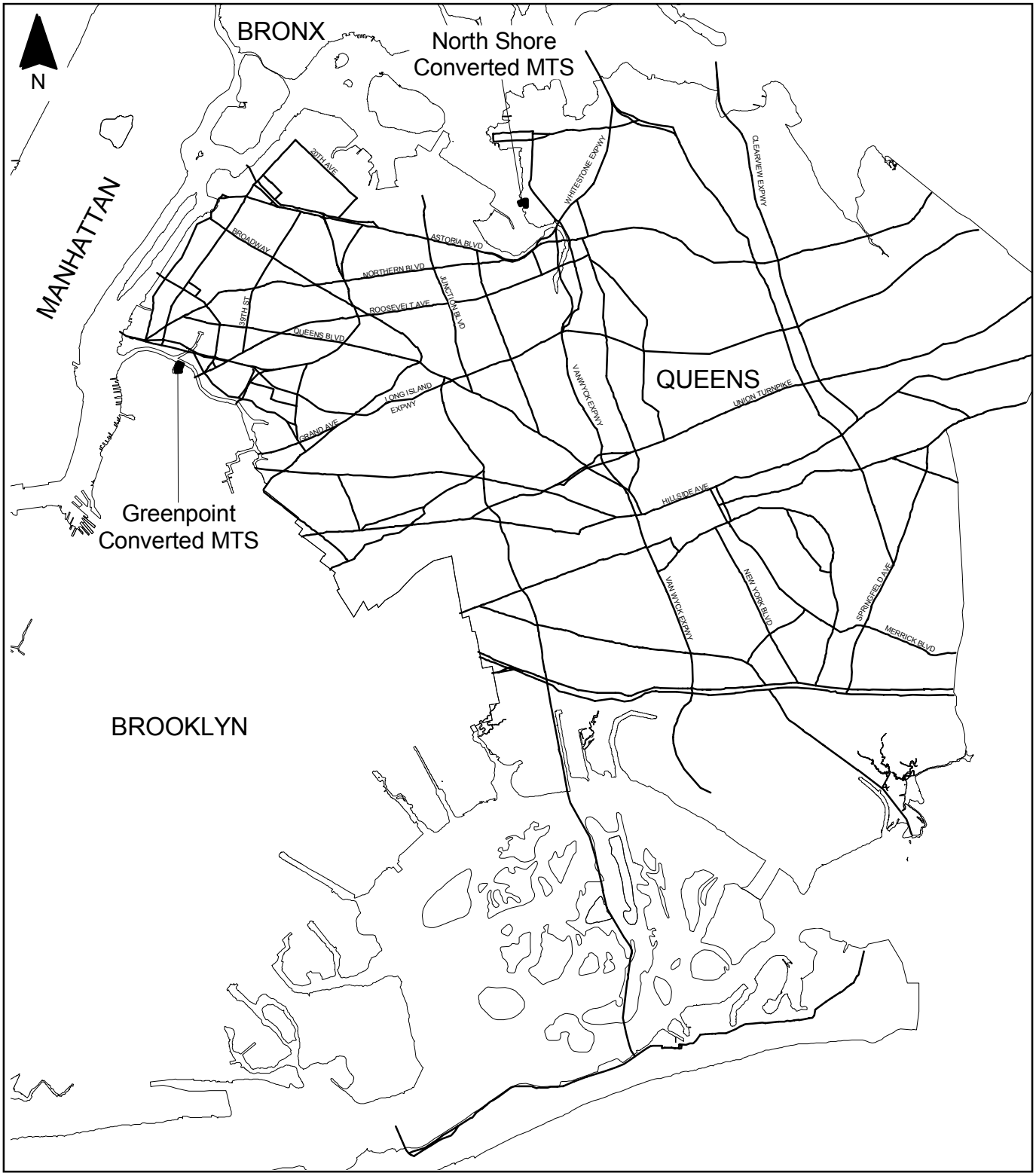


Site delineations are approximate.

1 0 1 Miles

Figure 3.16-4 NYCDOT Designated Truck Routes - Manhattan

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate.

1 0 1 Miles

Figure 3.16-5 NYCDOT Designated Truck Routes - Queens

CITY OF NEW YORK
DEPARTMENT OF SANITATION

6. NYCDOT reviewed and approved the proposed routes and the site-specific study areas and provided information from prior studies for these areas, if available. NYCDOT suggested additional intersections for inclusion in the study. NYCDOT also provided information on changes to traffic patterns that would be implemented prior to the build year of 2006 due to other projects in the vicinities of the facilities.

DSNY collection vehicles were assigned to a route based on the trip generation data provided by DSNY discussed in Section 3.16.4. The data provided by DSNY included information on the origin of the load by CD and the origin of the load within each CD (either the centroid of the CD or the district garage).

Commercial waste collection vehicles were assumed to use NYCDOT designated truck routes to travel to and from the Converted MTSs. Once close to the Converted MTSs, it was assumed that commercial waste collection vehicles would follow the same paths on local roads as DSNY collection vehicles to access the Converted MTSs.

Origin points of commercial waste were based on information provided by DSNY that identified amounts of commercial waste generated in the City by zip code. Commercial waste was assigned to a Converted MTS by zip code according to the zip codes that were within the CDs assigned to a particular Converted MTS. If a zip code spanned two CDs, the commercial waste was assumed to be from the CD that contained to largest portion of that zip code. It was assumed also that the zip codes with large quantities of commercial waste assigned to a Converted MTS would be most likely to use the Converted MTS in the future, if feasible. Collection vehicle routes from zip codes to a Converted MTS were assumed to be the same as the DSNY collection vehicle routes from the CD in which the zip codes are located. A more detailed discussion of this methodology is included in the Commercial Waste Management Study – Volume III, included in Appendix I to this FEIS.

3.16.5 Screening Methodology

Intersections along truck routes and district garage routes were screened using three different criteria.

- ~~The first criterion identifies intersections through which~~ 50 or more additional PCEs are assigned during peak hours;
- ~~The second criterion identifies intersections in which s~~Significant increases in delay result from less than 50 additional PCEs based on ~~the type of traffic control and characteristics of the intersecting streets.~~field observations of the intersection; and
- The ~~third criterion identifies~~ intersections ~~that~~ are high accident locations, as defined in the 2001 CEQR Technical Manual on page 30-4, based on 2003 accident data provided by NYCDOT.

Because no single CD would generate enough new trips in the Future Build Conditions by itself to warrant a traffic analysis, convergence intersections were screened first. Convergence intersections are those where DSNY collection vehicles traveling to the same facility from different CDs meet or overlap in their routes to and from the facility.

A summary of all critical intersections along CD routes and district garage routes meeting the above screening criteria are presented in each applicable site-specific chapter in this SWMP FD~~D~~EIS. No intersections located near district garages met the above criteria and were not, therefore, considered for further traffic analysis. NYCDOT reviewed and approved the selected intersections. Intersections within the study areas that ~~do~~ did not meet the above criteria ~~will be~~were considered to "screen out" and no further traffic analysis ~~will be~~was performed at these locations.

3.16.6 Data Collection

The following data were obtained for intersections identified for further analysis:

- Data available from prior studies (within a three-year period) conducted for the DSNY or submitted to and/or conducted by the NYCDOT; and

- Signal timing and phasing, and intersection as-built drawings of signalized intersections from the NYCDOT. The timing and phasing of each intersection was then field verified. Geometrics for intersections were field verified.

Where recent data were unavailable or unusable, the following data were obtained in the field:

- Three- or one-day turning movement counts, depending upon the specific study area, schedule and weather constraints. If one-day turning movement counts were obtained, they were adjusted for a three-day average using ATR counts.

- Full turning movement counts for traffic analysis:
  - Time periods: 7:00 a.m. to 7:00 p.m. (data collection times may vary from site to site but are consistent for all intersections studied for a particular site.);
  - Vehicle classifications: autos, trucks, buses (3 or more axles); and
  - Inventories: full physical inventories and intersection operations observation.

- Short-term counts for air quality and noise studies:
  - Time periods: 15- or 20-minute counts per hour during the above hours at each location;
  - Vehicle classifications: six category classification counts by direction; and
  - Inventories: full physical inventories and intersection operations observation.

- Pedestrian sample counts:
  - Sample counts during the above hours at each location.

- Travel time surveys:
  - Time periods: 7:00 a.m. to 7:00 p.m.;
  - Coverage: Six to nine runs per direction per time period; and
  - Procedure: Checkpoints at each signalized intersection, record stopped delay.

- ATR Counts:
  - Duration: Tuesday to Thursday minimum, seven days preferred for 24 hours each day.

- Accident information at intersections
  - Source: Appendix 1; 2001 CEQR Technical Manual; and
  - Source: 2003 NYSDOT Accident Records

3.16.7 Data Compilation

Using data collected in the field, the ~~baseline~~ existing traffic volumes were calculated for the average weekday at each intersection. ~~Automatic traffic recorder (~~ATR~~)~~ data were used to adjust the manual turning movement counts to obtain a more representative measure of the existing hourly traffic volume at each intersection. Future No-Build Conditions were calculated for the Future Build year by applying the CEQR-specified growth rates (Table 3.16-3) to the Existing Conditions. These Future No-Build traffic projections included traffic from any known future developments within or near the study area that have environmental and regulatory approvals in place. Information on future developments was obtained from local community boards and NYCDCP. Finally, the Future Build traffic volumes were calculated by adding the net increase in collection vehicles and employee vehicles to the Future No-Build Condition for each intersection.

3.16.8 Analysis

Three time periods were selected for analysis based upon the vehicle trips to be generated by the operations at each facility:

- The AM peak hour that would experience the greatest impact from the projected net increase in collection vehicles (AM Facility Peak Hour or AM Background Peak Hour) during the Future Build year;
- The PM peak hour that would experience the greatest impact from the projected net increase in collection vehicles (PM Facility Peak Hour or PM Background Peak Hour) during the Future Build year; and
- The Facility Peak Hour, which is the hour during which the most DSNY collection vehicle trips are generated by a given facility. (See Table 3.16-2)

Table 3.16-3
Annual Growth Rates for Studied Areas

Facility	Location	Growth Rate (%)
Hamilton Avenue MTS[1]	Brooklyn	1.0
Southwest Brooklyn MTS[1]	Brooklyn	1.0
East 91st Street MTS[1]	Manhattan	0.5
North Shore MTS[1]	Queens	1.0
52nd Street Barge Staging Area	Brooklyn	1.0
65th Street Intermodal Yard	Brooklyn	1.0
East 132nd Street Site	Bronx	0.5
Scott Avenue TS[2]	Brooklyn	NA
Scott Avenue/Scholes Street Truck to Rail TS	Brooklyn	1.0
Review Avenue Site	Queens	1.0
Collection Vehicle Transport to Out-of-City WTE Facilities[3]	New Jersey	NA
~~MCR~~ BCR to 30th Street Pier at South Brooklyn Marine Terminal	Brooklyn	1.0
MCR to Gansevoort Recyclables Acceptance Facility	Manhattan	0.5
South Bronx MTS[1]	Bronx	0.5
Greenpoint MTS[1]	Brooklyn	1.0
West 135th Street MTS[1]	Manhattan	0.5
West 59th Street MTS[1]	Manhattan	0.5
Meserole Street Truck to Rail TS	Brooklyn	1.0

Notes:

(1) The total number of loads from DSNY collection vehicles is the same for both the Converted MTSs and the Existing MTSs.

(2) Future Condition DSNY-managed Waste deliveries to the Scott Avenue TS are less than Existing Condition deliveries to the facility. Therefore, no traffic analysis was performed because there is no net increase in trucks.

(3) Future Condition DSNY-managed Waste deliveries to out-of-City waste-to-energy facilities would remain the same as Existing Conditions. Therefore, no traffic analysis was performed at this site because there is no change between Existing and Future Conditions.

WTE = waste-to-energy
TS = Transfer Station
BCR = Brooklyn Curbside Recyclables
RRF = Resource Recovery Facility
MCR = Manhattan Curbside Recyclables
NA = Not Applicable

The Facility Peak Hour often occurs closer to the midday peak hour, therefore, no midday peak hour analysis was performed. The peak time periods remained constant for all intersections analyzed in a study area. The time periods may have differed, however, from site to site. Employee vehicles were added to the analysis if such trips occurred during the peak time period analysis hours.

No weekend analyses were conducted because: (1) the facilities would not receive DSNY-managed Waste on Sundays; and (2) the Saturday background traffic and project-induced traffic are lower than the weekday traffic for the Proposed Plan Facilities and Alternative Facilities, as applicable, as presented in this F~~D~~EIS. The following individual facility chapters show the comparison of weekday to weekend traffic for both background volumes and project-generated volumes.

The primary measure of an intersection's general operational state is its LOS. The HCM 2000 defines LOS as "a qualitative measure describing operational conditions within a traffic stream, based on service measures such as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience." For all intersections, the HCM 2000 specifies six levels of service: LOS A through LOS F. LOS A generally describes an intersection where there is little or no delay time and progression is extremely favorable. LOS F generally describes poor progression and long delay times and also indicates over-saturation of the intersection. For signalized intersections, LOS is characterized by delay in ~~a~~ each lane group or overall ~~at an~~ intersection delay. The HCM 2000[3] defines delay as "the additional travel time experienced by a driver, passenger or pedestrian." Table 3.16-4 displays the delay for signalized and unsignalized intersections as specified by the HCM 2000 to characterize each of the six levels of service.

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[3] The methodologies for analyzing signalized and unsignalized intersections have limitations noted for their specific sections. (1) The signalized methodology "does not take into account the potential impact of downstream congestion on intersection operation," nor does the methodology "detect and adjust for the impacts of turn-pocket overflows on through traffic and intersection operation." (2) The unsignalized methodology is "for steady-state conditions . . . the methods are not designed to evaluate how fast or how often the facility transitions from one demand/capacity state to another."

Table 3.16-4
LOS Criteria for Signalized and Unsignalized Intersections

Level of Service	Stopped Delay Per Vehicle (seconds)	
	Signalized Intersection	Unsignalized Intersection
A	≤ 10	≤10
B	> 10 or ≤20	> 10 or ≤ 15
C	> 20 or ≤35	> 15 or ≤25
D	> 35 or ≤ 55	> 25 or ≤ 35
E	> 55 or ≤ 80	> 35 or ≤50
F	> 80	> 50

3.16.9 Impact Analysis Methodology

CEQR states that generally "deterioration in level of service within the clearly acceptable range (LOS A through LOS C) is not considered a significant impact." However, CEQR further states that the level of service must be disclosed and may constitute significant impacts on neighborhood character should they occur on residential streets. Furthermore, "levels of service that deteriorate from clearly acceptable LOS A, B or C in the Future No-Build Condition to marginally unacceptable mid-LOS D (delays great than 45.0 seconds) or unacceptable LOS E or F in the Future Build Condition would be considered significant impacts." It is noted that in cases where a LOS decreased from LOS C to LOS D but the increase in delay was less than five seconds, no mitigation action was taken. All intersections were analyzed by lane group. The same criteria are applied to unsignalized intersections as to signalized intersections. CEQR also states "for the minor street to trigger significant impacts, 90 PCEs must be identified in the Future Build Condition in any peak hour." Table 3.16-5 presents the CEQR-defined significant impacts for signalized and unsignalized intersections that have a Future No-Build Condition of LOS D or worse.

Table 3.16-5
Significant Impacts for Signalized and Unsignalized Intersections

Future ~~Baseline~~ No-Build LOS	Significant Impact Delay Time (seconds)
LOS D	5
LOS E	4
LOS F	3
LOS F with delay > 120 seconds	1

In addition to delay time, CEQR also specifies the use of volume-to-capacity (v/c) ratios as an indicator of intersection LOS, with high v/c ratios (approaching 1.0) indicating the development of problem conditions. CEQR requires the disclosure of both v/c ratios and average vehicle delays for each lane group at an intersection.

All analyses were performed using the Highway Capacity Software Model version 4.1(c/d). Model runs were conducted for the Existing Conditions traffic levels, Future No-Build traffic levels, and the traffic levels in the Future Build year. For both signalized and unsignalized intersection analysis, impacts were calculated by comparing the Future No-Build intersection delay and LOS with the intersection delay and LOS in the Future Build Condition. For both the signalized and unsignalized intersection analysis, the changes were compared with the 2001 CEQR Technical Manual criteria to test whether or not the impacts can be classified as significant. Individual study area findings are presented in the site-specific sections of this SWMP ~~FD~~EIS.

For safety impact analyses, the 2001 CEQR Technical Manual states that "assessment of impacts can generally be made at a qualitative level, but should indicate the nature of the impact, the volumes affected by or affecting such impacts, and the likelihood of its severity, if possible." Increasing pedestrian traffic at high accident locations can lead to increasingly unsafe conditions, and generating measurable pedestrian crossings at non-controlled locations leads to unsafe conditions. If high accident locations were identified, mitigation measures were explored based on the types and frequency of accidents. With the exception of the intersections analyzed for the West 135th Converted MTS and East 132nd Street Truck to Rail Transfer Station, no other intersections evaluated in this FEIS for potential traffic impacts either: (1) were included on the

list of Recent High Pedestrian/Vehicle Accident intersections in the 2001 CEQR Technical Manual or in the 2003 accident data provided by NYCDOT; or (2) were above the minimum screening threshold of five (5) or more pedestrian accidents in any year in the most recent 3-year period that require analysis. For the proposed East 91st Street Converted MTS, one intersection (York Avenue/86th Street) had five (5), three (3) and one(1) pedestrian accident(s) in 1998, 1999 and 2000, respectively. Though the five pedestrian accidents in 1998 just meets the CEQR threshold as a high accident location, there has been a steady and significant improvement in the years since. Therefore, mitigation measures were not explored at this location.

3.16.10 Typical Mitigation Measures

If significant impacts are found under the Future Build year analysis, CEQR requires the identification and evaluation of suitable mitigation measures that would restore traffic to the Future No-Build Conditions or to acceptable levels. For example, if the Future No-Build Conditions are determined to be LOS D, E or F, then a return to the Future No-Build Conditions in the Future Build year is required. If the Future No-Build LOS is A, B or C, and the LOS in the Build year deteriorates to D, E or F, then mitigation to mid-LOS D is required under the 2006 Build Conditions. The mitigation analysis varied by study area and individual intersections based on the severity of the impacts and the existing operation of the intersection. In general, all mitigation measures were evaluated for suitability based upon severity of impact, relative cost of mitigation (defined below as low, moderate or high) and the ease of implementation. Mitigation measures with a high associated cost were considered only to mitigate the most severe impacts when all other alternative mitigation measures were deemed inadequate. Mitigation measures evaluated were:

- Low Cost:
  - Signal phasing and timing modifications;
  - Parking regulation modifications;
  - Lane re-striping and pavement marking changes; and
  - Street direction and other traffic flow related changes (e.g., signage).

- Moderate Cost:
  - Intersection channelization improvements; and

- Traffic signal installation.

- High Cost (where applicable):
  - Street widenings.

Mitigation measures were also considered for locations identified as high accident intersections. Pedestrian safety mitigation measures were considered on the same basis as traffic mitigation measures in terms of Existing Conditions, severity on impact, cost and ease of implementation. Pedestrian safety mitigation measures evaluated were:

- Low Cost:
  - Advanced stop lines;
  - Addition/modification of signs; and
  - High visibility crosswalks.

- Moderate Cost:
  - Traffic signal enhancements; and
  - Addition of pedestrian safety areas (e.g., raised medians and crossing islands).

- High Cost (where applicable):
  - Pedestrian signal upgrade or installation; and
  - Roadway redesigns to benefit pedestrians.

For each study area, a summary of the mitigation measures identified and evaluated for intersections where significant impacts or high accidents were found are presented in the appropriate site-specific chapters of this SWMP FDEIS.

3.16.11 Transit and Pedestrians

The objective of the transit and pedestrian analyses is to determine whether the Proposed Plan Facilities and Alternative Facilities, as applicable, would have a significant impact on public transportation facilities and services and on pedestrian flows. Particularly, the analyses would examine the effects of the Proposed Plan Facilities and Alternative Facilities, as applicable, on rail and subway facilities and services, bus services and pedestrian flow and conditions.

The 2001 CEQR Technical Manual guidelines state that "if the proposed action is projected to result in fewer than 200 peak hour rail or bus transit riders, further transit analyses are not typically required as the proposed action is considered unlikely to create a significant transit impact." Additionally, the 2001 CEQR Technical Manual states that "projected pedestrian volume increases of less than 200 pedestrians per hour at any pedestrian element analyzed would not typically be considered a significant impact, since that level of increase would not generally be noticeable and therefore would not require further analysis."

The Proposed Plan Facilities and Alternative Facilities, as applicable, are expected to generate less than 200 employee trips per day, which is significantly lower than the 200 people per hour threshold stated in the 2001 CEQR Technical Manual. Employees traveling to and from the facilities are the only pedestrian and transit generators that would result from the Proposed Plan Facilities and Alternative Facilities, as applicable. Additionally, many of the employees will travel to and from the new facilities using automobiles, as a number of the facilities are not easily accessible by mass transit. Because pedestrian volumes and transit riders are significantly below the thresholds in the 2001 CEQR Technical Manual, further analysis will not be included. Pedestrian safety at selected intersections will be addressed according to the guidelines stated in the Traffic, Parking, Transit, and Pedestrians section of ~~this DEIS~~the site-specific chapters.

3.17 Air Quality

3.17.1 Introduction

Although located in manufacturing-zoned districts, operations that would occur within the Proposed Plan Facilities and Alternative Facilities, as applicable, would generate some air pollutant emissions within and near each site and potentially alter local air quality conditions. Also, the addition of DSNY and other agency collection vehicles to roadways in the vicinity of the Proposed Plan Facility and Alternative Facility sites would have the potential to affect local traffic conditions and air quality levels near these roadways. The air quality analyses determine whether and to what extent the Proposed Plan Facilities and Alternative Facilities would affect air quality levels at nearby sensitive land uses during construction and operations.

Pursuant to CEQR, the air quality analyses performed for each Proposed Plan Facility and Alternative Facility, as applicable:

- Describe Existing and Future No-Build air quality conditions in the New York Metropolitan Region; and
- Identify and quantify any potentially significant air quality impacts at the ~~Proposed Plan Facility and Alternative Facility~~ sites, as applicable.

Two types of analyses were conducted. ~~to estimate the air quality effect of each Proposed Plan Facility and Alternative Facility, as applicable.~~ The first estimates the impacts associated with emissions generated by on-site operations and the second estimates the potential impacts associated with off-site DSNY and other agency collection vehicle operations.

The following emission sources were considered for the analysis of on-site operations:

- Combustion emissions of diesel engines of operational equipment, including tugboats and moving and queuing collection vehicles, and MSW handling equipment (e.g., wheel loaders) that would operate inside or outside of the processing building;
- Fugitive dust emissions from MSW material handling operations (e.g., loading, unloading, transferring) that would occur inside the processing buildings;
- Re-entrained dust resulting from collection vehicles that would travel on paved roads inside and outside the processing buildings; and
- Heating plant and/or space heater emissions released from stacks on the processing buildings.

For off-site analyses, the effects of the DSNY and other agency collection vehicles traveling to and from each Proposed Plan Facility and Alternative Facility sites, as applicable, were determined by estimating pollutant concentrations at roadway intersections that would be most affected by such vehicles.

Both the on-site and off-site analyses were designed to determine whether Proposed Plan Facility and Alternative Facility operations, as applicable, would cause or exacerbate violations of applicable ambient air quality standards and/or exceed appropriate air quality guideline values or impact thresholds.

3.17.2 Air Quality Standards and Impact Significance Criteria

3.17.2.1 Ambient Air Quality Standards and Guidelines

3.17.2.1.1 National and State Ambient Air Quality Standards

National Ambient Air Quality Standards (NAAQS) have been established by USEPA for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM) (less than 2.5 microns in diameter [$PM_{2.5}$] and less than 10 microns in diameter [PM_{10}]), sulfur dioxide (SO_2) and lead (Pb). The air pollutants identified by USEPA as being of concern nationwide are CO, hydrocarbon (HC), NO_2, O_3, PM, sulfur oxides (SO_X) and Pb. Of these pollutants, those considered in this SWMP FDEIS are:

- **CO.** CO is a colorless and odorless gas that is generated in the urban environment primarily by the incomplete combustion of fossil fuels in motor vehicles. Prolonged exposure to high levels of CO can cause headaches, drowsiness, loss of equilibrium or heart disease. CO concentrations can vary greatly over relatively short distances. Relatively high concentrations of CO are typically found near congested intersections, along heavily used roadways carrying slow-moving traffic and in areas where atmospheric dispersion is inhibited by urban "street canyon" conditions. In the City, more than 80% of CO emissions are from motor vehicles. The addition of collection or other trucks to roadways that are already congested may reduce overall vehicular operating speeds and increase CO emissions.

- **HC.** HC compounds are also referred to as volatile organic compounds (VOCs). While no NAAQS have been established, this class of chemicals can act as a

precursor to the formation of O_3, for which there is a NAAQS. Impacts of the Proposed Plan Facilities and Alternative Facilities, as applicable, on ozone formation are not addressed in this analysis because these impacts occur on a larger, regional scale and any changes in emissions on a regional basis from waste disposal operations would not be significant. However, HC emissions were evaluated for the purpose of assessing human health risks due to the applicable individual toxic air pollutants, for which no NAAQS exist.

- **NO_x.** Nitrogen oxides (NO_X) include nitric oxide (NO) and NO_2. NO_X is emitted by motor vehicles and stationary sources due to the combustion of fuels. While most NO_X emissions leave the stack or exhaust pipe in the form of NO, they gradually convert to NO_2 in the atmosphere, which is the form of NO_X regulated by a NAAQS. NO_X also acts as a precursor to the formation of O_3; however, because such activity occurs on a large, regional scale and Proposed Plan Facility and Alternative Facility emissions would be insignificant on such a scale, the O_3 precursor effects of NO_X were not considered.

- **PM.** Respirable PM with an aerodynamic diameter smaller than 10 microns ~~in diameter~~ (including both PM_{10} and $PM_{2.5}$) is emitted to the atmosphere by sources such as industrial facilities, power plants, construction activity, wind erosion from paved roadways and diesel-powered vehicles, such as collection vehicles and other heavy trucks and buses. The addition of DSNY and other agency collection vehicles to, from and within a Proposed Plan Facility and Alternative Facility site, as applicable, may result in potential impacts from particulates due to tail pipe exhaust and increases in dust particles from truck travel on paved roads (i.e., re-entrained dust). Although there is a state standard for total suspended particulates (TSP), it is no longer enforced and potential impacts of TSP were not considered in this analysis because PM_{10} and $PM_{2.5}$ impacts are more representative of the health-related effects of particulate emissions.

- **SO_2.** Emissions generated from the combustion of sulfur-containing fuels, primarily oil and coal, for power generation, space heating or transportation are associated mainly with stationary sources. Potential SO_2 impacts from the operation of on-site diesel fuel-fired equipment were considered.

Pb impacts were not analyzed in this SWMP FDEIS. Pb emissions, which historically were influenced primarily by motor vehicle activity, have been reduced substantially due to the elimination of lead from gasoline. As a result, a quantitative analysis of Pb is no longer warranted.

The NAAQS specify concentrations of criteria pollutants that are not to be exceeded at ambient air quality receptor sites. NAAQS have been established for various averaging times based on how each pollutant affects human health. The estimated concentrations of criteria pollutants resulting from Proposed Plan Facility and Alternative Facility operations, as applicable, combined with the background concentrations discussed later in this document are compared to the NAAQS. The NAAQS are summarized in Table 3.17-1. The total amount of each applicable criteria pollutant generated by on-site non-fugitive sources was also estimated to determine if the total exceeds major emission source threshold values (as defined in Part 201 of NYCRR). If so, a facility would be subject to major source permitting requirements. ~~The NAAQS are summarized in Table 3.17-1.~~

Table 3.17-1
National and State Ambient Air Quality Standards
($\mu g/m^3$)

Averaging		Federal	
Contaminant	**Period**	**Primary**	**Secondary**
Carbon Monoxide (CO)	8-hour(1)	10,000 (9 ppm)	10,000
	1-hour(1)	40,000 (35 ppm)	40,000
Sulfur Dioxide (SO_2)	Annual	80 (0.03 ppm)	--
	24-hour(1)	365 (0.14 ppm)	--
	3-hour(1)	--	1,300 (0.5 ppm)
Nitrogen Dioxide (NO_2)	Annual	100 (0.05 ppm)	100
Ozone (O_3)(2)(3)	8-hour(1)(4)	0.08 ppm	0.08 ppm
	1-hour(3)	235 (0.12 ppm)	235
PM_{10}	Annual	50	50
	24-hour(2)	150	150
$PM_{2.5}$(4)	Annual(6)	15	15
	24-hour(5)	65	65
Lead (Pb)	Three-month (Calendar quarter)	1.5	--

Notes:
Source: USEPA, *National Primary and Secondary Ambient Air Quality Standards* (40 CFR 50).
(1) Not to exceed more than once per year, per monitor location, over a three-year period.
(2) During any 12 consecutive months, 99% of the values shall not exceed 150 $\mu g/m^3$.
(3) The number of days with hourly levels greater than standard shall not exceed one per year.
(4) Standards for 8-hour O_3 and for $PM_{2.5}$ were promulgated in 1997, but are not yet fully implemented by the USEPA.
(5) During any 12 consecutive months, 98% of the values shall not exceed 65 $\mu g/m^3$.
(6) Spatial average standard, applied by USEPA over a neighborhood scale.

3.17.2.1.2 Significant Impact Thresholds

USEPA is currently implementing procedures for complying with the $PM_{2.5}$ NAAQS.~~, and has not yet made a formal determination on which areas of the United States will be classified as meeting these relatively new standards. Until areas are designated and appropriate background levels established, comparison with the $PM_{2.5}$ NAAQS is not feasible. As an alternative,~~ On December 17, 2004, USEPA designated initial $PM_{2.5}$ attainment and non-attainment areas for the entire United States. All five boroughs of New York City were designated as non-attainment areas. Therefore, the $PM_{2.5}$ impacts were compared with interim significance thresholds of $\mu g/m^3$ for 24-hour impacts and 0.1 $\mu g/m^3$ for annual impacts established by NYSDEC and NYCDEP. The following approach was applied to $PM_{2.5}$:

- Potential incremental 24-hour and annual impacts from Proposed Plan Facility and Alternative Facility operations, as applicable, were estimated using the same modeling methodologies used for other criteria pollutants. For facilities ~~where current operations have little to no effect on air quality~~that are not in operations at a current time, the potential incremental 24-hour and annual impacts are the same as the impacts from the operations from the Proposed Plan Facility and Alternative Facility. Otherwise the incremental impact will be equal to the difference between impacts from existing and future operations.
- Per NYSDEC and NYCDEP policy, r~~R~~esults from the receptor having the highest 24-hour concentration were compared to a screening threshold value (STV) of 5 micrograms per cubic meter ($\mu g/m^3$) to determine if the facility and/or collection vehicle traffic have a significant short-term (24-hour) impact.
- Per NYSDEC policy, i~~I~~f primary PM_{10} emissions from the facility exceeded 15 tons per year, results from the receptor having the highest annual concentration were compared to an STV of 0.3 $\mu g/m^3$ to determine if the facility and/or collection vehicle traffic have a significant annual impact at a single receptor. Otherwise, the highest annual concentration will be included in the technical backup available upon request on compact disk.
- Per NYCDEP policy, ~~T~~the potential incremental impacts from on-site operations on an annual basis were evaluated on a spatial-average basis (neighborhood scale) as follows:
  - A 1 kilometer (km) x 1 km Cartesian receptor grid centered at the receptor having the highest estimated annual $PM_{2.5}$ concentration from the previous analysis (with 25-meter spacing in all directions) was developed. All receptors within the grid but within the Proposed Plan Facility and Alternative Facility property fence line, as applicable, were eliminated from the model input.
  - The results estimated at all receptors within the receptor grid for the on-site emissions were averaged. This value was added to the maximum annual receptor

concentration obtained in the off-site analysis. If there were no intersections within the 1 km x 1 km receptor grid, a receptor was placed at the intersection analyzed for off-site impact. The value was then added to the maximum annual receptor obtained from the off-site analysis.

- The total on-site plus off-site concentration was compared to an annual STV of 0.1 $\mu g/m^3$.
- If the neighborhood averaged impact ~~rounded to the nearest tenth (i.e., 0.15 rounds up, while lower values round down)~~ was greater than or equal to the 0.1 $\mu g/m^3$ STV, the analysis was refined further by combining the emissions from the on-site sources and off-site roadways, including intersections, into a single USEPA Industrial Source Complex Short-term Air Quality Dispersion (ISCST3) model run to determine the neighborhood average using the same methodology as above.

- Per NYCDEP policy, t~~T~~he maximum incremental impact from off-site operations on an annual basis was determined based on concentrations estimated at 15 meters from the edge of affected roadways for selected intersections. However, the off-site contribution was refined by averaging the concentration over the mobile source analysis grid. The on-site impact was then added to the impact from the ~~on~~off-site model receptor and compared to the 0.1 $\mu g/m^3$ spatial average STV as an ~~conservative~~ estimate of a spatial average concentration increment.

In addition to the NAAQS and $PM_{2.5}$ interim significance thresholds, CO incremental impact criteria known as "*de minimis*" criteria have been established under the NYCDEP's CEQR guidelines to estimate the significance of impacts from projects affecting mobile source operations. These are:

- An increase of 0.5 parts per million (ppm) or more for the 8-hour period, when baseline CO concentrations are above 8.0 ppm; and
- An increase of one-half the difference between the baseline and the standard concentration (9 ppm) for the 8-hour period when baseline CO concentrations are below 8 ppm.

3.17.2.1.3 Toxic Air Pollutants

Small quantities of a wide range of the non-criteria air pollutants, known as toxic air pollutants, that are emitted from diesel-fueled vehicles are also of concern. These pollutants can be grouped into two categories: *carcinogenic* air pollutants and *non-carcinogenic* air pollutants. Carcinogenic pollutants in diesel exhaust emissions include formaldehyde; benzene;

benzo(p)pyrene; 1,3 butadiene and acetaldehyde. Non-carcinogenic pollutants include toluene, xylenes, acrolein and various polycyclic aromatic HCs. No federal standards have been promulgated for toxic air pollutants; however, NYSDEC has established acceptable ambient levels for these pollutants based on human exposure criteria in the *Guidelines for the Control of Toxic Ambient Air Contaminants*. In this document, NYSDEC outlines short-term guideline concentrations (SGCs) and annual guideline concentrations (AGCs). Estimated concentrations of toxic pollutants were compared with these values.

USEPA has developed approaches that can be used to assess the potential impacts associated with carcinogenic and non-carcinogenic air pollutant releases. USEPA's "Hazard Index Approach," together with NYSDEC guidelines, ~~was~~ were used to assess the potential impacts associated with chronic and acute risk from the release of non-carcinogenic toxic air pollutants from each Proposed Plan Facility and Alternative Facility, as applicable. The potential impacts of non-carcinogenic air pollutant releases from on-site operating diesel-powered equipment, collection vehicles and tugboats were assessed as follows:

- Ratios of the maximum estimated pollutant concentration, divided by its respective health-related NYSDEC guideline values (SGCs and/or AGCs), were estimated for each applicable non-carcinogenic toxic pollutant;
- Short-term (1-hour) ratios were developed to assess the potential for acute risk exposure, and annual ratios were developed to assess the potential for chronic risk exposures;
- The short-term and annual ratios for each of these pollutants were summed to obtain total short-term and annual ratios of all pollutants combined;
- The total short-term and annual ratios were compared with a hazard index of 1; and
- If the total ratios were found to be less than 1, then no significant air quality impacts would occur due to these non-carcinogenic pollutant releases.

NYSDEC cancer risk thresholds, which are based on USEPA's IRIS database, were used ~~for this analysis~~to analyze the potential impact of carcinogenic air pollutants from each Proposed Plan Facility and Alternative Facility, as applicable. The potential cancer risk associated with each pollutant was estimated, and the total incremental cancer risk associated with the release of all of the carcinogenic toxic pollutants was estimated, by summing the risk associated with each of the carcinogenic pollutants on a receptor-by-receptor basis.

USEPA considers that an overall incremental cancer risk from a proposed action of less than one-in-one million is not significant. If the total combined incremental cancer risk of all of the carcinogenic toxic pollutants at the sensitive receptor locations was less than one-in-one million, cancer-related air quality impacts were determined to be insignificant.

Based on the types of pollutants associated with the Proposed Plan Facilities and Alternative Facilities, as applicable, 16~~5~~ toxic compounds that have been identified as emissions from diesel equipment and that have emission factors developed by USEPA were considered in this analysis, along with their respective NYSDEC guideline values, which were revised in 2000 (Table 3.17-2). The emission factors used for each of the toxic compounds were obtained from USEPA's AP-42 Compilation of Air Pollutant Emission Factors, Table 3.3-2 Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines, revised in October 1996.

3.17.3.1 Monitored Air Quality and Background Concentrations

Air pollutant levels in the City metropolitan area are monitored by a network of sampling stations operated under the supervision of NYSDEC. Monitored ambient air quality levels for each borough were provided by NYCDEP for use in each Proposed Plan Facility and Alternative Facility site-specific analysis, as applicable. NAAQS attainment status is based on a three-year period of monitoring, so despite the more recent data that shows no violation of NAAQS, the metropolitan area contains NAAQS non-attainment designations for some pollutants, as detailed below.

Background concentrations (i.e., pollutant levels due to emission sources not accounted for in the modeling analysis) of the criteria pollutants for the on-site and off-site air quality impact analyses were obtained primarily from NYCDEP memorandum dated February 18, 2005 received on April 18, 2003 (used in the DEIS) and revised on March 4, 2005 (used in this FEIS). These values are based on ambient monitored values for the last few years of data from NYSDEC's ambient monitoring system. More recent data from the NYSDEC Monitoring Network were used where appropriate. The revised background concentrations were added to the on-site and off-site modeling results to estimate the total pollutant concentrations in this FEIS. The background concentrations presented in Table 3.17-3 and Table 3.17-4, as well as the technical backup submitted to NYCDEP, were used for each site-specific analysis.

Table 3.17-2
Annual and Short-Term Guideline Concentrations

No.	Toxic air Pollutant	Short-Term (1-Hour) Guideline Concentration (SGC) $\mu g/m^3$	Annual Guideline Concentration (AGC) $\mu g/m^3$
Carcinogenic			
1	Benzene	1,300	0.13
2	Formaldehyde	30	0.06
3	1,3 Butadiene	--	0.0036
4	Acetaldehyde	4,500	0.45
5	Benzo(a)pyrene	--	0.002
Non-Carcinogenic			
6	Propylene	--	3,000
7	Acrolein	0.19	0.02
8	Toluene	37,000	400
9	Xylenes	4,300	700
10	Anthracene	--	0.02
11	Benzo(a)Antracene	--	0.02
12	Chrysene	--	0.02
13	Naphthalene	7,900	3.0
14	Pyrene	--	0.02
15	Phenanthrene	--	0.02
16	Dibenz(a,h)anthracene	--	0.02

Source: NYSDEC Division of Air Resources-1 (DAR-1) AGC/SGC Tables, July 12, 2000.

Table 3.17-3
Background Concentrations[1] for SO_2, NO_2 (1999-2003) and PM_{10} (2001-2003)

	SO_2					PM_{10}			NO_2
	Annual ($\mu g/m^3$)	24-hour ($\mu g/m^3$)		3-hour ($\mu g/m^3$)		Annual ($\mu g/m^3$)	24-hour ($\mu g/m^3$)		Annual ($\mu g/m^3$)
NAAQS	80	365	365	1300	1300	50	150	150	100
		1st Max	2nd Max	1st Max	2nd Max		1st Max	2nd Max	
Manhattan									
Mabel Dean[1]	37	139	118	246	212	21	61	49	71
PS 59	37	139	123	265	228	---	---	---	77
Queens									
Queensboro Comm. College[2]	*18*	*107*	86	186	165	=	=	=	*49*
College Point P.O.	=	=	=	=	=	=	=	=	*56*
Bronx									
Botanical Garden [3]	*26*	139	126	*231*	183	=	=	=	58
IS 52	37	136	134	254	*233*	21	91	46	*60*
Brooklyn									
JHS 126	=	=	=	=	=	20	90	50	=
Staten Island									
Susan Wagner	=	=	=	=	=	16	90	51	=

Notes:

[1] Pollutant background concentrations provided by NYCDEP on March 4, 2005.

[2] At Mabel Dean, the SO_2, NO_2, and PM_{10} values are based on data collected from 1999-2001.

[3] At Queensboro Community College, the SO_2 and NO_2 values are based on data collected from 1999-2001.

[4] At Botanical Garden, the SO_2 values are based on data collected from 2000-2003.

Table 3.17-4
CO Background Levels

Study Area	1-hour Concentration (ppm)	8-hour Concentration (ppm)
Midtown Manhattan	4,353	3,322
Downtown Brooklyn and Long Island City	3,321	2,635
Rest of the City	3,781	2,635

Source: New York State Department of Transportation (NYSDOT), *Environmental Procedures Manual* (January 2001).

3.17.3 Regulatory Setting

$PM_{2.5}$ background levels were not used in this analysis because they have not yet been established by NYSDEC or NYCDEP. Instead, facility-related $PM_{2.5}$ impacts were compared to interim "significance impact thresholds" to determine the likelihood of significant impacts. Maximum modeled incremental $PM_{2.5}$ impacts (due to on-site and off-site operations only) for the 24-hour, and annual average neighborhood ~~and annual maximum~~ periods were compared against interim "significance thresholds" of 5 $\mu g/m^3$, and 0.1 $\mu g/m^3$ ~~and 0.3 $\mu g/m^3$~~, respectively.

No background values were considered for the toxic pollutant analysis because toxic pollutant impacts were assessed from a project incremental risk standpoint.

3.17.3.2 Regulatory Status

The federal Clean Air Act Amendment (CAAA) defines non-attainment areas as geographic regions that have been designated as not meeting one or more of the NAAQS. The New York Metropolitan Region is currently designated as being a severe non-attainment area for O_3 and a maintenance area (i.e., a previously designated/ re-designated non-attainment area that has been based on demonstrated compliance with the NAAQS) for CO. ~~In addition,~~ New York County (Manhattan) is designated as being a moderate non-attainment area for PM_{10}. In addition, the Metropolitan Region in now formally designated a non-attainment area for $PM_{2.5}$.

3.17.3.3 Major Stationary Source Requirements

Under federal permitting rule 40 CFR 52.21(b)(1), a new or modified facility within the New York Metropolitan Region is considered a "Major Stationary Source" (i.e., a source subject to major stationary source construction permitting requirements) if the stationary source emissions released from that facility have the potential to emit 25 tons per year or more of NO_X or VOCs, 250 tons per year or more of CO, 100 tons per year or more of PM_{10} in Manhattan and 250 tons per year or more of PM_{10} elsewhere in the City area. NYSDEC is proposing amendments to its permitting regulations (i.e., 6 NYCRR Part 231) that may impose additional permitting requirements. Under the amendments, p~~P~~otential SO_2 emissions of 250 tons or more per year would classify ~~a source as~~ as a "major" under construction permit rules.

Following the guidelines presented in NYCRR Part 201 (Permits and Registrations, Subpart 201-3 Exemptions and Trivial Activities), only emissions released within the Proposed Plan Facility and Alternative Facility (as applicable) processing buildings should be considered in these estimates. Emission estimates would be prepared for each Proposed Plan Facility and Alternative Facility, as applicable, that would be constructed as part of its air permitting process. If a Proposed Plan Facility or Alternative Facility is determined to be a major source for a pollutant, ~~which the area~~ and is located within an area that is designated as non-attainment, emission offsets may need to be obtained.

3.17.4 Methodology Used to Estimate Potential On-site Impacts

3.17.4.1 Analytical Approach

Atmospheric dispersion analyses were conducted to estimate pollutant levels at air quality receptors (i.e., points at or beyond the site fence line, as discussed in Section 3.17.4.5) surrounding each facility. The USEPA's ISCST3 model was used for this analysis. ISCST3 is a versatile model that is often used to predict pollutant concentrations from continuous point, area, volume and open pit sources. This model is often preferred by USEPA because of its many features that enable users to estimate concentrations from nearly any type of source emitting non-reactive pollutants.

The following dispersion modeling options and assumptions were applied:

- Unless the topography surrounding a study area included substantial changes in elevation, flat terrain was assumed;
- As only smaller particulate matter and gaseous pollutants were considered, gravitational settling and deposition of particulate matter was not included;
- Possible wake effects on point source plume dispersion from the Proposed Plan Facility and Alternative Facility, as applicable, and/or other nearby buildings were considered; and
- For each pollutant, an appropriate set of point, area and volume emission source parameters associated with each operation at each Proposed Plan Facility and Alternative Facility, as applicable, was developed.

USEPA's ~~Industrial Source Complex Air Quality Dispersion (~~ISCST3~~)~~ model uses different dispersion coefficients and mixing heights in rural vs. urban settings. The Auer land use technique was applied to each site to determine whether the rural or urban dispersion coefficients and mixing heights should be applied.

Four types of emission sources that were anticipated to operate inside of processing buildings were considered in the analysis. These include emissions from diesel engines for equipment used in waste handling operations, diesel-fueled collection vehicles, heating equipment and particulate emissions from waste handling operations. Emission sources operating outside of the processing building that were considered included collection vehicles and tugboats.

The mechanical ventilation system of each Proposed Plan Facility and Alternative Facility, as applicable, would be designed to force emissions generated in the building into the atmosphere through rooftop vents, which were input into the ISCST3 model as point sources. To negate the effects of plume rise for horizontally-vented emissions, a velocity of 0.001 meters per second (m/s) and a stack diameter of 0 meters (m) was used based on CEQR guidance. If the facility's heating plant had a separate exhaust stack, its emissions were considered as a separate point source.

Moving collection vehicles were considered as emission sources located along the internal roadway system of each Proposed Plan Facility and Alternative Facility, as applicable, and modeled using the volume source, or in some cases area source, algorithms incorporated into the ISCST3 model. Emissions from vehicles operating within 50 meters of each site boundary were modeled together with the emissions from the on-site sources. It was assumed that all vehicles moving on site were traveling at 5 ~~miles per hour (~~mph~~)~~. Tugboats were considered area sources, with emissions distributed evenly over the area of tugboat operations.

The concentrations of each pollutant were estimated by modeling all of the sources of each pollutant from each Proposed Plan Facility and Alternative Facility, as applicable, in one modeling run.

3.17.4.2 Meteorological Data

Detailed dispersion analyses were conducted using a set of meteorological conditions representative of the New York metropolitan area for the latest available five consecutive years of compiled meteorological data. Meteorological data used consisted of LaGuardia Airport surface data and Brookhaven mixing height data for the years 1998~~7 and~~ through 2002~~1~~ for the Proposed Plan Facilities and some Alternative Facilities. For the remaining Alternatives, the 1997 through 2001 meteorological data was used.

3.17.4.3 Emission Sources and Stack Parameters

In general, vendor-supplied information was used to identify site-specific emission source parameters for use in the dispersion analysis. However, in the absence of vendor-supplied data, the following assumptions relating to source (stack) parameters for Proposed Plan Facilities and Alternative Facilities, as applicable, were applied (unless otherwise specified):

- For outdoor moving and idling/queuing collection vehicles, emissions were input as adjacent volume or area sources with a release height of six feet above the elevation of the internal Proposed Plan Facility and Alternative Facility (as applicable) roadway ~~or ramp~~for volume sources, and 12 feet above the elevation of the ramp for area sources. In some cases, however, to refine the analysis, the area source algorithm was used in the event that the source-to-receptor distances ~~are~~were less than three times the initial lateral dimension of the volume sources. For example, if in the case of collection vehicles the lateral dimension of the volume sources were 12 feet, this

distance would be 36 feet. ~~The Rrelease height of the area sources of 12 feet was used. the idling emissions were separated from the volume sources and input as point sources with a release height of 12 feet~~. The dimension of volume sources and area sources were determined on a case-by-case basis considering roadway geometry of each site.

- For tugboats, release heights were assumed to be 10 meters (32.81 feet) above the water level based on exhaust heights above water and a minimum amount of expected plume rise. Area source dimensions were determined for each site based on the size and shape of the operational area anticipated.
- Heating plant exhaust stack emissions and processing building exhaust were modeled as point sources.

Due to the fact that only a small number of employee vehicles are anticipated to operate on site for a small fraction of time during the analysis periods considered, emissions from the vehicles were not considered.

The following assumptions were applied to emission sources at each Proposed Plan Facility and Alternative Facility, as applicable:

- USEPA PART 5 and MOBILE5b were used for the initial analysis of prospective sites performed prior to January 2004~~ for initial analysis for prospective sites~~. To refine the analysis, a~~. A~~ final version of MOBILE6.2, ~~was~~ released in February 2004, ~~and~~ was used for the Proposed Plan Facilities and some Alternative Facility analyses. A supplemental analysis will be performed if any Alternative Facilities are selected as part of the Proposed Plan and were not analyzed using MOBILE 6.2.~~ and in instances where a more refined analysis was warranted.~~
- CO, NO_2 and total HC emission factors for all moving and idling vehicles were estimated using the USEPA ~~MOBILE5b/~~MOBILE6.2 vehicular emission factor model. To estimate the emission rates of CO, NO_X and HC for moving vehicles, emission factors (based on anticipated travel speeds~~ for moving vehicles~~) were multiplied by the distance that an average vehicle will travel and then by the number of moving vehicles.
- Each collection vehicle was considered a heavy, heavy duty diesel vehicle (HHDDV) with a gross vehicle weight of 64,000 pounds when full and 44,000 pounds when empty.
- Exhaust and fugitive dust PM_{10} emission factors for moving vehicles (e.g., re-entrained dust, exhaust, brakes and tires) were estimated using the USEPA Publication AP-42, Section 13.2.1 [12/03], Equation 1:

$$E = k\left(\frac{sL}{2}\right)^{0.65} \times \left(\frac{W}{3}\right)^{1.5} - C$$

where:

E = Particulate emission factor;
~~K~~k = Particle size multiplier (1.8g/veh-mile for $PM_{2.5}$ and 7.3g/veh-mile for PM_{10});
sL = Road surface silt loading (g/m^2);
W = Average weight (tons) of the vehicles traveling the road, and
C = Emission factor for 1980s vehicle fleet exhaust, brake wear and tire wear (0.1617g/veh-mile for $PM_{2.5}$ and 0.2119g/veh-mile for PM_{10}).

- For queuing vehicles (exhaust PM_{10}), the emission factors were estimated using MOBILE6.2. To estimate the emission rate (grams per hour [g/hr]), the emission factor for moving vehicles (grams per vehicle-mile [g/veh-mile]) was multiplied by the distance that an average vehicle would travel, and then by the number of moving vehicles. In some cases, because of low speed (i.e., less than the 10 mph minimum speed for which the AP-42 equation is applicable), emission factors were reduced by a factor of 50% to account for the fact that speeds would be restricted to 5 mph on site.
- A silt loading factor of 0.4 (i.e., factors that are a function of the dust of the roadway that influence resuspended dust emission rates) was used for calculating PM_{10} emissions from collection vehicles.
- Low-sulfur fuel is used in DSNY collection vehicles, so a reduction from 500 ppm to 15 ppm was applied.
- $PM_{2.5}$ emission rates for collection vehicles were estimated using a similar methodology as used for PM_{10} except that re-entrained dust was not considered for $PM_{2.5}$. This is because re-entrained $PM_{2.5}$ emissions from traffic are considered by New York regulatory agencies to be negligible for on-site vehicles at speeds of 5 mph or less. If no $PM_{2.5}$ emission factor was available for a particular type of source, PM_{10} emission factors were conservatively utilized.
- SO_2 emission factors for diesel-fueled equipment and idling collection vehicles were estimated based on the allowable sulfur content in diesel fuel and estimated fuel utilization rates. These factors were calculated using the following equation from USEPA's "Exhaust Emission Factors for Nonroad Engine Modeling – Compression Ignition."

$$SO_2 = BSFC \times 453.6 \times (1 - 0.022) - HC \times sulfur\ \ weight\ \ fraction \times 2$$

~~where~~where:

SO_2 = SO_2 emission factors in grams per horsepower hour (g/hp-hr);

BSFC	=	In-use adjusted Brake-Specific Fuel Consumption in pounds per horsepower-hour (lb/hp-hr) (from Table 1 of the above-mentioned document, for different engine powers and years);
453.6	=	The conversion factor from pounds to grams;
1-0.022	=	An adjustment for sulfur converted to direct PM;
HC	=	The in-use adjusted hydrocarbon emissions in g/hp-hr;
Sulfur weight fraction	=	The weight fraction of sulfur (0.003 for tugboat diesel fuel, 0.000015 for DSNY on-road and nonroad diesel fuel, 0.0004 for non-DSNY on-road diesel fuel and 0.0005 for non-DSNY nonroad diesel fuel); and
2	=	Grams of SO_2 formed from a gram of sulfur.

Regarding the operation of these engines, the following assumptions were made:

- All engines were operating at an average of 70% of maximum engine horsepower during both peak hour and annual average conditions.
- All engines were operating at an average of 20% of maximum engine horsepower while idling.
- Emission factors for space heaters and boilers were obtained from USEPA's AP-42 for natural gas-fired facilities. (Table 1.4-1 for CO and NO_X and Table 1.4-2 for PM, SO_2 and VOC [or HC]).
- The quantity of dust (PM_{10} and $PM_{2.5}$) emissions generated by waste handling (transfer) operations were estimated based on Proposed Plan Facility and Alternative Facility (as applicable) throughput and the following USEPA AP-42 (Section 13.2.4 [~~12/03~~1/95], Equation 1) equation:

$$EF = k \times (0.0032) \times \frac{(u/5)^{1.3}}{(M/2)^{1.4}} - C$$

where:

EF	=	The emission factor in pounds per ton (lb/ton);
k	=	The particle size multiplier (0.35 for PM_{10} and 0.11 for $PM_{2.5}$);
u	=	Mean wind speed (miles per hour), assumed to be 2.2 mph (equivalent to 1.0 m/s); and
M	=	Material moisture content, assumed to be 10% for residential solid waste. This is a conservative estimate based on available data from DSNY's 1992 Solid Waste Management Plan, lower than the moisture content of several low-moisture content categories (i.e., paper, plastics, textiles, wood); ~~and.~~
~~C~~	=	~~Emission factor for 1980 vehicle fleet exhaust, break wear and tire wear.~~

3.17.4.3.1 Emissions from Tugboats

Emissions rates of diesel-fueled tugboats were estimated as follows:

- Values provided in Table 3.5 of the USEPA document, Analysis of Commercial Marine Vessels Emissions and Fuel Consumption Data (February 2000), were used to determine the emission factors for CO, NO_X, HC, PM_{10} and SO_2. A rated horsepower of 1,800 horsepower and a load factor of 0.2 for each tugboat maneuvering at each Proposed Plan Facility and Alternative Facility, as applicable, were assumed. Tugboat emission factors used in this analysis are provided in Table 3.17-5.
- It was assumed that emissions from tugboats were released as area sources located within a tugboat operating area. This area was determined on a site-by-site basis depending on the layout of each facility.

Following CEQR guidance, a diesel fuel sulfur content of 0.3% was assumed for tugboats.

Table 3.17-5
Tugboat Emission Factors

Contaminant	Emission Factor (g/kw-hr)
CO	4.344
NO_X	17.634
$PM_{10}/PM_{2.5}$	0.321
HC	1.132
SO_2	1.968

Based on design assumptions, tugboats were assumed to operate for five hours per day. Peak hour emission rates were estimated by assuming that one tugboat would be operating for the entire hour. Annual average rates were estimated by assuming that one tugboat was operating at the Proposed Plan Facility and Alternative Facility, as applicable, for four hours per day, 302 days per year.

3.17.4.4 Coordinate System and Receptors

A Universal Transverse Mercator (UTM) coordinate system was used to establish geographic coordinates of buildings, sources and receptors for each Proposed Plan Facility and Alternative Facility, as applicable. These coordinates were input into ~~to~~ the modeling analysis for each Proposed Plan Facility and Alternative Facility (as applicable) location.

Locations of ambient air receptors (i.e., sensitive land uses where air quality concentrations are estimated) surrounding each Proposed Plan Facility and Alternative Facility, as applicable, were developed. These included locations outside of property and fence line boundaries where the general public has access. Areas over water that were within either the tugboat operating areas or the bulkhead lines were excluded. The following sets of receptors were developed around each Proposed Plan Facility and Alternative Facility, as applicable:

- A Cartesian ground-level (i.e., at 1.8 meters above the ground) receptor grid out to a distance of approximately 500 meters from the site property line in all directions, in 50-meter increments, including over water;
- Discrete elevated receptors (e.g., windows, balconies or air intakes), if any;
- Discrete sensitive land uses, such as playgrounds, schools and residential areas; and
- Property line or boundary receptors that were located in 15-meter increments around each site.

3.17.4.5 Operating Scenarios

Emission rates of each pollutant from all sources of that pollutant were estimated for each operation that would occur at each Proposed Plan Facility and Alternative Facility, as applicable. Separate analyses were conducted to estimate short-term (1-hour, 3-hour, 8-hour and 24-hour) pollutant levels and long-term (annual average) pollutant levels. Short-term emission estimates were based on peak 1-hour activity levels at each site; long-term estimates were based on annual average activity levels at each site. It was possible that some of the short-term emission rates, especially for the 24-hour estimates as determined in this manner, would significantly overestimate maximum values. If 24-hour impacts based on the peak 1-hour emission rates exceeded the thresholds of concern, more realistic hourly distributions or period average estimates of emissions were developed to refine the analysis on a case-by-case basis.

Based on anticipated operating scenarios from DSNY, it was assumed that each Proposed Plan Facility and Alternative Facility, as applicable, would operate an average of two shifts per day, 302 days per year. Evaluations were made for a 2006 analysis year using appropriate emission factors, background values and traffic estimates. Because vehicular emission factors are projected to decrease in future years as a result of increasingly stringent emission control requirements, concentrations were anticipated to decrease in future years.

The assumptions made regarding the operation of each piece of equipment at each Proposed Plan Facility and Alternative Facility, as applicable, are presented in the air quality technical backup documentation submitted to NYCDEP.

3.17.5 Methodology Used to Estimate Potential Off-Site Impacts

3.17.5.1 Analytical Approach

Mobile source analyses were conducted to estimate concentrations of CO, PM_{10} and $PM_{2.5}$ at locations (e.g., congested intersections) near each Proposed Plan Facility and Alternative Facility, as applicable, that might be affected by the addition of DSNY and other agency collection vehicles. Analyses were conducted for roadways in the vicinity of each Proposed Plan Facility and Alternative Facility, as applicable, to estimate whether changes in the number, routing and/or scheduling of the collection vehicles would cause or exacerbate violations of applicable NAAQS and/or exceed applicable CEQR impact thresholds.

Maximum 1-hour and 8-hour CO concentrations and maximum 24-hour and annual PM_{10} and $PM_{2.5}$ concentrations were estimated as appropriate at analysis sites near each Proposed Plan Facility and Alternative Facility, as applicable, using procedures provided by the 2001 CEQR Technical Manual and by NYCDEP. While pollutant levels were estimated at multiple receptor locations near each analysis site, only the highest levels predicted at any of these locations were reported as an indication of the maximum levels for the analysis site as a whole.

3.17.5.2 Selection of CO Analysis Sites

The selection of analysis sites for detailed microscale modeling of CO impacts was completed based on the number of facility-generated collection vehicles that would be added to signalized intersection locations during peak 1-hour traffic conditions, and a comparison of these values to CEQR screening impact thresholds. These thresholds were established to identify locations where air quality levels might be potentially affected by the addition of such vehicles. These impact thresholds, which are region-specific, are provided in Table 3.17-6.

Table 3.17-6
CEQR CO Screening Thresholds

Location	Incremental 1-hour Vehicular Trips (Per Intersection)
Manhattan between 30th and 61st Streets	75 or more new auto trips
Downtown Brooklyn	50 or more new auto trips
Long Island City	50 or more new auto trips
All Other Areas	100 or more new auto trips

These thresholds were established for facility-generated passenger cars. An appropriate factor of 1.5 was applied to account for the difference in traffic operations (e.g., ~~affect~~ effect on approach capacity, queuing and operating speed from larger vehicles). This factor is based on the information provided in the HCM 2000, which states that a heavy-duty vehicle is equivalent to approximately 1.5 passenger cars.

Locations exceeding the traffic impact thresholds were identified, and for each Proposed Plan Facility and Alternative Facility, as applicable, up to four sites were selected for a detailed microscale analysis using the following criteria:

1. Locations with high traffic volumes under the ~~future~~Future No-Build Condition that would experience the largest increases in incremental, facility-generated traffic volumes. Changes in traffic volumes are the major factor in the selection of PM_{10} and $PM_{2.5}$ analysis sites.

2. Locations with a Future No-Build LOS of C or worse that would experience a change in LOS between the Future No-Build and Future Build Conditions.
3. Locations with a change in delay of any approach link of 10 seconds or more between ~~future~~Future No-Build and Future Build Conditions, where the v/c ratios are greater than 0.85 and surveyed travel speeds ~~are~~ were less than 10 mph.

If the microscale analysis had indicated potential violations of the NAAQS at any of the analysis sites selected, then additional representative locations in the vicinity would have been analyzed based on the site selection criteria described above. This, however, was not the case.

The analysis sites considered near each Proposed Plan Facility and Alternative Facility, as applicable, are presented in the site-specific analysis sections of this ~~SWMP~~ FDEIS.

3.17.5.3 Selection of PM_{10} Analysis Sites

PM_{10} analyses were conducted at up to five intersections near each Proposed Plan Facility and Alternative Facility with the highest volumes of facility-generated collection vehicles. Where appropriate, these locations were the same as those for the CO analysis.

3.17.5.4 Selection of $PM_{2.5}$ Analysis Sites

Detailed mobile source $PM_{2.5}$ analyses were performed for intersections near each Proposed Plan Facility and Alternative Facility that would experience a facility-related increase of 21 trucks per hour or ~~greater~~ more for the peak project traffic demand hour. Prior sensitivity studies by NYCDEP have found insignificant $PM_{2.5}$ impacts with a facility-generated increase of less than 21 trucks per hour.

3.17.5.5 Analysis Years

Analyses were conducted for the following years:

- ~~2002/~~2003 (based on when traffic data were collected) to estimate air quality concentrations under Existing Conditions; and

- 2006 to estimate air quality concentrations under Future No-Build and Future Build Conditions.

3.17.5.6 Traffic Data

Traffic data were developed for peak analysis periods for each set of analysis conditions. The HCM 2000 methodology and field monitoring data were used to develop the following traffic data necessary for the air quality analysis for all the roadway links within 1,000 feet of each of the selected analysis sites:

- Peak hour traffic volumes (traffic volumes for the daily 1-hour period with the highest morning [AM] and afternoon [PM] background volumes) obtained from traffic analysis;
- Traffic volumes during periods with the highest number of facility-generated vehicles (facility peak);
- Average peak hour free flow travel speeds for signalized approaches and average travel speeds for unsignalized roadway approaches;
- Vehicle classifications (percent autos, sport-utility vehicles [SUVs], medallion taxis [where applicable], light-duty and heavy-duty trucks and buses);
- Width of traveled roadways (the effective width of the roadway);
- Signal timing data (cycle length, red time length);
- Number of effective moving lanes and exclusive turn lanes;
- Saturation flow rates (i.e., the maximum amount of vehicular throughput) per lane; and
- Arrival rate at signalized approaches.

The CO ~~and~~, PM_{10} and $PM_{2.5}$ analyses were conducted for up to three traffic periods (AM peak, facility [or midday] peak and PM peak). ~~The $PM_{2.5}$ analysis was conducted for facility peak periods.~~ It was generally assumed for these analyses that the traffic volumes during these traffic periods would occur for every hour of the 8-hour, 24-hour and annual average analysis periods. At these locations where exceedances of either the NAAQS or significance thresholds were estimated using this conservative assumption, refined Tier II analyses were conducted using hour-by-hour traffic conditions for the 8-hour, 24-hour and annual average analysis periods for Proposed Plan Facilities and some Alternatives. For Alternatives that show an exceedance of NAAQS or significance thresholds that did not undergo a Tier II analysis in this FEIS, a supplemental environmental review will be conducted if that Alternative is selected as a Proposed Plan Facility.

3.17.5.7 Vehicular Emissions

3.17.5.7.1 Carbon Monoxide

Mobile source CO emissions for the Proposed Plan Facilities and some Alternative Facilities were estimated using the USEPA MOBILE 6.2 emission factor program, and for the remaining Alternative Facility sites were estimated using the USEPA MOBILE 5b (EPA-AA-AQAB-94-01) emission factor program. A supplemental analysis will be performed if any Alternative Facilities are selected as part of the Proposed Plan and were not analyzed using MOBILE 6.2. The most current state- and City-approved input parameters were used to estimate existing and future emission factors. Input files for the 2003 and 2006 analysis years, showing parameters recommended by NYCDEP, including local vehicular age-distribution rates, inspection/maintenance and anti-tampering program credits, and low emission vehicle (LEV) program credits, are presented in the air quality technical backup submitted to NYCDEP.

Taxi emissions for 2002/2003 and 2007 were modeled where appropriate (i.e., near the East 91st Street and West 59th Street Converted MTSs) by using the latest version of MOBILE5b/MOBILE6.2 obtained from NYCDEP for new medallion taxis. Specific vehicle age and mileage accumulation distribution for taxis were also incorporated, and the inspection and maintenance, anti-tampering and LEV program credits that are applicable to light-duty medallion taxis were applied.

3.17.5.7.2 Particulates

Mobile source PM_{10} and $PM_{2.5}$ emissions for the Proposed Plan Facilities and some Alternative Facilities were estimated using the USEPA MOBILE 6.2 emission factor program for idling plus moving vehicles emissions, and AP-42 for moving vehicle emissions. For the remaining Alternative Facility sites, PM_{10} and $PM_{2.5}$ mobile source emissions were estimated using USEPA's PART 5 for idling plus moving vehicle emissions and AP-42 for moving vehicle emissions. A supplemental analysis will be performed if any Alternative Facilities are selected as part of the Proposed Plan and were not analyzed using MOBILE 6.2. The most current state- and City-approved input parameters at the time of the analysis were used to estimate existing and future emission factors. Parameters recommended by NYCDEP included local

vehicular age-distribution rates. Emissions from moving and idling vehicles were estimated for all vehicle types; idle exhaust PM_{10} and $PM_{2.5}$ emissions were estimated only for heavy-duty diesel trucks and buses because emissions from idling vehicles could not be calculated for non-heavy duty diesel vehicles. ~~using USEPA's PART 5~~ Idle PM_{10} and $PM_{2.5}$ emissions from non-heavy duty diesel vehicles (HDDVs) are considered to be negligible in comparison to the other idling and moving vehicle emissions estimated for this analysis.

Emissions of fugitive dust (i.e. emissions caused by the re-entrainment of dust into the air by moving vehicles) are primarily dependent on vehicle weight and on the surface silt loading. At the direction of the NYCDEP, the following silt loading factors were used for estimating PM_{10} and $PM_{2.5}$ emissions:

- 0.16 for roadways with more than 5,000 vehicles per day (NYSIP, 1995);
- 0.10 for principle and minor arterials with more than 5,000 vehicles per day (NYSDEC & NYCDEP, 2002);
- 0.015 for expressways (NYSDEC); and
- 0.4 for roadways with fewer than 5,000 vehicles per day (AP-42, 1997).

An average vehicle fleet weight of 6,000 pounds was used for all analyses (NYSIP, 1995), where the area (or Borough) specific average fleet weight was not available (see Table 3.17-7).

Table 3.17-7
Average Fleet Weight by Borough[1]

County	Average Fleet Weight (pounds)
Bronx	5,149
Kings	5,055
Manhattan	5,085
Queens	5,119
Richmond	5,085

(1) Source: NYCDEP, 2005.

Re-entrained dust was considered for the 24-hour $PM_{2.5}$ analysis (incremental contribution at receptors three meters away from the edge of the roadway). However, re-entrained dust was not included in the $PM_{2.5}$ annual neighborhood analysis due to the fact that existing neighborhood-scale ambient air monitoring data indicates that on a long-term (annual) average very little paved road dust is collected by $PM_{2.5}$ monitors. Most $PM_{2.5}$ samples collected in the City have been found to consist primarily of combustion-related emissions; although, on a short-term (24-hour) basis, especially near road fugitive sources, this may not always be the case.

3.17.5.7.3 Ambient Temperature

Following CEQR guidance, CO mobile emission rates were computed for Proposed Plan Facilities and some Alternatives with the MOBILE6.2 model, and for the remaining Alternatives with the MOBILE 5b model, using ambient temperatures for winter conditions of 50°F for Manhattan and 43°F for the rest of the City. Ambient temperatures are not a required input for PM analyses.

3.17.5.7.4 Vehicle Classification

Vehicle classification data required to determine composite emission factors were based on traffic survey data and included percentages of light duty gasoline vehicles (LDGVs), SUVs, medallion taxis, light-duty trucks, heavy-duty trucks and buses. [Based upon current CEQR guidance, SUVs were classified as light-duty gasoline trucks (LDGT). ~~with 75% of SUV emissions modeled as LDGT1, while the remaining 25% were LDGT2. The two groups (LDGT1 and LDGT2) are based on local registration data. The registered split between LDGT1 and LDGT2 used in the analysis was 73% to 27%, respectively.~~ The split between heavy duty gasoline vehicles (HDGVs) and HDDVs was based on local registration data.] ~~values presented in NYCDEP's Report #34 for each borough during a particular time period.~~ All Metropolitan Transportation Authority (MTA) and private commuter buses and DSNY and other agency collection vehicles were considered as HDDV. Traffic-related data used in this analysis ~~are~~ were presented in the air quality technical backup submitted to NYCDEP and traffic technical backup submitted to NYCDOT.

3.17.5.7.5 Thermal State Data

Hot and cold vehicle thermal state conditions for background automobile traffic were obtained from NYCDEP's Report #34 (see Table 3.17-~~7~~8), where applicable. Based upon current CEQR guidance, SUVs are assumed to have the same thermal states as automobiles. These data were input into the ~~MOBILE 5b/MOBILE6.2~~ model for each borough for each applicable time period and roadway type. Light duty truck operating conditions (excluding SUVs) were based on data supplied by the NYMTC, as presented below. All taxis and heavy-duty trucks were assumed to be operating in a hot-stabilized mode.

Table 3.17-~~7~~8
Thermal State Conditions for Light Duty Gasoline Trucks

Location	% Cold Non Catalytic	% Hot Start	% Cold Catalytic
Manhattan	3.2	45.3	4.1
Rest of City	5.4	50.5	5.1

3.17.5.8 Dispersion Modeling

The CO dispersion analysis was conducted using USEPA's dispersion model, CAL3QHC, which uses worst-case meteorological data to estimate 1-hour CO concentrations. Eight-hour maximum CO concentrations were estimated by multiplying the 1-hour maximum concentrations by a "persistence factor" (see ~~below~~Section 3.17.5.10). The CAL3QHCR dispersion model was used to estimate peak 24-hour and annual average PM_{10} and $PM_{2.5}$ concentrations. The CO, PM_{10} and 24-hour $PM_{2.5}$ analyses followed USEPA's Intersection Modeling Guidelines (EPA-454/R-92-005) for modeling methodology and receptor placement. These air quality dispersion analyses for CO, PM_{10} and 24-hour $PM_{2.5}$ were conducted as follows:

- All major roadway segments (links) within approximately 1,000 feet of each intersection were considered. Elevated sources were included where appropriate.
- Receptors were placed: (1) near the midpoint of the adjacent sidewalks (generally 6- to 7½-feet from the curb line) and set back from the corner of the intersection in accordance with USEPA's modeling guidelines; (2) adjacent to queued approaches at

the corner of each intersection and set back at 25, 50 and 75 meters from the corner, as well as at the mid-block location, if appropriate; and (3) near sensitive land uses (schools, hospitals, etc).

- Receptor heights were 1.8 meters (6.0 feet) above ground level.

In addition to the above receptors, for the annual neighborhood average $PM_{2.5}$ analysis, receptors were placed at a distance of 15 meters (49 feet) from the curb line and set back from the corner of the intersection in accordance with USEPA's modeling guidelines (i.e., at the corner of each intersection and set back at 25, 50 and 75 meters from the corner, as well as at the mid-block location, as appropriate).

3.17.5.9 Meteorological Conditions

Reasonable worst-case meteorological conditions shown in Table 3.17-98 were used to estimate peak 1-hour CO concentrations.

Table 3.17-98
Reasonable Worst-Case Meteorological Conditions[1]

Condition	Worst Case
Wind Speed	1 m/s (2.25 mph)
Stability Class	D (neutral stability, meaning moderate mixing)
Temperature	50°F for Manhattan, 43°F for the rest of NYC
Mixing Height	1,000 meters (0.6 mile)
Wind Angles	5 degree increments from 0 degrees to 360 degrees
Surface Roughness Factor[1]	▪ 321 centimeters (cm) for Manhattan CBD; ▪ 370 cm for Hunts Point, Bronx and Southwest Brooklyn; and ▪ 175 cm for Greenpoint, Hamilton Avenue, Brooklyn, North Shore and Queens

Note:
[1] Source: EPA-454/R-92-006, User's Guide to CAL3QHC version 2.0, Table 1.

Peak 24-hour and annual average PM_{10} and $PM_{2.5}$ concentrations were estimated using five consecutive years of meteorological data from LaGuardia Airport (19987 to 20021).

3.17.5.10 Persistence Factors

Peak 8-hour concentrations of CO were obtained by multiplying the highest peak hour CO estimates by persistence factor values presented in Table 3.17-~~9~~10 for each affected area. These factors, obtained from NYCDEP, account for the fact that over the 8-hour periods, vehicle volumes will fluctuate downwards from the peak, vehicle speeds may vary and meteorological conditions including wind speed and wind direction will vary as compared to the very conservative assumptions used for the single hour.

Table 3.17-10~~9~~
Eight-Hour Persistence Factors

Location	Factor
Midtown Manhattan	0.77
Rest of the City	0.70

Maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced traffic only) for the 24-hour and annual periods were compared against interim "significance thresholds" of 5 $\mu g/m^3$ and 0.3 $\mu g/m^3$, respectively.

3.17.6 Combined Impact Analysis

For those locations where detailed on-site and off-site air quality analyses were performed, a combined source analysis was conducted for $PM_{2.5}$ by adding the predicted on-site results to the predicted off-site results at the off-site receptor location with the highest reported off-site 24-hour and maximum annual neighborhood average $PM_{2.5}$ concentrations. The combined air quality results are reported in Chapters 4 through 31 of this FEIS, as applicable.

Since publication of: (1) the EIS-level air quality analysis for Converted MTSs presented in Appendix D to this FEIS - the Commercial Waste Management Study, Converted MTSs Commercial Waste Processing and Analysis of Potential Impacts -Volume III; and (2) the DEIS, the air quality analyses were revised using the USEPA MOBILE 6.2 emission factor program

(for Proposed Plan Facilities and some Alternatives), the updated background pollutant concentrations, and based on final facility designs. For processing only DSNY-managed Waste at the proposed Converted MTSs, the combined air quality results are reported in Chapters 4 through 7 and Chapters 19 through 22 of this FEIS. The combined air quality results of processing DSNY-managed Waste plus Commercial Waste at the Converted MTSs are reported in revised Tables A.4-1 through A.4-16 in Appendix D of this FEIS.

3.17.7~~6~~ Mitigation Measures

3.17.6.1 On-Site Air Quality

Mitigation measures could include changes: (1) to the number and/or types of operating pieces of equipment to lower emissions; (2) in operations to limit the length of time a piece of equipment is operating; or (3) to the Proposed Plan Facility and Alternative Facility (as applicable) design to modify the location of a source or sources with respect to off-site receptors. If required, site-specific mitigation is addressed in Chapters 4 through 31 of this SWMP F~~D~~EIS.

3.17.6.2 Off-Site Air Quality

Mitigation measures could include changes to DSNY and other agency collection vehicle routes and/or temporal distribution. If required, site-specific mitigation is addressed in Chapters 4 through 31 of this SWMP F~~D~~EIS.

3.18 Odor

3.18.1 Introduction

Design of a modern solid waste transfer facility includes environmental controls within the processing building to minimize odors emitted from on-site waste transfer operations. Effective odor control is implemented through a variety of facility design features, such as maintaining negative air pressure in the tipping floor area of the processing building to prevent untreated odors from escaping to the outdoors, and operational procedures. NYSDEC Part 360 Solid Waste Facility Regulations require that odors be controlled effectively so that they do not constitute a nuisance or hazard to health, safety or property. City Zoning Regulations require that odors not be detectable at any point along or beyond lot lines.

An odor analysis was conducted to estimate the potential impacts of the odor sources in the vicinity of each Proposed Plan Facility and Alternative Facility, as applicable, and to determine if additional design or operational measures would be required for odor mitigation.

3.18.2 Overview

Typically, odors, such as those generated from wastewater treatment plants, composting operations and landfills, can be evaluated by obtaining air samples and analyzing them to identify the odorous compounds, such as ammonia, sulfides, mercaptans and others. Concentrations of these compounds can be compared to published odor detection thresholds to determine if the compounds would be detected. Many odor studies have been conducted at wastewater treatment plants, composting facilities and landfills to identify the types and concentrations of compounds present from these operations. For example, the *Final Generic Environmental Impact Statement for the New York City Sludge Management Plan* dated May 1992 (Sludge Composting EIS) characterized odors and non-criteria air pollutants from the City Sludge Composting Facilities using indicator compounds (such as sulfides, ammonia and hydrogen sulfide), and the June 2003 FEIS for the Newtown Creek WPCP Track 3 Upgrade characterized odors using hydrogen sulfide (H_2S) as an indicator compound.

In ~~the current~~this ~~current~~ study, odors have not been characterized by measuring just a particular compound or group of compounds, but rather~~,~~ by applying a "whole air" odor analysis approach. This approach considers the odor level of the whole sample, based on evaluation in the laboratory by a representative group of individuals referred to as an "odor panel."

Odors generated from residential MSW are dependent upon the composition of the waste disposed, which can vary widely from day to day and from household to household (as opposed to odors from decomposed MSW in landfills that are attributed to specific chemical compounds, such as hydrogen sulfide, as the waste undergoes decomposition). The odors are also affected by factors such as the residence time of the waste before it is disposed, the moisture content of the waste, and ambient temperature. In addition to the residential MSW, waste from other City and state agencies (e.g., office waste, brush and furniture) would be transported to the Proposed Plan ~~Facility~~ Facilities and Alternative ~~Facility~~Facilities, as applicable and mixed in with the MSW.

The current odor study is based on odor panel analysis of several types of odor emissions sources connected with solid waste handling and processing, including:

- Full barges (containing uncovered, loose, solid waste) moored outdoors;
- Empty barges (with solid waste debris) moored outdoors;
- Process building vents/stacks;
- Shipping container (containing compacted waste) vent openings; and
- Waste collection vehicles.

The 2001 FEIS odor study included odor sampling from the first four categories of sources listed above. The ~~current~~ FEIS study included sampling of DSNY waste collection vehicles, and also makes use of separate processing building vent sampling that was conducted in the summer of 2003 for several commercial waste processing facilities.

The first two types of sources listed above are relevant to the alternative for re-use of the City's Existing MTSs. The last three types of sources are relevant to the Proposed Plan ~~Facility~~ Facilities and Alternative Facilities~~y~~, as applicable. For the Proposed Plan Facilities and

Alternative Facilities, as applicable, only sealed containers would be loaded on barges and shipped to out-of-City disposal sites. Sampling of the MTS vents in the prior study yielded detectable odors, while sampling of the shipping container vents found no significant odor emissions. Therefore, the modeling analysis for this FDEIS considers odor emissions from each of the above source types except for shipping containers, for which odor generation is expected to be insignificant.

Table 3.18-1 presents several odor classes, chemical types and examples of the odors from these chemical types, many of which relate to odors that may emanate from the Proposed Plan Facilities and Alternative Facilities (as applicable) exhaust vents.

Table 3.18-1
Odor Classes and Examples[1]

Odor Class	Chemical Types	Examples
Acidic	Acid anhydrides Organic acids Sulfur dioxides	Vinegar, perspiration, rancid oils, resins, body odor, garbage
Sulfury	Selenium compounds Arsenicals Mercaptans Sulfides	Rotting fish and meat, cabbage, onion, sewage
Basic	Vinyl monomers Amines Alkaloid Ammonia	Feces, manure, fish and shellfish

Note:
(1) Source: ASTM D 1292 – 86 (Re-approved 1995): Standard Test Method for Odor in Water.

Odor levels are typically measured or analyzed in relation to the minimum detectable level or detection threshold (DT), which is the level of odor that can just be detected by 50% of the individuals in an odor panel. Some time odor levels in contaminated air are reported in units of dilutions-to-threshold (D/T), which is the number of volumes of pure air that must be added to a volume of contaminated air before the diluted sample becomes undetectable to 50% of the odor panelists. Thus, the DT value is equal to the D/T value plus one. For the purpose of evaluating

and presenting dispersion modeling results in this study, results will be presented as multiples of DT. In other words, an odor concentration of 10 DT in an air sample or in the ambient air means that the odor level is 10 times the average laboratory detection threshold.

3.18.3 Odor Impact Criteria

There are no federal standards that establish acceptable ambient odor levels. New York State does not set quantitative odor limits for solid waste handling facilities or any other facilities. Title 6 NYCRR Part 360-1.14(m) specifies: "Odors must be effectively controlled so that they do not constitute nuisances or hazards to health, safety or property." The Zoning Resolution Performance Standards Article IV 42-24 requires that the emissions of odorous matter in M1 or M2 districts be in such quantities as to not be readily detectable at any point along lot lines or to produce a public nuisance or hazard beyond lot lines. Therefore, a comparison of odor results to quantitative regulatory standards cannot be made. Levels of one particular odorous and toxic compound, hydrogen sulfide (H_2S), can be compared to the NYSDEC Air Quality Standards Part 257-10.3 hourly 0.01 ppm standard. Meeting this standard will minimize H_2S odors, but not necessarily eliminate them. Also, because there are many other odorous compounds, it is necessary to apply a "whole air" odor approach as described above.

Given a lack of applicable odor standards, it is necessary to make a judgment on what levels of odor in the ambient air are likely to represent an impact that is great enough to be recognizable and a nuisance to the public. Two factors were evaluated in establishing an appropriate odor impact control level, above which mitigation should be considered, for this study. First, a review was made of other state and local regulations for controlling odor in the United States. Most state and local agencies have some odor control requirements, but most do not have quantitative odor limits that can be used for comparison with the current study results. Table 3.18-2 lists odor limits established by other state and local jurisdictions, as found through a search ~~on~~ of on-line (Internet) regulations databases. These are presented here in (converted to) units of the detection threshold (DT), even though many limits are stated in terms of D/T.

Table 3.18-2
Odor Limits of State and Local Agency Jurisdictions[1]

State/Jurisdiction	Odor Limit (as multiple of DT)
California, Bay Area AQMD[2]	5 DT at property line or beyond
Colorado	8 DT for residential & commercial areas 16 DT for all other areas
Connecticut	8 DT in ambient air
Illinois	9 DT in residential and commercial areas 25 DT on/adjacent to industrial areas 17 DT in all other areas
Missouri	8 DT
Nevada	9 DT in places of occupancy
North Dakota	8 DT outside facility property boundary
Wyoming	8 DT at property line

Notes:
(1) Source: On-line regulations available on Internet as of August 2004.
(2) AQMD = Air Quality Management District

A second factor considered in establishing an appropriate odor impact threshold is the odor level of the background air. Pristine background air will make it easier to detect odorous emissions, while more contaminated air, such as may exist in urban areas, will tend to mask additional odorous emissions. As part of the current study, background air odor samples were taken in the vicinity of the proposed Converted MTS sites. Also, background air odor samples were taken upwind of four commercial waste facilities, which were analyzed in the preparation of the March 2004 Commercial Waste Management Study (CWMS). These background odor data are summarized in Table 3.18-3 and show that measured background odor levels are typically in the 5-7 DT range in New York City.

Table 3.18-3
Background Sampling Results

Date	Sample Location	DT
July 18, 2003	Queens	5
July 25, 2003	Bronx	5
August 13, 2003	Brooklyn	5
August 11, 2004	Manhattan	5 to 7
	Brooklyn	6 to 7
August 17, 2004	Manhattan	6 to 7
	Brooklyn	6 to 7
August 18, 2004	Queens	5 to 6
	Brooklyn	7
	Bronx	5 to 6

Based on the odor standards established by other jurisdictions and on the analyzed background odor levels as summarized above, an odor mitigation threshold of 5 DT has been established for this study. This level is equal to the lowest background odor level listed above and the lowest quantitative odor standard established for other jurisdictions. Predicted (modeled) odor impacts above 5 DT at a sensitive receptor (i.e. residence, adjacent business, ~~park~~and park) are assumed to represent a potentially unacceptable impact and would be grounds for considering mitigation to reduce the predicted impacts.

3.18.4 Odor Analysis

In accordance with procedures recommended by USEPA and the Air and Waste Management Association (AWMA), a scientific organization involved in reviewing and reporting on quantitative procedures for testing and evaluating odors, several methods can be used to collect odor samples from each source. All methods involve capturing odorous source air in a sealed Tedlar® sample bag. The evaluation of air samples for odor is conducted by ~~a trained panel of individuals, referred to as~~ an "odor panel," w~~ho~~hich quantifies~~y~~ odor concentration, odor intensity and odor persistence and determines equivalent butanol concentrations. H_2S concentrations are measured on site using a portable H_2S analyzer.

Odor panel members are selected and odor analyses conducted by a laboratory in accordance with the following established protocols and standards set by the American Society for Testing and Materials (ASTM):

- Selection and Training of Sensory Panel Members (Standard Practice 758);
- Determination of Odor and Taste Thresholds by a Forced-Choice Ascending Concentration Series Method of Limits (Standard Practice E679-91); and
- Referencing Suprathreshold Odor Intensity (Standard Practice E544).

The analysis was conducted to:

- Determine concentrations, emission rates and persistence of odors from identified odor sources for facilities subject to this study;
- Evaluate the effect of these odor sources at off-site sensitive receptors (e.g., residences, schools, churches, parks), if any, through atmospheric dispersion modeling; and
- Based on dispersion modeling, determine whether the facility designs need to include mitigating measures to minimize the escape of odors to the ambient air.

3.18.5 Sampling Program

Conditions were evaluated in 1999 at three existing MTSs in Brooklyn (Southwest Brooklyn, Hamilton Avenue and Greenpoint), one in Queens (North Shore) and a private facility in the City~~,~~ to identify those facilities most suitable for sampling odors from residential MSW. Sampling data from the selected facilities were then used to estimate odor emission rates from facilities.

Details of the sampling program are described in the Sampling Protocol for the Department Barge Odor Study prepared by DSNY's consultant, finalized based upon comments received from DSNY on October 2, 1998, and updated on June 18, 1999 (Sampling Protocol). The City Department of Environmental Protection (NYCDEP) was provided with a copy of the Sampling Protocol on July 29, 2003. The measurement methodology allows samples to be taken in a manner that isolates source air from ambient air. Results from the samples obtained from the exhaust points at the MTS before and after a neutralizing agent was applied and with and without barge slip doors closed were used in this F~~D~~EIS analysis.

Fall sampling was conducted at the Greenpoint MTS, North Shore MTS and the Fresh Kills Landfill during the week of October 5, 1998, with follow-up sampling conducted at the Southwest Brooklyn MTS on October 26, 1998. Summer sampling was conducted at the Greenpoint MTS and the Fresh Kills Landfill during the week of June 21, 1999, with follow-up and sampling of full containers of compacted waste from a private transfer station in the City during the week of July 12, 1999. After collection, samples were sent to an off-site laboratory for odor panel evaluation as described below. H_2S readings were taken during the summer sampling event during the week of July 12, 1999. Additional samples could not be collected for this ~~SWMP~~ F~~D~~EIS because the MTSs were subsequently closed and no one facility in or near the City currently accepts and processes only residential MSW from DSNY.

In addition to the sampling of odors from barge and MTS facility exhaust vents as described above, this study utilized odor sampling results from commercial waste facilities, completed in the summer of 2003 as part of the CWMS, and odor sampling of full DSNY waste collection vehicles parked in a DSNY garage, completed in the summer of 2004.

3.18.5.1 Sample Collection

In accordance with guidance documents published by USEPA and AWMA and procedures described in the Sampling Protocol, a total of 32 odor samples and 15 H_2S samples were obtained from area sources using an equilibrium chamber and from point sources from exhaust fans. A point source is a single localized source, such as a stack, vent or exhaust fan. An area source is typically a low-level or ground-level emission from a two-dimensional area, such as the surface of loose garbage in a loaded barge. The 15 H_2S samples were composites of several readings taken at 15 different times and/or locations.

For all sources sampled for odor panel evaluation, tygon vinyl tubing was used to connect the air sampling location to the sample pump inlet and the sample pump outlet to the sample bag. The tygon vinyl tubing was replaced between samples or the line was flushed with ambient air at a rate of five liters per minute (liters/min) for several minutes between samples. Tygon vinyl tubing was used because it is tasteless and odorless and is formulated specifically for use in peristaltic pumps (pumps used for sampling a media that does not come in contact with the pump itself). Air samples were drawn through the tubing into 25-liter Tedlar® sample bags. Tedlar® bags are recommended for use by the AWMA Subcommittee on the Standardization of Odor Measurement (AWMA Odor Subcommittee) because they have a low permeability that results in minimal sample loss or outside infiltration (thus maintaining sample integrity), and they have the lowest background odor. For sources analyzed for H_2S, tygon vinyl tubing was used to connect the air sampling location directly to the Jerome analyzer.

In keeping with practices recommended by the AWMA Odor Subcommittee, the sampling line and sample bags were pre-conditioned with a sample of the odorous air being evaluated, and then the air was evacuated from the bag prior to collecting the actual sample. Bags were filled to approximately 75% to 80% of capacity to prevent decompression during shipping. All samples were presented to the odor panel for evaluation within 24 hours of collection. Due to restrictions at the laboratory on the time it takes to analyze the odor sample, a maximum of six samples were collected each day.

Exhaust (point sources) air samples were obtained by using a funnel attached to the tip of the tubing and held up to the face of the exhaust point. The flow rate of the sampling pump for these sources was set at 5 liters/min, which is low enough, given the exhaust vent flow rate, to prevent ambient air from being pulled into the sample bag.

3.18.5.2 Sample Analysis

As described in the ASTM Standard Practice E679-91 (see Section 3.18.4), the odor panel evaluation uses a dynamic dilution binary scale butanol olfactometer. Air is passed through a vessel containing n-butanol (1-butanol) liquid, which allows the air stream to become saturated with n-butanol. Specific measured amounts of fresh air are also added to the odor-saturated air samples to vary the dilutions in each of eight sniffing ports of the olfactometer. When analyzing an odor sample, a member of the odor panel is asked to match the intensity of the odor in the air sample with the diluted odor level in a given port on the olfactometer. The odor panel's results are reported as multiples of the detection threshold (DT) and odor intensity (provided as a butanol equivalent concentration, not used for the current study). H_2S samples were analyzed on site using the hand-held Jerome analyzer.

3.18.5.3 Sampling Results

Tables 3.18-3 through Table 3.18-5 contains a summary of the odor samples (types and source/locations) obtained and the analytical results (in multiples of DT) for each of the samples. After all sampling was completed, the maximum concentration of the values from summer samples was used to calculate emission rates of odors from the sources at each facility. Table 3.18-6 contains a summary of the H_2S results obtained on site using a portable analyzer.

As noted previously in Section 3.18.2, odors from certain operations can be evaluated by analyzing air samples for specific odorous compounds. H_2S is commonly used as a surrogate for odors at wastewater treatment plants. While not necessarily the primary odorous compound present from solid waste transfer stations, measurements were obtained at the request of NYCDEP. The average H_2S concentration of samples collected from fan exhausts with~~out~~ the addition of neutralizing agent are below the New York Ambient Air Quality Standard for H_2S of 0.01 ppm.

Table 3.18-3
Summary of Odor Panel Evaluation Results
Fall 1998 and Summer 1999 Sampling Event from Fan Exhaust

Sample Date	Sample Location	Identification	Sample Point	Sample Type	Neutralizing Agent Added?	DT
October 5, 1998	Greenpoint MTS	PTMTS-01	Fan Exhaust	Point	No	14
October 7, 1998	Greenpoint MTS	PTMTS-02	Fan Exhaust	Point	No	15
		PTMTS-03	Fan Exhaust	Point	Yes	12
October 26, 1998	Southwest Brooklyn MTS	PTMTS-04	Fan Exhaust	Point	No	33
		PTMTS-05	Fan Exhaust	Point	No	44
June 23, 1999	Greenpoint MTS	PTMTS-02	Fan Exhaust(1)	Point	No	123

Notes:
DT = multiple of detection threshold
(1) A second fan exhaust sample was obtained, but the air leaked out of the sample bag during shipment.

Table 3.18-4
Summary of Odor Panel Evaluation Results
Summer 2004 Sampling Event from Collection Vehicles Garage

Sample Date	Sample Location	Identification	Sample Point	Sample Type	Neutralizing Agent Added?	DT
August , 2004	DSNY Garage	072004-M8-03	Fan Exhaust	Point	No	7
		072004-M8-04	Fan Exhaust	Point	No	6
		072004-M8-05	Fan Exhaust	Point	No	6

Notes:
DT = multiple of detection threshold

Table 3.18-5
Summary of Odor Panel Evaluation Results
Fall 1998 and Summer 1999 Sampling Event from Full and Empty Barges

Sample Date	Sample Location	Identification	Sample Point	Sample Type	Neutralizing Agent Added?	DT
October 5, 1998	Greenpoint MTS	FMTS-01	Full Barge	Area	No	402
		FMTS-02	Full Barge	Area	Yes	621
October 6, 1998	Fresh Kills Landfill	FEBUF-01	Full Barge	Area	Yes	29
		FEBUF-02	Full Barge	Area	Yes	36
		FEBUF-03	Full Barge	Area	Yes	44
		EEBUF-01	Empty Barge	Area	Maybe(1)	27
		EEBUF-01a	Empty Barge	Area	Maybe(1)	30
October 7, 1998	Greenpoint MTS	FMTS-03	Full Barge	Area	Yes	11
		EMTS-01	Empty Barge	Area	Maybe(1)	7
October 7, 1998	North Shore MTS	EMTS-02	Empty Barge	Area	Maybe(1)	11
October 26, 1998	Southwest Brooklyn MTS	FMTS-04	Full Barge	Area	No	39
		FMTS-05	Full Barge	Area	No	10
		FMTS-06	Full Barge	Area	No	29
		FMTS-07	Full Barge	Area	No	33
June 23,1999	Greenpoint MTS	FMTS-01	Full Barge	Area	No	112
		EMTS-01	Empty Barge	Area	No	75
June 24, 1999	Fresh Kills Landfill	FEBUF-01A	Full Barge	Area	Yes	30
		FEBUF-01B	Full Barge	Area	Yes	54
		FEBUF-02	½ Full Barge	Area	Yes	29
		EEBUF-01	Empty Barge	Area	Maybe(2)	33
		EEBUF-02	Empty Barge	Area	Maybe(2)	267
July 14, 1999	Greenpoint MTS	FMTS-21	Full Barge	Area	No	368
		FMTS-22	Full Barge	Area	Yes	81
July 15, 1999	Fresh Kills Landfill	FEBUF-21	Full Barge	Area	Maybe(2)	29
		FEBUF-22	Full Barge	Area	Maybe(2)	83

Notes:

DT = multiple of detection threshold

(1) A second fan exhaust sample was obtained, but the air leaked out of the sample bag during shipment.

(2) Empty barges contain residue that may be mixed with some of the liquid neutralizing agent that was applied to the waste prior to barge unloading.

Table 3.18-6
H_2S Sampling Results

Date (1999)	Sample Location	Sample Point	Residence Time of Waste	H_2S Concentration (ppm)	
				Range	Average
July 16	Private Transfer Station	Container vent	6 days	0.011 to 0.44	0.20
		Container vent	4 days	0.007 to 0.17	0.07
July 20	Fresh Kills Landfill	Empty barge	1 to 5 hours	0.002 to 0.005	0.0028
		Empty barge	8 days	0.002 to 0.003	0.0028
		Full barge	1 to 5 hours	0.002 to 0.006	0.005
July 22	Greenpoint	Empty barge with neutralizing agent	NA	0.006 to 0.026	0.013
		Full barge	1 day	0.001 to 0.006	0.0032
		Fan exhaust without neutralizing agent	NA	0.011 to 0.012	0.0117
		Fan exhaust with neutralizing agent	NA	0.005	0.005

NA= Not Applicable

The average H_2S concentration of samples obtained from four containers of waste stored for four to six days are above the New York Ambient Air Quality Standard for H_2S of 0.01 ppm. However, the container samples were taken by inserting the sample tubing directly into the container vents after sealing all vents on the container. To obtain a sample of the air from the sealed containers, a pump was used to draw air out of the containers at a rate of 0.5 to 1.0 liters per minute, which is much higher than the natural airflow from the containers. Airflow measurement from the same vents on a full container indicated that over the course of a day, ~~there was~~ an extremely small amount of air ~~that~~ was forced out of the vent (presumably due to diurnal heating), ~~which~~ but, again, this amount was~~is~~ much lower than the sampling rate of the pump. In addition, the age of waste in the containers sampled was greater than would be expected for normal operations at the Converted MTSs. The very low resulting H_2S emission rate means that the rapid dilution by atmospheric turbulence would quickly reduce the concentration of H_2S to below the 0.01 ppm standard by the time the emissions are a few feet from the container.

The result from the fan exhaust without the addition of neutralizing agent was 0.0117 ppm H_2S, slightly above the standard. The very low H_2S emission rate that results from the barges means that the rapid dilution by atmospheric turbulence will rapidly reduce the concentration of H_2S to below the 0.01 ppm standard by the time the emissions are only a few feet from the barge. Therefore, no dispersion modeling was performed for H_2S because concentrations would be below 0.01 ppm at off-site locations.

The NYCDEP measures H_2S from its WPCPs and compares modeled concentrations at off-site residential receptors to a 1 part per billion (ppb) guideline. Because emission rates are so low, containers are stored on site and facilities are located in industrial areas with the nearest residential receptors located several hundred feet away, it is expected that H_2S concentrations would be below the 1 ppb guideline at any residential receptor.

3.18.6 Odor Modeling Methodology

Potential impacts of odors on nearby receptors were estimated by:

- Conservatively calculating the emission rates based on the highest DT value for each source type;
- Entering the emission rate for each point (exhaust vent) source into USEPA's ISCST3 (version 97363) dispersion model;
- Inputting the coordinates of buildings for the Proposed Plan Facilities and Alternative Facilities, as applicable;
- Inputting coordinates of receptors at 50-meter (150-foot) intervals around the site boundary; and
- Conducting air dispersion modeling using historical meteorological data to determine whether odors, if any, would be detected by off-site receptors.

3.18.6.1 Mass Emission Rate Calculation

Sensory data alone cannot be used to conclude whether a specific odor source can become an odor problem. Although a specific release point may have a high odor concentration and/or intensity, it may not be the primary cause of the odor if that source has a low air release rate.

Also, depending upon the downwind distance from the source to a receptor, odor emissions may be diluted through atmospheric dispersion to levels that are not a concern.

Sources are characterized as either point, volume or area. A point source is a single localized source, such as a stack, vent or exhaust fan. A volume source is typically a ground-level emission source with no plume rise that originates in a three-dimensional space. For example, queued waste collection vehicles on a facility ramp are best characterized as volume sources because emissions could emanate from various locations around the sides of the waste collection vehicles. An area source is typically used to characterize a low-level or ground-level emission from a two-dimensional area, such as the surface of loose garbage in a loaded barge. In some cases, however, to refine the analysis, an area source is used to model collection vehicles on the ramp. ~~In~~ in the event that the source-to-receptor distances are less than three times the initial lateral dimension of the volume sources.

The results of the sampling and laboratory analyses described in the section above were reviewed and used together with source characterization information to estimate odor emission rates for model input, as described in the following sections.

3.18.6.1.1 Exhaust Vent (Point) Source Emission Rate

The exhaust vents of the facilities were considered point sources. Calculation of the point source emission rate (expressed in odor units per second [OU/sec]) of the facility exhaust vents was based upon the volumetric flow rate (cubic meters per second [m^3/sec]) of the exhaust system and the DT value (expressed as odor units per cubic meter [OU/m^3]) of the collected samples. The odor emission factors used for the analysis are expressed as "odor units" (OU) per second, where 1 OU is defined as the amount of mass of odor needed to generate a concentration at the detection threshold (where 50% of the odor panel can detect the odor) in a volume of one cubic meter of air. The laboratory analysis by an odor panel, as described above, provided the concentration of odor for each sample in multiples of DT, also referred to as odor units. The DT value for a sample was then multiplied by the air exhaust flow rate from the vent sampled to estimate the OU/sec emission rate for that vent.

Table 3.18-7 provides a summary of the estimated odor emission factors based on all odor samples analyzed for this FDEIS. These data show that the emission factors ranged from 136 OU/sec to 6,904 OU/sec.

Table 3.18-7
Summary of Emission Rates

Sample Date	Location/Facility	Sample ID	Operating Rate (tons/hour)	Odor Panel DT	All Fans Total Exhaust Flow (m^3/sec)	Calculated Emission Rate (OU/sec)	Calculated Emission Factor (OU/sec) (ton/hour)
DSNY-managed Waste							
October 5, 1998	Greenpoint MTS	PTMTS-01	86	14	11.3	158	1.84
October 7, 1998	Greenpoint MTS	PTMTS-02	86	15	11.3	170	1.98
		PTMTS-03	86	12	11.3	136	1.58
October 26, 1998	Southwest Brooklyn MTS	PTMTS-04	125	33	17.7	584	4.67
		PTMTS-05	125	44	17.7	779	6.23
June 23, 1999	Greenpoint MTS	PTMTS-02	86	123	11.3	1390	16.2

Sample Date	Location/Facility	Sample ID	Operating Rate (tons/hour)	Odor Panel DT	All Fans Total Exhaust Flow (m^3/sec)	Calculated Emission Rate (OU/sec)
Commercial Waste						
July 18, 2003	Private TS1	AR071803	17	63	1789	108.4
July 25, 2003	Private TS2	MT072503	33	15	615	18.5
August 11, 2003	Private TS1	AR081103	17	63	6433	386.0
			17	63	6904	414.2
August 13, 2003	Private TS3	BFI081303	23	47	1600	68.6
August 20, 2003	Private TS4	RR082003	7	16	94	14.2
			7	16	188	28.4
			7	16	471	71.1

It is assumed that odor generation (and the resulting emission rate) is proportional to the amount of waste processed. Therefore, based on the sample data for exhaust vents and the solid waste processing rates for the sampled facilities, the calculated odor emission rate for each exhaust vent sample was divided by the facility's measured solid waste processing rate to estimate an emission factor in units of OU/sec/ton of solid waste processed per hour. This emission factor was then multiplied by the peak design processing capacity (tons/hour) of each facility to obtain an estimated odor emission rate that is scaled to each facility's capacity.

The summer 1999 exhaust vent (point) sample data generated the highest emission factor. The maximum emission factor, used as the basis for exhaust vent emissions from all facilities that would accept DSNY-managed Waste only, is 16.2 OU/sec/(ton of solid waste processed per hour).

For the CWMS, air samples were obtained from private transfer stations that accepted only commercial waste. The maximum emission factor for the commercial waste is 414.2 OU/sec/(ton of solid waste processed per hour). For a facility that will potentially accept commercial waste, a ratio of commercial and DSNY-managed Waste to total waste received is applied as a weighted average to the commercial and residential waste emission factor. Since the commercial waste deliveries would only occur from 8:00 p.m. to 8:00 a.m., the potential commercial waste tonnage~~,~~ with the off-site noise constraints~~,~~ and the DSNY-managed Waste delivered during those hours were used. The emission rate is calculated based on this ratio for each site.

The air release height for the point source is based on the height of the exhaust fans on the roofs of the facilities. Because the vertical momentum of the exhaust air is assumed to be obstructed by the design of the exhaust vents, the vents were modeled using very small input diameters and velocities~~,~~ in order to simulate no plume rise for these point source emissions.

3.18.6.1.2 Barge (Area) Source Emission Rate

Barge odor air samples obtained (for the 2000 SWMP FEIS) from full and empty barges at MTSs and the Fresh Kills Landfill were analyzed as area sources because the sides of the barges are enclosed. Area source odor emission factors (mass/time/unit area) were estimated by calculating the OU using the D/T provided by the laboratory for each sample, divided by the area covered by the enclosure where the sample was collected, and ~~divided~~ dividing that result by the duration of sampling. The peak-to-mean adjustment and decimal place adjustment were applied to obtain emission rates for the ISCST3 input.

For the 2000 SWMP FEIS, samples were collected by extracting 20 to 25 liters of air within an approximate one cubic meter enclosure with an open bottom that is approximately one square meter (1,000 liters) placed over the odor source. The chamber was placed over the waste for a period of time before the sampling pump was turned on, thereby allowing some accumulation of odors before sampling. Since the sample volume was 2% to 3% of the enclosure volume, any dilution effect caused by ambient air pulled into the enclosure was ignored. Each sample was collected over an average of approximately 20 to 25 minutes. This sampling was conducted for both full barges, and for "empty" barges, in which case the sampling apparatus was placed on the barge bottom, over waste residue.

The highest emission factor for either full or empty barges was conservatively used as the basis to develop model inputs for all facility scenarios involving the use of open-top barges (non-containerized waste). For facilities that accept commercial waste, emission factor was assumed using the weighted ratio between the emission factor of the point source of commercial waste and DSNY-managed Waste combined. The emission rate is then calculated using the same methodology as that for emission factor for the DSNY-managed Waste. The emission rates for barges were calculated to be 0.00000057 odor units per second per squared meter (OU/sec-m^2) for residential waste and 0.000008 OU/sec-m^2 to 0.000015 OU/sec-m^2 for facilities that accept commercial waste. The odor emission release height of the barges was assumed to be 12 feet (3.66 meters), based on the approximate height of the barge side above the water line.

3.18.6.1.3 Container (Volume) Source Emission Rate

Estimated odor emission rates from shipping containers were based on the sampling of odors from inside vent openings on the sides and/or rear of the containers. The D/T for these samples was generally higher than those obtained for exhaust vents. Due to the tightly compacted waste inside a shipping container, however, there is little air space within these containers. Winds cannot force air through the containers and, consequently, there is very little airflow out of these vents. Whatever airflow does exit the vents is probably due to diurnal heating of the small vapor space left after the compacted waste is placed in the container.

As a test of potential airflow out of a container due to diurnal heating effects, all openings on a container were sealed with tape and an empty one-liter sample bag was attached to an orifice installed in the taped opening. The bag was set in place early in the morning on a sunny day during the summer 1999 odor sampling program. Observation of the bag at intervals over the daytime period revealed that only a very small portion of the bag was filled due to the diurnal heating or other potential off-gassing effects of the waste. The conclusion, based on this test, is that much less than a liter of airflow is emitted from diurnal heating of a shipping container with tightly compacted waste. Based on the very low air flow sampled from filled shipping containers (as part of the 2000 SWMP FEIS), and the very low estimated emission rates, the containers were not included as an emissions source in the dispersion model. Filled container odor emissions are expected to be negligible in comparison to other odor sources analyzed for the ~~proposed~~ Proposed Plan F~~f~~acilities and Alternative Facilities.

An empty container has a much ~~bigger~~ greater volume of space within ~~the container~~it. Although, based on calculation, a higher air flow is emitted from diurnal heating of empty containers when compared to a full container, the estimated emission rates are still very low in comparison to other odor sources from the ~~proposed~~ Proposed Plan ~~facility~~Facilities or Alternative Facilities. Therefore, empty container odor emissions are also expected to be negligible.

3.18.6.1.4 Collection Vehicles (Volume or Area) Source Emission Rate

Estimated odor emission rates from collection vehicles were based on the sampling of odors from a DSNY garage where full collection vehicles were parked. See Appendix J to this FEIS for a more detailed discussion of DSNY collection vehicle odor sampling and analysis. The DT values and garage ventilation exhaust air flow rate for these samples were used to calculate the emission factors and rates on a per collection vehicle basis. The maximum emission rate based on highest DT value of any sample was applied in the ISCST3 model, using the volume or area source algorithm to simulate odor emissions from collection vehicles queued on facility inbound ramps.

3.18.6.1.5 Emission Rate Summary

Table 3.18-8 contains a summary of the emission rates or factors used for each type of sampled source. Note that the shipping container emission rate is so low that container emissions were not included in the dispersion modeling analyses.

Table 3.18-8
Modeled Odor Emission Rates/Factors

Source Type	Unit Emissions	ISCST3 Emissions
Facility Exhaust Vents	16.2 OU/sec/(ton of solid waste processed/hr) for residential waste 414.2 OU/sec/(ton of solid waste processed/hr) for Commercial Waste	0.00072 OU/sec [(1)] (residential waste) 0.008 OU/sec – 0.015 OU/sec (Residential + Commercial Waste) [(1)(2)]
Barges	5.7×10^{-7} OU/sec-m^2 for residential waste 1.5×10^{-5} OU/sec-m^2 for Commercial Waste	5.7×10^{-7} OU/sec-m^2 (residential waste) 8.0×10^{-6} OU/sec-m^2 – 1.4×10^{-5} OU/sec-m^2 (Residential + Commercial Waste)[(2)]
Collection Vehicles[(3)]	3.2 OU/sec/collection vehicle	Varies for each site based on number of collection vehicles.

Notes:
OU/sec = odor units per second.
OU/sec-m^2 = odor unit per second per squared meter
(1) Based on a 4,290 tpd facility for typical facility.
(2) Based on potential residential waste and commercial waste to be delivered during the hours of 8:00 p.m. to 8:00 a.m.
(3) Based on DSNY collection vehicles.

3.18.6.2 Dispersion Modeling

Based upon emission rates, exhaust parameters, building design and site characteristics for each Proposed Plan Facility~~ies~~ and Alternative Facility~~ies~~, as applicable, atmospheric dispersion modeling was used to assess the distance at which the odor would not be detected and the odor unit level at the property line and off-site receptors. For this FEIS, additional off-site odor sensitive receptor results are reported in Chapters 4 through 7 and 22 for consistency with additional noise-sensitive receptors analyzed in the DEIS. While dispersion models are used typically by regulatory agencies to determine compliance with air quality regulations, odor modeling techniques have been developed using these same air quality dispersion models. Using the emission characteristics of the facility, USEPA's ISCST3 model was used to assess worst-case estimates of maximum short-term concentrations from a single point, area or volume source, and from combinations of multiple point, area and volume sources. The odor dispersion modeling followed the same basic approach as that for criteria and toxic pollutants of on-site sources.

The purpose of using dispersion modeling for the odorous emissions was to determine the distance from the Proposed Plan Facilities and Alternative Facilities, as applicable, at which the modeled emission rates had resulting concentrations that were equal to or less than 5 OU. For assessing whether there are adverse or objectionable odors, there is no specified odor limit that has been established by the City. Thus, this study considered the odor levels in background samples taken at various locations in the City~~,~~ as well as precedents established by other state and local agencies nationwide in regulating odor levels~~,~~ to develop an odor level considered protective of the general public's sensibilities.

The shortest averaging period accommodated by the ISCST3 model is one hour. Because odor can be detected on an instantaneous basis by the human nose, it was necessary to apply a multiplication factor – referred to as a "peak-to-mean" factor – to the ISCST3 one-hour concentration predictions. This peak-to-mean factor was set at 2.5, based on data contained in the publication *Meteorology and Atomic Energy* (Slade, et. al., 1968). However, because the ISCST3 concentration predictions are proportional to the emission rate for a single source, the emission rates were simply multiplied by 2.5 for input to the ISCST3 model so that ISCST3 output concentrations would be adjusted for peak – rather than one-hour average – odor impacts.

Because the modeled emission rates are actually input in units of "grams/second" and the output concentrations are in units of "micrograms/cubic meter," one can simply move the decimal point six places to the left in the modeled emission rates, so that output concentrations are effectively in units of grams/cubic meter. It does not matter to the model whether one is modeling "grams" or "odor units" or any other measure of mass. Therefore, if one defines the input as "odor units/second" the output, after making the decimal place adjustment, will effectively be in units of "odor units/cubic meter" or equivalently, multiples of DT.

Together, the peak-to-mean adjustment and decimal place adjustment in emission rates make it possible to have the model output show directly the predicted number of odor units (multiples of the DT) at each receptor location. As an example, a facility processing 4,290 tons per day (tpd) of waste would have an stack/vent estimated emission rate of 7,195 OU/sec ([4,290 tons of solid waste processed per day x 16.1 OU/sec/(ton of solid waste processed/hr)/(24 hrs/day)] x 2.5). This value would then be divided by 10^6 to give a model input emission rate of 0.007195, which would then produce output concentrations in OU/m3, or effectively, multiples of the detection threshold (DT).

3.18.6.3 Modeling Procedures

The following procedures were followed for modeling the odor sources:

1) BPIP. The USEPA Building Profile Input Program (BPIP) was used to determine dimensions for simulating building downwash effects on the plume of the stack/vent located on the roof of the processing building. The ISCST3 model takes the output generated by the BPIP program and simulates downwash effects by limiting any plume rise and by increasing the rate of vertical and horizontal plume spread. The BPIP program calculates 36 projected building widths and heights (one set for every 10° of arc, 360° total, with respect to a point source).

2) ISCST3 Model. The source emission rates in OU/sec were input into ISCST3 along with all other necessary input data. Model inputs were set to calculate and output the peak value that was representative of how odors are detected by humans.

Several modeling assumptions were used for the analysis of each Proposed Plan Facility site and Alternative Facility site, as applicable:

- Stack heights were set at 3 feet or 0.91 meters above the process building roofline with an exit velocity of 0.001 m/s, to simulate horizontally-directed exhaust.
- Calm wind conditions were not represented in the ISCST3 results since the USEPA regulatory default option was used. Calm wind conditions are a worst-case dispersion condition and tend to keep odors closer to the source and show higher impacts at or near the facility property line. However, calm wind conditions only occur at a maximum of 3% of the time on an annual basis for the 1997 through 2001 LaGuardia Airport meteorological data set.
- A Cartesian coordinate system was developed to encompass all emissions at the process building stack as well as the receptor points, which are the locations where the model calculates odor concentrations. The receptor grid was developed out to a distance of 500 meters (approximately 1,640 feet) from the property boundary in all directions over land in 50-meter (approximately 164-foot) increments. This allowed creation of contour plots to help define any areas of predicted detectable odors and to determine whether these areas overlapped any sensitive receptors.
- The building ventilation exhaust stack(s) were modeled as a point source(s) located at the top of the process building, unless otherwise specified. The emission rate for the point sources was modified for facility capacity and number of emission points, if applicable. The ISCST3 model is the same as that used to determine compliance with applicable air quality standards and guidelines. The emission rates from each source were determined by converting the sampled concentrations into odor emission rates calculated in units of OU/sec. In addition, physical parameters of the sources and surrounding structures, such as exhaust fan height, were incorporated into the model.
- The barges were modeled as area sources located outside of the processing building.
- The collection vehicles were modeled as volume or area sources located on the ramp of the facility where the collection vehicles could potentially queue.

Since publication of: (1) the EIS-level odor analysis of Converted MTSs presented in Appendix D to this FEIS - the Commercial Waste Management Study, Converted MTSs Commercial Waste Processing and Analysis of Potential Impacts -Volume III; and (2) the DEIS, the odor analyses were revised based on the proposed Converted MTS final designs, and several additional sensitive receptor location results were reported for the proposed East 91st Street Converted MTS. For processing only DSNY-managed Waste at the proposed Converted MTSs, the revised odor results are reported in Chapters 4 through 7 and 19 through 22 of this FEIS. The revised odor results of processing DSNY-managed Waste plus Commercial Waste at the proposed Converted MTSs are reported in revised Tables 1 through 8 in Appendix D of this FEIS.

3.18.7 Mitigation Measures

Examples of design features that may be associated with facilities to mitigate odor problems include:

- Installation of building exhaust fans and filter systems (e.g., bag houses and cyclones) to create negative air pressure that would minimize the escape of fugitive odors from the Proposed Plan Facilities and Alternative Facilities, as applicable; and
- Installation of an automatic spray system that would disperse odor neutralizing agents within the building and into the ducts of the exhaust air system.

Operational procedures that have been shown to be effective at reducing odors include:

- Requiring all waste handling operations to be conducted within the enclosed facility and limit the length of time solid waste can be retained on site;
- The requirement that the doors in the waste receiving area be closed except during waste deliveries;
- The use of covered or enclosed trucks for all waste delivery and transfer operations; and
- The use of neutralizing agents on the loose waste in the barge.

3.19 Noise

3.19.1 Introduction

This section briefly outlines the methodology that will determine the extent to which Proposed Plan Facility and Alternative Facility (as applicable) operations could affect noise levels. Each site is located in manufacturing-zoned districts but has the potential to generate noise that could affect nearby noise-sensitive receptors, such as residential land uses and outdoor areas (e.g., parks). Noise sources evaluated include both mobile and stationary sources operating within the site boundary and DSNY and other agency collection and employee vehicles traveling on roads leading to and from the facility. The analysis, which is based upon guidance found in the 2001 CEQR Technical Manual, includes:

- A screening step to determine if further analysis is warranted; and
- If warranted, a detailed analysis including a monitoring task to determine existing noise levels near the site and at noise-sensitive receptors, ~~based upon guidance found in the 2001 CEQR Technical Manual~~ and modeling techniques to predict ~~for~~ on- and off-site noise levels.

The on-site noise analysis used a spreadsheet model with standard noise calculations that accounts for multiple indoor noise sources, ~~attenuation~~ transmission loss provided by building walls, multiple outdoor sources, attenuation due to propagation (geometric spreading) toward off-site receptors, equipment utilization factors and shielding provided by intervening buildings.

The FHWA Traffic Noise Model Version 2.1 (TNM 2.1) or field simulations of DSNY or other agency collection vehicles along routes near sensitive receptors were used to predict potential off-site noise impacts.

3.19.2 Background

Noise is often described as unwanted sound. Factors affecting the physical characteristics of sound when it is perceived subjectively as noise by the human ear are:

- Actual level of the sound (perceived loudness);

- Distribution of sound energy among individual frequency bands in the audible range;
- Period of exposure to the noise; and
- Changes or fluctuations in the noise levels during the period of exposure.

The human ear does not perceive all sound frequencies equally well, so measured sound levels are adjusted or weighted to correspond closely to human hearing. The adjusted basic measurement unit is known as the A-weighted decibel (dBA). Community noise levels in urban areas usually range between 45 dBA and 85 dBA, 45 dBA being the daytime noise level in a typical quiet living room, and 85 dBA being the approximate noise level near ~~the~~ a sidewalk adjacent to heavy traffic. Figure 3.19-1 illustrates noise levels from typical fluctuating and non-fluctuating (steady) noise sources, based on the A-weighted decibel measure of noise.

Because ~~dBA describes a noise level at just one moment and~~ very few noises are constant, ~~other~~ methods of describing noise over extended periods are used. One way of describing fluctuating sound is to describe the fluctuating noise heard over a specific time period as if it has been a steady, unchanging sound. For this condition, a descriptor called the equivalent sound level, L_{eq}, is computed. An L_{eq} is the constant sound level that conveys the same sound energy as the actual time-varying sound in a given situation and time period, for example, 1 hour.

The 1-hour L_{eq}, as recommended by CEQR, and the New York City Noise Code, ~~and the DSNY Transfer Station Operational Requirement Rules,~~ is used as the noise descriptor in this analysis. The 1-hour L_{eq} sound level allows for comparison with federal and local noise standards and indicates to what extent local residents will be affected by changes in facility-related noise levels. Maximum 1-hour L_{eq} sound levels are used to provide an indication of expected sound levels during the loudest hour of facility operations. Minimum 1-hour L_{eq} sound levels provide a basis for impact assessment during the quietest hour of operations. ~~The 1-hour L_{eq} sound level allows for comparison with federal and local noise standards and indicates to what extent local residents will be affected by changes in facility-related noise levels.~~ In addition to the L_{eq}, statistical descriptors of L_5, L_{10}, L_{50} and L_{90} are also used in this analysis. These descriptors represent noise levels that are exceeded 5%, 10%, 50% and 90% of the time. Therefore, an L_{10} of 60 dBA means that during 10% of the measurement period, the noise levels will be higher than 60 dBA. Similarly, an L_{50} of 60 dBA means that during 50% of the measurement period, the noise levels will be higher than 60 dBA.

The average person's ability to perceive changes in noise levels is well documented. Generally, changes in noise levels of less then 3 dBA will barely be perceived by most people, whereas a 10 dBA change is perceived as a doubling (or halving) of noise levels. The general principle on which most noise acceptability criteria are based is that a change in noise is likely to cause annoyance whenever it intrudes upon the existing noise from all other sources. Essentially, annoyance depends upon the noise that exists before the start of a new noise-generating project or an expansion of an existing project.

Ways for expressing noise emission levels for equipment are sound power level (SWL) and sound pressure level (SPL). A ~~decibel~~ sound power level is defined as:

$$Lw = 10 \times \log(W/Wref)$$

where:
- W = Watts, a unit of power;
- Wref = a reference power (usually 1 x 10-12 W); and
- Lw = sound power level.

Sound power can be thought of as the amount of energy generated and propagated per unit of time. Sound pressure level is a variation in pressure above and below atmospheric pressure and is proportional to sound power level. For example, two piston cylinders of different diameters can be driven so that they put out the same amount of sound power. The sound power per unit area, or sound intensity, in the smaller tube will be greater than that in the larger tube because the same amount of energy is distributed over a smaller area. This means that the sound pressure disturbances in the smaller tube are larger because the sound intensity is higher.

A sound pressure level is defined as:

$$Lp = 20 \times \log(P/Pref)$$

where:
- P = Micropascals (μPa), a unit of pressure
- Pref = a reference pressure (usually 20 μPa)
- Lp = sound pressure level.

3.19.3 Criteria

The noise analyses are based upon CEQR standards, the Current New York City Noise Code and Performance Standards of the New York City Zoning Code for Manufacturing Districts that set limits on facility-generated noise levels at the property boundary and the nearby residential areas. However, for private transfer station sites, only a CEQR analysis was performed. The criteria used include a determination of the following:

- ~~If~~ For the ~~existence of the~~ Proposed Plan Facilities~~y~~ and Alternative ~~Facility~~Facilities, as applicable, ~~and related activities would raise the existing hourly minimum plant noise levels by 3 dBA or more at the nearest noise sensitive receptor~~ adherence to the CEQR Noise Standards;
- For the MTSs, adherence to the Current New York City Noise Code requirements in all facilities; and
- For the MTSs, adherence to the Performance Standards of the New York City Zoning Code for Manufacturing Districts.

3.19.3.1 Current New York City Noise Code

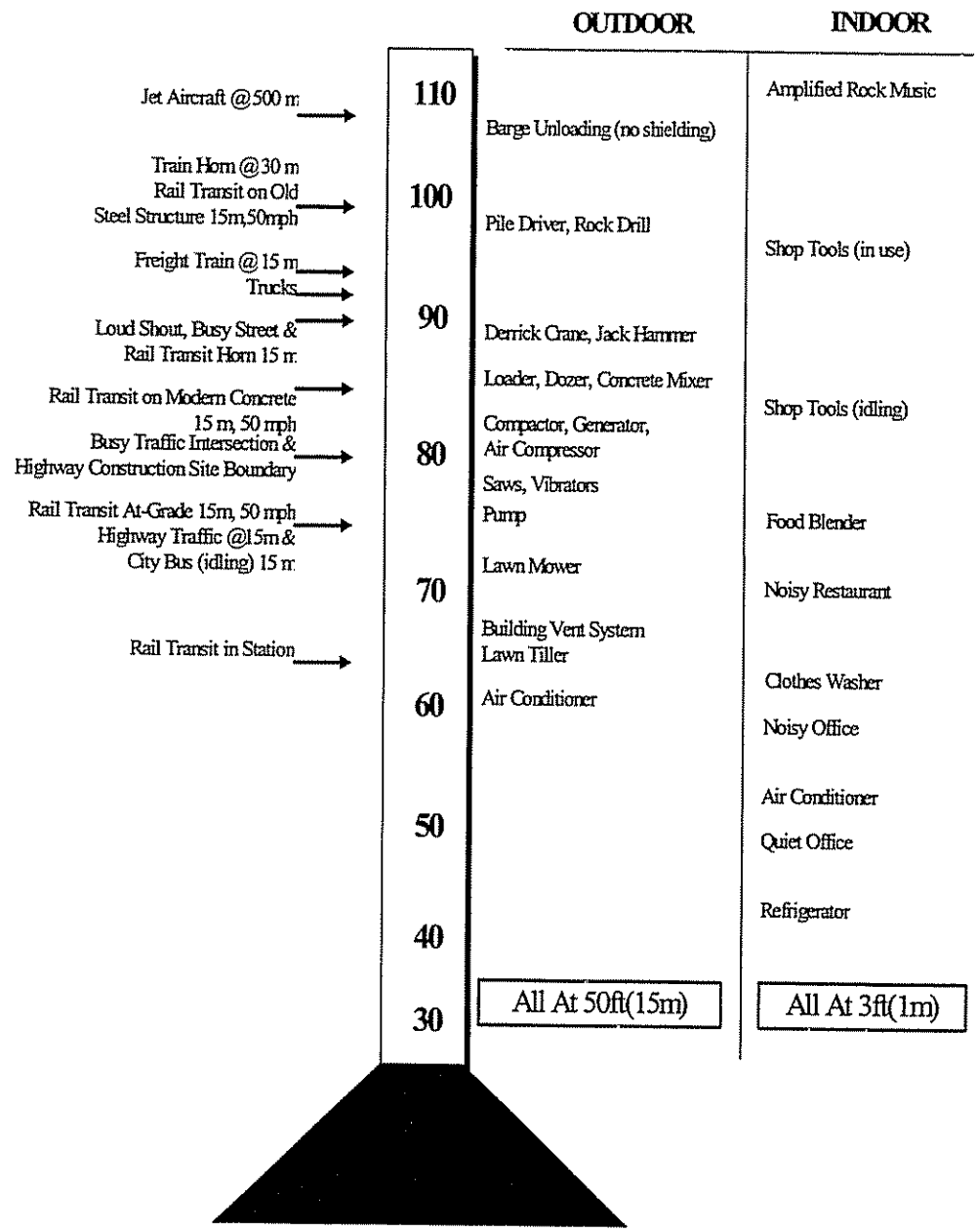
The Current New York City Noise Code 24-243 (Ambient Noise Quality Zone), which specifies a ~~24~~1-hour $L_{eq(1)}$ level less than or equal to 70 dBA for noise emitted from land uses zoned for manufacturing at the property line of the Proposed Plan Facility and Alternative Facility site, as applicable, was applied.

3.19.3.2 CEPO-CEQR Noise Standards

The noise analysis is based on Section R of the 2001 CEQR Technical Manual, which includes definitions of environmental acoustics concepts, guidance for determining if a noise analysis is appropriate, assessment methods, impact thresholds and mitigation guidance. The noise requirements of the 2001 CEQR Technical Manual are as follows:

- On-Site Noise
  - If the Future No-Build Condition ~~traffic~~ noise level is less than 60 dBA $L_{eq(1)}$ and the analysis period is during the day, the threshold for significant impact from the proposed project will be an increase of 5 dBA ~~$L_{eq(1)}$~~.

Figure 3.19-1
Common Indoor and Outdoor Noise Levels



Sources: Parsons Brinckerhoff Quade & Douglas, Inc., July 1998
FTA Report DOT-T-95-16. "Transit Noise and Vibration Impact Assessment: Final Report", April 1995
Hudson River Waterfront Transportation Corridor DEIS, November 1992

- If the Future No-Build Condition ~~traffic~~ noise level is equal to or greater than 62 dBA $L_{eq(1)}$ or if the analysis period is during the nighttime, the threshold for significant impacts from the proposed project will be an increase of 3 dBA.

- Off-Site Noise
  - The threshold for significant impacts is an increase of 3 dBA or more, over the existing minimum noise at the nearest sensitive receptor, when impacts are analyzed for cumulative noise effects from proposed facility-related truck traffic and noise.

A screening analysis was performed for on-site and off-site noise sources to evaluate the potential for noise impacts and to determine if additional refined noise analyses were required. Refer to Section 3.19.5 for a discussion of the screening analyses, Section 3.19.7 for a discussion of the detailed noise analyses and impact thresholds, and Section 3.19.8 for a discussion of typical mitigation measures for impacted locations.

3.19.3.3 City Zoning Regulations

City Zoning Regulations also address noise emissions. The following section of the City Zoning Regulation was applied: City Zoning Regulations 42-213, which specifies maximum permissible octave band sound pressure levels for manufacturing districts M1 and M3 from plant equipment operations, including the operation of rooftop ventilators and air circulation devices (see Table 3.19-1).

The octave bands provided above are "old" and can no longer be measured with the noise monitoring equipment available. The American National Standards Institute (ANSI) has promulgated a standard for the conversion of the old octave bands to the current octave bands. (See Table 3.19-2.)

If the facility boundary is located adjacent to a residential zone, these sound pressure levels must be reduced by 6 dB.

Table 3.19-1
New York City Zoning Regulation
Maximum Permitted
Sound Pressure Level
(in decibels)

Octave Band (cycles per second)	District	
	M1	M3
20 to 75	79	80
75 to 150	74	75
150 to 300	66	70
300 to 600	59	64
600 to 1,200	53	58
1,200 to 2,400	47	53
2,400 to 4,800	41	49
Above 4,800	39	46

Table 3.19-2
New York City Zoning Regulation
Maximum Permitted
Sound Pressure Level
(Current Octave Band)
(in decibels)

Octave Band (cycles per second)	District	
	M1	M3
63	78	79
125	73	74
250	64	69
500	57	63
1,000	52	57
2,000	46	52
4,000	40	48
8,000	38	45

3.19.4 Noise Sources

3.19.4.1 On-Site Noise Sources

Solid waste management facilities may include a variety of on-site noise sources, such as gantry cranes and ventilation equipment. For practical purposes, certain mobile sources were modeled as on-site sources, including collection vehicles loading/unloading at the Proposed Plan Facilities and Alternative Facilities, as applicable, front-end loaders moving waste on site, barge loading/unloading equipment and street sweepers. To be conservative and identify the period with the highest incremental effect, it was assumed that typical daytime facility operations occur 24 hours per day.

3.19.4.2 Off-Site Noise Sources

For the purposes of this analysis, collection and employee vehicles were considered as off-site mobile sources.

3.19.5 Screening Methodology

3.19.5.1 On-Site Source Screening Analysis

Both stationary and mobile equipment operate indoors and outdoors. The operations within the facility boundary were treated as stationary sources for the purpose of the screening analysis. The locations of equipment and activities at each site at each facility's peak capacity were drawn on a scaled layout map. A reference noise level for each piece of equipment, both indoor and outdoor, was obtained and added together. The combined noise levels were used to identify the 55 dBA noise contour line (i.e., the point at which on-site noise would attenuate to 55 dBA). As 55 dBA is a generally acceptable nighttime noise level, it was used as a threshold for screening purposes. Noise-sensitive receptors located between the facilities and the 55 dBA contour, if any, were identified.

To calculate the 55 dBA contour line, a -6 dBA drop-off rate (i.e., level of attenuation per doubling of distance from the source) was assumed. The shielding effects of intervening buildings was accounted for by applying 5 decibels of shielding for each row of buildings that provides 70% to 90% coverage (of the line of sight), with a 10-decibel limit (FHWA-RD-77-108, page 33). A 10-decibel attenuation was used for buildings providing more complete coverage.

If noise-sensitive receptors were not located within the 55 dBA contour line, the facilities were screened from further CEQR analysis and a qualitative discussion is provided. If noise-sensitive receptors exist within the 55 dBA contour line, a detailed stationary noise source analysis was performed. If the nearest noise-sensitive receptor was located outside of the 55 dBA contour line, background noise levels were measured at that noise-sensitive receptor to determine if they were below 55 dBA. If the noise level was below 55 dBA, a contour line for that noise level was determined and a detailed stationary noise source analysis was performed.

The following were considered to be noise-sensitive receptors:

- Parks/playgrounds;
- Schools and educational facilities;
- Residences;
- Churches and other places of worship;
- Outdoor performance facilities;
- Indoor performance facilities with windows;
- Healthcare facilities; and
- Libraries and community centers.

Noise analyses were also conducted at noise-sensitive receptors that were non-conforming uses in particular zoning districts.

3.19.5.2 Off-Site Source Screening Analysis

CEQR includes guidelines for a screening-level analysis of off-site sources to determine if additional refined analyses are required. The only off-site sources for the Proposed Plan Facilities and Alternative Facilities, as applicable, are DSNY and other agency collection and employee vehicles on local roads traveling to and from the sites.

Noise screening was performed in a two-level process. The first level consisted of converting the Future No-Build traffic volume and the DSNY and other agency collection vehicle and employee traffic volume to PCEs. The Future No-Build traffic volume was determined by escalating the existing traffic volume obtained by automatic traffic recorders (ATRs) using the CEQR traffic escalation formula. The Future No-Build traffic volume was converted to PCEs using New York State Department of Transportation (NYSDOT) site-specific axle factors. These categorize the traffic volume into two classes: (1) Automobile/Light Truck/Medium Truck/Bus; and (2) Heavy Trucks. The CEQR PCE factors for the vehicles in Class 1 range from 1 to 18, per Section R 332.1 of the 2001 CEQR Technical Manual. A conservative PCE factor of 1 was used for Class 1, therefore resulting in a lower Future No-Build traffic PCE volume. ~~that~~This volume cannot be doubled, per the CEQR screening threshold. The CEQR PCE factor for the vehicles in Class 2 is 47, which was also used to convert the collection vehicle traffic volume to PCEs. Employee vehicles were converted to PCEs using the CEQR PCE factor of 1 for cars. The two PCE values (Future No-Build and Future Build) were then compared. If the Future Build PCEs (Future No-Build PCEs plus collection vehicle PCEs ~~plus~~ and employee vehicle PCEs) were double the Future No-Build PCEs, the collection vehicles and employee vehicles would cause a possible impact. A second-level screening process was then required.

For the second-level screening, the hour for which the greatest ratio of Future Build PCEs to Future No-Build PCEs was analyzed for each roadway that resulted in a doubling of PCEs based on the first-level screening. If the first-level screening resulted in possible impacts during the daytime (7:00 a.m. to 10:00 p.m.), as well as the nighttime (10:00 p.m. to 7:00 a.m.), both the hour with the greatest ratio from the daytime and the hour with the greatest ratio in the nighttime were further analyzed in the second-level screening.

Similar to the first-level screening, the collection vehicle traffic volume and employee vehicle traffic volume was converted to PCEs using a PCE factor of 47 for Heavy Trucks and 1 for cars, respectively, for this level. However, for this level, Future No-Build PCEs were calculated using: (1) the field-obtained vehicle classification count for the hour(s) being screened or a vehicle classification count representative of the vehicle distribution expected during that time of the day; and (2) the following conversion factors from 2001 CEQR Technical Manual Section R 332.1:

- Each Automobile or Light Truck: 1 PCE;
- Each Medium Truck (gross vehicle weight from 9,900 pounds to 26,400 pounds): 13 PCEs;
- Each Bus: 18 PCEs; and
- Each Heavy Truck (gross vehicle weight more than 26,400 pounds): 47 PCEs.

As a result of the second-level screening process, if the Future No-Build PCEs were either doubled or nearly doubled along a roadway due to an increase in traffic volume from the addition of DSNY and other agency collection and employee vehicles at any time there is a possible impact, then a detailed noise analysis was required per the 2001 CEQR Technical Manual, Section R 311.1.

3.19.6 Noise Monitoring

3.19.6.1 On-Site Monitoring

Noise-sensitive receptors near each site were identified using a combination of land use and zoning maps, aerial photography and field visits to each site. Noise monitoring was conducted continuously for 24 hours to establish Future No-Build noise levels at the facility property line closest to the nearest sensitive receptor. Monitoring results were expressed as L_{eq}, L_{min} (the minimum sound level), L_{max} (the maximum sound level) and the statistical descriptors of L_5, L_{10}, L_{50} and L_{90}. For sites located near highways or airports, Future No-Build noise levels might

include noise generated by these existing sources. Because many of the Proposed Plan Facilities and Alternative Facilities, as applicable, are on waterfront sites, Future No-Build noise levels might include noise generated by marine activities, such as pleasure boats and tugboats, etc. If the screening process identified the need for a detailed on-site analysis, then short-term, 20-minute readings were taken at the closest noise-sensitive receptor during the hour in which the greatest difference between facility-related noise and background noise levels occurred in order to estimate the maximum potential impacts on that receptor.

3.19.6.2 Off-Site Monitoring

If the screening analysis task for off-site sources determined that PCEs either doubled or nearly doubled along a roadway due to an increase in traffic volume resulting from the addition of DSNY and other agency collection and employee vehicles, a detailed off-site noise source analysis was performed. The detailed off-site noise source analysis consisted of noise monitoring and modeling to predict noise levels during the hours expected to receive the largest change in noise levels (when the difference between traffic noise and background noise levels is greatest). For each location in which PCEs doubled, noise monitoring was performed to determine the existing background noise level at the representative nearest sensitive receptors along the study area. ~~The Future No-Build Condition noise level and the Future Build Condition noise level predicted by the FHWA's TNM 2.1 was calibrated using the background noise level (measured).~~ The FHWA's TNM 2.1 was used to predict the Future No-Build Condition noise level and the Future Build Condition noise level. The difference between~~of~~ the ~~calibrated~~ Future No-Build Condition noise level and the ~~calibrated~~ Future Build Condition noise level was compared with 2001 CEQR Technical Manual noise impact thresholds and reported in a tabular format. If ~~the Traffic Noise Model (TNM)~~ predicted an impact at a site, noise simulations were performed that included noise monitoring of the existing background noise level and simulation of DSNY collection vehicles passing through the site during all hours that the screening resulted in a possible impact.

3.19.7 Impact Analysis

3.19.7.1 On-Site Impact Analysis

On-site noise impacts were evaluated during the hour in which the greatest difference between project-related noise and background noise levels would occur (on-site noise analysis hour). If the greatest incremental difference would occur at night, activities at the on-site sources would be largely, but not entirely, indoor operations, with occasional collection vehicles delivering waste to the facility. However, to be conservative, typical daytime operations were also assumed to occur at nighttime. Indoor activities include collection vehicles dumping waste on the tipping floor, loaders moving waste toward the hoppers, the tamping down of waste into containers, container lidding operations and housekeeping. Boilers would be located within the processing buildings, but are not a significant noise source. The outdoor analysis accounts for trucks queuing on site, container-handling activities, and barge loading by gantry cranes. ~~and housekeeping activities by street sweepers.~~

For the Proposed Plan Facilities, a refined analysis was performed including refining utilization factors for equipment noise from facility fans and more accurately, defining the interior building conditions and shielding.

3.19.7.1.1 CEQR and Part 360 Noise Code Analysis

Because operations were conservatively assumed to occur 24 hours per day, the quietest background hour was the hour during which the greatest difference between facility noise levels and background noise levels occurred (the hour during which the greatest impact would occur). To determine this hour, the 24-hour background noise levels measured at the site boundary nearest to the closest noise-sensitive receptor were reviewed for the lowest $L_{eq(1)}$. Short-term 20-minute readings were taken at the closest noise-sensitive receptor during this hour to estimate the maximum potential impacts upon that receptor.

Noise levels from indoor and outdoor on-site activities were predicted at the nearest noise-sensitive receptor and combined logarithmically.

The source noise level at 50 feet from the source, for each piece of equipment, was obtained from manufacturers. However, if this data were not available, monitoring of the equipment was performed to determine the source noise level. When possible, the equipment noise level was monitored at 50 feet from the equipment for the time period necessary to monitor one full cycle of the equipment in operation. If monitoring was performed for the equipment performing various operations at different times, for example idling vs. moving, the highest noise level was used.

The noise level included in the DEIS from trucks queuing on the facility ramp was based on trucks queuing the entire length of the inbound portion of the ramp and one DSNY truck queuing on the outbound scale. For Proposed Plan Facilities, if a higher noise level was predicted from the expected mixture of DSNY and Commercial Waste Trucks, then the mixture of DSNY and Commercial Waste trucks was analyzed. Corrected utilization factors were applied to these on site queuing vehicles between the DEIS and this FEIS.

~~Boilers would be located within the processing buildings, but are not a significant noise source.~~is FEIS. ~~Roof exhaust fans are located on top of the processing buildings; however, manufacturers' data for a typical roof exhaust fan has a sound pressure level of 45 dBA at 50 feet. Even with 10 roof exhaust fans, the Lp for these fans without enclosures would be 55 dBA at 50 feet, which would not change the overall noise level calculated for each Proposed Plan Facility and Alternative Facility, as applicable. The exhaust fans for the Converted MTSs are located within the processing buildings on an enclosed heating, ventilation and air conditioning (HVAC) platform located above the tipping and loading levels. This enclosure and the fact that the fans are located within the building will further attenuate the noise levels. Therefore, noise contributions from roof exhaust fans were not included in the analysis for each Converted MTS.~~

The steps involved in performing a CEQR detailed on-site analysis were as follows:

- **Step 1**: Calculate the cumulative boundary noise levels from equipment located inside the plant building during the on-site noise analysis hour. For each piece of equipment:

  a) Establish the sound power level (SWL).

  b) Calculate the sound pressure level (SPL) at the inside of the building wall.

c) Determine the SPL ~~in the~~ outside ~~areas~~ of the building by applying a ~~20~~ 15 decibel (dB) reduction to the SPL at the inside of the building wall due to transmission through the wall.

d) Use the outside SPL and area of the wall to calculate the SWL of the wall.

e) Convert the wall SWL to an SPL at selected distances to the plant boundary taking into account multiple pieces of equipment of the same type and the equipment utilization factor (when equipment utilization is 100% during 1-hour, the SPL is equivalent to $L_{eq(1)}$.

- Repeat steps (a) through (e) for all plant equipment operating indoors during the on-site noise analysis hour.

- **Step 2**: Calculate the noise level contributions from all of the outside equipment in operation during the on-site noise analysis hour at the closest noise-sensitive receptor. For each piece of outside equipment, including on-site DSNY and other agency collection vehicles:

a) Establish the SPL at 50 feet from the noise source, the reference distance. ~~(A reference noise level at a reference distance is required to predict noise levels at certain distances from a source.)~~

b) Convert the SPL at 50 feet to the SPL at the distance to the closest noise-sensitive receptor, taking into account multiple pieces of equipment of the same type and the equipment utilization factor. For all equipment except DSNY collection vehicles, this calculation utilizes a -6 dB/distance doubled drop-off rate to express noise propagation on-site. This drop-off rate is generally assumed to occur close to (in the near field of) a point source. For DSNY collection vehicles, this calculation utilizes a -4.5 dB/distance double drop-off rate to express noise propagation on site. This drop-off rate is generally assumed to be a line source.

c) Make appropriate corrections for factors such as shielding.

- Repeat steps (a) through (c) for all outside equipment.

- **Step 3:** Calculate the overall facility-predicted noise level at the closest sensitive receptor by logarithmically adding the L_{eq} contributions from plant equipment operating indoor and outdoors at that location.

The overall facility-predicted noise level was logarithmically combined to the background (measured) noise levels (to determine an overall predicted combined noise level (Future Build noise level). The difference between the overall predicted combined noise level (Future Build

noise level) at the receptor and the background (measured) noise level (Existing noise level) was compared with noise impact CEQR Threshold defined in Sections 3.19.3.2 and 3.19.3.4. ~~If a noise impact is predicted, a more refined analysis, including refining utilization factors for equipment, will be performed.~~

3.19.7.1.2 Current Noise Code

Noise levels from indoor and outdoor on-site activities were combined ~~logarithmically~~ at selected locations around the site boundary. The steps involved in performing a Current Noise Code analysis were as follows:

- **Step 1**: Calculate the cumulative boundary noise levels from equipment located inside the plant building during the on-site noise analysis hour. For each piece of equipment:

  a) Establish the SWL.

  b) Calculate the SPL at the inside of the building wall.

  c) Determine the SPL ~~in the~~ outside ~~areas~~ of the building by applying a ~~20~~ 15 dB reduction to the SPL at the inside of the building wall due to transmission through the wall.

  d) Use the outside SPL and area of the wall to calculate the SWL of the wall.

  e) Convert the wall SWL to an SPL at selected distances to the plant boundary taking into account multiple pieces of equipment of the same type and the equipment utilization factor (when equipment utilization is 100% during 1-hour, the SPL is equivalent to $L_{eq\ (1)}$.

  - Repeat steps (a) through (e) for all plant equipment operating indoors during the on-site noise analysis hour. To determine the total projected plant boundary noise levels from all indoor plant equipment at the selected locations, logarithmically add the L_{eq} contributions from each piece of indoor equipment.

- **Step 2**: Calculate the cumulative plant boundary noise level contributions from all of the outside equipment in operation during the on-site noise analysis hour. For each piece of outside equipment, including on-site DSNY and other agency collection vehicles:

a) Establish the SPL at 50 feet from the noise source, the reference distance. ~~(A reference noise level at a reference distance is required to predict noise levels at certain distances from a source.)~~

b) Convert the SPL at 50 feet to the SPL at distances to selected plant boundary locations, taking into account multiple pieces of equipment of the same type and the equipment utilization factor. For all equipment except DSNY collection vehicles, this calculation utilizes a -6 dB/distance doubled drop-off rate to express noise propagation on site. This drop-off rate is generally assumed to occur close to (in the near field of) a point source. For DSNY collection vehicles, this calculation utilizes a -4.5 dB/distance double drop-off rate to express noise propagation on site. This drop-off rate is generally assumed to be a line source.

c) Make appropriate corrections for factors such as shielding.

- Repeat steps (a) through (c) for all outside equipment. To determine the total projected plant boundary noise levels from the outside equipment at the selected locations, logarithmically add the L_{eq} contributions from each piece of outside equipment.

- **Step 3**: Calculate the total L_{eq} at selected locations around the property line by logarithmically adding the L_{eq} contributions from plant equipment operating indoors.

These total L_{eq} at selected boundary locations around the property lines were compared to the Current Noise Code criteria defined in Sections 3.19.3.1 and 3.19.3.5. ~~If a noise impact is predicted, a more refined analysis, including refining utilization factors for equipment, will be performed.~~ The noise level at boundary locations above water was not included in the analysis because noise sensitive receptors are not expected to be in this area. In addition, if receptors are in the area, they would most likely be in motorized boats that would emit a louder noise level than that emitted by the facility. Since the DEIS, additional property boundary points were added and analyzed in this FEIS at each Proposed Plan Facility and Alternative, as indicated in the revised Noise Code Analysis results tables in Chapters 4.0 through 31.0, as applicable.

3.19.7.1.3 Performance Standards for Zoning Code

Spectral noise levels from indoor and outdoor on-site activities were combined logarithmically at selected locations around the site boundary. Outdoor DSNY collection vehicles~~,~~ or ~~other agency~~commercial waste hauling ~~collection~~ vehicles, ~~as well as~~and tug boats, are ~~which were~~

considered as transportation facilities, and were not included in the Performance Standards for Zoning Code analysis, in accordance with the City Zoning Code Performance Standards for Manufacturing Districts. The steps involved in performing a Zoning Code analysis were similar to those performed for the Current Noise Code analysis but on a spectral noise L_{max} basis. The spectral noise levels predicted at selected boundary locations around the property lines were compared to the Performance Standards for the Zoning Code analysis defined in Section 3.19.3.3. Since the DEIS, additional property boundary points were added and analyzed in this FEIS at each Proposed Plan Facility and Alternative, as indicated in the revised Zoning Code Analysis results tables in Chapters 4.0 through 31.0, as applicable.

3.19.7.2 Off-Site Impact Analysis

As mentioned previously, the off-site analysis used the FHWA TNM 2.1 or field simulations of DSNY and other agency collection vehicles along routes near sensitive receptors to predict traffic noise levels for the Future Build Condition. At study areas where TNM was used, sensitive receptors within 200 feet and with an unobstructed view of the roadway were identified and modeled to determine the predicted traffic noise levels for the Existing, Future No-Build and Future Build Condition. In most cases, this limited the analysis to the first row of buildings along a roadway. If necessary, the FHWA shielding methodology was applied if buildings obstructed the line of site between a roadway and a sensitive receptor.

If the TNM analysis predicted an impact at a site, noise measurements were performed at the same site that included simulation of DSNY and other agency collection vehicles passing through the site during all hours that the ~~second~~ first level screening resulted in a possible impact. For this procedure, two sets of noise measurements were taken, with and without DSNY collection vehicles, by routing a set number of such trucks during the affected nighttime hours past the sensitive receptor. The difference between the noise levels with and without DSNY collection vehicles were compared to the CEQR standards. In addition, TNM was used to determine the existing and the existing plus DSNY collection vehicle (project-related traffic) noise level for comparison purposes.

From these two sets of measurements obtained during the simulations, it was possible to calculate the average acoustic energy from each individual truck movement in terms of $L_{eq(1)}$. The individual truck noise energy which was calculated for each site was used to estimate number of trucks that could be allowed on a street without causing noise impact, per CEQR guidelines. Appendix K provides a more detailed description of the truck simulations.

The existing noise level predicted by TNM and the existing noise level estimated from simulation tests (as described above) did not always agree. In cases where such differences were less than 3 dBA, the TNM-predicted noise levels were adjusted so that it agreed with the estimated existing noise level. However, for purposes of CEQR analysis, it is the difference between the Future Build and Future No-Build that matters, and this difference will not change following the adjustment to the Future Build and Future No-Build noise levels.

In cases where the disagreement between the TNM-predicted existing noise level and the estimated or measured existing noise level was more than 3 dBA, such disagreements were attributed to the fact that the existing noise level in some areas of the City during the quietest hours of the night is not entirely from road traffic but is dominated by other noise sources which include sirens, window air conditioners, and activities in bus garages and in the general community. Under these circumstances, the TNM modeling may not strictly be applicable though it was performed for comparison purposes.

3.19.8 Combined Impact Analysis

For those locations in which detailed on-site and off-site noise analyses were performed, a combined source analysis may also be conducted if the potential impacts affected the same noise-sensitive receptor. The combined analysis study area was defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway entrance to the site. The other limits for the combined analysis study area were defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the site.

If noise-sensitive receptors were not located in the study area, a combined analysis was not performed. If noise-sensitive receptors exist in the study area, then the TNM was used to predict mobile traffic noise levels at that receptor. Noise levels from the on-site source were estimated at each receptor using the spreadsheet model employed in the on-site analysis. The combined noise level was calculated using a spreadsheet. The combined analysis was performed during the off-site noise analysis hour(s).

3.19.9 Typical Mitigation Measures

Mitigation measures available were limited to those that affect the source, the propagation path or the receiver. The typical mitigation measure for the path of noise between source and receiver is a noise wall. Noise walls can be designed to provide noise attenuation for noise-sensitive areas located relatively close to the wall. Noise attenuation provided by the wall decreases as distance from the wall increases. Receiver treatments may include the construction of noise walls at residential property lines or the installation of replacement windows and air conditioning. The latter two mitigation measures are suggested in the 2001 CEQR Technical Manual. Typical mitigation measures at the source include: (1) changes in operations schedules to reduce noise emissions; (2) reduction in DSNY collection vehicles; (3) using noise mufflers for the exhaust pipes of material handling equipment (e.g., side loaders, yard tractors, etc.) or other source noise reduction methods; and (4) maintaining the equipment through regularly scheduled maintenance and repairs. If significant impacts were identified, noise attenuation measures were explored and either included in the Proposed Plan Facility and Alternative Facility (as applicable) design or operations plans, if feasible, or evaluated to identify if the mitigation measures would avoid, lessen or mitigate the impacts. ~~If significant impacts were identified, noise attenuation measures were explored and either included in the Proposed Plan Facility and Alternative Facility (as applicable) design or operations plans, if feasible, or evaluated to identify if the mitigation measures would avoid, lessen or mitigate the impacts.~~ However, mitigation measures that were developed for a specific code or regulation may no longer be required and therefore not implemented if the code or regulation is no longer applicable to the Proposed Plan Facility or Alternative Facility, or if the code or regulation no longer exists at the time of construction.

Since publication of the: (1) EIS-level noise analysis for Converted MTSs presented in Appendix D to this FEIS - the Commercial Waste Management Study, Converted MTSs Commercial Waste Processing and Analysis of Potential Impacts -Volume III; and (2) the DEIS, the noise analyses were revised based on the proposed Converted MTS final designs, inclusion of the fans in the analyses, and corrected utilization factors for the on-site queuing waste hauling vehicles. For the four Proposed Plan Converted MTSs, the revised noise analysis results are reported in Chapters 4 through 7 of this FEIS. As a result of these revisions, additional restrictions on the deliveries of commercial waste to the proposed North Shore Converted MTS are required to mitigate potential predicted on-site noise impacts. Therefore, the revised "Summary of Commercial Waste Trucks Allowed for the 8:00 p.m. to 8:00 a.m. Period" table is included in Appendix D of this FEIS, and hourly summaries presented in Chapter 7 of this FEIS.

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CHAPTER 4 ENVIRONMENTAL REVIEW: HAMILTON AVENUE CONVERTED MTS

4.1 Introduction

The results of the environmental analyses of the Hamilton Avenue Converted MTS are presented in the following sections:

4.2 Land Use, Zoning, and Public Policy
4.3 Socioeconomic Conditions
4.4 Community Facilities and Services
4.5 Open Space
4.6 Cultural Resources
4.7 Urban Design, Visual Resources, and Shadows
4.8 Neighborhood Character
4.9 Natural Resources
4.10 Hazardous Materials
4.11 Water Quality
4.12 Waterfront Revitalization Program
4.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
4.14 Traffic, Parking, Transit, and Pedestrians
4.15 Air Quality
4.16 Odor
4.17 Noise
4.18 Commercial Waste to the Hamilton Avenue Converted MTS

Section 2.2.1 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

4.2 Land Use, Zoning, and Public Policy

4.2.1 Existing Conditions

4.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 4.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 4.2-2). Section 3.4 describes the methodology used in these analyses and Section 2.2.1 provides information on existing land uses and operations on the site.

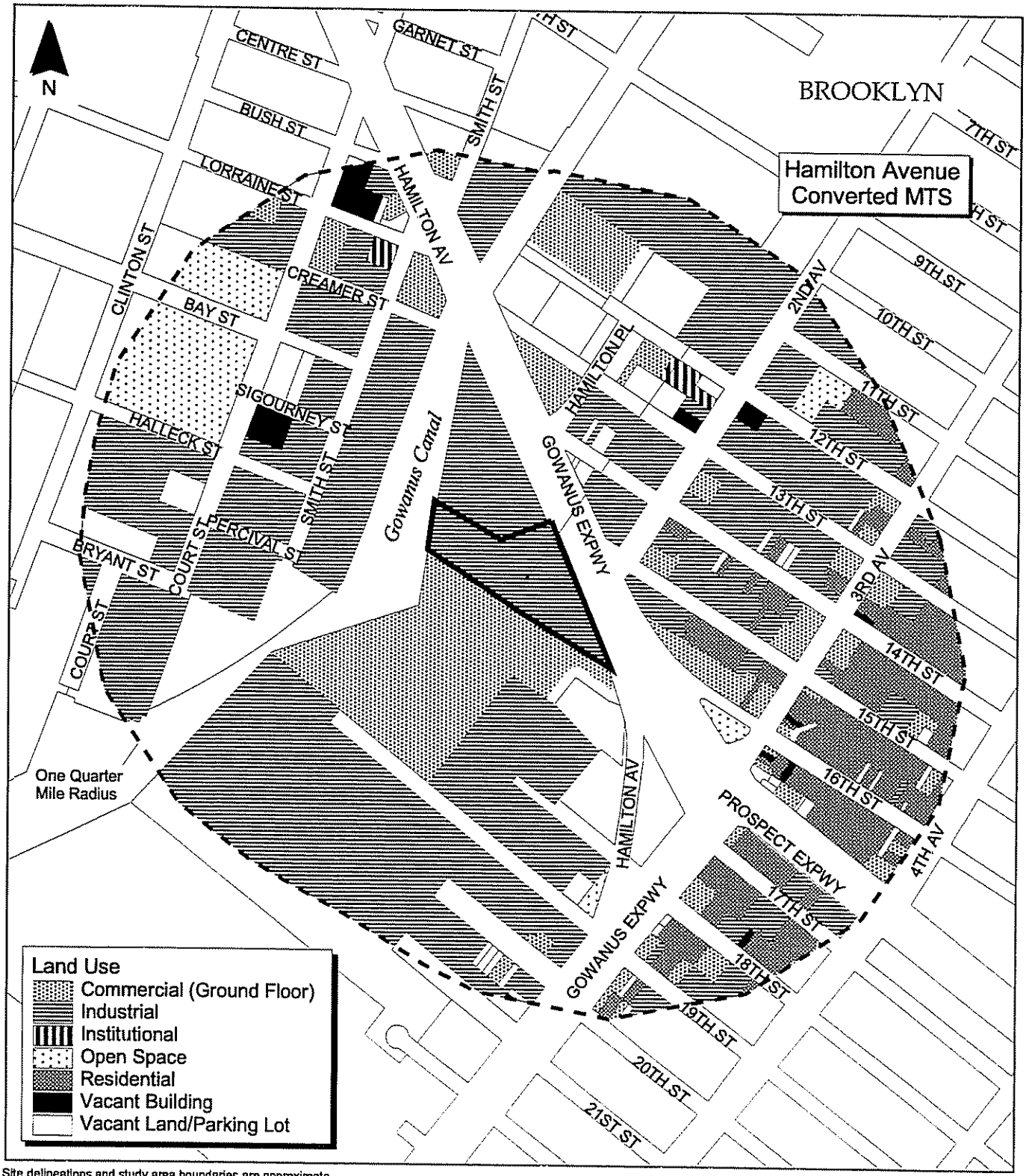
4.2.1.2 Land Uses Patterns

4.2.1.2.1 General Context

The site is in a predominantly industrial area on the southeastern side of Gowanus Canal in Brooklyn at the mouth of the Gowanus Bay. It is surrounded by industrial uses, primarily warehousing and transportation infrastructure, and is separated physically from residential areas located further inland.

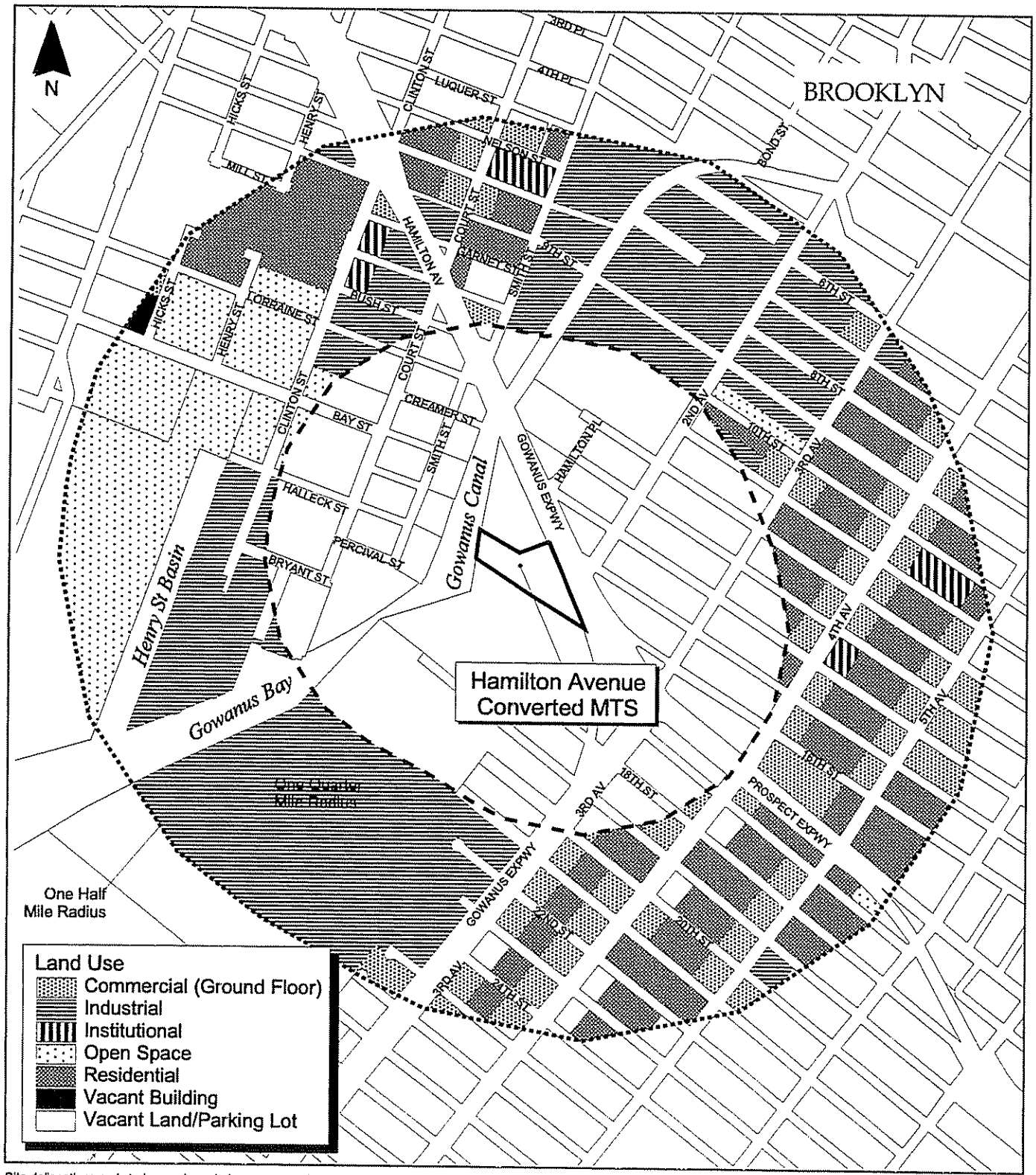
4.2.1.2.2 Land Uses in the Primary Study Area

The site is bordered on the west by the Gowanus Canal and on the northeast by an NYCDOT asphalt plant and storage yard. Hamilton Avenue, which is a busy arterial, and the elevated Gowanus Expressway define the eastern boundary of the site, separating it from various automotive service uses and warehouses beyond. The large, two-story parking lot/garage associated with a Home Depot on 19th Street borders the site on the south.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area

Figure 4.2-1 Land Use in the Primary Study Area
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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses at the secondary study area

500 0 500 Feet

Figure 4.2-2 Land Use in the Secondary Study Area

Hamilton Avenue Converted MTS

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Large lots in the northeastern portion of the primary study area contain industrial and warehouse uses. Automotive services are located along Hamilton Avenue just east of the site, including DSNY's Brooklyn 2 garage.

Warehouses, automotive services and industrial uses, including Hess Industries oil tanks, are located in the northern portion of the primary study area, west of the canal. Further west is the Red Hook Houses Recreational Area (between Halleck Street, Court Street, Bay Street and Clinton Street). Southwest of the site, just beyond the Home Depot, are the Sunset Industrial Park and surrounding large-lot warehouses. Smaller-lot warehouses line the northwestern side of Third Avenue/Gowanus Expressway. There is a mix of warehousing, vacant buildings, residences and commercial uses southeast of Second Avenue, with more residences located southeast of Third Avenue.

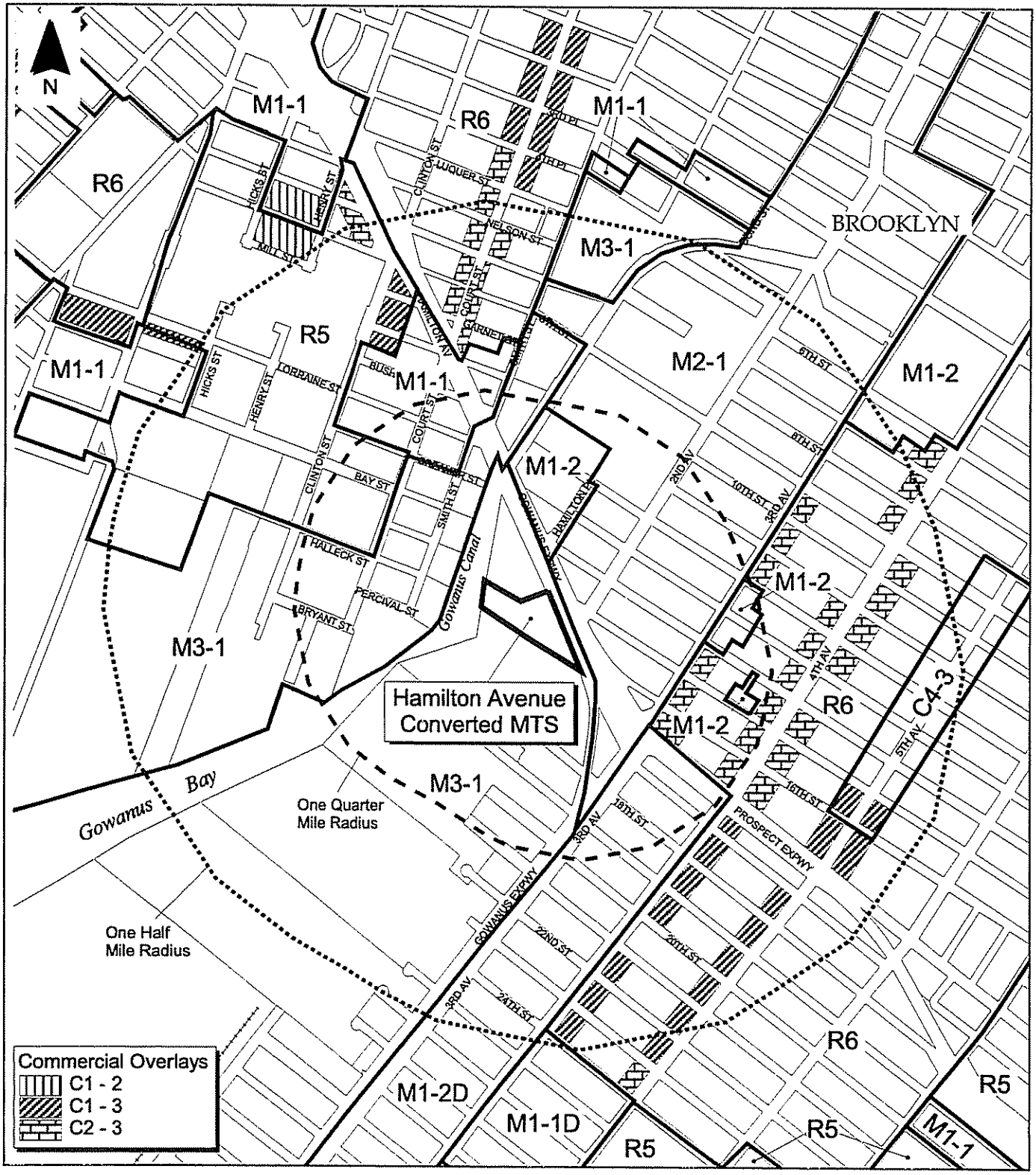
4.2.1.2.3 Land Uses in the Secondary Study Area

Large-lot industrial uses line both sides of Gowanus Bay and Canal throughout the secondary study area southwest and northeast of the site. The area southeast of Third Avenue, in Park Slope, is almost exclusively residential with ground-floor commercial uses located on the avenues. The large Red Hook Houses complex is located west of Clinton Street, between Lorraine Street and West 9th Street, where it dominates the northwestern portion of the secondary study area. Vacant lots and large parkland areas surround the complex. A small portion of the large Carroll Gardens/South Brooklyn (Gowanus) neighborhood is included in the secondary study area northwest of the canal.

4.2.1.3 Zoning On and Near the Site

4.2.1.3.1 Zoning Within the Primary Study Area

The primary study area is zoned primarily for manufacturing: M3-1, M1-2 and M2-1 zoning districts are southeast of Gowanus Bay and Gowanus Canal and M3-1 and M1-1 districts are to the west. A small portion of the larger R5 residential zoning district in Red Hook is just beyond these manufacturing districts. (See Figure 4.2-3 and Table 3.4-1: Zoning District Characteristics.) A small portion of a larger R6 district lies east of Third Avenue.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 4.2-3 Zoning

Hamilton Avenue Converted MTS

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4.2.1.3.2 Zoning Within the Secondary Study Area

The majority of the secondary study area is zoned for manufacturing, although it includes portions of the residential zoning districts east of Third Avenue and west of the canal in Red Hook.

4.2.1.4 Plans and Policies

CD 6 covers most of the primary and secondary study areas east and north of Gowanus Bay and north of the Prospect Expressway, but not the site. The Fiscal Year (FY) 2004 CDNS for CD 6 reports the community's desire to study the economic development potential of the Gowanus Canal, such as through the development of maritime light manufacturing. The community overall also notes the need to expand enforcement of truck traffic regulations, especially in the Red Hook neighborhood.

CD 7 covers the site and the remainder of the study area. The FY 2004 CDNS for CD 7 does not make specific reference to recommended or anticipated physical development affecting the site or study area. Specifically regarding the site, the community mentions its desire for long-term export by barge or rail to replace the current truck-dependent waste handling. The CD Board also requests that comprehensive air quality studies be undertaken. The CDNS reports that 197-a planning efforts have been initiated to ensure intelligent community-based economic development planning for the waterfront.

The Red Hook 197-a Plan, which is relevant to the portion of the study area northwest of the bay, contains no recommendations for land immediately across the canal from the site or for land within view of the site. It does, however, recommend the general preservation and expansion of industrial and maritime uses present in the southeast section of Red Hook. Specifically, the plan suggests that the Red Hook Marine Terminal and the waterfront between Erie Basin and Gowanus Bay be preserved and strengthened.

The site is located within the northernmost portion of the Sunset Park sub-area according to the Plan for the Brooklyn Waterfront, within Reach 14, which stretches from Brooklyn's northernmost East River shoreline to about 65th Street on the southern end. The plan notes that

there is no natural waterfront of significance and, although it does recommend development of public access, such public access is not recommended for the industrial waterfront within the study area. The plan recommends that Erie Basin and Sunset Park be designated as Significant Maritime and Industrial Areas (SMIAs) to form the hub of Red Hook's working waterfront. Likewise, the plan specifically recommends investment in the infrastructure associated with the publicly owned land along the Gowanus Canal. (See Section 4.12 for a review of consistency with the Waterfront Revitalization Program [WRP].)

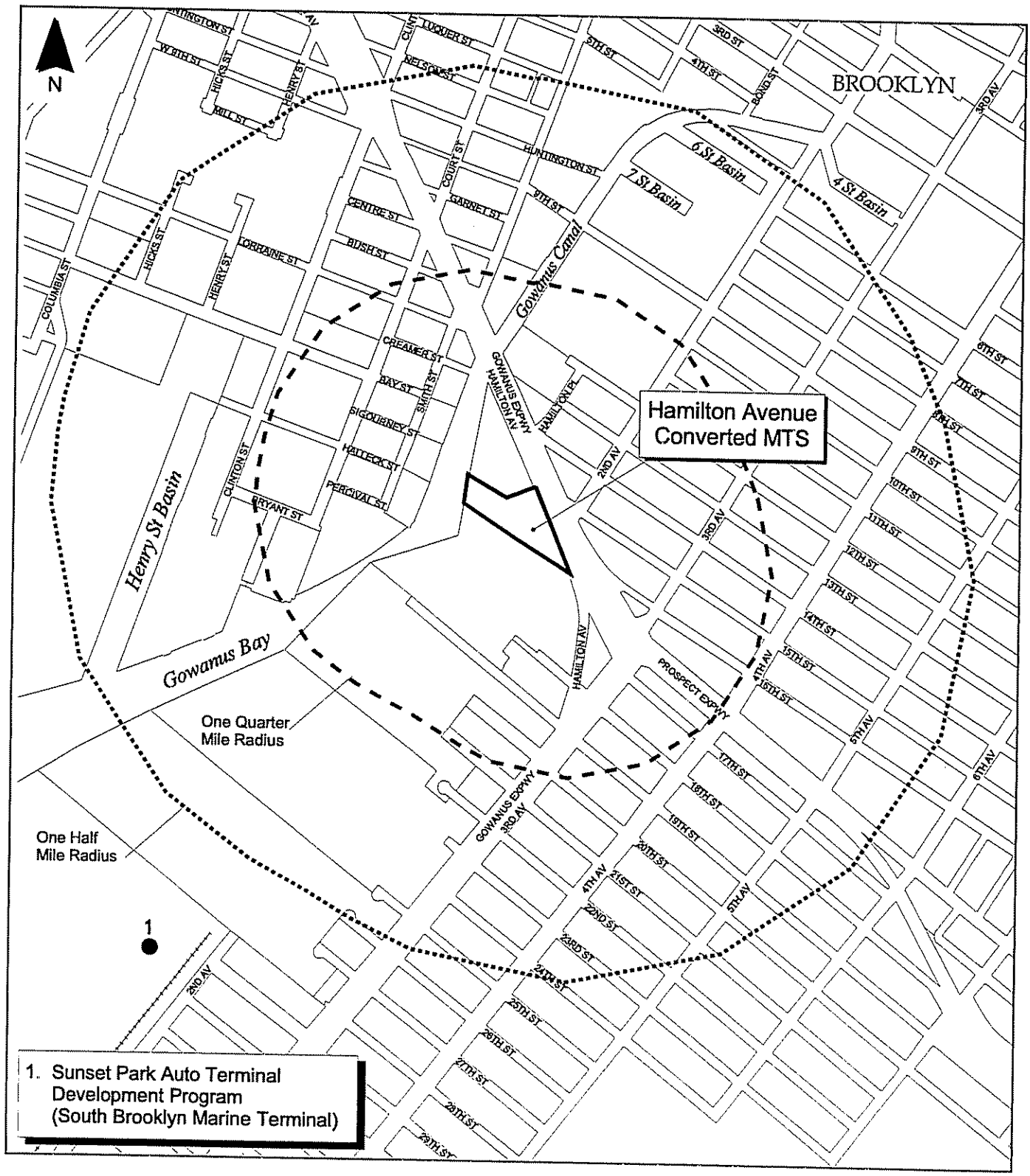
NYCEDC plans for development of the Sunset Park waterfront (29th Street to about 65th Street) south of the secondary study area are described in its Strategic Plan. This development would potentially include a new auto terminal at the South Brooklyn Marine Terminal (SBMT) and a 90-acre container port.

4.2.2 Future No-Build Conditions

The existing incinerators on the site will be demolished, though the existing MTS will remain, and the associated DSNY salt storage and parking area will continue to be fully utilized. It is reasonable to anticipate that the Future No-Build Conditions in the primary and secondary study areas will generally resemble Existing Conditions; although new development may be realized, it would not alter the land use of the study areas overall.

On April 30, 2003, the City Planning Commission adopted the Park Slope Rezoning Proposal that would increase the permitted density for residential development on Fourth Avenue to 6.02 (R8A) from 3.0 (R6 with Quality Housing on a wide street). In its environmental review, NYCDCP identified a number of development sites along the Fourth Avenue corridor, but its analysis showed that the most likely sites to be developed in the next 10 years would be north of the site, outside the secondary study area.

Additionally, an IKEA warehouse is proposed for a site at Columbia Street and Halleck Street, outside the secondary study area, north of Gowanus Canal in Red Hook. It would be 300,000 square feet with 1,400 parking spaces. This development would require a rezoning action, as well as various special permits and certifications through the ULURP process. Although IKEA has not yet filed for the ULURP action, NYCDCP reports that the proposed Build year is 2005 or 2006. Figure 4.2-4 shows the planned development sites.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 4.2-4 Planned Development Sites

Hamilton Avenue Converted MTS

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4.2.3 Potential Impacts with the Hamilton Avenue Converted MTS

4.2.3.1 Land Use and Zoning

The Hamilton Avenue Converted MTS would entail replacing the existing deactivated MTS with a similar new one that would feature containerization functions. The new facility would be situated further inland, partly within the eastern portion of the site where the incinerator, which will have been demolished, now stands. Delivered waste would be containerized for transport on barges to disposal sites out of the City – a change from the previous practice of loading loose waste onto larger barges for intra-harbor transport to the now-closed Fresh Kills Landfill. The reactivation of garbage handling at the site would not be likely to affect the surrounding land use or zoning patterns.

4.2.3.2 Consistency with Public Plans and Policies

There are no recommendations stated in relevant plans and policies that specifically relate to the site, study areas or proposed development, but the Hamilton Avenue Converted MTS would be consistent with the Red Hook 197-a Plan and the Plan for the Brooklyn Waterfront insofar as it would enhance existing public infrastructure and maritime industrial uses on the Gowanus Canal and Gowanus Bay.

4.3 Socioeconomic Conditions

4.3.1 Existing Conditions

4.3.1.1 Definition of the Study Areas

Two study areas were used for analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (See Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Census Tracts 18 and 117 (see Figure 4.3-1). Census Tract 18 covers industrial waterfront areas between Gowanus Bay and approximately 65th Street, approximately to the west of Second Avenue. Census Tract 117 covers an area of approximately one dozen blocks northeast of the Gowanus Expressway and south of 10th Street, between Second Avenue and Fourth Avenue. For comparison purposes, both 1990 and 2000 Census data were also gathered at the borough and City levels.

Detailed socioeconomic information referred to in the text but not presented in table format may be found in Appendix B.

4.3.1.2 Demographic Characteristics

4.3.1.2.1 Population

The total 2000 study area population was 4,328 persons (see Table 4.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a considerably greater percentage increase (88%) than did the borough (7%) or the City (9%) during the same period.

4.3.1.2.3 Families and Households

There were 591 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (58%) was larger than those families in Brooklyn with children under 18 (51%) and in the City (49%). There was a slightly smaller percentage of married-couple families in the study area (55%) than in the borough (59%) or the City (62%), and 56% of these families had children, greater than Brooklyn (50%) and the City (48%).

The proportion of families headed by a female householder was roughly the same in the three areas: 32% in the study area, 33% in the borough and 30% in the City. Of these, 60% had children under the age of 18, compared to 55% in the borough and the City.

There were 1,050 households in the study area in 2000, with an average household size of 2.8 persons, equivalent to Brooklyn and slightly greater than the City (2.6 persons).

From 1990 to 2000, the number of households in the study area increased by 32%, compared with a 6% increase in the borough and a 7% increase in the City.

4.3.1.2.4 Employment

Within the study area, 40% of people aged 16 and older participated in the labor force in 2000, compared to 55% in Brooklyn and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

There were proportionally fewer government workers in the study area – 12% of employed persons 16 years and over compared to Brooklyn (19%) and the City (16%). There were also fewer self-employed workers in the study area – 3% of the study area's working population as compared to 5% for the borough and 6% for the City.

From 1990 to 2000, the number of employed persons increased by 37% in the study area, while it decreased by 41% in the borough and remained the same in the City. Among employed persons, those engaged in government jobs decreased by 4% compared to a 14% decrease in the borough and a 10% decrease in the City.

Current forecasts indicate that about 88,754 employees worked in Brooklyn CDs 6 and 7 in 2005.[1]

4.3.1.2.5 Housing

Most of the housing units in the three areas were constructed before 1960. As of 2000, there were 1,129 housing units in the study area with a vacancy rate of about 8%, greater than either the borough (5%) or the City (6%). Most of the housing units were renter-occupied (71%), slightly more than the borough (69%) or the City (66%). Median monthly rent ($755) was higher than in the borough ($672) and the City ($705). The 2000 median value of housing units in the study area ($173,300) was lower than in Brooklyn ($224,100) or the City ($211,900). In the study area, housing values increased by 23%, compared to increases of 15% and 13% in Brooklyn and the City.

The turnover in the study area (52%) from 1995 until 2000 was greater than that of the borough and the City (both 43%).

From 1990 to 2000, a total of 180 housing units were added in the study area, representing a 19% increase, markedly greater than the borough and the City (both 7%).

4.3.1.2.6 Education

Consistent with the lower number of children in the area, there was a lower rate of school enrollment (22%) than in either the borough (31%) or the City (29%). Of those enrolled in school within the study area in 2000, 60% were enrolled in elementary school or high school and

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

31% were enrolled in college or beyond. In Brooklyn, 64% were enrolled in elementary school or high school and 24% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

The study area witnessed a 14% increase in the number of persons enrolled in school from 1990 to 2000, equal to the borough and close to the City's (18%) growth.

The study area had a far lower educational attainment level than either the borough or the City. A smaller proportion (34%) of the study area population aged 25 and over had a college degree or some college education, compared to Brooklyn (42%) and the City (48%). The study area had a similar percentage of people with only high school diplomas (27%) compared to the borough (27%), but slightly greater than that of the City (24%).

The study area witnessed rising numbers of educational attainment from years 1990 to 2000. The number of college graduates increased 95%, and the same trend was evident in the borough and the City, which experienced increases of 41% and 29%, respectively.

4.3.1.2.7 Income and Poverty

In 2000, the median household income ($30,833) and median family income ($33,233) were lower than in Brooklyn ($32,135 and $36,188, respectively) and the City ($38,293 and $41,887, respectively). Compared to the larger two areas, a greater percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes (57%) below $35,000. Thirty percent of households in the study area had incomes of $50,000 and above, compared with 33% in the borough and 40% in the City.

Within the study area, the percentage of families living below the poverty level (24%) was slightly more than that of Brooklyn (22%) and the City (19%). The percentage of families that have children under 18 living below the poverty level (34%) was greater than the percentages in Brooklyn (29%) or the City (26%).

The same percentage of persons in the study area and Brooklyn under the age of 18 were living below the poverty level in 2000 (34%), which was slightly more than the City (30%). The 2000 Census also reported that 33% of persons 65 and older were living below the poverty level in the study area, compared to 22% in the borough and 18% in the City.

Between 1990 and 2000, the percentage of people living below the poverty level grew 53% in the study area, far higher than in the borough (19%) or the City (20%).

4.3.1.3 Economic Conditions

The study area contains a number of industrial and municipal activities on the southeastern side of Gowanus Bay in Brooklyn. The site is bordered by an NYCDOT asphalt plant and storage yard, a Home Depot store and parking lot/garage and major transportation infrastructure elements. Southwest of the site, just beyond the Home Depot store on 19th Street, is the Sunset Industrial Park, surrounded by large-lot loft factory buildings, with smaller warehouses lining the northwestern side of Third Avenue/Gowanus Expressway. Automotive services and warehouses are located north and east of the site. Hess Industries tanks are on the west side of the bay in Red Hook.

Portions of the study area fall within the City's Southwest Brooklyn Economic Development Zone (EDZ). The EDZ program was created to stimulate economic activity in distressed areas. It encourages business development through targeted incentives and benefits to new and expanding commercial and industrial firms.

State benefits are available through wage tax credits, investment tax credits, sales tax refunds (building/construction costs) and financial assistance. Utility discounts and free security surveys are also provided to relocating or expanding businesses.

4.3.2 Future No-Build Conditions

4.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CDs 6 and 7 will remain about the same as current conditions.[2]

4.3.2.2 Economic Conditions

Improvements are planned for industrial and port facilities in Sunset Park and other City ports as part of the NYCEDC's Strategic Plan. In the near term, and potentially before 2006, an auto terminal is proposed at the South Brooklyn Marine Terminal about ½-mile from the site, at its closest. A subsequent phase of development at that property would include a 90-acre container terminal as part of the overall NYCEDC Sunset Park Development Program. The terminal would increase the area's job base and bring additional economic activity to the area. Other transportation and infrastructure improvements in the Sunset Park environs that are expected to occur within the next several years, such as increased rail access and float bridge improvements, will make the area more viable for industrial- and distribution-related firms.

Regional projections indicate that employment in Brooklyn CDs 6 and 7 will remain about the same as current conditions.[3]

The near-term economic health of industrial areas such as the study area may be supported by established City programs that are available through the Industrial Development Agency (IDA). These programs, such as the Industrial Incentive Program and the Small Industry Incentive Program, provide business tax incentives for capital renovation and expansion projects.

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[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.
[3] Ibid.

4.3.3 Potential Impacts with the Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS represents reactivation of solid waste transfer operations on the site with added containerization functions. Therefore, it would not result in socioeconomic changes in the study area. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

4.3.3.1 Residential Impacts

No direct or indirect displacement of residential uses would occur as a result of the Hamilton Avenue Converted MTS and land use and neighborhood character analyses predict no adverse impacts.

4.3.3.2 Direct Business and Institutional Impacts

No direct displacement of businesses or institutional uses is expected to occur as a result of the Hamilton Avenue Converted MTS.

4.3.3.3 Indirect Business and Institutional Impacts

The Hamilton Avenue Converted MTS would not affect the adjacent and nearby businesses, which are industrial uses congruent with MTS operations and added containerization activities.

4.3.3.4 Employment Impacts

The Hamilton Avenue Converted MTS is expected to generate approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

4.4 Community Facilities and Services

4.4.1 Existing Conditions

4.4.1.1 Definition of the Study Areas

The primary study area is defined as that area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile from the site.

4.4.1.2 Summary of Community Facilities and Services

Three community facilities are located within the primary study area and 13 within the secondary study area, which includes portions of the Red Hook, Carroll Gardens and Park Slope neighborhoods. Community facilities serving the area are listed in Table 4.4-1 and shown on Figure 4.4-1.

4.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity and adequacy of delivery.

4.4.3 Potential Impacts with the Hamilton Avenue Converted MTS

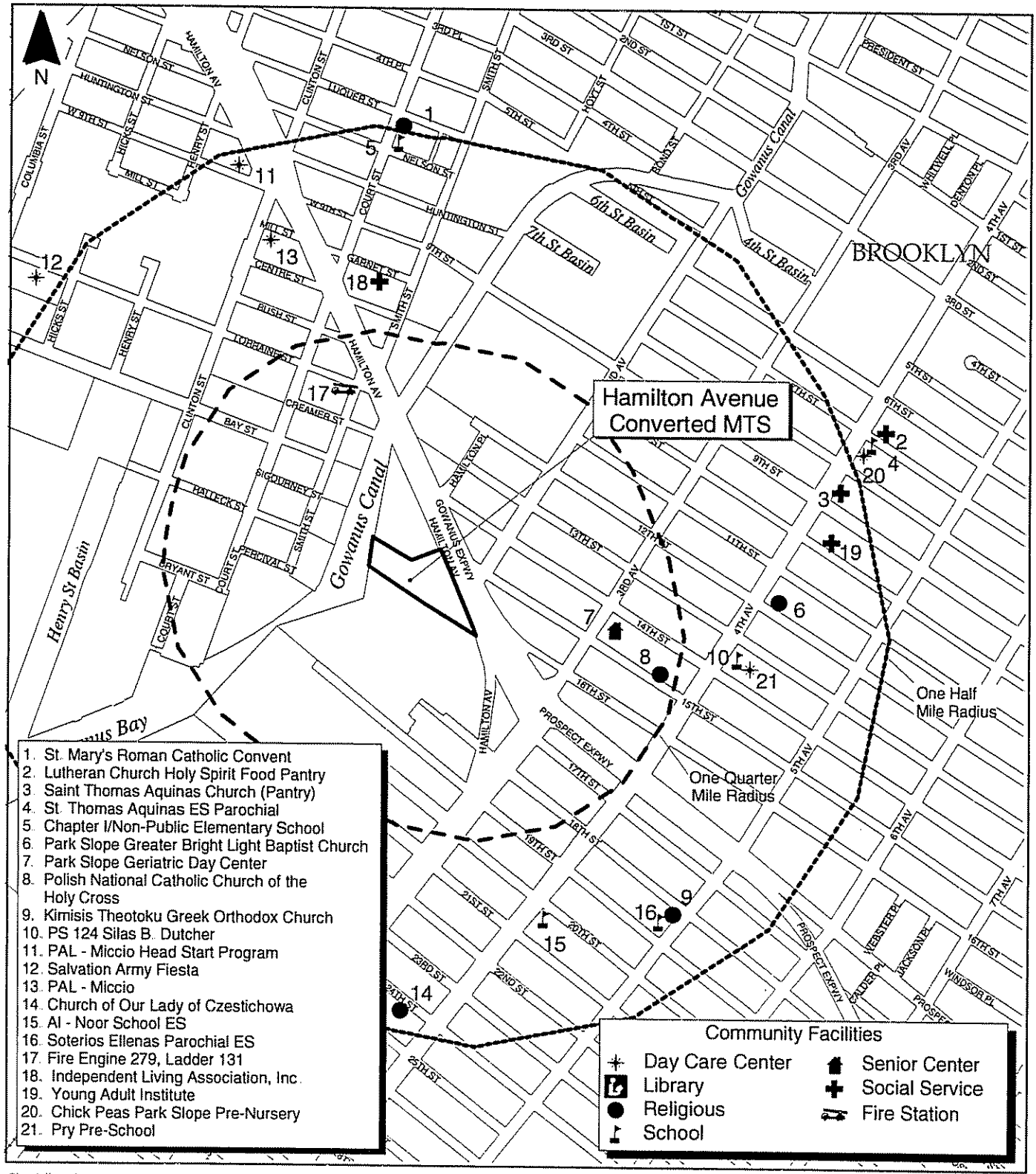
The Hamilton Avenue Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the Hamilton Avenue Converted MTS (see Appendix A).

Table 4.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Fire	
Engine 279, Ladder 131	252 Lorraine Street
Religious and Cultural Institutions	
Polish National Catholic Church of the Holy Cross	159 15th Street
Senior Centers	
Park Slope Geriatric Day Center	199 14th Street
Within the Secondary Study Area	
Schools	
P.S. 124 Silas B. Dutcher	515 Fourth Avenue
Al-Noor School	675 Fourth Avenue
Soterios Ellenas Parochial School	224 18th Street
Chapter I/Non-Public Elementary School	Nelson Street & Court Street
Day Care Centers	
Pry Pre-School	199 14th Street
PAL-Miccio	595 Clinton Street
PAL-Miccio Head Start Program	120 West 9th Street
Social Services	
Independent Living Association, Inc.	40 Garnet Street
Lutheran Church Holy Spirit Food Pantry	267 7th Street
St. Thomas Aquinas Church (pantry)	9th Street and Fourth Avenue
Religious and Cultural Institutions	
Church of Our Lady of Czestochowa	183 25th Street
Kimisis Theotokou Greek Orthodox Church	224 18th Street
Park Slope Greater Bright Light Baptist Church	251 12th Street

Table 4.4-1 (continued)
Community Facilities and Services

Name	Address
Outside the Secondary Study Area	
Day Care Centers	
Chickpeas Park Slope Pre-Nursery	211 8th Street
Salvation Army Fiesta	80 Lorraine Street
Schools	
St. Thomas Aquinas Parochial ES	211 Eighth Street
Hospitals	
Long Island College Hospital	340 Henry Street
New York – Methodist Hospital	506 6th Street
Social Services	
Lutheran Church Holy Spirit Food Pantry	267 7th Street
Religious and Cultural Institutions	
St. Mary's Roman Catholic Church	467 Court Street
Police	
72nd Precinct	830 Fourth Avenue
76th Precinct	191 Union Street
78th Precinct	65 Sixth Avenue
Fire	
1st Engine Company – Engine Company 202 and 1st Ladder Company – Ladder Company 101	31 Richards Street
2nd Engine Company – Engine Company 204 and 2nd Ladder Company – Ladder Company 131	299 Degraw Street



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations, and hospitals outside the secondary study area may not be shown on the figure.

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Figure 4.4-1 Community Facilities and Services

Hamilton Avenue Converted MTS

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4.5 Open Space

4.5.1 Existing Conditions

4.5.1.1 Definition of the Study Area

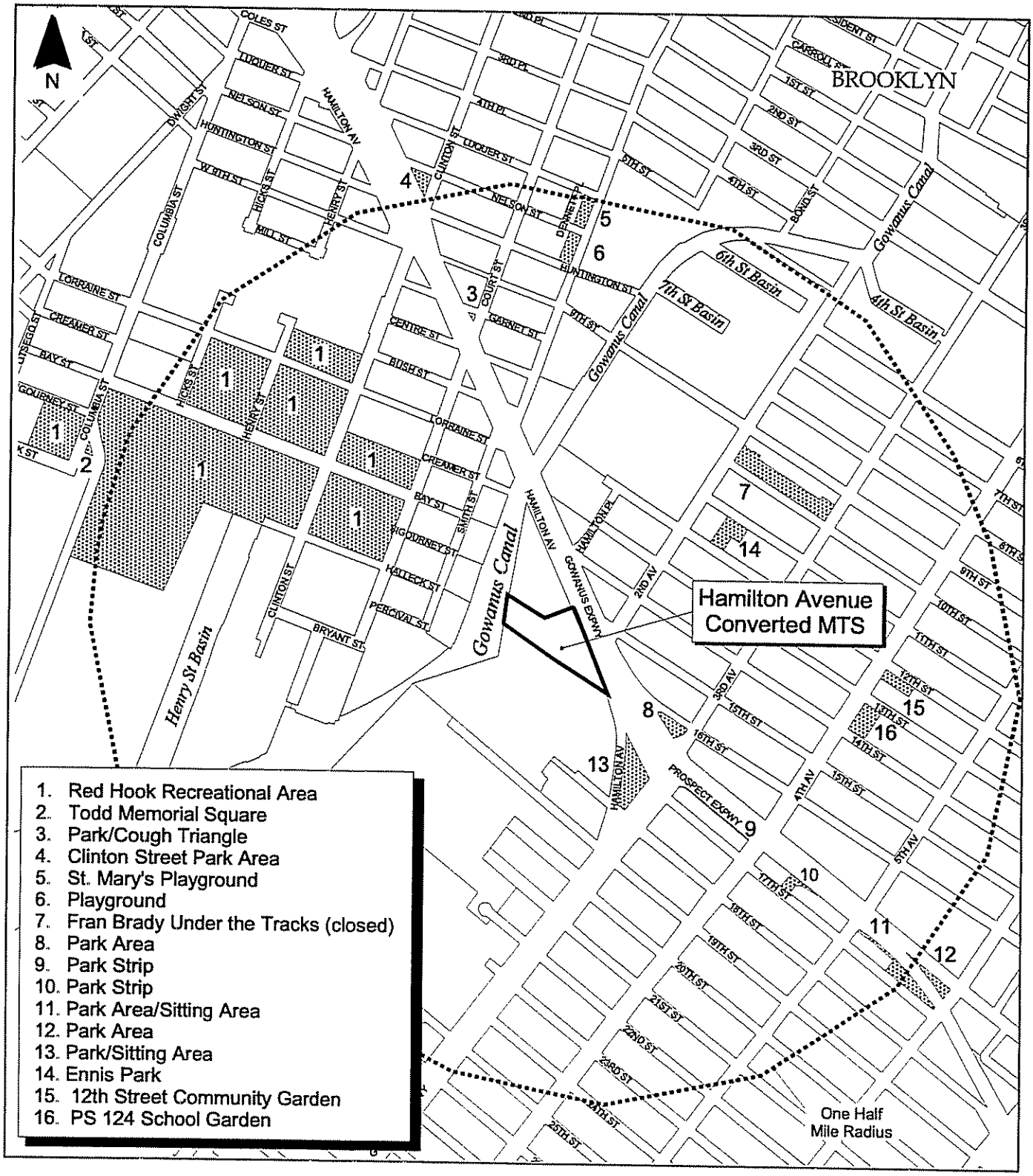
The study area for open space is the area within ½-mile of the site.

4.5.1.2 Summary of Open Space in the Study Area

There are 14 public parks and open spaces within the study area, including one large regional facility. They are listed below in Table 4.5-1 and shown on Figure 4.5-1.

Table 4.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Red Hook Recreational Area	Between Columbia Street, Bay Street, Hicks Street, Lorraine Street, Court Street and Halleck Street	58.5
Todd Memorial Square	Intersection of Columbia and Halleck Streets	0.1
Park/Cough Triangle	Hamilton Avenue, Court Street and Garnett Street	0.1
Clinton Street Park Area	Clinton Street, Hamilton Avenue and Nelson Street	0.4
St. Mary's Playground	Smith Street between Luquer Street and Nelson Street	0.3
Playground	Smith Street between Nelson Street and Huntington Street	0.4
Fran Brady Under the Tracks Playground	10th Street between Second Avenue and Third Avenue	1.8
Park Area	Hamilton Avenue, 16th Street and Third Avenue	0.3
Park Strip	South side of Prospect Expressway between Third Avenue and Fourth Avenue	0.1
Park Strip	South side of Prospect Expressway between Fourth Avenue and Fifth Avenue	0.2
Park Area (Sitting Area)	South side of Prospect Expressway between Fifth Avenue, Sixth Avenue and 17th Street	0.7
Park Area	North side of Prospect Expressway west of Sixth Avenue at Prospect Avenue	0.3
Park (Sitting Area)	Hamilton Avenue, Third Avenue and 18th Street	1.1
Ennis Park	11th Street to 12th Street between Second Avenue and Third Avenue	0.6
12th Street Community Garden	12th Street and Fourth Avenue	--
P.S. 124 School Garden	Fourth Avenue between 13th and 14th Streets	--



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.5-1 Open Space/Parkland
Hamilton Avenue Converted MTS

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4.5.2 Future No-Build Conditions

NYCDPR has no long-term development plans or notable development projects associated with the open spaces in the study area. Currently, there is no ongoing work at these facilities nor capital funding allocated to them.

Since the publication of the DEIS, the Brooklyn Greenway Initiative (BGI) and the Regional Plan Association (RPA) have published the "Brooklyn Waterfront Greenway: A Plan for Community Boards 2 and 6 (DRAFT)," February 2005. In addition to proposing planning principles and guidelines, the draft plan also delineates a route for the greenway extending along the waterfront of the two Community Districts. West of the Hamilton Avenue site, the proposed route runs along the Red Hook waterfront northwest of the Gowanus Canal. A primary access point is designated at Smith Street and Hamilton Avenue, which is 1,000 feet north of the site on the opposite side of the canal. East of the site, the route would run inland to the south along Hamilton Avenue.

The report does not identify when the greenway might be in place; however, an interim greenway may be implemented in 2005 at the discretion of NYCODT and NYCDPR. As noted in the draft plan , the Brooklyn Waterfront has historically been a place of maritime and industrial uses, and the greenway would provide New Yorkers an opportunity to gain access to the working waterfront.

4.5.3 Potential Impacts with the Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS would have no effect on any open space resources within the study area, nor would it physically change, diminish or eliminate any open space or reduce its use or aesthetic value, nor would it introduce a substantial new user population that might create or exacerbate over-utilization of open space resources.

Adverse environmental impacts to the interim greenway as a result of the Hamilton Avenue Converted MTS (analyzed in this FEIS) are unlikely, since traffic, air, odor, and noise studies predicted no significant adverse impacts associated at the site boundary or on the streets surrounding the proposed facility.

4.6 Cultural Resources

4.6.1 Existing Conditions

4.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site.

4.6.1.2 Development History of the Area

The Gowanus Canal is an artificial waterway that lies to the northeast of the site and extends from Hamilton Avenue to Douglass Street. In the 1840s, the natural canal was enlarged by Edwin C. Litchfield, a prominent Brooklyn landowner, who transformed it into an industrial watercourse 5,700 feet long, 100 feet wide and up to 15 feet deep.

The land along the Gowanus Canal soon developed with heavy industries such as coal, lumber, brick and stone yards; paint and ink factories; foundries; electroplating shops; flour, plaster and paper mills; and an early purveyor of household heating and cooking gas. As a result of these noxious industries and disposal practices, the canal became one of the City's most polluted waterways, and earned the moniker "Lavender Lake."

By the late 1800s, the immediate neighborhood had earned a reputation for rowdiness and was nicknamed the Gashouse District. One 12-block section of Smith Street had 23 taverns and many rooming houses that catered to seamen and laborers.

Industrial activity along the canal declined in the early 1960s with the move toward containerized shipping elsewhere in the New York Harbor. The canal continues to be an industrial venue lined with stone, gravel and concrete yards, some foundries, and outdoor-loading petroleum facilities.

The elevated Gowanus Expressway and Prospect Expressway, built in the 1950s, serve to physically separate the site from its surrounding inland context of Red Hook to the northwest, Carroll Gardens to the north and Park Slope to the southeast.

4.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

4.6.1.4 Historic Resources Within the Study Area

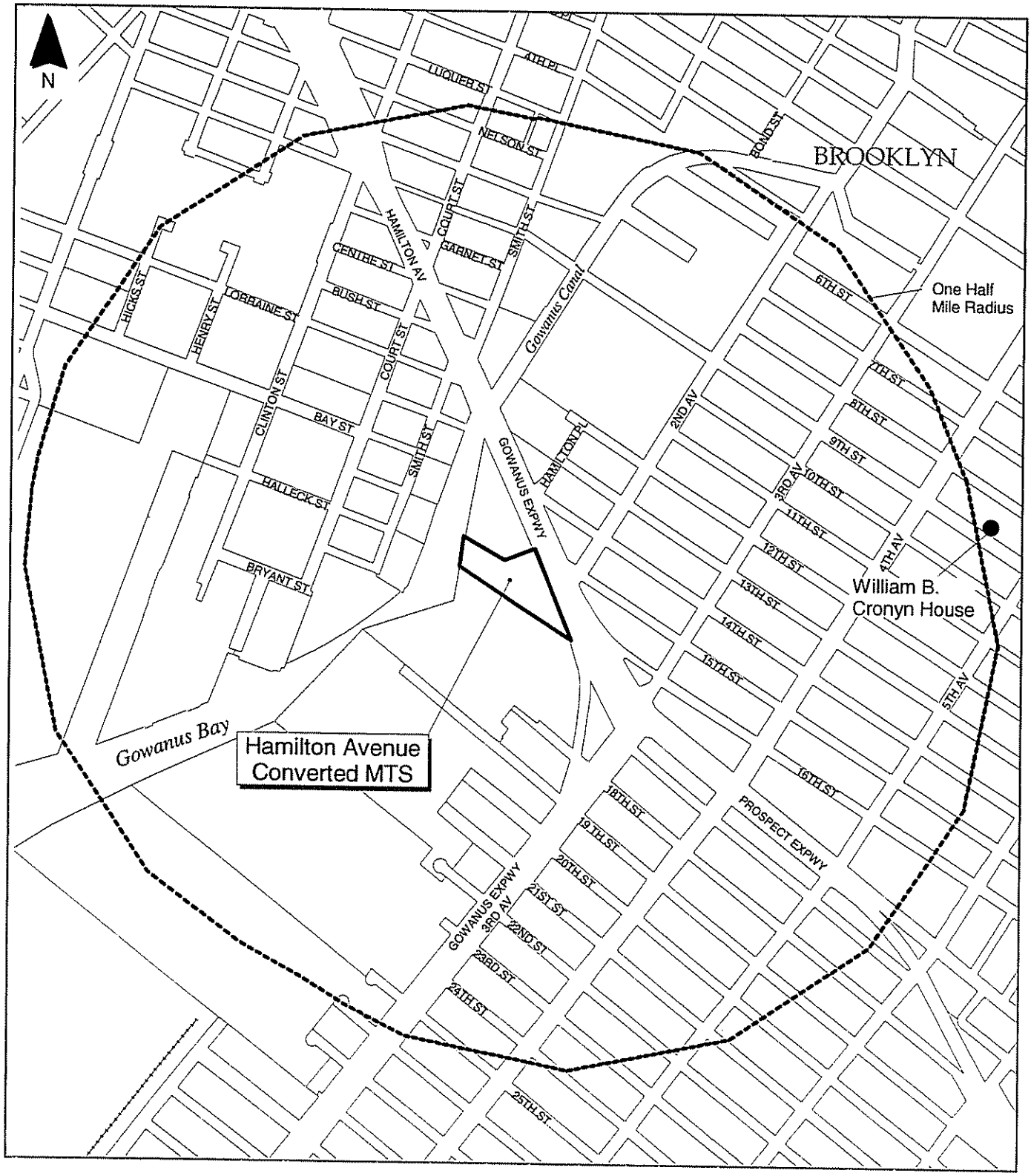
There are no state-, national- or City-designated landmarks or historic districts within ½-mile of the site, although the City-landmarked William B. Cronyn House at 271 9th Street is just outside the study area (see Figure 4.6-1).

4.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review. Therefore, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

4.6.3 Potential Impacts with the Hamilton Avenue Converted MTS

As there are no existing or eligible resources on the site or in the study area, the Hamilton Avenue Converted MTS would have no effect on any cultural resources. Based upon its review, SHPO has confirmed that the Hamilton Avenue Converted MTS would have no impact upon cultural resources in, or eligible for inclusion in, the SRHP and NR. The LPC has stated that the site contains no architectural or archaeological significance (see Appendix A).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.6-1 Cultural Resources

Hamilton Avenue Converted MTS

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4.7 Urban Design, Visual Resources, and Shadows

4.7.1 Existing Conditions

4.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 4.8-1). The site has been developed in a manner consistent with adjacent properties and the overall study area. It is a non-sensitive industrial area in terms of urban design and visual quality assessment. There are no sensitive view corridors or publicly accessible open areas or points of waterfront access that would likely experience visual quality impacts from the Hamilton Avenue Converted MTS.

4.7.1.2 Description of the Site

The existing MTS and associated DSNY structures dominate the site (see Figure 4.7-1). The permanently closed incinerator, which stands on the site between Hamilton Avenue and the curved existing MTS ramp at Prospect Avenue, is the most visible on-site structure (see Figure 4.7-2). It largely blocks the existing MTS from inland views. The incinerator is comprised of a five-story square building and two cylindrical incinerator stacks that rise to approximately 200 feet, more than twice the height of the main building, and taper toward the top. There is an outdoor salt storage area adjacent to the incinerator on Hamilton Avenue (see Figure 4.7-3), and the area between the incinerator and the existing MTS is used for employee parking and DSNY truck storage. The site, like its surroundings, which include elevated highway infrastructure, is paved and has no on-site landscaping or vegetation other than minimal growth of opportunistic plant species (see Figure 4.7-4). Also visible from the interior of the site is the NYCDOT asphalt production plant, north of the site along Hamilton Avenue (see Figure 4.7-5).



Figure 4.7-1 : View of the site interior, facing east from the Home Depot parking lot.



Figure 4.7-2: View of incinerator, facing southeast from the Home Depot parking lot.

Figure 4.7-1 and 4.7-2
Urban Design and Visual Quality
Hamilton Avenue Converted MTS

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Figure 4.7-3 : View of the southern most portion of the site (salt storage area). (Photo 2000)



Figure 4.7-4 : View southward along Hamilton Avenue (and beneath the elevated Gowanus Expressway), adjacent to the site. (Photo 2000)

Figure 4.7-3 and 4.7-4
Urban Design and Visual Quality
Hamilton Avenue Converted MTS

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Figure 4.7-5 : View of DOT property, looking northward from interior of the site.
(Photo 2000)

Figure 4.7-5 Urban Design and Visual Quality

Hamilton Avenue Converted MTS

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4.7.1.3 Urban Design and Visual Resources of the Study Area

There are no publicly accessible views through the site to the Gowanus Bay. Views from around the intersection of Hamilton and Prospect Avenues terminate at the incinerator, which blocks from sight the existing MTS, the fuel storage tanks west of the site along the shore and the hulking Port Authority Grain Terminal (also to the northwest of the site).

The only publicly accessible views of the bay or into the site are from the two-story Home Depot parking lot.

4.7.2 Future No-Build Conditions

Although the on-site incinerator will be demolished, there are no plans for the site or surrounding environs that would lead to changes in urban design or visual quality conditions. The site will remain DSNY property, the existing MTS will remain and the associated DSNY salt storage and garage facilities will continue to operate. The anticipated Future No-Build Conditions are fundamentally the same as Existing Conditions.

4.7.3 Potential Impacts with the Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS would be compatible with the existing urban design context and visual conditions of this portion of the industrial Gowanus Bay waterfront. It would entail removing the existing MTS and replacing it with a similar, though larger, facility further upland that would include containerization functions. The Hamilton Avenue Converted MTS, therefore, would not result in significant adverse impacts on the urban design and visual quality of the study area.

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

A survey was conducted within this 430-foot area and found that there were no parks, publicly accessible open spaces, historic resources or important natural features; therefore, no assessment of shadows was deemed necessary and no shadow impact is expected as a result of the proposed project.

4.8 Neighborhood Character

4.8.1 Existing Conditions

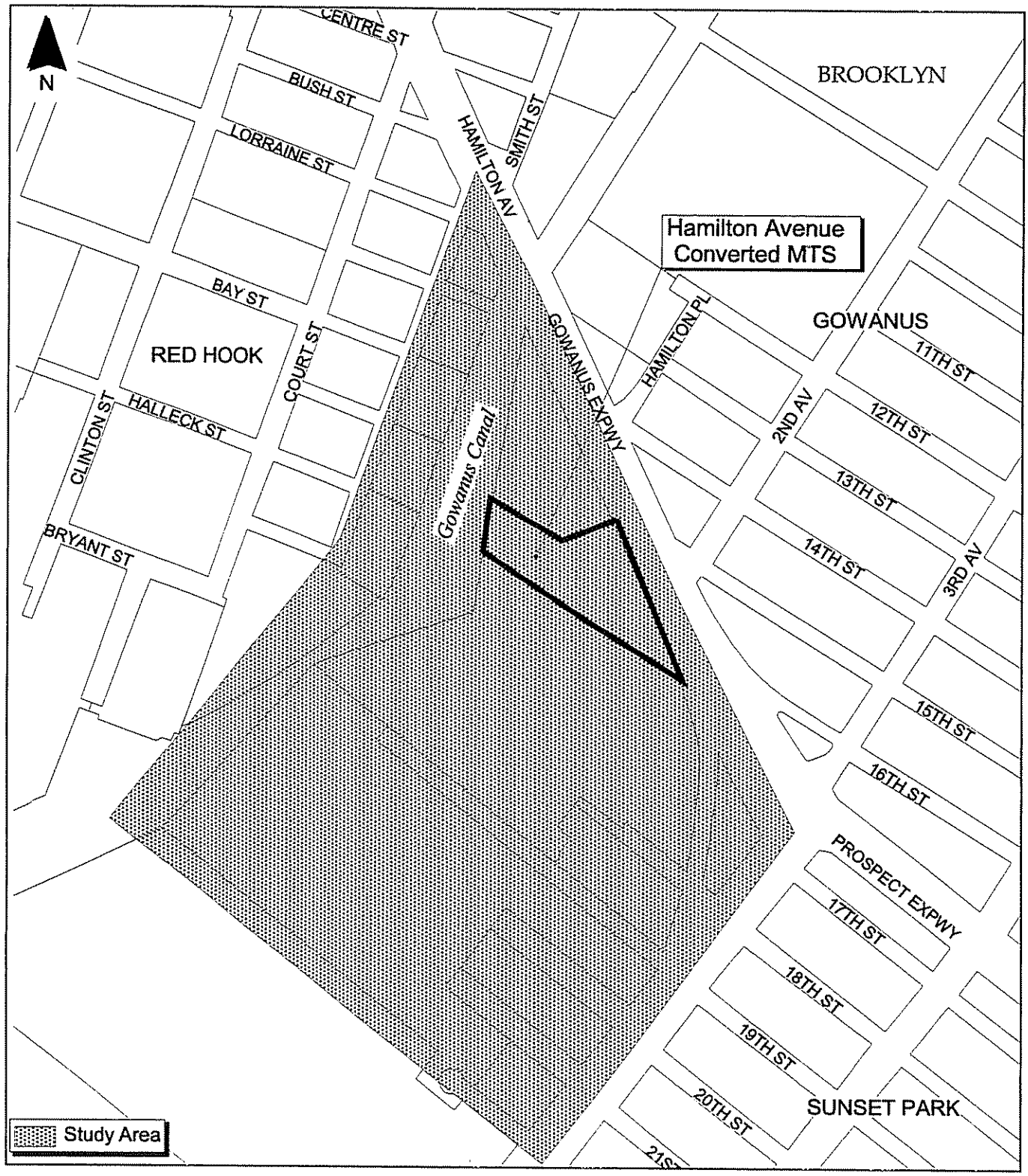
4.8.1.1 Definition of the Study Area

The neighborhood character study area is defined by the predominance of industrial land uses and associated visual quality of the Gowanus Bay. The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas.

The study area is bounded by the Gowanus Expressway (and Hamilton Avenue) and Third Avenue to the north, east and southeast; 22nd Street (extended west across Gowanus Bay) to the south and southwest; and Smith Street to the west on the opposite side of the canal. Although the bay clearly is a physical barrier limiting access to the site from the west, this portion of the Gowanus Bay waterfront is included in the study area because it mirrors the industrial character of the study area east of the bay and is connected with it visually. While the land uses and visual quality along most of Gowanus Bay and Gowanus Canal extending beyond the study area are similar to those within the study area, Hamilton Avenue – the first major arterial roadway that crosses the canal north of the site – effectively defines the northern end of the study area (see Figure 4.8-1).

4.8.1.2 Description of Neighborhood Character

The study area is characterized by warehouses, large-scale, industrial uses on large lots and noisy, truck-dominated streets in a neighborhood named for the canal – Gowanus or South Brooklyn. The site, the adjacent NYCDOT asphalt plant and the adjacent Home Depot store are of a larger scale than any of the uses located east of the expressway. Hamilton Avenue and the elevated Gowanus Expressway separate the industrial and commercial uses along the Gowanus Bay from the mixed industrial, commercial and residential uses to the east, outside the study area.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR URBITRAN EEA Cambridge Environmental Inc Hydroqual PB

Figure 4.8-1 Neighborhood Location

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The streets are not well suited to pedestrians, although there are sidewalks along Hamilton Avenue near the site. Except for the Gowanus Expressway and major streets such as Hamilton and Prospect Avenues, local roads are used almost exclusively by trucks and area employees accessing the warehouses along the avenues or other industries that line the waterfront.

4.8.2 Future No-Build Conditions

While the on-site incinerator will be demolished by 2006, there are no known plans for development on the site or in the study area that would potentially lead to changes in neighborhood character. The site will remain DSNY property, the existing MTS will remain and the associated DSNY salt storage and parking facilities will continue to be fully utilized. The Future No-Build Conditions are expected, therefore, to be the same as Existing Conditions.

4.8.3 Potential Impacts with the Hamilton Avenue Converted MTS

No change to industrial neighborhood character would be expected, though the Hamilton Avenue Converted MTS would reactivate MTS activities formerly accommodated on the site and add containerization functions. Since the character of the neighborhood will not have changed substantially under Future No-Build Conditions, it is reasonable to conclude that the reactivation of a similar facility on this site but with containerization would result in no significant adverse effect to neighborhood character.

4.9 Natural Resources

4.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the Hamilton Avenue Converted MTS.

4.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bounded by the Gowanus Canal to the north (see Figure 2.2.1-1). The upland portions of the site and the surrounding neighborhood parcels are fully developed and contain very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of aquatic communities is included.

4.9.1.2 Geology

According to borings performed for the MTS Conversion Conceptual Design Report (2003), multiple strata of sediment are located beneath the Hamilton Avenue MTS. The first layer, the surficial stratum, ranged in thickness from 10 to 25 feet and consisted of loose fill material comprised of concrete, brick, glass, asphalt mixed with sand and gravel, and materials such as cinders, wood and vegetation.

A 10- to 20-foot-thick stratum of soft, black to gray organic soil with loose, gray silty sand and loose gray, poorly graded sand with silt underlaid the fill. Shells and vegetation were also encountered in this layer. In addition, a one- to four-foot-thick layer of dark brown to black peat was located in this layer.

A stratum of stiff, gray silt with sand approximately 2 to 14 feet thick was located beneath most of the organic soil. A dense, red brown poorly to well-graded sand with silt stratum 20 to 30 feet thick with occasional gravel layers was located beneath the silt with sand stratum.

A second stratum of silt was located beneath the sand with silt stratum. This silt stratum consisted of stiff to very stiff gray silt sand layered with stiff, gray lean clay. It ranged in thickness from 4 to 20 feet.

The deepest stratum encountered was a very dense, red brown poorly to well-graded sand with silt layer with occasional layers of gravel. The thickness of the stratum was undetermined.

Results of the sediment samples collected for analysis in 2003 show that surficial sediment is characterized as 73.5% silt and clay, 16.6% sand and 10% gravel.[4] The sediment has 103,769 milligrams per kilogram (mg/kg) of total organic carbon (TOC) and is somewhat degraded by contaminants. The metals with the highest concentrations in the sediment were lead (161.85 mg/kg), barium (102.46 mg/kg) and chromium (63.77 mg/kg).

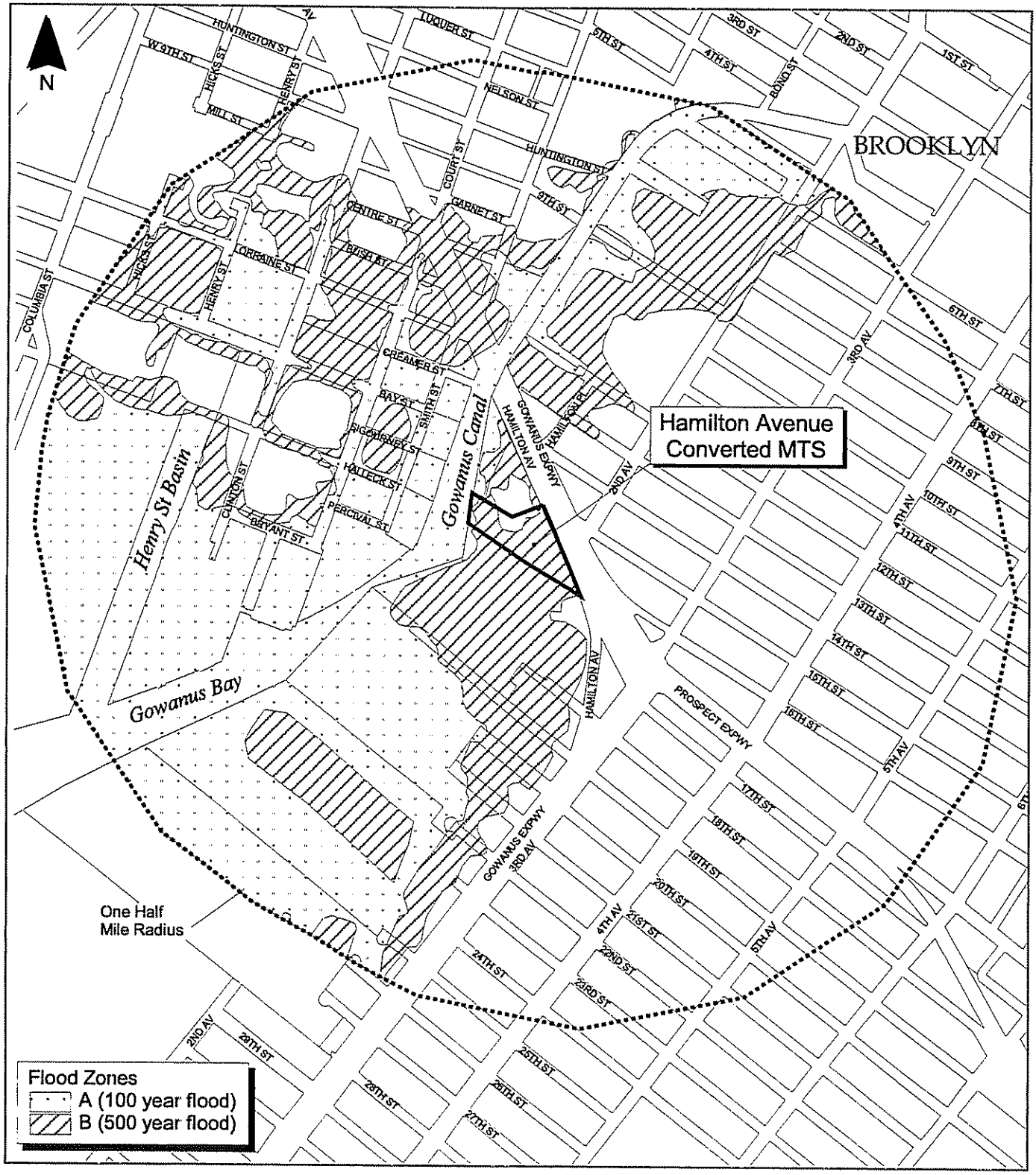
4.9.1.3 Floodplains

The site is constructed within the 100 to 500 year coastal floodplain (see Figure 4.9-1). No intertidal wetlands exist on the site. Gowanus Canal, which is a NYSDEC-designated littoral zone, is a part of the study area (see Figure 4.9-2).

4.9.1.4 Ecosystems

Vegetative cover on the site was confined to the outer edges of the upland portions between the existing MTS and the fence, and around the outer edges of the incinerator building. The vegetative cover was too sparse in these areas to be mapped. Various opportunistic plant species are present on the site, including mugwort (*Artemesia vulgaris*), Queen Anne's lace (*Daucus carota*), poor-man's pepper (*Lepidium virginicum*), seaside goldenrod (*Solidago semper virens*),

[4] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

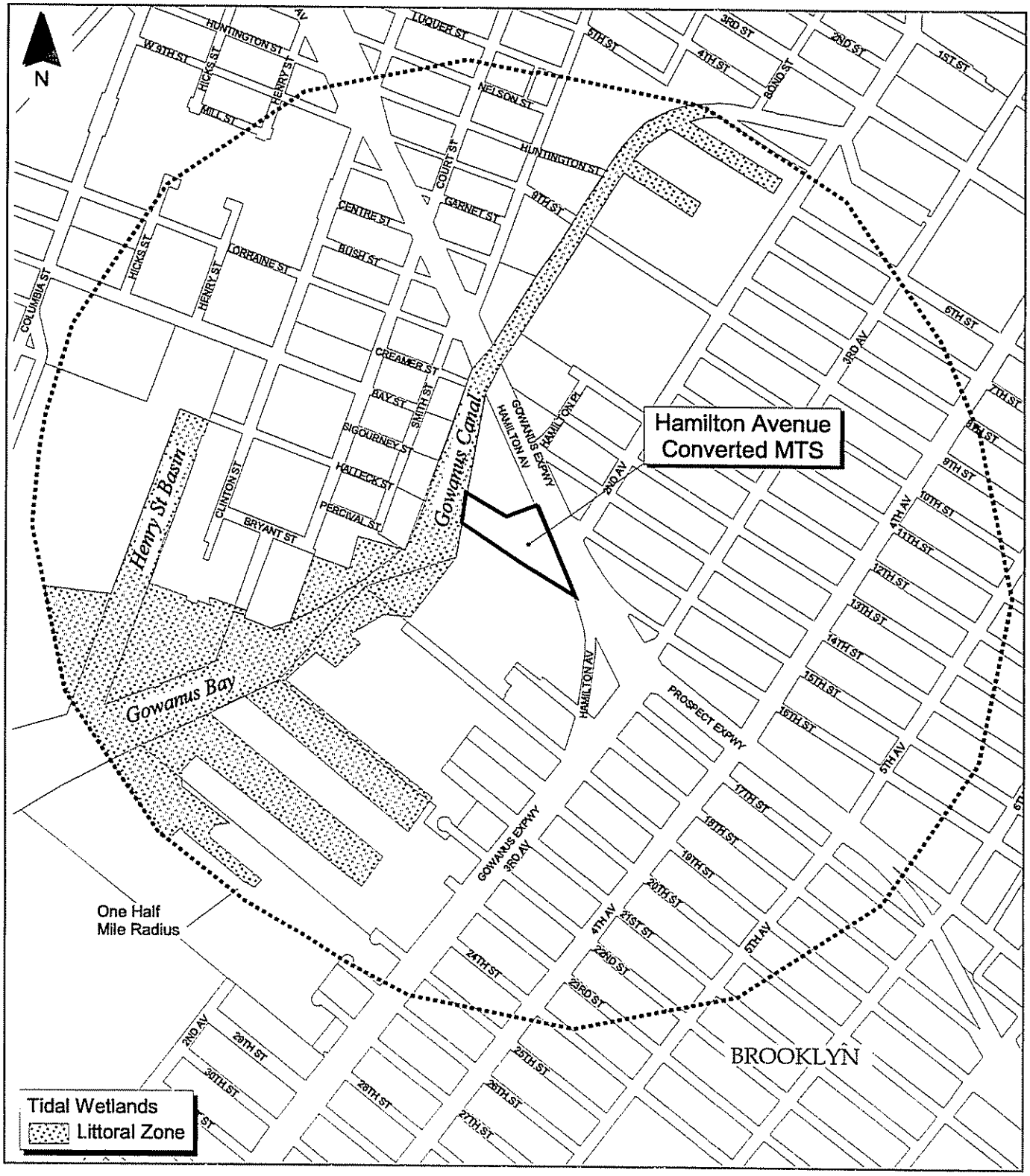
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PB

Figure 4.9-1 Floodplains

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 4.9-2 Wetlands

Hamilton Avenue Converted MTS

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green foxtail (*Setaria viridis*), common reed (*Phragmites australis*), pokeweed (*Phytolacca americana*) and poison ivy (*Rhus radicans*). Saplings of tree-of-heaven (*Ailanthus altissima*) were observed in the vicinity of the ramp to the existing MTS and along the outside of the incinerator building. The NYSDEC NHP does not list any rare or endangered plant species as being present in the study area.

A field program conducted in 2003 was designed to fully characterize the marine biological resources of the study area. The program included monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for benthic organisms and sessile colonizing organisms. Results of the program are discussed in the following paragraphs.

Water and sediment quality were poor at the Hamilton Avenue Converted MTS. There were visible oil slicks and floating debris, and dissolved oxygen concentrations were very low in the summer. The densities of finfish eggs and larvae were lowest at the Hamilton Avenue Converted MTS compared to all other MTS sampled, presumably due to decreased survival as a result of the poor water quality. The benthic communities were also indicative of a stressed environment.[5]

Dominant finfish eggs collected at the Hamilton Avenue Converted MTS were cunner (*Tautogolabrus adspersus*), bay anchovy (*Anchoa mitchilli*), tautog (*Tautoga onitis*) and Atlantic menhaden (*Brevoortia tyrannus*). Dominant finfish larvae were winter flounder (*Pleuronectes americanus*), anchovy spp., Atlantic menhaden and goby spp. (*Gobiosoma* spp.). Three species identified as having Essential Fish Habitat (EFH) in the region were collected from the Hamilton Avenue Converted MTS. Eggs of windowpane (*Scophthalmus aquosus*) and larvae of winter flounder, windowpane and Atlantic herring (*Clupea harengus*) were found in the water surrounding this MTS.

The dominant benthic invertebrates collected at the Hamilton Avenue Converted MTS were pollution tolerant worms. The most abundant species collected was *Capitella capitata*, followed by *Streblospio benedicti* and oligochaetes. A Jaccard's Index[6] indicates that this MTS has fewer

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[5] Ibid.

[6] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs. The index

benthic organisms in common with the other MTSs and the population may be more distinct. The most abundant epibenthic colonizers present at the Hamilton Avenue Converted MTS were *Polydora* sp. (polychaete worms), *Molgula manhattensis* (sea grapes), *Balanus* sp. (barnacles), and hydrozoans, mud and algal film. The organisms are also pollution tolerant.

The peregrine falcon (*Falco peregrinus*), a federally listed endangered species, was not listed as present for this site in the recent response from the USF&WS.

4.9.2 Future No-Build Conditions

If the Hamilton Avenue Converted MTS were not constructed, the study area would remain as it is at present, except for removal of the incinerator. The limited aquatic and terrestrial natural resources would remain, and the study area would continue to be an impacted urban area dominated by opportunistic species of vegetation and marine organisms.

4.9.3 Potential Impacts with the Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS would involve removal of the existing MTS and construction of a new facility on the incinerator site. The facility would be completely upland and the existing platform would be removed. Dredging may also be necessary to accommodate the barges. The Hamilton Avenue Converted MTS would result in an increase of ecologically productive open water space and pose no adverse ecological impacts, other than the temporary loss of benthic organisms from dredging activities, and no loss of habitat to rare or endangered species.

4.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of

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ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

4.9.3.2 Floodplains

Implementation of the Hamilton Avenue Converted MTS would have no effect on the elevation of the site. The facility would be constructed within the 100 to 500 year floodplain, and would not include any provisions for raising any portions of the site over this level.

4.9.3.3 Ecosystems

Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Therefore, no impacts on the terrestrial natural resources are anticipated.

Dredging activities would result in an immediate, short-term destruction of the benthic invertebrates in the area, and the removal of the existing pilings and MTS would result in loss of habitat for attached organisms. Recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[7] Given the relatively small size of the project, minimal impact is expected from the removal of the existing MTS. The only negative impact would be the reduced area for epibenthic growth. However, this is only a small overall loss of surface area and organisms will still be able to grow on the bulkheading surrounding the MTS. In addition, the increase in open water area may create a more ecologically productive habitat for finfish as more sunlight will pass through the water column increasing primary production.

[7] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

Operational impacts will last the entire lifespan of the facility. The major impact is the removal of the existing platform. The proposed plan for the Hamilton Avenue Converted MTS is for a complete removal of the existing platform, resulting in an increase of ~~34,905~~29,450 square feet of unshaded water. The removal of the platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[8] Epibenthic communities, however, will lose some surface area for growth, but the decrease should not be significant, and finfish should return to the area with the return of food sources.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by Energy and Environmental Analysts, Inc. (EEA) in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[9] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the decrease in shading over water is very small, there are not expected to be significant community changes. There is a possibility of a slight shift in the finfish community with the decrease in over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

Construction of the new upland facility would not have any significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have

[8] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

[9] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the Hamilton Avenue Converted MTS because the site is already fully developed and the creek is heavily contaminated. Removal of the above-water section of the existing MTS eliminates shading of the marine environment in this area. The only shading that would take place under the Future Build Condition would be temporary due to temporary barge dockage and, therefore, any impacts of shading would also be temporary.

4.10 Hazardous Materials

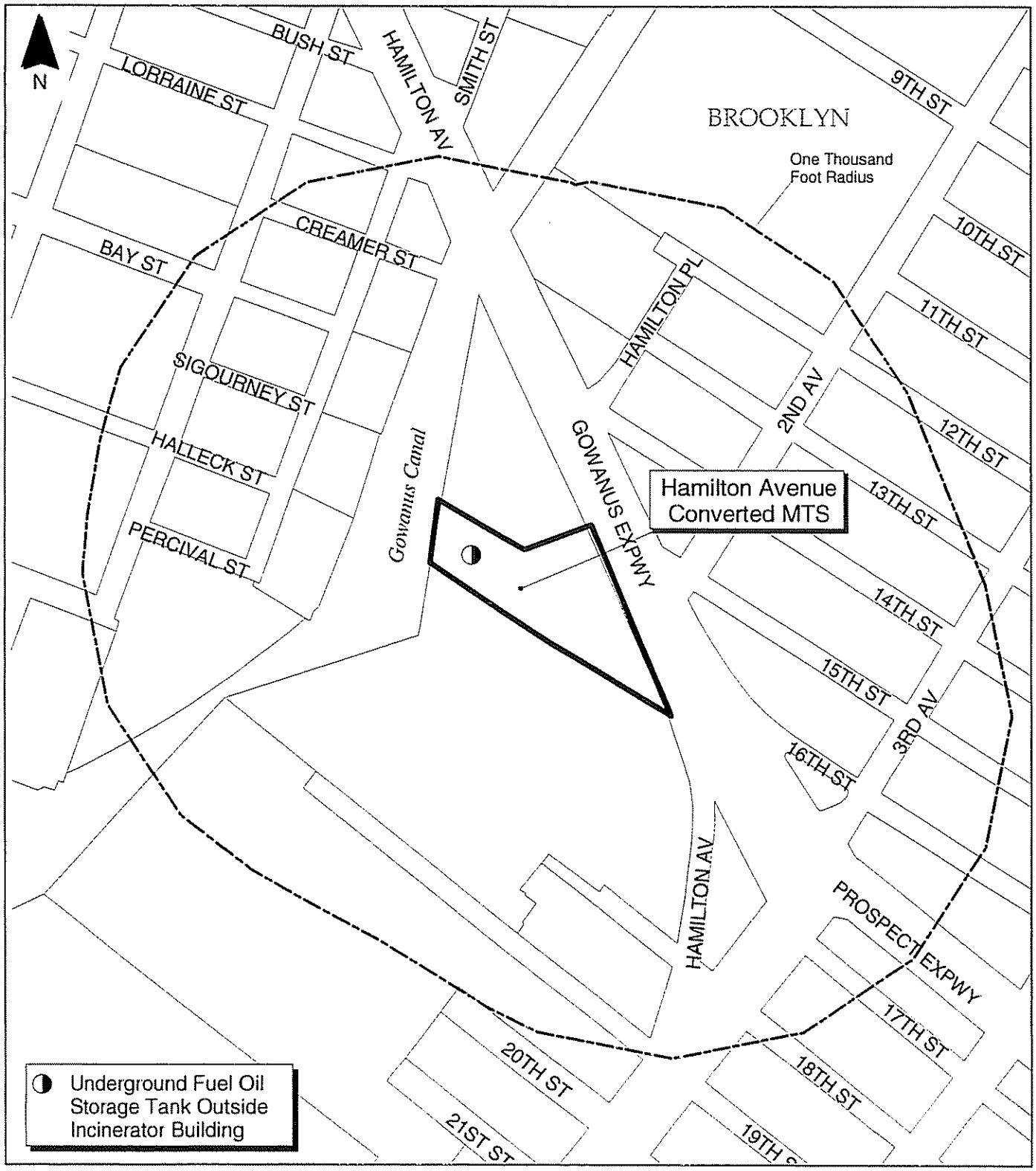
4.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I Environmental Site Assessment (ESA) established by the American Society for Testing and Materials (ASTM) (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the City Fire Department (FDNY) for underground storage tank (UST) records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

4.10.1.1 Definition of Study Area

The study area encompasses the site and neighboring properties within a 1,000-foot radius (see Figure 4.10-1).



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 4.10-1 Hazardous Materials Sites

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4.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and for which the Hamilton Avenue Converted MTS could lead to an increased exposure of people or the environment to those materials. The areas of concern at the subject site are as follows:

- Probability of asbestos-containing materials (ACMs) in the incinerator building.
- Probability of underlying layers of lead-based paint in the incinerator building.
- The incinerator's listing as a CERCLIS site.
- An "active" spill report, Number 9711052, of 200 gallons of possibly transformer oil spilled into the water in early 1998. Also, a stain of oil was noticed during the February 2003 reconnaissance near the fill port of the existing MTS's 5,000-gallon fuel oil tank.

A field program to investigate the potential impacts to the soil and groundwater from the historic use of the property as an incinerator and MTS was completed in November 2003 in accordance with a ~~NYSDEC approved work plan~~ work plan reviewed by the NYSDEC.[10] The site investigation included:

- Performing a ground-penetrating radar and magnetometer survey over accessible areas of the site.
- Collecting one subsurface soil sample from nine boring locations.
- Collecting one surface soil sample from six boring locations.
- Collecting one groundwater sample from three permanent monitoring wells.
- Collecting one groundwater sample from two boring locations.
- Laboratory analysis of all soil samples for asbestos, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs) and Resource Conservation and Recovery Act (RCRA) metals.
- Laboratory analysis of all water samples for VOCs, SVOCs, pesticides/PCBs and RCRA metals.

[10] New York City Department of Sanitation, October 2003. Final phase II Site Investigation Work Plan, Hamilton Avenue Marine Transfer Station, Brooklyn, New York.

- Resampling and analysis of soils for total and Toxicity Characteristic Leaching Procedure (TCLP) lead in all areas where total lead concentrations exceeded NYSDEC Technical and Administrative Guidance Memorandum (TAGM) guidelines.
- Determination of the direction of the groundwater gradient by land survey measurements and measurement to the top of the groundwater surface.
- Comparison of the analytical results obtained from the soil and groundwater sampling program with the NYSDEC TAGM guidelines.
- Preparation and submittal of a detailed site investigation report.[11]

Low concentrations of VOCs were detected in the soil and groundwater samples collected from this site. Elevated concentrations of SVOCs (above TAGM Guidelines) were detected in some of the soil and groundwater samples collected. Elevated concentrations of several RCRA metals were detected in all soil samples collected, indicative of typical ash fill materials used in this area. Resampling and analysis of the soil samples for total and TCLP lead was completed in all five borings where total lead was found to be above TAGM guidelines. Analytical results from three soil samples showed TCLP concentrations of lead in excess of the maximum concentration for the toxicity characteristic.

4.10.2 Future No-Build Conditions

The property would remain in its present state except for the demolition and removal of the incinerator. Any asbestos-containing building materials found in the incinerator would be removed prior to demolition in a manner that is consistent with City building codes and practices. Any contamination present at the site would remain.

4.10.3 Potential Impacts with the Hamilton Avenue Converted MTS

Historical soil and groundwater contamination is present at the existing MTS; however, this contamination should not prevent development of the site. If the Hamilton Avenue Converted MTS was implemented, any residual contaminated soil would require disposal in a manner that is consistent with the level of contamination found during the demolition/construction phase. The necessary and appropriate health and safety measures would be used to mitigate and minimize any exposure risk to workers and the general public.

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[11] New York City Department of Sanitation, July 2004. Hamilton Avenue Marine Transfer Station, Brooklyn, New York. Prepared by EEA, Inc.

4.11 Water Quality

4.11.1 Existing Conditions

4.11.1.1 Definition of Study Area

The water quality study area encompasses Gowanus Bay, Gowanus Channel and Upper New York Bay, and includes discharges from point sources and combined sewer overflows (CSOs) located within ½-mile of the site.

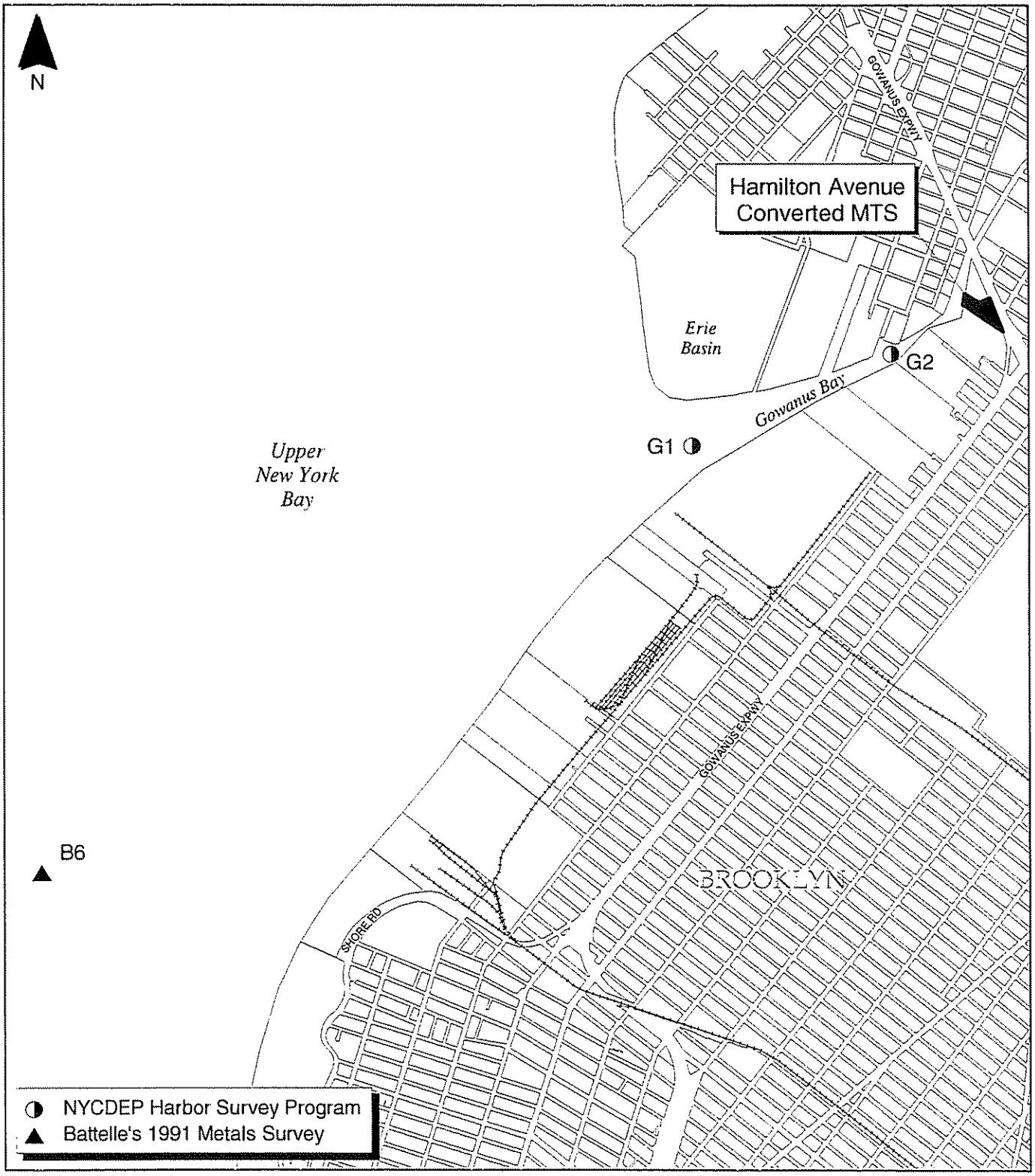
4.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 4.11-1, are generally representative of conditions in the study area:

- NYCDEP Harbor Survey Program – Stations G-1 at Gowanus Bay and G-2 at Gowanus Channel; and
- Battelle's 1991 Metals Survey – Station B-6 in Upper New York Bay.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 4.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.

As shown in Table 4.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station B-6 did not conform to the water quality standard for mercury.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.11-1 Ambient Water Quality Stations

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Table 4.11-1
Existing Water Quality Conditions and Standards
Hamilton Avenue Converted MTS Study Area

Average Concentration					
Parameter	**Units**	**Station G-1[1]**	**Station G-2[2]**	**Station B-6[3]**	**NYS Class SD Standard**
Dissolved Oxygen (surface/minimum)	mg/L	7.2 [4]/4.0 [5]	6.83 [6] / 4.0 [7]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	7.0 [8]/3.7 [5]	6.37 [9] / 3.87 [7]	-------	3.0
BOD (surface)	mg/L	2.4 [10]	2.3 [10]	-------	-------
BOD (bottom)	mg/L	2.4 [10]	2.5 [10]	-------	-------
Total Coliform (surface)	MPN/100 ml	970 [11]	1,945 [11]	-------	-------
Total Coliform (bottom)	MPN/100 ml	407 [11]	985 [11]	-------	-------
Fecal Coliform (top)	MF	15	256	-------	-------
Fecal Coliform (bottom)	MF	5	20 [12]	-------	-------
Total Suspended Solids (surface)	mg/L	6	5.87	-------	-------
Total Suspended Solids (bottom)	mg/L	8	7.21	-------	-------
NH_3-N	mg/L	0.362	0.357	-------	-------
(NO_3 + NO_2)	mg/L	0.341	0.365	-------	-------
Total Phosphorous	mg/L	0.468 [13]	0.151	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	5.5	3.305	-------	-------
Arsenic	µg/L	-------	-------	1 [14]	120 [14.15]
Cadmium	µg/L	-------	-------	0.06 [14]	21 [14.15]
Chromium	µg/L	-------	-------	-------	-------
Copper	µg/L	-------	-------	1.15 [16]	7.9 [15.16]
Lead	µg/L	-------	-------	1.14 [14]	204 [14.15]
Mercury	µg/L	-------	-------	0.0039 [14]	0.0026 [14.15]
Nickel	µg/L	-------	-------	0.78 [14]	74 [14.15]
Silver	µg/L	-------	-------	1.1000 [17]	2.3 [15.17]
Zinc	µg/L	-------	-------	4.85 [14]	95 [14.15]
Cyanide	µg/L	-------	-------	-----	1.0 [15]

Notes:

[1] Average concentrations for 1999 NYCDEP Harbor Survey Station G-1, located in Gowanus Bay.
[2] Average concentrations for 2003 NYCDEP Harbor Survey Station G-2, located in the Gowanus Channel.
[3] Average concentrations for 1991 Battelle Ambient Survey Station B-6, located in Upper New York Bay.
[4] Represents average between February and December 1999.
[5] Minimum between June 1, 1999 and September 30, 1999.
[6] Represents average between January and October 2003.
[7] Minimum between June 1, 2003 and September 30, 2003.
[8] Represents average between February and October 1999.
[9] Represents average between January and October 2003.
[10] Latest available data 1997.
[11] Latest available data 1996.
[12] Latest available data 1999.
[13] Latest available data 1998.
[14] Guidance value and data are for dissolved metals.
[15] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).
[16] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

Notes for Table 4.11-1 (Continued)
(17) Guidance value and data are for acid-soluble metal.
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

4.11.1.3 Permitted Discharges

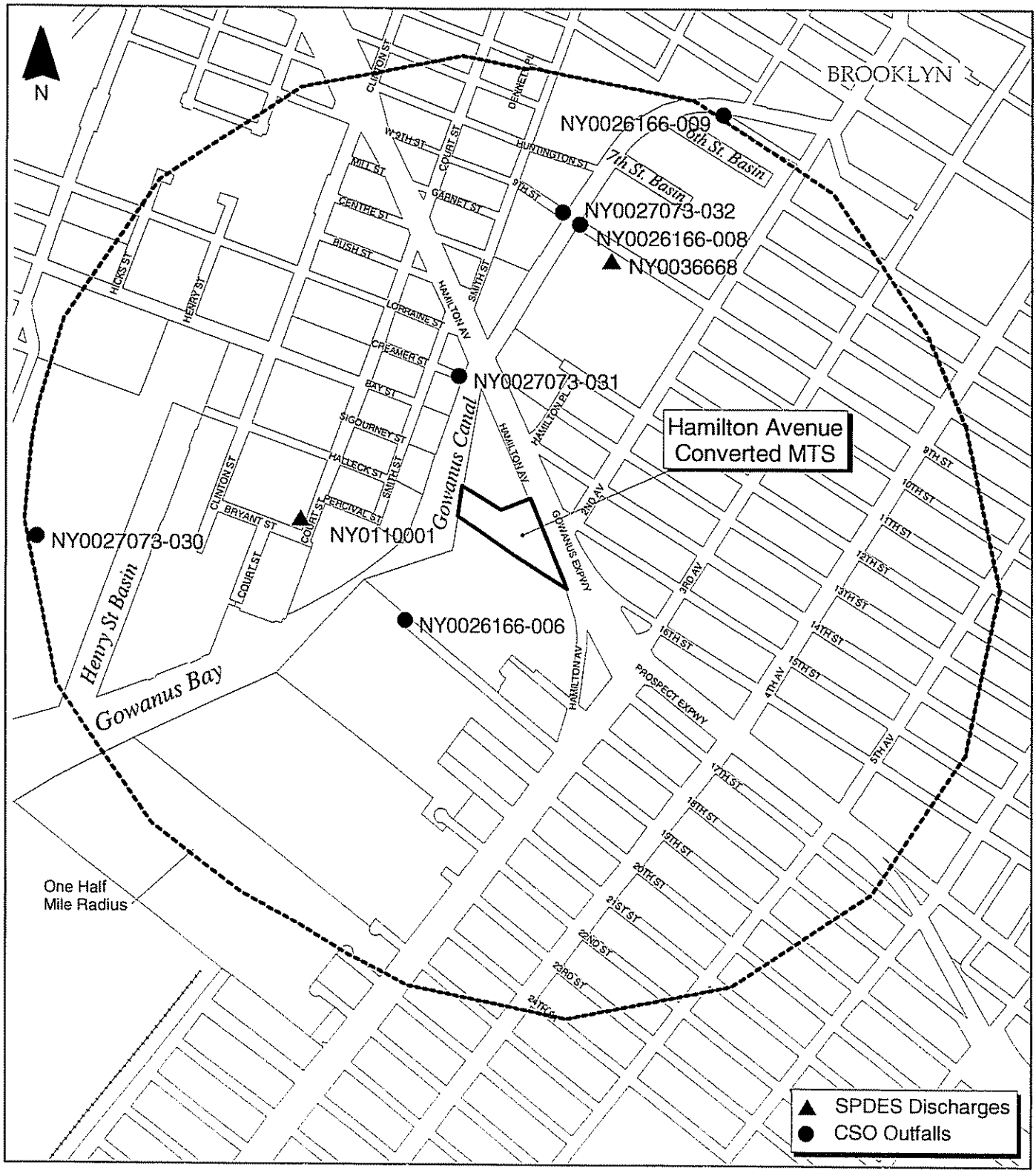
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the Hamilton Avenue Converted MTS site are shown in Figure 4.11-2 and listed in Table 4.11-2. These discharges consist of six CSOs and two industrial sites, all of which are permitted by the NYSDEC.

4.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and infiltration. A runoff flow of 0.255 cfs was calculated using the impervious site area (4.24 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 4.11-3, represent the existing loads at the site.

4.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to ongoing water improvement programs, such as the NYCDEP CSO Abatement Program, which will reduce untreated discharges to the receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from the City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 4.11-2 Permitted Outfalls and CSO Locations Hamilton Avenue Converted MTS

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Table 4.11-2
Existing Permitted Discharges
Hamilton Avenue Converted MTS Study Area

Combined Sewer Overflows (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
5th Street/Owl's Head	NY0026166-009	Kings	Gowanus Canal
19th Street/Owl's Head	NY0026166-006	Kings	Gowanus Canal
Creamer Street/Red Hook	NY0027073-031	Kings	Gowanus Canal
West 9th Street/Red Hook	NY0027073-032	Kings	Gowanus Canal
East 9th Street/Owl's Head	NY0026166-008	Kings	Gowanus Canal
Port Authority Grain Terminal/Red Hook	NY0027073-030	Kings	Gowanus Bay
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Universal Fixture Corp.	NY0036668	Kings	Gowanus Canal
Amerada Hess Corp.	NY0110001	Kings	Gowanus Canal

Table 4.11-3
Estimated Existing Pollutant Loads and Runoff Flows
Hamilton Avenue Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	46,659[1]
BOD mg/L	11	15
Heavy Metals		
Copper µg/L	35	0.048
Lead µg/L	28	0.038
Zinc µg/L	154	0.211
Total Impervious Area (acre) = 4.24 Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Coefficient (C) = 1.00 Runoff Flow (cfs) = 0.255

Notes:
[1] Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
[2] Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

4.11.3 Potential Impacts with the Hamilton Avenue Converted MTS

With the development and operation of the Hamilton Avenue Converted MTS, the overall area of the site would decrease. This would effectively decrease the impervious area and therefore the stormwater loadings at the site. Table 4.11-4 shows the existing impervious area, the change in impervious area and pollutant loads. With the development of the Hamilton Avenue Converted MTS, conditions would not be significantly different from Future No-Build Conditions.

All solid waste processing at the Hamilton Avenue Converted MTS would occur within the structures on the site. All process wastewater from waste handling operations at the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After pretreatment, the process water would be discharged to the municipal sewer system and, ultimately, to the Owl's Head WPCP, where it would be treated prior to discharge to New York Bay. Therefore, the Hamilton Avenue Converted MTS would not affect water quality.

Table 4.11-4
Impervious Area and Estimated Pollutant Loads
Hamilton Avenue Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Conditions	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	4.24	0.0	46,659/NA	15/NA	0.048/NA	0.038/NA	0.211//NA
Future Build Conditions	3.87	-0.37	42,513/-4,146	14/-1	0.044/-0.004	0.035/-0.003	0.193/-0.018

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

Unimpeded operation of the Hamilton Avenue Converted MTS may also require dredging activities to construct the waterfront structures and to improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with

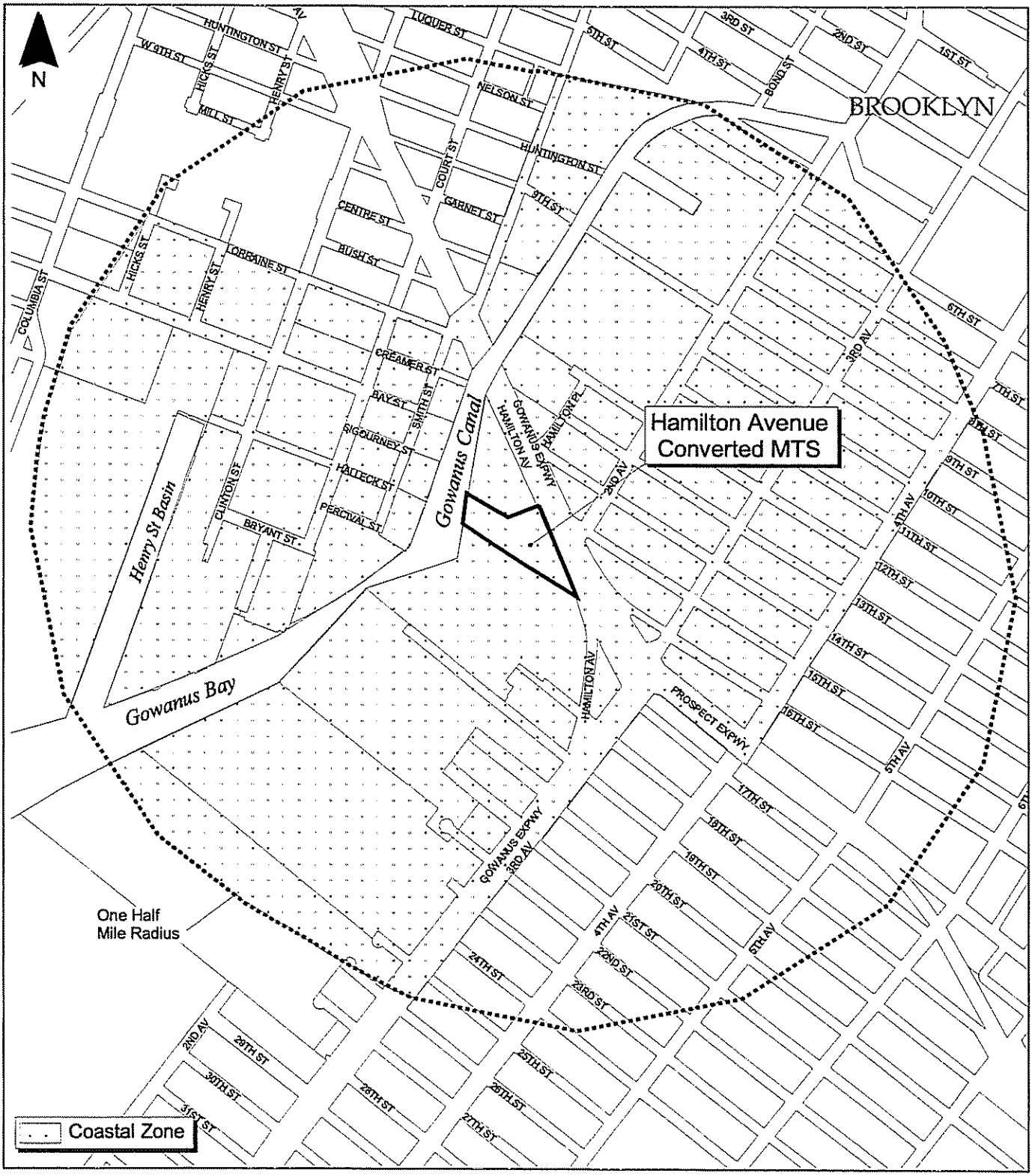
applicable federal, state and local regulations and required permits would be acquired before any such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not be expected to result in any significant adverse long-term impacts.

4.12 Waterfront Revitalization Program

4.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of Gowanus Canal and Gowanus Bay, the Hamilton Avenue Converted MTS would be within the City's coastal zone boundary (see Figure 4.12-1). According to the "New Waterfront Revitalization Program," the Hamilton Avenue Converted MTS would be classified as a water-dependent, industrial use. It would be located within the NYCDCP-designated Sunset Park SMIA, within Reach 14 East River/Upper Bay as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." It is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Hamilton Avenue Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3, 8.1, 8.5 and 10.2. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. In instances where a component of the Hamilton Avenue Converted MTS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations is provided in Section 2.2.1.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 4.12-1 Coastal Zone Boundary
Hamilton Avenue Converted MTS

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4.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the Hamilton Avenue Converted MTS. As part of the Hamilton Avenue Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

According to the "The New Waterfront Revitalization Program," the Hamilton Avenue Converted MTS would be located within the Sunset Park SMIA. Its development would involve the demolition of the existing over-water truck-to-barge MTS and construction of a new truck-to-container-to-barge (TCB) MTS located primarily within the upland portions of the site for marine transport of DSNY-managed Waste to remote out-of-City disposal facilities.

The demolition and site redevelopment, as described in Section 2.2.1, would help to restore and revitalize industrial waterfront property and would be compatible with existing and neighboring heavy industrial uses. The majority of reconstruction activity would occur within the upland portions of the site, and

would consist of four primary components: (1) an enclosed processing building which would include a tipping floor, loading floor and pier level; (2) an elevated access ramp, with accompanying retaining walls, to the truck gallery; (3) a gantry crane, outside of the processing building and at the waterfront; and (4) a new bulkhead and fendering systems ~~for barge slips.~~. A gantry crane would be used in the loading and unloading of DSNY barges at the site. The Hamilton Avenue Converted MTS would be consistent with existing land uses in the vicinity of its site and with the "Plan for the Brooklyn Waterfront," which recommends the continued industrial use of the area. Although it would not encourage or facilitate the siting of any additional water-dependent uses, the Hamilton Avenue Converted MTS would represent an upland expansion and reactivation of an existing water-dependent use and would be compatible with surrounding uses. The Hamilton Avenue Converted MTS would, therefore, be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The Hamilton Avenue Converted MTS would involve the demolition of the existing MTS and the development of a new and expanded facility within the upland portions of the site. It would allow for marine transport of solid waste to licensed out-of-City disposal facilities. The development would consist of four major components: (1) an enclosed processing building which would include a tipping floor, loading floor and pier level; (2) an elevated access ramp; (3) a gantry crane located at the waterfront and adjacent to the processing building; and (4) bulkhead and fendering systems. In addition, a 21-inch and an 18-inch stormwater outfall would be constructed within the south bulkhead. These outfalls would drain stormwater runoff from the facility into Gowanus Canal. Before Stormwater is discharged into Gowanus Canal it will pass through a stormwater treatment system. The pilings that support the existing MTS would be removed as part of the demolition of the existing MTS.

In addition, the Hamilton Avenue Converted MTS would require dredging to improve existing water depths at and in the immediate vicinity of the site and to allow for the unimpeded operations of barges and tugboats once it became operational. All required dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any proposed dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The development of the Hamilton Avenue Converted MTS would involve the revitalization of an existing waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the vicinity of the proposed site. Activities within Gowanus Canal and Gowanus Bay resulting from the Hamilton Avenue Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the ~~slips~~mooring berths. Approximately four ~~or five~~ barges would be loaded on a daily basis at the Hamilton Avenue Converted MTS. Barge swapping activities would be conducted in close proximity to the Hamilton Avenue Converted MTS and be comparable in nature to previous barge activities at the existing MTS. Therefore, no adverse impacts upon other uses within the water body would be anticipated. The Hamilton Avenue Converted MTS would, therefore, be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The Hamilton Avenue Converted MTS would involve the conversion of an existing over-water facility from a truck-to-barge waste transfer station where loose waste was placed in open barges, into an upland TCB transfer station where waste would be transferred into containers that would be sealed and placed into flat deck barges for marine transport to out-of-City disposal locations and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All solid waste handling would occur within an enclosed processing building. All waste would be placed in sealed containers before leaving the building for loading on barges.

Building ventilation would be maintained under negative pressure, which would maintain dust inside the enclosed processing building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. All process wastewaters generated on site (e.g., washdown waters, etc.) would be properly treated prior to their discharge to the municipal sewer system. In addition, on-site storage of petroleum products and hazardous materials related to the operation of the Hamilton Avenue Converted MTS would be done in accordance with applicable federal, state and local regulations. Therefore, the Hamilton Avenue Converted MTS would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of Special Natural Waterfront Areas (SNWAs), as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes and Significant Coastal Fish and Wildlife Habitat (SCFWH) information, the Hamilton Avenue Converted MTS would not be located within a designated area. The Hamilton Avenue Converted MTS would represent an upland expansion in size of a previous over-water use and would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. The Hamilton Avenue Converted MTS would, therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted to determine the presence of wetlands within the site. The Hamilton Avenue Converted MTS would be located adjacent to the Gowanus Canal, a NYSDEC-designated littoral ~~zone.~~ zone, however, due to the existing water depths at the site being deeper than six feet, no effects to wetlands would occur. No freshwater wetlands exist on the site. The Hamilton Avenue Converted MTS would involve the demolition of the existing over-water MTS and development of a new MTS within the upland portions of the site. These activities and anticipated dredging would not result in ~~limited, short-term impacts~~effects to ~~these tidal~~ wetlands.

Dredging activities associated with the development of the Hamilton Avenue Converted MTS are not anticipated to have significant ~~impacts~~ effects on wetlands in the vicinity of the site, primarily due to previous and ongoing activities and previous dredging that has historically occurred at the existing MTS and adjacent ~~staging area~~mooring rack. ~~Mitigation for potential~~Potential ~~impacts~~ effects upon wetlands would be ~~proposed~~ addressed during the environmental review and permitting of the Hamilton Avenue Converted MTS. ~~This mitigation, if required, would address potential impacts that may occur due to the construction of the Hamilton Avenue Converted MTS.~~ DSNY in coordination

with the NYSDEC and other involved agencies would determine the appropriate measure to address potential effects that may occur due to the Hamilton Avenue Converted MTS and would effectively restore these wetlands and their associated value. The Hamilton Avenue Converted MTS would, therefore, be consistent with this subpolicy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of the NYSDEC NHP database indicates that there are no known species of special concern in the vicinity of the site. As part of the Hamilton Avenue Converted MTS development, the existing MTS and its support pilings would be removed. In addition, dredging would be required to improve existing water depths in the vicinity of the site for barge and tugboat operations. Modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat for rare or endangered species.

Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the Hamilton Avenue Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. Further, the Hamilton Avenue Converted MTS would not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 *Manage direct or indirect discharges to waterbodies.*

The Hamilton Avenue Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site treatment system, which would consist of oil/water separators, etc., discharging eventually to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Development of the proposed MTS would involve the installation of two stormwater outfalls that would drain stormwater runoff from the facility into Gowanus Canal. Prior to discharging, stormwater runoff would travel through a stormwater treatment system. Stormwater runoff from the Hamilton Avenue Converted MTS would be managed in accordance with all applicable federal, state and local regulations.

In addition, the majority of activity associated with the Hamilton Avenue Converted MTS would be conducted within an enclosed processing building. Only sealed, air- and watertight containers would be transferred to barges outside of the processing building by gantry cranes installed at the pier level. Inside the facility, several measures would be taken to minimize the potential for environmental degradation as a result of the facility. Building ventilation would be maintained under negative pressure, which would keep dust inside the enclosed processing building. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. The Hamilton Avenue Converted MTS would be consistent with this subpolicy.

5.2 *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

Best management practices (BMPs) would be used to the extent possible during all phases of construction, including demolition of the existing MTS, and during operation of the Hamilton Avenue Converted MTS, in order to minimize any

nonpoint discharges. The Hamilton Avenue Converted MTS would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be conducted within an enclosed processing building. During construction, non-structural and, if necessary, structural, measures would be used to minimize nonpoint source pollution.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The pilings that support the existing MTS would be removed and dredging would be necessary to provide sufficient water depths for unimpeded operations once the Hamilton Avenue Converted MTS is operational. ~~Any dredging~~Dredging undertaken as part of development of the Hamilton Avenue Converted MTS would result in temporary impacts and would be conducted in a manner to minimize siltation and erosion and other short-term impacts to water quality. All possible non-structural and, if necessary, structural, measures would be used to minimize siltation and potential adverse impacts to tidal wetlands in the vicinity. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations. Therefore, the Hamilton Avenue Converted MTS would be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The Hamilton Avenue Converted MTS would have no impact on the quality or quantity of surface or ground waters. Process wastewaters (e.g., washdown waters, etc.) would be conveyed to an on-site treatment system and would then discharge to the municipal sewer system. Stormwater runoff from the Hamilton Avenue Converted MTS would be managed in accordance with all applicable federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer of water supply. The Hamilton Avenue Converted MTS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of FEMA National Flood Insurance Program maps, the Hamilton Avenue Converted MTS would be situated within portions of both the 100-year (Zone A) and 500-year (Zone B) floodplain boundaries. As part of its development, the existing over-water MTS would be demolished and a new MTS would be constructed within the upland portions of the project site. The pilings that support the existing MTS would also be removed and dredging would be necessary to provide sufficient water depths for unimpeded operations once the Hamilton Avenue Converted MTS is operational. To the extent practicable, non-structural and, if necessary, structural, measures would be used to minimize impacts due to flooding and erosion during the demolition and subsequent construction of the Hamilton Avenue Converted MTS. Construction of the Hamilton Avenue Converted MTS within the upland portions of the site would not affect the potential for flooding or erosion. All structures would comply with applicable building code requirements.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The Hamilton Avenue Converted MTS would not involve the storage, treatment or disposal of hazardous waste, but would facilitate the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Unless emergencies close the facility, solid waste

would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the Hamilton Avenue Converted MTS. The majority of proposed activities would occur within an enclosed processing building. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. Only sealed, air- and watertight containers would be utilized outside the facility.

On-site storage of petroleum or hazardous materials related to the operation of the Hamilton Avenue Converted MTS would be minimal. All storage would be done in accordance with applicable federal, state and local regulations. The Hamilton Avenue Converted MTS would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 *Prevent and remediate discharge of petroleum products.*

Soil and groundwater contamination is present at the existing site and is discussed in further detail within section 4.10. Existing contamination of the site would be addressed as part of the proposed development of the site, if required. This contamination would not be expected to prevent the proposed development of the Hamilton Avenue Converted MTS. Removal and disposal of contaminated materials, if required, would be done in accordance with applicable regulatory guidelines. In addition, as appropriate, health and safety measures would be used to mitigate and minimize any exposure risk to workers or the general public. Also see response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1 and 7.2.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Due to the existing, heavy industrial uses at and in the immediate vicinity of the Hamilton Avenue Converted MTS, public access would not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The Hamilton Avenue Converted MTS would be a stand-alone, water-dependent, industrial facility fronting Gowanus Canal. Public access would not be compatible with the Hamilton Avenue Converted MTS; however, its development would not preclude any future development of public access at other locations along the Gowanus Canal or Gowanus Bay waterfront.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Development of the Hamilton Avenue Converted MTS site would represent an upland expansion in size of an existing waterfront use and would not impair visual access to coastal lands, waters or existing open space. The existing MTS would be removed and a new MTS would be constructed within the upland

portions of the site. The Hamilton Avenue Converted MTS is not anticipated to significantly impact visual access within the area. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

A cluster of several small parks and open spaces collectively known as the Red Hook Recreational Area is located west of the Hamilton Avenue Converted MTS. In addition, various playgrounds and other parks and open space areas are scattered within the study area. There would be no impacts to these areas because the facilities are located across either Gowanus Canal or the Gowanus Expressway and are generally screened by existing, industrial buildings. In addition, the reactivation of an existing MTS use within an established and existing industrial area, located approximately ¼-mile from these park areas, would not result in any impacts to mapped parklands or open space resources. Therefore, the Hamilton Avenue Converted MTS would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 *Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.*

The Hamilton Avenue Converted MTS would be an upland expansion in size and rehabilitation of an existing waterfront use and, therefore, would be compatible with the existing urban design context and visual conditions of this portion of the industrialized Gowanus Canal and Bay waterfront, as noted in Section 4.7.3. Based on the information presented in that section, the Hamilton Avenue Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The Hamilton Avenue Converted MTS would pose no impact to scenic values associated with natural resources. It would be compatible with existing uses in the vicinity of the site, which do not allow for scenic views. Therefore, this subpolicy is not applicable.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The Hamilton Avenue Converted MTS would have no effect on any cultural resources on or near the site, as noted in Section 4.6.3. Based on the information presented in that section, the Hamilton Avenue Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy is, therefore, not applicable.

4.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

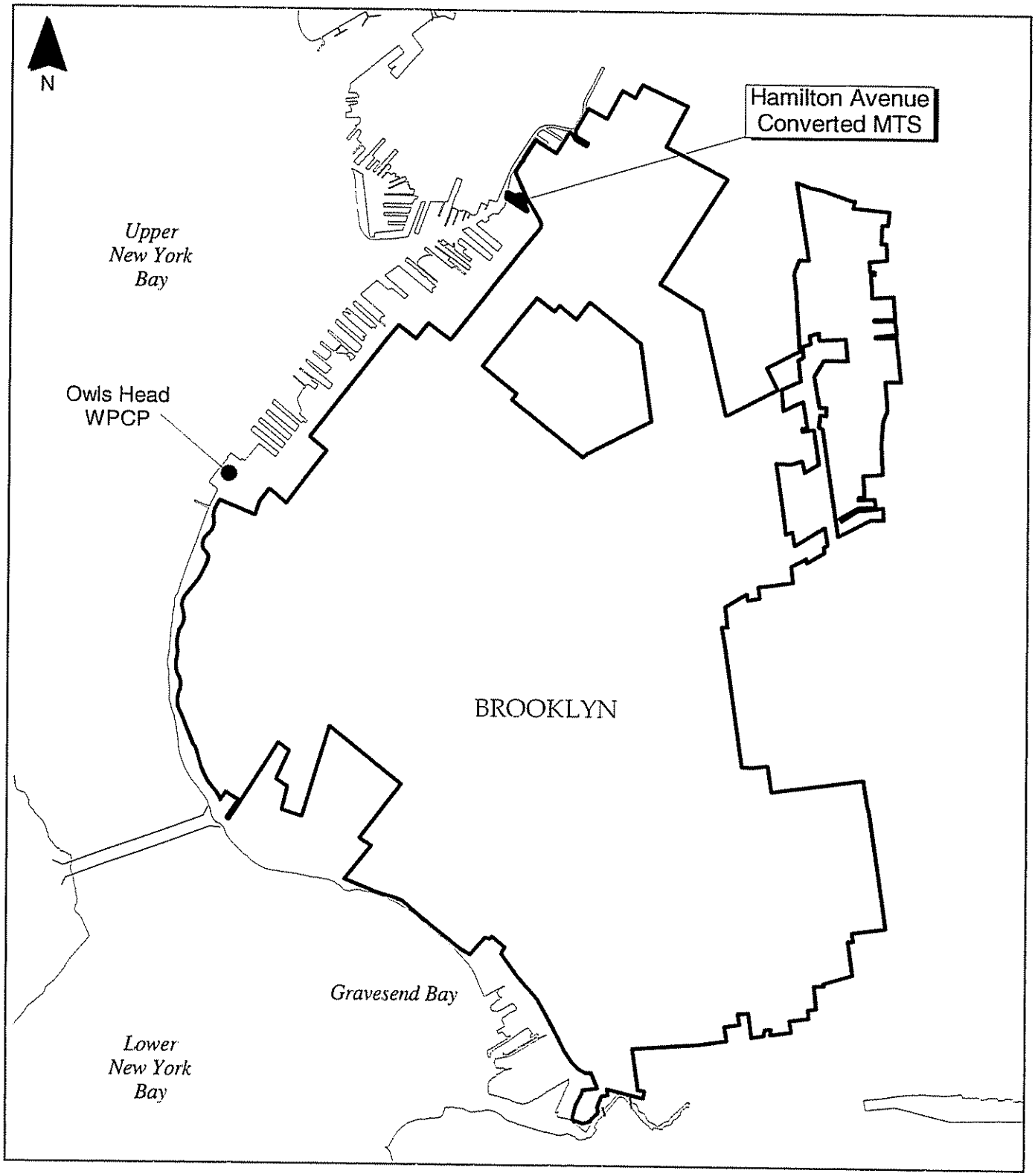
4.13.1 Existing Conditions

4.13.1.1 Water Supply

Water is supplied to the existing Hamilton Avenue MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. An 8-inch-diameter pipe that runs along Hamilton Avenue provides potable water for both potable and sanitary requirements. There is a 20-inch high-pressure fire system water main that flows south under the Gowanus Expressway along 3rd Avenue. Water pressure throughout the City system is generally about 20 pounds per square inch (psi), which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

4.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP infiltration and inflow (I&I) maps shows that the site is served by the Owls Head WPCP, which serves a large portion of Brooklyn. The WPCP drainage area is illustrated in Figure 4.13-1. From July 2002 through June 2003, the WPCP treated an average of 95 million gallons per day (mgd) of wastewater under dry weather flow conditions and an average flow of 104 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 4.13-1). The maximum dry weather flow during this period was 99 mgd during October 2002 and the maximum average flow was 114 mgd during June 2003. Effluent from the plant is discharged to Upper New York Bay and is regulated by NYSDEC under the State Pollutant Discharge Elimination System (SPDES). The current SPDES permit limit for flow to the Owls Head WPCP is 120 mgd. It is estimated that current on-site employee water usage at the existing Hamilton Avenue MTS is about 75 gallons per day (gpd). This estimate is based on three security employees (one employee per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). As the facility is not currently accepting waste, no additional potable water is used and no operational personnel are assigned to the site.



Site delineations are approximate

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Figure 4.13-1 Existing WPCP Drainage Area

Hamilton Avenue Converted MTS

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Table 4.13-1
Average Monthly Dry Weather and Average Flows
Owls Head Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	90	93
August	94	99
September	97	107
October	99	113
November	96	111
December	96	104
January 2003	93	99
February	91	101
March	94	103
April	95	105
May	94	102
June	98	114
Average Effluent	**95**	**104**

Note:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, wastewater from the MTS is conveyed to a 12-inch municipal combined sewer running to the southeast along Hamilton Avenue, the northern boundary of the site. Near the corner of 2nd Avenue and Hamilton Avenue, the 12-inch line intersects a 30-inch combined sewer, which conveys flow to the southeast to a 78-inch combined line at the intersection of 3rd Avenue and Hamilton Avenue. From this intersection, the sewer system conveys wastewater generally to the south through a series of combined sewer lines and interceptors along 3rd and 1st Avenues to the Owls Head WPCP. CSOs connected to the lines on 3rd and 1st Avenues en route to the WPCP include one at 19th Street and Gowanus Bay associated with the pump station near the corner of 19th Street and 3rd Avenue, and another at 49th Street and the Upper Bay.

Municipal storm sewers in the vicinity of the MTS include a 12-inch line which conveys flow to the northwest along Hamilton Avenue from near the intersection of 2nd Avenue and Hamilton Avenue to Gowanus Canal.

4.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each of the three security employees at the existing MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately 4 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

~~Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, wastewater from the MTS is conveyed to a 12-inch municipal combined sewer running to the southeast along Hamilton Avenue, the northern boundary of the site. Near the corner of 2nd Avenue and Hamilton Avenue, the 12-inch line intersects a 30-inch combined sewer, which conveys flow to the southeast to a 78-inch combined line at the intersection of 3rd Avenue and Hamilton Avenue. From this intersection, the sewer system conveys wastewater generally to the south through a series of combined sewer lines and interceptors along 3rd and 1st Avenues to the Owls Head WPCP. CSOsombined sewer overflows connected to the lines on 3rd and 1st Avenues en route to the WPCP include one at 19th Street and Gowanus Bay associated with the pump station near the corner of 19th Street and 3rd Avenue. Another combined sewer overflow is located at 49th Street and the Upper Bay.~~

~~Municipal storm sewers in the vicinity of the MTS include a 12-inch line which conveys flow to the northwest along Hamilton Avenue from near the intersection of 2nd Avenue and Hamilton Avenue to Gowanus Canal.~~

4.13.1.4 Energy

Consolidated Edison supplies electricity to the facility through electric lines running along Hamilton Avenue. The existing Hamilton Avenue MTS currently utilizes a negligible amount of electricity due to the low staffing levels (for security purposes only). No gas is currently supplied to the facility, but utility maps from KeySpan show that there is a 1.5-inch gas main that runs southbound along Hamilton Avenue.

4.13.2 Future No-Build Conditions

The existing Hamilton Avenue MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Owls Head WPCP would continue to increase and would be projected to be 104.6 mgd by 2006.

4.13.3 Potential Impacts with the Hamilton Avenue Converted MTS

4.13.3.1 Water Supply

The Hamilton Avenue Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The Hamilton Avenue Converted MTS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, this usage would not have significant impacts on water pressure in the system

4.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the Hamilton Avenue Converted MTS, the small quantities of wastewater sent to the Owl's Head WPCP would not significantly impact the sewage flow rate or the ability of the Owl's Head WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 104.6 mgd in 2006, which would be well below the permitted capacity of 120 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in ~~combined sewer overflows~~ (CSOs).

4.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 pounds per day [lbs/day] per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the Hamilton Avenue Converted MTS and would not significantly impact the system.

4.13.3.4 Energy

The Hamilton Avenue Converted MTS would require approximately 5.51E+10 British thermal units per year (BTU/year) of electricity. Natural gas facility heating would be used with an estimated demand of 1.34E+07 BTU/year.

Consolidated Edison has been notified of the power requirements of the Hamilton Avenue Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the Hamilton Avenue Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility.

4.14 Traffic, Parking, Transit, and Pedestrians

4.14.1 Introduction

The Hamilton Avenue Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

4.14.2 Existing Conditions

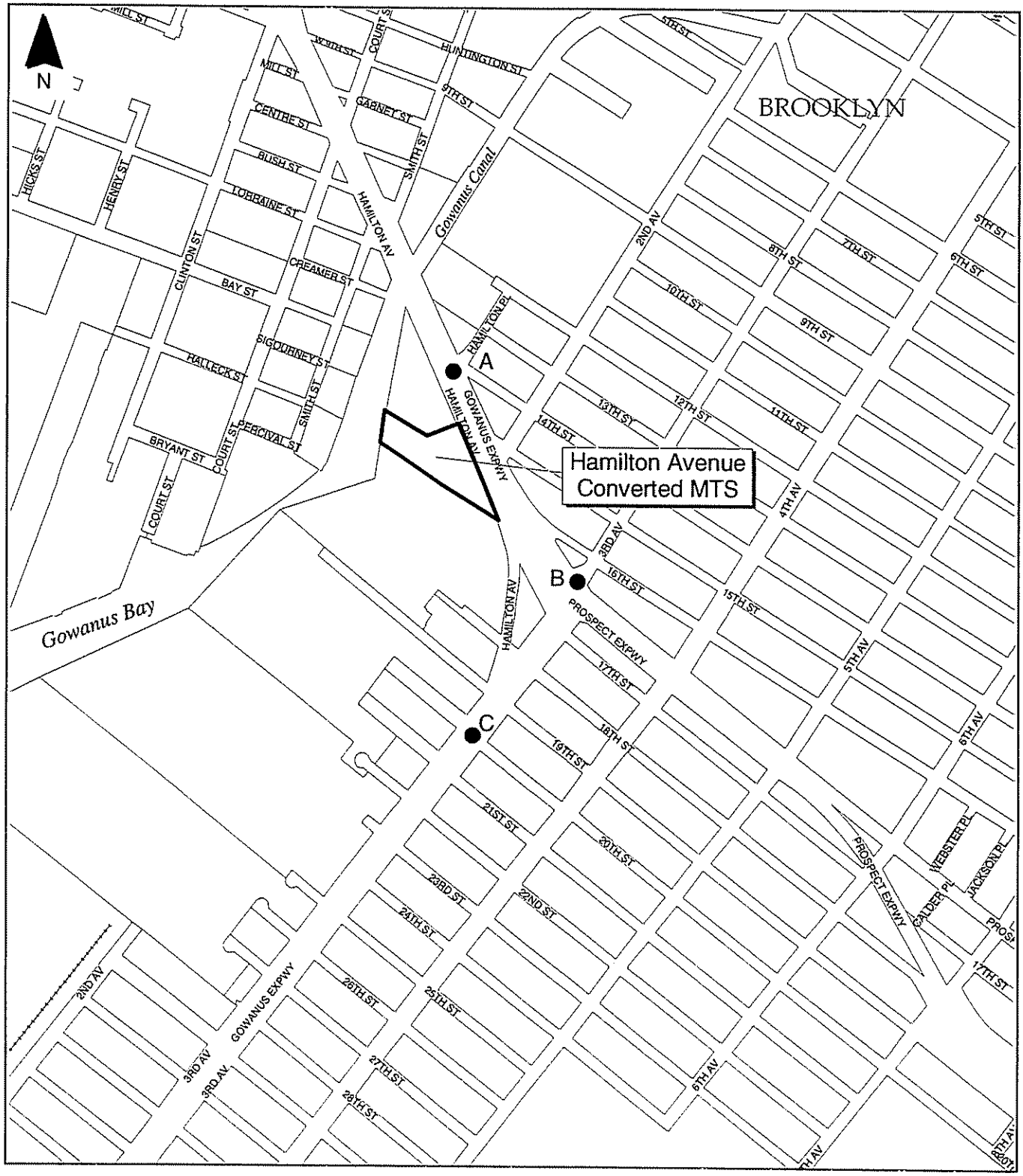
4.14.2.1 Definition of Study Area

The traffic analysis study area is relatively limited, existing entirely within the Gowanus area of Brooklyn. It includes the major corridors along the Gowanus Expressway, including Hamilton Avenue and Third Avenue. This study area is predominantly industrial in nature. There are no CEQR-defined areas of concern located within it. Figure 4.14-1 shows the locations of the intersections selected for analysis (locations A through C). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points in conjunction with local truck routes. Section 4.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the Hamilton Avenue Converted MTS.

4.14.2.2 Surface Network

Two major highways, the Gowanus Expressway and Prospect Expressway, service the traffic analysis study area. Second Avenue, Third Avenue, Hamilton Avenue, Prospect Avenue and 20th Street are local truck routes that provide access to and from the site. A map showing all major truck routes and local truck routes in Brooklyn is provided in Section 3.16 (see Figure 3.16-3).



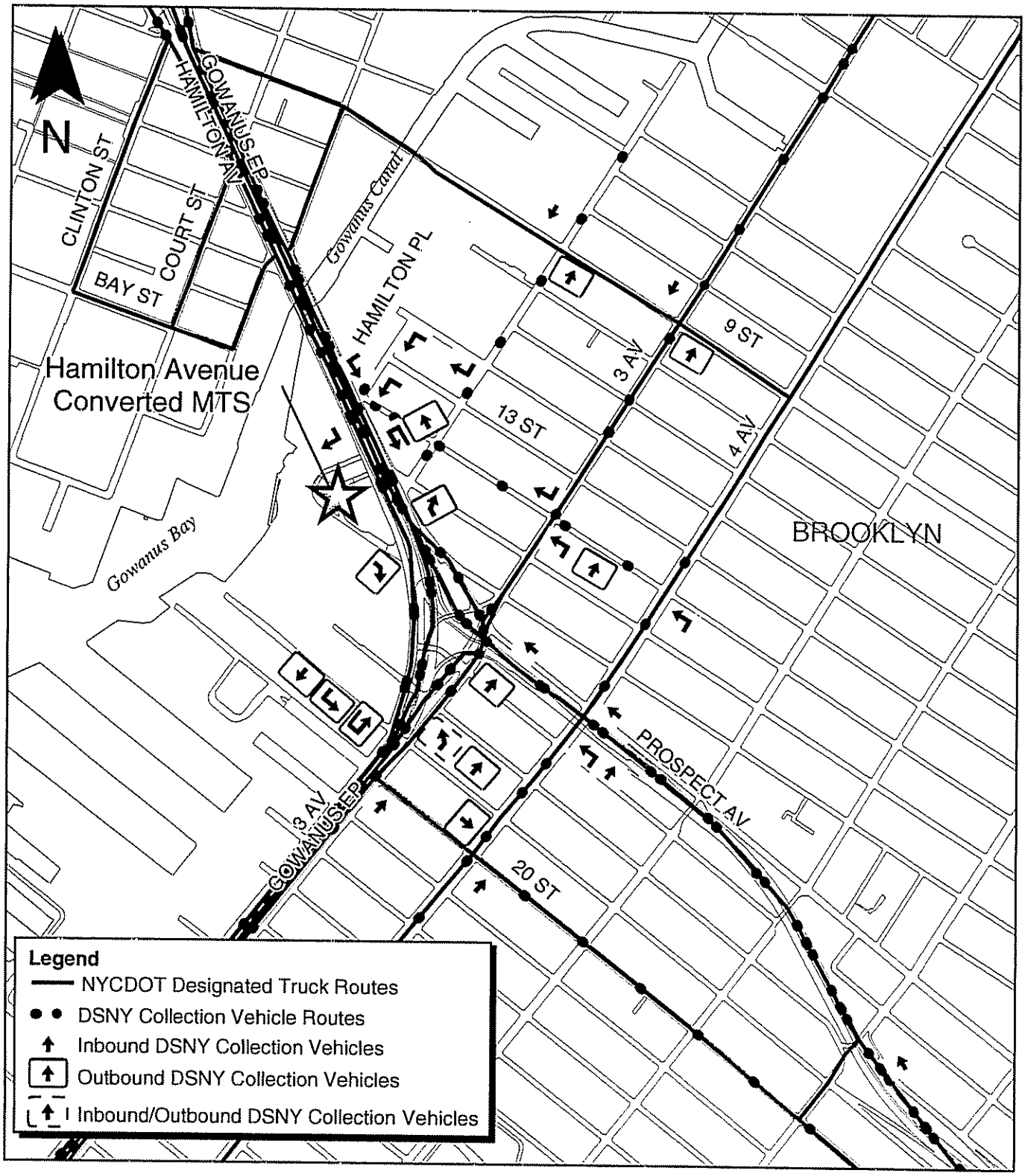
Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 4.14-1 Traffic Analysis Study Area
Hamilton Avenue Converted MTS
CITY OF NEW YORK
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Hamilton Avenue is a principal arterial that provides north-south access from Prospect Expressway to the industrial areas in Red Hook, Brooklyn. Hamilton Avenue is a divided road with northbound traffic on the east side of the Gowanus Expressway and southbound traffic on the west side of the Gowanus Expressway. The Gowanus Expressway is an elevated roadway in the area that runs above 3rd Avenue and Hamilton Avenue. Third Avenue is a minor arterial that provides north-south access from Sunset Park and Bay Ridge to downtown Brooklyn. Fourth Avenue is a principal arterial that provide north-south access to the area. Prospect Avenue and 20th Street are minor arterials that provide east-west access for local and commercial traffic on either side of the Prospect Expressway. Both Hamilton Place and 14th Street are local streets that are not designated truck routes.

DSNY and other agency collection vehicles traveling south to the Hamilton Avenue Converted MTS could use either 3rd Avenue or the Gowanus Expressway. Vehicles traveling on the Gowanus Expressway would use Exit 26, the Hamilton Avenue exit, and travel to the Converted MTS on Hamilton Avenue (southbound). Vehicles traveling south on 3rd Avenue would turn west on 14th Street, then south on Hamilton Place. All vehicles traveling to the Hamilton Avenue Converted MTS converge at the intersection of Hamilton Avenue and Hamilton Place. All vehicles traveling north on Hamilton Avenue (northbound) must turn west on Hamilton Place and then south onto Hamilton Avenue (southbound) to access the Converted MTS. DSNY and other agency collection vehicles traveling north to the facility would use either 3rd Avenue or 4th Avenue. Vehicles traveling along 3rd Avenue would turn north onto Hamilton Avenue and then proceed to Hamilton Place. Vehicles using 4th Avenue would turn west on 14th Avenue and proceed to Hamilton Place. DSNY and other agency collection vehicles originating east of the Hamilton Avenue Converted MTS would travel west on the Prospect Expressway and exit onto Prospect Avenue. Prospect Avenue turns into Hamilton Avenue (northbound) and the vehicles would continue to Hamilton Place. Figure 4.14-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.

All DSNY and other agency collection vehicles exiting the Hamilton Avenue Converted MTS must turn south onto Hamilton Avenue (southbound). DSNY and other agency collection vehicles returning to points south of the Converted MTS continue on Hamilton Avenue



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 4.14-2 DSNY Collection Vehicle Routes
Hamilton Avenue Converted MTS

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(southbound) and merge onto 3rd Avenue. Vehicles that return to points east of the Converted MTS turn east on 20th Street. Vehicles that return to points north of the facility also turn east onto 20th Street and then north onto 3rd Avenue. Vehicles that traveled south on the Gowanus Expressway turn onto Hamilton Avenue (northbound) from 3rd Avenue and then proceed to the Gowanus Expressway.

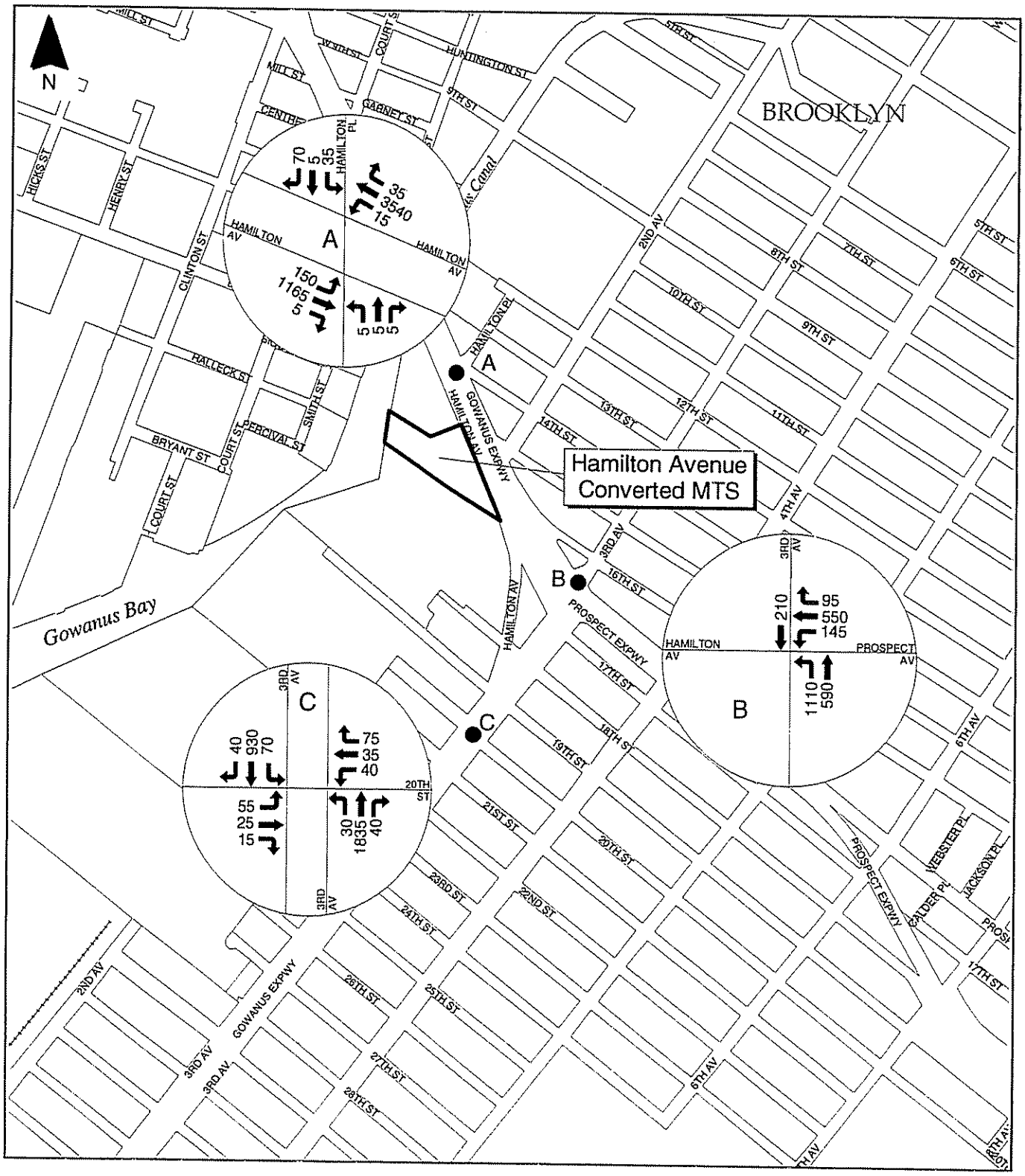
4.14.2.3 Existing Traffic Operations

The three intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the Hamilton Avenue Converted MTS. All of them are on major arterials and/or collection vehicle routes. Diagrams of these intersections are included in the technical backup submitted to NYCDOT.

- Hamilton Avenue and Hamilton Place and 14th Street – Signalized Intersection (see Figure 4.14-1 – location A)
- Prospect Avenue and Third Avenue – Signalized Intersection (see Figure 4.14-1 – location B)
- Third Avenue and 20th Street – Signalized Intersection (see Figure 4.14-1 – location C)

Hamilton Avenue is a principal arterial that provides north-south access from Prospect Expressway to the industrial areas in Red Hook, Brooklyn. Third Avenue is a minor arterial that provides north-south access from Sunset Park and Bay Ridge to downtown Brooklyn. Prospect Avenue and 20th Street are minor arterials that provide access for local and commercial traffic on either side of the Prospect Expressway. Both Hamilton Place and 14th Street are local streets.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 4 and February 6, 2003 and ATR counts were conducted between February 3 and February 7, 2003. Figures 4.14-3, 4.14-4 and 4.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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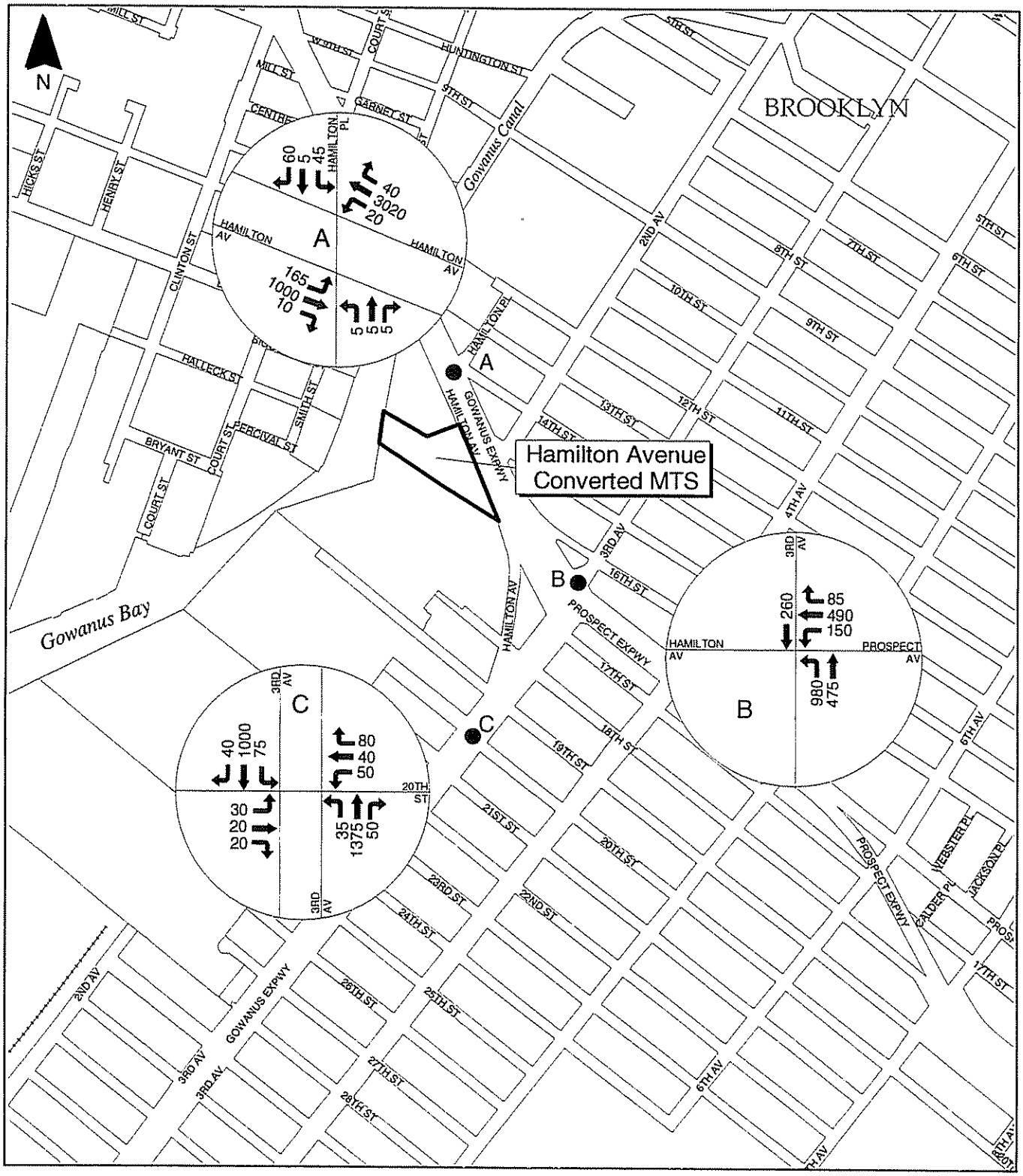
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Figure 4.14-3 Existing Traffic Volumes - AM Peak

Hamilton Avenue Converted MTS

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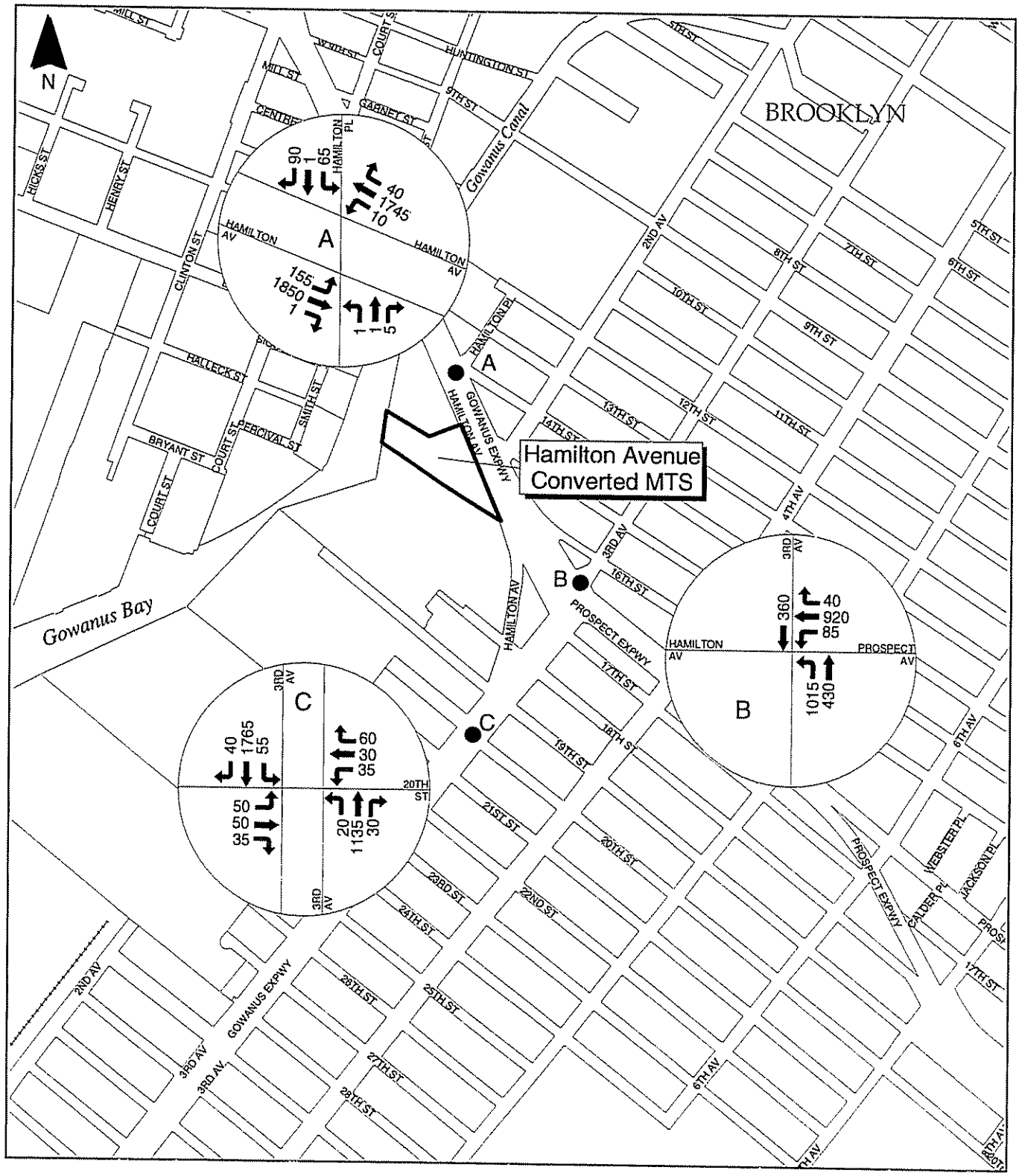


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.14-4 Existing Traffic Volumes Facility Peak Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.14-5 Existing Traffic Volumes - PM Peak

Hamilton Avenue Converted MTS

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occurred between 8:15 a.m. and 9:15 a.m., the Facility peak between 9:00 a.m. and 10:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 4.14-1 presents the volume-to-capacity (v/c) ratio, delay and LOS for the three intersections during the AM, Facility, and PM peaks.

Existing truck traffic through most of the intersections was moderate. The percentages of trucks increases steadily during the morning hours, remaining at between 13% and 16% during midday hours, then decreasing to 7% or lower during the PM peak hours.

4.14.2.3.1 LOS at Signalized Intersections

Table 4.14-1 shows that the signalized intersections generally operated at an overall LOS of C or D, with some exceptions. The lane group with the least favorable LOS was the westbound through and right movements at the intersection of Prospect Avenue and Third Avenue. During the PM peak hour, this approach operated at LOS F with a delay of 82.7 seconds. Several other lane groups at various intersections operated at an LOS of D during various peak hours.

4.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

4.14.2.4 Existing DSNY-Related Traffic

The privately-owned IESI-Court transfer facility located at 577 Court Street in the nearby Red Hook section of Brooklyn accepts waste from Brooklyn CD 6, the AFF and EZ-Pack Operations (from CDs 10, 13 and 16). The existing DSNY-related traffic in the vicinity of the Hamilton Avenue Converted MTS is generated by DSNY and related facilities in the immediate study area, including the DSNY Brooklyn Districts CDs 2 (465 Hamilton Avenue) and 6 (Second Avenue and 12th Street) garages, and the Brooklyn CD 6 Center at Second Avenue and 5th Street. Within the study area, DSNY-related traffic is primarily routed along Hamilton Avenue, Prospect Avenue, Second Avenue, Third Avenue, 20th Street, Gowanus Expressway and Prospect Expressway.

Table 4.14-1
HCM Analysis[1] – Existing Conditions
Hamilton Avenue Converted MTS

Intersection & Lane Group	AM Peak Hour (8:15 a.m. – 9:15 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Hamilton Avenue & Hamilton Place/14th Street (signalized)									
EB LTR	0.08	31.4	C	0.07	31.2	C	0.05	27.3	C
WB LTR	0.61	54.6	D	0.50	50.8	D	0.61	49.1	D
NB LTR	1.00	25.0	C	0.85	11.8	B	0.52	20.9	C
NB L	-	39.0	D	-	36.6	D	-	36.0	D
SB LTR	0.42	16.9	B	0.34	15.7	B	0.63	11.0	B
SB L	-	44.4	D	-	45.6	D	-	39.8	D
OVERALL		26.2	C		16.7	B		23.2	C
Prospect Avenue & Third Avenue (signalized)									
WB L	0.56	50.1	D	0.60	51.9	D	0.34	43.4	D
WB TR	0.78	52.2	D	0.75	50.9	D	1.03	82.7	F
NB L	0.81	8.1	A	0.66	4.8	A	0.83	40.4	D
NB LT	0.33	1.7	A	0.26	1.5	A	0.23	10.5	B
SB T	0.39	39.0	D	0.42	39.7	D	0.45	29.0	C
OVERALL		28.1	C		22.8	C		48.5	D
Third Avenue & 20th Street (signalized)									
EB LTR	0.42	34.8	C	0.21	29.7	C	0.49	43.2	D
WB LTR	0.41	33.4	C	0.44	34.1	C	0.50	43.5	D
NB LTR	0.86	17.0	B	0.76	13.9	B	0.43	14.9	B
NB L	-	36.4	D	-	36.6	D	-	42.0	D
SB LTR	0.56	22.3	C	0.52	21.3	C	0.77	7.5	A
SB L	-	37.8	D	-	37.7	D	-	43.4	D
OVERALL		23.6	C		22.2	C		19.3	C

Notes:
[1] Highway Capacity Manual (HCM) output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement

4.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The Prospect Avenue stop on MTA's "M," "N" and "R" subway lines is located approximately ¼-mile east of the site at the Prospect Avenue/Fourth Avenue intersection. MTA operates one local bus line, B37, through the study area, operating along Third Avenue. Bus stops are located at the Third Avenue/20th Street intersection and scheduled stops occur at various times during the day.

4.14.2.6 Pedestrian Activity

Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at all signalized study intersections. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

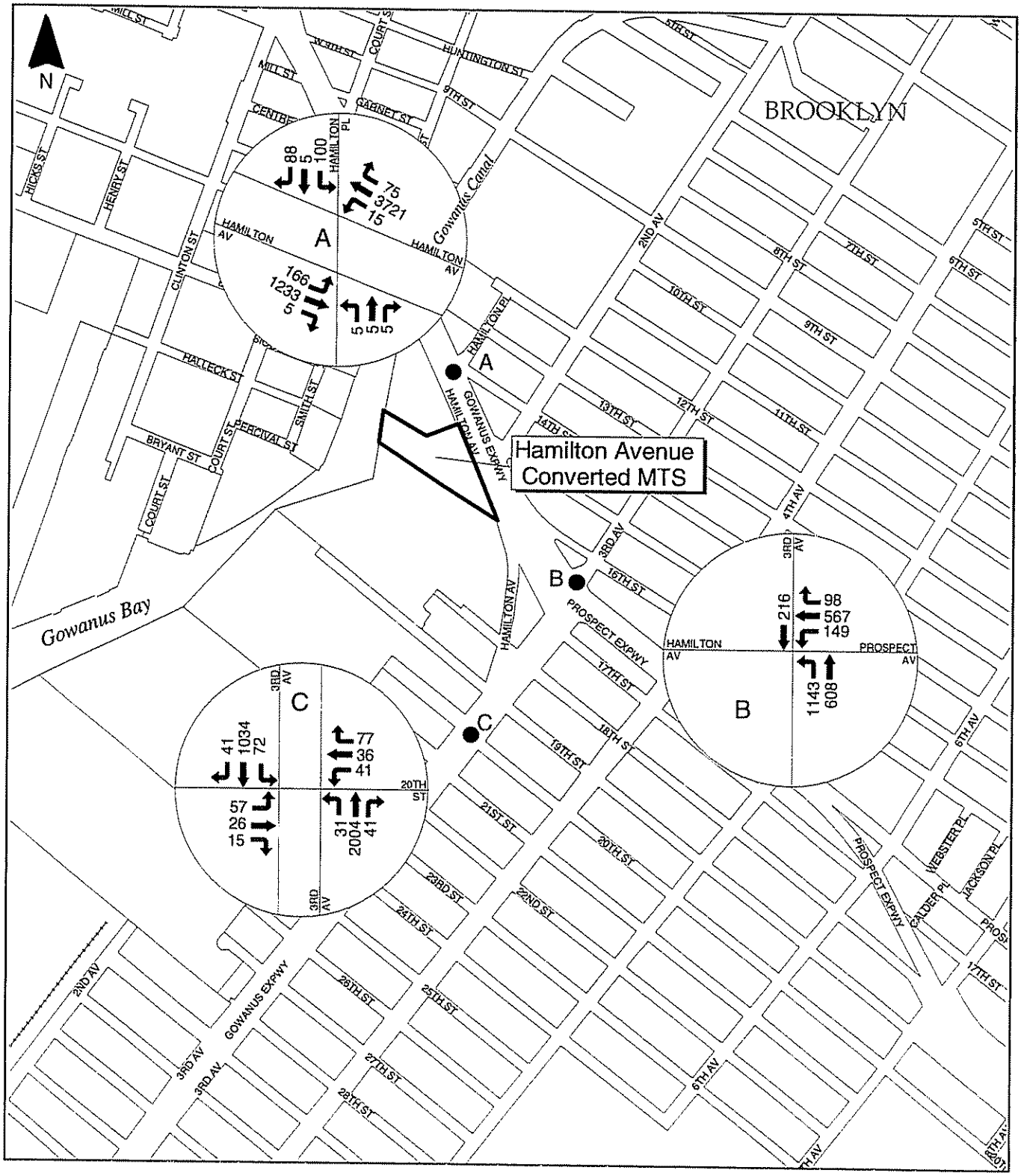
4.14.3 Future No-Build Conditions

4.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1.0% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. In addition, additional traffic generated by proposed developments in the study expected to be completed by the Future No-Build year (2006) was also included. The following is a listing of the approved or in-process developments that are expected to generate significant volumes of traffic through the study area, and thus were specifically accounted for as part of this analysis:

- Lowe's (home improvement retail);
- Red Hook Stores (residential and retail); and
- Ikea Furniture (Retail)

Figures 4.14-6, 4.14-7 and 4.14-8 depict the Future No-Build traffic volumes for the AM, Facility, and PM peak hours at the intersections analyzed. Table 4.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delays and LOS for the study intersections. Overall, unsignalized intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their existing condition LOS, with the following exceptions:

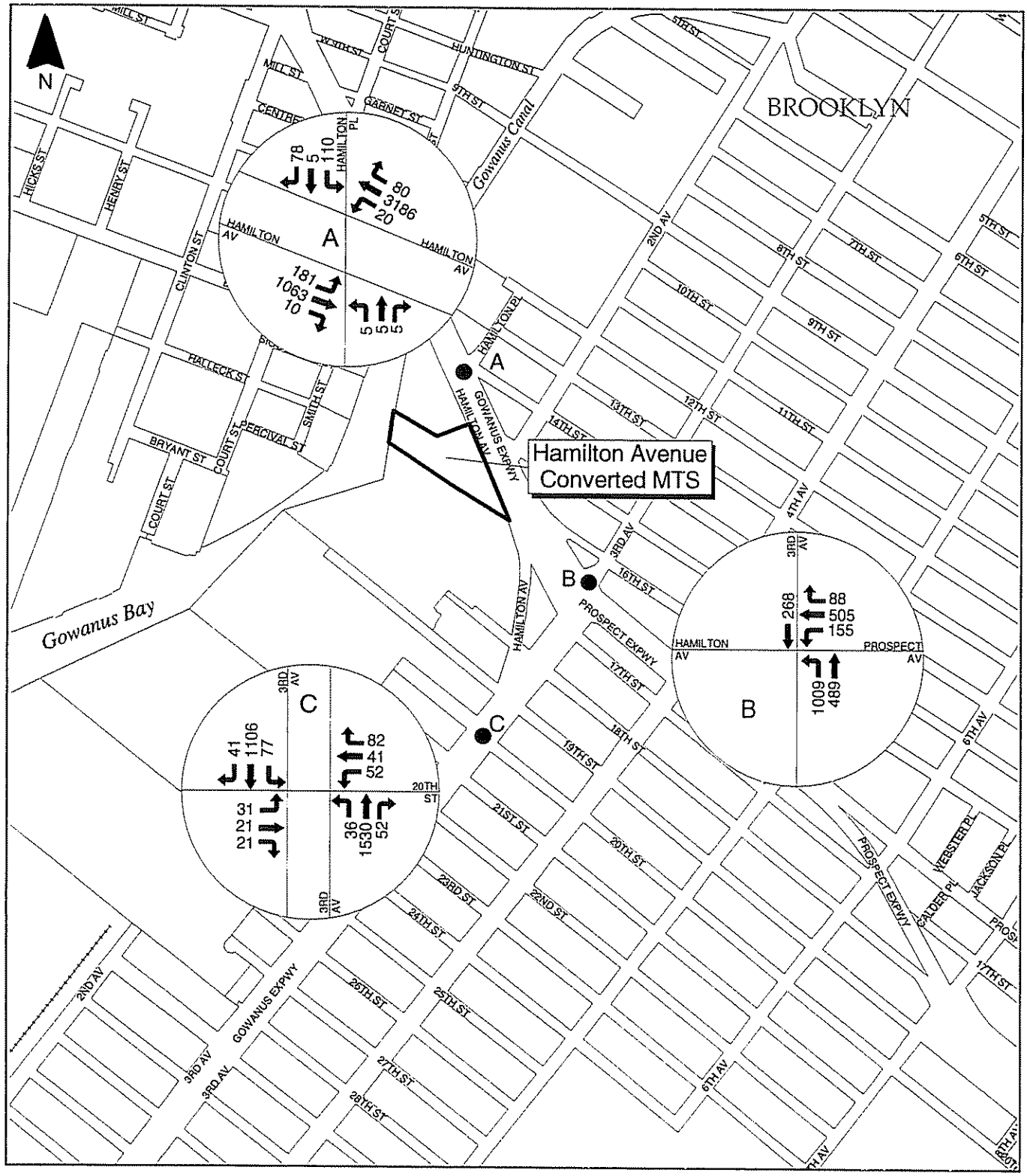


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.14-6 Future No-Build Traffic Volumes AM Peak Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

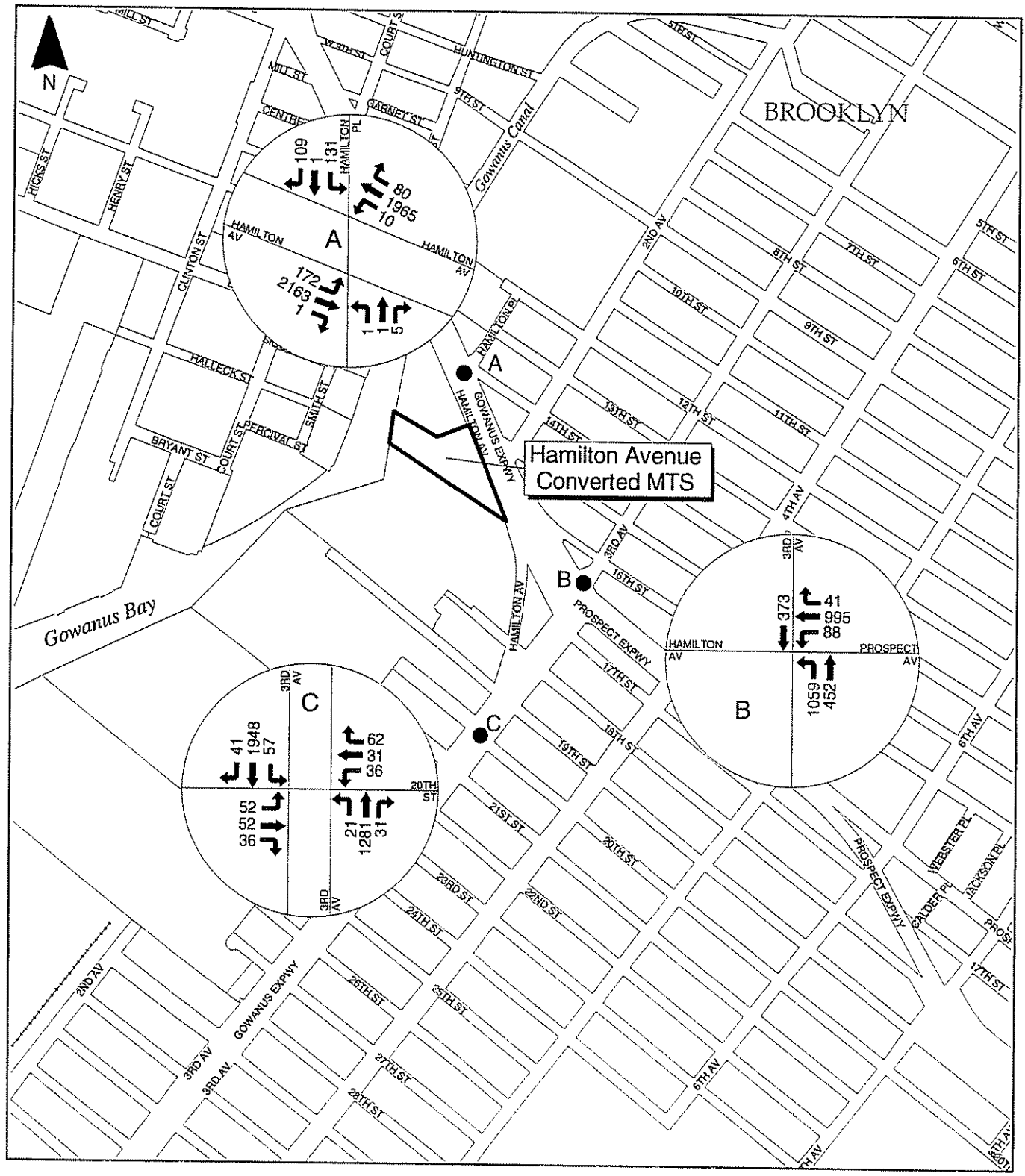
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Figure 4.14-7 Future No-Build Traffic Volumes Facility Peak Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.14-8 Future No-Build Traffic Volumes PM Peak Hamilton Avenue Converted MTS

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Table 4.14-2
HCM Analysis[1] – Future No-Build Conditions
Hamilton Avenue Converted MTS

Intersection & Lane Group	AM Peak Hour (8:15 a.m. – 9:15 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Hamilton Avenue & Hamilton Place/14th Street (signalized)									
EB LTR	0.07	31.3	C	0.07	31.2	C	0.04	27.3	C
WB LTR	1.22	178.3	F	0.92	87.6	F	1.02	99.0	F
NB LTR	1.06	45.1	D	0.92	14.6	B	0.60	22.6	C
NB L	-	39.0	D	-	39.7	D	-	36.0	D
SB LTR	0.45	17.4	B	0.36	16.0	B	0.74	12.6	B
SB L	-	45.3	D	-	46.6	D	-	40.3	D
OVERALL		44.6	D		19.0	B		25.3	C
Prospect Avenue & Third Avenue (signalized)									
WB L	0.57	50.7	D	0.62	52.8	D	0.35	43.6	D
WB TR	0.81	53.3	D	0.78	51.8	D	1.11	109.6	F
NB L	0.84	9.2	A	0.68	5.2	A	0.87	46.2	D
NB LT	0.34	1.7	A	0.27	1.5	A	0.24	10.7	B
SB T	0.40	39.2	D	0.43	39.9	D	0.46	29.3	C
OVERALL		22.6	C		23.3	C		60.0	E
Third Avenue & 20th Street (signalized)									
EB LTR	0.44	35.4	D	0.22	29.9	C	0.51	44.0	D
WB LTR	0.42	33.6	C	0.45	34.4	C	0.52	44.3	D
NB LTR	0.94	22.3	C	0.84	16.5	B	0.47	15.6	B
NB L	-	36.4	D	-	36.6	D	-	42.0	D
SB LTR	0.62	23.7	C	0.57	22.4	C	0.85	9.4	A
SB L	-	37.9	D	-	37.8	D	-	43.5	D
OVERALL		24.8	C		23.2	C		19.8	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L = left movement

TR = through right movement

- During the AM peak hour, the delay of the westbound approach at the intersection of Hamilton Avenue and Hamilton Place and 14th Street increased from 54.6 seconds to 178.3 seconds (LOS D to LOS F).
- During the Facility peak hour, the delay of the westbound approach at the intersection of Hamilton Avenue and Hamilton Place and 14th Street increased from 50.8 seconds to 87.6 seconds (LOS D to LOS F).
- During the PM peak hour, the delay of the westbound approach at the intersection of Hamilton Avenue and Hamilton Place and 14th Street increased from 49.1 seconds to 99.0 seconds (LOS D to LOS F).
- During the PM peak hour, the delay of the westbound through and right movements at the intersection of Prospect Avenue and Third Avenue increased from 82.7 seconds to 92.5 seconds (LOS F in both cases).
- During the AM peak hour, the delay of the eastbound approach at the intersection of Third Avenue and 20th Street increased from 34.8 seconds to 35.4 seconds (LOS C to LOS D).

4.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

4.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

4.14.4 Potential Impacts with the Hamilton Avenue Converted MTS

The Hamilton Avenue Converted MTS would receive waste from 10 CDs in Brooklyn — Brooklyn CDs BKS02, BKS06, BKS07, BKN08, BKS09, BKS10, BKS14, BKS16, BKS17 and BKS18. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours.

4.14.4.1 2006 Future Build Traffic Conditions

2006 Future Build Traffic Conditions assume that the Hamilton Avenue Converted MTS would generate 267 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site

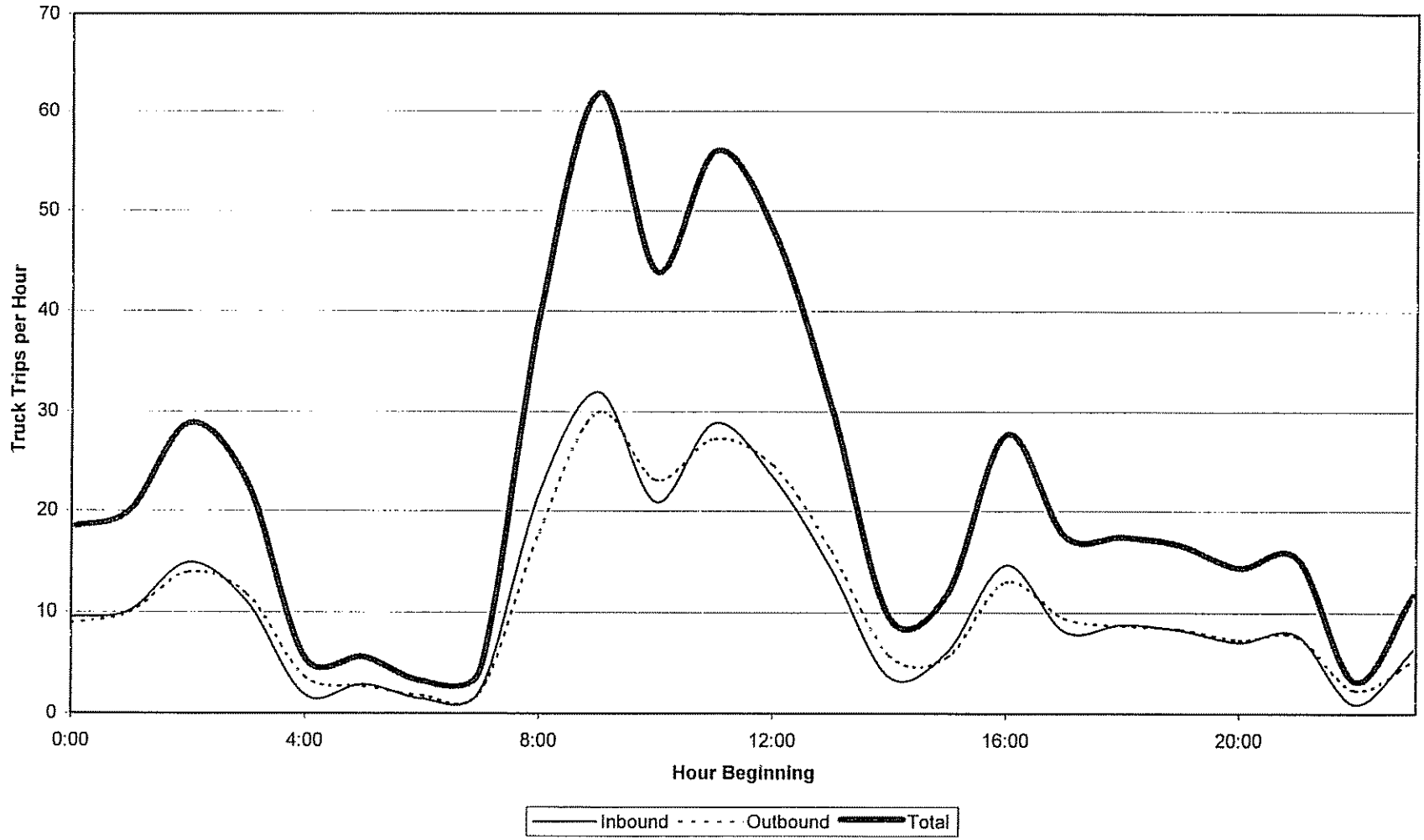
or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the Hamilton Avenue Converted MTS are shown in Figure 4.14-2.

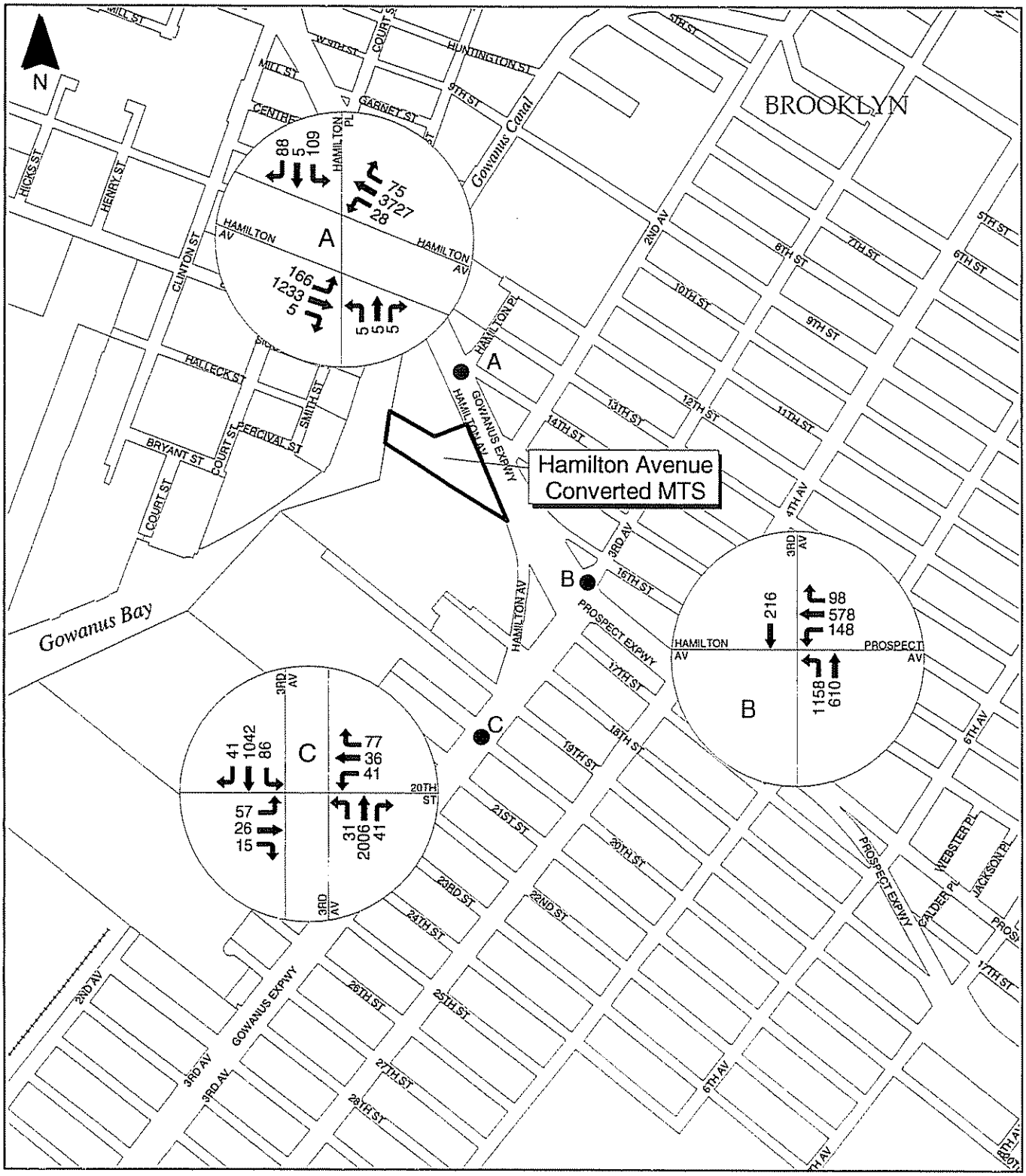
Figure 4.14-9 presents the average peak day temporal distribution of collection vehicles for the Hamilton Avenue Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Hamilton Avenue Converted MTS is expected to vary from approximately 5 to 30 truck trips per hour in the late evening/early morning, 30 to 62 truck trips per hour in the mid-morning/early afternoon, and 10 to 30 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (62) occurs at approximately 9:00 a.m.

Employee trips generated as a result of the Hamilton Avenue Converted MTS are expected to be about 44 per shift (22 coming in and 22 leaving). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (8:15 a.m. to 9:15 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips from the Hamilton Avenue Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic. Figures 4.14-10, 4.14-11 and 4.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 4.14-13, 4.14-14 and 4.14-15 show the intersections analyzed with only the net increase in site-generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Hamilton Avenue Converted MTS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 32. The highest net increase at any one intersection was 30 trucks. Both of these net increases occurred at the intersection of Hamilton Avenue and Hamilton Place and 14th Street.

Figure 4.14-9
Truck Trips per Hour
Hamilton Avenue Converted MTS





Site delineations are approximate
Base Map Source: New York City Department of City Planning

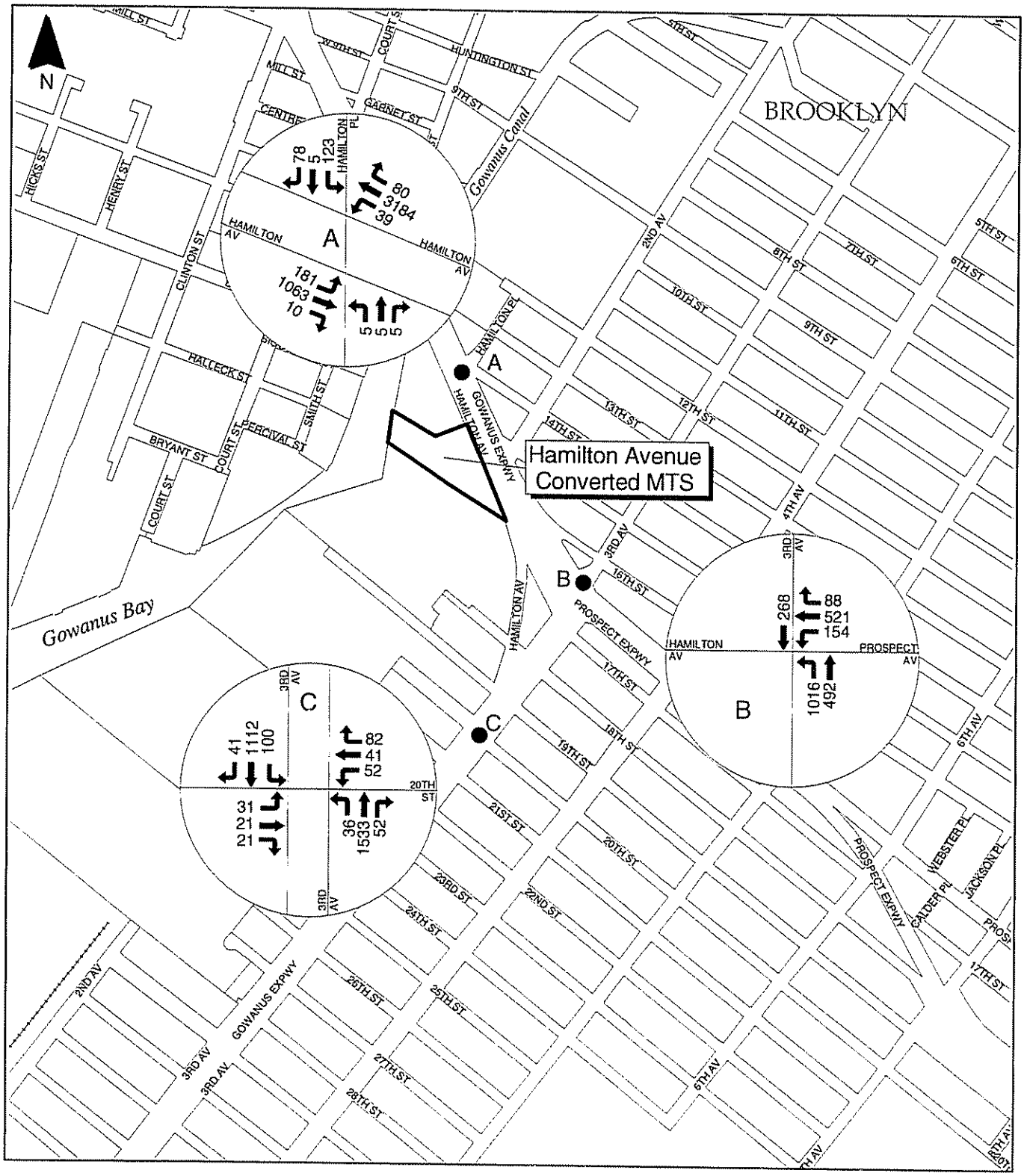
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Figure 4.14-10 2006 Future Build Traffic Volumes
AM Peak
Hamilton Avenue Converted MTS

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Site delineations and are approximate
Base Map Source: New York City Department of City Planning

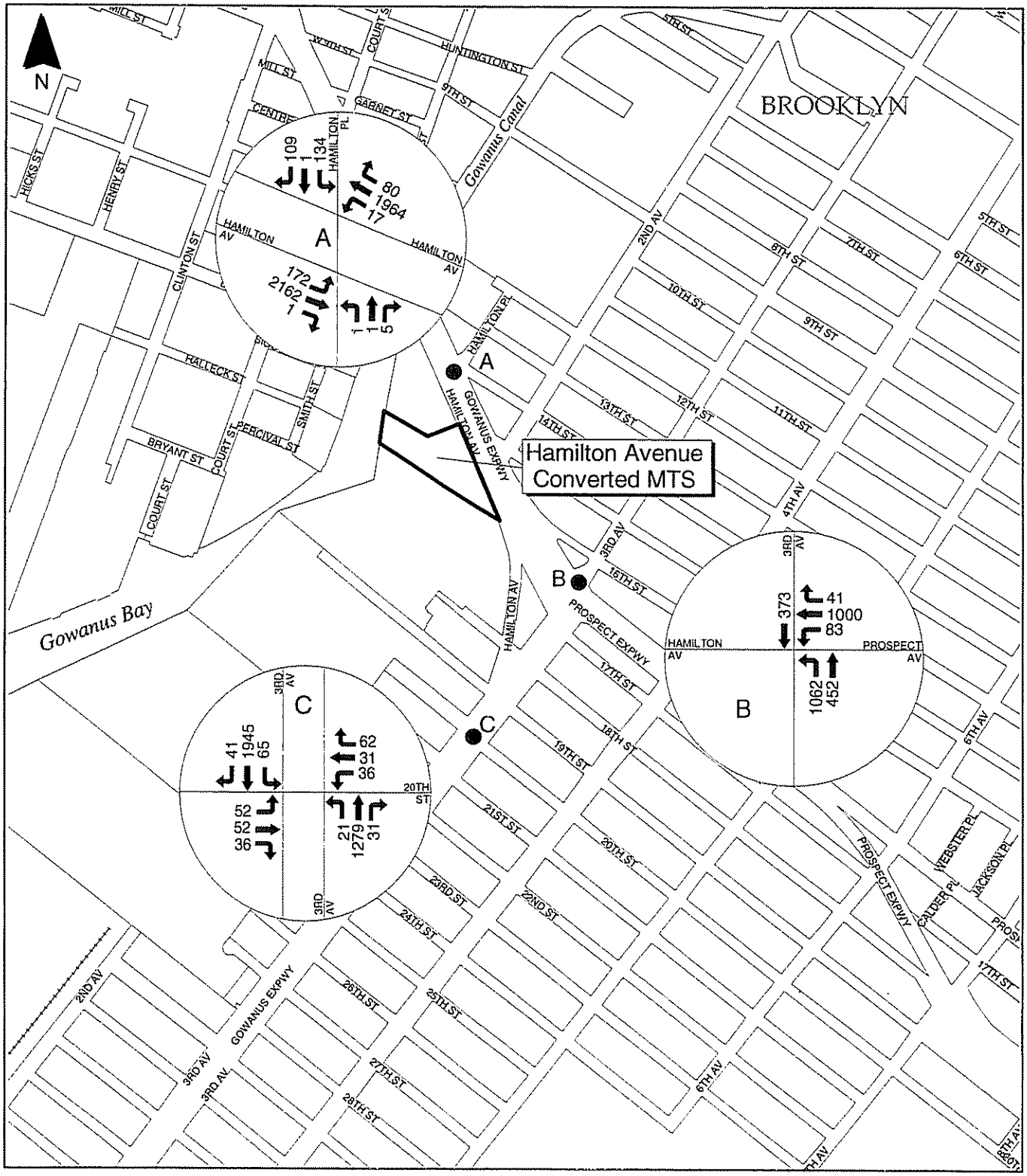
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Figure 4.14-11 2006 Future Build Traffic Volumes Facility Peak Hamilton Avenue Converted MTS

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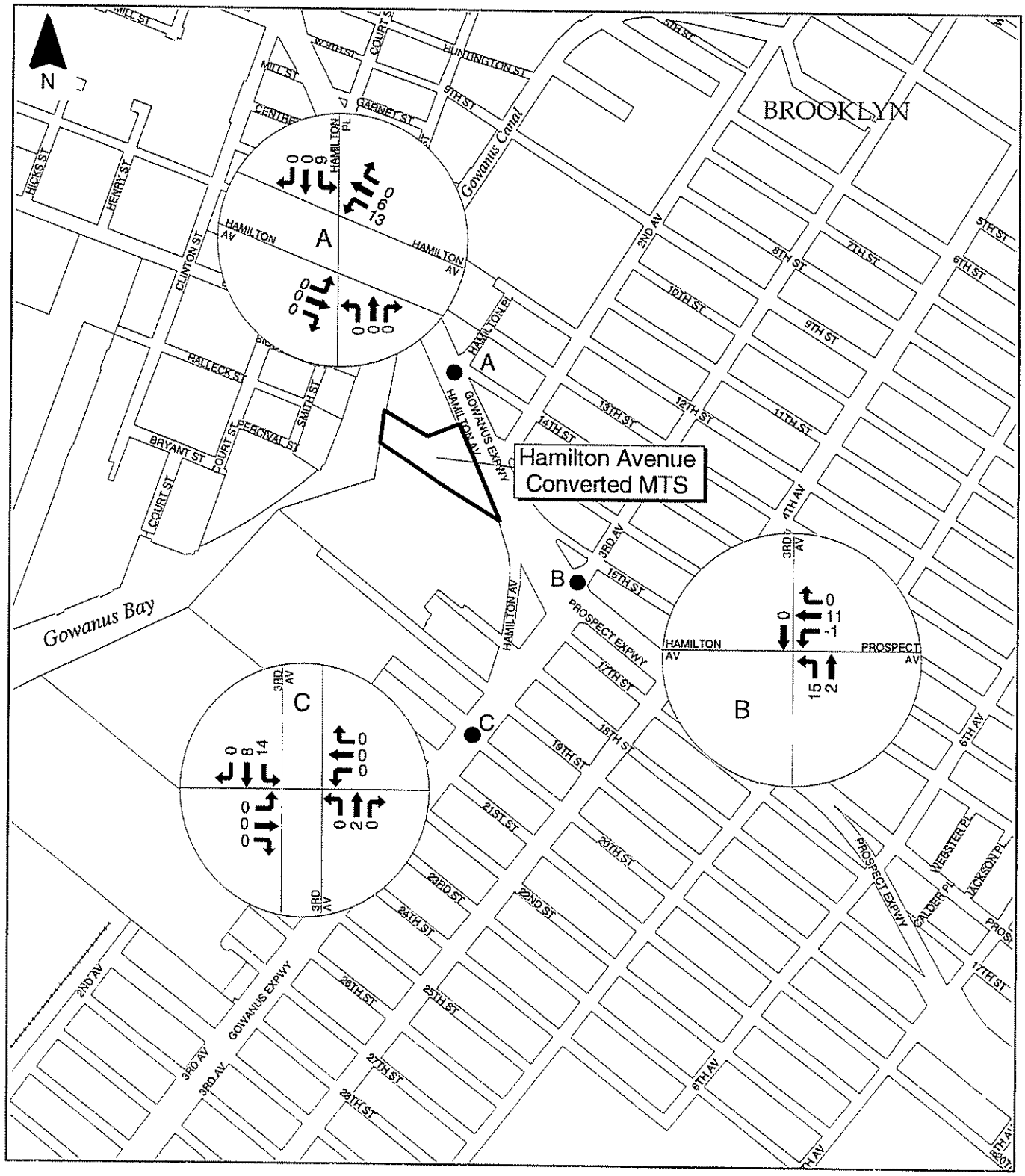


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 4.14-12 2006 Future Build Traffic Volumes
PM Peak
Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

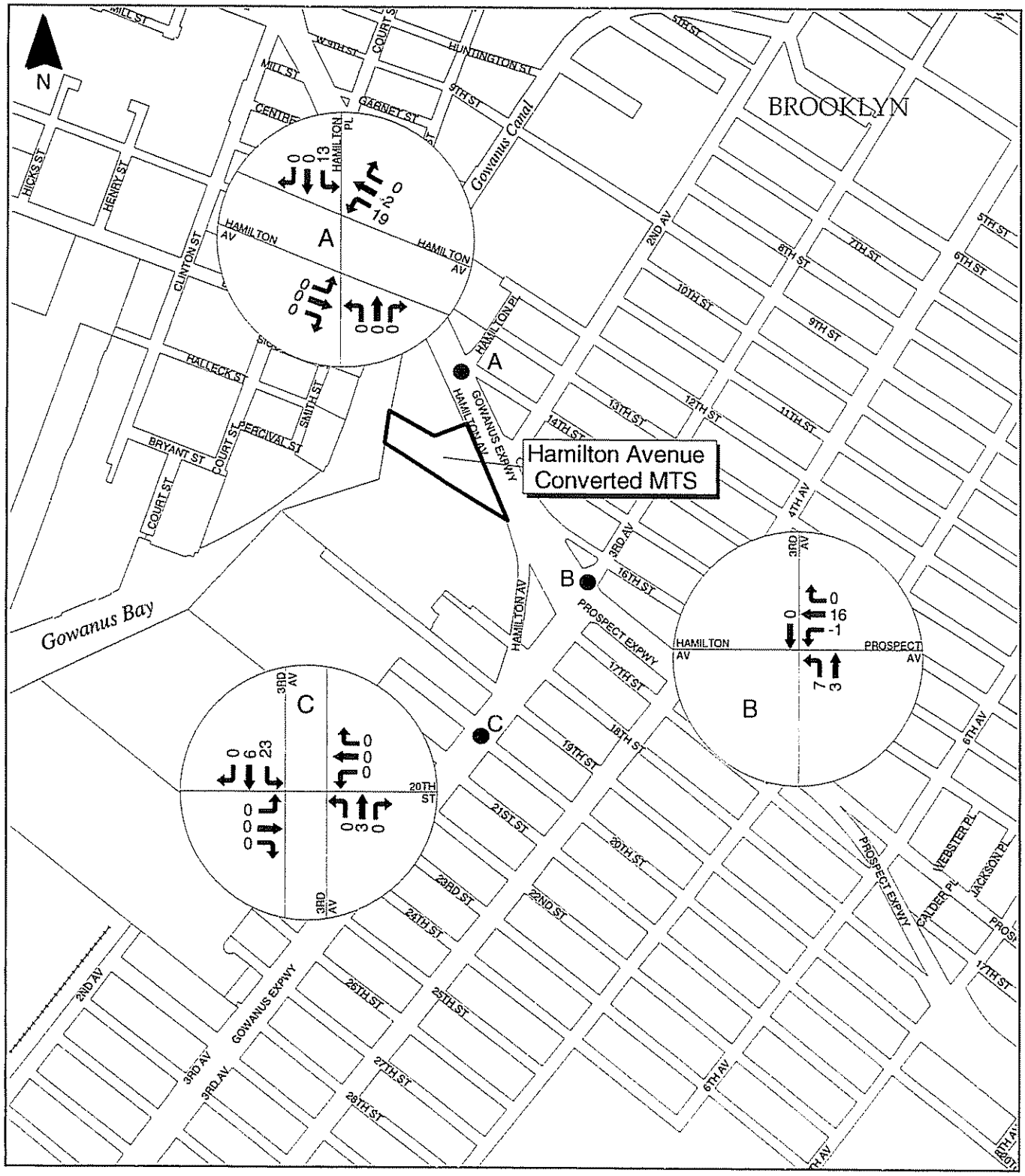
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Figure 4.14-13 2006 Net Traffic - AM Peak
Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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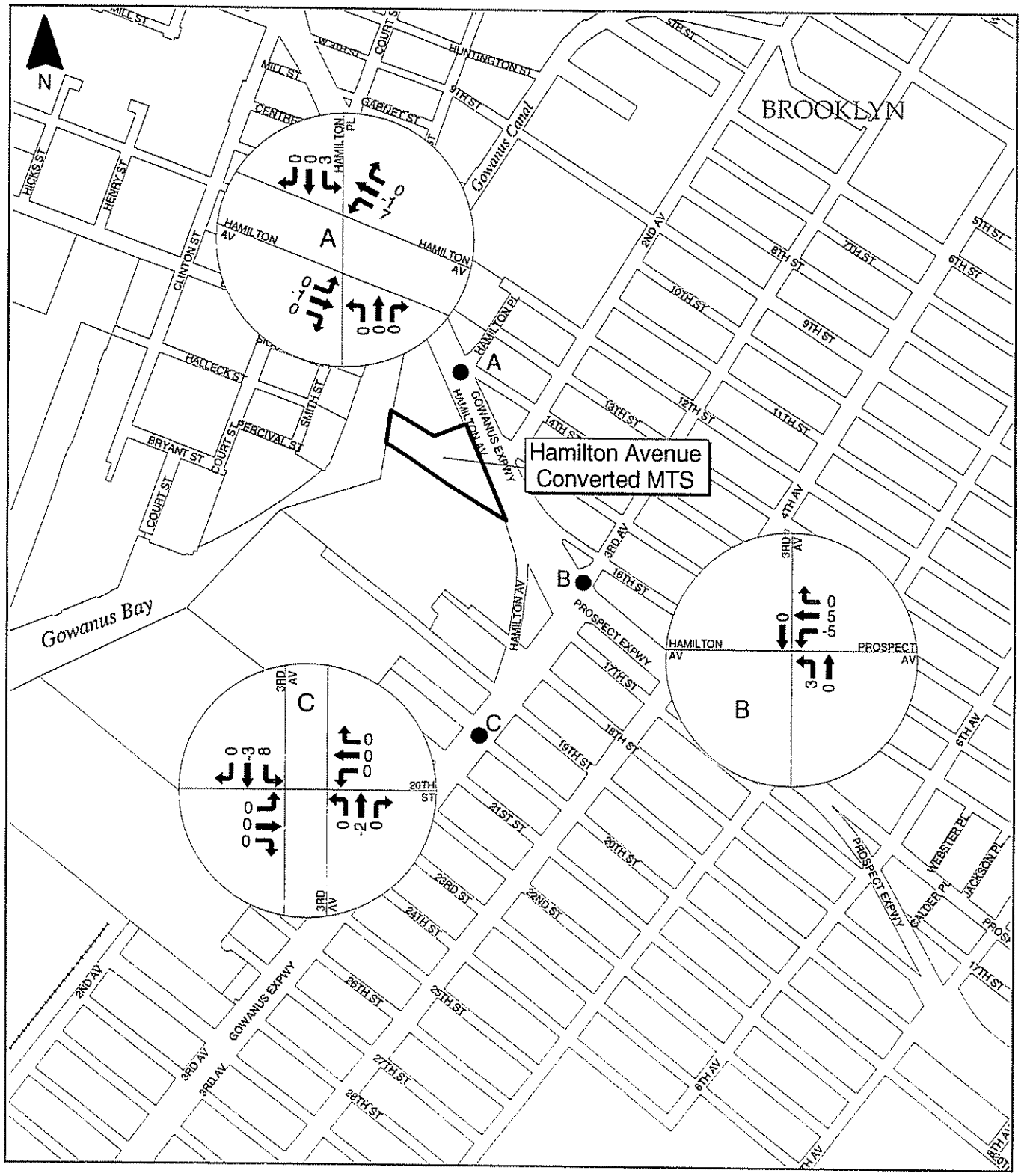
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Figure 4.14-14 2006 Net Traffic - Facility Peak

Hamilton Avenue Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 4.14-15 2006 Net Traffic - PM Peak
Hamilton Avenue Converted MTS

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 68% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 62% of weekday traffic volumes. Table 4.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Hamilton Avenue Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 4.14-3
Weekday and Weekend Traffic
Hamilton Avenue Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic NB and SB on Hamilton Avenue[1]	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
267	181	59,819	37,339

Note:
(1) NB and SB traffic data collected from ATR counts taken on Hamilton Avenue between Hamilton Place and 2nd Avenue from September 15 to 21, 2003.

Table 4.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Hamilton Avenue Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The two intersections that may experience potentially significant impacts are discussed in Section 4.14.4.2 and summarized in Table 4.14-5.

4.14.4.2 Impacts and Mitigation

Two of the three intersections may experience impacts great enough to be considered significant during only one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below. Their effectiveness is summarized in Table 4.14-5.

Table 4.14-4
HCM Analysis[1] – 2006 Future Build Conditions
Hamilton Avenue Converted MTS

Intersection & Lane Group	AM Peak Hour (8:15 a.m. – 9:15 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Hamilton Avenue & Hamilton Place/14th Street (signalized)									
EB LTR	0.07	31.2	C	0.07	31.2	C	0.04	27.3	C
WB LTR	1.34	225.6	F	1.02	111.4	F	1.04	106.1	F
NB LTR	1.07	48.4	D	0.93	15.6	B	0.60	22.7	C
NB L	-	40.1	D	-	41.0	D	-	36.5	D
SB LTR	0.45	17.4	B	0.36	16.0	B	0.73	12.6	B
SB L	-	45.3	D	-	46.6	D	-	40.3	D
OVERALL		51.4	D		21.2	C		25.4	C
Prospect Avenue & Third Avenue (signalized)									
WB L	0.56	50.3	D	0.61	52.3	D	0.32	42.9	D
WB TR	1.19	147.3	F	0.81	53.3	D	1.11	113.0	F
NB L	0.85	9.8	A	0.69	5.4	A	0.87	46.6	D
NB LT	0.34	1.7	A	0.27	1.5	A	0.24	10.7	B
SB T	0.40	39.2	D	0.43	39.9	D	0.46	29.3	C
OVERALL		44.2	D		23.7	C		61.5	E
Third Avenue & 20th Street (signalized)									
EB LTR	0.44	35.4	D	0.22	29.9	C	0.51	44.0	D
WB LTR	0.42	33.6	C	0.45	34.4	C	0.52	44.3	D
NB LTR	0.94	22.4	C	0.85	16.6	B	0.47	15.6	B
NB L	-	36.4	D	-	36.6	D	-	42.0	D
SB LTR	0.64	24.2	C	0.60	22.9	C	0.85	9.5	A
SB L	-	38.7	D	-	39.1	D	-	44.2	D
OVERALL		25.2	C		23.5	C		19.9	B

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement

Table 4.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
Hamilton Avenue Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Hamilton Avenue & Hamilton Place/14th Street (signalized) – AM Peak									
EB LTR	0.07	31.3	C	0.07	31.2	C	0.07	31.2	C
WB LTR	1.22	178.3	F	1.34	225.6	F	0.83	57.4	E
NB LTR	1.06	45.1	D	1.07	48.4	D	1.07	48.4	D
NB L	-	39.0	D	-	40.1	D	-	40.1	D
SB LTR	0.45	17.4	B	0.45	17.4	B	0.45	17.4	B
SB L	-	45.3	D	-	45.3	D	-	45.3	D
OVERALL		44.6	D		51.4	D		48.1	D
Hamilton Avenue & Hamilton Place/14th Street (signalized) – Facility Peak									
EB LTR	0.07	31.2	C	0.07	31.2	C	0.07	29.7	C
WB LTR	0.92	87.6	F	1.02	111.4	F	0.93	87.2	F
NB LTR	0.92	14.6	B	0.93	15.6	B	0.96	19.8	B
NB L	-	39.7	D	-	41.0	D	-	41.0	D
SB LTR	0.36	16.0	B	0.36	16.0	B	0.37	17.1	B
SB L	-	46.6	D	-	46.6	D	-	44.9	D
OVERALL		19.0	B		21.2	C		23.6	C
Hamilton Avenue & Hamilton Place/14th Street (signalized) – PM Peak									
EB LTR	0.04	27.3	C	0.04	27.3	C	0.04	26.6	C
WB LTR	1.02	99.0	F	1.04	106.1	F	1.01	94.7	F
NB LTR	0.60	22.6	C	0.60	22.7	C	0.61	23.4	C
NB L	-	36.0	D	-	36.5	D	-	35.9	D
SB LTR	0.74	12.6	B	0.73	12.6	B	0.75	13.5	B
SB L	-	40.3	D	-	40.3	D	-	39.7	D
OVERALL		25.3	C		25.4	C		25.8	C
Prospect Avenue & Third Avenue (signalized) – AM Peak									
WB L	0.57	50.7	D	0.56	50.3	D	0.42	39.4	D
WB TR	0.81	53.3	D	1.19	147.3	F	0.88	55.2	E
NB L	0.84	9.2	A	0.85	9.8	A	0.95	24.9	C
NB LT	0.34	1.7	A	0.34	1.7	A	0.38	4.9	A
SB T	0.40	39.2	D	0.40	39.2	D	0.44	41.7	D
OVERALL		22.6	C		44.2	D		29.9	C
Prospect Avenue & Third Avenue (signalized) – PM Peak									
WB L	0.35	43.6	D	0.32	42.9	D	0.31	41.8	D
WB TR	1.11	109.6	F	1.11	113.0	F	1.07	96.3	F
NB L	0.87	46.2	D	0.87	46.6	D	0.88	47.3	D
NB LT	0.24	10.7	B	0.24	10.7	B	0.25	11.1	B
SB T	0.46	29.3	C	0.46	29.3	C	0.48	30.4	C
OVERALL		60.0	E		61.5	E		56.2	E

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement

Hamilton Avenue/Hamilton Place/14th Street – During the AM peak hour, a potential impact was identified on the westbound approach when the delay is expected to increase from 178.3 seconds to 225.6 seconds (LOS F in both cases). During the Facility peak hour, the same (westbound) approach is expected to experience an increase in delay from 87.6 seconds to 111.4 seconds (LOS F in both cases). During the PM peak hour, the delay of the westbound approach is expected to increase from 99.0 seconds to 106.1 seconds (LOS F in both cases).

During the AM peak hour, an increase in green time of 13 seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would eliminate the 13-second exclusive eastbound phase, leaving the northbound and southbound approach green time unchanged. This mitigation would improve the LOS for the westbound approach to below Future No-Build Condition levels.

During the Facility peak hour, an increase in green time of two seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract two seconds from the northbound and southbound approach green time, but would improve the LOS for the westbound approach to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches.

During the PM peak hour, an increase in green time of one second for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second of green time from the northbound and southbound approach, but would improve the LOS for the westbound approach (again) to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches.

Prospect Avenue/Third Avenue – During the AM peak hour, a potential impact was identified on the westbound through and right movements when the delay increased from 53.3 seconds to 147.3 seconds (LOS D to LOS F). During the PM hour, the delay of the westbound approach is expected to increase from 109.6 seconds to 113.0 seconds (LOS F in both cases).

During the AM peak hour, an increase in green time of eight seconds for the westbound approach should eliminate this unacceptable increase in delay. This mitigation measure would subtract five seconds of green time from the northbound left and through movements and three seconds of green time from the northbound and southbound approach phases, but would reduce the delay for the westbound through and right movements from 147.3 seconds to 55.2 seconds. The delay of both the northbound and southbound approaches would increase within acceptable levels. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

During the PM peak hour, an increase in green time of one second for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would detract one second of green time from the northbound and southbound approach, but would improve the LOS for the westbound approach with minimal increase to the delay of the northbound and southbound approaches.

Overall, the mitigation measures suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Condition.

4.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

4.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

4.15 Air Quality

4.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) from the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Hamilton Avenue Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 4.15.4.2.

4.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 4.15.1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 4.15-1
Representative Ambient Air Quality Data
Hamilton Avenue Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	MTA, Flatbush Avenue between Tillary Street and Johnson Avenue	8-Hour	3,436 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}[(2)]	P.S. 321	Annual	20 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	45 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	P.S. 321	3-Hour	152 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	94 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	24 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 and USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1998 calendar year.

4.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

4.15.4 Potential Impacts with the Hamilton Avenue Converted MTS

4.15.4.1 On-Site Analysis

4.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 4.15-2. Figure 4.15-1 shows the locations of these sources within the site.

4.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 4.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Hamilton Avenue Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 4.15-3, are below the STVs. The Hamilton Avenue Converted MTS would not, therefore, significantly impact air quality in the area.

Table 4.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
Hamilton Avenue Converted MTS

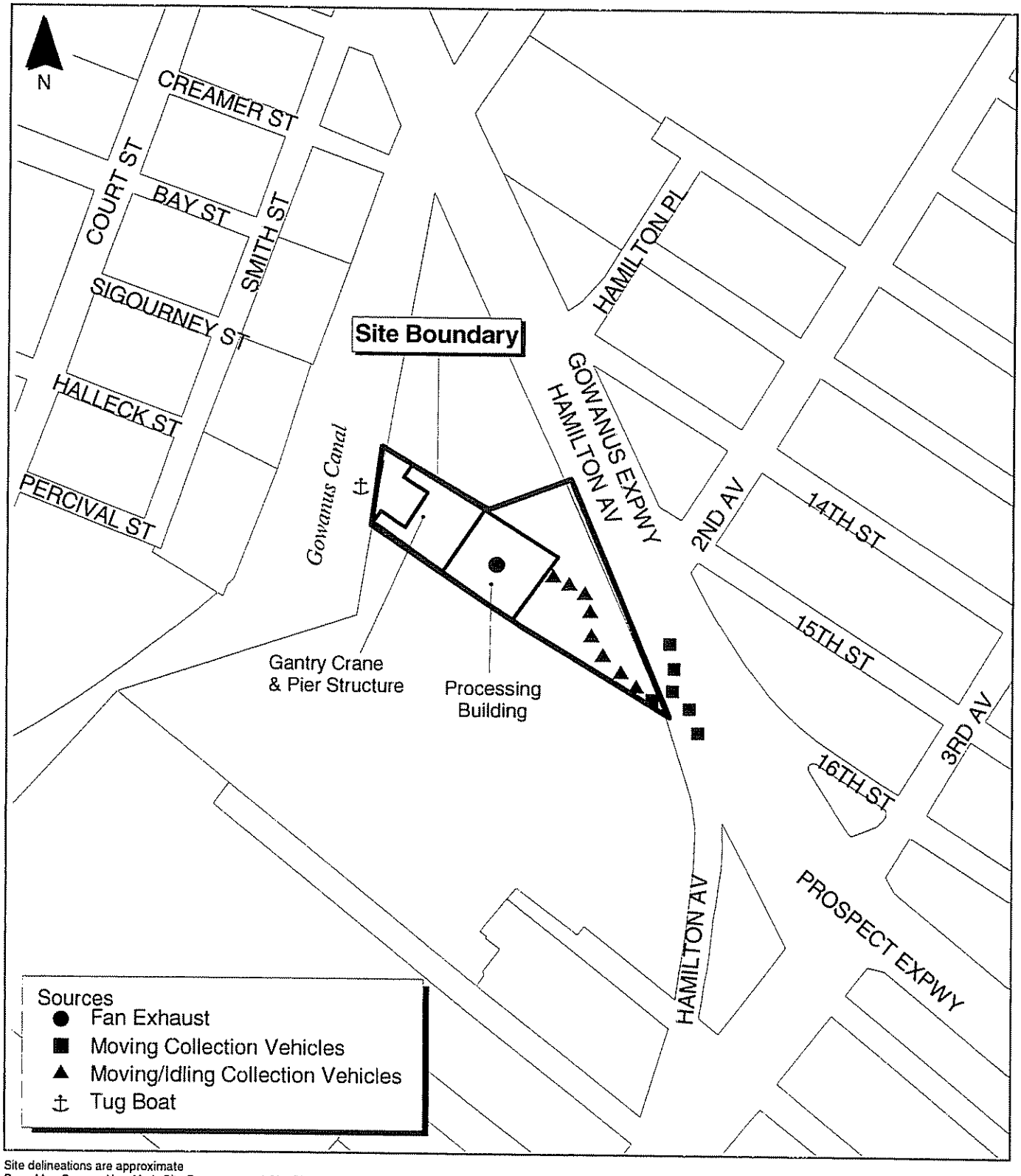
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweeper	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	6	4
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	12 in, 1 out	~~3~~ 4 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~ available upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (one third of 12), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

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Figure 4.15-1 On-Site Air Quality Analysis

Hamilton Avenue Converted MTS

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Table 4.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Hamilton Avenue Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~536~~744	~~2,635~~3,321	~~3,171~~4,065	40,000	NA
	8-hour[6]	~~200~~321	~~3,322~~2,635	~~3,522~~2,956	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	~~6~~13	56	~~62~~69	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~24~~38	~~82~~90	~~106~~128	150	NA
	Annual	~~3~~5	~~22~~20	25	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	~~24.0~~	NA	NA	NA	5
	Annual Neighborhood Average	~~0.022~~0.025	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	~~45~~44	~~152~~186	~~197~~230	1,300	NA
	24-hour[6]	3	~~94~~107	~~97~~110	365	NA
	Annual	0.4	~~24~~18	~~24~~18	80	NA

Notes:

[1] The highest estimated pollutant concentrations found at any of the off-site receptor locations.

[2] Background concentrations were obtained from the NYCDEP ~~in April 2003~~memorandum dated February 18, 2005..

[3] NAAQS = National Ambient Air Quality Standard.

[4] Screening threshold value (STV) established by the NYCDEP and NYSDEC.

[5] Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

[6] The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

[7] The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

4.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 4.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Hamilton Avenue Converted MTS are not considered to be significant.

4.15.4.2 Off-Site Analysis

4.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of Hamilton Avenue at Hamilton Place and 14th Street, and 20th Street at 3rd Avenue and 4th Avenue to determine whether Hamilton Avenue Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the intersections of Hamilton Avenue at Hamilton Place and 14th Street, and 20th Street at 3rd Avenue and 4th Avenue to determine whether Hamilton Avenue Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 4.15-2. This selection was in accordance with the PM_{10} and $PM_{2.5}$ screening criteria discussed in Section 3.17.

Table 4.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Hamilton Avenue Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] (µg/m³)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] (µg/m³)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] (µg/m³)	Long-Term (Annual) Guideline Conc. (AGCs) [5] (µg/m³)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] (µg/m³)	Unit Risk Factors [7] (µg/m³)	Max. Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	2.20E-01	1.30E+03	1.70E-04	4.24E-03	1.30E-01	3.26E-02	4.24E-03	8.30E-06	3.52E-08
2	*Formaldehyde*	2.79E-01	*3.00E+01*	9.29E-03	5.36E-03	6.00E-02	8.93E-02	5.36E-03	1.30E-05	6.97E-08
3	*1,3 Butadiene*	9.24E-03	-	-	1.78E-04	3.60E-03	4.93E-02	1.78E-04	2.80E-04	4.97E-08
4	Acetaldehyde	1.81E-01	4.50E+03	4.03E-05	3.48E-03	4.50E-01	7.74E-03	3.48E-03	2.20E-06	7.66E-09
5	Benzo(a)pyrene	4.44E-05	-	-	8.54E-07	2.00E-03	4.27E-04	8.54E-07	1.70E-03	1.45E-09
Non-Carcinogenic Pollutants [10]									-	
6	Propylene	6.10E-01	-	-	1.17E-02	3.00E+03	3.91E-066	1.17E-02	NA	NA
7	Acrolein	2.19E-02	1.90E-01	1.15E-01	4.20E-04	2.00E-02	2.10E-02	4.20E-04	NA	NA
8	Toluene	9.66E-02	3.70E+04	2.61E-06	1.86E-03	4.00E+02	4.64E-06	1.86E-03	NA	NA
9	Xylenes	6.73E-02	4.30E+03	1.57E-05	1.29E-03	7.00E+02	1.85E-06	1.29E-03	NA	NA
10	Anthracene	4.42E-04	-	-	8.49E-06	2.00E-02	4.25E-04	8.49E-06	NA	NA
11	Benzo(a)anthracene	3.97E-04	-	-	7.63E-06	2.00E-02	3.81E-04	7.63E-06	NA	NA
12	Chrysene	8.34E-05	-	-	1.60E-06	2.00E-02	8.02E-05	1.60E-06	NA	NA
13	Naphthalene	2.00E-02	2.32E+03	2.54E-06	3.85E-04	3.00E+00	1.28E-04	3.85E-04	NA	NA
14	Pyrene	1.13E-03	-	-	2.17E-05	2.00E-02	1.09E-03	2.17E-05	NA	NA
15	Phenanthrene	6.95E-03	-	-	1.34E-04	2.00E-02	6.68E-03	1.34E-04	NA	NA
16	Dibenz(a,h)anthracene	1.38E-04	-	-	2.65E-06	2.00E-02	1.32E-04	2.65E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.25E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**2.09E-01**	**Total Estimated Combined Cancer Risk**		**1.64E-07**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 4.15-4:

(1) Estimated by multiplying the total 1-hour hydrocarbons (HCs) concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGCs) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

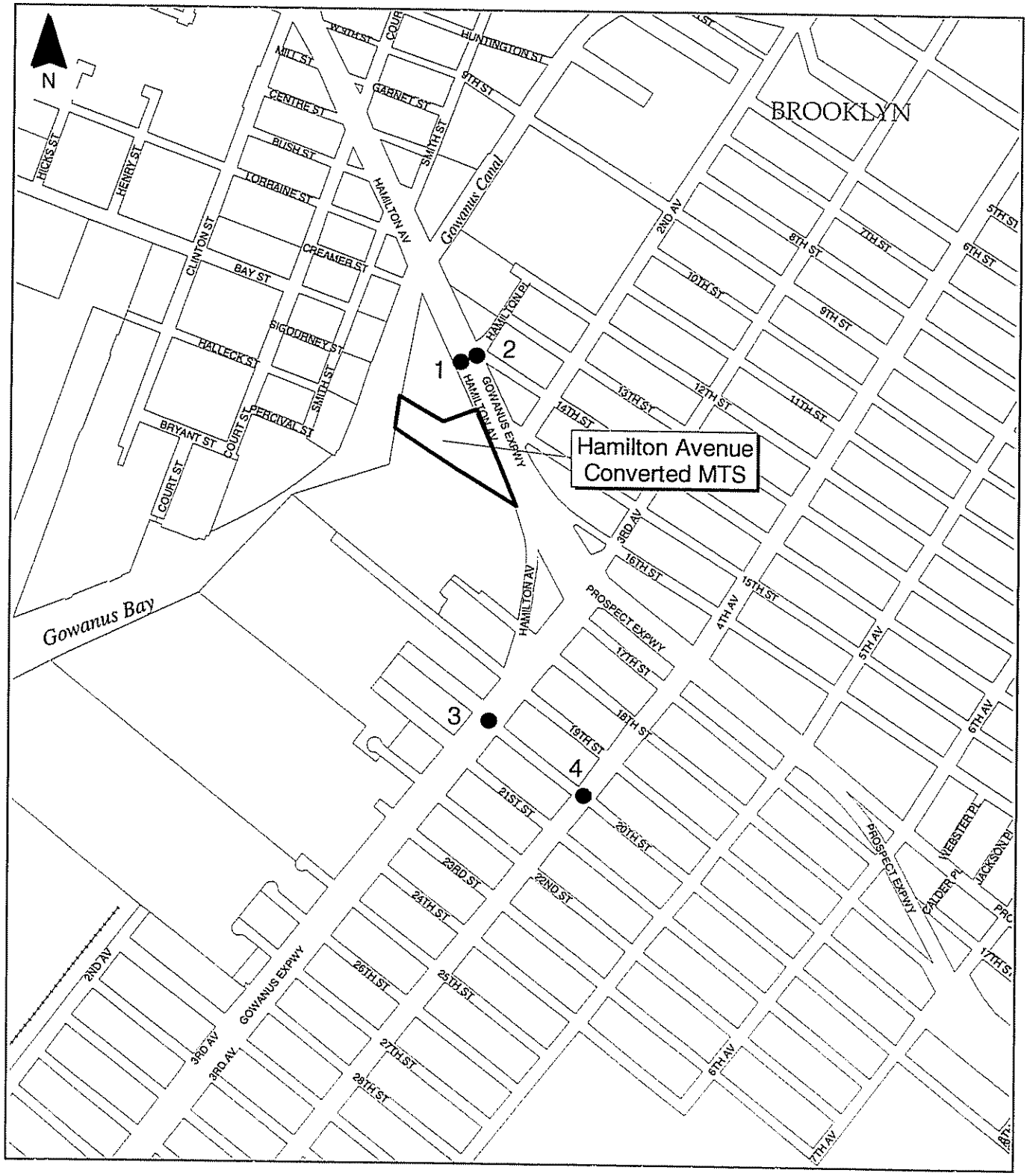
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.15-2 Off-Site Air Quality Intersections Studied Hamilton Avenue Converted MTS

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4.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 4.15-5~~, are all within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$)~~. A Tier II analysis of the intersections at Hamilton Avenue and Hamilton Place and 14th Street, and 20th Street at 3rd Avenue and 4th Avenue was necessary to determine the off-site annual and 24-hour impacts for PM_{10}. and the annual neighborhood impacts for $PM_{2.5}$. The results of this Tier II analysis are within the applicable state and federal ambient air quality standards for PM_{10}. The off-site operations of the Hamilton Avenue Converted MTS, therefore, are not considered to be significant.

Table 4.15-5
Estimated Pollutant Concentration Near Selected Roadway Intersections
Hamilton Avenue Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] µg/m³ (NAAQS: 150 µg/m³)	Annual PM_{10} Conc.[1] µg/m³ (NAAQS: 50 µg/m³)	Impacts from On-Site Emission Sources[2] µg/m³ (STV: 5 µg/m³)	Impacts from Off-Site Emission Sources[3] µg/m³ (STV: 5 µg/m³)	Total Combined Impacts from On- and Off-Site Emission Sources µg/m³ (STV: 5 µg/m³)	Impacts from On-Site Emission Sources[2] µg/m³ (STV: 0.1 µg/m³)	Impacts from Off-Site Emission Sources[4] µg/m³ (STV: 0.1 µg/m³)	Total Combined Impacts from On- and Off-Site Emission Sources µg/m³ (STV: 0.1 µg/m³)
20th Street, 3rd Avenue & 4th Avenue									
Existing Conditions	NA[6]	145	42						
Future No-Build Conditions	NA[6]	143	41						
Future Build Conditions	NA[6]	144	42						
Future Build Incremental				0.090	0.30	0.39	0.006	0.02[5]	0.026
Hamilton Avenue, Hamilton Place, & 14th Street									
Existing Conditions	NA[6]	~~137~~114[5]	~~43~~47[5]						
Future No-Build Conditions	NA[6]	~~114~~	46~~45~~[5]						
Future Build Conditions	NA[6]	~~141~~112[5]	47~~45~~[5]						
Future Build Incremental		~~112~~ ~~142~~114[5] ~~114~~		0.17	1.83~~0.3~~	2.00	0.010	0.03~~45~~	0.04

Notes for Table 4.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8-hr CO = 2.8 ppm; 24-hr PM_{10} (2nd Highest Max) = 507 $\mu g/m^3$; Annual PM_{10} = 203 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways averaged over the mobile source analysis grid using AM, Facility, or PM peak traffic conditions.

(5) Results determined by performing a TIER II analysis.

(6) Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

NA = Not Applicable

4.16 Odor

4.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the row of apartment buildings located on 15th Street between 2nd Avenue and 3rd Avenue, approximately 372 feet from the site boundary.

4.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the Hamilton Avenue Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

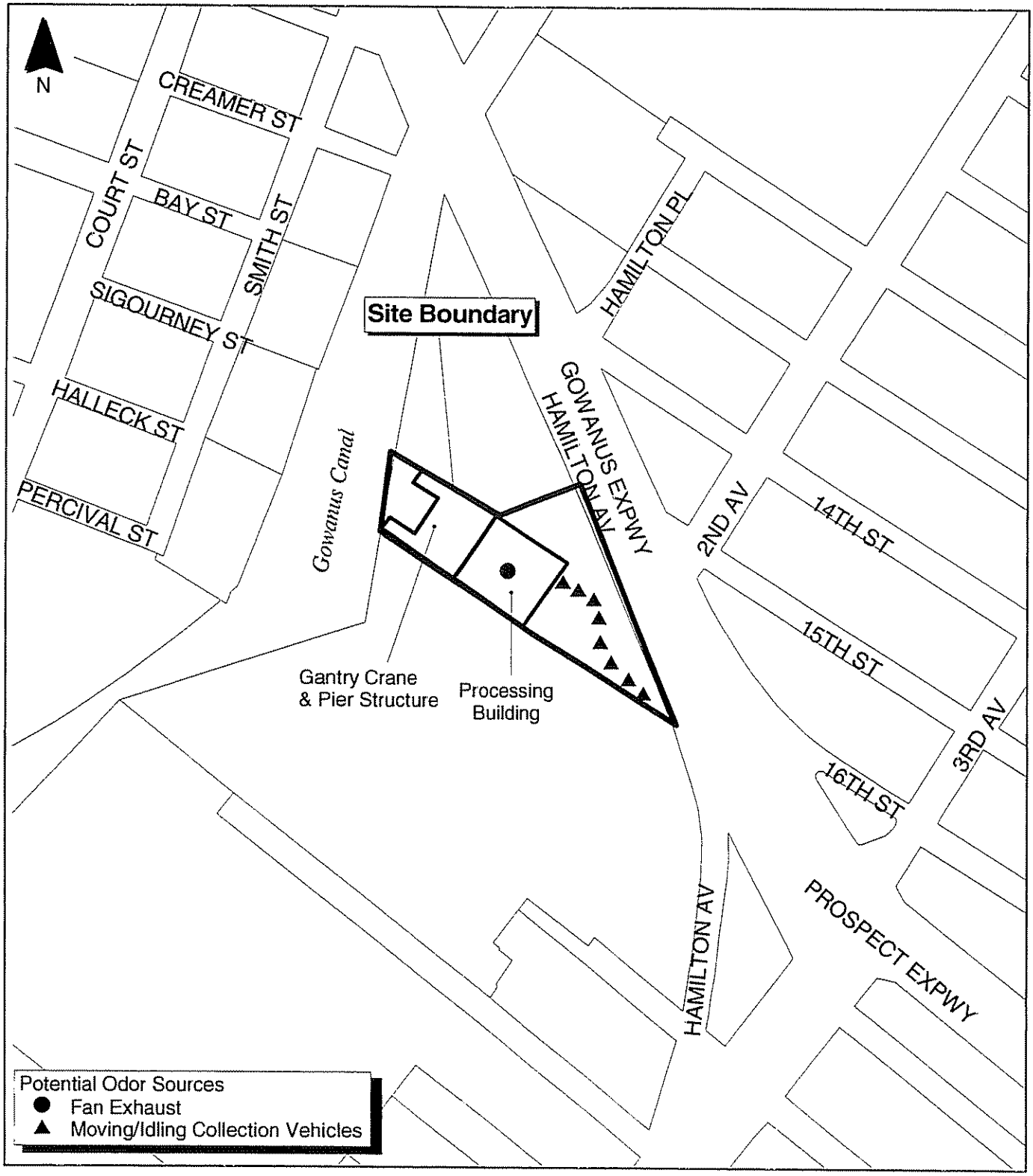
4.16.3 Potential Impacts with the South Bronx Converted MTS

4.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Hamilton Avenue Converted MTS are provided in Table 4.16-1. Figure 4.16-1 shows the locations of these sources within the site.

Table 4.16-1
Odor Sources Included in Odor Analysis
Hamilton Avenue Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving /Ideling Collection Vehicles	13



Site delineations are approximate
Base Map Source: New York City Department of City Planning

100 0 100 Feet

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Figure 4.16-1 Potential Odor Sources

Hamilton Avenue Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Hamilton Avenue Converted MTS.

4.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 4.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Hamilton Avenue Converted MTS at any nearby sensitive receptor is less than 1, so odors from the Hamilton Avenue Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 4.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Hamilton Avenue Converted MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	0.44
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result[2]	0.12
Type of Receptor	Apartment Buildings
Distance to Receptor[3]	372 Feet

Notes:
(1) ~~D/T ratio is dimensionless.~~ Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
(2) Measured from the site boundary.
(3) ~~Measured from the site property line.~~

4.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Hamilton Avenue Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

4.17.1 Existing Conditions

4.17.1.1 Introduction

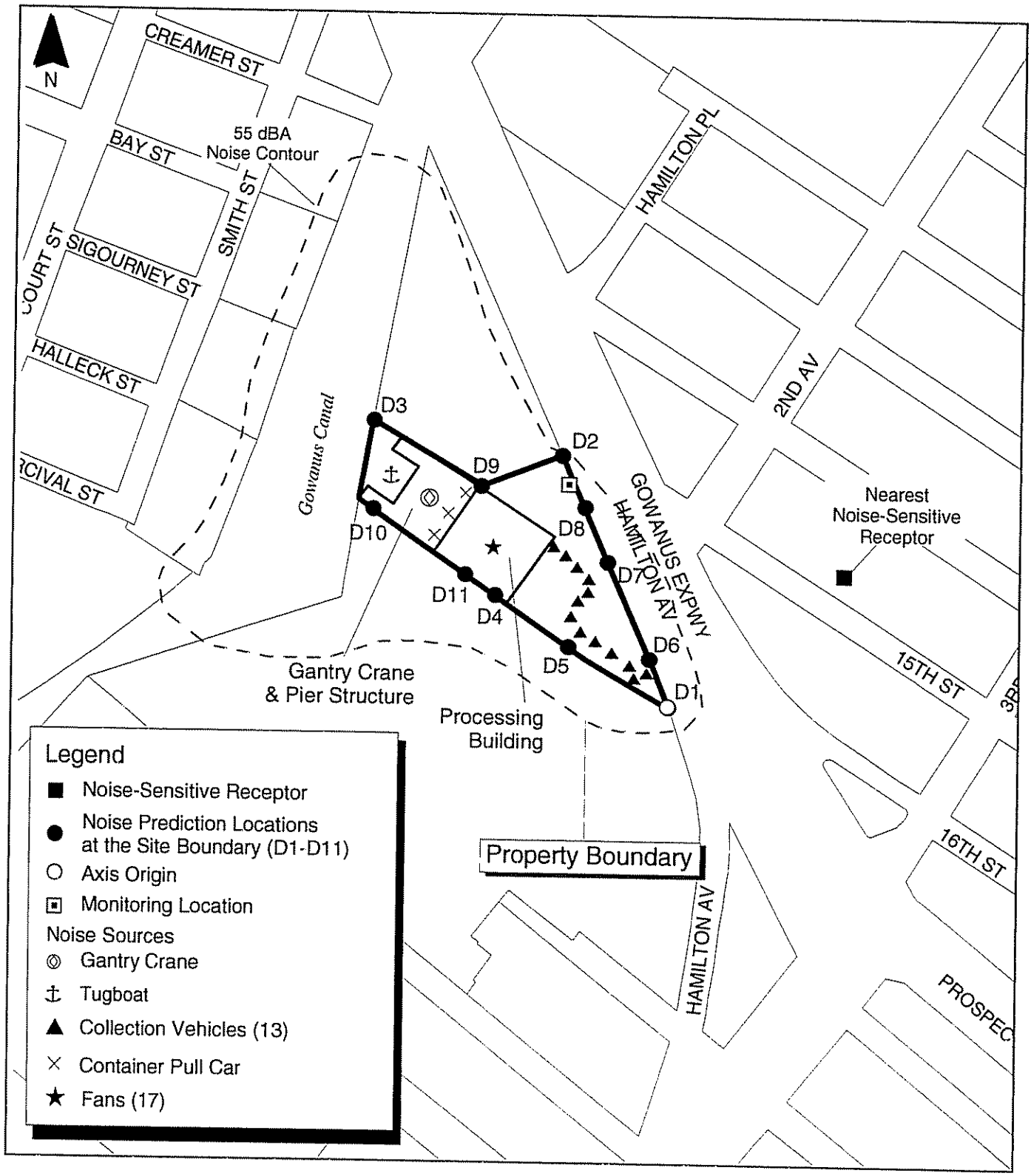
Figure 4.17-1 shows the location of the Hamilton Avenue Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is a row of apartment buildings on 15th Street between 2nd Avenue and 3rd Avenue, 136 meters (447 feet) from the Hamilton Avenue Converted MTS property line.

4.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}.[13] Table 4.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 81.0 dBA on January 15, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic due to the proximity of industrial and commercial areas and the BQE; and
- Boat traffic on Gowanus Bay.

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

Figure 4.17-1 Noise Sources and Receptors

Hamilton Avenue Converted MTS

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Table 4.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Hamilton Avenue Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 p.m.	86.0	82.0	84.9	88.5	78.3	101.9
1:00-2:00 p.m.	86.0	81.9	84.9	88.3	78.4	101.8
2:00-3:00 p.m.	85.2	81.3	84.1	87.7	78.1	95.9
3:00-4:00 p.m.	84.5	80.8	83.4	86.7	78.1	99.3
4:00-5:00 p.m.	83.8	80.7	83.1	85.7	77.5	96.5
5:00-6:00 p.m.	84.4	80.9	83.6	86.6	77.1	98.0
6:00-7:00 p.m.	85.2	82.0	84.5	87.4	78.4	99.5
7:00-8:00 p.m.	83.7	80.5	82.8	86.0	77.4	94.4
8:00-9:00 p.m.	82.3	78.8	81.3	84.5	76.5	97.2
9:00-10:00 p.m.	81.9	78.2	80.6	84.2	74.6	95.2
10:00-11:00 p.m.	81.4	77.8	80.2	83.9	73.0	91.6
11:00 p.m.-12:00 a.m.	81.3	77.4	80.1	83.7	74.2	95.7
12:00-1:00 a.m.	82.0	76.8	80.7	84.9	71.3	95.7
1:00-2:00 a.m.	81.3	75.6	79.7	84.6	67.5	91.7
2:00-3:00 a.m.	81.0	75.3	79.3	84.2	70.5	93.1
3:00-4:00 a.m.	81.4	75.0	79.7	84.6	68.8	93.7
4:00-5:00 a.m.	82.8	75.9	81.1	85.4	67.1	104.0
5:00-6:00 a.m.	83.4	79.3	82.4	86.1	74.4	92.4
6:00-7:00 a.m.	84.5	80.4	83.7	87.1	76.8	94.6
7:00-8:00 a.m.	85.2	81.9	84.5	87.4	77.1	98.3
8:00-9:00 a.m.	85.8	82.3	84.6	87.6	78.7	105.0
9:00-10:00 a.m.	84.8	81.7	84.0	87.0	78.6	95.4
10:00-11:00 a.m.	85.7	82.7	84.9	87.8	79.9	99.7
11:00 a.m.-12:00 p.m.	85.6	82.1	84.8	87.8	78.2	101.1

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

4.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the Hamilton Avenue Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required and, therefore, off-site noise monitoring was conducted. Table 4.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

Table 4.17-2
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-site Analysis
Hamilton Avenue Converted MTS

Location	Existing Noise Levels During Quietest Hour (dBA)[1][2]
20th Street West of 4th Avenue	63.4

Notes:
(1) A 1-hour noise level reading was measured at the nearest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The existing noise level was measured on August 20, 2003 between 2:00 a.m. and 3:00 a.m.

4.17.2 Future No-Build Conditions

4.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

4.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 4.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on first-level screening.

Table 4.17-3
Off-Site Noise Traffic Volume
Hamilton Avenue Converted MTS

Location	Hour Beginning	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
20th Street west of 4th Avenue	2:00 a.m.	19	20
20th Street west of 4th Avenue	12:00 p.m.	307	319
13th Street west of 4th Avenue	9:00 a.m.	104	109
~~**13th Street west of 4th Avenue**~~	~~2:00 a.m.~~	~~14~~	~~15~~
Prospect Avenue Westbound east of 3rd Avenue	3:00 a.m.	89	93

Notes:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth.

4.17.3 Potential Impacts with the Hamilton Avenue Converted MTS

4.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Hamilton Avenue Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 4.17-4. The number and types of equipment assumed for this analysis were based on the Hamilton Avenue Converted MTS's peak design capacity. As described in Section 3.19, an analysis was performed to determine if the number and type of trucks queuing on the ramp that was analyzed

in the DEIS is more conservative than the greatest number of DSNY and Commercial Waste trucks expected to be queuing on the ramp based on the number of trucks that might be routed to the facility. The DEIS analysis was based on DSNY trucks queuing along the entire length of the ramp. For the Hamilton Avenue Converted MTS, the analysis of the greatest number of DSNY and Commercial Waste trucks that will be expected to be queuing on the ramp (based on the number of trucks that might be routed to the facility) is more conservative. Therefore, the results presented for the on-site analysis in this FEIS are based on the greatest number of DSNY and Commercial Waste trucks that is expected to be queuing on the ramp.

Spectral noise levels which were used in the Performance Standards analysis are shown in Table 4.17-5. The number and types of equipment assumed for this analysis were based on the Hamilton Avenue Converted MTS's peak design capacity. Shown earlier, Figure 4.17-1 indicates the Hamilton Avenue Converted MTS layout, the locations of the points along the Hamilton Avenue Converted MTS boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

4.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Hamilton Avenue Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 20 meters (67 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 136 meters (447 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 4.17-1); therefore, on-site noise monitoring and an on-site noise analysis were not required.

Table 4.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Hamilton Avenue Converted MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Exhaust Fans (17)	74[3]
Moving/Queuing DSNY Collection Vehicles (6)	79
Outdoor	
Container Shuttle Cars(3)	45
Gantry Cranes (1)[4]	67
Harbor Tug Boat (1)[5]	69
Exhaust Fans (17)	76[3]
Inbound Moving/Queuing DSNY Collection Vehicles (2)	67
Inbound Moving/Queuing Commercial Waste Collection Vehicles (10)	71.3
Outbound Moving/Queuing Commercial Waste Collection Vehicles [6](1)	71.3

Notes for Table 4.17-4:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative for each piece of equipment.
(3) Noise level representative of a total of 17 exhaust fans.
(4) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the Converted MTSs.
(5) Noise level will be specified for the harbor tugboat in DSNY's plans and specifications for construction of the converted MTSs.
(6) Since both DSNY and Commercial waste trucks are entering the facility, the outbound queuing collection vehicle was assumed to be a commercial waste vehicle, to be conservative.

Table 4.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
Hamilton Avenue Converted MTS

Equipment Name (quantity)[1], [2]	Reference Sound Pressure Noise Level at 50 feet (dB)[3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [5]	78	81	78	71	66	60	55	55
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Trucks and tugboats are not included in the performance standard analysis because they are transportation facilities.
(3) Noise level representative for each piece of equipment.
(4) Noise level representative of a total of 17 exhaust fans.
(5) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the Converted MTSs.
Hz = Hertz
K = Thousand

4.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points along the Hamilton Avenue Converted MTS boundary to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming ~~tugboats~~ both are ~~traffic~~ transportation facilities). (~~s~~See Table 4.17-6~~)~~. Based on this analysis, no exceedances of the Performance Standards are predicted.

Table 4.17-6
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
Hamilton Avenue Converted MTS

Manufacturing District Regulation (M3)								
Frequency Range (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Threshold	**79**	**74**	**69**	**63**	**57**	**52**	**48**	**45**
Total Lp dB: D1	67.0	63.2	56.1	51.1	46.4	41.9	34.6	26.8
Total Lp dB: D2	68.9	64.4	58.8	56.2	51.7	48.0	42.0	36.8
Total Lp dB: D3	60.4	61.2	58.2	53.0	48.2	43.3	36.5	32.5
Total Lp dB: D4	73.1	68.0	60.1	54.8	49.1	43.9	37.9	33.9
Total Lp dB: D5	74.7	70.7	62.7	55.5	50.5	45.0	38.5	32.6
Total Lp dB: D6	69.4	65.3	57.8	52.7	48.1	43.8	36.9	29.3
Total Lp dB: D7	76.3	72.2	63.7	55.3	49.7	42.4	35.0	27.4
Total Lp dB: D8	74.1	69.0	62.0	59.4	54.9	51.3	45.4	39.6
Total Lp dB: D9	69.1	68.6	65.0	59.0	54.0	48.9	43.9	43.3
Total Lp dB: D10	69.4	71.2	68.1	61.3	56.3	50.5	45.1	44.4
Total Lp dB: D11	73.8	71.5	64.7	59.1	53.9	47.6	41.1	38.2

Notes:
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
D1 through -D11 are the points representative of the Hamilton Avenue Converted MTS boundary that are used in all noise analyses.
K = Thousand
Bold = Exceedance

4.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Hamilton Avenue Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. The overall noise predictions were based on refined calculated noise levels for the on-site queuing collection vehicles on the Hamilton Avenue Converted MTS facility truck ramp. Individual, position-specific utilization factors were assigned to each inbound collection vehicle position on the inbound scale of the ramp, and to one collection vehicle position on the outbound scale based on the processing time at the Hamilton Avenue Converted MTS. The utilization factor for each truck was estimated based on the greatest number of DSNY and Commercial Waste trucks expected to be queuing on the ramp, totaling two (2) DSNY trucks and 12 Commercial Waste trucks and conservatively assuming these utilization factors would occur for 24 hours. The assumption was made that each inbound truck would be queuing on-site for approximately two minutes before proceeding one truck length further up the ramp toward the facility.

~~This is~~ The results of the Current NYC Noise Code Analysis are shown in Table 4.17-7. ~~Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.~~ The NYC Noise code (Title 24, Subchapter 6 of the Administrative Code and Charter of the City of New York) requires compliance with an L_{eq} of 70 dBA (daytime and nighttime for all commercial and manufacturing land-use zones) at the site property line. (This standard is proposed to be replaced by sensitive-receptor based standards in the proposed NYC Noise code.) The NYC Noise code language recognizes that the contributions from background sounds outside the boundaries of the noise source (such as public highways) are not considered in the measuring compliance with the standard. At the Hamilton Avenue site, four (4) of the boundary noise points along the southern sides of the site exceed the 70 dBA threshold by between 1.2 dBA and 7.6 dBA. However, 24-hour background noise levels monitored at the site boundary (that include the background noise of the Gowanus Expressway and 3rd Avenue traffic) are at levels between 81.0 dBA and 86.0 dBA (See Table 4.17-1). At these levels, the theoretical exceedance of the noise standard cannot be perceived at the property boundary and, therefore, no impact is predicted.

Table 4.17-7
Current Noise Code Analysis
Hamilton Avenue Converted MTS[(1)]

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	~~68.1~~71.2
D2	64.065.8
D3	62.459.2
D4	68.269.4
D5	**72.3**
D6	**73.7**
D7	**77.6**
D8	69.9
D9	63.4
D10	64.7
D11	68.4

Notes:
(1) D1 through D11 are the points on the Hamilton Avenue Converted MTS site boundary that are used in all noise analyses.
Bold= Exceedance

4.17.3.5 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Hamilton Avenue Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 4.17-8.

Table 4.17-8
Off-Site Noise Screening Results
Hamilton Avenue Converted MTS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
20th Street west of 4th Avenue	2:00 a.m.	30	6	0	282	312	**Yes**
20th Street west of 4th Avenue	12:00 p.m.	2,159	13	0	611	2,770	No
13th Street west of 4th Avenue	9:00 a.m.	312	5	0	235	547	No
~~**13th Street west of 4th Avenue**~~	~~2:00 a.m.~~	~~131~~	~~0~~	~~0~~	~~0~~	~~131~~	~~No~~
Prospect Avenue Westbound east of 3rd Avenue	3:00 a.m.	276	5	0	235	511	No

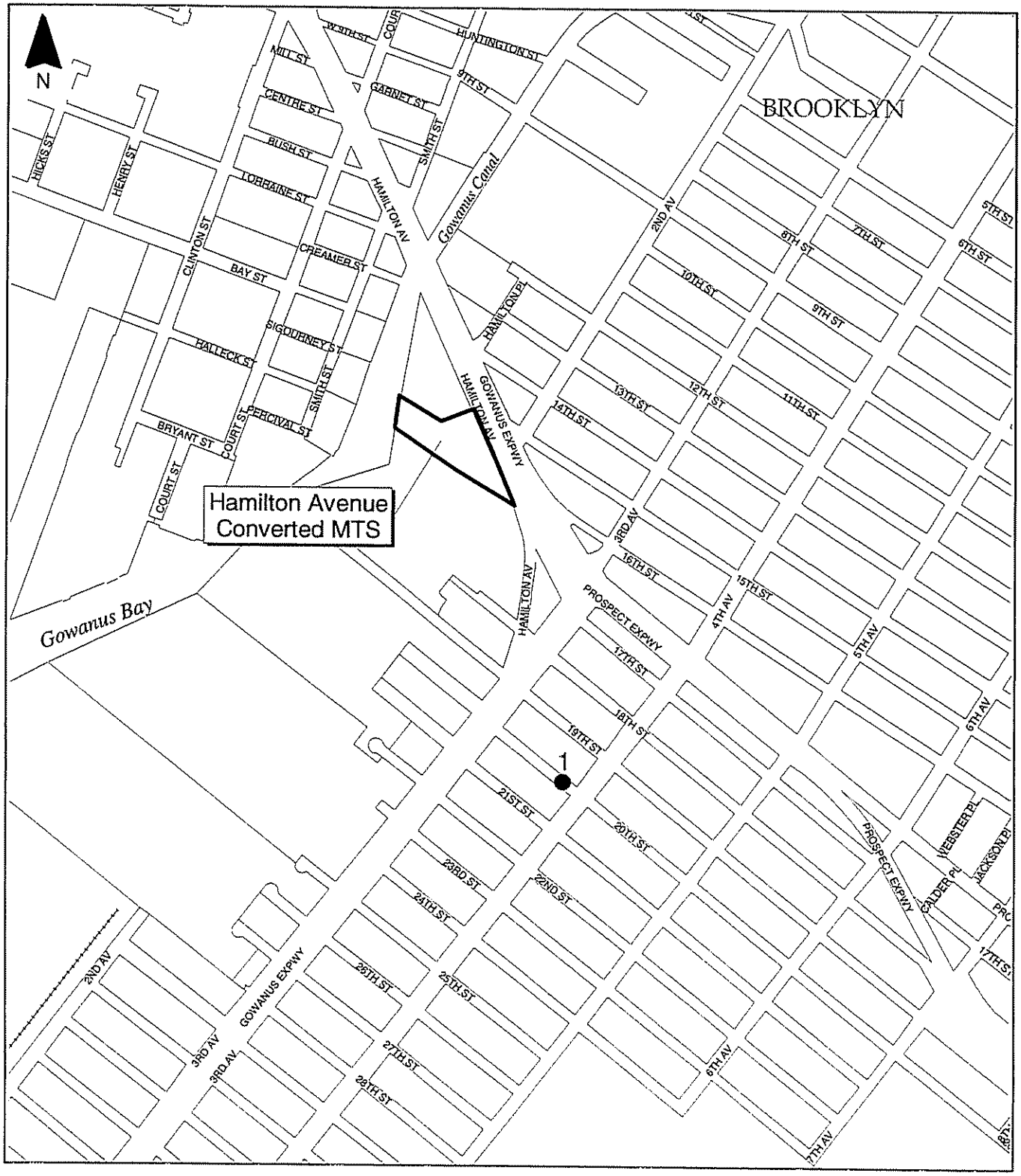
Note:
(1) Total PCEs are rounded to the nearest whole number.
(2) Future Build PCEs include Hamilton Avenue Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted to PCEs using a factor of 1.
(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles coming to or going from the Hamilton Avenue Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. Figure 4.17-2 depicts the locations of the roadways where a detailed noise analysis was performed.

TNM results for locations/hours that resulted in a possible impact based on second-level screening are presented in Appendix E of this FDEIS. Because this incremental noise-level change, which is calculated by obtaining the difference between the TNM predicted Future Build noise level and the TNM-predicted Future No-Build noise level, is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, an impact is predicted by TNM from the Hamilton Avenue Converted MTS-related collection and employee vehicles.

To determine if this TNM-predicted impact was accurate, site-specific truck simulations were conducted at the noise-sensitive receptor site. The truck simulation analysis provides a more realistic determination of DSNY collection vehicle noise impacts based on the proposed number of DSNY collection vehicles expected to travel through the roadways analyzed during the nighttime hours. Truck simulations were conducted with DSNY collection vehicles, as described in Section 3.19.7.2, for each roadway and hour that the first-level screening analysis resulted in potential impacts. For this procedure, two sets of noise measurements were taken, one with and one without DSNY trucks, by routing a set number of DSNY trucks during the affected nighttime hours past the noise-sensitive receptor. Table 4.17-9 contains the results of the site-specific DSNY collection vehicle simulations, which shows that only the 2:00 a.m. to 3:00 a.m. hour would have an impact as a result of the Hamilton Avenue Converted MTS-related collection vehicles.

A comparison of the simulation results for the 2:00 a.m. to 3:00 a.m. hour and the TNM results for the same traffic conditions and background noise levels estimated from recordings during the simulations is provided in Appendix E of this FDEIS. Based on this comparison, it is determined that TNM over-predicted the incremental change. The over-prediction can be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the Hamilton Avenue Converted MTS-related collection vehicles.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 4.17-2 Mobile Noise Analysis
Intersections Analyzed
Hamilton Avenue Converted MTS

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Table 4.17-9
Off-Site Noise Analysis Truck Simulation
20th Street West of 4th Avenue
Hamilton Avenue Converted MTS

Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
11:00 a.m.	65.5	3	67.1	No (1.6)
12:00 a.m.	65.1	5	66.9	No (1.8)
1:00 a.m.	65.3	4	67.2	No (1.9)
2:00 a.m.	63.4	6	67.0	Yes (3.6)
3:00 a.m.	67.0	4	68.1	No (1.1)

Note:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations performed on August 19, 2003 and August 20, 2003.

Because both TNM and the site-specific truck simulations predict an impact at a noise-sensitive receptor during the 2:00 a.m. to 3:00 a.m. hour for the 20th Street west of 4th Avenue location, adjustments were made to the distribution of trucks. Only the number of trucks that can be routed through this location without causing an impact will be allowed. The remaining collection vehicles will be routed through this location during the 3:00 a.m. to 4:00 a.m. hour without causing an impact. This location was re-analyzed during both of these hours with the truck adjustments using the site-specific truck acoustic energy per hour as described in Section 3.19.7.2 to confirm that off-site noise impacts would not be caused by the reduced number of collection vehicles at this location. Table 4.17-10 shows the results of this analysis. Based on these results, with the truck adjustments, there is no predicted impact that would be caused by the Hamilton Avenue Converted MTS collection vehicles en route to and from the facility.

Table 4.17-10
Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles
20th Street West of 4th Avenue
Hamilton Avenue Converted MTS

Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Adjusted Collection Vehicles	Calculated[2] Noise Level (L_{eq}) for Existing Traffic plus Adjusted Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
2:00 a.m.	63.4	4	66.1	No (2.7)
3:00 a.m.	67.0	6	68.6	No (1.6)

Note:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Noise levels for existing traffic plus adjusted collection vehicles were calculated utilizing the per truck acoustic energy determined from the truck simulation data for this location.

4.17.3.6 Combined On-Site and Off-Site Noise Levels

An off-site noise analysis was performed for the Hamilton Avenue Converted MTS. The results of the on-site screening analysis showed that noise-sensitive receptors were not located within the 55 dBA contour line (see Figure 4.17-1); therefore, on-site noise monitoring and an on-site noise analysis were not required. Since an on-site analysis was not required, a combined noise analysis was not performed.

4.18 Commercial Waste to the Hamilton Avenue Converted MTS

4.18.1 Existing Conditions

No commercial waste is delivered to the Hamilton Avenue MTS site under Existing Conditions. Commercial waste generated in Brooklyn is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

4.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the Hamilton Avenue Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

4.18.3 Potential Impacts of Sending Commercial Waste to the Hamilton Avenue Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

4.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the Hamilton Avenue Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 4.15, 4.16 and 4.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

4.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the Hamilton Avenue Converted MTS were evaluated in Sections 4.14, 4.15 and 4.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 4.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 32 (inbound trip ends) per hour, which occurred during the AM peak. These 32 DSNY and other agency collection vehicles are also more than the 25 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the Hamilton Avenue Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 32 DSNY and other collection agency vehicles at the Hamilton Avenue Converted MTS. Therefore, the addition of the 25 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the Hamilton Avenue Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 32 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 32 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24-hour period. Results showed there would be no unmitigatible significant adverse environmental impacts at several analyzed intersections. Consequently, because the 25 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can travel through these intersections per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

For the intersections of Hamilton Avenue and Hamilton Place and 14th Street, and 20th Street at 3rd Avenue and 4th Avenue, a Tier II analysis was required. The estimated actual hourly distribution over 24 hours included the estimated 25 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could potentially be processed at the Hamilton Avenue Converted MTS, and no unmitigatible significant adverse environmental impacts were identified.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the Hamilton Avenue Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,306 tons (or 124 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

CHAPTER 5 ENVIRONMENTAL REVIEW: SOUTHWEST BROOKLYN CONVERTED MTS

5.1 Introduction

The results of the environmental analyses of the Southwest Brooklyn Converted MTS are presented in the following sections:

5.2 Land Use, Zoning, and Public Policy
5.3 Socioeconomic Conditions
5.4 Community Facilities and Services
5.5 Open Space
5.6 Cultural Resources
5.7 Urban Design, Visual Resources, and Shadows
5.8 Neighborhood Character
5.9 Natural Resources
5.10 Hazardous Materials
5.11 Water Quality
5.12 Waterfront Revitalization Program
5.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
5.14 Traffic, Parking, Transit, and Pedestrians
5.15 Air Quality
5.16 Odor
5.17 Noise
5.18 Commercial Waste to the Southwest Brooklyn Converted MTS

Section 2.2.2 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

5.2 Land Use, Zoning, and Public Policy

5.2.1 Existing Conditions

5.2.1.1 Definition of Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 5.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 5.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.2.2 provides information on existing land uses and operations on the site.

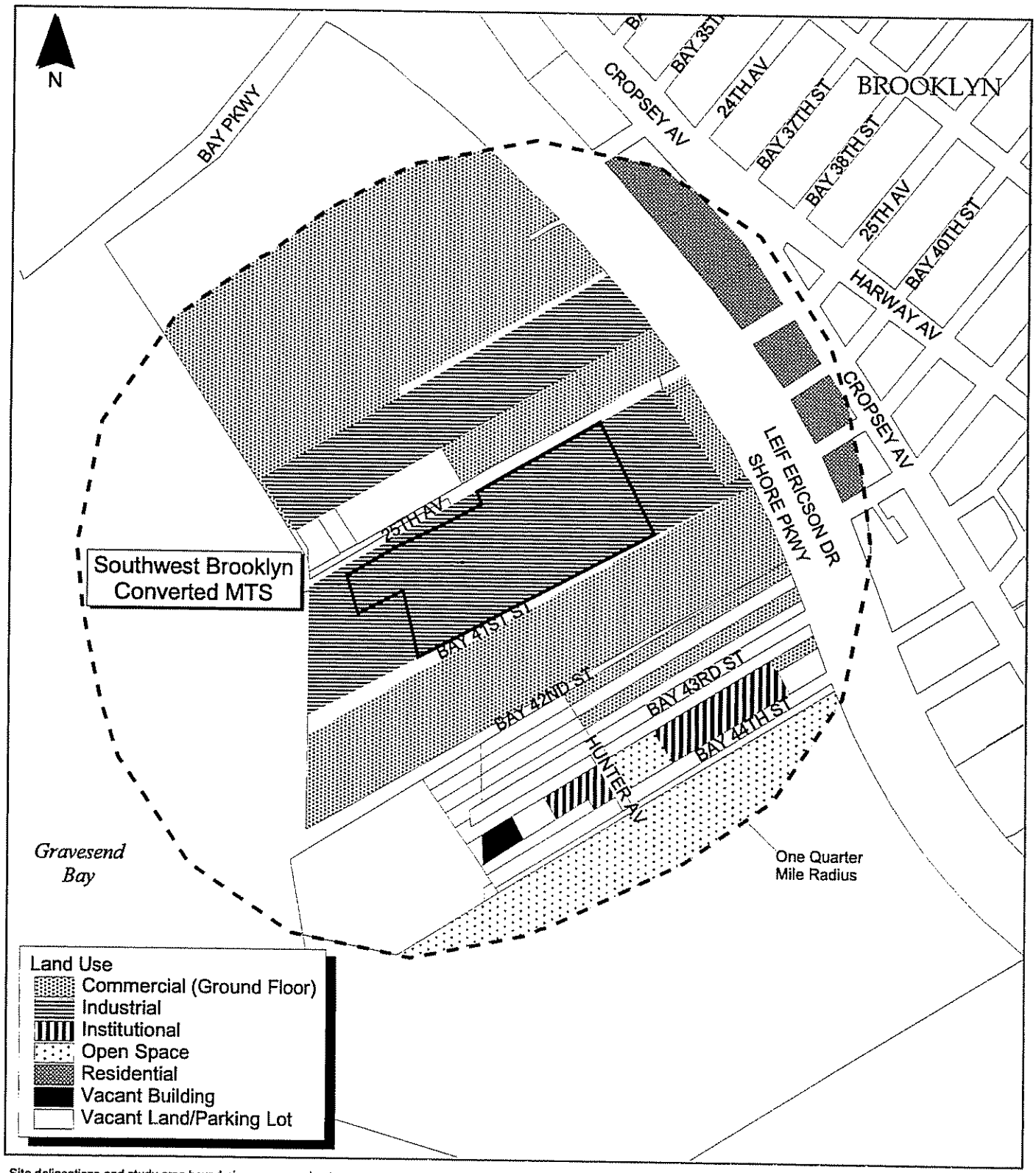
5.2.1.2 Land Use Patterns

5.2.1.2.1 General Context

The site is situated on Gravesend Bay in Bensonhurst, surrounded by a relatively mixed land use pattern. The site and immediate environs contain the only industrial uses found in the primary and secondary study areas, which are both characterized largely by commercial, recreational, residential and institutional uses.

5.2.1.2.2 Land Uses in the Primary Study Area

Directly to the northeast and east of the site are DSNY facilities, including one salt shed and DSNY garage. The Nellie Bly Amusement Park is also on the same block, fronting Shore Parkway, 500 feet east of the site. Fuel oil tanks and buildings associated with the Bayside Fuel Oil Corporation are located north of the site near Shore Parkway, as are the Atlantic Express Bus Company and various other automobile repair services. Further north-northwest of the site is a variety of commercial uses surrounded by fairly large parking areas. These uses include several banks; a shopping area with regional retail establishments, such as Best Buy and Toys "R" Us; several automobile service establishments; and a motel on the equivalent of 24th Avenue south of the Bay Parkway-Shore Parkway intersection.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
The figure illustrates predominant land uses in the primary study area

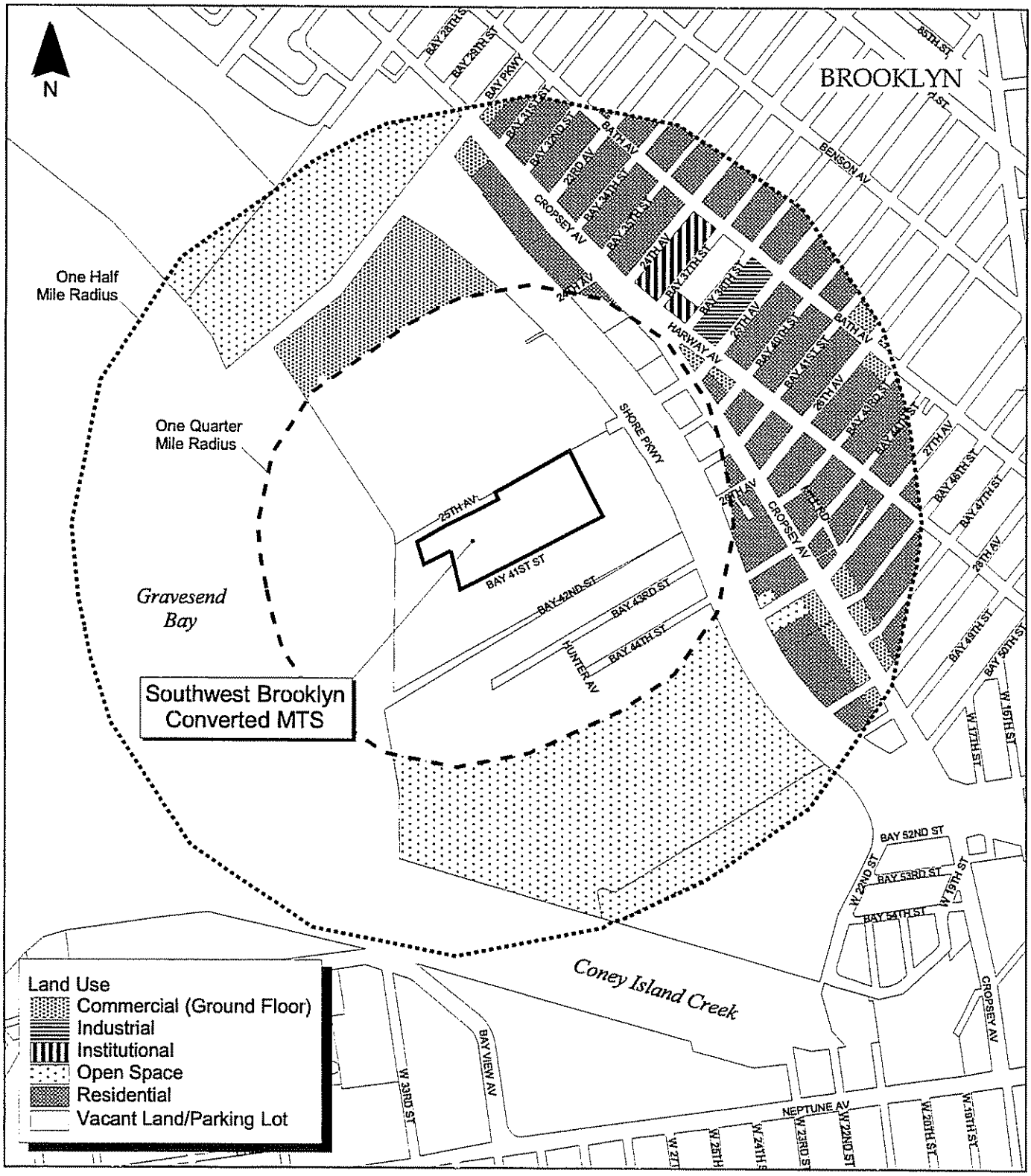
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Figure 5.2-1 Land Use in the Primary Study Area
Southwest Brooklyn Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

500 0 500 Feet

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Figure 5.2-2 Land Use in the Secondary Study Area

Southwest Brooklyn Converted MTS

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East of Shore Parkway within the study area is a dense residential area, including the 167-unit Regina Pacis Residence for Senior Citizens on Bay 37th Street, various apartment houses and three-story row houses.

South of the site are several yacht clubs, including the Excelsior Yacht Club and Marina, where boats are moored south of Bay 41st Street. On Bay 44th Street and Hunter Avenue is a home for handicapped children. Across Hunter Avenue to the east are another assisted living facility and the Brooklyn School for Special Children. An unfinished residential development once known as "Rose Cove" stands within the primary study area north of and adjacent to Dreier-Offerman Park at Bay 44th Street and West Shore. This residential development was designed originally to include three buildings and some town homes, the remains of which are not publicly accessible. The model structures now stand vacant and dilapidated. The property is not being developed at this time.

5.2.1.2.3 Land Uses in the Secondary Study Area

The secondary study area is characterized by waterfront, municipal parks and largely residential uses inland to the east. Bensonhurst Park is located southwest of the southern end of the Leif Ericson Drive Shore Road park system north of Bay Parkway and northwest of the site, while Dreier-Offerman Park, a large 73-acre waterfront public park, and the Coney Island Boat Basin are located south of the site along Coney Island Creek.

The remainder of the secondary study area lies northeast of Shore Parkway, where the land use pattern is primarily residential, consisting of single- and multi-family housing, mostly detached and semi-detached homes. The area also contains apartment towers, such as the Contello Towers Co-op, Sections I and II (between Shore Parkway and Cropsey Avenue at Bay 44th Street); senior housing; schools; and religious institutions, as well as some local professional offices, light industrial uses and automotive services, with a concentration along Bath Avenue. East of Cropsey Avenue on either side of 25th Avenue are the buildings, storage areas and parking areas associated with NYCT's Ulmer Park bus depot.

5.2.1.3 Zoning On and Near the Site

5.2.1.3.1 Zoning Within the Primary Study Area

The site is located in an M3-1 zoning district on Gravesend Bay, as is much of the primary study area. The area also includes a mix of M1-1, M3-1, C3 (waterfront recreation areas), R4 and R6 zoning districts. (See Figure 5.2-3 and Table 3.4-1: Zoning District Characteristics.)

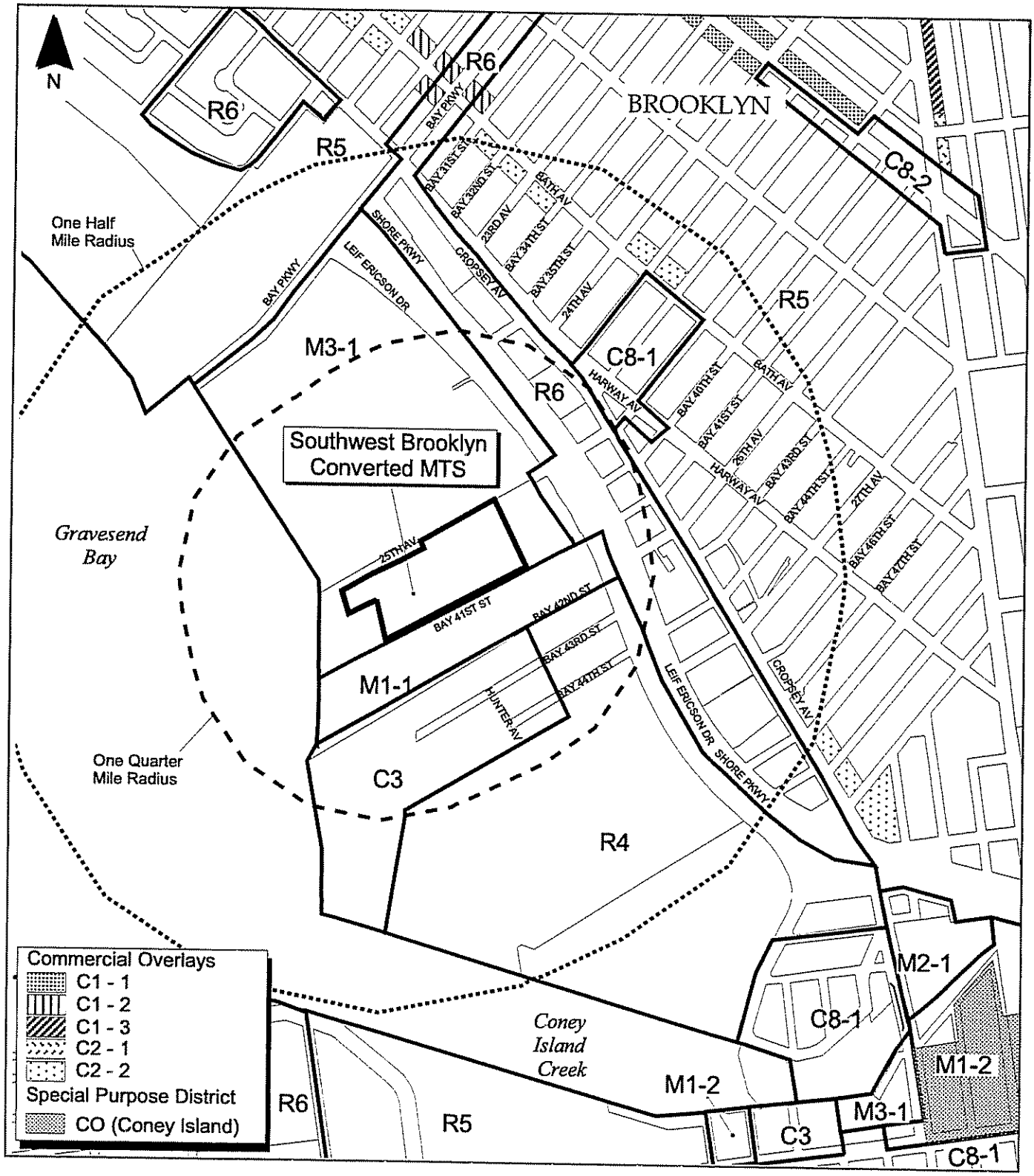
5.2.1.3.2 Zoning Within the Secondary Study Area

The surrounding residential communities of Bensonhurst, Gravesend and Coney Island are characterized by medium density R4, R5 and R6 residential; C8-1 (automotive-related) commercial; and M3-1 zoning districts.

5.2.1.4 Plans and Policies

The FY 2004 CDNS for District 11, in which the site lies, provides no recommendations for physical development programs that would be relevant to the site or the study areas. The 2004 statement prepared by Brooklyn CD 13 (adjacent to the site on the south) indicates the need and the hope for overall development of the district. No specific development proposals are defined that would likely be relevant to the site or study areas, though mention is made of support for relocation of the District 13 DSNY garage from its location on Coney Island at Neptune Avenue at West 20th Street to a new location at the former Brooklyn Union Gas site (now KeySpan).

The site lies within Reach 15 of the City/Brooklyn Waterfront Development Plan, which extends along the waterfront from Owl's Head Park in Bay Ridge at the northern end to the northern shore of Coney Island at the southern end. The plan recommends that the Shore Road bicycle path, which currently ends at Bensonhurst Park, be extended south to Dreier-Offerman Park, which in turn should be developed to include bicycle/pedestrian access to the waterfront, perhaps via an esplanade. The plan recommends that mapped streets and parks be developed to



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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PB

Figure 5.2-3 Zoning

Southwest Brooklyn Converted MTS

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provide enhanced access to the water's edge and, in particular, the restoration of the bulkhead at Bay Parkway. The plan also recommends that Dreier-Offerman Park be developed for recreation and that the Nellie Bly Amusement Park be relocated from Shore Road and Bay 41st Street to the Dreier-Offerman Park.

The plan notes that existing M1 and M3 zoning should be maintained, specifically around the existing MTS, but that the commercial zoning south of the site just north of Dreier-Offerman Park could offer other development opportunities. While these recommendations for developing the parks in such a manner have public support, there are no definite plans for such development. (See Section 5.5 for details on NYCDPR park plans and Section 5.12 for a review of consistency with the WRP.)

5.2.2 Future No-Build Conditions

It is reasonable to anticipate that except for the demolition of the on-site incinerator, the Future No-Build Conditions in both the primary and secondary study areas will generally resemble Existing Conditions. The site itself will remain DSNY property; though inactive, the existing MTS will remain and the associated DSNY salt storage and garage facilities northeast of the site will continue to be fully utilized.

5.2.3 Potential Impacts with the Southwest Brooklyn Converted MTS

5.2.3.1 Land Use and Zoning

Development of the Southwest Brooklyn Converted MTS would entail the creation of a new facility with containerization functions that would replace the former functions of the existing MTS — though the existing MTS will remain standing — and would cover more of the site's upland area. The existing incinerator will have already been demolished and removed from the site, and the westernmost salt shed on the site (of the two that exist on the larger DSNY property) would be either moved off the property or dismantled. Delivered waste would be containerized for transport on barges for disposal outside the City — a change from the previous practice of loading loose waste onto hopper barges for intra-harbor transport to Fresh Kills Landfill.

Because the Southwest Brooklyn Converted MTS would reactivate a historic use on DSNY property, it would not be considered a substantial new use. It would, however, increase the intensity of use on the site without causing an accumulation of similar uses in the area. It is not likely to encourage or discourage other typical development in the area more than previous waste transfer operations had, and would not likely affect the existing C3, R4 or R6 zones, which permit residential development nearby.

5.2.3.2 Consistency with Public Plans and Policies

Because the Southwest Brooklyn Converted MTS would be the reactivation of a historic use on DSNY property and there are no definitive plans for the park development and bikeway recommended in the plan for Reach 15, it would be consistent with public plans and policies. The Southwest Brooklyn Converted MTS would also be consistent with the Waterfront Development Plan for this area, which recommends maintaining the existing manufacturing zones there.

5.3 Socioeconomic Conditions

5.3.1 Existing Conditions

5.3.1.1 Definition of the Study Areas

Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Census Tract 320 (see Figure 5.3-1), which covers industrial waterfront areas southwest of Shore Parkway between approximately 15th Avenue and Coney Island Creek.

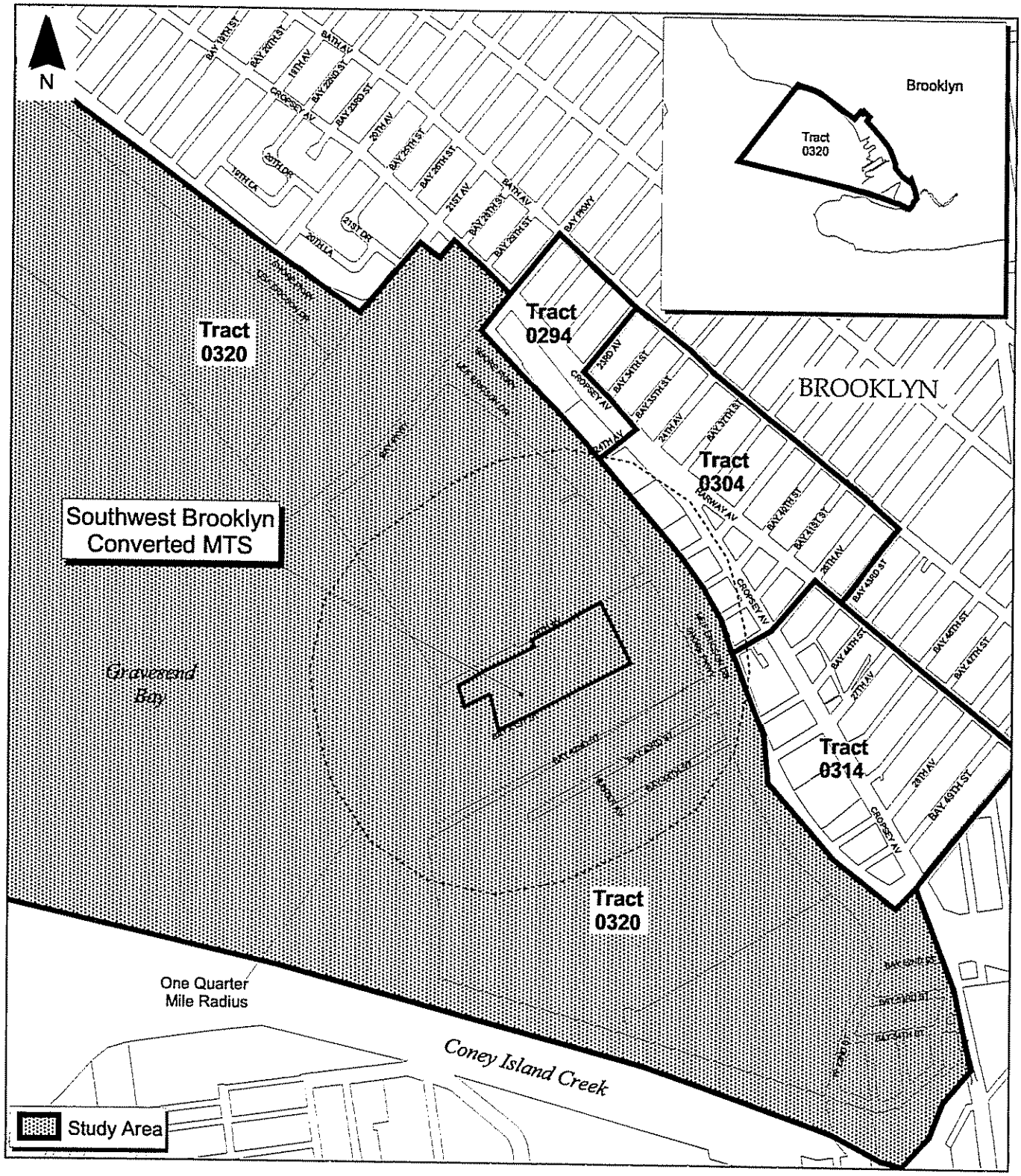
5.3.1.2 Demographic Characteristics

Because the total 2000 demographic study area population consisted of only 60 individuals and 14 families, none of who would be directly displaced by the Southwest Brooklyn Converted MTS, a detailed demographic review is not presented here. Socioeconomic data (comparing 1990 and 2000 Census data for the study area, borough and City) were collected, however, and are provided in Appendix B.

5.3.1.3 Economic Conditions

The site is in an industrial area and is surrounded immediately by a mix of industrial and water-dependent recreational uses. Around the site, the industrial activities include fuel oil storage and other DSNY facilities. Also on the water are commercial establishments and recreational facilities, such as the Excelsior Yacht Club and Marina and Dreier-Offerman Park.

The dense residential neighborhood of Bensonhurst begins on the east side of Shore Parkway within ¼-mile of the site and extends beyond the economic study area. Most local retail services are found along Cropsey Avenue.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.3-1 Census Tracts
Southwest Brooklyn Converted MTS

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5.3.2 Future No-Build Conditions

5.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 11 will remain about the same as current conditions.[1]

5.3.2.2 Economic Conditions

Areas surrounding the site on the Brooklyn waterfront have seen considerable new retail construction recently, but no new projects are anticipated that would generate additional jobs and economic activity.

The near-term economic health of industrial areas such as the study area may also be supported by recently established City programs. These programs are available through the IDA and include the Industrial Incentive Program and the Small Industry Incentive Program, both of which provide business tax incentives for capital renovation and expansion projects. However, no significant changes are expected through 2006 in the study area.

Regional projections indicate that employment in Brooklyn CD 11 will remain about 5% of the borough total.[2]

5.3.3 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS represents the reactivation of solid waste transfer operations on the site with added containerization operations. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

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[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.
[2] Ibid.

5.3.3.1 *Residential Impacts*

No residential uses would be displaced as a result of the Southwest Brooklyn Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

5.3.3.2 *Direct Business and Institutional Impacts*

The Southwest Brooklyn Converted MTS would not result in direct displacement of businesses or institutional uses.

5.3.3.3 *Indirect Business and Institutional Impacts*

The businesses adjacent to and near the Southwest Brooklyn Converted MTS are not expected to experience significant indirect impacts from the reactivation of solid waste transfer operations on the site and new containerization operations. The marina located directly to the south would not be significantly affected by the Southwest Brooklyn Converted MTS because the waste operations would be similar to former activities. Although the density of development on the site would increase, it would not be a significant change to the visual quality of this industrial property.

5.3.3.4 *Employment Impacts*

The Southwest Brooklyn Converted MTS would be expected to generate approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

5.4 Community Facilities and Services

5.4.1 Existing Conditions

5.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary area is defined as the area between ¼- and ½-mile from the site.

5.4.1.2 Summary of Community Facilities and Services

There are four community facilities in the primary study area and ten in the secondary study area. Seven additional facilities are either just beyond the secondary study area or otherwise serve the site environs. Community facilities serving or located within or near the study area are listed in Table 5.4-1 and shown in Figure 5.4-1.

5.4.2 Future No-Build Conditions

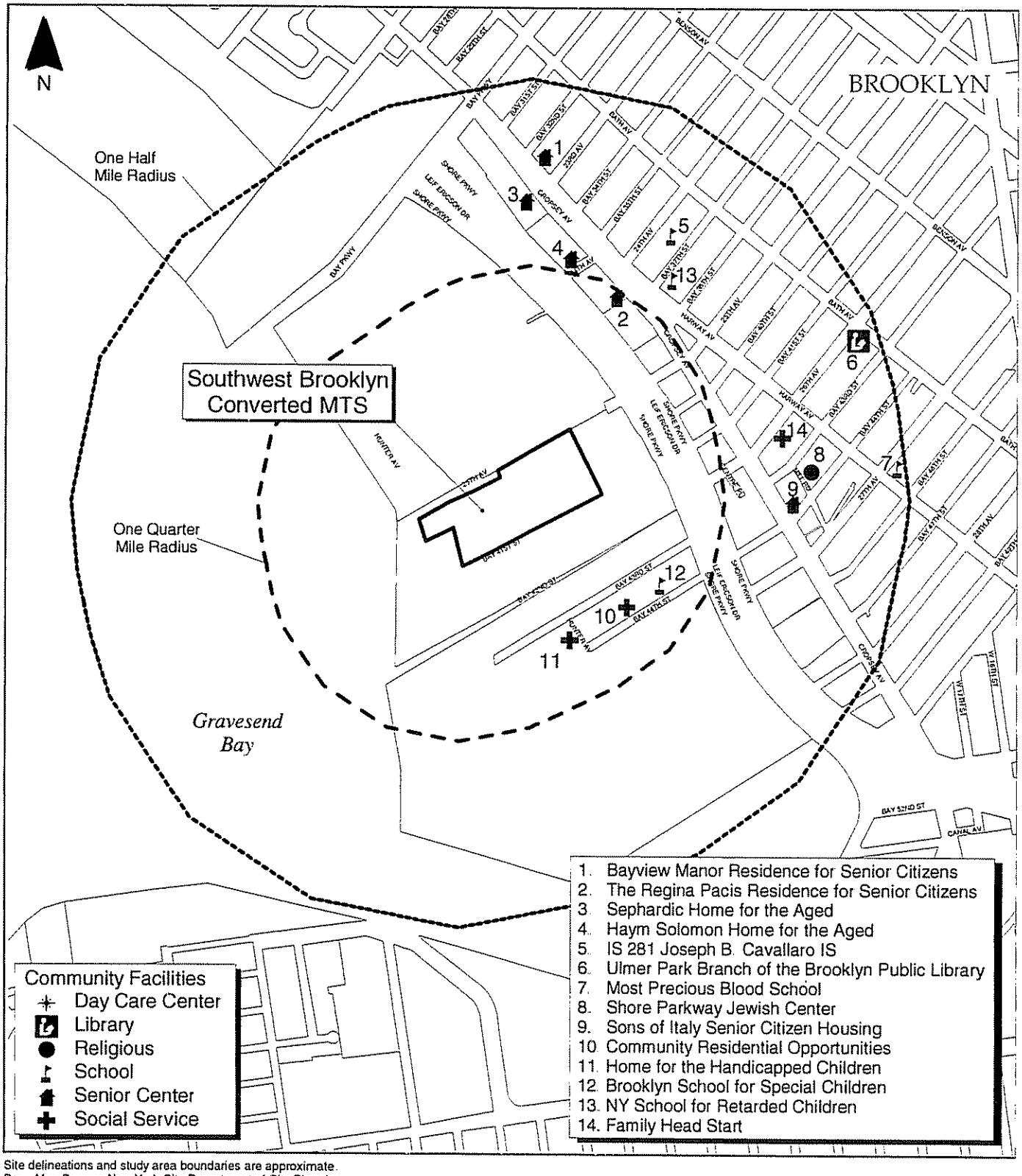
There are no known changes planned for the community facilities and services within the study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity and adequacy of delivery.

5.4.3 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY stated that it would have no problem supporting the Southwest Brooklyn Converted MTS.

Table 5.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Schools	
Brooklyn School for Special Children	376 Bay 44th Street
Health Care Facilities and Social Services	
Home for Handicapped Children	426 Bay 44th Street
Community Residential Opportunities	424 & 506 Bay 44th Street
Senior Center	
The Regina Pacis Residence for Senior Citizens	2134 Cropsey Avenue
Within the Secondary Study Area	
Schools	
I.S. 281 Joseph B. Cavallaro Intermediate School	8787 24th Avenue
Most Precious Blood School	133-157 27th Avenue
Health Care Facilities and Social Services	
New York School for Retarded Children	2426 Harway Avenue
Public Libraries	
Ulmer Park Branch of the Brooklyn Public Library	2602 Bath Avenue
Senior Centers	
Sephardic Home for the Aged	2266 Cropsey Avenue
Haym Solomon Home for the Aged	2300 Cropsey Avenue
Bayview Manor Residence for Senior Citizens	2255 Cropsey Avenue
Sons of Italy Senior Citizen Housing	2629 Cropsey Avenue
Religious and Cultural Institutions	
Shore Parkway Jewish Center	230 Bay 43rd Street
Social Services	
Family Head Start	8885 26th Avenue
Outside the Secondary Study Area	
Hospitals	
Coney Island Hospital	2601 Ocean Parkway
Maimonides Hospital	5th Avenue and 101st Street
Police	
60th Precinct	2951 W. 8th Street
Fire	
1st Engine Company – Engine 243 and 1st Ladder Company – Ladder 168	8653 18th Avenue
2nd Engine Company – Engine 253 and 2nd Ladder Company – Ladder 166	2510 Neptune Avenue



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

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Figure 5.4-1 Community Facilities and Services

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5.5 Open Space

5.5.1 Existing Conditions

5.5.1.1 Definition of the Study Area

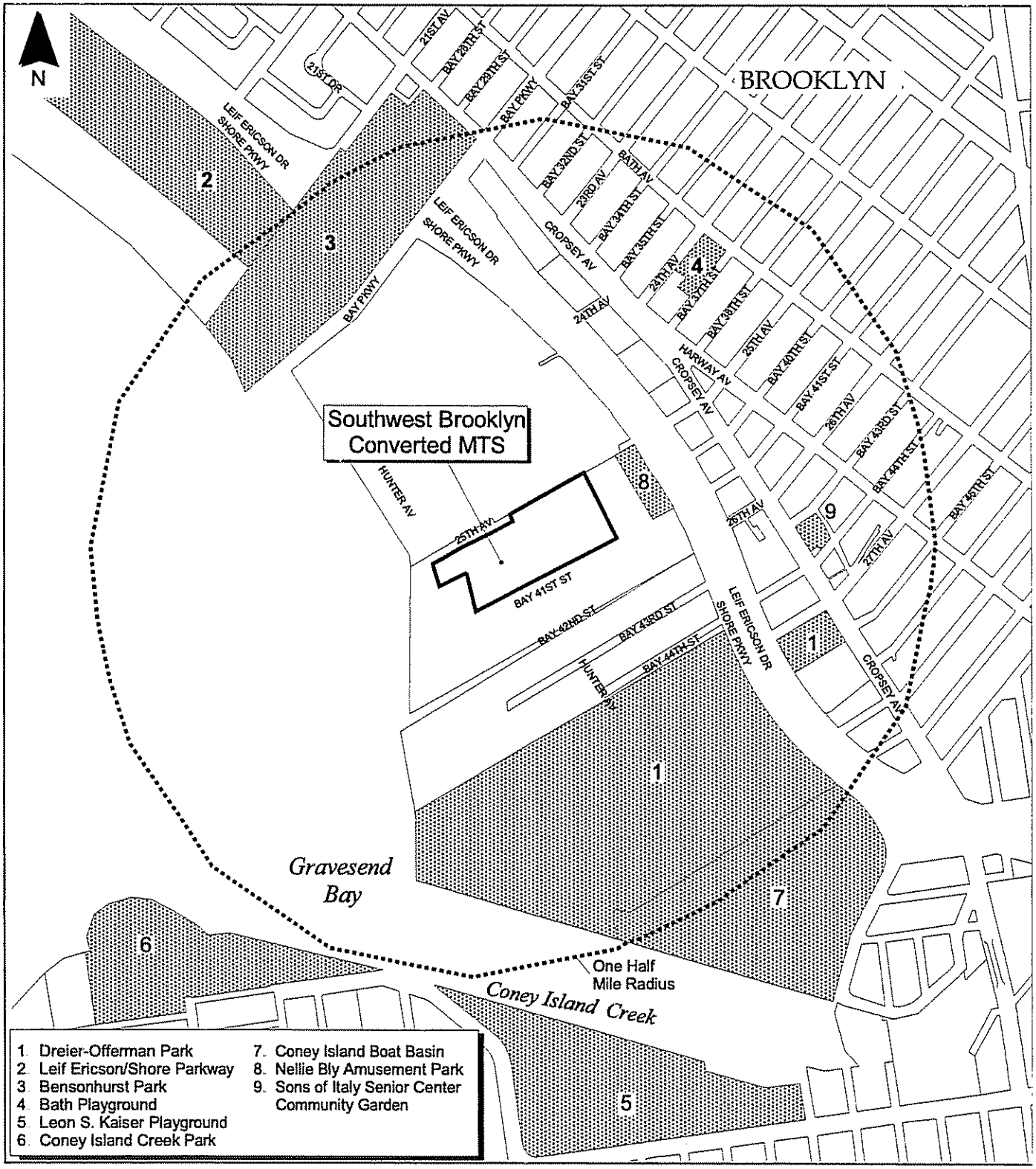
The study area for open space is defined as being the area within a ½-mile radius of the site.

5.5.1.2 Summary of Open Space in the Study Area

There are 10 public parks and open spaces in the study area, two of which are regional facilities. They provide a variety of active and passive recreational opportunities. They are listed in Table 5.5-1 and shown on Figure 5.5-1.

Table 5.5-1
Public Parks and Open Spaces

Name	Address	Acreage
Dreier-Offerman Park	Gravesend Bay, Bay 44th – Bay 49th Streets, Shore Parkway	73.1
Portion of Drier-Offerman Park	27th Avenue and Cropsey Avenue	--
Leif Ericson/Shore Parkway	Fort Hamilton Parkway to Knapp Street, Cross Bay Boulevard	2.6
Bensonhurst Park	Gravesend Bay, 21st Avenue and Cropsey Avenue, Bay Parkway	17.5
Bath Playground	Bath Avenue between 24th Avenue and Bay 37th Street	1.2
Leon S. Kaiser Playground	Southwest Neptune Avenue and West 28th Street	26.3
Coney Island Creek Park	Bayview Avenue, US Pierhead Line and Seagate Avenue	9.8
Coney Island Boat Basin	Shore Parkway and Cropsey Avenue	36.8
Sons of Italy Senior Center Community Garden	2629 Cropsey Avenue	--
Nellie Bly Amusement Park	Shore Parkway, 25th Avenue, and Bay 41st Street	1.06



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 5.5-1 Open Space/Parkland
Southwest Brooklyn Converted MTS

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5.5.2 Future No-Build Conditions

The reconstruction of the Bath Playground and the reconstruction of ball fields in Dreier-Offerman Park are expected to be complete by 2006.

5.5.3 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would not physically change, diminish or eliminate an open space or reduce its utilization or aesthetic value. Likewise, it would not introduce a substantial new user population that would affect utilization of open space resources. Therefore, no impact on open space or parklands is expected from development of the Southwest Brooklyn Converted MTS.

5.6 Cultural Resources

5.6.1 Existing Conditions

5.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site.

5.6.1.2 Development History of the Area

Like other areas of southwestern Brooklyn, Bensonhurst had been populated by small farms from the early 1700s until steam railroads were constructed throughout Brooklyn in the 1870s to bring city dwellers to the ocean. In the 1880s, a developer named James Lynch bought large parcels of land from the Benson family on Gravesend Bay and created the 350-acre suburb of "Bensonhurst-by-Sea." The street grid laid out for this development remains to this day.

The 4th Avenue subway linked the area to Manhattan in 1915, spurring further development and great influxes of people from other parts of the City. Mostly Italians and Jews from the Lower East Side populated the four- to six-story apartment buildings and two- to three-family brick houses built in the 1920s. Local community educational and recreational facilities, such as the Jewish Community House, became popular among the resident Jewish population.

In the early 20th century, north of the site, "Bath Beach" had been a resort known for its yachting clubs, fashionable villas and restaurants until construction of Shore Parkway in 1939. Residential growth continued after World War II, and in 1949 Fred Trump built the then-largest private housing development in Brooklyn, Shore Haven Apartments, at 21st Avenue and Shore Parkway.

5.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

5.6.1.4 Historic Resources Within the Study Area

There are no state, national or City designated landmarks or historic districts within the site or study area.

5.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review; therefore, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

5.6.3 Potential Impacts with the Southwest Brooklyn Converted MTS

As there are no existing or eligible architecturally or archaeologically significant resources on the site or in the study area, the Southwest Brooklyn Converted MTS would have no effect on any cultural resources. Based upon its review, SHPO has confirmed that the Southwest Brooklyn Converted MTS would have no impact upon cultural resources in or eligible for inclusion in the SRHP and NR. The LPC has stated that the site contains no architectural or archeological significance (see Appendix A).

5.7 Urban Design, Visual Resources, and Shadows

5.7.1 Existing Conditions

5.7.1.1 Definition of the Study Area

The urban design and visual quality study area is basically the same as the neighborhood character study area (see Section 5.8), but also includes view corridors from nearby parks, recreational uses and residential areas (see Figure 5.8-1). The site is visible because it extends out over the water and because the buildings in this area are generally not densely arranged or tall enough to hide the facility from view. There are views to the site and environs from waterside recreational areas such as Dreier-Offerman Park, Coney Island Creek Park, and the Excelsior Yacht Club, and from the residential areas east of Shore Parkway, specifically the Regina Pacis Residence for Senior Citizens, and Bensonhurst Park.

5.7.1.2 Description of the Site

The site has been developed in a manner that is now inconsistent with the visual character of adjacent properties and the overall urban design of the study area. It contains the existing MTS facility built over the water in the western portion of the site, the Southwest Brooklyn Incinerator (building and stacks) inland from the existing MTS, and one of two salt sheds that stand on the larger DSNY property. There is much area devoted to parking on site and in the general area for workers, and for the storage of trucks and other vehicles associated with the various sanitation uses located there.

The shoreline of the site is rock-covered. There is grass and some scrub growth on the interior regions of the shore near the fence line and along the ramp leading up to the existing MTS. The few trees in the vicinity grow mostly on non-maintained shore areas as a result of natural growth. There is no vegetative landscaping on the site, which is entirely paved in asphalt.

The concrete ramp to the existing MTS runs alongside the northwestern side of the incinerator structure. The existing MTS building design differs from other MTS facilities in that it is asymmetrical. A single large entrance door opens onto the ramp and is topped with a low gable. The shell of the tipping floor is constructed of off-white pre-fabricated steel and the lower barge-level of the building is faced in red brick.

Below this portion of the building, a paved roadway runs in an easterly direction between the shore and the incinerator, toward its intersection with Bay 41st Street. It runs under what appears to be an enclosed loading belt that extends from the incinerator to a point about two stories above the shore. There is parking on the shore side of this road, and both sides of the road are lined with chain-link fencing about 10 feet high.

The brick incinerator facility is in the process of being demolished, with the two cylindrical incinerator stacks that rise approximately 200 feet to be taken down by September 2004.

The salt shed is in the northern portion of the site at the base of the existing MTS entrance ramp. It is essentially conical in shape, rising to approximately 40 feet at its peak. The base walls are constructed of prefabricated unpainted concrete panels topped by a dark brown conical roof.

Additionally, there are light poles located adjacent to the site and lights mounted on the exterior walls of the existing MTS facility and the ramp leading to it.

5.7.1.3 Urban Design and Visual Resources of the Study Area

The buildings that surround the site appear to have been constructed within the last 20 years for their current uses, which are light industrial or maritime in nature. They do not appear to have been developed originally for heavy industry or modified for such use, as buildings often are in older working waterfronts. The area immediately to the south of the site is characterized by marina and boating activities, and there is a mooring area for boats of the Excelsior Yacht Club immediately adjacent to the site, along a pier (see Figure 5.7-1).

Buildings adjacent to the site include one salt shed located next to the on-site salt shed of the same design, and the DSNY Garage and Borough Command Facility. This off-site portion of DSNY property is characterized by paved surfaces and DSNY-related facilities.

The Nellie Bly Amusement Park is just to the east of the site, beyond the off-site DSNY facilities (see Figure 5.7-2). This colorful small park, which faces east, features numerous amusement rides, as well as picnic, concession and video-game areas. It offers no direct views of the site, as the off-site DSNY buildings buffer the park from the site, but it is bordered on two sides by roads that serve the site.

North of the site along the shore and beyond the Bayside Fuel Company and the Atlantic Express Bus Company is a major commercial area. It includes a Toys "R" Us store and various strip mall-type commercial establishments organized around a large parking lot. Toys "R" Us impedes almost any view of the site from the shoreline north of Bay Parkway, including views from Shore Parkway and some of the parkland running between the shore and parkway (Leif Ericson Drive Shore Parkway park system). The northern portion of this park and Bensonhurst Park afford views of the site at a distance (see Figure 5.7-3).

Dreier-Offerman Park lies farther to the south of the site beyond the yacht club and marina. It affords views of the existing MTS as well as of the incinerator (see Figure 5.7-4). At the mouth of Coney Island Creek is Coney Island Creek Park, which is not an active recreational area. This park extends from the Sea Gate neighborhood into the bay with views of the site. The site is clearly visible from Coney Island across Gravesend Bay (see Figure 5.7-5).

The tallest building in the area is the Regina Pacis Residence for Senior Citizens (Regina Pacis Housing Corporation), at 24-24 Cropsey Avenue, which stands approximately 20 stories tall. The building is faced in light brick and has many windows and balconies with views toward the water and, consequently, the site and existing MTS.



Figure 5.7-1: View northward from Bay 43rd Street. (Photo 2000)



Figure 5.7-2: Nellie Bly Amusement Park, located east of the site.

Figure 5.7-1 and 5.7-2
Urban Design and Visual Quality
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Figure 5.7-3: MTS as viewed from the Shore Park at approximately 19th Avenue.
(Photo 2000)



Figure 5.7-4 : View northward from the interior of Dreier-Offerman Park.
(Photo 2000)

Figure 5.7-3 and 5.7-4
Urban Design and Visual Quality
Southwest Brooklyn Converted MTS

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Figure 5.7-5: View of site, looking north across Coney Island Creek from Coney Island Creek Park.

Figure 5.7-5
Urban Design and Visual Quality
Southwest Brooklyn Converted MTS

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5.7.2 Future No-Build Conditions

Other than the imminent demolition of the defunct 200-foot-tall incinerator stacks and building, there are no plans for the site or surrounding environs that would lead to a change in urban design and visual quality characteristics. The site will remain DSNY property, the existing MTS will remain, and the associated DSNY salt storage and garage facilities will continue to be fully utilized. The anticipated urban design and visual quality Future No-Build Conditions are, therefore, fundamentally the same as Existing Conditions on site and within the study area.

5.7.3 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would be located further inland than the existing facility, in about the same location as the incinerator, which will be demolished by the time of MTS construction. The Southwest Brooklyn Converted MTS would be approached via a sharply curved drive to its south. Operation of the Southwest Brooklyn Converted MTS would require mooring of barges on its bay side. The existing MTS building would remain.

Because the new construction would be limited to the site that is already arranged to handle waste transfer operations, no impacts on urban design of the area would result. Likewise, the presence of a transfer station further inland, still bordered by DSNY salt storage sheds, would not significantly alter the industrial visual quality of the site.

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.) If this site were chosen and a noise wall used as the preferred mitigation, a supporting analysis would be conducted.

A survey was conducted within this 430-foot area and found that there were no parks, publicly accessible open spaces, historic resources or important natural features; therefore, no assessment of shadows was deemed necessary and no shadow impact is expected as a result of the proposed project.

5.8 Neighborhood Character

5.8.1 Existing Conditions

5.8.1.1 Definition of the Study Area

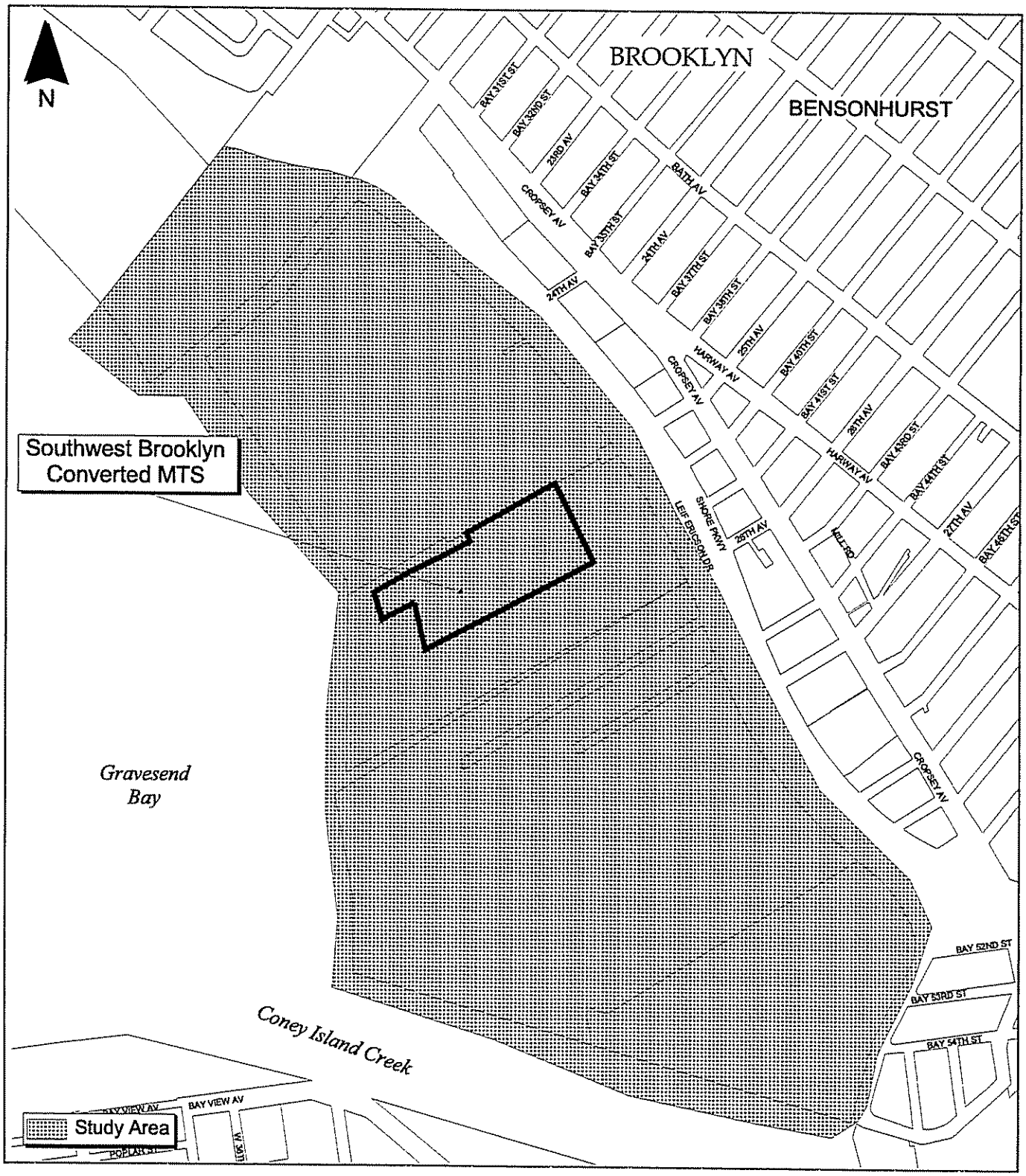
The site is on Gravesend Bay in Bensonhurst, a large mixed-use community in Southwest Brooklyn featuring mostly residential uses and water-related recreational activities. The site and other waterside uses are physically separated from the primary residential area inland by Shore Parkway, a six-lane arterial. Because Shore Parkway essentially buffers the residential neighborhood to the east, the study area considered for this assessment is defined by the mix of uses along the waterfront and includes Bensonhurst Park to the north, Dreier-Offerman Park to the south and Shore Parkway to the east (see Figure 5.8-1).

5.8.1.2 Description of Neighborhood Character

The study area has a wide range of mixed uses (e.g., industrial, commercial, institutional, recreational and open space land uses). It is generally developed at a low density and with fairly large lots. Waterfront access is provided to the public in Bensonhurst Park north of the site and Dreier-Offerman Park to the south. The Excelsior Yacht Club and Marina adjacent to the site affords private access to water recreation uses.

The site, which is on the waterfront portion of the larger DSNY property, is accessed from a local service road running parallel to Shore Parkway on its bay side. This road is also accessible from Cropsey Avenue at its intersection with Bay 52nd Street southeast of the site. It serves Bensonhurst Park, Dreier-Offerman Park, the Nellie Bly Amusement Park, commercial uses next to the amusement park, and the yacht club, marinas and all the other activities on the bay side of the parkway.

The yacht club and Nellie Bly Amusement Park, which are regional destination points adjacent to the site, contribute to the pedestrian, automobile and boat circulation activity nearby. These uses and the routes that are used to access them have direct views to the site, and virtually all



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 5.8-1 Neighborhood Location

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these uses within the immediate area are intended for outdoor activity and recreation. Dreier-Offerman Park and the institutional uses south of the site also contribute to the area's pedestrian and automobile activity; there is also direct visual connection to the site from these areas.

The institutional/residential uses on Bay 44th Street — Community Residential Opportunities, Home for Handicapped Children, and the Brooklyn School for Special Children — account for a well-maintained streetscape. The parks are also well maintained and, since the area is without through-traffic, this street is relatively quiet and peaceful.

5.8.2 Future No-Build Conditions

Although there would be no delivery of waste to the existing MTS, other DSNY operations would continue to produce truck traffic in the neighborhood. It is assumed that the site will remain DSNY property, the incinerator will be demolished, the existing MTS would remain standing and the associated DSNY salt storage and garage facilities would continue to operate fully. Moreover, there are no plans for development on the site or in the study area that would potentially lead to changes in neighborhood character. The anticipated Future No-Build Conditions are, therefore, expected to be the same as Existing Conditions.

5.8.3 Potential Impacts with the Southwest Brooklyn Converted MTS

Generally, no change to the mixed neighborhood character would be expected because the operation and appearance of the Southwest Brooklyn Converted MTS would resemble those of the existing MTS and DSNY and other collection agency vehicles would follow the same routes as before. The Southwest Brooklyn Converted MTS would differ from Future No-Build Conditions in that it would accept the delivery of waste to the existing MTS, as it had in the past, but for the containerization of waste for export. Technical studies were performed for potential site-generated environmental impacts and no significant, unmitigatible adverse traffic, air quality, odor or noise impacts were found.

Therefore, no significant adverse impacts to neighborhood character would result from the reactivation of this historic waste transfer use on DSNY property surrounded by DSNY uses and activities that are anticipated to remain largely unchanged in the Future No-Build Condition.

5.9 Natural Resources

5.9.1 Existing Conditions

Existing Conditions include moderately stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the Southwest Brooklyn Converted MTS.

5.9.1.1 Definition of Study Area

The study area includes the site and the waterfront sections that are bounded by the waters of Gravesend Bay to the west (see Figure 2.2.2-1). The upland sections of the study area and surrounding neighborhood are fully developed and, therefore, have very limited terrestrial natural resources. Such resources that do exist will be discussed in following sections. Because Future Build Conditions would include dredging of bottom sediment and construction of a new MTS, a description of aquatic communities is included.

5.9.1.2 Geology

Boring data from the City Department of Public Works entitled "Record of Borings, Southwest Brooklyn Sanitation Center" (December 5, 1956), indicates that bedrock was not encountered in borings drilled to varying depths up to 100 feet.[3] The uppermost layer (between one to eight feet thick) generally consisted of "uncontrolled fill," and its content varied greatly and included concrete, brick mixed with sand and gravel and deleterious material such as cinders, wood and vegetation. Borings performed within the upland portions of the site indicated a sand stratum underlying this fill material. In borings in the vicinity of the existing MTS, a sand stratum was encountered at the mud line. This stratum typically consists of a loose to medium dense, red brown poorly graded sand, to poorly graded sand with silt. All previous borings terminated in

[3] Geology and Hydrogeology discussions based on "Record of Borings, Southwest Brooklyn Sanitation Center," December 1956, by the New York City Department of Public Works, as cited in the "MTS Conversion Conceptual Design Report," April 2003, by Greeley and Hansen, LLC.

this stratum. Results of the sediment samples collected for analysis in 2003 show that surficial sediment is characterized as light gray to gray sludge consisting of clay and silt with trace amounts of sand, with approximately 92,250 mg/kg TOC.[4] A grain-size analysis of sediment surrounding the MTS indicated the material to be 87.3% silt and clay, 11.1% sand and 1.7% gravel. Sediment was found to be somewhat degraded due to contaminants in the sample material. Lead had the highest concentrations in the sediment (106.33 mg/kg), followed by chromium, barium and arsenic (71.17 mg/kg, 62.42 mg/kg and 20.72 mg/kg, respectively).

5.9.1.3 Floodplains

The site is constructed within the 100-year coastal floodplain (see Figure 5.9-1). No intertidal wetlands exist on the site. Gravesend Bay, which is a NYSDEC-designated littoral zone, is a part of the study area (see Figure 5.9-2).

5.9.1.4 Ecosystems

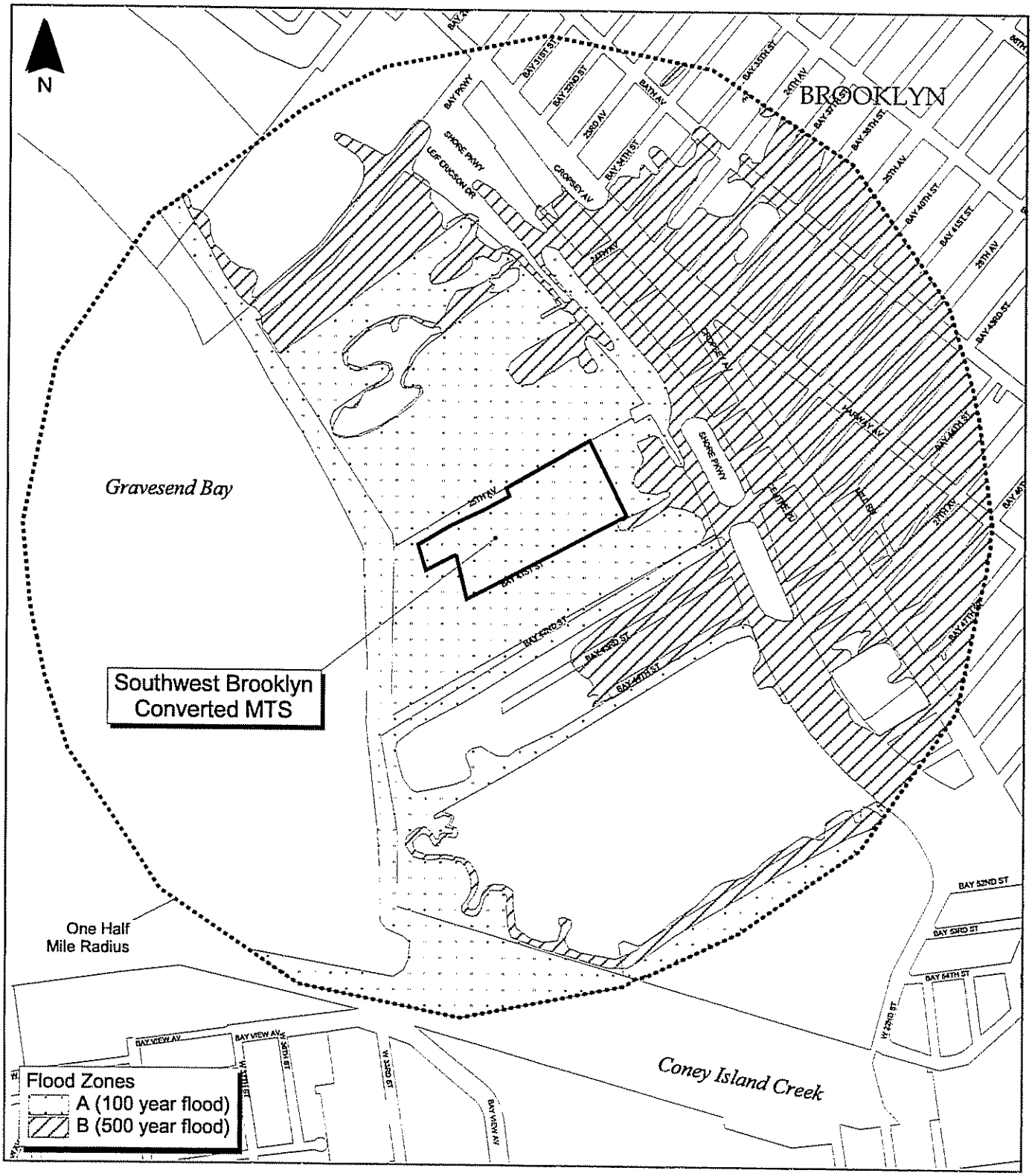
Vegetative resources are virtually absent because nearly the entire site is covered with buildings or pavement. The few areas that are not hard surfaced exhibit typical opportunistic (weed) species including mugwort (*Artemisia vulgaris*) and tree-of-heaven (*Ailanthus altissima*). The vegetative cover in these areas was too sparse to be mapped.

The headwater of Gravesend Bay/Coney Island Creek is grossly contaminated, although the lower reaches exhibit adequate to good water quality. The reason for the good water quality is the proximity of the Upper Bight to the oceanic waters. Because Gravesend Bay has a large opening, the resultant tidal exchange facilitates circulation and replenishment.

A field program designed to fully characterize the marine biological resources of the study area took place in 2003. The program included monthly sampling for adult finfish, finfish eggs and larvae and water quality, and quarterly sampling for benthic organisms, sediment quality and sessile colonizing organisms. Results of the program are discussed in the following paragraphs.

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[4] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

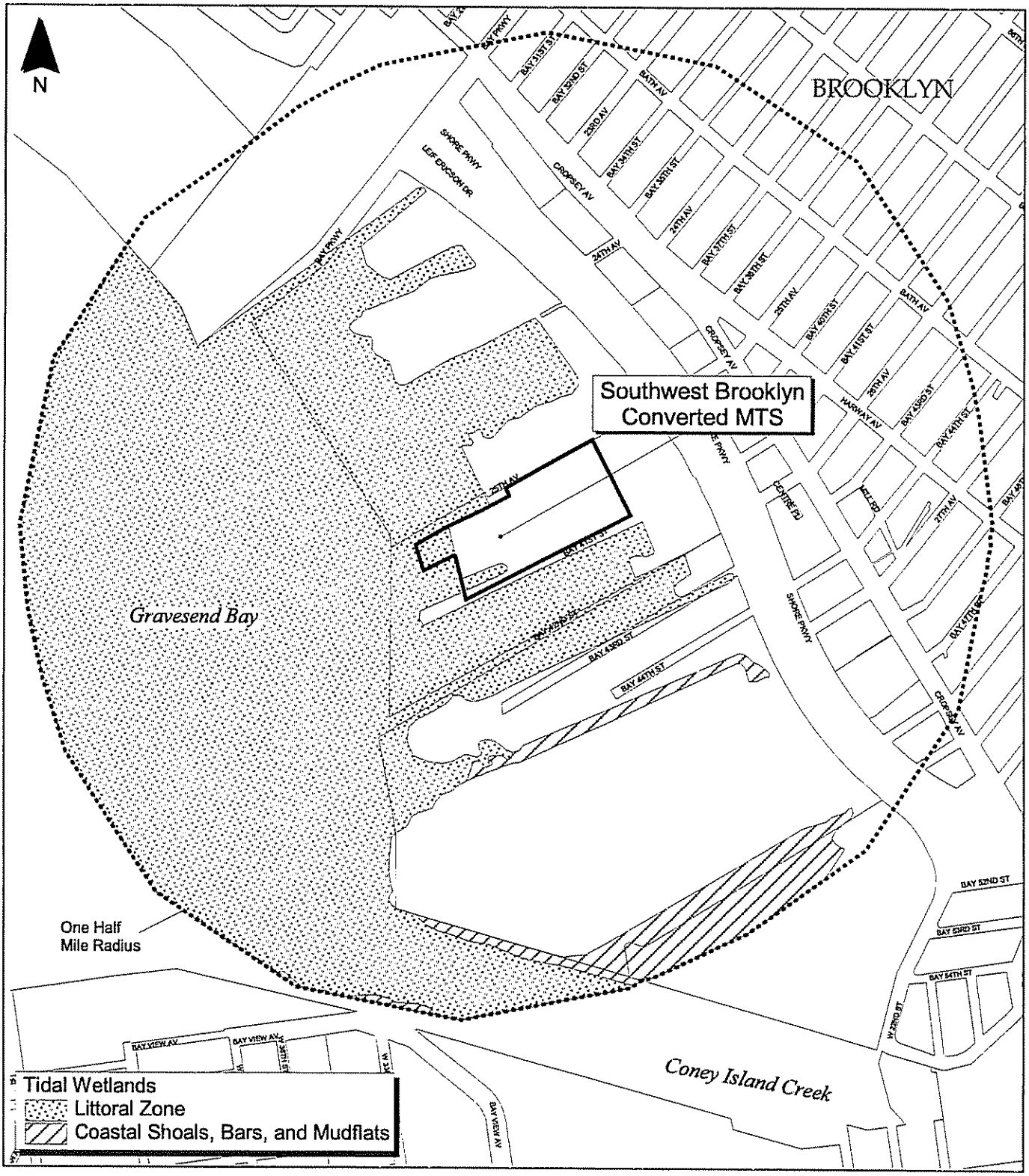
HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 5.9-1 Floodplains

Southwest Brooklyn Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.9-2 Wetlands

Southwest Brooklyn Converted MTS

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The Southwest Brooklyn Converted MTS was one of three MTSs with the greatest biological integrity. It housed a diverse benthic, larval finfish and adult finfish community. It also had the greatest number of EFH-listed adult finfish (8) and larvae (4) and the highest number of *Dyspanopeus sayi* (a mud crab whose presence indicates suitable dissolved oxygen levels in the water column).

A diverse finfish community exists at the Southwest Brooklyn Converted MTS.[5] Of 1,293 adult finfish collected, 69% were bay anchovy (*Anchoa mitchilli*). Weakfish (*Cynoscion regalis*) and scup (*Stenotomus chrysops*) were also abundant at this site. The Southwest Brooklyn Converted MTS site housed the greatest number of EFH species (8). The species collected were: scup (*S. chrysops*), windowpane (*Scophthalmus aquosus*), summer flounder (*Paralichthys dentatus*), Atlantic herring (*Clupea harengus*), winter flounder (*Pleuronectes americanus*), Atlantic butterfish (*Peprilus triacanthus*), bluefish (*Pomatomus saltatrix*) and black sea bass (*Centropristis striata*). The larvae of four EFH-listed species were also found at the Southwest Brooklyn Converted MTS: winter flounder, windowpane, scup and Atlantic butterfish; eggs of windowpane were also collected. Some of the highest finfish egg and larval densities and the greatest larval species richness were found at the Southwest Brooklyn Converted MTS. A Shannon-Weaver Index[6] indicates this MTS to have the greatest finfish egg and larval species diversity and a Jaccard's Index[7] indicates that the finfish eggs and larvae were most dissimilar at the Southwest Brooklyn Converted MTS in comparison to the other MTSs sampled.

The Southwest Brooklyn Converted MTS had one of the greatest species richnesses in the benthic communities. The dominant benthic organism collected from the sediment surrounding the Southwest Brooklyn Converted MTS was *Streblispio benedicti*, a polychaete worm. There were approximately 13,500 *S. benedicti* per square meter of sediment. This species, however, is tolerant of polluted environments. Dominant epibenthic colonizers were *Polydora* sp. (polychaete worms), *Crepidula fornicata* (common Atlantic slippersnail), *Nereis succinea* (yellow-jawed clam worm), *Mytilus edulis* (blue mussel), and hydrozoa, mud, and algal film. Many of these species also are tolerant of degraded environmental conditions.

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[5] Ibid.

[6] The Shannon-Weaver Index is a measure of community diversity. If an individual of the community is selected at random, the index gives a measure of the uncertainty that the selected individual will be of a particular species. The higher the index, the more diverse the community.

[7] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs. The index ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

The peregrine falcon (*Falco peregrinus)*, a federally listed endangered species, was not listed as present for this site in the recent response from the USF&WS.

5.9.2 Future No-Build Conditions

If the Southwest Brooklyn Converted MTS were not to be constructed, the study area would remain as is, except that the incinerator would be demolished and removed from the site. The site would remain DSNY property and the existing MTS would remain. The limited aquatic and terrestrial natural resources would also remain and the study area would continue to be a moderately ecologically productive area in a stressed urban area.

5.9.3 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would be built at about the same location as the incinerator, which will have already been demolished and removed. The above-water platform for this facility will remain in place. Barges would be located along the dock on the southwest side of the study area. Since this facility will not require the removal of the old platform and construction of a new one, the impacts from suspended sediment, as a result of construction, will be minimal. There will, however, be construction of a king pile wall, a barrier to protect neighboring marina from wave action. Water depth in this area is approximately eight to ten feet, so dredging would be necessary to accept the retrofitted DSNY barges that would be used to transport the containerized waste. Dredging and construction of a king pile wall, however, will cause the upper organic silts to be disturbed to some degree, resulting in re-suspension of the sediments. Because of the swift currents in the area, mitigation measures, such as silt curtains, would not be feasible. However, the amount of re-suspended sediments is expected to be low and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable, against the normal background fluctuations.

5.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

5.9.3.2 *Floodplains*

Implementation of the Southwest Brooklyn Converted MTS would not affect the elevation of the site. It would be constructed within the 100-year floodplain and would not include any provisions for raising any portions of the site over this level.

5.9.3.3 *Ecosystems*

The limited vegetative resources that are present on the small patches of unpaved areas of the study area are not rare, endangered or particularly important species from an ecological perspective. Development of the Southwest Brooklyn Converted MTS would produce no consequences to the natural resources. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the study area since the original construction of the buildings in 1965.

Construction of the Southwest Brooklyn Converted MTS would involve dredging to accommodate the deeper draft of the coastal barges and construction of a king pile wall, resulting in an immediate, short-term destruction of the benthic invertebrates in the area. Because the benthic diversity is high and dredging and construction causes turbidity and siltation that could smother the benthic organisms, there is expected to be a short-term degree of impact. However, because there is no platform construction slated, the impact should be minimal and recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[8] Given the relatively small size of the project and the fact that periodic maintenance dredging has been performed repeatedly at the study area since its original construction, minimal impact is expected from the Southwest Brooklyn Converted MTS. The plan to use the existing platform will prove beneficial to epibenthic organisms. Because the platform will remain, an already established, complex epibenthic community will remain in existence. This community will also colonize the new king pile wall.

[8] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

The dredging and construction activity will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to suspended sediment and flatfish (flounders) are least sensitive. Flounder catch was much higher at the Southwest Brooklyn Converted MTS than herring catch, so it can be assumed that this site is not an important herring habitat that will be temporarily impacted. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. Also, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The Southwest Brooklyn Converted MTS, however, does not have a proposed change in platform footprint. Therefore, there will be no impact as a result of increased shading of the water column at this MTS.

The existing MTS had operated as a solid waste transfer station for 35 years and does not contain or abut any environmentally sensitive areas. Modifications to the study area would pose little, if any, adverse ecological impacts and no loss of habitat to rare or endangered species.

5.10 Hazardous Materials

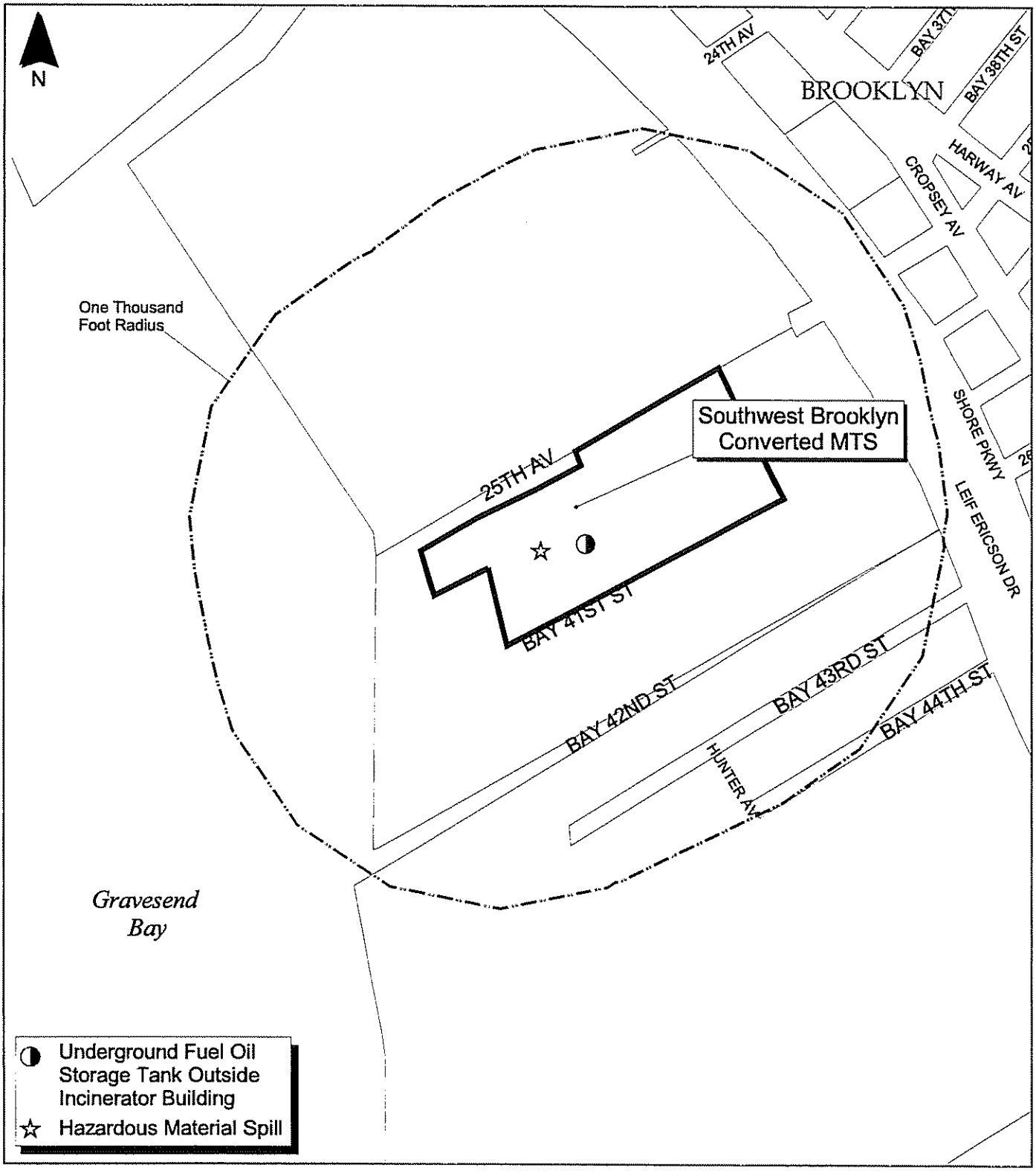
5.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

5.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 5.10-1).



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

300 0 300 Feet

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Figure 5.10-1 Hazardous Materials Sites
Southwest Brooklyn Converted MTS

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5.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and implementation of the Southwest Brooklyn Converted MTS could lead to an increased exposure of people or the environment to those materials. The areas of concern at the subject site include:

- Possible groundwater contamination migrating beneath the site from the adjacent DSNY Garage and Borough Command Facility on the east side. Evidence of on-site USTs (i.e., fuel pumps, fills and vents, and NYSDEC Petroleum Bulk Storage listings) was noted at the Borough Command Facility site. Numerous monitoring wells were noted inside and around this facility, strongly suggesting the presence and/or a release of contaminants to the environment. Four "active status" NYSDEC spill incidents consisting of test failure of USTs (#2 fuel oil, gasoline and hoist oil) are believed to have occurred at this facility. These include Spill No. 8911519 dated March 7, 1990, at 1824 Shore Parkway; Spill No. 9001807 dated May 15, 1990, at 380 Bay 41st Street/DSNY); and Spill Nos. 0001699 and 0001700 dated April 25, 2000, at 1824 Shore Parkway/NYSDEC. An "active status" spill listing DSNY as the spiller, and noted during the April 1999 assessment, was not found during the 2003 assessment.

- Potential subsurface contamination associated with what appeared in 1999 to be USTs within the fenced-in exterior areas of the closed Southwest Brooklyn Incinerator building.

- The probable presence of lead-based paint in underlying layers of the existing MTS (based on the age of the building). Painted surfaces were in relatively good condition, with only minor areas of damaged paint noted. Underlying paint in good condition does not represent any risk to current employees.

- Probable presence of lead-based paint on the Southwest Brooklyn Incinerator building based on its age (circa 1960). In addition, due to the age and nature of operations performed within this building, it is highly likely that its interior portions contain ACMs. Suspected asbestos-containing corrugated cement panels in relatively good condition were noted on exterior portions of the building and adjacent conveyor structure at the time of the site visit in 1999.

A field program to investigate the potential impacts to the soil and groundwater from the historic use of the property as an incinerator and MTS was completed in November 2003 in accordance with a NYSDEC-approved work plan.[9] The field investigation included:

- Performing a ground-penetrating radar and magnetometer survey over accessible areas of the site.
- Collection of one subsurface soil sample from 14 boring locations.
- Collection of one surface soil sample from four boring locations.
- Collection of one soil/ash sample for TCLP analysis.
- Collection of one groundwater sample from three boring locations.
- Collection of one groundwater sample from three permanent monitoring wells.
- Laboratory analysis of all soil samples for asbestos, VOCs, SVOCs, pesticides/PCBs, and RCRA metals.
- Laboratory analysis of all water samples for VOCs, SVOCs, pesticides/PCBs and RCRA metals.
- Determination of the direction of groundwater flow by land survey and measurement to the top of the groundwater surface.
- Comparison of the analytical results obtained from the soil and groundwater sampling program with the NYSDEC technical and TAGM guidelines.
- Preparation and submittal of a detailed site investigation report.[10]

Low-level soil and groundwater contamination was discovered during this investigation and is consistent with the historic construction and use of this facility as an incinerator and MTS.

5.10.2 Future No-Build Conditions

The site would remain as is except for the demolition of the on-site incinerator. Any ACMs that are found in the incinerator building would be removed prior to demolition in a manner that is consistent with City building codes and practices. Contamination may exist on the subject site from suspected on-site USTs; however, DSNY has plans to close all USTs in accordance with New York State regulations (6 NYCRR 613.9).

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[9] New York City Department of Sanitation, October 2003. Final Phase II Site Investigation Work Plan, Southwest Brooklyn Marine Transfer Station, Brooklyn, New York.

[10] New York City Department of Sanitation, June 2004. Phase II Site Investigation, Southwest Brooklyn Marine Transfer Station, Brooklyn, New York. Prepared by EEA, Inc.

5.10.3 Potential Impacts with the Southwest Brooklyn Converted MTS

Historical low-level soil and groundwater contamination is present at the existing MTS facility; however, this contamination should not prevent development of the site. If the Southwest Brooklyn Converted MTS were implemented, any residual contaminated soil discovered would require appropriate disposal according to current regulatory guidelines in a manner that is consistent with the level of contamination found during the demolition/construction phase. The necessary and appropriate health and safety measures would be used to mitigate and minimize any exposure risk to workers or the general public.

5.11 Water Quality

5.11.1 Existing Conditions

5.11.1.1 Definition of the Study Area

The water quality study area encompasses Gravesend Bay and Lower New York Bay, and also includes discharges from point sources located within ½-mile of the site.

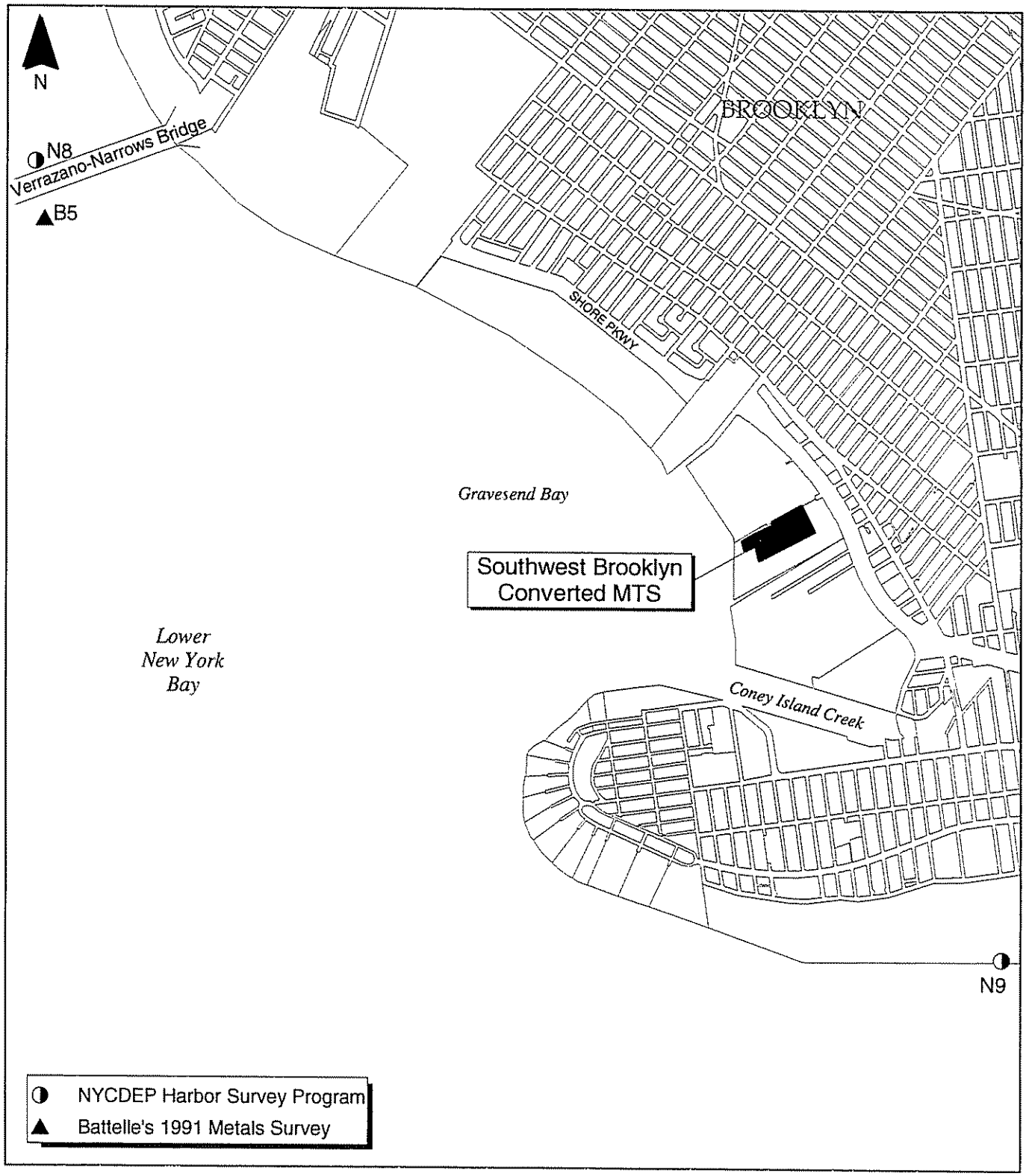
5.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 5.11-1, are generally representative of water quality conditions in the study area:

- NYCDEP Harbor Survey Program – Stations N-8 at the Verrazano Narrows and N-9 at Steeplechase Pier in Lower New York Bay; and
- Battelle's 1991 Metals Survey – Station B-5 in the Lower New York Bay.

These data along with NYSDEC's water quality standards and guidance values are presented in Table 5.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 5.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station B-5, however, did not conform to the water quality standard for mercury.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 5.11-1 Ambient Water Quality Stations
Southwest Brooklyn Converted MTS

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Table 5.11-1
Existing Water Quality Conditions and Standards
Southwest Brooklyn Converted MTS Study Area

Average Concentration					
Parameter	**Units**	**N-8[1]**	**N-9[2]**	**B-5[3]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	8.4[4]/5.6[5]	8.1[6]/ 6.1[5]	--------	4.0
Dissolved Oxygen (bottom/minimum)	mg/L	7.4 [4]/5.2[5]	7.9 [6]/6.0[5]	--------	4.0
BOD (surface)	mg/L	2.4 [7]	2.0 [7]	--------	--------
BOD (bottom)	mg/L	2.5 [7]	2.2 [7]	--------	--------
Total Coliform (surface)	MPN/100 ml	362 [8]	536[8]	--------	10,000
Total Coliform (bottom)	MPN/100 ml	358[8]	174[8]	--------	10,000
Fecal Coliform (top)	MF	17.9	6.6	--------	2,000
Fecal Coliform (bottom)	MF	2[9]	8[9]	--------	2,000
Total Suspended Solids (surface)	mg/L	6.2	6.9	--------	--------
Total Suspended Solids (bottom)	mg/L	13.3	10.7	--------	--------
NH_3-N	mg/L	0.319	0.169	--------	--------
(NO_3 + NO_2)	mg/L	0.346	0.138	--------	--------
Total Phosphorous	mg/L	0.120	0.092	--------	--------
Dissolved PO_4	mg/L	--------	--------	--------	--------
Chlorophyll-a	µg/L	4.1	3.7	--------	--------
Arsenic	µg/L	--------	--------	1.4 [10]	36 [10,11]
Cadmium	µg/L	--------	--------	0.059 [10]	7.7 [10,11]
Chromium	µg/L	--------	--------	--------	--------
Copper	µg/L	--------	--------	2.00 [12]	5.6 [11,12]
Lead	µg/L	--------	--------	1.23 [10]	8.0[10,11]
Mercury	µg/L	--------	--------	0.015 [10]	0.0026 [10,11]
Nickel	µg/L	--------	--------	0.86 [10]	8.2 [10,11]
Silver	µg/L	--------	--------	0.0596 [10]	------
Zinc	µg/L	--------	--------	4.32 [10]	66 [10,11]
Cyanide	µg/L	--------	--------	------	1.0 [11]

Notes for Table 5.11-1:

(1) Average concentrations for 2003 NYCDEP Harbor Survey Station N-8 located at the Verrazano Narrows.
(2) Average concentrations for 2003 NYCDEP Harbor Survey Station N-9 located at Steeplechase Pier, in Lower New York Bay.
(3) Average concentrations for 1991 Battelle Ambient Survey Station B-5 located in the Lower New York Bay.
(4) Represents average between January and October 2003.
(5) Minimum between June 1, 2003 and September 30, 2003.
(6) Represents average between January and December 2003.
(7) Latest available data 1997.
(8) Latest available data 1996.
(9) Latest available data 1999.
(10) Guidance values and data are for dissolved metals.
(11) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).
(12) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

5.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there is one permitted discharge in the vicinity of the site. The existing discharge within a ½-mile radius is listed in Table 5.11-2 and shown in Figure 5.11-2. This discharge consists of one industrial site, which is permitted by the NYSDEC. It is located in Brooklyn, north of the site, and discharges into Gravesend Bay.

Table 5.11-2
Existing Permitted Discharges
Southwest Brooklyn Converted MTS Study Area

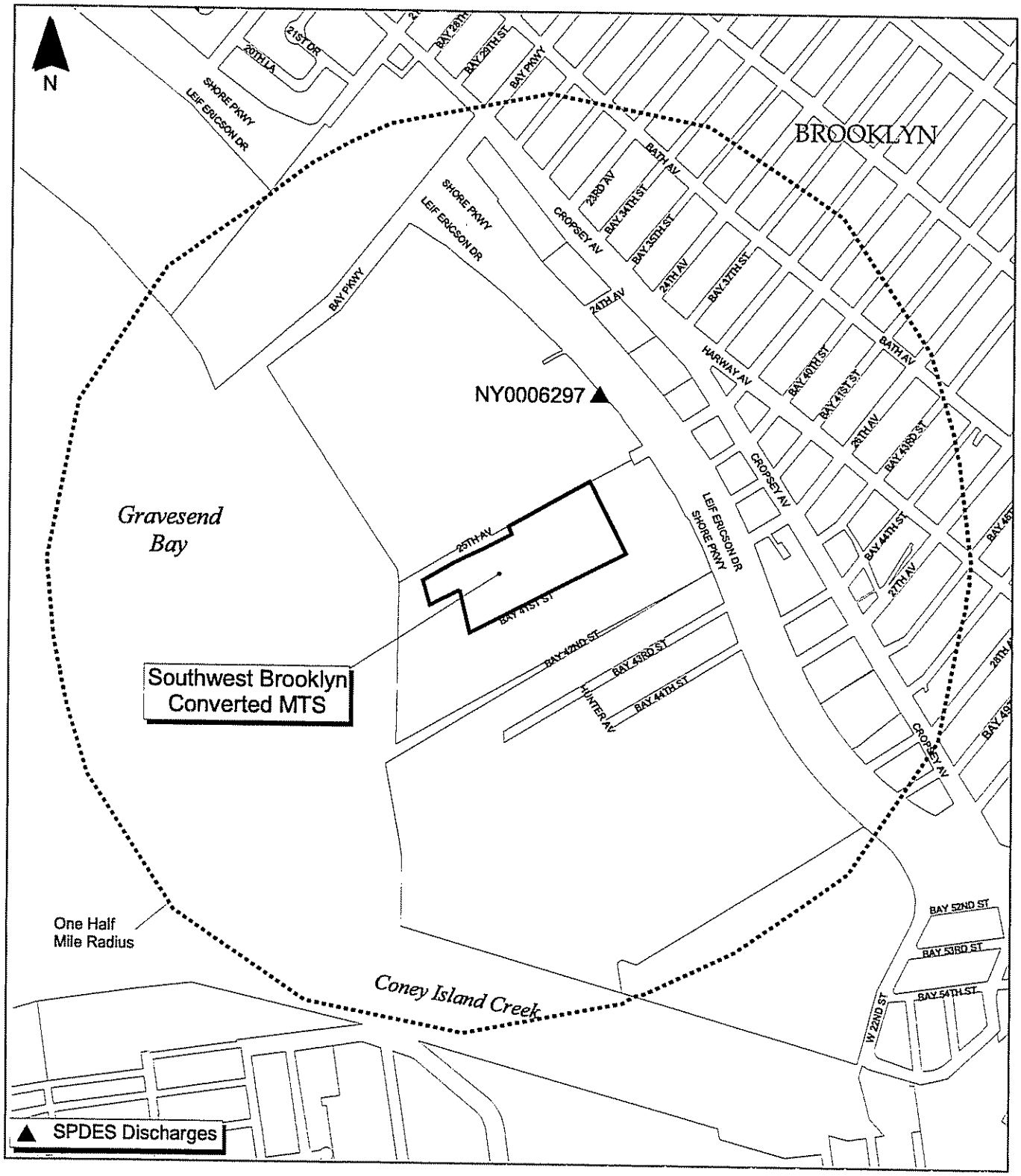
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Bayside Fuel Oil Depot Corp.	NY0006297	Kings	Gravesend Bay

5.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, an estimate of existing stormwater pollutant loadings was calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% infiltration and/or storage. A runoff flow of 0.341 cfs was calculated using the impervious site area (6.5 acres), an average rainfall intensity of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 5.11-3, represent the existing loads at the site.

5.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Hydroqual DD

Figure 5.11-2 Permitted Outfalls and CSO Locations Southwest Brooklyn Converted MTS

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Table 5.11-3
Estimated Existing Pollutant Loads and Runoff Flows
Southwest Brooklyn Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	71,446[1]
BOD mg/L	11	23
Heavy Metals		
Copper (µg/L)	35	0.074
Lead (µg/L)	28	0.059
Zinc (µg/L)	154	0.324
Total Impervious Area (acre) = 6.5		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Flow (cfs) = 0.341

Notes:
[1] Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
[2] Based on Central Park Rain Data (1969-2002); The National Climatic Data Center

5.11.3 Potential Impacts with the Southwest Brooklyn Converted MTS

With the development and operation of the Southwest Brooklyn Converted MTS, there would be no change to the impervious area and, therefore, the stormwater loadings at the site would remain unchanged. Table 5.11-4 shows the existing impervious area, the change in impervious area and pollutant loads. With the development of the Southwest Brooklyn Converted MTS, conditions would not be significantly different from Future No-Build Conditions. After treatment, the processed wastewater would be discharged to the municipal sewer system and, ultimately, to the Owls Head WPCP, where it would be treated prior to discharge to the Lower New York Bay and, therefore, would not adversely affect water quality. The Southwest Brooklyn Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

Table 5.11-4
Impervious Area and Estimated Pollutant Loads
Southwest Brooklyn Converted MTS

Impervious Area Change			Estimated Pollutant Loadings/Incremental Change [1]				
Condition	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	6.5	0.0	71,446/NA	23/NA	0.074/NA	0.059/NA	0.324/NA
Future Build Conditions	6.5	0.0	71,446/0	23/0	0.074/0	0.059/0	0.324/0

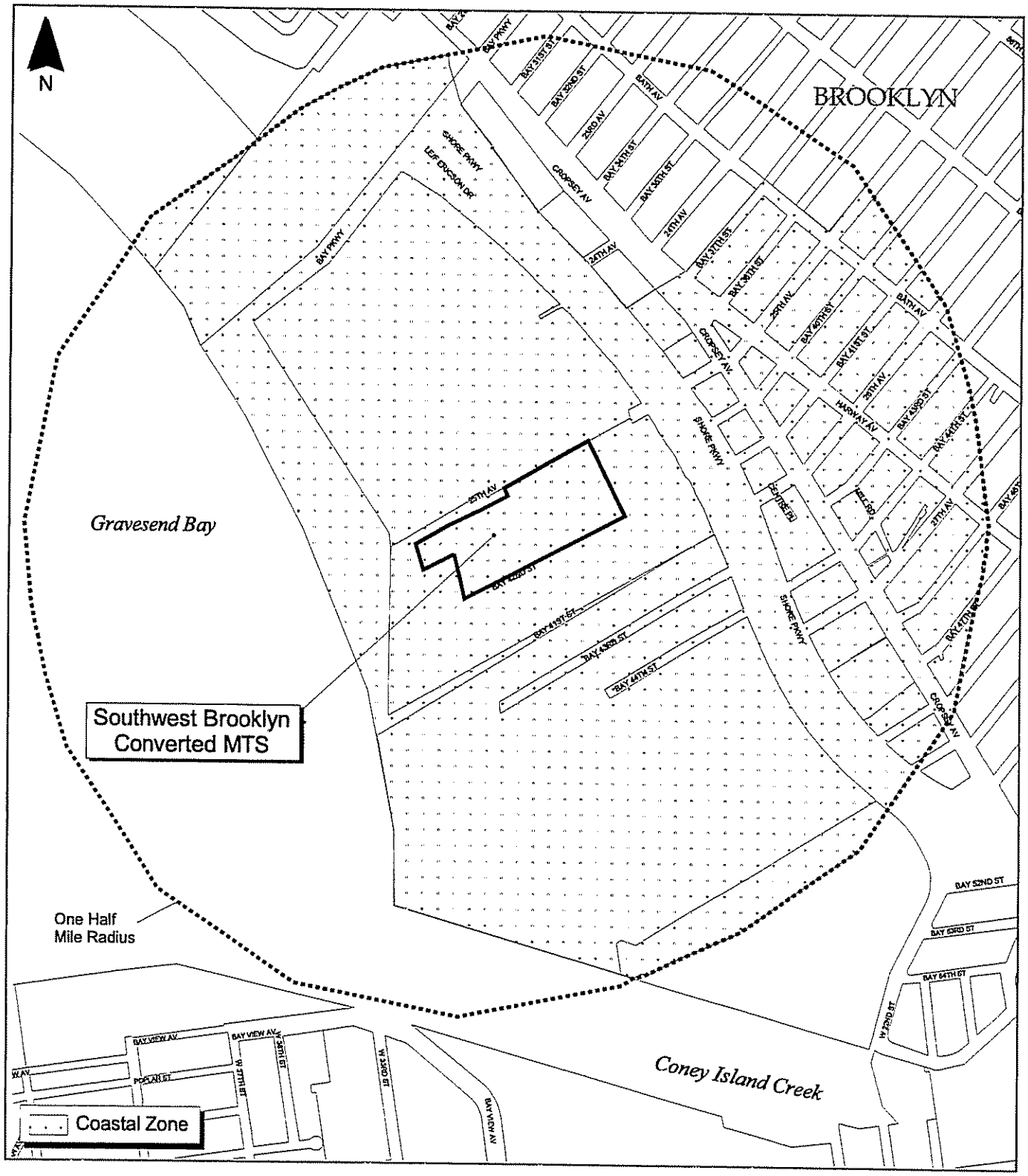
Notes:
[1] Incremental change refers to the difference in pollutant loading between the Existing Conditions and the Future Build Conditions.
[2] Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

5.12 Waterfront Revitalization Program

5.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of Gravesend Bay, the Southwest Brooklyn Converted MTS would be within the City's coastal zone boundary (see Figure 5.12-1). According to "The New Waterfront Revitalization Program," the Southwest Brooklyn Converted MTS, once operational, would be classified as a water-dependent, industrial use. It would be located within Reach 15 Brooklyn/Lower Bay as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." It is not currently within an NYCDCP-designated SNWA or SMIA. Due to its location, it is subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Southwest Brooklyn Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable, including subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3, 8.5 and 10.2. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. In instances where a component of the Southwest Brooklyn Converted MTS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations that would occur at the Southwest Brooklyn Converted MTS is provided in Section 2.2.2.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB PB28 EEA Cambridge Environmental Inc

Figure 5.12-1 Coastal Zone Boundary

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
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THE CITY OF NEW YORK DEPARTMENT OF SANITATION

5.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the new Southwest Brooklyn Converted MTS. As part of the Southwest Brooklyn Converted MTS, connections from the new facility to existing utilities (e.g., sewer connections, etc.) in the vicinity would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The site of the Southwest Brooklyn Converted MTS is not located within an NYCDCP-designated SMIA. The existing MTS would remain in its current configuration for potential future use by DSNY. Development of the Southwest Brooklyn Converted MTS would involve its construction within the upland portion of the site that is currently occupied by a former incinerator, which is in the process of being demolished. This incinerator previously had the ability to transport ash by barge from the site. The Southwest Brooklyn Converted MTS would involve the development of an upland TCB transfer station that would transport DSNY-managed Waste by marine transport to remote out-of-City disposal facilities.

The site redevelopment, as described in Section 2.2.2, would help to restore and revitalize industrial waterfront property and would be compatible with existing industrial and maritime uses. The majority of reconstruction activity would occur within the upland portions of the site and would consist of four primary components: (1) an enclosed processing building which would include a tipping floor, loading floor and pier level; (2) an elevated access ramp with accompanying retaining walls; (3) a gantry crane, outside of the processing building and at the waterfront; and (4) a ~~rehabilitated bulkhead and~~new fendering system and new ~~breakwater groin~~king pile wall. The Southwest Brooklyn Converted MTS would be consistent with existing land uses in the vicinity of the site and with the "Plan for the Brooklyn Waterfront," which recommends the continued industrial use of the area. Although it would not encourage or facilitate the siting of any additional water-dependent uses, the Southwest Brooklyn Converted MTS would involve the redevelopment of the former incinerator site with a new waterfront use that would expand the previous waterfront activities at the site, which are currently inactive and would be compatible with surrounding uses.

The Southwest Brooklyn Converted MTS would, therefore, be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The Southwest Brooklyn Converted MTS would involve the development of a new facility within the upland portion of the site that is currently occupied by the former incinerator, which is in the process of being demolished. It would allow for marine transport of solid waste to licensed out-of-City disposal facilities. The development would consist of four primary components: (1) an enclosed processing building which would include the tipping floor, loading floor and pier level; (2) an elevated access ramp; (3) a gantry crane; and (4) a ~~rehabilitated bulkhead and~~ new fendering system and ~~breakwater groin~~king pile wall. In

addition, an 18-inch concrete stormwater outfall would be constructed within the bulkhead. It is likely the construction of the king pile wall, fendering system and new outfall would be done from a crane-mounted work barge. The stormwater outfall would drain stormwater runoff from the facility into the Gravesend Bay. Some of the stormwater would also drain to ~~tan~~ existing 8-foot by 8-foot storm outfall, located north of the site. Prior to discharging to these outfalls, the stormwater runoff would pass through a stormwater treatment system. The Southwest Brooklyn Converted MTS would be consistent with existing waterfront uses at and in the vicinity of the site.

In addition, the Southwest Brooklyn Converted MTS would require dredging to improve existing water depths at and in the immediate vicinity of the site to allow for unimpeded operation of barges and tugboats once it became operational. All required dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The development of the Southwest Brooklyn Converted MTS would involve the reactivation of a historic waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within Gravesend Bay resulting from the Southwest Brooklyn Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges. ~~Four or five~~Two barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the waterbody would be anticipated. The Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The Southwest Brooklyn Converted MTS would be an upland TCB transfer station where DSNY-managed Waste would be transferred into containers that would be sealed and placed onto flat deck barges, then transported to out-of-City disposal locations and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All solid waste handling would occur within an enclosed processing building. All waste would be placed in sealed containers before leaving the building for loading on barges.

Building ventilation would be maintained under negative pressure, which would maintain dust inside the enclosed processing building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. All process wastewaters generated on site (e.g., washdown waters, etc.) would be treated prior to their discharge to the municipal sewer system. In addition, on-site storage of petroleum products and hazardous materials related to the operation of the Southwest Brooklyn Converted MTS would be done in accordance with applicable federal, state and local regulations. Therefore, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, as described in "The Waterfront Revitalization Program," as well as Recognized Ecological Complexes and SCFWH information, the Southwest Brooklyn Converted MTS is not within a designated area. The Southwest Brooklyn Converted MTS would involve the redevelopment of the former incinerator site, which is in the process of being taken down, with a new waterfront use that would expand the previous waterfront activities at the site. It would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. The Southwest Brooklyn Converted MTS would, therefore, be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland maps was conducted to determine the presence of wetlands within the site. As noted in Section 5.9.1, the Southwest Brooklyn Converted MTS would front Gravesend Bay, a NYSDEC-designated littoral zone. No freshwater wetlands exist on the site. The Southwest Brooklyn Converted MTS would involve the construction of a new facility within the upland portion of the site that is currently occupied by the former incinerator, which is in the process of being demolished. Required dredging associated with construction activities would result in limited, short-term ~~impact~~ effects to these tidal wetlands.

Construction of a 300-foot ~~breakwater groin~~king pile wall within Gravesend Bay would be needed to protect existing waterfront facilities located southeast of the site. The ~~breakwater~~ king pile wall would consist of the placement of steel sheet piling and rip rap.

Dredging activities associated with the development of the Southwest Brooklyn Converted MTS are not anticipated to have significant ~~impacts~~ effects on wetland areas in the vicinity of the site, primarily due to previous activities and dredging that historically occurred at the site. ~~Mitigation for potential~~Potential ~~impacts~~ effects upon wetlands would be ~~proposed~~ addressed during the environmental review and permitting of the Southwest Brooklyn Converted MTS. ~~This mitigation, if required, would address potential impacts that may occur due to the Southwest Brooklyn Converted MTS and would effectively restore these wetlands~~

~~and their associated value.~~ DSNY in coordination with the NYSDEC and other involved agencies would determine the appropriate measure to address potential effects that may occur due to the Southwest Brooklyn Converted MTS and would effectively restore these wetlands and their associated value. The Southwest Brooklyn Converted MTS would, therefore, be consistent with this subpolicy.

4.3 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

A review of NYSDEC NHP database indicates that no known species of concern were located in the vicinity of the site. The Southwest Brooklyn Converted MTS would be constructed within the upland portion of the site that is currently occupied by the former incinerator, which is in the process of being demolished. Development of a new king pile wall and the replacement of the existing fendering system would be required. Dredging would also be required to accommodate ~~larger~~ barges and tugboats once the site is operational. As stated in Section 5.9.3, modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat to rare or endangered species. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the Southwest Brooklyn Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The Southwest Brooklyn Converted MTS would not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The Southwest Brooklyn Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site treatment system, which may consist of oil/water separators, etc., discharging eventually to the municipal sewer system. In

addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. A new stormwater outfall would be constructed in the bulkhead to manage stormwater runoff from the proposed action. In addition, some of the stormwater runoff from the Southwest Brooklyn Converted MTS would discharge to an existing 8-foot by 8-foot outfall located north of the site. The runoff to both of these outfalls would pass through a stormwater treatment system. Stormwater runoff from the Southwest Brooklyn Converted MTS would be managed in accordance with all applicable federal, state and local regulations.

In addition, the majority of activities associated with the Southwest Brooklyn Converted MTS would be conducted within an enclosed processing building. Only sealed, air- and watertight containers would be transferred to barges outside of the processing building by gantry cranes installed at the pier level. Inside the facility, several measures would be taken to minimize the potential for environmental degradation as a result of the facility. Building ventilation would be maintained under negative pressure, which would be intended to keep dust inside the enclosed processing building. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. The Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

5.2 *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

BMPs would be used to the extent possible during all phases of construction and operation of the Southwest Brooklyn Converted MTS in order to minimize any nonpoint discharges. The Southwest Brooklyn Converted MTS would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be conducted within an enclosed processing building. During construction, non-structural and, if necessary, structural, measures would be used to minimize nonpoint source pollution.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

A 300 foot long king pile wall would be placed within Gravesend Bay, perpendicular to the southeastern corner of the existing bulkhead. Construction of the king pile wall would consist of the placement of steel sheet piling and rip rap. The king pile wall would serve to protect existing Marine structures, including a marina and a concrete seawall, located south and southeast of the site. The king pile wall would provide stability to the seawall during construction and dredging and will protect the seawall against wave action and tugboat prop-wash during facility operations. Development of this king pile wall would result in temporary impacts to water quality, which would be short-term and highly localized. It is likely that all construction activities associated with the king pile wall would occur from crane-mounted barges.

In addition, as part of the Southwest Brooklyn Converted MTS, dredging would be necessary to provide sufficient water depths for unimpeded operations. Dredging would be conducted with the use of an environmental bucket, which is an overlapping, sealed clamshell style bucket that prevents sediments from entering the waterway. Dredging done as part of construction would result in temporary impacts and would be conducted in a manner to minimize siltation and erosion and other short-term impacts to water quality. Non-structural and, if necessary, structural, measures would be used to minimize siltation and potential adverse impacts to tidal wetlands in the vicinity. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations. Therefore, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The Southwest Brooklyn Converted MTS would have no impact on the quality or quantity of surface or ground waters. Process wastewaters (e.g. washdown waters, etc.) would be conveyed to an on-site treatment system and would then discharge to the municipal sewer system. A new stormwater outfall would be constructed within the existing bulkhead. In addition, stormwater runoff from the Southwest Brooklyn Converted MTS would also discharge to an existing

stormwater outfall located north of the site. Prior to being discharged to Gravesend Bay, stormwater would travel through a stormwater treatment system. Stormwater runoff from the Southwest Brooklyn Converted MTS would be managed in accordance with all applicable federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. The Southwest Brooklyn Converted MTS would be consistent with this policy.

~~*5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*~~

~~A 300-foot breakwater groin would be placed within Gravesend Bay, perpendicular to the southeastern corner of the existing bulkhead. Construction of the breakwater would consist of the placement of steel sheet piling and rip rap. The breakwater would serve to protect existing waterfront facilities located south of the site. Development of this breakwater would result in temporary impacts to water quality, which be short-term and highly localized.~~

~~In addition, as part of the Southwest Brooklyn Converted MTS, dredging would be necessary to provide sufficient water depths for unimpeded operations. Any dredging done as part of construction would result in temporary impacts and would be conducted in a manner to minimize siltation and erosion and other short-term impacts to water quality. Non-structural and, if necessary, structural, measures would be used to minimize siltation and potential adverse impacts to tidal wetlands in the vicinity. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations. Therefore, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.~~

~~*5.4 Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*~~

~~The Southwest Brooklyn Converted MTS would have no impact on the quality or quantity of surface or ground waters. Process wastewaters (e.g. washdown waters, etc.) would be conveyed to an on-site treatment system and would then~~

~~discharge to the municipal sewer system. Stormwater runoff from the Southwest Brooklyn Converted MTS would be managed in accordance with all applicable federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. The Southwest Brooklyn Converted MTS would be consistent with this policy.~~

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of the FEMA National Flood Insurance Program maps, the Southwest Brooklyn Converted MTS would be situated within the 100-year floodplain boundary (Zone A). It would be constructed within the upland portion of the site that is currently occupied by a former incinerator, which is currently being demolished. Dredging would be required to provide sufficient water depths in the vicinity of the Southwest Brooklyn Converted MTS for unimpeded barge and tugboat operations once the facility is operational. In addition, the proposed action would involve the construction of a 300-foot ~~breakwater groin~~ king pile wall that would be placed perpendicular to the existing bulkhead. The breakwater is intended to allow for dredging activities to take place, while protecting a rip-rap bulkhead on the adjacent property that is constructed of loose concrete blocks. Construction of the king pile wall would be done from crane-mounted barges. To the extent practicable, non-structural and, if necessary, structural, measures would be used to minimize damage from flooding and erosion during construction of the proposed facility. Construction of the new Southwest Brooklyn Converted MTS would not affect the potential for flooding or erosion. All structures would comply with applicable building code requirements.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The Southwest Brooklyn Converted MTS would not involve the storage, treatment or disposal of hazardous waste, but would facilitate the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the Southwest Brooklyn Converted MTS. The majority of activities would occur within the enclosed processing building. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. Only sealed, air- and watertight containers would be used outside of the facility.

On-site storage of petroleum or hazardous materials related to the operation of the Southwest Brooklyn Converted MTS would be in accordance with applicable federal, state and local regulation. The Southwest Brooklyn Converted MTS would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 Prevent and remediate discharge of petroleum products.

Soil and groundwater contamination is present at the existing site and is discussed in further detail in Section 5.10.3. Existing contamination would be addressed as part of the proposed development of the site, if required. This contamination

would not be expected to prevent the proposed development of the Southwest Brooklyn Converted MTS. Removal and disposal of contaminated materials, if required, would be done in accordance with applicable regulatory guidelines. In addition, as appropriate, health and safety measures would be used to mitigate and minimize any exposure risk to worker or the general public. Also see response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicies 7.1 and 7.2.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Due to the existing industrial uses at and in the immediate vicinity of the Southwest Brooklyn Converted MTS, public access would generally not be compatible with the principal use of the site. The Excelsior Yacht Club and Marina is located adjacent and immediately south of the site; however, the Southwest Brooklyn Converted MTS would not impact this marina or other existing, public water-related recreational resources or access and, therefore, would be consistent with this subpolicy.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

According to "The New Waterfront Revitalization Plan," the Southwest Brooklyn Converted MTS would be a stand-alone, water-dependent and industrial facility fronting Gravesend Bay. Public access would not be compatible with the Southwest Brooklyn Converted MTS; however, its development would not preclude any future development of public access at other locations along the Gravesend Bay waterfront.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Development of the Southwest Brooklyn Converted MTS would involve the redevelopment of the site of a former incinerator and the restoration of the waterfront uses at the site, and would not impair visual access to coastal lands, waters or open space. The new building would be constructed upland in about the same location as the former incinerator, which is currently being demolished. It would not allow for additional visual access, but its development would not preclude visual access from other locations along the Gravesend Bay waterfront. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

Several open space and outdoor recreational areas have been identified within the study area. The nearest areas include the Nellie Bly Amusement Park, located approximately 500 feet to the east of the site; Bensonhurst Park, located approximately 2,000 feet north of the site; and Dreier-Offerman Park, approximately 1,000 feet to the south of the site. It is not anticipated that the Southwest Brooklyn Converted MTS, once operational, would have any impact on these facilities. Waterfront activities associated with the new facility would be centralized in the vicinity of the MTS and, as such, would not result in adverse impacts to these parklands or open space areas. Therefore, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The Southwest Brooklyn Converted MTS would involve the development of a new facility at the site of a former incinerator, and the restoration and expansion of waterfront use at the site. It would be compatible with the existing urban design context and visual conditions of this portion of the Gravesend Bay waterfront, as noted in Section 5.7.3. Based on the information presented in that section, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The Southwest Brooklyn Converted MTS would pose no impact to scenic values associated with natural resources. The ongoing removal of the incinerator would open views westward, but would not necessarily create additional visual access because the Southwest Brooklyn Converted MTS would be constructed in approximately the same location. The Southwest Brooklyn Converted MTS would be compatible with existing uses in the vicinity, which do not allow for scenic views. Therefore, the Southwest Brooklyn Converted MTS is consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The Southwest Brooklyn Converted MTS would have no effect on any cultural resources on or near the site, as noted in Section 5.6.3. Based on the information presented in that section, the Southwest Brooklyn Converted MTS would be consistent with this subpolicy.

10.2 *Protect and preserve archaeological resources and artifacts.*

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

5.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

5.13.1 Existing Conditions

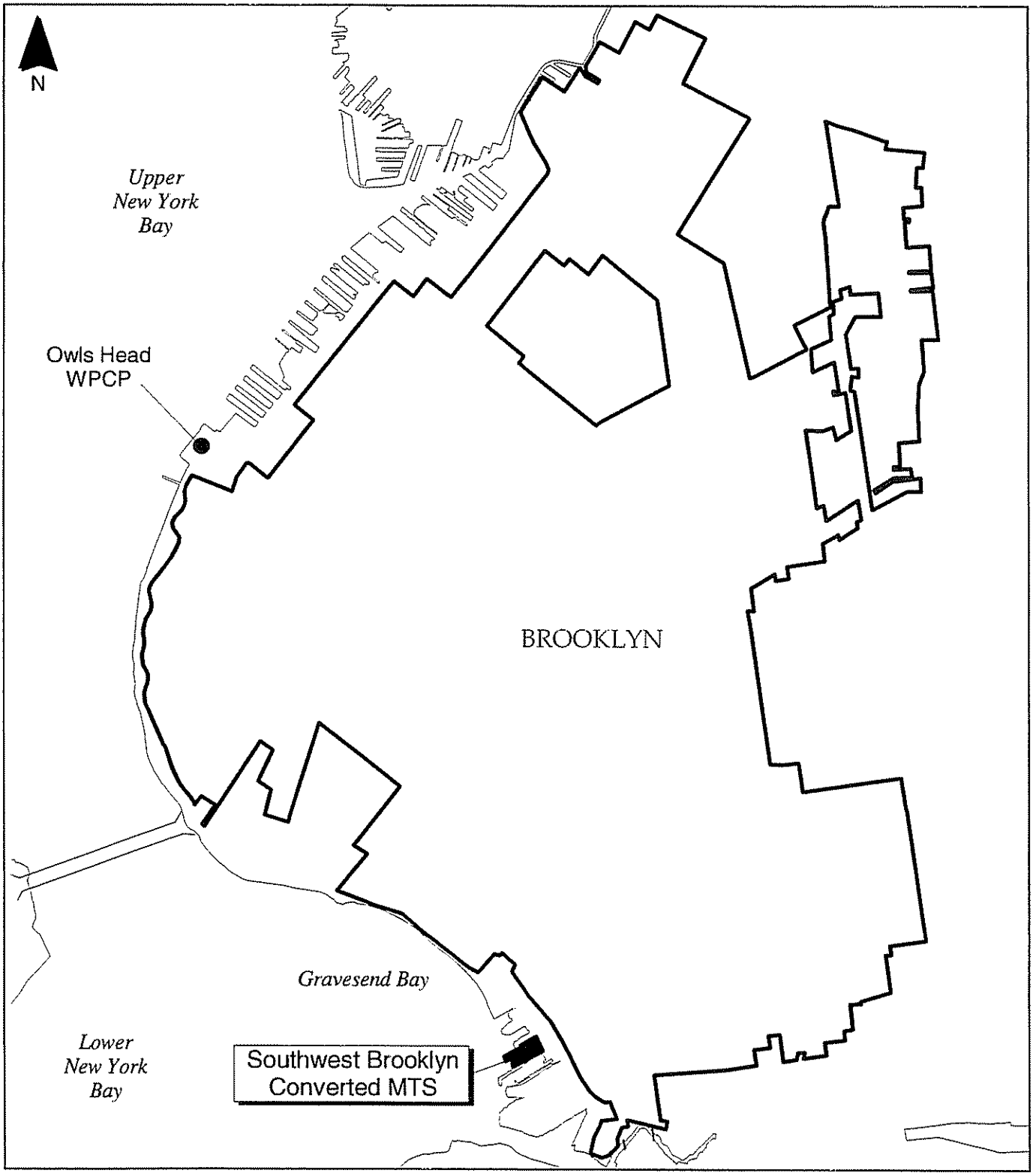
5.13.1.1 Water Supply

Water is supplied to the existing Southwest Brooklyn MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter water main line along Shore Parkway provides potable water for both process and sanitary requirements. A pump is used on site to maintain adequate pressure. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

5.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Owls Head WPCP, which serves the southwestern portion of Brooklyn. The WPCP drainage area is illustrated in Figure 5.13-1. From July 2002 through June 2003, the WPCP treated an average of 95 mgd of wastewater under dry weather flow conditions and an average flow of 104 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 5.13-1). The maximum dry weather flow during this period was 99 mgd in October 2002 and the maximum average flow was 114 mgd during June 2003. Effluent from the plant is discharged to the Upper New York Bay and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Owls Head WPCP is 120 mgd. It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on three security employees (one guard per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). As the facility is not currently accepting waste, no additional potable water is used and no operational personnel are assigned to the site.

As shown on the I&I maps, the site is served by a 6-inch-diameter pipe that flows to a 36-inch sanitary sewer line that flows in a southeast direction along Shore Parkway. Stormwater runoff discharges to a 96-inch storm sewer line flowing southeast along Shore Parkway. Wastewater is eventually discharged to the Owls Head WPCP for treatment.



Site delineations are approximate

3000 0 3000 Feet

Figure 5.13-1 Existing WPCP Drainage Area

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

Table 5.13-1
Average Monthly Dry Weather and Average Flows
Owls Head Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow[1] (mgd)
July 2002	90	93
August	94	99
September	97	107
October	99	113
November	96	111
December	96	104
January 2003	93	99
February	91	101
March	94	103
April	95	105
May	94	102
June	98	114
Average Effluent	**95**	**104**

Note:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

5.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each of the three security employees at the existing MTS produces approximately 9 pounds of solid waste per week for a facility total of 27 pounds per week (approximately 4 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

5.13.1.4 Energy

Consolidated Edison of New York supplies electricity to the facility. A review of utility maps from Consolidated Edison shows electric lines along the Shore Parkway service road. Utility maps from KeySpan, which supplies gas to the existing MTS, show a 1.5-inch gas main that extends from the Shore Parkway Service Road and runs along 25th Avenue serving the facility.

The existing Southwest Brooklyn MTS utilizes a negligible amount of gas and electricity due to the current staffing levels used for security purposes only.

5.13.2 Future No-Build Conditions

The existing Southwest Brooklyn MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Owls Head WPCP would continue to increase and would be projected to be 104.6 mgd by 2006.

5.13.3 Potential Impacts with the Southwest Brooklyn Converted MTS

5.13.3.1 Water Supply

The Southwest Brooklyn Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The Southwest Brooklyn Converted MTS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

5.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the Southwest Brooklyn Converted MTS, the small quantities of wastewater sent to the Owl's Head WPCP would not significantly impact the sewage flow rate or the ability of the Owl's Head WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately

104.6 mgd in 2006, which would be well below the permitted capacity of 120 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

5.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the Southwest Brooklyn Converted MTS and would not significantly impact the system.

5.13.3.4 Energy

The Southwest Brooklyn Converted MTS would require approximately 5.51E+10 BTU/year of electricity to operate the facility. Natural gas facility heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the Southwest Brooklyn Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Keyspan has been notified of the natural gas requirements of the Southwest Brooklyn Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility.

5.14 Traffic, Parking, Transit, and Pedestrians

5.14.1 Introduction

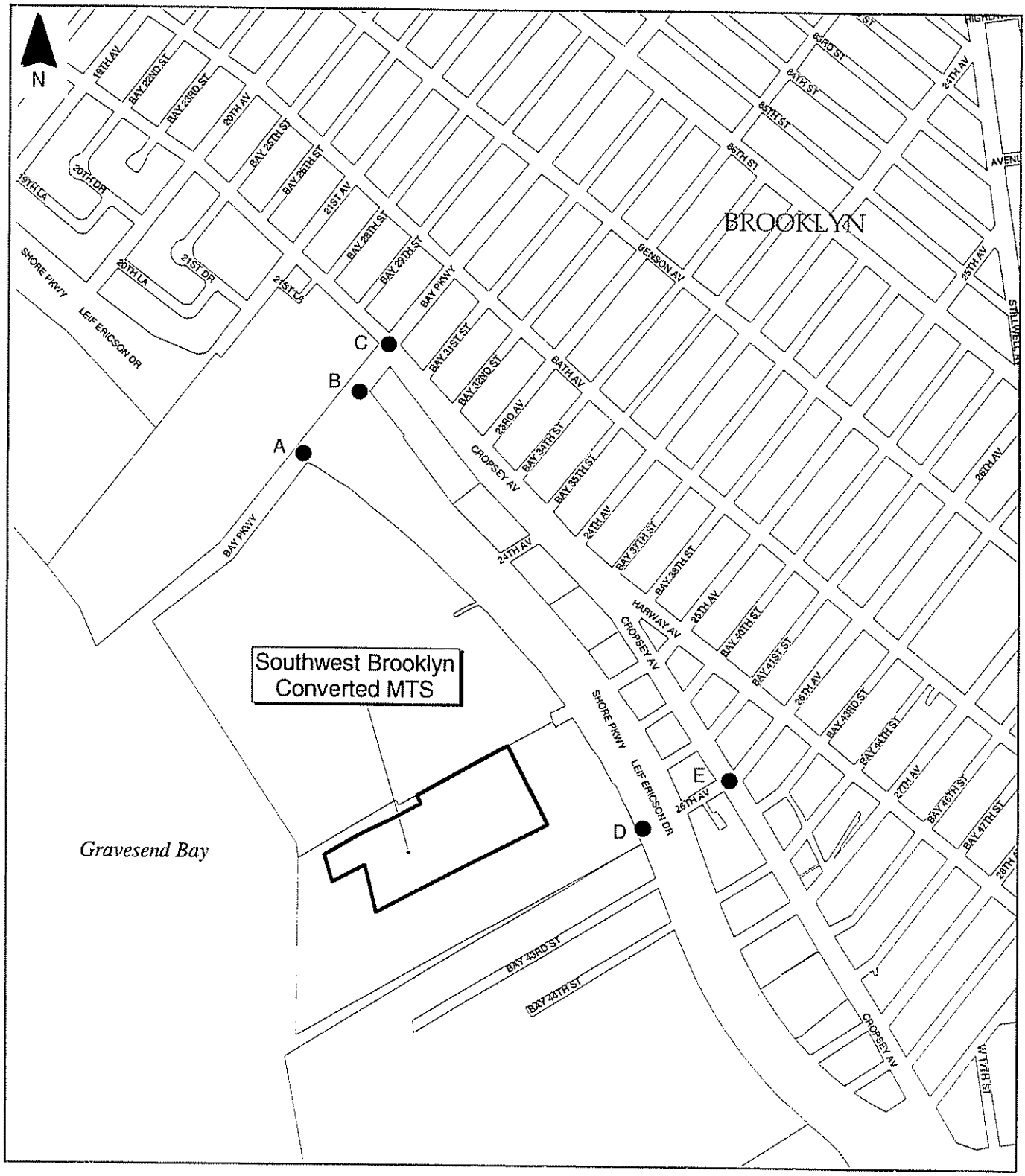
The Southwest Brooklyn Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

5.14.2 Existing Conditions

5.14.2.1 Definition of Study Area

The traffic analysis study area is broad, covering portions of the Gravesend sections of Brooklyn. It includes the corridors along Cropsey Avenue and Shore Road that are bounded by Bay Parkway on the north and 26th Avenue on the south. Commercial and residential areas are included in the traffic study area. There are no CEQR-defined areas of concern located within the study area. Figure 5.14-1 shows the locations of the intersections selected for analysis (locations A through E). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points within ½-mile of the site in conjunction with local truck routes. Section 5.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the Southwest Brooklyn Converted MTS.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-1 Traffic Analysis Study Area
Southwest Brooklyn Converted MTS

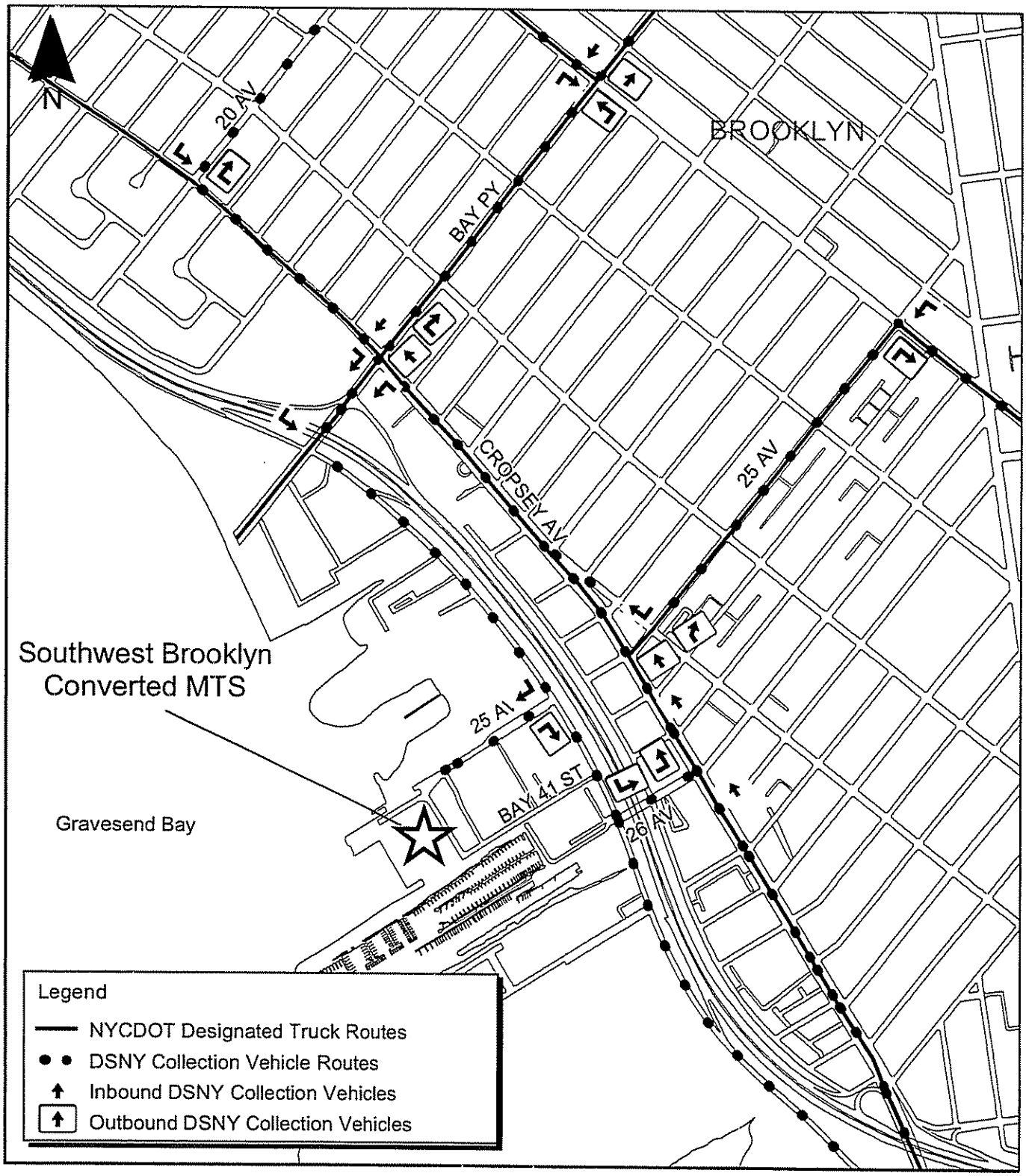
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5.14.2.2 Surface Network

One major parkway, the predominantly north-south Shore Parkway (Lief Ericson Drive), services the traffic analysis study area. The Shore Parkway is a controlled access highway, which prohibits commercial vehicle traffic. Cropsey Avenue is a local truck route that provides access from the south and north of the site and Bay Parkway is a local truck route that provides access to the site from the east. A map showing all major truck routes and local truck routes in Brooklyn is provided in Section 3.16 (see Figure 3.16-3).

25th and 26th Avenues are collector roads that provide access to and from the arterials of Cropsey Avenue and Shore Road (one-way southbound). Bay Parkway, another arterial, provides access to and from traffic on the Shore Parkway and Shore Road. Southbound traffic on the Shore Parkway enters and exits on Shore Road (one-way southbound) in the traffic study area.

DSNY and other agency collection vehicles traveling to the Southwest Brooklyn Converted MTS from the north or south would generally approach the area using either Cropsey Avenue or 86th Street. Vehicles approaching from the east would approach the area on Bay Parkway or 25th Avenue. All incoming traffic converges at the intersection of Cropsey Avenue and Bay Parkway and proceeds west along Bay Parkway to Shore Road (one-way southbound). Vehicles then access the Southwest Brooklyn MTS via 25th Avenue on the west side of Shore Parkway. Shore Road and 25th Avenue on the west side of Shore Parkway are not designated as truck routes. All DSNY and other agency collection vehicles exiting the facility must turn south onto Shore Road. At 26th Avenue, the vehicles turn east and then proceed to Cropsey Avenue. From Cropsey Avenue, vehicles proceed back to their respective CDs along the same truck routes that they used to access the area close to the Southwest Brooklyn Converted MTS. Figure 5.14-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 5.14-2 DSNY Collection Vehicle Routes
Southwest Brooklyn Converted MTS

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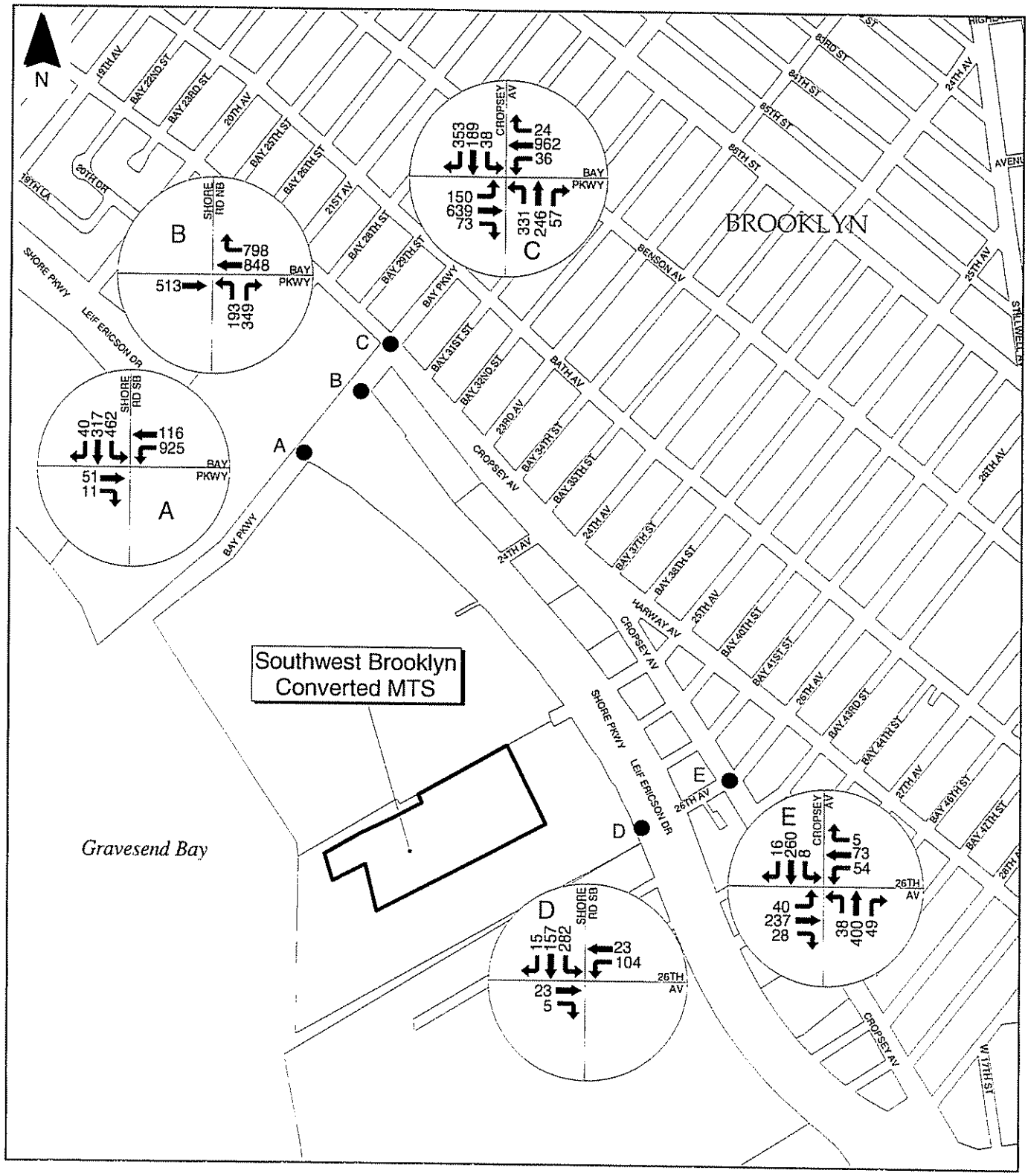
5.14.2.3 *Existing Traffic Operations*

The five intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the Southwest Brooklyn Converted MTS. All of them are on major arterials and/or collection vehicle routes. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Shore Road (southbound) and Bay Parkway – Signalized Intersection (see Figure 5.14 -1 location A)
- Bayview Place (Shore Road - northbound) and Bay Parkway – Signalized Intersection (see Figure 5.14-1 – location B)
- Cropsey Avenue and Bay Parkway – Signalized Intersection (see Figure 5.14-1 - location C)
- Shore Road (southbound) and 26th Avenue – Unsignalized Intersection (see Figure 5.14-1 – location D)
- Cropsey Avenue and 26th Avenue – Signalized Intersection (see Figure 5.14-1 - location E)

25th and 26th Avenues are collector roads that provide access to and from the arterials of Cropsey Avenue and Shore Road (southbound). Bay Parkway, another arterial, provides access to and from northbound traffic on the Shore Parkway. Southbound traffic on the Shore Parkway enters and exits on Shore Road (southbound) in the traffic study area.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 5, 2003 and February 11, 2003, while ATR counts were conducted between February 3, 2003 and February 9, 2003. Figures 5.14-3, 5.14-4 and 5.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:45 a.m. and 8:45 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 5:00 p.m. and 6:00 p.m. Table 5.14-1 presents the v/c ratio, delay and LOS for the five intersections during the AM, Facility, and PM peaks.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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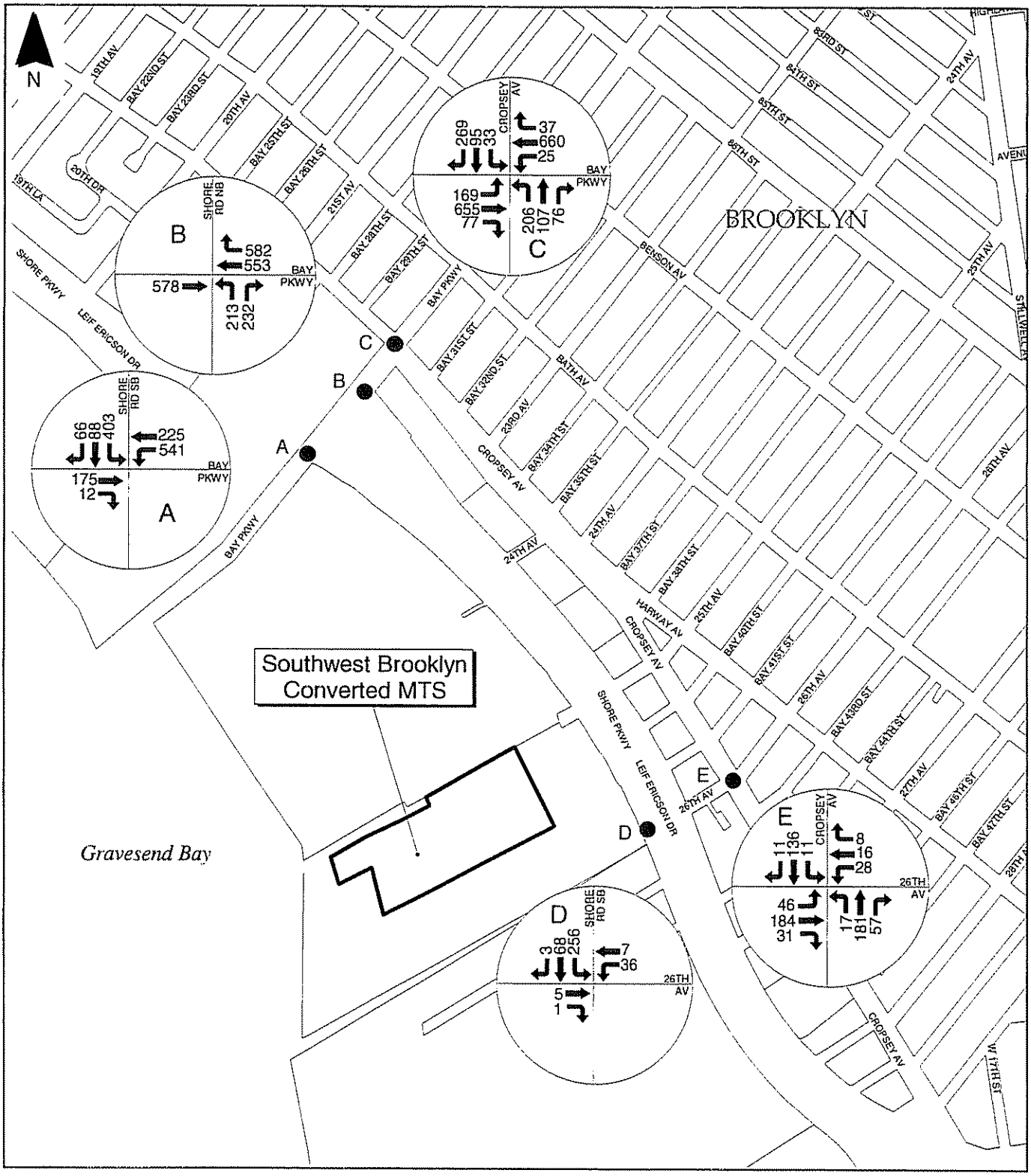
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Figure 5.14-3 Existing Traffic Volumes - AM Peak

Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

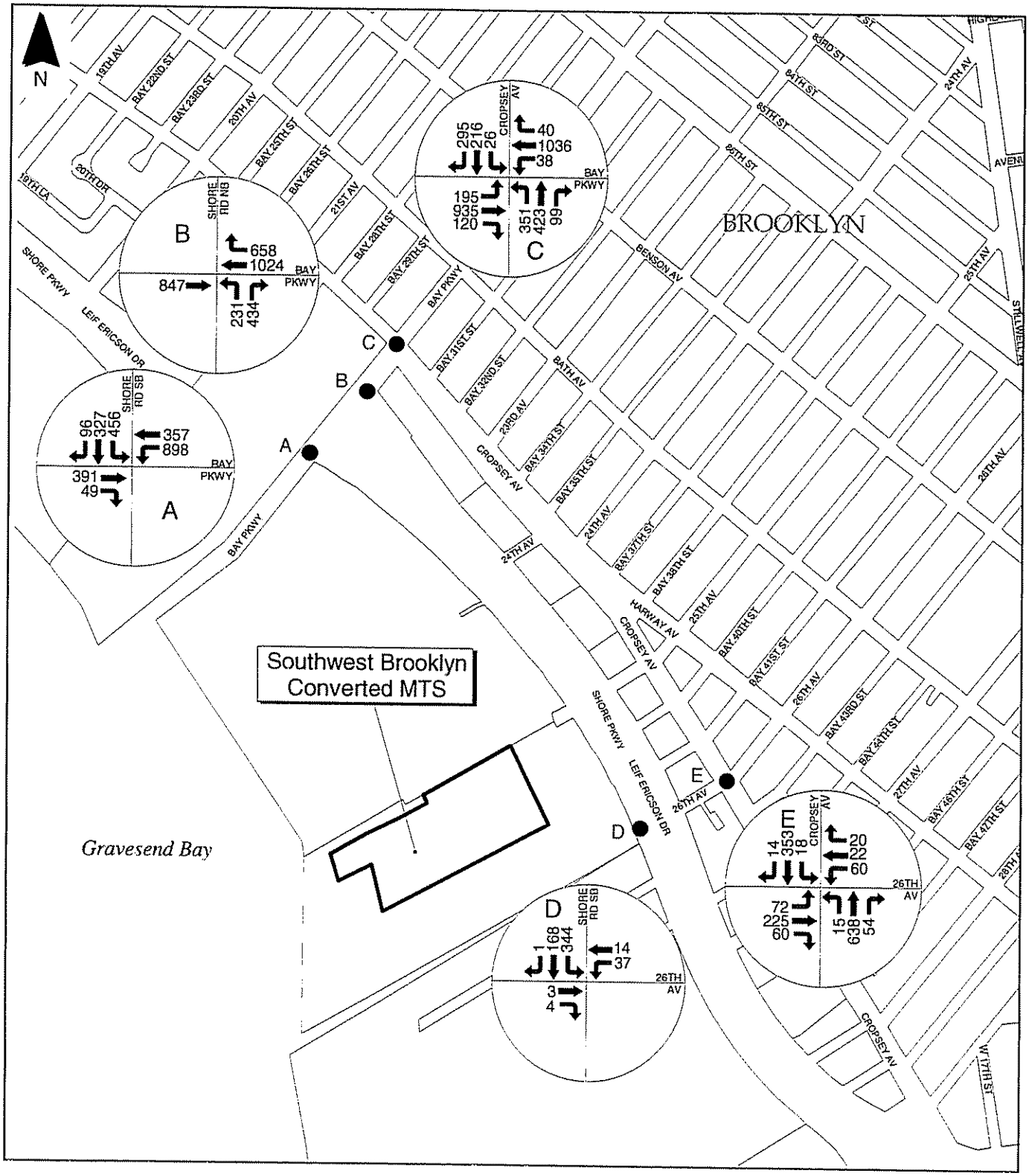
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Figure 5.14-4 Existing Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-5 Existing Traffic Volumes - PM Peak

Southwest Brooklyn Converted MTS

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Table 5.14-1
HCM Analysis[1]— Existing Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.79	49.3	D	0.67	26.5	C	1.05	112.5	F
EB TR	0.44	20.1	C	0.44	15.3	B	0.64	23.9	C
WB L	0.27	29.0	C	0.19	22.2	C	0.41	38.1	D
WB TR	0.84	40.6	D	0.71	28.4	C	0.93	49.2	D
NB L	0.85	55.7	E	0.51	25.2	C	0.96	75.9	E
NB LTR	0.39	25.5	C	0.28	19.7	B	0.53	28.1	C
SB L	0.16	34.4	C	0.18	28.5	C	0.17	34.8	C
SB T	0.47	39.6	D	0.35	31.0	C	0.50	40.3	D
SB R	0.93	71.1	E	0.81	49.1	D	0.76	52.0	D
OVERALL		39.3	D		25.9	C		44.0	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.84	44.8	D	0.72	35.6	D	0.84	44.0	D
WB LTR	0.54	30.2	C	0.24	22.7	C	0.32	24.6	C
NB LTR	0.42	13.3	B	0.24	11.4	B	0.48	13.9	B
SB LTR	0.24	11.4	B	0.16	10.7	B	0.30	11.9	B
OVERALL		23.2	C		21.0	C		21.2	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.5	A	0.31	11.7	B	0.39	9.9	A
WB TR	0.85	20.4	C	0.69	17.2	B	0.86	21.3	C
NB L	0.46	38.2	D	0.43	23.1	C	0.49	38.5	D
NB R	0.81	56.9	E	0.38	24.1	C	0.93	72.6	E
OVERALL		24.0	C		17.1	B		25.8	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.19	25.0	C	0.45	36.9	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.77	31.1	C	0.56	21.8	C	0.94	55.1	E
WB T	0.14	13.9	B	0.24	13.4	B	0.45	18.3	B
SB L	0.95	69.8	E	0.85	47.2	D	1.04	91.4	F
SB TR	0.77	47.7	D	0.36	27.9	C	0.86	55.7	E
OVERALL		42.5	D		28.3	C		56.2	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.6	A	-	8.0	A	-	7.8	A
WB LT	-	10.0-	A	-	8.9	A	-	8.7	A
SB L		11.8	B		10.4	B		11.1	B
SB TR	-	9.0	A	-	8.3	A	-	8.2	A
OVERALL		10.4	B		9.5	A		9.9	A

Notes for Table 5.14-1:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement
T = through movement

Existing truck traffic varies throughout the intersections in the traffic study area. On roads that provide access to and from the Shore Parkway, truck percentages held constant between 4% and 10% throughout the day. On truck routes in the study area, the percentages of trucks generally increased throughout the morning hours, remained between 15% and 25% during midday hours, and then decreased during the PM peak hours to 5% to 15%.

5.14.2.3.1 LOS at Signalized Intersections

Table 5.14-1 shows that the existing signalized intersections generally operated at an overall LOS of B or C with the following exceptions:

- During the AM and PM peak hours, the intersections of Cropsey Avenue at Bay Parkway and Shore Road (southbound) at Bay Parkway operate at an overall LOS D;
- The eastbound left/through/right lane group at Cropsey Avenue and 26th Avenue operates at LOS D for the AM, Facility, and PM peak hours; and
- During the AM and PM peak hours, the intersection of Shore Road and Bay Parkway operates at an overall LOS D or E.

5.14.2.3.2 LOS at Unsignalized Intersections

The one unsignalized intersection analyzed operates at LOS A or B throughout the day as shown in Table 5.14-1.

5.14.2.4 Existing DSNY-Related Traffic

Under Brooklyn's Interim Export, there are no commercial vendors located close to the Southwest Brooklyn Converted MTS. However, DSNY and other agency collection vehicles pass through the traffic study area on truck routes from Queens CDs 11 and 13 to the commercial vendor, IESI, located at 110 50th Street in Brooklyn. Collection vehicles from these two CDs pass through all intersections analyzed in the study area.

5.14.2.5 Public Transportation

Public transportation in the study area consists predominantly of bus trips. The B6 travels in a loop entering the study area going west on Bay Parkway, then south on Shore Road, east on 26th Avenue, north on Cropsey Avenue and exits the study area on Bay Parkway; and the X28, X38 and B82 run north-south along Cropsey Avenue. Bus stops are located at some of the study area intersections analyzed, and scheduled stops occur at various times during the day.

5.14.2.6 Pedestrian Activity

Light pedestrian activity occurs along Cropsey Avenue in the traffic study area where restaurants and commercial and residential areas produce and attract pedestrians throughout the day. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

5.14.3 Future No-Build Conditions

5.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 130 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes.

Figures 5.14-6, 5.14-7 and 5.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 5.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their existing condition LOS, with the following exceptions:

- During the PM peak hour, the overall LOS of the Shore Road (southbound) and Bay Parkway intersection deteriorated from D to E; and
- During the PM peak hour, the overall LOS of the Shore Road (southbound) and 26th Avenue intersection deteriorated from A to B.

5.14.3.2 Public Transportation

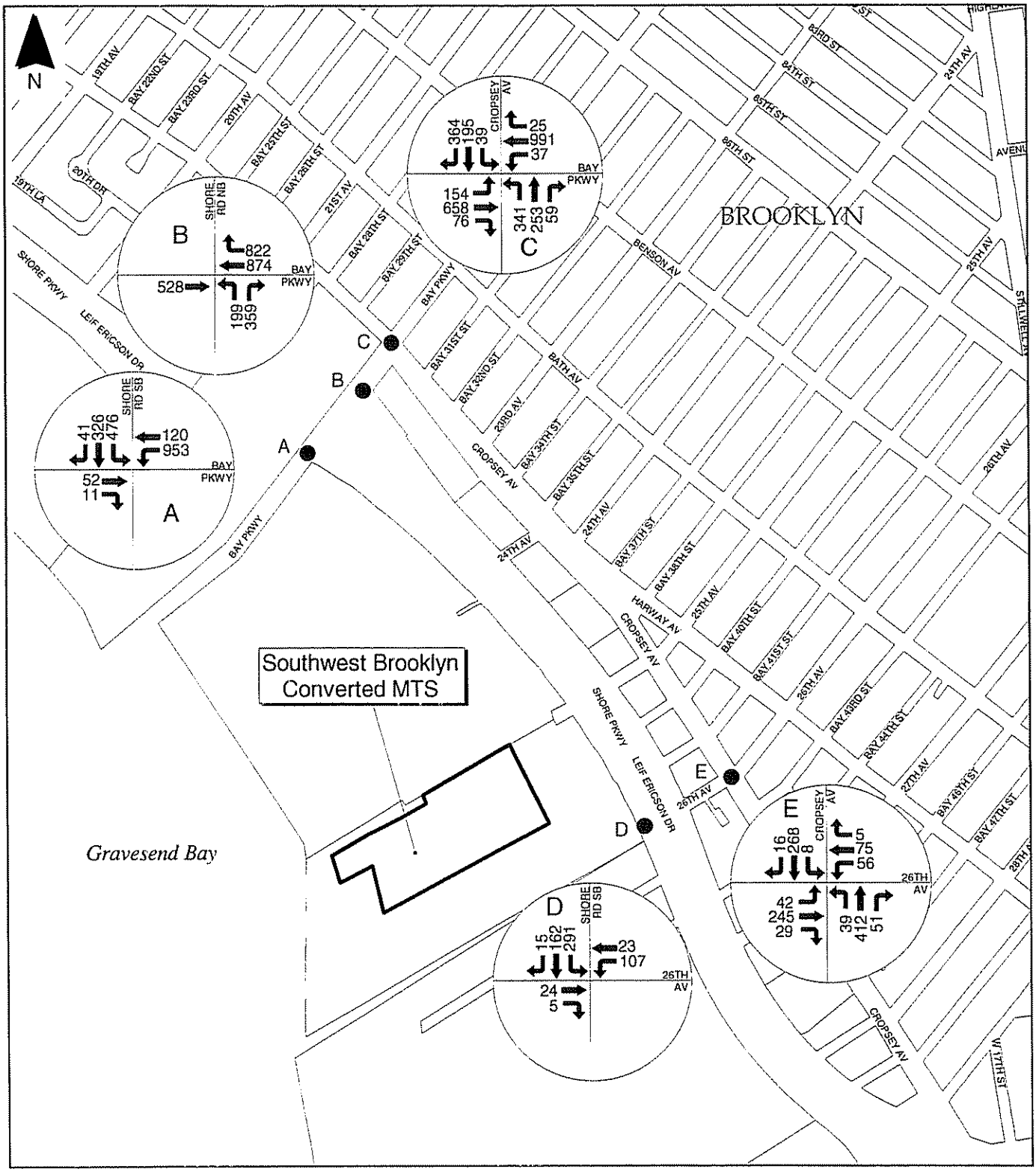
Future No-Build Conditions are expected to remain the same as Existing Conditions.

5.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

5.14.4 Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would receive waste from four CDs in Brooklyn - BK 11 through BK 13 and BK 15. Additionally, the waste collected from Brooklyn self-help bulk (SHBLK) operations would be delivered to the Southwest Brooklyn Converted MTS. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Employee trips to and from the site may also result in traffic impacts during the AM peak hour.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

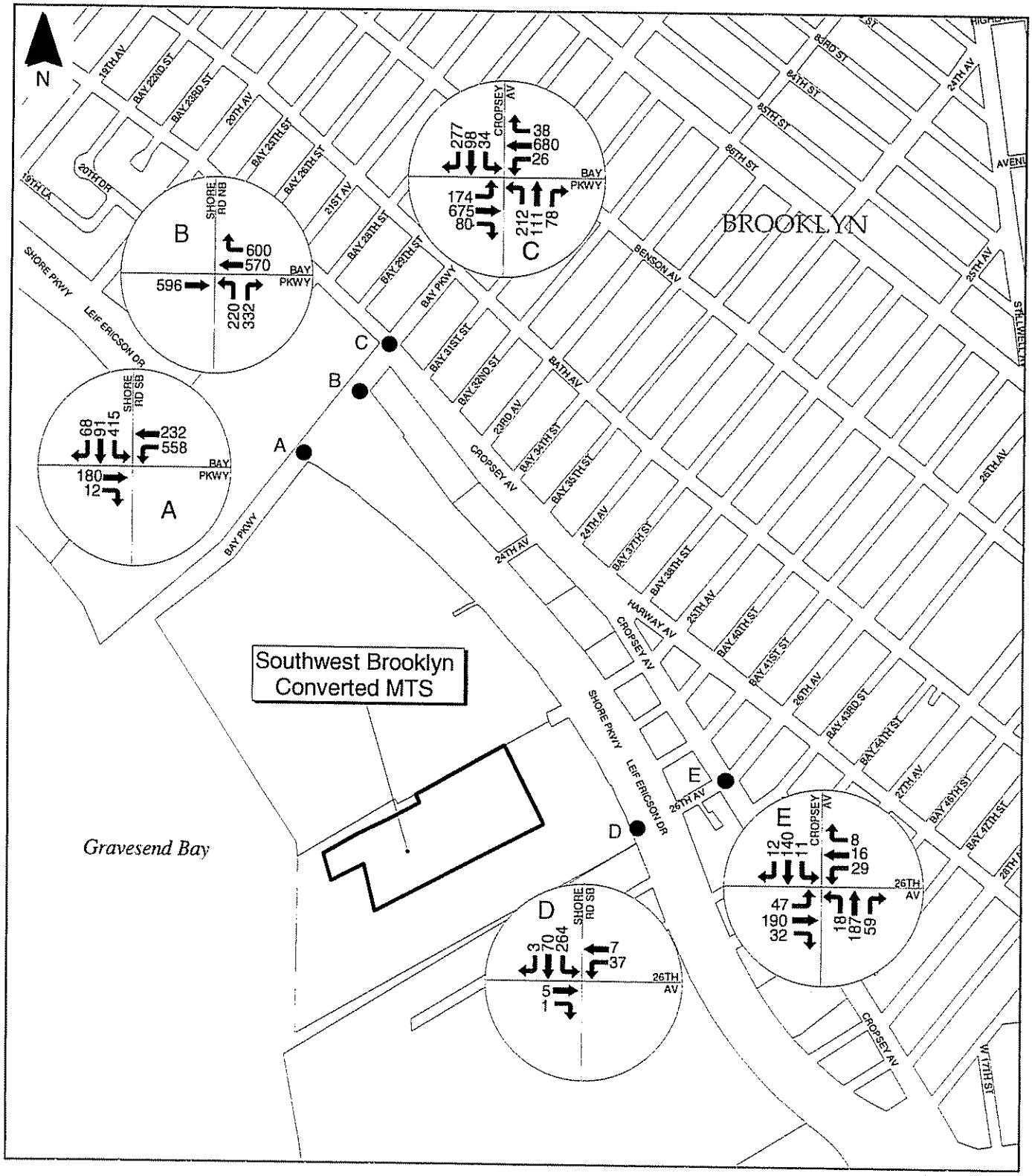
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Figure 5.14-6 Future No-Build Traffic Volumes
AM Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

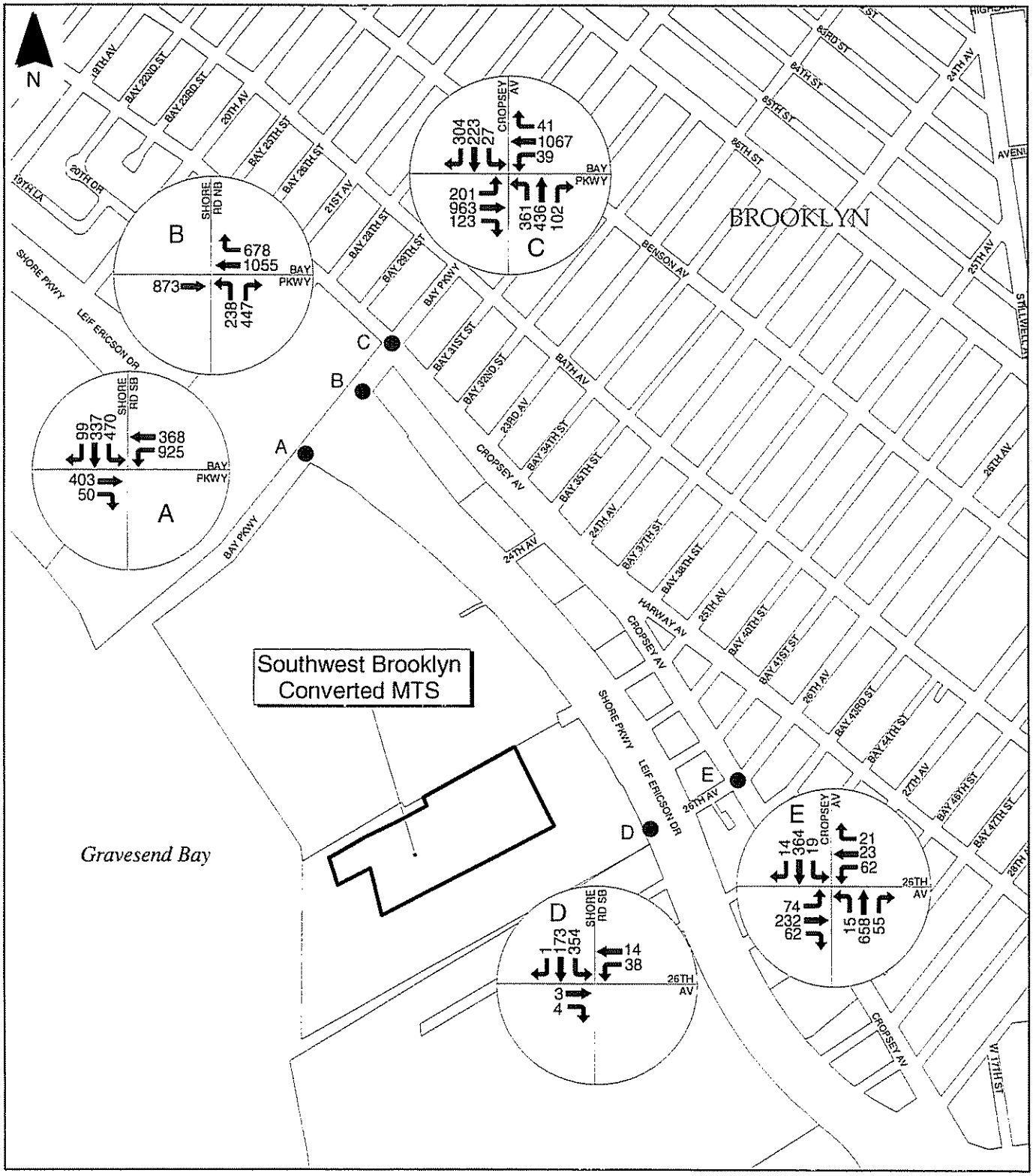
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Figure 5.14-7 Future No-Build Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-8 Future No-Build Traffic Volumes PM Peak Southwest Brooklyn Converted MTS

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Table 5.14-2
HCM Analysis[1] – Future No-Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.84	59.4	E	0.71	29.2	C	1.08	122.4	F
EB TR	0.46	20.3	C	0.46	15.5	B	0.66	24.3	C
WB L	0.28	29.7	C	0.21	22.6	C	0.46	41.5	D
WB TR	0.87	42.4	D	0.66	26.7	C	0.96	53.5	D
NB L	0.89	61.1	E	0.53	25.9	C	1.01	88.0	F
NB LTR	0.40	25.8	C	0.26	19.4	B	0.55	28.6	C
SB L	0.17	34.5	C	0.19	28.5	C	0.18	35.0+	D
SB T	0.48	40.0	D	0.36	31.2	C	0.52	40.7	D
SB R	0.95	76.7	E	0.83	51.5	D	0.78	53.5	D
OVERALL		41.5	D		25.9	C		47.2	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.88	49.1	D	0.74	36.8	D	0.87	46.9	D
WB LTR	0.57	31.5	C	0.24	22.9	C	0.34	25.0	C
NB LTR	0.43	13.4	B	0.25	11.5	B	0.49	14.1	B
SB LTR	0.25	11.4	B	0.16	10.7	B	0.31	12.0	B
OVERALL		24.6	C		21.4	C		21.0	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.6	A	0.32	11.8	B	0.40	10.1	B
WB TR	0.87	21.9	C	0.71	17.7	B	0.89	23.2	C
NB L	0.47	38.3	D	0.44	23.3	C	0.50	38.7	D
NB R	0.87	62.7	E	0.56	27.9	C	0.97	79.0	E
OVERALL		25.8	C		18.3	B		27.6	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.20	25.1	C	0.46	37.1	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.80	32.4	C	0.58	22.5	C	0.97	59.8	E
WB T	0.14	14.0	B	0.25	13.5	B	0.47	18.6	B
SB L	0.96	71.4	E	0.87	50.1	D	1.07	101.4	F
SB TR	0.79	49.0	D	0.37	28.1	C	0.89	59.0	E
OVERALL		43.6	D		29.5	C		57.9	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.6	A	-	8.1	A	-	7.9	A
WB LT	-	10.1	B	-	9.0	A	-	8.8	A
SB L		12.1	B		10.6	B		11.3	B
SB TR	-	9.1	A	-	8.3	A	-	8.2	A
OVERALL		10.6	B		9.6	A		10.1	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L= left movement

Notes for Table 5.14-2 (Continued):
TR = through right movement
R = right movement
T = through movement

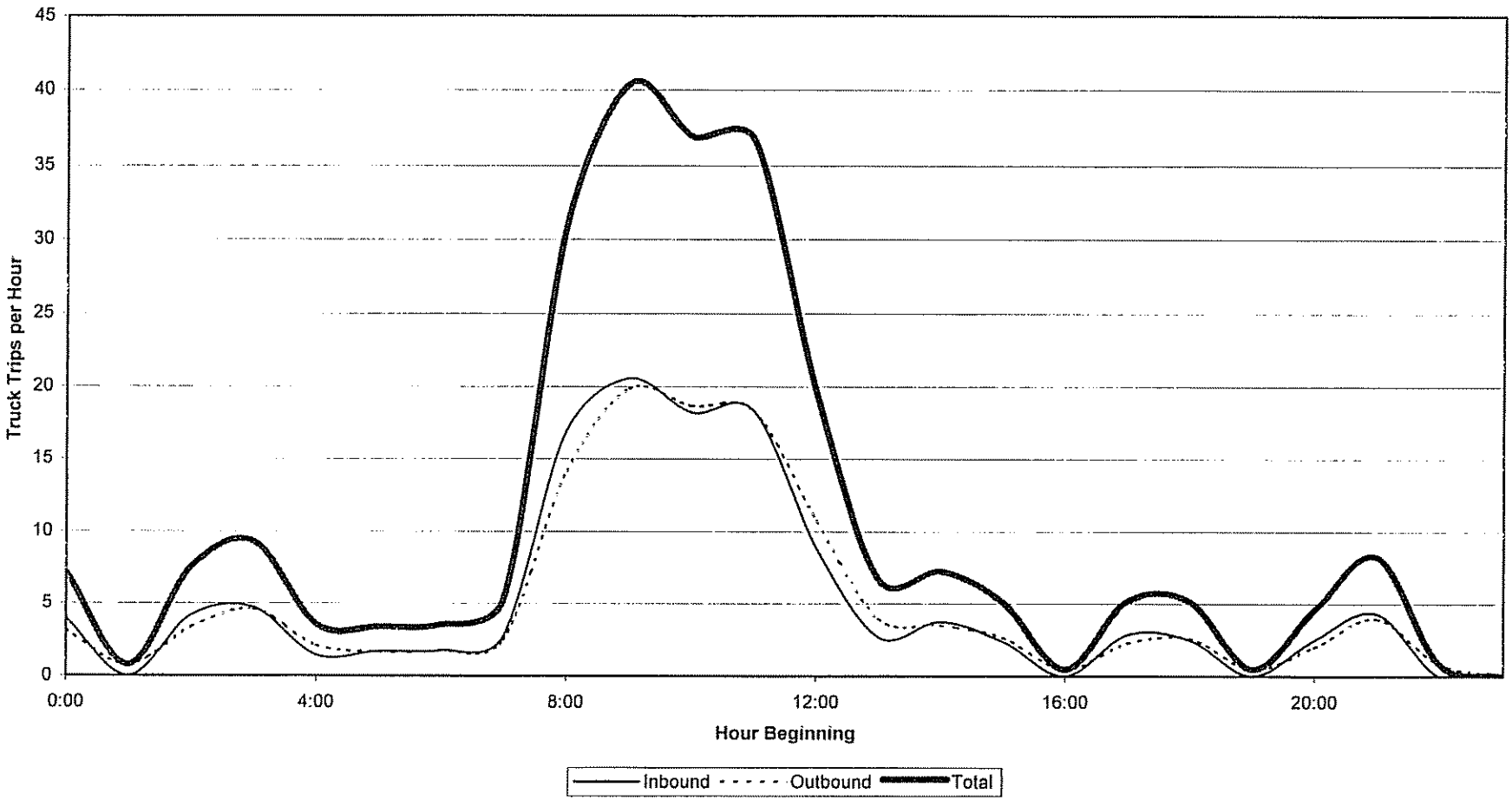
5.14.4.1 2006 Future Build Traffic Conditions

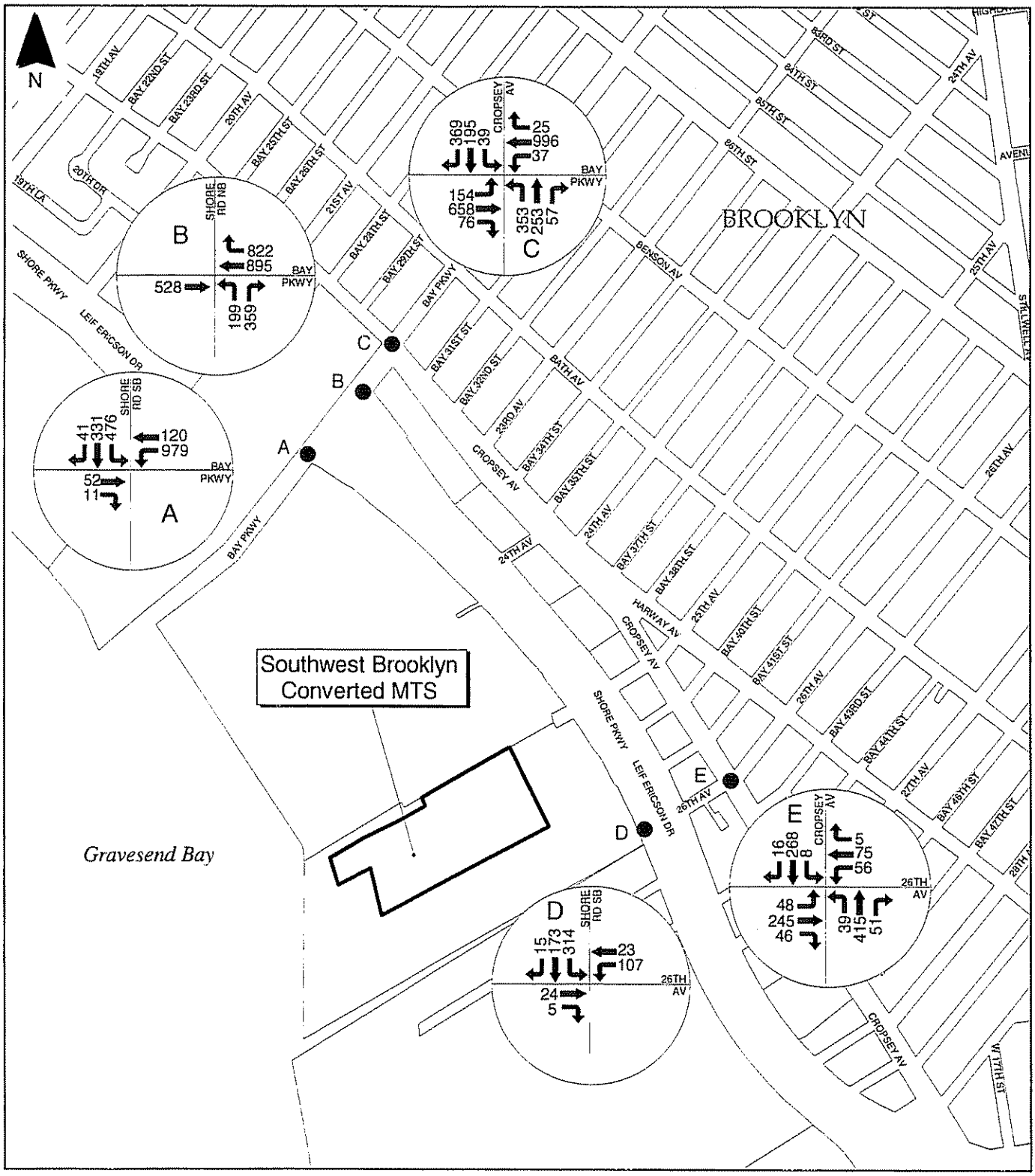
2006 Future Build Traffic Conditions assume that the Southwest Brooklyn Converted MTS would generate 166 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site of the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The collection vehicle truck routes for the Southwest Brooklyn Converted MTS are shown in Figure 5.14-2.

Figure 5.14-9 presents the average peak day temporal distribution of collection vehicles for the Southwest Brooklyn Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Southwest Brooklyn Converted MTS is expected to vary between approximately 0 to 13 truck trips per hour in the late evening/early morning, 4 to 28 truck trips per hour in the mid-morning/early afternoon, and 1 to 5 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (28) occurs at approximately 10:00 a.m. Figures 5.14-10, 5.14-11 and 5.14-12 depict the Future Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Figures 5.14-13, 5.14-14 and 5.14-15 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM, Facility, and PM peaks at the intersections analyzed.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 85% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 98% of weekday traffic volumes.

Figure 5.14-9
Truck Trips per Hour
Southwest Brooklyn Converted MTS



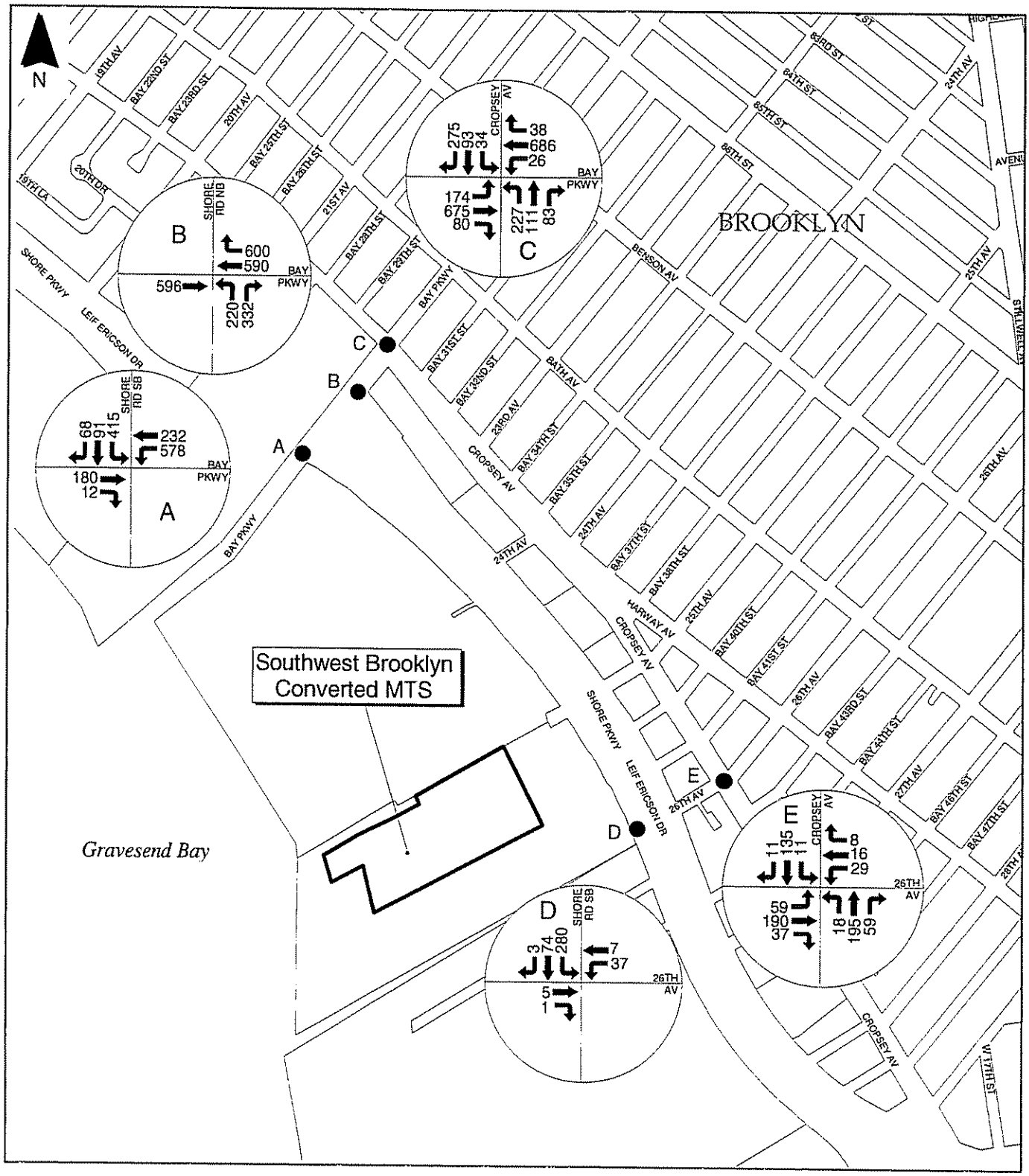


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-10 2006 Future Build Traffic Volumes
AM Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

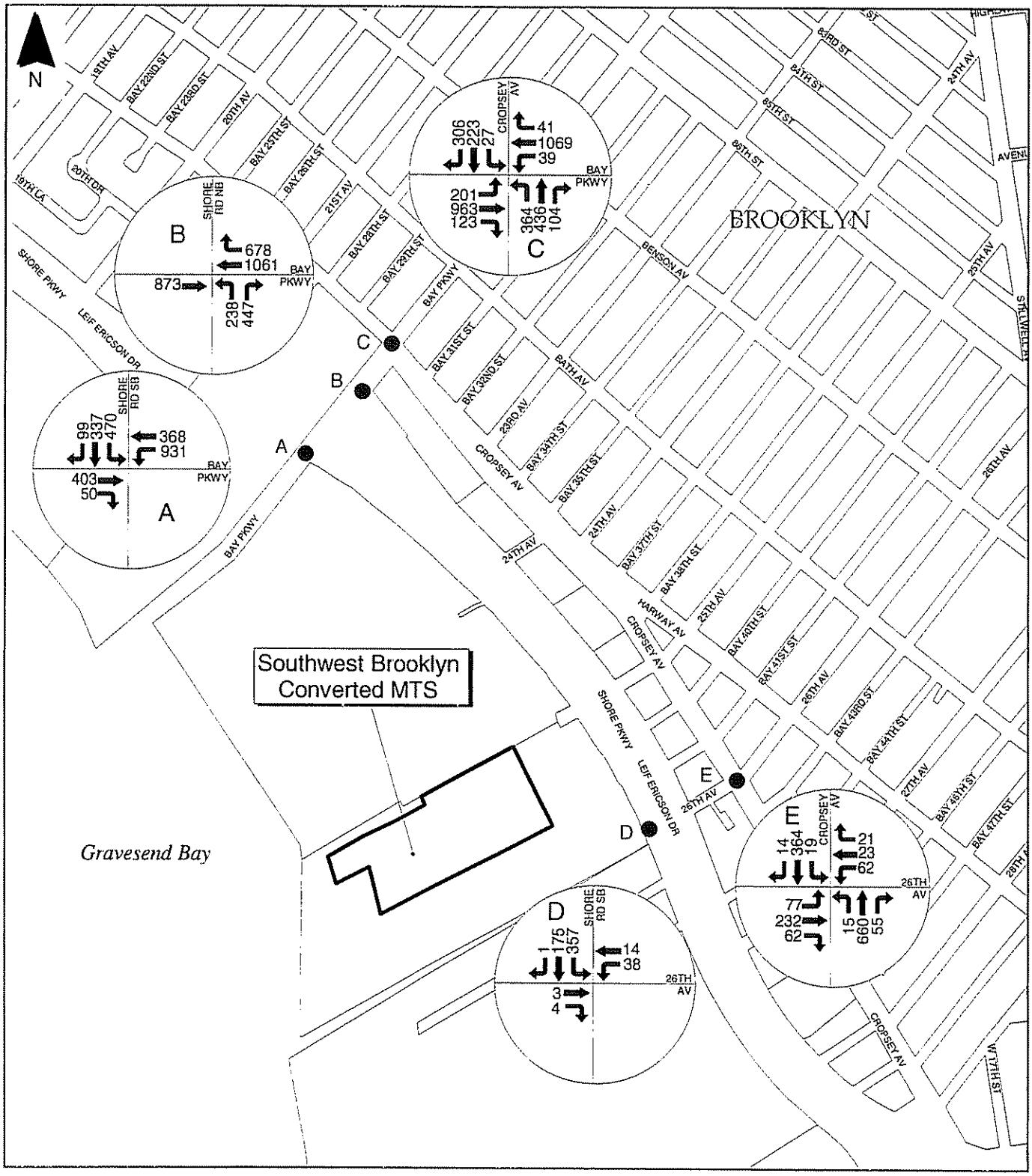
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Figure 5.14-11 2006 Future Build Traffic Volumes
Facility Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

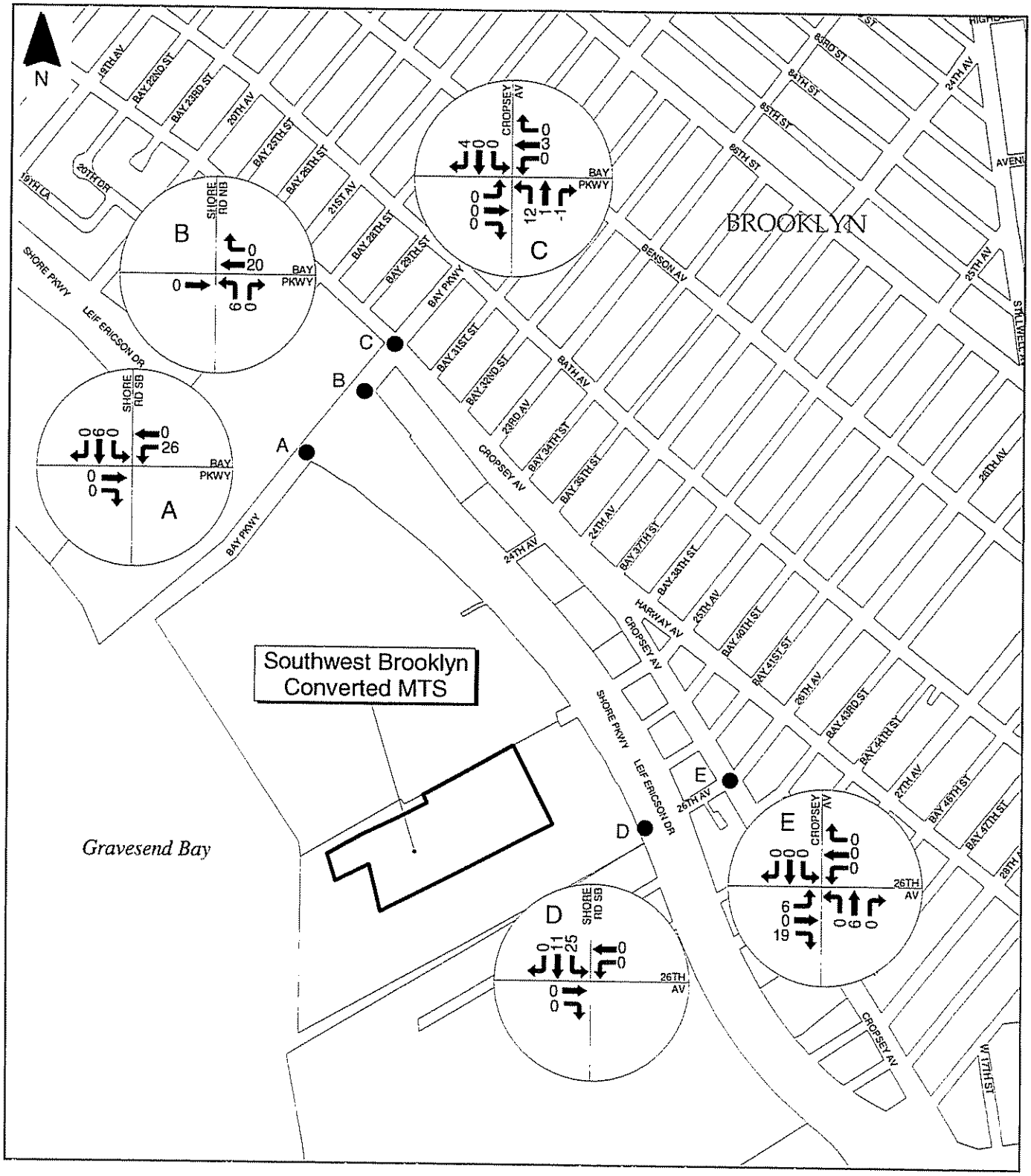
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Figure 5.14-12 2006 Future Build Traffic Volumes PM Peak Southwest Brooklyn Converted MTS

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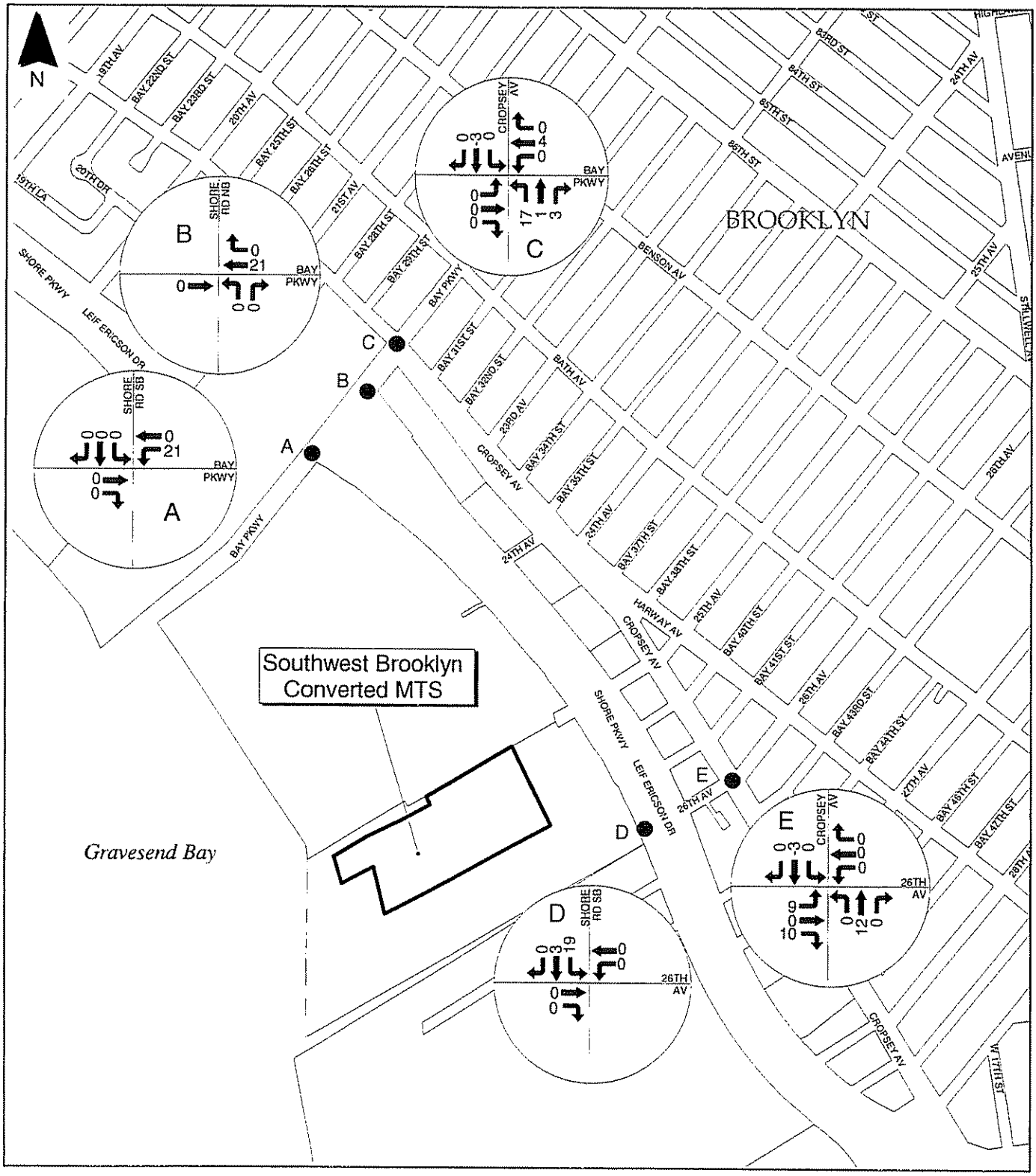
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-13 2006 Net Traffic - AM Peak

Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

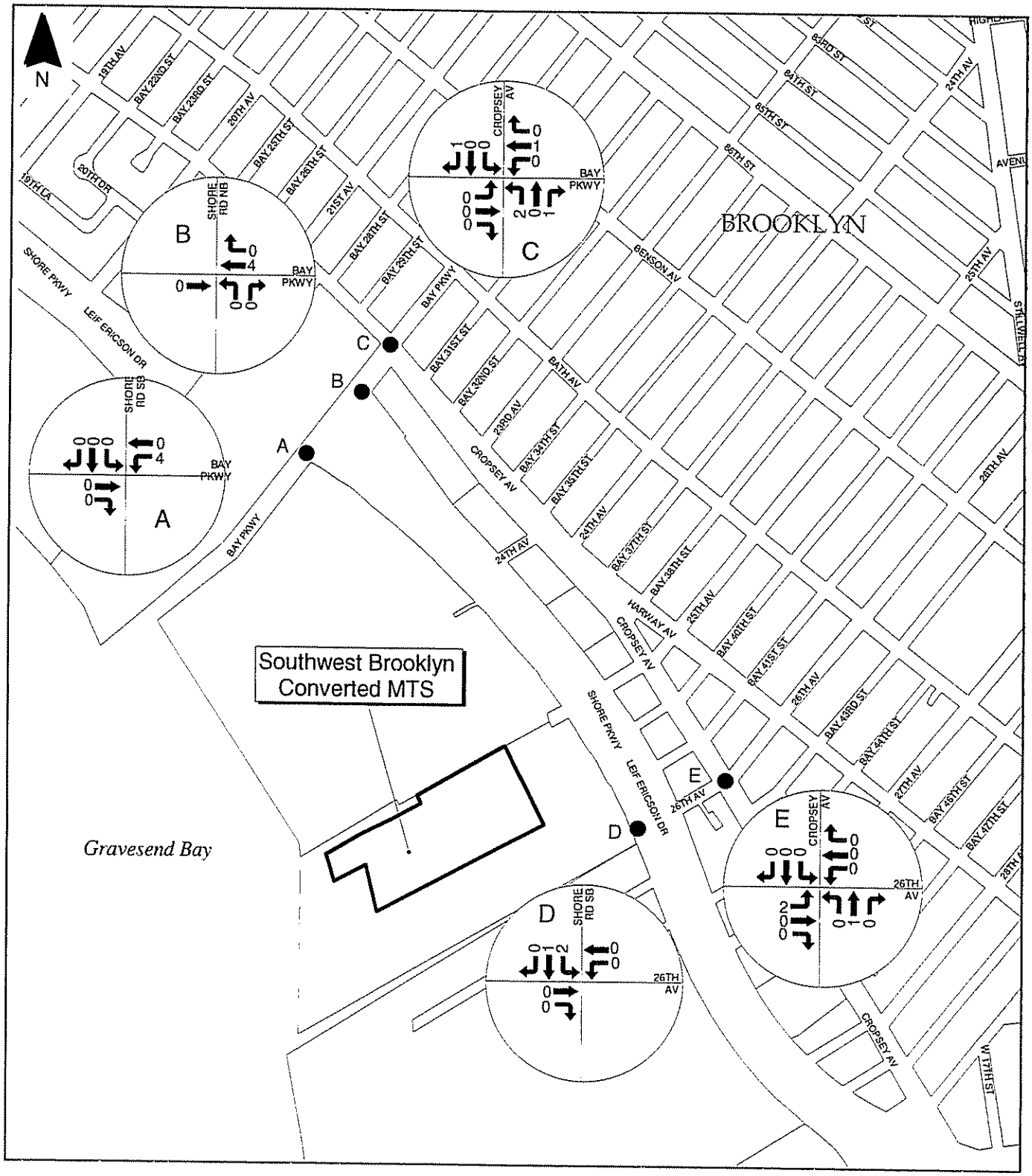
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Figure 5.14-14 2006 Net Traffic - Facility Peak

Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14-15 2006 Net Traffic - PM Peak

Southwest Brooklyn Converted MTS

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Table 5.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Southwest Brooklyn Converted MTS would not operate on Sundays. It was~~,~~ therefore~~,~~ ~~judged~~ determined that a peak weekday analysis would represent the worst overall case conditions.

Table 5.14-3
Weekday and Weekend Traffic
Southwest Brooklyn Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Bay Parkway [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
166	142	49,605	48,773

Note:
(1) EB and WB traffic data collected from ATR counts taken on Bay Parkway between Bayview Place and Cropsey Avenue from September 11 to 17, 2003.

Table 5.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Southwest Brooklyn Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The three intersections that may experience potentially significant impacts are discussed in Section 5.14.4.2 and summarized in Table 5.14-5.

5.14.4.2 Impacts and Mitigation

Three of the five intersections may experience impacts great enough to be considered significant during only one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 5.14-5.

Table 5.14-4
HCM Analysis[1]— 2006 Future Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.85	60.7	E	0.71	29.8	C	1.08	122.4	F
EB TR	0.46	20.3	C	0.46	15.5	B	0.66	24.3	C
WB L	0.28	29.7	C	0.21	22.6	C	0.46	41.5	D
WB TR	0.87	42.8	D	0.67	26.8	C	0.96	53.8	D
NB L	0.92	67.1	E	0.56	27.1	C	1.01	89.4	F
NB LTR	0.40	25.8	C	0.27	19.5	B	0.56	28.7	C
SB L	0.17	34.5	C	0.19	28.6	C	0.18	35.1	D
SB T	0.48	40.0	D	0.34	30.9	C	0.52	40.7	D
SB R	0.97	79.3	E	0.83	51.0	D	0.79	54.1	D
OVERALL		42.8	D		26.0	C		47.5	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.96	64.1	E	0.81	41.7	D	0.88	48.8	D
WB LTR	0.59	32.6	C	0.25	22.9	C	0.34	25.1	C
NB LTR	0.43	13.5	B	0.26	11.6	B	0.50	14.1	B
SB LTR	0.25	11.4	B	0.16	10.7	B	0.31	12.0	B
OVERALL		29.4	C		23.5	C		22.6	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.6	A	0.32	11.8	B	0.40	10.1	B
WB TR	0.88	22.6	C	0.72	18.0	B	0.89	23.5	C
NB L	0.47	38.3	D	0.44	23.3	C	0.50	38.7	D
NB R	0.87	62.7	E	0.56	27.9	C	0.97	79.0	E
OVERALL		26.2	C		18.4	B		27.8	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.20	25.1	C	0.46	37.1	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.82	33.6	C	0.61	21.3	C	0.97	61.1	E
WB T	0.14	14.0	B	0.25	13.5	B	0.47	18.6	B
SB L	0.98	76.1	E	0.87	50.1	D	1.07	101.4	F
SB TR	0.80	49.7	D	0.37	28.1	C	0.89	59.0	E
OVERALL		45.4	D		29.4	C		58.3	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.7	A	-	8.1	A	-	7.9	A
WB LT	-	10.2	B	-	9.1	A	-	8.8	A
SB L		12.6	B		10.9	B		11.3	B
SB TR	-	9.2	A	-	8.4	A	-	8.2	A
OVERALL		11.0	B		9.8	A		10.1	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

TR = through right movement

LT = left through movement

R = right movement

L= left movement

T = through movement

Table 5.14-5
HCM Analysis[1] — 2006 Future Build Conditions with Mitigation
Southwest Brooklyn Converted MTS

Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized) – AM Peak									
EB L	0.84	59.4	E	0.85	60.7	E	0.81	56.1	E
EB TR	0.46	20.3	C	0.46	20.3	C	0.46	20.8	C
WB L	0.28	29.7	C	0.28	29.7	C	0.28	18.8	B
WB TR	0.87	42.4	D	0.87	42.8	D	0.90	46.5	D
NB L	0.89	61.1	E	0.92	67.1	E	0.90	63.3	E
NB LTR	0.40	25.8	C	0.40	25.8	C	0.41	25.7	C
SB L	0.17	34.5	C	0.17	34.5	C	0.12	21.5	C
SB T	0.48	40.0	D	0.48	40.0	D	0.47	39.5	D
SB R	0.95	76.7	E	0.97	79.3	E	0.66	34.6	D
OVERALL		41.5	D		42.8	D		37.9	D
Cropsey Avenue and 26th Avenue (signalized) – AM Peak									
EB LTR	0.88	49.1	D	0.96	64.1	D	0.90	51.0	D
WB LTR	0.57	31.5	C	0.59	32.6	C	0.53	28.5	C
NB LTR	0.43	13.4	B	0.43	13.5	B	0.45	14.8	B
SB LTR	0.25	11.4	B	0.25	11.4	B	0.26	12.6	B
OVERALL		24.6	C		29.4	C		26.0	C
Shore Road (southbound) and Bay Parkway (signalized) – AM Peak									
EB T	0.07	31.6	C	0.07	31.6	C	0.07	32.3	C
EB R	0.05	31.5	C	0.05	31.5	C	0.05	32.2	C
WB DFL	0.80	32.4	C	0.82	33.6	C	0.83	34.8	C
WB T	0.14	14.0	B	0.14	14.0	B	0.15	14.5	B
SB L	0.96	71.4	E	0.98	76.1	E	0.96	69.4	E
SB TR	0.79	49.0	D	0.80	49.7	D	0.78	47.4	D
OVERALL		43.6	D		45.4	D		44.0	D

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

L= left movement

TR = through right movement

R = right movement

T = through movement

Cropsey Avenue/Bay Parkway – During the AM peak hour, a potential impact was identified on the northbound left-turn lane group when the delay increased from 61.1 seconds to 67.1 seconds (LOS E in both cases). An increase in green time of one second for the northbound-only approach should eliminate this unacceptable increase in delay. To avoid this timing change causing impacts to other lane groups, it would be necessary to increase the eastbound only approach by one second and decrease the eastbound and westbound approach green time by one second. In addition to signal timing changes, new movements would be added to two of the signal phases. During the eastbound-only phase, a southbound right-turn-only movement would be added from the right-turn-only lane of the southbound approach. Also during the eastbound-only phase, a semi-actuated left turn from the westbound left-turn-only approach would be added. During the northbound-only phase, a semi-actuated movement would be added from the southbound approach. The two semi-actuated movements would create a left-turn-only phase during which vehicles would simultaneously make left turns from two directions when a queue forms in the semi-actuated lanes. When no queues are present in the semi-actuated left-turn-only lanes, the signals would allow traffic movements from one direction only (eastbound or northbound) during the phase. Compared to Future No-Build Conditions, eastbound approach delay times would remain approximately the same, westbound and northbound approach delay times would increase between two and four seconds, and southbound approach times would decrease by over 25 seconds.

Cropsey Avenue/26th Avenue – During the AM peak hour, a potential impact was identified on the eastbound left/through/right lane group when the delay increased from 49.1 seconds to 64.1 seconds. An increase in the green time of two seconds for the eastbound and westbound approaches should eliminate the delay increase. This mitigation measure decreases the northbound and southbound approach green time by two seconds. The northbound, southbound and eastbound approach delay times would increase by approximately one to two seconds and the westbound approach delay would decrease by less than three seconds compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Shore Road (southbound)/Bay Parkway – During the AM peak hour, a potential impact was identified on the southbound left-turn lane group when the delay increased from 71.4 seconds to 76.1 seconds (LOS E in both cases). An increase in green time of one second for the southbound approach should eliminate this unacceptable increase in delay. This mitigation measure decreases the eastbound and westbound approach green time by one second. With this mitigation, the westbound and eastbound approach delay time would increase by one second and the southbound approach time would decrease three seconds compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

In addition to the two intersections that may experience impacts, the Shore Road (southbound) and site entrance/exit intersection (section of 25th Avenue) may also require low-cost and easily implemented mitigation. Even though traffic operations at this intersection should not affect traffic significantly along Shore Road, some improvements near the intersection would need to be considered, such as restricting parking along Shore Road within the vicinity of the intersection to improve site distance at the site entrance/exit. There is an existing stop sign at the site exit. This mitigation should not generate any adverse impacts on other lane groups during any time periods.

Overall, the mitigation measures suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Conditions.

5.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

5.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

5.14a Traffic, Parking, Transit, and Pedestrians - Alternative Route

5.14a.1 Introduction

The Southwest Brooklyn Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

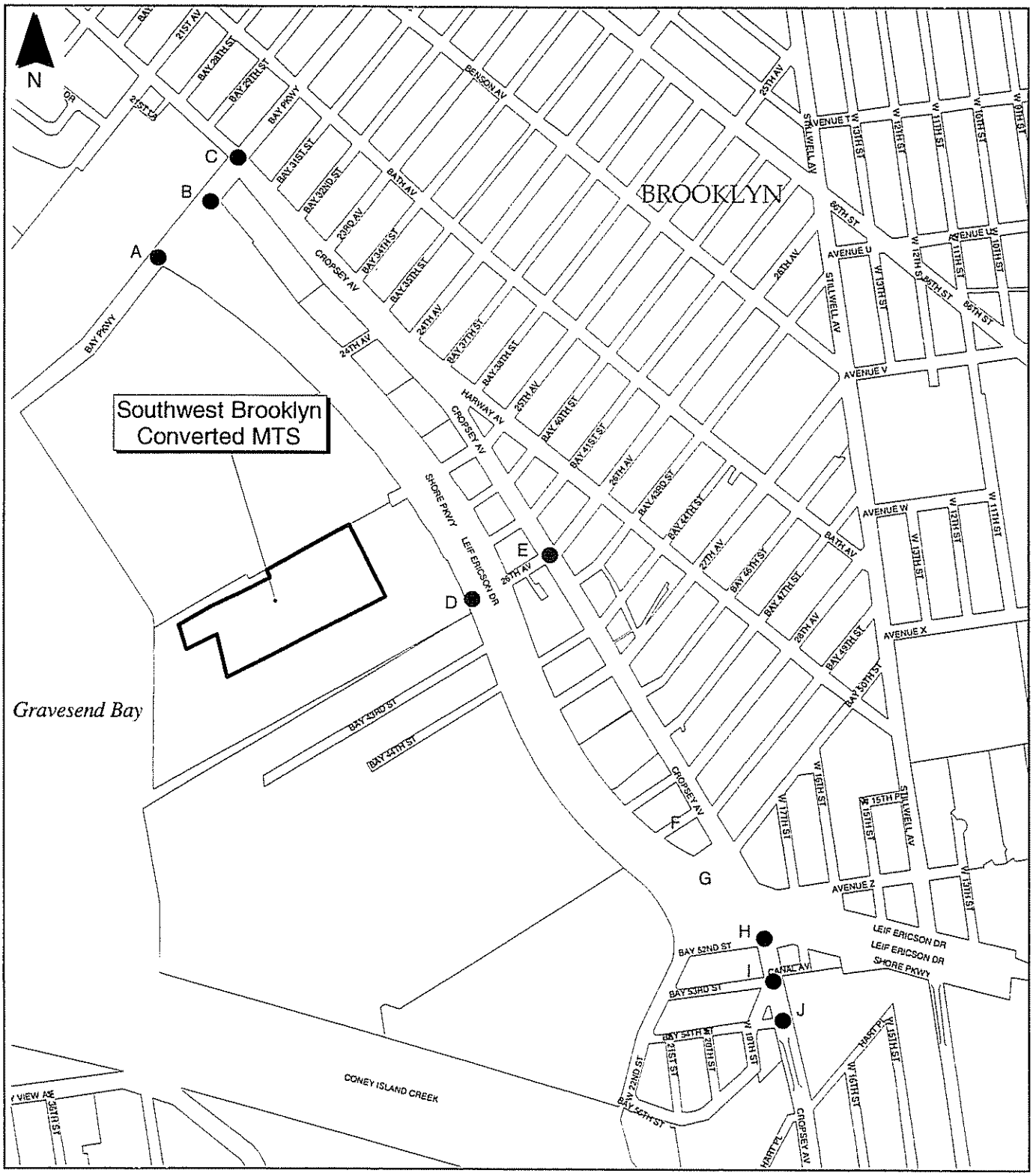
Due to comments received at the CB 11 ULURP public meeting, an alternate route for vehicles exiting the facility was selected for analysis. The original and alternate routes are described below in section 5.14a2.2.

5.14a.2 Existing Conditions

5.14a.2.1 Definition of Study Area

The traffic analysis study area is broad, covering portions of the Gravesend sections of Brooklyn. It includes the corridors along Cropsey Avenue and Shore Road that are bounded by Bay Parkway on the north and Bay 54th Street on the south. Commercial and residential areas are included in the traffic study area. There are no CEQR-defined areas of concern located within the study area. Figure 5.14a.-1 shows the locations of the intersections selected for analysis (locations A through J). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points within ¾-mile of the site in conjunction with local truck routes. Section 5.14a.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the Southwest Brooklyn Converted MTS.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14A-1 Traffic Analysis Study Area

Southwest Brooklyn Converted MTS

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5.14a.2.2 Surface Network

One major parkway, the predominantly north-south Shore Parkway (Lief Ericson Drive), services the traffic analysis study area. The Shore Parkway is a controlled access highway, which prohibits commercial vehicle traffic. Cropsey Avenue is a local truck route that provides access from the south and north of the site and Bay Parkway is a local truck route that provides access to the site from the east. A map showing all major truck routes and local truck routes in Brooklyn is provided in Section 3.16 (see Figure 3.16-3).

25th and 26th Avenues are collector roads that provide access to and from the arterials of Cropsey Avenue and Shore Road (one-way southbound). Bay Parkway, another arterial, provides access to and from traffic on the Shore Parkway and Shore Road. Southbound traffic on the Shore Parkway enters and exits on Shore Road (one-way southbound) in the traffic study area.

For this Alternate route, DSNY and other agency collection vehicles traveling to the Southwest Brooklyn Converted MTS from the north or south would generally approach the area using either Cropsey Avenue or 86th Street. Vehicles approaching from the east would approach the area on Bay Parkway or 25th Avenue. All incoming traffic converges at the intersection of Cropsey Avenue and Bay Parkway and proceeds west along Bay Parkway to Shore Road (one-way southbound). Vehicles then access the Southwest Brooklyn MTS via 25th Avenue on the west side of Shore Parkway. Shore Road and 25th Avenue on the west side of Shore Parkway are not designated as truck routes. All DSNY collection vehicles exiting the facility must turn south onto Shore Road. At 26th Avenue, the collection vehicles from only CD 11 turn east and then proceed to Cropsey Avenue. All collection vehicles from CDs 12, 13, and 15 will continue south on Shore Road past 26th Avenue to Bay 52nd Street. Shore Road merges into Bay 52nd Street and then intersects Cropsey Avenue.[11] From Cropsey Avenue, collection vehicles from all CDs proceed back to their respective CDs along the same truck routes that they used to access the area close to

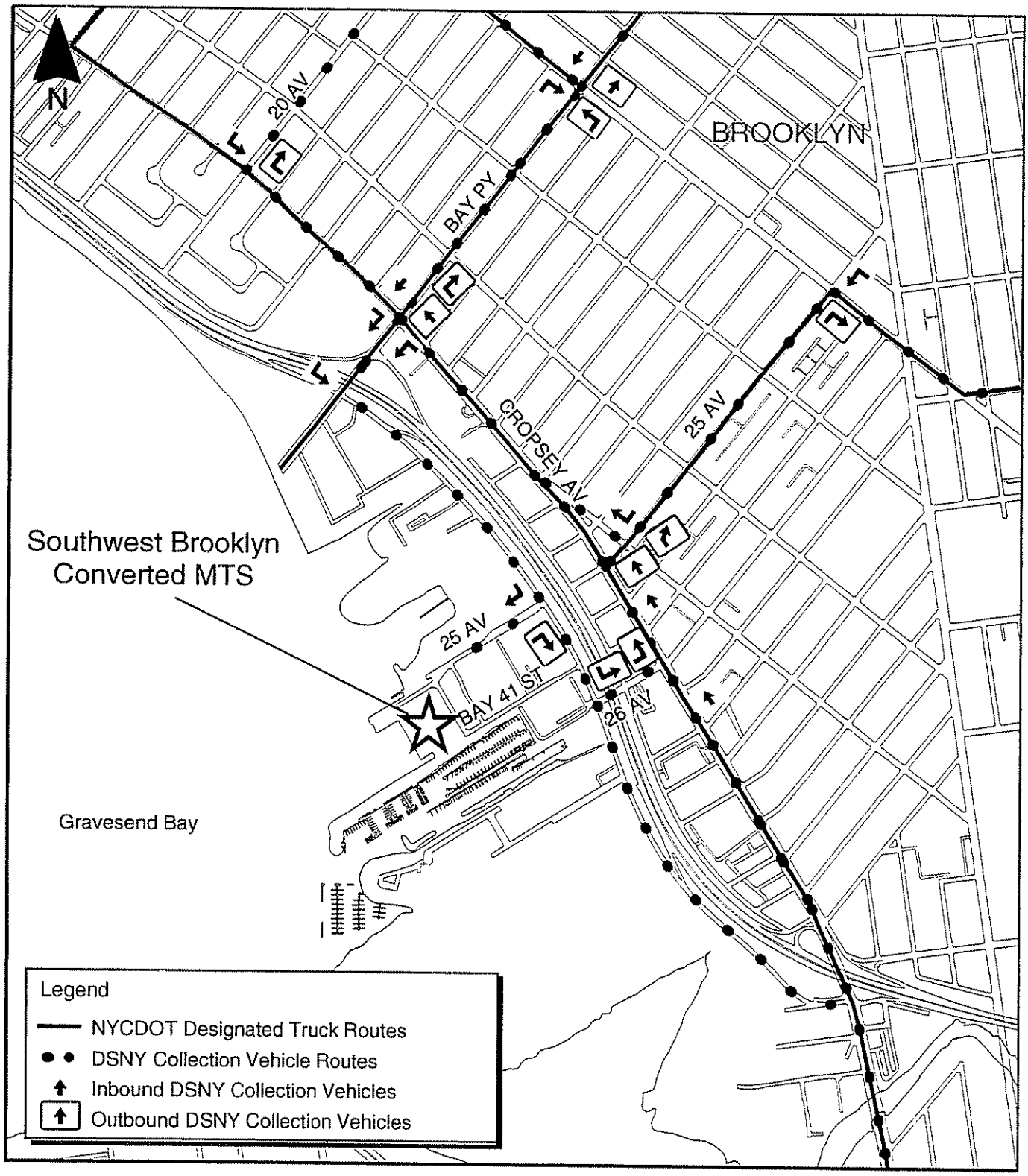
[11] In the original traffic analysis discussed in Section 5.14, collection vehicles from all CDs assigned to the Southwest Brooklyn converted TMS turned east onto 26th Avenue from Shore Road to proceed to Cropsey Avenue.

the Southwest Brooklyn Converted MTS. Figure 5.14a-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.

5.14a.2.3 Existing Traffic Operations

The five intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the Southwest Brooklyn Converted MTS. All of them are on major arterials and/or collection vehicle routes. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Shore Road (southbound) and Bay Parkway – Signalized Intersection (see Figure 5.14a -1 location A)
- Bayview Place (Shore Road - northbound) and Bay Parkway – Signalized Intersection (see Figure 5.14a-1 – location B)
- Cropsey Avenue and Bay Parkway – Signalized Intersection (see Figure 5.14a-1 - location C)
- Shore Road (southbound) and 26th Avenue – Unsignalized Intersection (see Figure 5.14a-1 – location D)
- Cropsey Avenue and 26th Avenue – Signalized Intersection (see Figure 5.14a-1 - location E)
- Cropsey Avenue and Bay 49th Street – Signalized Intersection (see Figure 5.14a-1 - location F)
- Cropsey Avenue and Bay 50th Street – Signalized Intersection (see Figure 5.14a-1 - location G)
- Cropsey Avenue and Canal Avenue and Bay 52nd Street – Signalized Intersection (see Figure 5.14a-1 - location H)
- Cropsey Avenue and Bay 53rd Street – Signalized Intersection (see Figure 5.14a-1 - location I)
- Cropsey Avenue and Bay 54th Street – Signalized Intersection (see Figure 5.14a-1 - location J)



Site delineations are approximate.
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 5.14A-2 DSNY Collection Vehicle Routes
Southwest Brooklyn Converted MTS

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25th and 26th Avenues are collector roads that provide access to and from the arterials of Cropsey Avenue and Shore Road (southbound). Bay Parkway, another arterial, provides access to and from northbound traffic on the Shore Parkway. Southbound traffic on the Shore Parkway enters and exits on Shore Road (southbound) in the traffic study area. Bay 49th, 50th, 52nd, 53rd, and 54th Streets, and Canal Avenue are all local roads.

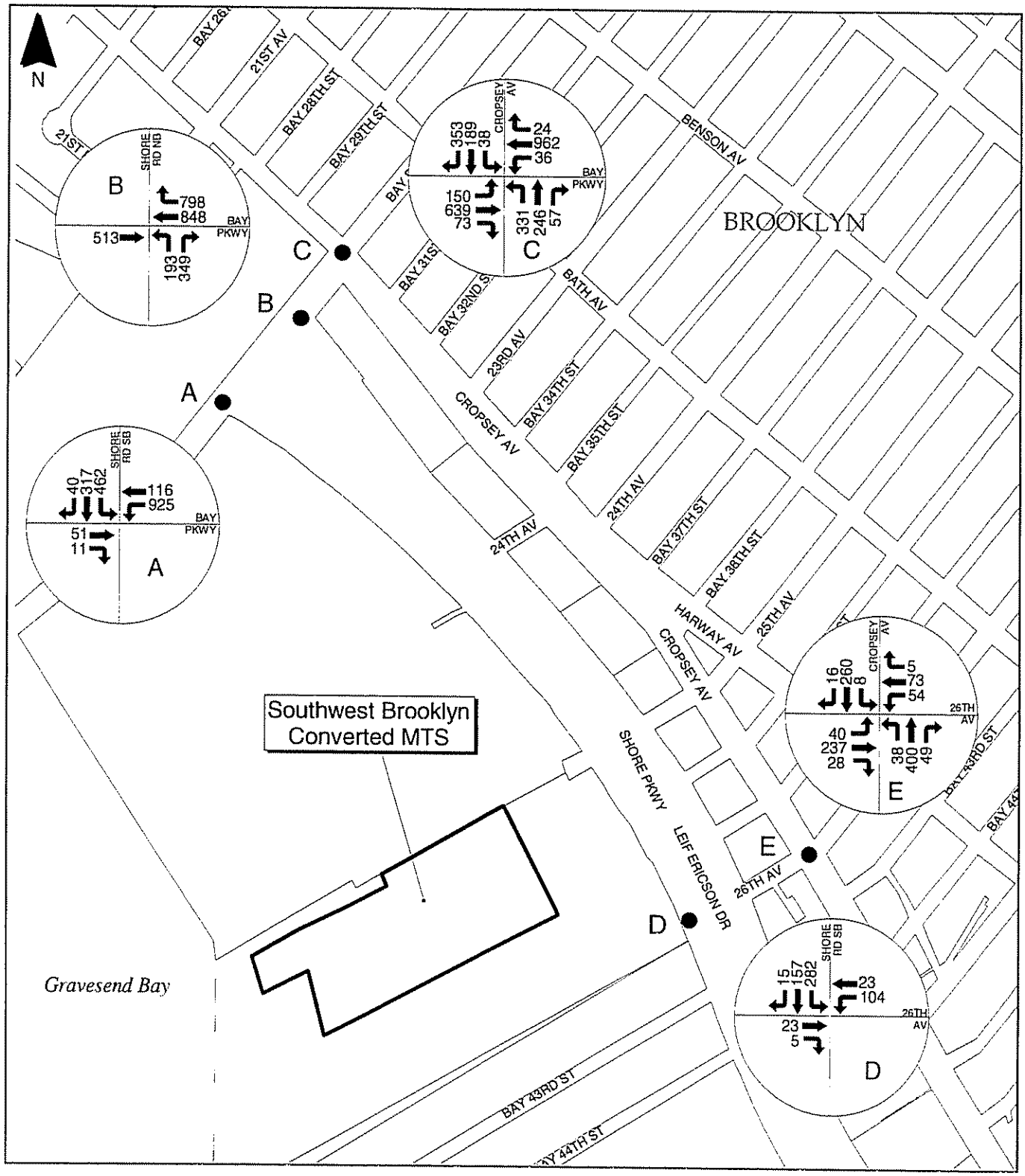
A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). For locations A through E, manual turning movement counts were conducted between February 5, 2003 and February 11, 2003, while ATR counts were conducted between February 3, 2003 and February 9, 2003. Since this Alternate route was proposed in January 2005, for additional locations F through J, manual turning movement counts were conducted on January 27, 2005, while ATR counts were conducted between January 26, 2005 and February 2, 2005. Figures 5.14a-3, through 5.14a-8 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:45 a.m. and 8:45 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 5:00 p.m. and 6:00 p.m. Table 5.14a-1 presents the v/c ratio, delay and LOS for the ten intersections during the AM, Facility, and PM peaks.

Existing truck traffic varies throughout the intersections in the traffic study area. On roads that provide access to and from the Shore Parkway, truck percentages held constant between 4% and 10% throughout the day. On truck routes in the study area, the percentages of trucks generally increased throughout the morning hours, remained between 15% and 25% during midday hours, and then decreased during the PM peak hours to 5% to 15%.

5.14a.2.3.1 LOS at Signalized Intersections

Table 5.14a-1 shows that the existing signalized intersections generally operated at an overall LOS of B or C with the following exceptions:

- During the AM and PM peak hours, the intersections of Cropsey Avenue at Bay Parkway and Shore Road (southbound) at Bay Parkway operate at an overall LOS D;



Site delineations are approximate
Base Map Source: New York City Department of City Planning

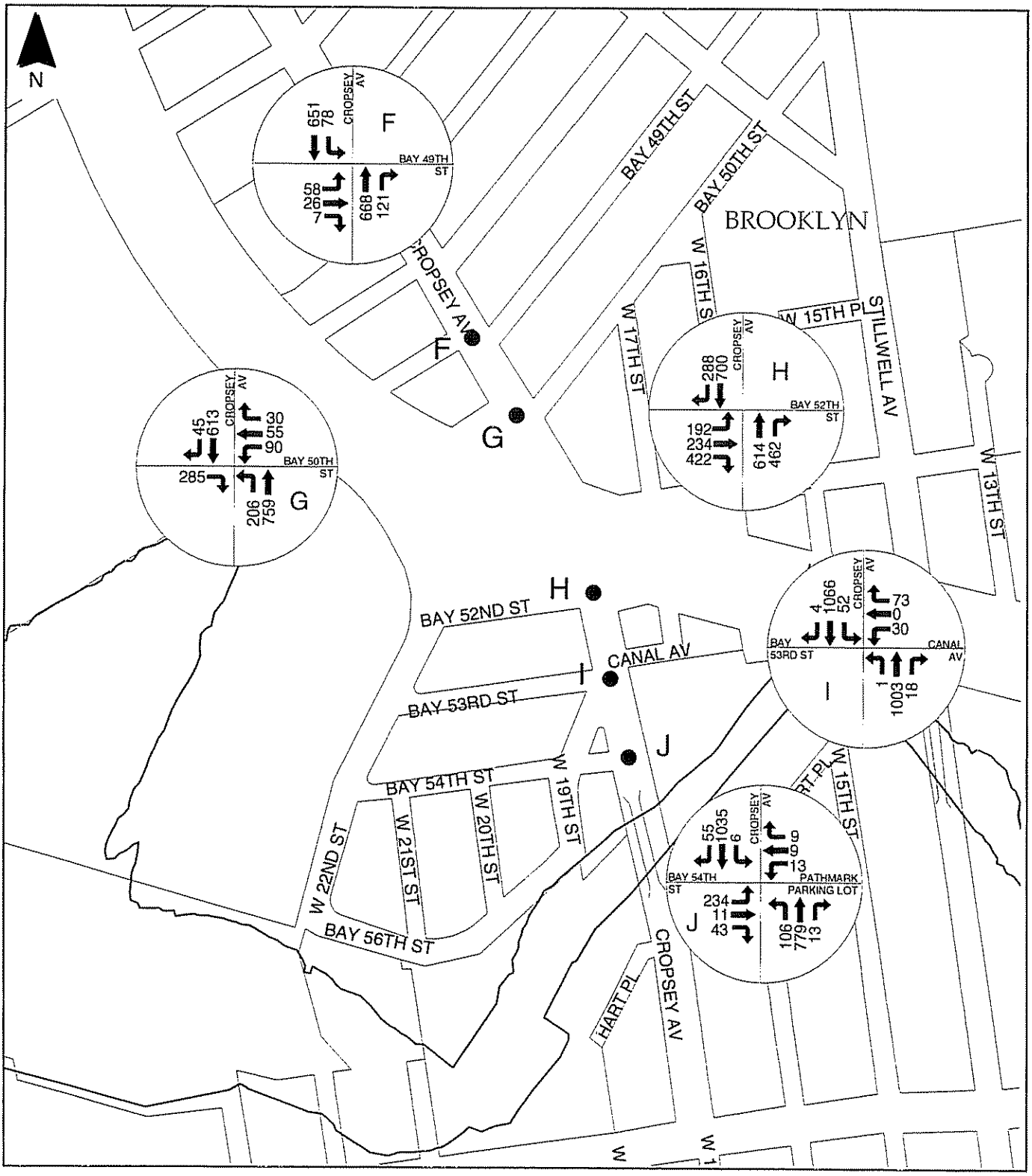
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Figure 5.14A-3 Existing Traffic Volumes - AM Peak

Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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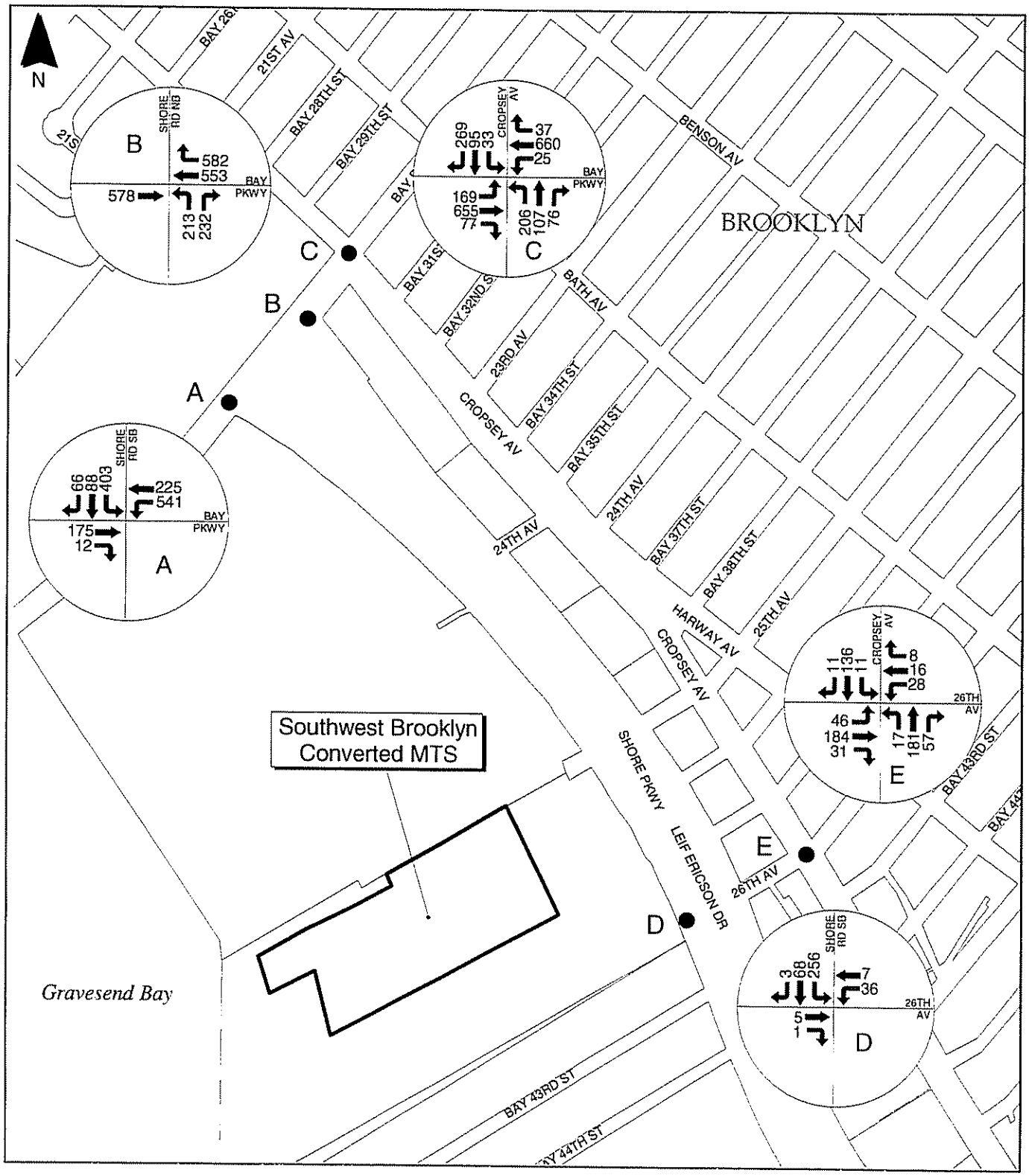
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Figure 5.14A-4 Existing Traffic Volumes- AM Peak

Southwest Brooklyn Converted MTS

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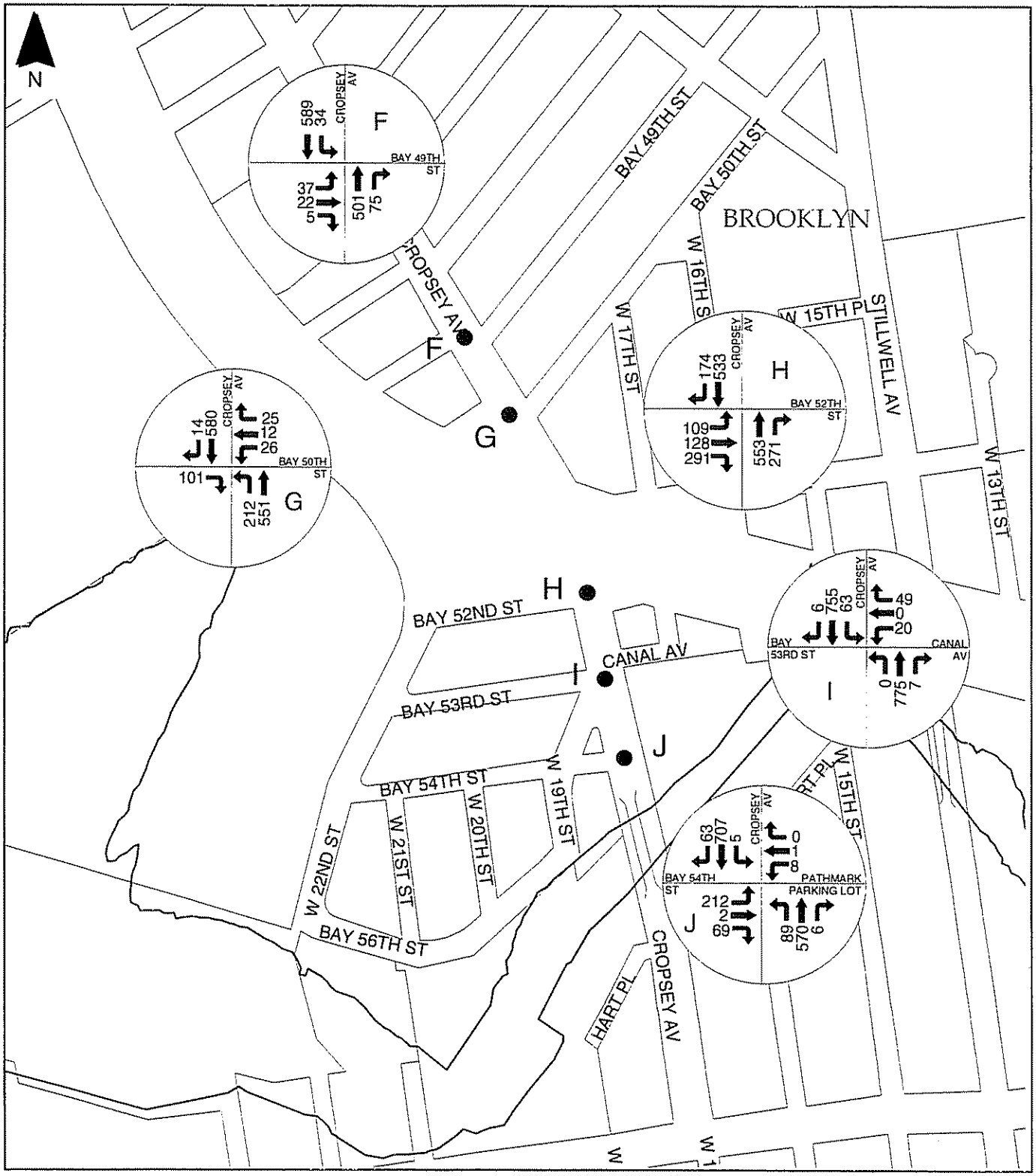
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Figure 5.14A-5 Existing Traffic Volumes
Facility Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

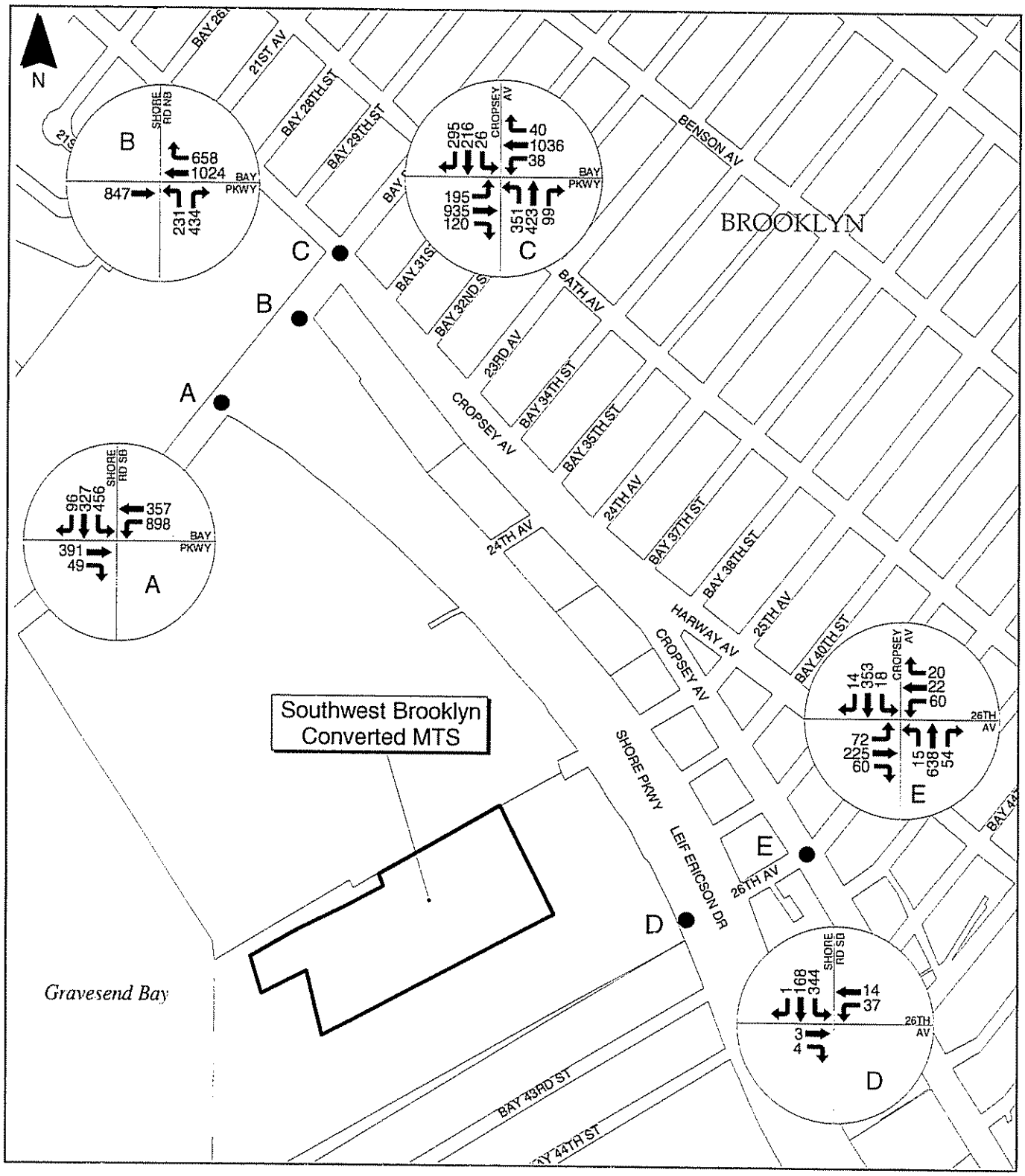
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Figure 5.14A-6 Existing Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

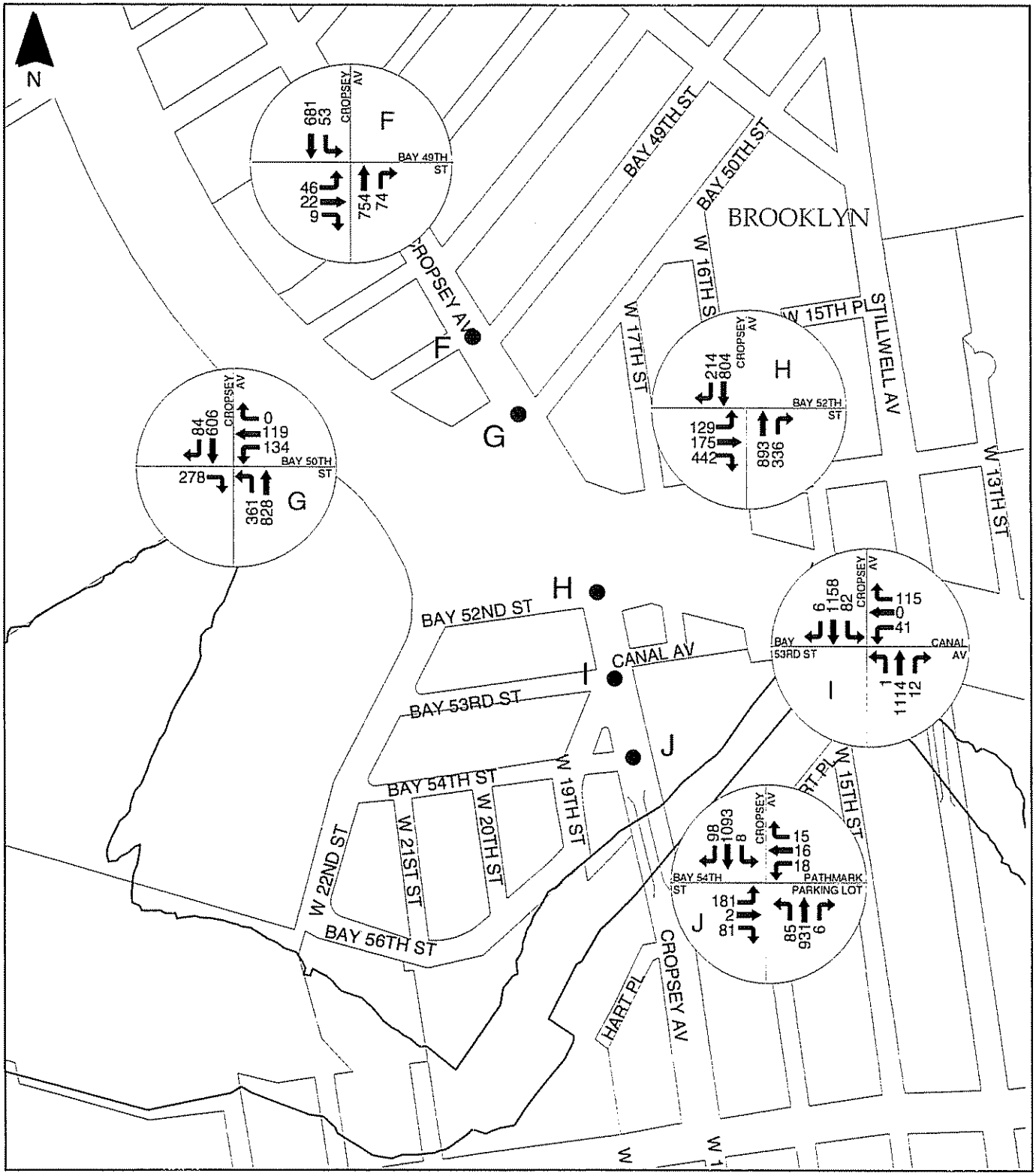
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Figure 5.14A-7 Existing Traffic Volumes - PM Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 5.14A-8 Existing Traffic Volumes- PM Peak

Southwest Brooklyn Converted MTS

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Table 5.14a-1
HCM Analysis[1]— Existing Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.79	49.3	D	0.67	26.5	C	1.05	112.5	F
EB TR	0.44	20.1	C	0.44	15.3	B	0.64	23.9	C
WB L	0.27	29.0	C	0.19	22.2	C	0.41	38.1	D
WB TR	0.84	40.6	D	0.71	28.4	C	0.93	49.2	D
NB L	0.85	55.7	E	0.51	25.2	C	0.96	75.9	E
NB LTR	0.39	25.5	C	0.28	19.7	B	0.53	28.1	C
SB L	0.16	34.4	C	0.18	28.5	C	0.17	34.8	C
SB T	0.47	39.6	D	0.35	31.0	C	0.50	40.3	D
SB R	0.93	71.1	E	0.81	49.1	D	0.76	52.0	D
OVERALL		39.3	D		25.9	C		44.0	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.84	44.8	D	0.72	35.6	D	0.84	44.0	D
WB LTR	0.54	30.2	C	0.24	22.7	C	0.32	24.6	C
NB LTR	0.42	13.3	B	0.24	11.4	B	0.48	13.9	B
SB LTR	0.24	11.4	B	0.16	10.7	B	0.30	11.9	B
OVERALL		23.2	C		21.0	C		21.2	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.5	A	0.31	11.7	B	0.39	9.9	A
WB TR	0.85	20.4	C	0.69	17.2	B	0.86	21.3	C
NB L	0.46	38.2	D	0.43	23.1	C	0.49	38.5	D
NB R	0.81	56.9	E	0.38	24.1	C	0.93	72.6	E
OVERALL		24.0	C		17.1	B		25.8	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.19	25.0	C	0.45	36.9	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.77	31.1	C	0.56	21.8	C	0.94	55.1	E
WB T	0.14	13.9	B	0.24	13.4	B	0.45	18.3	B
SB L	0.95	69.8	E	0.85	47.2	D	1.04	91.4	F
SB TR	0.77	47.7	D	0.36	27.9	C	0.86	55.7	E
OVERALL		42.5	D		28.3	C		56.2	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.6	A	-	8.0	A	-	7.8	A
WB LT	-	10.0-	A	-	8.9	A	-	8.7	A
SB L		11.8	B		10.4	B		11.1	B
SB TR	-	9.0	A	-	8.3	A	-	8.2	A
OVERALL		10.4	B		9.5	A		9.9	A

Table 5.14a-1 (continued)
HCM Analysis[1]— Existing Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay 49th Street (signalized)									
EB LTR	0.24	19.2	B	0.18	18.2	B	0.27	19.7	B
NB TR	0.63	18.1	B	0.44	14.7	B	0.60	17.2	B
SB LT	0.89	31.6	C	0.55	16.7	B	0.73	21.5	C
OVERALL		24.6	C		15.8	B		192	B
Cropsey Avenue and Bay 50th Street (signalized)									
EB R	0.18	0.2	A	0.06	0.1	A	0.18	0.2	A
WB LTR	0.48	28.1	C	0.21	23.2	C	0.68	34.6	C
NB L	0.52	24.6	C	0.50	22.1	C	0.97	63.8	E
NB LT	0.36	10.1	B	0.27	9.1	A	0.37	10.2	B
SB TR	0.60	20.9	C	0.54	19.9	B	0.58	20.5	C
OVERALL		15.5	B		15.7	B		23.8	C
Cropsey Avenue and Canal Avenue and Bay 52nd Street (signalized)									
EB L	0.38	21.9	C	0.20	19.5	B	0.24	20.0-	B
EB TR	0.65	28.2	C	0.40	22.5	C	0.54	25.1	C
EB R	0.54	25.2	C	0.44	23.5	C	0.61	26.9	C
NB TR	0.55	14.8	B	0.41	13.1	B	0.51	14.3	B
SB T	0.50	14.4	B	0.37	12.8	B	0.51	14.6	B
SB R	0.43	14.4	B	0.27	12.2	B	0.27	12.2	B
OVERALL		17.8	B		15.4	B		17.1	B
Cropsey Avenue and Bay 53rd Street (signalized)									
WB LTR	0.20	19.7	B	0.15	18.9	B	0.32	21.1	C
NB LTR	0.53	14.6	B	0.33	12.3	B	0.51	14.3	B
SB L	0.33	16.7	B	0.23	13.0	B	0.55	26.1	C
SB TR	0.50	14.0	B	0.34	12.3	B	0.51	14.2	B
OVERALL		14.6	B		12.7	B		15.1	B
Cropsey Avenue and Bay 54th Street (signalized)									
EB L	0.73	43.4	D	0.54	34.3	C	0.44	31.6	C
EB LTR	0.40	30.1	C	0.35	29.0	C	0.41	30.0	C
WB LTR	0.09	25.2	C	0.04	24.7	C	0.18	26.3	C
NB L	0.40	19.7	B	0.29	11.8	B	0.35	18.7	B
NB TR	0.34	12.3	B	0.24	11.4	B	0.38	12.7	B
SB L	0.02	8.0	A	0.02	6.6	A	0.03	8.9	A
SB TR	0.49	13.9	B	0.34	12.3	B	0.50	14.1	B
OVERALL		17.4	B		15.4	B		16.0	B

Notes for Table 5.14a-1:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L= left movement

TR = through right movement

R = right movement

T = through movement

- The eastbound left/through/right lane group at Cropsey Avenue and 26th Avenue operates at LOS D for the AM, Facility, and PM peak hours;
- During the AM and PM peak hours, the intersection of Shore Road and Bay Parkway operates at an overall LOS D or E;
- The northbound left lane group at Cropsey Avenue and Bay 50th Street operates at LOS E for the PM peak hour; and
- The eastbound left lane group at Cropsey Avenue and Bay 54th Street operates at LOS D for the AM peak hour.

5.14a.2.3.2 LOS at Unsignalized Intersections

The one unsignalized intersection analyzed operates at LOS A or B throughout the day as shown in Table 5.14a-1.

5.14a.2.4 Existing DSNY-Related Traffic

Under Brooklyn's Interim Export, there are no commercial vendors located close to the Southwest Brooklyn Converted MTS. However, DSNY and other agency collection vehicles pass through the traffic study area on truck routes from Queens CDs 11 and 13 to the commercial vendor, IESI, located at 110 50th Street in Brooklyn. Collection vehicles currently pass through all intersections analyzed in the study area under the Interim Export Program.

5.14a.2.5 Public Transportation

Public transportation in the study area consists predominantly of bus trips. The B6 travels in a loop entering the study area going west on Bay Parkway, then south on Shore Road, east on 26th Avenue, north on Cropsey Avenue and exits the study area on Bay Parkway; and the X28, X38 and B82 run north-south along Cropsey Avenue. Bus stops are located at some of the study area intersections analyzed, and scheduled stops occur at various times during the day.

5.14a.2.6 Pedestrian Activity

Light pedestrian activity occurs along Cropsey Avenue in the traffic study area where restaurants and commercial and residential areas produce and attract pedestrians throughout the day. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

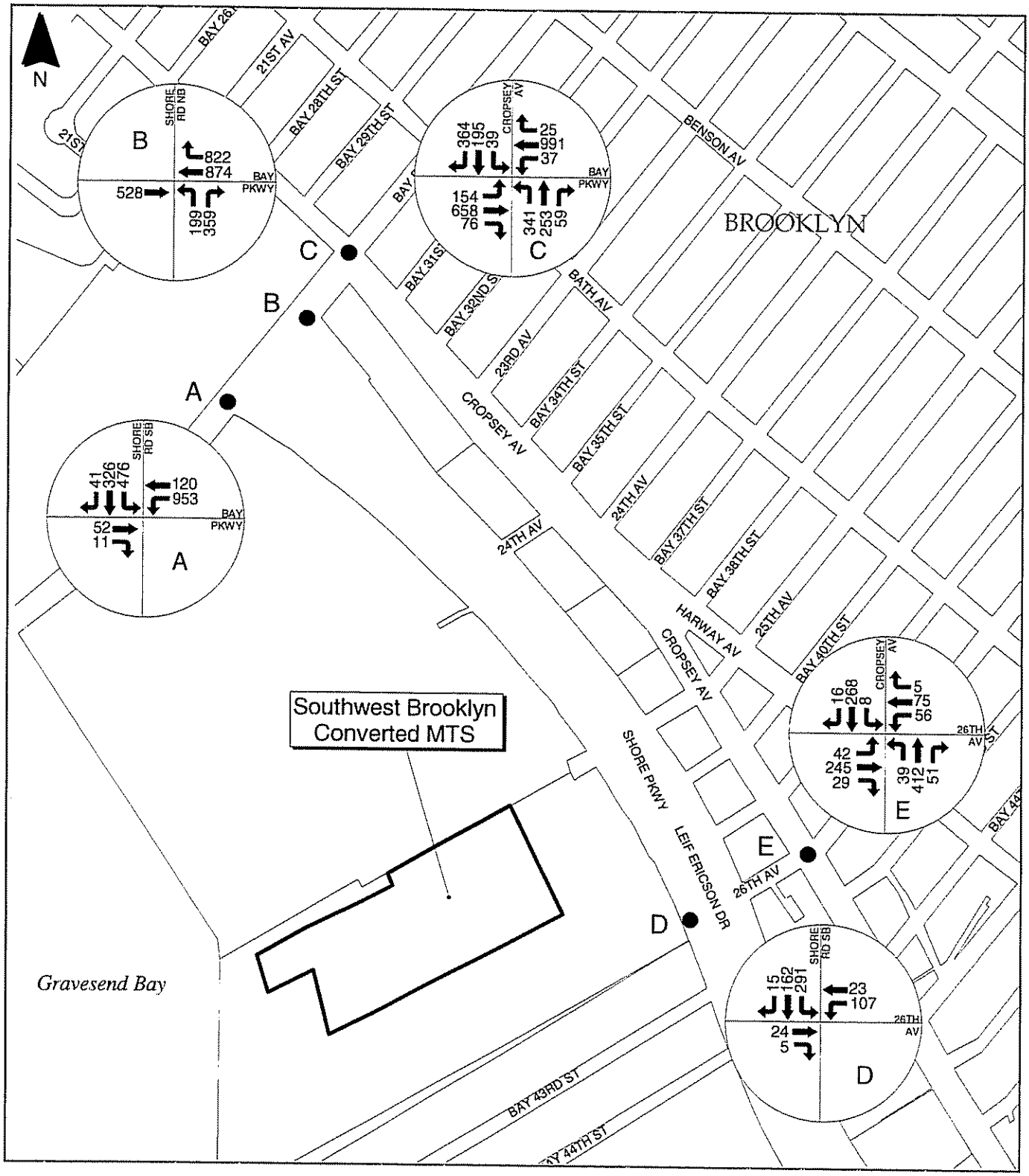
5.14a.3 Future No-Build Conditions

5.14a.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 130 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes.

Figures 5.14a-9 through 5.14a-14 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 5.14a-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their existing condition LOS, with the following exceptions:

- During the PM peak hour, the overall LOS of the Shore Road (southbound) and Bay Parkway intersection deteriorated from D to E;
- During the PM peak hour, the overall LOS of the Shore Road (southbound) and 26th Avenue intersection deteriorated from A to B;
- During the AM peak hour, the LOS of the southbound left/ through lane group at the intersection of Cropsey Avenue and Bay 49th Street deteriorated from C to D;
- During the Facility peak hour, the LOS of the southbound through/ right lane group at the intersection of Cropsey Avenue and Bay 50th Street deteriorated from B to C;
- During the PM peak hour, the LOS of the westbound left/ through/ right lane group at the intersection of Cropsey Avenue and Bay 50th Street deteriorated from C to D;
- During the PM peak hour, the LOS of the northbound left lane group at the intersection of Cropsey Avenue and Bay 50th Street deteriorated from D to E;
- During the PM peak hour, the LOS of the eastbound left lane group at the intersection of Cropsey Avenue and Bay 52nd Street deteriorated from B to C; and
- During the AM peak hour, the LOS of the northbound left lane group at the intersection of Cropsey Avenue and Bay 54th Street deteriorated from B to C.



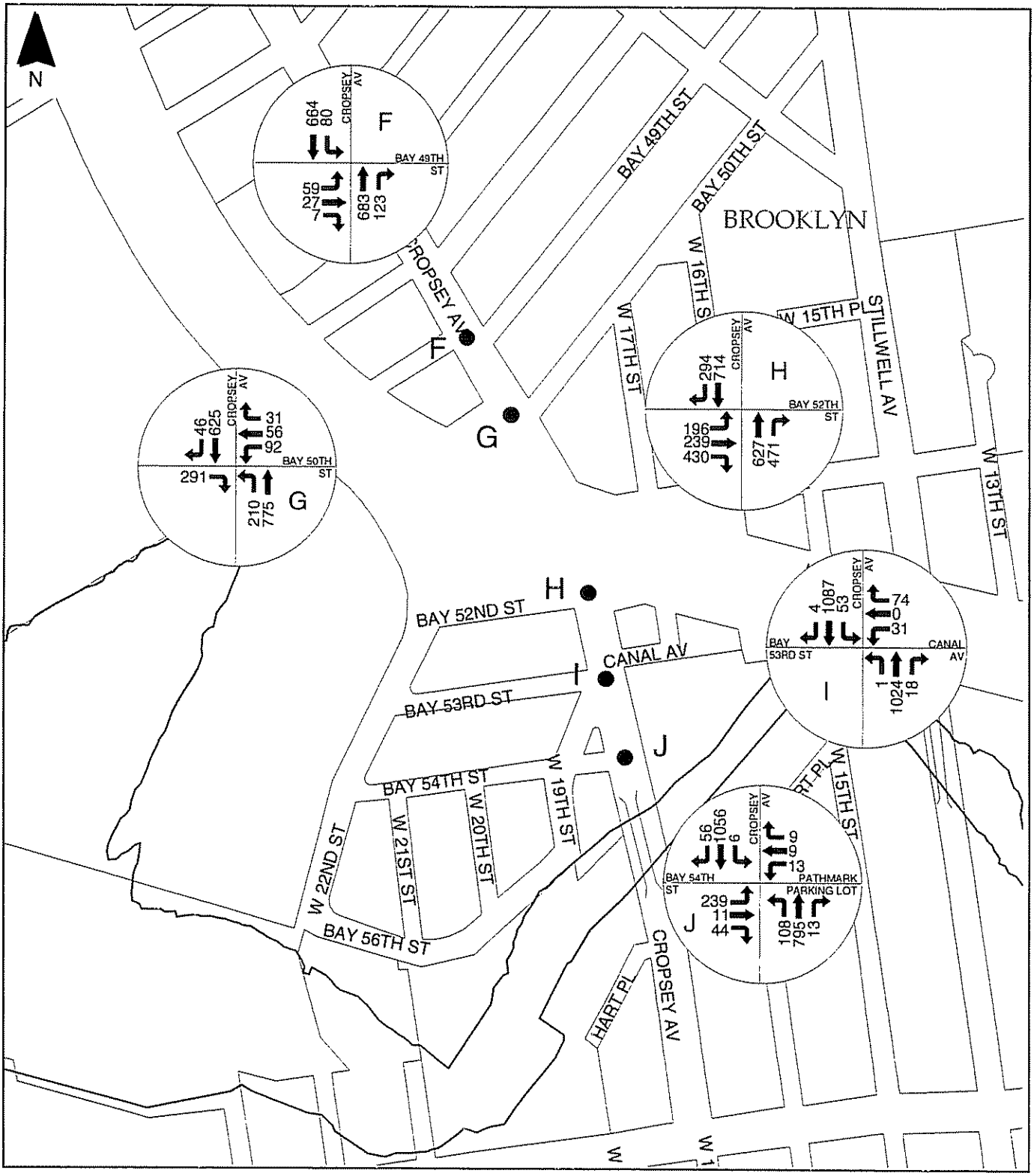
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14A-9 Future No-Build Traffic Volumes
AM Peak
Southwest Brooklyn Converted MTS

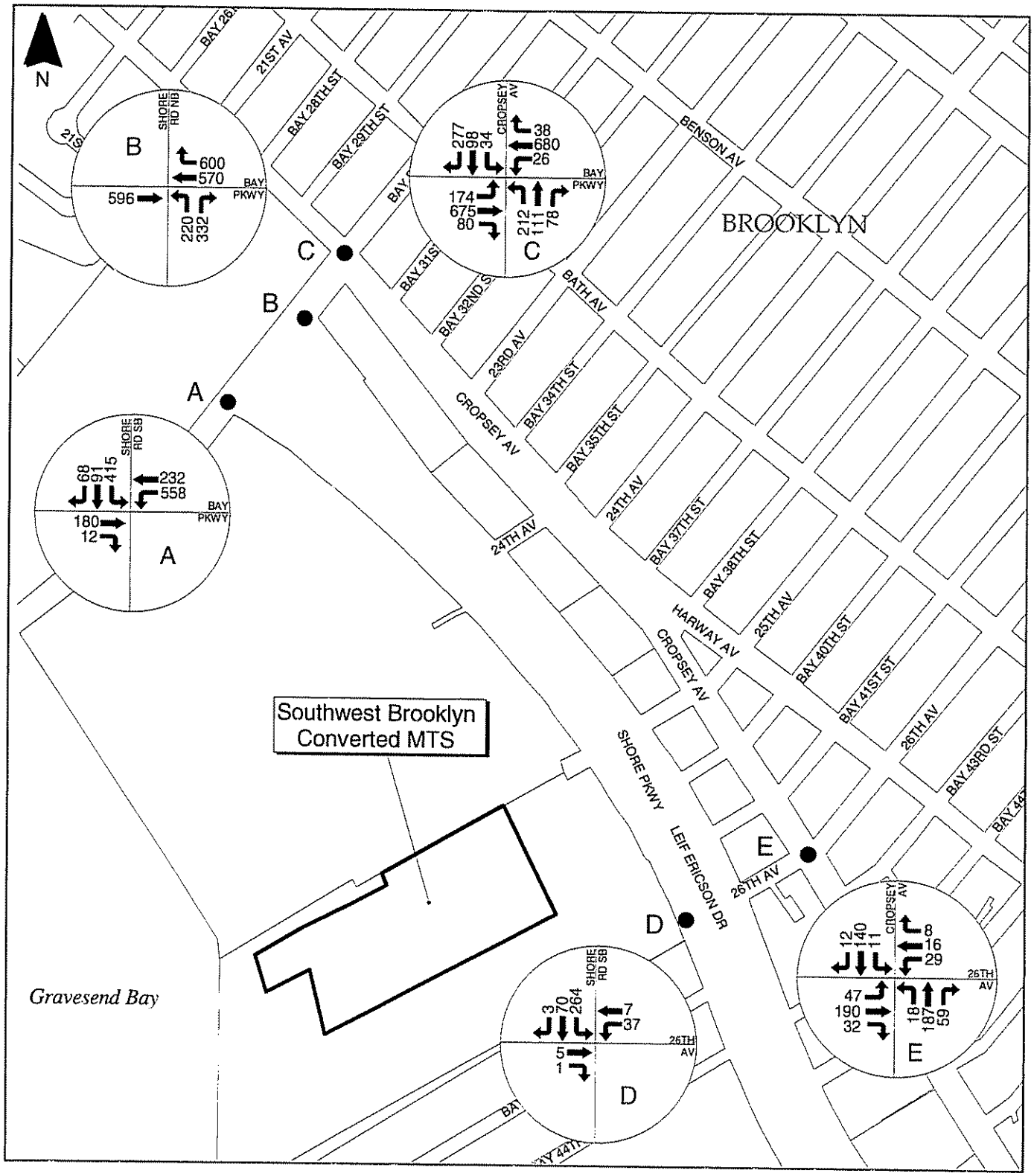
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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 5.14A-10 Future No-Build Traffic Volumes
AM Peak
Southwest Brooklyn Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

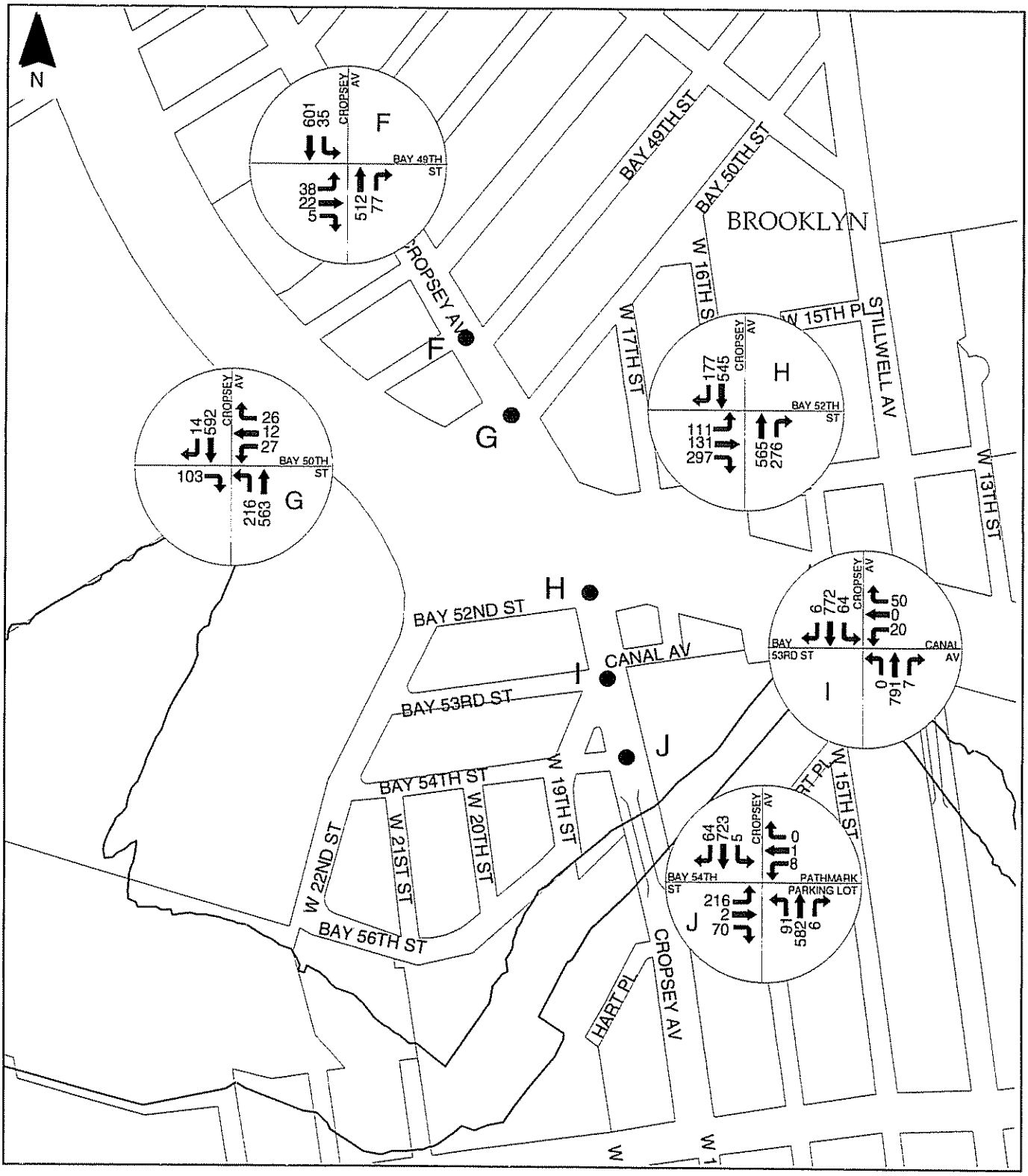
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 5.14A-11 Future No-Build Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

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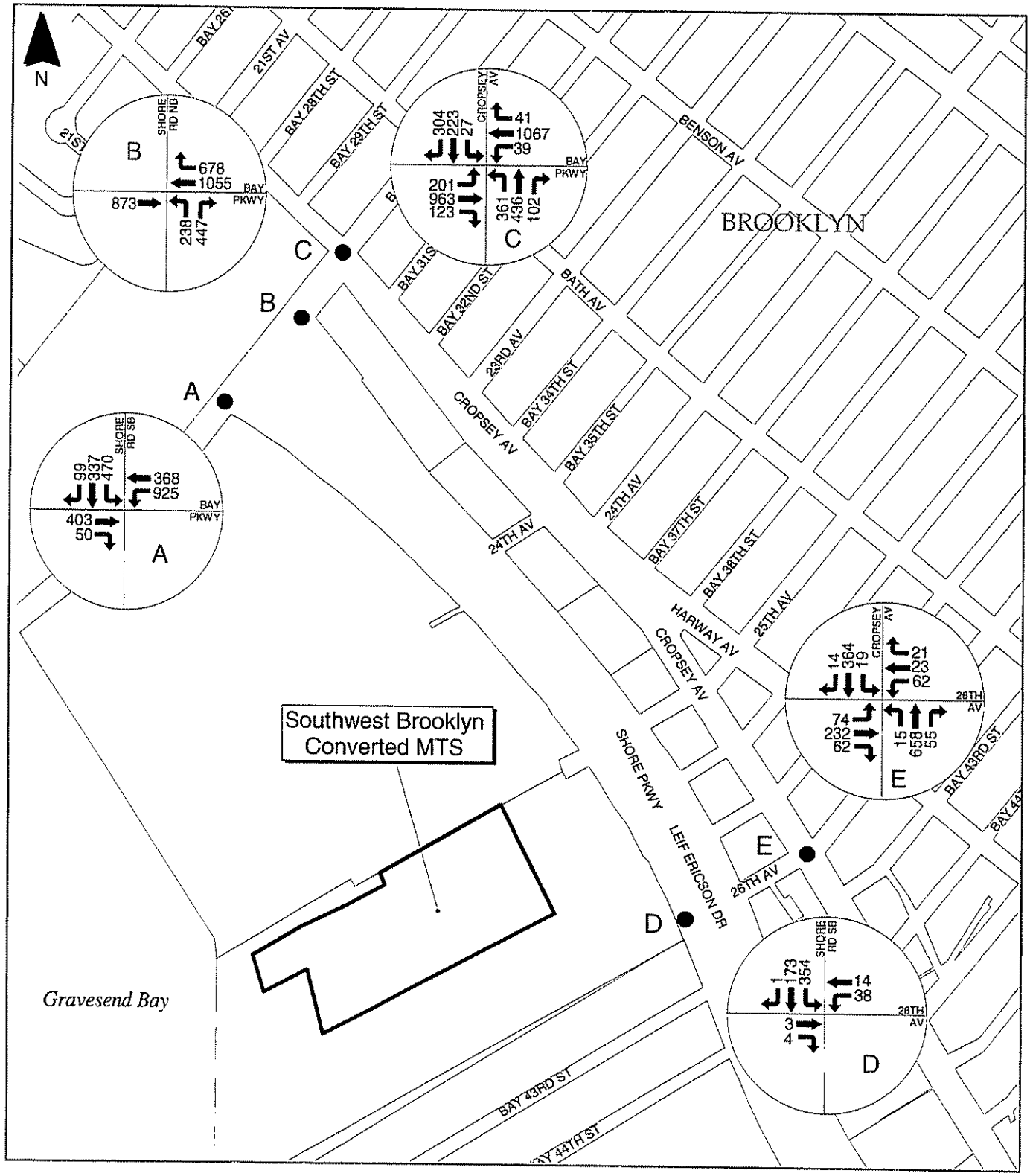


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14A-12 Future No-Build Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

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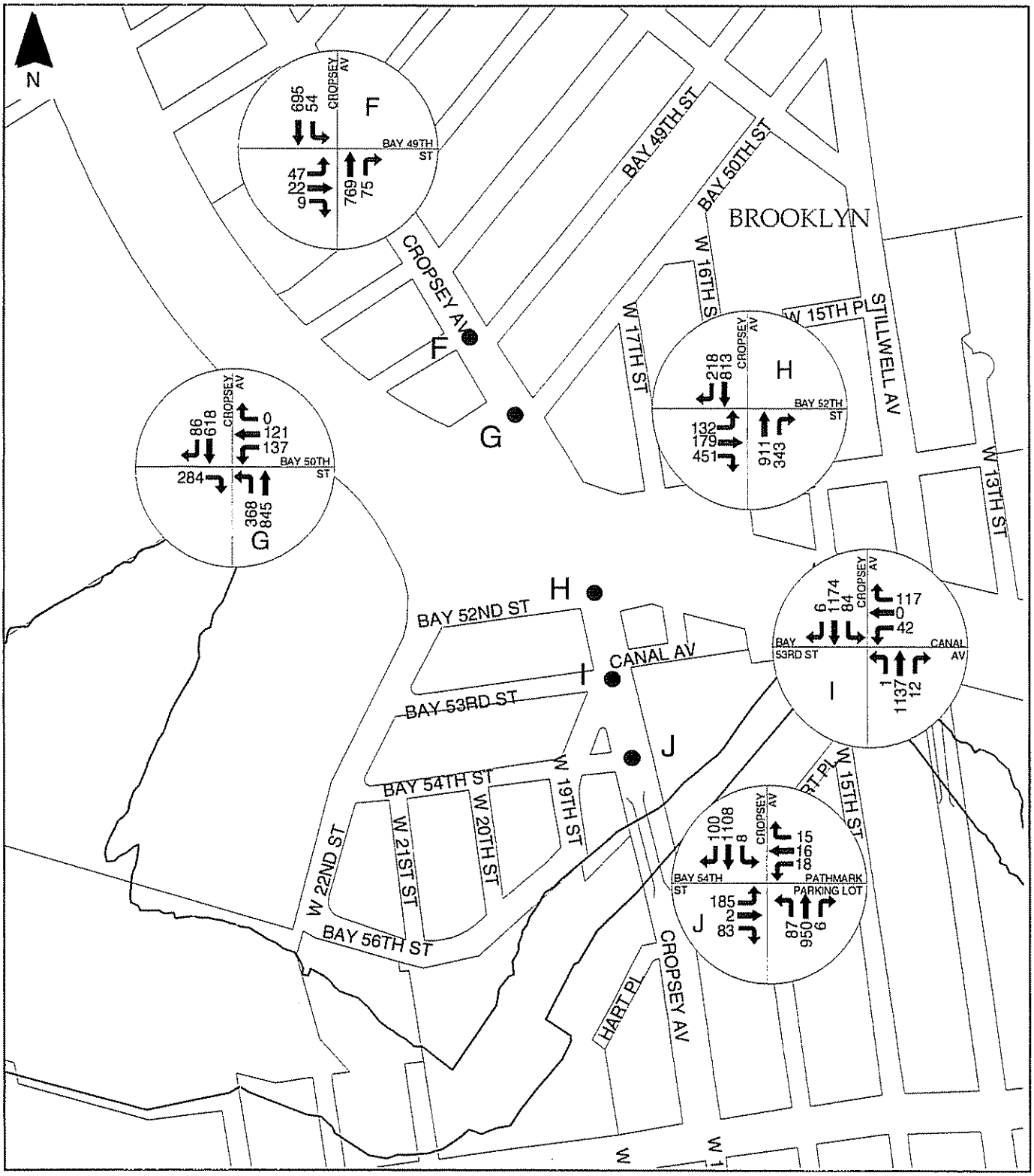


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 5.14A-13 Future No-Build Traffic Volumes PM Peak Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.14A-14 Future No-Build Traffic Volumes PM Peak Southwest Brooklyn Converted MTS

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Table 5.14a-2
HCM Analysis[1] – Future No-Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.84	59.4	E	0.71	29.2	C	1.08	122.4	F
EB TR	0.46	20.3	C	0.46	15.5	B	0.66	24.3	C
WB L	0.28	29.7	C	0.21	22.6	C	0.46	41.5	D
WB TR	0.87	42.4	D	0.66	26.7	C	0.96	53.5	D
NB L	0.89	61.1	E	0.53	25.9	C	1.01	88.0	F
NB LTR	0.40	25.8	C	0.26	19.4	B	0.55	28.6	C
SB L	0.17	34.5	C	0.19	28.5	C	0.18	35.0+	D
SB T	0.48	40.0	D	0.36	31.2	C	0.52	40.7	D
SB R	0.95	76.7	E	0.83	51.5	D	0.78	53.5	D
OVERALL		41.5	D		25.9	C		47.2	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.88	49.1	D	0.74	36.8	D	0.87	46.9	D
WB LTR	0.57	31.5	C	0.24	22.9	C	0.34	25.0	C
NB LTR	0.43	13.4	B	0.25	11.5	B	0.49	14.1	B
SB LTR	0.25	11.4	B	0.16	10.7	B	0.31	12.0	B
OVERALL		24.6	C		21.4	C		21.0	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.6	A	0.32	11.8	B	0.40	10.1	B
WB TR	0.87	21.9	C	0.71	17.7	B	0.89	23.2	C
NB L	0.47	38.3	D	0.44	23.3	C	0.50	38.7	D
NB R	0.87	62.7	E	0.56	27.9	C	0.97	79.0	E
OVERALL		25.8	C		18.3	B		27.6	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.20	25.1	C	0.46	37.1	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.80	32.4	C	0.58	22.5	C	0.97	59.8	E
WB T	0.14	14.0	B	0.25	13.5	B	0.47	18.6	B
SB L	0.96	71.4	E	0.87	50.1	D	1.07	101.4	F
SB TR	0.79	49.0	D	0.37	28.1	C	0.89	59.0	E
OVERALL		43.6	D		29.5	C		57.9	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.6	A	-	8.1	A	-	7.9	A
WB LT	-	10.1	B	-	9.0	A	-	8.8	A
SB L		12.1	B		10.6	B		11.3	B
SB TR	-	9.1	A	-	8.3	A	-	8.2	A
OVERALL		10.6	B		9.6	A		10.1	B

Table 5.14a-2 (continued)
HCM Analysis[1] – Future No-Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay 49th Street (signalized)									
EB LTR	0.25	19.2	B	0.18	18.3	B	0.27	19.7	B
NB TR	0.65	18.3	B	0.44	14.8	B	0.61	17.4	B
SB LT	0.93	35.8	D	0.56	16.9	B	0.76	22.5	C
OVERALL		26.7	C		16.0	B		19.8	B
Cropsey Avenue and Bay 50th Street (signalized)									
EB R	0.18	0.2	A	0.06	0.1	A	0.19	0.3	A
WB LTR	0.49	28.4	C	0.22	23.3	C	0.70	35.3	D
NB L	0.53	25.6	C	0.52	23.0	C	1.00	70.3	E
NB LT	0.37	10.1	B	0.27	9.4	A	0.38	10.3	B
SB TR	0.61	21.1	C	0.55	20.0+	C	0.58	20.6	C
OVERALL		15.7	B		15.9	B		25.0	C
Cropsey Avenue and Canal Avenue and Bay 52nd Street (signalized)									
EB L	0.39	22.0	C	0.20	19.6	B	0.24	20.1	C
EB TR	0.67	28.7	C	0.41	22.6	C	0.55	25.4	C
EB R	0.55	25.5	C	0.47	23.6	C	0.62	27.3	C
NB TR	0.56	14.9	B	0.42	13.2	B	0.53	14.4	B
SB T	0.51	14.5	B	0.38	12.9	B	0.52	14.7	B
SB R	0.44	14.5	B	0.27	12.3	B	0.27	12.3	B
OVERALL		18.0	B		15.5	B		17.3	B
Cropsey Avenue and Bay 53rd Street (signalized)									
WB LTR	0.21	19.7	B	0.15	18.9	B	0.32	21.2	C
NB LTR	0.54	14.7	B	0.35	12.4	B	0.52	14.4	B
SB L	0.35	17.4	B	0.25	13.3	B	0.59	28.9	C
SB TR	0.51	14.2	B	0.35	12.4	B	0.52	14.3	B
OVERALL		14.7	B		12.8	B		15.4	B
Cropsey Avenue and Bay 54th Street (signalized)									
EB L	0.74	44.2	D	0.55	34.6	C	0.45	31.8	C
EB LTR	0.41	30.2	C	0.36	29.1	C	0.42	30.2	C
WB LTR	0.09	25.2	C	0.04	24.7	C	0.18	26.3	C
NB L	0.41	20.7	C	0.30	12.1	B	0.37	19.5	B
NB TR	0.35	12.4	B	0.24	11.5	B	039	.12.8	B
SB L	0.02	8.1	A	0.02	6.7	A	0.03	9.0	A
SB TR	0.50	14.0	B	0.35	12.4	B	0.51	14.2	B
OVERALL		17.5	B		15.4	B		16.1	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L= left movement

TR = through right movement

R = right movement

T = through movement

5.14a.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

5.14a.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

5.14a.4Potential Impacts with the Southwest Brooklyn Converted MTS

The Southwest Brooklyn Converted MTS would receive waste from four CDs in Brooklyn - BK 11 through BK 13 and BK 15. Additionally, the waste collected from Brooklyn self-help bulk (SHBLK) operations would be delivered to the Southwest Brooklyn Converted MTS. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Employee trips to and from the site may also result in traffic impacts during the AM peak hour.

5.14a.4.1 2006 Future Build Traffic Conditions

2006 Future Build Traffic Conditions assume that the Southwest Brooklyn Converted MTS would generate 166 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site of the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The collection vehicle truck routes for the Southwest Brooklyn Converted MTS are shown in Figure 5.14a-2.

Figure 5.14-9 in Section 5.14 presents the average peak day temporal distribution of collection vehicles for the Southwest Brooklyn Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Southwest Brooklyn Converted MTS is expected to vary between approximately 0 to 13 truck trips per hour in the late evening/early morning, 4 to 28 truck trips per hour in the mid-morning/early afternoon, and 1 to 5 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection

vehicle truck trips (28) occurs at approximately 10:00 a.m. Figures 5.14a-15, through 5.14a-20 depict the Future Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Figures 5.14a-21 through 5.14a-26 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM, Facility, and PM peaks at the intersections analyzed.

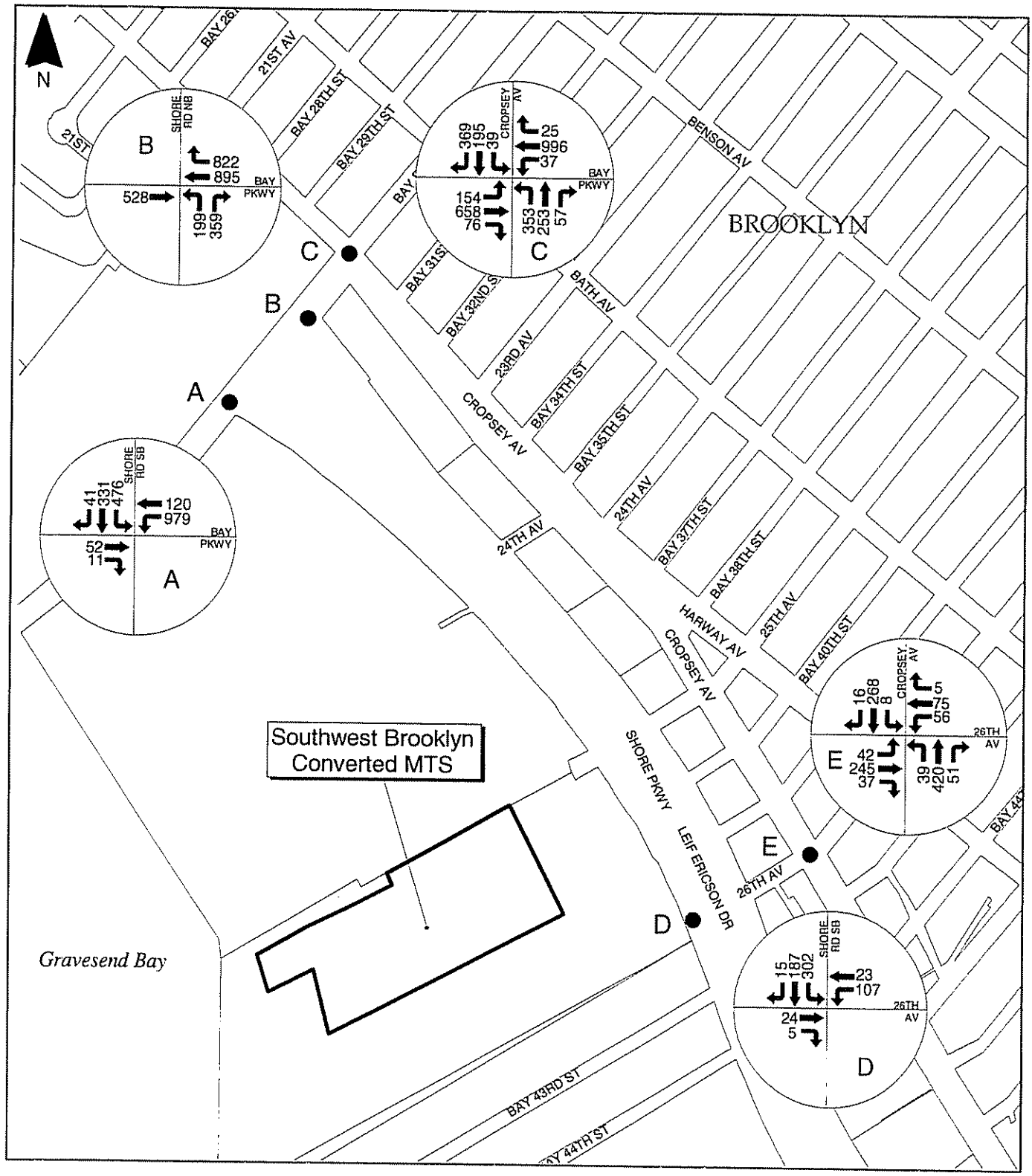
The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 85% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 98% of weekday traffic volumes.

Table 5.14a-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Southwest Brooklyn Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the worst overall case conditions.

Table 5.14a-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Southwest Brooklyn Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The two intersections that may experience potentially significant impacts are discussed in Section 5.14a.4.2 and summarized in Table 5.14a-5.

5.14a.4.2 Impacts and Mitigation

Two of the ten intersections may experience impacts great enough to be considered significant during only one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 5.14a-5.

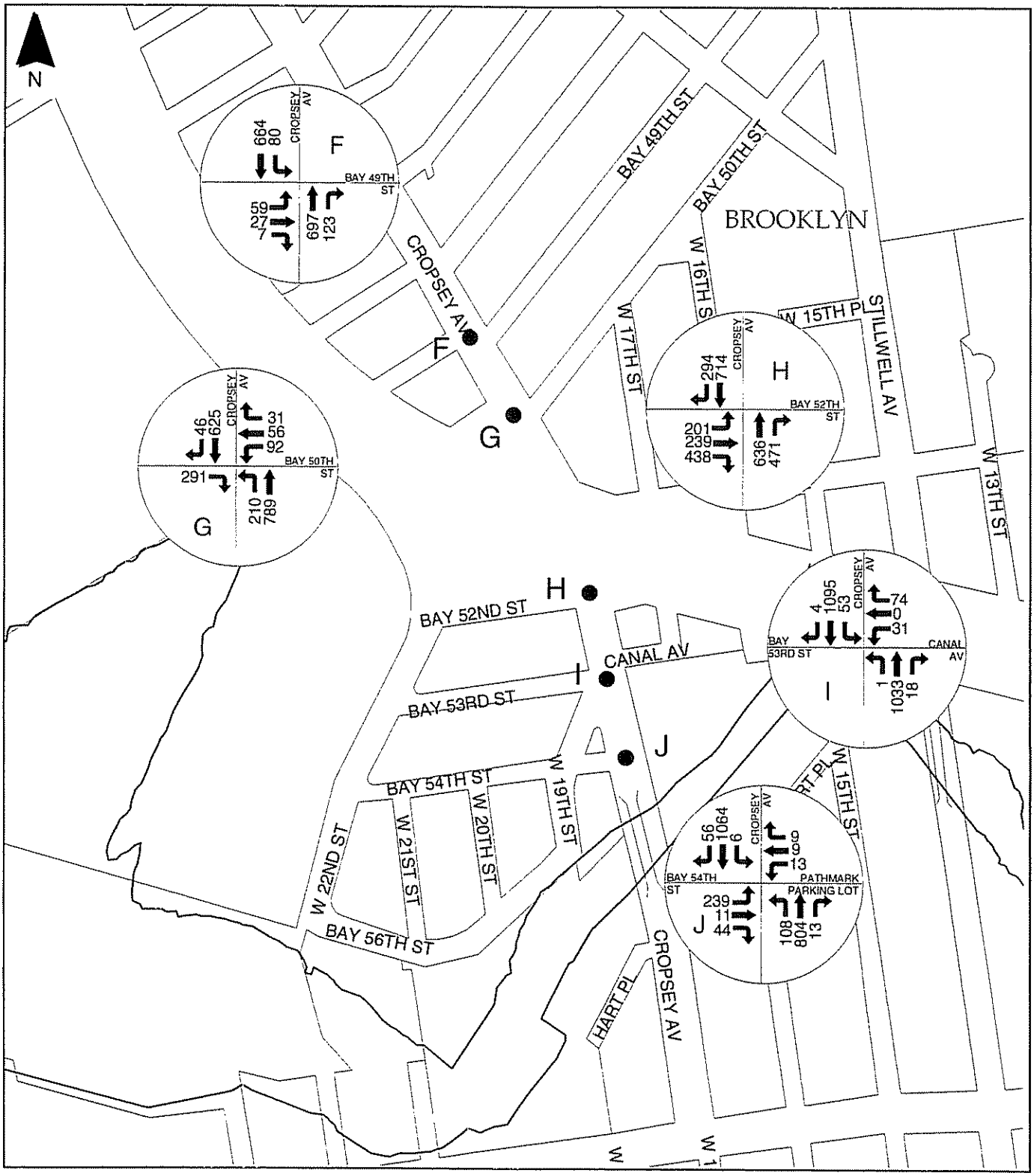


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.14A-15 2006 Future Build Traffic Volumes AM Peak Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

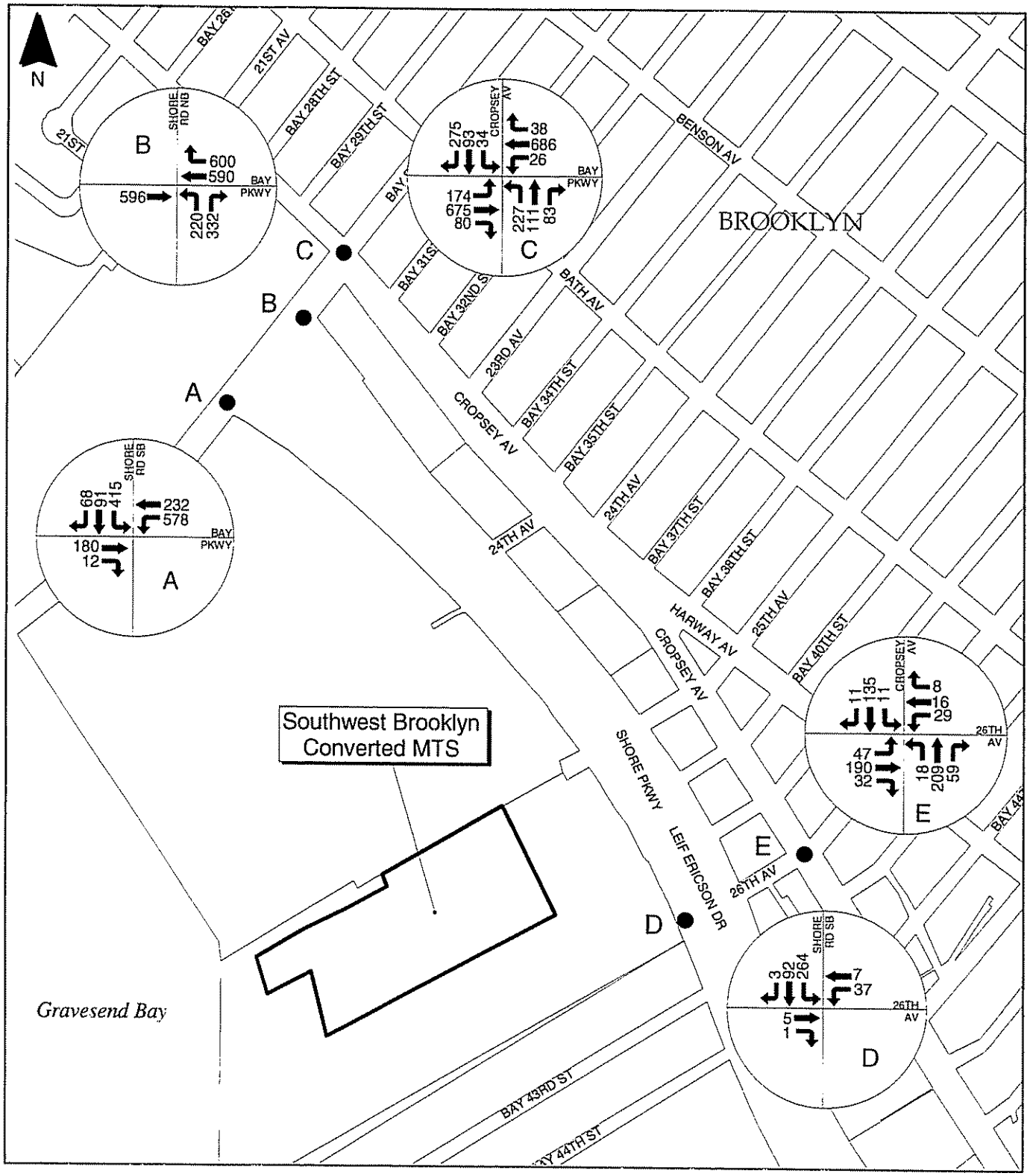
500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 5.14A-16 2006 Future Build Traffic Volumes
AM Peak
Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

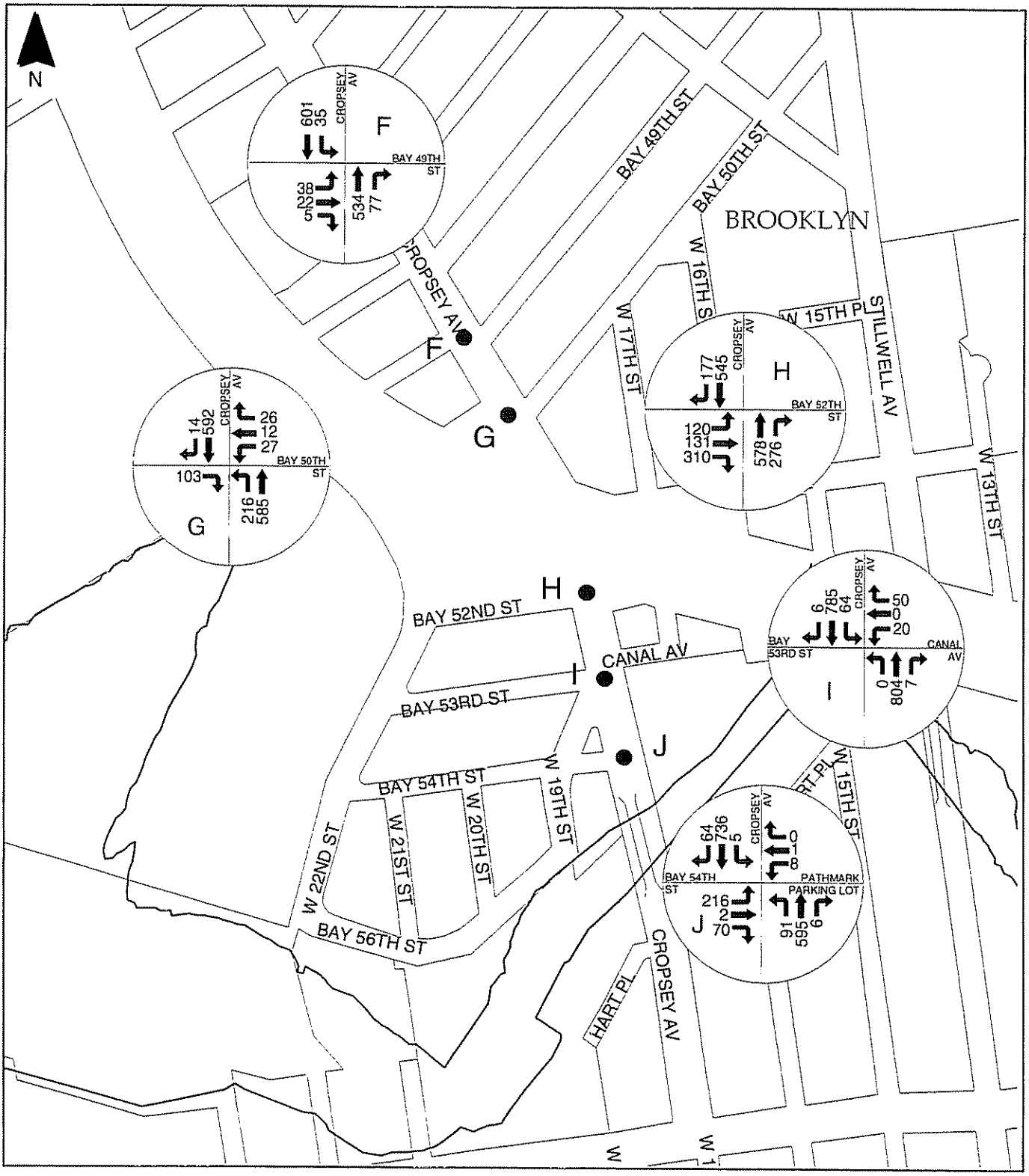


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.14A-17 2006 Future Build Traffic Volumes Facility Peak Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

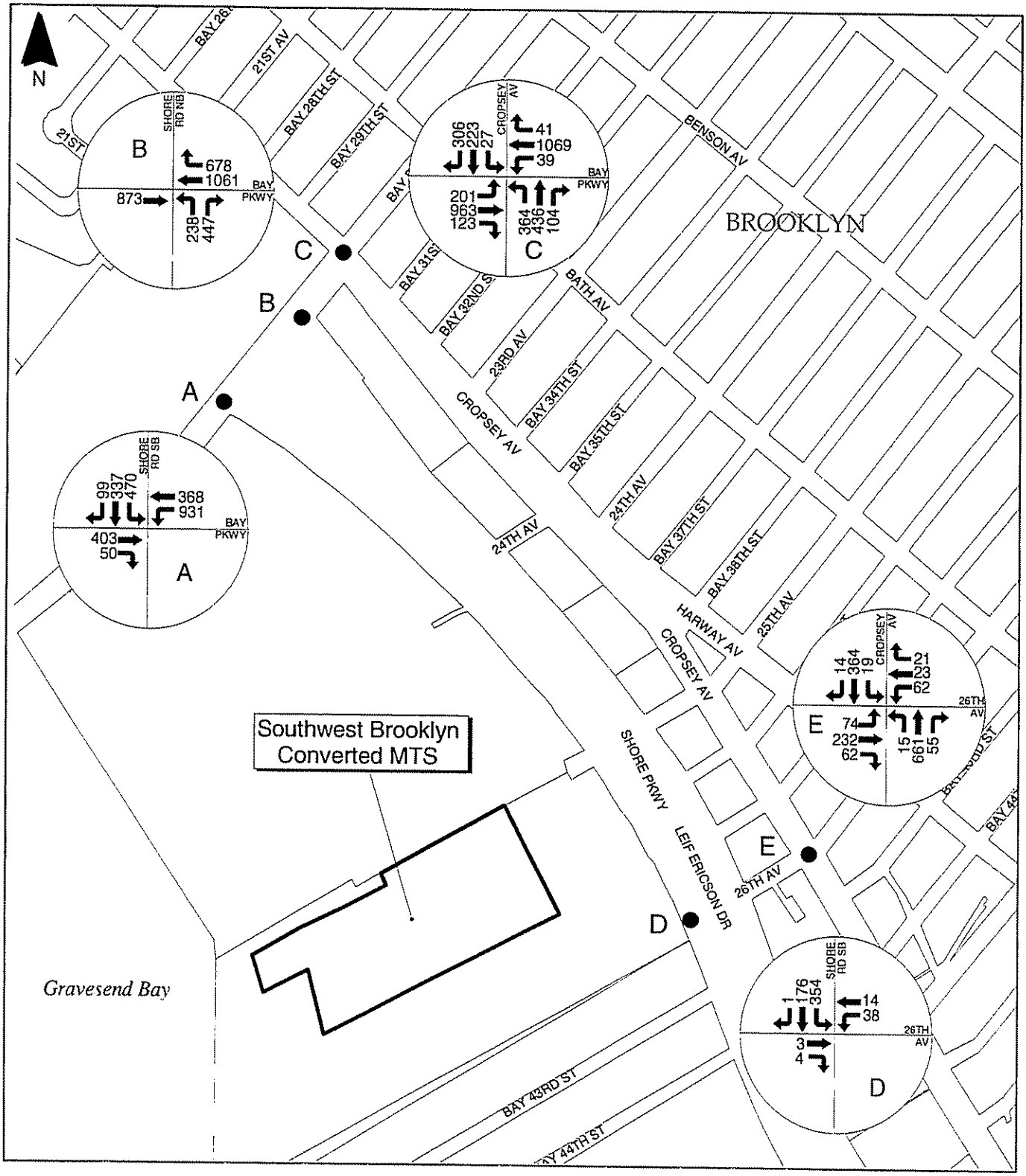
500 0 500 Feet

HDR URBITRAN EEA Hydroqual PB Cambridge Environmental Inc

Figure 5.14A-18 2006 Future Build Traffic Volumes
Facility Peak
Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.14A-19 2006 Future Build Traffic Volumes
PM Peak
Southwest Brooklyn Converted MTS

CITY OF NEW YORK
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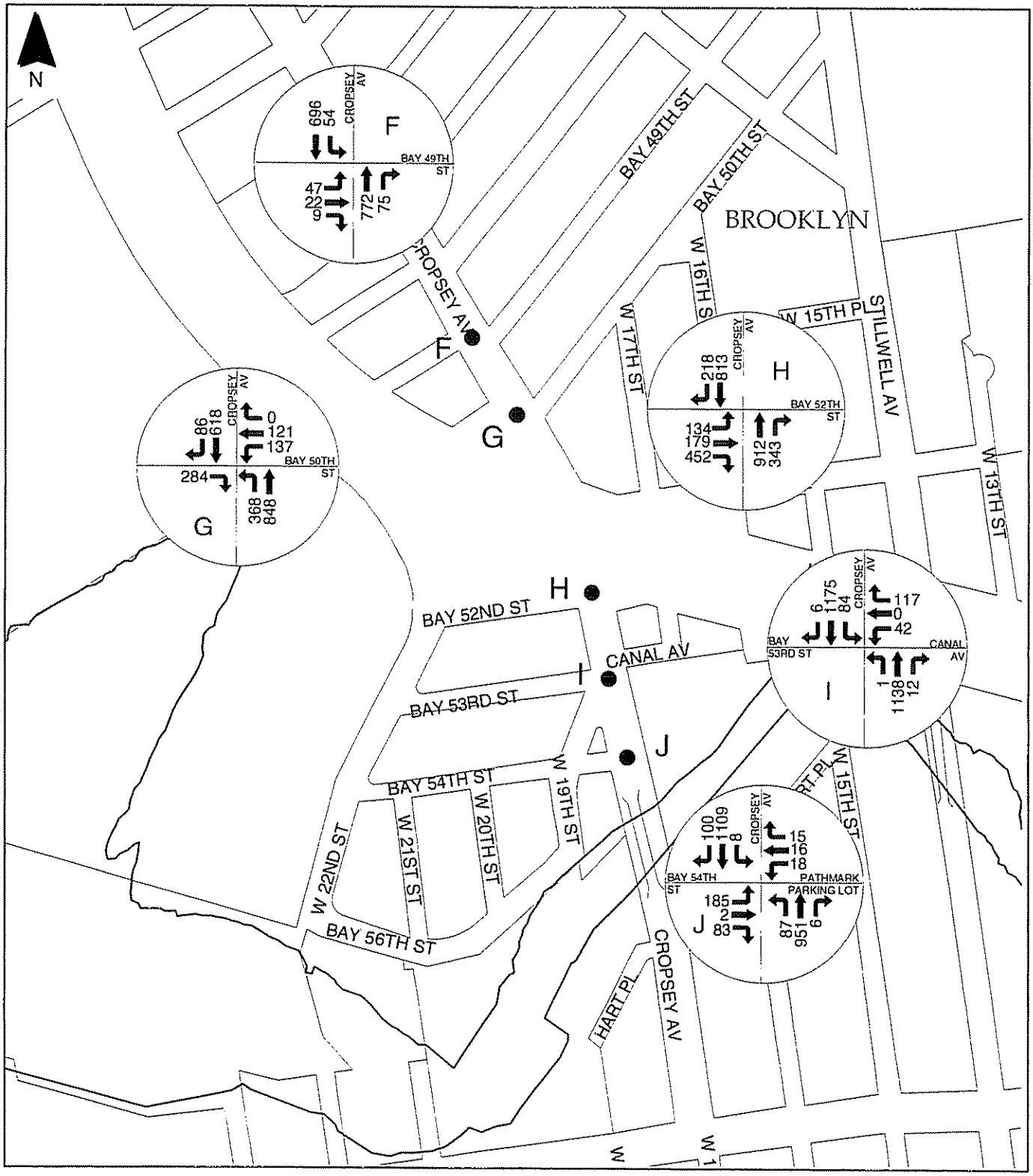
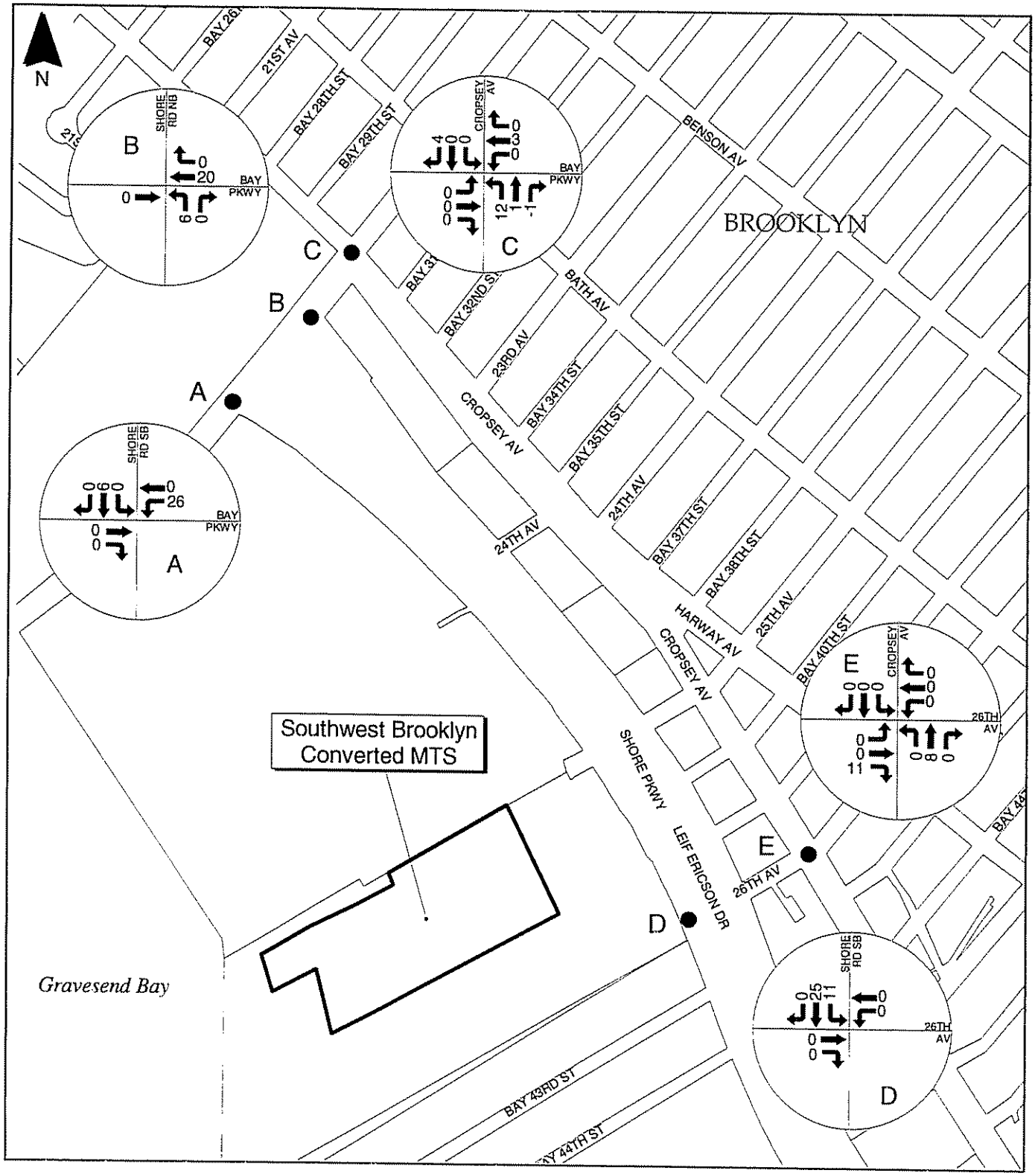


Figure 5.14A-20 2006 Future Build Traffic Volumes PM Peak Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

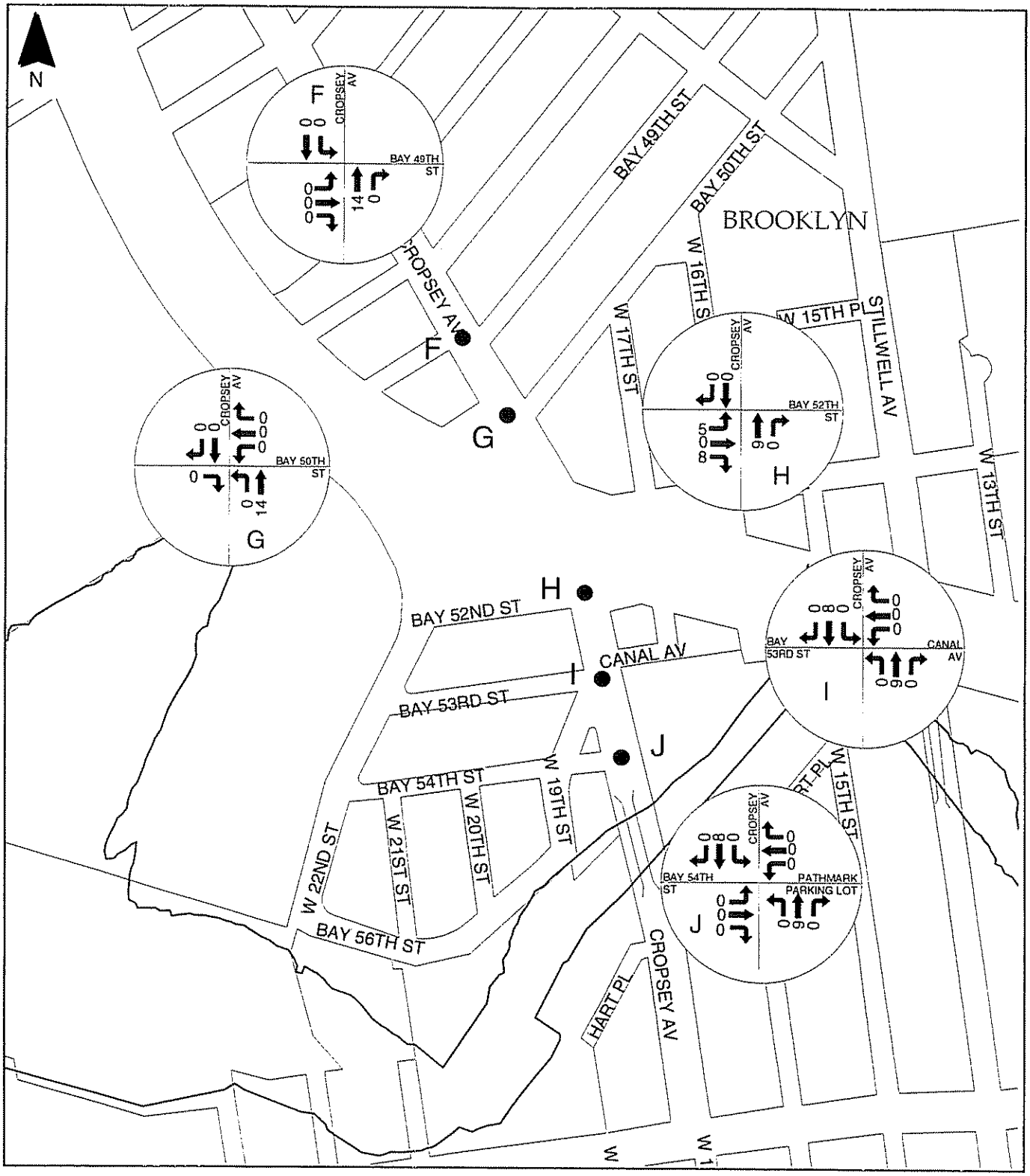
500 0 500 Feet

HDR URBITRAN EEA HydroQual PB

Figure 5.14A-21 2006 Net Traffic - AM Peak
Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

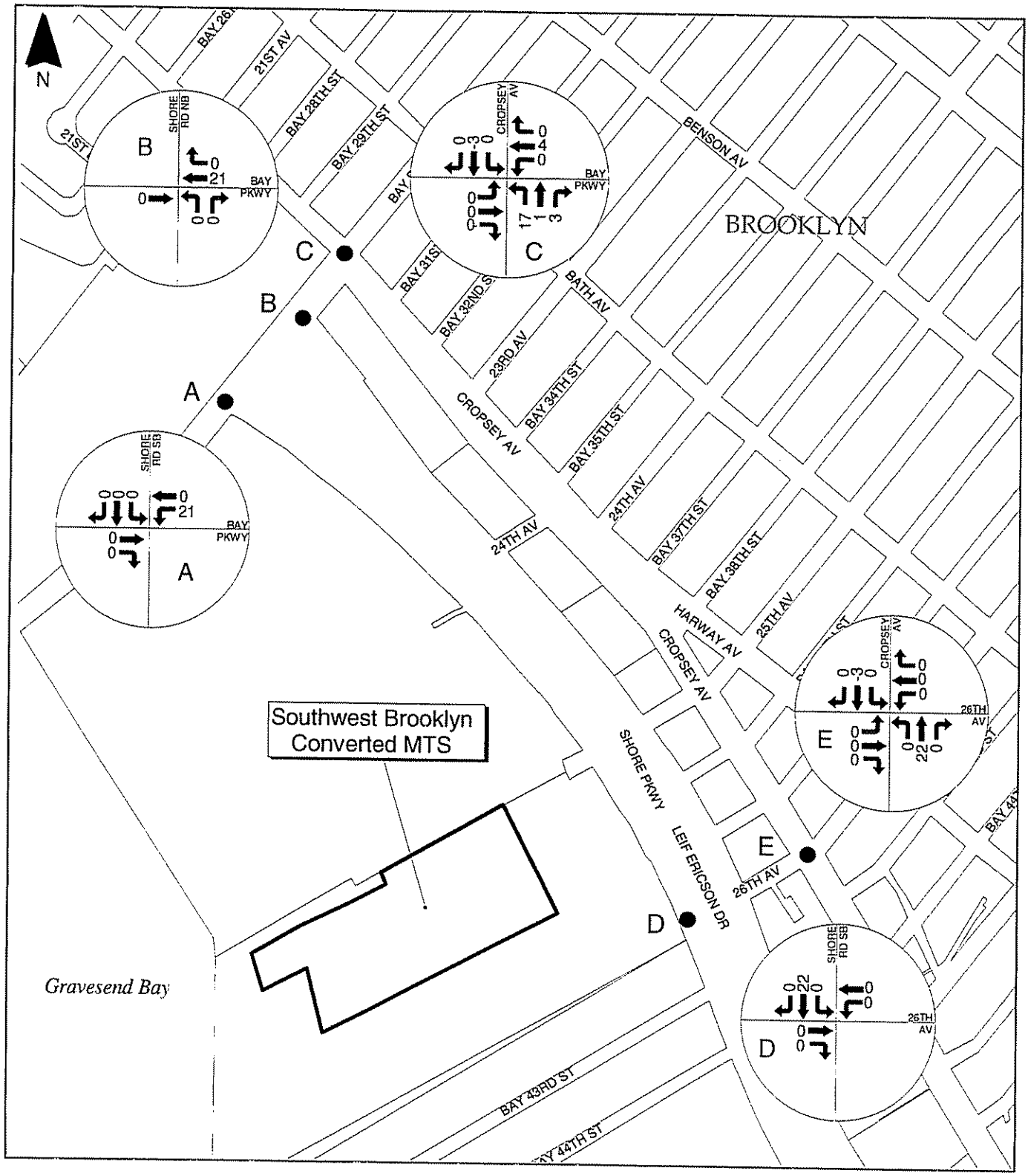
HDR URBITRAN EEA Cambridge Environmental Inc

Figure 5.14A-22 2006 Net Traffic - AM Peak

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

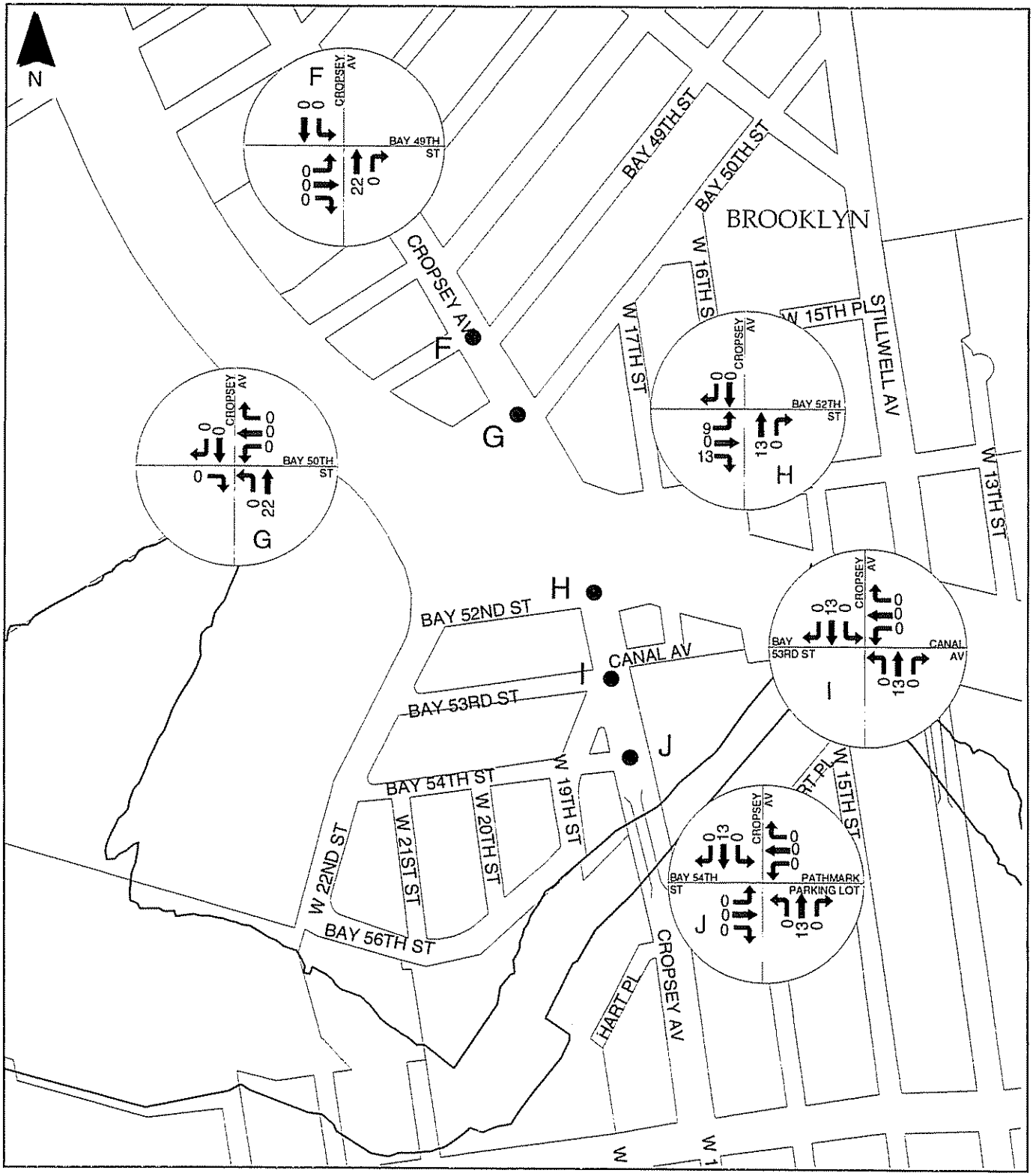
HDR URBITRAN EEA Cambridge Environmental Inc HydroQual DD ESE

Figure 5.14A-23 2006 Net Traffic - Facility Peak

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

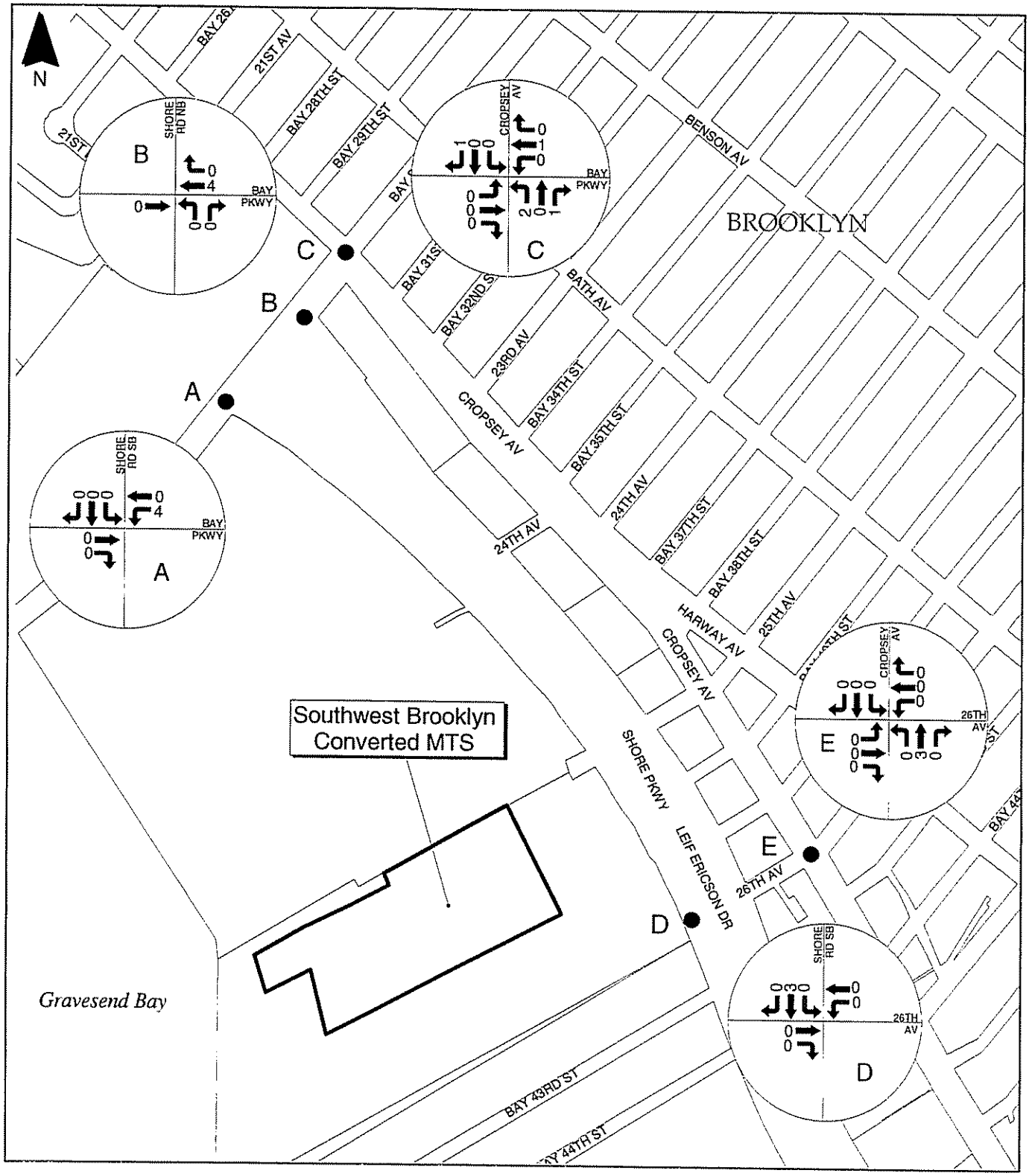
HDR Hydroacoustic URBITRAN DMJM+ EEA Cambridge Environmental Inc

Figure 5.14A-24 2006 Net Traffic - Facility Peak

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

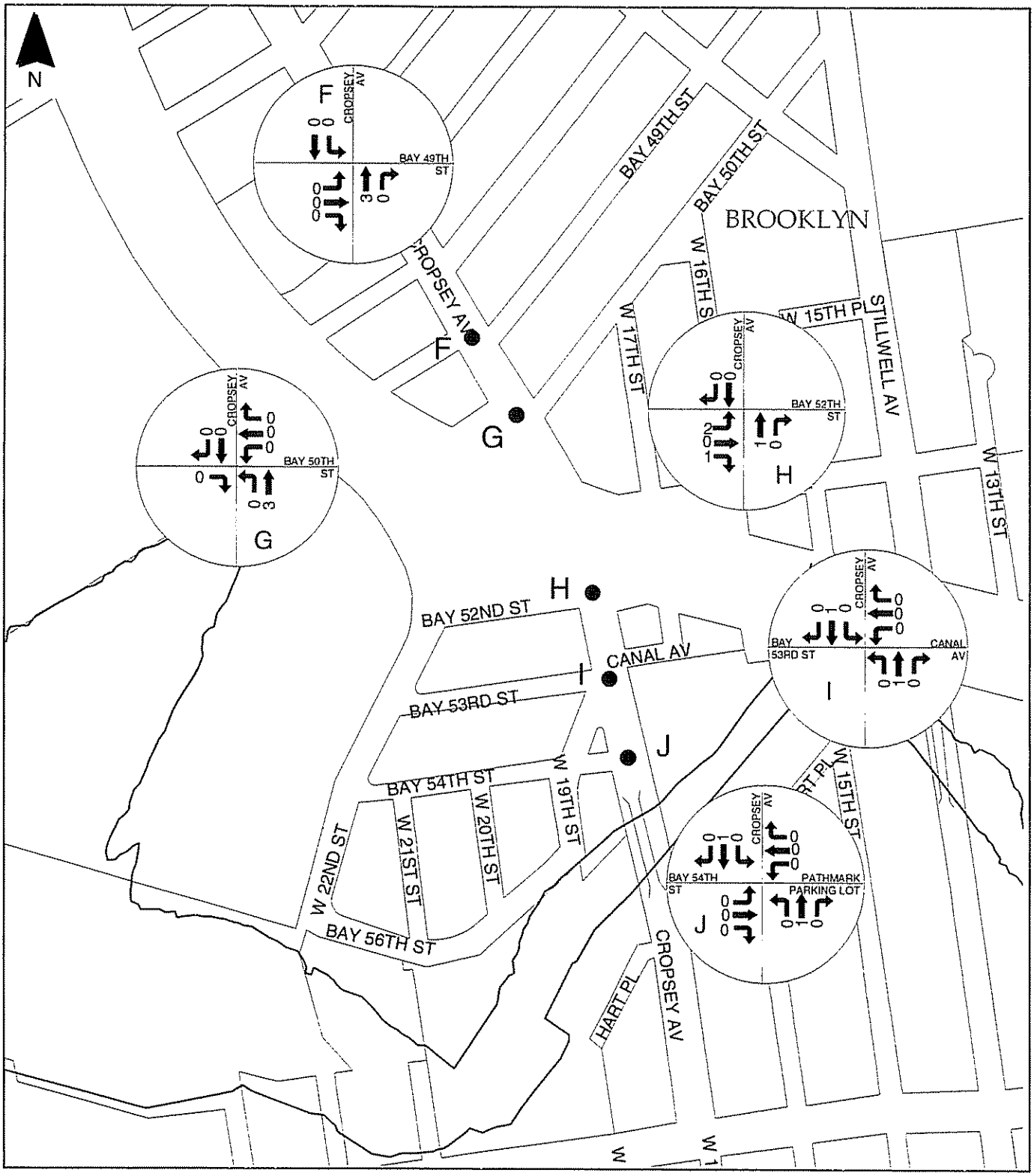
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HDR URBITRAN EEA Cambridge Environmental Inc

Figure 5.14A-25 2006 Net Traffic - PM Peak
Southwest Brooklyn Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 5.14A-26 2006 Net Traffic - PM Peak

Southwest Brooklyn Converted MTS

CITY OF NEW YORK
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THE CITY OF NEW YORK DEPARTMENT of SANITATION

Table 5.14a-3
Weekday and Weekend Traffic
Southwest Brooklyn Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic EB and WB on Bay Parkway [1]	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
166	142	49,605	48,773

Note:
[1] EB and WB traffic data collected from ATR counts taken on Bay Parkway between Bayview Place and Cropsey Avenue from September 11 to 17, 2003.

Table 5.14a-4
HCM Analysis[1]— 2006 Future Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized)									
EB L	0.85	60.7	E	0.71	29.8	C	1.08	122.4	F
EB TR	0.46	20.3	C	0.46	15.5	B	0.66	24.3	C
WB L	0.28	29.7	C	0.21	22.6	C	0.46	41.5	D
WB TR	0.87	42.8	D	0.67	26.8	C	0.96	53.8	D
NB L	0.92	67.1	E	0.56	27.1	C	1.01	89.4	F
NB LTR	0.40	25.8	C	0.27	19.5	B	0.56	28.7	C
SB L	0.17	34.5	C	0.19	28.6	C	0.18	35.1	D
SB T	0.48	40.0	D	0.34	30.9	C	0.52	40.7	D
SB R	0.97	79.3	E	0.83	51.0	D	0.79	54.1	D
OVERALL		42.8	D		26.0	C		47.5	D
Cropsey Avenue and 26th Avenue (signalized)									
EB LTR	0.91	54.0	D	0.74	36.8	D	0.87	46.9	D
WB LTR	0.58	32.1	C	0.24	22.9	C	0.34	24.9	C
NB LTR	0.45	13.6	B	0.28	11.8	B	0.50	14.2	B
SB LTR	0.25	11.4	B	0.16	10.7	B	0.31	12.0	B
OVERALL		26.1	C		21.2	C		22.0	C
Bayview Place (Shore Road – northbound) and Bay Parkway (signalized)									
EB T	0.24	8.6	A	0.32	11.8	B	0.40	10.1	B
WB TR	0.88	22.6	C	0.72	18.0	B	0.89	23.5	C
NB L	0.47	38.3	D	0.44	23.3	C	0.50	38.7	D
NB R	0.87	62.7	E	0.56	27.9	C	0.97	79.0	E
OVERALL		26.2	C		18.4	B		27.8	C
Shore Road (southbound) and Bay Parkway (signalized)									
EB T	0.07	31.6	C	0.20	25.1	C	0.46	37.1	D
EB R	0.05	31.5	C	0.04	23.6	C	0.17	33.3	C
WB DFL	0.82	33.6	C	0.61	21.3	C	0.97	61.1	E
WB T	0.14	14.0	B	0.25	13.5	B	0.47	18.6	B
SB L	0.98	76.1	E	0.87	50.1	D	1.07	101.4	F
SB TR	0.80	49.7	D	0.37	28.1	C	0.89	59.0	E
OVERALL		45.4	D		29.4	C		58.3	E
Shore Road (southbound) and 26th Avenue (unsignalized)									
EB TR	-	8.7	A	-	8.2	A	-	7.9	A
WB LT	-	10.2	B	-	9.2	A	-	8.8	A
SB L	-	12.5	B	-	10.6	B	-	11.3	B
SB TR	-	9.2	A	-	9.1	A	-	8.3	A
OVERALL		10.9	B		9.8	A		10.1	B

Table 5.14a-4 (continued)
HCM Analysis[1]— 2006 Future Build Conditions
Southwest Brooklyn Converted MTS

Lane Group	AM Peak Hour (7:45 a.m. – 8:45 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay 49th Street (signalized)									
EB LTR	0.25	19.2	B	0.18	18.3	B	0.27	19.7	B
NB TR	0.66	18.7	B	0.47	15.2	B	0.61	17.5	B
SB LT	0.94	37.3	D	0.57	17.0	B	0.76	22.6	C
OVERALL		27.5	C		16.2	B		19.9	B
Cropsey Avenue and Bay 50th Street (signalized)									
EB R	0.18	0.2	A	0.06	0.1	A	0.19	0.3	A
WB LTR	0.49	28.4	C	0.22	23.3	C	0.70	35.3	D
NB L	0.53	25.6	C	0.52	23.0	C	1.00	70.3	E
NB LT	0.38	10.2	B	0.29	9.5	A	0.38	10.3	B
SB TR	0.61	21.1	C	0.55	20.0+	C	0.58	20.6	C
OVERALL		15.7	B		15.8	B		25.0	C
Cropsey Avenue and Canal Avenue and Bay 52nd Street (signalized)									
EB L	0.40	22.3	C	0.23	19.9	B	0.25	20.1	C
EB TR	0.67	28.9	C	0.43	22.9	C	0.55	25.4	C
EB R	0.57	25.8	C	0.50	24.3	C	0.63	27.3	C
NB TR	0.56	15.0	B	0.43	13.3	B	0.53	14.4	B
SB T	0.51	14.5	B	0.38	12.9	B	0.52	14.7	B
SB R	0.44	14.5	B	0.27	12.3	B	0.27	12.3	B
OVERALL		18.2	B		15.8	B		17.3	B
Cropsey Avenue and Bay 53rd Street (signalized)									
WB LTR	0.21	19.7	B	0.15	18.9	B	0.32	21.2	C
NB LTR	0.55	14.8	B	0.36	12.5	B	0.52	14.4	B
SB L	0.35	17.7	B	0.25	13.5	B	0.59	28.9	C
SB TR	0.51	14.2	B	0.36	12.5	B	0.52	14.3	B
OVERALL		14.8	B		12.9	B		15.4	B
Cropsey Avenue and Bay 54th Street (signalized)									
EB L	0.74	44.2	D	0.55	34.6	C	0.45	31.8	C
EB LTR	0.41	30.2	C	0.36	29.1	C	0.42	30.2	C
WB LTR	0.09	25.2	C	0.04	24.7	C	0.18	26.3	C
NB L	0.42	21.2	C	0.30	12.4	B	0.37	19.5	B
NB TR	0.35	12.5	B	0.25	11.5	B	039	.12.8	B
SB L	0.02	8.2	A	0.02	6.8	A	0.03	9.0	A
SB TR	0.50	14.1	B	0.36	12.5	B	0.51	14.2	B
OVERALL		17.6	B		15.4	B		16.1	B

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound TR = through right movement
LT = left through movement R = right movement
L= left movement T = through movement

Table 5.14a-5
HCM Analysis[1] — 2006 Future Build Conditions with Mitigation
Southwest Brooklyn Converted MTS

Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Cropsey Avenue and Bay Parkway (signalized) – AM Peak									
EB L	0.84	59.4	E	0.85	60.7	E	0.81	56.1	E
EB TR	0.46	20.3	C	0.46	20.3	C	0.46	20.8	C
WB L	0.28	29.7	C	0.28	29.7	C	0.28	18.8	B
WB TR	0.87	42.4	D	0.87	42.8	D	0.90	46.5	D
NB L	0.89	61.1	E	0.92	67.1	E	0.90	63.3	E
NB LTR	0.40	25.8	C	0.40	25.8	C	0.41	25.7	C
SB L	0.17	34.5	C	0.17	34.5	C	0.12	21.5	C
SB T	0.48	40.0	D	0.48	40.0	D	0.47	39.5	D
SB R	0.95	76.7	E	0.97	79.3	E	0.66	34.6	D
OVERALL		41.5	D		42.8	D		37.9	D
Shore Road (southbound) and Bay Parkway (signalized) – AM Peak									
EB T	0.07	31.6	C	0.07	31.6	C	0.07	32.3	C
EB R	0.05	31.5	C	0.05	31.5	C	0.05	32.2	C
WB DFL	0.80	32.4	C	0.82	33.6	C	0.83	34.8	C
WB T	0.14	14.0	B	0.14	14.0	B	0.15	14.5	B
SB L	0.96	71.4	E	0.98	76.1	E	0.96	69.4	E
SB TR	0.79	49.0	D	0.80	49.7	D	0.78	47.4	D
OVERALL		43.6	D		45.4	D		44.0	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L= left movement
TR = through right movement
R = right movement
T = through movement

Cropsey Avenue/Bay Parkway – During the AM peak hour, a potential impact was identified on the northbound left-turn lane group when the delay increased from 61.1 seconds to 67.1 seconds (LOS E in both cases). An increase in green time of one second for the northbound-only approach should eliminate this unacceptable increase in delay. To avoid this timing change causing impacts to other lane groups, it would be necessary to increase the eastbound only approach by one second and decrease the eastbound and westbound approach green time by one second. In addition to signal timing changes, new movements would be added to two of the signal phases. During the eastbound-only phase, a southbound right-turn-only movement would be added from the right-turn-only lane of the southbound approach. Also during the eastbound-only phase, a semi-actuated left turn from the westbound left-turn-only approach would be added. During the northbound-only phase, a semi-actuated movement would be added from the southbound approach. The two semi-actuated movements would create a left-turn-only phase during which vehicles would simultaneously make left turns from two directions when a queue forms in the semi-actuated lanes. When no queues are present in the semi-actuated left-turn-only lanes, the signals would allow traffic movements from one direction only (eastbound or northbound) during the phase. Compared to Future No-Build Conditions, eastbound approach delay times would remain approximately the same, westbound and northbound approach delay times would increase between two and four seconds, and southbound approach times would decrease by over 25 seconds.

Shore Road (southbound)/Bay Parkway – During the AM peak hour, a potential impact was identified on the southbound left-turn lane group when the delay increased from 71.4 seconds to 76.1 seconds (LOS E in both cases). An increase in green time of one second for the southbound approach should eliminate this unacceptable increase in delay. This mitigation measure decreases the eastbound and westbound approach green time by one second. With this mitigation, the westbound and eastbound approach delay time would increase by one second and the southbound approach time would decrease three seconds compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

In addition to the two intersections that may experience impacts, the Shore Road (southbound) and site entrance/exit intersection (section of 25th Avenue) may also require low-cost and easily implemented mitigation. Even though traffic operations at this intersection should not affect traffic significantly along Shore Road, some improvements near the intersection would need to be considered, such as restricting parking along Shore Road within the vicinity of the intersection to improve site distance at the site entrance/exit. There is an existing stop sign at the site exit. This mitigation should not generate any adverse impacts on other lane groups during any time periods.

Overall, the mitigation measures suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Conditions.

5.14a.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

5.14a.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

5.15 Air Quality

5.15.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Southwest Brooklyn Converted MTS. The study area for the off-site air quality analysis is the intersections listed in Section 5.15.4.2.

5.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 5.15.1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 5.15-1
Representative Ambient Air Quality Data
Southwest Brooklyn Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	MTA, Flatbush Avenue between Tillary Street and Johnson Avenue	8-Hour	3,436 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}[(2)]	P.S. 314	Annual	25 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	55 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	P.S. 321	3-Hour	152 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	94 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	24 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1998 calendar year.

5.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the No-Build analysis year (2006). As such, no significant changes to air quality levels are anticipated, and Future No-Build Conditions are expected to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be reduced by increasingly stringent, federally mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

5.15.4 Potential Impacts with the Southwest Brooklyn Converted MTS

5.15.4.1 On-Site Analysis

5.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 5.15-2. Figure 5.15-1 shows the locations of these sources within the site.

5.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 5.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Southwest Brooklyn Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 5.15-3, are below the STVs. Based on the results presented in Table 5.15-3, operations at the Southwest Brooklyn Converted MTS would not significantly impact air quality in the area.

Table 5.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
Southwest Brooklyn Converted MTS

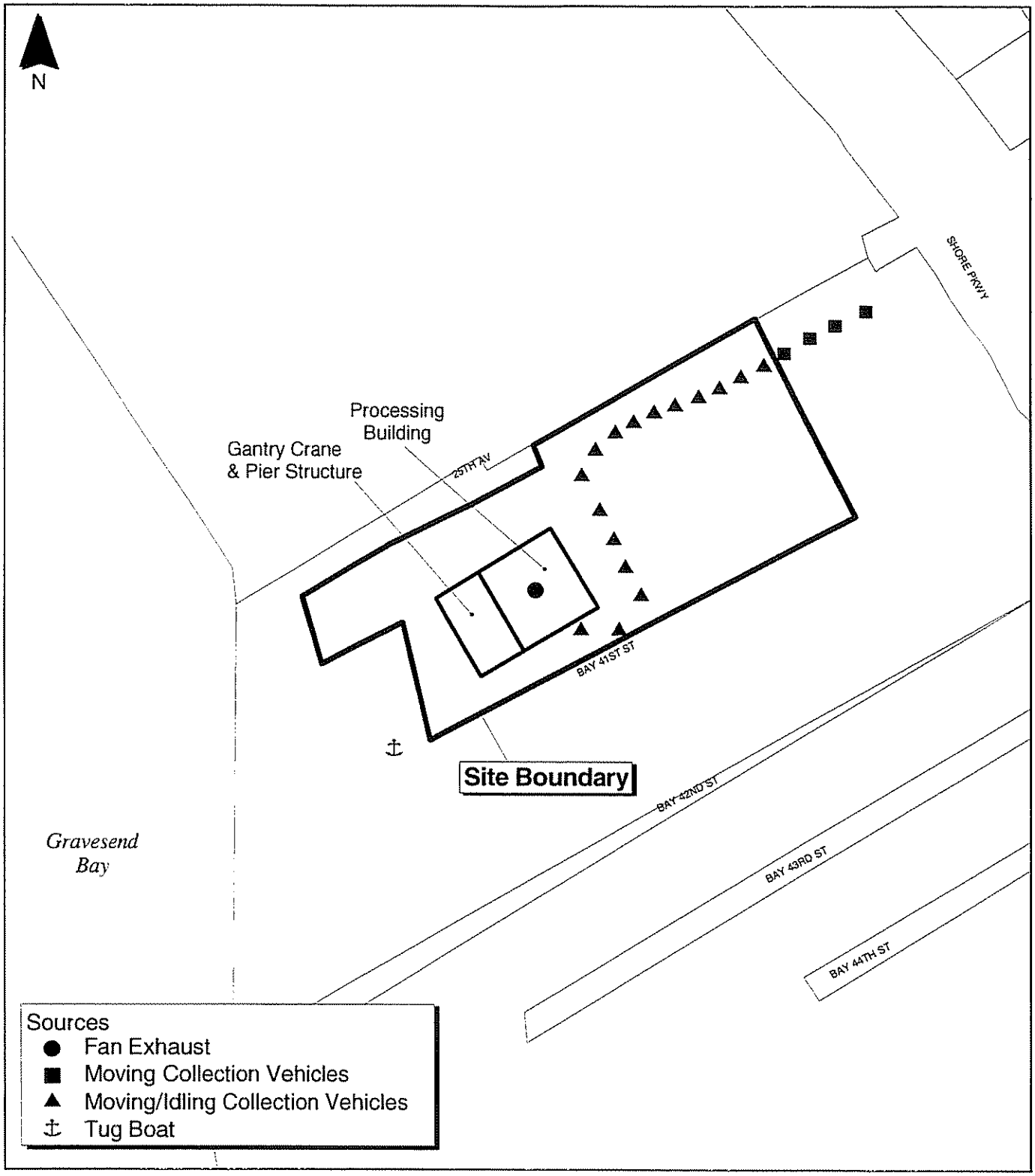
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated Over 24-hour and Annual Average Periods
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	6
Space Heaters	6	4
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	35 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (one third of 35), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 5.15-1 On-Site Air Quality Analysis

Southwest Brooklyn Converted MTS

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Table 5.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Southwest Brooklyn Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~650~~893	3,781	~~4,431~~4,674	40,000	NA
	8-hour[6]	~~148~~221	2,635	~~2,783~~2,856	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	45	56	~~60~~61	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~28~~41	~~91~~90	~~119~~131	150	NA
	Annual	~~3~~5	~~27~~20	~~30~~25	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	~~1.6~~2.9	NA	NA	NA	5
	Annual Neighborhood Average	0.025[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	35	~~152~~186	~~187~~221	1,300	NA
	24-hour[6]	2	~~94~~107	~~96~~109	365	NA
	Annual	0.3	~~24~~18	~~24~~18	80	NA

Notes:
(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.
(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~ memorandum dated February 18, 2005..
(3) NAAQS = National Ambient Air Quality Standard.
(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.
(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.
(7) The 24-hour PM_{10} NAAQS is based on a 99_{th} percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.
NA = Not Applicable

5.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 5.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Southwest Brooklyn Converted MTS are not considered to be significant.

5.15.4.2 Off-Site Analysis

5.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations that may be significantly impacted by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, detailed mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

- The intersections of 26th Avenue at Cropsey Avenue, 26th Avenue at Shore Parkway Service Road South, Bay Parkway at Cropsey Avenue, and Bay Parkway at Shore Parkway (North and South) to determine whether Southwest Brooklyn Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and

- The intersections of 26th Avenue at Cropsey Avenue, 26th Avenue at Shore Parkway Service Road South, Bay Parkway at Cropsey Avenue, and Bay Parkway at Shore Parkway (North and South) to determine whether Southwest Brooklyn Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

Table 5.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Southwest Brooklyn Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	2.50E-01	1.30E+03	1.92E-04	2.03E-03	1.30E-01	1.56E-02	2.03E-03	8.30E-06	1.69E-08
2	Formaldehyde	3.16E-01	3.00E+01	1.05E-02	2.57E-03	6.00E-02	4.29E-02	2.57E-03	1.30E-05	3.34E-08
3	1,3 Butadiene	1.05E-02	-	-	8.52E-05	3.60E-03	2.37E-02	8.52E-05	2.80E-04	2.39E-08
4	Acetaldehyde	2.06E-01	4.50E+03	4.57E-05	1.67E-03	4.50E-01	3.71E-03	1.67E-03	2.20E-06	3.68E-09
5	Benzo(a)pyrene	5.04E-05	-	-	4.10E-07	2.00E-03	2.05E-04	4.10E-07	1.70E-03	6.96E-10
Non-Carcinogenic Pollutants [10]										
6	Propylene	6.92E-01	-	-	5.62E-03	3.00E+03	1.87E-06	5.62E-03	NA	NA
7	Acrolein	2.48E-02	1.90E-01	1.31E-01	2.02E-04	2.00E-02	1.01E-02	2.02E-04	NA	NA
8	Toluene	1.10E-01	3.70E+04	2.96E-06	8.91E-04	4.00E+02	2.23E-06	8.91E-04	NA	NA
9	Xylenes	7.64E-02	4.30E+03	1.78E-05	6.21E-04	7.00E+02	8.87E-07	6.21E-04	NA	NA
10	Anthracene	5.01E-04	-	-	4.07E-06	2.00E-02	2.04E-04	4.07E-06	NA	NA
11	Benzo(a)anthracene	4.50E-04	-	-	3.66E-06	2.00E-02	1.83E-04	3.66E-06	NA	NA
12	Chrysene	9.46E-04	-	-	7.69E-07	2.00E-02	3.85E-05	7.69E-07	NA	NA
13	Naphthalene	2.27E-02	7.90E+03	2.88E-06	1.85E-04	3.00E+00	6.16E-05	1.85E-04	NA	NA
14	Pyrene	1.28E-03	-	-	1.04E-05	2.00E-02	5.21E-04	1.04E-05	NA	NA
15	Phenanthrene	7.88E-03	-	-	6.41E-05	2.00E-02	3.20E-03	6.41E-05	NA	NA
16	Dibenz(a,h)anthracene	1.56E-04	-	-	1.27E-06	2.00E-02	6.35E-05	1.27E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.41E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**1.00E-01**	**Total Estimated Combined Cancer Risk**		**7.85E-08**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 5.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGCs) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGCs) established by NYSDEC

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

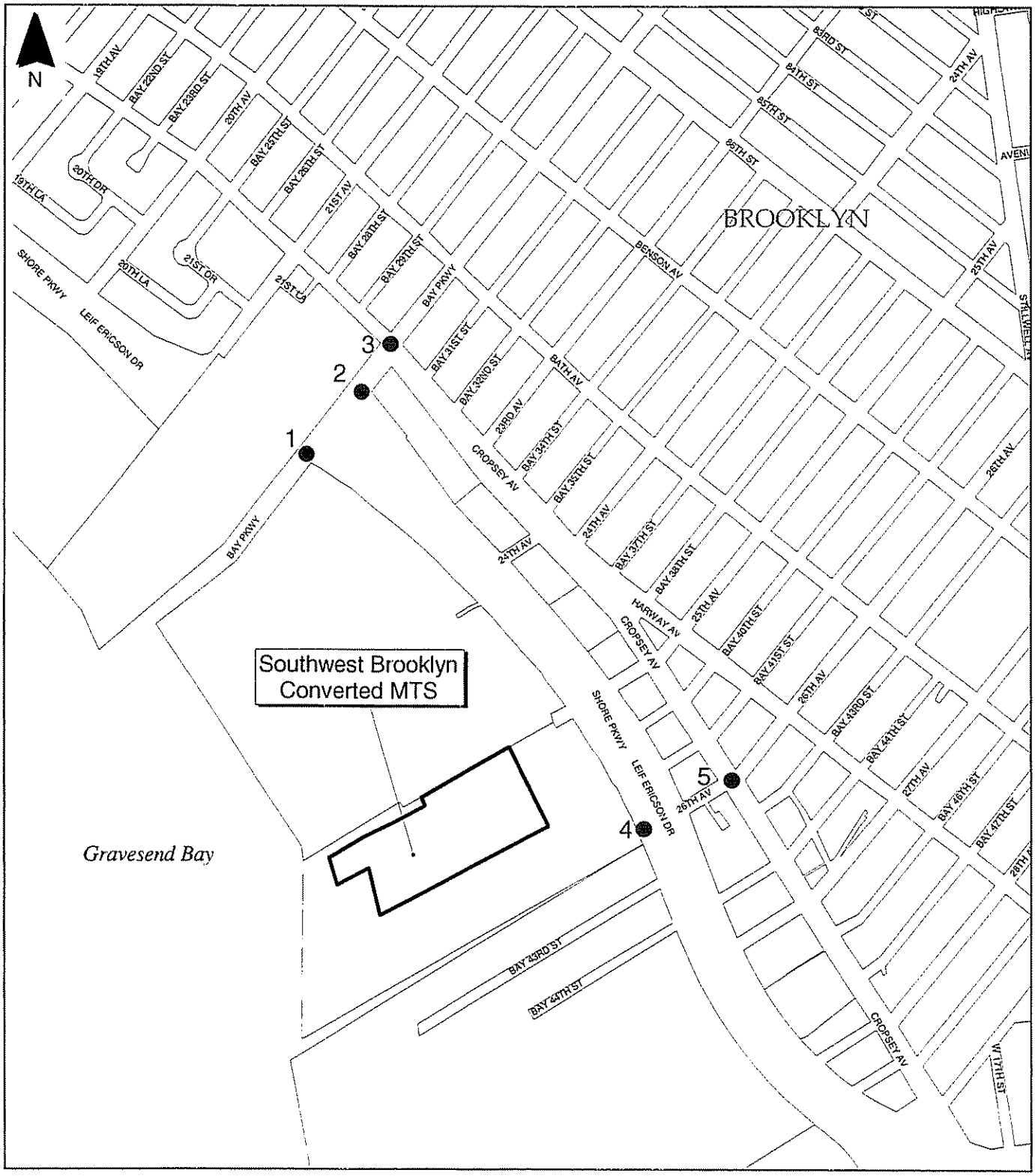
(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

The roadway intersections selected for the mobile source analysis are shown in Figure 5.15-2.

5.15.4.2.2 Results of the Off-Site Analysis

Applicable maximum pollutant concentrations estimated near the selected intersections are shown in Table 5.15-5. The results for all applicable pollutants at the intersections of 26th Avenue at Cropsey Avenue and 26th Avenue at Shore Parkway Service Road South were within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$). A Tier II analysis for the intersection at Bay Parkway at Cropsey Avenue and Shore Parkway (North and South) was necessary to determine the off-site annual and 24-hour impacts for PM_{10}, and the annual neighborhood impacts for $PM_{2.5}$. The results of this Tier II analysis for all pollutants at this intersection are within the applicable state and federal ambient air quality standards STVs (for $PM_{2.5}$). Therefore, the off-site operations of the Southwest Brooklyn Converted MTS are not considered to be significant.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.15-2 Off-Site Air Quality Intersections Studied Southwest Brooklyn Converted MTS

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Table 5.15-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
Southwest Brooklyn Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
26th Avenue, Cropsey Avenue & Shore Parkway									
Existing Conditions	~~NA~~	~~137~~143	~~47~~43						
Future No-Build Conditions	~~NA~~	~~136~~135	46~~40~~						
Future Build Conditions	~~NA~~	~~136~~136	46~~40~~						
Future Build Incremental				0.32	1.38	1.70	0.030	0.025	0.055
Bay Parkway, Cropsey Avenue & Shore Parkway									
Existing Conditions	NA	147[5]~~149~~[5]	42~~50~~[5]						
Future No-Build Conditions	NA	143[5]~~147~~[5]	41~~49~~[5]						
Future Build Conditions	NA	144[5]~~147~~[5])	41~~49~~[5]						
Future Build Incremental				0.15	0.62	0.77	0.0069	0.030	0.037

Notes for Table 5.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8-hr CO = 2.8 ppm; 24-hr PM_{10} = ~~57~~ 90 $\mu g/m^3$; Annual PM_{10} = 20~~3~~ $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways averaged over the mobile source analysis grid using AM, Facility, or PM peak traffic conditions.

~~(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.~~

(5) Results determined by performing a Tier II analysis.

(6) Concentration resulting from rounding of 49.9 $\mu g/m^3$.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

NA = Not Applicable

5.15a Air Quality - Alternative Route

5.15a.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Southwest Brooklyn Converted MTS. The study area for the off-site air quality analysis of this Alternative route is the intersections listed in Section 5.15a.4.2.

5.15a.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 5.15a.1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 5.15a-1
Representative Ambient Air Quality Data
Southwest Brooklyn Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[1]	MTA, Flatbush Avenue between Tillary Street and Johnson Avenue	8-Hour	3.436 µg/m^3	10.000 µg/m^3
		1-Hour	4.695 µg/m^3	40.000 µg/m^3
NO_2	College Point Post Office	Annual	56 µg/m^3	100 µg/m^3
PM_{10}[2]	P.S. 314	Annual	25 µg/m^3	50 µg/m^3
		24-Hour	55 µg/m^3	150 µg/m^3
SO_2	P.S. 321	3-Hour	152 µg/m^3	1.300 µg/m^3
		24-Hour	94 µg/m^3	365 µg/m^3
		Annual	24 µg/m^3	80 µg/m^3

Notes:
Source: NYCDEP. April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(3) Values are the highest pollutant levels recorded during the 2003 calendar year.
(4) Values are the highest pollutant levels recorded during the 1998 calendar year.

5.15a.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the No-Build analysis year (2006). As such, no significant changes to air quality levels are anticipated, and Future No-Build Conditions are expected to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be reduced by increasingly stringent, federally mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

5.15a.4 Potential Impacts with the Southwest Brooklyn Converted MTS

5.15a.4.1 On-Site Analysis

5.15a.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are the same as those in Table 5.1.5-2 and the locations of these sources within the site are the same as those shown in Figure 5.15-1.

5.15a.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are the same as those presented in Table 5.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Southwest Brooklyn Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 5.15-3, are below the STVs. Based on the results presented in Table 5.15-3, operations at the Southwest Brooklyn Converted MTS using this Alternative route would not significantly impact air quality in the area.

5.15a.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are the same as those presented in Table 5.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Southwest Brooklyn Converted MTS using this Alternative route are not considered to be significant.

5.15a.4.2 Off-Site Analysis

5.15a.4.2.1 Pollutants Considered and Analyses Conducted

Locations that may be significantly impacted by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, detailed mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

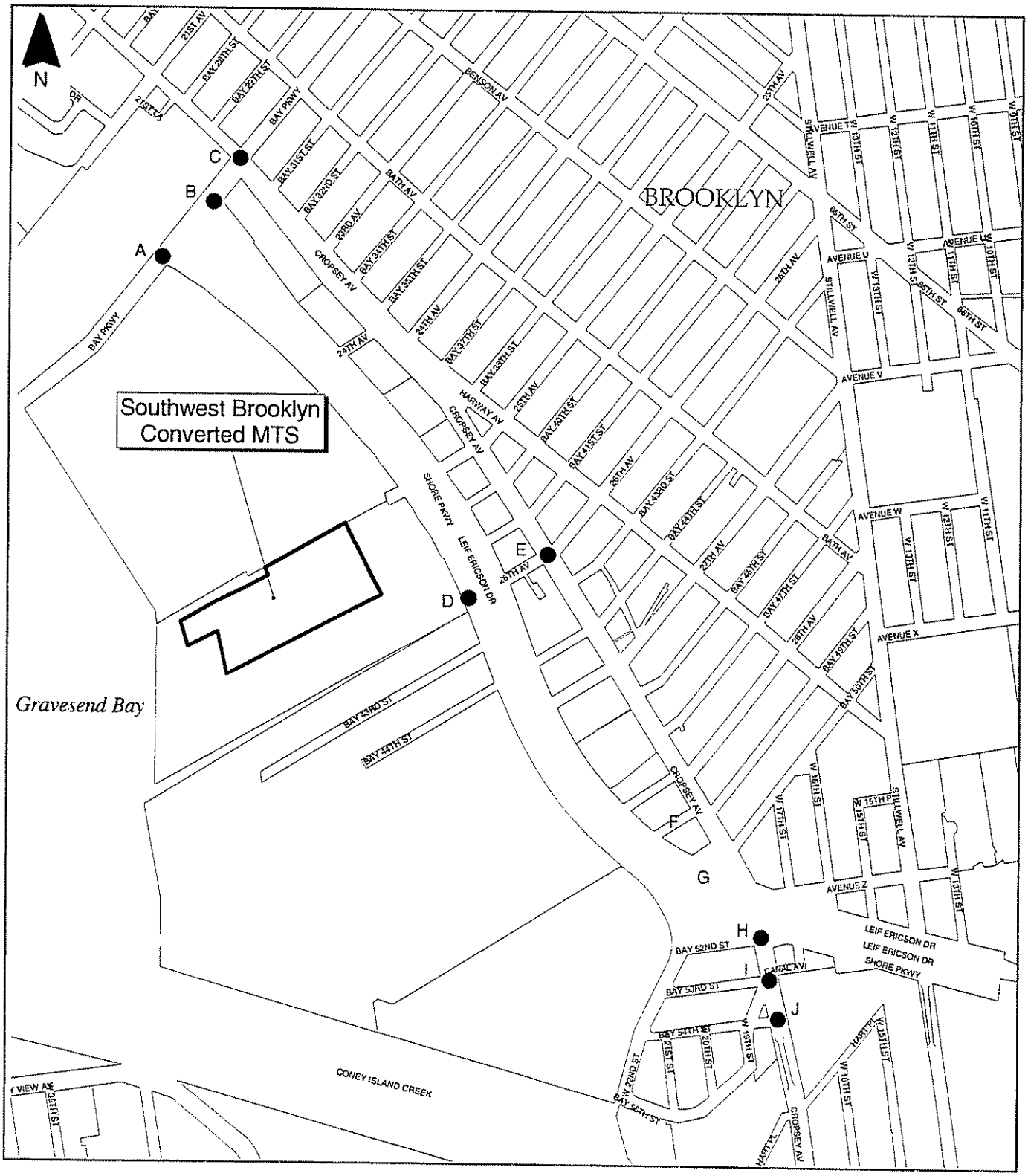
- The intersections of 26th Avenue at Cropsey Avenue, 26th Avenue at Shore Parkway Service Road South, Bay Parkway at Cropsey Avenue, Bay Parkway at Shore Parkway (North and South), and Cropsey Avenue at Bay 52nd Street, to determine whether Southwest Brooklyn Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and

- The intersections of 26th Avenue at Cropsey Avenue, 26th Avenue at Shore Parkway Service Road South, Bay Parkway at Cropsey Avenue, Bay Parkway at Shore Parkway (North and South), and Cropsey Avenue at Bay 52nd Street, to determine whether Southwest Brooklyn Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 5.15a-2.

5.15a.4.2.2 Results of the Off-Site Analysis

Applicable maximum pollutant concentrations estimated near the selected intersections are shown in Table 5.15a-2. The results for all applicable pollutants at the intersections of 26th Avenue at Cropsey Avenue and 26th Avenue at Shore Parkway Service Road South were within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$). A Tier II analysis for the intersection at Bay Parkway at Cropsey Avenue and Shore Parkway (North and South) and Cropsey Avenue at Bay 52nd Street was necessary to determine the off-site annual and 24-hour impacts for PM_{10}, and the annual neighborhood impacts for $PM_{2.5}$. The results of this Tier II analysis for all pollutants at this intersection are within the applicable state and federal ambient air quality standards STVs (for $PM_{2.5}$). Therefore, the off-site operations of the Southwest Brooklyn Converted MTS using this Alternative route are not considered to be significant.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.15A-2 Off-Site Air Quality

Southwest Brooklyn Converted MTS

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Table 5.15a-2
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
Southwest Brooklyn Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
26th Avenue, Cropsey Avenue & Shore Parkway									
Existing Conditions	NA	143	43						
Future No-Build Conditions	NA	135	40						
Future Build Conditions	NA	136	40						
Future Build Incremental				0.32	1.35[3]	0.45	0.030	0.024	0.054
Bay Parkway, Cropsey Avenue & Shore Parkway									
Existing Conditions	NA	147[5]	42[5]						
Future No-Build Conditions	NA	143[5]	41[5]						
Future Build Conditions	NA	144[5]	41[5]						
Future Build Incremental				0.15	0.62	0.50	0.0069	0.030[5]	0.037
Bay 52nd St at Cropsey Avenue									
Existing Conditions	NA	145	43						
Future No-Build Conditions	NA	140	41						
Future Build Conditions	NA	140	41						
Future Build Incremental				0.11	1.35	1.46	0.006	0.02	0.026

Notes for Table 5.15a-2:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8-hr CO = 2.8 ppm; 24-hr PM_{10} = 90 $\mu g/m^3$; Annual PM_{10} = 20 $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways averaged over the mobile source analysis grid using AM, Facility, or PM peak traffic conditions.

(5) Results determined by performing a Tier II analysis.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

NA = Not Applicable

5.16 Odor

5.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest noise-sensitive receptors are a rehabilitation center on Bay 44th Street west of the Shore Parkway, approximately 277 meters (910 feet) from the Southwest Brooklyn Converted MTS property boundary, a residential house on Bay 44th Street west of the Shore Parkway, approximately 239 meters (785 feet) from the Southwest Brooklyn Converted MTS property boundary and a public school on Bay 44th Street west of the Shore Parkway, approximately 228 meters (749 feet) from the Southwest Brooklyn Converted MTS property boundary, and a baseball field on Bay 44th Street west of the Shore Parkway, approximately 340 meters (1,114 feet) from the Southwest Brooklyn MTS property boundary. The nearest sensitive receptor is the rehabilitation center on Bay 44th Street, approximately 780 feet from the site boundary.

5.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the Southwest Brooklyn Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

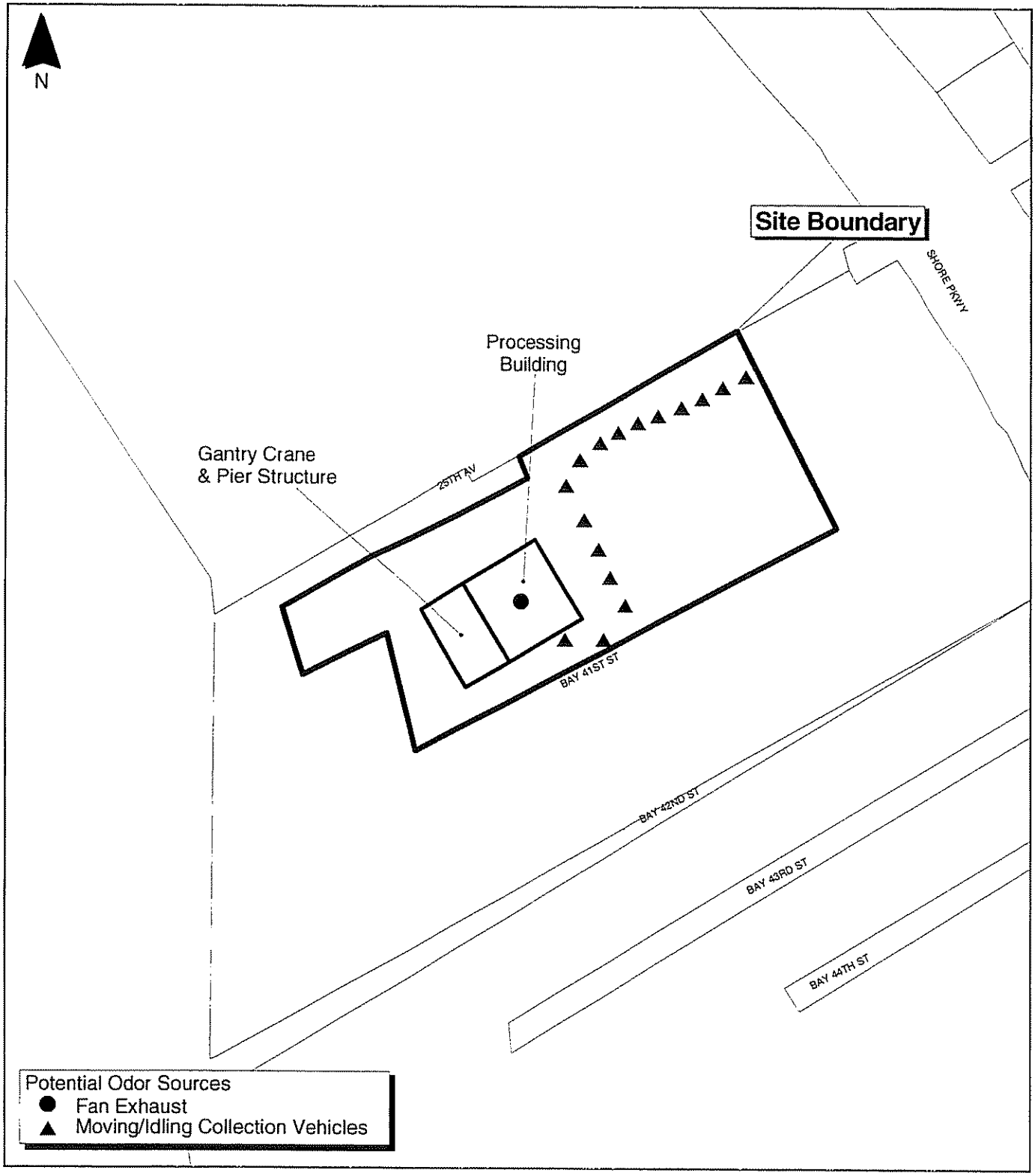
5.16.3 Potential Impacts with the Southwest Brooklyn Converted MTS

5.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Southwest Brooklyn Converted MTS are provided in Table 5.16-1. Figure 5.16-1 shows the locations of these sources within the site.

Table 5.16-1
Odor Sources Included in Odor Analysis
Southwest Brooklyn Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving & Idling Collection Vehicles	36



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR Hydroqual URBITRAN DD EEA Cambridge Environmental Inc

Figure 5.16-1 Potential Odor Sources

Southwest Brooklyn Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Southwest Brooklyn Converted MTS.

5.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 5.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Southwest Brooklyn Converted MTS at any nearby sensitive receptor is less than 1, so odors from the Southwest Brooklyn Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 5.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Southwest Brooklyn Converted MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	~~0.29~~0.47
Type of Receptor	Discrete Receptor
Location of Receptor[2]	Over Water
Closest Sensitive Receptor[2] ~~Result~~	0.061
~~Type of Receptor~~Rehabilitation Center	~~Rehabilitation Center~~0.11
~~Distance to Receptor[2]~~Residential House	~~780 Feet~~ 0.12
Baseball Field	0.066
School	0.094

[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
[2]~~Measured from the site boundary.~~ Receptor at the same locations as noise sensitive receptor.
~~[2]~~[1] ~~Measured from the site property line~~.

5.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Southwest Brooklyn Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

5.17.1 Existing Conditions

5.17.1.1 Introduction

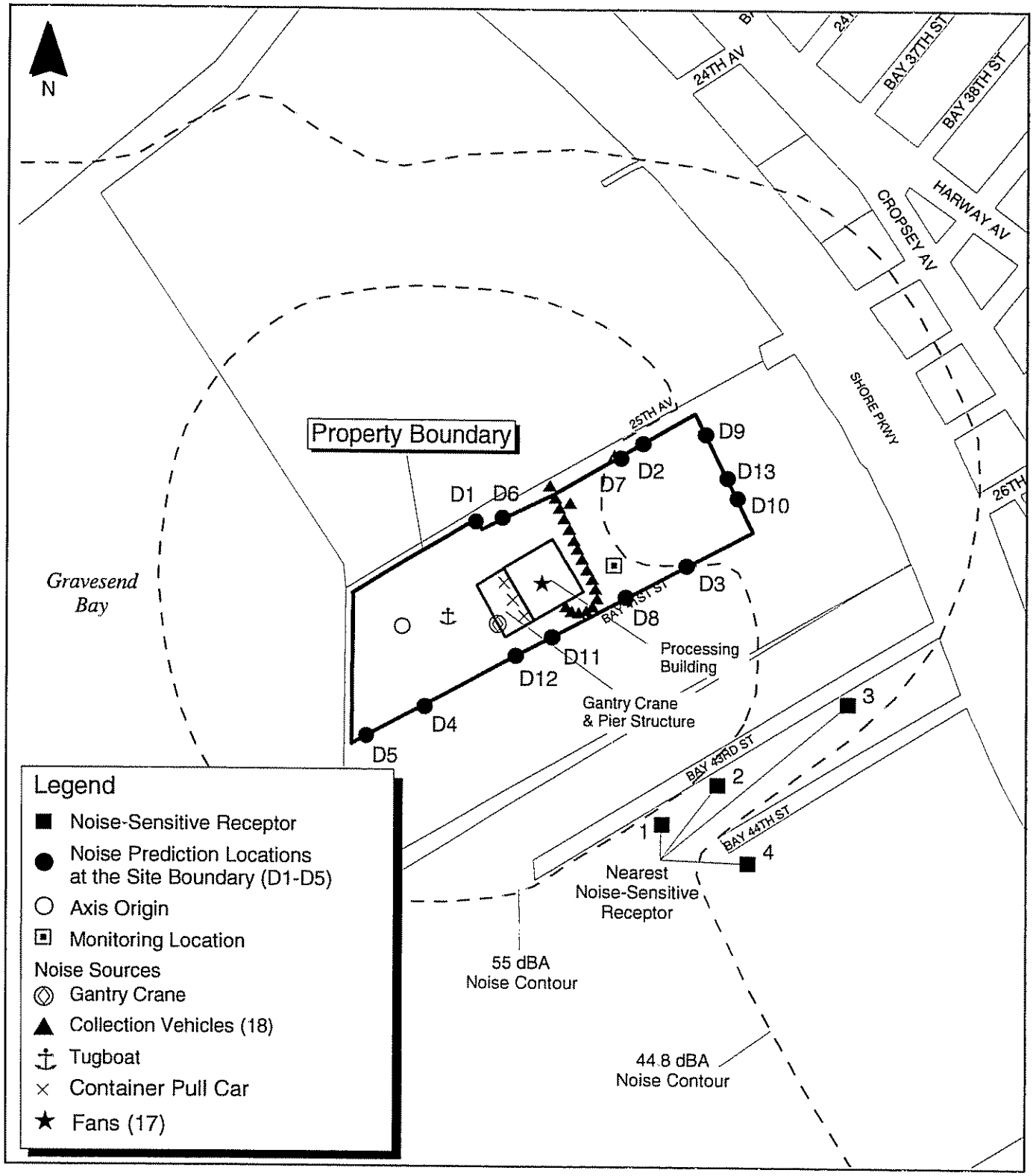
Figure 5.17-1 shows the location of the Southwest Brooklyn Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptors are a rehabilitation center on Bay 44th Street west of the Shore Parkway, approximately 277 meters (910 feet) from the Southwest Brooklyn Converted MTS property boundary, a residential house on Bay 44th Street west of the Shore Parkway, approximately 239 meters (785 feet) from the Southwest Brooklyn Converted MTS property boundary and a public school on Bay 44th Street west of the Shore Parkway, approximately 228 meters (749 feet) from the Southwest Brooklyn Converted MTS property boundary, and a baseball field on Bay 44th Street west of the Shore Parkway, approximately 340 meters (1,114 feet) from the Southwest Brooklyn MTS property boundary.

5.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptors. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}.[13] Table 5.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 4:00 a.m. and 5:00 a.m. and had an $L_{eq(1)}$ of 51.3 dBA on January 15, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic on Shore Parkway and the surrounding area.

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 5.17-1 Noise Sources and Receptors

Southwest Brooklyn Converted MTS

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Table 5.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Southwest Brooklyn Converted MTS

Time of Measurement	$L_{eq\ (1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
11:00 a.m.-12:00 p.m.	63.2	54.5	56.6	61.7	52.9	86.2
12:00-1:00 p.m.	63.5	54.0	56.9	64.1	51.6	82.3
1:00-2:00 p.m.	59.9	54.2	56.4	60.4	52.5	81.9
2:00-3:00 p.m.	60.5	52.9	56.3	63.2	50.8	78.6
3:00-4:00 p.m.	57.9	53.8	55.9	59.8	51.5	73.4
4:00-5:00 p.m.	61.7	54.2	56.0	62.6	52.6	81.4
5:00-6:00 p.m.	56.8	53.6	55.1	57.2	51.4	74.7
6:00-7:00 p.m.	59.9	53.9	55.9	58.4	52.3	81.5
7:00-8:00 p.m.	58.1	54.1	55.8	59.7	51.0	76.5
8:00-9:00 p.m.	56.8	52.5	54.1	56.4	50.7	81.2
9:00-10:00 p.m.	56.0	51.4	53.6	56.9	49.5	79.7
10:00-11:00 p.m.	55.9	50.3	52.4	56.5	47.9	79.9
11:00 p.m.-12:00 a.m.	55.5	49.2	51.5	56.9	45.8	79.5
12:00-1:00 a.m.	58.2	48.1	51.2	55.7	43.7	81.0
1:00-2:00 a.m.	58.0	48.3	55.2	58.7	43.7	79.9
2:00-3:00 a.m.	52.7	45.1	48.2	52.4	41.7	76.8
3:00-4:00 a.m.	64.4	46.1	50.1	59.7	41.2	91.7
4:00-5:00 a.m.	51.3	47.4	49.9	52.8	44.4	70.9
5:00-6:00 a.m.	54.5	50.1	53.1	56.5	46.5	73.4
6:00-7:00 a.m.	57.9	53.2	56.2	60.4	51.4	75.9
7:00-8:00 a.m.	66.0	56.1	58.4	66.5	54.2	85.6
8:00-9:00 a.m.	57.2	52.6	54.7	58.7	50.9	77.7
9:00-10:00 a.m.	56.9	51.5	53.3	57.4	49.4	80.1
10:00-11:00 a.m.	57.1	51.2	53.2	57.6	49.2	76.2

Note:

(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

5.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Southwest Brooklyn Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required and, therefore, off-site noise monitoring was conducted. Table 5.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

Table 5.17-2
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-site Analysis
Southwest Brooklyn Converted MTS

Location	Existing Noise Levels During Quietest Hour (dBA)[1]
26th Avenue South of Cropsey Avenue[2]	54.7
Cropsey Avenue South of Bay 34th Street[3]	64.1

Notes:
(1) A 1-hour noise level reading was measured at the closest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The existing noise level was measured on May 21, 2003 between 3:00 a.m. and 4:00 a.m.
(3) The existing noise level was measured on August 13, 2003 between 2:00 a.m. and 3:00 a.m.

5.17.2 Future No-Build Conditions

5.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

5.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 5.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 5.17-3
Off-Site Noise Traffic Volume
Southwest Brooklyn Converted MTS

Location	Hour Beginning	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
Cropsey Avenue northwest of 26th Avenue	2:00 a.m.	97	101
25th Avenue northeast of Harway Avenue	2:00 a.m.	29	30
25th Avenue northeast of Harway Avenue	9:00 a.m.	265	276
26th Avenue south of Cropsey Avenue	3:00 a.m.	26	27
26th Avenue south of Cropsey Avenue	9:00 a.m.	306	319
Cropsey Avenue south of Bay 34th Street	2:00 a.m.	104	109

Notes:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

5.17.3 Potential Impacts with the Southwest Brooklyn Converted MTS

5.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Southwest Brooklyn Converted MTS and its reference noise levels used in the CEQR and Current Noise Code Noise Code analysis are shown in Table 5.17-4. The number and types of equipment assumed for this analysis were based on the Southwest Brooklyn Converted MTS's peak design capacity. As described in Section 3.19, an analysis was performed to determine if the number and type of trucks queuing on the ramp that was analyzed in the DEIS is more conservative than the greatest number of DSNY and

Commercial Waste trucks expected to be queuing on the ramp based on the number of trucks that might be routed to the facility. The DEIS analysis was based on DSNY trucks queuing along the entire length of the ramp. For the Southwest Brooklyn Converted MTS, the analysis of the greatest number of DSNY and Commercial Waste trucks that might be expected to be queuing on the ramp (based on the number of trucks that might be routed to the facility), is more conservative. Therefore, the results presented for the on-site analysis in this FEIS are based on the greatest number of DSNY and Commercial Waste trucks that might be expected to be queuing on the ramp.

Spectral noise levels used in the Performance Standards analysis are shown in Table 5.17-5. The number and types of equipment assumed for this analysis were based on the Southwest Brooklyn Converted MTS's peak design capacity. Shown earlier, Figure 5.17-1 indicates the Southwest Brooklyn Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 5.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Southwest Brooklyn Converted MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Exhaust Fans (17)	74[3]
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1)[4]	67
Harbor Tug Boat (1)[5]	69
Exhaust Fans (17)	76[3]
Inbound Moving/Queuing DSNY Collection Vehicles (see Table 5.17-4(a))	67
Inbound Moving/Queuing Commercial Waste Collection Vehicles (see Table 5.17-4(a))	71.3
Outbound Moving/Queuing Collection Vehicle (1)	67 or 71.3[6]

Notes for Table 5.17-4:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Noise level representative of each piece of equipment.

(3) Noise level representative of a total of 17 exhaust fans.

(4) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the Converted MTSs.

(5) Noise level will be specified for the harbor tug boat in DSNY's plans and specifications for construction of the Converted MTSs.

(6) For each hour, the type of truck assumed to be queuing on the outbound scale varied depending on the type of trucks entering the facility. If both DSNY and Commercial Waste trucks enter the facility, the outbound truck was assumed to be a Commercial Waste truck, to be conservative. However, if only DSNY trucks enter the facility, the outbound truck was assumed to be a DSNY truck. Similarly, if only Commercial Waste trucks enter the facility, the outbound truck was assumed to be a Commercial Waste truck. If a Commercial Waste truck was assumed, 71.3 dBA was used as a noise level. If a DSNY truck was assumed, 67 dBA was used as a noise level.

Table 5.17.4(a)
Collection Vehicle Volumes Modeled in the
Refined CEQR Noise Analysis of the Residential House Noise-Sensitive Receptor
Southwest Brooklyn Converted MTS

Hour Beginning	DSNY Collection Vehicles		Commercial Waste Collection Vehicles	
	Number of Trucks Entering Facility	Number of Trucks Queuing Outside - Inbound [1]	Number of Trucks Entering Facility	Number of Trucks -Queuing Outside – Inbound [1]
12:00 AM	13	6	1	1
1:00 AM	0	0	2	0
2:00 AM	7	0	0	0
3:00 AM	8	1	0	0
4:00 AM	6	0	2	1
5:00 AM	5	0	5	3
6:00 AM	5	0	10	8
7:00 AM	0	0	5	0
8:00 AM	20	13	0	0
9:00 AM	26	19	0	0
10:00 AM	28	21	0	0
11:00 AM	21	14	0	0
12:00 PM	8	1	0	0
1:00 PM	0	0	0	0
2:00 PM	2	0	0	0
3:00 PM	4	0	0	0
4:00 PM	1	0	0	0
5:00 PM	5	0	0	0
6:00 PM	5	0	0	0
7:00 PM	5	0	0	0
8:00 PM	3	0	13	9
9:00 PM	3	0	13	9
10:00 PM	0	0	10	3
11:00 PM	0	0	5	0

Note:
[1] Assumes first 7 collection vehicles to arrive are DSNY vehicles immediately entering building.

Table 5.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
Southwest Brooklyn Converted MTS

Equipment[1] Name (quantity)[1],[2]	Reference Sound Pressure Noise Level at 50 feet (dB)[3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Crane (1) [2],[5]	78	81	78	71	66	60	55	55
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57

Notes:
[1] Instantaneous maximum number of pieces of equipment on site at any given time.
~~[2] This is the noise level that will be specified for the gantry crane in DSNY's plans and specification for construction of the converted MTS's.~~
[2] Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities
[3] Noise level representative of each piece of equipment.
[4] Noise level representative of a total of 17 exhaust fans.
[5] Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTSs.
Hz = Hertz
K = Thousand

5.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Southwest Brooklyn Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 148 meters (487 feet) from the property boundary in the direction of the Rehabilitation Center, approximately 205 meters 673 feet) from the property boundary in the direction of the residential house, approximately 207 meters (680 feet) from the

property boundary in the direction of the school and approximately 207 meters (680 feet) from the property boundary in the direction of the baseball field. The distance from these noise-sensitive receptors to the property boundary is provided in Section 5.17.1.1. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. Background noise monitoring was conducted at the nearest noise-sensitive receptor. Since the background noise level at the receptor is 44.8 dBA, which is less than 55 dBA, the contour of the predicted facility L_{eq} equivalent to the background noise level is also shown in Figure 5.17-1. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line, however they are located within the contour based on the background noise level (see Figure 5.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptors, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 5.17-1 above. A detailed noise analysis was performed to calculate the Southwest Brooklyn Converted MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The difference between this combined noise level and the existing noise level at the noise-sensitive receptor represents the predicted incremental change in noise level from the Southwest Brooklyn Converted MTS. According to CEQR, an increase of 3 dBA or more at nighttime is considered an impact. In addition, if the daytime background noise level is 62 dBA or more, an increase of 3 dBA or more is considered an impact. Because this incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor for the quietest nighttime hour, there is a predicted impact that would be caused by the Southwest Brooklyn Converted MTS on-site operations based on this conservative analysis.

On-site queuing collection vehicles were further analyzed to refine the calculated noise levels from the Southwest Brooklyn Converted MTS facility truck ramp on the ~~Rehabilitation Center and Residential House~~noise sensitive receptors. Individual, position-specific utilization factors were assigned to each inbound collection vehicle position on the inbound side of the ramp, and

to one collection vehicle position on the outbound scale based on the processing time at the Southwest Brooklyn Converted MTS. The utilization factor for each truck was ~~estimated~~ calculated for each hour on a 24-hour basis based on the ~~peak hour of~~actual number of inbound collection vehicles~~, totaling 20 trucks and conservatively assuming these utilization factors would occur for 24 hours.~~ The assumption was made that each inbound truck would be queuing on-site for approximately two minutes before proceeding one truck length further up the ramp towards the facility. The actual number of DSNY and Commercial collection vehicles used in the 24-hour analysis is shown in Table 5.17-4(a). A restriction on the number of: (1) relayed DSNY collection vehicles delivering waste between 2:00 a.m. and 3:00 a.m.; and (2) commercial waste hauling vehicles at certain hours between 8:00 p.m. and 8:00 a.m. will mitigate predicted on-site impacts at nearby noise sensitive receptors.

Table 5.17-6 below shows the results of the CEQR analysis for the quietest hour with the ~~conservative~~ refined queuing analysis at the Public School and Baseball Field. Table 5.17-6(a) below shows the results of the CEQR analysis with ~~and~~ a refined ~~queuing~~ 24-hour analysis at the ~~Rehabilitation Center and~~ Residential House. Since the Rehabilitation Center and the Residential House are across the street from each other, the background noise levels used for both are the same. Therefore, the results provided in Table 5.17-6(a) represent the noise levels predicted for both the Residential House and the Rehabilitation Center. The Tables includes the existing noise level at the noise-sensitive receptors, ~~and~~ the Southwest Brooklyn Converted MTS-related noise levels and the combined noise level. The table also provides the difference between this combined noise level and the existing noise level at the sensitive receptors. This difference represents the predicted incremental change in noise level from the Southwest Brooklyn Converted MTS. Because this incremental change is less than the CEQR threshold of 3 dBA during nighttime hours, or during daytime hours when the daytime background noise level is greater than 62 dBA, for all of the noise-sensitive receptors analyzed, there is no predicted impact that would be caused by the Southwest Brooklyn Converted MTS on-site operations.

5.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the Southwest Brooklyn Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for

Manufacturing Districts (assuming ~~tugboats~~ both are transportation facilities) (see Table 5.17-7). Based on this analysis, no exceedances to the Performance Standards are predicted.

5.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Southwest Brooklyn Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. The overall noise predictions were based on the refined queuing analysis. ~~This is~~ The results are shown in Table 5.17-8. Based on this conservative analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 5.17-6
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptors
Southwest Brooklyn Converted MTS

Noise Sensitive Receptor ID	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[4]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Level (dBA)	Impact[5] (yes or no)
~~Rehabilitation Center [2][6]~~	~~277 / 910~~	~~44.8~~	~~44.2~~	~~47.5~~	~~2.7~~	~~No~~
Rehabilitation Center [2]	277 / 910	See Table 5.17-6(a)				
~~Residential House [2][6]~~	~~239 / 785~~	~~44.8~~	~~44.1~~	~~47.5~~	~~2.7~~	~~No~~
Residential House [2]	239 / 785	See Table 5.17-6(a)				
Public School [3]	228 / 749	50.5~~64.6~~	44.3~~57.3~~	51.4~~65.4~~	0.9~~0.8~~	No
Baseball Field [3]	340 / 1114	50.5~~64.6~~	43.0~~55.7~~	51.2~~65.1~~	0.7~~0.5~~	No

Notes:

(1) Twenty-minute noise level readings measured at the closest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels measured on February 10, 2004 at 2:00 a.m.

(3) Existing noise levels were measured on February 10th, 2004 at ~~9~~1:00 a~~p~~.m. This was the quietest daytime hour. The quietest nighttime hour was not used since the Baseball Field and Public School are assumed to be closed during nighttime hours.

(4) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(5) According to CEQR, an increase over 65 dBA at daytime is considered an impact. However, if the existing noise level at the receptor during the daytime is 62 dBA or greater or if the analysis is for a nighttime hour, an increase over 3 dBA would be considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Southwest Brooklyn Converted MTS with the quietest background noise levels that occur during facility operation.

~~(6) These results are based on refined on-site queuing collection vehicles utilization factors.~~

Table 5.17-6(a)
CEQR Analysis
Existing and Predicted Noise Levels (Leq) at the Residential House[1] Noise-Sensitive Receptor
Southwest Brooklyn Converted MTS

Hour Beginning	Existing Noise Levels During Quietest Hour (dBA) [2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA) [3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Level (dBA)	Impact (yes or no) [4]
12:00 AM	49.8	49.1	52.5	2.7	No
1:00 AM	45.6	44.4	48.1	2.5	No
2:00 AM	44.8	44.5	47.7	2.9	No
3:00 AM	45.3	44.7	48.0	2.7	No
4:00 AM	46	45.6	48.8	2.8	No
5:00 AM	48.1	47.1	50.7	2.6	No
6:00 AM	52	51.5	54.8	2.8	No
7:00 AM	61.6	44.8	61.7	0.1	No
8:00 AM	60	51.0	60.5	0.5	No
9:00 AM	64.6	53.3	64.9	0.3	No
10:00 AM	53.7	53.9	56.8	3.1	No
11:00 AM	54.8	51.4	56.4	1.6	No
12:00 PM	57.3	44.7	57.5	0.2	No
1:00 PM	50.5	44.1	51.4	0.9	No
2:00 PM	63.2	44.2	63.3	0.1	No
3:00 PM	55	44.3	55.4	0.4	No
4:00 PM	62.3	44.2	62.4	0.1	No
5:00 PM	52	44.4	52.7	0.7	No
6:00 PM	50.8	44.4	51.7	0.9	No
7:00 PM	58.9	44.4	59.1	0.2	No
8:00 PM	50.9	52.3	54.6	3.7	No
9:00 PM	53.1	52.3	55.7	2.6	No
10:00 PM	50.9	47.1	52.4	1.5	No
11:00 PM	49	44.8	50.4	1.4	No

Notes:

(1) This analysis is also applicable to the Rehabilitation Center.

(2) Twenty-minute noise level readings measured at the residential house receptor on February 9-10, 2004.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase over 65 dBA at daytime is considered an impact. However, if the existing noise level at the receptor during the daytime is 62 dBA or greater or if the analysis is for a nighttime hour, an increase over 3 dBA would be considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Southwest Brooklyn Converted MTS with the quietest background noise levels that occur during facility operation.

Table 5.17-7
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
Southwest Brooklyn Converted MTS[1]

Manufacturing District Regulation (M3)								
Frequency Range (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
M1 Threshold	**78**	**73**	**64**	**57**	**52**	**46**	**40**	**38**
M3 Threshold	**79**	**74**	**69**	**63**	**57**	**52**	**48**	**45**
Total Lp dB: D1[2]	69.4	64.3	56.0	50.7	44.8	39.4	32.7	27.9
Total Lp dB: D2[2]	57.7	52.8	45.3	40.1	34.4	28.9	21.5	16.4
Total Lp dB: D3[1]	57.5	54.0	48.6	43.5	38.3	33.2	25.5	19.2
Total Lp dB: D4[1]	62.9	60.9	56.6	50.6	45.4	39.8	32.7	28.9
Total Lp dB: D5[1]	59.0	56.9	52.4	46.5	41.1	35.2	26.8	21.4
Total Lp dB: D6 [2]	70.5	65.3	56.8	51.5	45.6	40.2	33.6	28.7
Total Lp dB: D7 [2]	59.2	55.3	49.4	43.3	37.7	31.8	24.5	19.9
Total Lp dB: D8 [2]	56.0	51.1	43.7	38.4	32.7	27.1	19.2	13.9
Total Lp dB: D9 [2]	58.6	53.3	44.4	38.8	32.2	25.6	16.5	11.3
Total Lp dB: D10 [2]	48.9	45.6	40.4	35.1	29.7	24.3	16.2	11.3
Total Lp dB: D11 [1]	71.4	67.3	61.1	54.9	49.3	43.4	36.9	33.9
Total Lp dB: D12 [1]	69.4	66.9	62.4	56.3	51.2	45.9	39.8	37.2
Total Lp dB: D13 [2]	58.9	53.6	44.6	39.1	32.5	25.8	16.8	11.5

Notes:
[1] M1 NYC Zoning Resolution Performance Regulation is applicable.
[2] M3 NYC Zoning Resolution Performance Regulation is applicable.
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
[1] D1 through ~~D5~~ D13 are points ~~representative of~~ on the Southwest Brooklyn Converted MTS boundary that are used in all noise analyses.
K = Thousand
Bold = Exceedance

Table 5.17-8
Current Noise Code Analysis
Southwest Brooklyn Converted MTS[1]

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	62.2 ~~64.4~~
D2	58.8 ~~61.4~~
D3	60.7 ~~61.3~~
D4	58.8 ~~58.7~~
D5	56.1 ~~55.9~~
D6	63.8
D7	59.0
D8	55.7
D9	56.5
D10	52.4
D11	67.4
D12	63.6
D13	51.5

Notes:
[1] D1 through D13 are points on the Southwest Brooklyn Converted MTS boundary that are used in all noise analyses.

5.17.3.5 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Southwest Brooklyn Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 5.17-9.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles ~~coming~~ traveling to or departing ~~going~~ from the Southwest Brooklyn Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime and nighttime. Figure 5.17-2 depicts the locations of the roadways where a detailed off-site noise analysis was performed.

TNM results for locations/hour that resulted in a possible impact based on second-level screening are presented in Table 5.17-10. The table shows existing background noise levels monitored at the nearest noise-sensitive receptor at the location, TNM-predicted noise levels for the existing traffic, TNM-predicted Future No-Build noise levels for 2006 for the location, the number of Southwest Brooklyn Converted MTS collection vehicles and employee vehicles, TNM-predicted Future Build noise levels for 2006 as a result of the Southwest Brooklyn Converted MTS-related collection vehicles, and the incremental change caused by these trucks, which is calculated by obtaining the difference between this TNM Future Build noise level and the TNM-predicted Future No-Build noise level. Because the incremental noise-level change that would be caused by the Southwest Brooklyn Converted MTS is not greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor for any of the analyzed roadways, no impact is predicted based on the detailed off-site noise analysis.

Table 5.17-9
Off-Site Noise Screening Results
Southwest Brooklyn Converted MTS

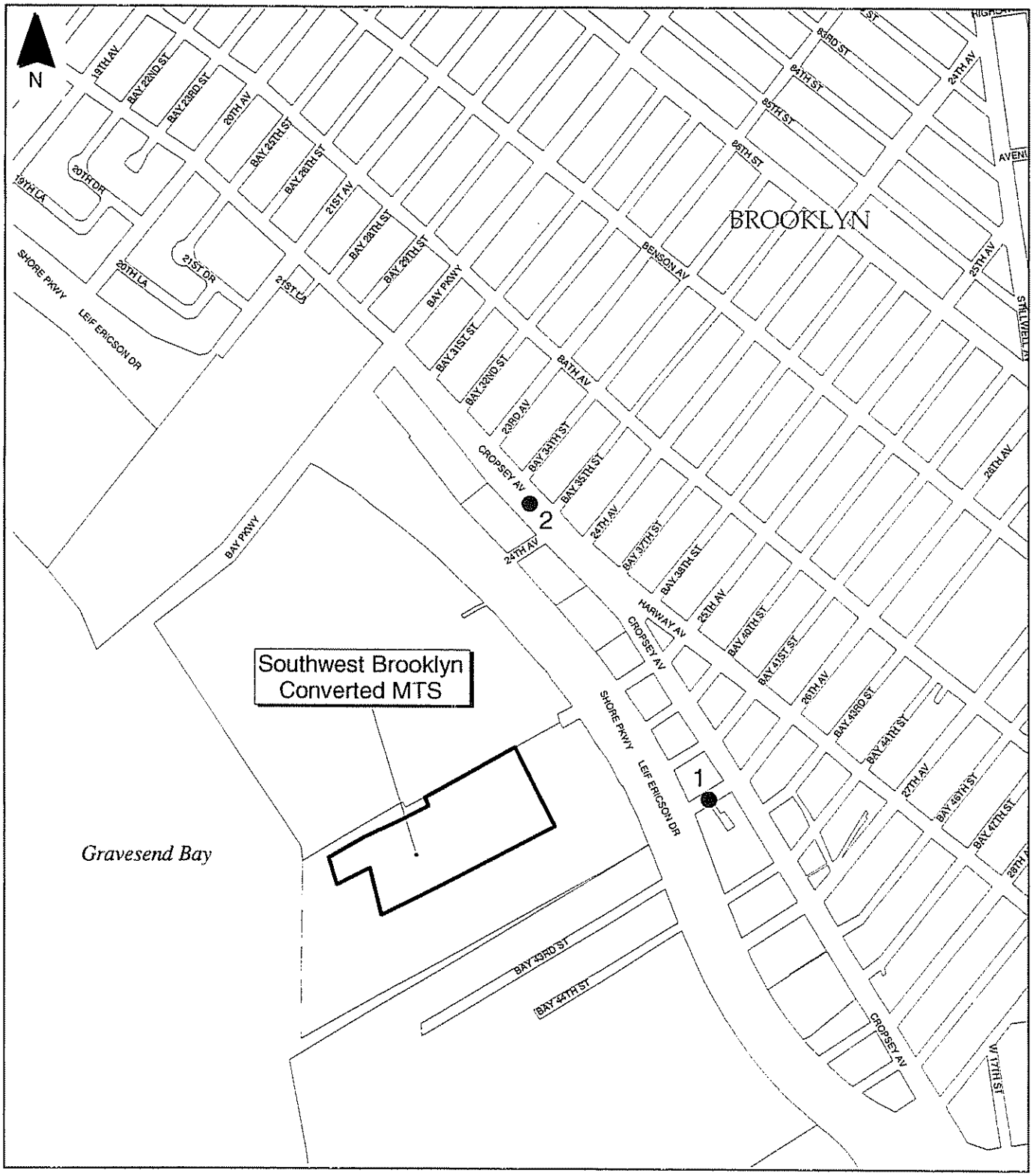
Location	Hour Beginning	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Cropsey Avenue northwest of 26th Avenue	2:00 a.m.	732	4	0	188	920	No
25th Avenue northeast of Harway Avenue	2:00 a.m.	1,155	4	0	188	1,343	No
25th Avenue northeast of Harway Avenue	9:00 a.m.	3,038	8	0	376	3,414	No
26th Avenue south of Cropsey Avenue	3:00 a.m.	36	3	0	141	177	Yes
26th Avenue south of Cropsey Avenue	9:00 a.m.	1,210	19	0	893	2,103	No
Cropsey Avenue south of Bay 34th Street	2:00 a.m.	184	4	0	188	372	Yes

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include Southwest Brooklyn Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA HydroQual DD PE Cambridge Environmental Inc

Figure 5.17-2 Mobile Noise Analysis Intersections Analyzed Southwest Brooklyn Converted MTS

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Table 5.17-10
Off-Site Noise Analysis TNM Results
Southwest Brooklyn Converted MTS

Location	Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Measured) (dBA)	TNM-Predicted Noise Level (L_{eq}) for Existing Traffic (dBA)	TNM Future No-Build Noise Level (L_{eq}) (dBA)	Collection Vehicles	Employee Vehicles	TNM Future Build Noise Level (L_{eq}) (dBA)	Impact (Noise Level Difference) (dBA)
26th Avenue South of Cropsey Avenue	3:00 a.m.	54.7	~~58~~56.5	~~58~~56.5	3	0	~~60.1~~58.3	No (~~2.1~~1.8)
Cropsey Avenue South of Bay 34th Street	2:00 a.m.	64.1	~~61.6~~58.5	~~61.7~~58.7	4	0	~~62~~59.3	No (~~0.7~~0.6)

Note:
(1) Existing noise level and traffic count used for input into TNM was recorded on May 21, 2003.

5.17.3.6 Combined On-Site and Off-Site Noise Levels

On- and off-site noise analyses were performed for the Southwest Brooklyn Converted MTS, however the potential impacts of these analyses did not affect the same noise-sensitive receptor. Therefore, a combined noise analysis was not performed.

5.17a Noise - Alternative Route

The noise analysis addresses off-site sources of noise emissions from the increase in traffic caused by DSNY and other agency collection vehicles traveling from the Southwest Brooklyn Converted MTS using the Alternative truck route. It is based on Section R of the 2001 CEQR Technical Manual for off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis. An analysis was performed only for: (1) new locations; or (2) locations identified in Section 5.17 with revised DSNY and other agency collection vehicle totals.

5.17a.1 Existing Conditions

5.17a.1.1 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Alternative truck route due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required, therefore, off-site noise monitoring was conducted. Table 5.17a-1 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest noise levels (when the difference between traffic noise levels and background noise levels is the greatest) based on first-level screening.

5.17a.2 Future No-Build Conditions

5.17a.2.1 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 5.17a-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 5.17a-1
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-Site Analysis
Southwest Brooklyn Converted MTS
Alternative Route

Location	Existing Noise Levels During Quietest Hour (dBA)[1]
Shore Road between 26th Avenue & Bay 43rd Street[2]	70.1
Shore Road South of Shore Parkway exit[3]	62.3
Bay 52nd Street between Shore Road & Cropsey Avenue[3]	61.7

Notes for Table 5.17a-1:

[1] A 1-hour noise level reading was measured at the closest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).

[2] The existing noise level was measured on February 18, 2005 between 10:00 a.m. and 11:00 a.m. The school is not in operation during nighttime hours, therefore the quietest nighttime hour was not analyzed.

[3] The existing noise level was measured on February 17, 2005 between 3:00 a.m. and 4:00 a.m.

Table 5.17a-2
Off-Site Noise Traffic Volume
Southwest Brooklyn Converted MTS
Alternative Route

Location	Hour Beginning	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
26th Avenue South of Crospey Avenue	3:00 a.m.	26	27
Cropsey Avenue South of Bay 34th Street	2:00 a.m.	104	109
Shore Road between 26th Avenue & Bay 43rd Street	10:00 a.m.	156	159
Shore Road South of Shore Parkway exit	3:00 a.m.	66	67
Bay 52nd Street between Shore Road & Cropsey Avenue	3:00 a.m.	63	64
Cropsey Avenue between Bay 53rd Street & Bay 54th Street	2:00 a.m.	238	243
Cropsey Avenue between Bay 49th Street & Bay 50th Street	3:00 a.m.	116	118

Notes for Table 5.17a-2:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

5.17a.3 Potential Impacts with the Southwest Brooklyn Converted MTS – Alternative Route

5.17a.3.1 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Southwest Brooklyn Converted MTS alternative route. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 5.17a-3.

Table 5.17a-3
Off-Site Noise Screening Results
Southwest Brooklyn Converted MTS – Alternative Route

Location	Hour Beginning	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Shore Road between 26th Avenue & Bay 43rd Street	10:00 a.m.	528	22	0	1034	1562	Yes
Shore Road South of Shore Parkway exit	3:00 a.m.	205	5	0	235	440	Yes
Bay 52nd Street between Shore Road & Cropsey Avenue	3:00 a.m.	64	5	0	235	299	Yes

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include Southwest Brooklyn Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles traveling to or departing from the Southwest Brooklyn Converted MTS via the alternative route, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime and nighttime. Figure 5.17a-1 depicts the locations of the roadways where a detailed off-site noise analysis was performed.

TNM results for locations/hour that resulted in a possible impact based on second-level screening are presented in Table 5.17a-4. The table shows existing background noise levels monitored at the nearest noise-sensitive receptor at the location, TNM-predicted noise levels for the existing traffic, TNM-predicted Future No-Build noise levels for 2006 for the location, the number of Southwest Brooklyn Converted MTS collection vehicles and employee vehicles, TNM-predicted Future Build noise levels for 2006 as a result of the Southwest Brooklyn Converted MTS-related collection vehicles, and the incremental change caused by these trucks, which is calculated by obtaining the difference between this TNM Future Build noise level and



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 5.17a-1 Mobile Noise Analysis
Intersections Analyzed
Southwest Brooklyn Converted MTS
Alternative Truck Route

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the TNM-predicted Future No-Build noise level. Because the incremental noise-level change that would be caused by the Southwest Brooklyn Converted MTS is predicted by TNM to be greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor for two of the analyzed roadways, TNM predicts an impact.

Table 5.17a-4
Off-Site Noise Analysis TNM Results
Southwest Brooklyn Converted MTS – Alternative Route

Location	Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Measured) (dBA)	TNM-Predicted Noise Level (L_{eq}) for Existing Traffic (dBA)	TNM Future No-Build Noise Level (L_{eq}) (dBA)	Collection Vehicles	Employee Vehicles	TNM Future Build Noise Level (L_{eq}) (dBA)	Impact (Noise Level Difference) (dBA)
Shore Road between 26th Avenue & Bay 43rd Street	10:00 a.m.	70.1	62.7	62.7	22	0	65.9	Yes (3.2)
Shore Road South of Shore Parkway exit	3:00 a.m.	62.3	56.2	56.2	5	0	58.6	No (2.4)
Bay 52nd Street between Shore Road & Cropsey Avenue	3:00 a.m.	61.7	52.1	52.2	5	0	55.6	Yes (3.4)

Note:
[1] Existing noise level and traffic count used for input into TNM was recorded on February 17th and 18th, 2004.

To determine if these TNM-predicted impacts were overpredicted, site-specific truck simulations would normally be conducted at the noise sensitive receptors, based on the methodology described in Section 3.19. However, due to the precipitation (noise monitoring cannot be conducted when it is raining) and the lack of time, a site-specific truck simulation analysis could not be performed for the FEIS. Based on: (1) the truck simulations performed for other Converted MTS facilities; and (2) the small increment of 0.2 and 0.4 dBA over the CEQR 3 dBA threshold that has been predicted by TNM, it is expected that the truck simulation analysis would not predict an impact at the two nearest noise-sensitive receptors where TNM predicts impacts.

5.17a.3.2 Combined On-Site and Off-Site Noise Levels

On-site and off-site noise analyses were performed for the Southwest Brooklyn Converted MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis was conducted to determine if a combined noise analysis would be required for the operations at the Southwest Brooklyn Converted MTS. The combined analysis study area was defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway entrance to the site. The other limits for the combined analysis study area were defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the site. The results of the screening analysis show that the School on the corner of Shore Road and Bay 44th Street is the nearest noise-sensitive receptor located within the study area that can be impacted by both on-site and off-site Southwest Brooklyn Converted MTS operations; therefore, a combined noise analysis, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest daytime hour based on the off-site analysis discussed in Section 6.17.3.5 above. The school is not in operation during nighttime hours, therefore the quietest nighttime hour was not analyzed. Table 5.17a-5 shows the distance from the Southwest Brooklyn Converted MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, Southwest Brooklyn Converted MTS predicted noise levels at the noise-sensitive receptor, and the predicted off-site noise level at the noise-sensitive receptor. The table also provides the combined on-site and off-site noise level and the difference between these combined noise levels. This difference

represents the predicted incremental change in noise level from the Southwest Brooklyn Converted MTS on-site and off-site operations at the noise-sensitive receptor. Because this incremental change is not greater than the CEQR threshold of 3 dBA during nighttime hours for the school receptor analyzed, there is no predicted impact that would be caused by the Southwest Brooklyn Converted MTS combined on-site operations and off-site operations.

Table 5.17a-5
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (Leq) at the Nearest Noise-Sensitive Receptor with Southwest Brooklyn Converted MTS based on the Alternative Truck Route

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
School on Shore Road between 26th Avenue and Bay 44th Street	228 / 749	10:00 a.m.	70.1	53.6	22	65.9	71.6	1.5	No

Notes:
(1) Existing noise level and traffic count used for input into TNM was recorded on February 18th, 2004.
(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(3) According to CEQR, an increase over 3 dBA during daytime hours where the existing noise level is 62 dBA or greater is considered an impact.

5.18 Commercial Waste to the Southwest Brooklyn Converted MTS

5.18.1 Existing Conditions

No commercial waste is delivered to the Southwest Brooklyn MTS site under Existing Conditions. Commercial waste generated in Brooklyn is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

5.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the Southwest Brooklyn Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

5.18.3 Potential Impacts of Sending Commercial Waste to the Southwest Brooklyn Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

5.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the Southwest Brooklyn Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 5.15, 5.16 and 5.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the

analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

5.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the Southwest Brooklyn Converted MTS were evaluated in Sections 5.14, 5.15 and 5.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 5.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 27 (inbound trip ends) per hour, which occurred during the AM peak. These 27 DSNY and other agency collection vehicles are also more than the 23 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the Southwest Brooklyn Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 27 DSNY and other collection agency vehicle trip ends at the Southwest Brooklyn Converted MTS. Therefore, the addition of the 23 DSNY and other agency collection vehicles and

commercial waste hauling vehicles at the Southwest Brooklyn Converted MTS during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 27 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 27 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24-hour period for most of the analyzed intersections. Results showed there would be no unmitigatible significant adverse environmental impacts at several analyzed intersections. Consequently, because the 23 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can travel through these intersections per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

For the intersection of Bay Parkway at Cropsey Avenue and Shore Parkway (north and south), a Tier II analysis was required. The estimated actual hourly distribution over 24 hours included the estimated 23 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could potentially be processed at the Southwest Brooklyn Converted MTS, and no unmitigatible significant adverse environmental impacts were identified.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the Southwest Brooklyn Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. Based on the revised analysis in this FEIS, ~~T~~the amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is ~~828~~ 718 tons (or approximately ~~766~~ commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

CHAPTER 6 ENVIRONMENTAL REVIEW: EAST 91ST STREET CONVERTED MTS

6.1 Introduction

The results of the environmental analyses of the East 91st Street Converted MTS are presented in the following sections:

6.2 Land Use, Zoning, and Public Policy
6.3 Socioeconomic Conditions
6.4 Community Facilities and Services
6.5 Open Space
6.6 Cultural Resources
6.7 Urban Design, Visual Resources, and Shadows
6.8 Neighborhood Character
6.9 Natural Resources
6.10 Hazardous Materials
6.11 Water Quality
6.12 Waterfront Revitalization Program
6.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
6.14 Traffic, Parking, Transit, and Pedestrians
6.15 Air Quality
6.16 Odor
6.17 Noise
6.18 Commercial Waste to the East 91st Street Converted MTS

Section 2.2.3 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

6.2 Land Use, Zoning, and Public Policy

6.2.1 Existing Conditions

6.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 6.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 6.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.2.3 provides information on existing land uses and operations on the site.

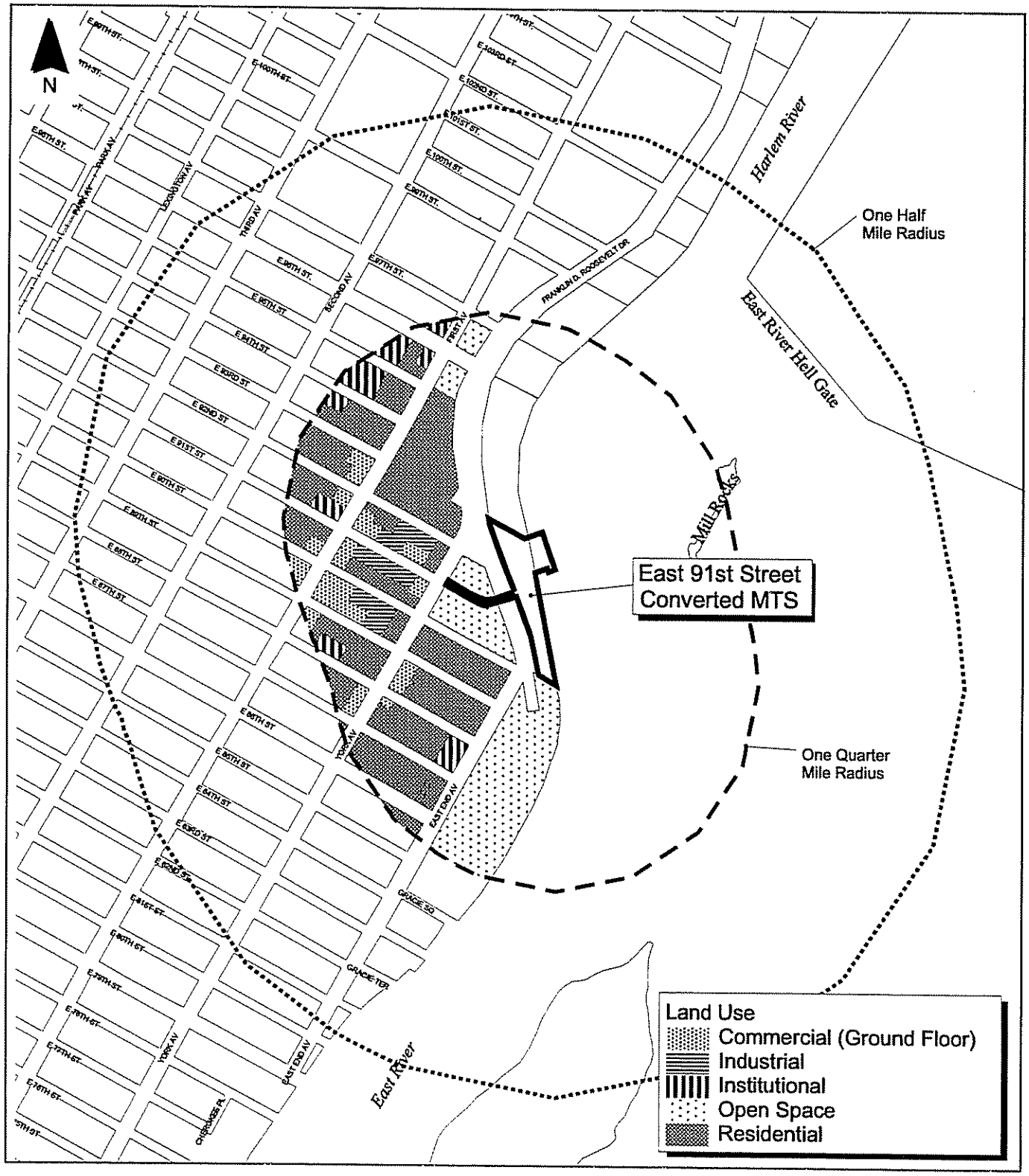
6.2.1.2 Land Use Patterns

6.2.1.2.1 General Context

Set in the larger context of Manhattan's Upper East Side and East River waterfront, the site is surrounded primarily by parks and recreational areas, transportation infrastructure and dense residential developments.

6.2.1.2.2 Land Uses in the Primary Study Area

The site is located on the waterfront, separated from the mainland street network, by the at-grade FDR Drive. Carl Schurz Park, the setting of Gracie Mansion, the mayor's formal residence, lies immediately to the south of the site and runs adjacent to the western side of the FDR Drive to 84th Street. The park provides a buffer to residential uses adjacent to it on East End Avenue. At its northern end nearest the site, the park extends over the FDR Drive to the waterfront. The East River Esplanade, alongside the FDR Drive, provides public access to the waterfront – south of East 84th Street and north of East 90th Street. The esplanade runs along the waterfront, adjacent to the site beneath the existing MTS access ramp. A commuter ferry pier is located just south of the existing MTS at East 90th Street. The park and promenade extend south along the water beyond the primary study area.

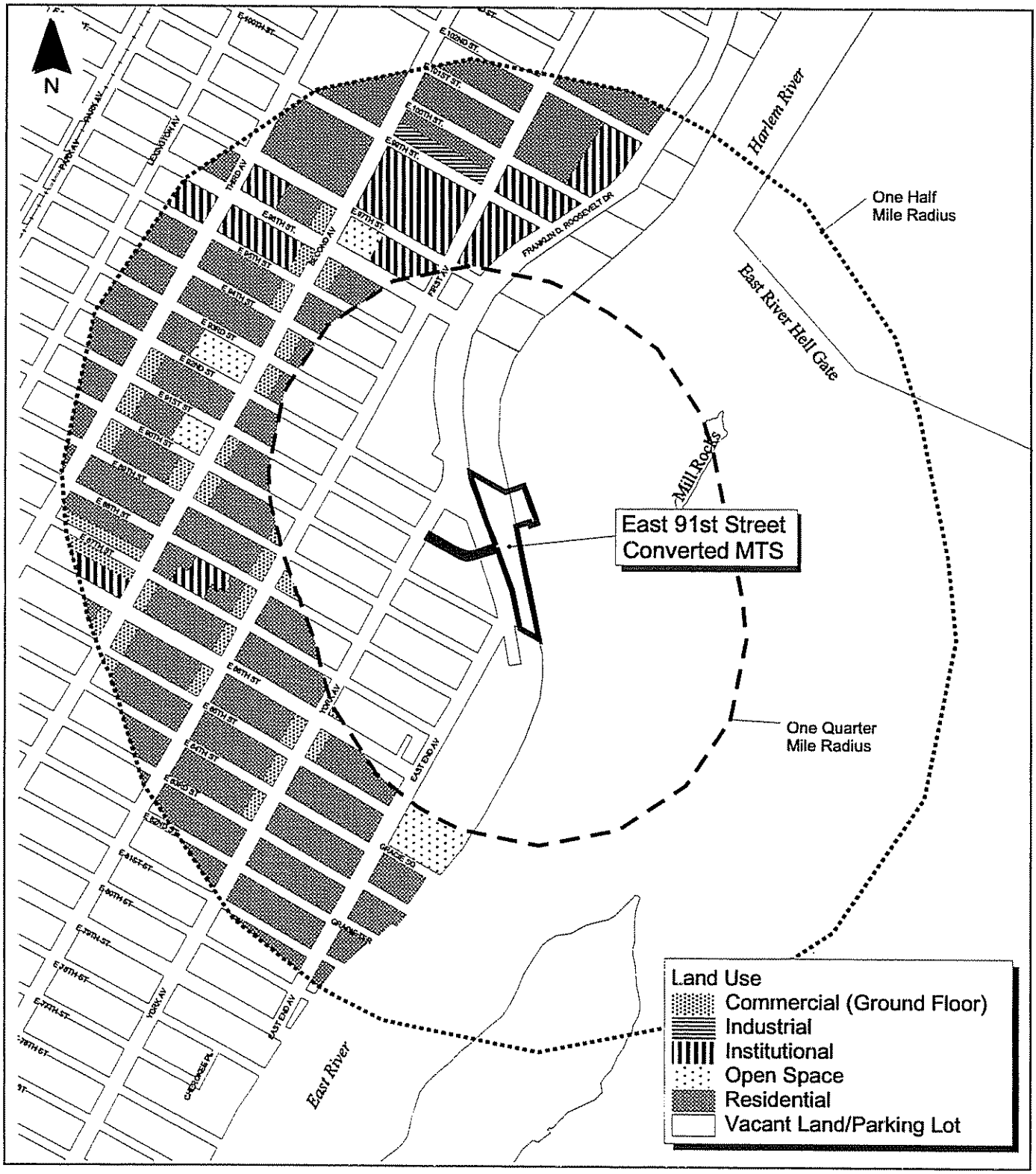


Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 6.2-1 Land Use in the Primary Study Area
East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.2-2 Land Use in the Secondary Study Area

East 91st Street Converted MTS

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Asphalt Green, another major open space and community facility within the primary study area, stretches between East 90th and 92nd Streets east of York Avenue. It consists of a sports and training complex, featuring indoor and outdoor facilities, soccer field, basketball courts, running track, aquatic center and fitness center. The former Municipal Asphalt Plant (now a landmark) houses a gymnasium as part of the complex. (See Section 6.6 for additional discussion of cultural resources in the study area.) Access to the existing MTS site is provided by an unmapped drive that ramps up through the Asphalt Green complex from the intersection of East 91st Street and York Avenue to clear the FDR Drive.

The remainder of the primary study area primarily consists of residential land uses with multi-story towers on the west side of East End Avenue facing the river and row houses lining the cross streets. A few blocks feature ground-floor commercial space along York Avenue and First Avenue. The study area's strongly residential nature is only somewhat interrupted by the presence of a few warehouses and auto-related uses between East 89th Street, East 92nd Street and York and First Avenues. A gourmet grocery (Eli's) with a restaurant above (The Vinegar Factory) and an arts-and-crafts shop are located on the north side of East 91st Street (a local route for DSNY and other agency collection vehicles leaving the site) just west of York Avenue, and a pizzeria is located on the south side of the street. On the local inbound truck route (East 90th Street between York and First Avenues) there is a combination of residential buildings and automobile-related uses (e.g., car rental, automobile repair and parking garages). Beth Israel Hospital (North) is also located in the primary study area on East End Avenue and East 87th Street, and the High School of Teaching and P.S. 66 are located on East 88th Street, between York and First Avenues. Stanley M. Isaacs Park is located on both sides of East 91st Street, east of First Avenue.

6.2.1.2.3 Land Uses in the Secondary Study Area

Land use within the secondary study area is also generally characterized by residential uses, with ground-floor commercial uses lining the avenues, except for the portion of the study area north of East 95th Street, where institutional uses abound. Metropolitan Hospital and associated parking is located at East 97th Street, J.H.S. 99 and other institutional uses are east of First Avenue (north of the Metropolitan Hospital complex), and the School of Cooperative Technical Education is at East 97th Street, to the south.

6.2.1.3 Zoning On and Near the Site

6.2.1.3.1 Zoning Within the Primary Study Area

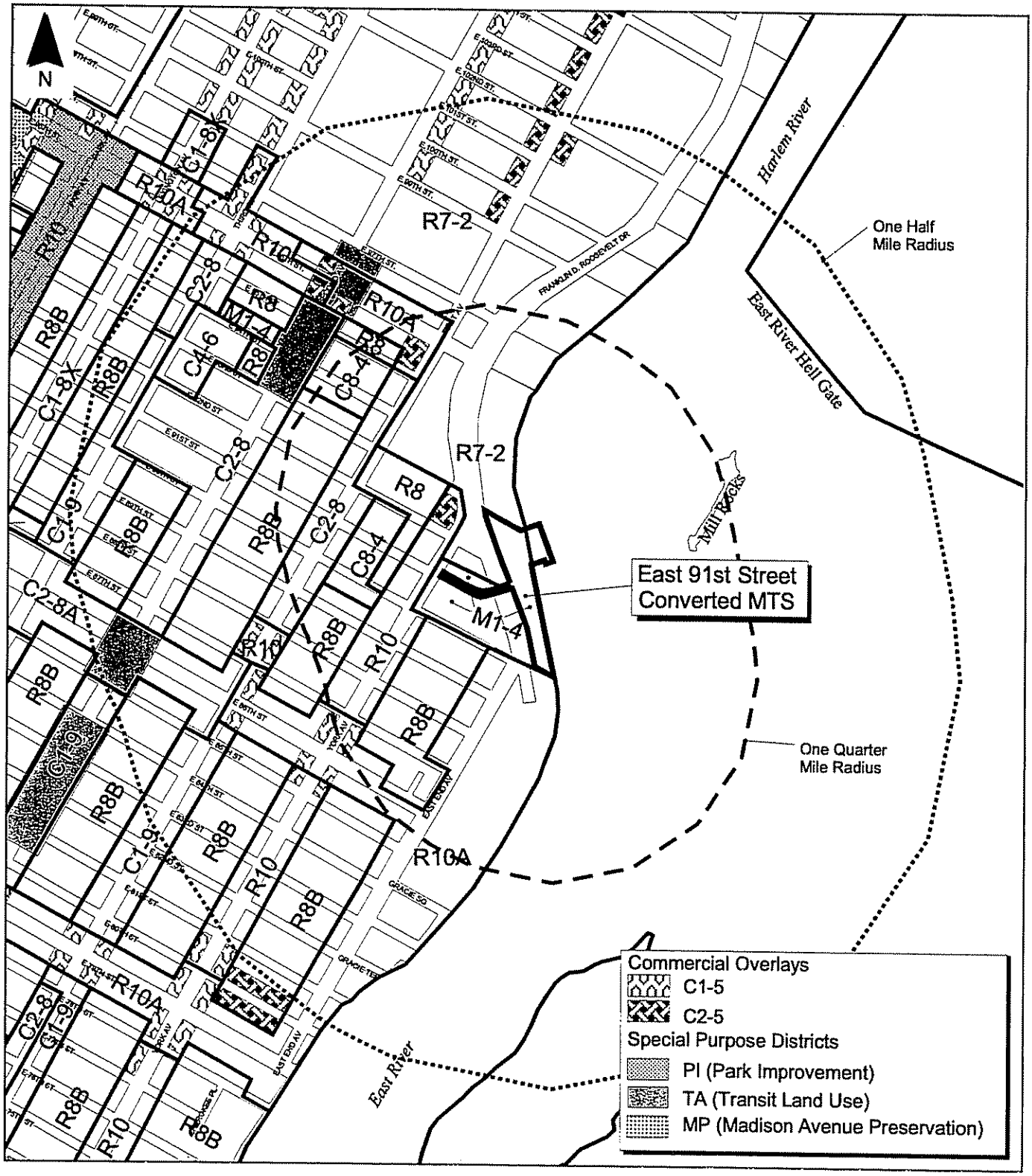
The MTS site is located within a small irregularly shaped M1-4 (light industrial) zoning district, which extends from East 90th to East 93rd Streets along the shoreline, between the FDR Drive and the East River waterfront. It continues west of the site to York Avenue between East 90th and East 92nd Streets to encompass most of the Asphalt Green complex. Beyond the site on all sides are high-density residential zoning districts that allow for dense apartment buildings. The northern portion of Asphalt Green is situated within a large R7-2 zoning district that extends about one mile to the north. Immediately south of the site is an R10A high-density residential district and is surrounded by other high-density residential districts: R8, R8B, R10 and R10A. An area covering the interiors of three blocks south of East 92nd Street between York and First Avenues, where warehouses and auto-related uses are located west of the site, is zoned C8-4. The remainder of the study area is zoned for high-density residential development with the exception of a strip of C2-8 zoning lining First Avenue. (See Figure 6.2-3 and Table 3.4-1: Zoning District Characteristics.)

6.2.1.3.2 Zoning Within the Secondary Study Area

The secondary study area is zoned primarily for high-density residential development (R7-2, R8, R8-B, R10 and R10A). Commercial zoning applies to the avenues and East 86th Street, and a Transit Land Use Special Purpose District covers several blocks of Second Avenue around East 86th Street and East 95th Street in the secondary study area to allow for the proposed Second Avenue subway, in design stages at the time of this writing.

6.2.1.4 Plans and Policies

Neither the FY 2004 CDNS for Manhattan CD 8, in which the site is located, or that for CD 11, in which a portion of the secondary study area is located, make reference to recommended or anticipated physical development affecting the site or primary or secondary study areas.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 6.2-3 Zoning

East 91st Street Converted MTS

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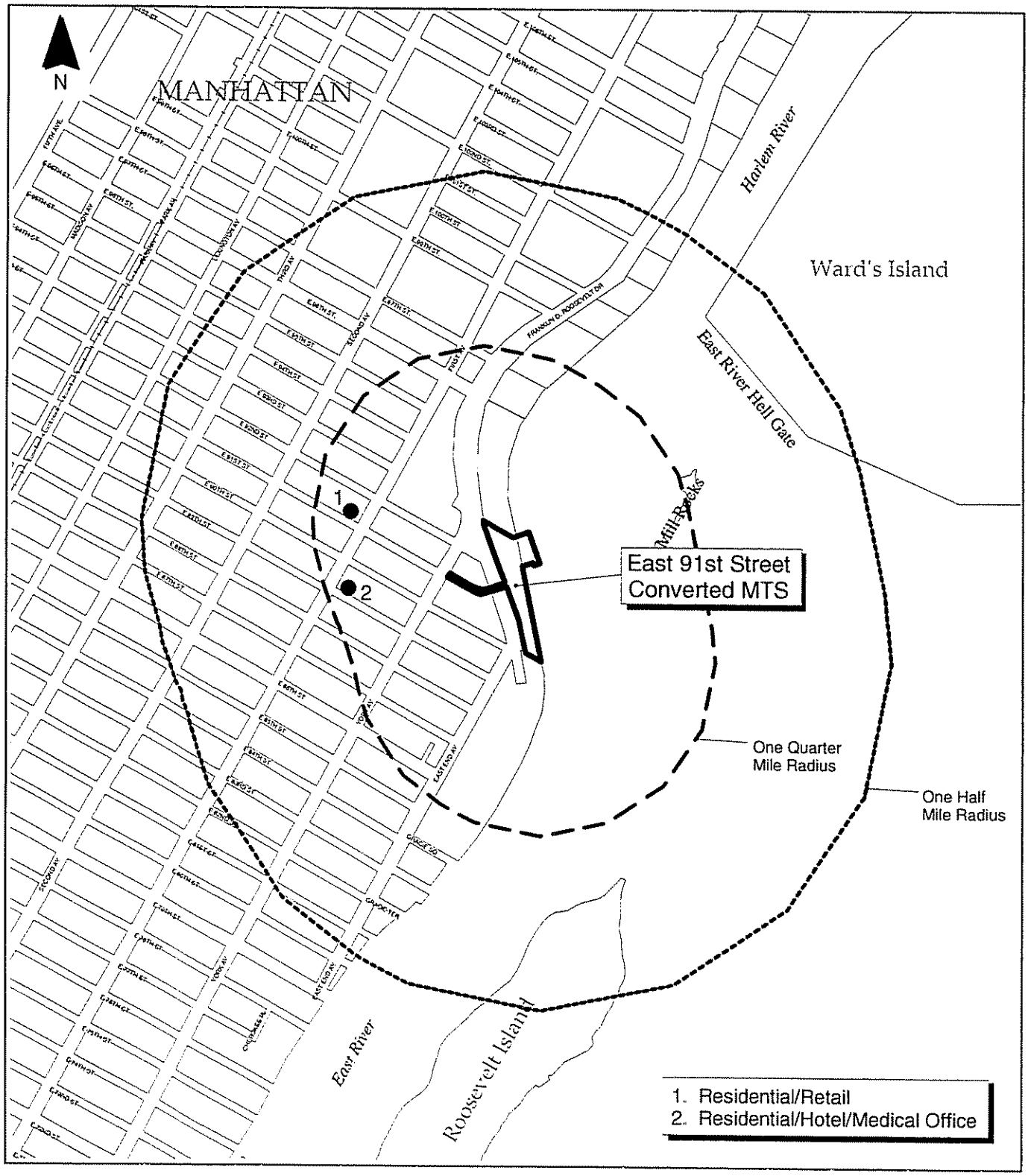
The Plan for Reach 1 makes several recommendations pertinent to the site. As part of planning for the public waterfront, it recommends that the esplanade throughout the reach be developed to accommodate both bicycles and pedestrians safely and that waterfront access from inland areas be enhanced. The plan also recommends that where public funds are invested in waterfront municipal facilities, allocations should be included for esplanade construction, and, for waterfront uses that may block access to or along the waterfront, public access should be incorporated into site plans. Specifically, RFPs for the development or use of City-owned waterfront property should require esplanades or waterfront parks and maintenance agreements to ensure their upkeep.

The plan also recommends that the fireboat pier at East 90th Street be renovated for use as an environmental education center and that a new pedestrian bridge be constructed from Asphalt Green to the pier. As part of its working waterfront recommendations, the plan for Reach 1 speaks to the commuter ferry service which, subsequent to the preparation of the plan, has begun service at East 90th Street. It also specifically notes that the adjacent MTS at East 91st Street should be considered when siting or locating a ferry landing at this location.

6.2.2 Future No-Build Conditions

Two multi-use residential towers will be completed within the primary study area by 2006, one at 389 East 89th Street and one, which will include a hotel, at East 91st Street and First Avenue (see Figure 6.2-4). Other new residential construction is underway on 90th Street at the western edge of the secondary study area. In addition, a feasibility study is currently underway for a potential new school to be located at 340-342 East 92nd Street. Otherwise, NYCDCP has no information of new development planned to occur within the study area, and notes that most new development in the broad vicinity occurs in the East 60s, south of the site and outside the secondary study area.

A large section of East Harlem (East 99th to East 122nd Streets) between First Avenue and Lexington Avenue has been rezoned for higher-density contextual residential development. The site would remain DSNY property and the existing inactive MTS would remain.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 6.2-4 Planned Development Sites
East 91st Street Converted MTS

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6.2.3 Potential Impacts with the East 91st Street Converted MTS

6.2.3.1 Land Use and Zoning

The East 91st Street Converted MTS entails replacement of the existing MTS with a new facility that includes containerization functions; it would represent a slight physical upgrading of the site. The East 91st Street Converted MTS operation would be designed to containerize waste and prepare containers for transfer to barge for disposal outside the City. The existing MTS, which extends over the water, would be demolished, and the new one would be built in approximately the same place, still hugging the shore and extending to the pierhead line. ~~The ramped entrance to the site would remain unchanged.~~ The new ramp constructed as part of the East 91st Street Converted MTS would follow the same footprint as the existing ramp.

The reactivation of waste transfer activities on the site would have no effect on land uses nearby. (See Section 6.8 for a discussion of potential impacts to neighborhood character.) Neither the reactivation of waste transfer activities on the site nor the volume of truck traffic would encourage similar types of land uses or discourage other types of land use such as those already present in the study areas. Therefore, no significant adverse impacts to land use or zoning in the built-out study area would result.

6.2.3.2 Consistency with Public Plans and Policies

There are no recommendations or objectives stated in relevant plans and policies that specifically relate to the site or the study area. The East 91st Street Converted MTS would be consistent with the applicable 197-a Plan (the Comprehensive Manhattan Waterfront Plan [CMWP]). Development of a ferry terminal at East 90th Street and the waterfront promenade in the area near the site has already occurred.

6.3 Socioeconomic Conditions

6.3.1 Existing Conditions

6.3.1.1 Definition of the Study Areas

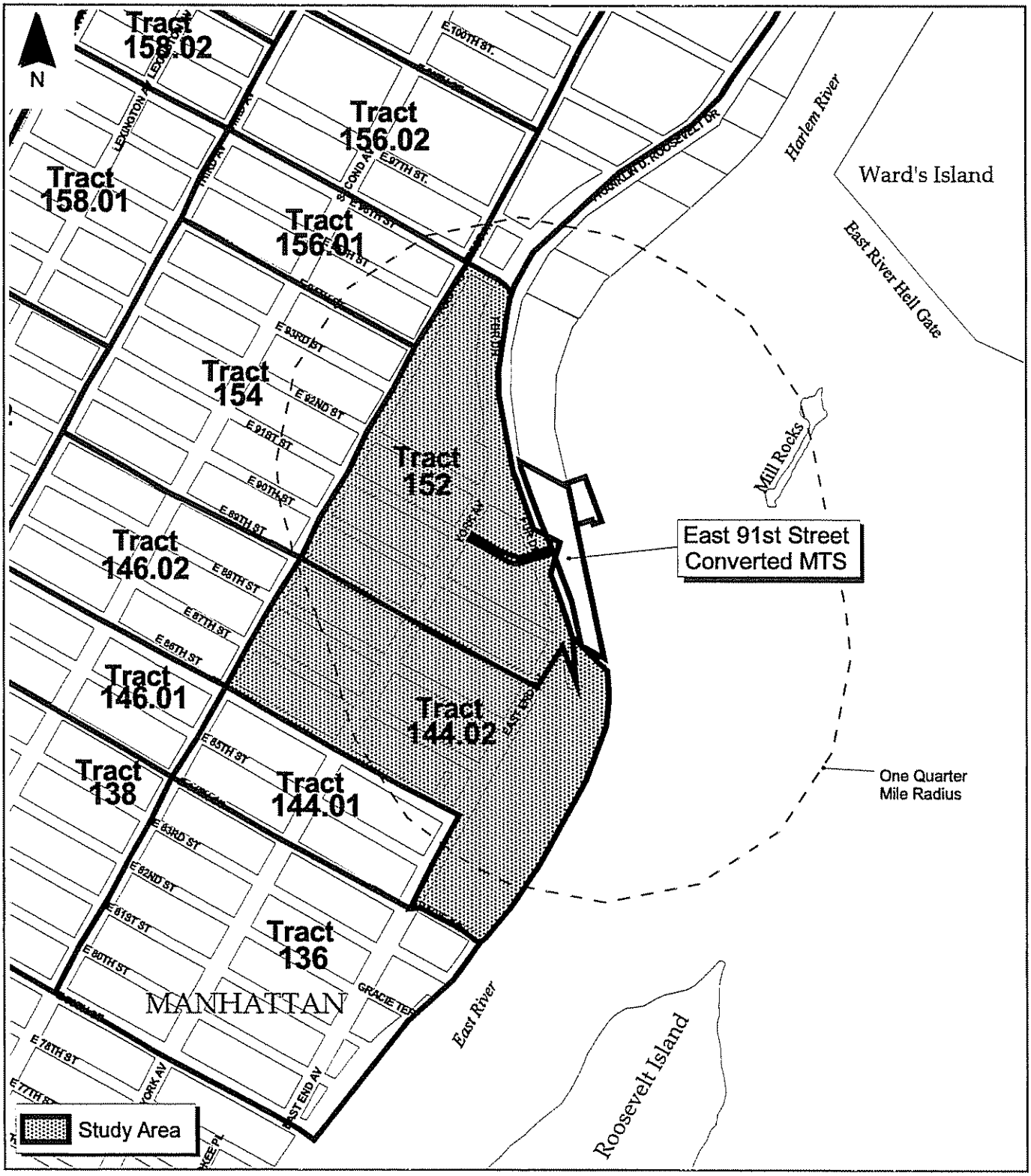
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) The demographic study area is comprised of Census Tracts 152 and 144.02 (see Figure 6.3-1). Census Tract 152 covers East River waterfront areas to the east of First Avenue between East 89th Street and East 96th Street. Census Tract 144.02 covers the six blocks directly south of Census Tract 152 and the area stretching east of East End Avenue between East 90th Street and East 84th Street. For comparison purposes, Census data were gathered at the borough and City levels. The study area for the assessment of potential impacts on economic conditions extends as far north as East 102nd Street, as far south as East 81st Street and as far west as Third Avenue.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

6.3.1.2 Demographic Characteristics

6.3.1.2.1 Population

The total 2000 study area population was 13,417 persons (see Table 6.3-1). In terms of population growth from 1990 to 2000, the study area experienced a greater rate of increase in residents (7%) than did the borough (3%) during the same period, but its population did not grow as rapidly as the City's (9%) as a whole.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.3-1 Census Tracts
East 91st Street Converted MTS

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Table 6.3-1
1990-2000 Population

	Study Area	Manhattan	City
2000	13,417	1,537,195	8,008,278
1990	12,601	1,487,536	7,322,564
Percent Change	+6.5%	+3.3%	+9.4%

Source: U.S. Census 1990, 2000

The age-sex distribution was slightly different from the population distribution of the borough and the City, with an even greater proportion of females to males. The study area contained a slightly smaller percentage of children and teenagers than the borough, but a considerably smaller percentage of children and teens than the City: 16% of the study area population was under the age of 20, compared to 19% for the borough and 27% for the City.

6.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a smaller proportion (12%) of people of Hispanic origin (all races) than did Manhattan or the City (both at 27%). Of the 88% not of Hispanic origin in the study area, 84% were White and 7% were Black. In Manhattan and the City, Blacks represented approximately 21% and 33% of the non-Hispanic populations, respectively, while Whites represented 63% and 48%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate than in the borough and in the City during the same period. People of Hispanic origin increased by 30% in the study area, compared with 10% in the borough and 24% in the City. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

6.3.1.2.3 Families and Households

There were 2,980 families in the study area in 2000. Approximately the same percentage of these families (42%) had children under the age of 18 as families in Manhattan (43%). In the City, the percentage of families with children was somewhat higher (49%). There was a larger

percentage of married-couple families in the study area than in the borough or the City, and 39% of these families had children, the same percentage as in Manhattan but a somewhat lower percentage than found within the City (48%).

Twenty-four percent (24%) of the families in the study area were headed by a female householder, a smaller percentage than in the borough (30%) or the City (also 30%). Fifty-one percent (51%) of the female householder families in the study area had children under the age of 18, similar to percentages in the borough (53%) and the City (55%).

There were 7,487 households in the study area in 2000, with an average household size of 1.8 persons, which was smaller than the number in Manhattan (2.0 persons per household) and the City (2.6 persons per household). From 1990 to 2000, the number of households in the study area increased by 4%, compared with a 3% increase in the borough and a 7% increase in the City.

6.3.1.2.4 Employment

Seventy-two percent (72%) of persons aged 16 and older participated in the labor force in 2000, compared to 64% in Manhattan and 58% in the City. The majority of employed in all three areas were engaged as private wage and salary workers.

Nine percent of employed persons 16 and over were government workers, compared to Manhattan (10%) and the City (16%). Moreover, 9% of the study area's working population was self-employed, the same proportion as in Manhattan and a somewhat higher proportion than in the City (6%).

From 1990 to 2000, the number of persons in the labor force increased at a faster rate in the study area (4%) than in the borough (less than 1%) or the City (1%). Among employed persons, those engaged in government jobs increased by 8% in the study area, compared with a 15% decrease in the borough and a 10% decrease in the City.

Current forecasts indicate that about 149,866 employees worked in Manhattan CD 8 in 2005, which was about 7% of the borough's total employment.[1]

6.3.1.2.5 Housing

In 2000, most housing units in the two-census-tract study area were built before 1969; the majority of housing units in both Manhattan and the City were slightly older, built before 1959. As of 2000, there were 7,961 housing units in the study area with a vacancy rate of about 6%, lower than the borough (8%) but about the same as the City. About three-quarters of housing units were renter-occupied, which was about the same as in the borough and greater than the City (66%). Median monthly rent ($781) was about the same as in the borough, but higher than in the City ($705).

The majority of study area householders moved into their units between 1990 and 2000 (65%), slightly greater than the percentages in the borough and City (61%).

From 1990 to 2000, a total of 176 housing units were added in the study area, representing a 2% increase, the same as in the borough, but a somewhat lower proportional increase than in the City (7%).

6.3.1.2.6 Education

Consistent with the lower percentage of children in the study area than in the borough or the City, there was a lower rate of school enrollment (19%) than in either the borough (24%) or the City (29%). Of those people enrolled in school, 48% were attending elementary or high school and about 37% were attending college or beyond. The study area witnessed a 19% increase in the number of persons enrolled in school from 1990 to 2000, with the largest increase in enrollment occurring at the pre-primary school level.

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

The study area had higher educational attainment levels than either the borough or the City. Compared to the larger areas, a larger percentage (81%) of the study area population aged 25 and over had a college degree or some college education. Compared to Manhattan (14%), the study area had a slightly lower percentage of people with only high school diplomas (5%).

From 1990 to 2000, the study area witnessed rising levels of educational attainment. The number of college graduates increased 21%; the same trend was evident in the borough and the City. Meanwhile, the numbers of people with less than a college education declined in the study area.

6.3.1.2.7 Income and Poverty

In 2000, both median household income ($51,150) and median family income ($60,606) were higher than in Manhattan (median household: $47,030; median family: $50,229) and the City (median household: $38,293; median family $41,887). Compared to the larger two areas, a lower percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes above $50,000 and about 32% above $100,000. Only 23% of households in the study area had incomes below $25,000, compared with 30% in the borough and 35% in the City.

The study area had a lower percentage of families living below the poverty level (11%) than in Manhattan (18%) or the City (19%). A significant percentage of these families below the poverty level (45%) had children under the age of 18, lower than Manhattan (48%) or the City (55%).

A lower percentage of persons in the study area under the age of 18 were living below the poverty level in 2000 (18%) than in Manhattan (32%) and the City (30%). The 2000 Census also reported that 11% of persons 65 and older were living below the poverty level in the study area, compared to 19% in Manhattan and 18% in the City.

From 1990 to 2000, the percentage of people living below the poverty level in the study area increased by 35%, as compared with a minimal change in the borough and a 21% increase in the City.[2]

6.3.1.3 Economic Conditions

The portion of the Upper East Side within approximately ½-mile of the site contains dense residential development, schools and other institutional uses. Ground-floor commercial establishments serving the neighborhood line First and Second Avenues, and several specialized commercial enterprises (such as wine shops, gourmet groceries and some restaurants) can be found on the side streets. Automobile-related uses, such as gas stations, repair, rental and garages are present along First Avenue and some side streets. The residents of the area are not necessarily employed within the same area and, likewise, the employees staffing the commercial and institutional establishments in the neighborhood do not necessarily reside there.

6.3.2 Future No-Build Conditions

6.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Manhattan CD 8 will remain about the same as current conditions.[3]

6.3.2.2 Economic Conditions

No notable changes to economic conditions are predicted for the area by 2006, although a new hotel will be in operation at East 91st Street and First Avenue.

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[2] Census 2000 may capture greater numbers of persons and families living below the poverty level than earlier census counts due to Service-Based Enumeration (SBE). The SBE operation was designed for Census 2000 to improve the count of individuals who might not be included through standard enumeration methods, and was conducted in service locations, such as shelters and soup kitchens, and at targeted outdoor locations.

[3] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

Regional projections indicate that employment in Manhattan CD 8 will remain about 7% of the borough total.[4]

6.3.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS represents the reactivation of solid waste transfer operations with added containerization functions at the site~~. Therefore, it~~, which would not result in socioeconomic changes in the study area. The land use patterns have not changed dramatically since this MTS discontinued its operation in 1998. Technical analyses indicate that no traffic, air, odor, noise or other impacts would result from the operation of the East 91st Street Converted MTS. ~~–~~No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

6.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the East 91st Street Converted MTS, and land use and neighborhood character analyses predict no adverse impacts (see Sections 6.2.3 and 6.8.3, respectively).

6.3.3.2 Direct Business and Institutional Impacts

The East 91st Street Converted MTS would not result in the direct displacement of businesses or institutional uses.

6.3.3.3 Indirect Business and Institutional Impacts

The East 91st Street Converted MTS would not result in indirect impacts to study area businesses or institutions. Of the few businesses located on nearby side streets that will once again serve as DSNY and other agency collection vehicle access routes (East 90th and 91st Streets between York and 1st Avenues), patronage would not likely be affected by the reactivation of solid waste transfer operations at the East 91st Street MTS. Since no adverse impacts to neighborhood

[4] Ibid.

character are predicted (see Section 6.8.3), and these businesses (in particular, Eli's grocery and the Vinegar Factory Restaurant) are entirely enclosed and rely primarily on pedestrian traffic, they would not be particularly sensitive to any associated increases in truck traffic on the street. As indicated in Section 6.14.4.4, no impacts to pedestrians are predicted, per CEQR screening methodology. The remain~~der of smaller~~ing businesses, located as they are on heavily traveled avenues, would similarly not likely be affected. The Asphalt Green recreation complex was constructed around the once active existing MTS entrance drive and ramp. The complex (building and field) is surrounded by protective fencing and landscaping to physically ~~and visually~~ buffer it ~~itself~~ from the existing MTS ramp that bisects the property. With the East 91st Street Converted MTS, visual buffering between the ramp and adjacent property would be provided by a wall designed for this purpose. (See Figure 2.2.3-7). Given this design and the fact that no operable windows open onto the entrance drive or face the MTS on FDR Drive, reactivation of the MTS would have minimal effects on the recreation center's function. Therefore, no indirect business and institutional impacts are predicted.

6.3.3.4 Employment Impacts

The East 91st Street Converted MTS is expected to generate a total of approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts (likely beyond the study area), the new workers would generate a minor amount of indirect economic benefits in the study area through local spending.

6.4 Community Facilities and Services

6.4.1 Existing Conditions

6.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼-mile and ½-mile of the site.

6.4.1.2 Summary of Community Facilities and Services

There are 10 community facilities in the primary study area and 25 in the secondary study area. These facilities and others serving the site but located outside the secondary study area are listed in Table 6.4-1 and shown on Figure 6.4-1.

6.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

6.4.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. The FDNY states that it would have no problem supporting the reactivation of the site (see Appendix A). No significant adverse impacts to service delivery are expected.

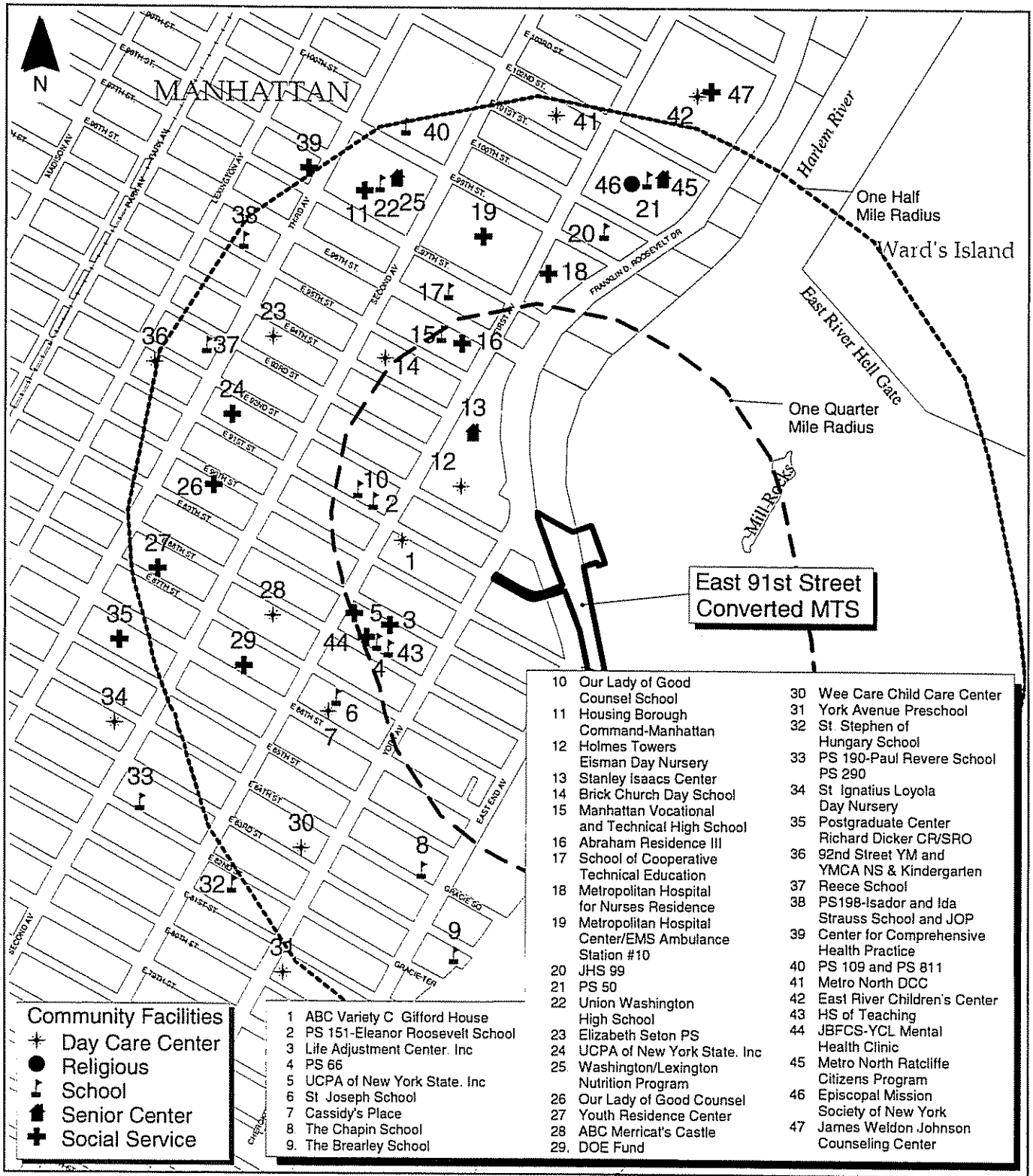
Table 6.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Day Care Centers	
ABC Variety C. Gifford House	404 East 91st Street
Holmes Towers Eisman Day Nursery	1794 1st Avenue
Schools	
P.S. 151 - Eleanor Roosevelt School	1763 1st Avenue
P.S. 66	421 East 88th Street
Our Lady of Good Counsel School	323 East 91st Street
High School of Teaching	421 East 88th Street
Senior Center	
Stanley Isaacs Center	415 East 93rd Street
Social Services	
Life Adjustment Center, Inc.	426 East 89th Street
UCPA of New York State, Inc.	400 East 89th Street
JBFCS-YCL Mental Health Clinic	421 East 88th Street
Within the Secondary Study Area	
Day Care Centers	
Cassidy's Place	419 East 86th Street
Brick Church Day School	62 East 92nd Street
Elizabeth Seton Pre-School	1675 3rd Avenue
ABC Merricat's Castle	316 East 88th Street
Wee Care Child Care Center	451 East 83rd Street
Religious	
Episcopal Mission Society of New York	1956 1st Avenue
Schools	
St. Joseph School	420 East 87th Street
The Chapin School	100 East End Avenue
The Brearley School	610 East 83rd Street
Manhattan Vocational and Technical High School	320 East 96th Street
School of Cooperative Technical Education	327 East 96th Street
J.H.S. 99	410 East 100th Street
P.S. 50	433 East 100th Street
Union Washington High School	1893 2nd Avenue
Reece School	180 East 93rd Street
Senior Centers	
Metro North Ratcliffe Citizens Program	1960 1st Avenue
Washington/Lexington Nutrition Program	1775 3rd Avenue

Table 6.4-1 (continued)
Community Facilities and Services

Name	Address
Social Services	
Abraham Residence III	336-338 East 96th Street
Metropolitan Hospital for Nurses Residence	1892 1st Avenue
Metropolitan Hospital Center/EMS Ambulance Station #10	1901 1st Avenue
UCPA of New York State, Inc.	1619-1623 3rd Avenue
Our Lady of Good Counsel	230 East 90th Street
Youth Residence Center	217 East 87th Street
DOE Fund	331 East 86th Street
Housing Borough Command-Manhattan	216 East 99th Street
Outside the Secondary Study Area	
Day Care Centers	
York Avenue Preschool	1520 York Avenue
St. Ignatius Loyola Day Nursery	240 East 84th Street
92nd Street YM and YMCA Nursery School & Kindergarten	1395 Lexington Avenue
Metro North Day Care Center	304 East 102nd Street
East River Children's Center	416 East 105th Street
Schools	
St. Stephen of Hungary School	408 East 82nd Street
P.S. 190 - Paul Revere School; P.S. 290	311 East 82nd Street
P.S. 198 - Isador and Ida Strauss School	1700 3rd Avenue
P.S. 109 and P.S. 811	215 East 99th Street
Social Services	
Postgraduate Center Richard Dicker CR/SRO(1)	220 East 86th Street
Center for Comprehensive Health Practice	163 East 97th Street
James Weldon Johnson Counseling Center	2201 1st Avenue

Note:
(1) CR/SRO = Community Residence/Single Room Occupancy



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

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Figure 6.4-1 Community Facilities and Services
East 91st Street Converted MTS

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6.5 Open Space

6.5.1 Existing Conditions

6.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

6.5.1.2 Summary of Open Space in the Study Area

There are 11 public parks and open spaces within the study area~~,~~ and three just outside to the north. They are shown on Figure 6.5-1 and listed in Table 6.5-1.

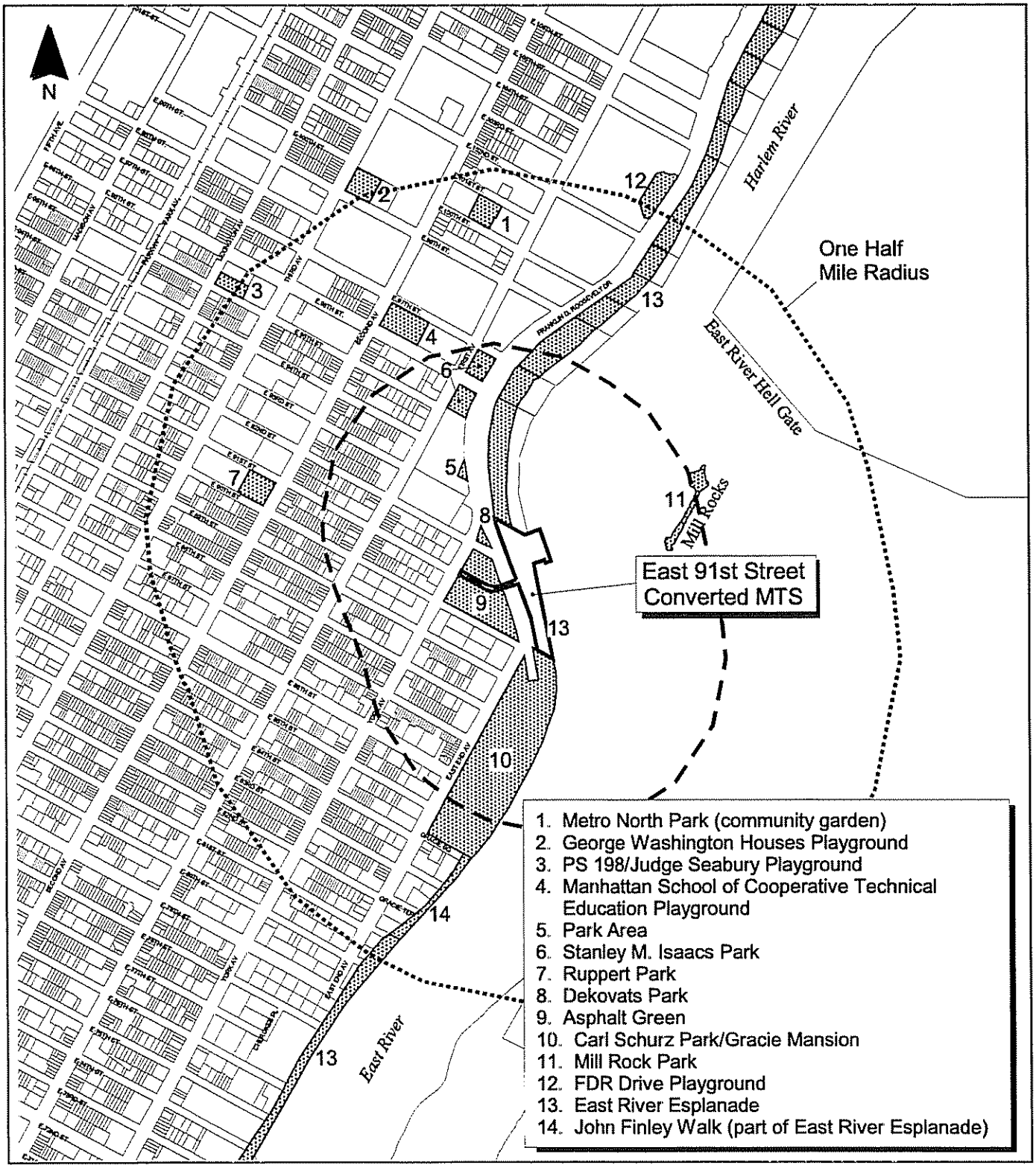
Of particular interest are the closest facilities: Asphalt Green, Carl Schurz Park ~~and~~, the East River Esplanade that runs along the water~~-~~, adjacent to the MTS and DeKovats Park. Asphalt Green is a 4.35 acre park and community facility that contains a variety of indoor and outdoor recreational opportunities, including an aquatics ~~center~~ center, private rooftop center, and playground north of the existing MTS ramp (between East 91st and 92nd Streets)~~,~~; and a gym, track and theater in the old municipal asphalt plant, and an outdoor field and track on the parcel between East 90th and 91st Streets, south of the ramp approximately 100 feet west of the MTS site.

Carl Schurz Park, is a 15-acre City park situated between East 84th Street (Gracie Square) and East 90th Street east of East End Avenue, is home to Gracie Mansion. It extends over the FDR Drive, approximately 200 feet south of the site. It features benches, play areas, a small-dog park, lawn and an esplanade that overlooks the waterfront and beyond.

The East River Esplanade follows the river and extends over three miles from just north of the Queensboro Bridge (East 63rd Street) north to the Triborough Bridge (East 126th Street). The Esplanade includes over 14 acres of pedestrian/biking space and passive recreation benches~~, outboard of the FDR Drive, to the north and south of Carl Schurz Park.~~ The northern portion of the Esplanade near the MTS site is accessible via a ramp from Carl Schurz Park at East 88th

Street, and the southern portion is accessible via stairs at Gracie Square. The paved esplanade is planted with trees and offers wonderful riverside views, but the park experience is greatly affected by its location beside the heavily-traveled FDR Drive.

DeKovats Park is located at East 92nd Street and the FDR Drive. This 0.05-acre greenspace is a landscaped traffic island, which does not offer direct space for public activity.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 6.5-1 Open Space/Parkland

East 91st Street Converted MTS

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Table 6.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Metro-North Park (community garden)	East 100th Street and East 101st Street, between First Avenue and Second Avenue	0.9
George Washington Houses Playground	Northeast corner of East 99th Street and Third Avenue	0.95
P.S. 198/Judge Seabury Playground	Northeast corner of East 95th Street and Lexington Avenue	0.79
Manhattan School of Cooperative Technical Education Playground	East 96th Street, East 97th Street and Second Avenue	1.47
Portion of Harlem River Park	FDR Drive and East 94th Street	0.25
Stanley M. Isaacs Park	Between FDR Drive and First Drive, East 95th Street and East 97th Street	1.23
Ruppert Park	East 90th Street, East 91st Street, and Second Avenue	1.0
DeKovats Park	FDR Drive and East 92nd Street	0.05
Asphalt Green	FDR Drive, York Avenue, East 90th and East 92nd Streets	4.35
Carl Schurz Park	East End Avenue, Gracie Square and FDR Drive	14.94
Mill Rock Park	Island in East River at approximately East 95th Street	8.64
FDR Drive Playground	FDR Drive and East 103rd Street	1.05
East River Esplanade	Along FDR Drive (and Carl Schurz Park), East 63rd Street to East 126th Street	--
John Finley Walk	Part of East River Esplanade, between East 81st Street and Gracie Square	--

6.5.2 Future No-Build Conditions

NYCDPR has no new long-term development plans or notable development projects associated with the open spaces in the study area, except for possible enhancements of Asphalt Green and the new irrigation and fencing to be installed at Ruppert Park several blocks west of the site that will be completed within the next few years. The site will remain DSNY property and the existing MTS will remain, though inactive.

6.5.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS would not introduce a new population to the study area and, therefore, the utilization of the nearby open spaces would not be increased. Although a new ramp would be constructed, it would follow the same footprint as the existing ramp; therefore, no parkland would be taken, and access between areas north and south of the drive would not be changed.

The site is, however, within close proximity to several open space resources, and its associated trucks would likely queue on the ramp that currently bisects the Asphalt Green complex and passes over the East River Esplanade. The results of the odor analysis (see Section 6.16), which analyzed potential effects of the queuing trucks and operations of the East 91st Street Converted MTS, indicate that there would be no odor impacts at the site boundary, along the esplanade, within Carl Schurz Park, or within the Asphalt Green property. Therefore, no permanent impacts to open space would result. (See Chapter 32 for discussion of potential impacts to open space associated with construction activities.) ~~to nearby sensitive receptors resulting from the queuing trucks or operations of the proposed East 91st Street Converted MTS.~~

6.6 Cultural Resources

6.6.1 Existing Conditions

6.6.1.1 Definition of the Study Area

The cultural resources study area is defined as that area within ½-mile of the site.

6.6.1.2 Development History of the Area

The study area is located in Yorkville, a historic neighborhood on the Upper East Side of Manhattan. It was once a rural village centered at East 86th Street and Third Avenue between the farmlands of Harlem to the north and the urban settlement of New Amsterdam to the south. By 1850, Yorkville was a predominantly German community about 1½ miles from the northern edge of the City. The hamlet could be reached from the City by a regularly scheduled stagecoach that ran to Third Avenue and East 86th Street. It was also home to Hazzard's roadhouse, the first stop for coaches carrying passengers from the Hell Gate Ferry at the eastern terminus of East 86th Street.

By the turn of the 20th century, Yorkville's population was more diverse, with the largest ethnic groups being Irish, Germans, Hungarians, Jews, Czechs, Slovaks and Italians, each living in distinct enclaves. The center of the neighborhood remained East 86th Street, which featured local commercial establishments.

Following the Civil War, squatters' shacks in the community were replaced by two-story houses for the wealthy, who moved to new luxury mansions and then apartment buildings on Madison, Fifth and Park Avenues in the late 19th and early 20th centuries. Many of these surviving buildings (some of which have become museums and other institutions) are now included in the Upper East Side Historic District, a locally and nationally recognized district. Many brownstones and tenements became or were replaced by multi-family dwellings with ground-floor shops. The Third Avenue elevated line began service in 1878 followed by the Second Avenue line the next year.

Tenement buildings, many of which still stand today, lined many of the easternmost streets and avenues. In fact, several on Second Avenue are historically notable and considered eligible for listing in the SRHP.

Gracie Mansion, originally the country home of Archibald Gracie, a successful Scottish businessman, is located at East 88th Street and East End Avenue overlooking the East River. In 1942, after several owners, additions and renovations, the 18th-century house became the mayor's official residence. The park in which Gracie Mansion is situated is named for Carl Schurz (1829-1906), a reformer, avid conservationist, editor of the New York Evening Post and The Nation, and the neighborhood's most famous 19th-century resident.

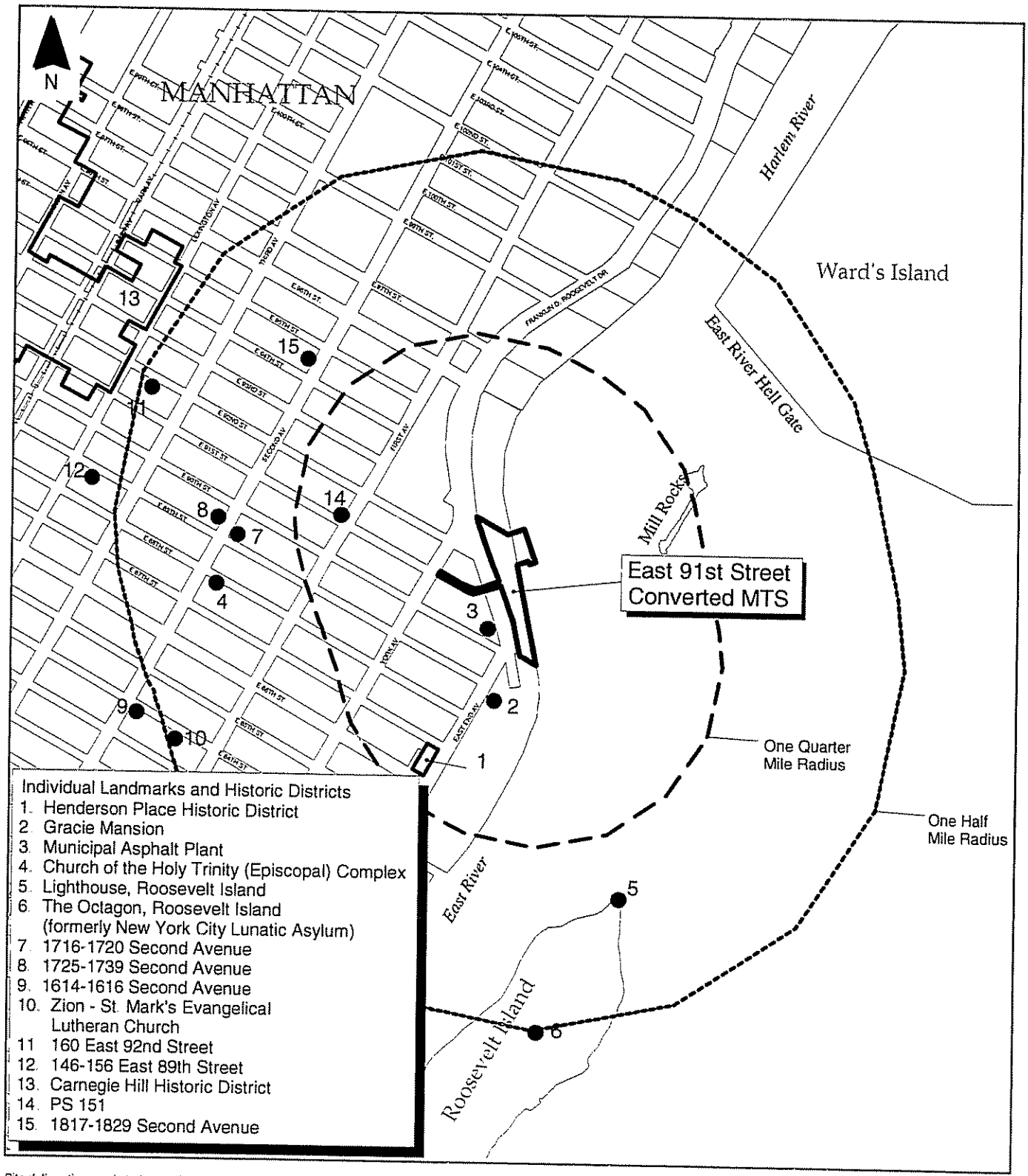
After World War II, the Third Avenue elevated line was dismantled and when many brownstones and tenements were demolished and replaced with high-rise apartment buildings, their eastern European residents moved to the suburbs. Gentrification in the years following continued to change the character of the neighborhood. Today, for example, the Rhinelander Mansion, once the home of the most influential family in Yorkville is now home to Ralph Lauren's Polo enterprise.

6.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

6.6.1.4 Historic Resources Within the Study Area

One historic district and several other historic properties are located within the study area, representing different stages of the neighborhood's development over the last 200 years (see Figure 6.6-1). These properties are listed in Table 6.6-1.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 6.6-1 Cultural Resources

East 91st Street Converted MTS

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Table 6.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Henderson Place Historic District	East End Avenue between East 86th and East 87th Streets	NYCL, NR
Gracie Mansion	East End Avenue at East 88th Street	NYCL, NR, SRHP
Municipal Asphalt Plant (now Asphalt Green Recreation Center)	FDR Drive at East 90th Street	NYCL, NR, SRHP
Church of the Holy Trinity Complex	316-322 East 88th Street	NR, SRHP
Lighthouse	Roosevelt Island	NYCL, NR, SRHP
The Octagon (Formerly the New York City Lunatic Asylum)	Roosevelt Island	NYCL, NR, SRHP
--	1716-1720 Second Avenue	(Individually eligible to the SRHP)
--	1725-1739 Second Avenue	(Individually eligible to the SRHP)
--	1614-1616 Second Avenue	(Individually eligible to the SRHP)
--	1817-1829 Second Avenue	(Individually eligible to the SRHP)
Zion-St. Mark's Evangelical Lutheran Church	339-341 East 84th Street	NR, SRHP
--	160 East 92nd Street	LPC
--	146-156 East 89th Street	NYCL, SRHP, NR
Carnegie Hill Historic District		NYCL, Eligible to SRHP
P.S. 151	1763 First Avenue	Individually eligible to the SRHP

Notes:
SRHP = New York State Register of Historic Places
NR= National Register of Historic Places
NYCL= New York City Landmark

6.6.2 Future No-Build Conditions

Several individual tenement buildings on Second Avenue and P.S. 151 on First Avenue have been determined to be eligible for listing on the SRHP. Except for these properties, there is no reason to anticipate the designation of other resources in this area in the near future. Even with their potential designation, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

6.6.3 Potential Impacts with the East 91st Street Converted MTS

Based upon its review, SHPO has stated that the East 91st Street Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, the SRHP and NR. The LPC has stated that the site contains no architectural or archeological significance (see Appendix A). The East 91st Street Converted MTS would not result in adverse impacts to cultural resources and no mitigation measures would be warranted.

6.7 Urban Design, Visual Resources, and Shadows

6.7.1 Existing Conditions

6.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 6.8-1). The site is separated from nearby residential uses by the FDR Drive and Carl Schurz Park, which itself screens some street-level views to the waterfront. Upper floors of apartment towers on East 91st Street and York Avenue likely have views of the site, as do outdoor field users of the Asphalt Green complex that borders both sides of the existing MTS entrance drive, and the users of East River Esplanade that runs along the river, beneath the MTS entrance ramp and adjacent to the facility itself. Due to the site's location on the waterfront, view corridors from points of waterfront access are the areas of primary concern in assessing potential impacts to urban design and visual quality.

6.7.1.2 Description of the Site

An existing inactive MTS is on the site. When it was operating, full DSNY trucks drove into the existing MTS (a 56-foot-tall prefabricated steel building), unloaded within the building and drove out of the building and off the property. The facility is accessible via a drive/ramp that bisects the Asphalt Green complex to the west. The ramp crosses above the FDR Drive and the East River Esplanade, entering an elevated platform over the water. There is no land portion of the site (see Figures 6.7-1 and 6.7-2).

6.7.1.3 Urban Design and Visual Resources of the Study Area

The East River Esplanade provides an attractive waterfront edge to Carl Schurz Park. It features benches and decorative fencing and lighting, and is wide enough to comfortably accommodate runners, walkers and cyclists (see Figure 6.7-3). Open views of the waterfront, Randall's Island, Astoria (Queens) and Wards Island are as attractive as the views of the nearby landscaped Carl Schurz Park. Traffic is unseen, as the FDR Drive runs beneath the esplanade in the



Figure 6.7-1 : View of East 91st Street MTS from adjacent East River Esplanade.



Figure 6.7-2 : View of East 91st Street entrance ramp on York Avenue, bisecting the Asphalt Green Complex.

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Figure 6.7-3 : View of East River Esplanade, facing south from approximately East 88th Street (FDR Drive visible beneath the esplanade).



Figure 6.7-4 : Ferry Terminal at East 90th Street.

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area of the park. The esplanade, which is elevated over the FDR Drive near the park, descends to the elevation of the FDR, running alongside the FDR north of the park, where a ferry terminal is located at East 90th Street (see Figure 6.7-4). Alongside the existing MTS, the esplanade is traversed by the access ramp to the MTS. Trees planted in the esplanade near the existing MTS and park streetlights soften the appearance of the structure's industrial facade.

Views toward the west from the esplanade are of the 20- to 30-story apartment towers located in the neighborhood below East 96th Street, including the George Washington Houses complex (see Figures 6.7-5 and 6.7-6). Further inland near these residences are the busy First and Second Avenue corridors, which are lined with active commercial and automotive uses. East End Avenue, an 11-block long street, is relatively quiet and lined almost exclusively with tall residential complexes with attractive views of Carl Schurz Park from the street.

6.7.2 Future No-Build Conditions

There are no plans for the site or surrounding environs that would lead to significant changes in urban design or visual conditions. The new residential developments on East 89th and East 91st Streets (see Section 6.2.2) would not alter the general visual quality or design of the study area. The anticipated Future No-Build Conditions, therefore, are fundamentally the same as Existing Conditions.

6.7.3 Potential Impacts with the East 91st Street Converted MTS

6.7.3.1 Visual Quality and Urban Design

The East 91st Street Converted MTS would resemble the existing MTS it would replace in terms of its building typology, massing and position and elevated access, as well as adjacency to the esplanade. However, it would stand nearly double in height (approximately 100 feet tall). Associated cranes used to transfer containerized waste to waiting barges are expected to be approximately 80 feet at their highest point. Additionally, the ramp will include 12- to 14-foot ~~noise~~ walls running along its edges, designed to hide queuing trucks on the ramp from users of the Asphalt Green complex. these~~which~~ will make the crossing over the FDR and esplanade more visually prominent, though without blocking significant views.

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Figure 6.7-5 : View south toward East 91st Street MTS from East River Esplanade at approximately East 92nd Street. The MTS is visible to the left and a portion of the Asphalt Green Complex is visible to the right, with high-rise residences on York Avenue visible in the distance.



Figure 6.7-6 : View south toward East 91st Street MTS from East River Esplanade at East 96th Street.

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The nearly 50-foot increase in height over the existing MTS is not expected to affect inland views toward the waterfront since these views are largely screened by trees within Carl Schurz Park, which is set approximately 20 to 25 feet above the MTS site elevation. The MTS site is visible from the East 88th Street ramp to the esplanade, ~~or~~ and from a vantage point further south on the Carl Schurz Park promenade. The closest possible views of the MTS – at the northern edge of the park near Gracie Mansion – are no longer open to the public. Views from nearer the waterfront, such as from the promenade, are already obstructed to some extent by the existing facility. The overall scale and appearance of the new facility would not likely contribute to a substantial change of views toward the waterfront from upper-story residential uses along East End Avenue.

It is assumed that the landscaping of the walkway near the existing MTS would be retained or replaced, and the esplanade and water area below the entrance around the facility would be properly maintained when the new facility is constructed and operating. As with the previous MTS operations, ~~The appearance of the new structure would resemble that of the existing one, with~~ the barges would be located on the northern side of the facility, which is less visible from the park and buffered from inland street-level views. Therefore, the new facility and reactivation of the former ramp would result in no significant impact to the visual quality of the area, and the urban design of the area would remain virtually unchanged.

6.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

These parks were identified within the shadow impact study area:

- Asphalt Green: ~~Asphalt Green includes 5½ acre sports and training campus across York Avenue between East 90th and 92nd Streets in Manhattan. Outdoor activities include an AstroTurf field for team sports, running track, basketball courts, two outdoor parks, and rooftop terrace overlooking the East River.~~

- East River Esplanade~~: Lying between the FDR Drive and the East River, the East River Esplanade extends over three miles from just north of the Queensboro Bridge (East 63rd Street) north to the Triborough Bridge (East 126th Street). The Esplanade includes over 14 acres of pedestrian/biking space and passive recreation benches.~~
- Carl Schurz Park~~/Gracie Mansion between East 84th and East 90th Streets, is home to Gracie Mansion, pedestrian/bikeways and playgrounds for multiple age groups.~~
- DeKovats Park: ~~Located at East 92nd Street and the FDR Drive, this 0.05 acre greenspace is a landscaped traffic island, which does not offer direct space for public activity.~~

There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the East 91st Street Converted MTS development.

An impact analysis of the 100-foot-tall East 91st Street Converted MTS and 80-foot-tall cranes determined that only two open spaces in the vicinity would be potentially affected by shadows. These two resources, Asphalt Green and the East River Promenade, would be affected to different degrees throughout the year. It should be noted that the existing 50-foot-tall MTS and ramp cast shadows on these resources currently, and the movement between Existing and proposed conditions is considered in this evaluation.

Asphalt Green: Analysis of December 21st indicates that the resource would not be affected by shadows. During the three other analysis periods, the northern portion of Asphalt Green would be shaded for 30 to 40 minutes in the early morning:(7:30 a.m. to 8:00 a.m. in March and June, 7:30 a.m. to 8:10 a.m. in May). As shadows would only affect lawn, benches and a playground for 30 to 40 minutes during three periods, ~~the East 91st Street Converted MTS is~~ this would not be considered ~~to cause~~ a significant shadow impact at this resource. (See Figure 6.7-7.)



Figure 6.7-7 Shadow Diagram

East 91st Street Converted MTS

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East River Esplanade: Similar to the existing MTS, ~~The~~ the East 91st Street Converted MTS would cast shadows on up to 200 feet of the 3.15-mile-long ~~Esplanade~~ esplanade adjacent to the MTS, for the following durations primarily in the morning hours:

- 7:30 a.m. – 11:00 a.m. (3 hours, 30 minutes) on March 21st;
- 7:30 a.m. – 11:50 a.m. (4 hours, 20 minutes) on May 6th;
- 7:00 a.m. – 12:10 p.m. (5 hours, 10 minutes) on June 21st; and
- 8:50 a.m. – 10:30 a.m. (1 hours, 40 minutes) on December 21st.

While five hours of shadow is a significant portion of the day, ~~the affected area of this resource is limited, comprising a small segment of the Esplanade.~~ This is not a new shadow. In addition, the majority of the uses of this section (biking and pedestrian activities) are transient and not dependent upon direct sunlight. These activities would be anticipated to continue in shadow for the minimal affected area. Due to the affected area's small size and the negligible impact on activities, the East 91st Street Converted MTS is not considered to cause a significant shadow impact at this resource.

6.8 Neighborhood Character

6.8.1 Existing Conditions

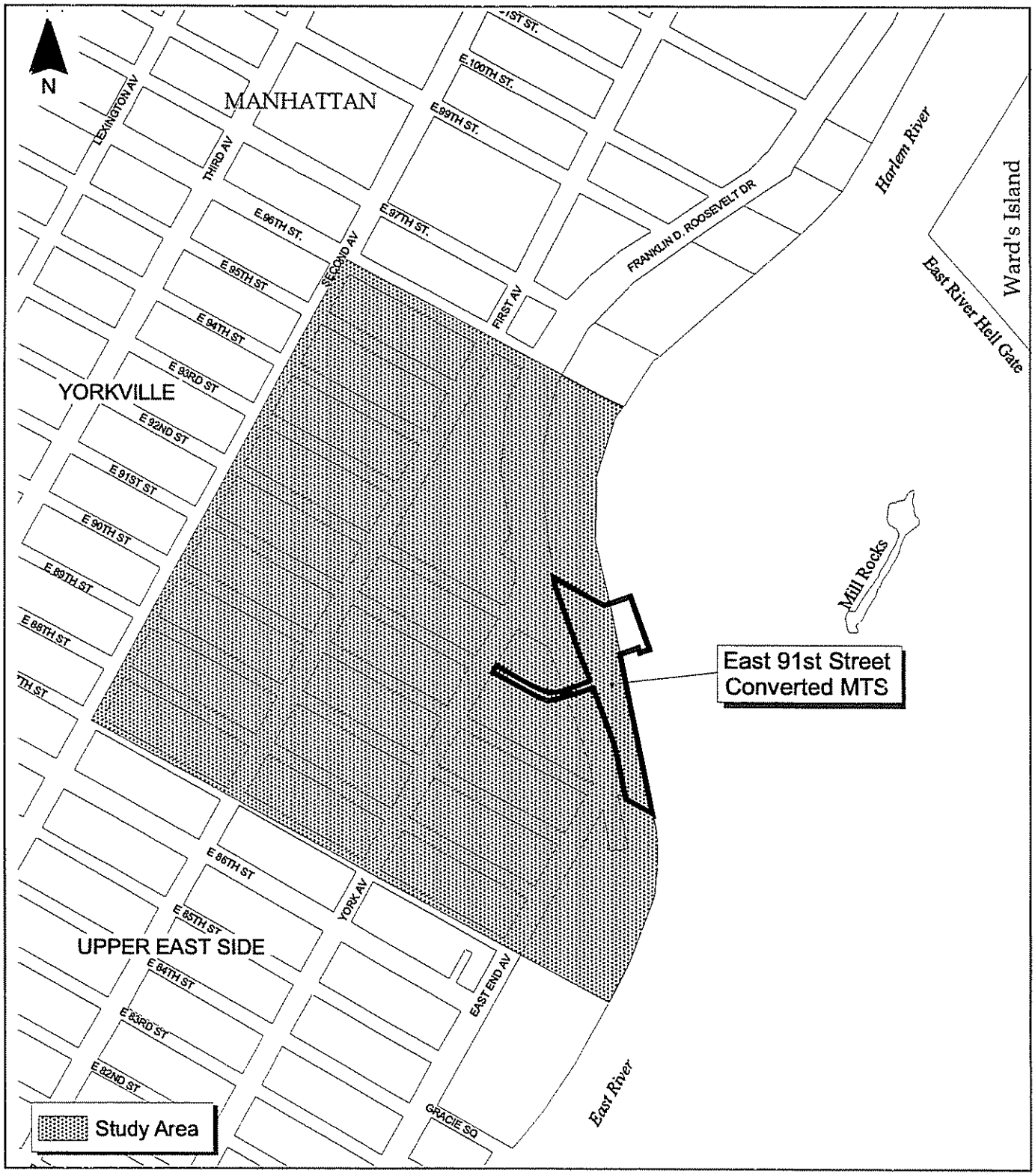
6.8.1.1 Definition of the Study Area

Unlike the other sites studied, this site is within fairly close proximity to both residential and open space resources, which are the two major factors contributing to the neighborhood character of the area. It is, however, somewhat separated from inland residential neighborhoods by the FDR Drive. Though the site is approximately 100 feet from the Asphalt Green complex and 200 feet from Carl Schurz Park, where Gracie Mansion is located, these park areas separate the residential areas from the site. The points of public access nearest the site are the East River Esplanade that runs outboard of the FDR Drive, and Asphalt Green. These two open space areas and Carl Schurz Park are included in the neighborhood character study area, which is defined by East 96th Street to the north, East 87th Street to the south, Second Avenue to the west and the East River shore to the east (see Figure ~~10-8.1~~6.8-1).

6.8.1.2 Description of Neighborhood Character

The visual quality of the area is pleasant, with well-maintained apartment blocks lining the streets, sidewalk trees and well appointed parks and recreational facilities. As with much of the Upper East Side, this area is conducive to pedestrians, though the nearest "convenience" stores (groceries, delis, etc.) tend to be located further west, along York Avenue and the busier First and Second Avenues, rather than East End Avenue. Lacking such commercial activity and given the 11-block length of East End Avenue, which is almost exclusively residential in the study area and not a major through street, the streets in that portion of the study area nearest the site are relatively quiet.

A few small warehouses and auto-related uses are intermingled with the residential uses in the interiors of three blocks south of East 92nd Street between York and First Avenues. Their presence, however, does not detract from the otherwise solidly residential nature of the area, either in appearance or in relatively limited activity, given that streets running through residential areas in Manhattan generally have more through traffic than many residential areas in other boroughs.



Site delineations and study areas are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 6.8-1 Neighborhood Location
East 91st Street Converted MTS

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Carl Schurz Park buffers the residential areas from the activity and visual presence of the FDR Drive, and in the study area the park extends over the highway, where a promenade provides access to the waterfront along the perimeter of the park and runs adjacent to the existing MTS.

The Asphalt Green complex is another major non-residential component, adding to the character and image of the neighborhood. Featuring several acres of outdoor sporting areas, as well as indoor pool and training facilities, the complex is an Upper East Side destination.

6.8.2 Future No-Build Conditions

There are no known plans for development on the site, the neighborhood parks or the overall study area, except for the construction of two multi-use/residential towers at 389 East 89th Street and at East 91st Street and First Avenue, both of which are fairly typical of the neighborhood. Therefore, it is reasonable to assume that Future No-Build Conditions will resemble Existing Conditions. The site will remain DSNY property and the existing MTS will remain standing.

6.8.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS is not expected to result in significant impacts on neighborhood character because it would be a reactivation of waste transfer facilities on a site formerly used for that purpose, although compared to Future No-Build Conditions, the re-introduction of trucks into the neighborhood would be noticeable. DSNY and other collection agency vehicles would utilize York Avenue south of East 91st Street, also a busy thoroughfare that accesses the FDR, in addition to East 90th Street and East 91st Street, and First and Second Avenues north of East 91st Street; however, no unmitigatible traffic impacts are predicted. (See Section 6.14 for a discussion of potential traffic impacts.) Likewise, technical analyses predict no significant adverse air quality, odor or noise impacts. (See Sections 6.15, 6.16 and 6.17, respectively, for discussions of potential air quality, odor and noise impacts.) As indicated in Section 3.16, no impacts to pedestrians are predicted, per CEQR screening methodology.

The proposed East 91st Street Converted MTS ~~potentially could result in impacts to neighborhood character, however, due to potential odor conditions. The~~ site is unique among sites analyzed in that in addition to its proximity to dense residential uses, its operation places trucks on a drive that bisects an open space and passes over a completed waterfront esplanade. ~~In these two particularly sensitive locations, the presence of DSNY trucks may be detectable if they are not kept clean at all times, and if liquid residue spills onto the drive and ramp nearby.~~ Detailed odor analyses that analyzed potential effects on these sensitive receptors predict no impacts, however. Likewise, no impacts to air quality (Section 6.15), and no impacts resulting from noise (Section 6.17) are predicted. Therefore, the East 91st Street Converted MTS result in no impacts to neighborhood character.

6.9 Natural Resources

6.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Manhattan. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the implementation of the East 91st Street Converted MTS.

6.9.1.1 Definition of Study Area

The study area includes the project site and the waterfront section that is bulkheaded and bounded by the Harlem River to the north and the East River to the south and east (see Figure 2.2.3-1). The upland sections of the study area and the surrounding neighborhood are completely developed and, therefore, have very limited terrestrial natural resources. Because the Future Build Conditions would include construction of a new MTS and dredging of bottom sediments, a description of aquatic communities is included.

6.9.1.2 Geology

Boring data from the City Department of Public Works drawing entitled "Record of Borings, Asphalt Green Sports and Recreation Center"[5] (September 16, 1980), indicated that no borings were collected within the footprint of the existing MTS. The closest borings were collected approximately 400 feet to the west and 1,500 feet to the southwest. Borings indicated that bedrock is expected at an elevation of 50 feet below grade (Borough of Manhattan datum) or shallower. The uppermost layer consisted of organic soils comprised of soft, dark gray to black organic soils, shells and thin clay and sand lenses. Based upon a review of data for sites in proximity to the East 91st Street site, it would be expected that a sand stratum would underlie these organic soils. Bedrock is described as hard, slightly weathered, gray fine-grained Gneissic schist. Previous boring data terminated in this stratum.

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[5]"Record of Borings, Asphalt Green Sports and Recreation Center," September 16, 1980, by the New York City Department of Public Works, as cited in the "MTS Conversion Conceptual Design Report," April 2003, by Greeley and Hansen, LLC.

Surface sediment collected from the site in 2003 indicates the sediment to be 94.5% silt and clay, 5.2% sand and 0.5% gravel, and to have 58,363 mg/kg TOC.[6] Sediment was found to be somewhat degraded due to contaminants in the sample material. The metals in the sediment with the highest concentrations were lead, barium and chromium (123.90 mg/kg, 72.18 mg/kg and 71.73 mg/kg, respectively).

6.9.1.3 Floodplains

The study area is within the 100-year coastal floodplain (see Figure 6.9-1). There are no wetlands other than the East River, which is a NYSDEC-designated littoral zone, located in the study area (see Figure 6.9-2).

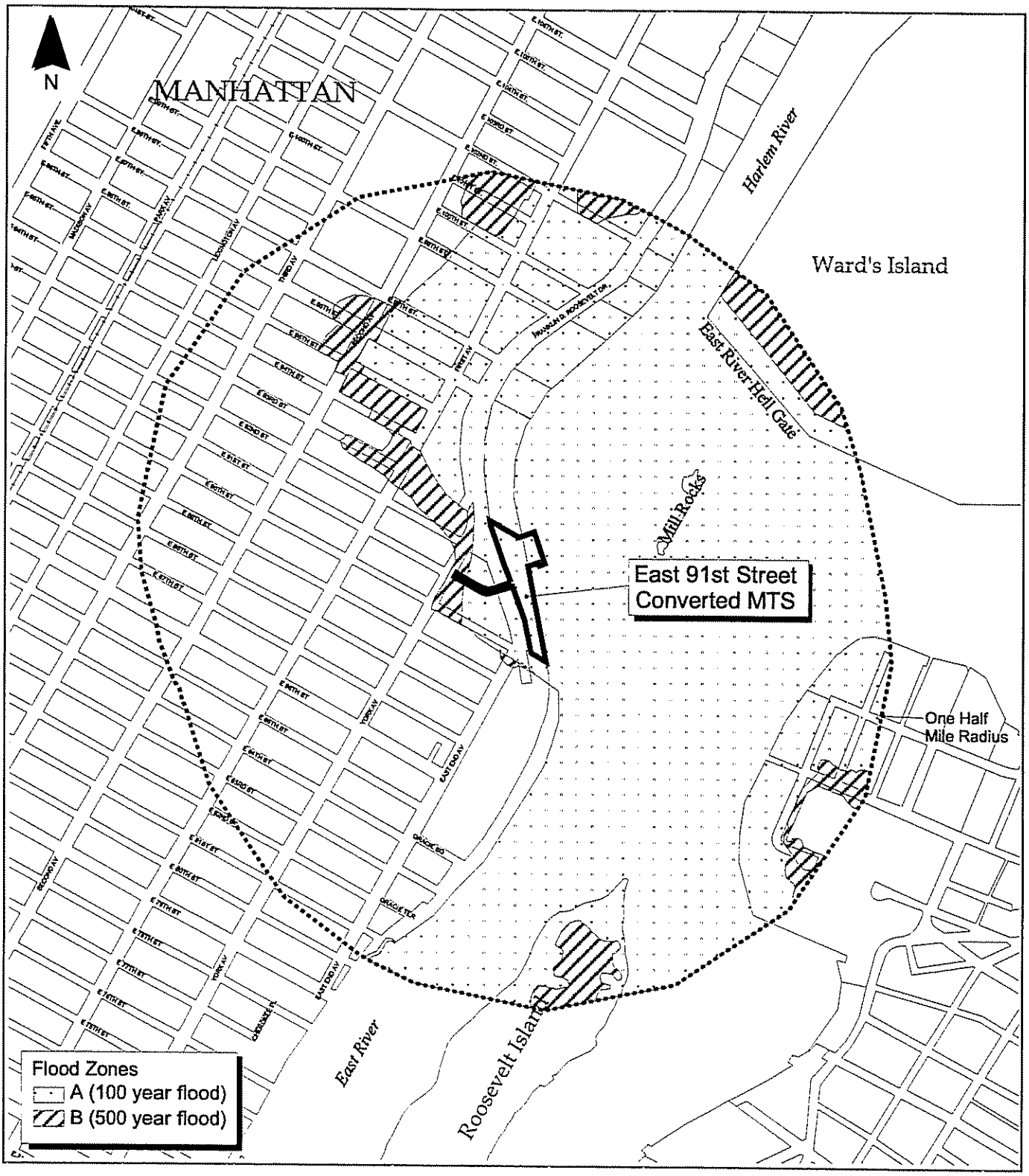
6.9.1.4 Ecosystems

The existing MTS is located on a platform above the East River and connected to Manhattan on the west side of the structure. The waters surrounding the study area are dominated by the East River, and aquatic resources are typical of the eastern sections of the East River. The terrestrial ecology of the upland portion of the study area is limited because the site is mostly developed and covered by structures and hard surfaces. The portions not developed have been altered by clearing and leveling and have no substantial ground cover other than opportunistic weeds.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the study area. The program included monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for benthic organisms and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

The most abundant finfish eggs collected at the East 91st Street Converted MTS were cunner (*Tautogolabrus adspersus*), bay anchovy (*Anchoa mitchilli*) and Atlantic menhaden (*Brevoortia tyrannus*). The most abundant larvae were winter flounder (*Pleuronectes americanus*), anchovy

[6] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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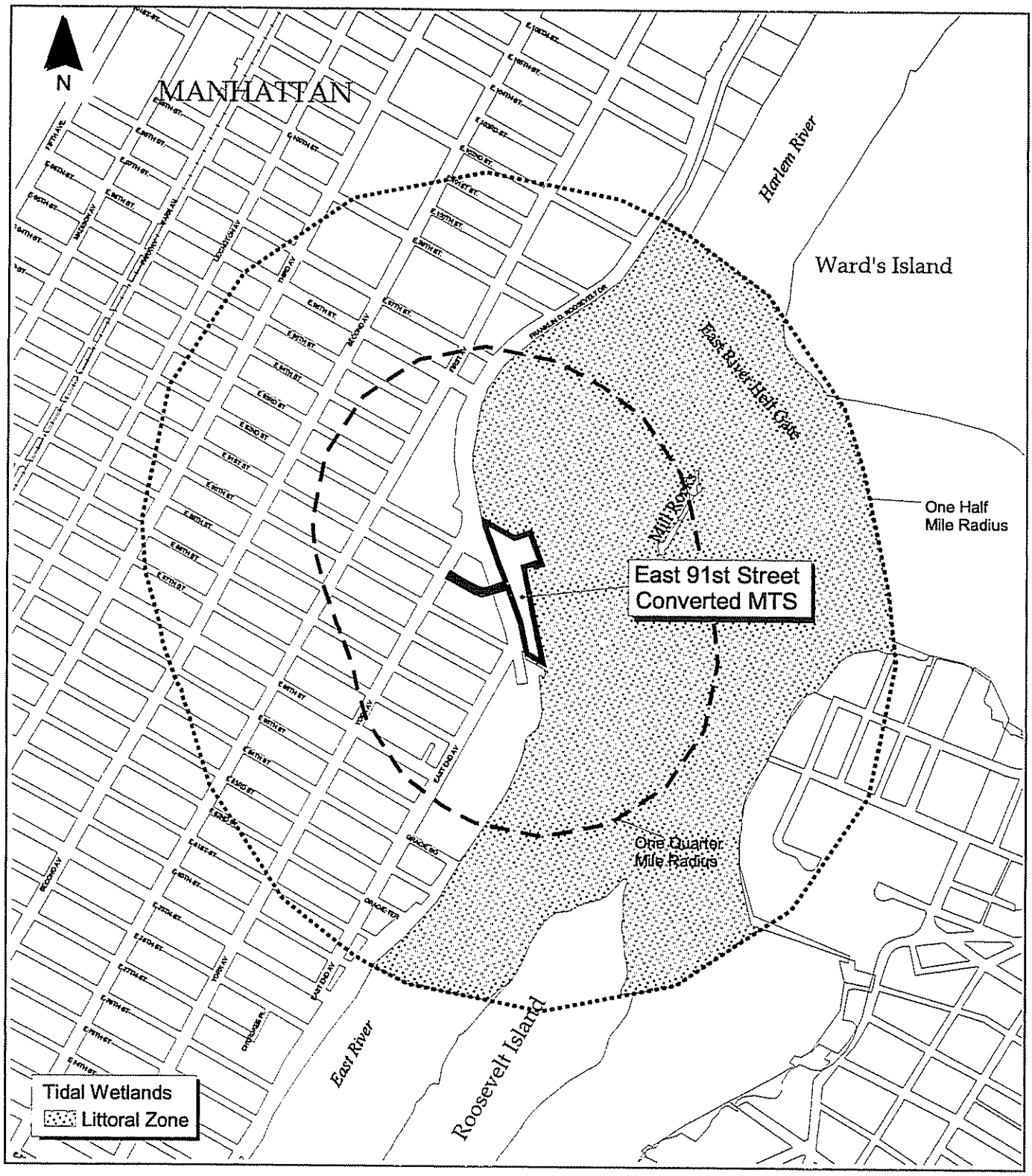
HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 6.9-1 Floodplains

East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.9-2 Wetlands

East 91st Street Converted MTS

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spp. (*Anchoa* spp.) and goby spp (*Gobiosoma* spp.).[7] Three species with an EFH listing were collected at the East 91st Street Converted MTS. Eggs and larvae of winter flounder and windowpane (*Scophthalmus aquosus*) and larvae of one summer flounder (*Paralichthys dentatus*) were identified during the sampling season.

The second highest number of benthic organisms was collected at the East 91st Street Converted MTS. The polychaete worm, *Streblospio benedicti*, was the most abundant and was present at approximately 61,000 individuals per square meter at this facility. A Jaccard's Index[8] suggested that the benthic community was less distinct than some of the other MTSs sampled. The most abundant epibenthic colonizers collected at the East 91st Street Converted MTS were *Corophium insidiosum* (amphipod), *Jassa falcata* (amphipod), *Polydora* sp. (polychaete worm), *Microdeutopus* sp. (amphipod), *Elasmopus levis* (amphipod), *Molgula manhattensis* (sea grape), and hydrozoa, mud and algal film.

The NYSDEC Natural Heritage Report on Rare Species and Ecological Communities reports the peregrine falcon (*Falco peregrinus*), a federally listed endangered species, to be found near the site on Wards Island and the Hell Gate Railroad Bridge.[9]

6.9.2 Future No-Build Conditions

If the East 91st Street Converted MTS were not to be built, the study area would remain as is. The absence of terrestrial natural resources would remain, and the upland portion of the study area would continue to be an ecologically unproductive and stressed urban area. Reasonably diverse and abundant aquatic natural resources would prevail in the waters in and around the study area.

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[7] Ibid.

[8] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs. The index ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

[9] Natural Heritage Report on Rare Species and Ecological Communities. Prepared by New York Natural Heritage Program, NYSDEC, Albany, New York, 2002.

6.9.3 Potential Impacts with the East 91st Street Converted MTS

6.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

6.9.3.2 Floodplains

The East 91st Street Converted MTS would have no effect on the elevation of the site. It would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the site over this level.

6.9.3.3 Ecosystems

The East 91st Street Converted MTS would be a pile-supported structure and would result in a net gain of ~~43,657~~42,612 square feet of pier over the water. During the demolition of the existing MTS, the upper organic silts lying ~~beneath the structure that was above water~~under that structure would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Construction would involve installing piles for the foundation supports and dredging to accommodate barges. The benthic and finfish community would be temporarily disrupted during this phase of the project. It can be anticipated that the benthic invertebrates would recolonize the area within 6 to 12 months and that finfish

would return to the area immediately following completion of the construction.[10] The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the East 91st Street Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Finfish eggs and larvae are more sensitive to suspended sediment, and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments. Winter flounder eggs were found at the East 91st Street ~~Converted~~ MTS site, but construction impacts are expected to be negligible.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the East 91st Street Converted MTS is for an increase in ~~43,657~~ 42,612 square feet of pier. This will result in increased shading that will block sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[11] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

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[10] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

[11] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[12] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. This increase in shading over water will possibly lead to a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

The East 91st Street Converted MTS would not have any significant impact on the few areas of vegetation present on the site. Vegetation observed on the site were invasive weed species that were not rare, endangered or particularly important from an ecological perspective.

The peregrine falcon (*Falco peregrinus*), a federally listed endangered species, is known to occupy areas close to the site (Wards Island and the Hell Gate Railroad Bridge); however, there are no sources showing the peregrine falcon to nest on the existing MTS. Use of this site is probably limited to flyovers during hunting and migration; therefore, no significant impacts would be expected.

[12] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

6.10 Hazardous Materials

6.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in ~~February~~ April, 2003 and included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps, as available, for the study area~~, if available,~~ and a Freedom of Information Law request to the FDNY for ~~UST~~ underground storage tank records. Standard ~~federal~~ Federal and ~~state~~ State environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was ~~attempted;~~ made on February 13, 2003. During the site boundaries reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains or odors. ~~however, access~~ Access to interior areas, including the fourteen-bay concrete tipping deck, toll booth, and bread room and the lower-level "vault room" was obtained on April 25, 2003.~~to the transfer station tipping deck and interior areas were not possible because of a padlocked gate at the end of the ramp on York Avenue. Therefore, site conditions are assumed based on historical and regulatory agency list reviews (2001 CEQR Technical Manual, Section 323). During the site boundaries reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors.~~ Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

6.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 6.10-1).

6.10.1.2 Delineation of Area of Concern

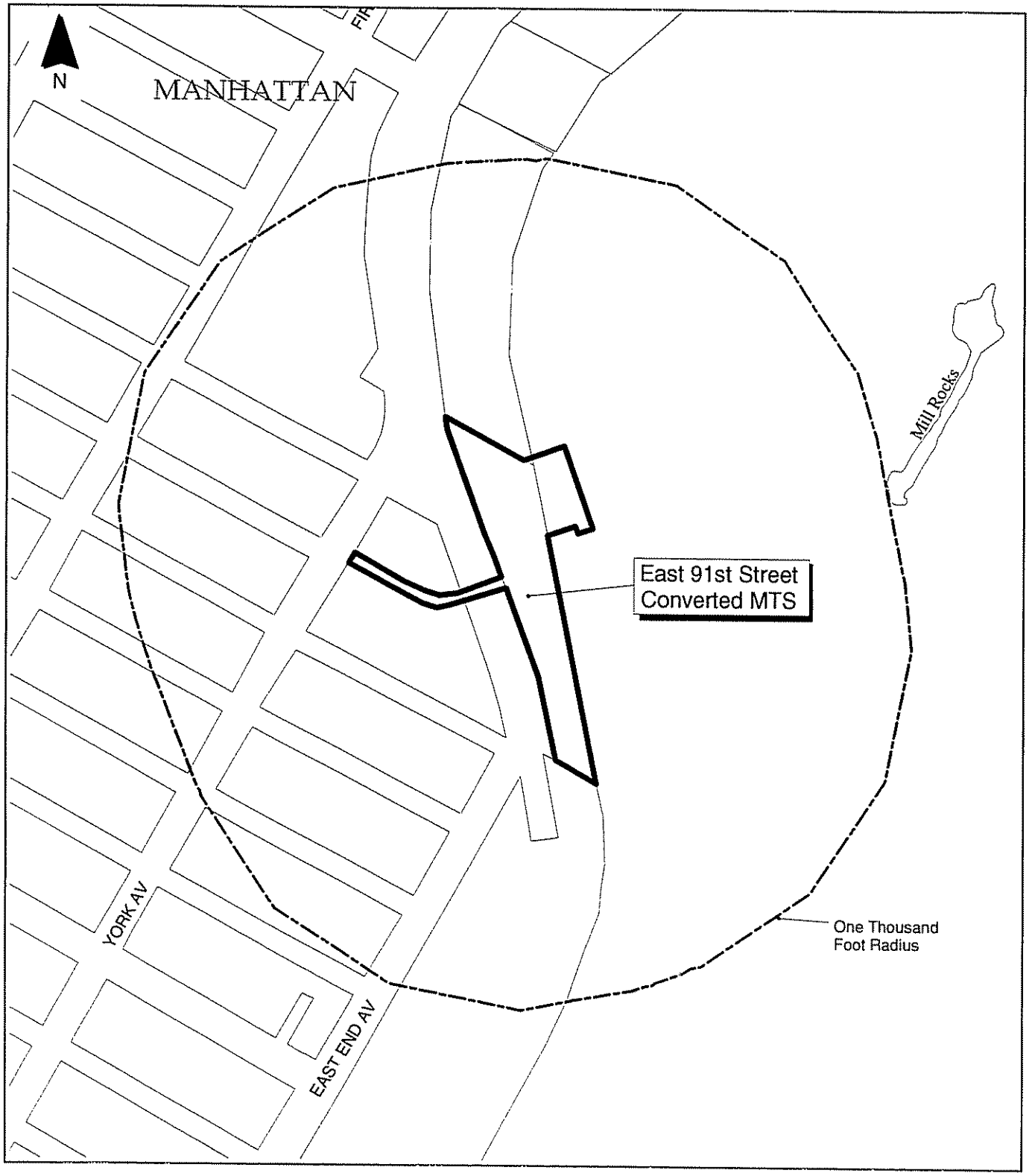
Areas of concern are defined as parts of the ground, groundwater, surface water or structures within the study area where the presence or likely presence of hazardous materials exists ~~and implementation~~for which modifications of the East 91st Street Converted MTS could lead to an increased exposure of people or the environment to those materials. No specific areas of concern at this site were identified ~~at this site~~ during the assessment.

6.10.2 Future No-Build Conditions

~~The existing MTS would remain standing and the site would remain as is~~Under Future No-Build Conditions, the existing East 91st Street MTS would continue as is. There would be no areas of significant concern with regard to hazardous materials.

6.10.3 Potential Impacts with the East 91st Street Converted MTS

Based on the information ~~that could be~~ obtained during this assessment, construction and/or ~~implementation~~ modification of the East 91st Street Converted MTS would not result in adverse impacts. No additional testing, other than an asbestos inspection prior to building demolition or modification would be required, ~~other than an asbestos inspection prior to building demolition or modification.~~. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 6.10-1 Hazardous Materials Sites

East 91st Street Converted MTS

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6.11 Water Quality

6.11.1 Existing Conditions

6.11.1.1 Definition of Study Area

The water quality study area encompasses the Harlem River and the East River, and includes discharges from CSOs located within ½-mile of the site.

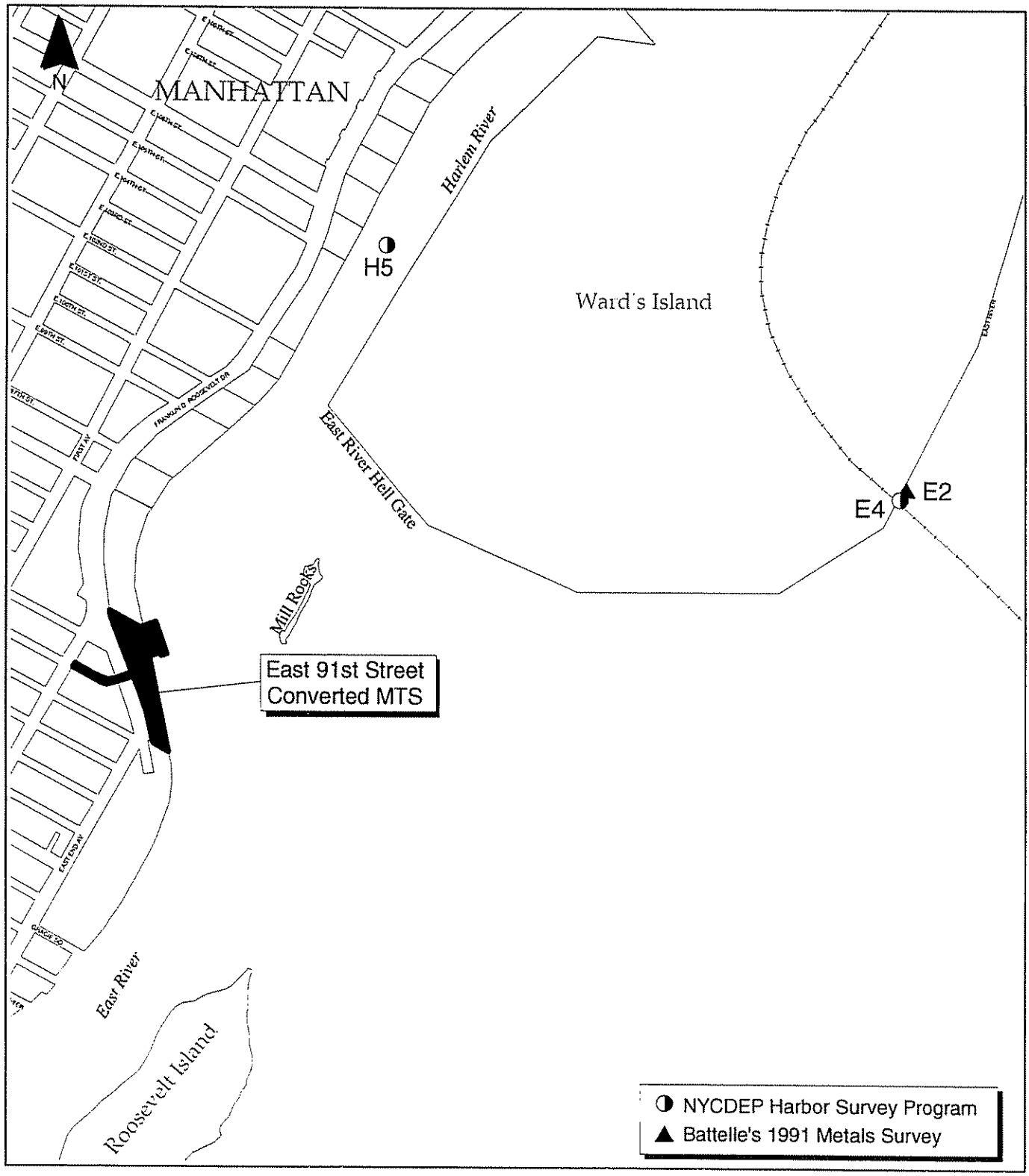
6.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 6.11-1, are generally representative of water quality conditions in the study area:

- NYCDEP Harbor Survey Program – Stations E-4 at Hell Gate in the East River and H-5 at 106th Street in the Harlem River; and
- Battelle's 1991 Metals Survey – Station E-2 at Hell Gate.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 6.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 6.11-1, on average, NYSDEC standards and guidance values are met. For Harbor Survey Station E-4, however, the minimum surface and bottom dissolved oxygen between June 1, 2003 and September 30, 2003 did not meet the water quality standard for dissolved oxygen. For Harbor Survey Station H-5, the minimum surface and bottom dissolved oxygen between June 1, 1999 and September 30, 1999 did not meet the water quality standard for dissolved oxygen. In addition, the mercury concentration for Battelle Station E-2 did not confirm to the water quality standard for mercury.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 6.11-1 Ambient Water Quality Stations

East 91st Street Converted MTS

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Table 6.11-1
Existing Water Quality Conditions and Standards
East 91st Street Converted MTS Study Area

Average Concentration					
Parameter	**Units**	**E-4[1]**	**H-5[2]**	**E-2[3]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	6.3[4]/3.2[5]	6.4[6]/3.9[7]	-------	4
Dissolved Oxygen (bottom/minimum)	mg/L	6.3[4]/3.0[5]	6.1[6]/3.7[7]	-------	4
BOD (surface)	mg/L	3.0[8]	2.8[8]	-------	-------
BOD (bottom)	mg/L	3.0[8]	3.1[8]	-------	-------
Total Coliform (surface)	MPN/100 ml	877[9]	497[9]	-------	10,000
Total Coliform (bottom)	MPN/100 ml	694[9]	690[9]	-------	10,000
Fecal Coliform (top)	MF	60	57	-------	2,000
Fecal Coliform (bottom)	MF	36[10]	57	-------	2,00
Total Suspended Solids (surface)	mg/L	14	10	-------	-------
Total Suspended Solids (bottom)	mg/L	14	13	-------	-------
NH_3-N	mg/L	0.556	0.398	-------	-------
(NO_3 + NO_2)	mg/L	0.382	0.424	-------	-------
Total Phosphorous	mg/L	0.190	0.446[11]	-------	-------
Dissolved PO_4	µg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	1.95	3.4	-------	-------
Arsenic	µg/L	-------	-------	-------	36 [12, 13]
Cadmium	µg/L	-------	-------	0.139[12]	7.7 [12, 13]
Chromium	µg/L	-------	-------	-------	50 [12, 13]
Copper	µg/L	-------	-------	4.495[14]	5.6 [13, 14]
Lead	µg/L	-------	-------	1.51[12]	8 [12, 13]
Mercury	µg/L	-------	-------	0.008404[12]	0.0026 [12, 13]
Nickel	µg/L	-------	-------	2.1[12]	8.2 [10, 11]
Silver	µg/L	-------	-------	0.0542[12]	------
Zinc	µg/L	-------	-------	9.28[12]	66 [12, 13]
Cyanide	µg/L	-------	-------	-------	1.0 [13]

Notes:

[1] Average concentrations for 2003 NYCDEP Harbor Survey site E-4, located at Hell Gate in the East River.

[2] Average concentrations for 1999 NYCDEP Harbor Survey site H-5, located at 106th Street in the Harlem River.

[3] Average concentrations for 1991 Battelle Ambient Survey site E-2, located at Hell Gate in the East River.

[4] Represents average between January and December 2003.

[5] Minimum between June 1, 2003 and September 30, 2003.

[6] Represents average between March and December 1999.

[7] Minimum between June 1, 1999 and September 30, 1999.

[8] Latest available data 1997.

[9] Latest available data 1996.

[10] Latest available data 1999.

[11] Latest available data 1998.

[12] Guidance values and data are for dissolved metals.

[13] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata January 1999 and addendum April 2000).

[14] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

BOD = biochemical oxygen demand

NH_3-N = ammonia

NO_3 = nitrate; NO_2 = nitrite

PO_4 = phosphate

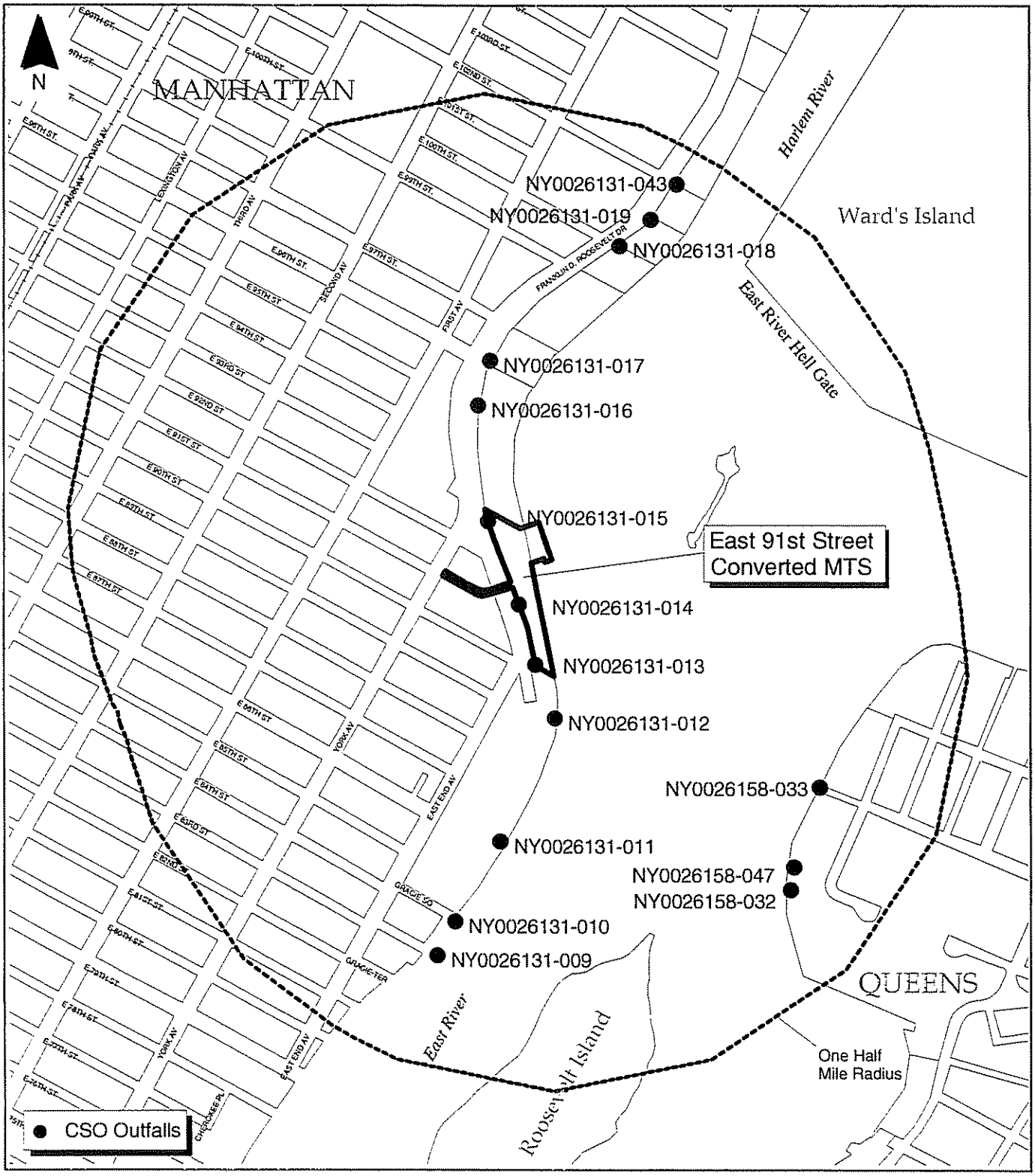
Notes for Table 6.11-1 (Continued)
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

6.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there are 15 permitted discharges in the vicinity of the site. The existing discharges within a ½-mile radius are listed in Table 6.11-2 and shown in Figure 6.11-2. These discharges are all permitted by the NYSDEC.

Table 6.11-2
Existing Permitted Discharges
East 91st Street Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
East 83rd Street/Ward's Island	NY0026131-009	New York	East River
Gracie Square/Ward's Island	NY0026131-010	New York	East River
Carl Schurz Park/Ward's Island	NY0026131-011	New York	East River
Carl Schurz Park/Ward's Island	NY0026131-012	New York	East River
East 90th Street/Ward's Island	NY0026131-013	New York	East River
East 91st Street/Ward's Island	NY0026131-014	New York	East River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-015	New York	Harlem River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-016	New York	Harlem River
East 96th Street/Ward's Island	NY0026131-017	New York	Harlem River
East 100th Street/Ward's Island	NY0026131-018	New York	East River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-019	New York	East River
East 102nd Street/Ward's Island	NY0026131-043	New York	Harlem River
Terminus of Astoria Boulevard/Bowery Bay	NY0026158-047	Queens	East River
Terminus of 27th Avenue/Bowery Bay	NY0026158-033	Queens	East River
100 feet south of Astoria Boulevard/Bowery Bay	NY0026158-032	Queens	East River



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.11-2 Permitted Outfalls and CSO Locations East 91st Street Converted MTS

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6.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, an estimate of existing stormwater pollutant loadings was calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% infiltration and/or storage. A runoff flow of 0.073 cfs was calculated using the impervious site area (1.22 acres), an average rainfall intensity of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 6.11-3, represent the existing loads at the site.

Table 6.11-3
Estimated Existing Pollutant Loads and Runoff Flows
East 91st Street Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	13,399[1]
BOD mg/L	11	4
Heavy Metals		
Copper µg/L	35	0.014
Lead µg/L	28	0.011
Zinc µg/L	154	0.061
Total Impervious Area (acre) = 1.22		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Volume (cfs) = 0.073

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

6.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

6.11.3 Potential Impacts with the East 91st Street Converted MTS

All solid waste processing at the East 91st Street Converted MTS would occur within structures on the site. All process wastewater from waste handling operations in the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the Ward's Island WPCP, where it would be treated prior to discharge to the East River and, therefore, would not adversely affect water quality.

Stormwater loads and impervious area, shown in Table 6.11-4 would be expected to increase above Existing Conditions. According to the 208 Model, however, the increased loads would have no significant impact on water quality in the adjacent surface waters.

Table 6.11-4
Impervious Area and Estimated Pollutant Loads
East 91st Street Converted MTS

			Estimated Pollutant Loadings/Incremental Change[1]				
Conditions	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	1.22	0	13,399/NA	4/NA	0.014/NA	0.011/NA	0.061/NA
Future Build Conditions	1.78	0.56	19,595/6,196	6/2	0.020/0.006	0.016/0.005	0.089/0.028

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

Unimpeded operation of the East 91st Street Converted MTS may also require dredging to refurbish the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired before such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate

any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant long-term impacts.

6.12 Waterfront Revitalization Program

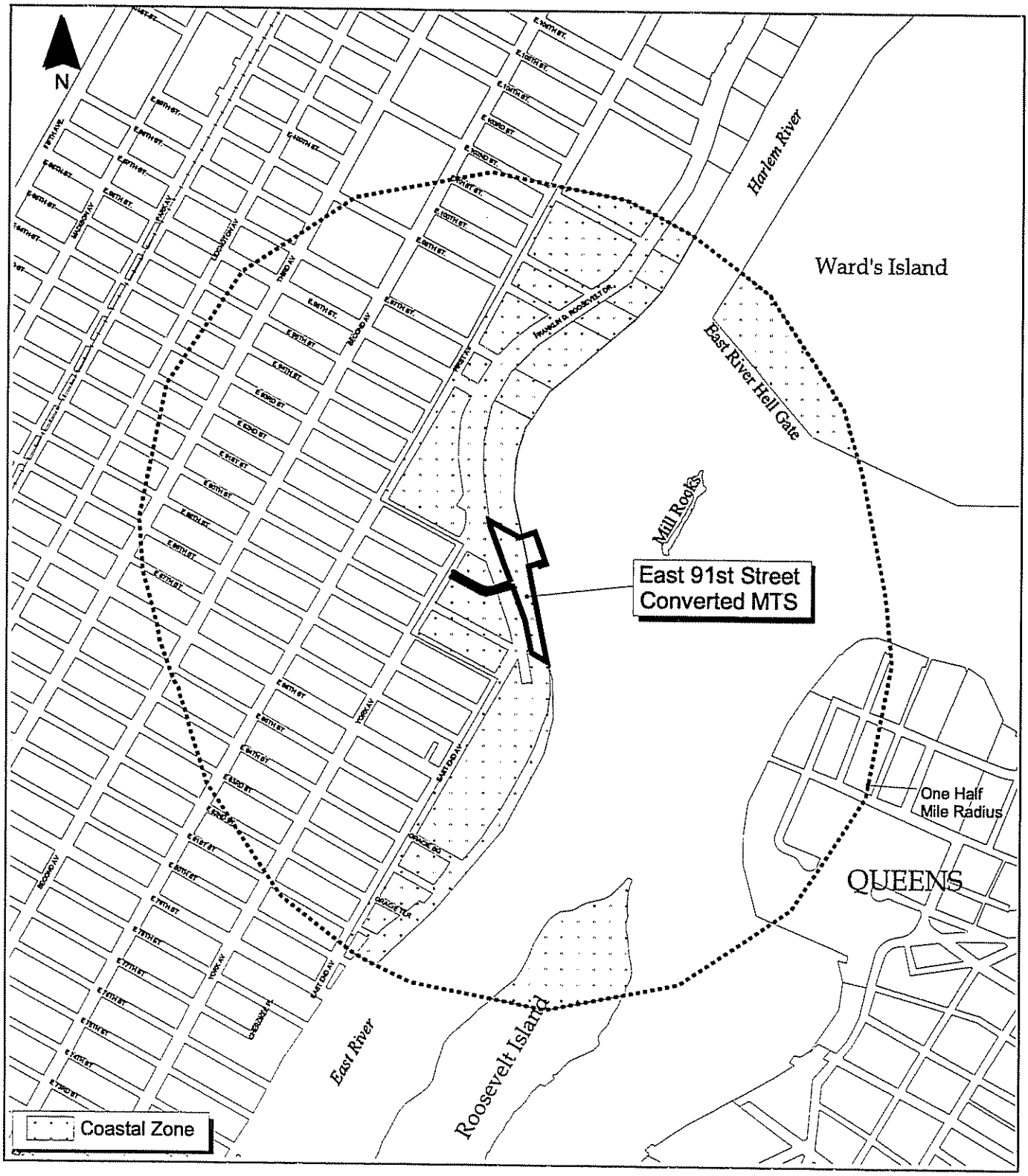
6.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the East River, the East 91st Street Converted MTS would be within the City's coastal zone boundary (see Figure 6.12-1). According to "The New Waterfront Revitalization Program," the East 91st Street Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 1/The East Side as indicated within the "New York City Comprehensive Waterfront Plan-Reclaiming the City's Edge" and the "Plan for the Manhattan Waterfront." It is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The East 91st Street Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3and 10.2. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the East 91st Street Converted MTS. A description of waste handling operations that would occur at the East 91st Street Converted MTS is provided in Section 2.2.3.

6.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 6.12-1 Coastal Zone Boundary
East 91st Street Converted MTS

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1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the East 91st Street Converted MTS. As part of the East 91st Street Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City's coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The East 91st Street Converted MTS would not be located within an SMIA. Its development would involve the removal of the ~~existing~~ Existing MTS and construction of a new MTS built primarily over water on pile-supported platforms. The East 91st Street Converted MTS would involve the conversion of the existing MTS from a truck-to-barge waste transfer station into a TCB MTS that would transport DSNY-managed Waste by marine transport to remote out-of-City disposal facilities. The demolition and redevelopment of the East 91st Street Converted MTS site, as described in Section 2.2.3, would largely represent the continuation of an existing industrial and water-dependent use. The East 91st Street Converted MTS would serve to maintain this use, while restoring and revitalizing existing industrial waterfront property. The redevelopment and expansion in size of the existing structure would be consistent with the previous industrial land use at the site. Although the East 91st Street Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an expansion of an existing water-dependent use and would be compatible with existing uses. The East 91st Street Converted MTS would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The East 91st Street Converted MTS would involve the demolition of the existing MTS. The existing vehicle access ramp, which crosses over the FDR Drive, would be removed and extended to accommodate the design of the East 91st Street Converted MTS. Waterfront construction would involve ~~three~~ four primary components: (1) the enclosed processing building, which includes the tipping floor, loading floor and pier level; (2) the outdoor gantry crane system; (3) elevated access ramp; and (4) a ~~rehabilitated bulkhead~~new and fendering system.

The East 91st Street Converted MTS would require minor dredging to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once it became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 *Minimize conflicts between recreational, commercial, and ocean-going freight vessels.*

The East 91st Street Converted MTS would be located within the East River and would be expanded from its existing footprint. Once operational, it would allow for the containerization of solid waste by a TCB system and marine transport to out-of-City disposal sites. Due to the high currents at the site location, barge maneuvering would require the use of tugboats rather than DSNY personnel. Mill Rock Park, a two and a half acre island that sits in the East River, off 96th

Street, poses a navigational hazard to vessels using the waterway in the vicinity of the proposed site. An existing ferry landing (water taxi) is located at east 90th Street immediately south of the proposed site. An increase in vessel traffic would result from the operation of the proposed East 91st Street Converted MTS. However, ~~t~~These operations would be comparable to those previously conducted at the site, which did not result in conflicts with recreational, commercial or ocean-going freight. The use of tugboats and the day-to-day operation of the East 91st Street Converted MTS would not, therefore, interfere with any maritime industrial, commercial or recreational vessel activities in the area.

3.3 *Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The ~~existing~~ Existing MTS managed solid waste through a truck-to-barge system where loose waste was placed in open barges. The East 91st Street Converted MTS would be a TCB MTS where waste would be transferred into containers that would be sealed and placed into flat deck barges that would transport DSNY-managed Waste to remote out-of-City disposal facilities. All containers would be loaded and sealed inside an enclosed processing building before being placed on the barges, thereby minimizing any impacts to the aquatic environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would also be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environments. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with all applicable federal, state and local regulations.

The "Plan for the Manhattan Waterfront" for this area recommends renovating the fireboat pier for commuter service, which has been subsequently developed. As part of the New York City Economic Development Corporation (NYCEDC) East River Ferry Landings Project, an expanded ferry landing (water taxi) is proposed for East 90th Street. The project would involve redevelopment of the existing pier construction of sheltered passenger areas and a floating dock for use in accessing the ferry. The waterfront plan also specifically mentioned the existing East 91st Street MTS and that it should be taken into consideration when siting a ferry at this location. The existing ferry service in the vicinity of the East 91st Street Converted MTS is not anticipated to be affected by the DSNY facility. Therefore, the East 91st Street Converted MTS would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, Recognized Ecological Complexes and SCFWH information, the site would not be located within any designated areas. Although the East 91st Street Converted MTS would involve the removal and replacement of existing pilings and pier structures, it would represent an expansion of a previous use and would not be anticipated to result in any long-term effects to natural resources in the vicinity of the site. As discussed in Section 6.9.3, disturbances to surficial sediments due to construction of the East 91st Street Converted MTS and/or potential dredging would have short-term and minimal effects on the benthic community found in the immediate vicinity of the site.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and NWI maps was conducted. As discussed in Section 6.9.1, the site contains no freshwater wetlands. A majority of the East 91st Street Converted MTS would be within the East River, however, which is identified as a littoral zone, a state-designated wetland. The demolition of the existing inactive MTS and subsequent development of the East 91st Street Converted MTS would result in limited, short-term ~~impacts~~ effects upon ~~to~~ these tidal wetlands.

~~Impacts~~ Effects to littoral zones would be minimal due to previous waterfront uses at and in the immediate vicinity of the site, and permitted dredging activities that have historically occurred at the site. Minor dredging would be required to provide adequate draft for staged barges and navigational depths for tugboat maneuvering. Potential ~~impacts~~ effects upon wetlands due to dredging would be minimal and of limited duration. All dredging would be done in compliance with applicable federal, state and local regulations. ~~Mitigation for potential~~Potential ~~impacts, if required~~effects upon wetlands~~,~~ would be ~~proposed~~ addressed during the environmental review and permitting of the East 91st Street Converted MTS. DSNY, in coordination with the NYSDEC and other involved agencies, would determine the appropriate measure to address potential effects that may occur due to the East 91st Street Converted MTS and would effectively restore these wetlands and their associated value.

4.3 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

There are no known vulnerable fish or plant species found within the vicinity of the site. However, during a field sampling program in 2003, three non-vulnerable fish species managed under the Magnuson-Stevens Act were

collected at the proposed site. Eggs and larvae of winter flounder (*Pseudopleuronectes americanus)* and windowpane (*Scopthalmus aquosus*) and summer flounder (*Paralichthys dentatus*) larvae were identified. The habitat in the immediate vicinity of the proposed site does not represent the ideal habitat as identified in the EFH descriptions for these species. Therefore, the proposed action ~~wouldnot~~would not result in significant adverse impacts to these species.

A review of the NYSDEC Natural Heritage Report on Rare Species and Ecological Communities reports the Peregrine Falcon (*Falco peregrinus*) as a known species found in the area and as being classified as a federally endangered species. ~~As noted in Section 6.9.3,~~ Ithe East 91st Street Converted MTS would not impact these species or their habitats.

The East 91st Street Converted MTS would involve the demolition of an existing MTS. The MTS would remain as an over-water facility. Waterfront development would include an enclosed processing building, which includes the tipping floor, loading floor and pier level; an outside gantry crane system; and a new fendering ~~and bulkhead~~ system. Development would involve minor dredging; however, potential impacts to plant, fish and wildlife species would be minimized and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any dredging activities.

In addition, all handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer systems. Stormwater runoff from the East 91st Street Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The East 91st Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The East 91st Street Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the processing floor would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system, which would include an oil-water separator, and then discharged to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the East 91st Street Converted MTS would be managed in accordance with applicable regulations.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the East 91st Street Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The East 91st Street Converted MTS would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the processing building, limiting the risk of an introduction of hazardous wastes or other pollutants into the environment. In addition, litter control methods would be implemented at the facility to minimize or eliminate the potential for litter to enter surface waters.

5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

The majority of the demolition and removal of the ~~existing~~ Existing MTS structure and foundations and construction of the East 91st Street Converted MTS would occur within the East River. During removal of the existing pile-supported

MTS, disturbances to the upper organic silts may occur, resulting in re-suspension of the sediments. The ~~alignment of the~~ existing vehicle access ramp would be ~~salvaged~~ demolish and ~~would remain; however, it would be extended over the East River~~ replaced to accommodate the new design. Minor dredging would be necessary to provide sufficient depths for barges and tugboats. Potential impacts due to dredging would be localized, however, and of short duration. All dredging would be in accordance with applicable federal, state and local regulations and removed materials would be disposed of at a permitted upland facility.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The East 91st Street Converted MTS would result in no adverse impact to the quality or quantity of surface or ground water at or in the immediate vicinity of its site. Applicable and appropriate measures would be implemented at the East 91st Street Converted MTS in accordance with federal, state and local regulations. The East 91st Street Converted MTS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

According to review of the FEMA National Flood Insurance Program maps, the ~~entire~~ majority of the East 91st Street Converted MTS site is located within the 100-year flood plain boundary (Zone A) and the ramp extends into the 500-year flood plain (Zone B). The East 91st Street Converted MTS would be located at the site of the existing MTS, but have an expanded footprint. The ~~existing~~ Existing MTS would be demolished to an elevation below the waterline to accommodate the expanded function, size and configuration of the East 91st Street

Converted MTS. The redevelopment of the site would not affect the potential for flooding or erosion. All demolition and redevelopment activities would comply with applicable building code requirements and, to the extent practicable, non-structural or structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The East 91st Street Converted MTS would involve the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Waste would be transported in airtight, waterproof, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding water body. Sufficient container and barge capacity would be available to meet the requirements of the collection area. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the East 91st Street Converted MTS. Litter control methods would be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. The East 91st Street Converted MTS would not result in adverse impacts and would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

On-site storage of petroleum or hazardous materials related to the operation of the East 91st Street Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. Spill prevention and control plans would be used to prevent any hazardous materials from entering the environment.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

The East 91st Street Converted MTS would be a stand-alone, water-dependent facility on the East River. It would generally be located at the site of the existing MTS. The proposed vehicle access ramp would cross over the FDR Drive and would go over the East River Esplanade, which runs along the waterfront, adjacent to the proposed site. Access to the esplanade or the waterfront would not be impacted from the access ramp, as the ramp would be located above the esplanade and would not block access to the waterfront. Public access would generally not be compatible with the East 91st Street Converted MTS; however, its conversion would not impact existing, nor preclude any future, development of public access. Several parks are located within the study area that would allow for continued physical, visual and recreational access to the waterfront.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

Public access would not be compatible with the principal use of the site due to the industrial activities. As discussed in Section 6.5.1, there are several parks providing public access and recreation facilities that are located in the immediate vicinity of the East 91st Street Converted MTS. The East 91st Street Converted MTS would not preclude future development of public access at other locations along the East River.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

The East 91st Street Converted MTS would be an expansion of an existing water-dependent facility. It would remain compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. As discussed in Section 6.7.3, the East 91st Street Converted MTS would be consistent with this subpolicy. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

Located south of the East 91st Street Converted MTS is Carl Schurz Park, which is physically separated from the site by the FDR Drive. In addition, the esplanade that runs adjacent to the existing MTS would not be affected by the new facility. Expansion and redevelopment of the existing MTS would cause no new impacts to these areas and, therefore, the East 91st Street Converted MTS would be consistent with this subpolicy.

8.5 Preserve the public interest in and the use of lands and waters held in public trust by the state and city.

The East 91st Street Converted MTS would involve the conversion of the existing MTS from a truck-to-barge waste transfer station into a TCB MTS that would transport DSNY-managed Waste by marine transport to remote out-of-city facilities. In order to allow for the efficient operation of the proposed facility, development of the facility would require development within an area approximately 42 by 272 feet, which is currently state-owned lands under water. As a result the East 91st Street Converted MTS would occupy approximately 0.25 acres of currently state-owned land.

The use of this land is required because the facility is limited in its ability to extend westward due to the presence of the FDR Drive, the esplanade and Asphalt Green. Likewise, the operational requirements of the facility limited the reorientation of barge operations along the northern or southern edges of the facility. The relocation of barge operations along the north or south portion of the facility would have resulted in additional impacts to visual quality and or scenic resources. The DSNY would apply for a River Bed ~~Easement~~ Grant from the New York State Office of General Services for that portion of the proposed facility, which would be located on state lands under water. The request for a ~~n easement~~ grant would represent the minimum amount of state-owned lands in accordance with the goals, standards and criteria presented for this subpolicy in the WRP. The granting of ~~an easement~~ grant for this small area at the East 91st Street Converted MTS would, in no way, diminish or affect other public lands under water. It would also not significantly affect public trust uses, such as recreation or public access, which are already partially limited due to previous uses and the physical characteristics of the waterbody at this site (i.e. high river velocities).

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The East 91st Street Converted MTS would be expanded from its existing footprint; however, it would not result in a significant impact to visual quality, as noted in Section 6.7.3. Views from the existing promenade, which runs adjacent to the East 91st Street site, are already obstructed to some extent by the existing facility. The East 91st Street Converted MTS would resemble the existing MTS in terms of its building typology, massing and position and elevated access, as well as adjacency to the esplanade. In addition to its close proximity to the esplanade, the proposed MTS would be in the vicinity of the Asphalt Green complex and Carl Schurz Park, where Gracie Mansion is located. The closest possible views of the MTS from Carl Schurz Park are from the northern edge of the park, near Gracie Mansion, which are no longer open to the public. The overall scale and appearance of the new facility would not likely contribute to a substantial change of views toward the waterfront from inland areas. It would involve the redevelopment of an existing water-dependent facility. Based upon the information discussed in Section 6.7.3, the East 91st Street Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The East 91st Street Converted MTS would be an expansion of an existing MTS facility and would pose no new impacts to scenic values associated with natural resources. The East 91st Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

According to the "Plan for the Manhattan Waterfront," the Municipal Asphalt Plant (Asphalt Green Recreational Center), listed as a City landmark on the NR, is located adjacent to the existing MTS ramp; however, as noted in Section 6.6.3, the East 91st Street Converted MTS would have no impacts on this resource. Therefore, the East 91st Street Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources have been identified on the site. Therefore, the East 91st Street Converted MTS would have no impact on such resources.

6.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

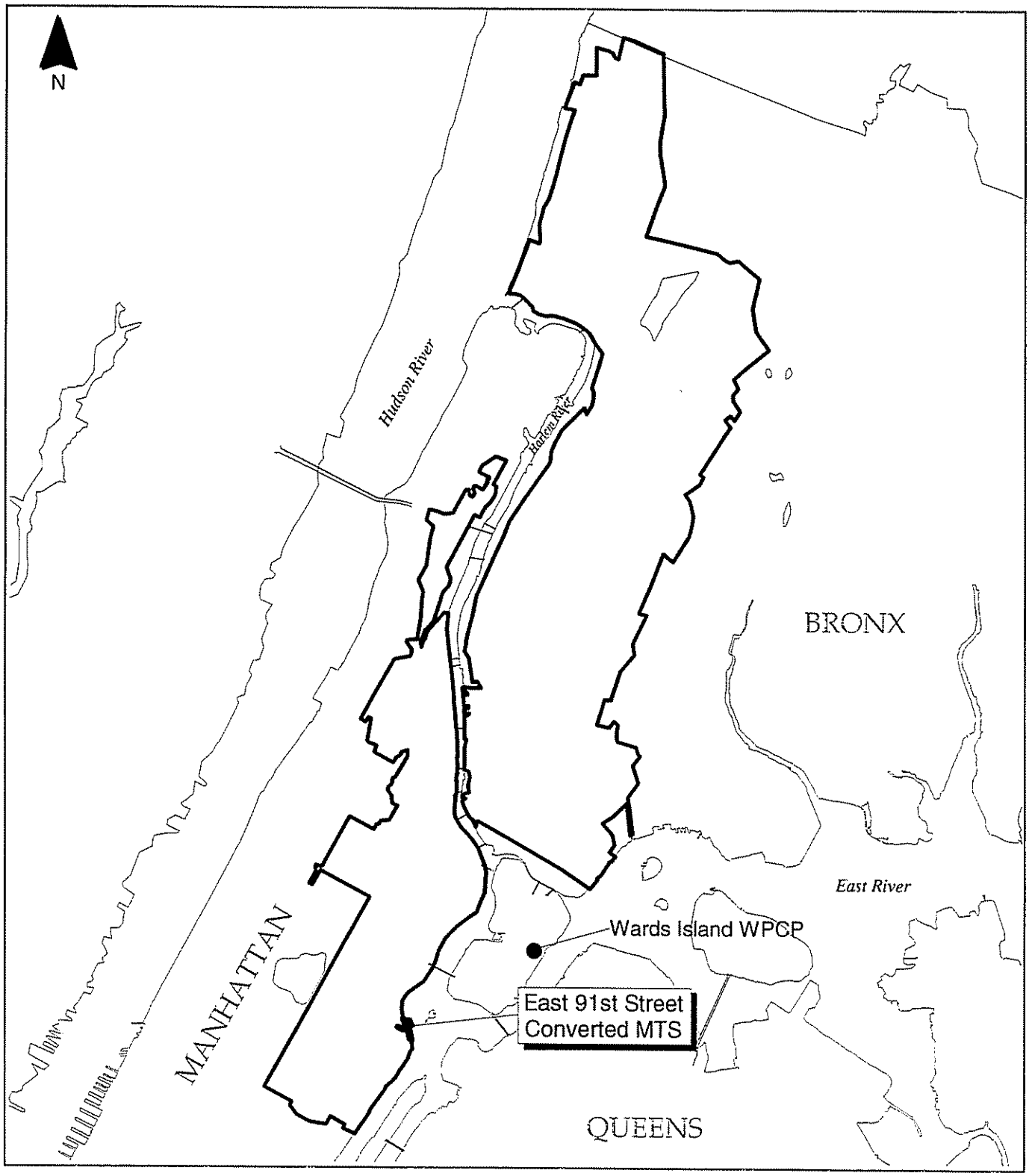
6.13.1 Existing Conditions

6.13.1.1 Water Supply

Water is supplied to the ~~existing~~ Existing East 91st Street MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. An off-site 6-inch-diameter line at East 91st Street provides potable water for both consumption and sanitary requirements. Water pressure throughout the City system is generally maitnained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual). To ensure that adequate pressure is provided on site, the potable and fire water systems are currently supplemented with a pump.

6.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Wards Island WPCP, which serves the eastern section of Manhattan generally bordered by 70th Street, 190th Street and Amsterdam Avenue/Central Park. Wards Island WPCP also serves portions of the western Bronx. The WPCP drainage area is illustrated in Figure 6.13-1. From July 2002 through June 2003, the Wards Island WPCP treated an average of 181 mgd of wastewater under dry weather flow conditions and an average flow of 193 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (see Table 6.13-1). The maximum dry weather flow during this period was 206 mgd during June 2003 and the maximum average flow was 216 mgd during June 2003. Effluent from the plant is discharged into the East River and is regulated by the NYSDEC under the SPDES. The current SPDES permit limit for flow to the Wards Island WPCP is 275 mgd. It is estimated that on-site employee water usage is about 75 gpd. This estimate is based on the current security staff of three security employees (one guard per shift, three shifts per day) using 25 gallons per person, per day (2001 CEQR Technical Manual). No other potable water is used as the facility is not currently accepting waste, and no operational personnel are assigned to the site.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1 0 1 Miles

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Figure 6.13-1 Existing WPCP Drainage Area
East 91st Street Conversion MTS

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Table 6.13-1
Average Monthly Dry Weather and Average Flows
Wards Island Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow[1](1) (mgd)
July 2002	175	179
August	182	191
September	172	190
October	173	196
November	173	192
December	185	195
January 2003	179	188
February	185	198
March	191	201
April	181	191
May	169	177
June	206	216
Average Effluent	**181**	**193**

Notes:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

A 12-inch-diameter sewer on East 91st Street serves the site. This sewer is connected to a 5.25-foot-by-4.25-foot interceptor line (combined sanitary and stormwater system) that runs north along York Avenue where waste is directed to the Wards Island WPCP. Stormwater runoff from the existing MTS parking area and ramp are routed to catch basins that discharge to the combined sewer system.

6.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the existing MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately four pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

6.13.1.4 Energy

Electricity to the facility is provided by Consolidated Edison of New York. A review of applicable utility plans shows electric lines along York Avenue and East 91st Street, with the ~~existing~~ Existing MTS service connected to the Consolidated Edison system at the intersection of York Avenue and East 91st Street. As the facility is currently not operating, the East 91st Street MTS utilizes a negligible amount of energy due to the low staffing levels that provide only security at the site.

6.13.2 Future No-Build Conditions

The ~~existing~~ Existing East 91st Street MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near Existing Conditions levels for security employees. Wastewater flows to the Wards Island WPCP would continue to increase and would be projected to be 194.4 mgd by 2006.

6.13.3 Potential Impacts with the East 91st Street Converted MTS

6.13.3.1 Water Supply

The East 91st Street Converted MTS would have a total of up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The East 91st Street Converted MTS would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

6.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the East 91st Street Converted MTS, the small quantities of wastewater sent to the Wards Island WPCP would not significantly impact the sewage flow rate or the ability of the Wards Island WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 194.4 mgd in 2006, which would be well below the permitted capacity of 250 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

6.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the East 91st Street Converted MTS and would not significantly impact the system.

6.13.3.4 Energy

The East 91st Street Converted MTS would require an additional 5.51E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the East 91st Street Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the East 91st Street Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts.

6.14 Traffic, Parking, Transit, and Pedestrians

6.14.1 Introduction

The East 91st Street Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

6.14.2 Existing Conditions

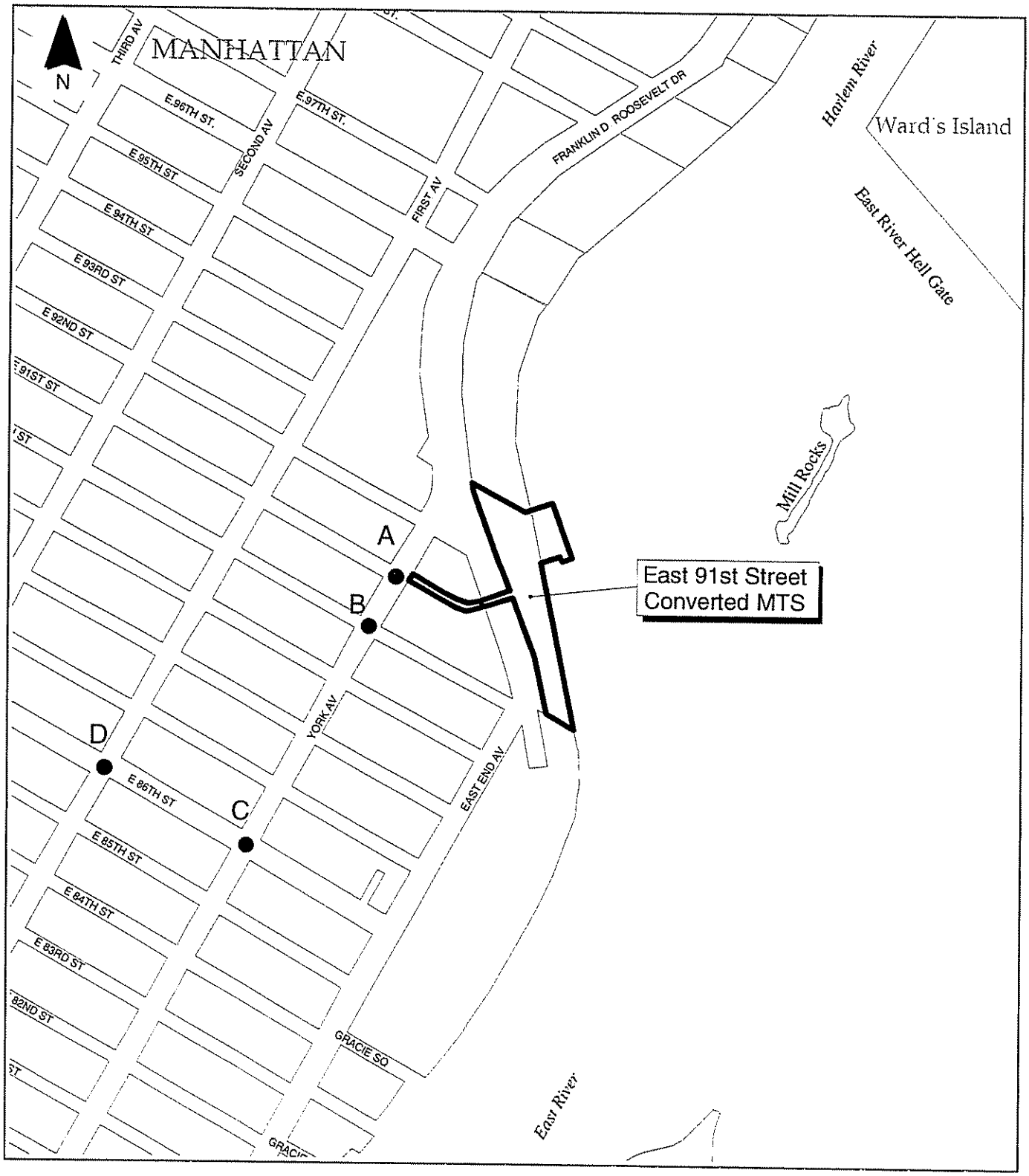
6.14.2.1 Definition of Study Area

The traffic analysis study area is relatively limited, existing entirely within the Upper East Side (Yorkville) neighborhood of Manhattan, and is focused primarily along the York Avenue and East 86th Street corridors. This study area is predominantly residential with ground-floor commercial uses. There are no CEQR-defined areas of concern located within the study area. Figure 6.14-1 shows the locations of the intersections selected for analysis (locations A through D). Intersections analyzed were selected using the procedures defined in Section 3.16.

All collection vehicles must access the site from York Avenue and East 91st Street. Section 6.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the East 91st Street Converted MTS.

6.14.2.2 Surface Network

One major highway, the FDR Drive, services the study area. First Avenue, Second Avenue and East 86th Street are local truck routes that provide access to and from the site. A map showing all major truck routes and local truck routes in Manhattan is provided in Section 3.16 (see Figure 3.16-4).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 6.14-1 Traffic Analysis Study Area
East 91st Street Converted MTS

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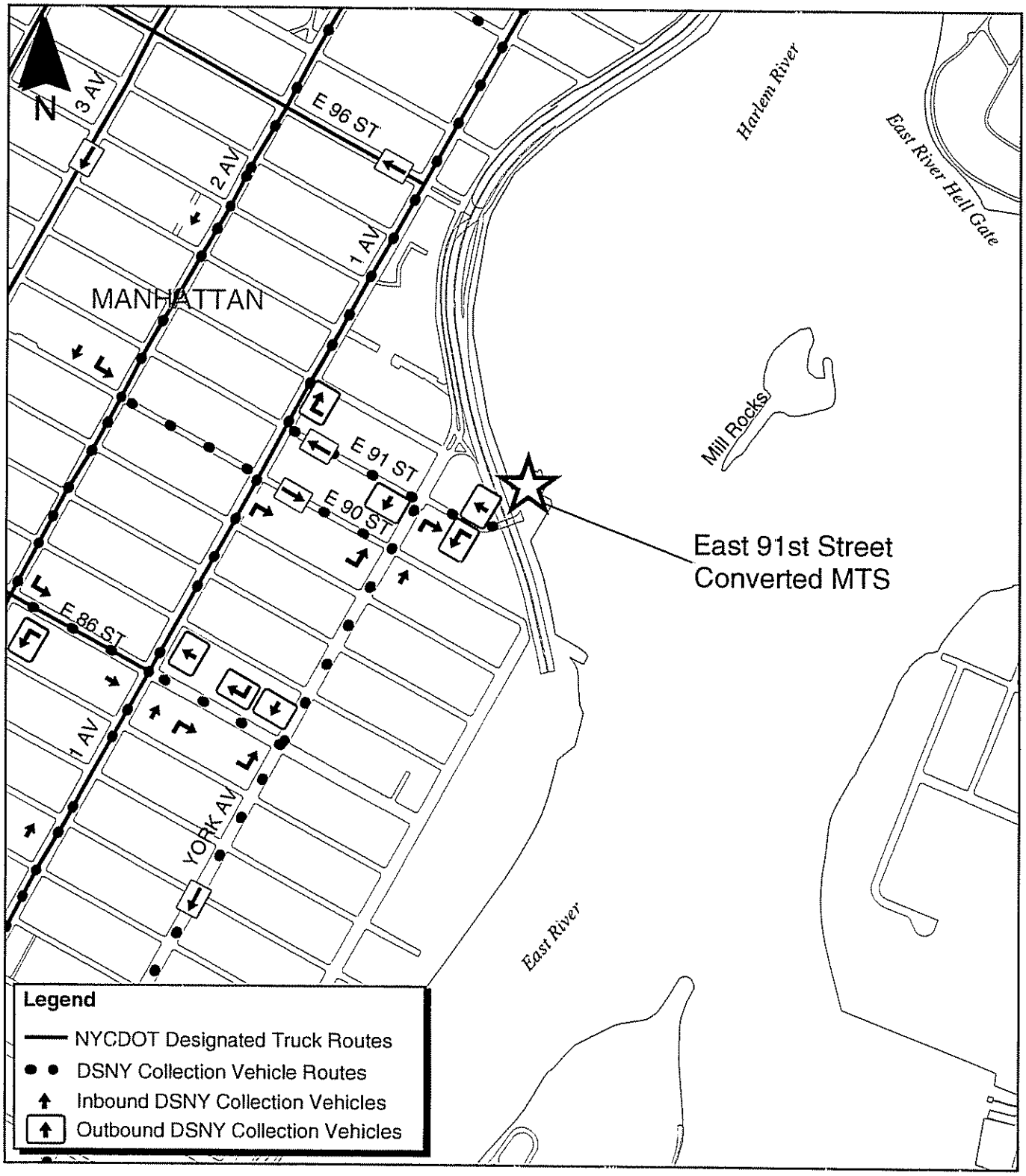
First Avenue and Third Avenue are principal arterials that provide northbound access from lower Manhattan (East Village/Lower East Side) to East Harlem. Second Avenue is a principle arterial that provides southbound access from East Harlem to lower Manhattan. York Avenue and East 86th Street are minor arterials that provide access for local and commercial traffic. East 86th Street is designated as a truck route from First Avenue to Fifth Avenue. Both East 90th Street and East 91st Street are local streets.

DSNY and other agency collection vehicles traveling north to the East 91st Street Converted MTS would travel along First and Third Avenues, turn east on East 86th Street, and then north on York Avenue. All vehicles entering and exiting the Converted MTS pass through the intersection of York Avenue and East 91st Street. Vehicles traveling south to the East 91st Street MTS would follow Second Avenue to either East 90th Street or East 86th Street and turn east to York Avenue. Which street the vehicles use to access York Avenue is determined by the DSNY route for the CD from which the vehicle originates. DSNY and other agency collection vehicles returning to the north of the facility would follow East 91st Street west to First Avenue and then proceed north. Vehicles returning to the south would travel south on York Avenue, then west on 86th Street to Second Avenue, where they would continue south. Figure 6.14-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.

6.14.2.3 Existing Traffic Operations

The four intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the East 91st Street Converted MTS. All of them are on major arterials and/or collection vehicle routes. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- York Avenue and East 91st Street – Signalized Intersection (see Figure 6.14-1 – location A)
- York Avenue and East 90th Street – Signalized Intersection (see Figure 6.14-1 – location B)
- York Avenue and East 86th Street – Signalized Intersection (see Figure 6.14-1 – location C)
- First Avenue and East 86th Street – Signalized Intersection (see Figure 6.14-1 – location D)



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 6.14-2 DSNY Collection Vehicle Routes
East 91st Street Converted MTS

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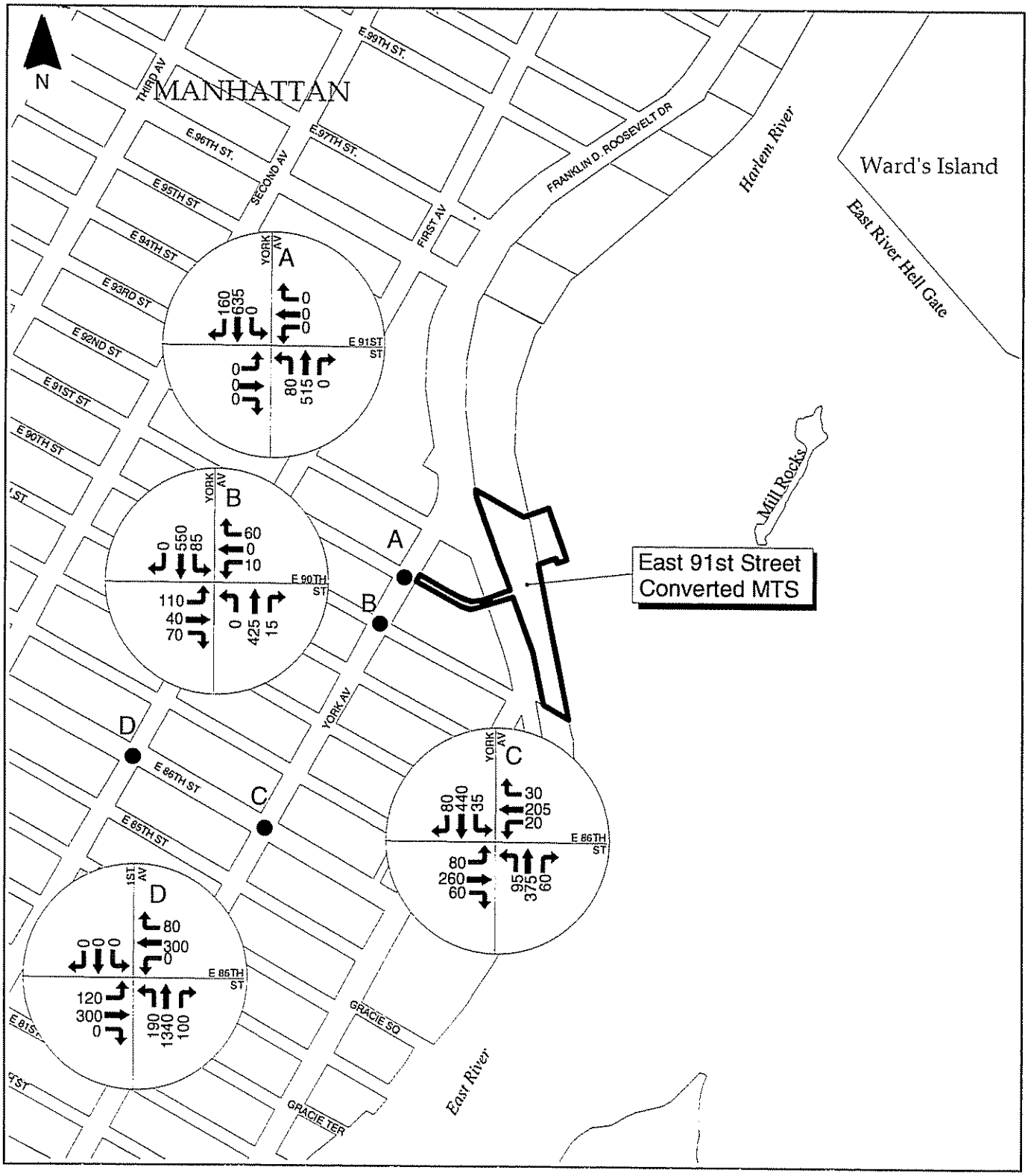
First Avenue is a principal arterial that provides northbound access from lower Manhattan (East Village/Lower East Side) to East Harlem. York Avenue and East 86th Street are minor arterials that provide access for local and commercial traffic. Both East 90th Street and East 91st Streets are local streets.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 11 and February 13, 2003, while ATR counts were conducted between February 10 and February 14, 2003. Figures 6.14-3, 6.14-4 and 6.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 9:00 a.m. and 10:00 a.m., and the PM peak between 4:00 p.m. and 5:00 p.m. Table 6.14-1 presents the v/c ratio, delay and LOS for the four intersections during the AM, Facility, and PM peaks.

Existing truck traffic through most of the intersections was moderate. The percentages of trucks increased steadily during the morning hours, remaining between 10% and 11% during mid-day hours, then decreasing to 8% or lower during the PM peak hours.

6.14.2.3.1 LOS at Signalized Intersections

Table 6.14-1 shows that the signalized intersections generally operated at an overall LOS of B or C with the following exceptions. Since the DEIS was published, the intersections of East 86th Street and York Avenue and East 90th Street and York Avenue were reanalyzed with corrected signal timing. As a result, ~~T~~the lane group with the least favorable LOS was the eastbound approach at the intersection of York Avenue and ~~,~~East ~~90th~~ 86th Street. During the AM, Facility, and PM peak hours, this approach operated at LOS D and F with delays of ~~42.0~~ 46.9, ~~38.2~~ 35.7, and ~~39.2~~ 81.2 seconds, respectively. During the PM peak hour, the northbound (defacto) left movement at the intersection of York Avenue and East 91st Street operated at LOS D with ~~41~~ 39.6 seconds of delay.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

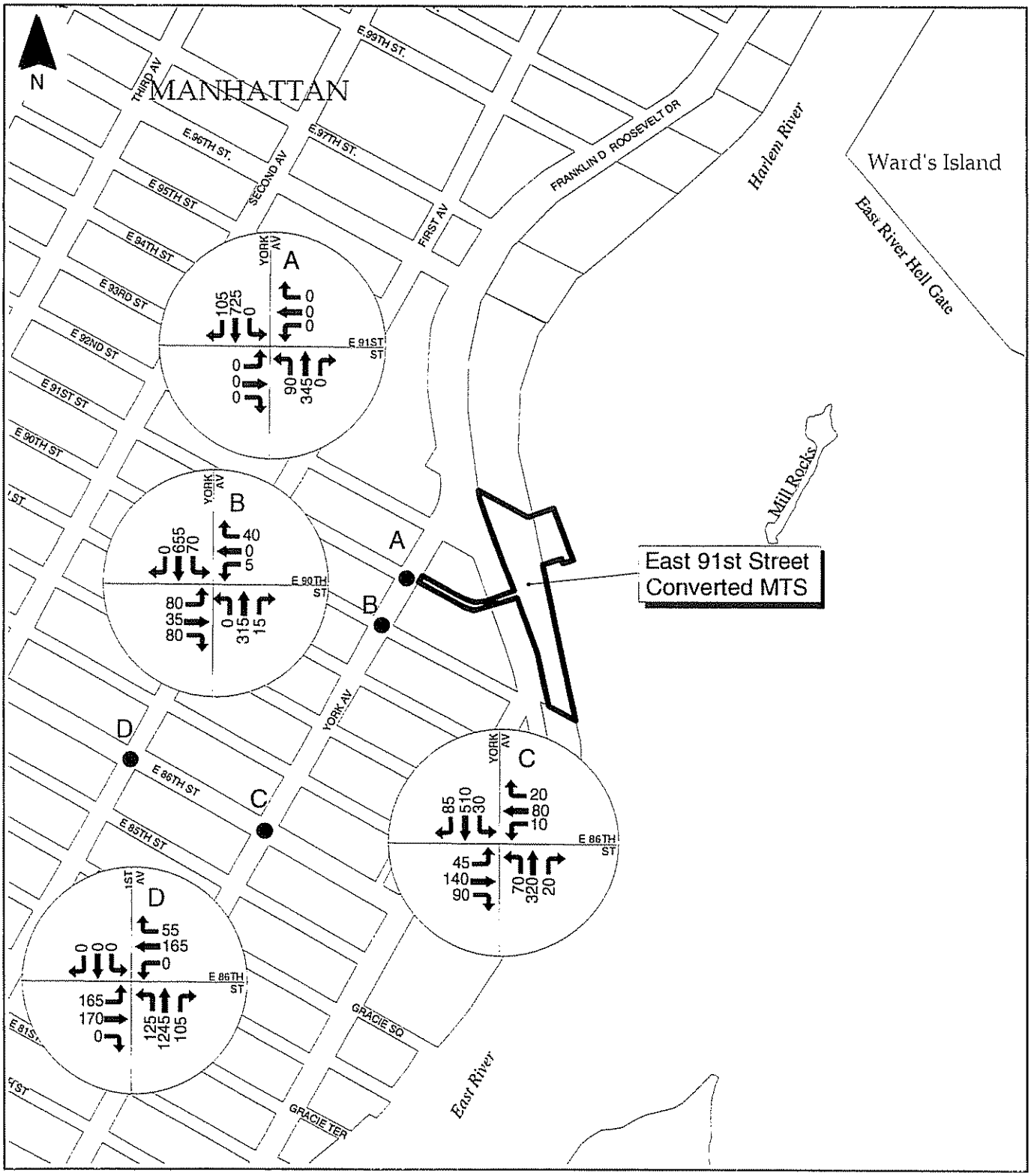
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Figure 6.14-3 Existing Traffic Volumes - AM Peak
East 91st Street Converted MTS

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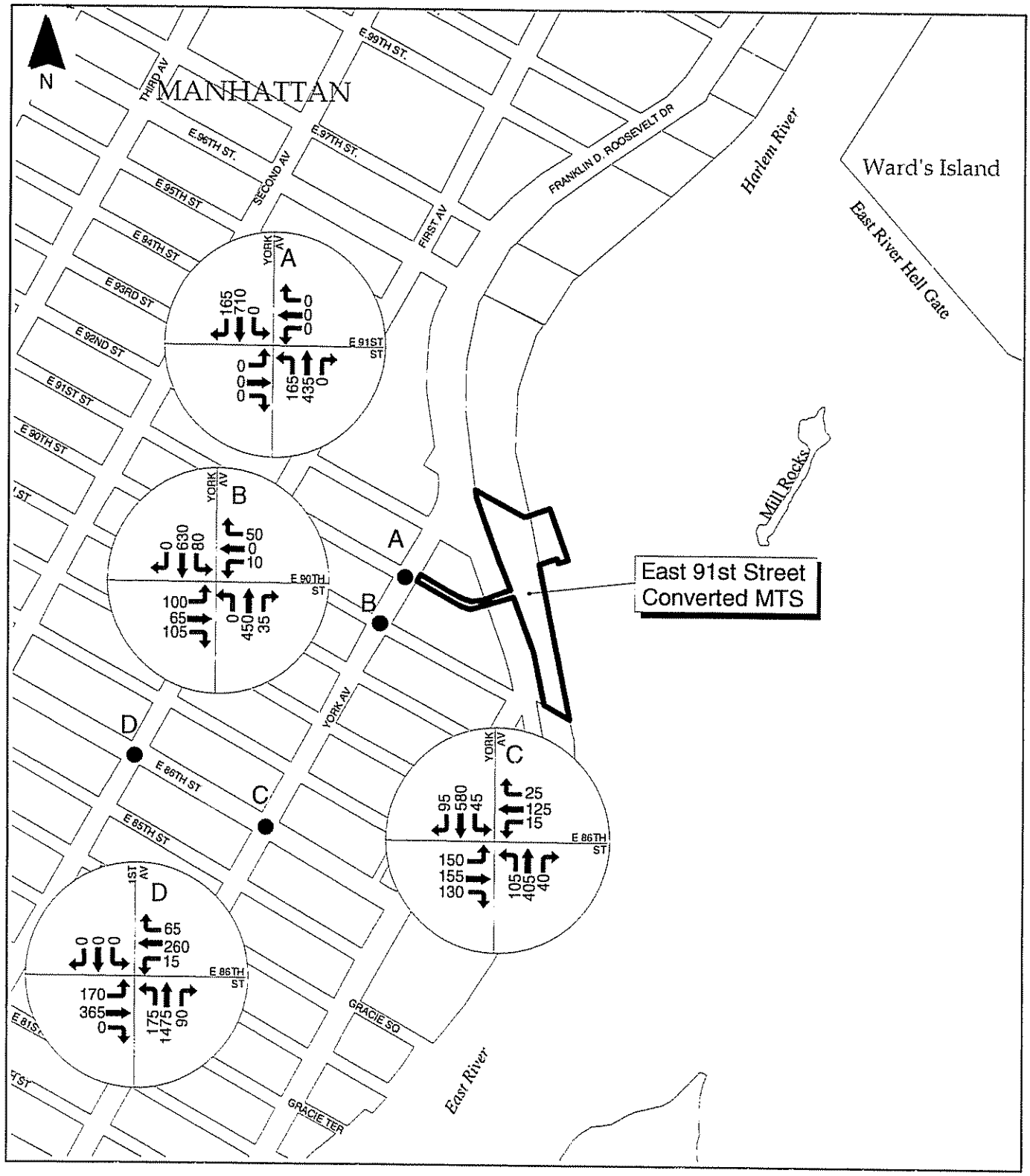
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.14-4 Existing Traffic Volumes
Facility Peak
East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 6.14-5 Existing Traffic Volumes - PM Peak

East 91st Street Converted MTS

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Table 6.14-1
HCM Analysis[(1)] – Existing Conditions
East 91st Street Converted MTS
(Revised Table)

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.79	46.9	D	0.49	35.7	D	1.01	81.2	F
WB LTR	0.43	34.1	C	0.19	30.3	C	0.33	32.4	C
NB LTR	0.56	9.0	A	0.42	7.4	A	0.60	9.6	A
SB LTR	0.38	6.7	A	0.34	6.3	A	0.39	6.7	A
OVERALL		20.1	C		14.2	B		28.3	C
East 90th Street & York Avenue (signalized)									
EB LTR	0.65	42.0	D	0.54	38.2	D	0.75	46.9	D
WB LR	0.29	33.2	C	0.20	31.2	C	0.32	33.8	C
NB TR	0.29	6.1	A	0.23	5.8	A	0.35	6.5	A
SB LT	0.54	8.5	A	0.54	8.4	A	0.62	9.7	A
OVERALL		15.1	B		13.5	B		16.6	B
East 91st Street & York Avenue (signalized)									
NB LT	0.40	6.9	A	-	-	-	-	-	-
NB DFL	-	-	-	0.44	11.9	B	0.86	39.6	D
NB T	-	-	-	0.20	5.6	A	0.28	6.1	A
SB TR	0.40	6.7	A	0.37	6.5	A	0.43	6.9	A
OVERALL		6.8	A		6.6	A		10.3	B
East 86th Street & 1st Avenue (signalized)									
EB LT	0.65	26.5	C	-	-	-	0.76	30.2	C
EB DFL	-	-	-	0.62	30.8	C	-	-	-
EB T	-	-	-	0.45	23.1	C	-	-	-
WB TR	0.28	19.2	B	0.22	18.7	B	0.22	18.7	B
NB LT	0.59	13.1	B	0.80	17.0	B	0.68	14.3	B
NB R	0.25	10.9	B	0.27	11.2	B	0.19	10.2	B
OVERALL		16.4	B		18.3	B		17.8	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

6.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

6.14.2.4 Existing DSNY-Related Traffic

The existing DSNY-related traffic in the vicinity of the East 91st Street Converted MTS is generated by DSNY and related facilities in the general area, most notably the DSNY Manhattan CD 11 garage (East 99th Street between First and Second Avenues). Within the study area, DSNY-related traffic is primarily routed along Second Avenue and Third Avenue.

6.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The 86th Street subway station (for the Number 4, 5 and 6 lines) and the 96th Street subway station (for the Number 6 line) are located approximately ½-mile southwest and ½-mile northwest of the East 91st Street Converted MTS, respectively.

Three MTA bus lines – M15, M31 and M86 – provide service along First Avenue, Second Avenue, York Avenue and East 86th Street. There are bus stops at every study intersection except York Avenue and East 90th Street, and scheduled stops occur at various times during the day.

6.14.2.6 Pedestrian Activity

Pedestrian activity is generally moderate to high within the study area. Striped crosswalks and pedestrian signals are provided at all study intersections. Despite the higher-level pedestrian activity, it is not expected to affect the capacity analysis significantly.

6.14.3 Future No-Build Conditions

6.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 0.5% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. In addition, additional traffic generated by proposed developments in the study area expected to be completed by the Future No-Build year (2006) was also included. The following is a listing of the approved or in-process developments that are expected to generate significant volumes of traffic through the study area and, thus, were specifically accounted for as part of this analysis:

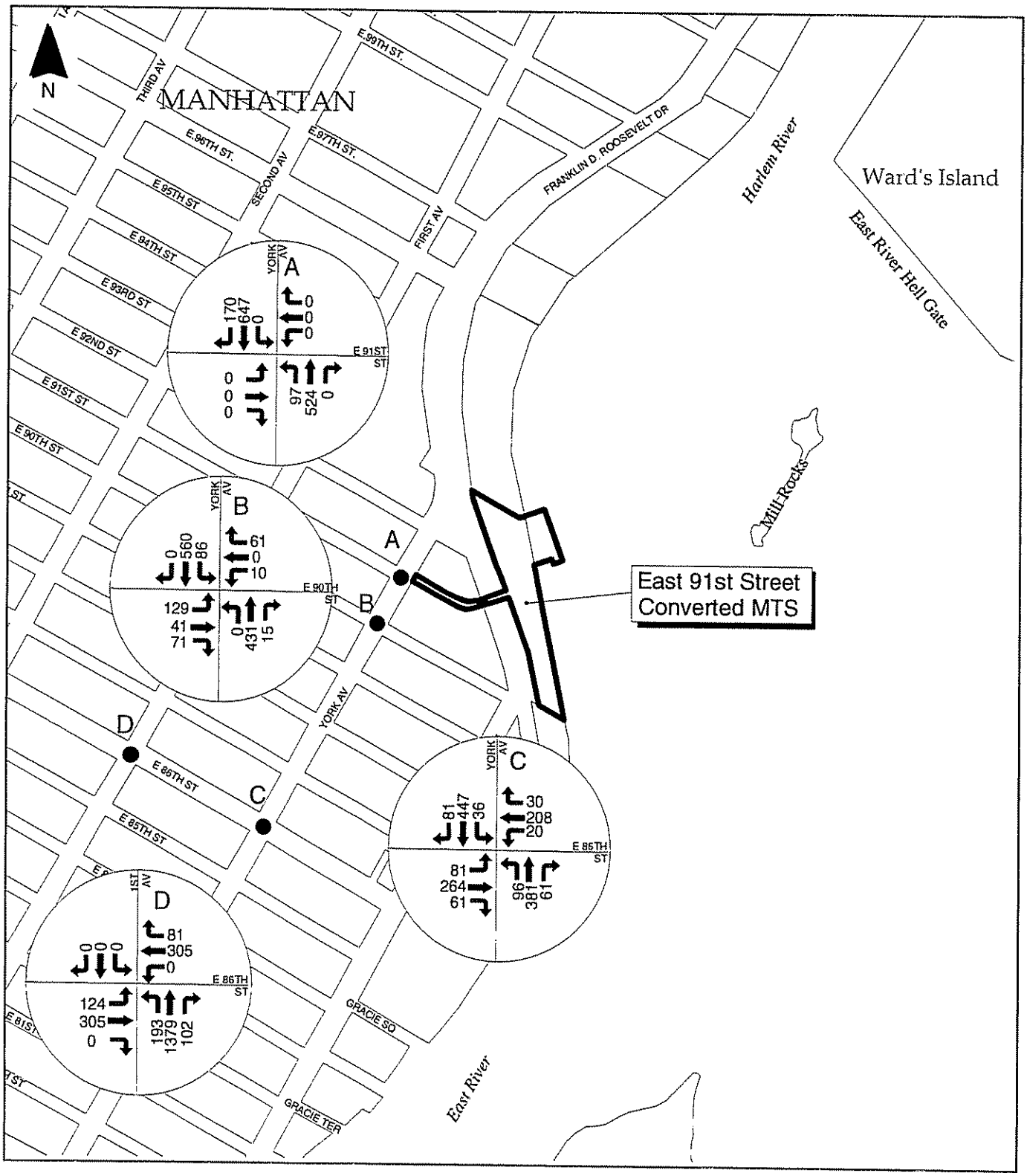
- 389 East 89th Street (residential and retail);
- 181 East 90th Street (residential and retail); and
- First Avenue/East 91st Street (residential, hotel and medical office building).

Figures 6.14-6, 6.14-7 and 6.14-8 depict the Future No-Build traffic volumes for the AM, Facility, and PM peaks at the intersections analyzed. Table 6.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, ~~Figure 6.14-6, Future No-Build Traffic Volumes AM Peak intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their Existing Condition LOS, with the following exceptions:~~ as shown in Table 6.14-2, the study intersections under the No-Build Condition experienced relatively small increases in delay (less than five seconds) and are projected to remain at their Existing Conditions LOS, with the following exceptions:

- During the PM peak hour, the delay of the ~~eastbound~~ northbound (defacto) ~~approach~~ left movement at the intersection of York Avenue and East ~~90th~~-91st Street increased from 39.~~2~~6 to ~~45~~80.9 seconds (LOS D to LOS F~~in both cases~~).
- ~~During the PM peak hour, the delay of the northbound (defacto) left movement at the intersection of York Avenue and East 91st Street increased from 41.6 to 86.9 seconds (LOS D to LOS F).~~

6.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

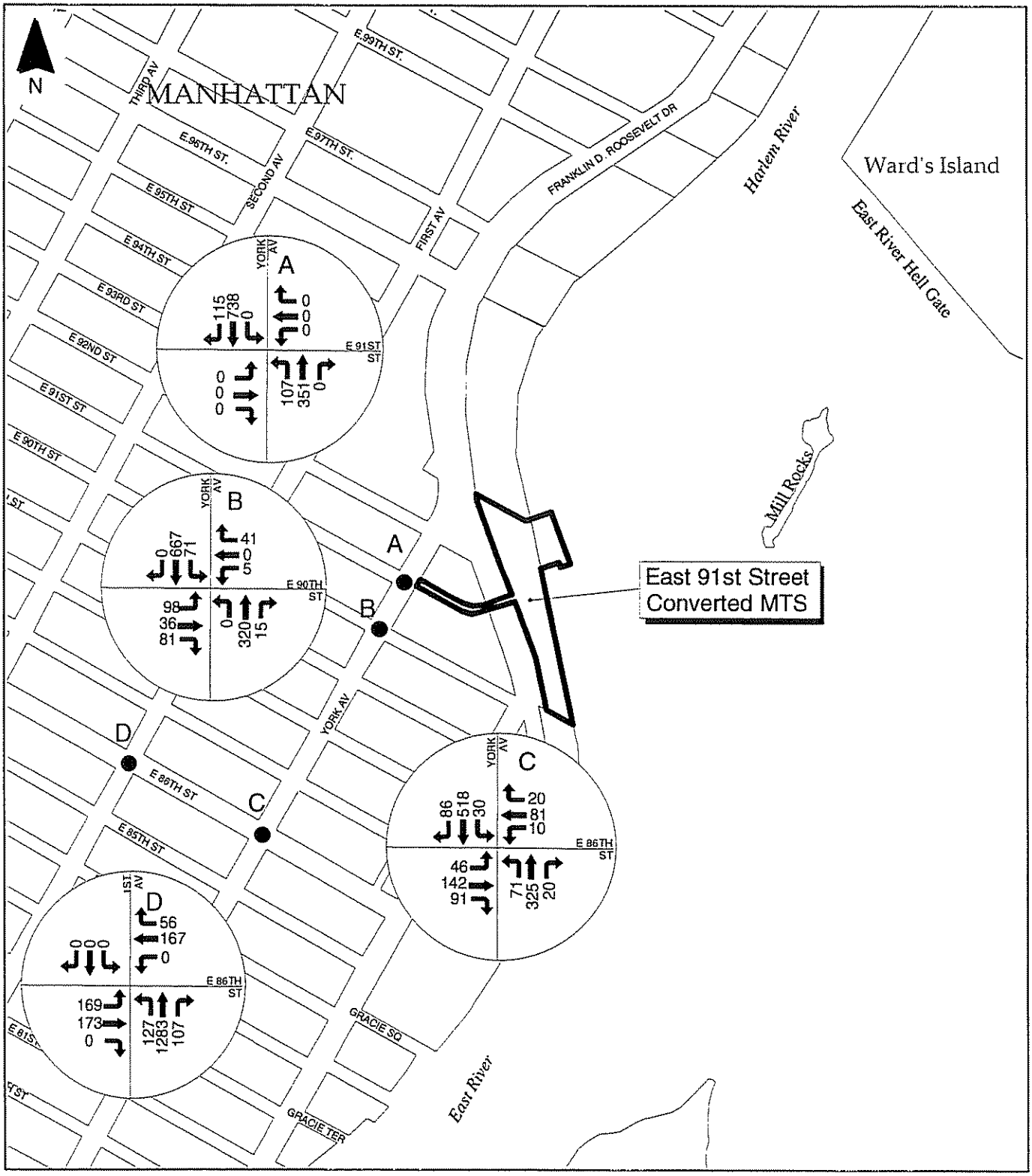
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Figure 6.14-6 Future No-Build Traffic Volumes AM Peak East 91st Street Converted MTS

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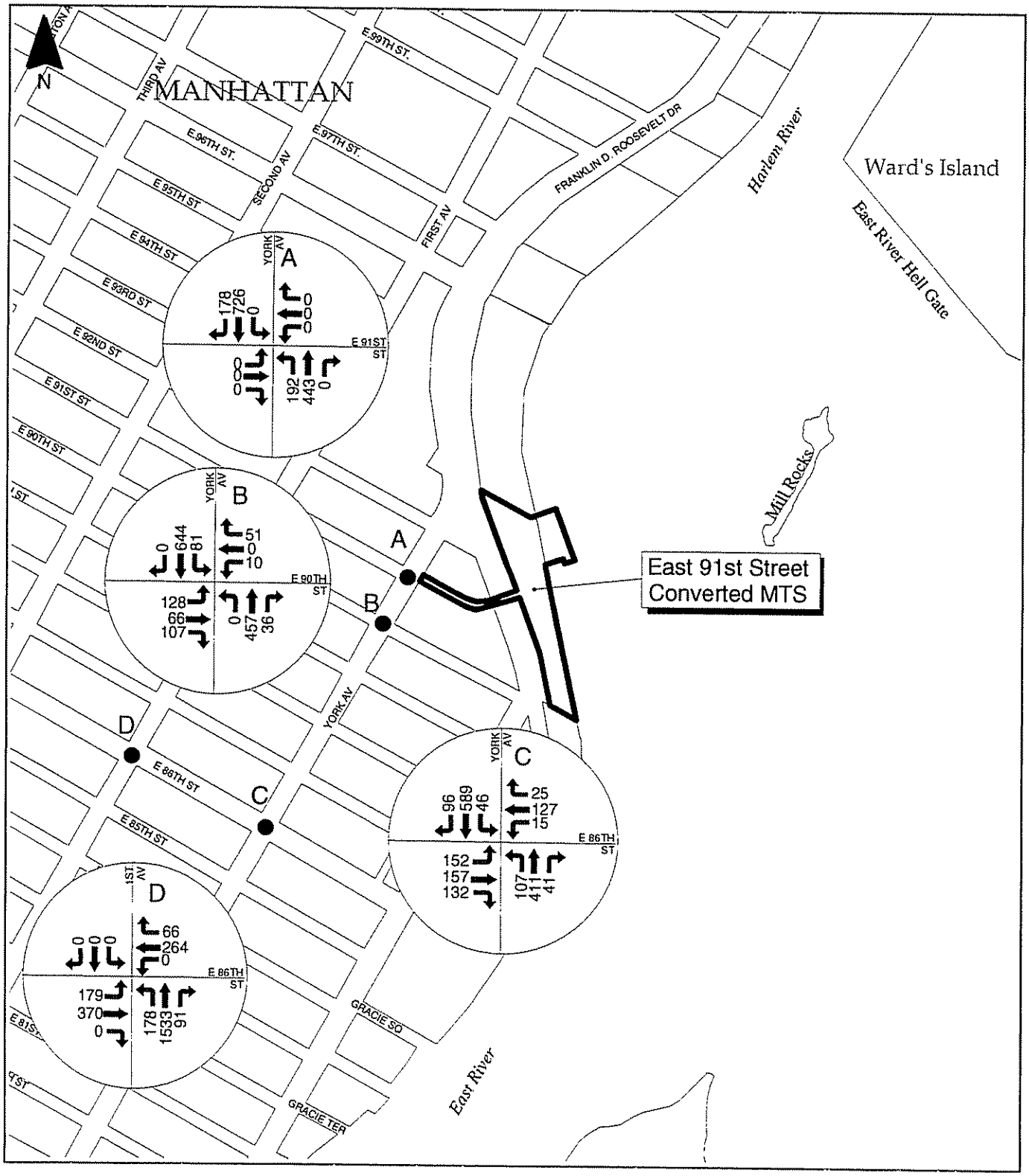


Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 6.14-7 Future No-Build Traffic Volumes Facility Peak East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 6.14-8 Future No-Build Traffic Volumes
PM Peak
East 91st Street Converted MTS

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Table 6.14-2
HCM Analysis[1] – No-Build Conditions
East 91st Street Converted MTS
(Revised Table)

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.81	48.0	D	0.50	35.9	D	1.03	84.7	F
WB LTR	0.43	34.2	C	0.19	30.3	C	0.33	32.4	C
NB LTR	0.57	7.9	A	0.43	7.5	A	0.61	9.9	A
SB LTR	0.39	6.7	A	0.34	6.3	A	0.39	6.7	A
OVERALL		20.1	C		14.3	B		29.3	C
East 90th Street & York Avenue (signalized)									
EB LTR	0.70	44.6	D	0.59	39.8	D	0.83	53.2	D
WB LR	0.30	33.2	C	0.20	31.3	C	0.32	33.9	C
NB TR	0.30	6.2	A	0.24	5.8	A	0.36	6.6	A
SB LT	0.55	8.6	A	0.56	8.6	A	0.64	9.9	A
OVERALL		16.0	B		14.2	B		18.4	B
East 91st Street & York Avenue (signalized)									
NB DFL	0.54	21.8	C	0.54	15.1	B	1.04	80.9	F
NB T	0.35	6.5	A	0.20	5.6	A	0.29	6.1	A
SB TR	0.42	6.8	A	0.38	6.5	A	0.45	7.0	A
OVERALL		7.7	A		7.0	A		16.0	B
East 86th Street & 1st Avenue (signalized)									
EB LT	0.67	27.0	C	-	-	-	0.79	31.5	C
EB DFL	-	-	-	0.64	31.7	C	-	-	-
EB T	-	-	-	0.46	23.3	C	-	-	-
WB TR	0.28	19.3	B	0.22	18.8	B	0.22	18.7	B
NB LT	0.61	13.3	B	0.83	17.8	B	0.71	14.7	B
NB R	0.25	10.9	B	0.27	11.2	B	0.19	10.3	B
OVERALL		16.6	B		18.9	B		18.3	B

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

6.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

6.14.4 Potential Impacts with the East 91st Street Converted MTS

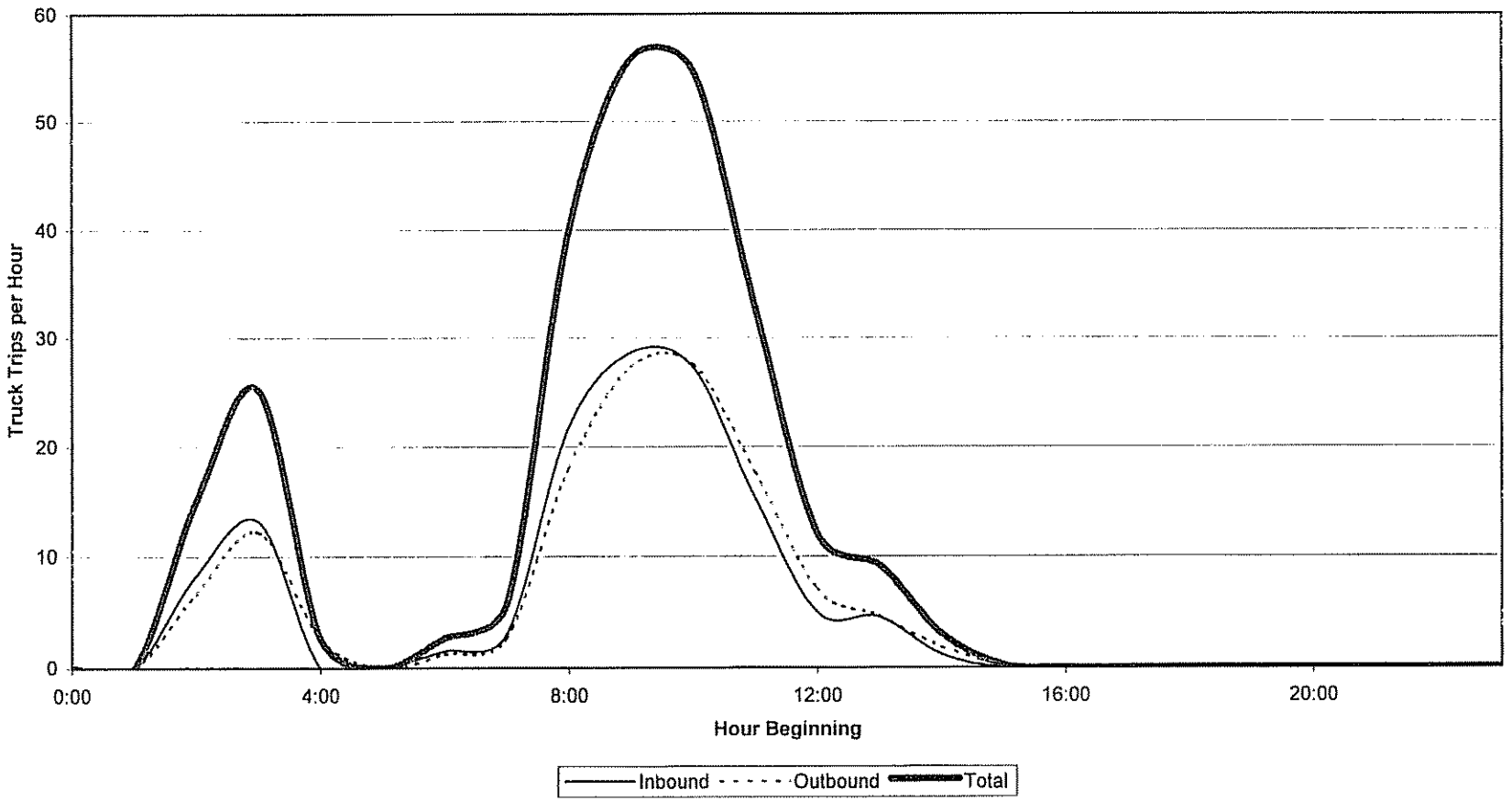
The East 91st Street Converted MTS would receive waste from four CDs in Manhattan — Manhattan CDs MN05, MN06, MN08 and MN11. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours.

6.14.4.1 2006 Future Build Traffic Conditions

The 2006 Future Build Traffic Conditions assume that the East 91st Street Converted MTS would generate 130 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the East 91st Street Converted MTS are shown in Figure 6.14-2.

Figure 6.14-9 presents the average peak day temporal distribution of collection vehicles for the East 91st Street Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the East 91st Street Converted MTS is expected to vary from approximately 0 to 15 truck trips per hour in the late evening/early morning, 5 to 56 truck trips per hour in the mid-morning/early afternoon, and 0 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (56) occurs at approximately 9:00 a.m.

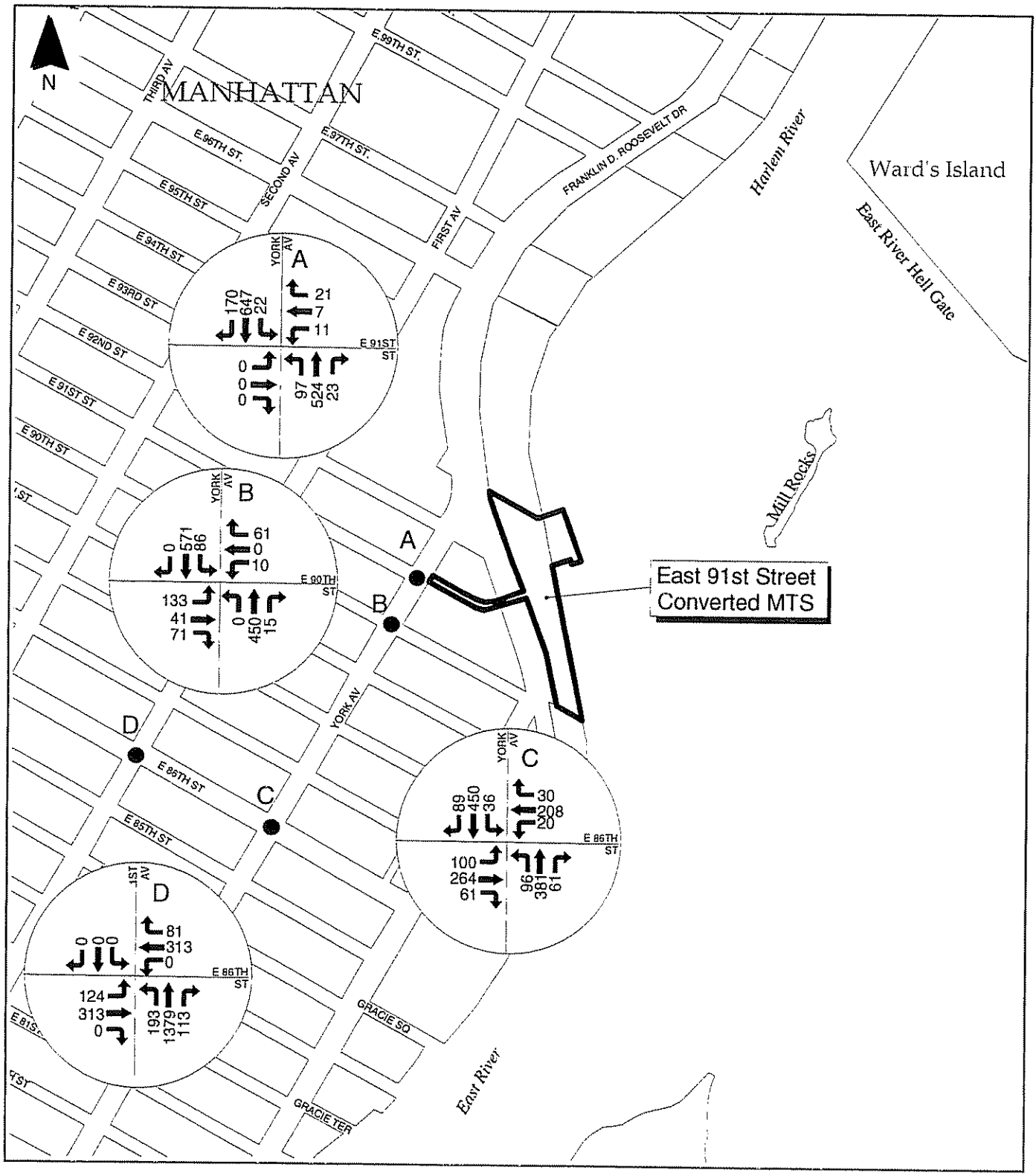
Figure 6.14-9
Truck Trips per Hour
East 91st Street Converted MTS



Figures 6.14-10, 6.14-11 and 6.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 6.14-13, 6.14-14 and 6.14-15 show the intersections analyzed with only the net increase in site-generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the East 91st Street Converted MTS. These projected net increases were routed through the intersections for the AM, Facility, and PM peak hours. The highest net increase in trucks in the ingress or egress direction was 28. The highest net increase at any one intersection was 56 trucks. Both of these net increases occurred at the intersection of York Avenue and East 91st Street.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 82% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 70% of weekday traffic volumes. Table 6.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the East 91st Street Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 6.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM Peak times associated with the East 91st Street Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. ~~The one intersection that may experience potentially significant impacts is discussed in Section 6.14.4.2 and summarized in Table 6.14-5.~~ However, two study intersections (discussed in Section 6.14.4.2 and summarized in Table 6.14-5 are projected to experience potentially significant impacts.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

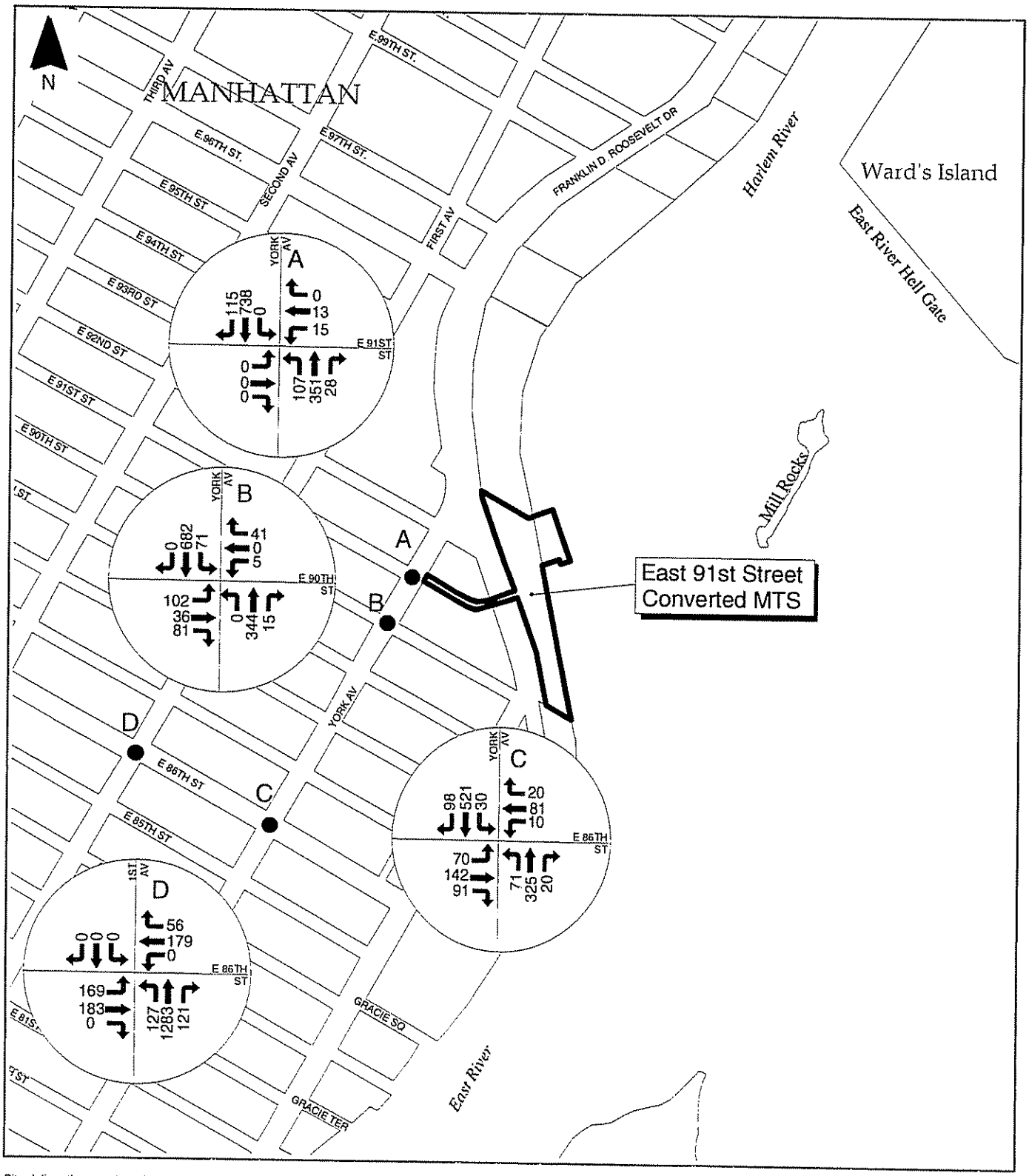
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Figure 6.14-10 2006 Future Build Traffic Volumes
AM Peak
East 91st Street Converted MTS

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Base Map Source: New York City Department of City Planning

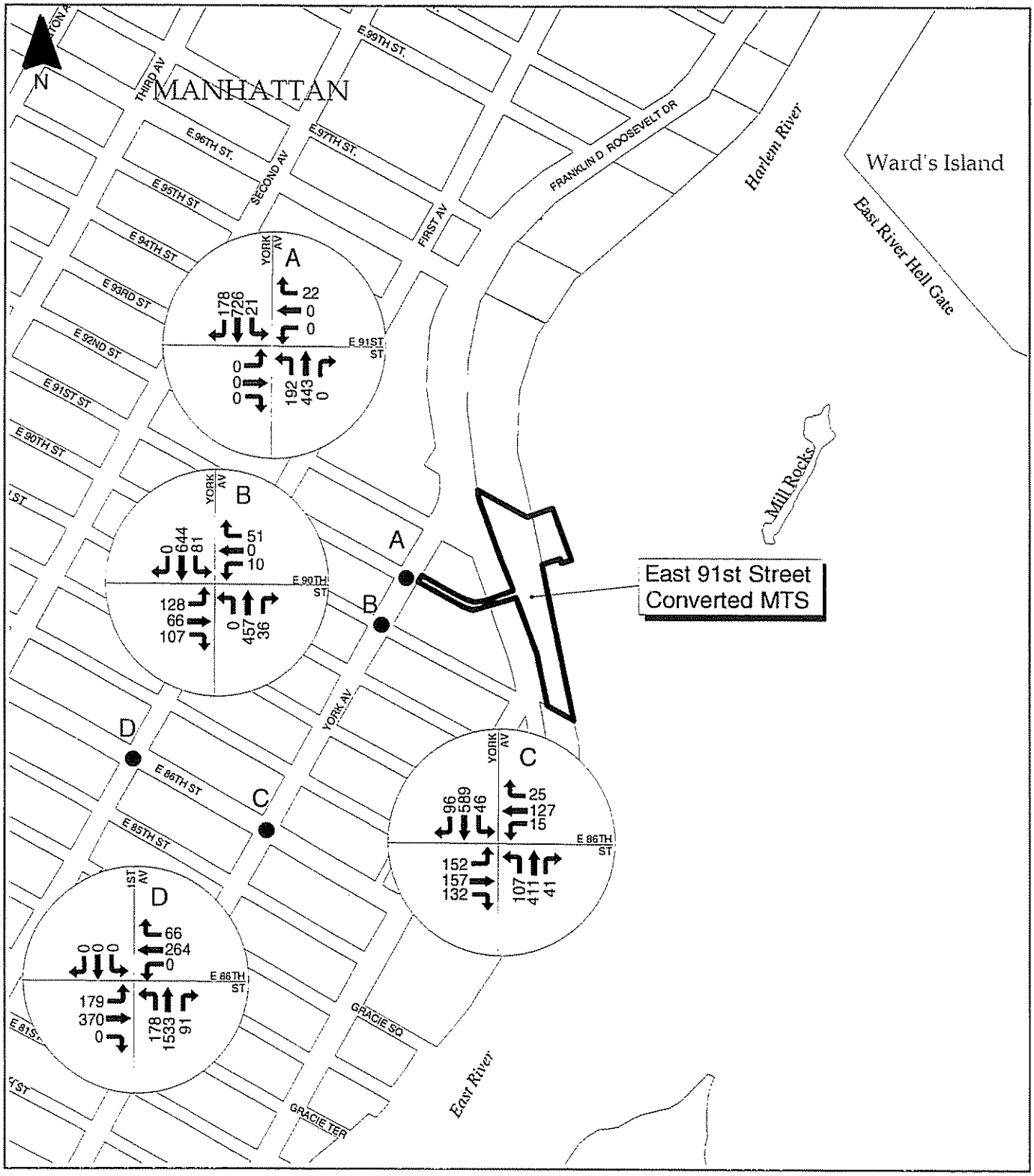
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Figure 6.14-11 2006 Future Build Traffic Volumes
Facility Peak
East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

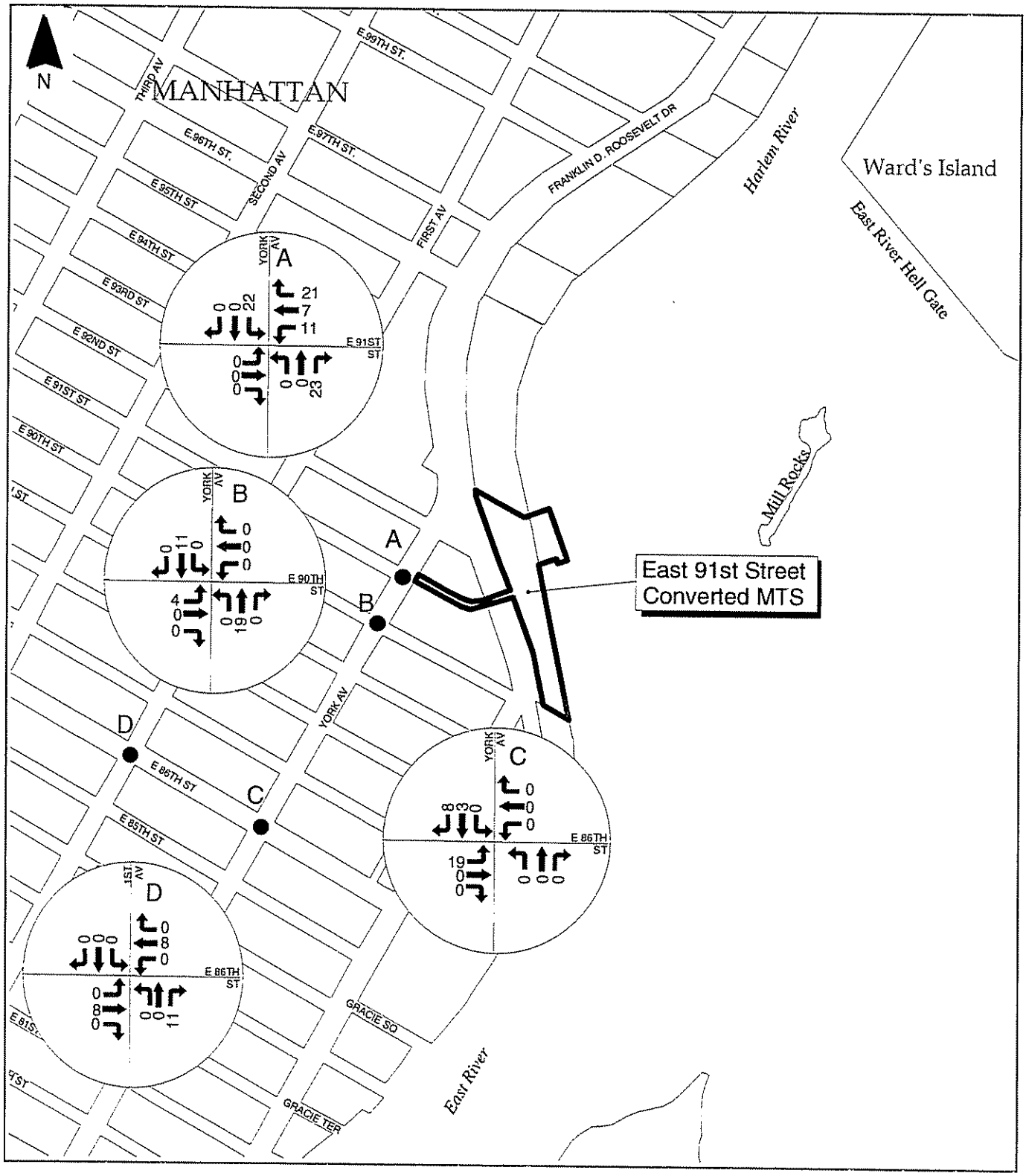
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Figure 6.14-12 2006 Future Build Traffic Volumes
PM Peak
East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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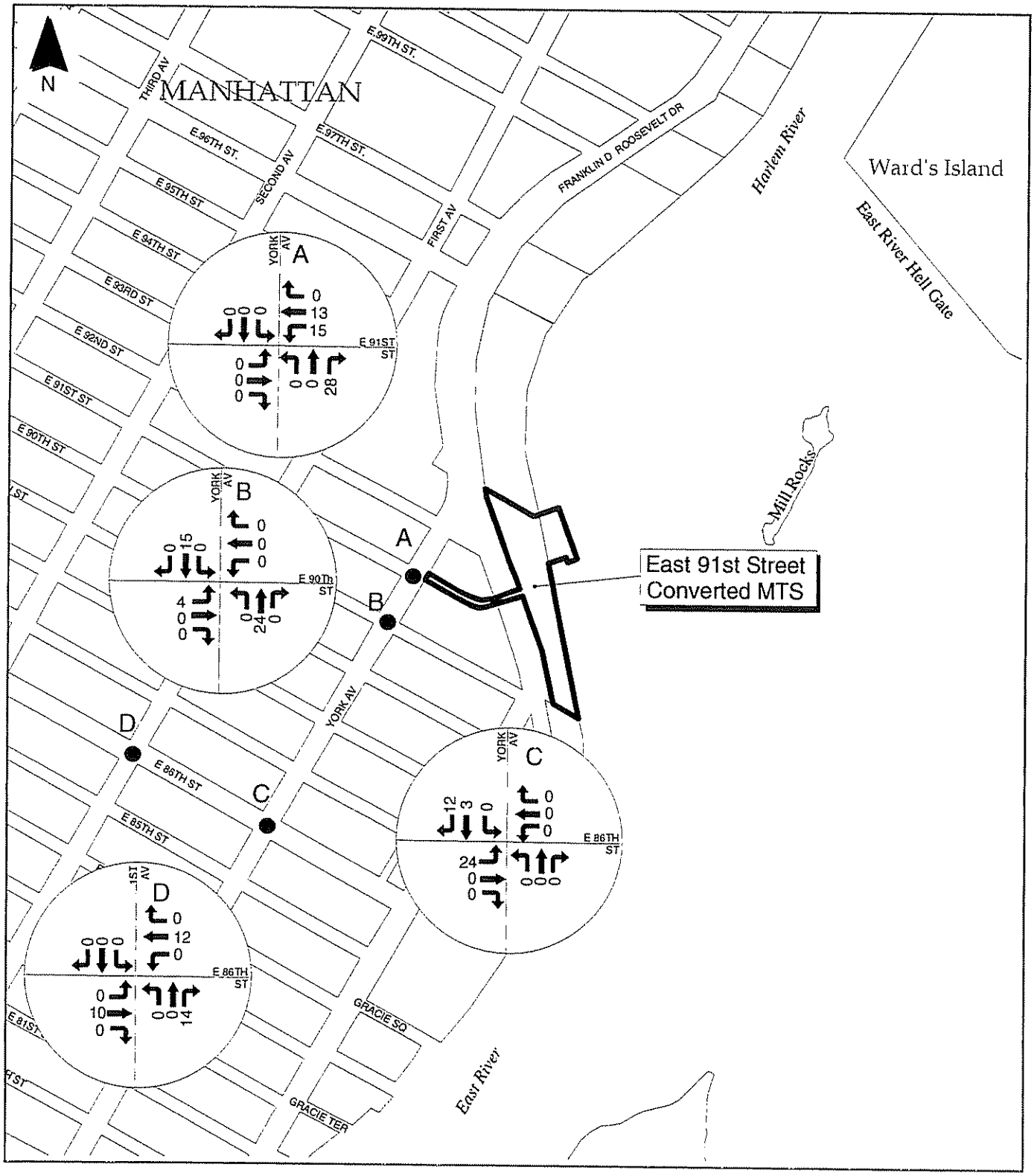
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Figure 6.14-13 2006 Net Traffic - AM Peak

East 91st Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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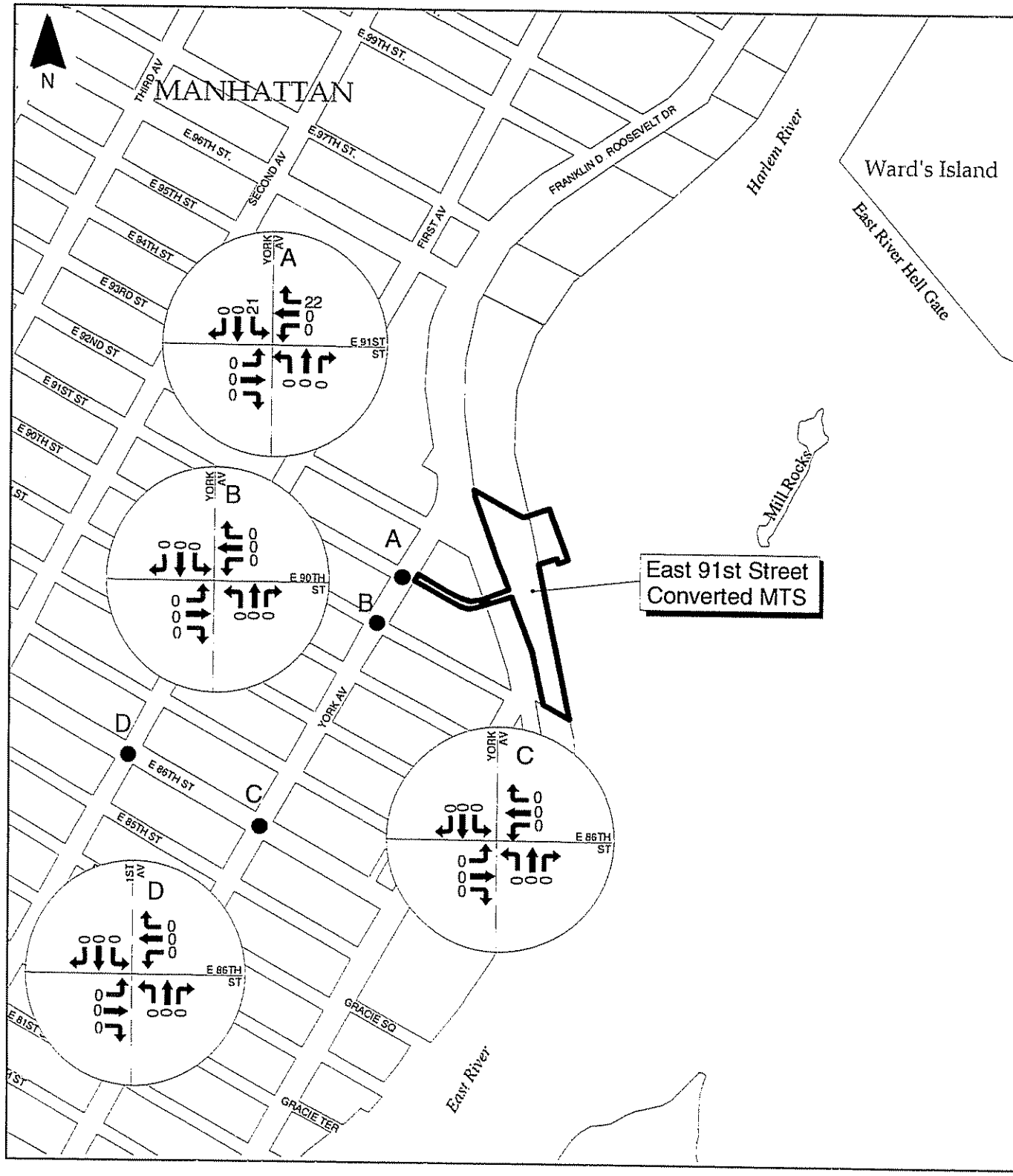
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Figure 6.14-14 2006 Net Traffic - Facility Peak

East 91st Street Converted MTS

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Base Map Source: New York City Department of City Planning

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Figure 6.14-15 2006 Net Traffic - PM Peak

East 91st Street Converted MTS

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Table 6.14-3
Weekday and Weekend Traffic
East 91st Street Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic NB and SB on York Avenue [1]	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
130	99	20,674	14,433

Note:
(1) NB and SB traffic data collected from ATR counts taken on York Avenue between East 90th Street and East 91st Street from September 11 to 17, 2003.

Table 6.14-4
HCM Analysis[(1)] – 2006 Future Build Conditions
East 91st Street Converted MTS
(Revised Table)

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.93	62.4	E	0.61	39.0	D	1.03	84.7	F
WB LTR	0.44	34.2	C	0.19	30.3	C	0.33	32.4	C
NB LTR	0.57	9.3	A	0.43	7.5	A	0.61	9.9	A
SB LTR	0.41	6.9	A	0.36	6.4	A	0.39	6.7	A
OVERALL		24.0	C		15.3	B		29.3	C
East 90th Street & York Avenue (signalized)									
EB LTR	0.72	45.4	D	0.61	40.4	D	0.83	53.2	D
WB LR	0.30	33.3	C	0.20	31.3	C	0.32	33.9	C
NB TR	0.31	6.3	A	0.26	6.0	A	0.36	6.6	A
SB LT	0.57	8.9	A	0.58	8.8	A	0.64	9.9	A
OVERALL		16.2	B		14.3	B		18.4	B
East 91st Street & York Avenue (signalized)									
WB LTR	0.16	31.2	C	0.13	30.6	C	0.08	30.0	C
NB DFL	0.56	22.6	C	0.54	15.1	B	1.07	90.4	F
NB TR	0.38	6.7	A	0.23	5.8	A	0.29	6.1	A
SB LTR	0.47	7.3	A	0.38	6.5	A	0.50	7.5	A
OVERALL		8.8	A		7.8	A		17.5	B
East 86th Street & 1st Avenue (signalized)									
EB LT	0.69	27.7	C	-	-	-	0.79	31.5	C
EB DFL	-	-	-	0.66	32.5	C	-	-	-
EB T	-	-	-	0.50	24.2	C	-	-	-
WB TR	0.29	19.4	B	0.24	18.9	B	0.22	18.7	B
NB LT	0.61	13.3	B	0.83	17.8	B	0.71	14.7	B
NB R	0.29	11.4	B	0.33	11.9	B	0.19	10.3	B
OVERALL		16.8	B		19.0	B		18.3	B

Notes for Table 6.14-4:

(1) HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

Table 6.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
East 91st Street Converted MTS
(Revised Table)

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized) – AM Peak									
EB LTR	0.81	48.0	D	0.93	62.4	E	0.85	49.8	D
WB LTR	0.43	34.2	C	0.44	34.2	C	0.40	31.6	C
NB LTR	0.57	7.9	A	0.57	9.3	A	0.60	11.5	B
SB LTR	0.39	6.7	A	0.41	6.9	A	0.43	8.6	A
OVERALL		20.1	C		24.0	C		22.0	C
East 91st Street & York Avenue (signalized) – PM Peak									
WB LTR	-	-	-	0.08	30.0	C	0.09	31.6	C
NB DFL	1.04	80.9	F	1.07	90.4	F	1.03	75.0	E
NB TR	0.29	6.1	A	0.29	6.1	A	0.28	5.1	A
SB LTR	0.45	7.0	A	0.50	7.5	A	0.48	6.3	A
OVERALL		16.0	B			B			B

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
TR = through right movement
NB = northbound
SB = southbound
WB = westbound

York Avenue/East 86th Street – During the AM peak hour, a potential impact was identified on the eastbound approach when the projected delay increased from 48.0 seconds to 62.4 seconds (LOS D to LOS E). A reallocation of three seconds of green time to the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract three seconds of green time from the northbound and southbound approaches, but would reduce the delay for the eastbound approach from 62.4 seconds to 49.8 seconds. This reallocation of green time would also decrease the delay of the westbound approach by approximately three seconds, while the northbound and southbound approach delays are projected to increase by approximately two seconds.

York Avenue/East 91st Street – During the PM peak hour, a potential impact was identified on the northbound (defacto) left movement when the delay increased from ~~86.9~~ 80.9 seconds to ~~97.3~~ 90.4 seconds (LOS F in both cases). ~~An~~ reallocation of two seconds of ~~increase in~~ green time ~~of one second for~~to the northbound and southbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract ~~one~~ two seconds from the westbound approach green time, but would reduce the delay for the northbound (defacto) left movement from ~~97.3~~ 90.4 seconds to ~~86.1~~ 75.0 seconds. The reallocation of green time would also decrease the delay of both the northbound and southbound approaches ~~would decrease~~ by approximately ~~less than~~ one second. The westbound approach delay ~~would~~ is projected to increase by less than one second.

This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Overall, the mitigation measure suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Condition.

6.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

6.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

6.15 Air Quality

6.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the East 91st Street Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 6.15.4.2.

6.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 6.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 6.15-1
Representative Ambient Air Quality Data
East 91st Street Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	P.S. 59	8-Hour	2,978 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	5,268 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2[(1)]	P.S. 59	Annual	71 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}	P.S. 59	Annual	34 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	88 $\mu g/m^3$	150 $\mu g/m^3$
SO_2[(1)]	P.S. 59	3-Hour	186 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	123 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	37 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.

6.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

6.15.4 Potential Impacts with the East 91st Street Converted MTS

6.15.4.1 On-Site Analysis

6.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 6.15-2. Figure 6.15-1 shows the locations of these sources within the site.

6.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 6.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from East 91st Street Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 6.15-3, are below the STVs. The East 91st Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 6.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
East 91st Street Converted MTS

Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	6	4
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3][4]	~~18~~16-in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

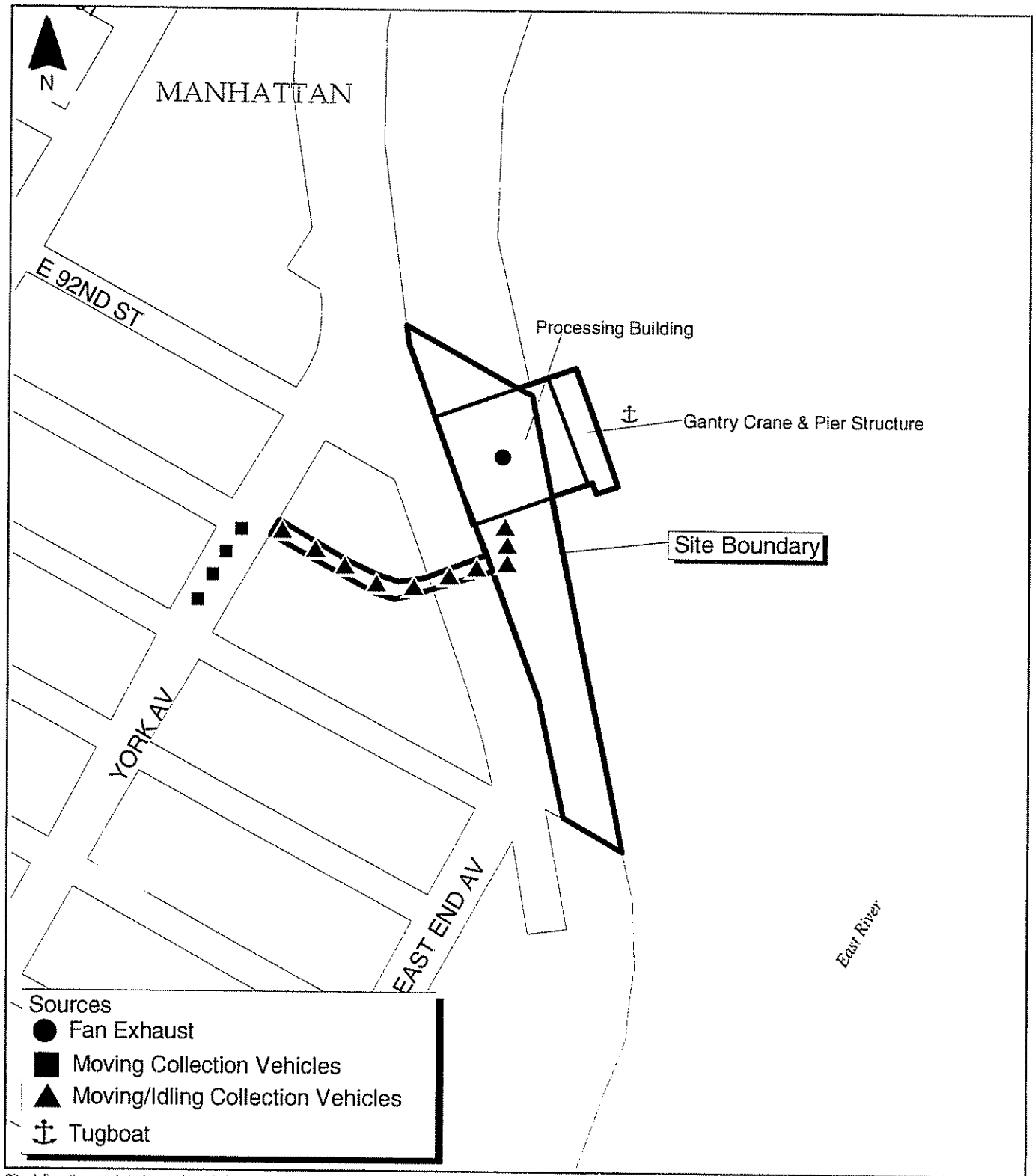
Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (one third of 18), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.

(4) The queuing collection vehicles presented in the DEIS reflected excess queuing capacity. To eliminate potential conflict at the bottom of the ramp, the number of queuing collection vehicles was revised in the FEIS.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

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Figure 6.15-1 On-Site Air Quality Analysis

East 91st Street Converted MTS

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Table 6.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
East 91st Street Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	1,060	3,781	4,841	40,000	NA
	8-hour[6]	401	2,635	3,036	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	7	77	84	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	38	61	99	150	NA
	Annual	6	21	27	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	4.9	NA	NA	NA	5
	Annual Neighborhood Average[5]	0.02	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	46	265	311	1,300	NA
	24-hour[6]	3	139	142	365	NA
	Annual	0.4	37	37	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP in a memorandum ~~in April 2003 background memorandum data for modeling NO_2, SO_2 and PM_{10}~~ dated February 18, 2005. Maximum background data were used unless otherwise noted.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

6.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 6.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the East 91st Street Converted MTS are not considered to be significant.

6.15.4.2 Off-Site Analysis

6.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by facility's collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersection of York Avenue and East 91st Street to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO de minimus value or a violation of the 8-hour NAAQS;
- An analysis of the intersections of York Avenue and East 86th Street, and York Avenue and East 91st Street to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the intersections of York Avenue and East 86th Street, and York Avenue and East 91st Street to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 6.15-2.

Table 6.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
East 91st Street Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs)[5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Unit Risk Factors[7] ($\mu g/m^3$)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	2.98E-01	1.30E+03	2.30E-04	2.50E-03	1.30E-01	1.93E-02	2.50E-03	8.30E-06	2.08E-08
2	Formaldehyde	3.78E-01	3.00E+01	1.26E-02	3.17E-03	6.00E-02	5.28E-02	3.17E-03	1.30E-05	4.12E-08
3	1,3 Butadiene	1.25E-02	-	-	1.05E-04	3.60E-03	2.92E-02	1.05E-04	2.80E-04	2.94E-08
4	Acetaldehyde	2.45E-01	4.50E+03	5.45E-05	2.06E-03	4.50E-01	4.58E-03	2.06E-03	2.20E-06	4.53E-09
5	Benzo(a)pyrene	6.01E-05	-	-	5.05E-07	2.00E-03	2.52E-04	5.05E-07	1.70E-03	8.58E-10
Non-Carcinogenic Pollutants[10]										
6	Propylene	8.25E-01	-	-	6.93E-03	3.00E+03	2.31E-06	6.93E-03	NA	NA
7	Acrolein	2.96E-02	1.90E-01	1.56E-01	2.48E-04	2.00E-02	1.24E-02	2.48E-04	NA	NA
8	Toluene	1.31E-01	3.70E+04	3.54E-06	1.10E-03	4.00E+02	2.75E-06	1.10E-03	NA	NA
9	Xylenes	9.12E-02	4.30E+03	2.12E-05	7.65E-04	7.00E+02	1.09E-06	7.65E-04	NA	NA
10	Anthracene	5.98E-04	-	-	5.02E-06	2.00E-02	2.51E-04	5.02E-06	NA	NA
11	Benzo(a)anthracene	5.37E-04	-	-	4.51E-06	2.00E-02	2.26E-04	4.51E-06	NA	NA
12	Chrysene	1.13E-04	-	-	9.48E-07	2.00E-02	4.74E-05	9.48E-07	NA	NA
13	Naphthalene	2.71E-02	7.90E+03	3.43E-06	2.28E-04	3.00E+00	7.59E-05	2.28E-04	NA	NA
14	Pyrene	1.53E-03	-	-	1.28E-05	2.00E-02	6.42E-04	1.28E-05	NA	NA
15	Phenanthrene	9.41E-03	-	-	7.89E-05	2.00E-02	3.95E-03	7.89E-05	NA	NA
16	Dibenz(a,h)anthracene	1.87E-04	-	-	1.57E-06	2.00E-02	7.83E-05	1.57E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.69E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**1.24E-01**	**Total Estimated Combined Cancer Risk**		**9.68E-08**
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold**[11]		**1.0E+00**	**Cancer Risk Threshold**[11]		**1.0E-06**

Notes to Table 6.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

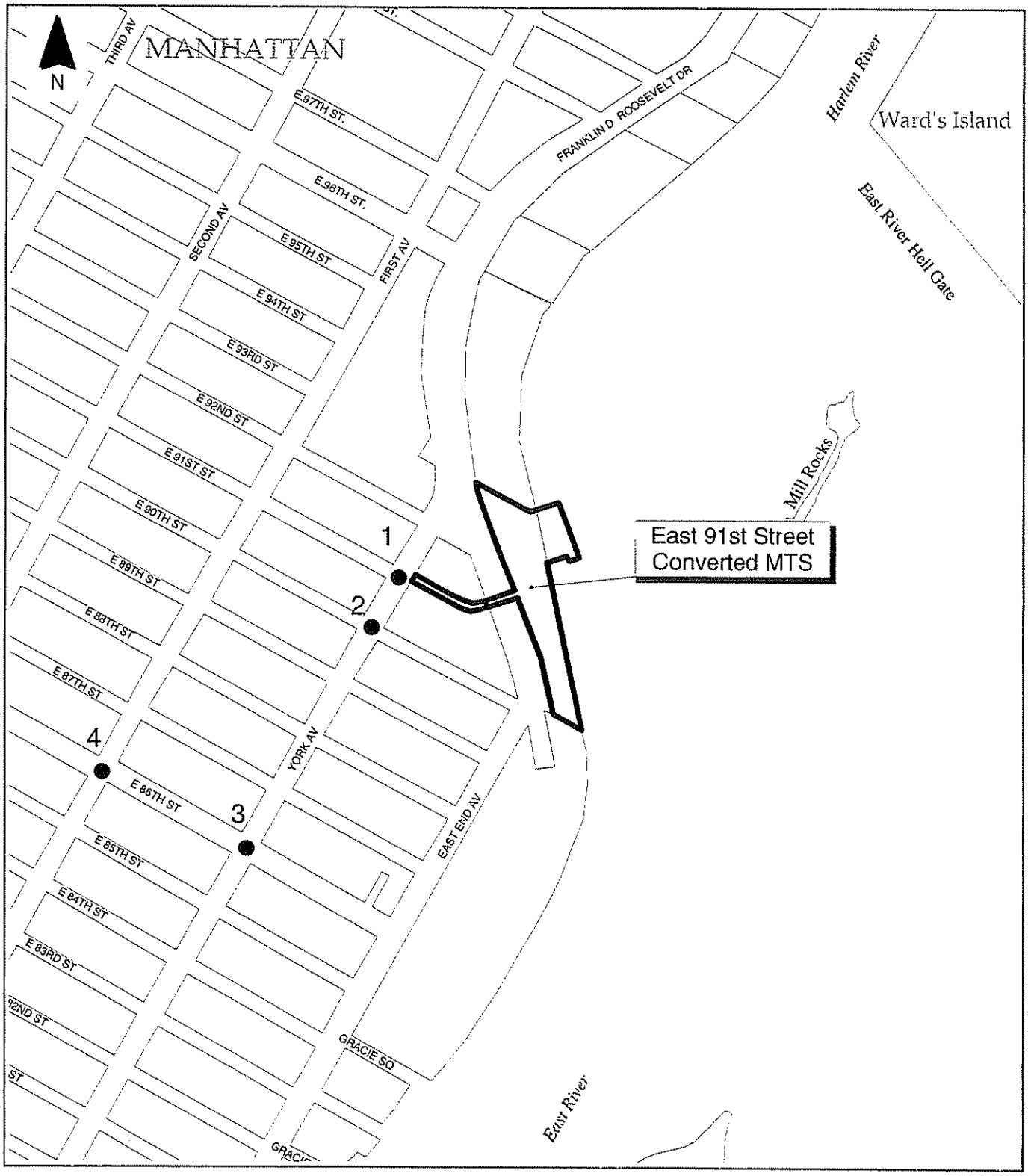
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



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Figure 6.15-2 Off-Site Air Quality Intersections Studied East 91st Street Converted MTS

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6.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 6.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). The off-site operations of the East 91st Street Converted MTS are not, therefore, considered to be significant. A conservative ratio of peak period project-induced traffic volumes to daily average project-induced volumes was used to estimate off-site annual impacts for $PM_{2.5}$. A more refined Tier II analysis will be performed to confirm the result of the annual impact for $PM_{2.5}$.

Table 6.15-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
East 91st Street Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
York Avenue and East 86th Street									
Existing Conditions		~~76~~ 87	~~32~~ 31						
Future No-Build Conditions		~~77~~ 86	~~32~~ 30						
Future Build Conditions	NA[5]	~~77~~ 87	~~32~~ 30						
Future Build Incremental				~~2.97~~ 0.43	~~0.92~~ 0.5	~~3.89~~ 0.93	~~0.03~~ 0.02	~~0.04~~[6] 0.059	~~0.07~~ 0.079
York Avenue & East 91st Street									
Existing Conditions	4	~~86~~ 90	~~35~~ 32						
Future No-Build Conditions	4	~~87~~ 90	~~35~~ 32						
Future Build Conditions	4	89 ~~92~~	36 ~~32~~						
Future Build Incremental				~~2.97~~ 1.50	~~0.59~~ 0.8	~~3.56~~ 2.30	~~0.03~~ 0.02	~~0.05~~ 0.022[6]	~~0.08~~ 0.042

Notes:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration (8-hr CO = 2.3 ppm; 24-hr PM_{10} = ~~46~~ 61 $\mu g/m^3$; Annual PM_{10} = 21 $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions near the intersection considered.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking.~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for the~~under ~~Future~~ future No-Build and ~~Future~~ future Build ~~scenarios~~ conditions at ~~any~~ sidewalk receptors ~~three meters from the edge of the roadways using AM~~, Facility, or PM peak traffic conditions.

(4) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the.~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for~~ under the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways ~~using~~ under AM, Facility, or PM peak traffic conditions.

(5) NA= Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

(6) ~~The result of a TIER I analysis, which assumed that peak period project induced trips occurred every hour of the 24-hour analysis period, was multiplied by a conservative ratio of peak period project induced traffic volumes to daily average project induced volumes to approximate a TIER II result. While actual ratio of 0.3 is estimated by the project's traffic engineers, a conservative value of 0.5 was applied to the annual impact estimated using a TIER I analysis.~~ Result determined using a Tier II analysis.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

~~NA = Not Applicable~~

6.16 Odor

6.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptors are: ~~is the apartment building located on 90th Street east of York Avenue, approximately 360 feet from the site boundary.~~

- Bobby Wagner Walk, an area that is designated as parkland and is directly abutting the East 91st Street Converted MTS property boundary.
- An apartment building on York Avenue, approximately 40 meters (131 feet) from the East 91st Street Converted MTS property boundary.
- An apartment building on East 90th Street east of York Avenue, approximately 114 meters (375 feet) from the East 91st Street Converted MTS property boundary.
- A playing field located on land abutting the East 91st Street Converted MTS truck ramp. This field is owned by Asphalt Green Aqua Center Recreation Facility (Asphalt Green).
- Asphalt Green, directly abutting the East 91st Street Converted MTS truck ramp and property boundary.
- A playground which is part of Asphalt Green on York Avenue, directly abutting the East 91st Street Converted MTS truck ramp and property boundary.

Additional residential areas exist immediately north, south and west of these noise-sensitive receptors.

6.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the East 91st Street Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

6.16.3 Potential Impacts with the East 91st Street Converted MTS

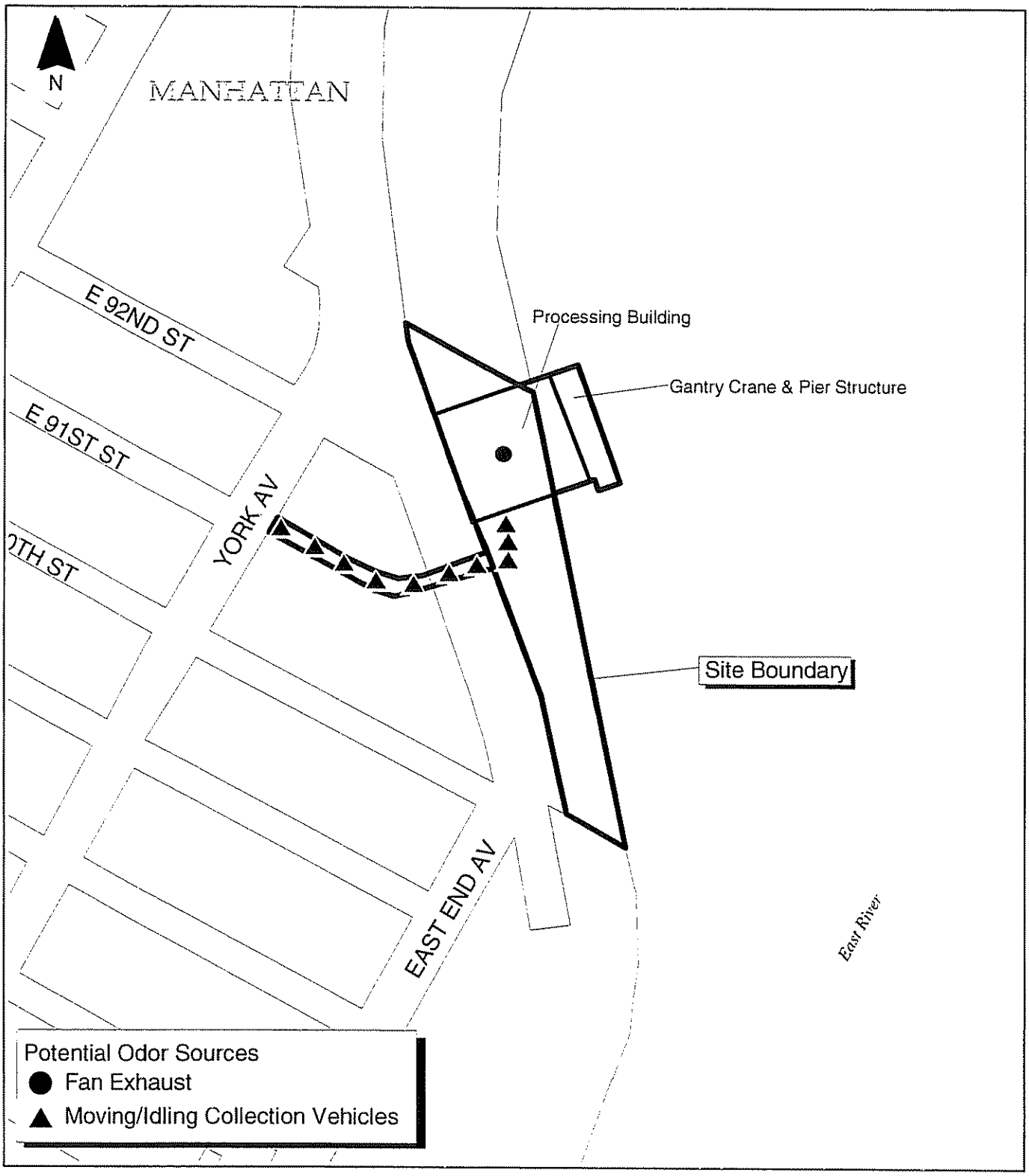
6.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the East 91st Street Converted MTS are provided in Table 6.16-1. Figure 6.16-1 shows the locations of these sources within the site.

Table 6.16-1
Odor Sources Included in Odor Analysis
East 91st Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving & ~~Idling~~ Queuing Collection Vehicles	~~19~~ 17

Notes:
(1) The queuing collection vehicles presented in the DEIS reflected excess queuing capacity. To eliminate potential conflict at the bottom of the ramp, the number of queuing collection vehicles was revised in this FEIS.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 6.16-1 Potential Odor Sources

East 91st Street Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the East 91st Street Converted MTS.

6.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 6.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the East 91st Street Converted MTS at any nearby sensitive receptor is less than 1, so odors from the East 91st Street Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 6.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
East 91st Street Converted MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	0.92
Type of Receptor	Fence Line Receptor
Location of Receptor [2]	Site Boundary
Closest Sensitive Receptor Results[2]	~~0.13~~
~~Type of Receptor~~	~~Apartment Building~~
~~Distance to Receptor[3]~~	~~360 Feet~~
Bobby Wager Walk	0.61
Apartment Building on York Avenue	0.12
Apartment Building on East 90th Street	0.17
Asphalt Green Aqua Center Recreational Field	0.40
Asphalt Green	0.41
Asphalt Green Playground	0.16

Notes:

(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.

(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

~~(2) Measured from the site property line.~~

6.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from East 91st Street Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

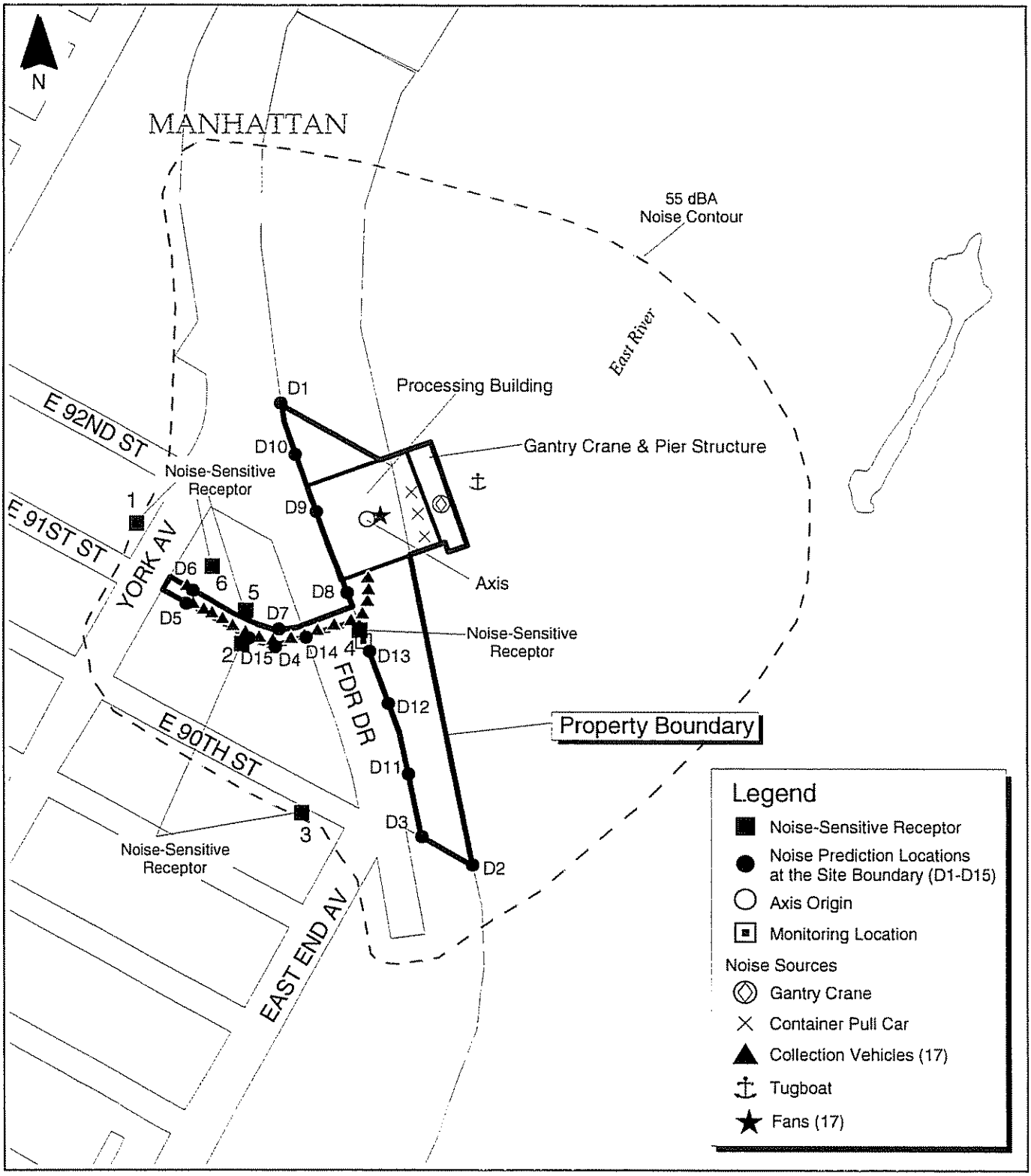
6.17.1 Existing Conditions

6.17.1.1 Introduction

Figure 6.17-1 shows the location of the East 91st Street Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptors are:

- Bobby Wagner Walk, an area that is designated as parkland and is directly abutting the East 91st Street Converted MTS property boundary.
- An apartment building on York Avenue, approximately 40 meters (131 feet) from the East 91st Street Converted MTS property boundary.
- An apartment building on East 90th Street east of York Avenue, approximately 114 meters (375 feet) from the East 91st Street Converted MTS property boundary.
- A playing field located on land abutting the East 91st Street Converted MTS truck ramp. This field is owned by Asphalt Green Aqua Center Recreation Facility (Asphalt Green).
- Asphalt Green, directly abutting the East 91st Street Converted MTS truck ramp and property boundary.
- A playground which is part of Asphalt Green on York Avenue, directly abutting the East 91st Street Converted MTS truck ramp and property boundary.

Additional residential areas exist immediately north, south and west of these noise-sensitive receptors.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual DB

Figure 6.17-1 Noise Sources and Receptors

East 91st Street Converted MTS

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6.17.1.2 *On-Site Noise Levels*

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptors. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[13] and the statistical metrics of L_{10}, L_{50} and L_{90}.[14] Table 6.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 5:00 p.m. and 6:00 p.m. and had an $L_{eq(1)}$ of 65.4 dBA on January 15, 2003. Although the quietest hour is typically a nighttime hour, the traffic conditions on the FDR Drive during the evening rush hour, when cars are not moving, reduces the noise level that would normally be expected next to a highway. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic from the FDR Drive;
- Ferry boats loading and unloading passengers; and
- Other marine activity.

6.17.1.3 *Off-Site Noise Levels*

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the East 91st Street Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required, and therefore off-site noise monitoring was conducted. Table 6.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

[13] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[14] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.

Table 6.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
East 91st Street Converted MTS

Time of Measurement	$L_{eq\ (1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
2:00-3:00 p.m.	~~73.4~~ 72.1	~~70.9~~ 67.7	~~73.0~~ 72.1	~~74.6~~ 73.9	~~66.7~~ 62.8	~~90.9~~ 85.7
3:00-4:00 p.m.	72.3	67.3	72.3	74.3	60.2	82.7
4:00-5:00 p.m.	71.9	66.0	71.5	73.7	58.6	86.0
5:00-6:00 p.m.	65.4	62.2	64.7	67.6	58.8	76.8
6:00-7:00 p.m.	67.1	61.9	66.5	69.6	58.2	78.1
7:00-8:00 p.m.	69.7	66.3	68.6	70.5	59.2	88.7
8:00-9:00 p.m.	70.8	62.9	68.1	72.6	56.6	89.6
9:00-10:00 p.m.	73.1	71.0	73.1	74.7	65.8	85.2
10:00-11:00 p.m.	73.3	71.1	73.2	74.9	64.3	83.6
11:00 p.m.-12:00 a.m.	73.1	70.5	73.0	74.8	61.8	83.0
12:00-1:00 a.m.	72.2	68.7	72.0	74.4	58.4	82.0
1:00-2:00 a.m.	70.0	64.4	69.5	72.7	54.1	77.6
2:00-3:00 a.m.	68.8	60.5	67.7	72.0	49.5	81.2
3:00-4:00 a.m.	68.7	59.7	67.4	71.9	50.2	81.1
4:00-5:00 a.m.	70.2	63.7	69.4	73.0	52.2	80.1
5:00-6:00 a.m.	72.8	69.0	72.6	75.0	58.2	80.6
6:00-7:00 a.m.	74.1	72.2	74.0	75.6	66.6	81.1
7:00-8:00 a.m.	72.3	67.4	72.2	74.6	61.9	79.7
8:00-9:00 a.m.	66.1	61.5	64.0	67.3	58.5	85.5
9:00-10:00 a.m.	71.9	68.6	71.7	73.8	60.5	81.2
10:00-11:00 a.m.	72.0	68.9	71.8	73.8	60.6	81.2
11:00 a.m.-12:00 p.m.	72.0	68.5	71.9	73.9	56.8	84.8
12:00-1:00 p.m.	72.6	69.5	72.2	74.1	61.5	88.1
1:00-2:00 p.m.	71.2	64.8	71.1	73.7	59.7	79.4

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour

Table 6.17-2
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-site Analysis
East 91st Street Converted MTS

~~Roadway ID~~ Location	Existing Noise Levels During Quietest Hour (dBA)[1]
East ~~91st~~-90th Street between First Avenue and York Avenue[2]	64.5
York Avenue between East 90th Street and East 91st Street[3]	62.9

Notes:
[1] A 1-hour noise level reading was measured at the closest noise-sensitive receptor during the hour expected to experience the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
[2] The existing noise levels were measured on July 29, 2003 between 3:00 a.m. and 4:00 a.m.
[3] The existing noise levels were measured on July 30, 2003 between 3:00 a.m. and 4:00 a.m.

6.17.2 Future No-Build Conditions

6.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

6.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 6.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 6.17-3
Off-Site Noise Traffic Volume
East 91st Street Converted MTS

Location	Hour Beginning	Existing Traffic Volume (1) (Vehicles / Hour)	Future No Build Traffic Volume (2) (Vehicles / Hour)
York Avenue between East 90th & East 91st Streets	3:00 a.m.	~~78~~ 60	~~79~~ 61
York Avenue between East 90th & East 91st Streets	10:00 a.m.	~~1084~~ 1.042	~~1100~~ 1.058
East 90th Street between First Avenue & York Avenue	~~3~~2:00 a.m.	~~24~~ 15	~~24~~ 15
East 90th Street between First Avenue & York Avenue	9:00 a.m.	~~182~~ 221	~~185~~ 224
East 91st Street between First Avenue & York Avenue	~~23~~:00 a.m.	~~33~~ 24	~~33~~ 24
East 91st Street between First Avenue & York Avenue	9:00 a.m.	~~228~~ 189	~~231~~ 192

Notes:
(1) Existing Traffic Volumes are based on corrected ATR data for this FEIS.
(2) Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

6.17.3 Potential Impacts with the East 91st Street Converted MTS

6.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the East 91st Street Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 6.17-4. The number and types of equipment assumed for this analysis was based on the East 91st Street Converted MTS's peak design capacity. As described in Section 3.19, an analysis was performed to determine if the number and type of trucks queuing on the ramp that was analyzed in the DEIS is more conservative than the greatest number of DSNY and Commercial Waste trucks expected to be queuing on the ramp based on the number of trucks that might be routed to the facility. The DEIS analysis was based on DSNY trucks queuing along the entire length of the ramp, which is more conservative than using the maximum potential number of queuing

DSNY and Commercial Waste trucks. Therefore, the results presented for the on-site analysis in this FEIS are based on DSNY trucks queuing along the entire length of the ramp.

Spectral noise levels used in the Performance Standards analysis are shown in Table 6.17-5. The number and types of equipment assumed for this analysis were based on the East 91st Street Converted MTS's peak design capacity. Shown earlier, Figure 6.17-1 indicates the East 91st Street Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 6.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
East 91st Street Converted MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
~~Wheel Loader 908 (1)~~Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
~~Bridge~~/Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
~~Mini-Sweeper (1)~~	~~76~~
Vacuum Sweeper (1)	64.3
Exhaust Fans (17)	74[3]
Moving/Queuing DSNY Collection Vehicles (7)	~~73~~79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes[4] (1)	67
Harbor Tug Boat[5] (1)	69
Exhaust Fans (17)	76[3]
Moving/Queuing DSNY Collection Vehicles[6] (17)	67
~~Container Car Puller (3)~~	~~45~~
~~Gantry Crane (1)~~	~~77.2~~
~~Oceangoing Tugboat (1)~~	~~73~~

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.
(3) Noise level representative of a total of 17 exhaust fans.
(4) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the Converted MTSs.
(5) Noise level will be specified for the harbor tug boat in DSNY's plans and specifications for construction of the Converted MTSs.
(6) Quantity includes one truck queuing on the outbound scale.

Table 6.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
East 91st Street Converted MTS

Equipment Name (quantity)[1],[2]	Reference Sound Pressure Noise Level at 50 feet (dB)[3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders Type CAT 966G (2)	78	77	75	76	77	74	68	60
~~Wheel~~Mini -Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Crane type CAT 325 (1)	95	90	85	85	81	78	73	64
~~Bridge/~~Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum ~~Mini-~~Sweeper (1)	71	74	69	74	71	68	64	56
Exhaust Fans (17)[4]	70	72	74	74	70	67	62	57
Outdoor								
Container Shuttle Car ~~Puller~~ (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [~~2~~5]	78	81	78	71	66	60	55	55
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.
(3) Noise levels representative of each piece of equipment.
(4) Noise levels representative of a total of 17 exhaust fans.
[~~2~~](5) ~~This is the noise~~Noise level ~~that~~ will be specified for the gantry crane in DSNY's plans and specification for construction of the converted MTSs.
Hz = Hertz
K = Thousand

6.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the East 91st Street Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 56 meters (183 feet) from the property boundary in the direction of the York Avenue Apartment Building, which is approximately 40 meters (131 feet)

from the property boundary; approximately 113 meters (371 feet) from the property boundary in the direction of the Asphalt Green Recreational Field, which is directly abutting the property boundary; approximately 121 meters (397 feet) from the property boundary in the direction of the East 90th Street Apartment Building, which is approximately 114 meters (375 feet) from the property boundary; approximately 145 meters (477 feet) from the property boundary in the direction of Bobby Wagner Walk, which is directly abutting the property boundary; approximately 110 meters (363 feet) from the property boundary in the direction of Asphalt Green, which is directly abutting the property boundary; and approximately 152 meters (493 feet) from the property boundary in the direction of the Asphalt Green Playground, which is directly abutting the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 6.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptors, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on monitoring data provided in Table 6.17-1 above. A detailed noise analysis was performed to calculate the East 91st Street Converted MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted noise levels with both facility noise and background noise combined. The difference between this combined noise level and the existing noise level at the noise-sensitive receptor represents the predicted incremental change in noise level from the East 91st Street Converted MTS. Because this incremental change is greater than the CEQR threshold of 3 dBA, during nighttime hours or during daytime hours when the daytime background noise level is greater than 62 dBA, for the Asphalt Green Recreational Field, the Bobby Wagner Walk, and Asphalt Green receptors analyzed, there is a predicted impact that would be caused by the East 91st Street Converted MTS on-site operations based on this conservative analysis.

On-site queuing collection vehicles were further analyzed to refine the calculated noise levels from the East 91st Street Converted MTS facility truck ramp on the ~~Asphalt Green Recreational Field, Bobby Wagner Walk, and Asphalt Green~~ noise-sensitive receptors. Individual, position-specific utilization factors were assigned to each inbound collection vehicle position on the inbound side of the ramp, and to one collection vehicle position on the outbound scale based on the processing time at the East 91st Street Converted MTS. The utilization factor for each truck was estimated based on the peak hour of inbound collection vehicles, totaling 28 trucks and conservatively assuming these utilization factors would occur for 24 hours. The assumption was made that each inbound truck would be queuing on-site for approximately two minutes before proceeding one truck length further up the ramp towards the facility.

The refined analysis also includes a louver fence that will be placed on the truck ramp as a visual screen. The louver fence will be approximately nine (9) feet in height and will be constructed on top of a 3-foot high concrete base, for a total height of 12 feet. The louver fence will provide a noise reduction of approximately 7dBA for receptors adjacent to the property boundary.

Table 6.17-6 below shows the results of the CEQR analysis at the noise-sensitive receptors for the quietest background noise level with the ~~conservative~~ refined queuing analysis. ~~at the noise-sensitive receptors York Avenue Apartment Building, East 90th Street Apartment Building and the Asphalt Green Playground, and a refined queuing analysis at the Asphalt Green Recreational Field, Bobby Wagner Walk and Asphalt Green~~. The table includes the existing noise level at the noise-sensitive receptors, the East 91st Street Converted MTS-related noise levels and the combined noise level. The table also provides the difference between this combined noise level and the existing noise level at the sensitive receptors. This difference represents the predicted incremental change in noise level from the East 91st Street Converted MTS. Because this incremental change is less than the CEQR threshold of 3 dBA during nighttime hours, or during daytime hours when the daytime background noise level is greater than 62 dBA for all of the noise-sensitive receptors analyzed, there is no predicted impact that would be caused by the East 91st Street Converted MTS on-site operations.

Table 6.17-6

CEQR Analysis

Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptors

East 91st Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
York Avenue Apartment Building	40 / 131	~~63.6~~ 63.4	~~60.9~~ 58.7	~~65.5~~ 64.7	~~1.9~~1.3	No
Asphalt Green Recreational Field[5][6]	Directly abutting truck ramp	~~69.0~~ 71.1	~~47.7~~ 66.8	~~69.0~~ 72.5	~~0.0~~ 1.4	No
East 90th Street Apartment Building[5]	114 / 375	~~64.5~~ 63.4	~~60.7~~ 61.2	~~66.0~~ 65.5	~~1.5~~ 2.1	No
Bobby Wagner Walk[6]	Directly abutting property boundary	68.0	~~57.2~~ 67.4	~~68.3~~ 70.7	~~0.3~~ 2.7	No
Asphalt Green Building [5][6]	Directly abutting truck ramp	71.1	~~48.7~~ 69.9	~~71.1~~73.6	~~0.0~~ 2.5	No
Asphalt Green Playground[5]	Directly abutting truck tramp	69.0	~~65.5~~ 56.0	~~70.6~~ 69.2	~~1.6~~ 0.2	No

Notes:

(1) Twenty-minute noise level readings measured at the noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels measured on ~~July 22, 2003~~August 10, 2004 at 3:00 a.m. at the York Avenue apartment building; ~~July 7, 2004~~ September 1, 2004 at 5:00 p.m. at the Asphalt Green Recreational Field and ~~Playground~~Building; ~~January 30, 2003 at 5:00 p.m.~~August 10, 2004 at 3:00 a.m. at the East 90th Street apartment building; July 8, 2004 at 5:00 p.m. at the Bobby Wagner Walk; and ~~September 1~~July 7, 2004 at 5:00 p.m. at the Asphalt Green Playground.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures, including the louvered fence along the ramp.

(4) According to CEQR, an increase over 65 dBA at daytime is considered an impact. However, if the existing noise level at the receptor during the daytime is 62 dBA or greater or if the analysis is for a nighttime hour, an increase over 3 dBA would be considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the East 91st Street Converted MTS with the quietest background noise levels that occur during facility operation.

(5) This noise-sensitive receptor was assumed to only be in use during daytime hours. Therefore, noise monitoring and noise analysis were only performed for the quietest daytime hour.

~~(6) These results are based on refined on-site queuing collection vehicles utilization factors.~~

6.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the East 91st Street Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 6.17-7). ~~Based on this analysis, no exceedances to the Performance Standards are predicted.~~

The NYC Zoning Resolution Performance Standards for Noise (Article IV: Manufacturing District Regulations, Section 42-21) requires that a lower standard (Maximum Permitted Sound Pressure Levels identified in 42-213 lowered by 6 dB) be met at any point at the manufacturing district boundary that adjoins a residential district. One location analyzed that is residentially zoned, though use of this property is recreational (not residential), is a point on the promenade between the FDR Drive and the East River to the north of the entrance ramp to the existing MTS. (The closest actual residence to this point is across the FDR Drive, over 400 feet away on York Avenue). Background noise levels at the point on the promenade are between 4.9 dB and 42.8 dB higher than the required standard, adjusted for residential zoning. At these levels, the theoretical exceedance at the boundary cannot be perceived and, therefore, no impact is predicted.

6.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the East 91st Street Converted MTS boundary to determine the total Leq from all indoor and outdoor sources for comparison to the current Noise Code. Based on this conservative analysis, the total Leq does exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 6.17-7
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
East 91st Street Converted MTS[1]

Manufacturing District Regulation (M1)								
Frequency Range (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Adjacent to Residential Zone Threshold	**72**	**67**	**58**	**51**	**46**	**40**	**34**	**32**
Total Lp dB: D1	65.5	61.2	54.8	48.6	42.8	36.8	30.3	27.4
Total Lp dB: D2	54.7	51.1	46.3	42.4	37.3	32.4	23.5	15.6
Total Lp dB: D3	55.7	52.0	47.14	43.3	38.3	33.5	24.8	16.8
Total Lp dB: D4	54.2	51.0	46.0	41.2	36.2	31.5	24.7	19.4
Total Lp dB: D5	53.1	49.9	44.9	39.9	34.9	30.0	22.9	17.5
Total Lp dB: D6	53.7	50.4	44.9	38.9	33.4	27.6	20.6	16.8
Total Lp dB: D7	55.6	52.3	47.1	42.4	37.4	32.8	26.4	22.0
Total Lp dB: D8	70.2	64.8	55.6	50.3	44.1	38.5	32.3	28.3
Total Lp dB: D9	**77.8**	**72.3**	**62.2**	**56.9**	**49.5**	**41.5**	33.0	27.2
Total Lp dB: D10	67.7	63.2	56.3	50.2	44.4	38.4	32.0	29.3
Total Lp dB: D11	57.6	53.8	48.7	45.0	40.1	35.6	27.5	19.9
Total Lp dB: D12	61.2	57.1	51.7	48.2	43.4	39.2	32.0	25.3
Total Lp dB: D13	66.9	62.1	54.7	48.8	42.9	37.0	30.5	27.1
Total Lp dB: D14	55.5	54.4	50.9	46.1	41.4	36.9	30.1	24.6
Total Lp dB: D15	53.9	50.7	45.6	46.4	35.8	31.0	24.1	18.8

Notes for Table 6.17-7
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
K = Thousand
(1) D1 through D15 are the points on the East 91st Street Converted MTS boundary that are used in all noise analyses. D1 through D15 are all adjacent to a residential zone.

On-Site queuing collection vehicles were further analyzed to refine the calculated noise levels emitted from the East 91st Street Converted MTS facility truck ramp on the property boundary. This refined analysis is discussed in Section 6.17.3.2. In addition, the refined analysis includes a noise reduction of 7dBA at property boundary points, where applicable, that will be provided by a louver fence that has been included in the design as a visual screen. (See Section 6.17.3.2.) Table 6.17-8 below shows the results of the Current NYC Noise Code analysis with the refined queuing analysis and louver fence. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

6.17.3.5 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the East 91st Street Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 6.17-9.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles coming to or going from the East 91st Street Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. Figure 6.17-2 depicts the locations of the roadways where a detailed off-site analysis was performed.

Table 6.17-8
Current Noise Code Analysis with
Refined On-Site Queuing Collection Vehicle Utilization Factors
East 91st Street Converted MTS

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	59.0 ~~57.0~~
D2	58.4 ~~49.6~~
D3	59.5 ~~50.2~~
D4	59.6 ~~49.9~~
D5	56.0 ~~46.8~~
D6	55.6 ~~47.2~~
D7	59.0
D8	60.3
D9	66.6
D10	59.6
D11	61.2
D12	64.7
D13	59.8
D14	60.2
D15	59.8

Notes:
(1) D1 through D15 are the points on the East 91st Street Converted MTS boundary that are used in all noise analyses.

Table 6.17-9
Off-Site Noise Screening Results
East 91st Street Converted MTS

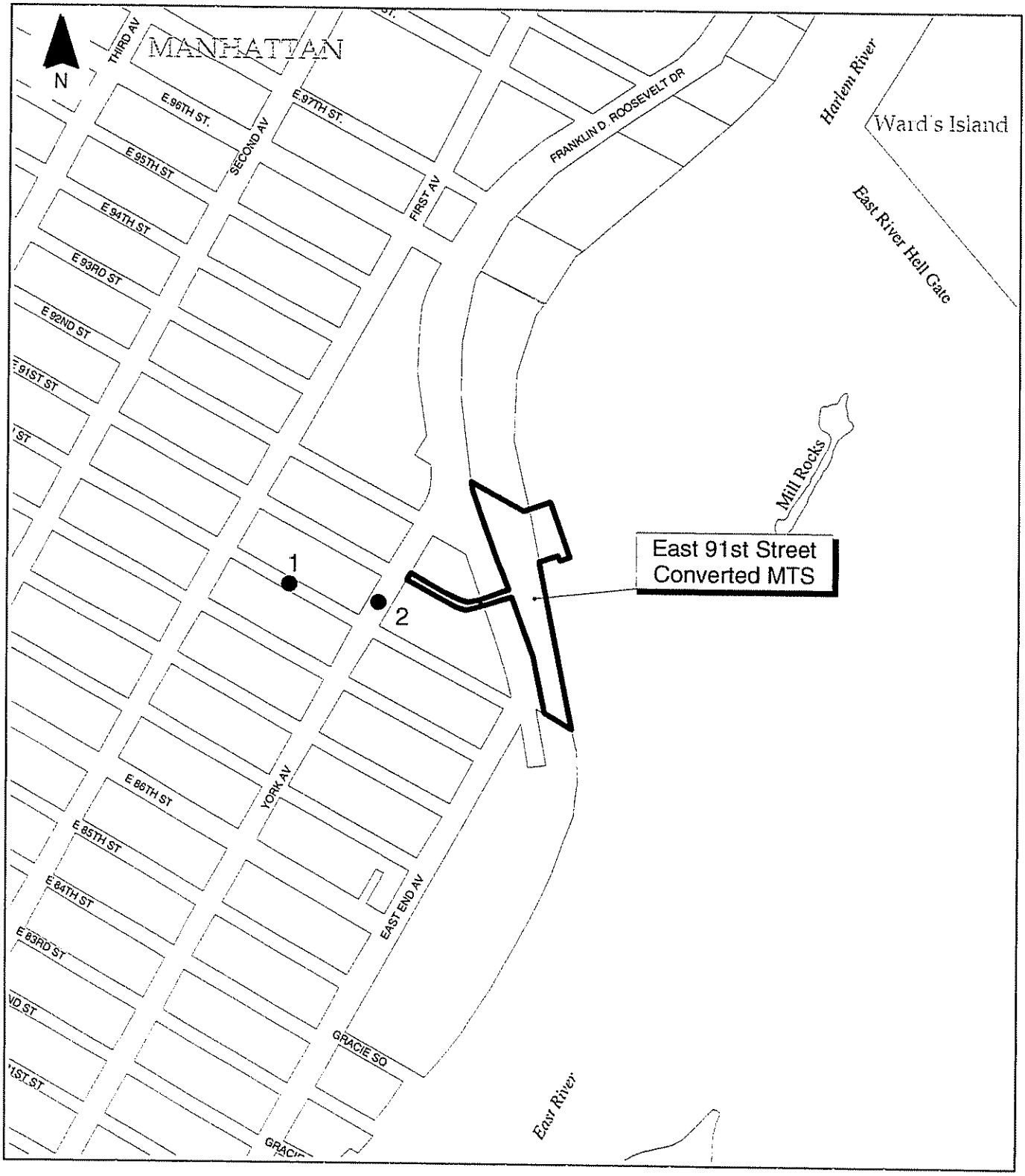
Location	Hour Beginning	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
York Avenue between East 90th & East 91st Streets	3:00 a.m.	170	19	0	893	1,063	Yes
York Avenue between East 90th & East 91st Streets	10:00 a.m.	2,722	42	0	1,974	4,696	No
East 90th Street between First Avenue & York Avenue	3:00 a.m.	116	7	0	329	445	Yes
East 90th Street between First Avenue & York Avenue	9:00 a.m.	448	14	0	658	1,106	Yes
East 91st Street between First Avenue & York Avenue	2:00 a.m.	137	4	0	188	325	Yes
East 91st Street between First Avenue & York Avenue	9:00 a.m.	1,363	14	0	658	2,021	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include East 91st Street Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 6.17-2 Mobile Noise Analysis
Intersections Analyzed
East 91st Street Converted MTS

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TNM results for locations/hours that resulted in an impact based on a second-level screening are presented in Appendix E of this FDEIS. Because the incremental noise-level change, which is calculated by obtaining the difference between the TNM-predicted Future Build noise level and the TNM-predicted Future No-Build noise level, is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, an impact at these roadways would be caused by the East 91st Street Converted MTS-related collection and employee vehicles.

To determine if these TNM-predicted impacts were accurate, site-specific truck simulations were conducted at the noise-sensitive receptors. The truck simulation analysis provides a more realistic determination of DSNY and other agency collection vehicle noise impacts based on the proposed number of DSNY and other agency collection vehicles expected to travel through the roadways analyzed during the nighttime hours. Truck simulations were conducted with DSNY collection vehicles, as described in Section 3.19.7, for each roadway and hour that the first-level screening analysis resulted in a possible impact. For this procedure, two sets of noise measurements were taken — one with and one without DSNY trucks — by routing a set number of DSNY trucks during the affected nighttime hours past the noise-sensitive receptor. Table 6.17-10 below contains the results of the site-specific DSNY collection vehicle simulations, which show that only the 3:00 a.m. to 4:00 a.m. hour at the York Avenue between East 90th Street and East 91st Street location would have an impact as a result of the East 91st Street Converted MTS.

A comparison of the simulation results for the hour resulting in an impact and the TNM results for this hour for the same traffic conditions and background noise levels estimated from recordings during the simulations is provided in Appendix E of this FDEIS. Based on this comparison, it is determined that TNM over-predicted the incremental change. The over-prediction can be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the East 91st Street Converted MTS-related collection vehicles.

Table 6.17-10
Off-Site Noise Analysis Truck Simulation
East 91st Street Converted MTS

Location	Hour Beginning	Existing Background Noise Level (L_{eq}) (Estimated)[1] dBA	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles dBA	Impact (Noise Level Difference) dBA
York Avenue between East 90th Street and East 91st Street	2:00 a.m.[2]	63.9	12	65.7	No (1.8)
York Avenue between East 90th Street and East 91st Street	3:00 a.m.[2]	62.9	19	66.5	Yes (3.6)
East 90th Street between First Avenue and York Avenue	2:00 a.m.[3]	64.9	5	65.8	No (0.9)
East 90th Street between First Avenue and York Avenue	3:00 a.m.[3]	64.5	7	65.4	No (0.9)

Note:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations performed on July 30, 2003.
(3) Simulations performed on July 29, 2003.

Because both TNM and the site-specific truck simulations predict an impact at a noise-sensitive receptor during the 3:00 a.m. to 4:00 a.m. hour for the York Avenue between East 90th Street and East 91st Street location, adjustments were made to the distribution of trucks. Only the number of trucks that can be routed through this location without causing an impact would be allowed. The remaining collection vehicles would be routed through this location during the 2:00 a.m. to 3:00 a.m. hour without causing an impact. This location was re-analyzed during these hours with the truck adjustments using the site-specific truck acoustic energy per hour, as described in Section 3.19.7.2, to confirm that off-site noise impacts would not be caused by the reduced number of collection vehicles at this location. Based on these results, with the truck adjustments, there is no predicted impact that would be caused by the East 91st Street Converted MTS collection vehicles en route to and from the facility. Table 6.17-11 shows the results of this analysis.

Table 6.17-11
Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles
York Avenue between East 90th Street and East 91st Street
East 91st Street Converted MTS

Hour	Existing Background Noise Level (L_{eq}) (Estimated)[1] (dBA)	Adjusted Collection Vehicles	Calculated[2] Noise Level (L_{eq}) for Existing Traffic plus Adjusted Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
2:00 a.m.	63.9	~~17~~15	~~66.3~~ 66.1	No ~~(2.4)~~(2.2)
3:00 a.m.	62.9	~~14~~ 8	~~65.8~~ 64.8	No ~~(2.9)~~(1.9)

Note:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Noise levels for existing traffic plus adjusted collection vehicles were calculated utilizing the per truck acoustic energy determined from the truck simulation data for this location.

6.17.3.6 Combined On-Site and Off-Site Noise Levels

An on-site and off-site noise analysis was performed for the East 91st Street Converted MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis was conducted to determine if a combined noise analysis would be required for the operations at the East 91st Street Converted MTS. The combined analysis study area was defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway

entrance to the site. The other limits for the combined analysis study area were defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the site. The results of the screening analysis show that the York Avenue apartment building is the nearest noise-sensitive receptor located within the study area that can be impacted by both on-site and off-site East 91st Street Converted MTS operations; therefore, an combined noise analysis, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on the off-site analysis discussed in Section 6.17.3.5 above. Table 6.17-12 shows the distance from the East 91st Street Converted MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, East 91st Street Converted MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted off-site noise level at the noise-sensitive receptor. The table also provides the combined on-site and off-site noise level and the difference between theise combined noise levels. This difference represents the predicted incremental change in noise level from the East 91st Street Converted MTS on-site and off-site operations at the noise-sensitive receptor. Because this incremental change is not greater than the CEQR threshold of 3 dBA during nighttime hours for the York Avenue apartment building receptor analyzed, there is no predicted impact that would be caused by the East 91st Street Converted MTS combined on-site operations and off-site operations.

Table 6.17-12
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor with East 91st Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed (Hour Beginning)	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
York Avenue Apartment Building between East 90th Street and East 91st Street	47 / 154	2:00 a.m.	63.9	~~44.4~~ 58.7	~~17~~ 15	~~66.3~~ 62.0	~~66.3~~ 66.8	~~2.4~~ 2.9	No
		3:00 a.m.	62.9	~~44.4~~ 58.7	~~14~~ 8	~~65.8~~ 60.3	65.8	2.9	No

Notes:

(1) Existing background noise levels were estimated from noise monitoring performed during truck simulations.

(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(3) According to CEQR, an increase over 3 dBA at nighttime is considered an impact.

6.18 Commercial Waste to the East 91st Street Converted MTS

6.18.1 Existing Conditions

No commercial waste is delivered to the East 91st Street MTS site under Existing Conditions. Commercial waste generated in Manhattan is taken directly out of the City to remote disposal locations.

6.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the East 91st Street Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

6.18.3 Potential Impacts of Sending Commercial Waste to the East 91st Street Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

6.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the East 91st Street Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 6.15, 6.16 and 6.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

6.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the East 91st Street Converted MTS were evaluated in Sections 6.14, 6.15 and 6.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 6.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 28 (inbound trip ends) per hour, which occurred during the AM peak. These 28 DSNY and other agency collection vehicles are also more than the 21 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the East 91st Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 28 DSNY and other collection agency vehicle inbound trip ends at the East 91st Street Converted MTS. Therefore, the addition of the 21 DSNY and other agency collection vehicles and commercial waste hauling vehicle inbound trip ends at the East 91st Street Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 28 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 28 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts at several of the intersections analyzed. Consequently, because the 21 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can travel through these intersections per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the East 91st Street Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 781 tons (or 71 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

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CHAPTER 7 ENVIRONMENTAL REVIEW: NORTH SHORE CONVERTED MTS

7.1 Introduction

The results of the environmental analyses of the North Shore Converted MTS are presented in the following sections:

7.2 Land Use, Zoning, and Public Policy
7.3 Socioeconomic Conditions
7.4 Community Facilities and Services
7.5 Open Space
7.6 Cultural Resources
7.7 Urban Design, Visual Resources, and Shadows
7.8 Neighborhood Character
7.9 Natural Resources
7.10 Hazardous Materials
7.11 Water Quality
7.12 Waterfront Revitalization Program
7.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
7.14 Traffic, Parking, Transit, and Pedestrians
7.15 Air Quality
7.16 Odor
7.17 Noise
7.18 Commercial Waste to the North Shore Converted MTS

Section 2.2.4 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

7.2 Land Use, Zoning, and Public Policy

7.2.1 Existing Conditions

7.2.1.1 Definition of Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 7.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 7.2-2). Section 3.4 describes the methodology employed in these analyses, and Section 2.2.4 provides information on existing land uses and operations on the site.

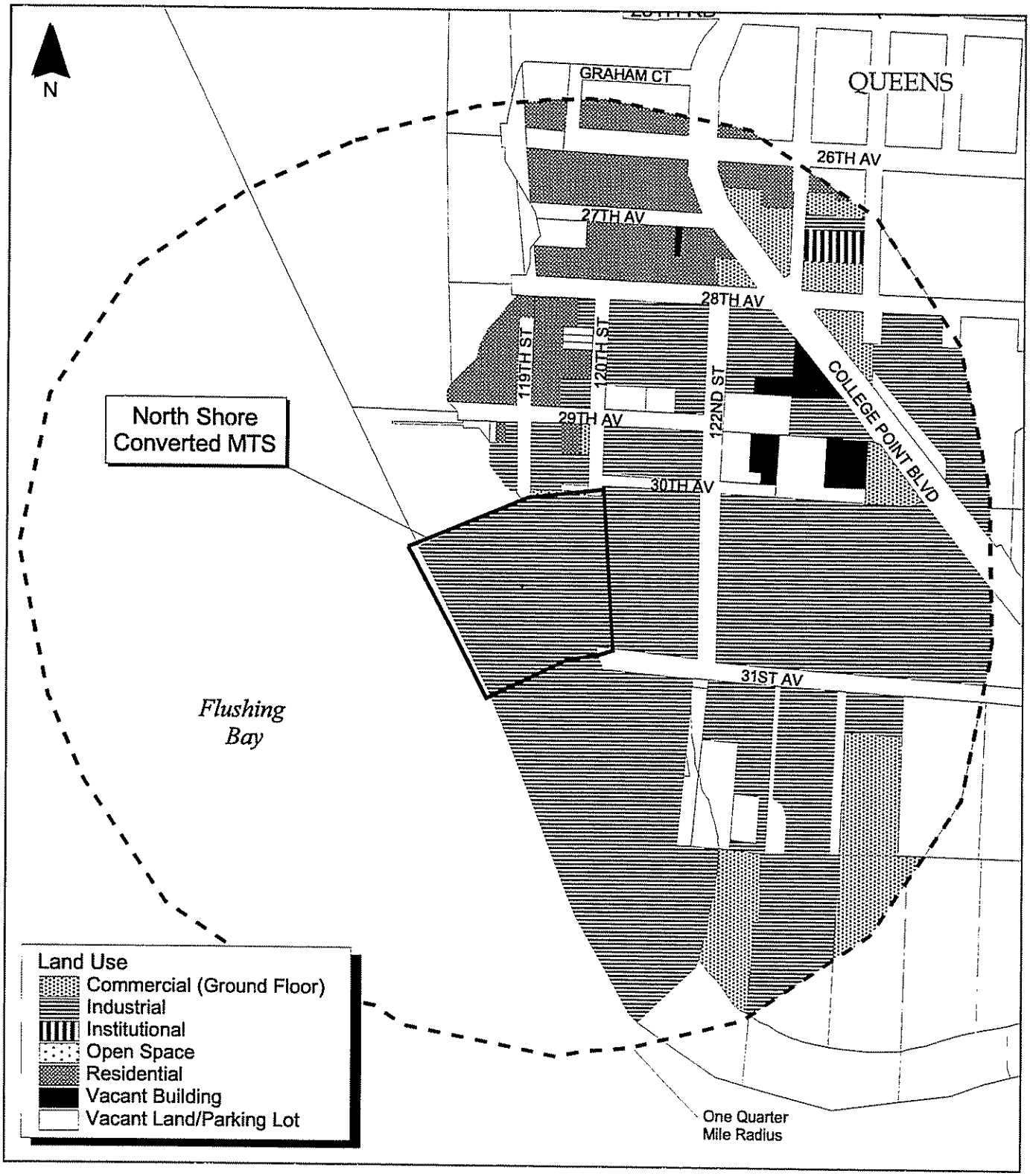
7.2.1.2 Land Use Patterns

7.2.1.2.1 General Context

The site is set on the southeast side of Flushing Bay within the mixed-use College Point peninsula and across from LaGuardia Airport. Commercial offices, manufacturing uses, warehouse storage facilities and automotive uses are the predominant land uses in the immediate vicinity south, east and northeast of the site, while residential uses are located further to the north of the site.

7.2.1.2.2 Land Uses in the Primary Study Area

The western half of the primary study area is part of Flushing Bay, while the eastern half contains a variety of land uses, mostly industrial. Industrial and manufacturing uses and their associated offices, warehouses/storage facilities and parking areas are concentrated to the south and east of the site. Commercial establishments are found throughout the primary study area, with a large number of automobile parts and service shops lining both sides of College Point Boulevard between approximately 27th and 28th Avenues and around 119th and 120th Streets, north of the site. East of and adjacent to the site is the DSNY Queens CD 7 garage, and, north of the garage, Vassilaros Coffee Roasting Company. A large Consolidated Edison facility is located on the block due east of the site and the CD garage, with storage and parking on the western end,



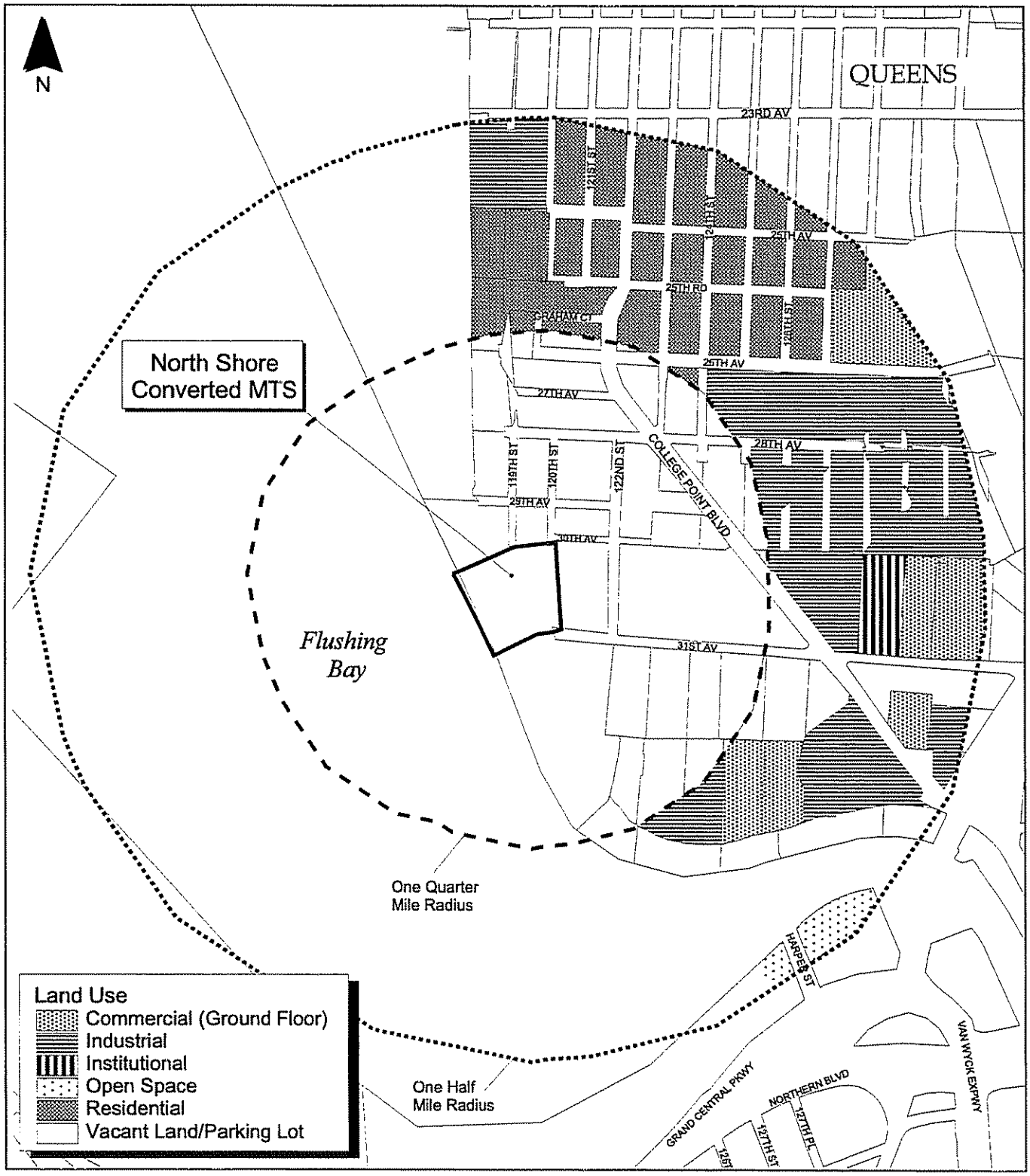
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

500 0 500 Feet

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Figure 7.2-1 Land Use in the Primary Study Area
North Shore Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

500 0 500 Feet

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Figure 7.2-2 Land Use in the Secondary Study Area

North Shore Converted MTS

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closest to the site. Residential uses are located north of the site from 29th Avenue to 28th Avenue west of 120th Street and north of 28th Avenue, where it is almost entirely residential between College Point Boulevard and the bay. The residential area contains single-family detached housing, two-family housing and some late 20th-century row housing. Nursing home facilities built between 1955 and 1971 are located on the western ends of the three blocks between 25th Avenue and 27th Avenue.

South of and adjacent to the site is the Ferrara Brothers Building Materials Company on 31st Avenue. Behind their offices is the materials storage and truck loading area. Several of the mapped streets in the area are not open to the public, but instead serve the concrete and asphalt companies located there. A Home Depot store has been recently constructed east of Ferrara Brothers near College Point Boulevard, introducing large-scale retail activity to the area.

A portion of the College Point Industrial Park to the east of the site lies in the primary study area. The park begins at College Point Boulevard and extends eastward and southward from about 26th Avenue to about 31st Avenue. Warehouses, busing facilities and storage/parking areas are located within that portion of the park within the study area, while the remainder of the park features such prominent businesses as The New York Times printing facility.

7.2.1.2.3 Land Uses in the Secondary Study Area

The northern portion of the secondary study area is almost exclusively residential, with the exception of major industrial uses in the area between 120th Street and the shore. Enterprises uses such as Sunrise Oil and an active boat yard and parking are found there. The northern residential portion of the study area east of 119th Street contains more multi-family apartment housing than in the residential areas nearer to the site. Machine shops and small manufacturers are scattered throughout. Public School No. 29, built in 1928, is located just outside the study area, on the south side of 23rd Avenue between 125th and 126th Streets. As mentioned, a new Home Depot is situated west of College Point Boulevard, south of 31st Avenue. Except for the Full Gospel New York Church at 130-30 31st Avenue, industrial uses, including the City's impound lot south of 28th Avenue, characterize most of the remaining secondary study area east of College Point Boulevard. Large manufacturers, such as The New York Times printing facility, are located to the east on the perimeter of the secondary study area.

Southeast of the site, the secondary study area consists of large privately owned lots of industrial waterfront and warehouses, as well as the former Metropolis nightclub at the southern end of Street. Most of these properties are accessible only via private drives. The secondary study area also includes the southern shore of Flushing Bay, where the City Bureau of Highways' Queens asphalt plant is located, as is the Flushing Meadows Corona Park, which extends south of the bay. The study area extends westward across the bay to include a small portion of the eastern edge of LaGuardia Airport.

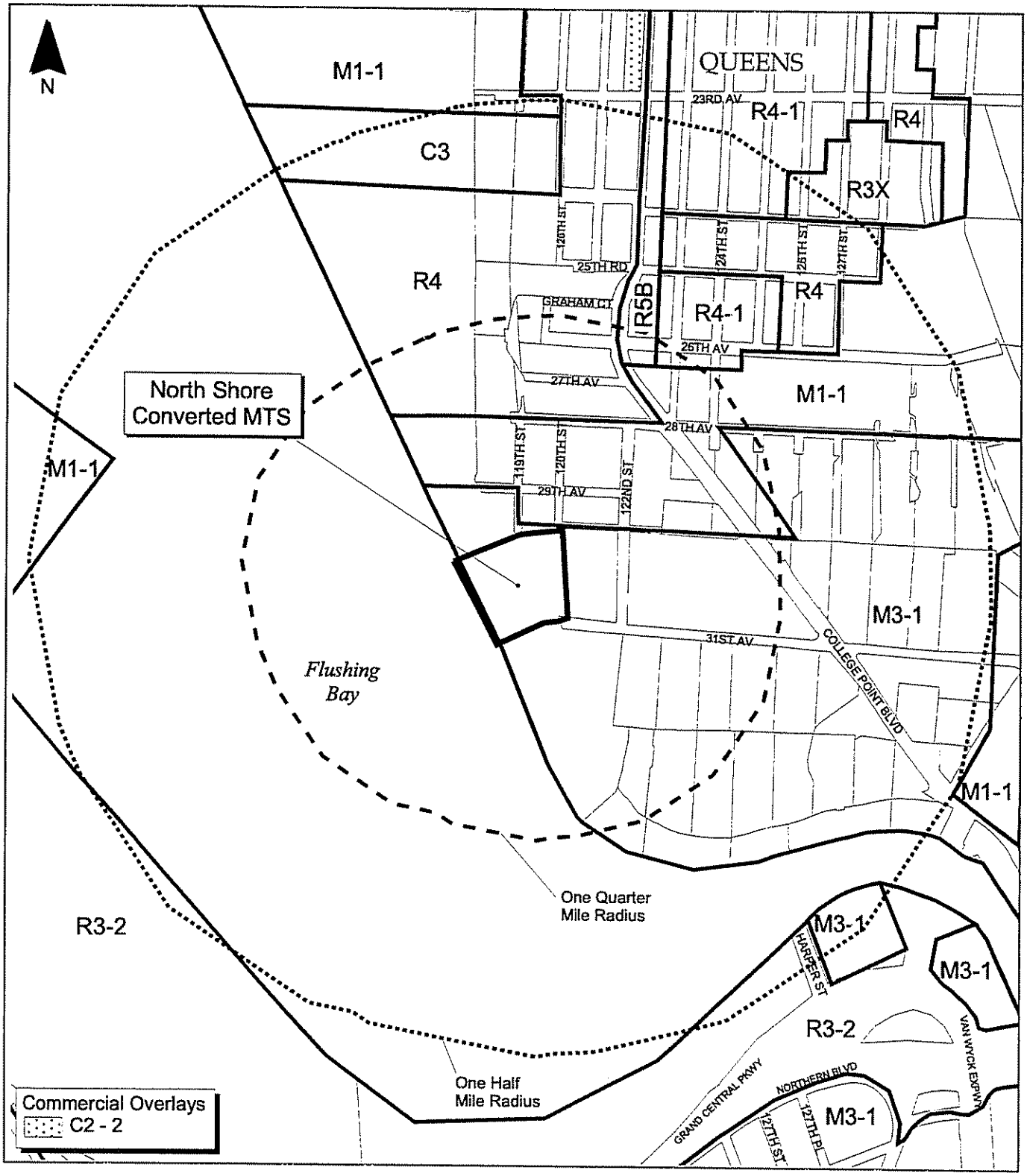
7.2.1.3 Zoning On and Near the Site

7.2.1.3.1 Zoning Within the Primary Study Area

The site is in an M3-1 zoning district that extends north to about 30th Avenue, west and south to the bay, and east beyond College Point Boulevard. (See Figure 7.2-3 and Table 3.4-1: Zoning District Characteristics.) Bordering the M3-1 zone to the north is an M1-1 zone that extends from the bay to beyond the eastern edge of the secondary study area. North of this M1-1 zoning district are portions of larger R4, R5B and R4-1 zoning districts.

7.2.1.3.2 Zoning Within the Secondary Study Area

The secondary study area is primarily zoned M3-1 east and southeast of the site. North and northeast of the site, the secondary study area is primarily zoned for residential uses, buffered by an M1-1 zone that cuts diagonally through the study area. The C3 zone at the northern edge of the study area encompasses the commercial waterfront between 23rd and 25th Avenues and 120th Street.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.2-3 Zoning

North Shore Converted MTS

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7.2.1.4 Plans and Policies

The FY 2004 CDNS for CD 7 does not provide physical planning recommendations that may be relevant specifically to the site or the primary and secondary study areas.

NYCDCP's Comprehensive Waterfront Plan for Reach 10 (Flushing Bay to Nassau County) recommends that "street-end" access to the waterfront that is compatible with industrial uses be provided at several points along the College Point industrial waterfront. Other recommendations pertaining to the study area include a recommendation to rezone a 2.5-acre vacant M1 site between 25th and 23rd Avenues to C3 to permit such water-dependent uses as a marina and restaurant or residential development. (See Section 7.5 for details on NYCDPR park plans and Section 7.12 for a review of consistency with the Waterfront Revitalization Program.)

7.2.2 Future No-Build Conditions

It is reasonable to anticipate that the Future No-Build Conditions in the primary and secondary study areas generally will resemble the Existing Conditions. The site will remain DSNY property, the existing MTS will remain standing and the associated DSNY salt storage and garage facilities will continue to be fully operational.

7.2.3 Potential Impacts with the North Shore Converted MTS

7.2.3.1 Land Use and Zoning

The North Shore Converted MTS would include containerization functions and would replace the existing, non-operating MTS. The North Shore Converted MTS would not be a substantial new use, however, since it would be a reactivation of former waste handling activities at the site. It would be unlikely to encourage or discourage similar development or other typical development in the area and would be unlikely to affect the residential area to the north. Because the general area is zoned for industrial uses, the North Shore Converted MTS would not likely affect surrounding zoning patterns.

7.2.3.2 Consistency with Public Plans and Policies

There are no recommendations or objectives stated in relevant plans and policies that specifically relate to the site, study area or the North Shore Converted MTS, so the new facility would be consistent with public plans and policies.

7.3 Socioeconomic Conditions

7.3.1 Existing Conditions

7.3.1.1 Definition of the Study Areas

Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Census Tract 907 (see Figure 7.3-1). Queens Census Tract 907 extends east from Flushing Bay in Queens to the Whitestone Expressway, as far south as approximately 32nd Avenue and as far north as approximately 20th Avenue. For comparison purposes, both 1990 and 2000 Census data were also gathered at the borough and City levels. The study area used for the assessment of potential impacts on economic conditions extends as far north as approximately 23rd Avenue and as far east as approximately the intersection of the Whitestone Expressway and College Point Avenue.

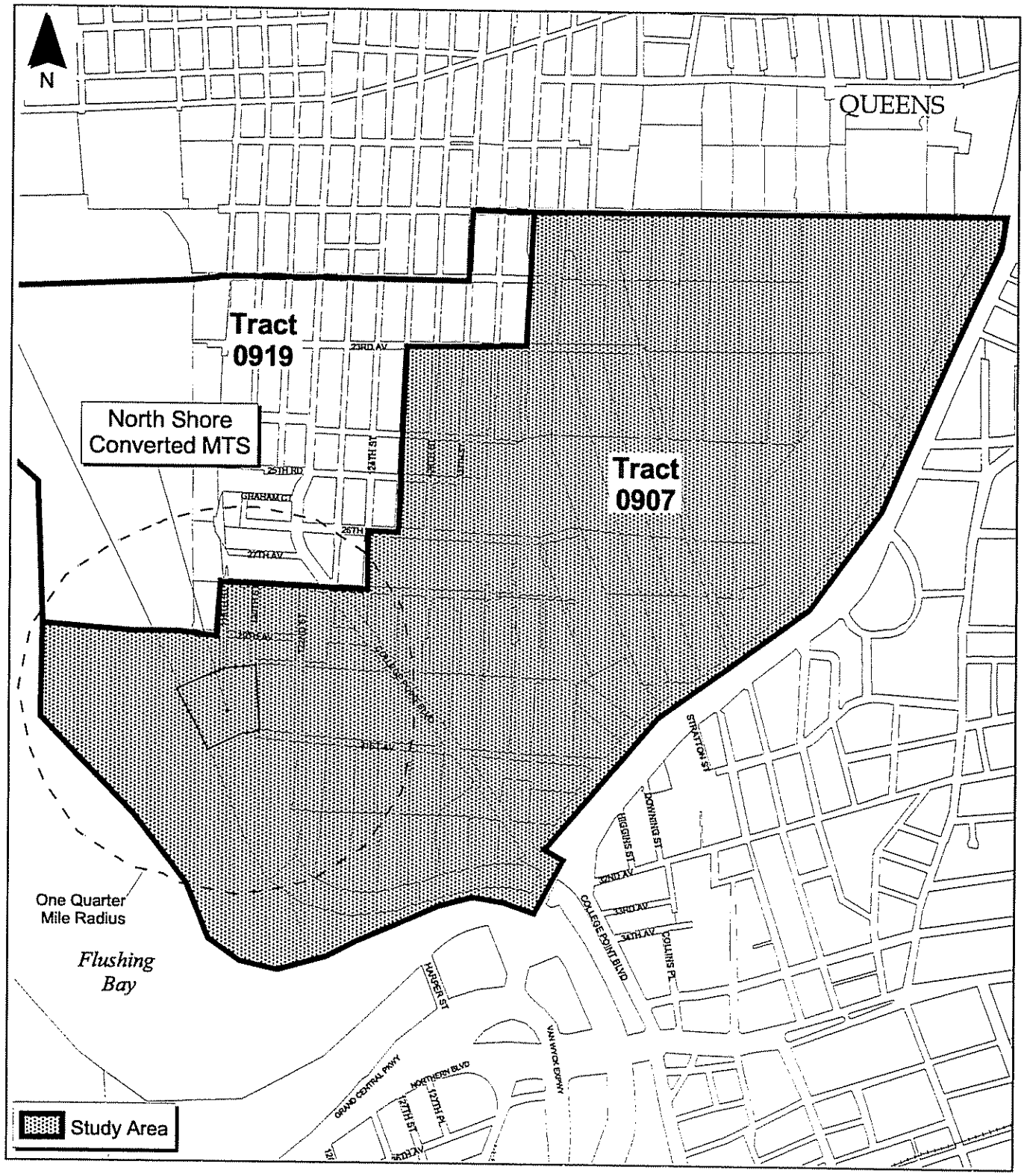
Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

7.3.1.2 Demographic Characteristics

7.3.1.2.1 Population

The total 2000 study area population was 1,243 persons (see Table 7.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a smaller percentage increase (7%) than did the borough during the same period (14%), but its population grew almost as rapidly as the City's as a whole (9%).

The age-sex distribution was approximately the same as the population distribution of the borough and the City. The study area contained approximately the same percentage of children and teenagers as the borough or City; approximately 26% of the study area population was under the age of 20, compared to 25% for Queens and 27% for the City.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 7.3-1 Census Tracts

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7.3.1.2.5 Housing

The housing stock of the study area is considerably newer than the borough and City. About half of the housing units (49%) in the study area were constructed between 1960 and 1980 and the remainder were largely built before 1960, while the majority of housing units in both Queens (71%) and the City (67%) were built before 1960. As of 2000, there were 448 housing units in the study area with a vacancy rate of about 1%, lower than the borough (4%) and the City (6%). In contrast to these two larger areas, the study area was occupied by a considerably higher percentage of owners than renters. Only 38% of the housing units were renter-occupied, in contrast to the borough (55%) and the City (66%).

The 2000 median value of housing units in the study area ($235,800) was greater than in Queens ($212,600) or the City ($211,900). The study area's median monthly rent ($784) was slightly higher than in the borough ($775) or the City ($705). The turnover in the study area (32%) from 1995 until 2000 was lower than that of the borough (42%) or the City (43%).

From 1990 to 2000, a total of 31 housing units were added in the study area, representing a 7% increase, slightly less than the borough (9%) and equivalent to the City (also 7%).

7.3.1.2.6 Education

Among people aged three and older, there was a slightly lower rate of school enrollment (21%) than in either the borough (27%) or the City (29%). Of those enrolled in school within the study area in 2000, 71% were enrolled in elementary school or high school and 25% were enrolled in college or beyond. In Queens, 61% were enrolled in elementary school or high school and 28% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

The number of persons enrolled in school from 1990 to 2000 within the study area remained relatively the same, in contrast to the 25% increase in Queens and the 18% increase in the City.

The study area had a lower educational attainment level than either the borough or the City. While half of the study area population aged 25 and over had some college degree compared to Queens (47%) and the City (48%), a smaller percentage of study area residents graduated college

(13%) compared to the borough (24%) and the City (27%). Similarly, the study area had a slightly higher percentage of people with only high school diplomas (29%) compared to the borough (28%) and the City (24%).

Despite the lower educational levels, from 1990 to 2000 the study area witnessed rising levels of educational attainment. The number of college graduates increased 48%; the same trend was evident in the borough and the City, which experienced increases of 32% and 29%, respectively.

7.3.1.2.7 Income and Poverty

In 2000, the median household income and median family income ($45,956) for the study area were the same. They were only a little different than the reported numbers in Queens ($42,439 and $48,608, respectively), while greater than those of the City ($38,293 and $41,887, respectively). Forty-four percent of households in the study area had incomes of $50,000 and above, compared with 43% in the borough and 40% in the City.

Within the study area, the percentage of families living below the poverty level (12%) was the same as that of Queens but less than that of the City (19%). The percentage of families living below the poverty level with children under the age of 18 (17%) was the same for Queens and considerably less than the City (26%).

A smaller percentage of persons in the study area under the age of 18 were living below the poverty level in 2000 (18%) than in Queens (19%) or the City (30%). The 2000 Census also reported that about 9% of persons 65 years or older were living below the poverty level in the study area, less than Queens (13%) and half the proportion of the City (18%).

From 1990 to 2000, the total number of people living below the poverty level in the study area increased dramatically, from 5 to 155, while the borough of Queens experienced an increase of 53%, more than twice that of the City (21%).

7.3.1.3 Economic Conditions

The study area contains a mix of offices, automotive repair shops, light industrial uses and some warehouse storage facilities. Industrial uses include a Consolidated Edison facility, the Ferrara Brothers Building Materials Company, Sunrise Oil and other manufacturing uses. Nearby commercial enterprises are primarily associated with automobile parts and service.

A portion of the 578-acre College Point Industrial Park is located within ½-mile of the site. It currently houses active warehouses, light industry, bus facilities, storage/parking areas and Consolidated Edison facilities between College Point Boulevard and Linden Place.

7.3.2 Future No-Build Conditions

7.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Queens CD 7 will remain about the same as current conditions.[2]

7.3.2.2 Economic Conditions

No significant changes to socioeconomic conditions within the study area are expected. Stable industrial and commercial uses are expected to continue to shape the character of the area around the site. The NYCEDC will continue to market sites within the College Point Industrial Park, although no significant new construction is expected to occur within the study area.

The near-term economic health of industrial areas such as the study area may be supported by recently established City programs available through the IDA. These programs, such as the Industrial Incentive Program and the Small Industry Incentive Program, provide businesses with tax incentives for capital renovation and expansion projects. However, no significant changes are anticipated through 2006.

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[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

Regional projections indicate that employment in Queens CD 7 will remain about 11% of the borough total.[3]

7.3.3 Potential Impacts with the North Shore Converted MTS

The North Shore Converted MTS represents the reactivation of solid waste transfer operations with added containerization operations. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

7.3.3.1 Residential Impacts

No residential uses would be displaced or indirectly affected as a result of the North Shore Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

7.3.3.2 Direct Business and Institutional Impacts

The North Shore Converted MTS would not result in direct displacement of any businesses or institutional uses.

7.3.3.3 Indirect Business and Institutional Impacts

The businesses adjacent to and near the site are industrial, automotive, office or storage-related uses that would not be significantly affected by the North Shore Converted MTS.

7.3.3.4 Employment Impacts

The North Shore Converted MTS is expected to generate a total of approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

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[3] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

7.4 Community Facilities and Services

7.4.1 Existing Conditions

7.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile from the site.

7.4.1.2 Summary of Community Facilities and Services

Consistent with the industrial nature of the primary and secondary study areas, very few community facilities are present. Community facilities within and serving the area are listed in Table 7.4-1 and locations are shown on Figure 7.4-1.

7.4.2 Future No-Build Conditions

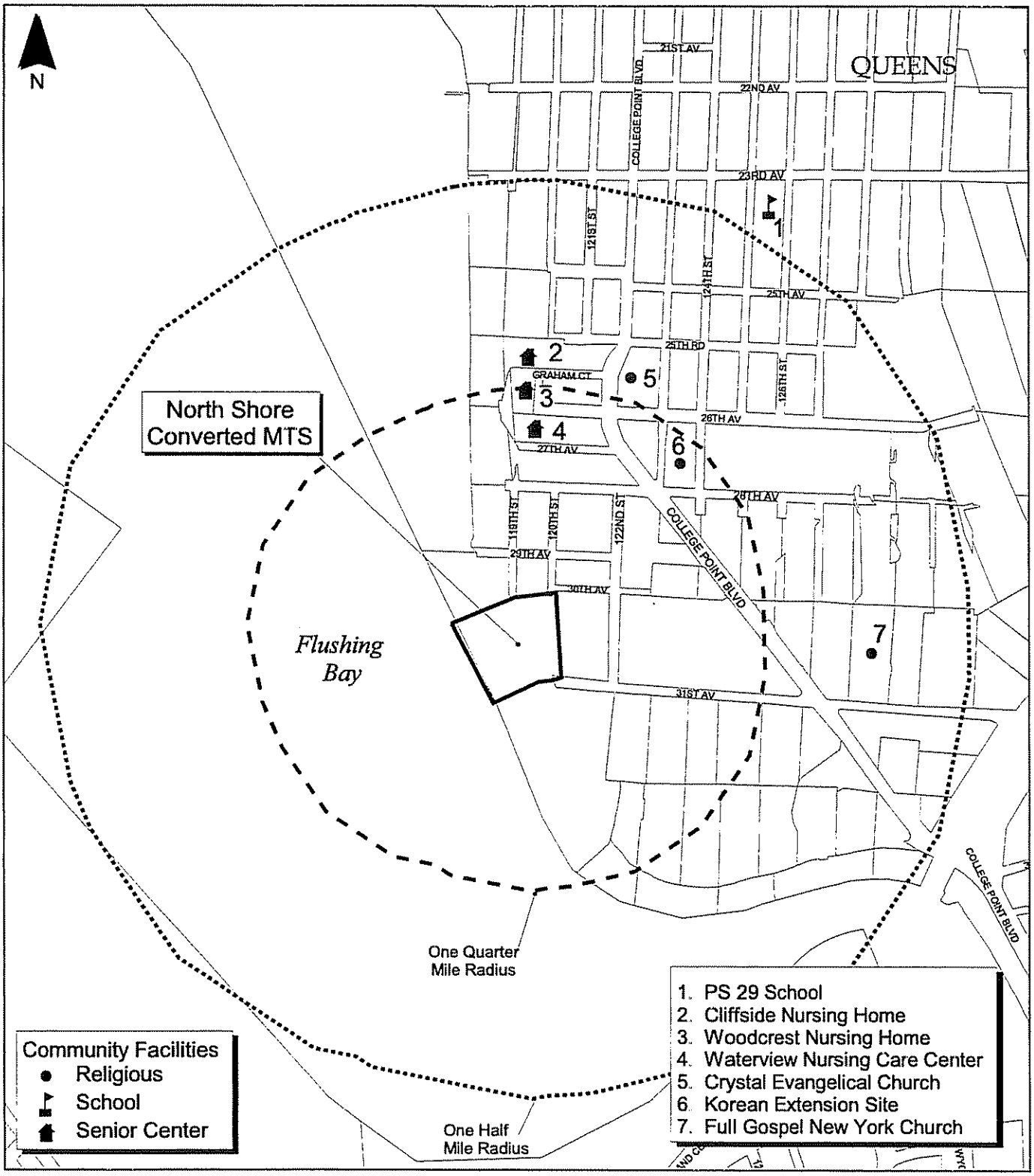
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

7.4.3 Potential Impacts with the North Shore Converted MTS

The North Shore Converted MTS would not create any significant new demand on services and community facilities. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the North Shore Converted MTS (Appendix A).

Table 7.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Senior Centers	
Waterview Nursing Care Center	119-15 27th Avenue
Woodcrest Nursing Home	119-09 26th Avenue
Religious and Cultural Institutions	
Korean Extension Site	2625 123rd Street
Within the Secondary Study Area	
Senior Centers	
Cliffside Nursing Home	119-19 Graham Court
Religious and Cultural Institutions	
Crystal Evangelical Church	2567 College Point Boulevard
Full Gospel New York Church	130-30 31st Avenue
Outside the Secondary Study Area	
Hospitals	
Booth Memorial Medical Center	56-45 Main Street
Flushing Hospital Medical Center	45th Avenue and Parsons Boulevard
Flushing Hospital – North Division	35-06 Parsons Boulevard
Police	
109th Precinct	37-05 Union Street
Fire	
1st Engine Company – Engine Company 297 and 1st Ladder Company – Ladder Company 130	119-11 14th Road
2nd Engine Company – Engine Company 295 and 2nd Ladder Company – Ladder Company 144	12-49 149th Street
Schools	
P.S. 29	125-10 23rd Avenue



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations, and hospitals outside the secondary study area may not be shown on the figure.

Figure 7.4-1 Community Facilities and Services

North Shore Converted MTS

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7.5 Open Space

7.5.1 Existing Conditions

7.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

7.5.1.2 Summary of Open Space in the Study Area

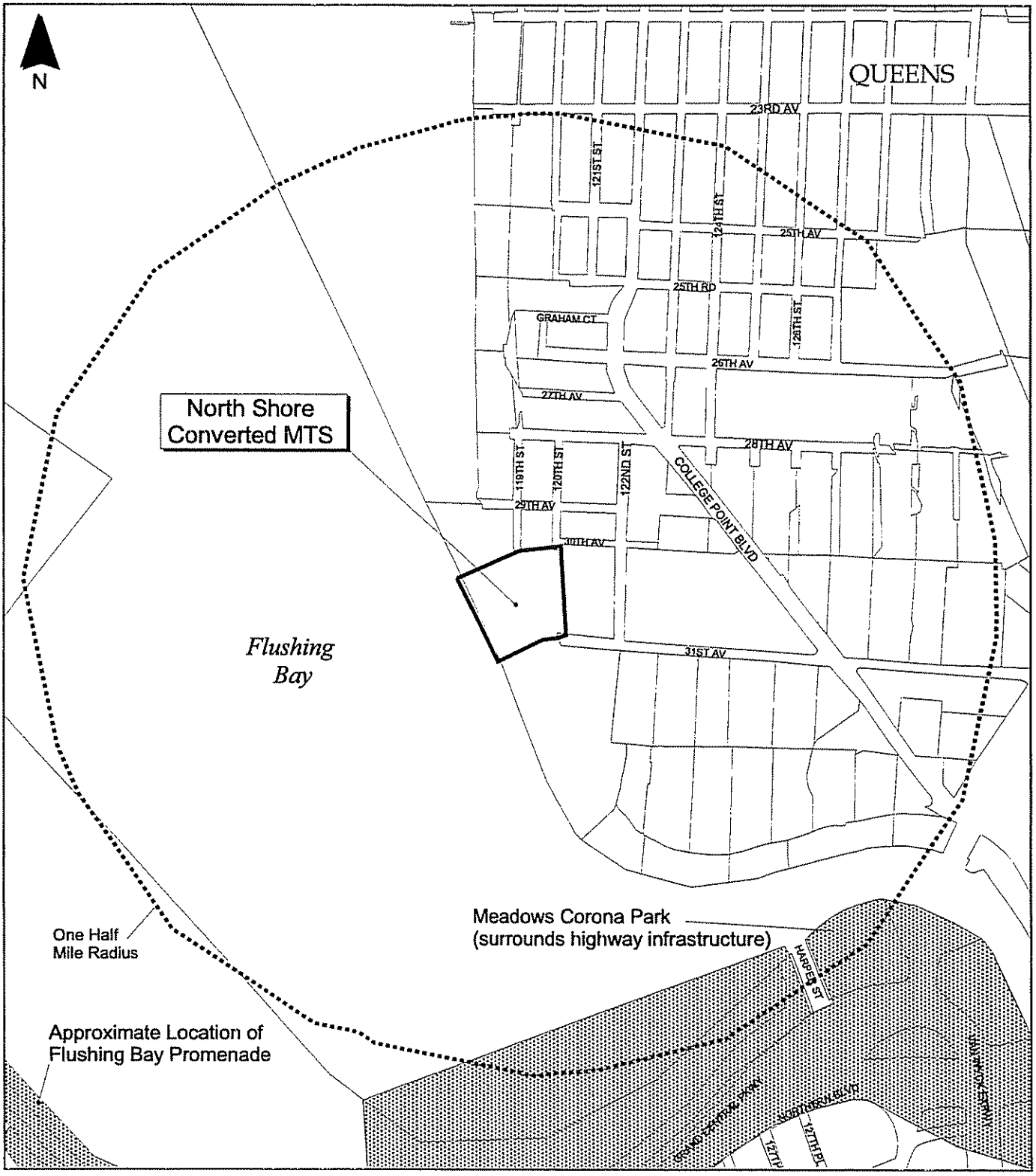
A small portion of Flushing Meadows Corona Park, a large regional open space resource, is located within the study area (Table 7.5-1 and Figure 7.5-1.)

Table 7.5-1
Public Parks and Open Spaces

Name	Address	Acreage
Flushing Meadows Corona Park	Flushing Meadows Corona Park, north of Grand Central Parkway	1,258

7.5.2 Future No-Build Conditions

The various park improvements planned for Flushing Meadows Corona Park will be located outside the study area. The improvements planned or under construction include a pool and ice skating facilities, statue, playground and three soccer fields. The only portion of the park that would likely afford views of the site is the Flushing Bay Promenade, which is along the Southern shore of Flushing Bay.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 7.5-1 Open Space/Parkland

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7.5.3 Potential Impacts with the North Shore Converted MTS

The North Shore Converted MTS would have no effect on any open space resources within the study area. It would neither physically change or eliminate any open space or reduce its utilization or aesthetic value, nor introduce a substantial new user population that would create or exacerbate over-utilization of open space resources. In particular, the North Shore Converted MTS would not affect views from the Flushing Bay Promenade because its appearance and placement would be similar to those of the existing MTS.

7.6 Cultural Resources

7.6.1 Existing Conditions

7.6.1.1 Definition of the Study Area

The cultural resources study area is defined as the area within ½-mile of the site.

7.6.1.2 Development History of the Area

Flushing Bay and its creek form the western boundary of College Point, which had practically been an island until much of the marshland was filled in the 19th century. The College Point neighborhood was established in 1854 by Conrad Poppenhausen, owner of a hard-rubber factory, to accommodate his workers. Streets, houses, businesses and schools were developed under Poppenhausen's guidance. The area grew rapidly in the 1880s and 1890s, attracting a largely German population. Breweries, silk mills and paint works were established. Beer halls and amusement parks, especially Point View Island, made the area popular for outings, steamboat excursions and political clubs. The resorts declined during the Prohibition era and were replaced eventually by aircraft and aviation parts factories built by Sikorsky Aircraft, the LWF Company and the EDO Corporation to support the nearby LaGuardia Airport. LaGuardia Airport, located on the south side of Flushing Bay, opened in 1939 as the first viable commercial airport serving the City.

7.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance on the site.

7.6.1.4 Historic Resources Within the Study Area

There are no state, national or local historic districts or individually designated properties within the study area.

7.6.2 Future No-Build Conditions

There are no elements of potential historic significance slated for review. Because of the nature of architectural and archaeological resources, and the fact that there is no reason to anticipate the designation of such resources in this area in the near future, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

7.6.3 Potential Impacts with the North Shore Converted MTS

The North Shore Converted MTS would have no effect on any known cultural resources. Based upon its review, SHPO has stated that the North Shore Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, the State and National Registers of Historic Places. The LPC has stated that the site contains no architectural or archaeological significance (see Appendix A).

7.7 Urban Design, Visual Resources, and Shadows

7.7.1 Existing Conditions

7.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 7.8-1). The site has been developed in a manner consistent with adjacent properties and the overall study area. It is a non-sensitive industrial area in terms of urban design and visual quality assessment. There are no sensitive view corridors, publicly accessible open areas or points of waterfront access that might be affected by development of the North Shore Converted MTS.

7.7.1.2 Description of the Site

Much of the space on the site and in the surrounding area is devoted to parking for employees and for storage of trucks and other vehicles associated with the existing uses (see Figure 7.7-1). A curved ramp extending from 31st Street leads to the existing MTS (see Figure 7.7-2). The design of the existing MTS is typical of similar facilities with a height of approximately 50 feet and a shell constructed of prefabricated steel. There are lights mounted on the exterior walls of the facility and light poles throughout the site.

In addition to the existing MTS building, there is the foundation of a former salt shed, within which salt is still stored in the northern portion of the site and that still contains salt piles. The base walls are constructed of unpainted, prefabricated concrete panels.

The shoreline near the existing MTS is overgrown with scrub and grasses and a few trees next to the access ramp. Otherwise, the site is entirely paved and has no vegetative landscaping.

7.7.1.3 Urban Design and Visual Resources of the Study Area

The area surrounding the site is characterized by mid- to late-20th-century brick and prefabricated concrete or steel industrial buildings, which generally do not exceed two stories in height and are generally not built to the lot lines. The block forms, large lots and street patterns



Figure 7.7-1 : View of MTS from 31st Avenue.



Figure 7.7-2 : View from the site at 31st Avenue, with salt piles and parking area visible over the ramp.

Figure 7.7-1 and 7.7-2
Urban Design and Visual Quality
North Shore Converted MTS

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are suited to truck circulation with certain streets fully dedicated to truck use. Alteration of fairly large lots to suit industry needs has kept the development pattern of the area suitable for manufacturing.

Although there are some properties within the area that are undeveloped, all property appears to be utilized. Un-built areas, for example, tend to serve as parking areas for trucks and equipment associated with the industrial uses. There is no recreational open space. There are no undisturbed natural features in the area and the lack of landscaping reflects the purely functionalist fashion in which the area has developed.

DSNY's Queen CD 7 garage, which contains administrative offices, is adjacent to the eastern side of the site. The southern portion of the building, the administrative section, is two stories tall and the remainder of the building, extending north and facing the shore, is one story tall and has eight garage bays. A one-story portion of the building with five garage bays extends east from the administrative section and faces south. The building is unpainted and is faced in textured, prefabricated concrete and blocks views of the existing MTS from 31st Avenue, approaching the site from the east. A view corridor exists from the Consolidated Edison building on 31st Avenue and 125th Street to the site, but since it is in a purely industrial area, it is not considered sensitive (see Figure 7.7-3).

Flushing Bay developed as a working waterfront, but non-water-dependent industries are inland around the site. The Consolidated Edison building at 125th Street and 31st Avenue (east of the site) is 10 stories tall and has exterior walls that are mostly glass. Various one-story, mid-20th century manufacturing and garage-type buildings are visible to the north of the site. Beyond these buildings are semi-detached, two-story white clapboard houses with chimneys in a repeating facade pattern.

Ferrara Brothers Building Materials Company has offices and materials storage and loading facilities on the property adjacent to the southern edge of the site (see Figure 7.7-4). The office building on 31st Avenue is a two-story building faced in brick and dark steel siding. The areas used for storing and loading building materials, such as sand and mixes, are behind (south of) the offices. The loading facilities are painted orange, like the trucks used in the operation, and are clearly industrial in nature.

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Figure 7.7-3 : View north from the site at 31st Avenue.



Figure 7.7-4 : Ferrara Brothers Building Materials Corporation viewed from 31st Avenue, facing south.

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7.7.2 Future No-Build Conditions

There are no plans for the site or surrounding environs; therefore, the anticipated Future No-Build Conditions are fundamentally the same as Existing Conditions. The site will remain DSNY property, the existing MTS will remain standing and the DSNY salt pile storage and garage facility will continue to be utilized.

7.7.3 Potential Impacts with the North Shore Converted MTS

The North Shore Converted MTS would not significantly affect the urban design or visual quality of the site or study area. Because it would be constructed on a site that is already arranged to handle waste transfer operations, no impacts on urban design of the area would result. Likewise, the North Shore Converted MTS would be similar in appearance to the existing MTS. With it and the associated barges being set amid DSNY and other industrial uses, the North Shore Converted MTS would result in no impact to visual quality.

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

A survey was conducted within this 430-foot area and found that there were no parks, publicly accessible open spaces, historic resources or important natural features; therefore, no assessment of shadows was deemed necessary and no shadow impact is expected as a result of the proposed project.

7.8 Neighborhood Character

7.8.1 Existing Conditions

7.8.1.1 Definition of the Study Area

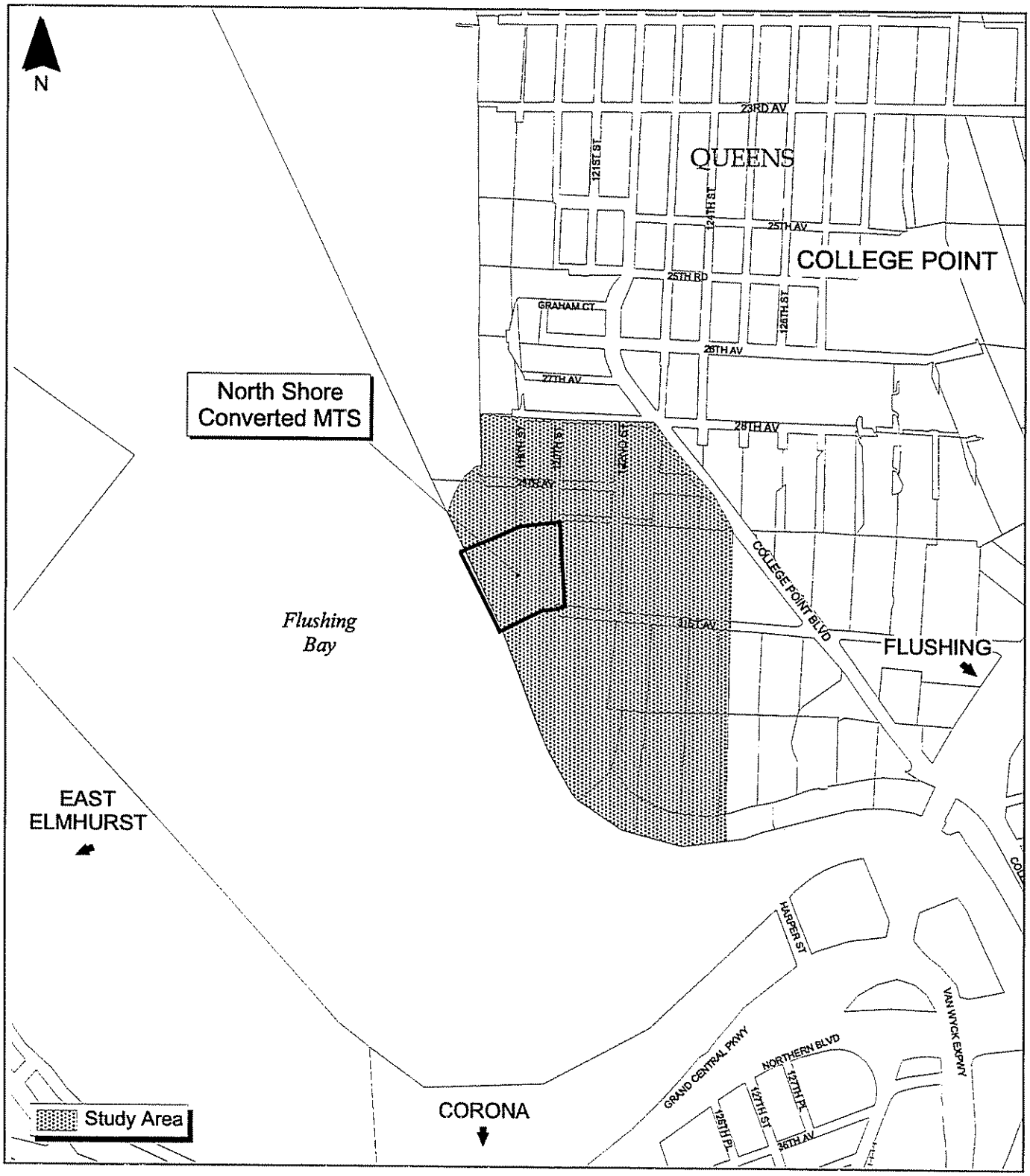
The site is located on the industrial portion of the Flushing Bay waterfront in the College Point neighborhood. The neighborhood character study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas. In this case, the study area is defined by predominantly industrial activities and related visual quality.

The triangular study area is bounded by 28th Avenue to the north, College Point Boulevard to the northeast, and, to the east, the continuation of 124th Street extending south to the shoreline (see Figure 7.8-1).

7.8.1.2 Description of Neighborhood Character

Industrial uses, such as the existing MTS and concrete production facilities, characterize most of the land use pattern in the neighborhood study area, with warehouses and vacant lots and vacant buildings in the northern portion. There is, however, a distinctly residential area north of 29th Avenue between 120th Street and the shore, which is a continuation of the residential development pattern that characterizes the area north of the study area. These residential uses are buffered from the site itself by small-lot manufacturing uses and automotive repair shops on the blocks north of and adjacent to the site, similar to the uses that line 120th Street. Located amid the industrial uses south of the Ferrara Brothers Building Materials Company is the former Metropolis nightclub, which is near the waterfront.

The site and the other industrial uses in the study area are destination points and there is limited through-access for automobiles. In fact, several mapped roads exclusively serve private industrial uses. There is through-access for automobiles and pedestrians between the residential northern portion of the study area and the site, but it appears that when it was in operation, the site had been accessed exclusively by DSNY employees in automobiles and collection trucks.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 7.8-1 Neighborhood Location

North Shore Converted MTS

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The residential character of the northern portion of the study area is most similar to the neighborhood north of the study area, both in type of land use and in visual quality. These two residential blocks are divided into small lots with trees and residential landscapes. They are generally well maintained and are not congruent with the overall industrial character of the rest of the study area.

The visual quality in the remainder of the study area is generally not aesthetically pleasing, but it is consistent with the industrial nature of the area. There are no community facilities or public open spaces within the neighborhood character study area. Additionally, while the houses and industrial uses along the shore have waterfront access, there is no public waterfront access in the study area and there are no views that would be considered visually sensitive. While the residences north of the site and the entrance to the offices of the Ferrara Brothers property south of the site are landscaped, there are no particularly sensitive elements of overall landscape design within the study area.

7.8.2 Future No-Build Conditions

There are no known plans for development of the site or the study area that would potentially lead to changes in neighborhood character. The Future No-Build Conditions are, therefore, expected to be the same as Existing Conditions.

7.8.3 Potential Impacts with the North Shore Converted MTS

No change to the industrial neighborhood character would be expected with the reactivation of the site to handle waste transfer activities. The fairly isolated neighborhood, characterized by industrial uses, including the DSNY garage (and related activities) that would continue under Future No-Build Conditions, would not be noticeably affected by the construction and operation of the North Shore Converted MTS.

7.9 Natural Resources

7.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities typical of this area of Queens. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from implementation of the North Shore Converted MTS.

7.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bounded by Flushing Bay to the west (see Figure 2.2.4-1). The upland sections of the study area are occupied with a salt storage shed and a parking area. This part of the study area and surrounding neighborhood ~~are~~ is completely developed, and, therefore, ~~have~~ has very limited terrestrial natural resources. Such resources that do exist will be discussed in following sections. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of aquatic communities is included.

7.9.1.2 Geology

Boring data from the City of New York Public Works drawing titled Record of Borings, made at the Proposed Site for the North Shore Marine Loading Station, dated November 18, 1952, indicates that the following geologic strata were encountered within or immediately adjacent to the footprint of the proposed structure.

In the land-based borings, an uncontrolled fill stratum was encountered near the surface and ranged in thickness from 2 to 5 feet below ground surface. The uncontrolled fill consisted of silt with miscellaneous aggregate including deleterious materials. Very soft, dark gray to black organic soil was encountered in the borings within Flushing Bay. This organic soil stratum contained shells and thin sand and clay lenses and ranged in thickness from 2 feet at the shoreline to 32 feet under the footprint of proposed structure. All borings terminated in a dense to very

dense, silty sand to silty sand with gravel stratum. This layer was found immediately beneath the fill on land and beneath the organic soil in the water borings. Although the borings did not fully penetrate the silty sand stratum, the stratum was penetrated 18 to 47 feet.

Surface sediment collected from the site in 2003 was composed of 97.5% silt and clay, 2.2% sand and 0.4% gravel, with approximately 63,417 mg/kg TOC.[4] Sediment was found to be somewhat degraded due to contaminants in the sample material. The three metals found in the highest concentrations were lead (166.67 mg/kg), chromium (110.17 mg/kg) and barium (98.83 mg/Kg).

Historically, the banks of Flushing Bay were comprised of extensive intertidal marshes covering more than 100 acres. The sediments under and around the site are silty muds, while extensive filling and hardening of the upland areas has taken place and the geology has little, if any, resemblance to its former state.

7.9.1.3 Floodplains

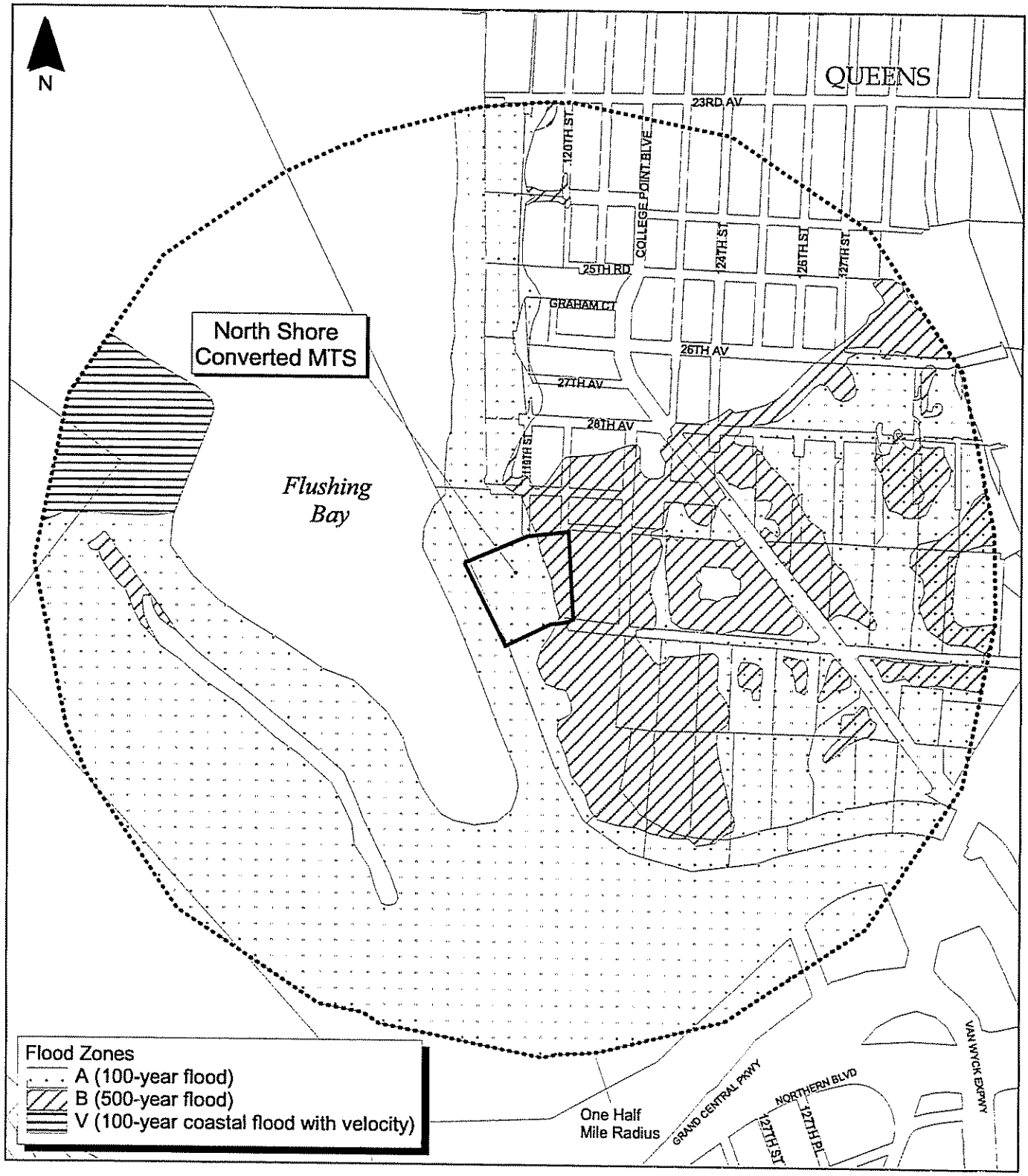
The existing MTS and salt shed are within the 100-year coastal floodplain (see Figure 7.9-1). Flushing Bay is the only surface water body on or adjacent to the study area. Other than Flushing Bay, a NYSDEC-designated littoral zone, no other wetlands are in the study area (see Figure 7.9-2).

7.9.1.4 Ecosystems

Flushing Bay is a shallow, highly impacted water body that has been greatly altered by human activities over the past century. Almost the entire shoreline is hardened and the hydrodynamics of Flushing Bay have been changed by the creation of LaGuardia Airport, which led to extensive filling and placement of jetties and groins.

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[4] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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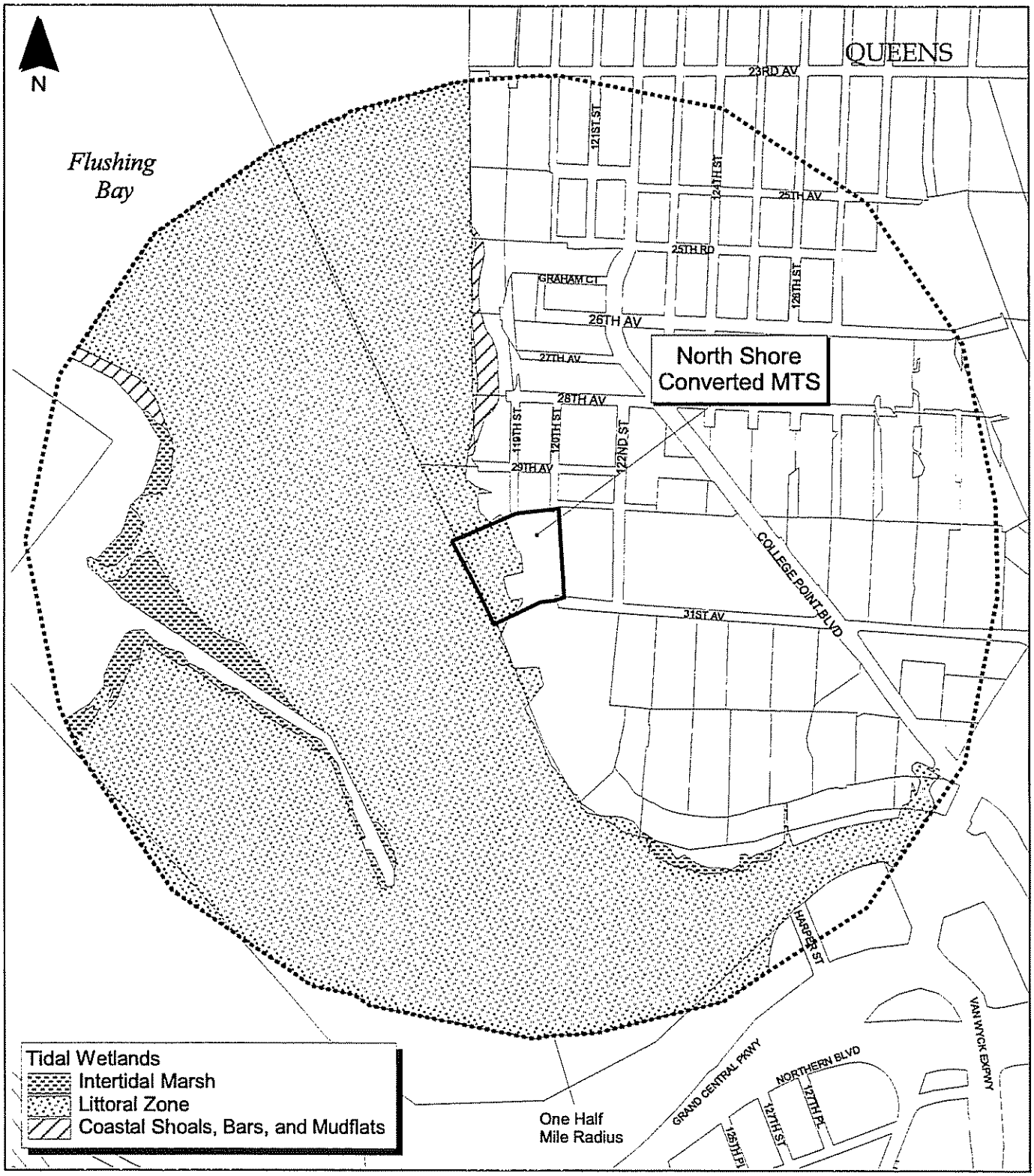
HDR Hydroqual URBITRAN DD EEA Cambridge Environmental Inc

Figure 7.9-1 Floodplains

North Shore Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.9-2 Wetlands

North Shore Converted MTS

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Much of the upland area on and around the site consists of fill material placed over an intertidal marsh. The original marsh was extensive, covering more than 100 acres that reached as far north as 20th Avenue. The existing MTS was built on pilings over the water with a short causeway that connects it with the shore.

At present, there is little vegetation of significance on the site because most of the surface is covered by buildings, roadways or other hard surfaces. ~~Vegetative cover on the site, which was confined to the shoreline near the existing MTS, was too sparse to be mapped. There were two small patches of *Spartina* sp. and a small fringe of this species along the shoreline, but the cover was very sparse. Various opportunistic plant species are present on the site.~~ Vegetative cover on the site was limited to the shoreline near the existing MTS. Several isolated patches of intertidal maresh vegetation consisting of smooth cordgrass (*Spartina alterniflora*) were present off the southeastern corner of the MTS, as well as to the north of the MTS ramp. One patch of high marsh, consisting of common reed (*Phragmites australis*) was also noted immediately south of the ramp. The tidal wetlands fringing Flushing Bay were delineated and surveyed on April 21, 2004, and the individual patches of wetland vegetation were identified and mapped in February 2005. The stem density within these isolated tidal wetland patches was noted as sparse. Various opportunistic plant species are present on the upland portion of the site, including mugwort (*Artemesia vulgaris*), Queen Anne's lace (*Daucus carota*), poor-man's pepper (*Lepidium virginicum*) and seaside goldenrod (*Solidago semper virens*). Saplings of tree-of-heaven (*Ailanthus altissima*) were observed in the vicinity of the ramp to the existing MTS.

The sediment under and around the existing MTS are silty muds, typical of the soft depositional types found in quiescent areas in Flushing Bay. Flushing Creek contains a large CSO that contributes substantial organic loading to lower Flushing Bay waters. The bay itself is known for highly enriched sediments that contribute to odor problems during warm weather.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the study area. The program includes monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for adult finfish, benthic invertebrates and sessile colonizing organisms. Results of the program will be discussed in the following paragraphs.

A total of 126 adult finfish, representing eight species were collected in 2003.[5] The most abundant species were Atlantic silverside (*Menidia menidia*) and Atlantic herring (*Clupea harengus*). Two adult species with EFH listing were collected at the North Shore Converted MTS: Atlantic herring and winter flounder (*Pleuronectes americanus*). The most abundant finfish eggs collected at this facility were cunner (*Tautogolabrus adspersus*) and Atlantic menhaden (*Brevoortia tyrannus*). The most abundant finfish larvae were herring spp. (*Clupea* spp.), Atlantic menhaden, anchovy spp. (*Anchoa* spp.), winter flounder and goby spp. (*Gobiosoma* spp.). A Shannon-Weaver Index[6] indicated that finfish larvae was most diverse at the North Shore Converted MTS.

The most abundant megainvertebrate species collected at the North Shore Converted MTS were sevenspine bay shrimp (*Crangon septemspinosa*) and grass shrimp (*Palaeomonetes vulgaris*). The dominant benthic invertebrates collected were pollution tolerant worms: *Streblospio benedicti*, Oligochaeta and *Haploscoloplos* sp. *S. benedicti* was by far the most abundant, having approximately 15,500 individuals per square meter of sediment. The most abundant epibenthic colonizers collected from the North Shore Converted MTS were *Corophium insidiosum* (amphipod), *Microdeutopus* sp. (amphipod), *Balanus* sp. (barnacle), *Polydora* sp. (polychaete worm), and hydrozoa, mud and algal film.

NYSDEC Breeding Bird Atlas records list the horned lark (*Eremophila alpestris*) as a species with a probable breeding status near the study area. The state legal status of the horned lark is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds. The peregrine falcon (*Falco peregrinus*), a federally-listed endangered species, was not listed as present for this site in the recent response from the USF&WS.

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[5] Ibid.

[6] The Shannon-Weaver Index is a measure of community diversity. If an individual of the community is selected at random, the index gives a measure of the uncertainty that the selected individual will be of a particular species. The higher the index, the more diverse the community.

7.9.2 Future No-Build Conditions

If the North Shore Converted MTS were not to be built, the study area would remain as is. The limited aquatic and terrestrial natural resources would remain and the study area would continue to be an ecologically unproductive and stressed urban area.

7.9.3 Potential Impacts with the North Shore Converted MTS

7.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

7.9.3.2 Floodplains

Implementation of the North Shore Converted MTS would have no effect on the elevation of the site. It would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the site over this level.

7.9.3.3 Ecosystems

The North Shore Converted MTS would be a pile-supported structure and would result in a net gain of ~~46,402~~ 46,159 square feet ~~of structure~~ over the water. During the demolition of the existing MTS, the upper organic silts lying beneath the structure that was above water would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term, lowered dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Construction would involve installing piles for the foundation supports and dredging to accommodate the deeper draft of the coastal barges. The benthic and finfish community would be temporarily disrupted during this phase of the project. It can be anticipated

that the benthic invertebrates would recolonize the area within 6 to 12 months and that finfish would return to the area immediately following completion of the construction.[7] Given the relatively small size of the project, minimal overall impact to the benthic community is expected at the North Shore Converted MTS. The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the North Shore Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Herring catch was much higher at the North Shore Converted MTS than flounder catch, so it can be assumed that this site will experience herring avoidance during construction activities. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the North Shore Converted MTS is for an increase in ~~46,402~~ 46,159 square feet of pier. This will result in increased shading that will block sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[8] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

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[7] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

[8] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[9] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as it provides shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the increase in shading over water is very small, there are not expected to be significant deleterious results. There is a possibility of a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

The North Shore Converted MTS would not have any significant impact on the few areas of vegetation present on the site. ~~Vegetation observed on the site were invasive weed species that are not rare, endangered or particularly important from an ecological perspective. The sparse *Spartina* sp. patches are not expected to be negatively impacted.~~Vegetation observed on the upland portions of the site consisted of various non-native and "invasive weed species."~~.~~ There would be a slight loss of wetland vegetation from the site. It was estimated that a total of approximately 0.051 acres or 2,237.8 square feet of tidal wetland vegetation situated off the southeast corner of the site would be lost or replaced by deep water pockets of unvegetated littoral zone as a result of the N~~n~~orth Shore Converted MTS and/or the proposed dredging. This includes approximately 224 square feet of high marsh covered by the invasive common reed, and approximately 2,015 square feet of sparsely vegetated intertidal marsh patches covered by smooth cordgrass. This loss would be mitigated by additional plantings of intertidal march and high marsh vegetation to the north of the MTS ramp or off-site. Preliminary site investigations indicate that limited suitable habitat exists to the north of the on-site stone pier; however,

[9] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A."

wetland mitigation plans would be developed and finalized in accordance with guidance received from the NYSDEC. The relatively small (totaling 178 square feet), isolated intertidal marsh patches located to the north of the existing ramp will not be directly impacted by project construction, and are not likely to be indirectly impacted due to shading from the new facility because of their distance from the proposed limit of construction.

The horned lark, a species of special concern, is listed by the NYSDEC as having probable breeding status in the area surrounding the site. However, this bird is only found in open areas with bare ground or short grass.[10] This bird, therefore, would not be found breeding on or using the site and any plans for the site would not impact the bird.

Estuaries, Vol. 24, No. 3, p. 430-440.

[10] Andrle, R.F. & Carroll, J.R., eds., 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

7.10 Hazardous Materials

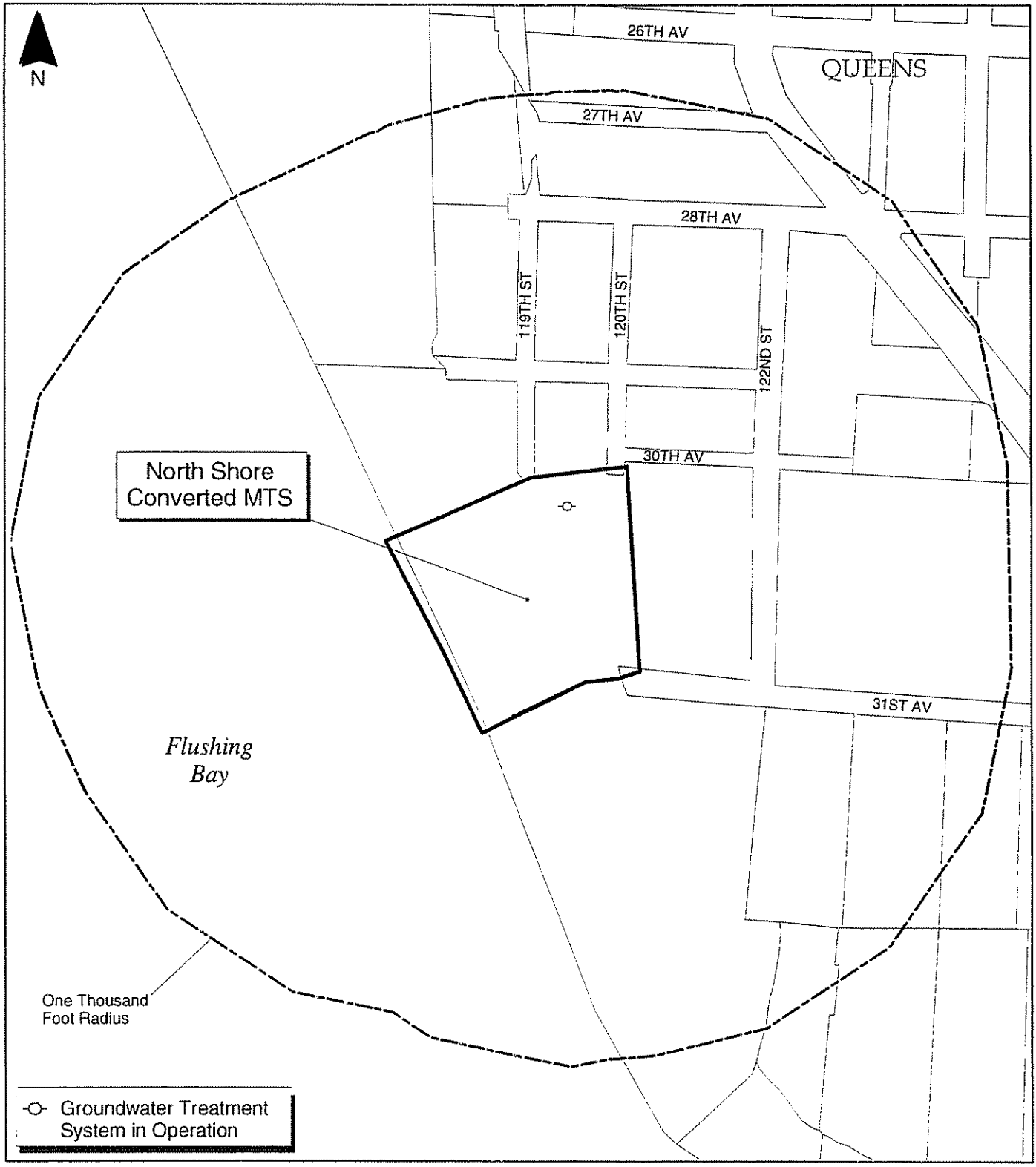
7.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

7.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 7.10-1).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 7.10-1 Hazardous Material Sites

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7.10.1.2 Delineation of Area of Concern

After review of the applicable databases and an on-site inspection, there is only one area of concern of note. During the reconnaissance of the study area, there was an apparent groundwater remedial system in the parking lot that serves the adjacent DSNY garage. The parking lot would be incorporated into the North Shore Converted MTS. The remedial system was operational in February 2003 and was likely associated with NYSDEC Spill No. 9508111, when, according to regulatory database information, the discovery in 1995 of free petroleum product beneath the DSNY garage led to the installation of a ground water recovery system. As of November 2001, the recovery system was not working effectively and NYSDEC asked for improvement or another approach.

7.10.2 Future No-Build Conditions

The existing MTS would remain standing as is, and operation of the ground water recovery system would continue. The system would require modification or improvement to meet the operational guidelines established by NYSDEC.

7.10.3 Potential Impacts with the North Shore Converted MTS

Implementation of the North Shore Converted MTS may interfere with the ground water recovery system. If so, the system would require modification to retain or improve its operational capability.

In the event that contaminated soils are encountered during construction, the soil would be excavated and disposed of in a manner that is consistent with the levels of contamination as specified in New York State regulations. The necessary and appropriate health and safety measures would be employed during construction to mitigate and minimize any exposure risk to workers or the general public related to the possible subsurface contamination.

7.11 Water Quality

7.11.1 Existing Conditions

7.11.1.1 Definition of the Study Area

The water quality study area encompasses Flushing Bay and the East River, and includes discharges from CSOs and point sources within ½-mile of the site.

7.11.1.2 Water Quality

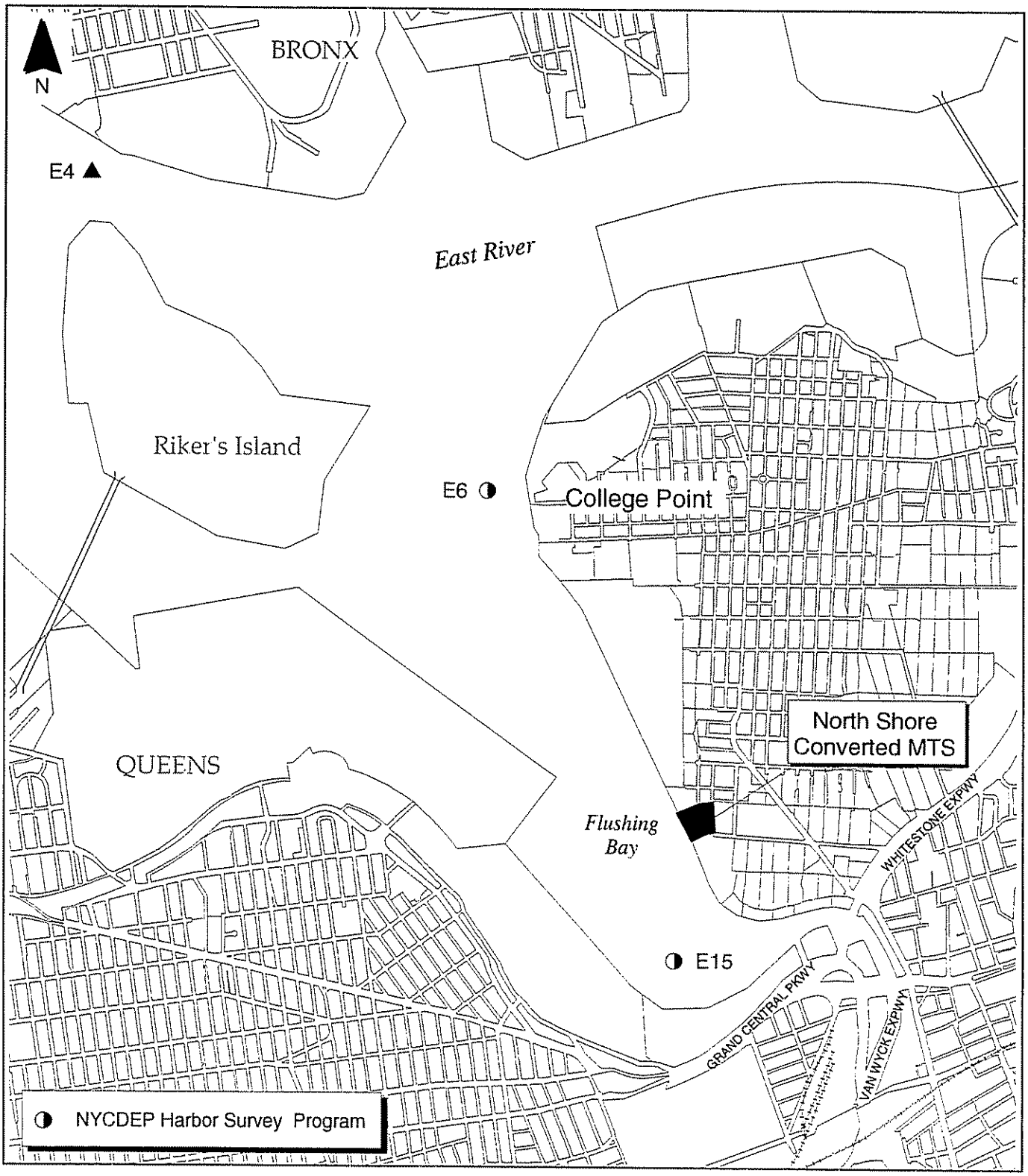
The water quality data for the following monitoring stations, shown in Figure 7.11-1, are generally representative of water quality conditions in the study area:

- NYCDEP Harbor Survey Program – Stations E-6 off of College Point in the East River and E-15 in Flushing Bay; and
- Battelle's 1991 Metals Survey – Stations E-4T and E-4B[11] in the East River off of Hunts Point.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 7.11-1. These standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 7.11-1, the data indicate that, on average, NYSDEC standards and guidance values are met. For NYCDEP Harbor Survey Station E-6, however, the minimum surface and bottom dissolved oxygen between June 1, 2003 and September 30, 2003 did not meet the water quality standards for dissolved oxygen. In addition, the mercury concentration for Battelle Stations E-4T and E-4B did not conform to the water quality standard for mercury.

[11] Stations E-4T and E-4B are located at the same longitude and latitude. Station E-4T is located at the surface of the East River. Station E-4B is located at the bottom of the East River.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 7.11-1 Ambient Water Quality Stations

North Shore Converted MTS

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Table 7.11-1
Existing Water Quality Conditions and Standards
North Shore Converted MTS Study Area

Average Concentrations						
Parameter	**Units**	**Station E-6[1]**	**Station E-15[2]**	**Station E-4T[3]**	**Station E-4B[4]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	6.7 [5]/3.2 [6]	7.3 [7]/4.1 [8]	-------	-------	4.0
Dissolved Oxygen (bottom/minimum)	mg/L	6.6 [9]/3.1 [6]	6.3 [7]/4.1 [8]	-------	-------	4.0
BOD (surface)	mg/L	3.1 [10]	3.4 [10]	-------	-------	-------
BOD (bottom)	mg/L	3.3 [10]	3.4 [10]	-------	-------	-------
Total Coliform (surface)	MPN/100 ml	1,171 [11]	8,458 [11]	-------	-------	10,000
Total Coliform (bottom)	MPN/100 ml	1003 [11]	5,034 [11]	-------	-------	10,000
Fecal Coliform (top)	MF	56.7	156	-------	-------	2,000
Fecal Coliform (bottom)	MF	96 [12]	489 [12]	-------	-------	2,000
Total Suspended Solids (surface)	mg/L	10	7	-------	-------	-------
Total Suspended Solids (bottom)	mg/L	16	7	-------	-------	-------
NH_3-N	mg/L	0.524	0.444	-------	-------	-------
(NO_3 + NO_2)	mg/L	0.364	0.273	-------	-------	-------
Total Phosphorous	mg/L	0.195 [13]	0.379 [13]	-------	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------	-------
Chlorophyll-a	µg/L	3.1	20.8	-------	-------	-------
Arsenic	µg/L	-------	-------	-------	-------	36 [14,15]
Cadmium	µg/L	-------	-------	0.07 [14]	0.06 [14]	7.7 [14,15]
Chromium	µg/L	-------	-------	-------	-------	-------
Copper	µg/L	-------	-------	1.83 [16]	1.83 [16]	5.6 [15,16]
Lead	µg/L	-------	-------	0.20 [14]	0.19 [14]	8.0 [14,15]
Mercury	µg/L	-------	-------	0.0028 [14]	0.0029 [14]	0.0026 [14,15]
Nickel	µg/L	-------	-------	1.50 [14]	1.46 [14]	8.2 [14,15]
Silver	µg/L	-------	-------	0.0083 [14]	0.0078 [14]	-------
Zinc	µg/L	-------	-------	5.32 [14]	5.11 [14]	66 [14,15]
Cyanide	µg/L	-------	-------	-------	-------	1.0 [15]

Notes:

(1) Average concentrations for 2003 NYCDEP Harbor Survey Station E-6, located off College Point in the East River.

(2) Average concentrations for 2000 NYCDEP Harbor Survey Station E-15, located at Flushing Bay.

(3) Average concentrations for 1991 Battelle Ambient Survey Station E-4T, located off Hunts Point on the surface of the East River.

(4) Average concentrations for 1991 Battelle Ambient Survey Station E-4B, located off Hunts Point on the bottom of the East River.

(5) Represents average between January and December 2003.

(6) Minimum between June 1, 2003 and September 30, 2003.

(7) Represents average between May and September 2000.

(8) Minimum between June 1, 2000 and September 30, 2000.

(9) Represents average between January and December 2003.

(10) Latest available data 1997.

(11) Latest available data 1996.

(12) Latest available data 1999.

(13) Latest available data 1998.

(14) Guidance values and data are for dissolved metals.

(15) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).

Notes for Table 7.1-1 (continued)
(16) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

7.11.1.3 Permitted Discharges

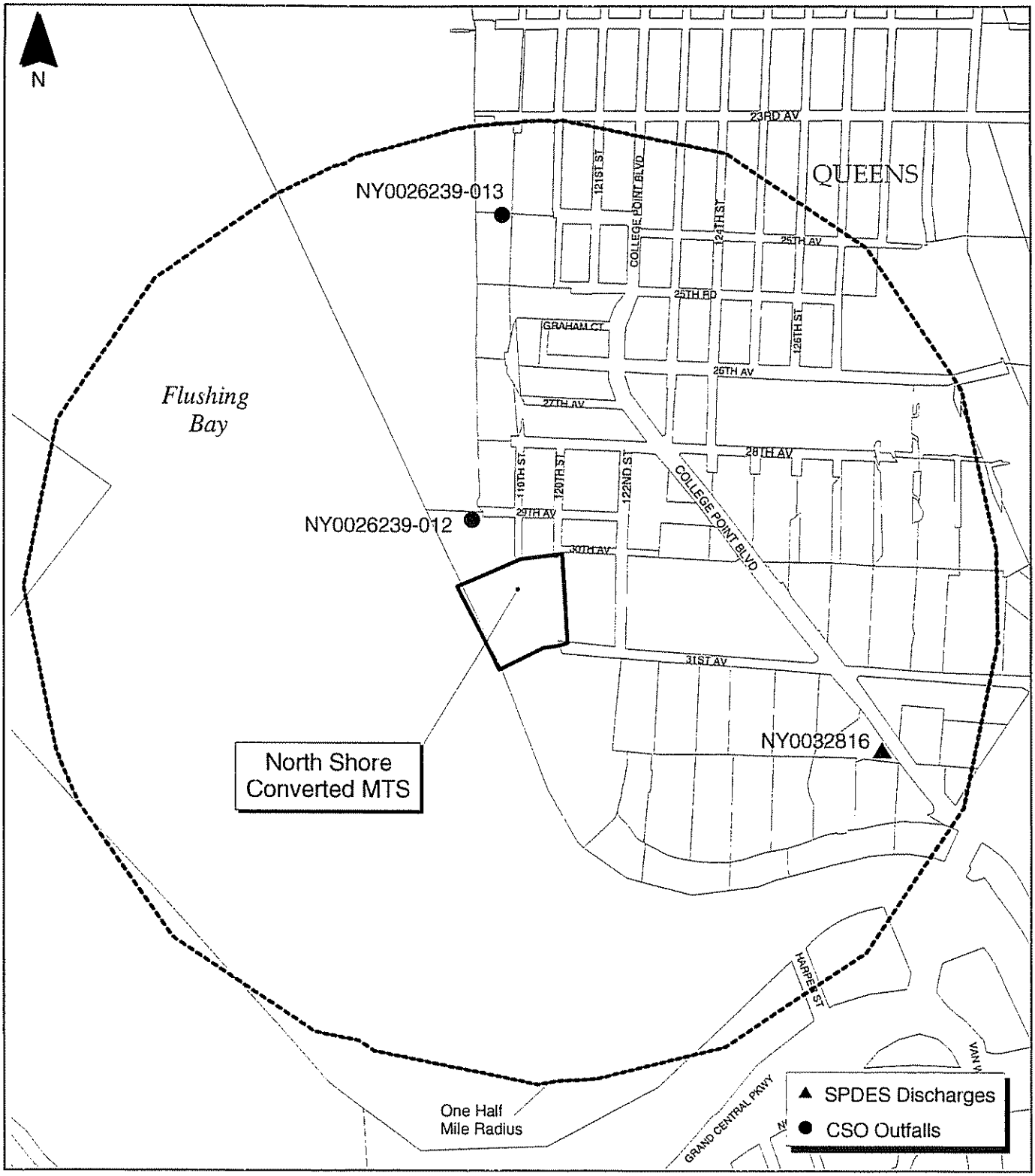
A review of the most recently available NYSDEC and USEPA databases indicated that there are three permitted discharges in the vicinity of the site. Those within a ½-mile radius are listed in Table 7.11-2 and shown in Figure 7.11-2. They consist of two CSOs and one industrial site, all of which are permitted by the NYSDEC.

Table 7.11-2
Existing Permitted Discharges
North Shore Converted MTS Study Area

Combined Sewer Overflow(CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
29th Avenue/Tallman Island	NY0026239-012	Queens	Flushing Bay
25th Avenue/Tallman Island	NY0026239-013	Queens	Flushing Bay
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Lefferts Oil Terminal, Inc.	NY0032816	Queens	Flushing Creek

7.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and/or infiltration. A runoff flow of 0.514 cfs was calculated using the impervious site area (8.56 acres), an average rainfall intensity of 0.06 inches/hour and a runoff coefficient set equal to 1. The resulting stormwater loads, shown in Table 7.11-3, represent the existing loads at the site.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.11-2 Permitted Outfalls and CSO Locations North Shore Converted MTS

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Table 7.11-3
Estimated Existing Pollutant Loads and Runoff Flows
North Shore Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	94,186[1]
BOD mg/L	11	31
Heavy Metals		
Copper µg/L	35	0.097
Lead µg/L	28	0.078
Zinc µg/L	154	0.427
Total Impervious Area (acre) = 8.56		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inches/hour) = 0.06[2]		Runoff Flow (cfs) = 0.514

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

7.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to ongoing water quality improvement programs, such as the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

7.11.3 Potential Impacts with the North Shore Converted MTS

With the development and operation of the North Shore Converted MTS, conditions would be similar to Future No-Build Conditions. All solid waste processing would occur within structures on the site. All process wastewater from waste handling operations in the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the Tallman Island WPCP, where it would be treated prior to discharge to the East River and, therefore, would not adversely affect water quality.

Stormwater loads and impervious area, shown in Table 7.11-4, would be expected to increase above Existing Conditions. According to the 208 Model, however, the increased loads would have no significant impact on water quality in the adjacent surface waters.

The North Shore Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

Table 7.11-4
Impervious Area and Estimated Pollutant Loads
North Shore Converted MTS

			Estimated Pollutant Loadings/Incremental Change[1]				
Conditions	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	8.56	0.0	94,186/NA	31/NA	0.097/NA	0.078/NA	0.427/NA
Future Build Conditions	9.45	0.89	103,932/9,746	34/3	0.107/0.010	0.086/0.008	0.471/0.044

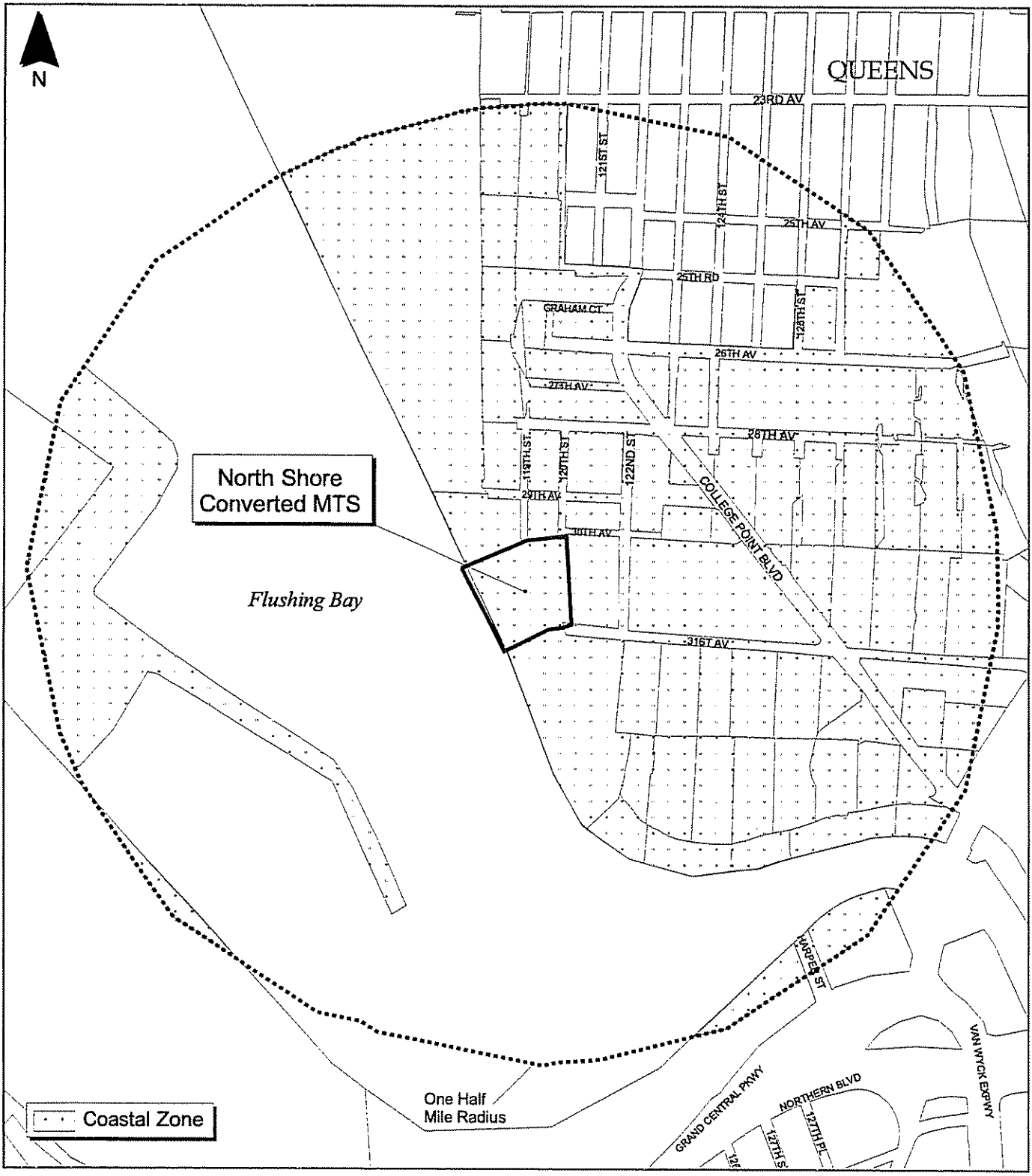
Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

7.12 Waterfront Revitalization Program

7.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of Flushing Bay, the North Shore Converted MTS would be within the City's coastal zone boundary (see Figure 7.12-1). According to "The New Waterfront Revitalization Program," the North Shore Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 10 Queens North Shore as indicated within the "New York City Comprehensive Waterfront Plan - Reclaiming the City's Edge" and the "Plan for the Queens Waterfront." It is not currently located within an NYCDCP-designated SNWA or SMIA. The North Shore Converted MTS is subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The North Shore Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3, 8.1, 8.5, 9.2 and 10.2. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. In instances where a component of the North Shore Converted MTS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations that would occur at the North Shore Converted MTS is provided in Section 2.2.4.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.12-1 Coastal Zone Boundary

North Shore Converted MTS

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7.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the new North Shore Converted MTS. As part of the North Shore Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The existing North Shore MTS is not currently located within a designated SMIA. Its development would involve the demolition of the existing MTS and the construction of a new MTS at and north of the existing MTS site. The positioning of the proposed Converted MTS would allow for barge access and would minimize the amount of dredging that needs to be done at the site. In addition, there is a required design slope needed for the access ramp in order for trucks to access the site. The North Shore Converted MTS would involve the conversion of the existing facility from a truck-to-barge waste transfer station into a TCB MTS station that would transport DSNY-managed Waste to remote out-of-City disposal facilities by marine transport.

The demolition and subsequent site redevelopment, as described in Section 2.2.4, would help to restore and revitalize industrial waterfront property and would be compatible with existing and neighboring heavy industrial and maritime uses. Waterfront development would be comprised of four primary components: (1) an enclosed over-water processing building which would include a tipping floor, loading floor and pier level; (2) an elevated access ramp to the processing building; (3) a gantry crane, outside of the processing building; and (4) a ~~rehabilitated bulkhead and~~ new fendering system. A gantry crane would be used in the loading and unloading of DSNY barges at the facility. The North Shore Converted MTS would be consistent with existing land uses in the vicinity of its site and with the "Plan for the Queens Waterfront," which recommends the continued industrial use of the area. Although it would not encourage or facilitate the siting of any additional water-dependent uses, the North Shore Converted MTS would represent an expansion and revitalization of an existing water-dependent use and would be compatible with surrounding uses. The North Shore Converted MTS would, therefore, be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The North Shore Converted MTS would involve the demolition of the existing MTS structure and the subsequent development of a new MTS at the site. The North Shore Converted MTS would allow for the truck delivery of waste to the facility where waste would be placed in sealed containers, loaded onto DSNY barges and transported to out-of-City disposal facilities.

Waterfront development would be comprised of four primary components: (1) an enclosed over-water processing building which would include a tipping floor, loading floor and pier level; (2) an elevated access ramp to the processing building; (3) an outdoor gantry crane; and (4) a ~~rehabilitated bulkhead and~~ new

fendering system. A gantry crane would be used in the loading and unloading of DSNY barges at the facility. The pilings that support the existing MTS would be removed as part of the demolition activities and new pilings would be installed. In addition, the North Shore Converted MTS would require dredging to construct the new pier structure and improve existing water depths at and in the immediate vicinity of the site to allow for the unimpeded operations of barges and tugboats once the North Shore Converted MTS became operational. All required dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

Development of the North Shore Converted MTS would involve the revitalization of an existing waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the vicinity of its site. Activities within Flushing Bay resulting from the North Shore Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges. Approximately ~~four or five~~three barges would be filled on a daily basis at the North Shore Converted MTS. These swapping activities would be in close proximity to the new MTS structure and comparable in nature to previous barge activities at the existing MTS; therefore, no adverse impacts upon other uses within the water body would be anticipated. The North Shore Converted MTS would, therefore, be consistent with this subpolicy.

3.3 *Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The existing MTS managed solid waste through a truck-to-barge system where loose waste was placed in open barges. The North Shore Converted MTS would be a TCB MTS where waste would be transferred into containers that would be sealed and placed onto flat deck barges that would transport DSNY-managed Waste to out-of-City disposal locations and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All solid waste handling would occur within an enclosed processing building. All waste would be placed in sealed containers before leaving the building for loading on barges.

Building ventilation would be maintained under negative pressure, which would maintain dust inside the enclosed processing building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. All process wastewaters generated on site (e.g., washdown waters, etc.) would be treated prior to their discharge to the municipal sewer system. In addition, on-site storage of petroleum products and hazardous materials related to the operation of the North Shore Converted MTS would be done in accordance with applicable federal, state and local regulations. The North Shore Converted MTS would be protective of the surrounding environment and, therefore, consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York City coastal area.

4.1 *Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.*

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes and SCFWH information, the North Shore Converted MTS is not within a designated area. The North Shore Converted MTS would represent an expansion in size of a previous use and would not be anticipated to result in any long-term impacts to natural resources in the vicinity of this site. The North Shore Converted MTS would, therefore, be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland maps was conducted to determine the presence of wetlands within the site. As noted in Section 7.9.1, the North Shore Converted MTS would be located within Flushing Bay, a NYSDEC-designated littoral zone. In addition, a wetland delineation was performed on February 4, 2005, and indicated the presence of intertidal and high marsh areas consisting of *Spartina alterniflora* and *Phragmites australis* respectively. No freshwater wetlands exist on the site. The North Shore Converted MTS would involve the demolition of the existing MTS structure and development of a new MTS at and in the vicinity of the existing facility. These activities and anticipated dredging would result in limited, short-term ~~impact~~ effects upon ~~to~~ these tidal wetlands.

Dredging activities associated with the development of the North Shore Converted MTS are not anticipated to have significant ~~impacts~~ effects on wetlands in the vicinity of the site, primarily due to previous and ongoing activities and previous dredging that has historically occurred at the existing MTS. ~~Mitigation for potential~~Potential ~~impacts~~ effects upon wetlands would be ~~proposed~~ addressed during the environmental review and permitting of the North Shore Converted MTS. ~~This mitigation, if required,~~ DSNY in coordination with NYSDEC and other involved agencies would determine the appropriate measures to address potential ~~impacts~~ effects that may occur due to the North Shore Converted MTS and would effectively restore these wetlands and their associated value. The North Shore Converted MTS would, therefore, be consistent with this subpolicy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

The NYSDEC Breeding Bird Atlas identified the horned lark (*Eremophila alpestris*), a designated species of Special Concern, as having probable breeding status in the area surrounding the site. However, as discussed in Section 7.9.3, this bird is only found in open areas with bare ground or short grass; therefore, the over-water North Shore Converted MTS would not be anticipated to interfere with this species.

The pilings that support the existing MTS would be removed as part of the demolition, and new pilings would be installed to support the North Shore Converted MTS. In addition, dredging would be required to construct the pier structure for the North Shore Converted MTS and to improve existing water depths at and in the immediate vicinity of the site to allow for unimpeded operations of barges and tugboats once it became operational. As stated in Section 7.9.3, modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat to rare or endangered species due to the disturbed nature of the site. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the North Shore Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. Further, the North Shore Converted MTS would not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The North Shore Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, sanitary and process wastewaters (e.g. floor washdown waters, etc.) would be conveyed to an on-site treatment system, which would consist of oil/water separators, etc., discharging eventually to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the North Shore Converted MTS would be managed in accordance with all applicable federal, state and local regulations.

In addition, the majority of activity associated with the North Shore Converted MTS would be conducted within an enclosed processing building. Only sealed, air- and watertight containers would be transferred to barges outside of the processing building by gantry cranes installed at the pier level. Inside the facility, several measures would be taken to minimize the potential for environmental degradation as a result of the facility. Building ventilation would be maintained under negative pressure, which would keep dust inside the enclosed processing building. Litter control methods such as routine sweeping and washing of the tipping floor would be implemented to minimize or eliminate the potential for litter entering surface waters. The North Shore Converted MTS would be consistent with this subpolicy.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

BMPs would be used to the extent possible during all phases of construction, including demolition of the existing MTS structure and operation of the North Shore Converted MTS, in order to minimize any nonpoint discharges. The MTS

would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be conducted within an enclosed processing building. During construction, non-structural (such as silt curtains) and, if necessary, structural, measures would be used to minimize nonpoint source pollution.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

As part of the North Shore Converted MTS, the pilings that support the existing MTS would be removed and new pilings would be installed to support the new building. In addition, dredging would be required to construct the pier structure for the North Shore Converted MTS and to improve existing water depths at and in the immediate vicinity of the site to allow for the unimpeded operation of barges and tugboats. Any dredging done as part of the construction of the new MTS would result in temporary impacts and would be conducted in a manner to minimize siltation and erosion and other short-term impacts to water quality. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations. Non-structural (such as silt curtains) and, if necessary, structural, measures would be employed to minimize siltation and potential adverse impacts to tidal wetlands in the vicinity. Therefore, the North Shore Converted MTS would be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The North Shore Converted MTS would have no impact on the quality or quantity of surface or ground waters. Sanitary and process wastewaters (e.g. floor washdown waters, etc.) would be conveyed to an on-site treatment system and

would then discharge to the municipal sewer system. Stormwater runoff from the North Shore Converted MTS would be managed in accordance with all applicable federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source of water supply. The North Shore Converted MTS would be consistent with this policy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of the FEMA National Flood Insurance Program maps, the site is located entirely within the 100-year floodplain boundary (Zone A). As part of the North Shore Converted MTS, the existing MTS would be demolished and a new MTS constructed at and north of the site. The pilings that support the existing MTS would be removed as part of the demolition and new pilings would be installed to support the new building. To the extent practicable, non-structural (such as silt curtains) and, if necessary, structural, measures would be used to minimize impacts due to flooding and erosion during the demolition of the existing MTS and subsequent construction of the new, expanded processing building. Construction of the new North Shore Converted MTS would not affect the potential for flooding or erosion. All structures would comply with applicable building code requirements.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The North Shore Converted MTS would not involve the storage, treatment or disposal of hazardous waste, but would facilitate the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the North Shore Converted MTS. The majority of North Shore Converted MTS activities would occur within an enclosed processing building. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. Only sealed, air- and watertight containers would be used outside of the facility.

On-site storage of petroleum or hazardous materials related to the operation of the North Shore Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. The North Shore Converted MTS would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.

Due to the existing, heavy industrial uses at and in the immediate vicinity of the North Shore Converted MTS, public access would not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

The North Shore Converted MTS would be a stand-alone, water-dependent, industrial facility fronting Flushing Bay. Public access would not be compatible with the North Shore Converted MTS; however, its development would not preclude any future development of public access at other locations along the Flushing Bay waterfront.

8.3 Provide visual access to coastal lands, waters and open space where physically practical.

Development of a new North Shore Converted MTS site would represent an expansion of an existing waterfront use that is currently inactive and would not impair visual access to coastal lands, waters or open space. Also see response to Subpolicy 9.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

Only one significant, mapped park, Flushing Meadows-Corona Park, was identified approximately ½-mile south of the site. The North Shore Converted MTS, however, would have no effect on this or any other open space resource within the study area. Therefore, it would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The new MTS structure would have no significant impact on the site, the urban design or visual quality of the surrounding area or the existing (non-sensitive) view corridors, as noted in Section 7.7.3. Based on the information presented in that section, the North Shore Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The North Shore Converted MTS would involve the expansion of an existing use and would pose no impact to scenic values associated with natural resources. Therefore, this subpolicy is not applicable.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological, and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The North Shore Converted MTS will have no effect on any cultural resources on or near the site, as noted in Section 7.6.3. Based on the information presented in that section, the North Shore Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy is, therefore, not applicable.

7.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

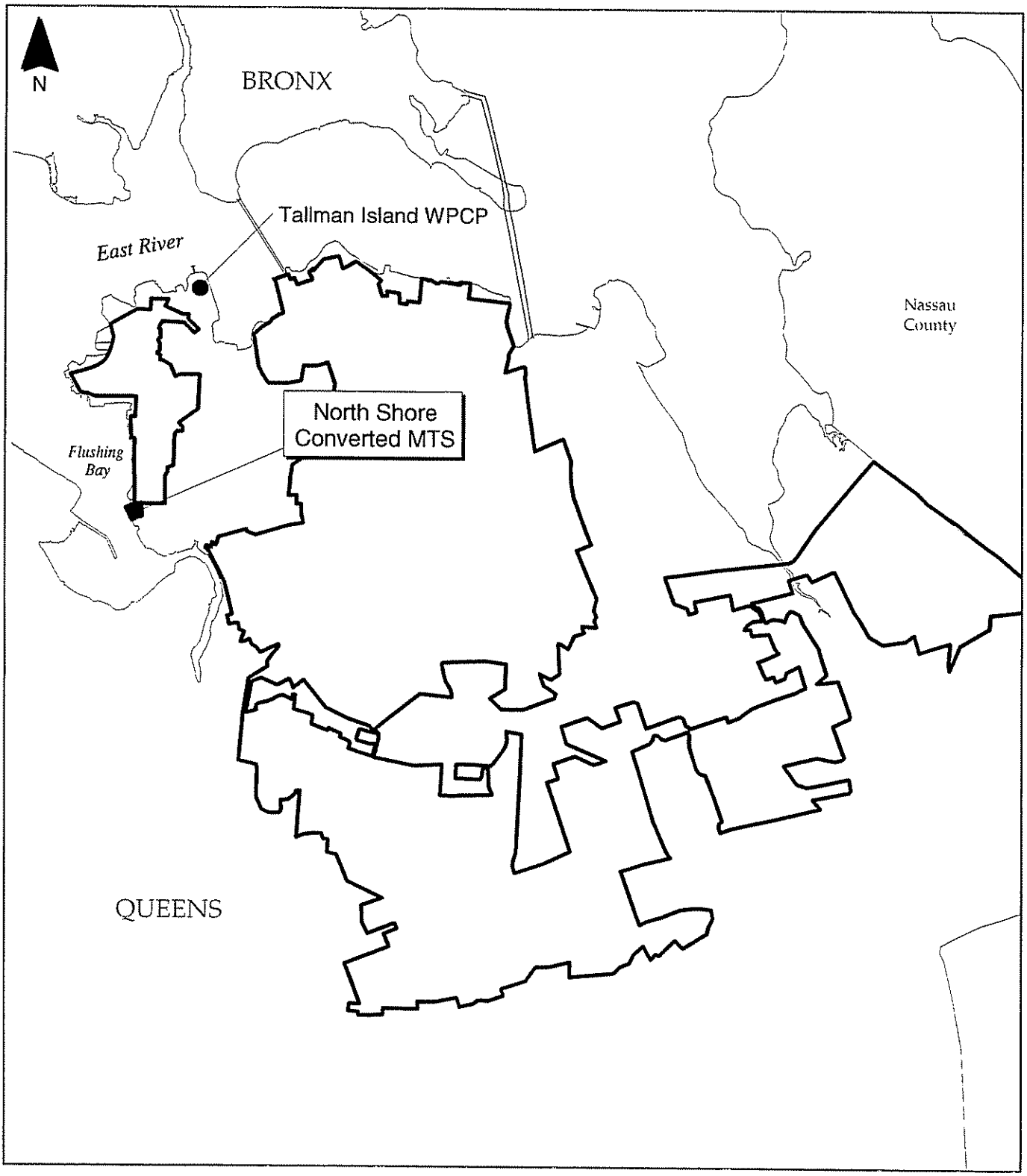
7.13.1 Existing Conditions

7.13.1.1 Water Supply

Water is supplied to the North Shore MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. An off-site 8-inch-diameter pipe along 122nd Street north of 30th Avenue provides potable water to the facility for both process and sanitary requirements. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

7.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps showed that the site is served by the Tallman Island WPCP, which serves portions of Queens. The WPCP drainage area is illustrated in Figure 7.13-1. From July 2002 through June 2003, the WPCP treated an average of 54 mgd of wastewater under dry weather flow conditions and an average flow of 58 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 7.13-1). The maximum dry weather flow during this period was 58 mgd during September 2002 and June 2003 and the maximum average flow was 65 mgd during June 2003. Effluent from the plant is discharged into the East River, and is regulated by the NYSDEC under the SPDES. The current SPDES permit limit for flow to the Tallman Island WPCP is 80 mgd. It is estimated that current on-site employee water usage at the MTS is about 75 gpd. This estimate is based on three security employees (one guard per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). As the facility is currently not accepting waste, no other potable water is used and no operational staff are currently assigned to the site.



Site delineations are approximate

3000 0 3000 Feet

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Figure 7.13-1 Existing WPCP Drainage Area

North Shore Converted MTS

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Table 7.13-1
Average Monthly Dry Weather and Average Flows
Tallman Island WPCP
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow[1](1) (mgd)
July 2002	47	47
August	49	52
September	58	63
October	55	62
November	56	63
December	54	57
January 2003	52	55
February	54	58
March	56	60
April	52	56
May	51	55
June	58	65
Average Effluent	**54**	**58**

Notes:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Wastewaters generated at the existing North Shore MTS are currently routed to a 12-inch sanitary sewer line flowing from west to east along 29th Avenue. Stormwater runoff flows into a 24-inch storm sewer line running from 31st Avenue to College Point Boulevard. Wastewater is discharged to the municipal sewer system from the site via a pump station on 122nd Street.

7.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the existing MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately four pounds per day). The solid waste is collected by DSNY personnel and is transported by truck to an appropriately licensed solid waste management facility.

7.13.1.4 Energy

Based on a review of applicable utility service plans, Consolidated Edison of New York supplies electricity to the facility via lines running along 31st Avenue. The existing North Shore MTS utilizes a negligible amount of energy due to the low staffing levels providing only security for the facility. There is currently no gas supplied directly to the facility.

7.13.2 Future No-Build Conditions

The existing North Shore MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Tallman Island WPCP would continue to increase and would be projected to be 58.9 mgd by 2006.

7.13.3 Potential Impacts with the North Shore Converted MTS

7.13.3.1 Water Supply

The North Shore Converted MTS would have a total of up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The North Shore Converted MTS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the distribution lines in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

7.13.3.2 *Sanitary Sewage*

Based on the estimated water usage of 3,300 gpd for the North Shore Converted MTS, the small quantities of wastewater sent to the Tallman Island WPCP would not significantly impact the sewage flow rate or the ability of the Tallman Island WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 58.9 mgd in 2006, which would be well below the permitted capacity of 70 mgd. In addition, the new wastewater flows due to the Proposed Action would not result in a significant increase in combined sewer overflows (CSO).

7.13.3.3 *Solid Waste*

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the North Shore Converted MTS and would not significantly impact the system.

7.13.3.4 *Energy*

The North Shore Converted MTS would require an additional 5.51E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the North Shore Converted MTS and has stated that all demands generated by the facility could be met without any impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the North Shore Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impact on the utility.

7.14 Traffic, Parking, Transit, and Pedestrians

7.14.1 Introduction

The North Shore Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

7.14-2 Existing Conditions

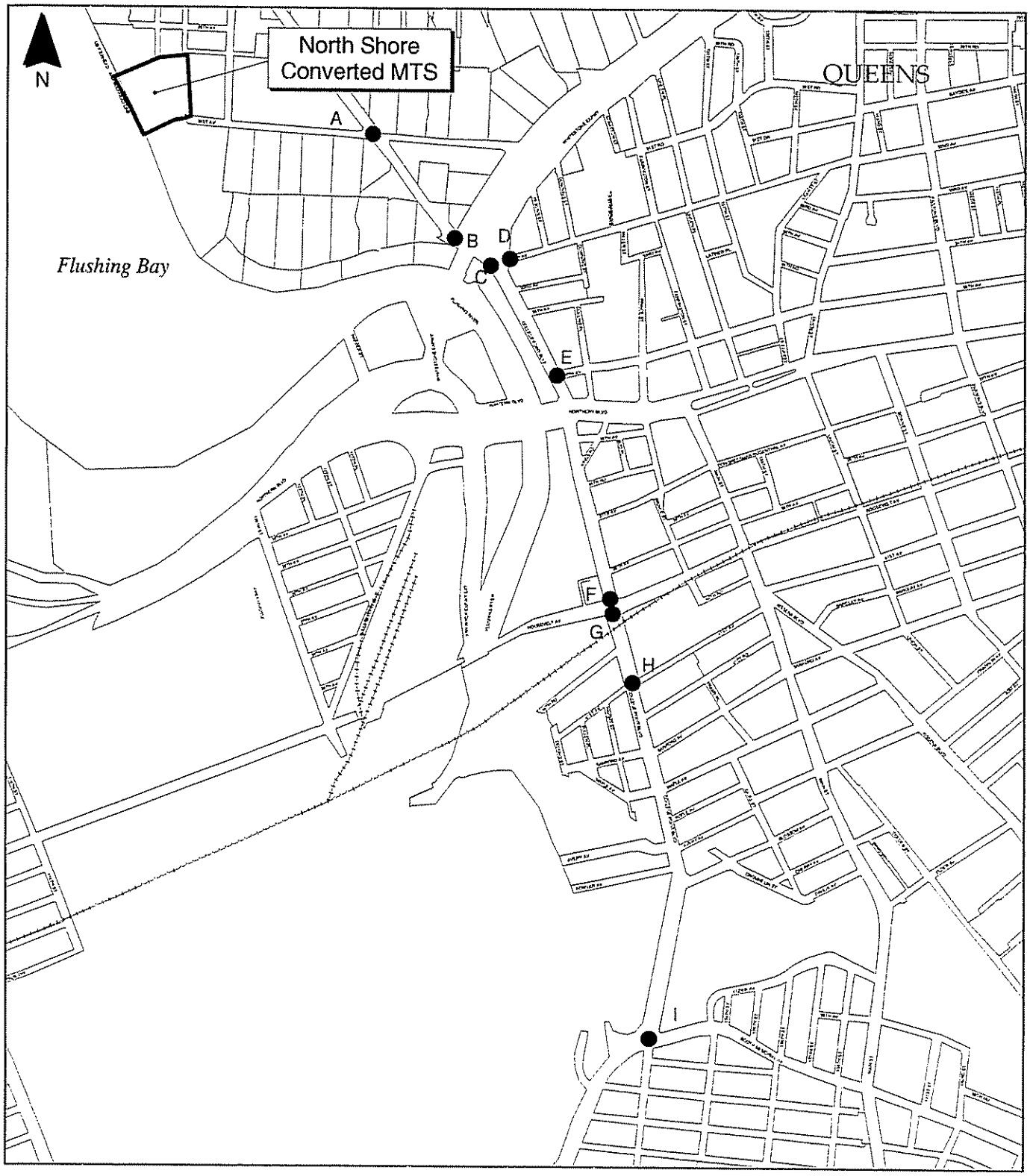
7.14.2.1 Definition of Study Area

The traffic analysis study area is broad, covering portions of the College Point, Flushing and Queensboro Hill sections of Queens. It includes the corridor along College Point Boulevard that is bounded by 31st Avenue on the north and Booth Memorial Avenue on the south. Commercial, industrial and residential areas are included in the traffic study area. There are no CEQR-defined areas of concern located within the study area. Figure 7.14-1 shows the locations of the intersections selected for analysis (locations A through I). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Section 7.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the North Shore Converted MTS.

7.14.2.2 Surface Network

Two major highways service the traffic analysis study area — the predominantly east-west LIE and the predominantly north-south Van Wyck Expressway. College Point Boulevard and the Whitestone Expressway Service Roads are local truck routes that provide access from the south and east of the site. A map showing all major truck routes and local truck routes in Queens is provided in Section 3.16 (see Figure 3.16-5).



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.14-1 Traffic Analysis Study Area
North Shore Converted MTS

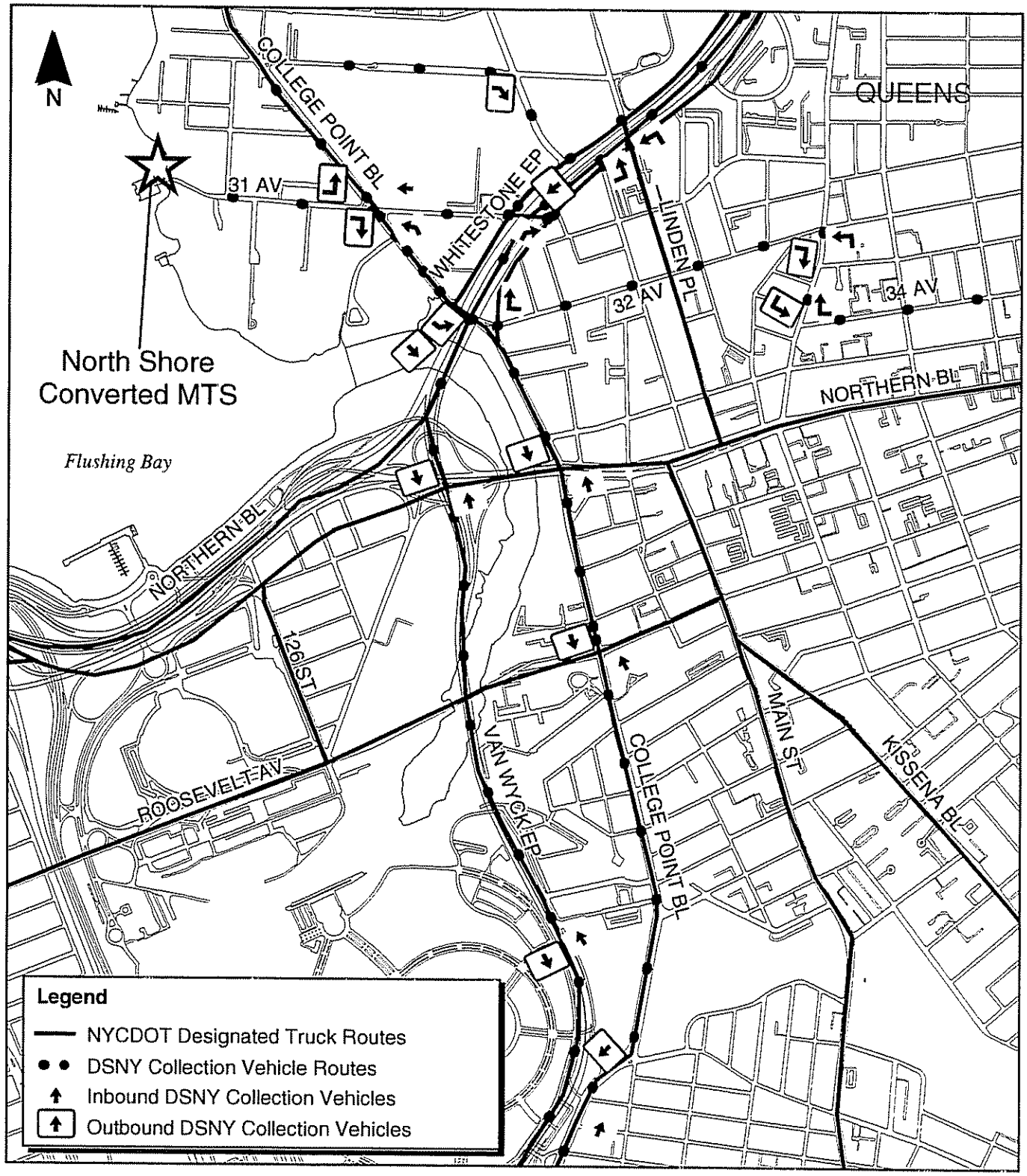
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31st Avenue, 32nd Avenue, 35th Avenue and 41st Avenue generally serve as collector roads for local traffic and provide access for local and industrial traffic to and from the arterial of College Point Boulevard. College Point Boulevard provides access to and from the LIE. The Whitestone Expressway Service Roads are arterials that provide access to and from the Whitestone Expressway. Roosevelt Avenue and Booth Memorial Avenue are east-west arterials that cross College Point Boulevard.

Most DSNY and other agency collection vehicles making deliveries to the North Shore MTS use either the Van Wyck Expressway or LIE to travel toward the North Shore Converted MTS. These vehicles exit the Van Wyck Expressway or LIE onto College Point Boulevard and proceed north towards the facility. Vehicles from one CD travel north on the Van Wyck Expressway to the Linden Place exit. These vehicles exit onto the Whitestone Expressway Service Road (northbound) and turn northwest on Linden Place. From Linden Place, the vehicles turn onto the Whitestone Expressway Service Road (southbound) and then turn west on 31st Avenue. Although this exit is located closer to the facility, the NYCDOT has requested that limited traffic be routed through the intersection of Linden Place and the Whitestone Expressway Service Roads due to exiting congestion at this intersection. All vehicles traveling to and from the North Shore Converted MTS converge at the intersection of 31st Avenue and College Point Boulevard. Inbound vehicles travel west along 31st Avenue to the facility. Figure 7.14-2 depicts NYCDOT designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.

Exiting DSNY and other agency collection vehicles return east along 31st Avenue and turn south onto College Point Boulevard to return to the Van Wyck Expressway or LIE, except for the vehicles that use the Linden Place exit. These vehicles turn north onto College Point Boulevard, east on 28th Avenue south onto Ulmer Street. From Ulmer Street, the vehicles turn onto the Whitestone Expressway Service Road (southbound) and enter onto the Van Wyck Expressway.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

1,000 0 1,000 Feet

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Figure 7.14-2 DSNY Collection Vehicle Routes
North Shore Converted MTS

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7.14.2.3 Existing Traffic Operations

The nine intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the North Shore Converted MTS. All of them are on major arterials and/ or collection vehicle routes. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- College Point Boulevard and 31st Avenue – Signalized Intersection (see Figure 7.14-1 – location A)
- College Point Boulevard and Whitestone Expressway Service Road (Westbound) – Signalized Intersection (see Figure 7.14-1 – location B)
- College Point Boulevard and 32nd Avenue – Signalized Intersection (see Figure 7.14-1 – location C)
- Whitestone Expressway Service Road (Eastbound) and 32nd Avenue – Signalized Intersection (see Figure 7.14-1 – location D)
- College Point Boulevard and 35th Avenue – Signalized Intersection (see Figure 7.14-1 – location E)
- College Point Boulevard and Roosevelt Avenue (Westbound) – Signalized Intersection (see Figure 7.14-1 – location F)
- College Point Boulevard and Roosevelt Avenue (Eastbound) – Signalized Intersection (see Figure 7.14-1 – location G)
- College Point Boulevard and 41st Avenue – Signalized Intersection (see Figure 7.14-1 – location H)
- College Point Boulevard and Booth Memorial Avenue – Signalized Intersection (see Figure 7.14-1 – location I)

31st Avenue, 32nd Avenue, 35th Avenue and 41st Avenue generally serve as collector roads for local traffic and provide access for local and industrial traffic to and from the arterial of College Point Boulevard. College Point Boulevard provides access to and from the LIE. The Whitestone Expressway Service Roads are arterials that provide access to and from the Whitestone Expressway. Roosevelt Avenue and Booth Memorial Avenue are east-west arterials that cross College Point Boulevard.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between November 14, 2002 and November 21, 2002, while ATR counts were conducted between November 18, 2002 and November 24, 2002. Figures 7.14-3, 7.14-4 and 7.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:30 p.m. and 5:30 p.m. Table 7.14-1 presents the v/c ratio, delay and LOS for the nine intersections during the AM, Facility, and PM peaks.

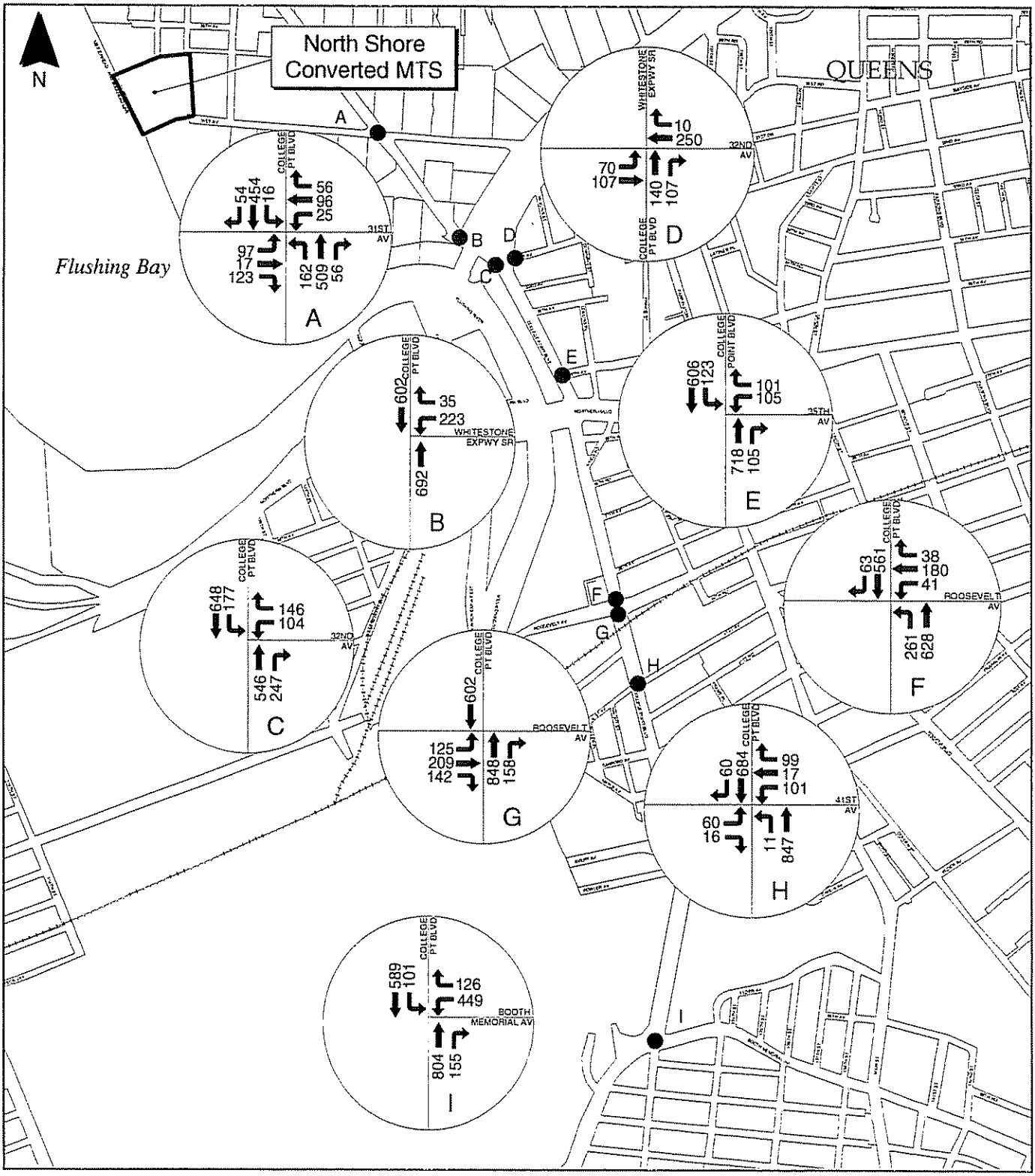
Existing truck traffic through most of the intersections was relatively high. The percentages of trucks increases steadily during the morning hours, remains between 20% and 35% during midday hours, then decreases to 10% or lower during the PM peak hours.

7.14.2.3.1 LOS at Signalized Intersections

Table 7.14-1 shows that the existing signalized intersections generally operated at an overall LOS of B or C with the following exceptions. The lane group with the least favorable LOS was the southbound defacto left movement at the intersection of College Point Boulevard and Booth Memorial Avenue. During the PM peak hour, this movement operated at LOS E with a delay of 61.9 seconds. Several other lane groups at various intersections operated at a LOS of D during various peak hours.

7.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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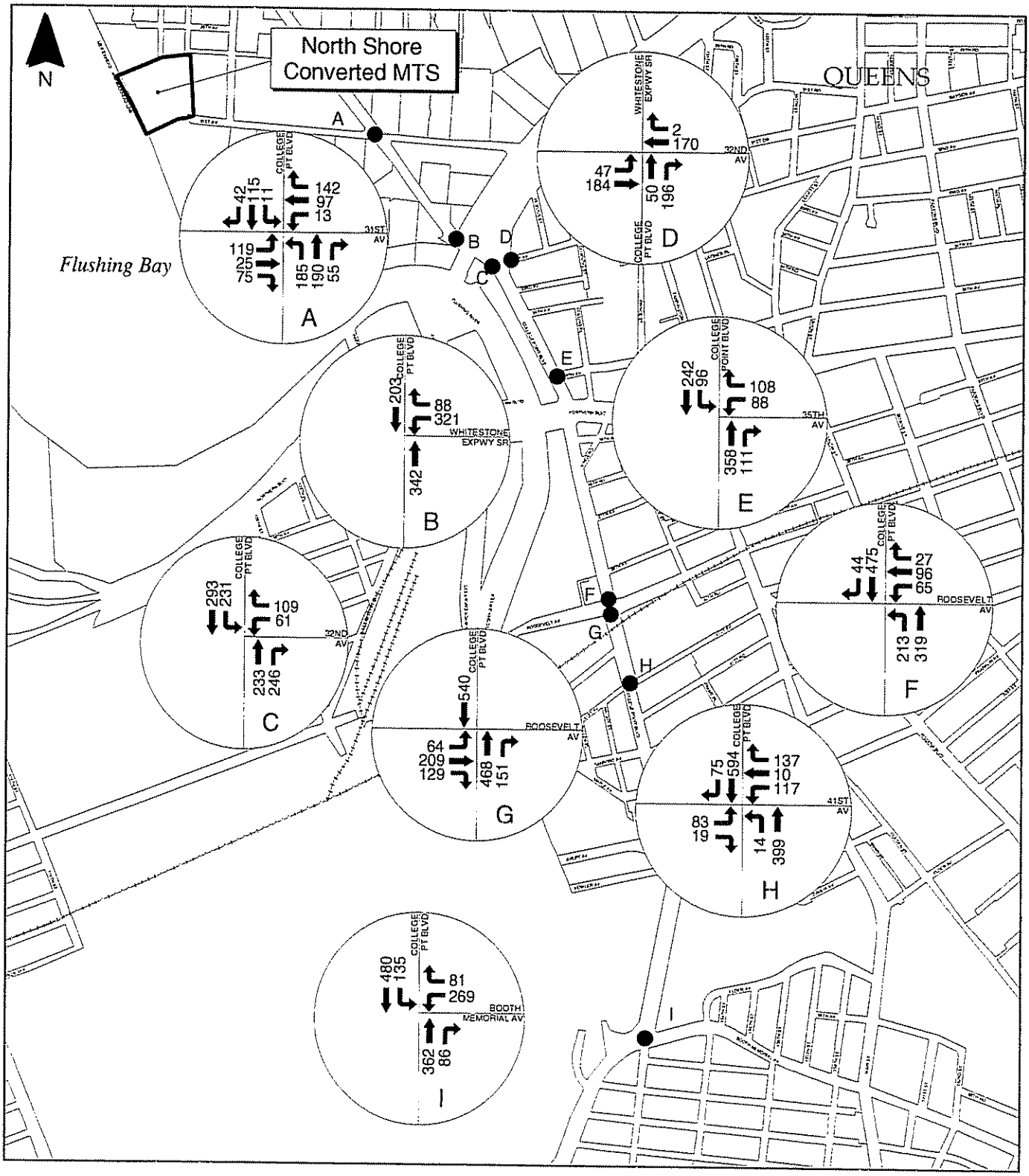
HDR Hydroqual URBITRAN DP EEA Cambridge Environmental Inc

Figure 7.14-3 Existing Traffic Volumes - AM Peak

North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

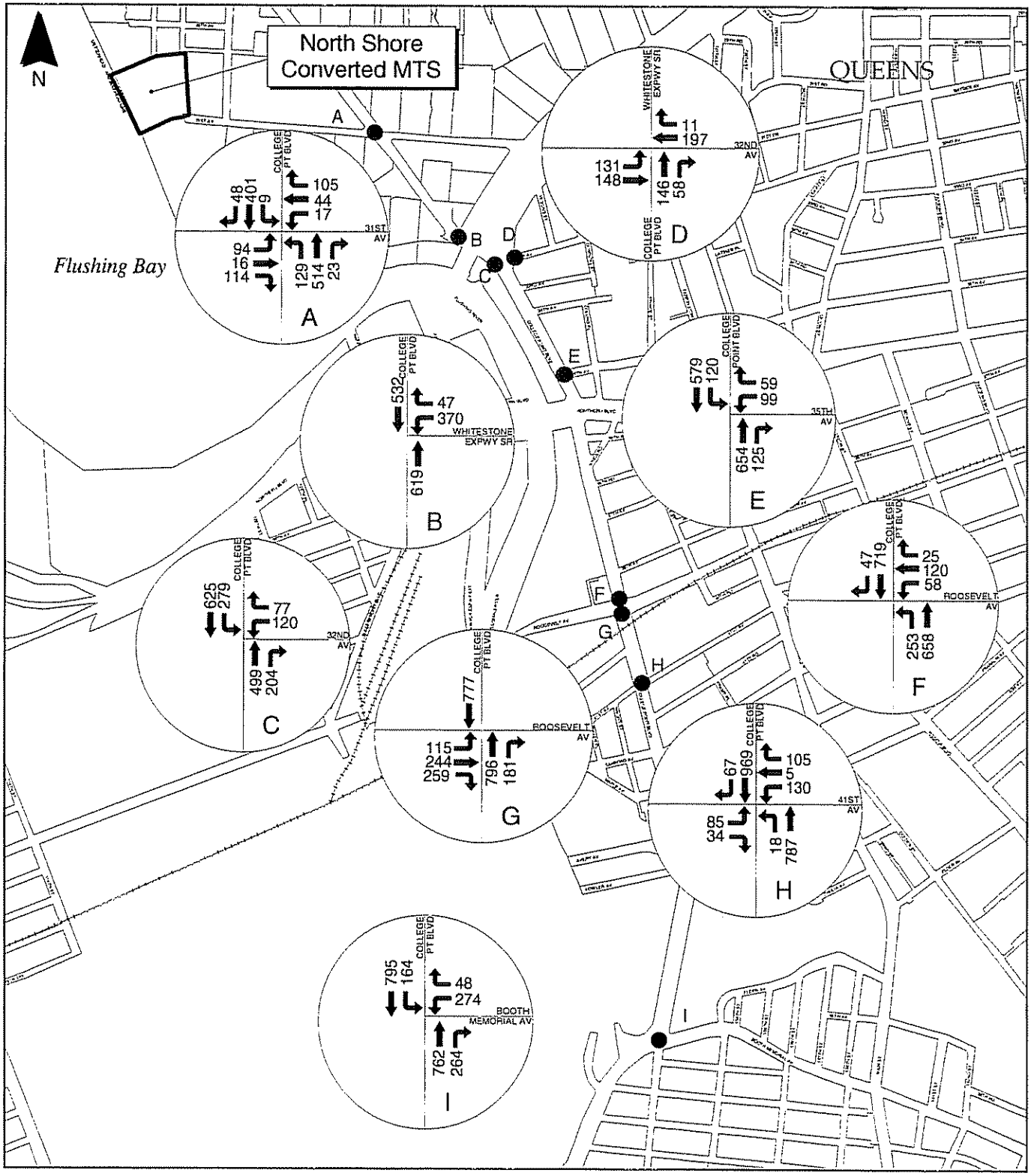
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Figure 7.14-4 Existing Traffic Volumes
Facility Peak
North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 7.14-5 Existing Traffic Volumes - PM Peak

North Shore Converted MTS

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Table 7.14-1
HCM Analysis[(1)]— Existing Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point & 31st Avenue (signalized)									
EB LTR	0.52	31.6	C	-	-	-	0.43	29.4	C
EB DFL	-	-	-	0.63	41.2	D	-	-	-
EB TR	-	-	-	0.29	27.9	C	-	-	-
WB LTR	0.37	28.2	C	0.44	29.3	C	0.29	27.1	C
NB L	0.46	12.2	B	0.39	10.3	B	0.31	9.8	A
NB TR	0.30	8.8	A	0.16	7.8	A	0.27	8.5	A
SB L	0.06	13.4	B	0.03	12.9	B	0.04	13.1	B
SB TR	0.32	16.0	B	0.14	13.7	B	0.33	15.5	B
OVERALL		17.2	B		20.0	C		16.2	B
College Point and Whitestone Expressway Service Road – North (signalized)									
WB L	0.46	18.4	B	0.59	20.9	C	0.67	22.9	C
WB LR	0.07	13.8	B	0.36	17.0	B	0.09	14.1	B
NB T	0.43	9.8	A	0.26	8.5	A	0.39	9.4	A
SB T	0.39	9.5	A	0.14	7.8	A	0.36	9.2	A
OVERALL		11.1	B		13.5	B		12.5	B
College Point and 32nd Avenue (signalized)									
WB LR	0.47	18.2	B	0.35	16.5	B	0.35	16.5	B
NB TR	0.85	28.5	C	0.62	20.5	C	0.74	22.8	C
SB L	0.41	18.5	B	0.48	15.9	B	0.60	22.4	C
SB T	0.44	9.3	A	0.22	7.5	A	0.44	9.2	A
OVERALL		19.5	B		15.8	B		17.1	B
Whitestone Expressway Service Road – South and 32nd Avenue (signalized)									
EB DFL	0.19	6.8	A	-	-	-	0.26	7.0	A
EB T	0.26	1.8	A	-	-	-	0.22	1.5	A
EB LT	-	-	-	0.20	1.1	A	-	-	-
WB TR	0.64	23.3	C	0.39	17.5	B	0.48	19.0	B
NB TR	0.57	20.9	C	0.53	20.3	C	0.40	17.9	B
OVERALL		17.1	B		12.5	B		12.9	B
College Point and 35th Avenue (signalized)									
WB LR	0.46	19.0	B	0.59	22.5	C	0.39	17.6	B
NB TR	0.57	11.5	B	0.39	9.6	A	0.50	10.6	B
SB LT	0.82	19.9	B	0.39	10.0 -	A	0.78	17.6	B
OVERALL		15.9	B		12.5	B		14.5	B
College Point and Roosevelt Avenue - Westbound (signalized)									
WB LTR	0.25	22.6	C	0.20	22.0	C	0.21	22.1	C
NB L	0.54	26.5	C	0.43	22.0	C	0.48	25.9	C
NB T	0.46	13.1	B	0.25	11.0	B	0.41	12.5	B
SB TR	0.86	43.8	D	0.76	38.5	D	0.95	54.5	D
OVERALL		27.0	C		26.1	C		32.6	C

Table 7.14-1 (continued)
HCM Analysis[(1)]— Existing Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point and Roosevelt Avenue - Eastbound (signalized)									
EB LTR	0.37	16.0	B	0.32	15.5	B	0.49	17.6	B
NB TR	0.60	22.2	C	0.40	19.4	B	0.55	21.3	C
SB T	0.52	21.6	C	0.48	20.9	C	0.63	23.4	C
OVERALL		20.5	C		18.8	B		20.9	C
College Point and 41st Avenue (signalized)									
EB LR	0.37	28.1	C	0.60	37.2	D	0.51	32.1	C
WB LTR	0.66	35.3	D	0.85	49.6	D	0.69	36.3	D
NB L	0.07	8.8	A	0.17	9.9	A	0.16	10.5	B
NB T	0.53	12.7	B	0.30	10.2	B	0.47	11.9	B
SB TR	0.41	11.1	B	0.40	11.0	B	0.52	12.3	B
OVERALL		15.6	B		20.5	C		16.2	B
College Point and Booth Memorial Avenue (signalized)									
WB L	0.77	36.7	D	0.51	27.1	C	0.54	27.6	C
WB LR	0.42	25.3	C	0.29	23.1	C	0.22	22.2	C
NB TR	0.47	13.5	B	0.24	11.2	B	0.45	13.3	B
SB DFL	0.67	32.1	C	0.40	14.9	B	0.93	61.9	E
SB T	0.37	12.5	B	0.32	12.0	B	0.45	13.3	B
OVERALL		19.3	B		15.8	B		19.6	B

Notes:

(1) HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement
LR = left right movement

7.14.2.4 Existing DSNY-Related Traffic

Under Queens' interim export, Tully Environmental, a commercial vendor located close to the North Shore Converted MTS, accepts waste originating from CDs in Queens. Queens CDs delivering to Tully Environmental are QN7, QN12 and E-Z Pack loads from QN2, QN7 and QN14. Additionally, duel bin school trucks, basket trucks, SHBLK, street dirt, lot clearing (LC) and other City department (OCD) loads from all Queens CDs are delivered to Tully Environmental. Existing DSNY-related traffic in the traffic study area is located on College Point Boulevard, 35th Street and Roosevelt Avenue.

7.14.2.5 Public Transportation

Public transportation in the study area consists predominantly of bus trips. The Q48 runs east-west along Roosevelt Avenue and the Q58 and Q65 run north-south along College Point Boulevard. Bus stops are located at some of the study area intersections analyzed, and scheduled stops occur at various times during the day.

7.14.2.6 Pedestrian Activity

Light pedestrian activity occurs along College Point Boulevard in the center section of the study area where restaurants and commercial and residential areas produce and attract pedestrians throughout the day. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

7.14.3 Future No-Build Conditions

7.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 100 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 7.14-6, 7.14-7 and 7.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 7.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their Existing Condition LOS, with the following exceptions:

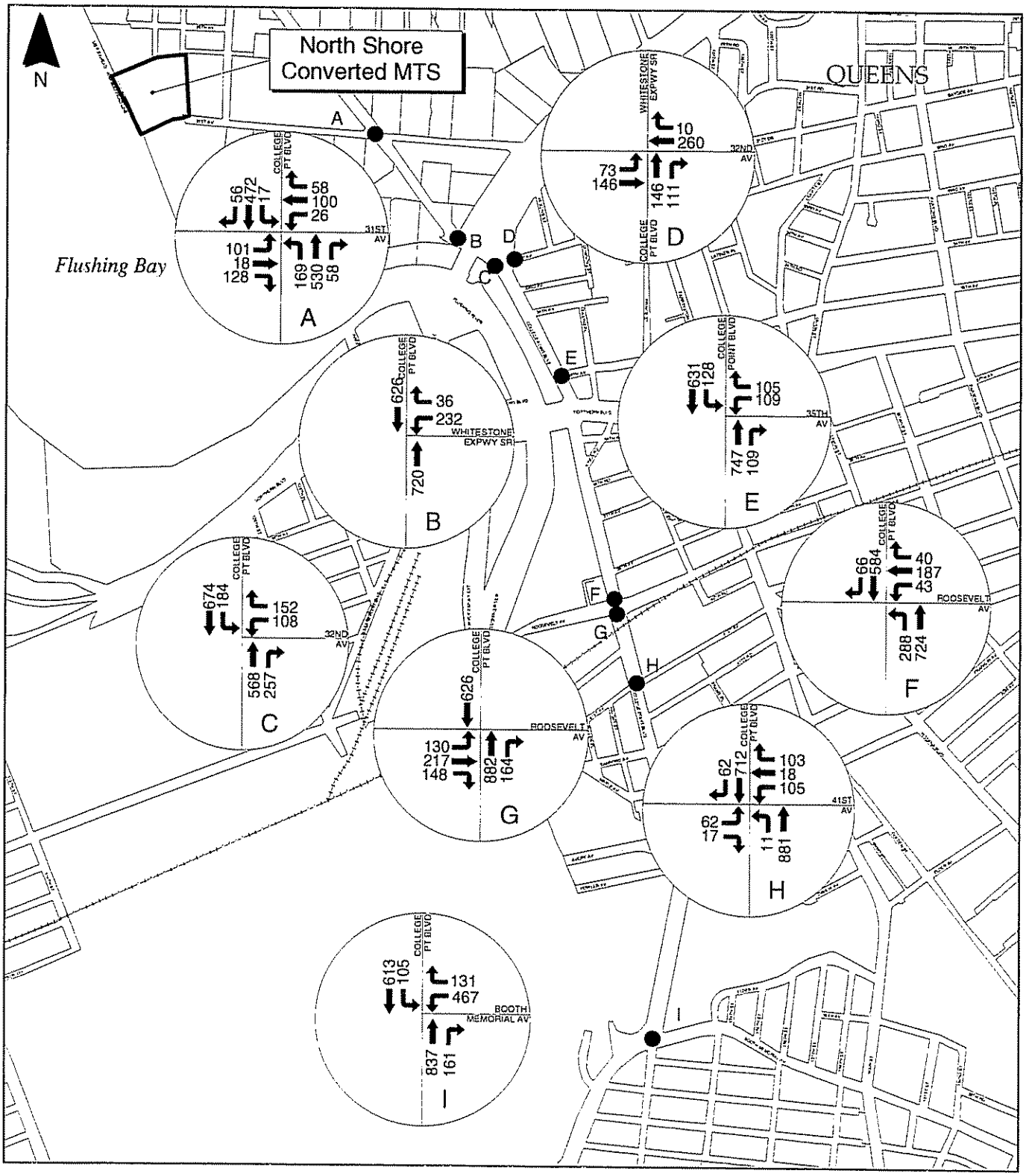
- During the AM peak hour, the overall LOS of the College Point Boulevard and 32nd Avenue intersection and the College Point Boulevard and Booth Memorial Avenue intersection deteriorated from B to C.
- During the PM peak hour, the overall LOS of the College Point Boulevard and Roosevelt Avenue (Westbound) intersection deteriorated from C to D.

7.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

7.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

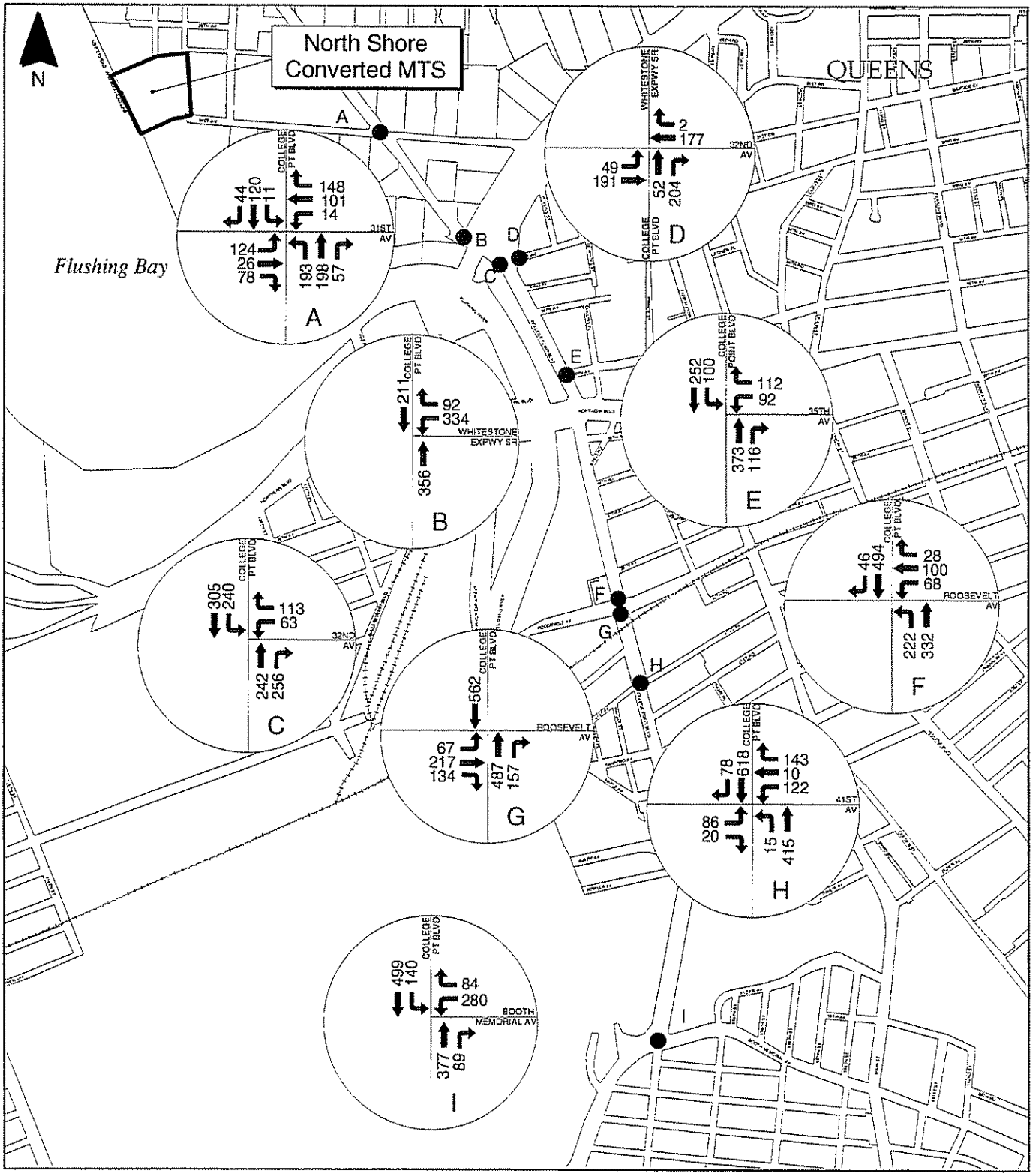
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HDR HydroQual URBITRAN DD EEA Cambridge Environmental Inc

Figure 7.14-6 Future No-Build Traffic Volumes
AM Peak
North Shore Converted MTS

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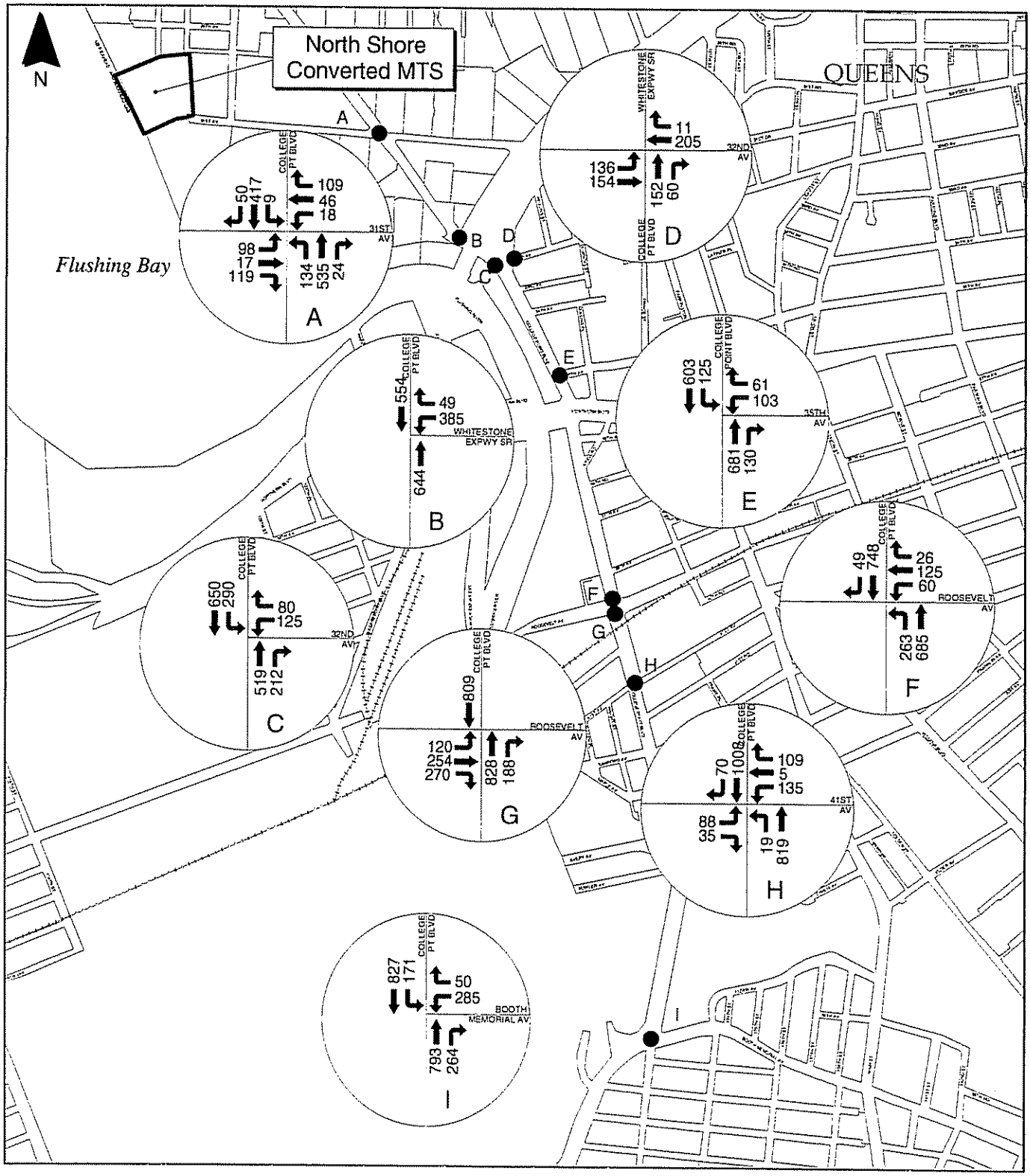


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 7.14-7 Future No-Build Traffic Volumes Facility Peak North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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HDR HydroQual URBITRAN DD EEA Cambridge Environmental Inc

Figure 7.14-8 Future No-Build Traffic Volumes PM Peak North Shore Converted MTS

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Table 7.14-2
HCM Analysis[1]— Future No-Build Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point & 31st Avenue (signalized)									
EB LTR	0.55	32.2	C	-	-	-	0.45	29.8	C
EB DFL	-	-	-	0.67	44.5	D	-	-	-
EB TR	-	-	-	0.31	28.1	C	-	-	-
WB LTR	0.38	28.4	C	0.47	29.7	C	0.30	27.3	C
NB L	0.49	12.9	B	0.41	10.6	B	0.33	10.1	B
NB TR	0.31	8.9	A	0.17	7.3	A	0.28	8.6	A
SB L	0.07	13.4	B	0.03	13.0	B	0.04	13.1	B
SB TR	0.38	16.2	B	0.15	13.8	B	0.34	15.7	B
OVERALL		17.4	B		20.6	C		16.4	B
College Point and Whitestone Expressway Service Road – North (signalized)									
WB L	0.48	18.8	B	0.61	21.6	C	0.69	23.8	C
WB LR	0.07	13.9	B	0.38	17.3	B	0.10	14.1	B
NB T	0.45	10.0+	B	0.27	8.6	A	0.40	9.5	A
SB T	0.41	9.6	A	0.15	7.8	A	0.38	9.3	A
OVERALL		11.3	B		13.8	B		12.8	B
College Point and 32nd Avenue (signalized)									
WB LR	0.49	18.5	B	0.36	16.6	B	0.37	16.7	B
NB TR	0.89	31.4	C	0.64	21.0	C	0.76	23.6	C
SB L	0.43	19.1	B	0.51	16.9	B	0.62	23.2	C
SB T	0.46	9.4	A	0.23	7.6	A	0.46	9.3	A
OVERALL		20.9	C		16.2	B		17.6	B
Whitestone Expressway Service Road – South and 32nd Avenue (signalized)									
EB DFL	0.20	7.0	A	-	-	-	0.28	7.2	A
EB T	0.27	1.9	A	-	-	-	0.23	1.5	A
EB LT	-	-	-	0.21	1.1	A	-	-	-
WB TR	0.66	24.2	C	0.40	17.7	B	0.50	19.4	B
NB TR	0.59	21.4	C	0.55	20.9	C	0.42	18.0	B
OVERALL		17.6	B		12.8	B		13.1	B
College Point and 35th Avenue (signalized)									
WB LR	0.48	19.4	B	0.61	23.2	C	0.40	17.8	B
NB TR	0.60	11.9	B	0.40	9.8	A	0.52	10.8	B
SB LT	0.88	24.1	C	0.41	10.2	B	0.83	20.4	C
OVERALL		17.9	B		12.8	B		15.8	B
College Point and Roosevelt Avenue - Westbound (signalized)									
WB LTR	0.26	22.7	C	0.21	22.1	C	0.22	22.2	C
NB L	0.56	27.3	C	0.45	23.0	C	0.50	26.5	C
NB T	0.48	13.4	B	0.26	11.1	B	0.42	12.6	B
SB TR	0.90	47.2	D	0.80	40.0	D	0.99	62.7	E
OVERALL		28.4	C		26.9	C		36.1	D

Table 7.14-2 (continued)
HCM Analysis[(1)]— Future No-Build Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point and Roosevelt Avenue - Eastbound (signalized)									
EB LTR	0.39	16.2	B	0.33	15.6	B	0.51	17.9	B
NB TR	0.62	22.6	C	0.41	19.6	B	0.57	21.7	C
SB T	0.55	21.9	C	0.50	21.7	C	0.65	24.0	C
OVERALL		20.9	C		19.1	B		21.3	C
College Point and 41st Avenue (signalized)									
EB LR	0.39	28.8	C	0.63	38.6	D	0.54	33.1	C
WB LTR	0.69	36.6	D	0.88	52.5	D	0.72	37.8	D
NB L	0.08	8.9	A	0.19	10.2	B	0.18	11.0	B
NB T	0.55	13.0	B	0.31	10.3	B	0.49	12.2	B
SB TR	0.42	11.2	B	0.41	11.2	B	0.54	12.6	B
OVERALL		16.0	B		21.3	C		16.7	B
College Point and Booth Memorial Avenue (signalized)									
WB L	0.81	38.7	D	0.53	27.5	C	0.56	28.1	C
WB LR	0.44	25.7	C	0.20	23.2	C	0.24	22.3	C
NB TR	0.49	13.7	B	0.25	11.3	B	0.47	13.4	B
SB DFL	0.73	38.9	D	0.42	15.3	B	1.01	85.1	F
SB T	0.39	12.7	B	0.33	12.1	B	0.47	13.6	B
OVERALL		19.3	B		15.8	B		19.6	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement
LR = left right movement

7.14.4 Potential Impacts with the North Shore Converted MTS

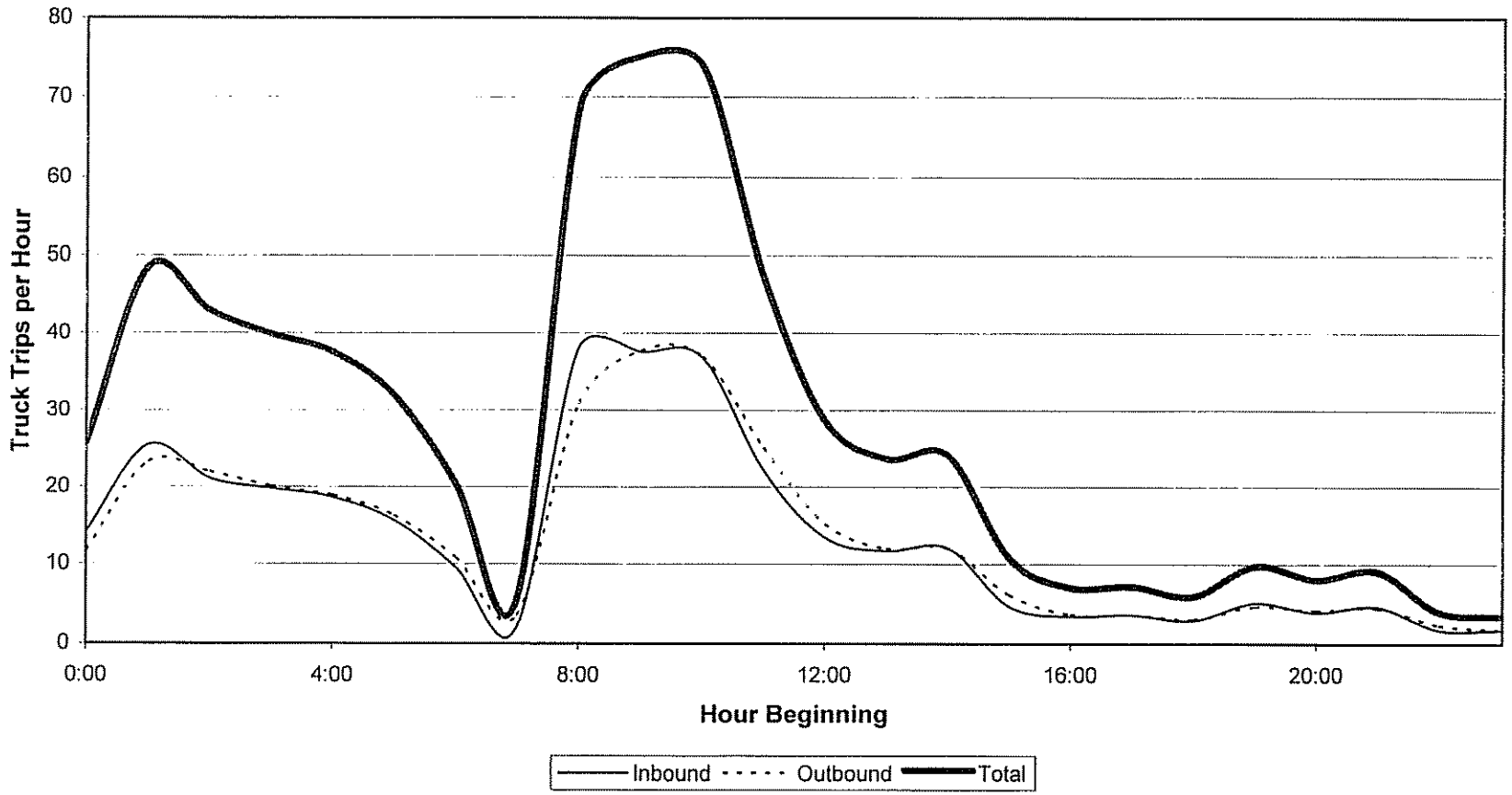
The North Shore Converted MTS would receive waste from nine CDs in Queens — QN 7 through QN 15. Additionally, the waste collected from Queens AFF and SHBLK operations would be delivered to the North Shore Converted MTS. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

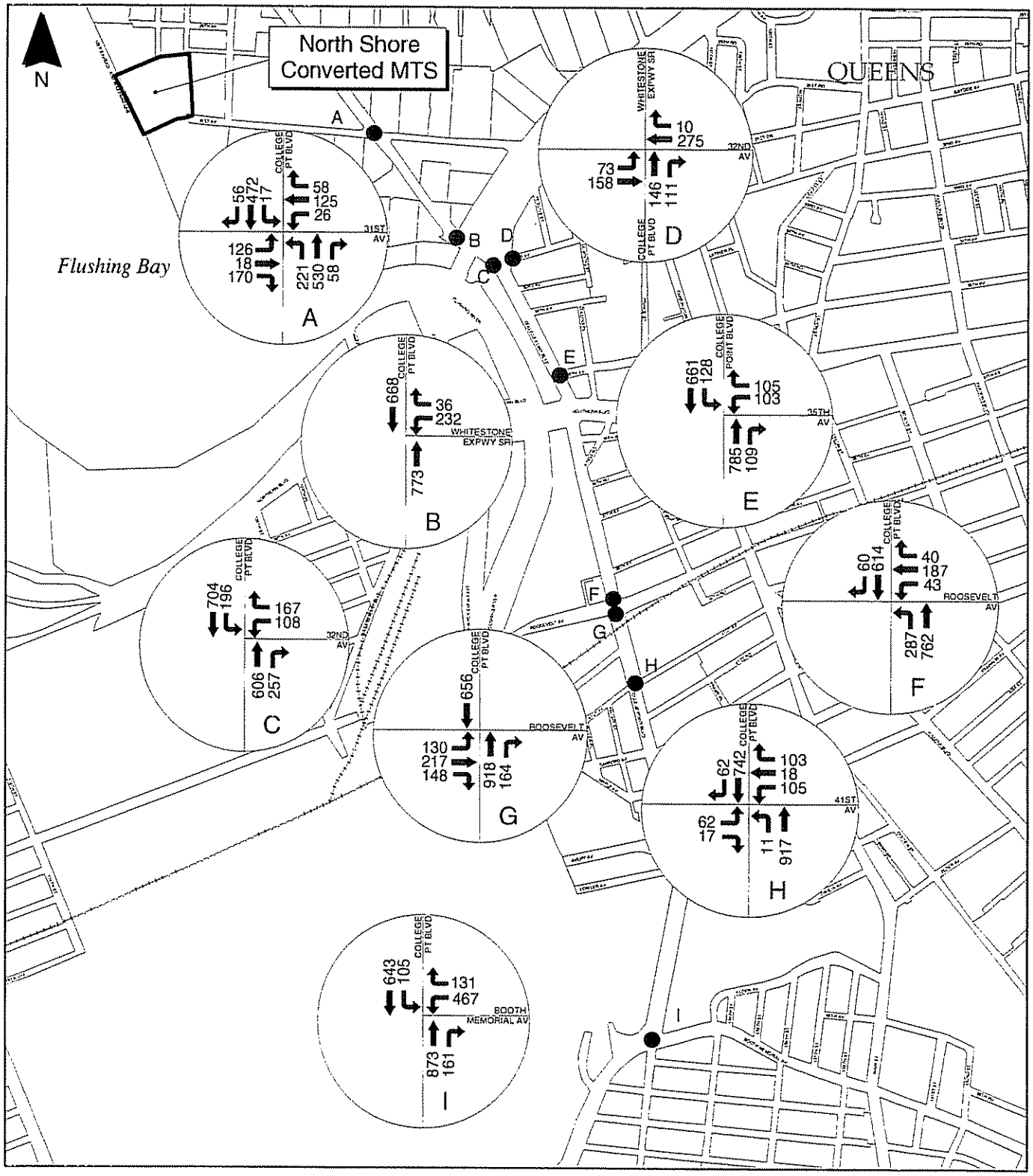
7.14.4.1 2006 Future Build Traffic Conditions

The 2006 Future Build Traffic Conditions assume that the North Shore Converted MTS would generate 329 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site of the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the North Shore Converted MTS are shown in Figure 7.14-2.

Figure 7.14-9 presents the average peak day temporal distribution of collection vehicles for the North Shore Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the North Shore Converted MTS is expected to vary between approximately 1 to 25 truck trips per hour in the late evening/early morning, 10 to 38 truck trips per hour in the mid-morning/early afternoon, and 1 to 5 truck trips per hour in the late afternoon /early evening. The peak hourly number of collection vehicle truck trips (38) occurs at approximately 10:00 a.m. Figures 7.14-10, 7.14-11 and 7.14-12 depict the Future Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Figures 7.14-1~~1~~3, 7.14-14 and 7.14-15 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM, Facility, and PM peaks at the intersections analyzed.

Figure 7.14-9
Truck Trips per Hour
North Shore Converted MTS





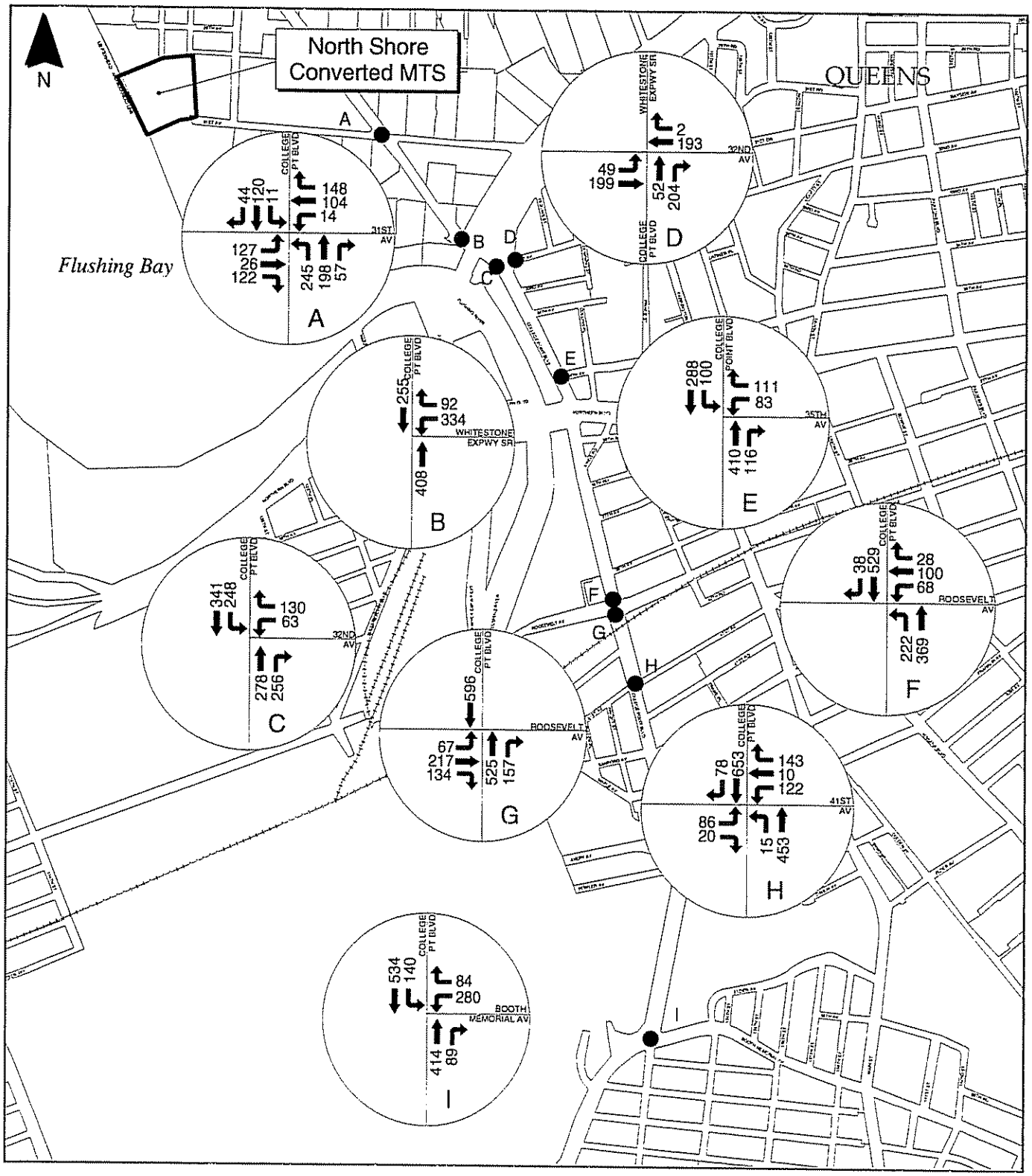
Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | HydroGeoLogic | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 7.14-10 2006 Future Build Traffic Volumes
AM Peak
North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

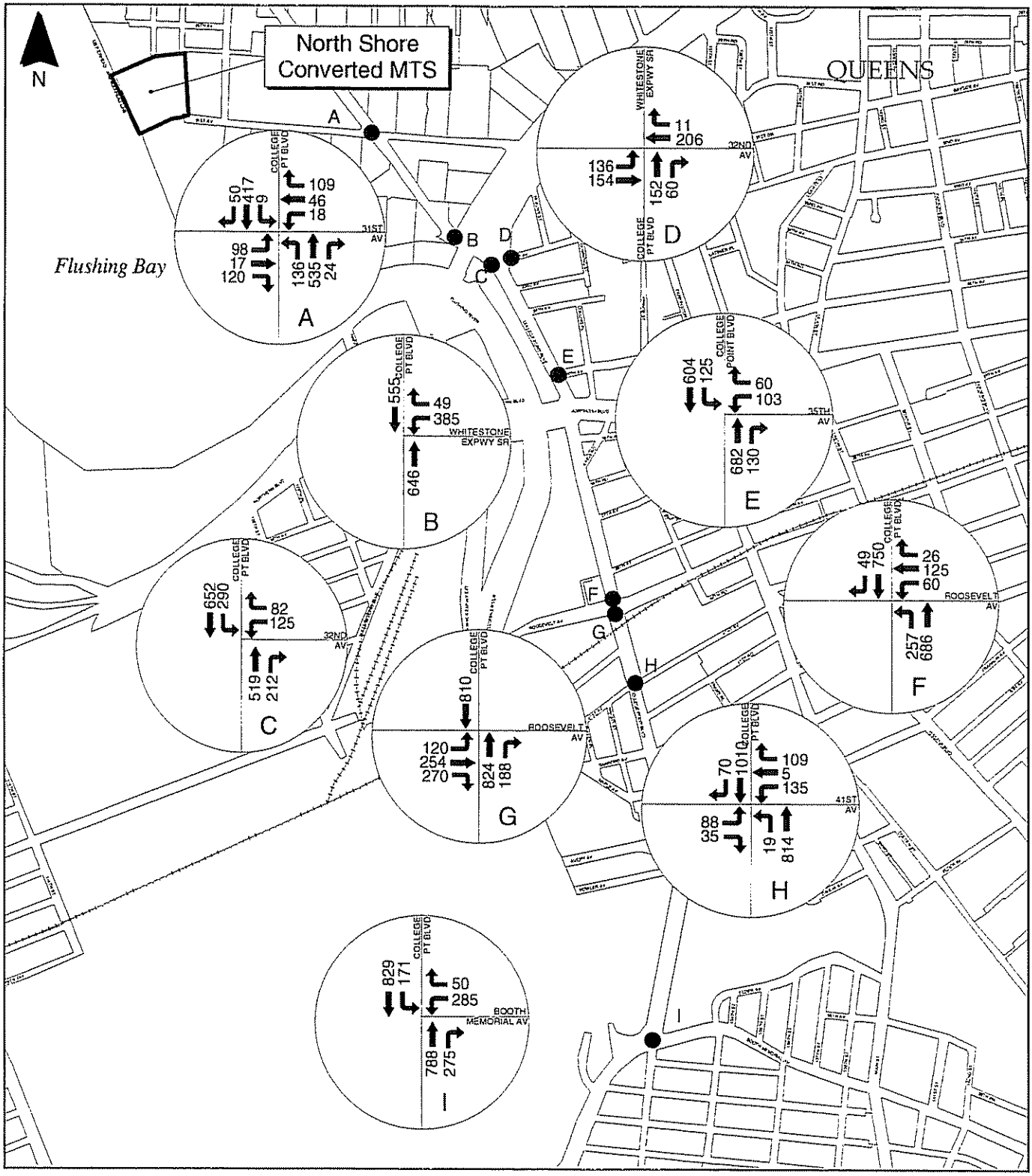
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HDR URBITRAN EEA Cambridge Environmental Inc

Figure 7.14-11 2006 Future Build Traffic Volumes Facility Peak North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

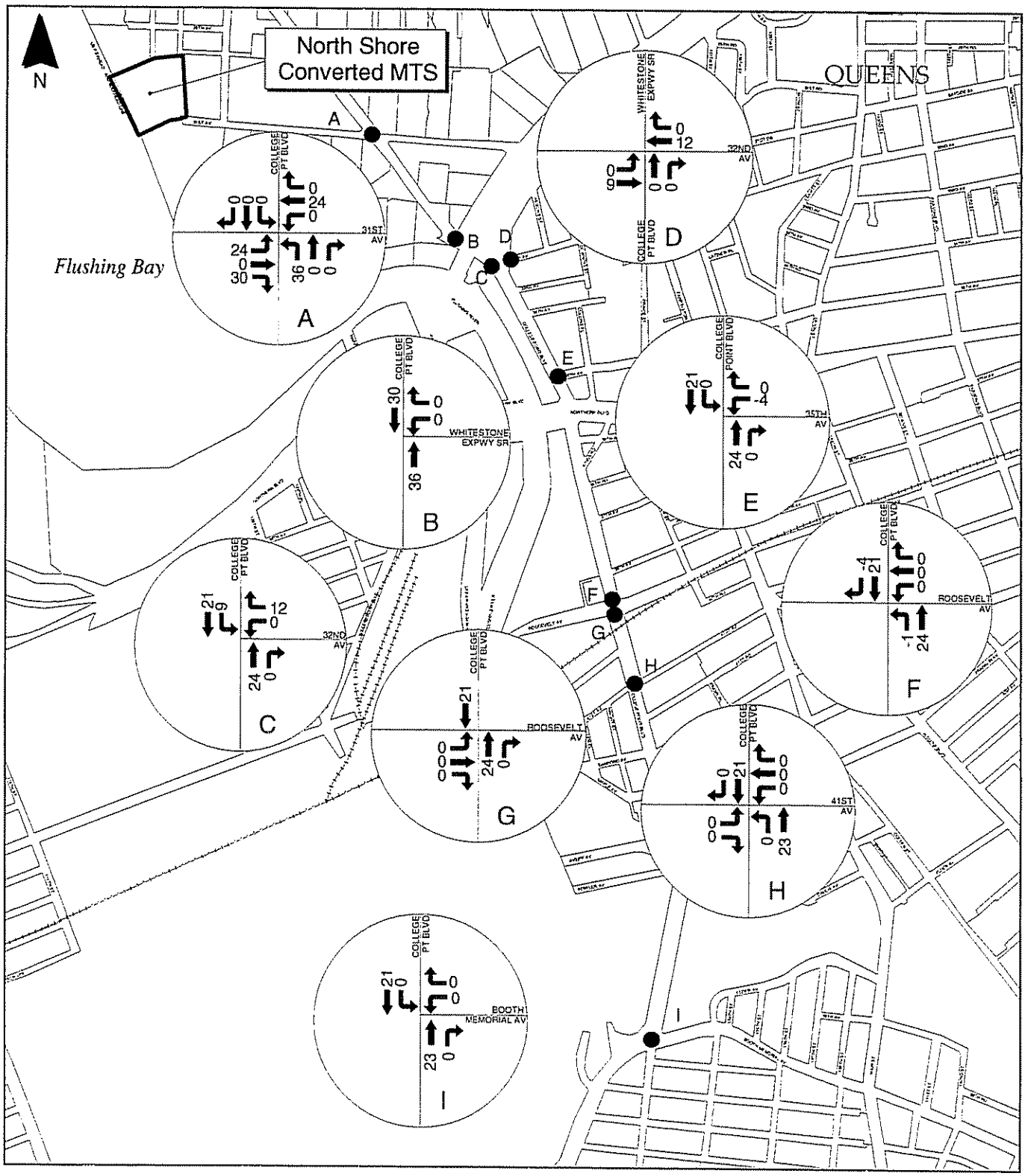
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Figure 7.14-12 2006 Future Build Traffic Volumes
PM Peak
North Shore Converted MTS

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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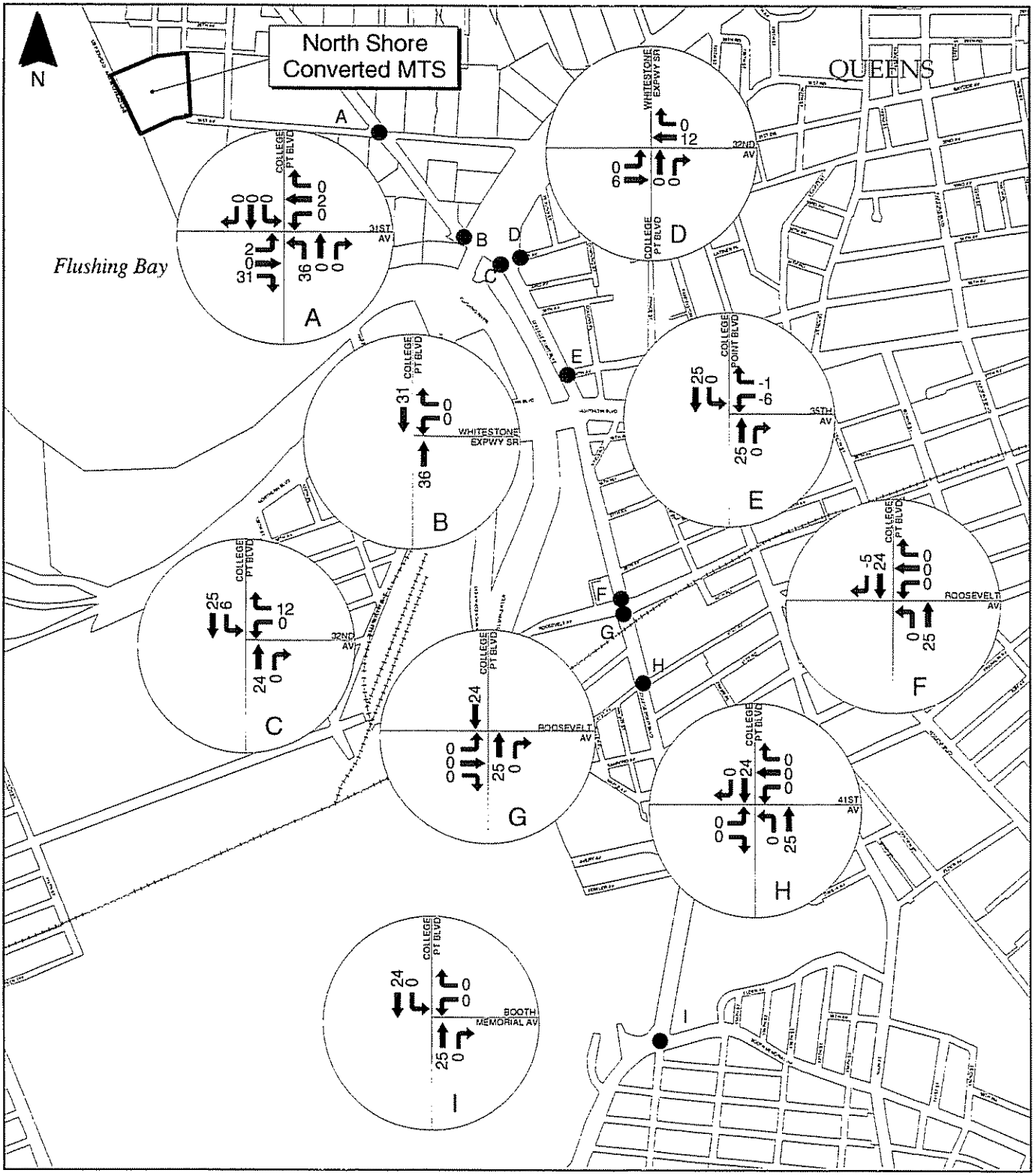
HDR | HydroQual | URBITRAN | DD | EEA Cambridge Environmental Inc

Figure 7.14-13 2006 Net Traffic - AM Peak

North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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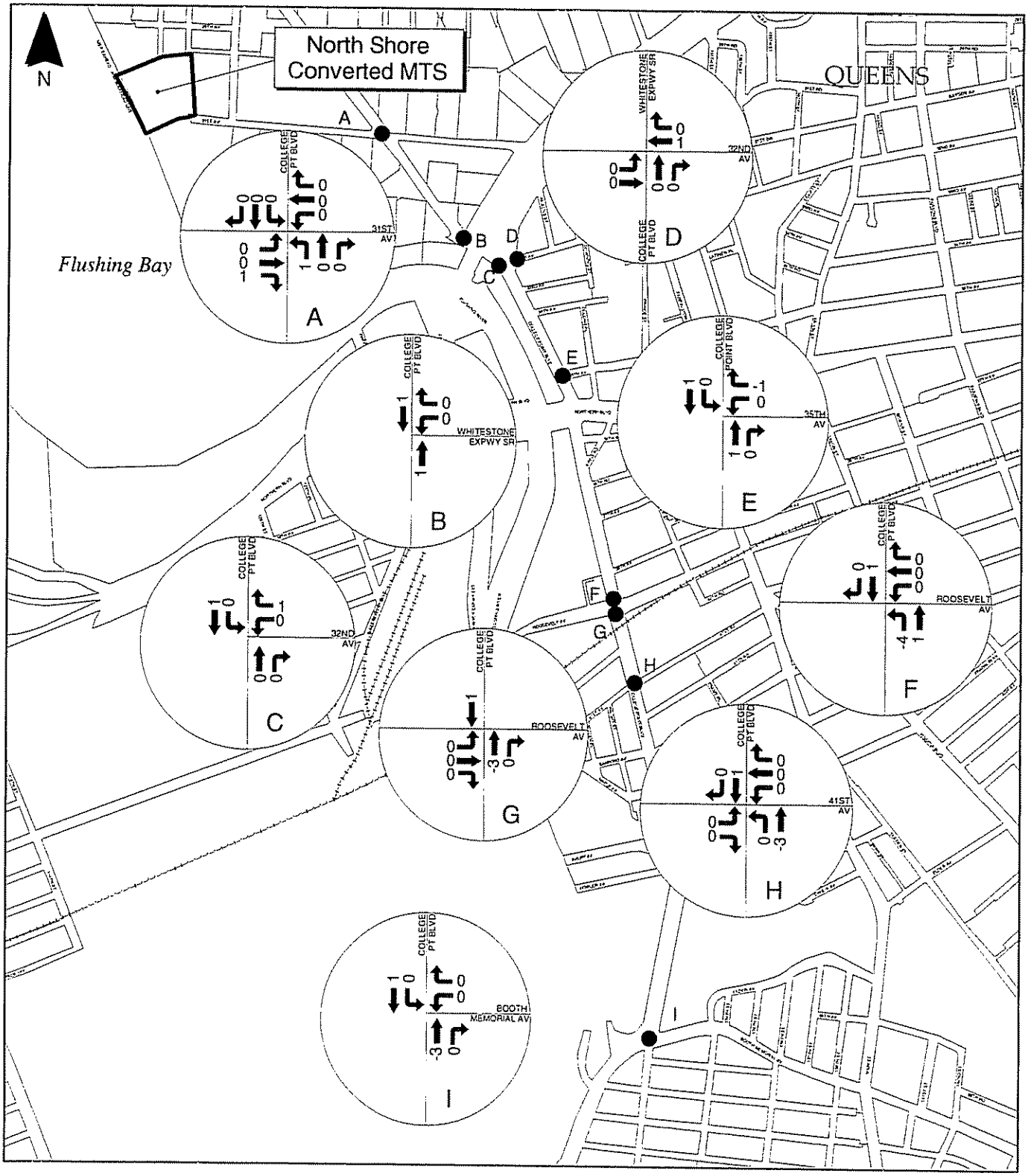
HDR Hydroqual URBITRAN DD EEA Cambridge Environmental Inc

Figure 7.14-14 2006 Net Traffic - Facility Peak

North Shore Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.14-15 2006 Net Traffic - PM Peak

North Shore Converted MTS

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Employee trips generated as a result of the North Shore Converted MTS are expected to be about 44 per shift (22 coming in and 22 leaving). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (7:30 a.m. – 8:30 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the North Shore Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic. Figures 7.14-10, 7.14-11 and 7.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 7.14-13, 7.14-14 and 7.14-15 show the intersections analyzed with only the net increase in site-generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the North Shore Converted MTS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 38. The highest net increase at any one intersection was 76 trucks. Both of these net increases occurred at the intersection of College Point Boulevard and 31st Avenue.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 86% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 64% of weekday traffic volumes. Table 7.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the North Shore Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 7.14-3
Weekday and Weekend Traffic
North Shore Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic NB and SB on College Point Boulevard [1]	
Average Peak Day Trucks/Day	Saturday Trucks/Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
329	282	20,661	13,306

Note:
[1] NB and SB traffic data collected from ATR counts taken on College Point Boulevard between 31st Avenue and Whitestone Expressway Service Road from September 11 to 16, 2003.

Table 7.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the North Shore Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The two intersections that may experience potentially significant impacts are discussed in Section 7.14.4.2 and summarized in Table 7.14-5.

7.14.4.2 Impacts and Mitigation

Two of the nine intersections may experience impacts great enough to be considered significant during only one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 7.14-5.

College Point Boulevard/31st Avenue – During the AM peak hour, a potential impact was identified on the eastbound left-turn/through/right turn lane group when the delay increased from 32.2 seconds to 37.8 seconds (LOS C deteriorated to LOS D). An increase in green time of one second for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second from the northbound and southbound approach green time. The southbound approach delay would increase by less than one second, the northbound approach delay would increase less than four seconds and the westbound approach delay would decrease by less than one second, compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Table 7.14-4
HCM Analysis[1] 2006 Future Build Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point & 31st Avenue (signalized)									
EB LTR	0.71	37.8	D	-	-	-	0.46	29.8	C
EB DFL	-	-	-	0.69	45.8	D	-	-	-
EB TR	-	-	-	0.44	30.8	C	-	-	-
WB LTR	0.43	29.2	C	0.47	29.8	C	0.30	27.3	C
NB L	0.64	21.7	C	0.52	14.3	B	0.33	10.1	B
NB TR	0.31	8.9	A	0.17	7.8	A	0.28	8.6	A
SB L	0.07	13.4	B	0.03	13.0	B	0.04	13.1	B
SB TR	0.38	16.2	B	0.15	13.8	B	0.34	15.7	B
OVERALL		20.2	C		21.7	C		16.4	B
College Point and Whitestone Expressway Service Road – North (signalized)									
WB L	0.48	18.8	B	0.61	21.6	C	0.69	23.8	C
WB LR	0.07	13.9	B	0.38	17.3	B	0.10	14.1	B
NB T	0.48	10.4	B	0.31	8.9	A	0.40	9.5	A
SB T	0.43	9.9	A	0.18	8.0	A	0.38	9.4	A
OVERALL		11.5	B		13.5	B		12.8	B
College Point and 32nd Avenue (signalized)									
WB LR	0.52	19.1	B	0.39	17.1	B	0.37	16.7	B
NB TR	0.93	35.8	D	0.69	22.2	C	0.76	23.6	C
SB L	0.46	19.9	B	0.54	18.5	B	0.62	23.2	C
SB T	0.48	9.6	A	0.26	7.8	A	0.46	9.3	A
OVERALL		22.9	C		17.0	B		17.6	B
Whitestone Expressway Service Road – South and 32nd Avenue (signalized)									
EB DFL	0.21	7.1	A	-	-	-	0.28	7.2	A
EB T	0.30	2.2	A	-	-	-	0.23	1.5	A
EB LT	-	-	-	0.22	1.1	A	-	-	-
WB TR	0.70	25.6	C	0.44	18.3	B	0.50	19.4	B
NB TR	0.59	21.4	C	0.55	20.9	C	0.42	18.0	B
OVERALL		18.1	B		12.9	B		13.1	B
College Point and 35th Avenue (signalized)									
WB LR	0.47	19.2	B	0.59	22.4	C	0.40	17.8	B
NB TR	0.62	12.3	B	0.43	10.1	B	0.52	10.8	B
SB LT	0.92	29.3	C	0.46	10.7	B	0.83	20.5	C
OVERALL		20.2	C		12.7	B		15.9	B
College Point and Roosevelt Avenue - Westbound (signalized)									
WB LTR	0.26	22.7	C	0.21	22.1	C	0.22	22.2	C
NB L	0.55	27.2	C	0.46	23.6	C	0.49	26.2	C
NB T	0.50	13.7	B	0.29	11.4	B	0.43	12.7	B
SB TR	0.92	50.6	D	0.83	41.9	D	1.00	63.3	E
OVERALL		29.6	C		27.7	C		36.4	D

Table 7.14-4 (continued)
HCM Analysis[1] 2006 Future Build Conditions
North Shore Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:30 p.m. – 5:30 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point and Roosevelt Avenue - Eastbound (signalized)									
EB LTR	0.39	16.2	B	0.33	15.6	B	0.51	17.9	B
NB TR	0.64	23.0	C	0.44	19.9	C	0.57	21.6	C
SB T	0.57	22.4	C	0.53	21.7	C	0.65	24.0	C
OVERALL		21.2	C		19.4	C		21.3	C
College Point and 41st Avenue (signalized)									
EB LR	0.39	28.8	C	0.63	38.6	D	0.54	33.1	C
WB LTR	0.69	36.6	D	0.88	52.5	D	0.72	37.8	D
NB L	0.08	8.9	A	0.19	10.4	B	0.18	11.0	B
NB T	0.57	13.4	B	0.34	10.6	B	0.49	12.1	B
SB TR	0.44	11.4	B	0.43	11.4	B	0.54	12.6	B
OVERALL		16.1	B		21.0	C		16.7	B
College Point and Booth Memorial Avenue (signalized)									
WB L	0.80	38.1	D	0.53	27.5	C	0.56	28.1	C
WB LR	0.45	26.1	C	0.30	23.2	C	0.24	22.3	C
NB TR	0.51	13.9	B	0.27	11.5	B	0.47	13.5	B
SB DFL	0.78	45.1	D	0.44	15.8	B	1.02	87.9	F
SB T	0.41	12.9	B	0.35	12.3	B	0.47	13.6	B
OVERALL		20.3	C		16.0	B		22.0	C

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT

DFL = defacto left

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L = left movement

TR = through right movement

T = through movement

LR = left right movement

Table 7.14-5
HCM Analysis[1] 2006 Future Build Conditions with Mitigation
North Shore Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
College Point & 31st Avenue (signalized) – AM Peak									
EB LTR	0.55	32.2	C	0.71	37.8	D	0.68	35.7	D
WB LTR	0.38	28.4	C	0.43	29.2	C	0.41	28.1	C
NB L	0.49	12.9	B	0.64	21.7	C	0.66	23.2	C
NB TR	0.31	8.9	A	0.31	8.9	A	0.32	9.4	A
SB L	0.07	13.4	B	0.07	13.4	B	0.07	14.0	B
SB TR	0.38	16.2	B	0.38	16.2	B	0.39	16.9	B
OVERALL		17.4	B		20.2	C		20.2	C
College Point and Booth Memorial Avenue (signalized) – AM Peak									
WB L	0.81	38.7	D	0.80	38.1	D	0.82	41.0	D
WB LR	0.44	25.7	C	0.45	26.1	C	0.47	27.1	C
NB TR	0.49	13.7	B	0.51	11.9	B	0.50	13.3	B
SB DFL	0.73	38.9	D	0.78	45.1	D	0.76	41.2	D
SB T	0.39	12.7	B	0.41	12.9	B	0.40	12.3	B
OVERALL		20.1	C		20.3	C		20.3	C

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
DFL = defacto left
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L = left movement
TR = through right movement
T = through movement
LR = left right movement

College Point Boulevard/Booth Memorial Avenue – During the AM peak hour, a potential impact was identified on the southbound defacto left lane group (LOS D) when the delay increased from 38.9 seconds to 45.1 seconds. An increase in the green time of one second for the southbound and northbound approaches should eliminate the delay increase. This mitigation measure decreases the westbound approach green time by one second. The westbound approach delay time would increase by approximately one second and the northbound and southbound approach delay times would decrease by less than one second compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

In addition to the two intersections that may experience impacts, the 31st Avenue and site entrance/exit intersection may also require low-cost and easily implemented mitigation. Even though traffic operations at this intersection should not affect traffic significantly along 31st Avenue, some improvements near the intersection would need to be considered, such as restricting parking along 31st Avenue within the vicinity of the intersection to improve site distance at the site entrance/exit. In addition, a stop sign at the site exit would be beneficial. This mitigation should not generate any adverse impacts on other lane groups during any time periods.

Overall, the mitigation measures suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Condition.

7.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

7.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

7.15 Air Quality

7.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the North Shore Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 7.15.4.2.

7.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 7.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 7.15-1
Representative Ambient Air Quality Data
North Shore Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[1]	Queens College – 14439 Gravett Road	8-Hour	2,998 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	15,345 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}[2]	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	51 $\mu g/m^3$	150 $\mu g/m^3$
SO_2[1]	Queens College – 14439 Gravett Road	3-Hour	134 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	103 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	18 $\mu g/m^3$	80 $\mu g/m^3$

Note:
Source: NYCDEP, April 2003 and USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
[1] Values are the highest pollutant levels recorded during the 2003 calendar year.
[2] Values are the highest pollutant levels recorded during the 1999 calendar year.

7.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effect may be offset by increases in regional traffic volumes.

7.15.4 Potential Impacts with the North Shore Converted MTS

7.15.4.1 On-Site Analysis

7.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 7.15-2. Figure 7.15-1 shows the locations of these sources within the site.

7.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 7.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from project-generated vehicles at any of the receptor locations considered, which are also presented in Table 7.15-3, are below the STVs. The North Shore Converted MTS would not, therefore, significantly impact air quality in the area.

Table 7.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
North Shore Converted MTS

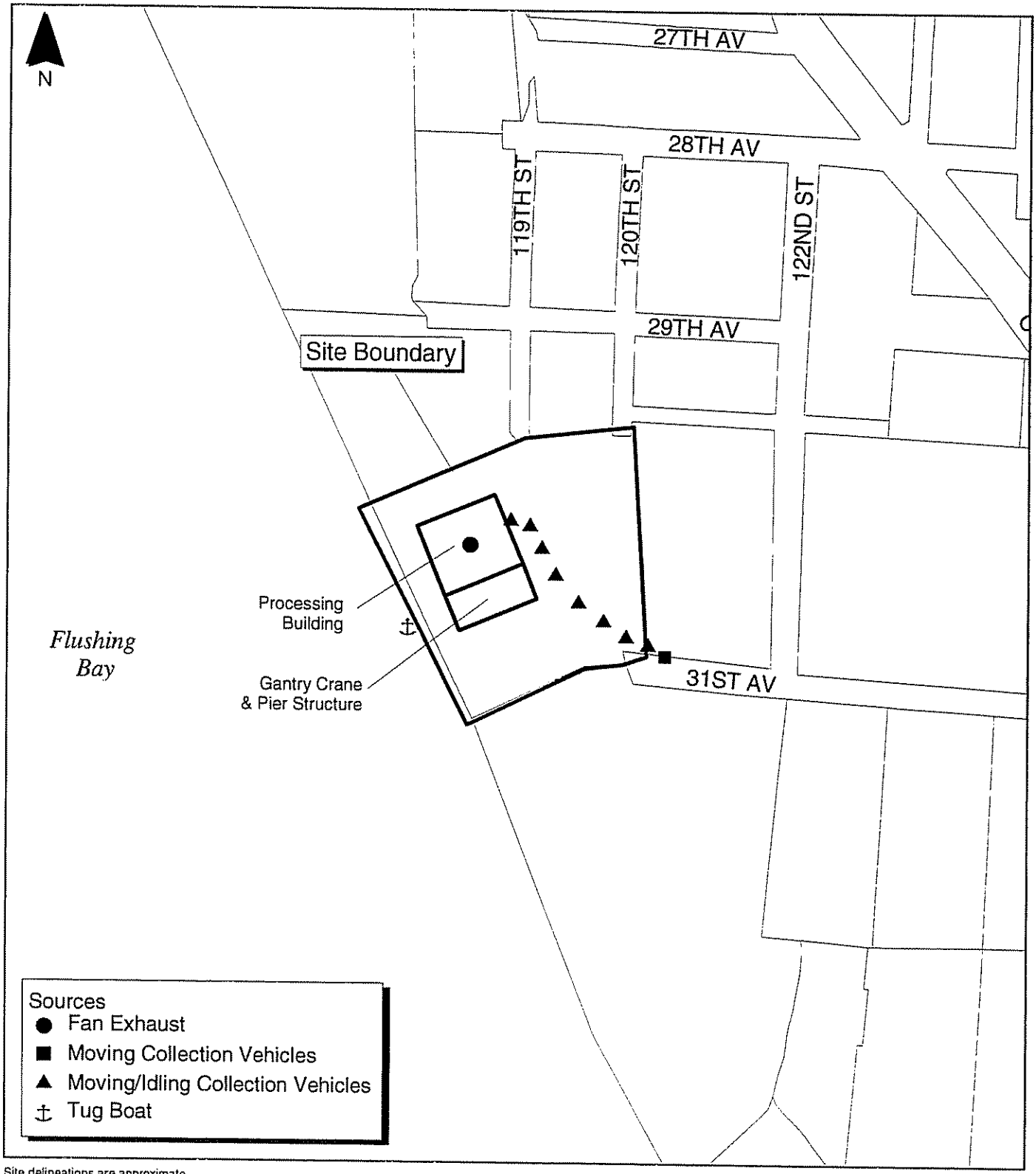
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	6	4
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	21 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (one third of 21), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

Figure 7.15-1 On-Site Air Quality Analysis

North Shore Converted MTS

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Table 7.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
North Shore Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~568~~859	~~3,779~~3,781	~~4,347~~4,640	40,000	NA
	8-hour[6]	~~125~~127	~~2,634~~2,635	~~2,759~~2,762	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	45	56	~~60~~61	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~21~~26	~~57~~90	~~78~~116	150	NA
	Annual	~~3~~4	~~23~~20	~~26~~24	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	~~2~~1.9	NA	NA	NA	5
	Annual Neighborhood Average	~~0.020~~0.021[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	36	186	222	1,300	NA
	24-hour[6]	3	107	110	365	NA
	Annual	0.3	18	18	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~ memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

7.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 7.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the North Shore Converted MTS are not considered to be significant.

7.15.4.2 Off-Site Analysis

7.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of College Point Boulevard at 31st Avenue, College Point Boulevard at Booth Memorial Avenue, and College Point Boulevard at 32nd Avenue and Whitestone Expressway Service Road, to determine whether North Shore Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO de minimus value or a violation of the 8-hour NAAQS;
- An analysis of the intersections of College Point Boulevard at 31st Avenue, College Point Boulevard at Booth Memorial Avenue, and College Point Boulevard at 32nd Avenue and Whitestone Expressway Service Road, to determine whether North Shore Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the intersections of College Point Boulevard at 31st Avenue, College Point Boulevard at Booth Memorial Avenue, and College Point Boulevard at 32nd Avenue and Whitestone Expressway Service Road, to determine whether North Shore Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 7.15-2.

Table 7.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
North Shore Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Max. Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	2.76E-01	1.30E+03	2.12E-04	1.64E-03	1.30E-01	1.26E-02	1.64E-03	8.30E-06	1.36E-08
2	Formaldehyde	3.49E-01	3.00E+01	1.16E-02	2.07E-03	6.00E-02	3.46E-02	2.07E-03	1.30E-05	2.70E-08
3	1,3 Butadiene	1.16E-02	-	-	6.87E-05	3.60E-03	1.91E-02	6.87E-05	2.80E-04	1.92E-08
4	Acetaldehyde	2.27E-01	4.50E+03	5.05E-05	1.35E-03	4.50E-01	3.00E-03	1.35E-03	2.20E-06	2.97E-09
5	Benzo(a)pyrene	5.57E-05	-	-	3.31E-07	2.00E-03	1.65E-04	3.31E-07	1.70E-03	5.62E-10
Non-Carcinogenic Pollutants [10]										
6	Propylene	7.64E-01	-	-	4.54E-03	3.00E+03	1.51E-06	4.54E-03	NA	NA
7	Acrolein	2.74E-02	1.90E-01	1.44E-01	1.63E-04	2.00E-02	8.13E-03	1.63E-04	NA	NA
8	Toluene	1.21E-01	3.70E+04	3.27E-06	7.19E-04	4.00E+02	1.80E-06	7.19E-04	NA	NA
9	Xylenes	8.44E-02	4.30E+03	1.96E-05	5.01E-04	7.00E+02	7.16E-07	5.01E-04	NA	NA
10	Anthracene	5.54E-04	-	-	3.29E-06	2.00E-02	1.64E-04	3.29E-06	NA	NA
11	Benzo(a)anthracene	4.97E-04	-	-	2.95E-06	2.00E-02	1.48E-04	2.95E-06	NA	NA
12	Chrysene	1.05E-04	-	-	6.21E-07	2.00E-02	3.10E-05	6.21E-07	NA	NA
13	Naphthalene	2.51E-02	7.90E+03	3.18E-06	1.49E-04	3.00E+00	4.97E-05	1.49E-04	NA	NA
14	Pyrene	1.42E-03	-	-	8.40E-06	2.00E-02	4.20E-04	8.40E-06	NA	NA
15	Phenanthrene	8.70E-03	-	-	5.17E-05	2.00E-02	2.58E-03	5.17E-05	NA	NA
16	Dibenz(a,h)anthracene	1.73E-04	-	-	1.03E-06	2.00E-02	5.13E-05	1.03E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.56E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**8.10E-02**	**Total Estimated Combined Cancer Risk**		**6.34E-08**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 7.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hr concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

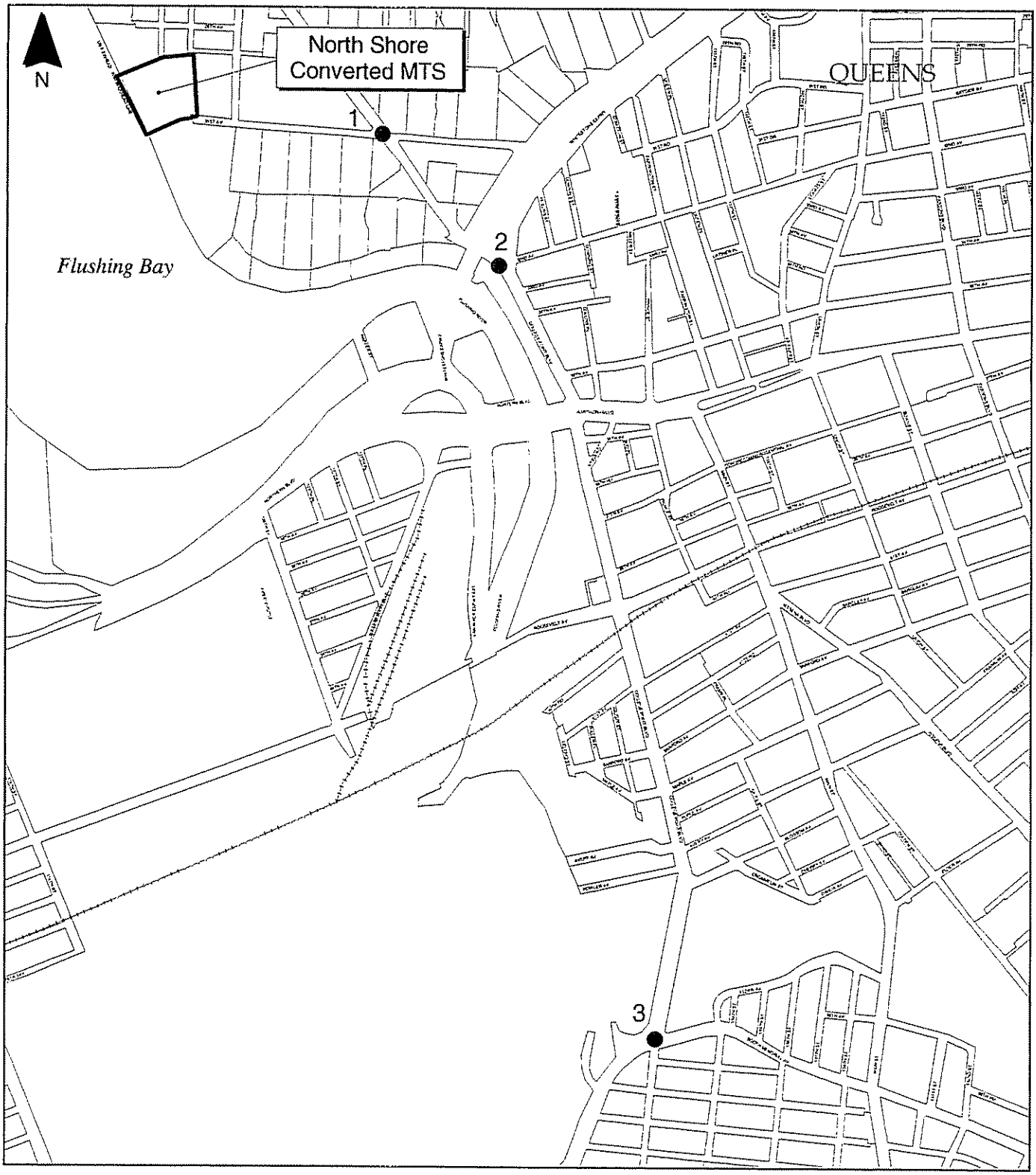
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.15-2 Off-Site Air Quality Intersections Studied North Shore Converted MTS

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7.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 7.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). A Tier II analysis of the intersections at College Point Boulevard at 31st Avenue was necessary to determine the off-site annual impacts for $PM_{2.5}$. The results of this Tier II analysis are within the applicable annual STVs for $PM_{2.5}$. The off-site operations of the North Shore Converted MTS are not, therefore, considered to be significant.

Table 7.15-5
Estimated Pollutant Concentration Near Selected Roadway Intersections
North Shore Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
College Point Boulevard & 31st Avenue									
Existing Conditions	4.14	9587	3935						
Future No-Build Conditions	4.28	9488	3835						
Future Build Conditions	4.48	9691	3936						
Future Build Incremental				0.310.17	0.684[5]	0.710.85	0.0340.010	0.04030[5]	0.0640.050
College Point Boulevard & Booth Memorial Avenue									
Existing Conditions	4.85.1	111100	4148						
Future No-Build Conditions	4.84.5	108102	4245						
Future Build Conditions	4.84.5	108102	4246						
Future Build Incremental				0.050.028	0.460.4	0.450.49	0.0010.002	0.0470.05[5]	0.0510.049
College Point Boulevard, 32nd Avenue & Whitestone Expressway Service Road									
Existing Conditions	65.0	11396	4539						
Future No-Build Conditions	6.14.9	10997	4439						
Future Build Conditions	6.14.9	11098	4440						
Future Build Incremental				0.180.089	0.59	0.68	0.0030.007	0.0705[5]	0.0530.077

Notes for Table 7.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8-hr CO = 2.75 ppm; 24-hr PM_{10} = 57 $\mu g/m^3$; Annual PM_{10} = 23 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(5) Results determined by performing a TIER II analysis and averaging concentrations over the entire receptor network.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

7.16 Odor

7.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is a residential house on 29th Avenue west of 119th Street, approximately ~~280~~ 301 feet from the site boundary.

7.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the North Shore Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

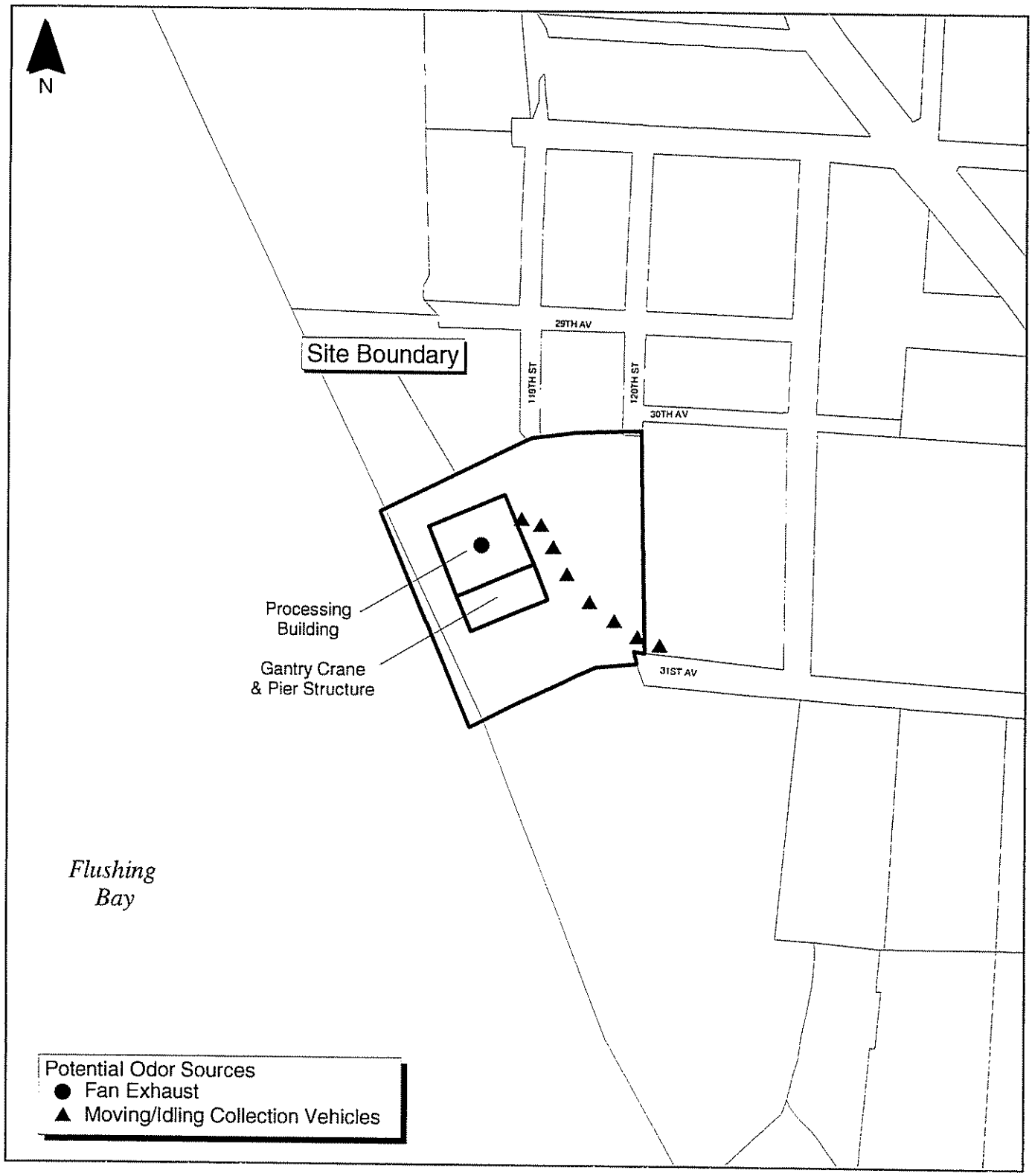
7.16.3 Potential Impacts with the North Shore Converted MTS

7.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the North Shore Converted MTS are provided in Table 7.16-1. Figure 7.16-1 shows the locations of these sources within the site.

Table 7.16-1
Odor Sources Included in Odor Analysis
North Shore Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection Vehicles	22



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 F

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Figure 7.16-1 Potential Odor Sources

North Shore Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the North Shore Converted MTS.

7.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 7.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the North Shore Converted MTS at any nearby sensitive receptor is less than 1, so odors from the North Shore Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 7.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
North Shore Converted MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	~~0.42~~0.47
Type of Receptor	Discrete Receptor
Location of Receptor	Over Water
Closest Sensitive Receptor Result[2]	~~0.06~~0.086
Type of Receptor	Residential House
Distance to Receptor[2]	280 Feet

Notes:

(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.

(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

7.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from North Shore Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

7.17.1 Existing Conditions

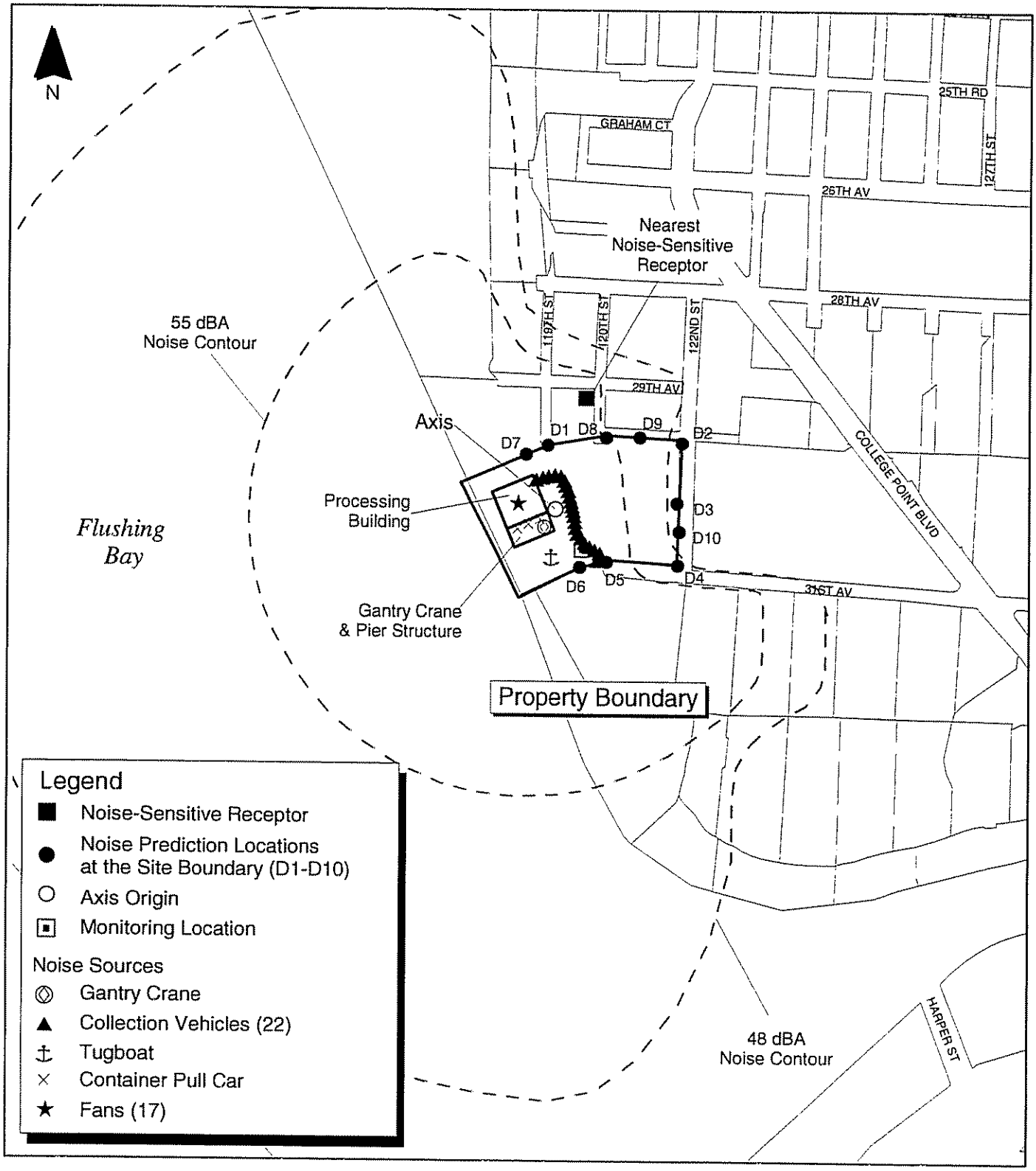
7.17.1.1 Introduction

Figure 7.17-1 shows the location of the North Shore Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is a residential house on 29th Avenue west of 119th Street, approximately 92 meters (301 feet) from the North Shore Converted MTS property line. Additional residential areas exist immediately west and north of these residences.

7.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}.[13] Table 7.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 11:00 p.m. and 12:00 a.m. and had an $L_{eq(1)}$ of 57.0 dBA on January 9, 2003. Activities and events that contribute to the on-site noise levels are as follows:

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 7.17-1 Noise Sources and Receptors

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Table 7.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
North Shore Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
3:00-4:00 p.m.	68.7	62.6	65.5	70.9	59.7	85.1
4:00-5:00 p.m.	69.6	62.6	68.0	71.8	57.8	86.0
5:00-6:00 p.m.	67.2	61.2	65.5	69.0	57.4	81.6
6:00-7:00 p.m.	67.9	62.2	65.8	69.7	59.6	85.2
7:00-8:00 p.m.	67.3	62.4	65.5	69.0	60.1	85.3
8:00-9:00 p.m.	67.7	63.3	66.3	69.9	60.3	83.2
9:00-10:00 p.m.	65.5	60.1	64.0	67.6	56.5	78.7
10:00-11:00 p.m.	68.1	55.7	60.0	65.6	54.0	98.8
11:00 p.m. -12:00 a.m.	57.0	54.2	55.5	57.7	53.4	73.4
12:00-1:00 a.m.	59.9	53.4	55.8	63.0	51.8	74.3
1:00-2:00 a.m.	65.6	53.2	59.8	65.8	51.0	95.4
2:00-3:00 a.m.	68.5	59.3	61.3	68.1	56.9	98.0
3:00-4:00 a.m.	58.3	52.6	55.5	59.7	50.4	79.6
4:00-5:00 a.m.	57.8	52.2	55.6	60.7	48.9	73.1
5:00-6:00 a.m.	62.0	55.5	59.5	62.3	52.2	90.7
6:00-7:00 a.m.	67.3	62.5	65.0	68.7	59.7	88.0
7:00-8:00 a.m.	69.0	62.6	66.6	70.9	59.3	85.3
8:00-9:00 a.m.	67.5	63.5	66.2	69.3	60.7	80.9
9:00-10:00 a.m.	70.3	65.1	68.1	72.3	61.4	87.9
10:00-11:00 a.m.	71.1	63.2	67.7	74.7	60.4	87.5
11:00 a.m.-12:00 p.m.	68.9	60.2	64.5	73.0	57.2	84.0
12:00-1:00 p.m.	66.4	59.3	62.9	69.9	55.4	81.7
1:00-2:00 p.m.	66.0	58.2	62.4	69.4	54.5	79.8
2:00-3:00 p.m.	65.8	57.7	61.2	69.5	54.8	85.8

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

- Airplanes, including jets, that arrive and depart from LaGuardia Airport regularly;
- A DSNY salt shed that is used during the winter; and
- An active DSNY garage that is used regularly.

7.17.1.3 Off-Site Noise Levels

Existing off-site noise sources consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the North Shore Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required and, therefore, off-site noise monitoring was conducted. Table 7.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

Table 7.17-2
Existing Noise Levels (Leq) at the Nearest Noise-Sensitive Receptor for Off-Site Analysis
North Shore Converted MTS

Roadway ID	Existing Noise Levels During Quietest Hour (dBA)[1]
College Point Boulevard North of Roosevelt Avenue [2]	64.9
College Point Boulevard South of Sanford Avenue [3]	66.0

Notes:
(1) A 1-hour noise level reading was measured at the closest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The existing noise level was measured on August 13, 2003 between 2:00 a.m. and 3:00 a.m.
(3) The existing noise level was measured on August 12, 2003 between 3:00 a.m. and 4:00 a.m.

7.17.2 Future No-Build Conditions

7.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build conditions are expected to be the same as Existing Conditions.

7.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 7.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 7.17-3
Off-Site Noise Traffic Volume
North Shore Converted MTS

Location	Hour Beginning	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
College Point Boulevard North of Roosevelt Avenue	3:00 a.m.	111	116
College Point Boulevard North of Roosevelt Avenue	9:00 a.m.	1265	1317
College Point Boulevard South of Sanford Avenue	3:00 a.m.	144	150
College Point Boulevard South of Sanford Avenue	9:00 a.m.	1378	1434
College Point Boulevard between 58th and 57th Avenues	3:00 a.m.	299	311

Notes:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR Annual Traffic Growth Rates.

7.17.3 Potential Impacts with the North Shore Converted MTS

7.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the North Shore Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 7.17-4. The number and types of equipment assumed for this analysis were based on the North Shore Converted MTS's peak design capacity. As described in Section 3.19, an analysis was performed to determine if the number and type of trucks queuing on the ramp that was analyzed in the DEIS is more conservative than the greatest number of DSNY and Commercial Waste trucks expected to be queuing on the ramp based on the number of trucks that might be routed to the facility. The DEIS analysis was based on DSNY trucks queuing along the entire length of the ramp. For the North Shore Converted MTS, the analysis of the greatest number of DSNY and Commercial Waste trucks that will be expected to be queuing on the ramp (based on the number of trucks routed to the facility) is more conservative. Therefore, the results presented for the on-site analysis in this FEIS are based on the greatest number of DSNY and Commercial Waste trucks that are expected to be queuing on the ramp.

Spectral noise levels used in the Performance Standards analysis are shown in Table 7.17-5. The number and types of equipment assumed for this analysis were based on the North Shore Converted MTS's peak design capacity. Shown earlier, Figure 7.17-1 indicates the North Shore Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 7.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
North Shore Converted MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA) [2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Exhaust Fans (17)	74 [3]
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1) [4]	67
Harbor Tug Boat (1) [5]	69
Exhaust Fans (17)	76 [3]
Inbound Moving/Queuing DSNY Collection Vehicles (see Table 7.17-4(a))	67
Inbound Moving/Queuing Commercial Waste Collection Vehicles (see Table 7.17-4(a))	71.3
Outbound Moving/Queuing Collection Vehicle (1)	67 or 71.3 [6]

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time

(2) Noise level representative of each piece of equipment.

(3) Noise level representative of a total of 17 exhaust fans.

(4) Noise level will be specified for gantry crane in DSNY's plans and specification for construction of the Converted MTS's.

(5) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the Converted MTS's.

(6) For each hour, the type of truck assumed to be queuing on the outbound scale varied depending on the type of trucks entering the facility. If both DSNY and Commercial Waste trucks enter the facility, the outbound truck was assumed to be a Commercial Waste truck, to be conservative. However, if only DSNY trucks enter the facility, the outbound truck was assumed to be a DSNY truck. Similarly, if only Commercial Waste trucks enter the facility, the outbound truck was assumed to be a Commercial Waste truck. If a Commercial Waste truck was assumed, 71.3 dBA was used as a noise level. If a DSNY truck was assumed, 67 dBA was used as a noise level.

Table 7.1.7-4 (a)
Collection Vehicle Volumes in the
Refined CEQR Noise Analysis of a Residential House Noise-Sensitive Receptor
North Shore Converted MTS

Hour Beginning	DSNY Collection Vehicles		Commercial Waste Collection Vehicles	
	Number of Trucks Entering Facility	Number of Trucks Queuing Outside - Inbound (1)	Number of Trucks Entering Facility	Number of Trucks Queuing Outside - Inbound (1)
12:00 AM	15	8	1	1
1:00 AM	20	13	0	0
2:00 AM	10	3	0	0
3:00 AM	14	7	0	0
4:00 AM	13	6	0	0
5:00 AM	16	9	0	0
6:00 AM	10	3	4	4
7:00 AM	2	0	0	0
8:00 AM	39	32	0	0
9:00 AM	38	31	0	0
10:00 AM	37	30	0	0
11:00 AM	23	16	0	0
12:00 PM	14	7	0	0
1:00 PM	12	5	0	0
2:00 PM	13	6	0	0
3:00 PM	5	0	0	0
4:00 PM	4	0	0	0
5:00 PM	16	9	0	0
6:00 PM	14	7	0	0
7:00 PM	13	6	0	0
8:00 PM	4	0	29	26
9:00 PM	5	0	26	24
10:00 PM	2	0	25	20
11:00 PM	2	0	10	5

Notes:

1. Assumes first 7 collection vehicles to arrive are DSNY collection vehicles immediately entering building.

Table 7.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
North Shore Converted MTS

Equipment Name (quantity) [1,2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [5]	78	81	78	71	66	60	55	55
Exhaust Fans (17) [4]	70	72	74	74	70	67	62	57

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.

(3) Noise level representative of each piece of equipment.

(4) Noise level representative of total of 17 exhaust fans.

(5) Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTSs.

Hz = Hertz

K = Thousand

7.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the North Shore Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 104 meters (340 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 92 meters (301 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on-site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the

screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 7.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 7.17-1 above. A detailed noise analysis was performed to calculate the ~~Table 7.17-6 below identifies the existing background noise level during the quietest hour. The table shows the distance from the North Shore Converted MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor,~~ North Shore Converted MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both North Shore Converted MTS noise and background noise combined. ~~The table also provides the~~ The difference between this combined noise level and the existing noise level at the noise-sensitive receptor. ~~This difference~~ represents the predicted incremental change in noise level from the North Shore Converted MTS. ~~Because this incremental change is not greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, there is no predicted impact that would be caused by the North Shore Converted MTS on-site operations.~~ According to CEQR, an increase of 3 dBA or more at nighttime is considered an impact. In addition, if the daytime background noise level is 62 dBA or more, an increase of 3 dBA or more is considered an impact. Because this incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor for the quietest nighttime hour, there is a predicted impact that would be caused by the North Shore Converted MTS on-site operations based on this conservative analysis.

On-site queuing collection vehicles were further analyzed to refine the calculated noise levels from the North Shore Converted MTS facility truck ramp on the noise sensitive receptors. Individual, position-specific utilization factors were assigned to each inbound collection vehicle position on the inbound side of the ramp, and to one collection vehicle position on the outbound scale based on the processing time at the North Shore Converted MTS. The utilization factor for each truck was calculated on a 24-hour basis, for each hour, based on the actual number of inbound collection vehicles. The assumption was made that each inbound truck would be queuing on-site for approximately two minutes before proceeding one truck length further up the

ramp towards the facility. The actual number of DSNY and Commercial collection vehicles used in the hourly analysis is shown in Table 7.17-4(a). A restriction on the number of relayed DSNY collection vehicles delivering waste between 1:00 a.m. and 5:00 a.m.; and commercial waste hauling vehicles at certain hours between 8:00 p.m. and 8:00 a.m. will mitigate predicted on-site impacts at nearby noise sensitive receptors.

Table 7.17-6 below shows the results of the CEQR analysis with a refined hourly analysis at the Residential House. An analysis could not be performed for the hours of 7:00 a.m. to 5:00 p.m. due to construction activities adjacent to the noise-sensitive receptor. The Table includes the existing noise level at the noise-sensitive receptor, the North Shore Converted MTS-related noise levels and the combined noise level. The table also provides the difference between this combined noise level and the existing noise level at the sensitive receptor. This difference represents the predicted incremental change in noise level from the North Shore Converted MTS. Because this incremental change is less than the CEQR threshold of 3 dBA during nighttime hours, or during daytime hours when the daytime background noise level is greater than 62 dBA, there is no predicted impact that would be caused by the North Shore Converted MTS on-site operations.

7.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points along the North Shore Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming ~~tugboats~~ both are transportation facilities) (see Table 7.17-7). Based on this analysis, no exceedances to the Performance Standards are predicted.

Table 7.17-6
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Residential House Noise-Sensitive Receptor
North Shore Converted MTS

Hour Beginning[1]	Existing Noise Levels During Quietest Hour (dBA) [2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA) [3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Level (dBA)	Impact (yes or no) [4]
12:00 AM	52.3	51.8	55.1	2.8	No
1:00 AM	53	52.7	55.9	2.9	No
2:00 AM	48.1	47.6	50.9	2.8	No
3:00 AM	50.1	49.8	52.9	2.8	No
4:00 AM	49.7	49.2	52.5	2.8	No
5:00 AM	51.8	50.8	54.4	2.6	No
6:00 AM	62.2	52.1	62.6	0.4	No
5:00 PM	62.3	50.8	62.6	0.3	No
6:00 PM	63.5	49.8	63.7	0.2	No
7:00 PM	60.7	49.2	61.0	0.3	No
8:00 PM	61	60.8	63.9	2.9	No
9:00 PM	60.9	60.3	63.6	2.7	No
10:00 PM	59.4	59.1	62.3	2.9	No
11:00 PM	55.5	50.8	56.8	1.3	No

Notes:

(1) Existing noise levels could not be measured between 7:00a.m. and 5:00 p.m. due to construction activities adjacent to the noise-sensitive receptor.

(2) Twenty-minute noise level readings measured at the residential house receptor on March 14-15, 2005.

(3) Predicted noise level calculations at the noise-sensitive receptor include on-site and off-site shielding from structures including a louver fence.

(4) According to CEQR, an increase over 65 dBA at daytime is considered an impact. However, if the existing noise level at the receptor during the daytime is 62 dBA or greater or if the analysis is for a nighttime hour, an increase over 3 dBA would be considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the North Shore Converted MTS with the quietest background noise levels that occur during facility operation.

Table 7.17-7
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
North Shore Converted MTS[(1)]

Manufacturing District Regulations (M3)								
Frequency (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
M3 Threshold	**79**	**74**	**69**	**63**	**57**	**52**	**48**	**45**
Total Lp dB: D1	67.5	62.5	55.2	51.5	46.5	42.3	35.6	29.2
Total Lp dB: D2	53.8	50.6	45.5	40.0	34.6	28.9	20.3	14.1
Total Lp dB: D3	49.6	46.5	41.6	36.0	30.7	25.1	17.2	12.5
Total Lp dB: D4	59.2	56.5	51.7	46.1	40.7	35.0	26.6	20.6
Total Lp dB: D5	62.8	60.2	55.5	49.9	44.7	39.3	32.1	27.7
Total Lp dB: D6	67.5	64.9	60.2	54.3	49.2	43.9	37.7	35.0
Total Lp dB: D7	69.4	64.0	54.9	50.3	44.5	39.6	33.0	27.2
Total Lp dB: D8	59.7	56.1	51.3	47.8	43.2	38.9	31.7	24.9
Total Lp dB: D9	60.3	55.6	48.4	42.9	37.1	31.3	22.9	16.8
Total Lp dB: D10	54.5	51.6	46.8	41.1	35.8	30.1	21.8	16.2

Notes:
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
K = Thousand
(1) D1 through D10 are the points on the North Shore Converted MTS boundary that are used in all noise analyses.

7.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the North Shore Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. The overall noise predictions were based on the refined queuing analysis as well as a louver fence that will be placed on the truck ramp. The louver fence will be approximately 9 feet in height and will be constructed on top of a 3-foot high concrete base, for a total height of 12 feet. The louver fence will provide a noise reduction of approximately 7dBA for receptors adjacent to the property boundary. ~~This is~~Results are shown in Table 7.17-8. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 7.17-8
Current Noise Code Analysis
North Shore Converted MTS

Location at Plant Boundary[1]	Total Leq Contribution at Plant Boundary (dBA)
D1	~~68.6~~65.3
D2	~~58.7~~59.9
D3	~~57.3~~59.2
D4	~~65.2~~66.2
D5	69.8
D6	65.3
D7	65.8
D8	65.9
D9	61.9
D10	61.3

Notes:
[1] D1 through D10 are points on the North Shore Converted MTS boundary that are used in all noise analysis.

7.17.3.5 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the North Shore Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 7.17-9.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles ~~coming~~ traveling to or ~~going~~ departing from the North Shore Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. Figure 7.17-2 depicts the locations of the roadway where detailed off-site noise analysis was performed.

Table 7.17-9
Off-Site Noise Screening Results
North Shore Converted MTS

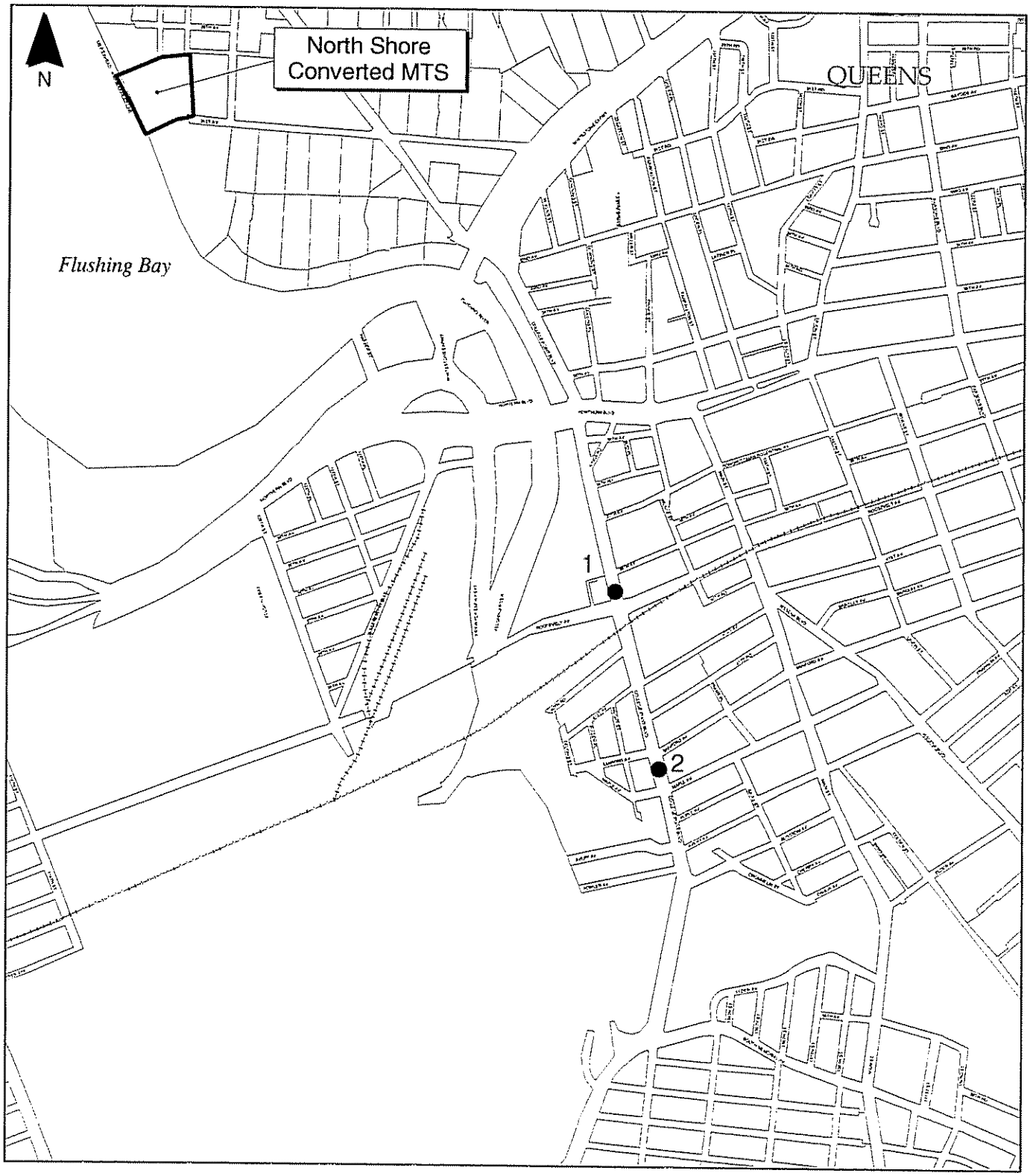
Location	Hour Beginning	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
College Point Boulevard North of Roosevelt Avenue	3:00 a.m.	305	26	0	1,222	1,527	Yes
College Point Boulevard North of Roosevelt Avenue	9:00 a.m.	4,078	43	0	2,021	6,099	No
College Point Boulevard South of Sanford Avenue	3:00 a.m.	220	26	0	1,222	1,442	Yes
College Point Boulevard South of Sanford Avenue	9:00 a.m.	5,049	46	0	2,162	7,211	No
College Point Boulevard between 58th and 57th Avenues	3:00 a.m.	2,075	26	0	1,222	3,298	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include North Shore Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA HydroQual DE Cambridge Environmental Inc

Figure 7.17-2 Mobile Noise Analysis Intersections Analyzed North Shore Converted MTS

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THE CITY OF NEW YORK DEPARTMENT OF SANITATION

TNM results for locations/hours that resulted in an impact based on second-level screening are presented in Appendix E of this FDEIS. Because the incremental noise-level change, which is calculated by obtaining the difference between the TNM-predicted Future Build noise level and the TNM-predicted Future No-Build noise level, is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, an impact at these roadways would be caused by the North Shore Converted MTS-related collection and employee vehicles.

To determine if these TNM-predicted impacts were accurate, site-specific truck simulations were conducted at the noise sensitive receptors. The truck simulation analysis provides a more realistic determination of DSNY and other agency collection vehicle noise impacts based on the proposed number of DSNY and other agency collection vehicles expected to travel through the roadways analyzed during the nighttime hours. Truck simulations were conducted with DSNY collection vehicles, as described in Section 3.19.7.2, for each roadway and hour that the first-level screening analysis resulted in a possible impact. For this procedure, two sets of noise measurements were taken – one with and one without DSNY trucks – by routing a set number of DSNY trucks during the affected nighttime hours past the noise-sensitive receptor. Tables 7.17-10 and 7.17-11 contain the results of the site-specific DSNY collection vehicle simulations, which show a possible impact at College Point Boulevard, north of Roosevelt, during the hours of 1:00 a.m. to 3:00 a.m., and at College Point Boulevard, south of Sanford Avenue, during the hours of 3:00 a.m. to 5:00 a.m.

A comparison of the simulation results for the hours resulting in an impact and the TNM results for these hours for the same traffic conditions and background noise levels estimated from recordings during the simulations is provided in Appendix E of this FDEIS. Based on this comparison, it is determined that TNM over-predicted the incremental change. The over-prediction can be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the North Shore Converted MTS-related collection vehicles.

Table 7.17-10
Off-Site Noise Analysis Truck Simulation
College Point Boulevard – North of Roosevelt Avenue
North Shore Converted MTS

Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
12:00 a.m.	65.5	11	67.5	No (2)
1:00 a.m.	65.7	31	69.3	Yes (3.6)
2:00 a.m.	64.9	22	68.0	Yes (3.1)
3:00 a.m.	67.0	26	69.4	No (2.4)
4:00 a.m.	67.7	24	69.5	No (1.8)
5:00 a.m.	68.2	21	69.6	No (1.4)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations performed on August 13, 2003.

Table 7.17-11
Off-Site Noise Analysis Truck Simulation
College Point Boulevard – South of Sanford Avenue
North Shore Converted MTS

Hour Beginning	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	69.9	31	72.2	No (2.3)
2:00 a.m.	71.0	22	72.3	No (1.3)
3:00 a.m.	66.0	26	69.9	Yes (3.9)
4:00 a.m.	67.3	24	70.5	Yes (3.2)
5:00 a.m.	70.8	21	71.9	No (1.1)

Notes:

(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.

(2) Simulations performed on August 12, 2003.

Because both TNM and the site-specific truck simulations predict an impact at a noise-sensitive receptor from 1:00 a.m. to 3:00 a.m. for the College Point Boulevard – North of Roosevelt Avenue location, and from 3:00 a.m. to 5:00 a.m. for the College Point Boulevard – South of Sanford Avenue location, adjustments were made to the truck routes to the North Shore Converted MTS. During these hours, ~~North Shore Converted MTS related~~DSNY collection vehicles en route to the North Shore Converted MTS from Queens CD 9 would be routed further on the Van Wyck Expressway to Exit 14, Linden Place, rather than the originally proposed route of the Van Wyck Expressway or LIE to College Point Boulevard, thus avoiding the locations predicted to have an impact. However, during these hours, ~~North Shore Converted MTS related~~DSNY collection vehicles leaving the MTS would continue to be routed along College Point Boulevard to either the LIE or Van Wyck Expressway.

Both locations were re-analyzed with the truck adjustments during these hours using the site-specific truck acoustic energy per hour as described in Section 3.19.7.2 to confirm that off-site noise impacts would not be caused by the reduced number of collection vehicles at these locations. Based on these results, with the re-routed ~~North Shore Converted MTS related~~DSNY collection vehicles, there is no predicted impact that would be caused by the ~~North Shore Converted MTS~~DSNY collection vehicles en route to and from the facility. Tables 7.17-12 and 7.17-13 show the results of this analysis.

7.17.3.6 Combined On-Site and Off-Site Noise Levels

On- and off-site noise analyses were performed for the North Shore Converted MTS, however the potential impacts of these analyses did not affect the same noise-sensitive receptor~~s~~. Therefore, a combined noise analysis was not performed.

Table 7.17-12
Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles
College Point Boulevard – North of Roosevelt Avenue
North Shore Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Adjusted Collection Vehicles based on Linden Exit	Calculated[2] Noise Level (L_{eq}) for Existing Traffic plus Adjusted Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	65.7	14	67.7	No (2.0)
2:00 a.m.	64.9	8	66.3	No (1.4)
3:00 a.m.	67.0	12	68.3	No (1.3)
4:00 a.m.	67.7	11	68.6	No (0.9)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Noise levels for existing traffic plus adjusted collection vehicles were calculated utilizing the per truck acoustic energy determined from the truck simulation data for this location.

Table 7.17-13
Off-Site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles
College Point Boulevard – South of Sanford Avenue
North Shore Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Adjusted Collection Vehicles based on Linden Exit	Calculated[2] Noise Level (L_{eq}) for Existing Traffic plus Adjusted Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	69.9	14	71.1	No (1.2)
2:00 a.m.	71.0	8	71.5	No (0.5)
3:00 a.m.	66.0	12	68.2	No (2.2)
4:00 a.m.	67.3	11	69.1	No (1.8)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Noise levels for existing traffic plus adjusted collection vehicles were calculated utilizing the per truck acoustic energy determined from the truck simulation data for this location.

7.18 Commercial Waste to the North Shore Converted MTS

7.18.1 Existing Conditions

No commercial waste is delivered to the North Shore MTS site under Existing Conditions. Commercial waste generated in Queens is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

7.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the North Shore Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

7.18.3 Potential Impacts of Sending Commercial Waste to the North Shore Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

7.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the North Shore Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 7.15, 7.16 and 7.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

7.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the North Shore Converted MTS were evaluated in Sections 7.14, 7.15 and 7.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 7.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 39 (inbound trip ends) per hour, which occurred during the AM peak. These 39 DSNY and other agency collection vehicles are also more than the 26 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the North Shore Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 39 DSNY and other collection agency vehicle trip ends at the North Shore Converted MTS. Therefore, the addition of the 26 DSNY and other agency collection vehicles and commercial waste hauling vehicle inbound trip ends at the North Shore Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 39 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 39 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24-hour period. Results showed there would be no unmitigatible significant adverse environmental impacts at several analyzed intersections. Consequently, because the 26 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can travel through these intersections per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

For the intersection of College Point Boulevard and 31st Avenue, a Tier II analysis was required. The estimated actual hourly distribution over 24 hours included the estimated 26 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could potentially be processed at the North Shore Converted MTS, and no unmitigatible significant adverse environmental impacts were identified.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the North Shore Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,000 tons (or 95 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

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CHAPTER 8 ENVIRONMENTAL REVIEW: 52ND STREET BARGE STAGING AREA

8.1 Introduction

The results of the environmental analyses of the 52nd Street Barge Staging Area are presented in the following sections:

8.2 Land Use, Zoning, and Public Policy
8.3 Socioeconomic Conditions
8.4 Community Facilities and Services
8.5 Open Space
8.6 Cultural Resources
8.7 Urban Design, Visual Resources, and Shadows
8.8 Neighborhood Character
8.9 Natural Resources
8.10 Hazardous Materials
8.11 Water Quality
8.12 Waterfront Revitalization Program
8.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
8.14 Traffic, Parking, Transit, and Pedestrians
8.15 Air Quality
8.16 Odor
8.17 Noise

Section 2.2.5 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

8.2 Land Use, Zoning, and Public Policy

8.2.1 Existing Conditions

8.2.1.1 Definition of the Study Area

For the land use, zoning, and public policy analyses, the primary study area is defined as the area within ¼-mile of the site (see Figure 8.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 8.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.2.5 provides information on existing land uses and operations on the site.

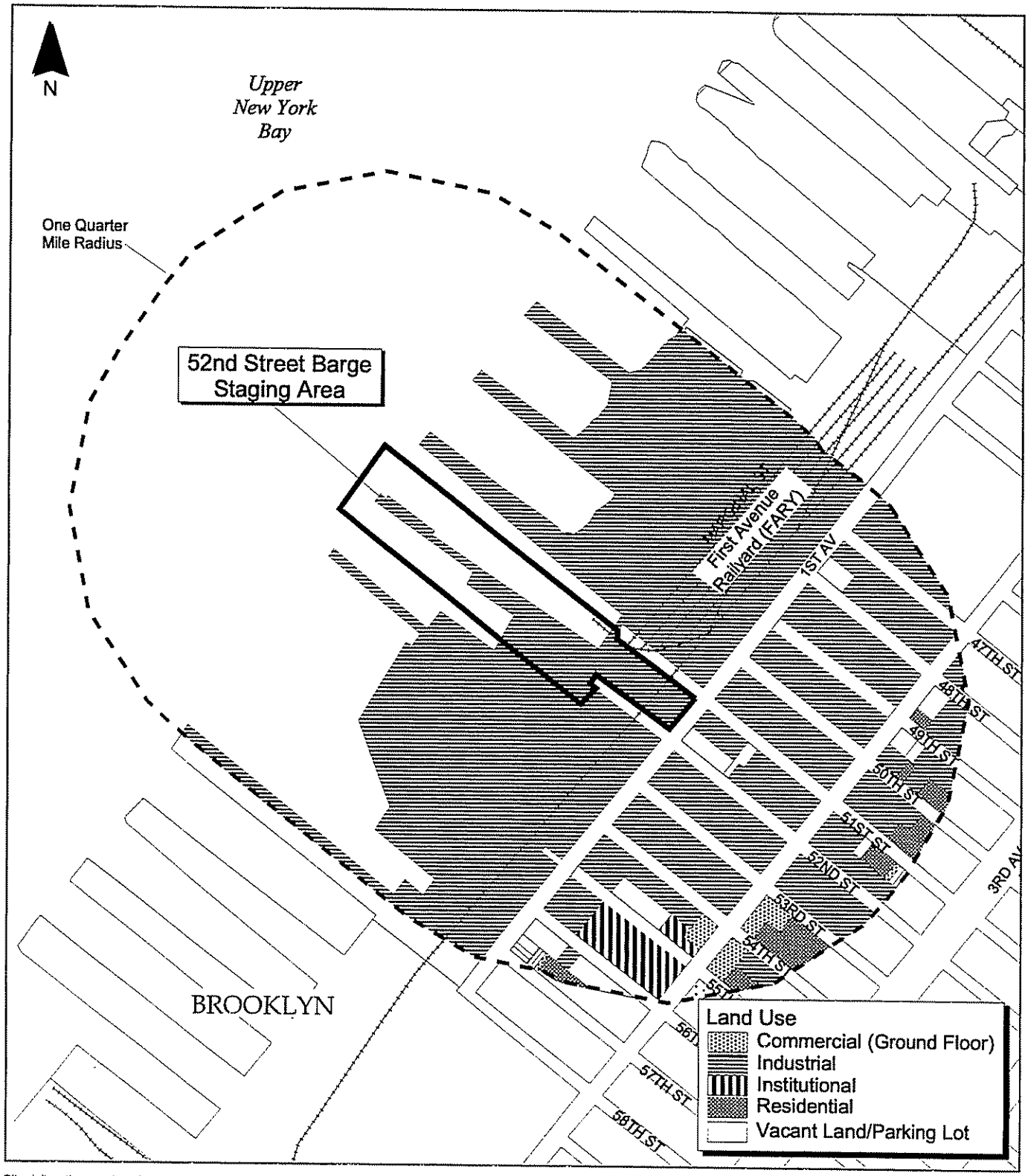
8.2.1.2 Land Use Patterns

8.2.1.2.1 General Context

The site is home to an existing DSNY vehicle maintenance facility, sand/salt storage location and parking lot for employees. Access is provided via First Avenue and both 51st and 52nd Streets; an unused spur railroad track (part of the First Avenue Rail Yard) crosses the site west of First Avenue; and the elevated Gowanus Expressway traverses the area above Third Avenue. It is located within the Sunset Park section of the industrial Brooklyn waterfront, just south of Bush Terminal and north of the Brooklyn Army Terminal (BAT). The waterfront and general area west of Third Avenue are predominantly industrial and generally characterized by large-scale industrial lofts.

8.2.1.2.2 Land Uses in the Primary Study Area

Land uses along First Avenue are characterized by light industrial activity, warehousing and some commercial space. A series of five- to six-story warehouses are located between First Avenue and the waterfront, north of 51st Street. These structures include loading piers and parking areas for both trucks and cars.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

300 0 300 Feet

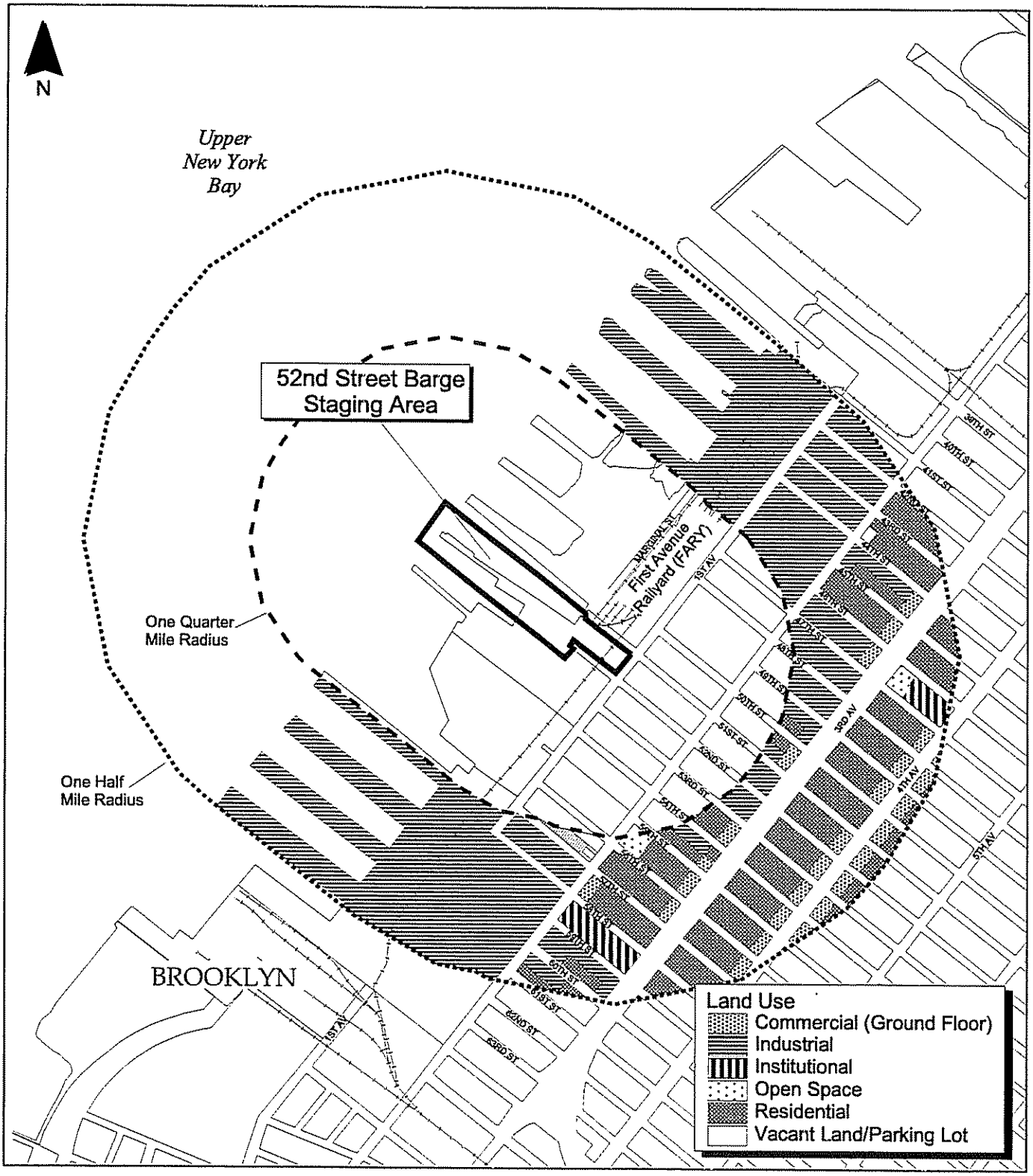
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Figure 8.2-1 Land Use in the Primary Study Area

52nd Street Barge Staging Area

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

500 0 500 Feet

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Figure 8.2-2 Land Use in the Secondary Study Area

52nd Street Barge Staging Area

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Between First and Second Avenues there are warehouses, factories, automotive repair shops, parking lots and several vacant sites. The First Avenue Rail Yard north of 51st Street includes several unused railroad spurs that run parallel to First Avenue. South of the site is the Brooklyn Wholesale Meat Market, consisting of three buildings at 5600 First Avenue, between 55th and 56th Streets. Individual meat and poultry wholesalers occupy two of the buildings and a processor and distributor of frozen meals leases the third.

Residential uses in the primary study area consist of two- and three-story single- and multi-family attached structures east of Second Avenue.

Likewise, community facilities within the primary study area are generally located east and southeast of the site. The Lutheran Medical Center, including its associated mental health clinic, the Augustana Lutheran elder care facility and five-story parking structure, as well as the Martin Luther King Playground, are located on Second Avenue at 55th and 56th Streets.

8.2.1.2.3 Land Uses in the Secondary Study Area

The general land use pattern found in the primary study area continues in the secondary study area. Industrial uses housed in large industrial loft buildings are located on the blocks nearest the waterfront, while a mix of residential, commercial and lighter industrial activities characterize the blocks east of Second Avenue. Rows of single-family attached homes and two- and three-story row houses line most of the blocks, along with isolated storefronts and auto repair shops, between Second and Third Avenues and 42nd and 46th Streets. The blocks also feature street trees, which become more prominent further east.

Third Avenue is dominated by the elevated Gowanus Expressway/BQE/I-287, which physically separates the areas east and west of Third Avenue. Third Avenue is itself a major arterial, functioning as a service road to the expressway above. The area directly below, dividing the expressway structure, is utilized for public metered parking.

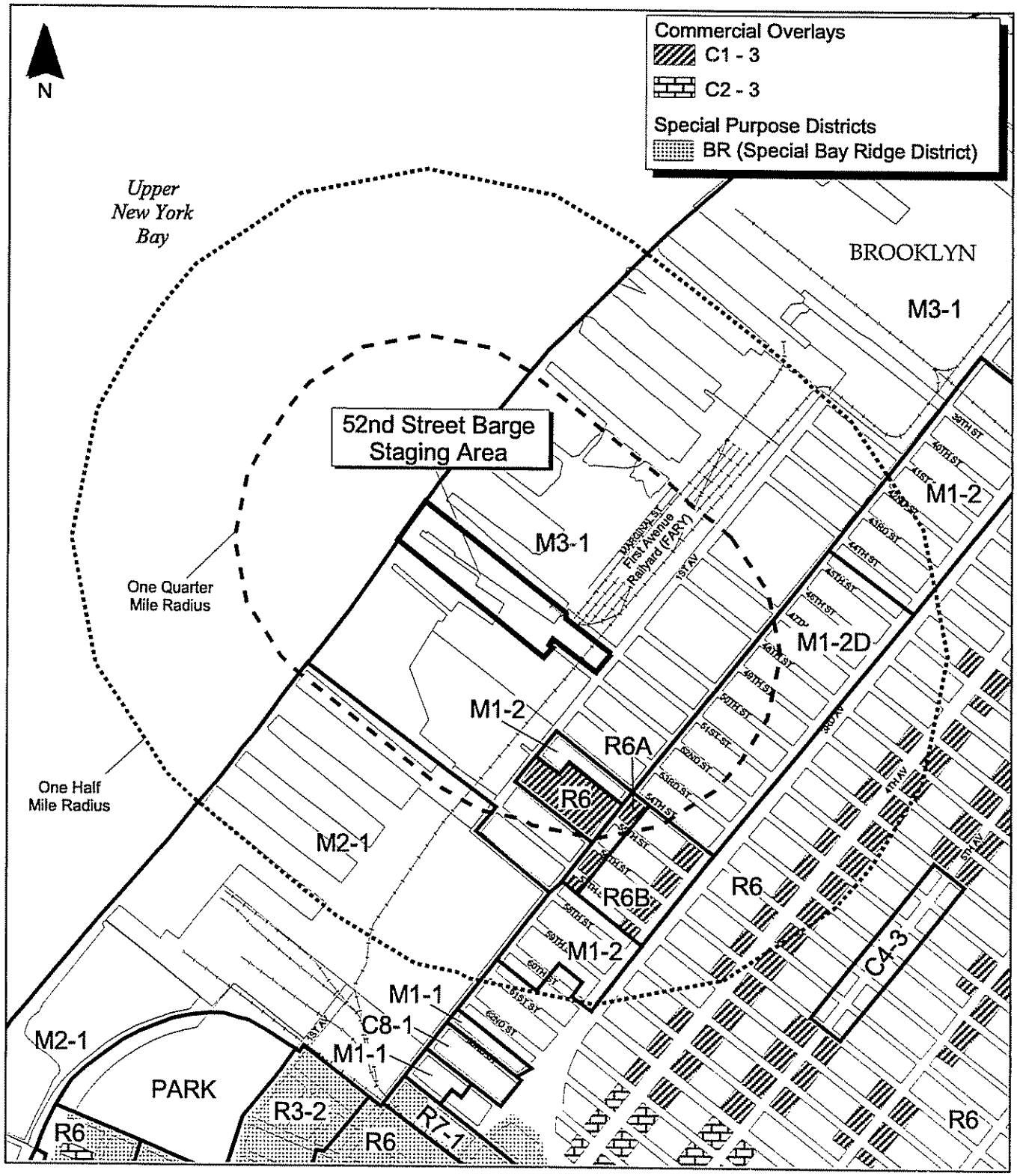
East of Third Avenue, the blocks are solidly residential, with a mix of single- and multi-family structures. Most blocks contain rows of attached brick row houses with driveways, as well as small-scale commercial storefronts at the corners. Isolated auto services (including inspection, repair, painting, etc.) tend to be located midblocks on the avenues, approximately one or two per block.

Fourth Avenue, which carries the area's only subway lines (N and R trains), has local stations at 45th Street and 53rd Street and an express station at 59th Street. As such, it is the primary commercial strip serving the Sunset Park neighborhood. Local commercial businesses, chain restaurants and banks use ground floor space along Fourth Avenue, with apartments in second, third and fourth stories above. Churches and schools, including St. Michael's Church and P.S. 1, are also located along Fourth Avenue.

8.2.1.3 Zoning On and Near the Site

8.2.1.3.1 Zoning Within the Primary Study Area

The site and most of the primary study area lie within a large M3-1 zone, which extends southward from the shoreline to Second Avenue and east from 57th Street, and to the northeast beyond the secondary study area. East of Second Avenue (between 44th and 54th Streets) is a mixed-use M1-2D zoning district and a small M1-2 zoning district on 54th Street west of Second Avenue. Immediately south of this light industrial district is an R6 district that encompasses Lutheran Medical Center. Small portions of R6A and R6B districts – allowing medium contextual residential development – are situated at the southeastern edge of the area, along Second Avenue and to the east. (See Figure 8.2-3 and Table 3.4-1: Zoning District Characteristics.)



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 8.2-3 Zoning

52nd Street Barge Staging Area

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8.2.1.3.2 Zoning Within the Secondary Study Area

Most of the secondary study area lies within manufacturing districts M3-1, M2-1, M1-2 and M1-2D. The southwestern half of the secondary study area is zoned M2-1 from the shoreline to Second Avenue and M1-2 to the south. Directly east of the primary study area is zoned M1-2D between Second and Third Avenues, and further northeast is a portion of an M1-2 district – north of 45th Street. Southwest of Third Avenue is a large R6 zoning district with a C1-3 commercial overlay that covers most of the Sunset Park neighborhood. Two medium-density residential districts – R6A and R6B – cover the blocks between 54th and 59th Streets, from Second to Third Avenues.

8.2.1.4 Plans and Policies

The project site lies within the City Coastal Zone, and as such is subject to the WRP. For areas near the site, the plan for the Brooklyn Waterfront recommends in Reach 14: Brooklyn Upper Bay, the provision of public access on Piers 4 to 7 in Sunset Park in conjunction with plans for their future use; the construction of access ramps to the Gowanus Expressway in the vicinity of 39th Street; and the implementation of proposed rail improvements in Sunset Park to maximize intermodal connection to carfloat operations.

Efforts aimed at preparing a 197-A Plan for Sunset Park have temporarily been put on hold, and no resumption date is known at the time of this analysis, but Brooklyn CD 7 continues to indicate its planning needs within the FY 2004 CDNS. In that report, Brooklyn CD 7 promoted the Hamilton Avenue MTS, particularly if a new garage for BK-7 on the former incinerator site would be part of its capital program.

The CD supports improvements at South Brooklyn Marine Terminal, which will allow for an integration of economic activities and waterfront access, and development of the Bush Terminal Piers Open Space proposed by the NYCEDC (see Section 8.2.2).

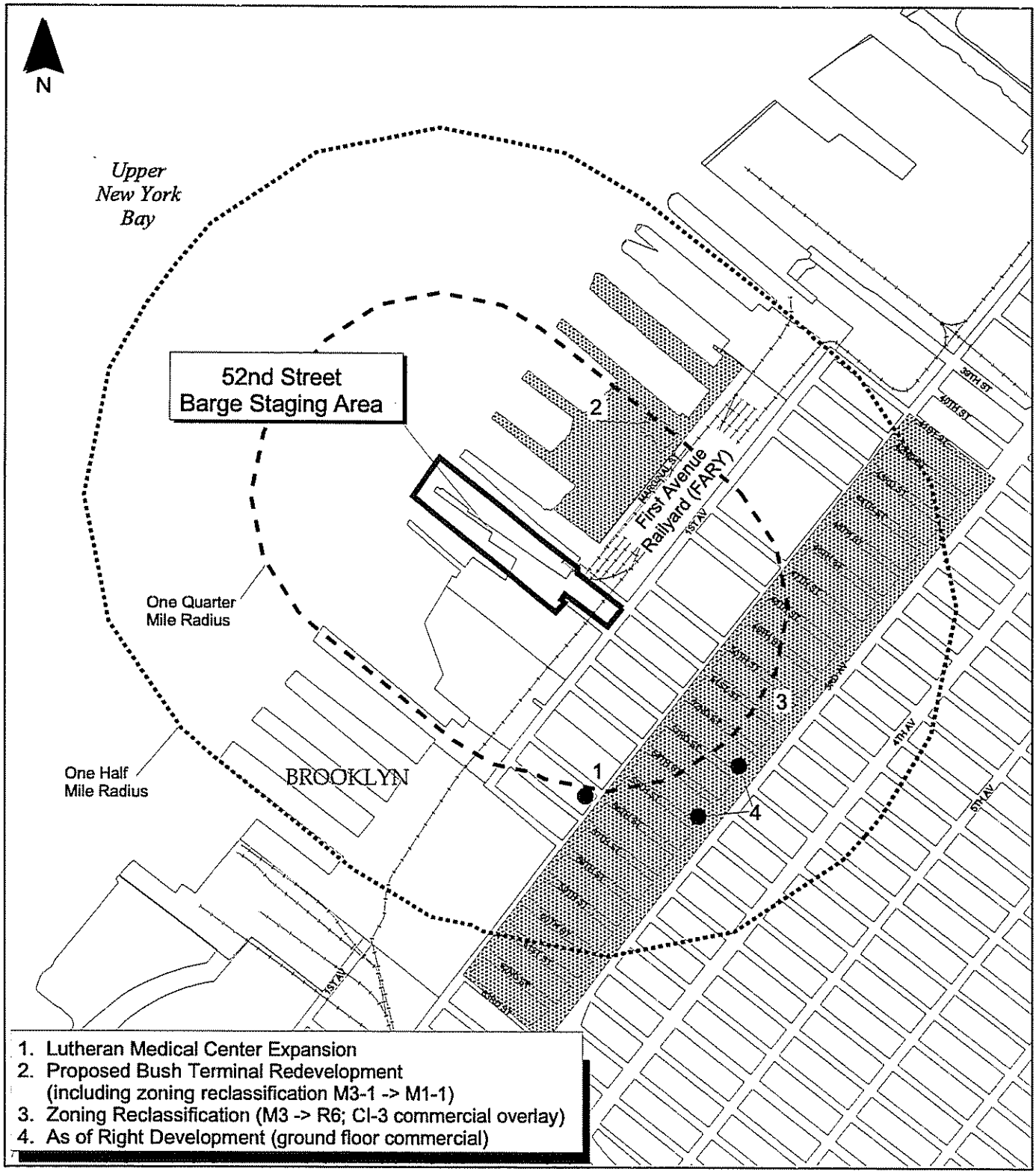
In the 1980s, the state established the Sunset Park In-Place Industrial Park. This complex covers 650 acres in southwest Brooklyn, offers a variety of sizes and types of industrial space, and is part of a New York State EDZ, making firms eligible for special financial incentives and low-cost financing.

The Strategic Plan for the Redevelopment of the Port of New York (1999) outlines a series of targeted investments to develop marine cargo terminals, public access to the waterfront, improved highway and rail access, improved navigation channels and environmental mitigation in the City over the period 1999 to 2020. Within the plan, NYCEDC considered Sunset Park a viable site for three separate, but complementary, development programs: (1) an auto terminal (near-term) at the South Brooklyn Maritime Terminal; (2) a landfill expansion of South Brooklyn Marine Terminal; and (3) a container terminal complex (long-term) over a larger are of Sunset Park, served by major cross-harbor freight improvements. The NYCEDC has since progressed their plan for the redevelopment of Bush Terminal.

8.2.2 Future No-Build Conditions

It is reasonable to anticipate that the Future No-Build Conditions in the primary and secondary study areas will resemble the Existing Conditions generally, except for the following three notable changes. (See Figure 8.2-4)

- **Bush Terminal Piers Open Space.** The NYCEDC proposes to create a 23-acre public open space and recreation facility for active and passive uses on the Bush Terminal Piers, on the Sunset Park waterfront, to serve the unmet demand of the community. The site encompasses five piers (and landfilled area) between 43rd and 51st Street, just north of the DSNY site. The first phase of the project, which would entail necessary site remediation, as well as some infrastructure and open space improvements, would be complete by 2006. The remaining development would then be complete by 2009. The open space would feature a variety of indoor and outdoor facilities (including walkways, natural areas, athletic fields, indoor ice rink, boat-building area, fishing pier, seasonal restaurant booths, environmental education center, community building, historic vessels and banquet hall).



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 8.2-4 Planned Development Sites

52nd Street Barge Staging Area

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- **Lutheran Medical Center Expansion and Associated Rezoning.** Lutheran Medical Center proposes to expand and relocate some services to a site on 56th Street between First and Second Avenue, currently a parking lot. The proposed development would consist of a ground floor pharmacy and two floors of medical facility space. Associated with this action would be a rezoning from M3-1 to R6 (with a C1-3 commercial overlay), which would apply to a larger portion of the study area, extending from 41st Street to 63rd Street on First Avenue. The ULURP process for this project has not been initiated at the time of this analysis, but construction is expected to be underway by the Future No-Build year.

- **First Avenue Rail Line.** The third project is the acquisition of an easement between 39th and 56th Streets for the First Avenue rail line, which will be improved and realigned in the area between 37th to 65th Streets. The project was filed through ULURP and approved, and construction on the rail line is expected to be completed in 2005.

8.2.3 Potential Impacts with the 52nd Street Barge Staging Area

8.2.3.1 Land Use and Zoning

The utilization of Pier 52 for a barge staging unit, much like the unit that historically has been operated by DSNY at the same location, would be generally compatible with the existing and proposed water-dependent uses of the Sunset Park waterfront. The barge staging area would not alter established land use patterns, nor would it affect uses inland. It would be in keeping with the industrial presence of the area in general, though its operation would resume near the proposed Bush Terminal Open Space, which will be under development by 2006, just north of the site. Most of the active uses are planned for the upland areas near Marginal Street. A fishing area is proposed at the northern tip of Pier 1 at the end of 51st Street, facing away from the proposed barge staging area (see Section 8.5.3 for discussion of potential impacts to open space.) It would not require or lead to changes in zoning, and it would remain within and surrounded by manufacturing zoning. Therefore, no impacts to land use and zoning would result from the 52nd Street Barge Staging Area.

8.2.3.1 Consistency with Public Plans and Policies

The 52nd Street Barge Staging Area would not be inconsistent with the waterfront plans or CDNS recommendations for the area or with the NYCEDC's plan to develop Bush Terminal Piers as an open space. Its development, however, would be inconsistent with NYCEDC's standing 1999 plans to develop the Sunset Park Container Terminal, which could extend out from the shore to the pierhead, from about 65th Street on the southern end (alongside the BAT) to approximately 50th Street.

Should the site be advanced as part of the Proposed Action, potential inconsistencies with public plans would be resolved by DSNY and appropriate agencies at that time.

8.3 Socioeconomic Conditions

8.3.1 Existing Conditions

8.3.1.1 Definition of the Study Areas

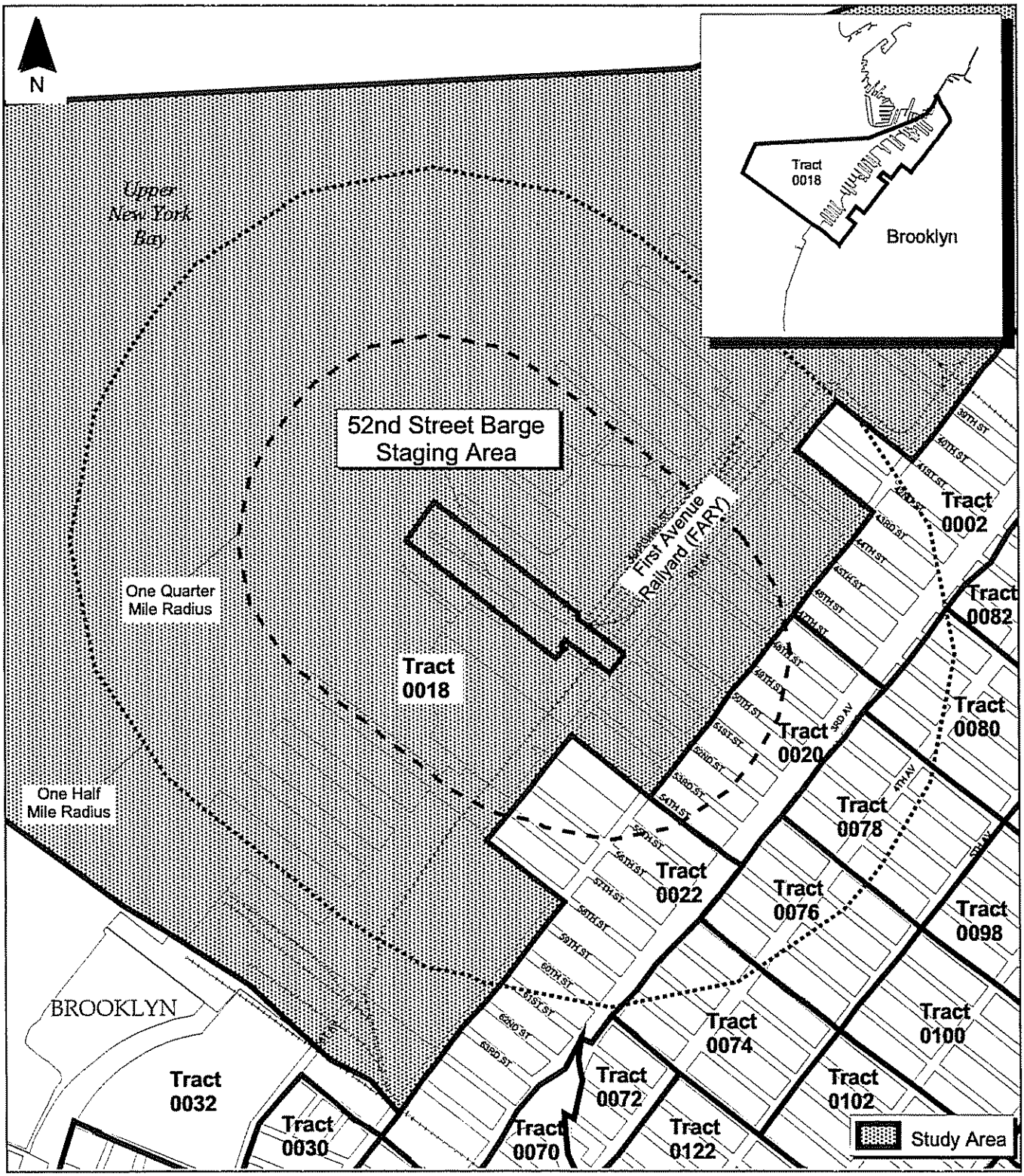
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site, and (2) a study area related to economic activity that generally covers a larger area ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Brooklyn Census Tract 18 (see Figure 8.3-1). Census Tract 18 covers industrial waterfront areas between Gowanus Creek and approximately 65th Street, generally to the west of Second Avenue. For comparison purposes, census data were also gathered at the borough and City levels.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

8.3.1.2 Demographic Characteristics

8.3.1.2.1 Population

In 2000, the study area population was 1,442 persons, which was an approximate 25% increase over 1990 (see Table 8.3-1). There were a greater number of males (1,287) than females (155) within the study area. Therefore, the age-sex distribution of the study area population was dissimilar to the distribution of population in the borough and the City, where there were slightly more females than males in each area.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 8.3-1 Census Tracts
52nd Street Barge Staging Area

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Table 8.3-1
1990-2000 Population

Year	Study Area	Brooklyn	City
2000	1,442	2,465,326	8,008,278
1990	4	2,300,664	7,322,564
Percent Change	NA	+7.2%	+9.4%

Source: U.S. Census 1990, 2000

The study area had a smaller percentage of children and teens than either the borough or the City in 2000. About 1.2% of the study area population was under the age of 20, as compared to Brooklyn (30%) and the City (27%).

8.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a greater proportion of people (49%) of Hispanic origin (all races) than did Brooklyn (20%) and the City (27%). Of the 51% of non-Hispanic origin, 55% were Black and 80% were White. In Brooklyn and the City, Blacks represented approximately 43% and 33% of the non-Hispanic populations, respectively, while Whites represented 43% and 48% respectively. About 8.4% of the non-Hispanic population was Asian or Pacific Islander compared to 9.3% and 13.4% in the borough and City, respectively.

8.3.1.2.3 Families and Households

There were four families in the study area in 2000. The percentage of these families who had children under the age of 18 years (50%) was similar to families in Brooklyn (51%) or the City (49%). The study area had a lower percentage of married-couple families (50%) than Brooklyn (59%) or the City (62%).

There were more households in the study area in 2000, with an average of 3.00 persons per household, more than Brooklyn and the City, each of which averaged about 2.6 persons per household.

Regional projections indicate that employment in Brooklyn CD 7 will remain about 6% of the borough total.[3]

8.3.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area is generally compatible with its industrial surroundings and is not expected to have a significant adverse impact on socioeconomic conditions within the study area.

8.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the 52nd Street Barge Staging Area. The site and its surrounding industrial uses are relatively isolated from most of the Sunset Park residential areas east of the Gowanus Expressway. Those residences nearer the site along Third Avenue are buffered from the site by other established industrial uses, typically housed in massive industrial lofts. The 52nd Street Barge Staging Area entails only over-water activity associated with barge movement, and no indirect impacts or significant impacts to neighborhood character are anticipated.

8.3.3.2 Direct Business and Institutional Impacts

The 52nd Street Barge Staging Area would utilize a vacant pier and adjacent area already under DSNY jurisdiction and previously used for a similar purpose; therefore, no direct displacement of businesses or institutional uses would result.

8.3.3.3 Indirect Business and Institutional Impacts

The 52nd Street Barge Staging Area is expected to be compatible with its surrounding industrial uses, as well as the Bush Terminal Piers Open Space that will be underway. Because the 52nd Street Barge Staging Area may be inconsistent with NYCEDC plans for Sunset Park Container Terminal Development, however, it may result in indirect business impacts, limiting future transload or intermodal opportunities at the site.

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[3] Ibid.

Should the site be advanced as part of the Proposed Action, potential inconsistencies with public plans would be resolved at that time.

8.3.3.4 Employment Impacts

The 52nd Street Barge Staging Area is expected to generate approximately 23 jobs associated with the operation and maintenance of the new facility (equipment operators, mechanics, supervisors and laborers), and marine operators (barge personnel). In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending. The 52nd Street Barge Staging Area would be operated around the clock with the last shift entailing maintenance and housekeeping activities. Around-the-clock activity would enhance security in this industrial area.

8.4 Community Facilities

8.4.1 Existing Conditions

8.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼-mile and ½-mile of the site.

8.4.1.2 Summary of Community Facilities and Services

There are four community facilities within the primary study area, all medical facilities or social services program centers. Fifteen others are located within the secondary study area, and five just beyond. The community facilities are listed below in Table 8.4-1 and shown on Figure 8.4-1.

8.4.2 Future No-Build Conditions

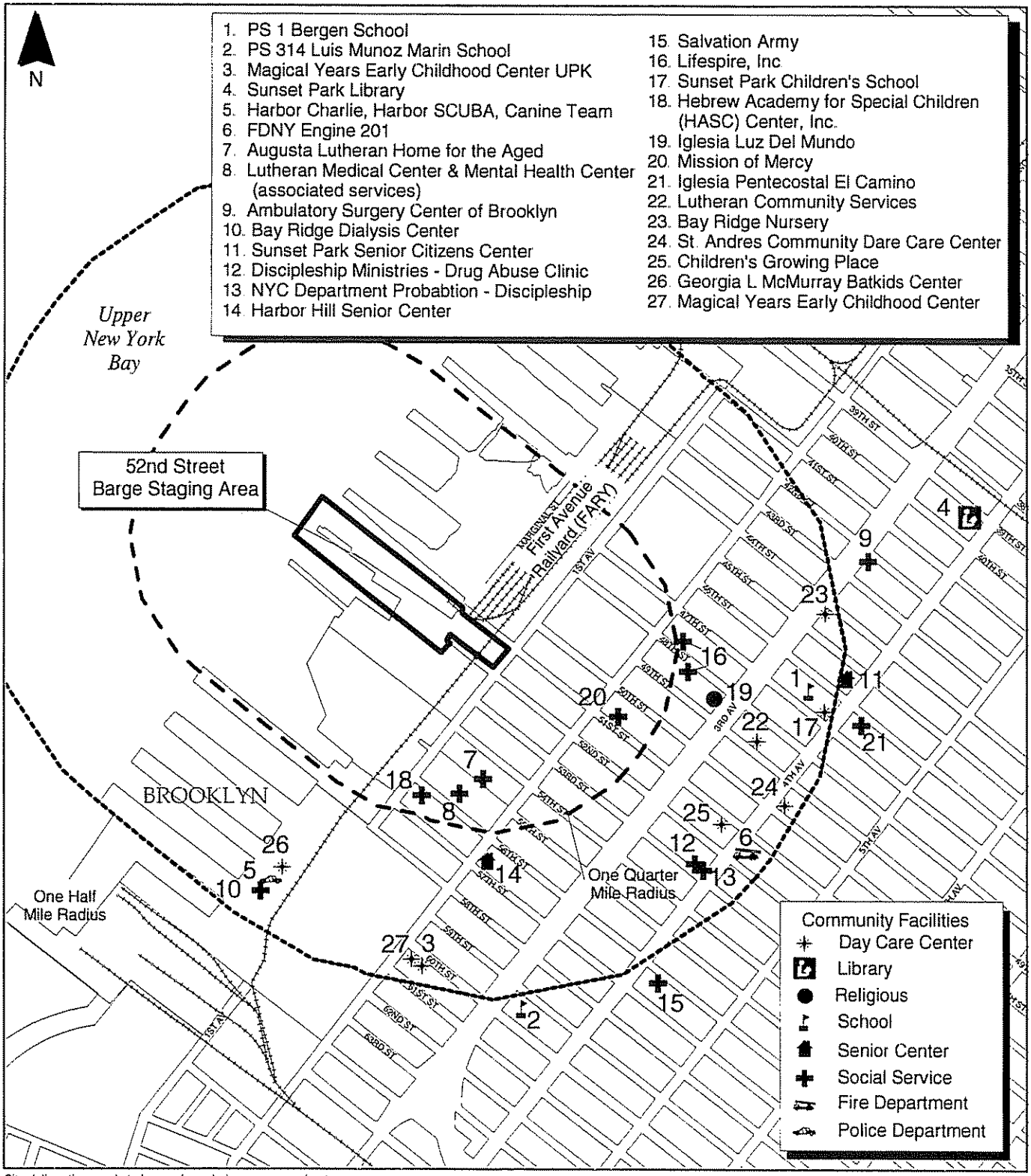
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

8.4.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area would create no significant new demand on services or community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the new facility (see Appendix A).

Table 8.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Health Care Facilities and Social Services	
Augustana Lutheran Center	5434 Second Avenue
Lutheran Medical Center and Mental Health Center and associated services	150 55th Street
HASC Center, Inc.	5601 First Avenue
Mission of Mercy	221-233 51st Street
Within the Secondary Study Area	
Schools	
P.S. 1 Bergen School	309 47th Street
Public Safety and Criminal Justice Facilities	
NYPD Harbor Charlie, Harbor SCUBA, Canine Team	140 58th Street
FDNY First Engine and Ladder Company – Engine 201 and Ladder 114	5113 Fourth Avenue
Health Care Facilities and Social Services	
Bay Ridge Dialysis Center	140 58th Street
Discipleship Ministries—Drug Abuse Clinic	5220 Fourth Avenue
City Department of Probation—Discipleship	5220 Fourth Avenue
Lifespire, Inc.	213 and 254 48th Street
Religious and Cultural Institutions	
Iglesia Luz Del Mundo	4812 Third Avenue
Daycare Facilities	
Lutheran Community Services	339 49th Street
Bay Ridge Nursery	314/322 44th Street
St. Andres Community Day Care Center	4917 Fourth Avenue
Children's Growing Place	362 51st Street
Georgia L. McMurray Batkids Center	140 58th Street
Magical Years Early Childhood Center	230 60th Street
Sunset Park Children's School	4616 Fourth Avenue
Senior Centers	
Harbor Hill Senior Center	5613 2nd Avenue
Outside the Secondary Study Area	
Schools	
P.S. 314 Luis Munoz Marin School	330 59th Street
Health Care Facilities and Social Services	
Ambulatory Surgery Center of Brooklyn	313 43rd Street
Salvation Army	426 56th Street
Religious and Cultural Institution	
Iglesia Pentecostal El Camino	416 46th Street
Senior Centers	
Sunset Park Senior Citizens Center	4520 Fourth Avenue
Public Safety and Criminal Justice Facilities	
FDNY Second Engine and Ladder Company – Engine 241 and Ladder 109	6630 Third Avenue



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary area may not be shown on the figure

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Figure 8.4-1 Community Facilitites and Services

52nd Street Barge Staging Area

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8.5 Open Space

8.5.1 Existing Conditions

8.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

8.5.1.2 Summary of Open Space in the Study Area

There are two playgrounds and a community garden within the study area, and one playground just beyond. They are listed in Table 8.5-1 and shown on Figure 8.5-1.

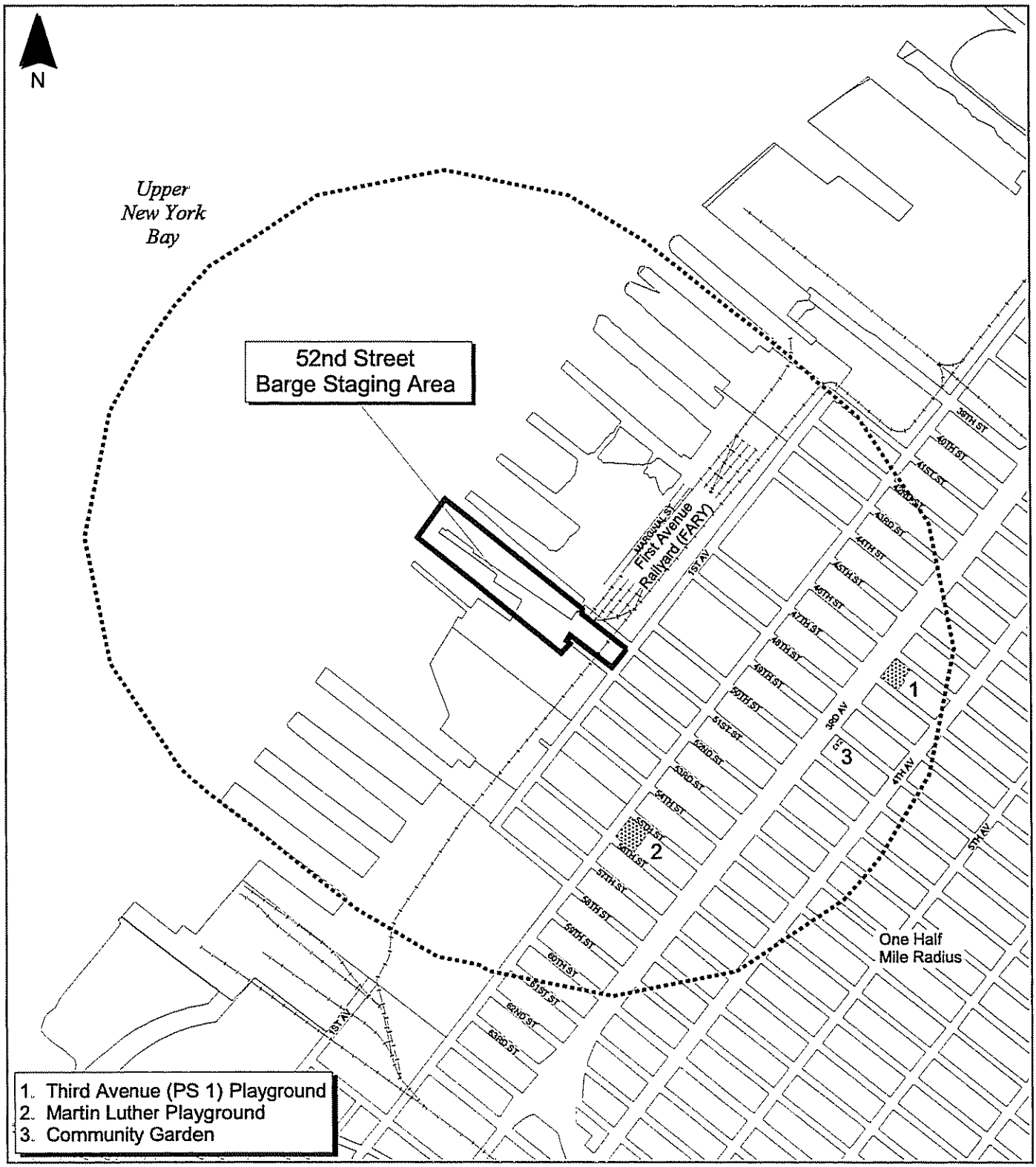
Table 8.5-1
Public Parks and Open Spaces

Name	Address	Acreage
Third Avenue (P.S. 1) Playground	46th Street to 47th Street, east of Third Avenue	1.52
Martin Luther Playground	55th Street to 56th Street, east of Second Avenue	0.913
Community Garden	49th Street, east of Third Avenue	0.1

The study area's open space facilities consist primarily of playgrounds. The nearest, Martin Luther Playground, is also near the Lutheran Medical Center. The residential areas outside the study area, east of the Gowanus Expressway, are generally served by the large Sunset Park located at 47th Street and Seventh Avenue and comprising the equivalent of six City blocks.

8.5.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions, except for the prominent Bush Terminal Piers Open Space project, between 43rd Street and 51st Street west of Marginal Street. Upon its completion in 2009, the proposed park will provide outdoor athletic fields (soccer and softball), a 24-hour indoor ice rink, play areas, game pavilions, mini golf-course, environmental education center,



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 8.5-1 Open Space/Parkland
52nd Street Barge Staging Area

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preserved/enhanced wetland areas, tree conservation/bird watching area, fishing piers, boat building, historic vessels and a waterfront promenade. By the Future No-Build year, development will be underway, and it is expected that some open space will be available for public access, though its ensemble of facilities will not yet be fully constructed by the Future No-Build year. Some sidewalk improvements would be made and bicycle routes designated along 43rd and 51st Streets and the segment of Marginal Street between them. The most notable contribution to open space resources within the study area will be the new opportunity for passive recreation afforded the local population of surrounding residential areas (primarily located east of the study area, beyond the Gowanus Expressway) to visit and observe the working maritime waterfront and its predominantly industrial surroundings.

8.5.3 Potential Impacts with the 52nd Street Barge Staging Area

The facility would not directly displace or significantly change demands on nearby parks. The activities planned for the southern portion of Bush Terminal Piers (closest to the 52nd Street Barge Staging Area), such as the indoor rink and soccer field, would be sited near Marginal Street and not facing the DSNY site. Similarly, the fishing area is proposed on the northern side of Pier 1, also away from the DSNY site, and facing north towards the future waterfront park. Primary access to the park would be via 43rd Street, where streetscape improvements are planned, and secondarily, along 51st Street. Therefore, no impacts to the public open spaces would result from the 52nd Street Barge Staging Area.

8.6 Cultural Resources

8.6.1 Existing Conditions

8.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site.

8.6.1.2 Development History of the Area

The Sunset Park neighborhood originally developed as a Scandinavian enclave in the 1830s and expanded in the 1840s with a great influx of Irish immigrants. Green-Wood Cemetery, located on a hill in the northern portion of the neighborhood (between 20th and 37th Streets east of Fifth Avenue), was laid out in 1839. It is distinguished as one of the earliest rural cemeteries in the nation and notable for its lushly landscaped site, overlooking the harbor and spectacular Gothic Revival gate at Fifth Avenue (designed by Richard Upjohn & Son, 1861-65), which is a designated City landmark. With the construction of the railroads, particularly the South Brooklyn (freight) Railway, and other transit improvements, waterfront industrial activity intensified and inland residential development flourished. After 1870, densely laid-out brick and brownstone row houses replaced the older wood houses of the neighborhood.[4]

The Sunset Park neighborhood, though, began to decline by the 1930s and 1940s, with the cessation of the Third Avenue elevated line and the construction in 1941 (and later widening) of the Gowanus Expressway. The expressway separated the industrial waterfront from the residential portions of the neighborhood.

The BAT, a military ocean supply facility, located about ¼-mile south of the project site, was completed in 1919. The terminal is situated on the waterfront between 58th to 64th Streets, covering approximately 97 acres. It originally consisted of 19 structures, including the remaining two eight-story warehouses of reinforced concrete, one of which was the largest warehouse in the world. During the Second World War, many of the three million troops and 63 million tons of supplies sent overseas by the New York Port of Embarkation passed through it.

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[4] (E. Snyder-Grenier, ENYC 1143.)

The neighborhood continued to suffer the detrimental effects of housing abandonment, migration of the maritime industry to New Jersey and the deactivation of the BAT in the 1970s. Conditions began to improve in the 1970s to the present, however, as the neighborhood experienced a new wave of immigrant and commercial revitalization, including the redevelopment of BAT by the NYCEDC (then, the New York Public Development Corporation)[5] which bought the facility in 1984 and converted it to manufacturing space for many small businesses.[6]

8.6.1.3 Cultural Resources on the Site

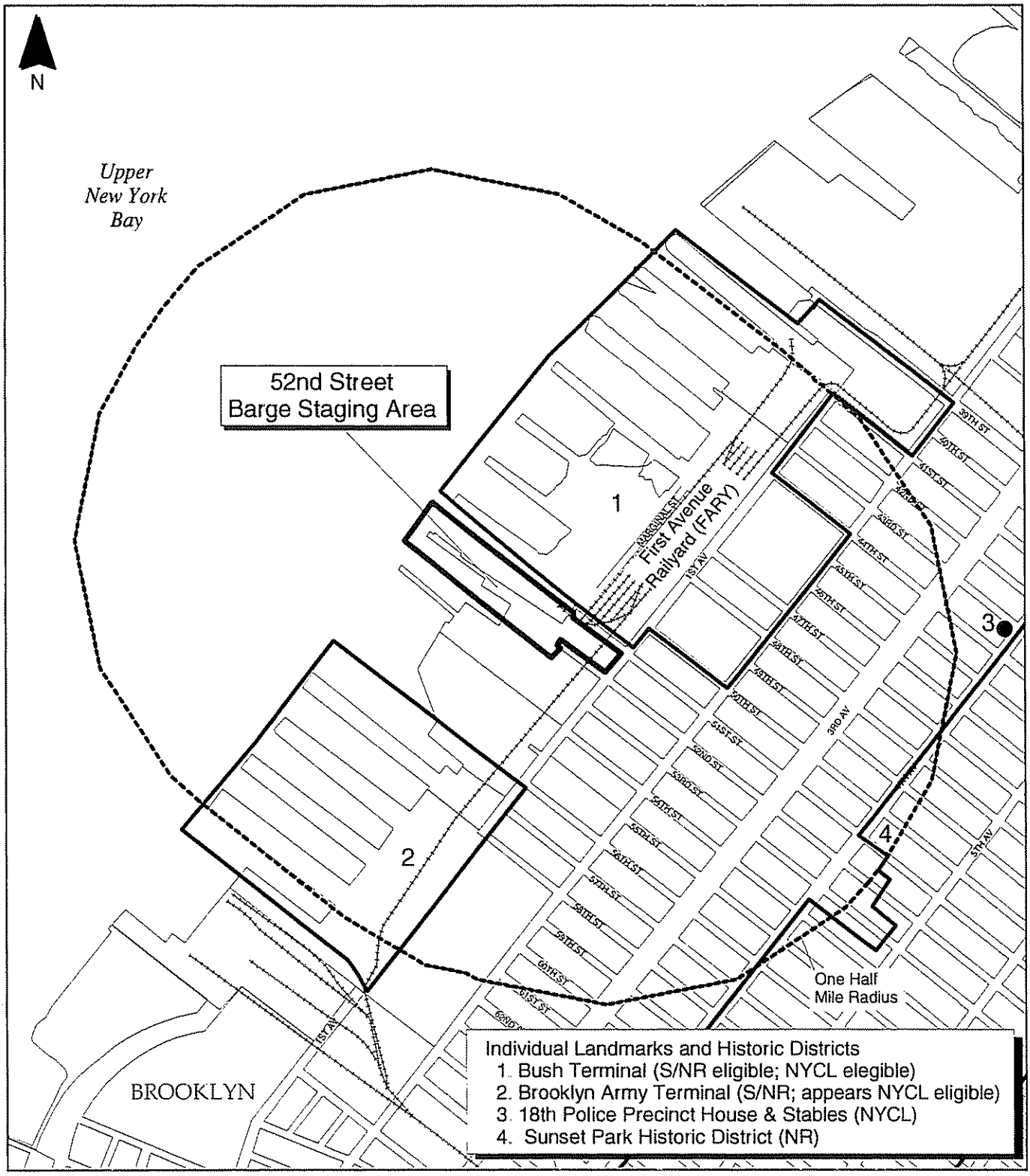
There are no significant elements of architectural or historical significance within the site. The only structures on the site is a DSNY salt dome and a DSNY vehicle maintenance facility.

8.6.1.4 Historic Resources Within the Study Area

There are several historic resources in the study area. (See Figure 8.6-1.) Bush Terminal to the north consists of a collection of red brick buildings that are clustered on either side of 43rd Street, between Marginal Street and First Avenue. Piers 1 to 5 (between 43rd and 51st Streets) were built in the early 1900s to serve the bustling intermodal industrial complex, which was developed by Irving Bush at the turn of the century. This terminal was a major component of one of the busiest waterfronts in the nation for decades.

The SHPO determined that Bush Terminal (not the deteriorated piers) is eligible for listing on the S/NR (documented in the Section 106 consultation for the Brooklyn Waterfront Rail Improvements Project EAS, May 2003). The LPC also agreed that the complex is eligible for City landmark designation, based on this same consultation. Similar buildings in the area, such as the rows of red-brick buildings on 52nd Street, east of First Avenue may also potentially be eligible for listing on the S/NR.

[5] Ibid.
[6] (J. Meany, Jr., ENYC 154.)



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

600 0 600 Feet

HDR URBITRAN EEA Hydroscience PB Cambridge Environmental Inc

Figure 8.6-1 Cultural Resources

52nd Street Barge Staging Area

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The BAT south of the site is listed on the S/NR and appears to be eligible for LPC designation. The property was listed in the NR because it is "associated with events that have made a significant contribution to the broad patterns of our history" and because it "embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction."[7] The terminal is architecturally and historically significant as a monumental example of modern industrial design and advanced engineering technology incorporating the work of a nationally prominent architect and for the role the complex played in the military and transportation history of the United States. The original complex of eight structures (two remain) was designed by Cass Gilbert, architect of the Woolworth Building and other City landmarks.

At the eastern edge of the study area is the expansive Sunset Park Historic District, which is listed on the NR for its uniform 19th-century residential development. It is a large district, roughly bounded by Fourth Avenue, 38th Street, Seventh Avenue and 64th Street.

Just beyond the study area is the former 18th Police Precinct House and Stable (4302 Fourth Avenue), now the Sunset Park School of Music. It is a designated City landmark, as one of several station houses in Brooklyn designed by the NYPD architect, George Ingram, in the late 19th century to resemble a medieval fortress.

Table 8.6-1 lists the Cultural Resources in the study area.

8.6.2 Future No-Build Conditions

There are no additional properties in the study area of potential architectural or archaeological significance known to be slated for review. Except for development of a public open space on the site of the former Bush Terminal Piers, north of the site, anticipated Future No-Build Conditions for the project year are assumed to be the same as Existing Conditions. The proposed 23-acre park is being planned on the piers, and no new construction is planned upland near the historic complex.

[7] Resource Evaluation, prepared by Kathleen A. Howe, SHPO, April 2, 1999 (project reference number 99PRO789).

Table 8.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Bush Terminal Complex	Third Avenue to the waterfront (approximately 32nd Street to 51st Street)	NYCL-eligible and S/NR-eligible
Brooklyn Army Terminal	First Avenue to the waterfront, between 58th and 64th Streets	NYCL-eligible and S/NR
18th Police Precinct House and Stable	4208 Fourth Avenue	NYCL
Sunset Park Historic District	Approximately from Fourth to Seventh Avenues, between 38th and 64th Streets	NR

8.6.3 Potential Impacts with the 52nd Street Barge Staging Area

The SHPO and LPC have determined that there are no resources of historical or archaeological value on the site and rehabilitation of the pier to continue to accommodate barge staging would not likely cause adverse effects to any of the study area's historic structures.

8.7 Urban Design, Visual Resources, and Shadows

8.7.1 Existing Conditions

8.7.1.1 Definition of the Study Area

The study area is the same as employed for neighborhood character study area (see Figure 8.8-1), extending inland from the waterfront to the Gowanus Expressway, bound by 39th Street to the north and Shore Parkway (and 66th Street) to the south.

8.7.1.2 Description of the Site

The site, a pier currently used for parking by DSNY, is surrounded by chain-link fencing and, in some places, concrete barrier blocks or sheets of corrugated metal, which are attached to the fence. The pier area outside the fencing is overgrown with vegetation and strewn with litter. (See Figure 8.7-1.)

8.7.1.3 Urban Design and Visual Resources of the Study Area

The site affords views of the Bush Terminal Piers to the north, which consists of five deteriorated piers and filled interpier areas, notable for forested areas and ground vegetation. To the southeast, the monumental BAT buildings area also visible. The site offers expansive harbor views, but it is not part of an important view corridor that would connect important public places and/or historic resources. The industrial massive loft buildings inland are visible from the site to the east, as are the century-old red-brick loft buildings of Bush Terminal. The Gowanus Expressway, which marks the eastern limit of the study area, is visible from the waterfront site. On-street parking contributes to the industrial aesthetic of the area, as does the common appearance of chain-link property fencing, the lack of street trees or other vegetation and the lack of pedestrian amenities (such as benches and, in some cases, useable sidewalks). First Avenue north of 51st Street is in severe disrepair, with potholes and uneven pavement. Overhead wires also run above several side streets, crossing from one side to the other.

The waterfront south of the site, in the vicinity of the BAT, which has been redeveloped to attract varied light industrial and office uses, and as such, sidewalks and streetscapes, are generally tidier. Also, because the BAT is served by City buses, there are benches and similar amenities. The BAT and surrounding buildings, though clearly industrial in design and imposing in scale, are well maintained and visually attractive. (See Figure 8.7-2.)

Just inland from the site is the DSNY Garage 7/10, located on First Avenue at 51st Street, designed like similar garages elsewhere in the City – one story, with multiple garage bays. The sidewalks and streets surrounding it are neat and clean. The Lutheran Medical Center, including its medical facilities, offices and parking structure, located between First and Second Avenues (55th to 57th Streets), is institutional in appearance, with broad expanses of blank wall and bands of glazing. It is visually congruent with its industrial surroundings, though it does feature some landscaping near entrances along with well-traveled sidewalks.

Martin Luther Playground, located between 55th and 56th Streets, just east of Second Avenue and the Lutheran Medical Center, introduces a large (approximately ½-block) open space, with shade trees, landscaping and benches.

The remainder of the study area is a mix of industrial, residential and commercial uses in the blocks along Third Avenue. Many of the residences are well-maintained two- or three-story single-family homes built nearly adjacent to one another with front yards, driveways, mature trees and landscaping, though most are similarly designed three-story row houses with minimally landscaped, shallow front yards or none at all. Generally they are in good repair and feature attractive facades.



Figure 8.7-1 : Waterfront at 52nd Street.



Figure 8.7-2 : 52nd Street, between waterfront and First Avenue.

Figure 8.7-1 and 8.7-2
Urban Design and Visual Quality
52nd Street Barge Staging Area

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8.7.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions. The Bush Terminals Piers Open Space project will be underway in 2006, and it is expected that some open space will be available for public access. While this will not noticeably change the general, vegetated appearance of much of the Bush Terminal site, it would allow for new vantage points of the 52nd Street Barge Staging Area site and the rest of the working maritime waterfront and its predominantly industrial surroundings. No new or important view corridors will be created, however. The remainder of the study area, through continued development of similar uses (e.g., the expansion of the Lutheran Medical Center) is anticipated to maintain an appearance and provide the same quality of streetscape and pedestrian environs as in Existing Conditions.

8.7.3 Potential Impacts with the 52nd Street Barge Staging Area

Development of the 52nd Street Barge Staging Area would establish a new visual element on the waterfront, in keeping with the general waterfront industrial aesthetic. Barges would be stored and maneuvered in the water surrounding the pier, including near the Bush Terminal Piers Open Space site, but they would not noticeably contribute to or detract from the visual landscape and waterfront views enjoyed from the proposed open space over the industrial maritime context.

The 52nd Street Barge Staging Area would not alter the development pattern of the waterfront area, as it would not alter street patterns or significantly affect the visual density of the built environment overall. Likewise, it would not it affect the context of the BAT, the nearest cultural resource to the site, in any significant or adverse way, since the BAT is designed to accommodate industrial waterfront activity. Therefore, no significant adverse impacts to urban design or visual resources would result from the 52nd Street Barge Staging Area.

8.8 Neighborhood Character

8.8.1 Existing Conditions

8.8.1.1 Definition of the Study Area

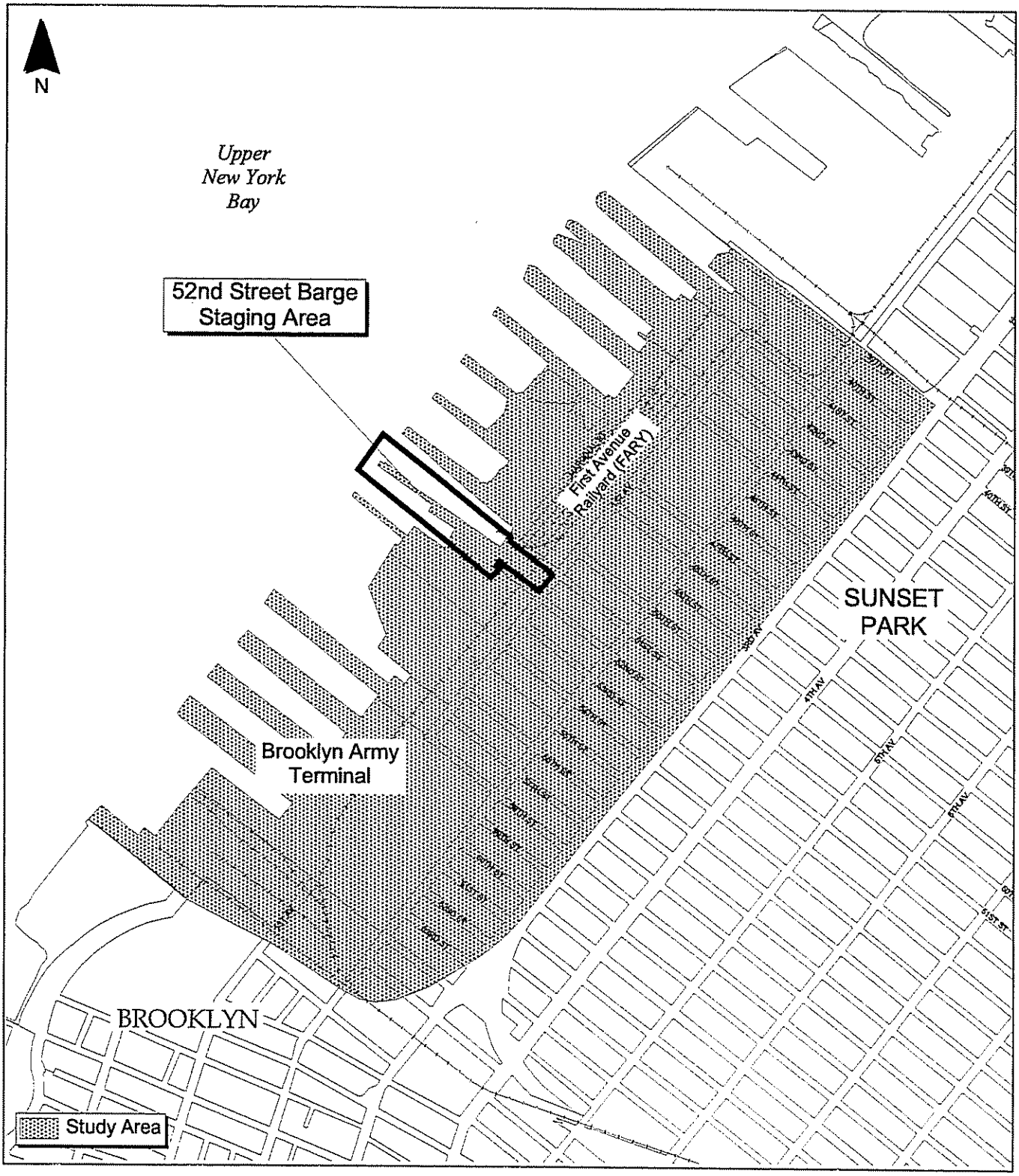
The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area, or physically obstruct pedestrian and vehicular access to it from outlying areas. The neighborhood character study area for the 52nd Street Barge Staging Area is defined by the predominantly industrial land use pattern and associated visual quality.

The site lies on the western shore of Brooklyn, on the Sunset Park waterfront. The study area for neighborhood character extends inland from the waterfront to the Gowanus Expressway and is bound by 39th Street to the north and Shore Parkway (and 66th Street) to the south. (See Figure 8.8-1.)

8.8.1.2 Description of Neighborhood Character

Like many industrial waterfront sites, this site is separated from nearby residential or other sensitive uses by major infrastructure elements, such as the elevated Gowanus Expressway and the First Avenue Rail Yard.

South of the site is the BAT and just beyond that is the narrow 65th Street Rail Yard, which provides barge-to-rail container facilities, alongside the Shore Parkway. The BAT is a large industrial complex that defines the southernmost part of the study area.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 8.8-1 Neighborhood Location

52nd Street Barge Staging Area

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The larger Sunset Park neighborhood (beyond the study areas) is a working class neighborhood with an ethnically and economically diverse population of approximately 120,000. A prominent local feature is the elevated Gowanus Expressway, above Third Avenue, that divides the community into its predominantly residential (to the east) and industrial (to the west) sectors. East of Third Avenue, the residential streets extend on an upward slope toward the high point of the community – which is also the highest point in Brooklyn – at about Sixth Avenue. The area's development and streetscapes are sufficiently historic and cohesive such that part of the neighborhood (east of the study area) is included on the NR.

The character of the study area, west of Third Avenue, differs considerably from the areas of Sunset Park to the east. Between Third and Second Avenues, just west of the elevated Gowanus Expressway, land uses are a mixture of residential and industrial. Third Avenue is lined with local retail businesses and walk-up tenement apartments. Second Avenue is primarily industrial, but some residential uses and vacant lots abut industrial uses on the side streets. The area west to First Avenue, within the bounds of the Bush Terminal complex, is solidly industrial, mainly consisting of low-rise warehouses and garages whose activities often spill out into the streets.

8.8.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions. The most prominent development, the Bush Terminals Piers Open Space project, will be underway, and it is expected that some open space will be available for public access. Its ensemble of facilities will not be constructed by the Future No-Build year, however. The most notable change to neighborhood character within the study area will be the new opportunity afforded the local population of surrounding residential areas (east of the study area) to visit the waterfront and observe the predominantly industrial surroundings.

8.8.3 Potential Impacts with the 52nd Street Barge Staging Area

As an active port use on a historically maritime-industrial site, the 52nd Street Barge Staging Area would be consistent with the character of the study area. Although it would introduce a new visual element to the waterfront near the Bush Terminal Open Space, it would not preclude the use or enjoyment of the unique park, as it will not directly affect the park land itself, or indirectly affect access to the park or the quality of the park environs. (See Traffic, Air Quality, Odor and Noise analyses, Sections 8.14, 8.15, 8.16 and 8.17.)

8.9 Natural Resources

8.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise if the 52nd Street Barge Staging Area were developed.

8.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bulkheaded and bounded by Bay Ridge Channel, south of Gowanus Bay. The existing site houses a garage, parking lot, household dump and salt dome just off 52nd Street, and some open land behind the garage. There is a 900-foot-long pier that extends northwest of the property into Bay Ridge Channel. The pier is 40 feet wide at its west end and 56 feet wide at its east end. The concrete pier surface has severely cracked and buckled over time. The study area and the surrounding neighborhood areas are completely developed and, therefore, have very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because the pier will be used as a barge staging facility, a description of aquatic communities is also included.

8.9.1.2 Geology

Based on information derived from a review of the Bedrock and Geologic Maps of New York County by Charles A. Baskerville, 1994, the bedrock lies 75 to 100 feet below surface sediment.[8] Surface sediment collected from the Hamilton Avenue MTS, located north of this site at the mouth of the Gowanus Canal, was mainly composed of fine-grained sediment.[9] Sediment at the 52nd Street Barge Staging Area is expected to be similar to that collected from the Hamilton Avenue MTS.

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[8] Baskerville, C.A., 1994. Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York and Parts of Bergen and Hudson Counties, New Jersey.

[9] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.

8.9.1.3 Floodplains

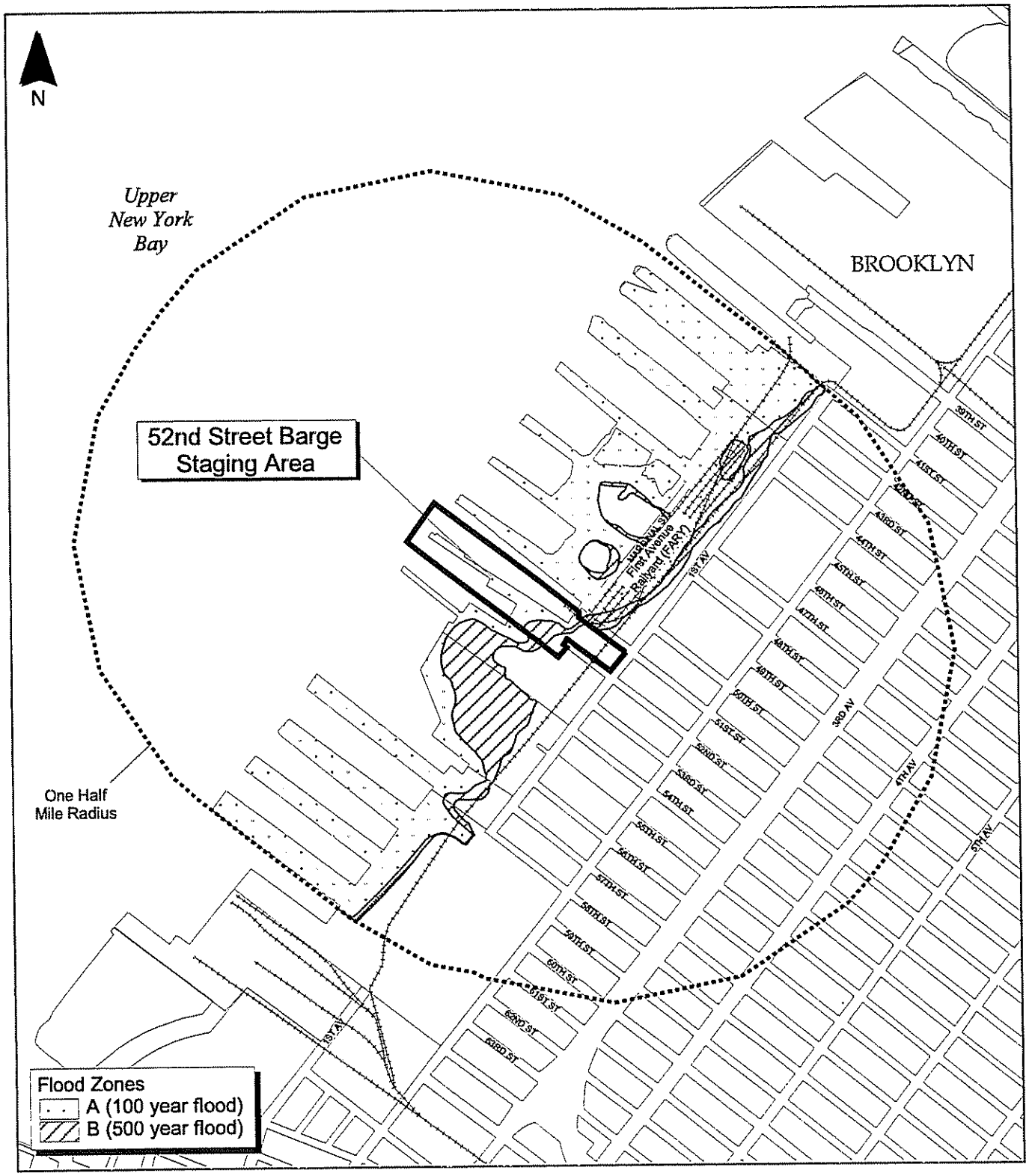
The site is within the 100-year coastal floodplain (see Figure 8.9-1). No intertidal wetlands exist on the study area. Bay Ridge Channel, however, is a NYSDEC-designated littoral zone (see Figure 8.9-2). The site is located within the City's WRP boundaries and is a designated SMIA.

8.9.1.4 Ecosystems

The site is essentially fully developed with the existing pier and buildings. Parking areas and paved roadways comprise the remainder of the site, leaving little terrestrial natural resources to be impacted. A few opportunistic, non-native weed species were identified along the edges and within the cracked portion of the pier. Those species identified include spotted spurge (*Chamaesyce maculate*), English plantain (*Plantago lanceolata*), lamb's quarters (*Chenopodium album*), black nightshade (*Solanum nigrum*), wild carrot (*Daucus carota*), lady's thumb (*Polygonum persicaria*), black medic (*Medicago lupulina*), horseweed (Conyza canadensis) and tree-of-heaven (*Ailanthus altissima*). As property limits were not clearly defined at the time of the survey, the investigation was focused along the pier; however, there were predominantly giant reed (*Phragmites australis*) and tree-of-heaven observed on the landward side of the property.

The aquatic natural resources found at the Hamilton Avenue Converted MTS, which were studied for an entire year in 2003[10], can be used to generally categorize the marine communities that would be found at the 52nd Street Barge Staging Area due to its proximity to the pier (the Hamilton Avenue Converted MTS is located at the mouth of the Gowanus Canal, just north of the 52nd Street Barge Staging Area). The dominant finfish larvae collected at the Hamilton Avenue MTS were winter flounder(*Pleuronectes americanus*), anchovy spp. (*Anchoa* spp.), Atlantic menhaden (*Brevoortia tyrannus*) and goby spp. (*Gobiosoma* spp.). The dominant finfish eggs collected were cunner (*Tautogolabrus adspersus*), bay anchovy (*Anchoa mitchilli*),

[10] Ibid.



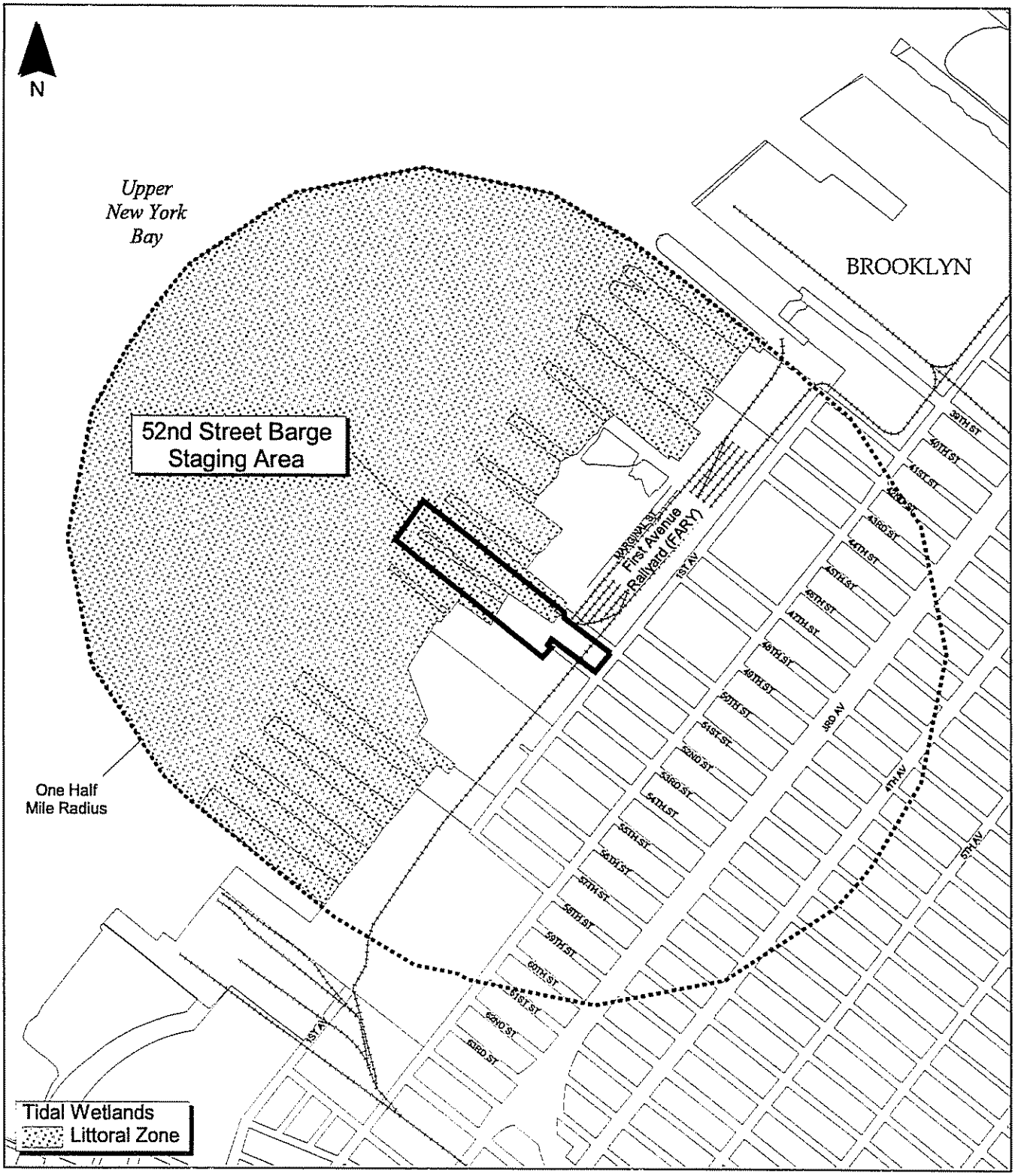
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 8.9-1 Floodplains

52nd Street Barge Staging Area

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

800 0 800 Feet

Figure 8.9-2 Wetlands

52nd Street Barge Staging Area

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tautog (*Tautoga onitis*) and Atlantic menhaden. The species that have EFH listing (and the life stage collected) include windowpane (*Scophthalmus aquosus*) (eggs and larvae), winter flounder (larvae) and Atlantic herring (*Clupea harengus*) (larvae). The benthic invertebrates that were found at the Hamilton Avenue Converted MTS are similar to those found throughout New York Harbor. The most abundant species collected were worms – *Capitella capitata*, *Streblospio benedicti* and Oligochaetes – all of which are tolerant of polluted areas. The dominant epibenthic colonizers found at the Hamilton Avenue Converted MTS were *Polydora* sp. (worms), *Molgula manhattensis* (sea grapes), *Balanus* sp. (barnacles), and hydrozoa, mud and algal film.

According to the USF&WS, except for occasional transients, there are no federally-listed or proposed endangered or threatened species, or any "critical habitats" present on the site. According to the NYSDEC, there are no records of rare or state-listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the site.

8.9.2 Future No-Build Conditions

If the 52nd Street Barge Staging Area were not developed, the study area would remain as is. The limited aquatic and terrestrial natural resources will remain and the study area will continue to be a stressed urban area with limited ecological productivity.

8.9.3 Potential Impacts with the 52nd Street Barge Staging Area

8.9.3.1 Geology

The geology of the study area would not be impacted as a result of the 52nd Street Barge Staging Area other than by potential dredging activity, which would remove layers of sediments deposited over time.

8.9.3.2 *Floodplains*

Potential development of the 52nd Street Barge Staging Area would have no effect on the elevation of the site. The potential development does not include any provisions for raising any portions of the site over this level. The facility would be constructed within the 100-year floodplain and within the SMIA. The 52nd Street Barge Staging Area does not "substantially hinder" the area, however, and therefore complies with New York State's CMP as expressed in the City's local WRP.

8.9.3.3 *Ecosystems*

Construction of the 52nd Street Barge Staging Area would involve complete removal of the existing pier and construction of a new pier with the same dimensions. Assuming normal operations, this procedure should not involve any permanent impacts to the aquatic or terrestrial natural resources. During the removal of the existing pier, the upper organic silts lying beneath the structure would be disturbed to some degree, resulting in re-suspension of the sediments. However, the amount of re-suspended sediments is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term lowered dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Any dredging activities in the area to accommodate barges would result in an immediate, short-term destruction of the benthic invertebrates in the area; however, recolonization of the area by benthic invertebrates could be expected within 6 to 12 months after cessation of dredging activities.[11]

Given the relatively small size of the project and the existing impacts to the natural resources of the study area, minimal impact is expected from the disturbance of the environment associated with the 52nd Street Barge Staging Area.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from

[11] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft – Phase I-II. During Construction and 1st Year Post-Construction Studies.

construction; flatfish (flounders) are least sensitive. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water, which results in shading that will block sunlight and hinder primary production. Because the proposed pier will match the footprint of the existing pier, the impacts will be no different than existing conditions. Barges, which were staged in higher numbers in the past than they will be in Future Build Conditions, will constantly be moving and therefore will not create any permanent shading. Additionally, with fewer barges staged on site than were in previous years, there will be a gain of unshaded water at this site, allowing more sunlight to penetrate the water for primary production.

Any upland construction would not have significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the 52nd Street Barge Staging Area because the site is already fully developed.

8.10 Hazardous Materials

8.10.1 Existing Conditions

Existing Conditions associated with the presence or suspected presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527-00). The assessment was performed in July and August of 2004. It included a historic land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps. A Freedom of Information Law request was sent to the NYCDEP for records pertaining to hazardous or toxic materials for the study area. A pedestrian reconnaissance of accessible areas within the study area was conducted in July 2004.

8.10.1.1 Definition of Study Area

The study area includes the existing 52nd Street pier structure located at the most western end of 52nd Street and neighboring properties within an approximate 1,000-foot radius. The pier is approximately 900 feet long; its widths at the western and eastern sections are approximately 40 feet and 56 feet, respectively. Located on the pier were electric winches, cleats, water pumps and several (non-permanent) locked trailers and containers. Reportedly these trailers were once utilized as lockers and offices for previous on-site DSNY barge and tug operations. The containers were reportedly utilized for equipment storage (e.g., welding supplies, boat lines, etc.).

8.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater, surface water and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and the implementation of the 52nd Street Barge Staging Area could lead to an increased exposure of people or the environment to those materials.

No significant areas of concern were identified for this project site during the assessment. However, the western end of the pier appears to be collapsing and, therefore, care should be taken to prevent materials from entering the waters to become drift or pollution hazards.

8.10.2 Future No-Build Conditions

The 52nd Street Barge Staging Area would remain the same and there would be no significant recognized areas of concern with regard to hazardous materials; however, natural dilapidation of the pier would continue.

8.10.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area would not result in adverse impacts to the site. Some benefits may be realized because a new pier would replace the existing pier. No testing would be required prior to the demolition of the existing pier. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.

8.11 Water Quality

8.11.1 Existing Conditions

8.11.1.1 Definition of the Study Area

The water quality study area encompasses Upper New York Bay and includes discharges from point sources and CSOs located within ½-mile of the site.

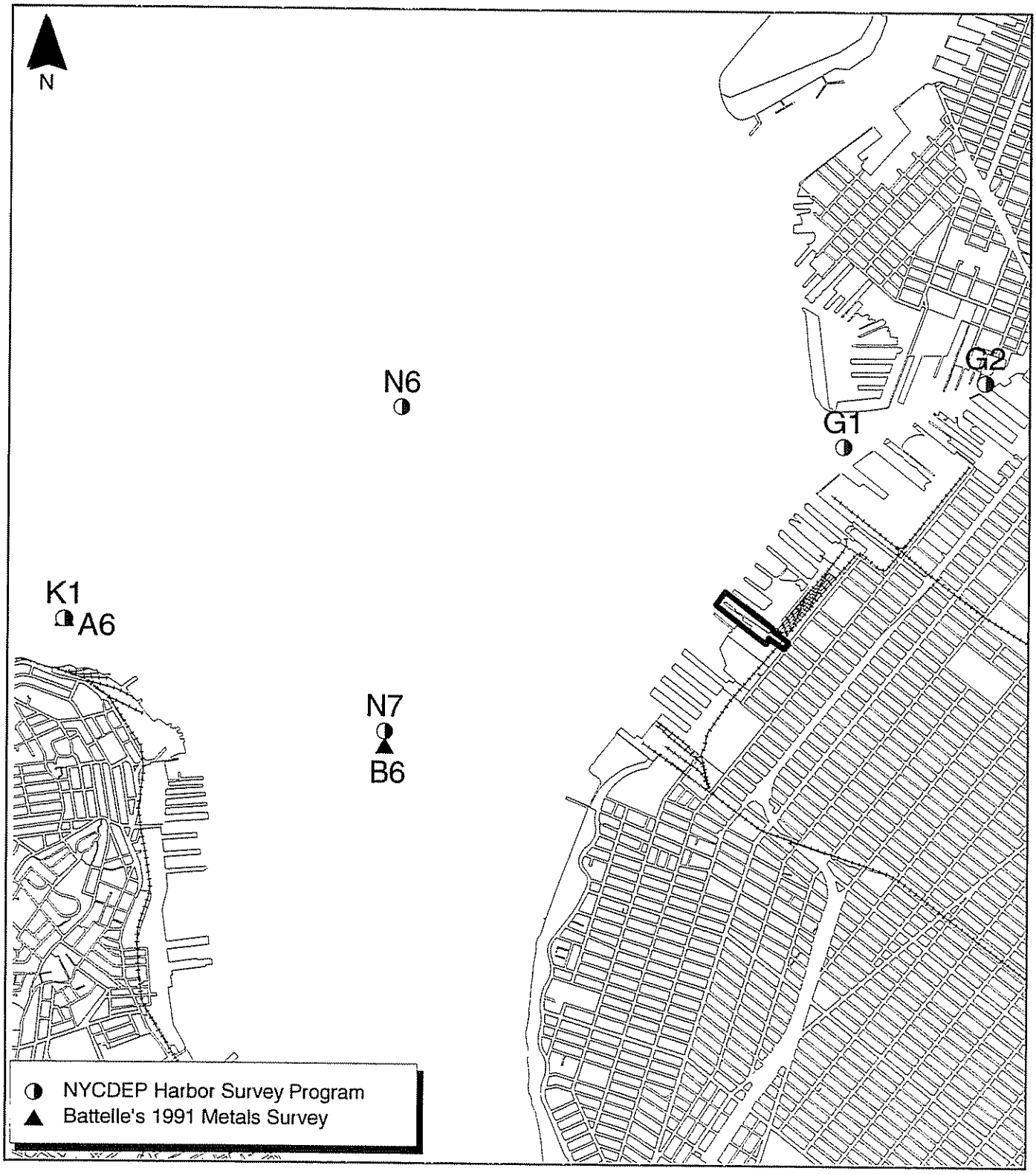
8.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 8.11-1, are generally representative of conditions in the study area:

- NYCDEP Harbor Survey Program – Stations N-6 and N-7 in Upper New York Bay; and
- Battelle's 1991 Metals Survey – B-6 in Upper New York Bay.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 8.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.

As shown in Table 8.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station B-6 did not conform to the water quality standard for mercury.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 8.11-1 Ambient Water Quality Stations

52nd Street Barge Staging Area

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Table 8.11-1
Existing Water Quality Conditions and Standards
52nd Street Barge Staging Area

Parameter	Units	Average Concentration N-6[1]	N-7[2]	B-6[3]	NYS Class SD Standard
Dissolved Oxygen (surface/minimum)	mg/L	7.88[4]/5.36[5]	7.65[4]/5.09[5]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	7.40[4]/5.38[5]	7.43[4]/5.33[5]	-------	3.0
BOD (surface)	mg/L	2.8[6]	2.5[6]	-------	-------
BOD (bottom)	mg/L	2.7[6]	2.7[6]	-------	-------
Total Coliform (surface)	MPN/100 ml	1073[7]	804[7]	-------	-------
Total Coliform (bottom)	MPN/100 ml	278[7]	600[7]	-------	-------
Fecal Coliform (top)	MF	52	50	-------	-------
Fecal Coliform (bottom)	MF	7[8]	7[8]	-------	-------
Total Suspended Solids (surface)	mg/L	8	5	-------	-------
Total Suspended Solids (bottom)	mg/L	9	7	-------	-------
NH_3-N	mg/L	0.312	0.324	-------	-------
(NO_3 + NO_2)	mg/L	0.400	0.354	-------	-------
Total Phosphorous	mg/L	0.130	0.129	-------	-------
Dissolved PO4	mg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	-------	-------	-------	-------
Arsenic	µg/L	-------	-------	0.78 [9]	120 [9,10]
Cadmium	µg/L	-------	-------	0.06 [9]	21 [9,10]
Chromium	µg/L	-------	-------	-------	-------
Copper	µg/L	-------	-------	1.15 [11]	7.9 [10,11]
Lead	µg/L	-------	-------	0.14 [9]	204 [9,10]
Mercury	µg/L	-------	-------	0.0039 [9]	0.0026 [9,10]
Nickel	µg/L	-------	-------	0.78 [9]	74 [9,10]
Silver	µg/L	-------	-------	0.028 [12]	2.3 [10,12]
Zinc	µg/L	-------	-------	4.85 [9]	95 [9,10]
Cyanide	µg/L	-------	-------	-------	1.0 [9]

Notes:

(1) Average concentrations for 2003 NYCDEP Harbor Survey Station N-6 located in Upper New York Bay.

(2) Average concentrations for 2003 NYCDEP Harbor Survey Station N-7 located in Upper New York Bay.

(3) Average concentrations for 1991 Battelle Ambient Survey Station B-6 located in Upper New York Bay.

(4) Represents average between January and October 2003.

(5) Minimum between June 1, 2003 and September 30, 2003.

(6) Latest available data 1997.

(7) Latest available data 1996.

(8) Latest available data 1999.

(9) Guidance values and data are for dissolved metals.

(10) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).

(11) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

(12) Guidance value and data are for acid-soluble metal.

BOD = biochemical oxygen demand

NH_3-N = ammonia

NO_3 = nitrate; NO_2 = nitrite

Notes for Table 8.11-1 (Continued):
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

8.11.1.3 Permitted Discharges

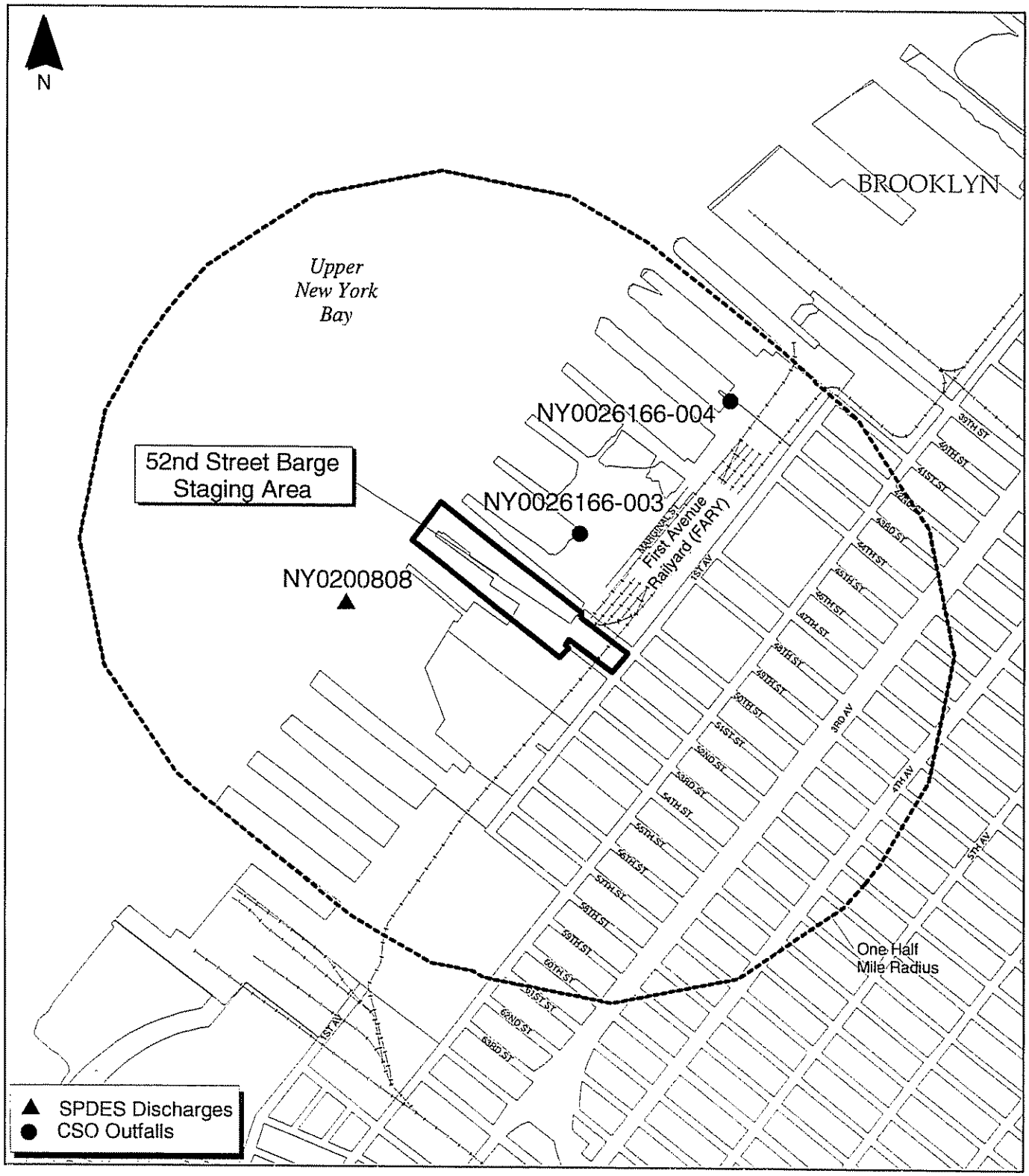
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the 52nd Street Barge Staging Area are shown in Figure 8.11-2 and listed in Table 8.11-2 The discharges consist of two CSOs and one industrial site, all of which are permitted by the NYSDEC.

Table 8.11-2
Existing Permitted Discharges
52nd Street Barge Staging Area

Combined Sewer Overflows (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
43rd Street/Owls Head	NY026166-004	Kings	Upper New York Bay
49th Street/Owls Head	NY026266-003	Kings	Upper New York Bay
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Narrows Generating Station	NY0200808	Kings	Upper New York Bay

8.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and/or infiltration. A runoff flow of 0.059 cfs was calculated using the impervious site area (0.98 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 8.11-3, represent the existing loads at the site.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

600 0 600 Feet

Figure 8.11-2 Permitted Outfalls and CSO Locations 52nd Street Barge Staging Area

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DEPARTMENT OF SANITATION

Table 8.11-3
Estimated Existing Pollutant Loads and Runoff Flows
52nd Street Barge Staging Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100ml	34,000	10,808[1]
BOD mg/L	11	3.5
Heavy Metals		
Copper µg/L	35	0.011
Lead µg/L	28	0.009
Zinc µg/L	154	0.049
Total Impervious Area (acre) = 0.98 Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Coefficient (C) = 1.00 Runoff Flow (cfs) = 0.059

Notes:
[1] Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
[2] Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

8.11.2 Future No-Build Conditions

Water quality would be expected to be the same as Existing Conditions.

8.11.3 Potential Impacts with the 52nd Street Barge Staging Area

The potential impact of the stormwater pollutant loadings on surface water quality was evaluated using the 208 Model. This model was developed under Section 208 of the Clean Water Act to help state and local water quality management agencies integrate water quality activities and goals. The 208 Model was used to predict the incremental changes in BOD, fecal coliform, copper, zinc and lead that resulted from the stormwater loadings.

The 208 Model predicted no significant impact on existing surface water quality due to fecal coliform, BOD, copper, zinc and lead loadings from the 52nd Street Barge Staging Area. (See Table 8.11-4.) Stormwater runoff from the 0.98 acres of the barge staging area would not result in any further violation of water quality standards or guidance values beyond any existing violations.

Therefore the rebuilding of the 52nd Street Barge Staging Area would not affect water quality.

Table 8.11-4
Impervious Area and Estimated Pollutant Loads
52nd Street Barge Staging Area

			Estimated Pollutant Loadings/Incremental Change[1]				
Condition	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	0.98	NA	10,808/NA	3.5/NA	0.011/NA	0.009/NA	0.049/NA
Future Build Conditions	0.98	0	10,808/0	3.5/0	0.011/0	0.009/0	0.049/0

Notes:
[1] Incremental change refers to the difference in pollutant loading between the Existing Conditions and the Future Build Conditions.
[2] Coliform loads are not shown in pounds/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

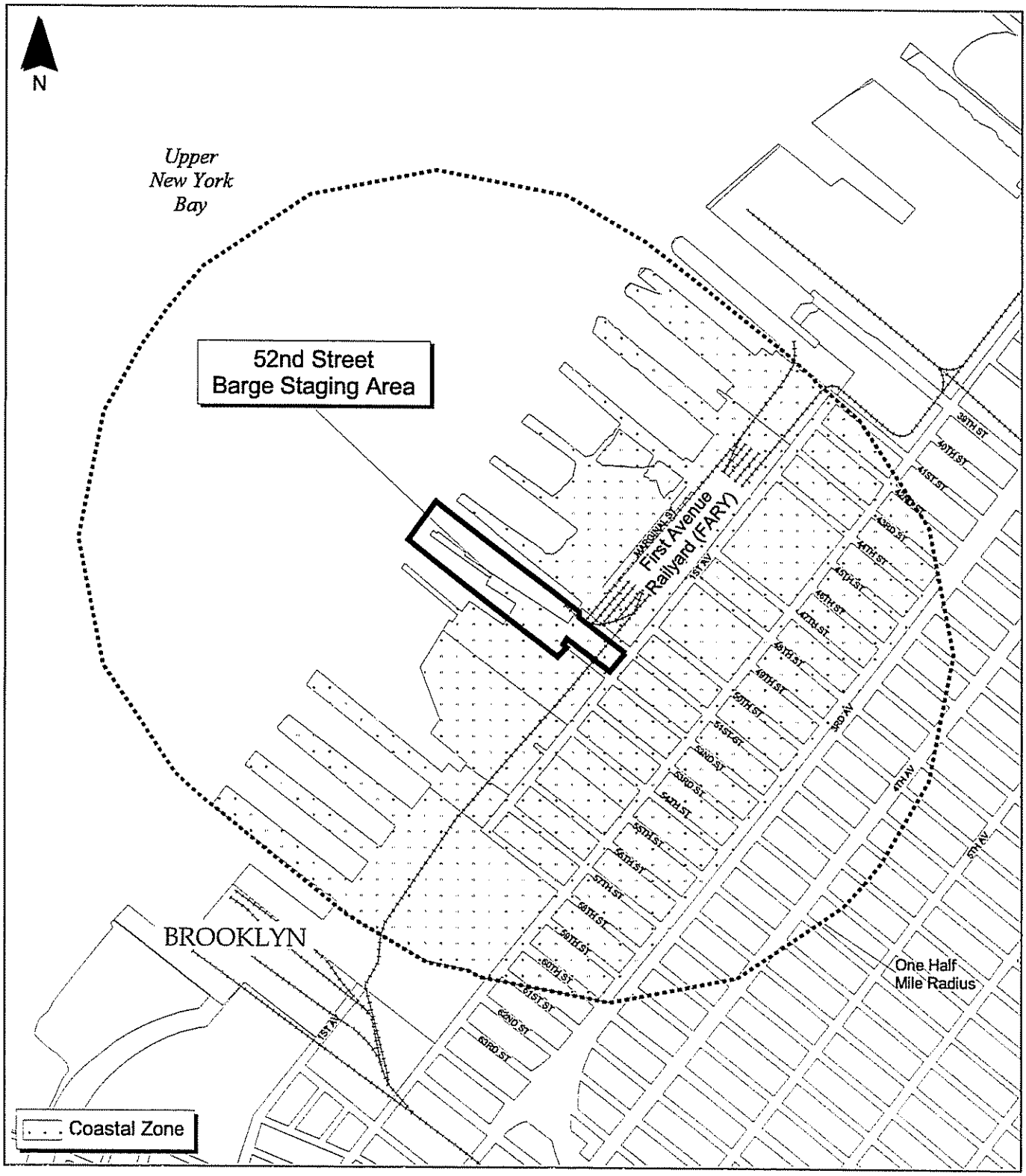
Unimpeded operation of the 52nd Street Barge Staging Area will also require dredging activities to construct the waterfront structures and to improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired before any such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not be expected to result in any significant adverse long-term impacts.

8.12 Waterfront Revitalization Program

8.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the Upper New York Bay, the 52nd Street Barge Staging Area would be within the City's coastal zone boundary (see Figure 8.12-1). According to "The New Waterfront Revitalization Program," the 52nd Street Barge Staging Area would be classified as a water-dependent, industrial use. The site is located within a designated SMIA and Reach 14/East River and Upper New York Bay as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." The 52nd Street Barge Staging Area is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The 52nd Street Barge Staging Area was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14-1. In instances where a component of the 52nd Street Barge Staging Area required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 8.12-1 Coastal Zone Boundary

52nd Street Barge Staging Area

CITY OF NEW YORK
DEPARTMENT OF SANITATION

8.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

The 52nd Street Barge Staging Area would not result in a significant increase in the need for public facilities or changes in infrastructure as the action would involve the replacement-in-kind of a previously existing pier. The 52nd Street Barge Staging Area would serve as a barge maintenance unit (BMU) to service barges and tugboats staged at the pier. No permanent structures would be constructed on the pier. A maximum of eight DSNY personnel would work at the site at one time. The Proposed Action would not have an adverse effect on the capacity of public facilities and infrastructure. The 52nd Street Barge Staging Area would, therefore, be consistent with this subpolicy.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The 52nd Street Barge Staging Area would be located within the limits of the NYCDCP-designated Sunset Park SMIA. The replacement of the 52nd Street Barge Staging Area would be an integral component of the City's Long Term Export Program. Under this program, the DSNY is proposing to convert the existing DSNY MTSs into TCB facilities that would allow for the containerization and transfer of DSNY-managed Waste by flat deck barges to intermodal facilities where the containers would be transloaded to either rail or ocean-going vessels for ultimate transport to out-of-City disposal facilities.

The proposed 52nd Street Barge Staging Area would provide a staging area with a maintenance unit for barges transporting containerized DSNY-managed Waste to and from the MTSs or intermodal facilities. In its current condition, the existing pier is unusable due to its deteriorated state. The proposed barge staging area would involve the removal and replacement of the existing pier structure. The proposed demolition and replacement of the existing pier would largely represent the continuation of an existing industrial and water-dependent use. The proposed replacement of the existing structure would be consistent with existing land uses in the immediate vicinity of the site and would not prevent the siting of any additional water-dependent uses. The Proposed Action would serve to maintain this use, while restoring and revitalizing industrial waterfront property. The Proposed Action would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The Proposed Action would involve the replacement and revitalization of a previously existing use. Once rehabilitation efforts are complete, the 52nd Street Barge Staging Area would provide a staging area and maintenance unit for barges transporting containerized DSNY-managed Waste to and from the MTSs or intermodal facilities.

The proposed 52nd Street Barge Staging Area would involve the removal of the existing pier and a replacement with a comparable structure. Waterfront development would involve the complete removal of the existing structure. The new structure would be located at the same site as the existing pier and would be of comparable size. The structure would consist of a concrete deck supported by timber piles and substructure elements. The timber fender system would be constructed of 12-inch-by-12-inch timber fender wales mounted to timber piles, with timber chocks and panels and rubber fender units.

Dredging would be required to improve existing water depths at and in the immediate vicinity of the site and in order to allow for the unimpeded operation of barges and tugboats. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any proposed dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 *Minimize conflicts between recreational, commercial, and ocean-going freight vessels.*

Development of the 52nd Street Barge Staging Area would involve the replacement-in-kind of a previously existing waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. The proposed structure would have the capacity to accommodate up to 27 barges; however, it is assumed that normal transportation operations would only require approximately 16 barges to be staged at the 52nd Street Barge Staging Area at any one time. There would be no anticipated impact on other uses within the water body as "barge-swapping" activities would be in close proximity to the proposed structure. In addition, barge movements associated with the 52nd Street Barge Staging Area would be comparable to previous activities. Therefore, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

3.3 *Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The Proposed Action would involve the replacement and reactivation of an existing pier structure. Once development of the 52nd Street Barge Staging Area is complete, the pier would serve as a staging area for barges transporting containerized DSNY-managed Waste to and from the Converted MTSs or intermodal facilities. Barges staged at the proposed 52nd Street Barge Staging Area would be loaded with sealed, air- and watertight containers containing

DSNY-managed Waste processed at the Converted MTSs. No handling of solid waste would occur at the site.

For the BMU, it is expected that no permanent structures would be constructed on the pier. Two trailers for DSNY personnel use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in storage containers. If applicable, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area and BMU would be done in accordance with applicable federal, state and local regulations. The Proposed Action would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes, the 52nd Street Barge Staging Area would not be located within a designated area. SCFWH information maintained by the New York State Department of State indicates that the 52nd Street Barge Staging Area would not be located within an SCFWH.

Development of the 52nd Street Barge Staging Area would involve the demolition of the existing facility and replacement-in-kind with a similarly sized and constructed structure. The proposed replacement of the pier would require dredging within Upper New York Bay to improve existing water depths at and in the immediate vicinity of the site in order to allow for unimpeded barge and tugboat operations. The 52nd Street Barge Staging Area would represent a revitalization of an existing previous industrial use and would not be anticipated to significantly impact natural resources in the vicinity of the site. The 52nd Street Barge Staging Area would, therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted in order to determine the presence of wetlands within the project site. As noted in Section 8.9, the 52nd Street Barge Staging Area would be located within portions of Upper New York Bay, designated by NYSDEC as a littoral zone, and no freshwater wetlands exist on the site. Development of the 52nd Street Barge Staging Area would involve the demolition of the existing structure and replacement-in-kind with a similarly sized facility. Dredging would be required to improve existing water depths at and in the immediate vicinity of the site to allow for the unimpeded operation of barges and tugboats. Dredging activities associated with the replacement of the existing pier would result in limited, short-term impact to these tidal wetlands.

The proposed 52nd Street Barge Staging Area is not anticipated to have significant impacts on wetland areas in the vicinity due to the previous and ongoing activities at and in the vicinity of the site and previous dredging activities that have historically occurred at the existing pier. Mitigation of potential impacts, if required, would be proposed during the permitting of the 52nd Street Barge Staging Area. This mitigation, if required, would address potential impacts that may occur due to the Proposed Action and would effectively restore these wetlands and their associated value. The 52nd Street Barge Staging Area, therefore, would be consistent with this subpolicy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of the NYSDEC NHP database indicates that there are no protected vulnerable plant, fish and wildlife species or rare ecological communities on or in the immediate vicinity of the proposed site.

As part of the 52nd Street Barge Staging Area, the existing pier and its foundation pilings would be removed. Dredging would be necessary to allow for the unimpeded operation of barges and tugboats. As stated in Section 8.9, modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat for rare or endangered species due to previous and ongoing industrial and dredging activities at and in the vicinity of the site. Stormwater runoff from the 52nd Street Barge Staging Area and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The 52nd Street Barge Staging Area would also not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The Proposed Action would involve the removal and reactivation of an existing barge staging area. Once development of the 52nd Street Barge Staging Area is complete, the pier would serve as a staging area and maintenance unit for barges traveling to and from the converted MTSs or intermodal facilities. Barges staged at the 52nd Street Barge Staging Area would either be empty or would be loaded with sealed, air- and watertight containers carrying DSNY-managed Waste processed at the MTSs. No waste handling activities would be associated with the operation and use of the proposed barge staging area. All construction activities associated with the removal and subsequent replacement of the pier would be done in accordance with applicable regulations.

In addition, no permanent structures would be constructed on the pier. Two trailers for DSNY workers' use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in three storage containers. If required, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area would be done in accordance with applicable federal, state and local regulations. The Proposed Action would be consistent with this subpolicy.

5.2 *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

The Proposed Action would involve the removal of the existing pier structure and subsequent replacement with a new, comparable structure. During the proposed replacement of the existing pier, BMPs would be used to the extent possible during all phases of construction and operation of the 52nd Street Barge Staging Area in order to minimize any nonpoint discharges. During construction, non-structural and, if necessary, structural, measures would be employed to minimize impacts to the surrounding environment. The 52nd Street Barge Staging Area would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. The Proposed Action would, therefore, be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

Development of the 52nd Street Barge Staging Area would involve a replacement-in-kind of the existing pier structure with a comparable structure. Dredging would be necessary to provide sufficient water depths for unimpeded operations once the proposed barge staging area is operational. Any dredging done as part of construction may result in temporary impacts and would be conducted in a manner to minimize short-term impacts to water quality. In addition, non-structural and, if necessary, structural, measures would be used to minimize potential adverse impacts to tidal wetlands in the vicinity of the site. All dredged materials would be disposed of at a permitted facility in accordance with applicable federal, state and local regulations. Therefore, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The proposed development of the 52nd Street Barge Staging Area would have no impact on the quality or quantity of surface or ground waters. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer

or water supply. The 52nd Street Barge Staging Area would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of the FEMA National Flood Insurance Program maps, the 52nd Street Barge Staging Area would be located within the 100-year and 500-year floodplains (Zones A and B, respectively). The 52nd Street Barge Staging Area would involve the reconstruction of an existing facility at the same location as the existing pier structure. Replacement of the 52nd Street Barge Staging Area would not affect the potential for flooding or erosion. During construction, appropriate erosion and sediment controls would be employed to prevent significant erosion. In addition, no permanent structures would be constructed on the pier. To the extent practicable, non-structural measures would be used to minimize damage from flooding and erosion during the demolition of the existing pier and subsequent construction of the 52nd Street Barge Staging Area.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

No hazardous waste or other pollutants would be introduced to the environment due to the removal or replacement of the pier structure. The 52nd Street Barge Staging Area would serve as a staging area for barges transporting containerized DSNY-managed Waste to and from the Converted MTSs or intermodal facilities. Waste would be transported on barges in sealed, airtight containers. Barges staged at the 52nd Street Barge Staging Area could be empty or loaded with these sealed containers. No loss of this material would be anticipated.

In addition, no permanent structures would be constructed on the pier. Two trailers for DSNY worker's use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in three storage containers. If applicable, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area would be done in accordance with applicable federal, state and local regulations. The 52nd Street Barge Staging Area and BMU would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8. Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

The Proposed Action would involve the rehabilitation of an existing industrial use. Due to the industrial uses at and in the immediate vicinity of the 52nd Street Barge Staging Area, public access would not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The existing pier would involve the replacement-in-kind of a previously existing use with a comparable structure. The Proposed Action would represent a revitalization of a previously existing waterfront use. According to NYCDCP's "Plan for the Brooklyn Waterfront," development of a public access corridor is recommended for 52nd Street, located immediately adjacent to the proposed 52nd Street Barge Staging Area. The Proposed Action, however, would involve the rehabilitation of an existing industrial use and, due to the industrial activities being proposed at the site, public access would not be compatible. However, development of the 52nd Street Barge Staging Area would not preclude any future development of public access at other locations in the area that have been identified as potential public access sites.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

The 52nd Street Barge Staging Area would be considered a revitalization of an existing waterfront-industrial use and would not further impair visual access to coastal lands, waters or open space. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

The 52nd Street Barge Staging Area would represent a removal and replacement of an existing industrial use. The 52nd Street Barge Staging Area would, therefore, not result in any new impact on open space resources within the study area. Furthermore, the development of the 52nd Street Barge Staging Area would not preclude development of waterfront parks north or south of the site. Therefore, the Proposed Action would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The 52nd Street Barge Staging Area would be a replacement and revitalization of an existing waterfront use and would be compatible with the existing urban design context and visual conditions of this portion of the Upper New York Bay, as noted in Section 8.7. Based on the information presented in that section, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The 52nd Street Barge Staging Area would involve the revitalization of a previously existing use. The replacement-in-kind of the existing structure would pose no additional impact to scenic values associated with natural resources. Therefore, this subpolicy is not applicable.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The 52nd Street Barge Staging Area would have no effect on any cultural resources on or near the site, as noted in Section 8.6. Based on the information presented in that section, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

8.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

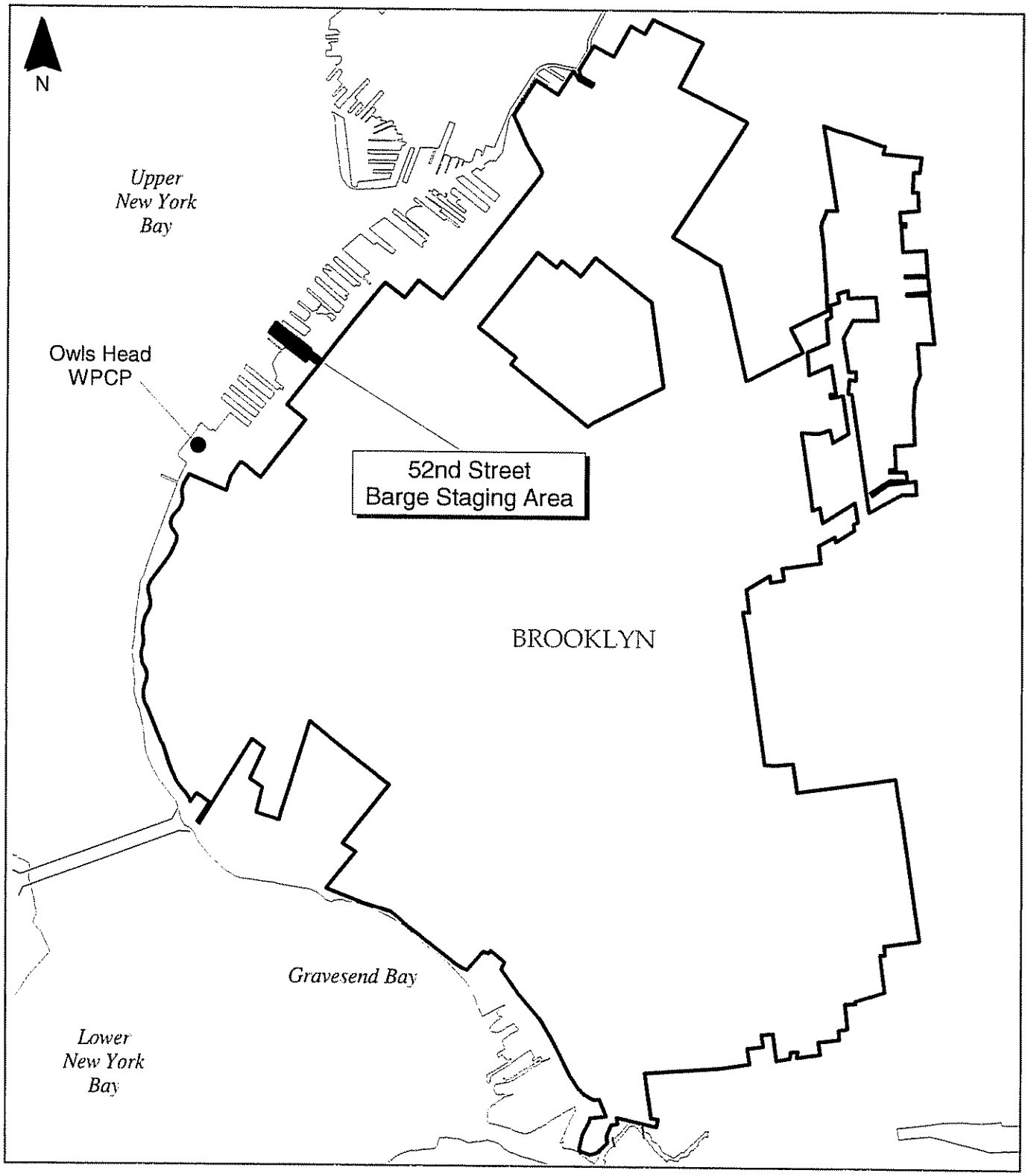
8.13.1 Existing Conditions

8.13.1.1 Water Supply

Potable water is supplied to the vicinity of the existing 52nd Street Barge Staging Area from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter water main exists along 52nd Street and the marginal street at the base of the pier along the waterfront, based on a review of NYCDEP water distribution maps. The 12-inch-diameter main is connected to a 20-inch-diameter water supply line that runs along 1st Avenue. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

8.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Owls Head WPCP, which serves the southwestern portion of Brooklyn. The WPCP drainage area is illustrated in Figure 8.13-1. From July 2002 through June 2003, the WPCP treated an average of 95 mgd of wastewater under dry weather flow conditions and an average flow of 104 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 8.13-1). The maximum dry weather flow during this period was 99 mgd in October 2002 and the maximum average flow was 114 mgd during June 2003. Effluent from the plant is discharged to Upper New York Bay and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Owls Head WPCP is 120 mgd. As the 52nd Street Barge Staging Area is currently not staffed and no operations take place at the site, no water is used by personnel or process operations.



Site delineations are approximate

3000 0 3000 Feet

Figure 8.13-1 Existing WPCP Drainage Area

52nd Street Barge Staging Area

CITY OF NEW YORK
DEPARTMENT OF SANITATION

Table 8.13-1
Average Monthly Dry Weather and Average Flows
Owls Head Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	90	93
August	94	99
September	97	107
October	99	113
November	96	111
December	96	104
January 2003	93	99
February	91	101
March	94	103
April	95	105
May	94	102
June	98	114
Average Effluent	**95**	**104**

Note:
~~(1)~~(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, the area in proximity to the 52nd Street Barge Staging Area is served by a 30-inch-diameter combined sewer line that flows in a northeast direction along 1st Avenue. The 30-inch line is connected to a regulator at the intersection of 1st Avenue and 49th Street. Combined sewage flows southwest from the regulator to the Owls Head WPCP through a 72-inch-diameter interceptor along 1st Avenue and Colonial Avenue. Overflow from the regulator is conveyed west along 49th Street to a CSO outfall in Upper New York Bay. In addition to the sewer lines along 1st Avenue, a 15-inch-diameter combined sewer line also flows from the east along 52nd Street to 1st Avenue and the 30-inch line. A 4-inch force main exists along 51st Street running from the DSNY-owned facilities east of the site to the 30-inch sewer on 1st Avenue.

8.13.1.3 Solid Waste

Commercial and industrial solid wastes generated in the City are collected by private companies. Residential solid waste and solid waste generated by certain City agencies is collected and managed by the DSNY. Based on information provided by the DSNY, the 52nd Street Barge Staging Area is not currently staffed, no operations take place, and no solid waste is generated at the site.

8.13.1.4 Energy

Consolidated Edison of New York supplies electricity to the existing facility. A review of utility maps from Consolidated Edison shows electric lines along 1st Avenue, 52nd Street and the marginal street at the foot of the barge staging area pier. Electricity is supplied to the pier through a connection located on the eastern edge of the marginal street.

Based on a review of relevant Keyspan Energy utility plates, several petroleum lines exist within the vicinity of the 52nd Street Barge Staging Area. Two 5-and-9/16-inch oil lines run in parallel and are located along 1st Avenue south of 52nd Street and along 52nd Street. These oil lines terminate roughly mid-block on 52nd Street west of 1st Avenue. An active 6-inch gas line runs west along 52nd Street from a 12-inch line located on 1st Avenue. At roughly mid-block, the 6-inch line is retired. Two additional retired 6-inch lines are also located along 1st Avenue: (1) on the east side of 1st Avenue to the north of 52nd Street; and (2) on the west side of 1st Avenue to the south of 52nd Street.

The 52nd Street Barge Staging Area currently utilizes a negligible amount of gas and electricity due to the absence of staff and a lack of operations.

8.13.2 Future No-Build Conditions

The 52nd Street Barge Staging Area would continue to be unstaffed and used for barge staging. Potable water use, process and wastewater generation, solid waste generation and energy use would remain at or near levels of zero as with Existing Conditions. Wastewater flows to the Owls Head WPCP would continue to increase and would be projected to be 104.6 mgd by 2006.

8.13.3 Potential Impacts with the 52nd Street Barge Staging Area

8.13.3.1 Water Supply

The 52nd Street Barge Staging Area would have up to 16 employees working three shifts per day. They would require approximately 400 gallons of potable water per day. The combined total usage of 400 gpd of potable water would represent an increase of 400 gpd above current consumption levels.

The 52nd Street Barge Staging Area would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

8.13.3.2 Sanitary Sewage

Based on the estimated water usage of 400 gpd for the Southwest Brooklyn Converted MTS, the small quantities of wastewater sent to the Owl's Head WPCP would not significantly impact the sewage flow rate or the ability of the Owl's Head WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 104.6 mgd in 2006, which would be well below the permitted capacity of 120 mgd. In addition, the new wastewater flow due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

8.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 16 facility employees per day, 125 pounds of solid waste would be generated per week (21 lbs/day) and would represent an incremental increase of approximately 125 pounds per week (21 lbs/day) above current waste generation levels. This volume would be managed at the Hamilton Avenue Converted MTS and would not significantly impact the system.

8.13.3.4 Energy

The 52nd Street Barge Staging Area has the necessary existing utility connections for electric supply in order to operate at its past levels of demand. Future electrical consumption demands are expected to revert to levels previously used by the 52nd Street Barge Staging Area when Fresh Kills Landfill on Staten Island was still operational. These levels of demand could be met by Consolidated Edison, as they were previously at this site, with no adverse affects on either the electrical utilities.

8.14 Traffic, Parking, Transit, and Pedestrians

8.14.1 Introduction

The 52nd Street Barge Staging Area would be a replacement-in-kind of the existing pier that would be used for staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations). Since this is a barge-to-barge operation, there is no truck traffic associated with this operation, and site-generated traffic resulting from employee trips and other miscellaneous trips would be minimal. Therefore, no off-site impacts are anticipated and no traffic analysis of this site was required.

8.15 Air Quality

8.15.1 Existing Conditions

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the 52nd Street Barge Staging Area.

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 8.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 8.15-1
Representative Ambient Air Quality Data
52nd Street Barge Staging Area

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	MTA, Flatbush Avenue, Between Tillary Street and Johnson Avenue	8-Hour	3,435 µg/m³	10,000 µg/m³
		1-Hour	4,695 µg/m³	40,000 µg/m³
NO_2	College Point Post Office	Annual	56 µg/m³	100 µg/m³
PM_{10}[(2)]	P.S. 314	Annual	25 µg/m³	50 µg/m³
		24-Hour	55 µg/m³	150 µg/m³
SO_2	P.S. 321	3-Hour	152 µg/m³	1,300 µg/m³
		24-Hour	94 µg/m³	365 µg/m³
		Annual	24 µg/m³	80 µg/m³

Note:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1998 calendar year.

8.15.2 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the No-Build analysis year (2006). As such, no significant changes to air quality levels are anticipated, and Future No Build Conditions are expected to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be reduced by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

8.15.3 Potential Impacts with the 52nd Street Barge Staging Area

8.15.3.1 On-Site Analysis

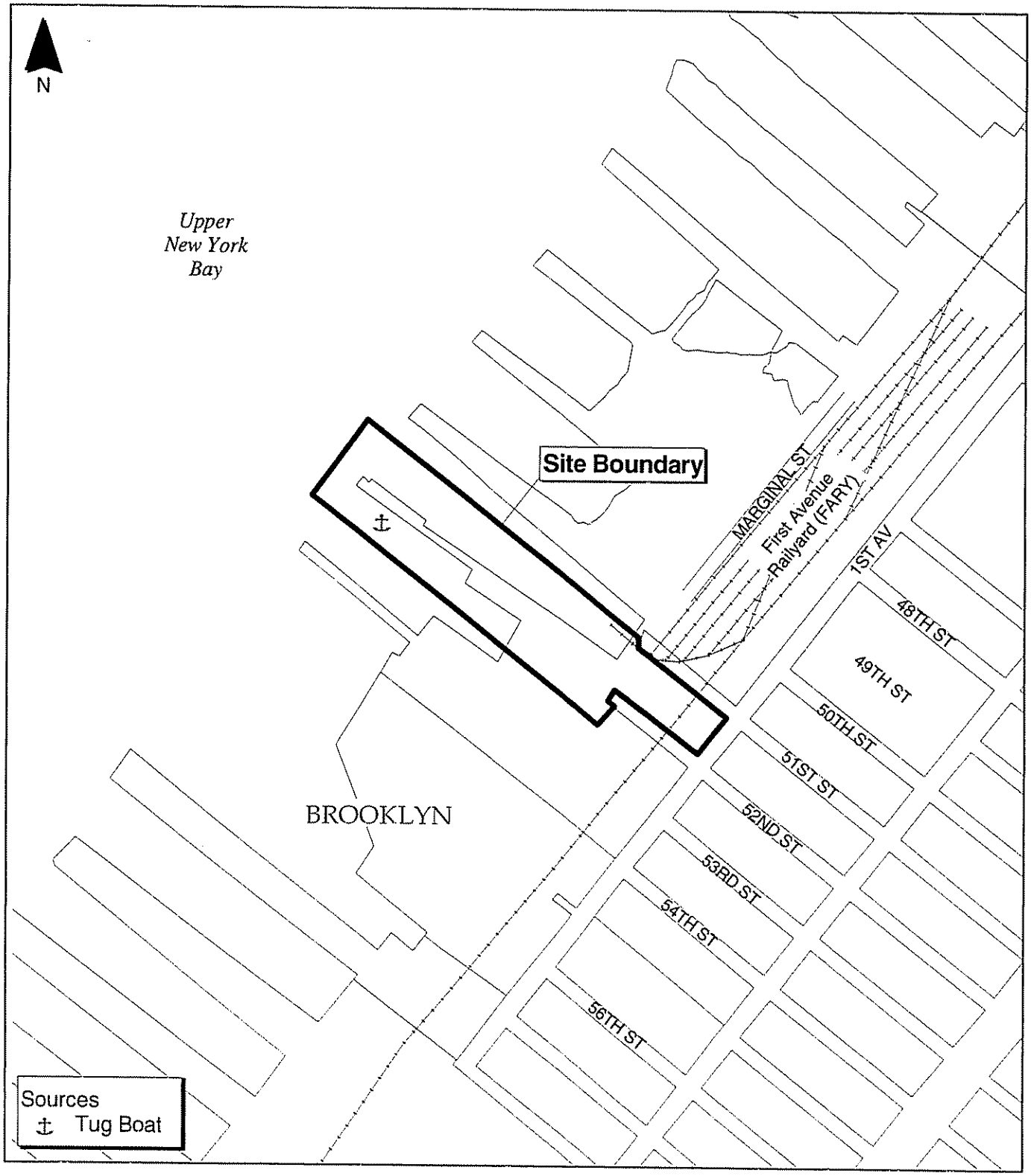
8.15.3.1.1 Sources Considered in the Analysis

The source of emissions and the number of each type of source that is anticipated to be in operation during the peak hour and under the daily average conditions are provided in Table 8.15-2. Figure 8.15-1 shows the locations of these sources within the site.

Table 8.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
52nd Street Barge Staging Area

Type of Emission Source[1]	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated Over 24-hour and Annual Average Periods
Oceangoing Tugboats	1	1

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.
(2) This is based on operational capacity of the barge staging area.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

400 0 400 Feet

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Figure 8.15-1 On-Site Air Quality Analysis

52nd Street Barge Staging Area

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8.15.3.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 8.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual PM_{25} concentrations from 52nd Street Barge Staging Area – generated equipment at any receptor locations considered, which are also presented in Table 8.15-3, are below the STVs. The 52nd Street Barge Staging Area would not, therefore, significantly impact air quality in the area.

8.15.3.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 8.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the 52nd Street Barge Staging Area are not considered to be significant.

8.15.4.2 Off-Site Analysis

8.15.4.2.1 Pollutants Considered and Analyses Conducted

The 52nd Street Barge Staging Area is a barge-to-barge operation so it would not generate any truck traffic; therefore, no off-site impacts were analyzed.

Table 8.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
52nd Street Barge Staging Area

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources (1)	Background Pollutant Concentrations (2)	Highest Estimated On-Site Pollutant Concentrations	NAAQS(3)	STV(4)
Carbon Monoxide (CO), $\mu g/m^3$	1-hour(~~7~~6)	731	~~2,635~~ 3,781	~~3,366~~ 4,512	40,000	NA
	8-hour(~~7~~6)	80	~~3,322~~ 2,635	~~3,402~~ 2,715	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	6	56	62	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour(7)	1	~~57~~ 90	~~58~~ 91	150	NA
	Annual	0.2	~~23~~ 20	~~23~~ 20	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	1	NA	NA	NA	5
	Annual Neighborhood Average(~~6~~5)	0.03	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour(7)	185	~~189~~ 186	~~374~~ 371	1,300	NA
	24-hour(7)	4	~~87~~ 107	~~91~~ 111	365	NA
	Annual	1	~~21~~ 18	~~22~~ 19	80	NA

Notes:

~~(2)~~(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

~~(3)~~(2) Background concentrations were obtained from the NYCDEP in ~~April 2003.~~memorandum dated February 18, 2005.

~~(4)~~(3) NAAQS = National Ambient Air Quality Standard.

~~(5)~~(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

~~(6)~~(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

~~(7)~~(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

~~(8)~~(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

Table 8.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
52nd Street Barge Staging Area

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs)[5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Unit Risk Factors[7] ($\mu g/m^3$)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	4.80E-01	1.30E+03	3.69E-04	1.45E-03	1.30E-01	1.12E-02	1.45E-03	8.30E-06	1.21E-08
2	Formaldehyde	6.07E-01	3.00E+01	2.02E-02	1.84E-03	6.00E-02	3.07E-02	1.84E-03	1.30E-05	2.39E-08
3	1,3 Butadiene	2.01E-02	-	-	6.10E-05	3.60E-03	1.69E-02	6.10E-05	2.80E-04	1.71E-08
4	Acetaldehyde	3.94E-01	4.50E+03	8.76E-05	1.20E-03	4.50E-01	2.66E-03	1.20E-03	2.20E-06	2.63E-09
5	Benzo(a)pyrene	9.67E-05	-	-	2.93E-07	2.00E-03	1.47E-04	2.93E-07	1.70E-03	4.98E-10
Non-Carcinogenic Pollutants[10]										
6	Propylene	1.33E+00	-	-	4.02E-03	3.00E+03	1.34E-06	4.02E-03	NA	NA
7	Acrolein	4.76E-02	1.90E-01	2.50E-01	1.44E-04	2.00E-02	7.21E-03	1.44E-04	NA	NA
8	Toluene	2.10E-01	3.70E+04	5.68E-06	6.38E-04	4.00E+02	1.59E-06	6.38E-04	NA	NA
9	Xylenes	1.47E-01	4.30E+03	3.41E-05	4.44E-04	7.00E+02	6.35E-07	4.44E-04	NA	NA
10	Anthracene	9.62E-04	-	-	2.92E-06	2.00E-02	1.46E-04	2.92E-06	NA	NA
11	Benzo(a)anthracene	8.64E-04	-	-	2.62E-06	2.00E-02	1.31E-04	2.62E-06	NA	NA
12	Chrysene	1.82E-04	-	-	5.50E-07	2.00E-02	2.75E-05	5.50E-07	NA	NA
13	Naphthalene	4.36E-02	7.90E+03	5.52E-06	1.32E-04	3.00E+00	4.41E-05	1.32E-04	NA	NA
14	Pyrene	2.46E-03	-	-	7.45E-06	2.00E-02	3.73E-04	7.45E-06	NA	NA
15	Phenanthrene	1.51E-02	-	-	4.58E-05	2.00E-02	2.29E-03	4.58E-05	NA	NA
16	Dibenz(a,h)anthracene	3.00E-04	-	-	9.09E-07	2.00E-02	4.55E-05	9.09E-07	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**2.71E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**7.19E-02**	**Total Estimated Combined Cancer Risk**		**5.62E-08**
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold**[11]		**1.0E+00**	**Cancer Risk Threshold**[11]		**1.0E-06**

Notes to Table 8.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

8.16 Odor

The 52nd Street Barge Staging Area would be used for the temporary mooring of barges and storage of marine supplies. The 2001 FEIS odor study included odor samplings from the following types of sources:

- Full barges (containing uncovered, loose, solid waste) moored outdoors;
- Empty barges (with solid waste debris) moored outdoors;
- Process building vents/stacks; and
- Shipping container (containing compacted waste) vent openings.

Samplings of the shipping container vents found no significant odor emissions. Therefore, an odor analysis for this site is not required.

8.17 Noise

The noise analysis addresses on-site sources of noise emissions from the 52nd Street Barge Staging Area-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual and the Current New York City Noise Code. A New York City Zoning Code analysis was not performed for the 52nd Street Barge Staging Area since the only equipment proposed are tugboats, which are seen as transportation facilities and, therefore, were not included in a New York City Zoning Code analysis. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis. The 52nd Street Barge Staging Area would not generate any truck traffic; therefore, no off-site impacts were analyzed.

8.17.1 Existing Conditions

8.17.1.1 Introduction

Figure 8.17-1 shows the location of the 52nd Street Barge Staging Area, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building located on the corner of 2nd Avenue and 52nd Street, approximately 263 meters (862 feet) from the site boundary.

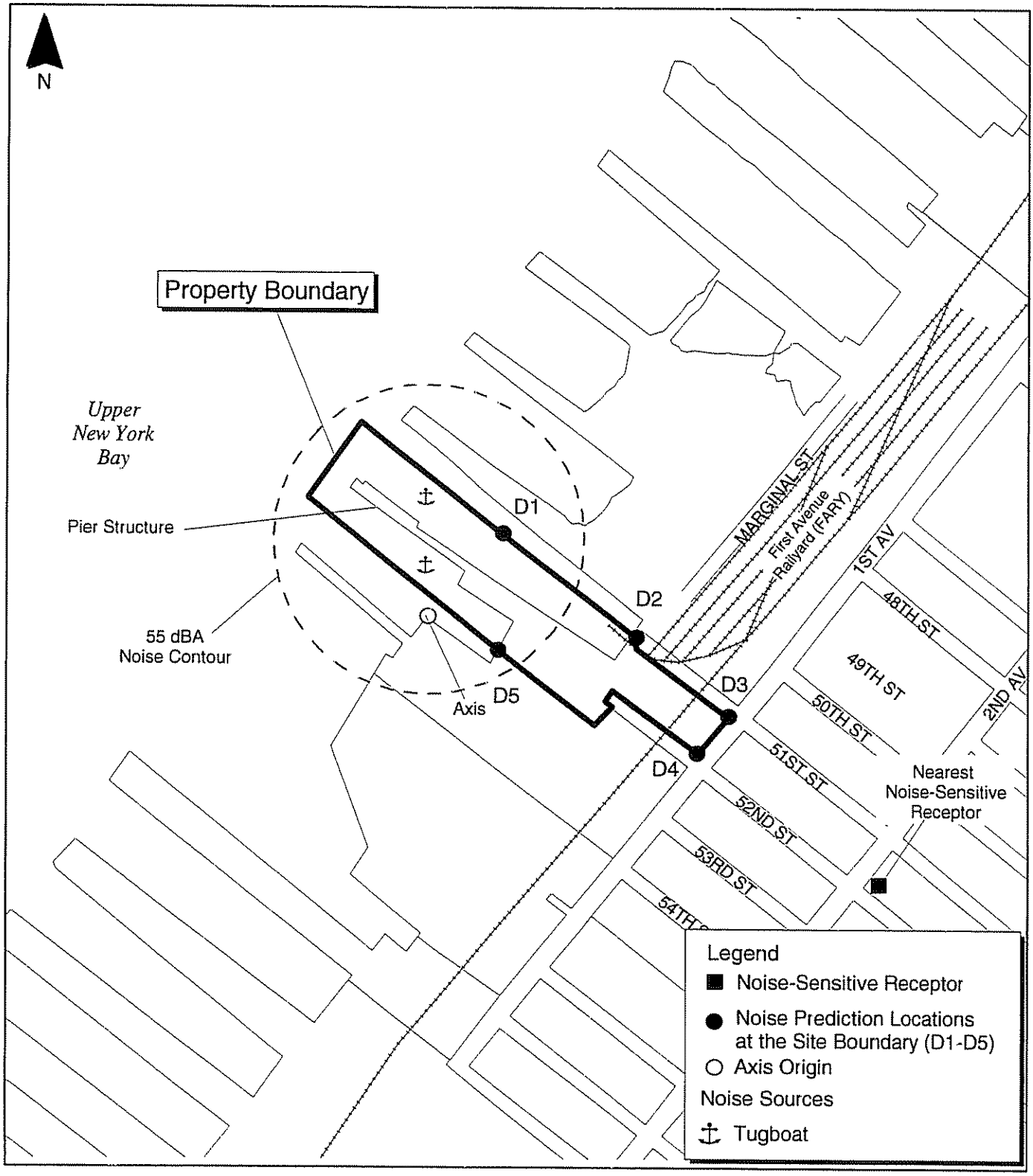
8.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the apartment building. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_5, L_{50} and L_{90}.[13] Table 8.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 1:00 a.m. and 2:00 a.m. and had an $L_{eq(1)}$ of 46.6 dBA on June 4, 2004. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic from the BQE; and
- Other noise sources associated with activities in the surrounding industrial areas.

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[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_5, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 8.17-1 Noise Sources and Receptors

52nd Street Barge Staging Area

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Table 8.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
52nd Street Barge Staging Area

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_5 (dBA)	L_{min} (dBA)	L_{max} (dBA)
3:00-4:00 p.m.	55.2	48.9	52.2	60.5	46.4	69.4
4:00-5:00 p.m.	58.5	51.4	54.5	64.8	49.3	71.3
5:00-6:00 p.m.	58.5	54.0	56.3	62.8	52.1	74.2
6:00-7:00 p.m.	57.1	52.6	55.6	61.1	48.9	68.9
7:00-8:00 p.m.	56.1	51.5	54.2	59.8	48.6	69.3
8:00-9:00 p.m.	53.8	48.1	51.4	58.9	45.6	66
9:00-10:00 p.m.	52.7	46.9	50.3	57.3	44.8	66.1
10:00-11:00 p.m.	52.6	46.3	49.2	57.8	44.8	67.9
11:00 p.m.-12:00 a.m.	52.5	48.1	50.3	55.1	46.3	71.9
12:00-1:00 a.m.	50	46.8	48.8	53.5	45.2	68.5
1:00-2:00 a.m.	46.6	44.2	45.6	48.5	43.4	62.9
2:00-3:00 a.m.	57.7	45.7	47.3	53.6	44.5	81.4
3:00-4:00 a.m.	55	46.4	48.4	60.3	45	73.1
4:00-5:00 a.m.	57.1	46.6	49.4	59.9	44.7	75.4
5:00-6:00 a.m.	49.8	47.2	48.8	52.2	42.8	62.5
6:00-7:00 a.m.	52.4	49.5	51.1	55.7	48.1	64.8
7:00-8:00 a.m.	53	50.0	51.8	56.6	48.4	68
8:00-9:00 a.m.	57.2	50.6	53.6	62.3	48	73.4
9:00-10:00 a.m.	56.5	52.7	55.0	60.1	50.8	67.7
10:00-11:00 a.m.	50.6	46.7	49.4	54.3	44.7	60.5
11:00 a.m.-12:00 p.m.	66.2	46.5	52.3	70.9	43.8	91.9
12:00-1:00 p.m.	59.5	47.7	52.2	63.7	45	81.5
1:00-2:00 p.m.	54.8	49.2	51.4	58.6	47.3	77.7
2:00-3:00 p.m.	54.3	49.2	51.0	58.1	47.7	71

Note:
[1] The 24-hour background noise levels were measured at the site boundary nearest to the closest sensitive receptor to identify the quietest background hour.

8.17.2 Future No-Build Conditions

8.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

8.17.3 Potential Impacts with the 52nd Street Barge Staging Area

8.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the 52nd Street Barge Staging Area and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 8.17-2. Shown earlier, Figure 8.17-1 indicates the 52nd Street Barge Staging Area layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 8.17-2
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
52nd Street Barge Staging Area

Equipment Name (quantity)(1)	Reference Sound Pressure Noise Level at 50 feet (dBA)(2)
Outdoor	
Oceangoing Tugboat (2)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of individual pieces of equipment.

8.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the 52nd Street Barge Staging Area. Noise levels from all sources were combined to determine the location of the 55 dBA contour line. Since the on-site equipment for the 52nd Street Barge Staging Area consists of only two tugboats, the 55 dBA contour lies within the property boundary. The distance from the 55 dBA contour line to the property boundary is 359 meters (1,178 feet) in the direction of the nearest noise-sensitive receptor, which is 263 meters (862 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA, (i.e., the point off site where noises generated on-site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (See Figure 8.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

8.17.3.1 Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the 52nd Street Barge Staging Area boundary to determine the total L_{eq} from outdoor sources for comparison to the current Noise Code. This is shown in Table 8.17-3. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

8.17.3.2 Combined On-Site and Off-Site Noise Levels

As a result of the on-site screening analysis performed for the 52nd Street Barge Staging Area, an on-site noise analysis was required. An off-site noise analysis was not required, therefore, a combined noise analysis was not performed.

Table 8.17-3
Current Noise Code Analysis
52nd Street Barge Staging Area

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	56.2
D2	48.5
D3	43.4
D4	42.7
D5	53.5
D6	59.9

Note:
(1) D1 through D6 are points representative of the 52nd Street MTS boundary that are used in all noise analysis.

CHAPTER 9 ENVIRONMENTAL REVIEW – HARLEM RIVER YARD BARGE TO RAIL INTERMODAL YARD.

9.1 Introduction

The HRY Barge to Rail Intermodal Yard, located within the HRY complex and on property contiguous to the HRY Truck to Rail TS, would receive barge deliveries of containers from one or more Converted MTSs. The HRY Barge to Rail Intermodal Yard site was previously analyzed as a site for an EBUF in the 2000 SWMP FEIS, which found there were no unmitigatible adverse environmental impacts associated with the EBUF operations. At that time, however, no $PM_{2.5}$ analysis was required and the HRY Truck to Rail TS was not yet operating. Therefore, this FDEIS presents the on-site air quality analysis of $PM_{2.5}$ and an on-site noise analysis that includes operations of the HRY Truck to Rail TS at its currently permitted 4,000 tpd capacity in conjunction with the operation of the HRY Barge to Rail Intermodal Yard. The information presented in Sections 9.2 through 9.12 of this (New SWMP) DFEIS ~~will be~~has been updated from the 2000 SWMP FEIS ~~in the subsequent New SWMP FEIS~~. Because the HRY Barge to Rail Intermodal Yard would not receive any collection vehicle deliveries of waste, off-site traffic, air quality and noise analyses are not required.

The results of the environmental analyses of the HRY Barge to Rail Intermodal Yard are presented in the following sections:

9.2 Land Use, Zoning, and Public Policy
9.3 Socioeconomic Conditions
9.4 Community Facilities and Services
9.5 Open Space
9.6 Cultural Resources
9.7 Urban Design, Visual Resources, and Shadows
9.8 Neighborhood Character
9.9 Natural Resources
9.10 Hazardous Materials
9.11 Water Quality

9.12 Waterfront Revitalization Program

9.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

9.14 Traffic, Parking, Transit, and Pedestrians

9.15 Air Quality

9.16 Odor

9.17 Noise

Section 2.2.6 provides a summary description of the site and important characteristics of the design and operation of the facility. The following sections provide additional information on the site or the study area, as appropriate to each analysis.

A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3.

9.2 Land Use, Zoning, and Public Policy

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.3 Socioeconomic Conditions

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.4 Community Facilities and Services

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.5 Open Space

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.6 Cultural Resources

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.7 Urban Design, Visual Resources, and Shadows

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.8 Neighborhood Character

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.9 Natural Resources

9.9.1 Existing Conditions

Existing conditions include stressed aquatic and terrestrial communities that are typical of this area of the Bronx. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from implementation of the HRY Barge to Rail Intermodal Yard.

9.9.1.1 Definition of Study Area

The study area includes the site and the waterfront sections that are bulkheaded and bounded by the Harlem River to the southwest and Bronx Kill to the southeast (see Figure 2.3-1). The entire upland parcel and surrounding neighborhood is fully developed and, therefore, has very limited natural resources. Such resources that do exist are discussed in the following sections.

9.9.1.2 Geology

The study area is underlain by consolidated pre-Cambrian rocks. Formations of Fordham Gneiss and narrow bands of infolded Inwood Marble are typical of the southern portion of Bronx County, where the study area is located. A large deposit of stratified drift composed mostly of sand and gravel underlies the study area. This deposit is roughly ¼-mile wide and extends south-southwestward across the western part of the county.

Historically, the banks of the Harlem River were comprised of extensive intertidal marshes and the waterbody was much wider than it is presently. Over the past 100 years, extensive filling and hardening of the banks has taken place and the geology has little, if any, resemblance to its former state.

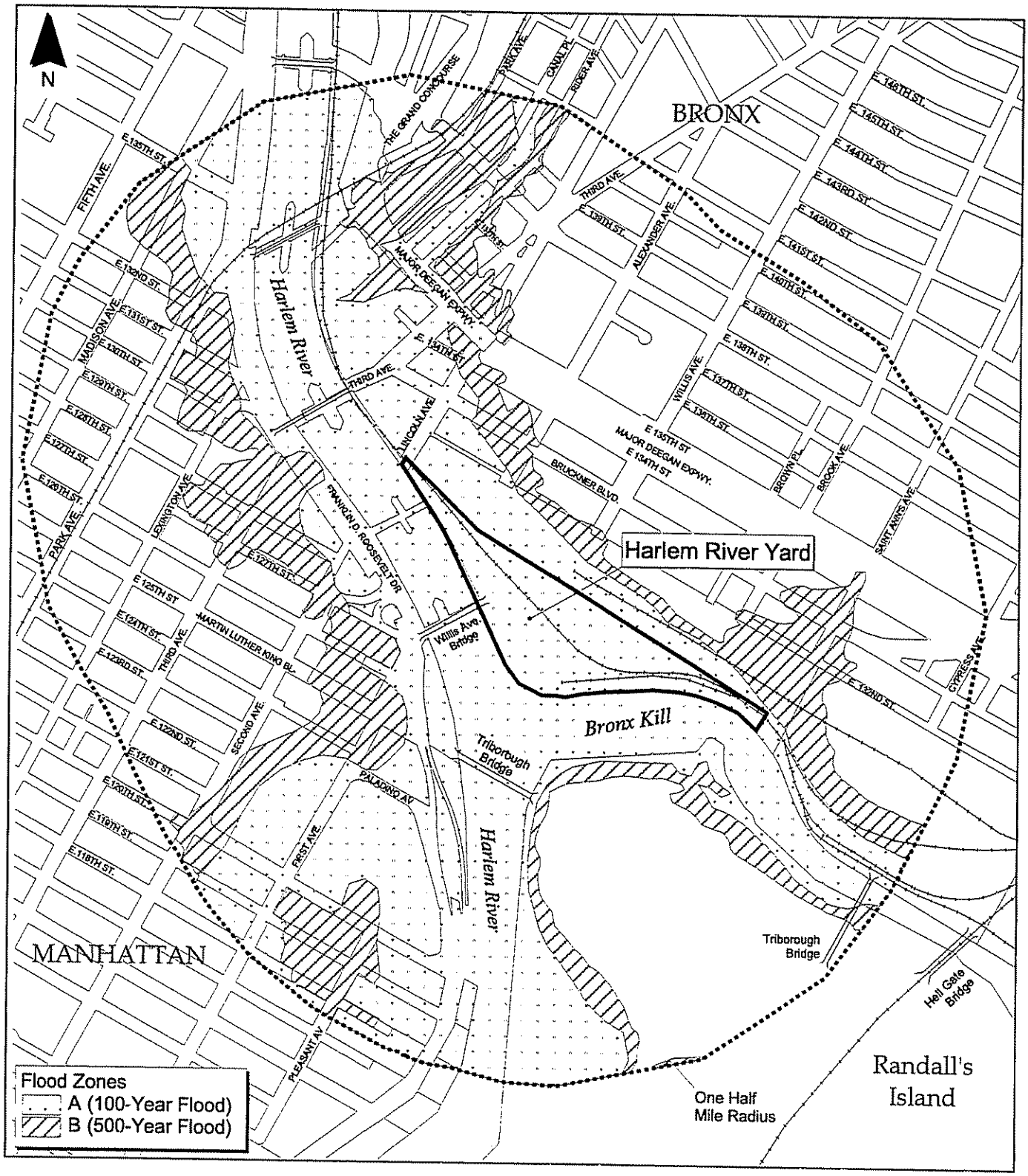
9.9.1.3 Floodplains

The study area is located within the 100-year coastal floodplain (see Figure ~~5.14~~ 9.9-1). The Harlem River and Bronx Kills, which are NYSDEC designated littoral zones, border the study area (see Figure ~~5.14~~ 9.9-2). No NYSDEC designated wetlands exist on the study area.

9.9.1.4 Ecosystems

The terrestrial ecology of the study area has been altered by intense residential and commercial development. Indigenous wildlife, insofar as it occurs, is comprised of animals associated with urbanized areas, such as feral cats and dogs and ubiquitous species such as rats, mice, and squirrels. The only naturally occurring wildlife is the resident or transient avifauna (birds), and rabbits.

The study area is nearly completely covered by hard surfaces, predominantly railroad tracks and paved parking areas, with the exception of a small patch under the Willis Avenue Bridge. A few buildings and office trailers are also present on the study area. Vegetation on the study area is



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

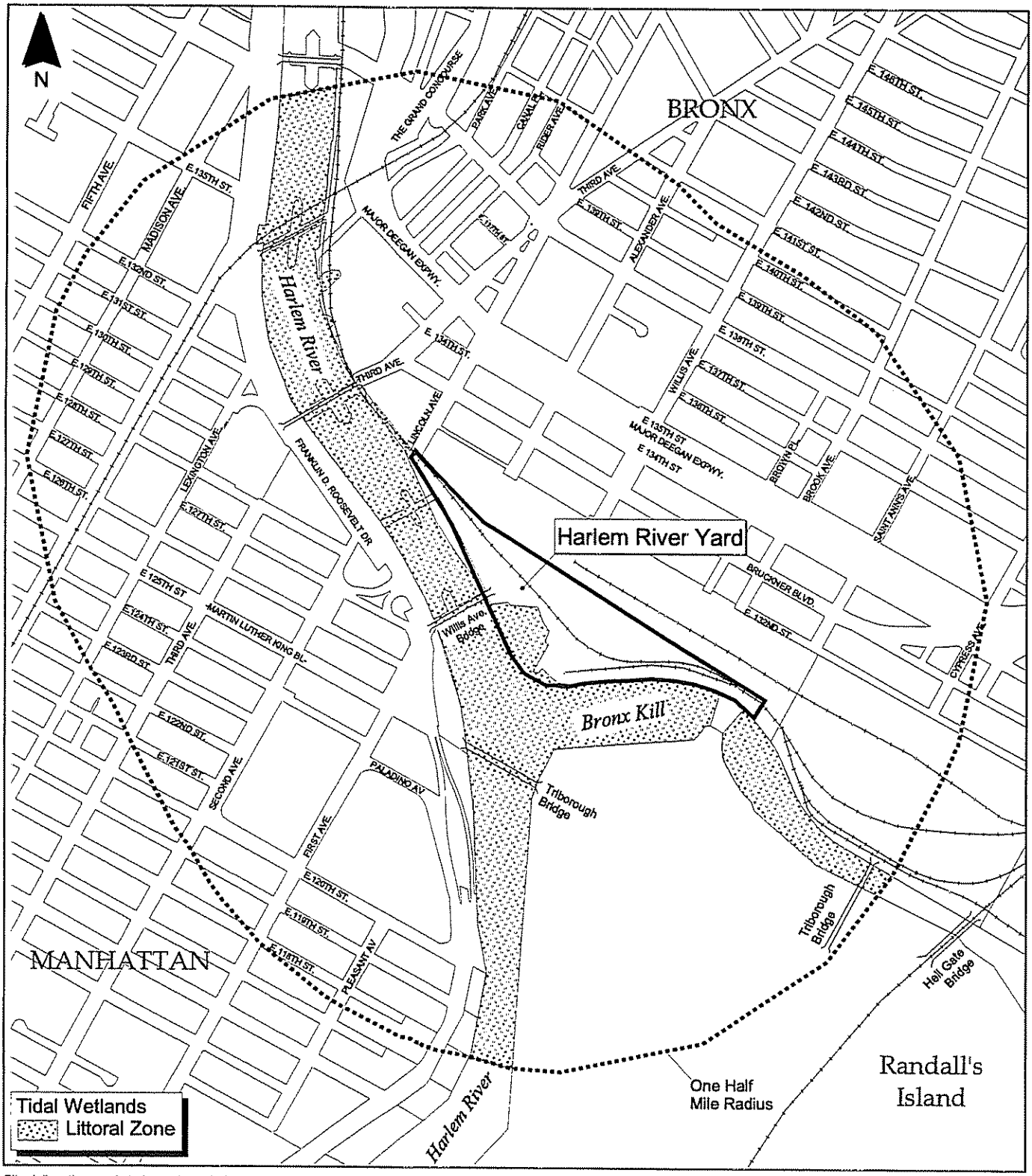
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HDR URBITRAN EEA Cambridge Environmental Inc

Figure 9.9-1 Floodplains

Harlem River Yard Barge to Rail Intermodal Yard

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Site delineations and study are boundaries are approximate
Base Map Source: New York City Department of Planning

500 0 500 Feet

HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 9.9-2 Wetlands

Harlem River Yard Barge to Rail Intermodal Yard

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THE CITY OF NEW YORK DEPARTMENT OF SANITATION

consistent with that of an urban vacant lot as classified by Reschke.[1] The sparse vegetation is dominated by mugwort (*Artemisia vulgaris*), with scattered specimens of evening primrose (*Oenothera biennis*), and goldenrod (*Solidago species*). A few woody saplings are present on the study area, including tree-of-heaven (*Ailanthus altissima*) and common cottonwood (*Populus deltoides*). A wood vine, Asiatic bittersweet (*Celastrus orbiculatus*), was observed growing on the fence.

9.10 Hazardous Materials

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.11 Water Quality

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.12 Waterfront Revitalization Program

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

The HRY Site was analyzed previously, as discussed in Section 9.1.

9.14 Traffic, Parking, Transit, and Pedestrians

As stated in Section 9.1, the HRY Barge to Rail Intermodal Yard would not receive any collection vehicle deliveries of waste, so traffic analysis is not required.

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[1] Reschke, Carol. Ecological Communities of New York State. March 1990. New York Natural Heritage Program, NYSDEC.

9.15 Air Quality

9.15.1 Definition of Study Areas

The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of HRY Barge to Rail Intermodal Yard.

9.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 9.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 9.15-1
Representative Ambient Air Quality Data
HRY Barge to Rail Intermodal Yard

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	200th Street and Southern Boulevard	8-Hour	2.9 ppm	9 ppm
		1-Hour	4.3 ppm	35 ppm
NO_2[(2)]	East 156th Street, between Dawson and Kelly Streets	Annual	0.03 ppm	0.05 ppm
PM_{10}[(2)]	East 156th Street, between Dawson and Kelly Streets	Annual	22 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	60 $\mu g/m^3$	150 $\mu g/m^3$
SO_2[(2)]	East 156th Street, between Dawson and Kelly Streets	3-Hour	0.089 ppm	0.5 ppm
		24-Hour	0.052 ppm	0.14 ppm
		Annual	0.011 ppm	0.03 ppm

Note:
Source: NYCDEP, April 2003 and USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2002 calendar year.
(2) Values are the highest pollutant levels recorded during the 2003 calendar year.

9.15.4.2 Off-Site Emissions

As stated in Section 9.1, the HRY Barge to Rail Intermodal Yard would not receive any collection vehicle deliveries of waste, so off-site air quality analysis is not required.

9.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

9.15.4 Potential Impacts with the Harlem River Yard Barge to Rail Intermodal Yard

9.15.4.1 On-Site Emissions

Based on the 2000 SWMP FEIS, the potential impacts from the operation of the Harlem River Yard EBUF were estimated for criteria pollutants and found to be within applicable standards and guidelines. Since the Harlem River Yard Barge to Rail Intermodal Yard would have less on-site emission generating equipment than those of the EBUF, impacts under the HRY Barge to Rail Intermodal Yard would also be within standards and guidelines, so an analysis of this facility would likewise not result in a finding of significant impacts.

9.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be operating during the peak hour and in an average hour are provided in Table 9.15-2.

9.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any one of the receptor sites considered are provided in 2000 SWMP FEIS. These values are compared with the applicable standards for the appropriate averaging time periods. $PM_{2.5}$ results are presented in Table 9.15-3. Based on the results presented in Table 9.15-3 and 2000 SWMP FEIS, the HRY Barge to Rail Intermodal Yard would not adversely impact air quality in the area. The total predicted concentrations (including appropriate background concentrations) are below the national and state ambient air quality standards.

Table 9.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
HRY Barge to Rail Intermodal Yard

Type of Emission Source	Maximum Number of Sources Operated During a Single Peak Hour	Number of Sources Operated During Annual Average Hour
Outside Processing Building		
Yard Tractor	4	4
Reachstacker Taylor GPPH885	2	2
Line-Haul Locomotive 1989 GE	1	1
Switch Locomotive 2003/04 Shuttlewagon	1	1
Tugboat	2	2

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.

Table 9.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
HRY Barge to Rail Intermodal Yard

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources	STV[2]
$PM_{2.5}$, $\mu g/m^3$[3]	24-hour[1]	2.70	5
	Annual Neighborhood Average	0.04	0.1

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(3) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

9.16 Odor

There would be no waste processing operations at the HRY Barge to Rail Intermodal Yard. Since the HRY Intermodal Yard is a barge to rail operation, based on calculations the emission rates from the containers are estimated to be negligible. Therefore, no odor impacts were analyzed for the HRY Barge to Rail Intermodal Yard.

9.17 Noise

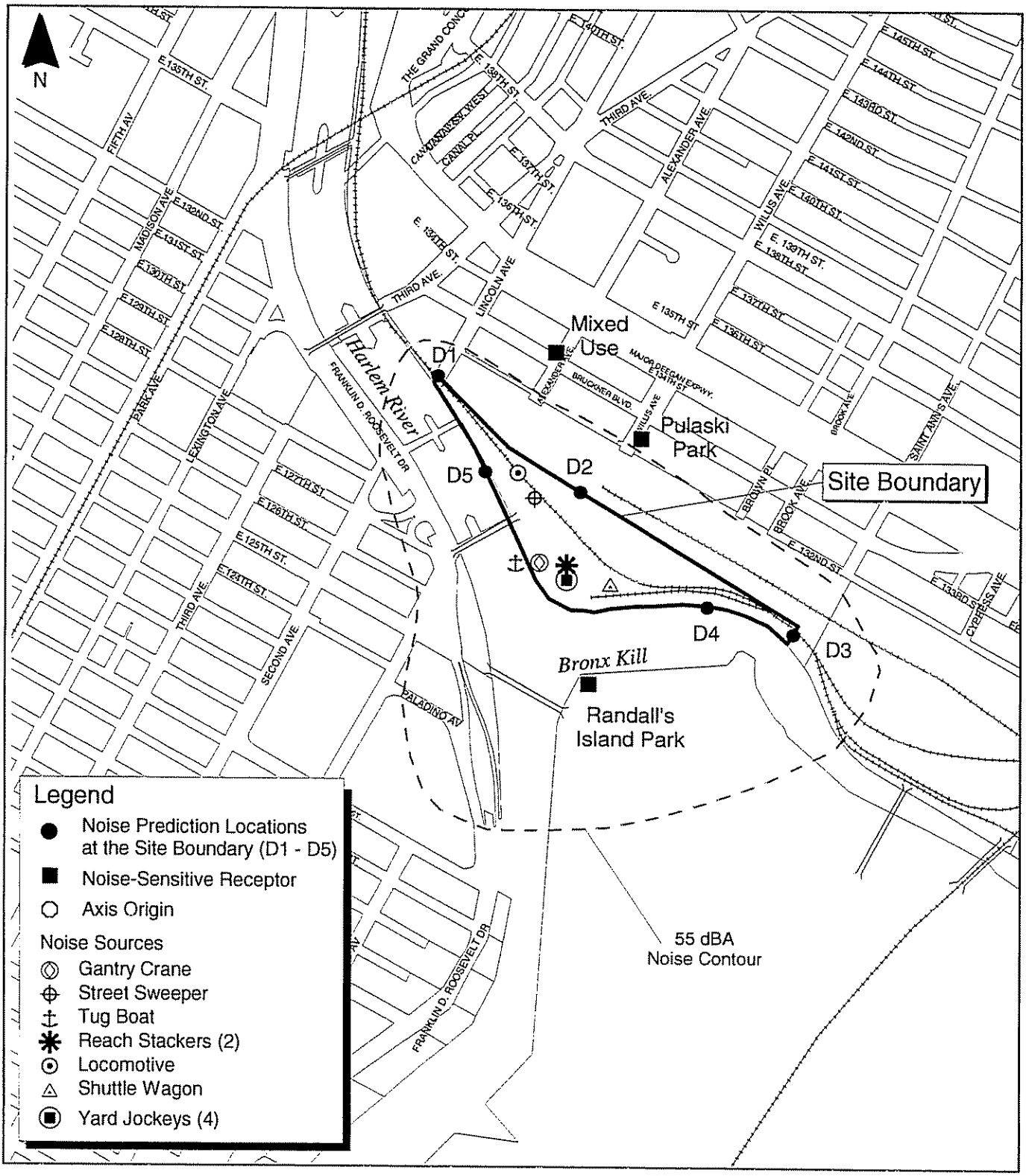
The noise analysis addresses on-site sources of noise emissions from HRY Barge to Rail Intermodal Yard -related activities. It is based on Section R of the 2001 CEQR Technical Manual for on-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodology used in this analysis.

9.17.1 Existing Conditions

The HRY Truck to Rail TS is adjacent to the HRY Barge to Rail Intermodal Yard and is currently permitted to operate at 4,000 tpd. The HRY Barge to Rail Intermodal Yard portion of the HRY site is currently undeveloped, so there are no noise sources associated with a barge to rail intermodal transfer operation at this site under Existing Conditions.

9.17.1.1 Introduction

Figure 9.17-1 shows the location of the HRY Barge to Rail Intermodal Yard, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The HRY Barge to Rail Intermodal Yard is set within a larger industrial area as described in Sections 2.2.6 and 2.2.8. The nearest potential noise-sensitive receptors are the Bruckner Avenue Antique Shop (mixed use) at a distance of approximately 220 meters (720 feet) from the property line, Pulaski Park, approximately 157 meters (515 feet) north of the property boundary, and ball fields located on Randall's Island, approximately 129 meters (425 feet) south of the property line.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

700 0 700 1400 Feet

Figure 9.17-1 Noise Sources and Receptors
Harlem River Yard Site
Barge to Rail Option

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9.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the former Willis Avenue Railroad Station. Noise monitoring data collected included $L_{eq(1)}$, L_{min} and L_{max},[2] and the statistical metrics of L_{10}, L_{50} and L_{90}.[3] Table 9.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 3:00 a.m. to 4:00 a.m. and 4:00 a.m. to 5:00 a.m., and had an $L_{eq(1)}$ of 57 dBA on March 18th, 1999. Activities and events that contribute to the on-site noise levels include:

- Other noise sources associated with activities in the surrounding industrial areas.

9.17.2 Future No-Build Conditions

9.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by the Future No-Build 2006 analysis year; therefore, Future No Build Conditions are expected to be the same as Existing Conditions.

9.17.3 Potential Impacts with the HRY Barge to Rail Intermodal Yard

9.17.3.1 On-Site Noise Levels

Equipment assumed to be operating on site at the HRY Barge to Rail Intermodal Yard and its reference noise levels used in the CEQR analysis are shown in Table 9.17-2. The number and types of equipment assumed for this analysis were based on the HRY Barge to Rail Intermodal Yard's ~~peak~~ average design capacity.

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[2] Terms $L_{eq(1)}$, L_{min} and L_{max} are explained in Section 3.19.2.
[3] Terms L_{10}, L_{50} and L_{90} are explained in Section 3.19.2.

Table 9.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
HRY Barge to Rail Intermodal Yard

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 a.m.	66	57	60	64	53	94
1:00-2:00 a.m.	73	56	59	70	52	98
2:00-3:00 a.m.	63	53	57	61	48	87
3:00-4:00 a.m.	57	52	56	60	48	71
4:00-5:00 a.m.	57	51	55	60	47	78
5:00-6:00 a.m.	73	53	57	73	48	101
6:00-7:00 a.m.	60	55	58	62	51	75
7:00-8:00 a.m.	63	59	62	65	55	79
8:00-9:00 a.m.	66	62	64	68	58	83
9:00-10:00 a.m.	67	61	64	69	58	96
10:00-11:00 a.m.	67	61	63	68	56	98
11:00 a.m.-12:00 p.m.	65	61	63	67	56	86
12:00-1:00 p.m.	66	61	64	69	57	87
1:00-2:00 p.m.	66	61	64	70	57	89
2:00-3:00 p.m.	65	61	63	67	57	82
3:00-4:00 p.m.	65	60	63	68	55	81
4:00-5:00 p.m.	73	61	63	67	57	103
5:00-6:00 p.m.	65	60	62	67	56	87
6:00-7:00 p.m.	64	59	62	66	56	81
7:00-8:00 p.m.	64	59	62	66	55	80
8:00-9:00 p.m.	62	57	60	64	53	82
9:00-10:00 p.m.	61	56	58	63	53	78
10:00-11:00 p.m.	61	57	59	63	53	80
11:00 p.m-12:a.m..	63	57	59	62	53	88

Note:

~~(4)~~[1] The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

Table 9.17-2
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
HRY Barge to Rail Intermodal Yard

Equipment Name (quantity)[1],[2]	Reference Sound Pressure Noise Level at 50 feet (dBA)[3]
Outdoor	
~~Line~~Long-Haul Locomotive (1)	84.2
Shuttle Wagon Locomotive (1)	76.3
Yard Tractor (4)	73.8
Reachstacker (2)	76.2
Tugboat (1)	73
Gantry Crane (1)	77.2

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Indoor sources are not proposed for the HRY Barge to Rail Intermodal Yard.
(3) Noise levels are representative of each piece of equipment.

9.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the HRY Barge to Rail Intermodal Yard. Noise levels from outdoor sources were combined to determine the location of the 55 dBA contour line. For the Bruckner Antique Shop, the 55 dBA contour line is approximately 134 meters (440 feet) from the property line in the direction of the Bruckner Antique Shop. For the Pulaski Park, the 55 dBA contour line is approximately 122 meters (400 feet) from the property line in the direction of the Pulaski Park. For Randall's Island, the 55 dBA contour line is approximately 457 meters (1,500 feet) from the property line in the direction of Randall's Island. The distance from the property boundary to these noise-sensitive receptors is provided in section 9.17.1.1. The 55 dBA contour line was selected as a limit or the study area because 55 dBA, (i.e., the point off site where noises generated on-site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that a noise-sensitive receptor, specifically Randall's Island, is located within the 55 dBA contour line (see Figure 9.17-1); therefore, an on-site noise analysis, including noise monitoring at Randall's Island, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 9.17-1 above. Table 9.17-3 below identifies the existing background noise level during the quietest hour. The table shows the distance from the HRY Barge to Rail Intermodal Yard to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, HRY Barge to Rail Intermodal Yard-related noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. The difference represents the predicted incremental change in noise level from the HRY Barge to Rail Intermodal Yard. Because this incremental change is less than the CEQR threshold of 3 dBA, since the daytime background noise level is greater than 62 dBA at the noise-sensitive receptor, there is no predicted impact that would be caused by the HRY Barge to Rail Intermodal Yard on-site operations.

9.17.3.3 Off-Site Noise Levels

As stated in Section 9.1, the HRY Barge to Rail Intermodal Yard would not receive any collection vehicle deliveries of waste, so off-site noise analysis is not required.

9.17.3.4 Combined On-Site and Off-Site Noise Levels

An on-site noise analysis was performed for the HRY Barge to Rail Intermodal Yard. An off-site noise analysis was not required; therefore, a combined noise analysis was not performed.

Table 9.17-3
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
HRY Barge to Rail Intermodal Yard

Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Randall's Island Park	107 / 350	62.5	~~61.8~~62.3	~~65.2~~65.4	~~2.7~~2.9	No

Notes:

(1) Twenty-minute noise level readings measured at the closest sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels were measured on August 17, 2004 at 11:00 a.m.

(3) Predicted noise level calculations at sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase of 3 dBA is considered an impact when the daytime noise level is greater than 62 dBA. The impact analysis compares the loudest noise emissions from daily operations at the facility with the quietest background noise levels that occur during facility operation.

CHAPTER 10 ENVIRONMENTAL REVIEW: 65TH STREET INTERMODAL YARD

10.1 Introduction

The 65th Street Intermodal Yard would be subject to DSNY's new rules, as a non-discretionary action, and thus is not subject to environmental review. The 65th Street Intermodal Yard would receive DSNY-managed Waste by barge and export it by rail. There is no truck traffic associated with this operation and site-generated traffic resulting from employee trips and other miscellaneous trips would be minimal. Therefore, no off-site analyses are required.

The results of the environmental analyses of the 65th Street Intermodal Yard are presented in the following sections:

10.2 Land Use, Zoning, and Public Policy
10.3 Socioeconomic Conditions
10.4 Community Facilities and Services
10.5 Open Space
10.6 Cultural Resources
10.7 Urban Design, Visual Resources, and Shadows
10.8 Neighborhood Character
10.9 Natural Resources
10.10 Hazardous Materials
10.11 Water Quality
10.12 Waterfront Revitalization Program
10.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
10.14 Traffic, Parking, Transit, and Pedestrians
10.15 Air Quality
10.16 Odor
10.17 Noise

Section 2.2.7 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

10.2 Land Use, Zoning, and Public Policy

See Section 10.1 for a description of the review required.

10.3 Socioeconomic Conditions

See Section 10.1 for a description of the review required.

10.4 Community Facilities and Services

See Section 10.1 for a description of the review required.

10.5 Open Space

See Section 10.1 for a description of the review required.

10.6 Cultural Resources

See Section 10.1 for a description of the review required.

10.7 Urban Design, Visual Resources, and Shadows

See Section 10.1 for a description of the review required.

10.8 Neighborhood Character

See Section 10.1 for a description of the review required.

10.9 Natural Resources

See Section 10.1 for a description of the review required.

10.10 Hazardous Materials

See Section 10.1 for a description of the review required.

10.11 Water Quality

See Section 10.1 for a description of the review required.

10.12 Waterfront Revitalization Program

See Section 10.1 for a description of the review required.

10.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

See Section 10.1 for a description of the review required.

10.14 Traffic, Parking, Transit, and Pedestrians

See Section 10.1 for a description of the review required.

10.15 Air Quality

See Section 10.1 for a description of the review required.

10.16 Odor

See Section 10.1 for a description of the review required.

10.17 Noise

See Section 10.1 for a description of the review required.

CHAPTER 11 ENVIRONMENTAL REVIEW – HARLEM RIVER YARD TRUCK TO RAIL TS

11.1 Introduction

The HRY Truck to Rail TS is currently permitted at 4,000 tpd based upon a 1993 FEIS for 3,000 tpd of capacity, and negative declaration finding on an EAS completed in 2003 for an additional 1,000 tpd of capacity. The HRY Truck to Rail TS was further evaluated for accepting and processing DSNY-managed Waste from all wastesheds in the Bronx under DSNY's Interim Export Program with a negative declaration finding on that EAS, which was completed in 2001.

Copies of the environmental review documents for the HRY Truck to Rail TS are available upon request on compact disk. Because the HRY Truck to Rail TS is an existing facility permitted to process up to 4,000 tpd of waste, which is greater than the DSNY-managed Waste Bronx wasteshed, no further environmental review is required.

The results of the environmental analyses of the HRY Truck to Rail TS are presented in the following sections:

11.2 Land Use, Zoning, and Public Policy
11.3 Socioeconomic Conditions
11.4 Community Facilities and Services
11.5 Open Space
11.6 Cultural Resources
11.7 Urban Design, Visual Resources, and Shadows
11.8 Neighborhood Character
11.9 Natural Resources
11.10 Hazardous Materials
11.11 Water Quality
11.12 Waterfront Revitalization Program
11.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
11.14 Traffic, Parking, Transit, and Pedestrians

11.15 Air Quality

11.16 Odor

11.17 Noise

Section 2.2.8 provides a summary description of the site and important characteristics of the design and operation of the facility. The following sections provide additional information on the site or the study area, as appropriate to each analysis.

A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3.

11.2 Land Use, Zoning, and Public Policy

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.3 Socioeconomic Conditions

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.4 Community Facilities and Services

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.5 Open Space

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.6 Cultural Resources

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.7 Urban Design, Visual Resources, and Shadows

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.8 Neighborhood Character

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.9 Natural Resources

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.10 Hazardous Materials

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.11 Water Quality

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.12 Waterfront Revitalization Program

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.14 Traffic, Parking, Transit, and Pedestrians

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.15 Air Quality

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.16 Odor

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

11.17 Noise

The HRY Truck to Rail TS was analyzed previously, as discussed in Section 11.1.

CHAPTER 12 ENVIRONMENTAL REVIEW – EAST 132ND STREET SITE

12.1 Introduction

The East 132nd Street Site is currently permitted to handle 2,999 tpd of putrescible waste, with a negative declaration finding on an EAS for that capacity completed in 1994. It is currently contracted to accept up to 1,500 tpd of Bronx DSNY-managed Waste under Interim Export for long haul in transfer trailers to out-of-City disposal locations. It is proposed to accept all of the Bronx DSNY-managed Waste long term (approximately 2,337 tons on an average peak day) with no increase in capacity. This site was also the subject of an EAS in 1997 for Interim Export that evaluated the receipt of all Bronx DSNY-managed Waste. At that time, no off-site PM_{10} or $PM_{2.5}$ analyses were performed. The 2000 SWMP FEIS evaluated on-site, but not off-site, impacts related to delivery of all Bronx waste to this site under a variety of different export scenarios. The EAS for Interim Export, updated in 2001, evaluated sending only a portion of the Bronx waste (24 collection vehicles during the peak hour between 11:00 a.m. to 12:00 p.m.) to East 132nd Street. Traffic analyses were completed at multiple locations and PM_{10} analyses were completed at two intersections. $PM_{2.5}$ was not analyzed and CO and mobile noise analyses screened out. The average peak quantity of DSNY-managed Waste delivered to this facility for Interim Export averages approximately 1,033 tpd. Copies of the environmental review documents for the East 132nd Street Site are available upon request on compact disk.

Under Long Term Export, DSNY-managed Waste would be containerized and then drayed to Oak Point Rail Yard, where the containers would be loaded onto rail cars. The trucking of containers of DSNY-managed ~~waste~~ Waste to Oak Point Rail Yard is considered part of the environmental review, since, at present, all waste from the East 132nd Street Site goes out by transfer trailer. However, the review would be limited to off-site impacts of draying of containerized waste to Oak Point. Oak Point has been permitted as an intermodal yard and any changes in this permit would be subject to DSNY's new rules, as a non-discretionary action, and thus not subject to environmental review. The RFP procurement issued by the City requires that proposers commit to exporting all waste (both DSNY and commercial) processed at their facility by rail or barge. Although historically some waste processed at the East 132nd Street Site was

containerized and drayed to Oak Point Rail Yard for export by rail, currently all waste moves out via transfer trailer. Thus the draying of full containers of waste and return of empties between East 132nd Street and Oak Point Rail Yard equivalent to the fully permitted capacity of the facility (2999 tpd) would be a change in the Existing Condition.

The results of the environmental analyses of the facility options at the East 132nd Street Site are presented in the following sections:

12.2 Land Use, Zoning, and Public Policy
12.3 Socioeconomic Conditions
12.4 Community Facilities and Services
12.5 Open Space
12.6 Cultural Resources
12.7 Urban Design, Visual Resources, and Shadows
12.8 Neighborhood Character
12.9 Natural Resources
12.10 Hazardous Materials
12.11 Water Quality
12.12 Waterfront Revitalization Program
12.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
12.14 Traffic, Parking, Transit, and Pedestrians
12.15 Air Quality
12.16 Odor
12.17 Noise

The facility elements evaluated for this site are:

- East 132nd Street Truck to Rail TS; and
- Oak Point Rail Yard.

Section 2.2.9 provides a summary description of the site and important characteristics of the design and operation of each element. The following sections provide additional information on the site or the study area, as appropriate to each analysis.

A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3.

12.2 Land Use, Zoning, and Public Policy

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Land Use, Zoning, and Public Policy environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.3 Socioeconomic Conditions

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Socioeconomic Conditions environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.4 Community Facilities and Services

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Community Facilities and Services environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.5 Open Space

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Open Space environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.6 Cultural Resources

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Cultural Resources environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.7 Urban Design, Visual Resources, and Shadows

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Urban Design, Visual Resources, and Shadows environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.8 Neighborhood Character

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Neighborhood Character environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.9 Natural Resources

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Natural Resources environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.10 Hazardous Materials

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Hazardous Materials environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.11 Water Quality

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Water Quality environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.12 Waterfront Revitalization Program

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Waterfront Revitalization Program environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

The East 132nd Street Site was previously analyzed as discussed in Section 12.1. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed Infrastructure, Solid Waste and Sanitation Services, and Energy environmental review.

Refer to Section 12.1 for an explanation of the analysis required for the Oak Point Rail Yard.

12.14 Traffic, Parking, Transit, and Pedestrians

The East 132nd Street Site is currently permitted to process 2,999 tons of waste per day and is currently contracted to accept up to 1,500 tpd of Bronx DSNY-managed Waste under Interim Export. Under this Alternative, it is assumed that the East 132nd Street Site would process all of the Bronx DSNY-managed Waste long term (approximately 2,337 tons on an average peak day) with no increase in capacity. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in DSNY collection vehicles in the study area (which is defined below) and on other site-generated traffic resulting from the acceptance of additional DSNY-managed Waste. (See Section 3.16 for a discussion of CEQR analysis thresholds.) Conservatively, it was assumed that DSNY collection vehicle trips would not eliminate non-DSNY collection vehicle trips associated with existing commercial waste operations at the East 132nd Street Site that would be displaced by this action.

DSNY-managed Waste would be containerized and then drayed to Oak Point Rail Yard, where the containers would be loaded onto rail cars. The draying of containers carrying DSNY-managed Waste to Oak Point Rail Yard is considered part of this environmental review, since, at present, all waste from the East 132nd Street Site is transported out by transfer trailer. (Although historically some waste processed at the East 132nd Street Site was containerized and drayed to Oak Point Rail Yard for export by rail, currently all waste moves out via transfer trailer.) However, it is assumed that both DSNY and other waste processed at this site will be transported to Oak Point Rail Yard. Thus, the analysis was performed for draying of full containers of waste and return of empties between the East 132nd Street Site and Oak Point Rail Yard equivalent to the fully permitted capacity of the facility of 2,999 tpd.

12.14.1 Existing Conditions

This site is located in the Port Morris area of the Bronx bounded on the north by the Port Morris Rail Yard, on the south by the Bronx Kill, on the east by the East River and on the west by the combination of the elevated Bruckner Expressway, Triborough Bridge approach span and the at-grade Bruckner Boulevard. Access to and from the area is generally limited to East 138th Street through its major intersection with Bruckner Boulevard and along East 132nd Street. Thus, geography, the limited street network and the adjacent Bruckner Boulevard provide a well-defined boundary for the study area where concentrations of trips to and from the site would be expected to occur. The study area is characterized by a mixture of light industrial/manufacturing land uses.

Bruckner Boulevard is a major corridor that extends from the Third Avenue Bridge to the interchange of the Bruckner and Sheridan Expressways. East 138th Street and Locust Avenue are the primary routes leading to and from the East 132nd Street Site.

12.14.1.1 Definition of Study Area

The traffic analysis study area was defined as the Port Morris area surrounding the site as described above. Figure 12.14-1 shows the locations of the intersections selected for analysis (locations A through C). Intersections analyzed were selected using the procedures defined in Section 3.16.

12.14.1.2 Surface Network

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the site or the intersection nearest the site if streets adjacent to the site are not designated truck routes. A map showing all major truck routes and local truck routes in the Bronx is provided in Section 3.16 (see Figure 3.16-2).



500 0 500 Feet

Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 12.14-1 Traffic Analysis Study Area
East 132nd Street Site

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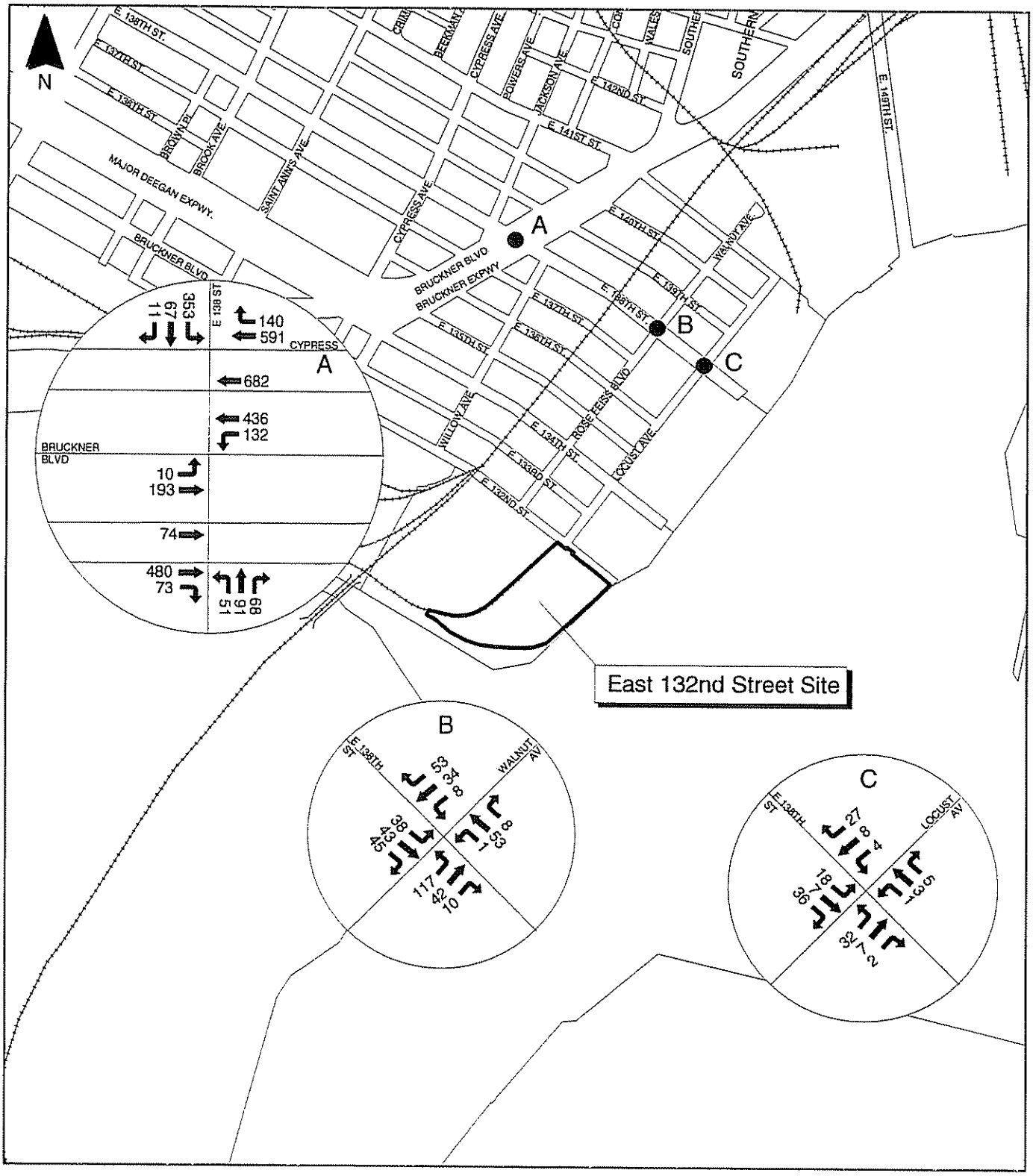
The primary truck access route to the Port Morris area is Bruckner Boulevard, a major arterial and designated truck route located at grade and below the Bruckner Expressway (I-278) for much of its length, with both express (mainline) and service road separated roadways. Through-truck routes connect the South Bronx with Queens via the Triborough, Bronx-Whitestone or Throgs Neck Bridges, and with Manhattan via the Willis Avenue, Third Avenue or Madison Avenue Bridges. East 138th Street is also designated as a local truck route from the East River to the Madison Avenue Bridge.

12.14.1.3 Existing Traffic Operations

The three intersections listed below were identified for analysis because they are most likely to be affected from additional truck trips generated by the East 132nd Street Site. (Diagrams of these intersections were included in technical backup submitted to NYCDOT and are shown on Figure 12.14-1.)

- Bruckner Boulevard and East 138th Street – Signalized Intersection (Location A)
- East 138th Street and Walnut Avenue – Unsignalized Intersection (Location B)
- East 138th Street and Locust Avenue – Unsignalized Intersection (Location C)

Manual turning movement counts, including vehicle classification, were conducted; and ATR counts were undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted in June 2003 and June 2004, while ATR counts were conducted in June and July 2004. Figures 12.14-2, 12.14-3 and 12.14-4 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 12.14-1 presents the v/c ratio, delay and LOS for the four intersections during the AM, Facility, and PM peaks. The AM peak generally occurred between 8:00 a.m. and 9:00 a.m., the Facility peak between 11:00 a.m. and 12:00 p.m., and the PM peak between 5:00 p.m. and 6:00 p.m.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

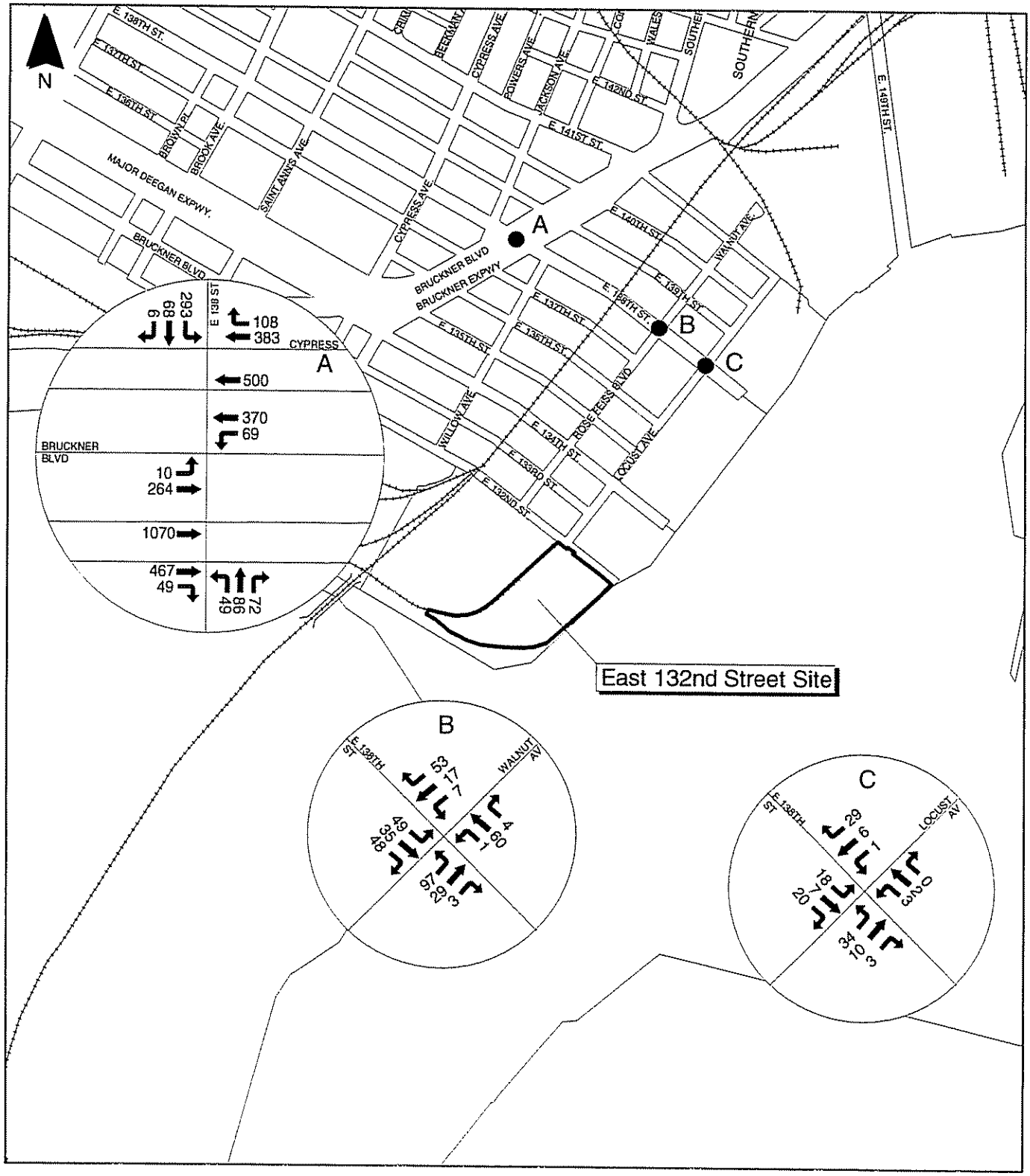
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Figure 12.14-2 Existing Traffic Volumes AM Peak East 132nd Street Site

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Figure 12.14-3 Existing Traffic Volumes Facility Peak East 132nd Street Site

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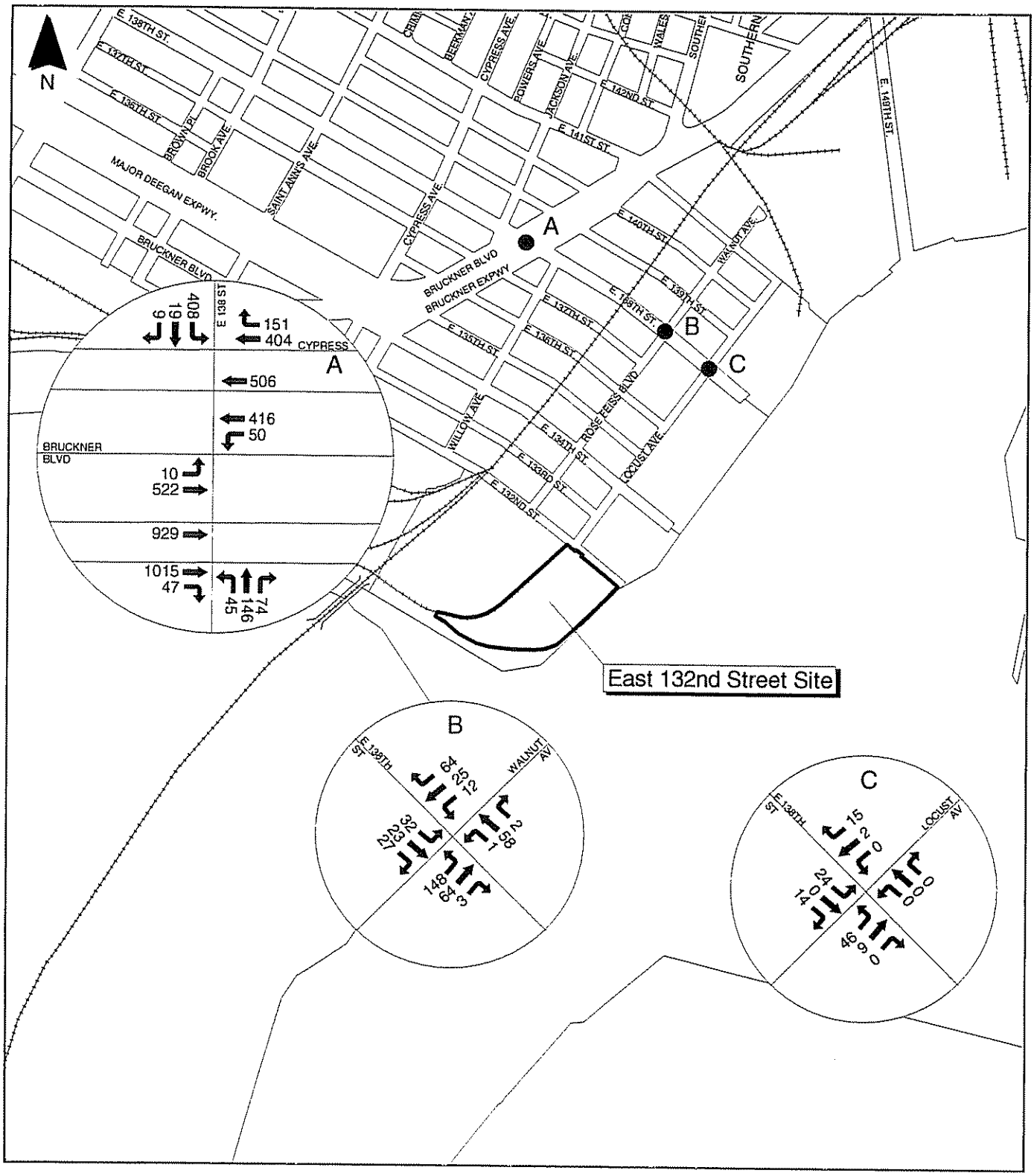


Figure 12.14-4 Existing Traffic Volumes PM Peak East 132nd Street Site

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Table 12.14-1
HCM Analysis[1] – Existing Conditions
East 132nd Street Site

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 138th Street & Bruckner Boulevard ML Inner (signalized)									
NB LT	0.22	20.1	C	0.25	20.3	C	0.40	22.5	C
SB DFL	0.60	46.3	D	0.53	44.4	D	0.36	37.7	D
SB T	0.63	28.7	C	0.54	26.2	C	0.61	27.8	C
EB L	0.95	86.0	F	0.99	98.5	F	0.93	84.0	F
EB LT	0.77	55.9	E	0.94	84.0	F	1.00	98.9	F
WB DFL	0.61	53.3	D	-	-	-	-	-	-
WB T	0.35	37.0	D	-	-	-	-	-	-
WB LT	-	-	-	0.55	41.1	D	0.45	38.2	D
OVERALL		47.2	D		48.3	D		42.6	D
East 138th Street & Bruckner Boulevard ML Outer (signalized)									
NB T	0.78	31.2	C	0.81	32.7	C	0.61	26.2	C
SB T	0.51	24.3	C	0.32	21.2	C	0.39	22.2	C
EB T	0.55	39.5	D	0.64	41.6	D	0.48	38.0	D
WB T	0.31	35.5	D	0.36	36.2	D	0.31	35.4	D
OVERALL		31.4	C		32.9	C		28.8	C
East 138th Street & Bruckner Boulevard SR (signalized)									
NB TR	0.52	24.6	C	0.43	22.9	C	0.71	28.8	C
SB TR	0.56	25.2	C	0.37	21.9	C	0.40	22.3	C
EB TR	0.58	40.1	D	0.61	40.9	D	0.53	38.8	D
WB TR	0.56	40.4	D	0.62	41.9	D	0.45	37.6	D
OVERALL		30.7	C		31.3	C		30.7	C
East 138th Street & Walnut Avenue (unsignalized)									
NB LTR	0.42	10.5	B	0.38	10.4	B	0.53	11.2	B
SB LTR	0.30	8.9	A	0.29	9.3	A	0.33	9.2	A
EB LT	0.27	11.1	B	0.30	10.4	B	0.27	10.8	B
EB R	0.16	8.7	A	0.18	8.6	A	0.13	9.0	A
WB LT	0.25	10.1	B	0.24	10.1	B	0.24	9.6	A
WB R	0.06	8.2	A	0.06	7.6	A	0.02	9.6	A
OVERALL		10.0	A		9.8	A		10.4	B
East 138th Street & Locust Avenue (unsignalized)									
EB LT	0.06	10.8	B	0.08	10.8	A	0.07	11.0	B
EB R	0.07	9.1	A	0.03	9.1	A	0.04	9.3	A
WB LTR	0.03	9.5	A	0.02	10.5	B	0.00	-	-
OVERALL		NA	NA		NA	NA		NA	NA

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LTR = left, through and right movements
LT = left through movement
L = left movement
R = right movement
TR = through right movement
T = through movement
ML = mainline
SR = service road
EB = eastbound
NB = northbound
SB = southbound
WB = westbound
NA = Not Applicable

For simplicity in this analysis, Bruckner Boulevard is described as north-south and East 138th Street as east-west. On Bruckner Boulevard at East 138th Street, existing traffic volumes peak between 7:00 a.m. and 9:00 a.m., then decrease, but remain at a fairly high relative level throughout the Facility peak period. Traffic volumes peak again between 4:00 p.m. and 6:00 p.m. On East 138th Street and Locust Avenue, traffic generally peaks from 8:00 a.m. to 10:00 a.m., and then decreases very gradually throughout the day.

The composition of vehicles in the traffic stream varies by location and time of day, but is typically comprised of a high proportion of trucks. Along Bruckner Boulevard, trucks and buses comprise between 10% and 30% of the total traffic during the AM peak and midday, depending upon the direction of travel and whether on the service road or main road, and generally less than 10% during the PM peak. On East 138th Street east of Bruckner Boulevard and on Locust Avenue, trucks usually comprise more than 50% of the total traffic volume throughout most of the day, with some reduction in the late afternoon.

The intersection of Bruckner Boulevard with East 138th Street has been identified as a high accident location. In the three-year period between 1999 and 2001, a total of 361 accidents occurred at this intersection, of which about half (181) were reportable with no fatalities and 106 accidents involved injuries. Most accidents involved other motor vehicles and eight accidents were pedestrian-related. Of the 168 accidents where collision type was reported, 25% were right angle, 20%t overtaking, 19% left turn and 14% rear-end collisions. Approximately 80% of the vehicles involved in accidents were autos/vans/pickups and 11% were trucks. The predominant travel direction of vehicles was northbound (39%) followed by southbound (27%).

12.14.1.3.1 LOS at Signalized Intersections

Bruckner Boulevard at East 138th Street consists of two mainline roadways (differentiated into an inner and outer roadway, with the northbound outer mainline roadway feeding directly onto the Bruckner Expressway on-ramp) and a service road. Therefore, there are three distinct northbound and southbound approaches and, for analysis purposes, the intersection was divided into three intersections, as presented in Table 12.14-1. All movements operate at LOS D or better, except those on the East 138th Street eastbound approach, which operate at LOS E/F due to the high left-turning traffic volume from East 138th Street.

12.14.2.3.2 LOS at Unsignalized Intersections

The unsignalized intersections of East 138th Street with Walnut Avenue and Locust Avenue operate at LOS B or better during all time periods.

12.14.1.4 Existing DSNY-Related Traffic

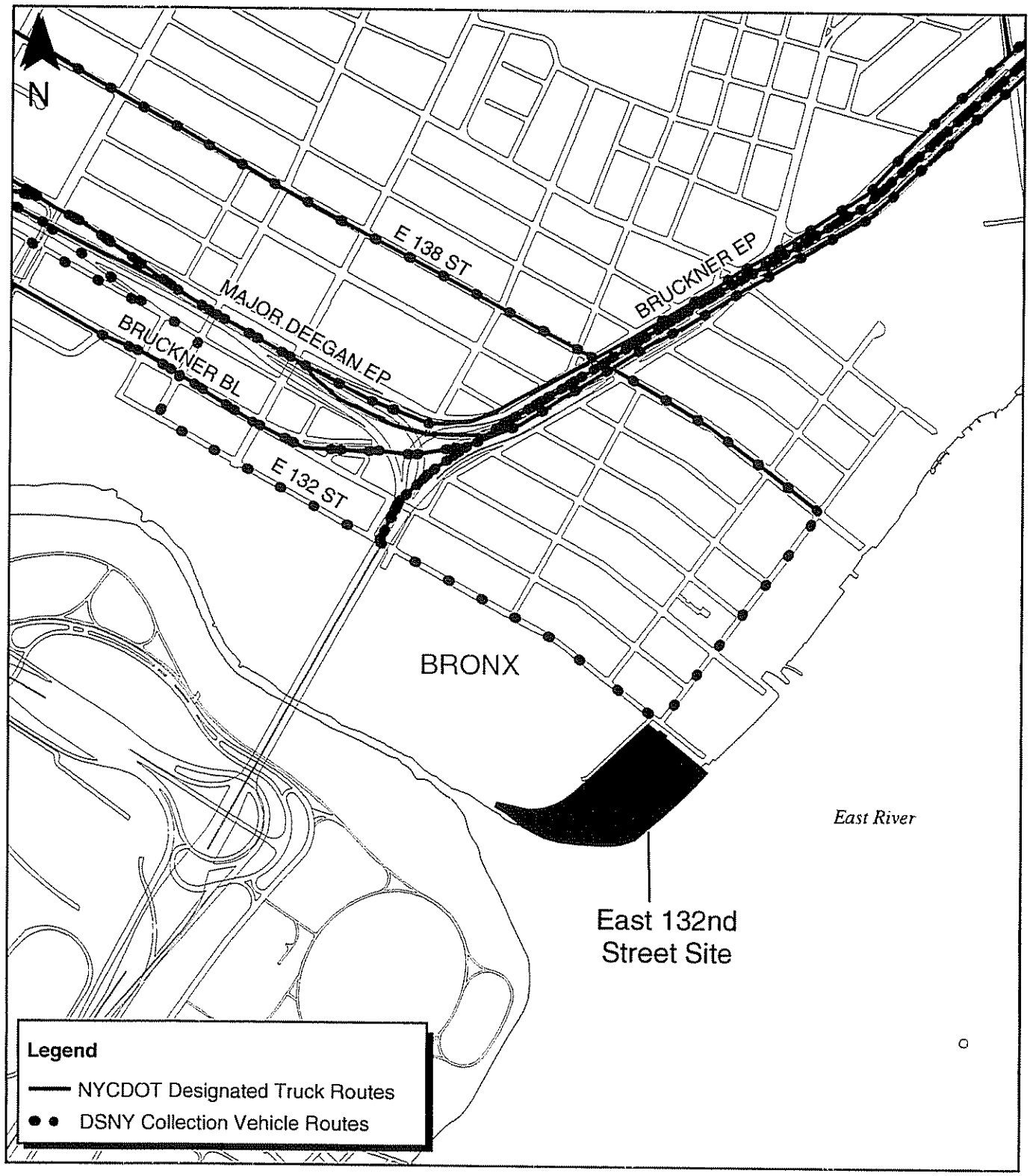
Currently, approximately 1,033 tpd of DSNY-managed ~~waste~~ Waste generated in CDs 9 and 10 in the Bronx is transported to the East 132nd Street Site on an average peak day, which, for this proposed Alternative would accept all Bronx DSNY-managed ~~waste~~Waste. (DSNY-managed Waste generated by Bronx CDs 1 through 8, 11 and 12 is currently transported under the Bronx Interim Export Program to the Harlem River Yard facility located at 98 Lincoln Avenue in the Port Morris section of the Bronx). E-Z Pack loads from CD 1 and 6 are delivered to either the East 132nd Street facility or to Triboro Fibers, located at 770 Barry Street in the Bronx, as are all borough-wide collection activities. Existing DSNY collection vehicles proceeding to and from these vendors are routed primarily along Bruckner Boulevard. The existing access route defined for the East 132nd Street Site extends from Bruckner Boulevard along East 138th Street and Locust Avenue. NYCDOT-designated truck routes are provided in Figure 12.14-5.

12.14.1.5 Public Transportation

Two bus routes provide service in the Port Morris area of the Bronx and directly serve the East 132nd Street Site. The Bx17 route provides local service between Port Morris and Fordham Plaza. Service frequency is between 8 and 12 minutes during weekdays. The Bx33 connects Port Morris with Harlem in Manhattan. It provides service approximately every 15 minutes weekdays.

12.14.1.6 Pedestrian Activity

Pedestrian activity is generally low within the study area. During several field visits, pedestrian activity was observed to be minimal and is not expected to significantly affect operations or be affected by them.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

500 0 500 Feet

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Figure 12.14-5 DSNY Collection Vehicle Routes
East 132nd Street Site

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12.14.2 Future No-Build Conditions

12.14.2.1 Traffic Conditions

The following assumptions and traffic assignments were applied in the development of Future No-Build traffic volumes:

- Continued operation of the Bronx Interim Export Program with MSW delivered to the vendors noted above; and
- Background traffic growth of 0.5% per year in accordance with the 2001 CEQR Technical Manual.

There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 12.14-6, 12.14-7 and 12.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peak hours at the intersections analyzed. Table 12.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the study intersections.

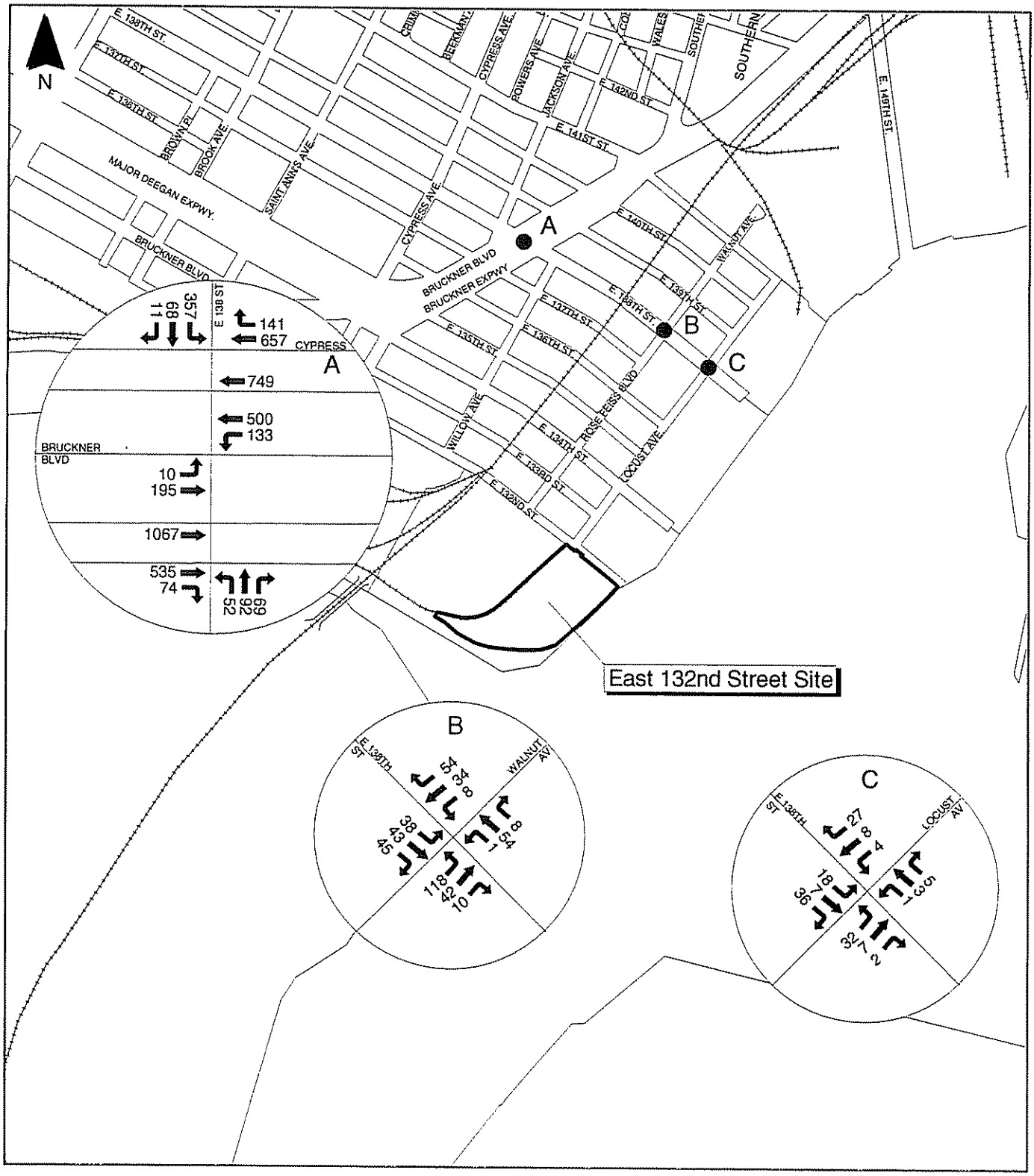
As shown, very little change in traffic operations is anticipated from Existing Conditions. The unsignalized study intersections demonstrate a negligible increase in delay. For the signalized study intersection of Bruckner Boulevard with East 138th Street, the highest increase in delay was indicated on the eastbound East 138th Street approach.

12.14.2.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

12.14.2.3 Pedestrian Activity

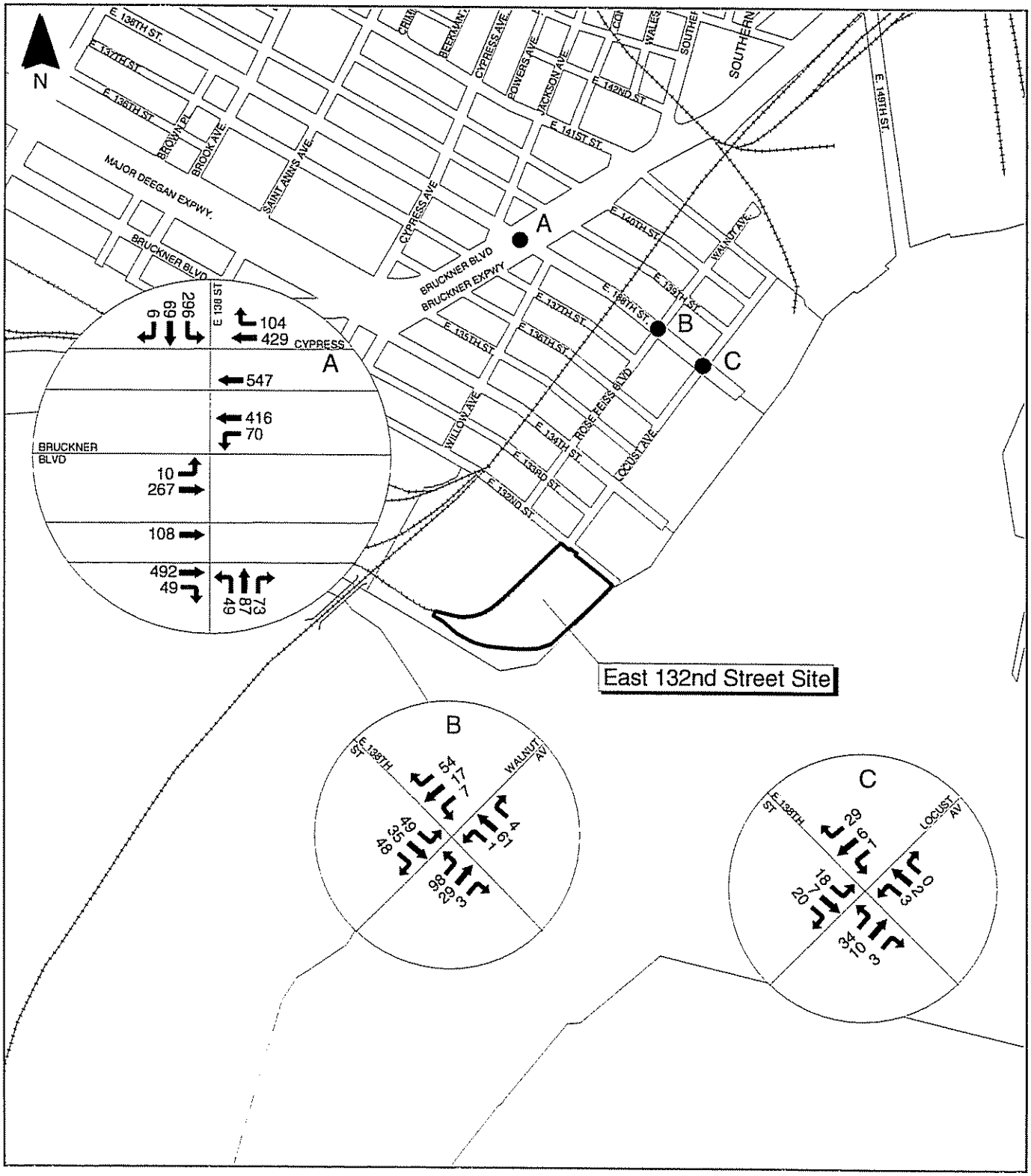
Future No-Build Conditions are expected to remain the same as Existing Conditions.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 12.14-6 Future No-Build Traffic Volumes AM Peak East 132nd Street Site

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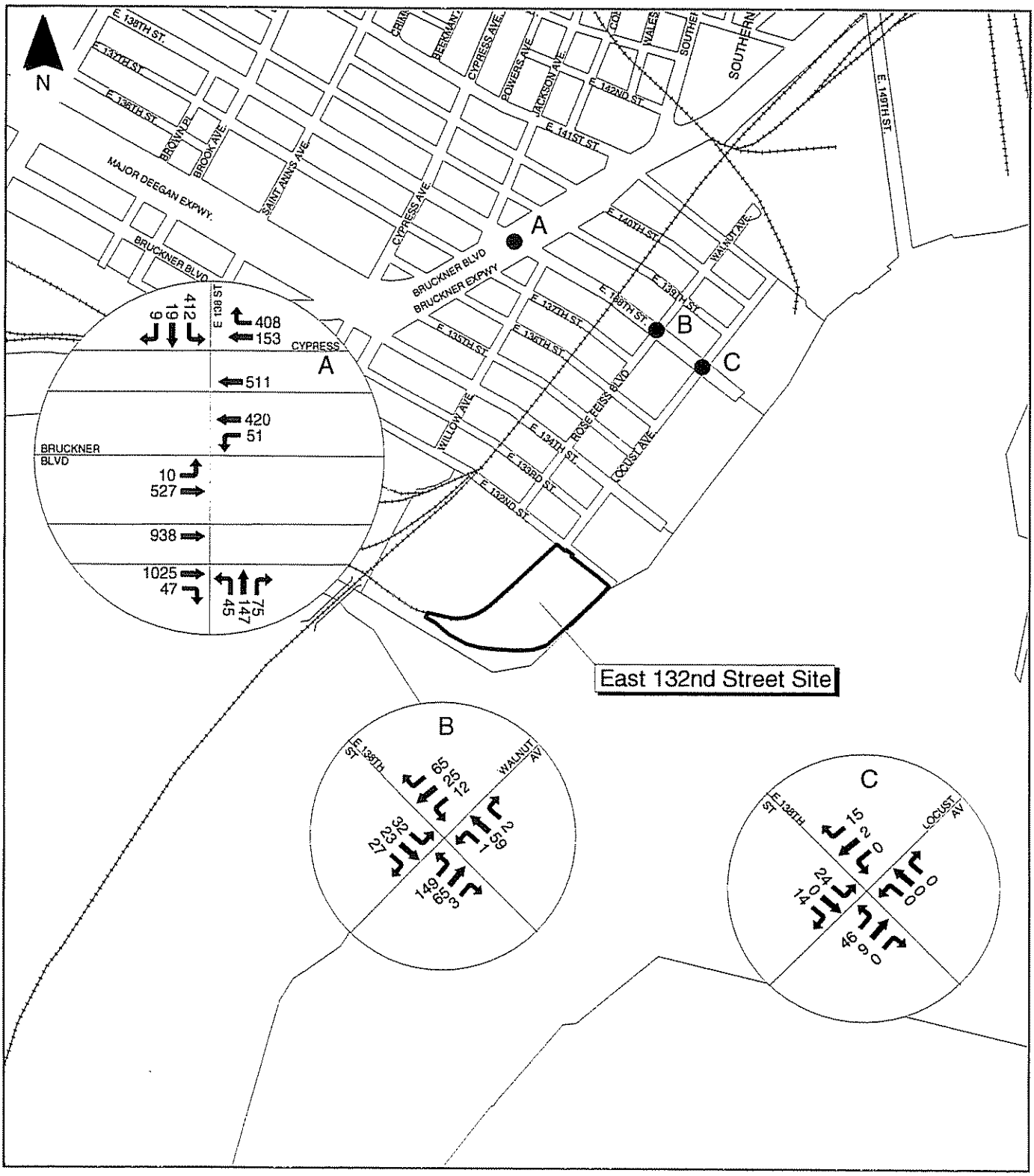
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 12.14-7 Future No-Build Traffic Volumes Facility Peak East 132nd Street Site

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 12.14-8 Future No-Build Traffic Volumes PM Peak East 132nd Street Site

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Table 12.14-2
HCM Analysis[1] – Future No Build Conditions
East 132nd Street Site

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 138th Street & Bruckner Boulevard ML Inner (signalized)									
NB LT	0.21	19.9	B	0.25	20.4	C	0.42	22.8	C
SB DFL	0.60	46.6	D	0.54	44.8	D	0.37	38.0	D
SB T	0.72	32.2	C	0.61	28.8	C	0.62	28.0	C
EB L	0.96	88.5	F	1.00	102.0	F	0.95	88.4	F
EB LT	0.78	56.7	E	0.96	88.2	F	1.01	101.9	F
WB DFL	0.63	54.8	D	-	-	-	-	-	-
WB T	0.35	37.0	D	-	-	-	-	-	-
WB LT	-	-	-	0.56	41.3	D	0.46	38.3	D
OVERALL		48.1	D		49.3	D		44.0	D
East 138th Street & Bruckner Boulevard ML Outer (signalized)									
NB T	0.78	31.6	C	0.81	33.1	C	0.61	26.3	C
SB T	0.56	25.3	C	0.35	21.6	C	0.39	22.2	C
EB T	0.56	39.6	D	0.65	41.8	D	0.49	38.1	D
WB T	0.32	35.6	D	0.36	36.2	D	0.32	35.4	D
OVERALL		31.7	C		33.0	C		28.9	C
East 138th Street & Bruckner Boulevard SR (signalized)									
NB TR	0.57	25.5	C	0.45	23.3	C	0.72	29.0	C
SB TR	0.61	26.2	C	0.40	22.4	C	0.40	22.4	C
EB TR	0.59	40.3	D	0.62	41.1	D	0.53	38.9	D
WB TR	0.57	40.6	D	0.62	42.0	D	0.46	37.7	D
OVERALL		31.1	C		31.3	C		30.8	C
East 138th Street & Walnut Avenue (unsignalized)									
NB LTR	0.42	10.6	B	0.38	10.4	B	0.53	11.2	B
SB LTR	0.31	8.9	A	0.29	9.4	A	0.33	9.2	A
EB LT	0.27	11.1	B	0.30	10.4	B	0.27	10.8	B
EB R	0.16	8.7	A	0.18	8.6	A	0.13	9.0	A
WB LT	0.25	10.2	B	0.24	10.1	B	0.24	9.6	A
WB R	0.06	8.2	A	0.06	7.6	A	0.02	9.6	A
OVERALL		10.0+	B		9.9	A		10.4	B
East 138th Street & Locust Avenue (unsignalized)									
EB LT	0.06	10.9	B	0.08	10.8	B	0.07	11.1	B
EB R	0.07	9.1	A	0.03	9.1	A	0.04	9.3	A
WB LTR	0.03	9.5	A	0.02	10.5	B	0.00	-	-
OVERALL		NA	NA		NA	NA		NA	NA

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left

LTR = left, through and right movements

LT = left through movement

L = left movement

R = right movement

TR = through right movement

T = through movement

ML = mainline

SR = service road

EB = eastbound

NB = northbound

SB = southbound

WB = westbound

NA = Not Applicable

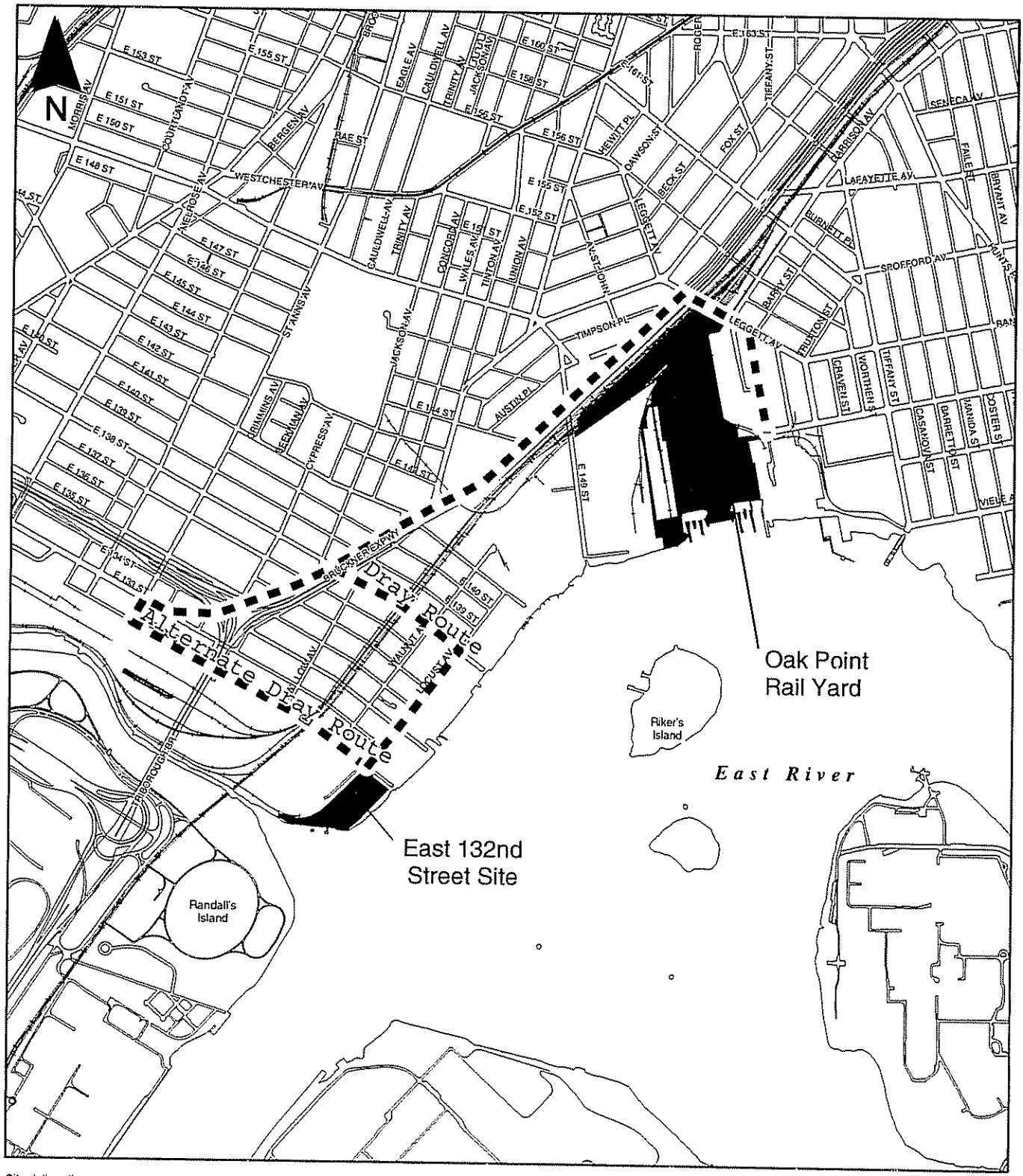
12.14.3 Potential Impacts with the East 132nd Street Truck to Rail TS

12.14.3.1 2006 Future Build Traffic Conditions

Under Build Conditions, the East 132nd Street Truck to Rail TS would receive DSNY-managed Waste from all twelve CDs in the Bronx, approximately 2,337 tpd on an average peak day. All DSNY-managed Waste and any commercial waste processed at the East 132nd Street Truck to Rail TS would be drayed to the Oak Point Rail Yard with the dray vehicles exiting the facility and proceeding north on Locust Avenue, west on East 138th Street, north on Bruckner Boulevard, east on Leggett Avenue and south on Barry Street to Oak Point, returning by the same route. On Locust Avenue and East 138th Street, the dray trucks would replace a portion of existing transfer trailer activity and a credit was taken to adjust for these existing trips. However, on the remainder of the route, all truck activity associated with draying containerized waste to Oak Point represents new truck trips.

Potential traffic impacts may result from the increase in DSNY collection vehicle trips and transfer trailer trips to and from the site during all peak hours. Additionally, employee trips to and from the site may contribute to these traffic impacts during the AM peak hour.

The proposed collection vehicle and dray routes for the East 132nd Street Truck to Rail TS are shown in Figure 12.14-9.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

1,000 0 1,000 Feet

HDR
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EEA
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Cambridge Environmental Inc

Figure 12.14-9 Truck to Rail Dray Route
East 132nd Street Site

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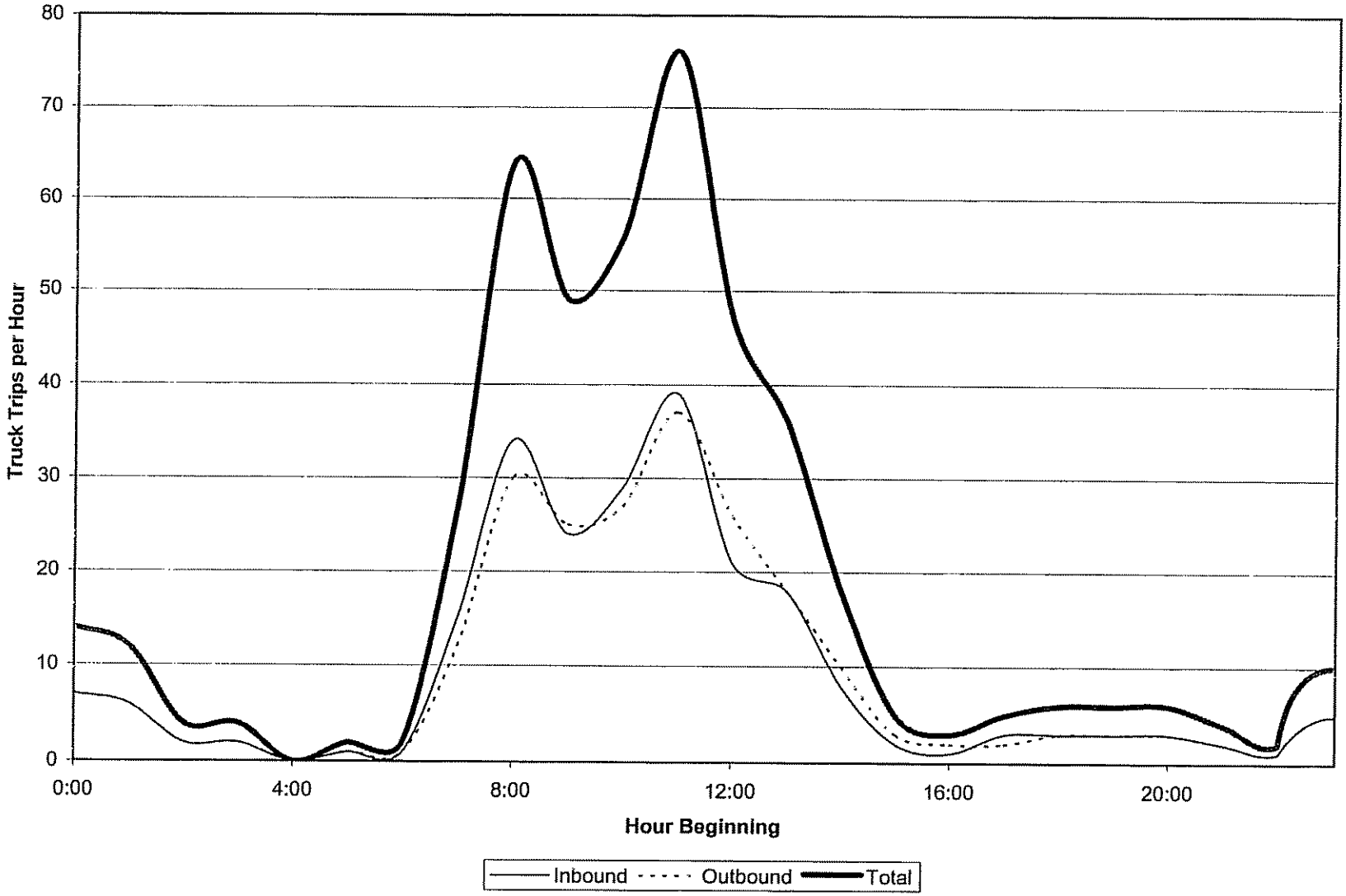
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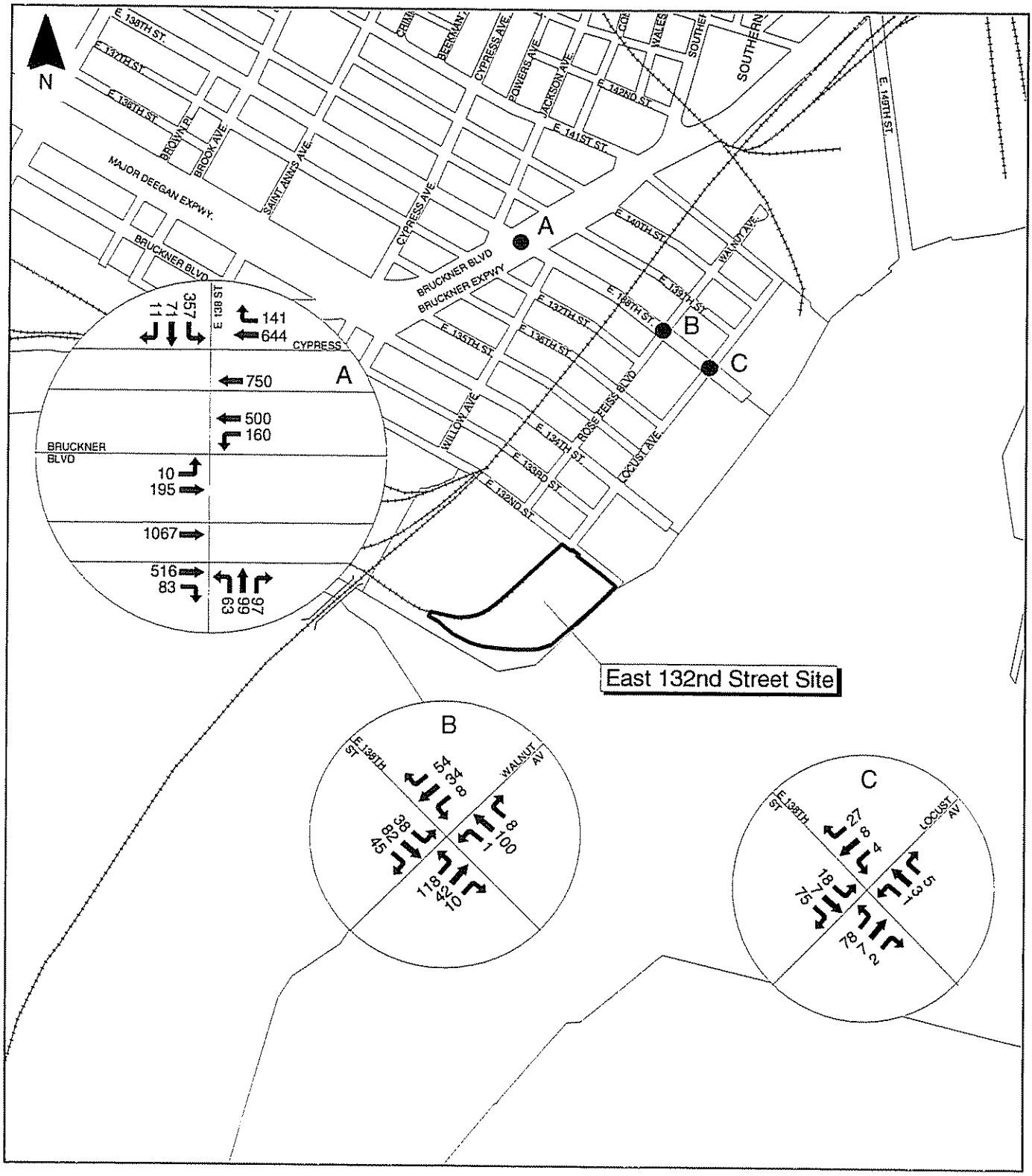
Figure 12.14-10 presents the average peak day temporal distribution of additional collection vehicle trips that would be generated by the East 132nd Street Truck to Rail TS acceptance of all Bronx DSNY-managed Waste. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of additional collection vehicle trips generated by the East 132nd Street Truck to Rail TS is expected to vary between zero and approximately 14 truck trips per hour in the late evening/early morning, 18 truck trips to approximately 75 truck trips per hour in the mid-morning/early afternoon, and approximately 5 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (76, or 38 inbound plus 38 outbound) is expected to occur from 11:00 a.m. to 12:00 p.m. The volume of dray trips to Oak Point is expected to average 8 trips in and 8 trips out per hour over the 24-hour period.

Additional employee trips are expected to be generated as a result of the acceptance of all DSNY-managed Waste by the East 132nd Street Truck to Rail TS. Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Most related trips would occur around shift changes when employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m. Because only the AM peak (8:00 a.m. to 9:00 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the East 132nd Street Truck to Rail TS during the shift change were considered part of the net increase in site-generated traffic. A net increase of 10 vehicle trips at the East 132nd Street Truck to Rail TS and one vehicle trip at Oak Point was estimated for the East 132nd Street Truck to Rail TS.

Figures 12.14-11, 12.14-12 and 12.14-13 provide the 2006 Future Build Condition traffic volumes at the study intersections, which are a combination of Future No-Build traffic volumes and incremental traffic volumes associated with the acceptance of all Bronx DSNY-managed Waste at the East 132nd Street Site. These traffic volumes were derived using a two-stage process. First, the truck trips generated by the existing Interim Export Program were subtracted from the truck trips expected to be generated by the acceptance of all Bronx DSNY-managed Waste at the East 132nd Street Site and increased by 20% to allow for contingency due to potential fluctuations in Waste deliveries. These net trips were added to the Future No-Build traffic volumes along the paths specified in Figure 12.14.-5 and 12.14-9.

Figure 12.14-10
Truck Trips per Hour
East 132nd Street Truck to Rail TS





Site delineations are approximate
Base Map Source: New York City Department of City Planning

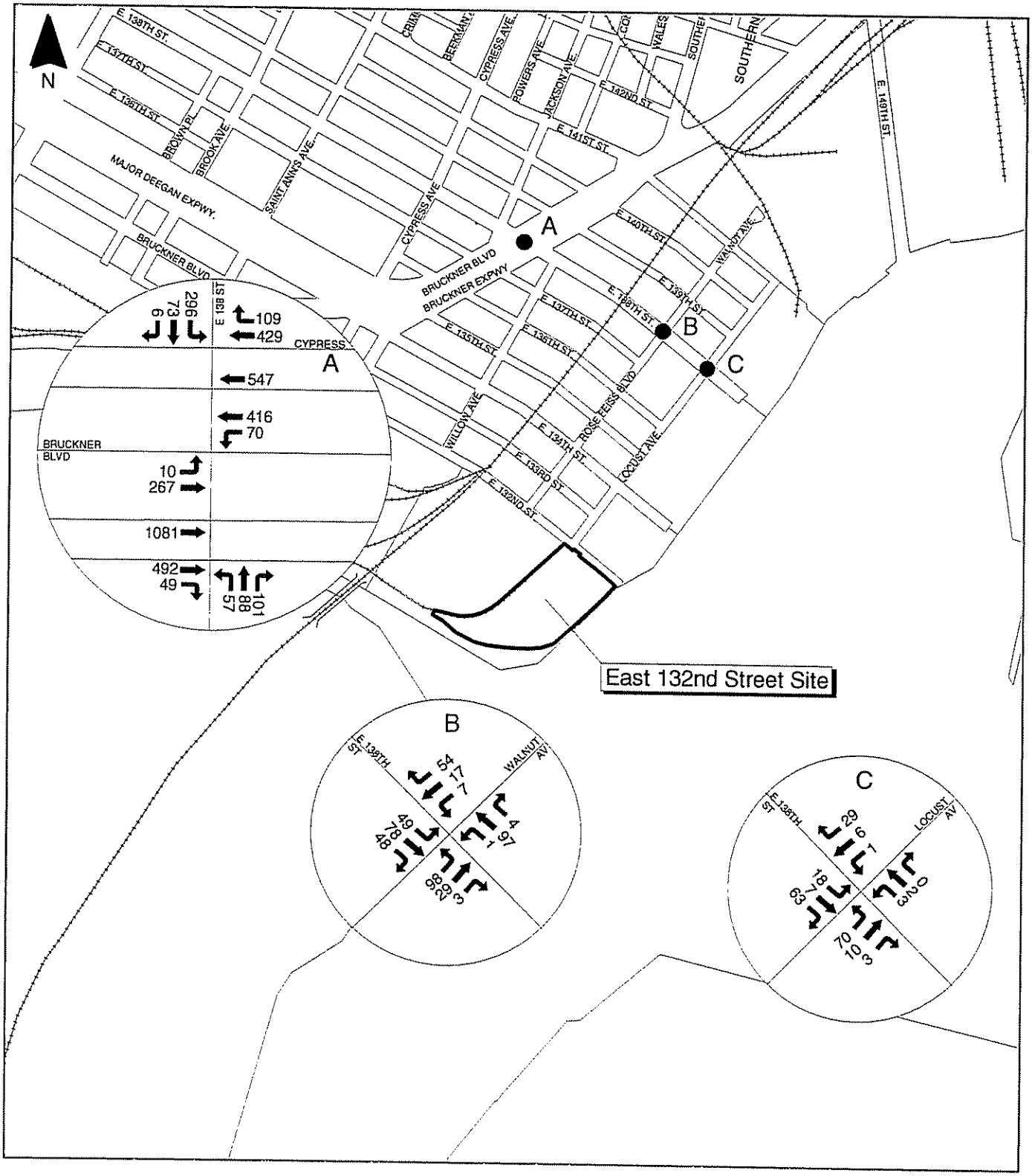
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Figure 12.14-11 2006 Build Traffic Volumes AM Peak East 132nd Street Site

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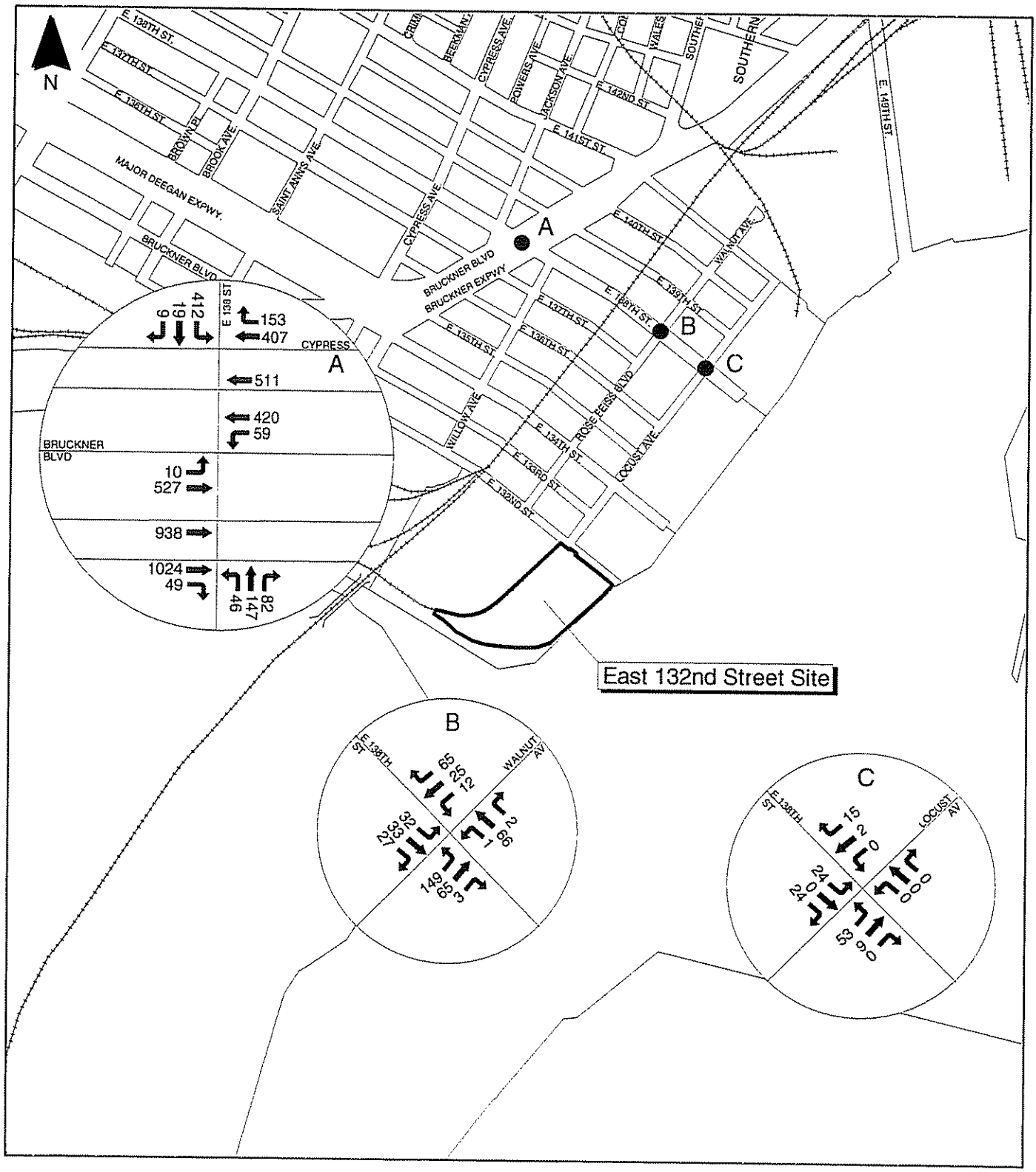


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 12.14-12 2006 Build Traffic Volumes Facility Peak East 132nd Street Site

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 12.14-13 2006 Build Traffic Volumes PM Peak East 132nd Street Site

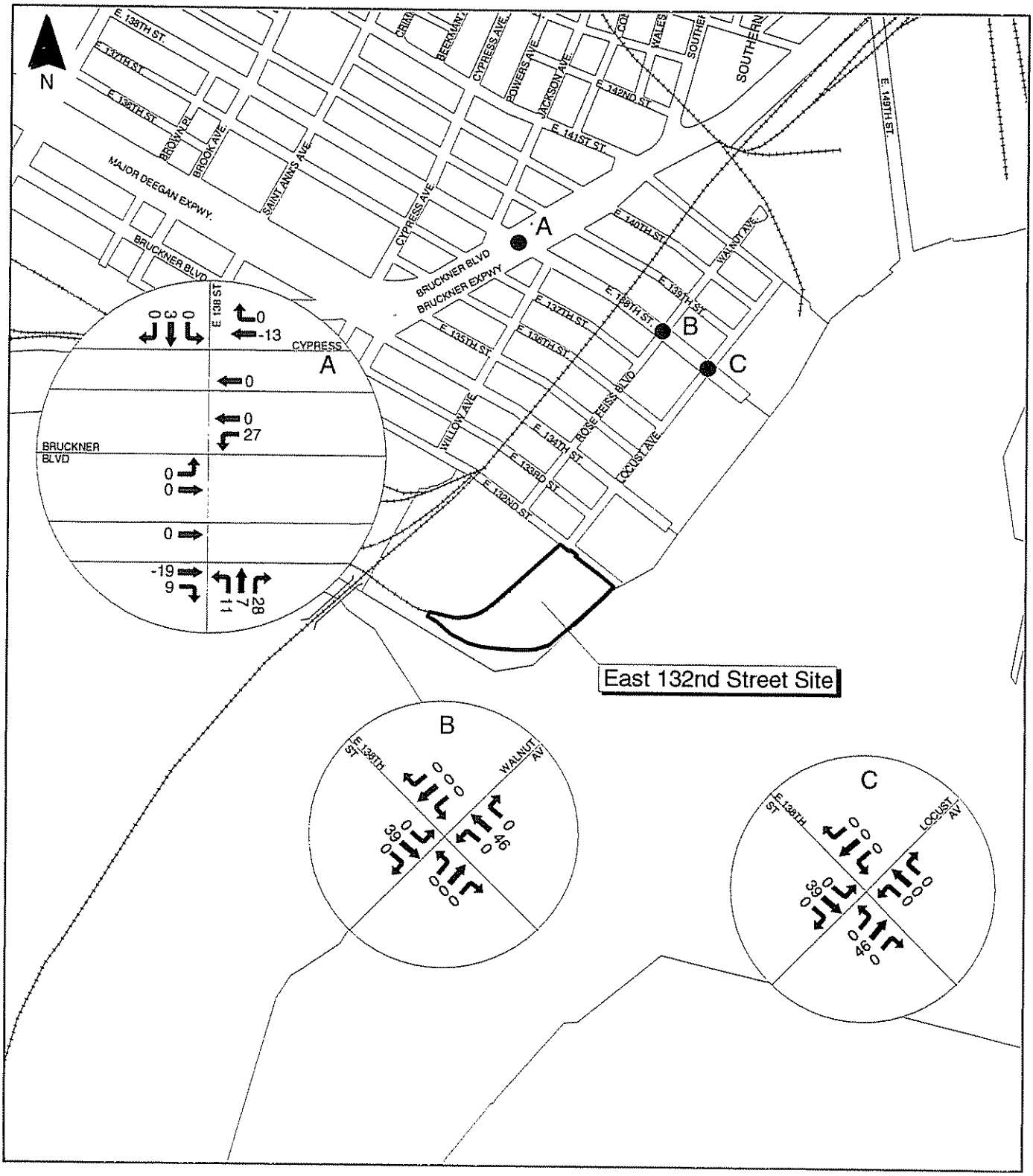
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Figures 12.14-14, 12.14-15 and 12.14-16 illustrate the resulting net change in traffic volumes at each study intersection. A negative value indicates that the volume of existing DSNY-related collection vehicle trips to the interim export facilities removed from a movement would be greater than the volume of truck traffic added to the movement by trips generated through the acceptance of all Bronx DSNY-managed Waste at the East 132nd Street Site. The highest increases in traffic would occur on the northbound right and southbound left turns on Bruckner Boulevard at East 138th Street, the westbound right and left turns from East 138th Street at Bruckner Boulevard, the eastbound and westbound through movements on East 138th Street at Walnut Avenue, the eastbound right turn from East 138th Street to Locust Avenue southbound and the northbound left turn from Locust Avenue to East 138th Street westbound.

As noted in Section 12.14.2.2, the intersection of Bruckner Boulevard with East 138th Street is identified as a high accident location. The Build Condition would increase the traffic levels through this intersection as discussed above, with trucks comprising most of the incremental vehicles. Existing accident records indicate that trucks were involved in approximately 11% of the accidents at this intersection. Therefore, trucks are no more frequently involved in accidents at this intersection than their occurrence in the total traffic stream. It also appears that no collision type or travel direction is prevalent in the accident history, possibly indicating that the high accident history at this intersection is due primarily to its overall complexity. However, the proportion of accidents involving eastbound/westbound vehicles (34%) appears to be higher than the proportion of total traffic entering this intersection from the eastbound/westbound approaches. This possibly indicates the need for additional clearance time for the eastbound/westbound approaches.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 63% of weekday traffic volumes. Table 12.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency incremental collection vehicle traffic expected to be generated on the weekend due to the study Alternative. No analysis was performed for Sunday because the East 132nd Street Truck to Rail TS would not accept DSNY-managed Waste on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 12.14-14 2006 Net Traffic AM Peak East 132nd Street Site

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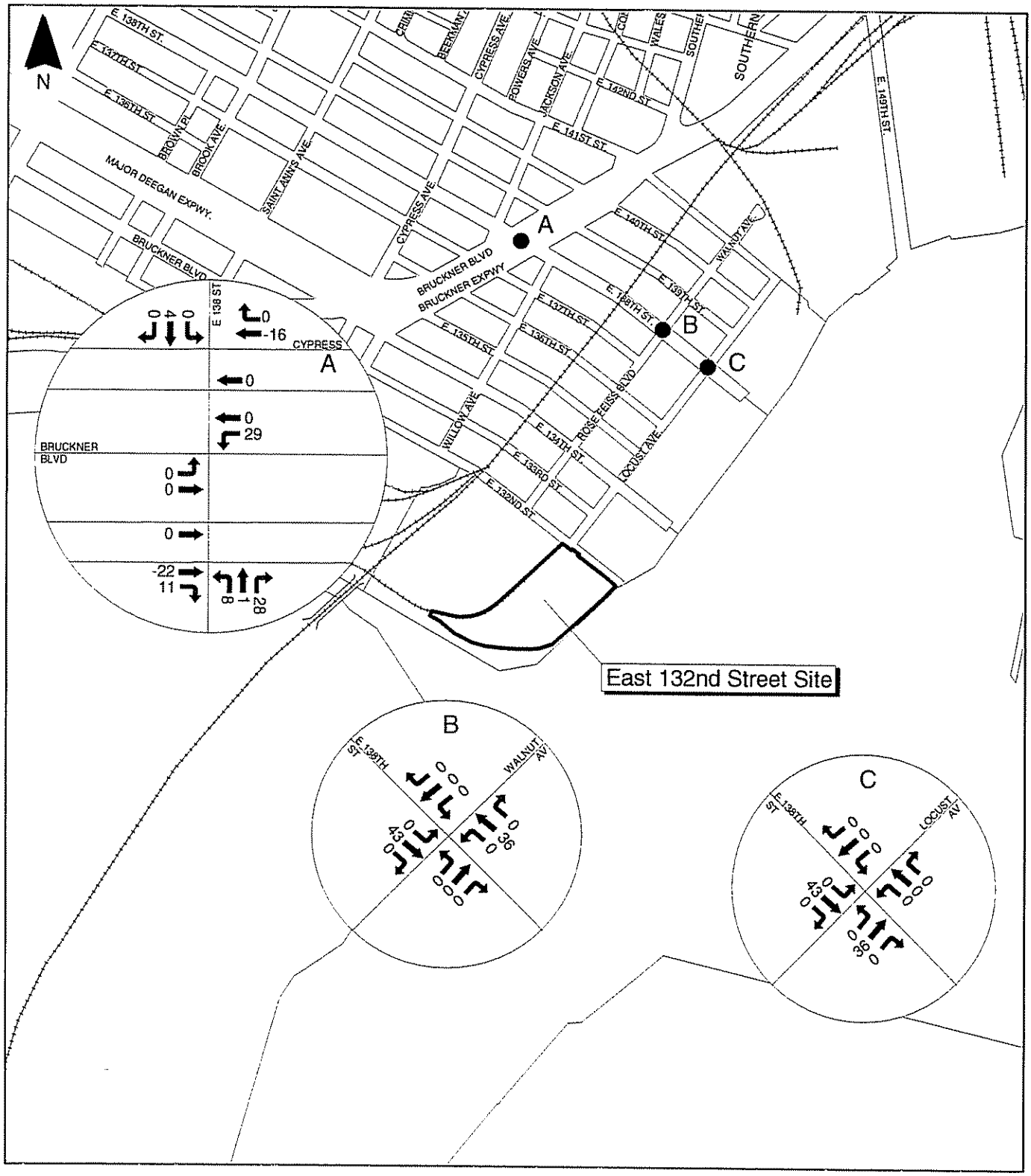
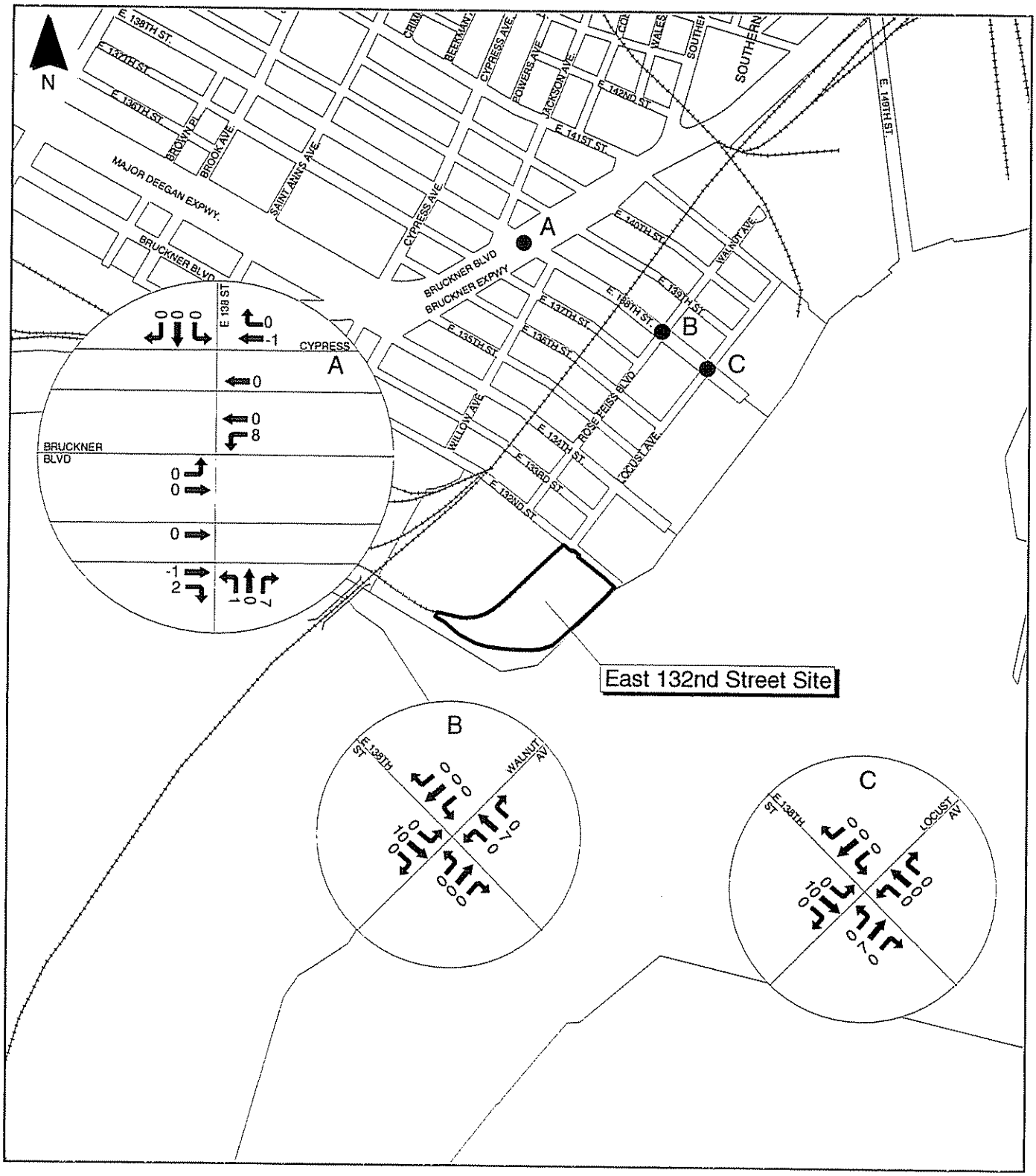


Figure 12.14-15 2006 Net Traffic Facility Peak East 132nd Street Site

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 12.14-16 2006 Net Traffic
PM Peak
East 132nd Street Site

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Table 12.14-3
Weekday and Weekend Traffic
East 132nd Street Truck to Rail TS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic EB and WB on Bruckner Boulevard (1)	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
458	344	20,464	12,841

Note:
(1) EB and WB traffic data collected from ATR counts taken on Bruckner Boulevard between Tiffany Street and Barretto Street from September 17 to 22, 2003.

Table 12.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the East 132nd Street Truck to Rail TS. Overall 2006 Future Build intersection traffic operations, expressed in terms of delay, would deteriorate slightly for the unsignalized intersections of East 138th Street and Walnut Avenue and East 138th Street and Locust Avenue, but lane group and overall intersection LOS would be maintained at LOS B or better. However, significant traffic impacts, as defined by the 2001 CEQR Technical Manual and listed in Section 3.16, were identified for specific lane groups at the signalized intersection of Bruckner Boulevard with East 138th Street. These impacts and suggested mitigation are discussed below.

Table 12.14-4
HCM Analysis(1) – 2006 Future Build Conditions
East 132nd Street Truck to Rail TS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (11:00 a.m. - 12 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 138th Street & Bruckner Boulevard ML Inner (signalized)									
NB LT	0.21	19.9	B	0.25	20.3	C	0.41	22.5	C
SB DFL	0.79	61.1	E	0.82	68.5	E	0.45	41.9	D
SB T	0.72	32.2	C	0.61	28.1	C	0.62	28.0	C
EB L	0.97	91.3	F	1.03	112.4	F	0.95	88.4	F
EB LT	0.80	59.2	E	1.00	100.2	F	1.02	103.1	F
WB DFL	0.81	75.2	E	-	-	-	-	-	-
WB T	0.39	37.9	D	-	-	-	-	-	-
WB LT	-	-	-	0.60	42.7	D	0.46	38.4	D
OVERALL		51.7	D		54.4	D		44.0	D
East 138th Street & Bruckner Boulevard ML Outer (signalized)									
NB T	0.78	31.6	C	0.81	33.1	C	0.61	26.3	C
SB T	0.56	25.3	C	0.35	21.6	C	0.39	22.2	C
EB T	0.56	39.7	D	0.66	42.2	D	0.49	38.1	D
WB T	0.36	36.3	D	0.40	36.9	D	0.32	35.4	D
OVERALL		31.9	C		33.2	C		28.9	C
East 138th Street & Bruckner Boulevard SR (signalized)									
NB TR	0.57	25.6	C	0.45	23.2	C	0.72	29.1	C
SB TR	0.59	25.8	C	0.38	22.0	C	0.40	22.4	C
EB TR	0.59	40.4	D	0.63	41.4	D	0.53	38.9	D
WB TR	0.74	46.8	D	0.78	49.1	D	0.48	38.3	D
OVERALL		32.5	C		33.4	C		31.0	C
East 138th Street & Walnut Avenue (unsignalized)									
NB LTR	0.42	11.4	B	0.38	11.1	B	0.53	11.6	B
SB LTR	0.31	9.5	A	0.29	9.9	A	0..33	9.4	A
EB LT	0.36	12.2	B	0.39	12.2	B	0.30	11.4	B
EB R	0.16	8.9	A	0.18	8.8	A	0.13	9.1	A
WB LT	0.38	12.1	B	0.34	11.7	B	0.26	10.1	B
WB R	0.06	8.4	A	0.06	7.8	A	0.02	9.6	A
OVERALL		11.2	B		11.0	B		10.8	B
East 138th Street & Locust Avenue (unsignalized)									
EB LT	0.07	12.7	B	0.10	12.3	B	0.07	11.3	B
EB R	0.16	10.0	A	0.12	9.8	A	0.07	9.5	A
WB LTR	0.03	10.5	B	0.03	12.3	B	0.00	-	-
OVERALL		NA	NA		NA	NA		NA	NA

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
LT = left through movement
L = left movement
R = right movement
TR = through right movement
T = through movement
ML = mainline
SR = service road
EB = eastbound
NB = northbound
SB = southbound
WB = westbound
NA = Not Applicable

12.14.3.2 Impacts and Mitigation

Table 12.14-5 provides a comparison of v/c ratio, delay and LOS for the Future No-Build, Future Build before mitigation, and Future Build after mitigation scenarios at each intersection where impacts were identified. The following describes proposed mitigation and projected results with mitigation.

Impacts were identified at the intersection of Bruckner Boulevard at East 138th Street, mostly during the Facility peak hour. On the eastbound approach during the Facility peak hour, the eastbound left-turn lane group and eastbound left-turn and through lane group delay increased from 102.0 seconds to 112.4 seconds and from 88.2 seconds to 100.2 seconds, respectively. In addition, during the Facility peak hour, the delay for the southbound defacto left-turn lane group increased from 44.8 seconds at LOS D to 68.5 seconds at LOS E, and the delay for the westbound through and right-turn lane group increased from 42.0 seconds to 49.1 seconds. The existing signal operates as a three-phase signal. The mitigation proposed is as follows:

- Add two seconds of green time to the eastbound/westbound phase.
- Add four seconds of green time to the northbound/southbound protected left turn phase.
- Decrease the northbound/southbound green phase by six seconds.

This change would mitigate the eastbound impact by decreasing the average delay per vehicle of the eastbound left-turn lane group from 112.4 seconds to 89.5 seconds and decreasing the delay on the eastbound left-turn and through lane group from 100.2 seconds to 80.9 seconds. This change would also reduce the southbound defacto left-turn lane group delay from 68.5 seconds to 54.0 seconds and improve the level of service from LOS E to LOS D, as well as reduce the westbound through and right-turn lane group delay from 49.1 seconds to 45.1 seconds, but not fully mitigate the impacts on these lane groups. To reduce the delay on the southbound defacto left-turn and westbound through and right-turn lane groups to mid-LOS D (mitigated) would require that 17 fewer trucks deliver to the facility from the north (inbound). This would also result in a reduction of 17 vehicles departing (outbound) the facility. Therefore, the net additional

Table 12.14-5
HCM Analysis(1) – 2006 Build Mitigation
East 132nd Street Truck to Rail TS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 138th Street & Bruckner Boulevard ML Inner (signalized) (11:00 a.m. – 12:00 p.m.)									
NB LT	0.25	20.4	C	0.25	20.3	C	0.28	24.3	C
SB DFL	0.54	44.8	D	0.82	68.5	E	0.72	54.0	D
SB T	0.61	28.8	C	0.61	28.1	C	0.68	34.7	C
EB L	1.00	102.0	F	1.03	112.4	F	0.96	89.5	F
EB LT	0.96	88.2	F	1.00	100.2	F	0.94	80.9	F
WB DFL	-	-	-	-	-	-	-	-	-
WB T	-	-	-	-	-	-	-	-	-
WB LT	0.56	41.3	D	0.60	42.7	D	0.56	39.9	D
OVERALL		49.3	D		54.4	D		49.5	D
East 138th Street & Bruckner Boulevard ML Inner (signalized) (8:00 a.m. – 9:00 a.m.)									
NB LT	0.21	19.9	B	0.21	19.9	B	0.24	23.8	C
SB DFL	0.60	46.6	D	0.79	61.1	E	0.68	49.6	D
SB T	0.72	32.2	C	0.72	32.2	C	0.81	41.6	D
EB L	0.96	88.5	F	0.97	91.3	F	0.91	75.1	E
EB LT	0.78	56.7	E	0.80	59.2	E	0.76	52.8	D
WB DFL	0.63	54.8	D	0.81	75.2	E	0.74	62.9	E
WB T	0.35	37.0	D	0.39	37.9	D	0.37	36.0	D
WB LT	-	-	-	-	-	-		-	-
OVERALL		48.1	D		51.7	D		49.3	D
East 138th Street & Bruckner Boulevard SR (signalized) (11:00 a.m. - 12:00 a.m.)									
NB TR	0.45	23.3	C	0.45	23.2	C	0.50	28.0	C
SB TR	0.40	22.4	C	0.38	22.0	C	0.43	26.4	C
EB TR	0.62	41.1	D	0.63	41.4	D	0.59	39.1	D
WB TR	0.62	42.0	D	0.78	49.1	D	0.74	45.1	D
OVERALL		31.3	C		33.4	C		34.3	C
East 138th Street & Bruckner Boulevard SR (signalized) (8:00 a.m. – 9:00 a.m.)									
NB TR	0.57	25.5	C	0.57	25.6	C	0.64	31.2	C
SB TR	0.61	26.2	C	0.59	25.8	C	0.67	31.4	C
EB TR	0.59	40.3	D	0.59	40.4	D	0.56	38.2	D
WB TR	0.57	40.6	D	0.74	46.8	D	0.70	43.4	D
OVERALL		31.1	C		32.5	C		34.8	C

Notes for Table 12.14-5:

(1) HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LT = left through movement
L = left movement
TR = through right movement
T = through movement
ML = mainline
SR = service road
EB = eastbound
NB = northbound
SB = southbound
WB = westbound

DSNY collection vehicles through this intersection would be limited to 21 inbound plus 21 outbound trips (42 trip ends). This in addition to the existing 26 inbound and 26 outbound trips assumed to travel through this intersection under interim export during the Facility peak hour. Therefore, the total DSNY collection vehicle trips through this intersection during the Facility peak hour must be limited to 47 inbound plus 47 outbound, a total of 94 trip ends. There would be no impacts induced for the northbound/southbound lane groups due to this shift in cycle time.

During the AM peak hour, impacts were identified on the southbound defacto left-turn lane group (delay increase from 46.6 seconds to 61.1 seconds), the westbound defacto left-turn lane group (delay increase from 54.8 seconds to 75.2 seconds) and the westbound through and right-turn lane group (delay increase from 40.6 seconds to 46.8 seconds). The mitigation measures proposed for use during the Facility peak hour are also proposed for use during the AM peak hour. The impact on the westbound through and right-turn lane group would be mitigated by the proposed measure (delay reduced from 46.8 seconds to 43.4 seconds); however, the delay on the westbound defacto left-turn lane group and southbound defacto left-turn lane group would be reduced, but the impacts not fully mitigated. On the westbound defacto left-turn lane group, the delay would be reduced from 75.2 seconds to 62.0 seconds with the LOS remaining at LOS E, and the delay on the southbound defacto left-turn lane group would be reduced from 61.1 seconds to 49.6 seconds and the LOS improving from LOS E to LOS D. To reduce the delay on the westbound defacto left-turn and southbound defacto left-turn lane groups to Future No-Build levels (mitigated) would require that nine fewer trucks deliver to the facility from the north (inbound) during the AM peak hour. This would also result in a reduction of nine vehicles departing (outbound) the facility. Therefore, the net additional DSNY collection vehicles through this intersection would be limited to 25 inbound plus 21 outbound trips (46 trip ends). This in addition to the existing 19 inbound and 17 outbound trips assumed to travel through this intersection under interim export during the AM peak hour. Therefore, the total DSNY collection vehicle trips through this intersection during the AM peak hour must be limited to 44 inbound plus 38 outbound, a total of 82 trip ends. There would be no impacts induced for the northbound/southbound lane groups due to this shift in cycle time.

12.14.3.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

12.14.3.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

12.14.4 Potential Impacts with the Oak Point Rail Yard

As discussed above in Section 12.14.3.1, all waste from the East 132nd Street Truck to Rail TS would be drayed to the Oak Point Rail Yard. These dray vehicles were included in the Build traffic volumes for the intersections analyzed with an adjustment to account for the displacement of transfer trailers under existing operations. On Bruckner Boulevard north of 138th Street, Leggett Avenue and Barry Street, all the dray trips are considered incremental traffic associated with the Build Condition. However, considering the threshold assumed for warranting traffic impact analysis (see Section 3.16 for a discussion of CEQR analysis thresholds), the draying activity of 16 trip ends per hour (or 32 PCEs) does not warrant a traffic analysis on the dray route solely due to dray vehicles.

12.15 Air Quality

The East 132nd Street Site is currently permitted at 2,999 tpd, based upon a negative declaration finding on an EAS for that capacity completed in 1994, and was further evaluated for accepting and processing all Bronx DSNY-managed Waste, with a negative declaration finding on that EAS in 1997. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed air quality environmental review. Copies of the environmental review documents for the East 132nd Street Site are available upon request on compact disk.

The Oak Point Rail Yard is an intermodal facility that would receive containers drayed from the East 132nd Street Site. DSNY issues a non-discretionary permit to intermodal facilities handling containerized waste, which is not subject to environmental review for potential on-site impacts. An off-site air quality analysis for the acceptance and processing of 2,999 tpd of waste at the Oak Point Rail Yard was completed.

12.15.1 Existing Conditions

The study area for the off-site air quality analysis consists of the two intersections listed in Section 12.15.3.2 between the East 132nd Street Truck to Rail TS and the Oak Point Rail Yard.

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 12.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 12.15-1
Representative Ambient Air Quality Data
East 132nd Truck to Rail Street TS and Oak Point Rail Yard

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO(1)	200th Street and Southern Boulevard	8-Hour	2.2 ppm	9 ppm
		1-Hour	4.1 ppm	35 ppm
NO_2(1)	East 156th Street, between Dawson and Kelly	Annual	0.030 ppm	0.05 ppm
PM_{10}(1)	East 156th Street, between Dawson and Kelly	Annual	22 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	60 $\mu g/m^3$	150 $\mu g/m^3$
SO_2(1)	East 156th Street	3-Hour	0.089 ppm	0.5 ppm
		24-Hour	0.052 ppm	0.14 ppm
		Annual	0.011 ppm	0.03 ppm

Notes:
Source: USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.

12.15.2 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the project's future analysis year (2006). As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants, except CO. CO concentrations are expected to be affected by increasingly stringent, federally-mandated vehicular emission controls, offset by increases in regional traffic volumes.

Using 2001 CEQR Technical Manual guidelines, two intersections were identified as potentially having significant impacts from proposed DSNY and other agency collection vehicles. Detailed mobile source analyses were then conducted at these two locations during the applicable (i.e., worst-case) time periods:

- The intersection of Bruckner Boulevard and East 138th Street; and
- The intersection of Locust Avenue and East 138th Street.

Analyses were conducted to determine whether the site-generated traffic has the potential to cause exceedances of the PM_{10}, NAAQS, or NYCDEP's and NYSDEC's 24-hour and annual

$PM_{2.5}$ STVs. No CO analysis was conducted because the number of proposed vehicles trips to and from the facility is below CEQR CO screening thresholds.

12.15.3 Results of the Off-Site Analysis

Maximum pollutant concentrations estimated near each selected intersection are shown in Table 12.15-2. Using a Tier I analysis, these results show that all estimated concentrations are within (less than) the applicable state and federal ambient air quality standards and/or STVs (for $PM_{2.5}$), except for the intersection of Locust Avenue and East 138th Street. Therefore, a Tier II analysis was conducted at this intersection. Using the Tier II analysis, it was determined that the operations of the East 132nd Street Truck to Rail TS and Oak Point Rail Yard would result in no significant off-site air quality impacts.

Table 12.15-2
Estimated Pollutant Concentrations Near Selected Roadway Intersections
East 132nd Street Transfer Station/Oak Point Rail Yard

Air Quality Receptor Site	PM_{10}		$PM_{2.5}$ [2]	
	24-hr PM_{10} Concentrations[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Concentrations[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3][4] $\mu g/m^3$ (24-Hour STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (Annual Neighborhood Average STV: 0.1 $\mu g/m^3$)
Bruckner Boulevard & East 138th Street				
Existing Conditions	~~109.6~~133	~~40.1~~37		
Future No-Build Conditions	~~111.0~~134	~~40.6~~38		
Future Build Conditions	~~111.7~~135	~~41.2~~38		
Future Build Incremental			0.932	0.09030
Locust Avenue & East 138th Street				
Existing Conditions	~~78.2~~96	~~26.9~~23		
Future No-Build Conditions	~~78.1~~96	~~26.9~~23		
Future Build Conditions	~~82.4~~101	~~28.4~~24		
Future Build Incremental			~~1.~~30.3	0.03040

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background values; 24-hr PM_{10} = ~~73~~91 $\mu g/m^3$; Annual PM_{10} = ~~25~~21 $\mu g/m^3$).

(2) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for~~ under ~~the~~ Future No-Build and Future Build ~~scenarios~~ conditions at ~~any~~ sidewalk receptors. ~~three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.~~

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the~~ The average difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for~~ under the Future No-Build and Future Build ~~scenarios~~ conditions at ~~any~~ average receptors 15 meters from the edge of the roadways. ~~using AM, Facility, or PM peak traffic conditions.~~

(4) Results determined ~~based on~~using a Tier II analysis.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

12.16 Odor

The East 132nd Street Site is currently permitted at 2,999 tpd, based upon a negative declaration finding on an EAS for that capacity completed in 1994, and was further evaluated for accepting and processing all Bronx DSNY-managed Waste, with a negative declaration finding on that EAS in 1997. The minor modification of adding the lidding operation on site would not result in any changes to the previously completed odor environmental review. Copies of the environmental review documents for the East 132nd Street Site are available upon request on compact disk.

The Oak Point Rail Yard is an intermodal facility that would receive containers drayed from the East 132nd Street Site. DSNY issues a non-discretionary permit to intermodal facilities handling containerized waste, which is not subject to environmental review for potential on-site impacts. An off-site traffic, air quality and noise analysis for the acceptance and processing of 2,999 tpd of waste at the Oak Point Rail Yard was completed. Results are reported in those sections of this FDEIS.

12.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from the East 132nd Street Site-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual ~~and the Current New York City Noise Code~~ for both on-site and off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

12.17.1 Existing Conditions

12.17.1.1 Introduction

The East 132nd Street Site is currently permitted at 2,999 tpd, based upon a negative declaration finding on an EAS for that capacity completed in 1994, and was further evaluated for accepting and processing all Bronx DSNY-managed Waste, with a negative declaration finding on that EAS in 1997. An off-site noise analysis for the acceptance and processing of 2,999 tpd of waste at the Oak Point Rail Yard was completed. The Oak Point Rail Yard is an intermodal facility that would receive containers drayed from the East 132nd Street Site. DSNY issues a non-discretionary permit to intermodal facilities handling containerized waste, which is not subject to environmental review for potential on-site impacts.

12.17.1.2 On-Site Noise Levels

Only a minor modification of adding the lidding operation on-site for the East 132nd Street Site is proposed. The nearest noise sensitive receptor is a park located on Randall's Island, located over 600 feet away. Background daytime noise levels monitored at this location for the 2000 FEIS were 58 dBA. Daytime noise levels (7:00 a.m. to 10:00 p.m.) can increase up to 5 dBA without causing a noise impact when background noise levels are 60 dBA or lower.

12.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the East 132nd Street Site-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was not required and, therefore, off-site noise monitoring was not conducted.

12.17.2 Future No-Build Conditions

12.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

12.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 12.17-1 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and the background noise levels is greatest) during the daytime (if any) and nighttime based on the first-level screening.

Table 12.17-1
Off-Site Noise Traffic Volume
East 132nd Street Site

Location	Hour	Existing Traffic Volume(1) (Vehicle/Hour)	Future No-Build Traffic Volume(2) (Vehicle/Hour)
Bruckner Boulevard between East 149th Street and Leggett Avenue	3:00 a.m.	408	415
East 138th Street, between Bruckner Boulevard and Walnut Street	~~12~~1:00 a.m.	~~56~~59	~~56~~60

Notes:
(1) -Existing traffic volumes are based on ATR data.
(2) -Future No-Build Traffic volumes are based on CEQR annual traffic growth rates.

12.17.3 Potential Impacts with the East 132nd Street TS

12.17.3.1 On-Site Noise Levels

L_{eq} noise levels associated with this type of lidding operation were measured at 79.1 dBA at 50 feet from the source, which would attenuate to an L_{eq} of 57.4 dBA at the Randall's Island park. The combined noise level at the Randall's Island park from the lidding operations and the background noise level at the park would result in an estimated L_{eq} of 60.7 dBA. The estimated increase in L_{eq} at the park from this operation is 2.7 dBA; therefore, no impact is predicted. Copies of the environmental review documents for the East 132nd Street TS are available upon request on compact disk.

12.17.3.2 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the East 132nd Street TS, including the routes to be used for the draying of the containers to the Oak Point Rail Yard. The

assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Results of the screening for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on first-level screening are provided in Table 12.17-2 below.

Because the screening results provided below showed that PCEs would not double on a roadway due to DSNY and other agency collection vehicles coming to or going from the East 132nd Street TS, a detailed off-site noise analysis was not required.

Table 12.17-2
Off-Site Noise Screening Results
East 132nd Street TS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Dray Trucks	Dray Truck PCEs	Future Build PCEs[1][2]	Possible Impact[3]
East 138th Street between Bruckner Boulevard and Walnut Street	1:00 a.m.	1172	12	0	564	12	564	2300	No

Notes:
(1) Total PCEs are rounded to the nearest whole numbers.
(2) Future Build PCEs include East 132nd Street TS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.
(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

12.17.3.3 Combined On-Site and Off-Site Noise Levels

An on-site noise analysis was performed for the East 132nd Street TS. As a result of the off-site screening analysis, which is described above in 12.17.3.2, no off-site noise analysis was required. Since an off-site analysis was not required, a combined noise analysis was not performed.

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CHAPTER 13 ENVIRONMENTAL REVIEW – SCOTT AVENUE TRUCK TO BARGE TS

13.1 Introduction

The Scott Avenue Transfer Station is currently permitted for receipt and processing of waste into outbound transfer trailers at 1,500 tpd with a negative declaration and EAS for that capacity dated January 2003. The current proposal does not propose any increase in capacity. A permit modification is required for container lidding and barge loading in response to the DSNY's RFP. Part 360 Permit application documents for the modification were submitted to the NYSDEC in April 2003. Scott Avenue is currently contracted to accept up to 1,400 tpd of DSNY-managed Waste under Interim Export and receives, on an average peak day, approximately 1,114 tons.

The facility was also the subject of an EAS in 1998/1999 for Interim Export. At that time, no off-site $PM_{2.5}$ analysis was performed. The EAS for Interim Export, updated in 2002, assumed continuation of the 1998/1999 EAS action, so no traffic, $PM_{2.5}$, CO or mobile noise analyses were completed as there was no net change. PM_{10} was analyzed at four locations. The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation. Copies of the environmental review documents for the Scott Avenue Truck to Barge TS are available upon request on compact disk.

The results of the environmental analyses of the facility options at the Scott Avenue Site are presented in the following sections:

13.2 Land Use, Zoning, and Public Policy
13.3 Socioeconomic Conditions
13.4 Community Facilities and Services
13.5 Open Space
13.6 Cultural Resources
13.7 Urban Design, Visual Resources, and Shadows
13.8 Neighborhood Character
13.9 Natural Resources

13.10 Hazardous Materials

13.11 Water Quality

13.12 Waterfront Revitalization Program

13.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

13.14 Traffic, Parking, Transit, and Pedestrians

13.15 Air Quality

13.16 Odor

13.17 Noise

Section 2.2.10 provides a summary description of the site and important characteristics of the design and operation of each option. The following sections provide additional information on the site or the study area, as appropriate to each analysis.

A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3.

13.2 Land Use, Zoning, and Public Policy

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the land use, zoning, and public policy impacts.

13.3 Socioeconomic Conditions

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the socioeconomic impacts.

13.4 Community Facilities and Services

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the community facilities and services impacts.

13.5 Open Space

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the open space impacts.

13.6 Cultural Resources

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the cultural resources impacts. As indicated in the 2000 SWMP FEIS, consultation with SHPO regarding possible archaeological resources on site are required once a detailed design is developed.

13.7 Urban Design, Visual Resources, and Shadows

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the urban design, visual resources, and shadows impacts.

13.8 Neighborhood Character

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the neighborhood character impacts.

13.9 Natural Resources

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the natural resources impacts.

13.10 Hazardous Materials

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the hazardous materials impacts. As indicated in the 2000 SWMP FEIS, a Phase II subsurface site investigation to sample and test any soils that would be disturbed during construction would be required.

13.11 Water Quality

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of water quality impacts.

13.12 Waterfront Revitalization Program

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the waterfront revitalization impacts.

13.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the infrastructure, solid waste and sanitation services, and energy impacts.

13.14 Traffic, Parking, Transit, and Pedestrians

Currently, the Scott Avenue Truck to Barge TS is contracted to accept 1,400 tpd of DSNY-managed Waste under the Interim Export Program. Data indicates that the facility receives approximately 1,114 tpd of DSNY-managed Waste. Under Future Build Conditions, this facility would accept no more than the current amount of DSNY-managed Waste. The Future Build Conditions represent no net change in amount of waste delivered to this facility (or resulting DSNY collection vehicles) under Existing Conditions. Additionally, waste is taken off site via transfer trailers under Existing Conditions. Under Future Build Conditions, waste would be exported from the site via barge, thus resulting in a reduction of outbound transfer trailer traffic generated by the Scott Avenue Truck to Barge TS. Due the reduction of site-generated traffic under Future Build Conditions, no traffic analysis was performed for this facility.

13.15 Air Quality

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of air quality impacts. Since the Future Build Conditions represent no net change in the amount of waste delivered to this facility (or resulting DSNY collection vehicles) under Existing Conditions and a decrease in outbound transfer trailers, no off-site air quality analysis was performed for this facility.

13.16 Odor

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the odor impacts.

13.17 Noise

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the noise impacts. Since the Future Build Conditions represent no net change in amount of waste delivered to this facility (or resulting DSNY collection vehicles) under Existing Conditions and a decrease in outbound transfer trailers, no off-site noise analysis was performed for this facility.

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CHAPTER 14 ENVIRONMENTAL REVIEW - SCOTT AVENUE/SCHOLES STREET TRUCK TO RAIL TS

14.1 Introduction

The Scott Avenue/Scholes Street TS is currently permitted to handle 220 tpd of putrescible waste. It is currently contracted to accept up to 220 tpd of DSNY-managed Waste under Interim Export and receives approximately 143 tons on an average peak day. This facility was the subject of an EAS in 1998/1999 for Interim Export at its permitted 220 tpd capacity. At that time, no off-site $PM_{2.5}$ analysis was performed. The EAS for Interim Export, updated in 2002, assumed continuation of the 1998/1999 EAS action, so no traffic, $PM_{2.5}$, CO or mobile noise analyses were completed since there was no net change. PM_{10} was analyzed at four locations.

The Scott Avenue/Scholes Street TS is proposed to increase putrescible waste capacity in two phases: (1) a Phase I expansion to 1,368 tpd (using tonnage offsets of putrescible, C&D and glass/tire/yard waste from other facilities in Brooklyn CD 1, several of which are located on the site); and (2) a Phase II expansion from 1,368 tpd to 3,000 tpd (offsets for this increment in capacity are not clearly defined).

The facility is proposed to accept 891 tpd of DSNY ~~Managed~~ managed Waste Long Term. A Part 360 Solid Waste Facility Permit Modification application has been submitted to the NYSDEC with an accompanying EAS for the 1,368 tpd expansion in September 2003, and supplemental traffic analyses submitted in March 2004 to support the phased expansion. A Negative Declaration has not been issued by DSNY on the EAS. Among the offsets proposed for the Phase I expansion are 588 tpd of non-putrescible and recycling processing capacity at the Scott Avenue/Scholes Street Truck to Rail TS.

The Phase II expansion is not required for Long Term Export of DSNY-managed ~~waste~~ Waste and, therefore, is not evaluated in this F~~D~~EIS.

The Scott Avenue/Scholes Street Transfer Station is evaluated at its 1,368 tpd design capacity for on-site impacts and for an incremental shift in tonnage of 637 tpd (1,368 tpd proposed permitted capacity minus 143 tpd existing average peak day deliveries, 388 tpd of offsets for C&D material from 594 Scholes Street, and 200 tpd of glass/tire/yard waste material from 598 Scholes Street).

The results of the environmental analyses of the Scott Avenue/Scholes Street Truck to Rail TS are presented in the following sections:

14.2 Land Use, Zoning, and Public Policy
14.3 Socioeconomic Conditions
14.4 Community Facilities and Services
14.5 Open Space
14.6 Cultural Resources
14.7 Urban Design, Visual Resources, and Shadows
14.8 Neighborhood Character
14.9 Natural Resources
14.10 Hazardous Materials
14.11 Water Quality
14.12 Waterfront Revitalization Program
14.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
14.14 Traffic, Parking, Transit, and Pedestrians
14.15 Air Quality
14.16 Odor
14.17 Noise

Section 2.2.11 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

14.2 Land Use, Zoning, and Public Policy

14.2.1 Existing Conditions

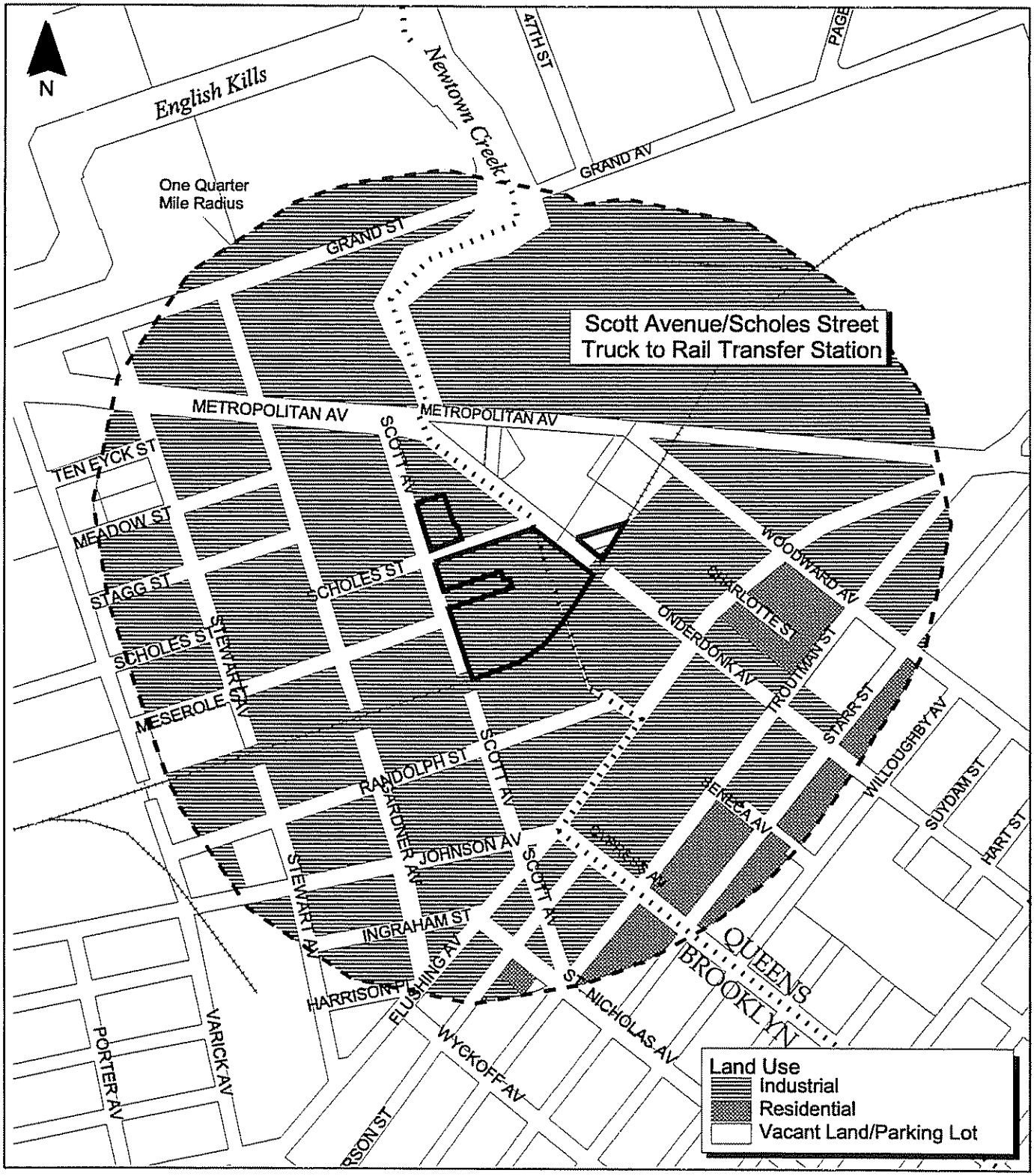
14.2.1.1 Definition of the Study Areas

For the land use, zoning, and public policy analyses, the primary study area is defined as the area within ¼-mile of the site (see Figure 14.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 14.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.2.11 provides information on existing land uses and operations on the site.

14.2.1.2 Land Use Patterns

14.2.1.2.1 General Context

The Scott Avenue/Scholes Street Truck to Rail TS site is located in Community District 1 near the Brooklyn/Queens border, in the predominantly industrial section of East Williamsburg, Brooklyn. It is largely surrounded by canals and railroad tracks: English Kills on the west, Newtown Creek on the east and LIRR tracks to the east and south, thus making it directly accessible on land only from the north.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

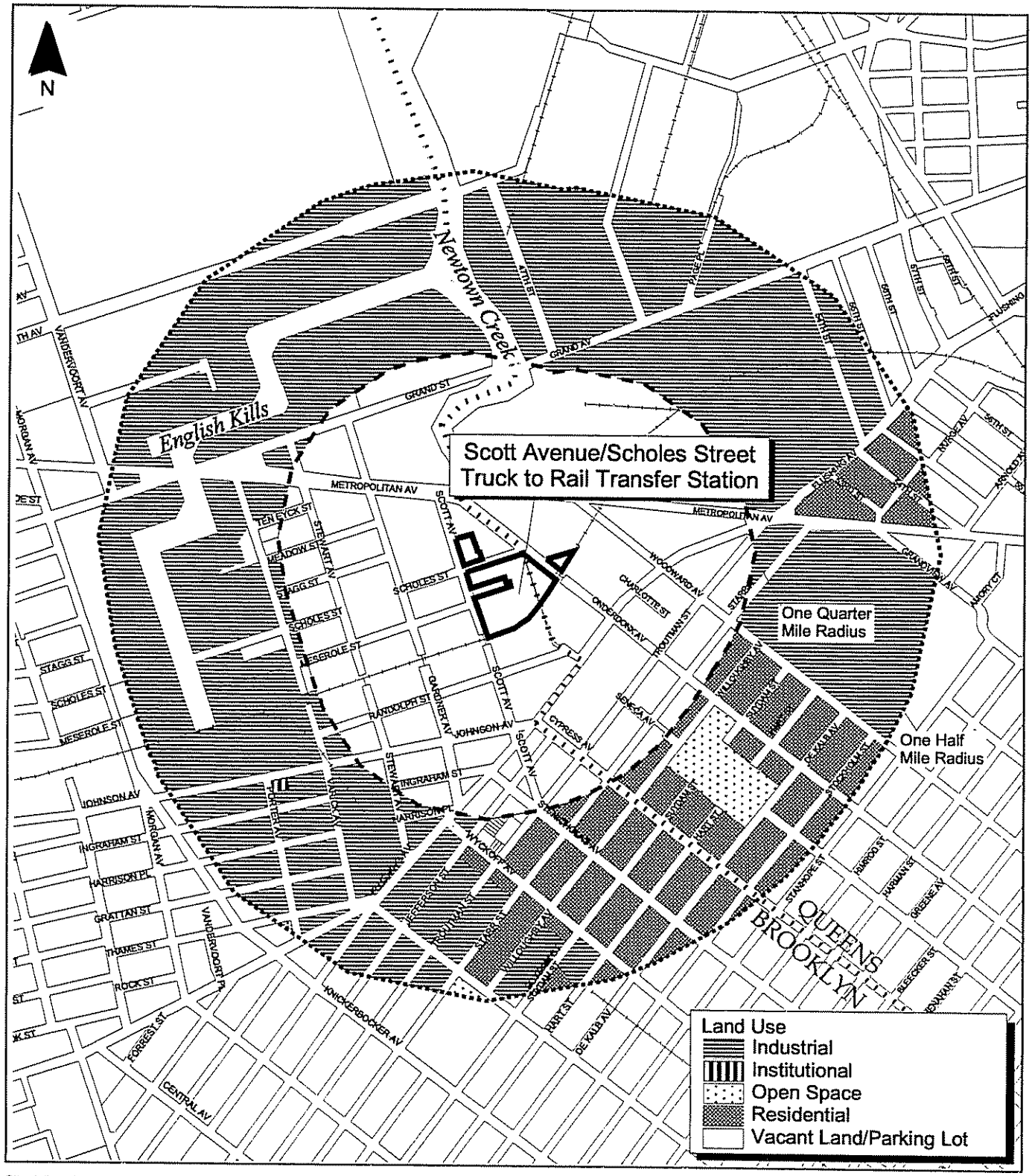
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HDR HydroQual URBITRAN DR EEA Cambridge Environmental Inc

Figure 14.2-1 Land Use in the Primary Study Area
Scott Avenue/Scholes Street Truck to Rail Transfer Station

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

500 0 500 Feet

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Figure 14.2-2 Land Use in the Secondary Study Area
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

CITY OF NEW YORK
DEPARTMENT OF SANITATION

14.2.1.2.2 Land Uses in the Primary Study Area

The Scott Avenue/Scholes Street Truck to Rail TS site is situated just west of the Brooklyn/Queens border which separates East Williamsburg, Brooklyn to the west and Maspeth, Queens to the east. The primary study area is characterized by several private waste transfer stations (including BFI Waste Systems facilities on Scholes Street and Gardner Avenue, and Waste Management of New York facilities on Stewart Avenue and Varick Avenue) as well as a DSNY parking lot on Meserole Street, a new CD 1 and 4 garage under construction on Varick Avenue and an existing garage on Johnson Avenue.

The English Kills canal runs along the eastern border of the primary study area, is approximately 200 feet wide and connects with Newtown Creek at the Brooklyn/Queens boundary. The LIRR tracks bisect the ½-mile study area east to west and pass immediately south of the site between Meserole and Randolph Streets. The NY&A operates freight trains on these tracks, with a terminal nearby, in Bushwick (to the west).

North and south of the existing site are scrap metal yards and plastic manufacturing facilities, window and door manufacturing facilities, lumber yards and hydraulic equipment leasing companies. Development surrounding the site is primarily low density with open parking lots and low-scale masonry buildings ranging from two to four stories in height.

The area surrounding the Scott Avenue/Scholes Street Truck to Rail TS site includes some vacant land to the north on Gardner and Stewart Avenues, as well as lots undergoing construction. Some sites have been rehabilitated to accommodate new industrial loft space and community facilities such as a Peter Jay Sharp Center for Opportunity on Porter Street (89-111). The other community facilities include a fire station on Morgan Avenue and a daycare center on Knickerbocker Street. The area is also characterized by abundant parking lots and garage facilities, some of which are leased by DSNY for trucks and other equipment storage.

14.2.1.2.3 Land Uses in the Secondary Study Area

Within ½-mile of the site there is a mix of residential, industrial and some commercial uses. Industrial uses in the secondary study area tend to be lighter than those found in the primary study area. These uses include printers, auto salvage and repair shops and food product manufacture and distribution companies. The residential area closest to the site is Bushwick, which is characterized by three- and four-story apartment buildings along Willoughby and Starr Streets to the southeast, as well as single-family homes and townhouses ½-mile south of the site, and in Ridgewood (Queens), ½-mile east of the site.

The secondary study area contains a major City park: Maria Hernandez Park, located ½-mile south of the site. Another open space, the five-acre Grover Cleveland High School Athletic Field about 1/3-mile to the southeast, provides recreational opportunities to neighborhood residents, as well as students of the school.

Local commercial and retail activities are primarily concentrated along the western border of the secondary study area along Knickerbocker and Morgan Avenues. These corridors are characterized by ground floor retail uses and upper floor residences. Flushing and Jefferson Avenues serve as local retail streets as well as hubs of wholesale activity. Bakery and restaurant suppliers, plumbing and electrical equipment manufacturers, and window and door products manufacturers, are all found on these mixed-use streets.

14.2.1.3 Zoning On and Near the Site

14.2.1.3.1 Zoning Within the Primary Study Area

The project site is located within an M3-1 zoning district. This M3-1 zone extends from beyond the northern boundary of the primary study area to Johnson Avenue in the south. M1-2 and M1-1 zoning districts comprise most of the remainder of the primary study area to the south in Brooklyn and east into Queens, though a block of R4 zoning is also located southeast of the site in the primary study area, just east of Troutman Street and North of Cypress Avenue. The M1

zones act as a buffer between the residential and the heavier manufacturing districts and feature both residential and light manufacturing (e.g., distribution) activities. (See Figure 14.2-3 and Table 3.4-1: Zoning District Characteristics.)

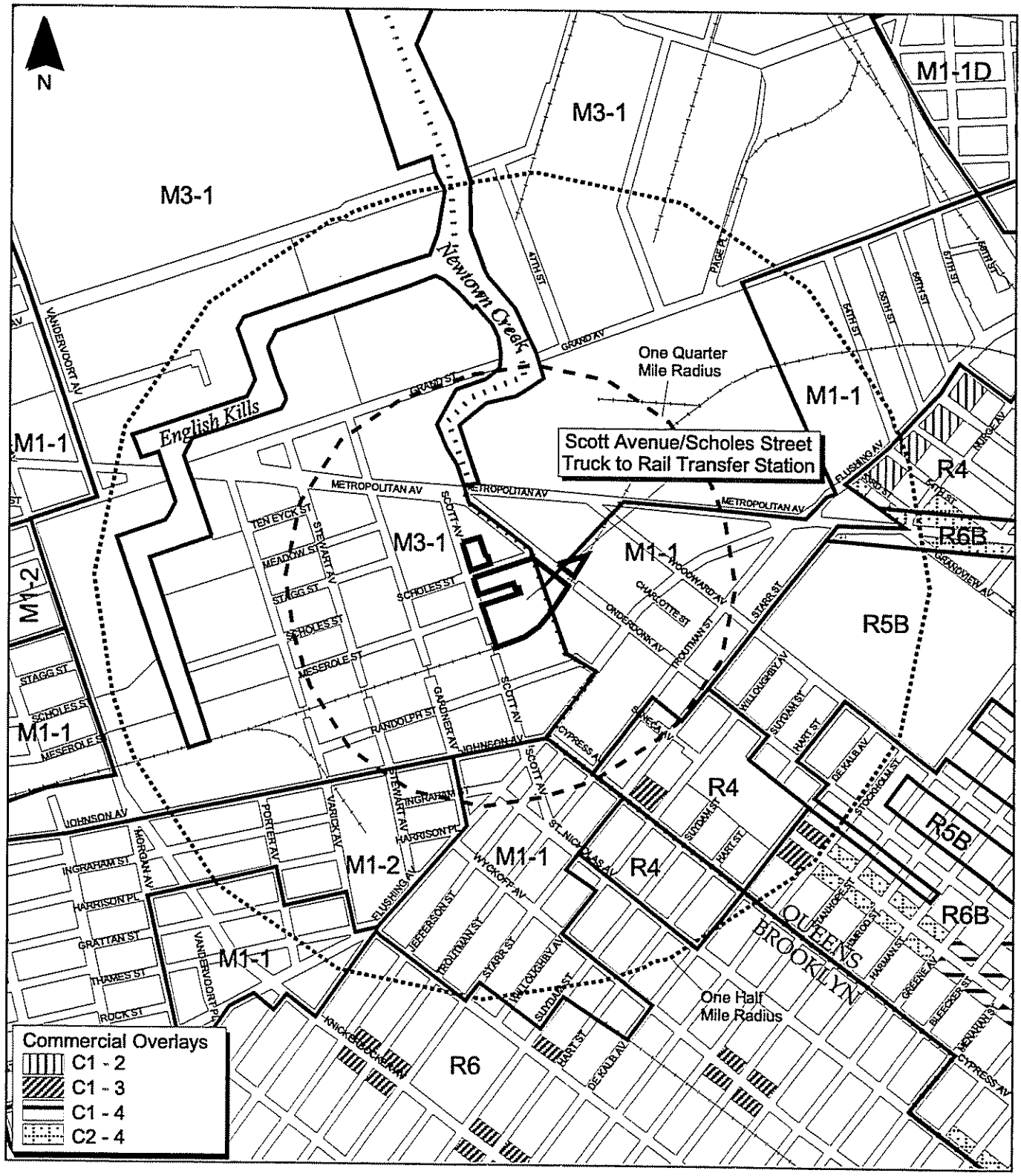
14.2.1.3.2 Zoning Within the Secondary Study Area

Zoning in the secondary area is largely comprised of M3-1 districts in the north and M1-1 and M1-2 districts in the south and east. In addition, there are R4 zoning districts covering Ridgewood (Queens and Brooklyn) and a small portion of a large R6 zoning district in Bushwick, which both permit residential development such as single-family homes and apartment buildings. Knickerbocker Avenue is mapped R6 with a commercial overlay of C1-3 which permits ground floor retail uses.

14.2.1.4 Plans and Policies

The project site lies within the City Coastal Zone, the East Williamsburg In-Place Industrial Park and the North Brooklyn Empire Zone. Since it is situated within the Coastal Zone, it is subject to the WRP. The Plan for the Brooklyn Waterfront recommends a restriction of public access within the Newtown Creek environs for Reach 13, since it is an important industrial area that should be retained.

The site is located within the East Williamsburg In-Place Industrial Park, which is now a 650-acre manufacturing district covering 150 City blocks in northern Brooklyn. The East Williamsburg Valley Industrial Development Corporation (EWVIDC), a local development corporation, provides comprehensive business services and helps local firms access public incentive programs. The EWVIDC administers the North Brooklyn Empire Zone (a New York State designation), which offers tax and financial incentives to attract and retain businesses in the area.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 14.2-3 Zoning
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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In its FY 2004 CDNS, Brooklyn CD 1 encourages the construction and rehabilitation of a roughly equal number of subsidized and market rate housing units under the Williamsburg Urban Renewal Area. The plan also encourages street resurfacing and sidewalk improvements to Flushing Avenue, which is heavily traveled by local/truck traffic. Infrastructure improvements are recommended throughout the industrial area, for example from Metropolitan Avenue to Vandervoort Avenue. In addition, the upgrading and replacement of the sewers in CD 1 remains an on-going necessity. CD 1 continues to support manufacturing jobs and hopes to increase the percentage of residents employed by local industries.

14.2.2 Future No-Build Conditions

No major development changes are expected to result in the immediate project area by the Future No-Build year. The large DSNY Varick Avenue Garage (serving CDs 1 and 4) at 137-165 Varick Street is currently under construction a few blocks northwest of the site and due to be completed at the end of 2004.

The larger Greenpoint-Williamsburg neighborhood, north and west of the site (beyond the secondary study area), is expecting more mixed development as a result of the MX-1 rezoning (NYCDCP). This rezoning would introduce changes such as the conversion of manufacturing lofts to residential use. Long-term projects for the area include the Bushwick Creek Inlet Development, the Greenpoint Terminal Market and the Sludge Tank Adaptive Reuse Project, though the Build years for these projects are 2012 and 2013.

14.2.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.2.3.1 Land Use and Zoning

The potential land use impacts of the proposed Scott Avenue/Scholes Street Truck to Rail TS would be equivalent to the existing waste transfer operations that occur at the site. While improvements would be made to the site, and the capacity of the facility increased, existing and proposed land uses in the area would not be significantly affected since land use would not

change. Existing buildings on the site will be demolished to accommodate new site construction. However, no significant adverse land use or zoning impacts are anticipated.

14.2.3.1 Consistency with Public Plans and Policies

The Scott Avenue/Scholes Street Truck to Rail TS would be consistent with the stated objectives of the pertinent plans and policies affecting the site and environs.

14.3 Socioeconomic Conditions

14.3.1 Existing Conditions

14.3.1.1 Definition of the Study Areas

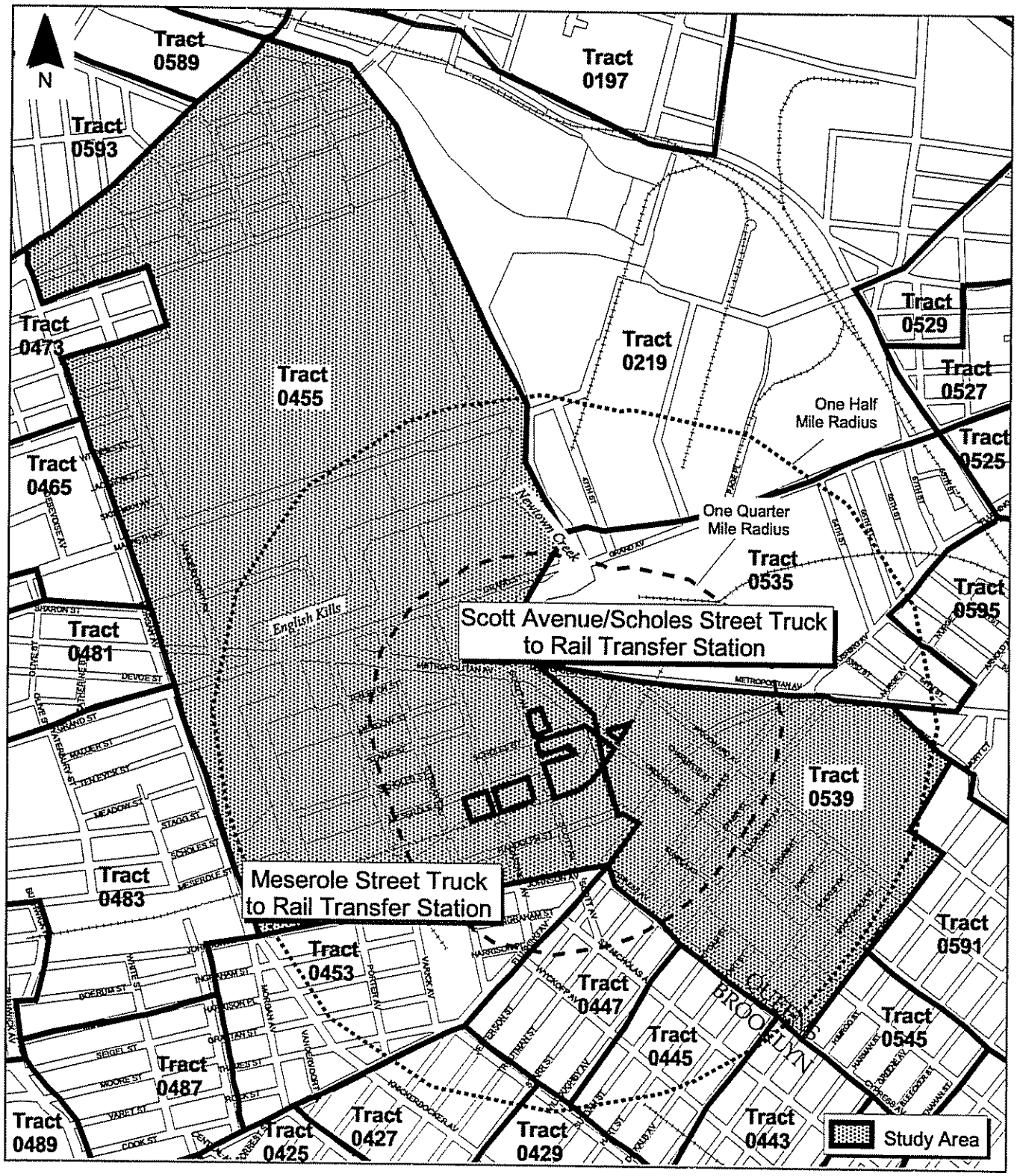
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) This large tract surrounds the English Kills and the area west of Newtown Creek. It encompasses predominantly industrial areas on or around the site along the northern border of Brooklyn. For comparison purposes, census data were also gathered at the borough and City levels. (See Figure 14.3-1.)

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

14.3.1.2 Demographic Characteristics

14.3.1.2.1 Population

In 2000, the study area population was 4,095 persons, which was an approximate 17% decrease from 1990 (Table 14.3-1). The age-sex distribution of the study area population was similar to the distribution of population in the borough and the City, with slightly more females than males in each area.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 14.3-1 Census Tracts
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

CITY OF NEW YORK
DEPARTMENT OF SANITATION

Table 14.3-1
1990-2000 Population

Year	Study Area	Brooklyn	City
2000	4,095	2,465,326	8,008,278
1990	4,960	2,300,664	7,322,564
Percent Change	-17.4%	+7.2%	+9.4%

Source: U.S. Census 1990, 2000

The study area had a greater percentage of children and teens than either the borough or the City in 2000. About 54% of the study area population was under the age of 20, as compared to Brooklyn (30%) and the City (27%).

14.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a smaller proportion of people (12%) of Hispanic origin (all races) than did Brooklyn (20%) or the City (27%). Of the 88% of non-Hispanic origin, 4% were Black and 70% were White. In Brooklyn and the City, Blacks represented approximately 43% and 33% of the non-Hispanic populations, respectively, while Whites represented 43% and 48%, respectively. Within the study area, Asian or Pacific Islanders represented 0% of the non-Hispanic population, while representing 9% and 13% in the borough and City, respectively.

14.3.1.2.3 Families and Households

There were 807 families in the study area in 2000. A somewhat larger percentage of these families had children under the age of 18 (58%) than families in Brooklyn or the City. The study area had a higher percentage of married-couple families (76%) than Brooklyn or the City and a smaller percentage of families with only a female householder (20%).

There were 1,891 households in the study area in 2000, with an average of 2.14 persons per household, less than Brooklyn and the City, each of which averaged about 2.6 persons per household.

14.3.1.2.4 Employment

The study area had a slightly lower percentage of persons aged 16 and older in the labor force (37% of the population) compared to Brooklyn and the City (an average of about 57% of the population). Private wage and salary workers, followed by government workers, were the largest classes of worker in all three areas.

14.3.1.2.5 Housing

As of 2000, there were 957 housing units with a 0% vacancy rate. Approximately 87% of housing units were renter-occupied, a higher percentage than Brooklyn or the City. Both the median rent in the study area ($530) and the median value of housing units ($30,000) were greater than in the larger areas.

14.3.1.2.6 Education

The percentage of residents enrolled in school in the study area in 2000 (4%) was lower than for the borough and the City. The study area also had similar levels of educational attainment as the borough and the City. In the study area, about 25% of people aged 25 and older had only a high school diploma and about 4% had a college degree.

14.3.1.2.7 Income and Poverty

In 2000, both median household income ($16,917) and median family income ($20,847) in the study area exceeded the levels of the borough and the City. About 25% of households and 31% of families had incomes greater than $34,999, a smaller proportion than in either the larger areas. Moreover, more households and families made less than $10,000 annually than in the borough and the City.

No families with related children under 18 years old were living below the poverty level in the study area in 2000. However, families with children under 18 years old living below the poverty level within Brooklyn and the City were about 22% and 18%, respectively.

Within the study area, 990 persons were under the age of 18 and 146 were 65 years and older.

14.3.1.3 Economic Conditions

Current forecasts indicate that about 68,787 employees worked in Brooklyn CD 1 in 2005, which was about 9.4% of the borough's total employment.[1]

14.3.2 Future No-Build Conditions

14.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 1 will remain about the same as current conditions.[2]

14.3.2.2 Economic Conditions

Regional projections indicate that employment in Brooklyn CD 1 will remain about 9.4% of the borough total.[3]

14.3.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

The Scott Avenue/Scholes Street Truck to Rail TS represents the continuation of waste transfer operations on the site. It would be compatible with its industrial surroundings and not be expected to have a significant adverse impact on socioeconomic conditions within the study area.

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[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.
[2] Ibid.
[3] Ibid.

14.3.3.1 Residential Impacts

Because the site would be far removed from the nearest residential concentrations (approximately ½-mile to the east and south of the site), it is not expected to significantly affect residential populations in the general area. Analyses of traffic, air quality and noise indicate that there would be no significant project-related impacts at these locations (see Sections 14.14, 14.15 and 14.17). Therefore, the Scott Avenue/Scholes Street Truck to Rail TS is not expected to result in indirect displacement of residents.

14.3.3.2 Direct Business and Institutional Impacts

No direct displacement of businesses or institutions would occur as a result of the Scott Avenue/Scholes Street Truck to Rail TS.

14.3.3.3 Indirect Business and Institutional Impacts

The site would continue to operate as a waste transfer facility under Future No-Build Conditions, and so the Scott Avenue/Scholes Street Truck to Rail TS would be compatible with its industrial surroundings. The adjacent industrial uses are not expected to experience significant adverse effects related to air quality or odor as a result of the operations of the transfer facility. While noise levels will increase on the site, they are not expected to affect the surrounding industrial operations of businesses in the study area.

Increased truck volumes on designated truck routes in the area resulting from the Scott Avenue/Scholes Street Truck to Rail TS would not be expected to result in indirect displacement of existing businesses or institutional uses, as these routes are already heavily used by trucks (some serving the existing operations) and have an industrial character.

14.3.3.4 Employment Impacts

The Scott Avenue/Scholes Street Truck to Rail TS would be expected to generate approximately 40 new jobs associated with its new operation and maintenance (crane operators, mechanics, supervisors) and transportation operations (drivers, dispatchers). In addition to direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

14.4 Community Facilities and Services

14.4.1 Existing Conditions

14.4.1.1 Definition of the Study Area

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼-mile and ½-mile of the site.

14.4.1.2 Summary of Community Facilities and Services

There is one community facility within the primary study area: the Onderdonk House and Park (a local historical museum). Nine others are located within the secondary study area. The community facilities are listed below in Table 14.4-1 and shown on Figure 14.4-1.

14.4.2 Future No-Build Conditions

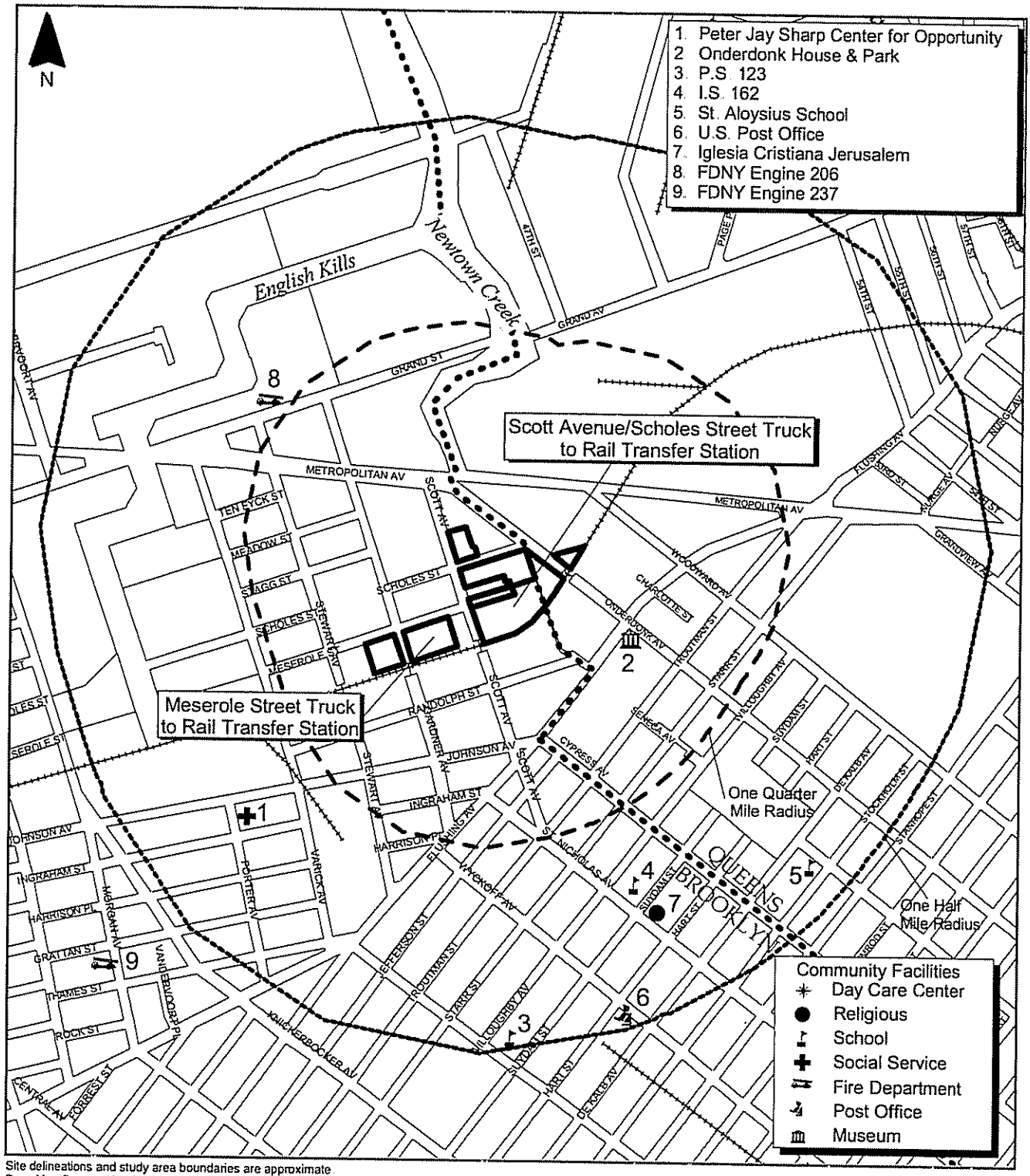
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

14.4.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

The Scott Avenue/Scholes Street Truck to Rail TS would create no significant new demand on services or community facilities, and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the new facility (see Appendix A).

Table 14.4-1
Community Facilities

Name	Address
Within the Primary Study Area	
Onderdonk House and Park	18-20 Flushing Avenue
Within the Secondary Study Area	
Social Services	
Peter Jay Sharp Center for Opportunity	89-111 Porter Avenue
Schools	
P.S. 123	100 Irving Avenue
I.S. 162	1390 Willoughby Avenue
St. Aloysius School	360 Seneca Avenue
Day Care Center	
Ridgewood Day Care Center	227 Knickerbocker Avenue
Religious and Cultural Institutions	
Iglesia Cristiana Jerusalem	92 St. Nicholas Avenue
Fire	
First Engine and Ladder Company – Engine 206 and Ladder 140	1201 Grand Street, Brooklyn, and 56-07 Metropolitan Avenue, Queens
Municipal	
U.S. Post Office	86 Wyckoff Avenue
Outside the Secondary Study Area	
Fire	
Second Engine and Ladder Company – Engine 237 and Ladder 124	43 Morgan Avenue and 394 Himrod Street



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary area may not be shown on the figure

Figure 14.4-1 Community Facilities and Services
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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14.5 Open Space

14.5.1 Existing Conditions

14.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

14.5.1.2 Summary of Open Space in the Study Area

There are five public parks and open spaces within or just beyond the study area. They are listed in Table 14.5-1 and shown on Figure 14.5-1.

The study area's major recreational facility, Maria Hernandez Park, is located in Bushwick.

Maria Hernandez Park (formerly Bushwick Park) is a large City park – nearly seven acres – located ¼-mile south of the site. This community park recently underwent significant reconstruction to provide additional courts, game tables, paths, benches and other infrastructural improvements, as well as public performance space, ornamental gates, etc.

Though not NYCDPR property or jurisdiction, the five-acre Grover Cleveland High School Athletic Field was also recently reconstructed to provide passive and active recreational space for the neighborhood, including new play equipment for young children.

Table 14.5-1
Public Parks and Open Spaces

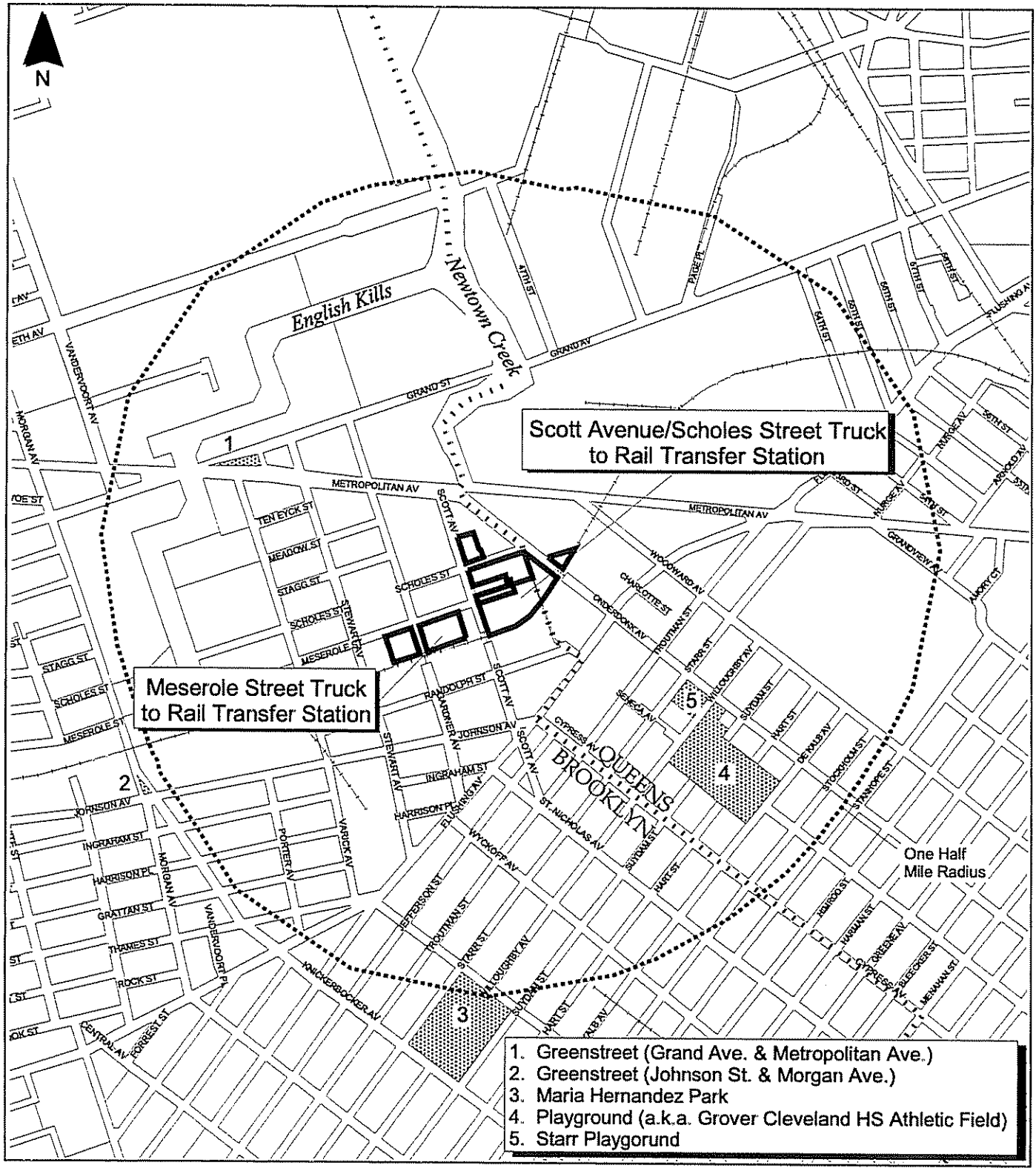
Name	Address	Acreage
Greenstreet	Grand Avenue and Metropolitan Avenue	--
Greenstreet	Johnson Street and Morgan Street	--
Maria Hernandez Park (formerly Bushwick Park)	Bounded by Knickerbocker Avenue, Starr Street, Irving Avenue and Suydam Street	6.87
Playground (a.k.a. Grover Cleveland High School Athletic Field)	210 Onderdonk Avenue	5.1
Starr Playground	Bounded by Starr Street, Onderdonk Avenue, Willoughby Avenue and Seneca Street	0.9

14.5.2 Future Baseline Conditions

NYCDPR has no new development plans or notable development projects associated with open spaces in the study area. Therefore, Future No-Build conditions are anticipated to resemble Existing conditions.

14.5.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

The facility would not directly displace or significantly change demands on nearby parks. Therefore, no impacts to the public open spaces would result from the Scott Avenue/Scholes Street Truck to Rail TS.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 14.5-1 Open Space/Parkland
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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14.6 Cultural Resources

14.6.1 Existing Conditions

14.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site, and includes portions of four historic neighborhoods, all clustered along Newton Creek: East Williamsburg and Bushwick in Brooklyn, and Maspeth and Ridgewood in Queens.

14.6.1.2 Development History of the Area

East Williamsburg in Brooklyn was established as an independent village in 1664 and remained a small farming community until the opening of the Erie Canal in 1825. Williamsburg became an independent city in 1827 and joined the city of Brooklyn in 1854. During the Civil War, The Monitor, the world's first ironclad warship, was built at the Brooklyn Navy Yard in Williamsburg. It remains an industrial neighborhood along the waterfront with an expanding residential population further inland.

Bushwick in the southern portion of the study area was one of six original towns in Brooklyn during Dutch rule in the 17th century. It was an established farming community well into the 19th century. With a large influx of German immigrants in the mid 1800s, many breweries were established; between 1850 and 1880 there were at least 11 breweries located in the neighborhood. Bushwick became part of Brooklyn, along with Williamsburg, in 1854. Housing development and associated residential population surged after the opening of the elevated railroad to Manhattan in 1888. The area's demographics changed over the decades with the improved access and available housing supply. As with many other neighborhoods in the outer boroughs, Bushwick declined in the 1960s and 1970s, and has recently experienced some revitalization of its housing stock.

The Ridgewood neighborhood of Queens was originally developed as part of Newtown, the first of Queens' three original towns, established in 1642. Following the protracted economic depression of the mid-1870s, Ridgewood boomed as a residential community after the Brooklyn City Railroad built its car barns there in 1881. The coming of the Myrtle Avenue Elevated in 1888 furthered this process, attracting great numbers of people from other parts of the City.

Maspeth is a large neighborhood in west central Queens, named for the Mespat Indians who lived there, near the headwaters of Newtown Creek. Though it was initially settled by Europeans in 1642, it remained sparsely developed until the mid-19th century. Heavy industrial uses lined Newtown Creek (in the study area) and that section of Maspeth remains industrial, though there are many vacant sites where fertilizer plants, lumber yards and linoleum plants once stood.

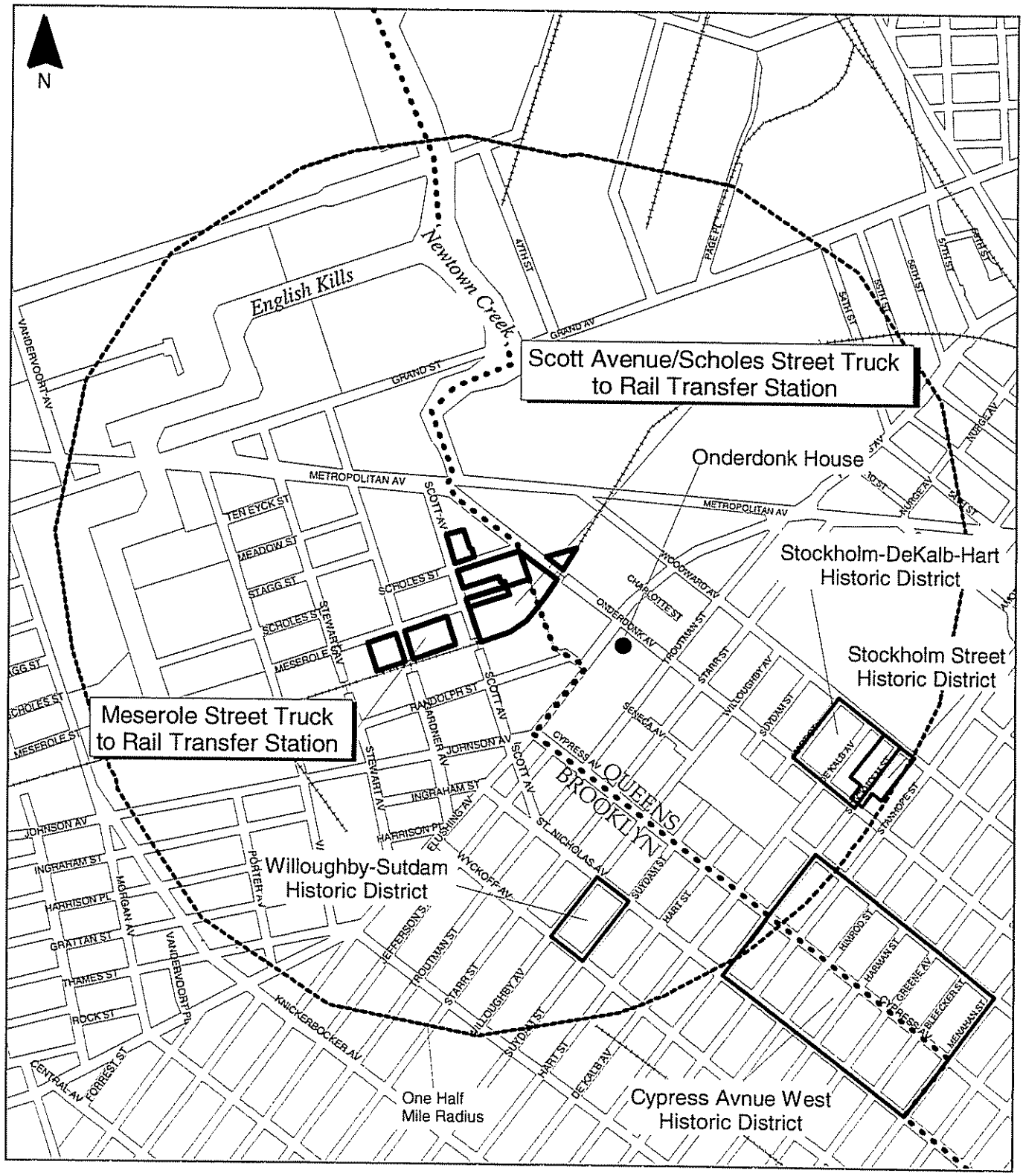
14.6.1.3 Cultural Resources on the Site

According to SHPO and LPC, there are no historic structures or areas of archaeological importance on the site.[22]

14.6.1.4 Historic Resources within the Study Area

Within or just beyond the study area, there are three early-20th-century historic districts and one individual property that are listed on the S/NR. The property and a large portion of one of the districts are also designated by the LPC. (See Figure 14.6-1.)

The Vander Ende-Onderdonk House (a.k.a., The Adrian and Anne Wyckoff Onderdonk House), located nearly ¼-mile east of the site, is a City landmark and is listed on the S/NR. It is the oldest Dutch-American fieldstone house in the City and houses the Greater Ridgewood Historical Society. The stone part of the house was built around 1709 and parts of the older frame date as far back as 1655. It served as a locus of 17th- and 18th-century Dutch and Huguenot settlement, and played a role in the boundary settlement between Kings and Queens Counties.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 14.6-1 Cultural Resources
Scott Avenue/Scholes Street Truck to Rail Transfer Station

CITY OF NEW YORK
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The three historic districts within (or just beyond) the study area are all intact groupings of late-19th-century/early-20th-century working class rowhouse and tenement housing. They are all in the bisected neighborhood of Ridgewood, which spans the Queens and Brooklyn border.

The Willoughby-Suydam Historic District covers 1½ blocks composed of 50 three-story brick tenements built between 1904 and 1906. Located more than ¼-mile southeast of the site, the district reflects the earliest phase of working class tenement housing constructed in Ridgewood, distinct from the rest of the Brooklyn Ridgewood community, which was developed with large industrial buildings at the time of construction. The district is listed on the S/NR.

The Stockholm-DeKalb-Hart Historic District covers 2½ blocks at the edge of the study area, east of the site. The two-story brick structures, designed in Romanesque and Renaissance Revival styles, are "an intact and cohesive neighborhood containing distinctive examples of working-class row houses constructed during Ridgewood's major period of development," between 1905 and 1921.[4] (The central portion of this district is also designated by LPC as the Stockholm Street Historic District.)

Located just beyond the study area boundary, further southeast of the site, the Cypress Avenue West Historic District is a 16-block district that stretches between Queens and Brooklyn. It serves as "an intact example of low-scale, working-class housing built at the turn of the twentieth century by German immigrants."[5] This district also contains two-story Romanesque and Renaissance Revival brick houses and other public buildings that were built between 1888 and 1906.

[4] The New York State/National Register, Number 92NR00293, page 4.
[5] The New York State/National Register, Number 90NR01600, page 4.

14.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review; therefore, anticipated Future No-Build Ceonditions are assumed to be the same as Existing eConditions.

14.6.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

The SHPO and the LPC have determined that there are no elements of architectural or archaeological significance within the site.

14.7 Urban Design, Visual Resources, and Shadows

14.7.1 Existing Conditions

14.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 14.8-1). The site has been developed in a manner consistent with urban design of the adjacent properties and visual quality of the overall study area. It is a non-sensitive industrial area, in terms of urban design and visual quality assessment. There are no sensitive-view corridors, publicly accessible open areas or points of waterfront access – areas that would likely experience visual quality impacts from the proposed transfer facility development.

14.7.1.2 Description of the Site

The existing transfer station comprises most of the on-site development. There is no formal landscaping on or adjacent to the site, but the perimeter walls are well maintained and free of graffiti. The interior of the site is generally not visible from the street, and so the site is recognized primarily by blank walls and screening fences. As such, it makes no notable contribution to the streetscape or urban design and visual quality of the general area.

14.7.1.3 Urban Design and Visual Resources of the Study Area

There are no sensitive-view corridors or important visual resources within the study area. The site is visually compatible with its industrial surroundings, which include several other waste transfer stations, recycling facilities and truck parking lots. Most industrial buildings in the area are two or three stories tall, with truck bays, and many with accompanying off-street parking. There is also on-street parking throughout the study area, but there is little daytime pedestrian activity. Vacant lots are adjacent to many of the buildings, though they tend to be maintained, some planted in grass. Although there is no formal and consistent landscaping for the public area, there are small strips of lawn along many of the area sidewalks, and there are mature trees throughout the study area. The area is generally tidy, and the low-scale buildings, numerous parking lots, and vacant lots give the area an open quality. See Figures 14.7-1 and 14.7-2.



Figure 14.7-1 : Looking north from facility entrance.



Figure 14.7-2 : Scott Avenue rail yards.

HDR, HydroQual, URBITRAN, PB, EEA, Cambridge Environmental Inc	**Figure 14.7-1 and 14.7-2** **Urban Design and Visual Quality** **Scott Avenue/Scholes Street Truck to Rail Transfer Station** **CITY OF NEW YORK** **DEPARTMENT OF SANITATION**	THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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14.7.2 Future No-Build Conditions

There are no plans for development that would change the general street grid and development pattern throughout the area. Therefore, the urban design and visual resources of the area under Future No-Build Conditions are anticipated to resemble Existing Conditions.

14.7.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

While improvements would be made to the site, the use would generally remain unchanged, and physical changes would be limited to the site. Although existing buildings on site will be demolished to accommodate new site construction, the improvements will likely produce a processing building, outdoor truck parking and container storage similar to the functional structures and open lot operations currently on the site. No significant adverse impacts to the urban design and visual quality of the area are anticipated.

14.8 Neighborhood Character

14.8.1 Existing Conditions

14.8.1.1 Definition of the Study Area

The neighborhood character study area and site is defined by predominantly industrial land use and visual quality. The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas.

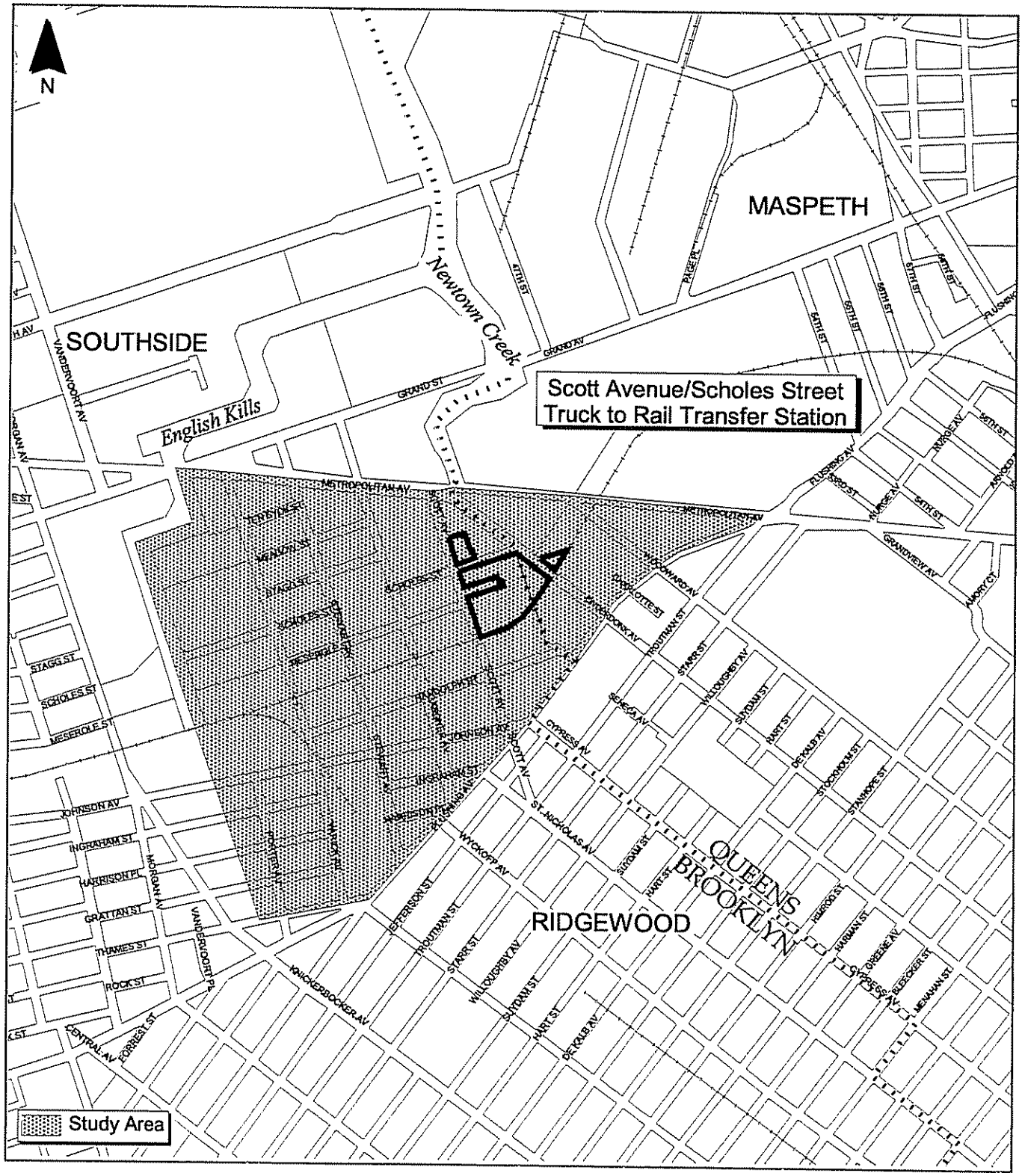
With these criteria, the study area is bounded by the English Kills to the west, LIRR tracks to the south, Newtown Creek to the east and Metropolitan Avenue to the north (see Figure 14.8-1).

14.8.1.2 Description of Neighborhood Character

The study area is characterized by industrial uses, including several waste transfer and recycling operations. Consistent with a heavily industrial area, there are no sensitive visual resources or unique features, and while there are sidewalks and the area is generally tidy, with a few trees and some grass, there is little pedestrian activity. This is largely the result of there being no commercial or residential uses within the study area, heavy truck traffic through the area and limited pedestrian access into the study area.

14.8.2 Future No-Build Conditions

Future development plans in the vicinity of the site are beyond the study area and would not be expected to alter neighborhood character in their surroundings, particularly as they are industrial developments. The site will continue to operate as a waste transfer station, and Future No-Build Conditions would generally resemble Existing Conditions.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 14.8-1 Neighborhood Location
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

CITY OF NEW YORK
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14.8.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

No change to the industrial neighborhood character would be expected because the Scott Avenue/Scholes Street Truck to Rail TS operation would be similar to Future No-Build Conditions. Technical analyses for the new facility predict no unmitigatible impacts associated with traffic, air, odor or noise. Therefore, no impacts to neighborhood character are predicted.

14.9 Natural Resources

14.9.1 Existing Conditions

Existing Conditions include stressed terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise if the Scott Avenue/Scholes Street Truck to Rail TS were developed.

14.9.1.1 Definition of Study Area

The study area includes the site located at 598 Scholes Street in Brooklyn. The 598 Scholes Street site is located on the southeast corner of the intersection of Scholes Street and Scott Avenue, Brooklyn (see Figure 2.2.11-1). BFI Waste Systems of New Jersey, Inc. is presently located on the site and operates as a solid waste and recycling facility. It is proposed that BFI increase its solid waste capacity and add rail export to the facility's waste shipping capabilities at the 598 Scholes Street facility. MSW will be trucked to the site, containerized and exported by rail and truck. The existing LIRR Bushwick Branch, an underutilized freight line located at the south end of the property, will be used for rail transport. Rail transport will locally reduce traffic and emissions.

The existing solid waste operations will continue at the Scholes Street facility; it is also proposed that other operations of facilities held by BFI Waste Systems be transferred to the 598 Scholes Street site. This includes the transfer of the operations of the solid waste facility at 105-115 Thames Street, the C&D debris facility at 594 Scholes Street, and the glass/tire facility at 575 Scholes Street. The Thames Street and 575 Scholes Street facilities will then be closed and the permit for the C&D facility at 594 Scholes Street will be transferred to a third party. The area is zoned M3-1 for heavy manufacturing and M1-1 light industry and is heavily developed. Therefore, the site has very limited terrestrial natural resources. Such resources that do exist are discussed in following sections.

14.9.1.2 Geology

Based on information derived from a review of the Bedrock and Engineering Geologic Maps of New York County by Charles A. Baskerville, 1994, the depth to bedrock is 125 feet below the soil surface.[6] The surface soil on site is paved with concrete and covered with buildings.

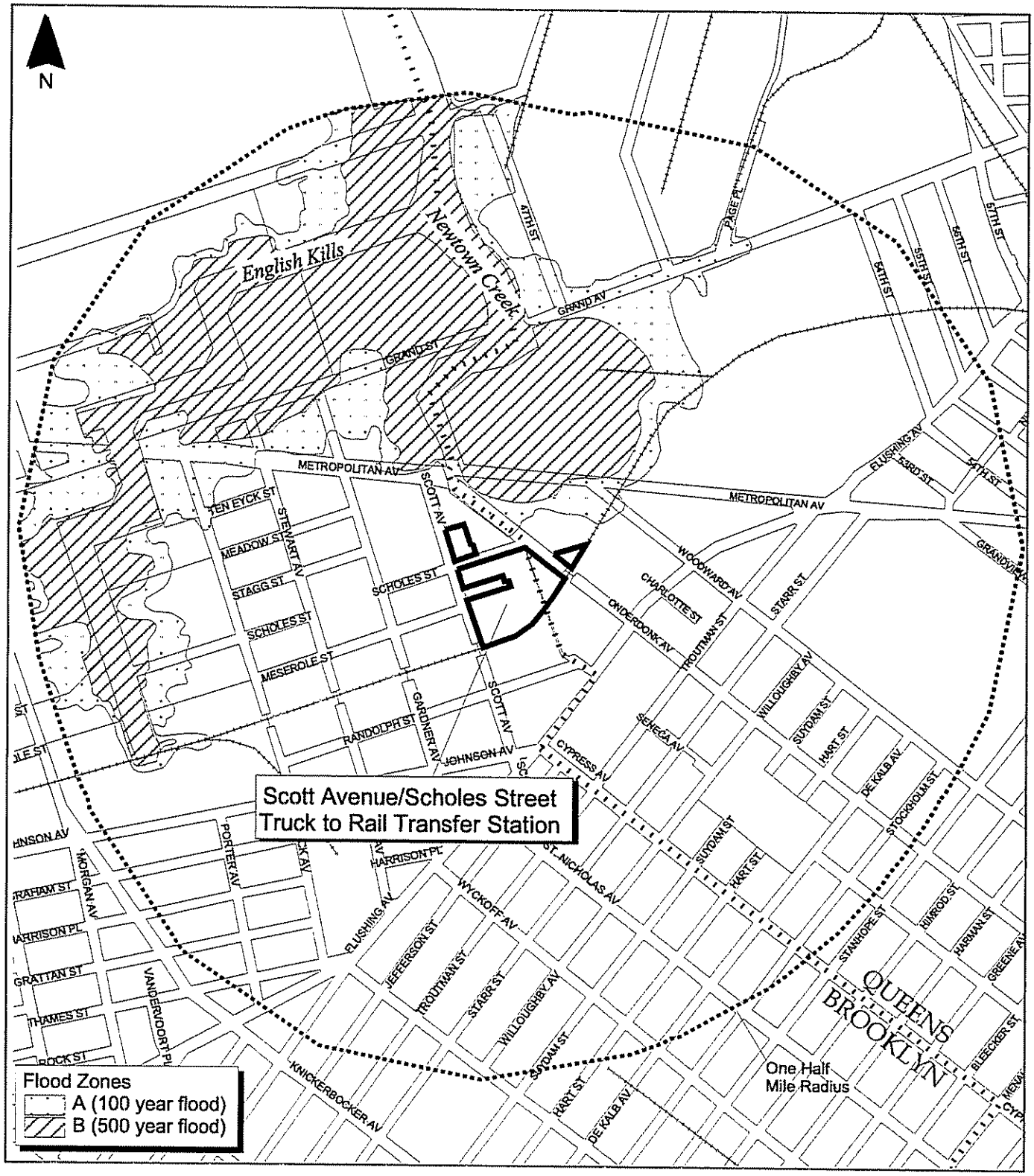
14.9.1.3 Floodplains

The proposed Scott Avenue/Scholes Street Truck to Rail TS is located within a zone of minimal flooding (see Figure 14.9-1). No intertidal wetlands exist in the study area. Newtown Creek and English Kills, which are NYSDEC-designated littoral zones, are to the north and west of the study area (see Figure 14.9-2). The end of Newtown Creek lies within a ¼-mile radius of the site and English Kills lies outside of the ¼-mile, but within a ½-mile, radius of the site. The site is located within the City's WRP boundaries and is a designated SMIA.

14.9.1.4 Ecosystems

The site is essentially fully developed with buildings and paved lots, leaving little terrestrial natural resources to be impacted. The transfer station facility was devoid of vegetation; however, there was vegetation documented along the railroad tracks located immediately south of the facility and in cracks of pavement on the property. The species observed were non-native weed species, including: poor man's peppergrass (*Lepidium virginicum*), yellow nutsedge (*Cyperus esculentus*), lady's thumb (*Polygonum persicaria*), common mugwort (*Artemisia vulgaris*), redroot pigweed (*Amaranthus retroflexus*), common sow thistle (*Sonchus oleraceus*), crabgrass (*Digitaria sanguinalis*), green foxtail (*Setaria viridis*), common ragweed (*Ambrosia artemisiifolia*), Japanese knotweed (*Polygonum cuspidatum*), lamb's quarters (*Chenopodium album*), brome (*Bromus* sp.), daisy fleabane (*Erigeron annuus*), tree-of-heaven (*Ailanthus altissima*), black cherry (*Prunus serotina*), black medic (*Medicago lupulina*), horseweed (Conyza canadensis) common evening primrose (*Oenothera biennis*), pokeweed (*Phytolacca*

[6] Baskerville, C.A., 1994. Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York and Parts of Bergen and Hudson Counties, New Jersey.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

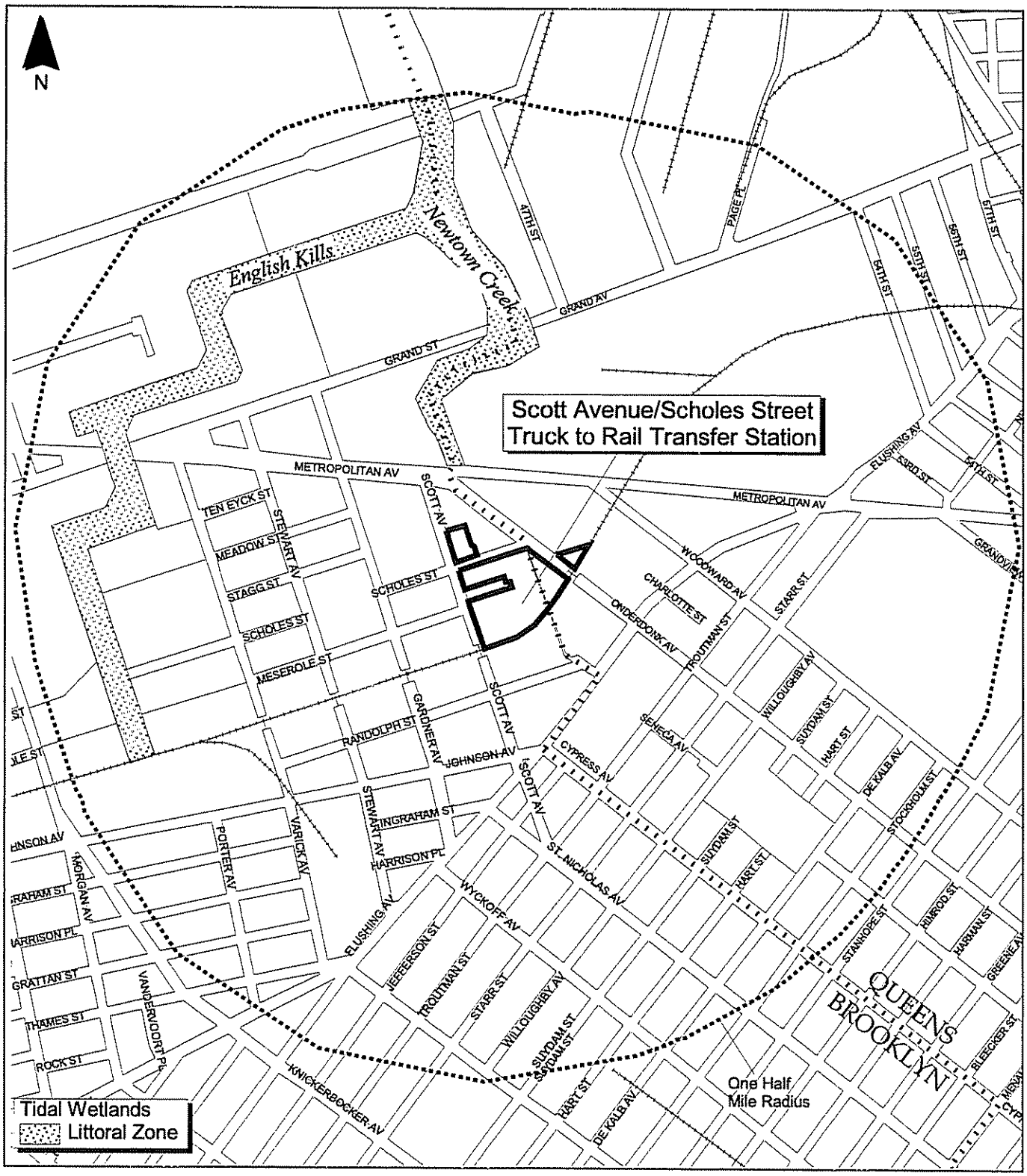
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HDR URBITRAN EEA Cambridge Environmental Inc HydroQual DR

Figure 14.9-1 Floodplains
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 14.9-2 Wetlands
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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americana), bindweed (*Convolvulus arvensis*), and thistle (*Cirsium* sp.). Any construction along the railroad would impact the above-mentioned vegetation, but none of the species are threatened or endangered and all are invasive weed species.

According to the USF&WS, except for occasional transients, there are no federally-listed or proposed endangered or threatened species, or any "critical habitats" present on the site. According to the NYSDEC, there are no records of rare or state-listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the site.

14.9.2 Future No-Build Conditions

If the Scott Avenue/Scholes Street Truck to Rail TS were not developed, the study area would remain as is. The limited terrestrial natural resources will remain and the study area will continue to be an ecologically unproductive and stressed urban area.

14.9.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.9.3.1 Geology

The geology of the study area would not be impacted as a result of the building of the Scott Avenue/Scholes Street Truck to Rail TS.

14.9.3.2 Floodplains

Potential development of the Scott Avenue/Scholes Street Truck to Rail TS would have no effect on the elevation of the site. The potential development does not include any provisions for raising any portions of the site over the present elevation level. The facility would be constructed within the zone of minimal flooding and within the SMIA. The proposed activity, however, complies with New York State's CMP as expressed in the City's approved local WRP.

14.9.3.3 Ecosystems

The Scholes Street facility is covered with buildings and paved lots which have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. Implementation of the new facility would not have any significant impact on the few areas of vegetation present on the site. The few opportunistic, invasive, weed species on the property are located along the railroad tracks. Any construction or alteration of the property will not impact the vegetative community, as only weeds are present. There may be a loss of the vegetative communities along the railroad tracks with increased usage, but the species present along the tracks are also opportunistic species that do not have a significant community value.

The consolidation of several of BFI Waste Systems of New Jersey, Inc.'s facilities to the 598 Scholes Street facility will positively impact the surrounding community. The use of rail export of waste will decrease truck emissions in the area, improving air quality. This will also help to decrease traffic and noise in the surrounding area.

14.10 Hazardous Materials

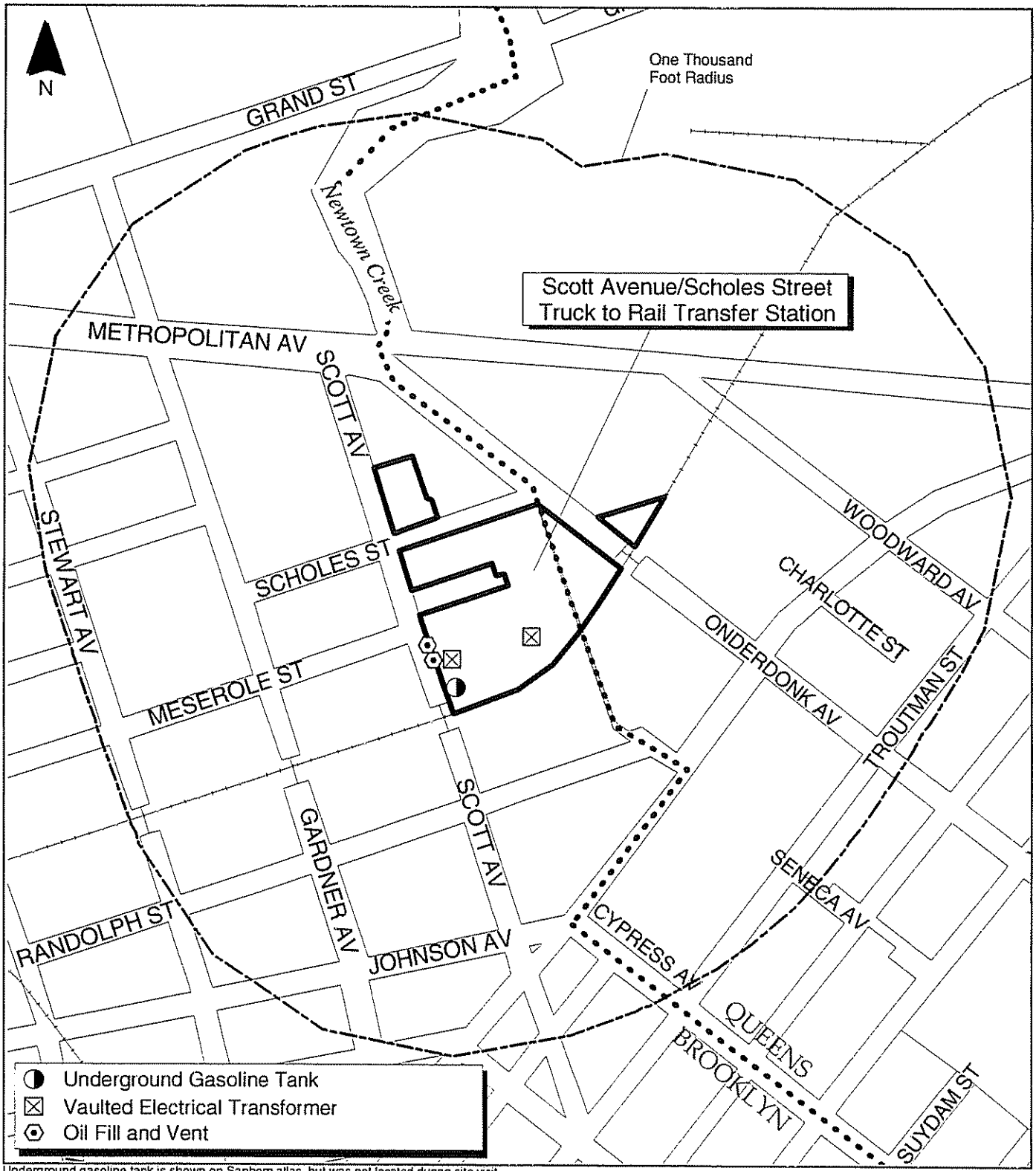
14.10.1 Existing Conditions

Existing Conditions associated with the presence or suspected presence of hazardous materials in soil, groundwater, and building components/equipment were assessed within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual, and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527-00). The assessment was performed in July and August of 2004. It included a historic land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps and information contained within City Building Department database records for the study area. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A Freedom of Information Law request was submitted to the NYCDEP to solicit records pertaining to toxic or hazardous materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted in July 2004. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers, and unusual stains and odors.

14.10.1.1 Definition of Study Area

The study area includes the existing site and its neighboring properties within an approximate 1,000-foot radius. (See Figure 14.10-1.) The existing site consists of two separate parcels: (1) a paved fenced-in yard located at 595 Scholes Street/162 Scott Avenue (Block 2966, Lot 1) used for container storage by BFI Waste Systems of New Jersey and a BFI solid waste management/paper recycling facility located at 598-636 Scholes Street and 138 Scott Avenue (Block 2979, Lots 1 and 5); and (2) an administrative office/equipment maintenance and



Underground gasoline tank is shown on Sanborn atlas, but was not located during site visit
Oil fill and vent located durung site visit but no connected tanks were identified.
Exact locations of USTs extracted from regulatory database and provided by BFI are unknown
Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 14.10-1 Hazardous Materials Sites
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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shelter/vehicle maintenance building located at 72 Scott Avenue (Block 2990, Lot 1). According to information provided by BFI, the one-story brick building located at 172 Scott Avenue (Block 2966 Lot 4), formerly used by BFI as a garage, had been sold approximately one year ago and is longer owned or used by BFI.

14.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater, and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and implementation of the Scott Avenue/Scholes Street Truck to Rail TS could lead to possible increased exposure of people or the environment to those materials. The areas of concern within the study area identified during the assessment include:

- Past and Present Occupants and Uses – Historical Sanborn atlases and regulatory database records indicated former occupants and uses of the existing site included a steel tube manufacturing facility (i.e., Steel & Tubes Inc. of New York, Brooklyn Steel & Tube Corp./Brooklyn Steel Company, Republic Steel Corporation, and LTV Steel Co., Inc.). Former building occupant, Brooklyn Steel & Tube Corp./Brooklyn Steel Company listed at 72 Scott Avenue, was identified within the following regulatory databases: NYSDEC Chemical Bulk Storage (CBS) Facility, Toxic Release Inventory (TRI) Facility and Air Discharge Facility; and USEPA and NYSDEC RCRA Hazardous Waste Generator. LTV Steel Co. Inc. and Republic Steel were also identified within the NYSDEC TRI Facility and Air Discharge Facility databases, respectively. BFI of New York and JLJ Recycling Contractors Corp., listed at 72 Scott Avenue, were identified within the USEPA and NYSDEC Hazardous Waste Generator database. Any improper releases of chemicals stored or used by these former on-site businesses, especially those occurring on then-unpaved property areas or within paved areas with drains, could have resulted in potential subsurface contamination. It should be noted that exterior portions of the existing site, not covered by on-site buildings and structures, were paved with asphalt and concrete. No visual evidence of stained soil or stressed vegetation was observed on the existing site during the site assessment.

- Underground Storage Tanks (USTs) - Historical Sanborn atlases (i.e., 1933, 1951, 1977, 1981 and 1991) depicted a buried gasoline tank inside the 72 Scott Avenue ground-floor loading dock area fronting Scott Avenue. According to BFI this tank was 550 gallons in size and was used for diesel fuel storage prior to closure circa 1997. City Building Department database records indicated oil burner applications were filed in 1967 for the 138 Scott Avenue building, and in 1968 and 1974 for the 72 Scott Avenue building. It is unknown if the storage tanks associated with the installation of on-site oil-fired heating systems were located above ground and/or

below ground. Review of NYSDEC database records indicated that seven USTs (i.e., 4,000-gallon diesel, 4,000-gallon leaded gasoline, 15,000-gallon No. 6 fuel oil, 15,000-gallon No. 6 fuel oil, 6,000-gallon, 2,000-gallon unleaded gasoline and 550-gallon No. 2 fuel oil) were registered under Facility Registration ID 2-212245 that was issued to BFI at 72 Scott Avenue. This registration expired on September 19, 2001.

According to Facility Registration records on file with the NYSDEC, three of the seven USTs (i.e., 4,000-gallon leaded gasoline and two 15,000-gallon No. 6 fuel oil) were closed sometime prior to April 1991. Two USTs (i.e., 550-gallon No. 2 fuel oil and 2,000-gallon unleaded gasoline) were closed and removed in May 1997. The 6,000-gallon UST was reportedly closed and removed from the ground. However, the date of closure/removal is not listed within NYSDEC database records. The 4,000-gallon diesel tank is listed as "in-service" on this facility registration. No fill ports or vent lines, normally associated with the presence of USTs, were noted within visible and accessible interior and exterior portions of the existing site, with one exception. A fill port and vent line was observed extending through the exterior wall of the 138 Scott Avenue building that is adjacent to Scott Avenue. This fill port and vent line were cut, and not connected to any interior tank that may have been present in the general vicinity. According to BFI, the UST located in this area of the 138 Scott Avenue building was closed circa 1997.

Two spill incidents, associated with the closure/removal of USTs listed at the existing site, were identified within the NYSDEC Spill Log databases (i.e., Spill Nos. 9702085 dated May 18, 1997 and Spill No. 9708693 dated October 24, 1997). Spill No. 9702085 listed at 72 Scott Avenue consisted of the discovery of soil contaminated with gasoline upon removal of an on-site UST. According to NYSDEC database records, the spill was contained within the soil and did not reach groundwater. Contaminated soils were to be excavated and removed. Spill No. 9708693 listed at 72 Scott Avenue consisted of the pressure test failure of a 4,000-gallon UST. Both of these spill incidents are listed as "active" within NYSDEC Spill Log databases, indicating that the spill incidents are either still under remediation or awaiting completion of paperwork for file closure.

- Older Electrical Transformers and Equipment – Possibility of PCBs in older electrical transformers located within secured concrete vaults inside existing on-site buildings (ground-floor equipment maintenance and shelter sections inside 72 Scott Avenue building). It should be noted that there were no obvious indications these transformers and equipment had leaked. However, in case of a fire, potential emissions of PCBs can be released from these transformers.

- Lead-Based Paint – Based on the age of the existing buildings, it is highly likely that interior portions of these buildings contain some lead-based paint, in underlying layers. Painted surfaces were in relatively good condition, with isolated damaged areas noted. Underlying paint in good condition does not represent any risk to current employees or visitors to the existing buildings.

- Asbestos-Containing Materials (ACM) – Based on the age of the existing buildings, it is highly likely that interior and exterior portions of these buildings contain ACM. Suspected ACM noted within, and affixed to these buildings, included thermal pipe insulation, vinyl floor tiles, corrugated cement panels (i.e., transite panels) and roofing materials. Isolated damaged areas of pipe insulation and vinyl floors within the existing buildings were noted during site reconnaissance.

- Past and Present Adjacent and Neighboring Uses – Review of historical Sanborn atlases and regulatory agency databases, as well as the pedestrian reconnaissance of neighboring properties, indicated the study area is located within a neighborhood that has historically been developed for and occupied by a variety of manufacturing and industrial uses. Manufacturing and industrial operations typically involve the storage and use of toxic or hazardous materials, and generation of toxic or hazardous wastes. Based upon this information, it is considered likely that some level of groundwater degradation exists within the study area.

14.10.2 Future No-Build Conditions

Under Future No-Build Conditions, the study area would remain as is. Contamination may exist within the study area from previous historic uses, suspected USTs, and/or from documented and undocumented hazardous material releases at adjacent or neighboring properties. In addition, lead-based paint, suspected ACMs and suspected PCB-containing electrical transformers would remain at the existing buildings in their present conditions.

14.10.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

Based on the land use history of the study area and possible presence of on-site USTs, contamination may exist within the study area where the construction of the Scott Avenue/Scholes Street Truck to Rail TS would occur. If the Scott Avenue/Scholes Street Truck to Rail TS project was to be implemented, a soil and groundwater Phase II sampling protocol would be developed for review and approval by NYCDEP (NYSDEC may be involved in the decisions to test and remediate the study area depending on the actual events and levels of

contamination encountered). If elevated levels of contamination are encountered, remediation of said contamination would be performed in a manner that is consistent with the levels of contamination discovered to ensure that no significant impact to on-site and off-site occupants occurs.

Additional areas of concern include lead-based paint, suspected ACMs and possible PCB-containing electrical transformers. Lead-based paint and ACMs that may be present within the existing buildings would be abated prior to any construction activities in accordance with City Building Codes and practices. All electrical transformers containing PCBs should be removed from the existing buildings to avoid future potential liabilities. Since construction and excavation may increase the exposure to contaminants by dermal contact, ingestion or inhalation, the necessary and appropriate health and safety measures would be implemented to mitigate and minimize any exposure risk to workers and the general public.

14.11 Water Quality

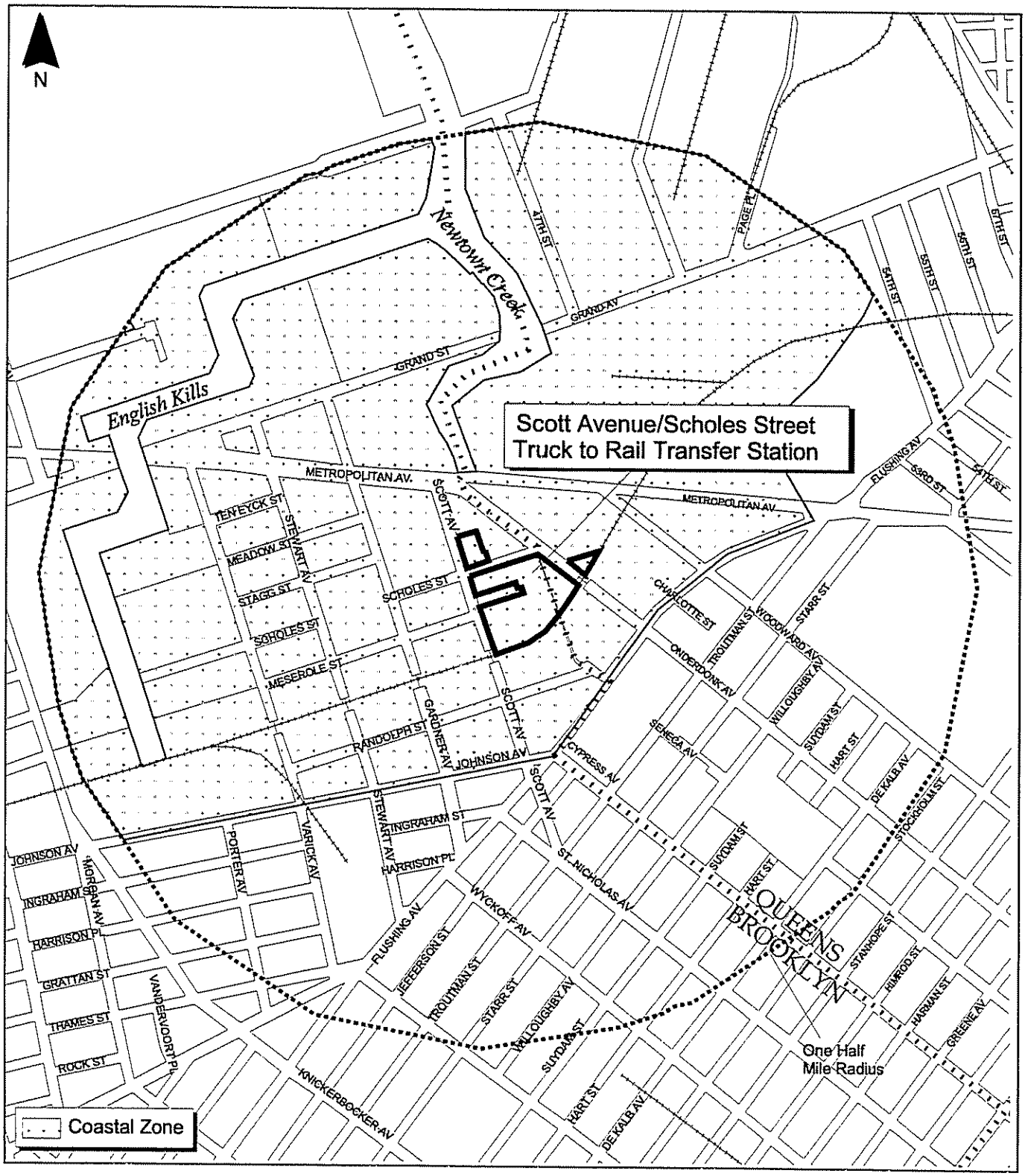
The Scott Avenue/Scholes Street TS is not located near or adjacent to surface water and would have no potential to impact water quality. Therefore, no analysis was required.

14.12 Waterfront Revitalization Program

14.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of English Kills and Newtown Creek, the proposed Scott Avenue/Scholes Street Truck to Rail TS would be located within the City's coastal zone boundary (see Figure 14.12-1). The site is located within a designated SMIA and would be within Reach 13/Newtown Creek as indicated in the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." The proposed Scott Avenue/Scholes Street Truck to Rail TS is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Scott Avenue/Scholes Street Truck to Rail TS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14-1. In instances where a component of the proposed Scott Avenue/Scholes Street Truck to Rail TS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations that would occur at the proposed site is provided in Section 2.2.11.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN DD R&D EEA Cambridge Environmental Inc

Figure 14.12-1 Coastal Zone Boundary
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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14.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the Scott Avenue/Scholes Street Truck to Rail TS. The facility would, therefore, be consistent with this subpolicy.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The Scott Avenue/Scholes Street Truck to Rail TS would not be a water-dependent facility; however, it would be located within the boundaries of the NYCDCP-designated Newtown Creek SMIA. The existing facility, located at 598 Scholes Street, currently operates as an MSW transfer station with a permitted capacity for 220 tpd. As part of the Proposed Action, the facility would be modified in order to accommodate MSW transferred from three other existing facilities in the immediate area. One of these three facilities would be shut down after the proposed modification is complete. The Proposed Action would result in the modification of the existing facility in order to increase its permitted capacity to 3,000 tpd of MSW, and add rail export to the facility's waste shipping capabilities. Modification to the existing facility would involve: (1) installation of two over-the-top loading stations accommodating both intermodal containers and/or tractor trailers; (2) installation of new inbound/outbound truck scales and

drainage structures; (3) refurbishment of existing rail; (4) development of a rail container transfer system and enclosed delidding/lidding area; and (5) the upgrading of dust/odor control systems. The Scott Avenue/Scholes Street Truck to Rail TS would be consistent with existing land uses in the immediate vicinity of the site and would be compatible with surrounding uses. Therefore, the proposed facility would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The proposed Scott Avenue/Scholes Street facility would not be considered a waterfront use and is not located on the waterfront. The Proposed Action would involve the modification of the existing facility into a truck-to-rail transfer station that would allow the transport of MSW by rail to out-of-City disposal facilities. In addition, the Proposed Action would allow for the permanent closure of a fully-operational and permitted transfer station located in the vicinity of the proposed site. The proposed modification of the Scott Avenue/Scholes Street Truck to Rail TS would not result in a need for significant infrastructure improvements and would, therefore, be consistent with this subpolicy.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 *Minimize conflicts between recreational, commercial, and ocean-going freight vessels.*

The Scott Avenue/Scholes Street Truck to Rail TS would not be a waterfront use and would not be located in an area that would cause conflicts with recreational, commercial or ocean-going vessels. This subpolicy would, therefore, not be applicable.

3.3 *Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The proposed ~~Alternative~~ facility would involve the modification of an existing facility to serve as a truck-to-rail facility where MSW would be delivered, processed and containerized, then transported via rail lines to out-of-City disposal facilities. The proposed site would not be located on the waterfront. No impacts on the aquatic environment and surrounding land and water uses would result from the development of the facility. Therefore, this subpolicy would not be applicable.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 *Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.*

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes, the Scott Avenue/Scholes Street Truck to Rail TS would not be within a designated area. SCFWH information maintained by the New York State Department of State indicates that the Scott Avenue/Scholes Street Truck to Rail TS would also not be located within an SCFWH.

Development of the Scott Avenue/Scholes Street Truck to Rail TS would involve the modification of an existing facility. The modified facility would not be a water-dependent use and would not be anticipated to result in significant impacts to natural resources at or in the vicinity of the site. The Scott Avenue/Scholes Street Truck to Rail TS would, therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted in order to determine the presence of wetlands within the proposed site. No tidal or freshwater wetlands exist on the site. The proposed Scott Avenue/Scholes Street Truck to Rail TS would be a land-based facility. No impacts to wetlands would occur as a result of the Proposed Action. This subpolicy would, therefore, not be applicable.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of the NYSDEC NHP database indicates that there are no vulnerable plant, fish and wildlife species or rare ecological community on or in the immediate vicinity of the proposed site.

The Proposed Action would involve the modification of an existing facility in order to increase its permitted MSW tpd capacity and to allow for the transport of MSW by rail. Modifications to the Scott Avenue/Scholes Street Truck to Rail TS would result in little, if any, adverse impacts upon natural resources due to previous and ongoing industrial activities at the site. Sanitary and process wastewaters would be routed to on-site treatment systems and then discharged to the municipal sewer system. Management of stormwater runoff from the Scott Avenue/Scholes Street Truck to Rail TS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The Scott Avenue/Scholes Street Truck to Rail TS would also not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The Scott Avenue/Scholes Street Truck to Rail TS would be constructed and operate in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, processing areas would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system and then discharged to the municipal sewer system. Stormwater runoff from the Scott Avenue/Scholes Street Truck to Rail TS would be managed in accordance with applicable regulations. The proposed facility would be consistent with this subpolicy.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the proposed modification of the Scott Avenue/Scholes Street Truck to Rail TS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The facility would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside an enclosed processing building, limiting the risk for the introduction of hazardous wastes or other pollutants into the environment. Control methods would be implemented at the facility to minimize or eliminate the potential for litter to escape into the surrounding environment. The proposed modification of the existing facility would be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The Scott Avenue/Scholes Street facility is not situated near navigable waters or natural areas. The Proposed Action would involve modification of an existing facility in order to increase its MSW tpd capacity and allow rail transport of containerized MSW to out-of-City disposal facilities. There would be no excavation or placement of fill within any surface waters or wetlands associated with the Proposed Action. Therefore, this subpolicy would not be applicable.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The proposed development of the Scott Avenue/Scholes Street Truck to Rail TS would have no impact on the quality or quantity of surface or ground waters. The proposed site is not located adjacent to surface waters. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. The Scott Avenue/Scholes Street Truck to Rail TS would be consistent with this policy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

The proposed Scott Avenue/Scholes Street Truck to Rail TS would not be a waterfront facility. In addition, according to a review of the FEMA National Flood Insurance Program maps, the Scott Avenue/Scholes Street Truck to Rail TS would not be located within a designated floodplain. This subpolicy would, therefore, not be applicable.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The proposed Scott Avenue/Scholes Street Truck to Rail TS would involve the modification of an existing permitted solid waste transfer station. Activities at the facility would involve the management and processing of solid waste through a truck-to-rail system. Waste would be transported in sealed containers via rail to out-of-City disposal facilities. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding environment. Solid waste would generally be containerized within 48 hours of arriving at the facility. All solid waste handling operations would be conducted in accordance with the NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to modify and operate the proposed facility.

Contingency plans would be put in place to address the potential receipt of unauthorized waste and/or other situations that could disrupt the operation of the facility. Control methods would be implemented at the facility to minimize or eliminate the potential for litter entering the environment. The proposed Scott Avenue/Scholes Street Truck to Rail TS would not result in adverse impacts and would be operated in a manner to ensure that there would be no impact to surface and ground waters, significant fish and wildlife habitats, recreational areas and scenic resources. The proposed facility would be consistent with this subpolicy.

7.2 Prevent and remediate discharge of petroleum products.

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

The proposed facility would not be located on the waterfront, and, due to the existing heavy industrial uses at and in the immediate vicinity of the proposed Scott Avenue/Scholes Street Truck to Rail TS, public access would generally not be compatible with the principal use of the site. The facility would not affect existing access to the waterfront. Therefore, this subpolicy would not be applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The Scott Avenue/Scholes Street Truck to Rail TS would not be a waterfront facility. Public access would also generally not be compatible with the principal use of the site. Therefore, this subpolicy would not be applicable.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

The Proposed Action would be compatible with existing uses in the vicinity of the site. It would involve the modification of an existing facility. As discussed in Section 14.7, visual access to the coastal lands is minimal due to the highly industrial nature of the surrounding vicinity. Therefore, no impacts to visual access would be anticipated. See also response to Subpolicy 9.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

No mapped parklands or open space areas have been identified at or within the immediate vicinity of the proposed site. Therefore, this subpolicy is not applicable.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The proposed Scott Avenue/Scholes Street Truck to Rail TS would involve the modification of an existing use and would not result in a significant impact upon visual quality, as noted in Section 14.7. Based on the information discussed in that section, the proposed facility would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The Proposed Action would involve the modification of an existing operating facility, and would result in no new impacts to scenic values associated with natural resources. It would, therefore, be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 *Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.*

No adverse effects on cultural resources would result from the development of the Scott Avenue/Scholes Street Truck to Rail TS, as stated in Section 14.6. Based on the information presented in that section, the proposed facility would be consistent with this subpolicy.

10.2 *Protect and preserve archaeological resources and artifacts.*

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

14.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

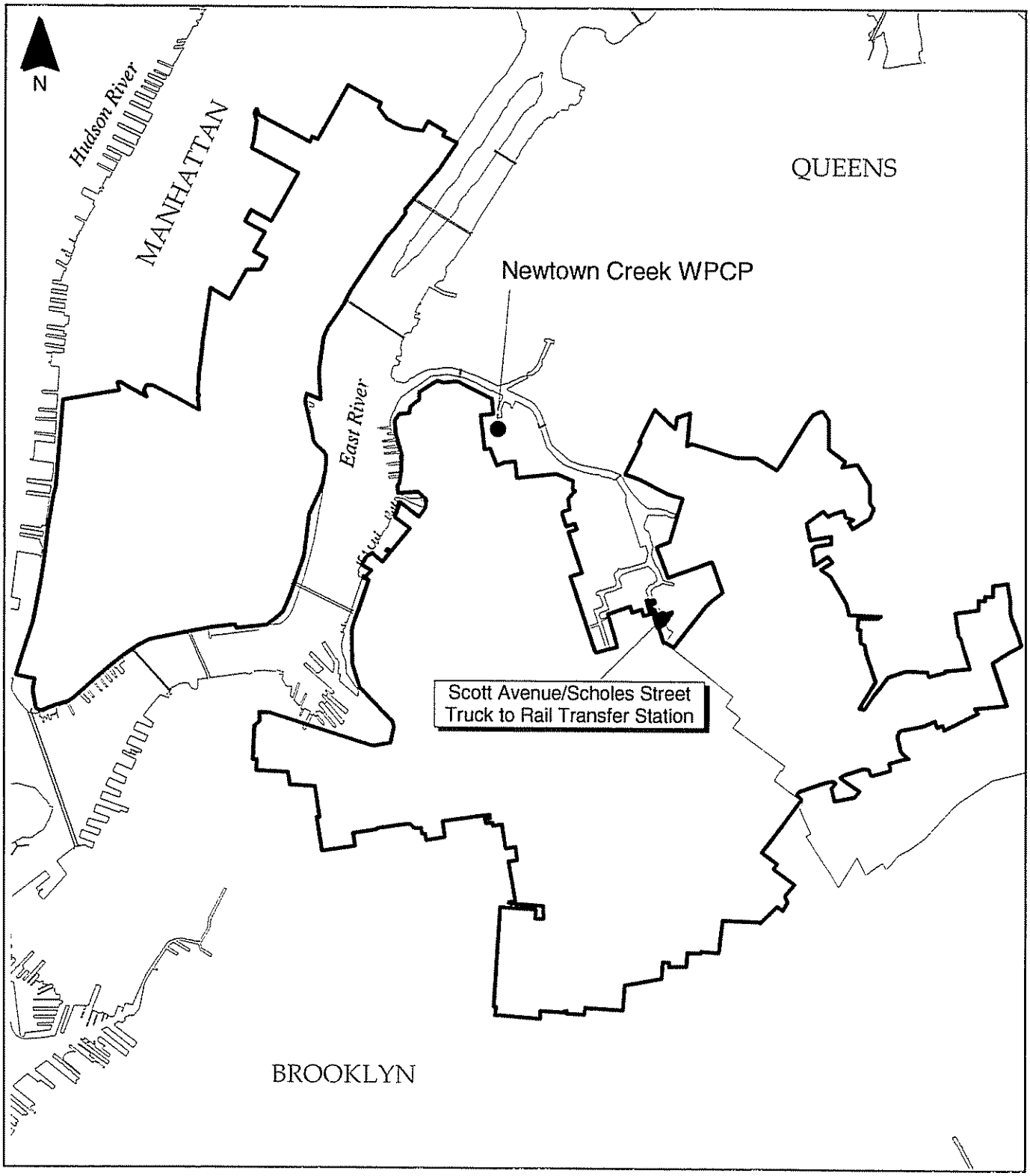
14.13.1 Existing Conditions

14.13.1.1 Water Supply

Potable water is supplied to the Scott Avenue/Scholes Street Truck to Rail TS site from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. Based on a review of NYCDEP water distribution maps, several water supply lines exist in the vicinity of the facility, including an 8-inch-diameter line along Scholes Street, a 20-inch line along Scott Avenue, a 12-inch line along Onderdonk Avenue and an 8-inch line along Meserole Street. A review of the information provided in the September 2003 EAS, supplemental information indicates that the existing facility has several connections to the 20-inch City water supply line on Scott Avenue. One 8-inch, two 6-inch and one 2-inch line connect to the City supply for the provision of potable water for process, sanitary and fire suppression purposes throughout the facility. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

14.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Newtown Creek WPCP, which serves portions of Manhattan, Queens and Brooklyn. The WPCP drainage area is illustrated in Figure 14.13-1. From July 2002 through June 2003, the WPCP treated an average of 216 mgd of wastewater under dry weather flow conditions and an average flow of 238 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 14.13-1). The maximum dry weather flow during this period was 239 mgd in August 2002 and the maximum average flow was 259 mgd during June 2003. Effluent from the plant is discharged to the East River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Newtown Creek WPCP is 310 mgd. The facility currently uses an estimated 9,000 gallons per day of water for process and sanitary purposes based on



Site delineations are approximate

5000 0 5000 Feet

Figure 14.13-1 Existing WPCP Drainage Area
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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information provided in the CEQR application and EAS supplemental information provided as part of the solid waste management facility permit modification documentation, indicating that the existing facility produces approximately 9,000 gallons per day of wastewater.

Table 14.13-1
Average Monthly Dry Weather and Average Flows
Newtown Creek Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow[(1)] (mgd)
July 2002	223	229
August	239	256
September	229	253
October	224	255
November	208	238
December	213	228
January 2003	212	223
February	204	224
March	218	240
April	207	228
May	201	219
June	218	259
Average Effluent	**216**	**238**

Note:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, the area within the vicinity of the Scott Avenue/Scholes Street Truck to Rail TS site is served by several sewer lines. A 10-inch-diameter sanitary sewer flows south along Scott Avenue and connects to a 24-inch interceptor sewer that flows west on Randolph Street. A 24-inch interceptor also runs south on Scott Avenue, connecting with the 24-inch Randolph Street interceptor. The 24-inch interceptor changes to a 36-inch interceptor on Randolph Street near Gardner Avenue and conveys sanitary flow to the west and north along Varick, Johnson, Knickerbocker, Morgan and Lombardy Avenues and Monitor and Russell Streets, to the Newtown Creek WPCP.

Stormwater sewers in the vicinity of the site include a 12-inch-diameter storm sewer that flows west along Scholes Street to a 10-foot-by-11-foot double-barrel storm sewer flowing north on Scott Avenue to Newtown Creek. A 12-inch-diameter storm sewer also exists at the intersection of Scott Avenue and Meserole Street and conveys flow to the west along Meserole Street. This storm sewer increases in diameter to a 42-inch line at the intersection of Meserole Street and Gardner Avenue and connects to a 48-inch storm sewer at the intersection of Meserole Street and Stewart Avenue, which conveys flow to the north along Stewart Avenue. The 48-inch line connects to a 54-inch storm sewer that flows west along Scholes Street and increases to a 60-inch diameter line at the Varick Avenue intersection before reaching the outfall at Scholes Street and English Kills.

Information provided in the technical proposal and related CEQR application and EAS supplemental information for the facility indicates that the facility conveys sanitary sewage to the City-maintained sewer line through three lines connected to the 10-inch sewer main on Scott Avenue. Stormwater is conveyed to the 10-foot-by-11-foot double-barrel storm sewer on Scott Avenue via three roof drains.

26.13.1.3 Solid Waste

Based on operations data from the Scott Avenue/Scholes Street Truck to Rail TS, the facility currently manages up to 220 tpd of putrescible solid waste from commercial and residential sources. Throughput of non-putrescible waste from commercial and residential sources currently includes up to 1,450 tpd of commingled recyclable material.

According to the CEQR application and EAS supplemental information, the Scott Avenue/Scholes Street Truck to Rail TS currently employs a staff of 80 personnel. Based on information from the 2001 CEQR Technical Manual, it was estimated that each employee produces approximately nine pounds of solid waste per week for a facility total of 720 pounds per week (approximately 103 pounds per day or 0.05 tpd). The waste generated by the facility staff is managed by adding it to the incoming waste to be containerized for intermodal transport to licensed solid waste management facilities.

14.13.1.4 Energy

Based on a review of applicable Consolidated Edison utility plates, the area in proximity to the Scott Avenue/Scholes Street Truck to Rail TS is served by electric lines along Scholes and Meserole Streets and Scott and Onderdonk Avenues. The service plates indicate that the existing transfer station electrical system is connected to the Consolidated Edison system at Scott Avenue near the intersection of Meserole Street.

A review of applicable Keyspan service plates shows several gas lines in the vicinity of the site. Six-inch diameter, 15-psi lines run along Scott and Onderdonk Avenues and Scholes Street. South of Scholes Avenue, an 8-inch gas line exists on Onderdonk Avenue. An additional retired 6-inch line also exists on Scott Avenue south of Scholes Street. The service plates also indicate that the facility is connected to the Keyspan 6-inch gas line on Scott Avenue.

14.13.2 Future No-Build Conditions

The Scott Avenue/Scholes Street Truck to Rail TS would continue current waste receiving operations. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for the site. Wastewater flows to the Newtown Creek WPCP would continue to increase and would be projected to be 240.4 mgd in 2006.

14.13.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.13.3.1 Water Supply

The Scott Avenue/Scholes Street Truck to Rail TS would require an additional 40 employees working three shifts per day. They would require approximately 1,000 gallons of additional potable water per day. The Scott Avenue/Scholes Street Truck to Rail TS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

14.13.3.2 Sanitary Sewage

Based on the estimated water usage of 10,000 gpd (9,000 gpd from Existing Conditions plus 1,000 gpd for new employees) for the Scott Avenue/Scholes Street Truck to Rail TS, the small quantities of wastewater sent to the Newtown Creek WPCP would not significantly impact the sewage flow rate or the ability of the Newtown Creek WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 240.4 mgd in 2006, which would be well below the permitted capacity of 310 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

14.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 40 additional facility employees per day, 312 pounds of solid waste would be generated per week (52 lbs/day) and would represent an incremental increase of approximately 312 pounds per week (52 lbs/day) above current waste generation levels. This volume would be managed at the Scott Avenue/Scholes Street Truck to Rail TS and would not significantly impact the system.

14.13.3.4 Energy

Detailed energy requirements based on the proposed renovations and changes for the Scott Avenue/Scholes Street Truck to Rail TS were not available at the time of this analysis. The renovations and changes are not expected to significantly change this facility's electrical and natural gas demands from Existing Conditions.

Additionally, Consolidated Edison has been notified of the power and natural gas requirements of the Greenpoint Converted MTS, a proposed facility in close proximity to the Scott Avenue/Scholes Street Truck to Rail TS. Consolidated Edison has stated that all demands

generated by the Greenpoint Converted MTS, which is not currently operational, could be met without an impact on the power and natural gas requirements of the surrounding community and without the need for additional power and natural gas generation capacity. Based on this statement, it is assumed that Consolidated Edison would also be able to meet all power demands without impacts of the Scott Avenue/Scholes Street Truck to Rail TS.

14.14 Traffic, Parking, Transit, and Pedestrians

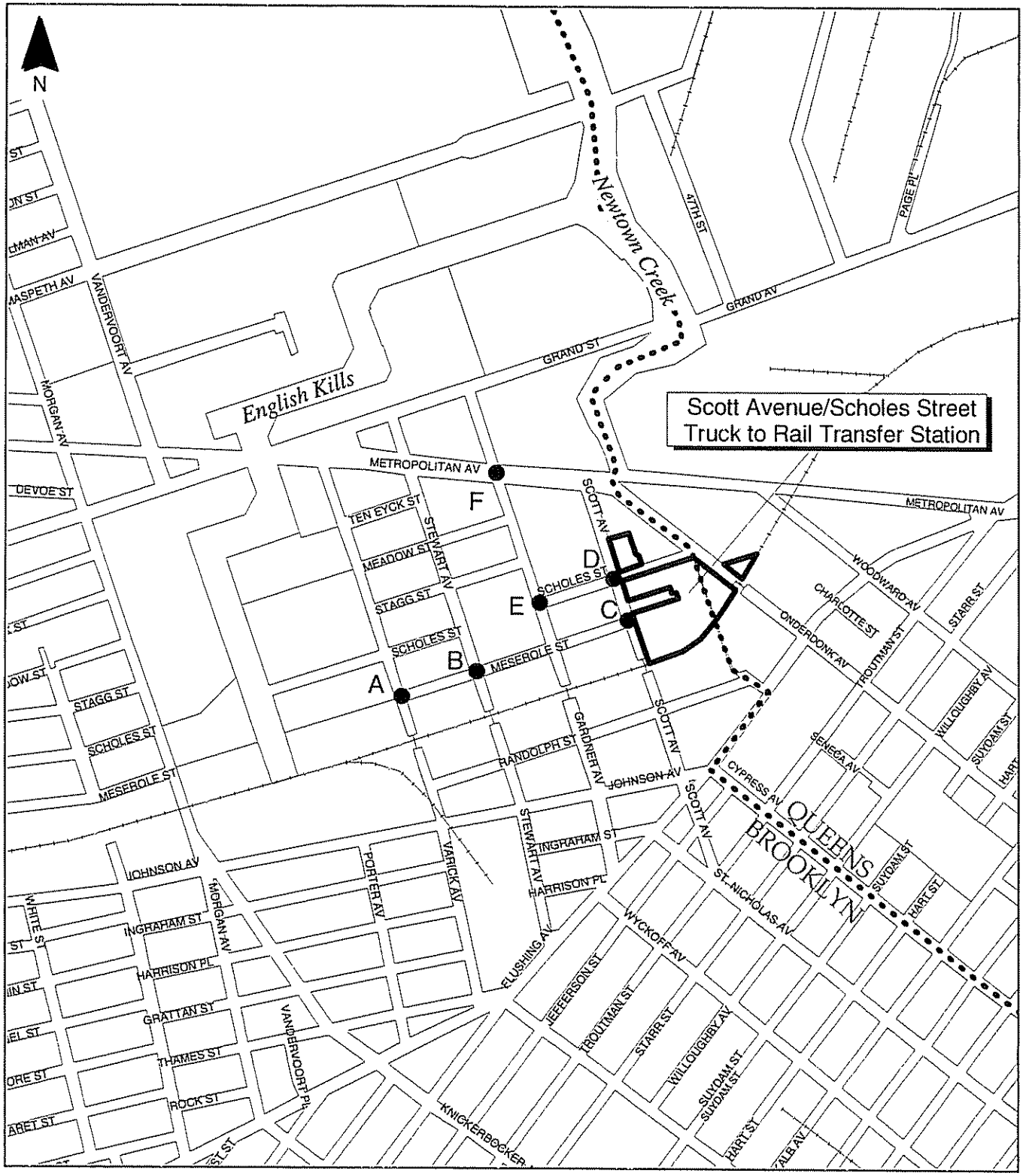
14.14.1 Existing Conditions

The Scott Avenue/Scholes Street Truck to Rail TS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

14.14.1.1 Definition of Study Area

The traffic analysis study area is broad and includes the East Williamsburg neighborhood of Brooklyn. It includes the area bounded by Grand Street on the north, Flushing Avenue on the south, the dividing line between Kings County and Queens County on the east (which approximately follows Onderdonk Avenue in the area), and Varick Avenue and Vandervoort Avenue on the west. The traffic study area is predominantly light industrial in nature. There are no CEQR-defined areas of concern located within the study area. Figure 14.14-1 shows the locations of the intersections selected for analysis (locations A through F). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Eastbound collection vehicles would approach the site along Flushing Avenue and turn northbound onto Varick Avenue. Collection vehicles would then turn east onto Meserole Street and then north onto Scott Avenue to access the facility. Alternatively, collection vehicles traveling eastbound could approach the facility on either Grand Street or Metropolitan Avenue. These vehicles would merge onto Metropolitan Avenue when crossing the bridge over English Kills and proceed east to Scott Avenue. The collection vehicles would then turn south onto Scott Avenue and proceed to the facility. Northbound and southbound collection vehicles could travel along the BQE or local designated truck routes to Flushing Avenue, Grand Street or Metropolitan Avenue, and then follow the same routes as eastbound collection vehicles. Westbound DSNY collection and other City agency vehicles are not expected to deliver DSNY-managed Waste to this facility.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

HDR | HydroQual | URBITRAN | DP | EEA Cambridge Environmental Inc

Figure 14.14-1 Traffic Analysis Study Area
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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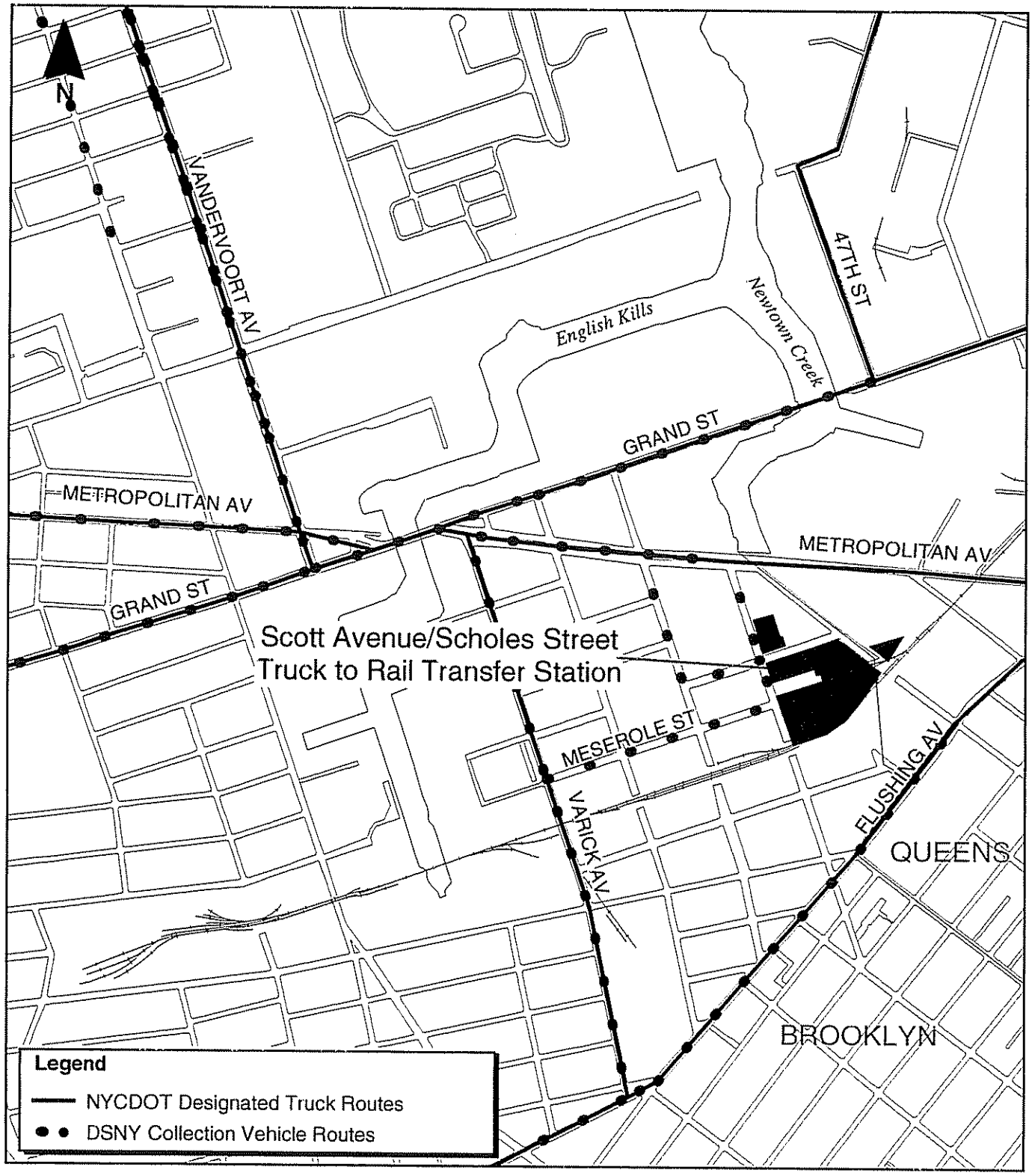
14.14.1.2 Surface Network

One major highway, the predominantly north-south BQE, services the traffic analysis study area. Flushing Avenue, Grand Street and Metropolitan Avenue are local truck routes that provide access from east and west of the site. Varick Avenue is a local truck route that provides access from north and south of the site. A map showing all major truck routes and local truck routes in Brooklyn is provided in Section 3.16 (see Figure 3.16-3).

Flushing Avenue, Grand Street and Metropolitan Avenue are principal arterials that provide access to the BQE to the west of the facility. Varick Avenue is a collector road for local traffic and provides access for local and industrial traffic between Metropolitan Avenue and Flushing Avenue.

DSNY and other agency collection vehicles approaching the Scott Avenue/Scholes Street Truck to Rail TS from the south on the BQE would exit at Grand Street and travel east towards the facility. Other vehicles approaching the facility from the south would follow a designated truck route to Flushing Avenue and proceed east to Varick Avenue. DSNY and other agency collection vehicles traveling to the facility from the north would approach the area using local truck routes to Metropolitan Avenue and then proceed east towards the facility. Vehicles traveling along Metropolitan Avenue and Grand Street would merge onto Metropolitan Avenue when crossing the bridge over English Kills and proceed east to Scott Avenue. Collection vehicles approaching the site along Flushing Avenue turn northbound onto Varick Avenue, then east onto Meserole Street, and then north onto Scott Avenue. Collection vehicles gain access to the facility from Scott Avenue between Scholes Street and Meserole Street.

Exiting vehicles all turn west onto Scholes Street between Scott Avenue and Onderdonk Avenue, then north onto Gardener Avenue. DSNY and other agency vehicles then would turn west onto Metropolitan Avenue and return to their CD of origin. Trucks returning to the south of the facility would turn onto Grand Street from Metropolitan Avenue and proceed to the BQE or a local designated truck route running north-south in the area. Trucks returning to areas north of the facility would follow Metropolitan Avenue to the west to a local designated truck route running north-south in the area. Figure 14.14-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.



Site delineations are approximate.
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 14.14-2 DSNY Collection Vehicle Routes
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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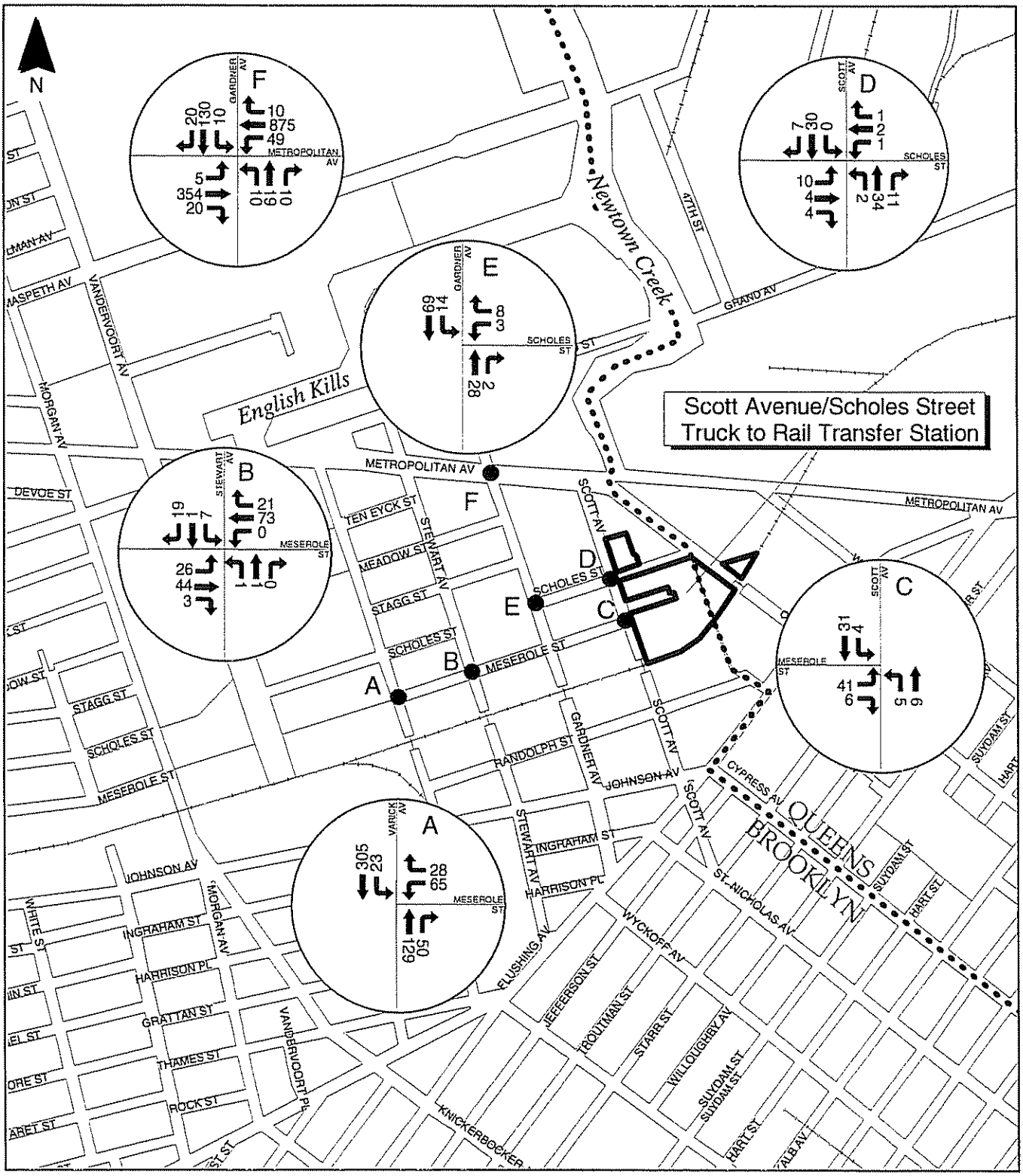
14.14.1.3 Existing Traffic Operations

The six intersections listed below were identified for analysis because they are the most likely to be impacted by the Scott Avenue/Scholes Street Truck to Rail TS. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Meserole Street and Varick Avenue– Unsignalized Intersection (see Figure 14.14-1 – location A)
- Meserole Street and Stewart Avenue – Unsignalized Intersection (see Figure 14.14-1 – location B)
- Meserole Street and Scott Avenue – Unsignalized Intersection (see Figure 14.14-1 – location C)
- Scott Avenue and Scholes Street – Unsignalized Intersection (see Figure 14.14-1 – location D)
- Scholes Street and Gardener Avenue – Unsignalized Intersection (see Figure 14.14-1 – location E)
- Gardener Avenue and Metropolitan Avenue – Signalized Intersection (see Figure 14.14-1 – location F)

Metropolitan Avenue is a principal arterial that provides access to the BQE to the west of the facility. Varick Avenue is a collector road for local traffic and provides access for local and industrial traffic between Metropolitan Avenue and Flushing Avenue. Meserole Street, Stewart Avenue, Scott Avenue and Scholes Street are local streets that are not designated truck routes.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted on May 26, 2004, while ATR counts were conducted between May 24 and May 31, 2004. Figures 14.14-3, 14.14-4 and 14.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 14.14-1 presents the v/c ratio, delay and LOS for the six intersections during the AM, Facility, and PM peaks.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

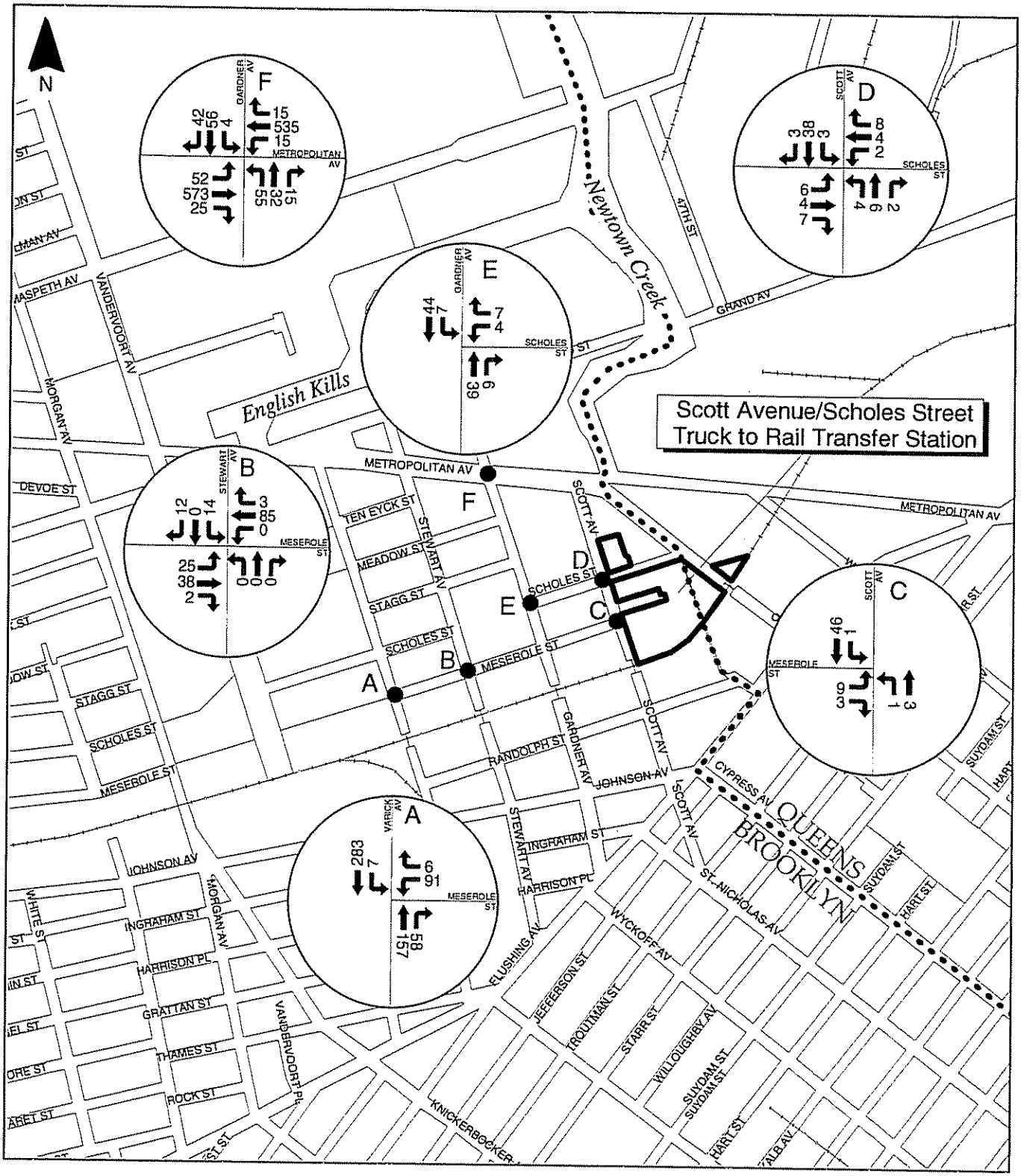
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Figure 14.14-3 Existing Traffic Volumes - AM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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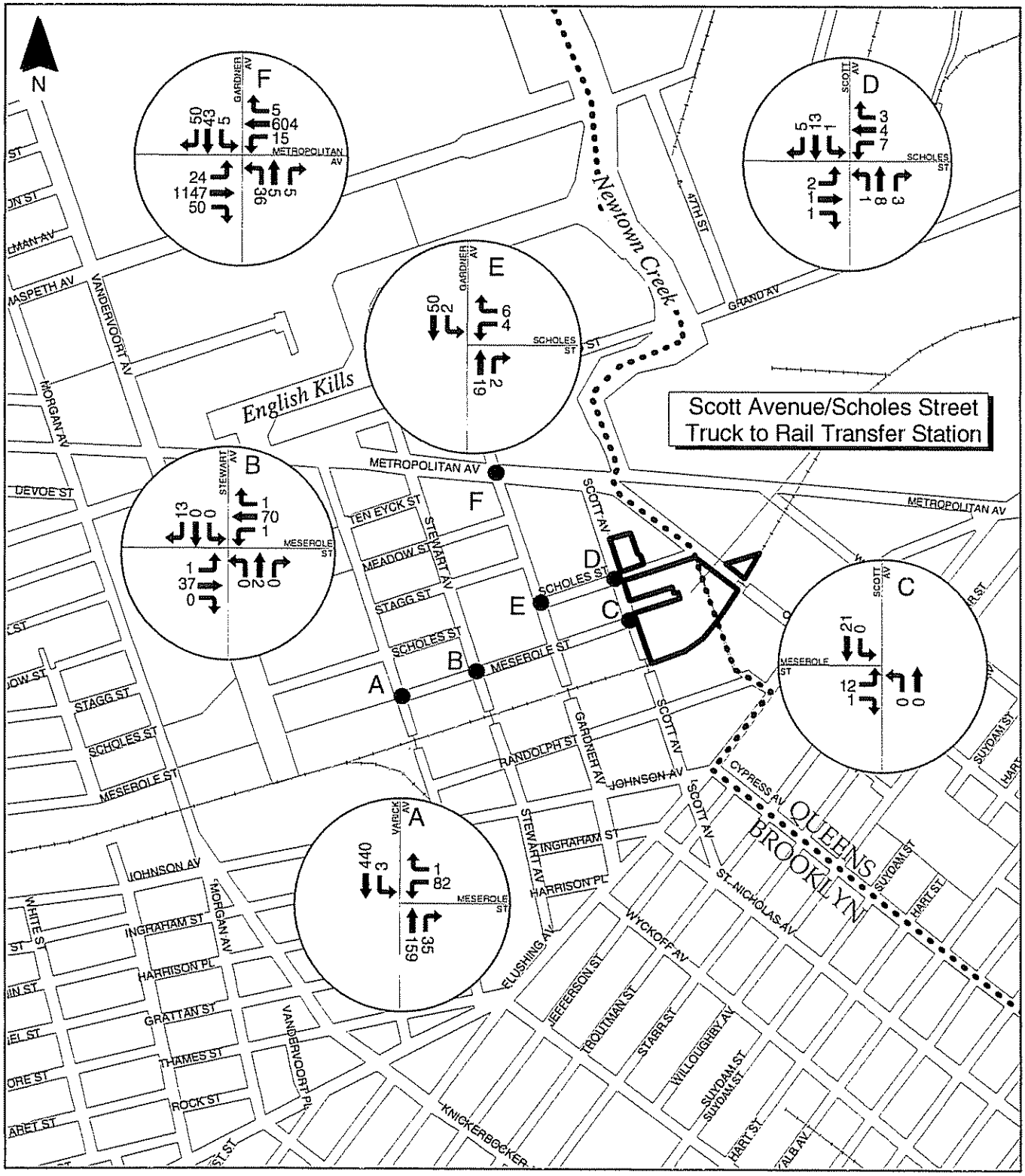
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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 14.14-4 Existing Traffic Volumes - Facility Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 14.14-5 Existing Traffic Volumes - PM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Table 14.14-1
HCM Analysis[1] – Existing Conditions
Scott Avenue/Scholes Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.36	17.0	C	0.25	15.4	C	0.26	18.7	C
SB LT	0.03	8.2	A	0.01	8.4	A	0.00	7.7	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.3	A	0.00	7.3	A	0.00	8.3	A
NB LTR	0.02	12.0	B	NA	NA	NA	0.01	10.0	A
SB LTR	0.09	10.2	B	0.07	10.3	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.11	9.7	A	0.02	9.0	A	0.02	8.9	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.05	9.6	A	0.03	9.0	A	0.01	9.0	A
WB LTR	0.01	9.3	A	0.03	9.0	A	0.04	9.3	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.3	A	0.00	7.2	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
WB LR	0.03	9.1	A	0.03	9.1	A	0.01	8.8	A
SB LT	0.01	7.3	A	0.01	7.3	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Gardener Avenue (signalized)									
EB L	0.04	11.2	B	0.23	14.3	B	0.11	11.9	B
EB TR	0.29	13.0	B	0.47	15.3	B	0.71	20.3	C
WB L	0.19	12.9	B	0.10	12.1	B	0.27	17.3	B
WB TR	0.59	17.2	B	0.36	13.8	B	0.36	13.8	B
NB LTR	0.23	30.8	C	0.65	46.6	D	0.28	31.5	C
SB LTR	0.62	40.7	D	0.34	32.7	C	0.29	31.2	C
OVERALL		19.5	B		18.7	B		19.3	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

LT = left through movement

LR = left right movement

L = left movement

TR = through right movement

Notes for Table 14.4-1 (continued):
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

Existing truck traffic through most of the intersections was relatively high. The percentages of trucks during the morning hours and Facility peak hours ranged between 32% and 61% at the study intersections and decreased to between 15% and 20% during the PM peak hours.

14.14.1.3.1 LOS at Signalized Intersections

Table 14.14-1 shows that the signalized intersection generally operates at an LOS of C or better with the following exception. At the intersection of Metropolitan Avenue and Gardener Avenue, during the AM peak hour the southbound movements have a delay of 40.7 seconds and operate at LOS D and during the Facility peak hour the northbound movements have a delay of 46.6 seconds and operate at LOS D.

14.14.1.3.2 LOS at Unsignalized Intersections

Table 14.14-1 shows that all of the unsignalized intersections generally operated at an LOS of C or better.

14.14.1.4 Existing DSNY-Related Traffic

Currently, the site contains a commingled recyclables facility, putrescible waste processing area and wastepaper baling plant, owned by BFI Waste Systems of New Jersey, Inc. The 598 Scholes Street site is currently permitted to handle 1,450 tpd of source-separated recyclables and 220 tpd of putrescible waste. The site is currently contracted to accept up to 220 tpd of DSNY-managed Waste under Interim Export.

14.14.1.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "Jefferson Street" stop on the MTA's "L" subway line is located approximately three-tenths (3/10) of a mile southwest of the site at the Jefferson Street/Wycoff Avenue intersection. The MTA operates several Brooklyn and Queens bus lines that pass through the study area, but the closest bus stop to the facility is located over one mile away, next to the Linden Hill Cemetery by the intersection of Starr Street and Metropolitan Avenue in Queens.

14.14.1.6 Pedestrian Activity

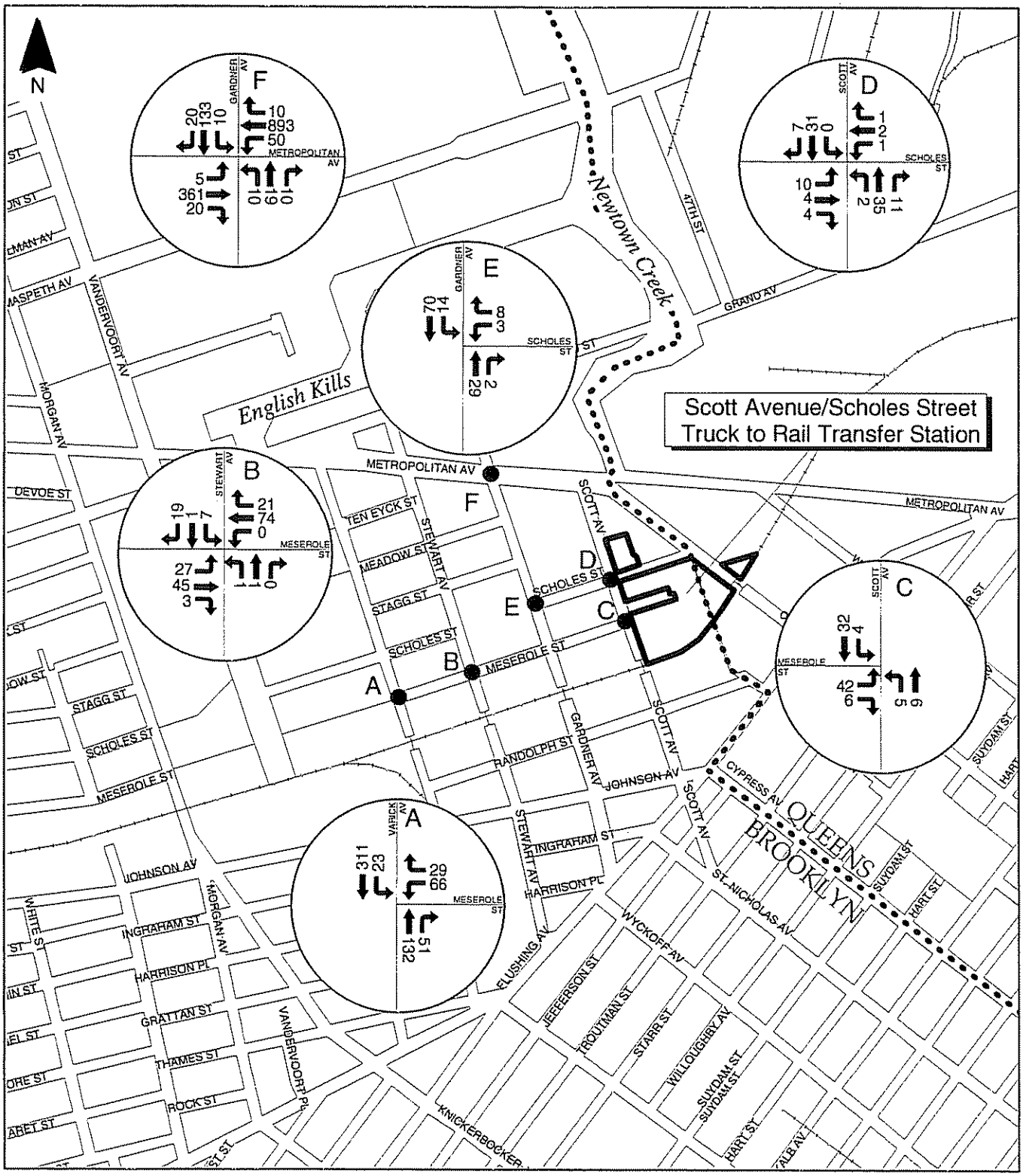
Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at signalized intersections in the study area. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

14.14.2 Future No-Build Conditions

14.14.2.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 25 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 14.14-6, 14.14-7 and 14.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 14.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their Existing Condition LOS.

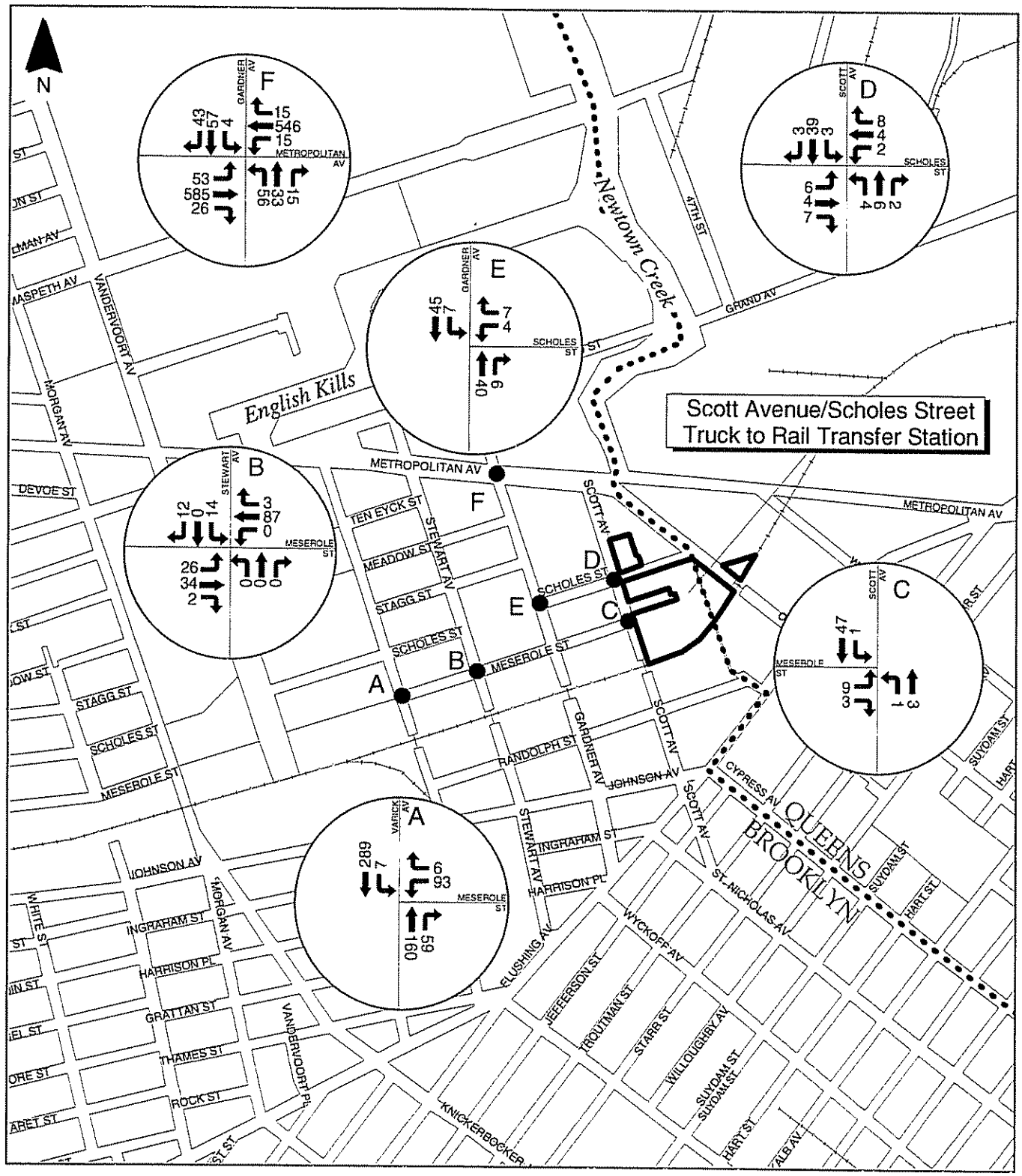


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 14.14-6 Future No-Build Traffic Volumes - AM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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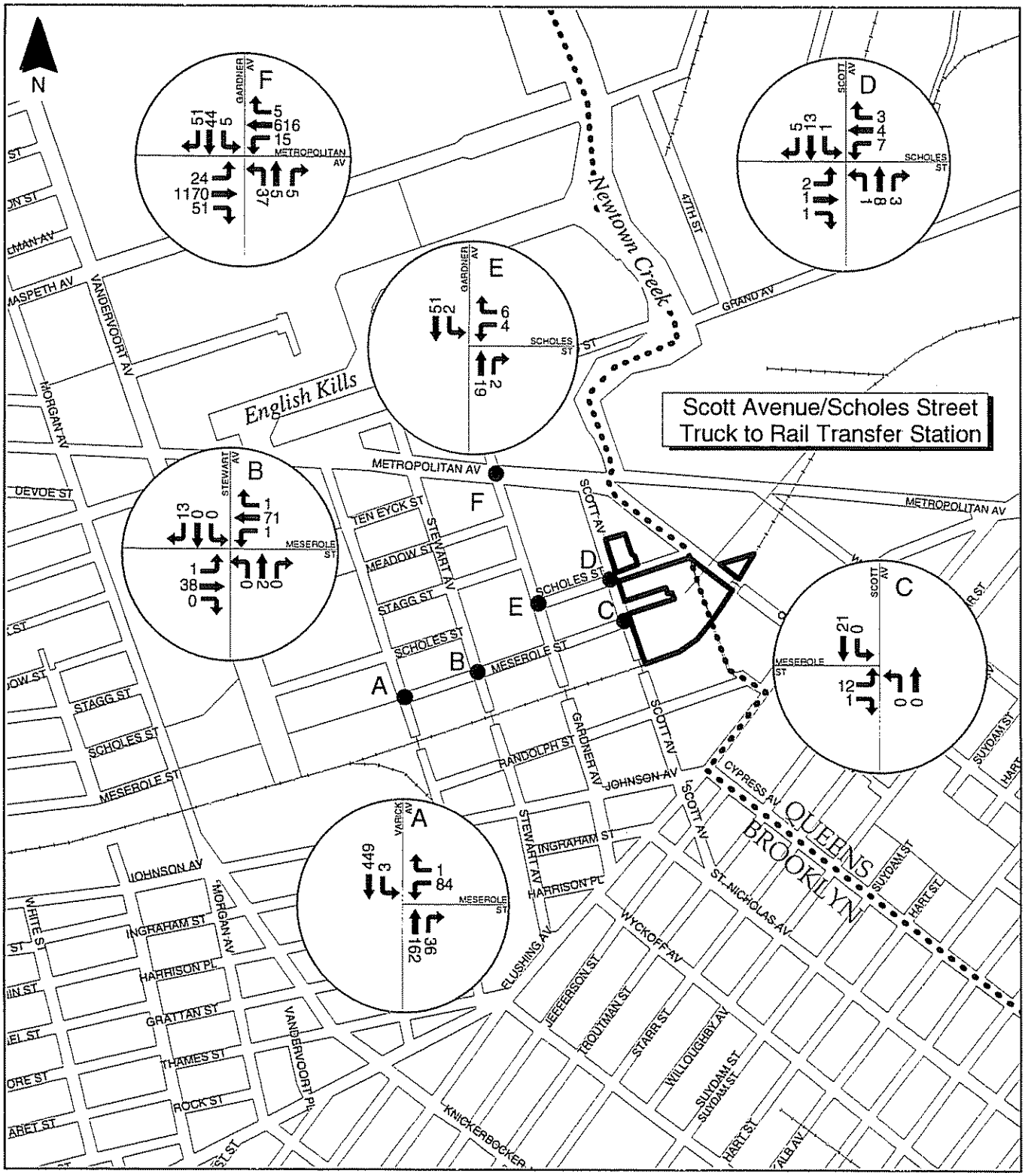


Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 14.14-7 Future No-Build Traffic Volumes - Facility Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 14.14-8 Future No-Build Traffic Volumes - PM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

CITY OF NEW YORK
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Table 14.14-2
HCM Analysis[1]— Future No-Build Conditions
Scott Avenue/Scholes Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.37	17.2	C	0.26	15.7	C	0.27	19.2	C
SB LT	0.03	8.2	A	0.01	8.4	A	0.00	7.7	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.3	A	0.00	7.3	A	0.00	8.3	A
NB LTR	0.02	12.1	B	NA	NA	NA	0.01	10.0-	A
SB LTR	0.09	10.3	B	0.07	10.3	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.11	9.7	A	0.02	9.0	A	0.02	8.9	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.05	9.6	A	0.03	9.0	A	0.01	9.0	A
WB LTR	0.01	9.3	A	0.03	9.0	A	0.04	9.3	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.4	A	0.00	7.2	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
WB LR	0.03	9.1	A	0.03	9.1	A	0.01	8.8	A
SB LT	0.01	7.3	A	0.01	7.3	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Gardener Avenue (signalized)									
EB L	0.04	11.3	B	0.24	14.5	B	0.11	12.0	B
EB TR	0.30	13.1	B	0.48	15.4	B	0.73	20.8	C
WB L	0.20	13.0	B	0.11	12.2	B	0.29	18.0	B
WB TR	0.60	17.5	B	0.37	13.9	B	0.37	13.9	B
NB LTR	0.23	30.8	C	0.67	47.9	D	0.29	31.6	C
SB LTR	0.63	41.2	D	0.35	32.8	C	0.30	31.4	C
OVERALL		19.7	B		19.0	B		19.6	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

LT = left through movement

LR = left right movement

L = left movement

TR = through right movement

NB = northbound

Notes for Table 14.4-2 (continued):
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

14.14.2.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

14.14.2.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

14.14.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

The Scott Avenue/Scholes Street Truck to Rail TS would receive waste from Brooklyn CDs 1, 3, 4 and 5 and the AFF. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, additional employee trips to and from the site may result in traffic impacts during the AM peak hour. The Scott Avenue/Scholes Street Truck to Rail TS would require an increase in the permitted putrescible waste capacity, and would add rail export to the facility's waste shipping capabilities. Rail export of containerized waste would be the preferred mode of operation, but some use of truck transfer during the transition period would be maintained. The capacity of the facility would be increased to 1,368 tpd, with a resulting additional 637 tpd of net waste (see Section 14.1).

14.14.3.1 2006 Future Build Traffic Conditions

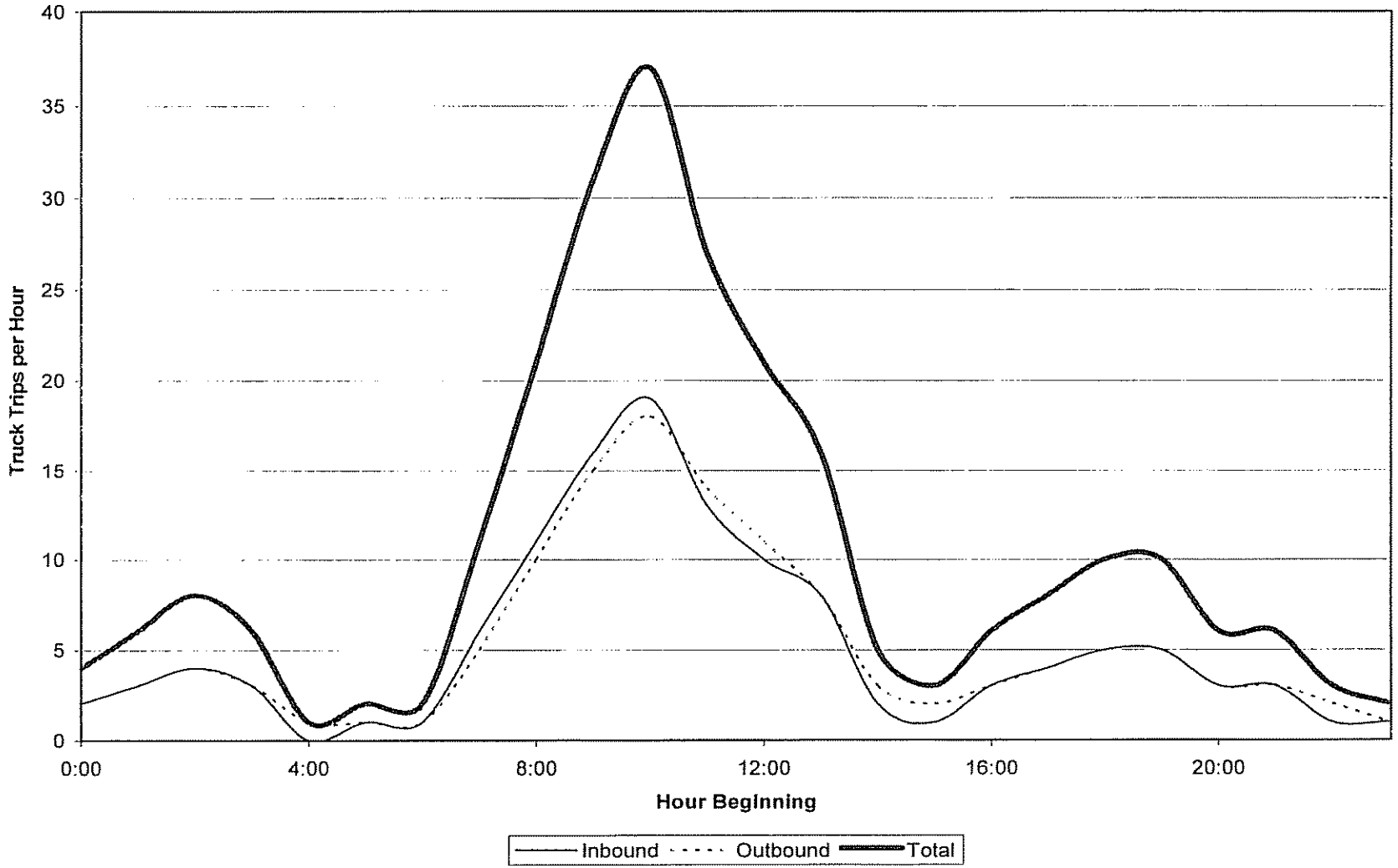
2006 Future Build Conditions assume that the Scott Avenue/Scholes Street Truck to Rail TS would generate 125 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the Scott Avenue/Scholes Street Truck to Rail TS are shown in Figure 14.14-2.

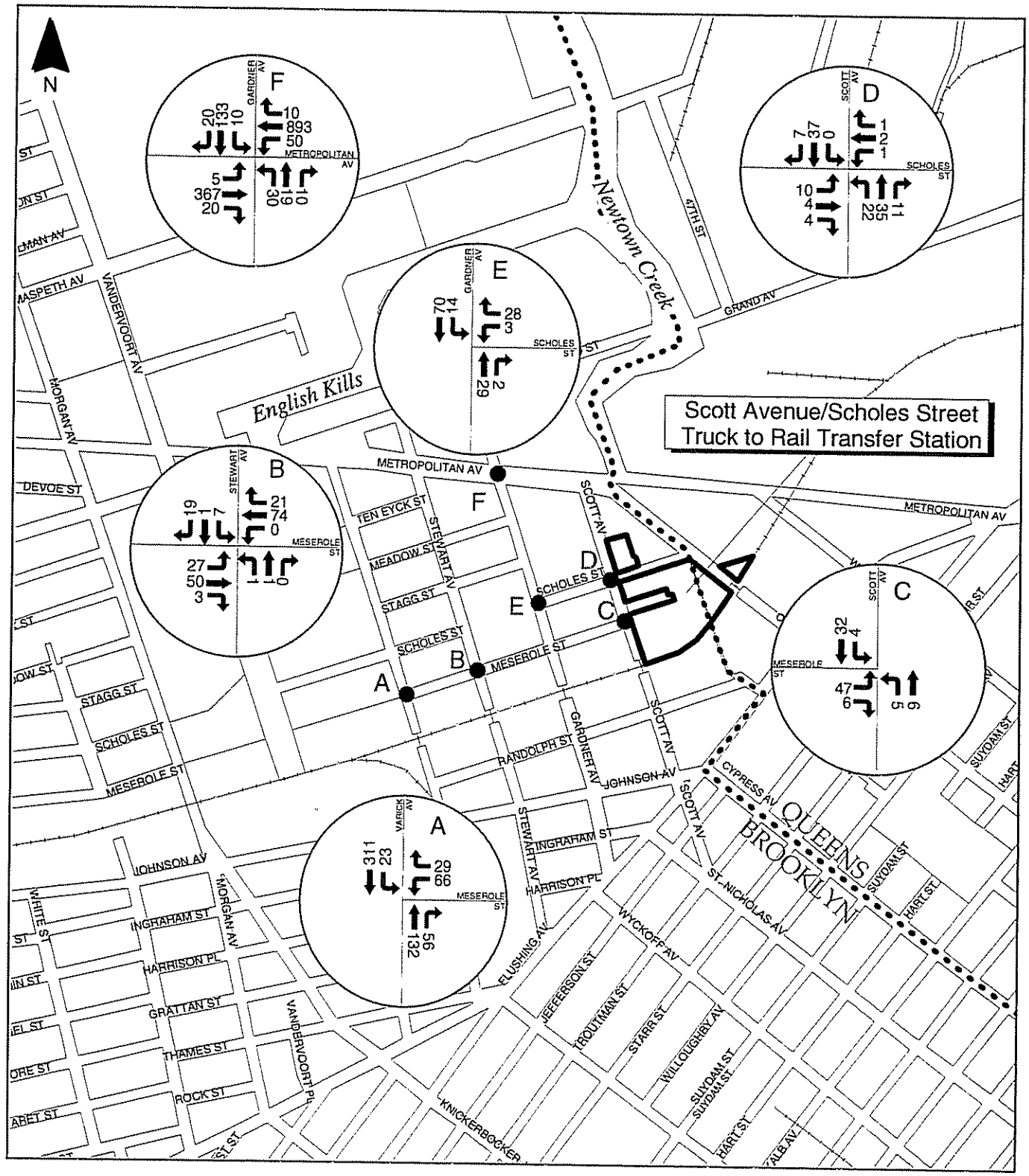
Figure 14.14-9 presents the average peak day temporal distribution of collection vehicles for the Scott Avenue/Scholes Street Truck to Rail TS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Scott Avenue/Scholes Street Truck to Rail TS is expected to vary between approximately 2 to 8 truck trips per hour in the late evening/early morning, 5 to 37 truck trips per hour in the mid-morning/early afternoon, and 3 to 10 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (37) occurs at approximately 10:00 a.m.

Employee trips generated as a result of the Scott Avenue/Scholes Street Truck to Rail TS are expected to be about 30 per shift (15 arriving and 15 departing). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive within approximately 30 minutes before the start of a shift and leave within approximately 30 minutes after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (7:30 a.m. to 8:30 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the Scott Avenue/Scholes Street Truck to Rail TS during the shift change (30) were considered as part of the net increase in site-generated traffic. Figures 14.14-10, 14.14-11 and 14.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 14.14-13, 14.14-14 and 14.14-15 show the intersections analyzed with only the net increase in site-generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Scott Avenue/Scholes Street Truck to Rail TS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 18. The highest net increase of collection vehicles at any one intersection was 28 trucks. Both of these net increases occurred at the intersection of Scott Avenue and Scholes Street.

Figure 14.14-9
Truck Trips per Hour
Scott Avenue/Scholes Street Truck to Rail TS



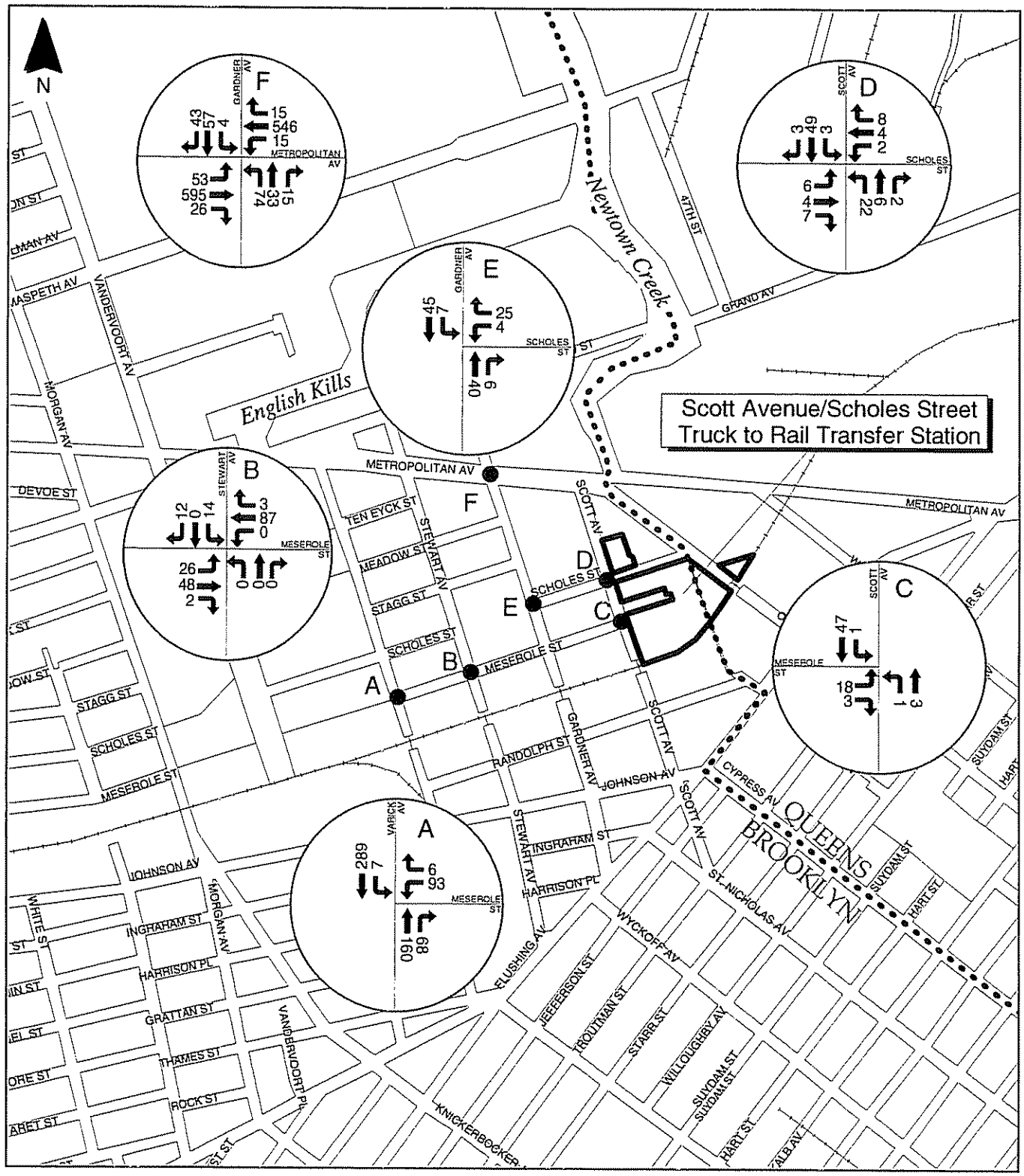


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 14.14-10 2006 Build Traffic Volumes - AM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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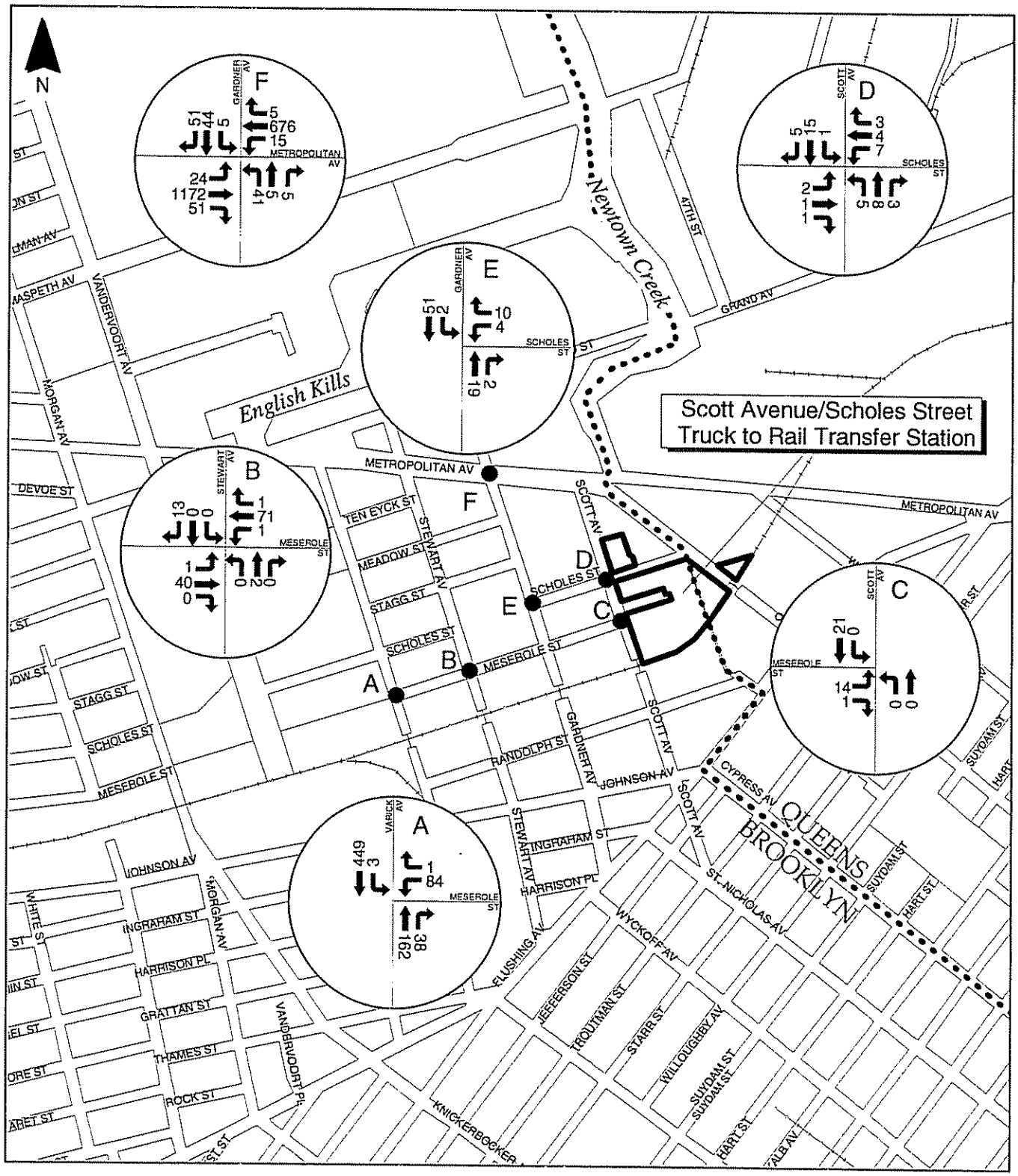


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 14.14-11 2006 Build Traffic Volumes - Facility Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

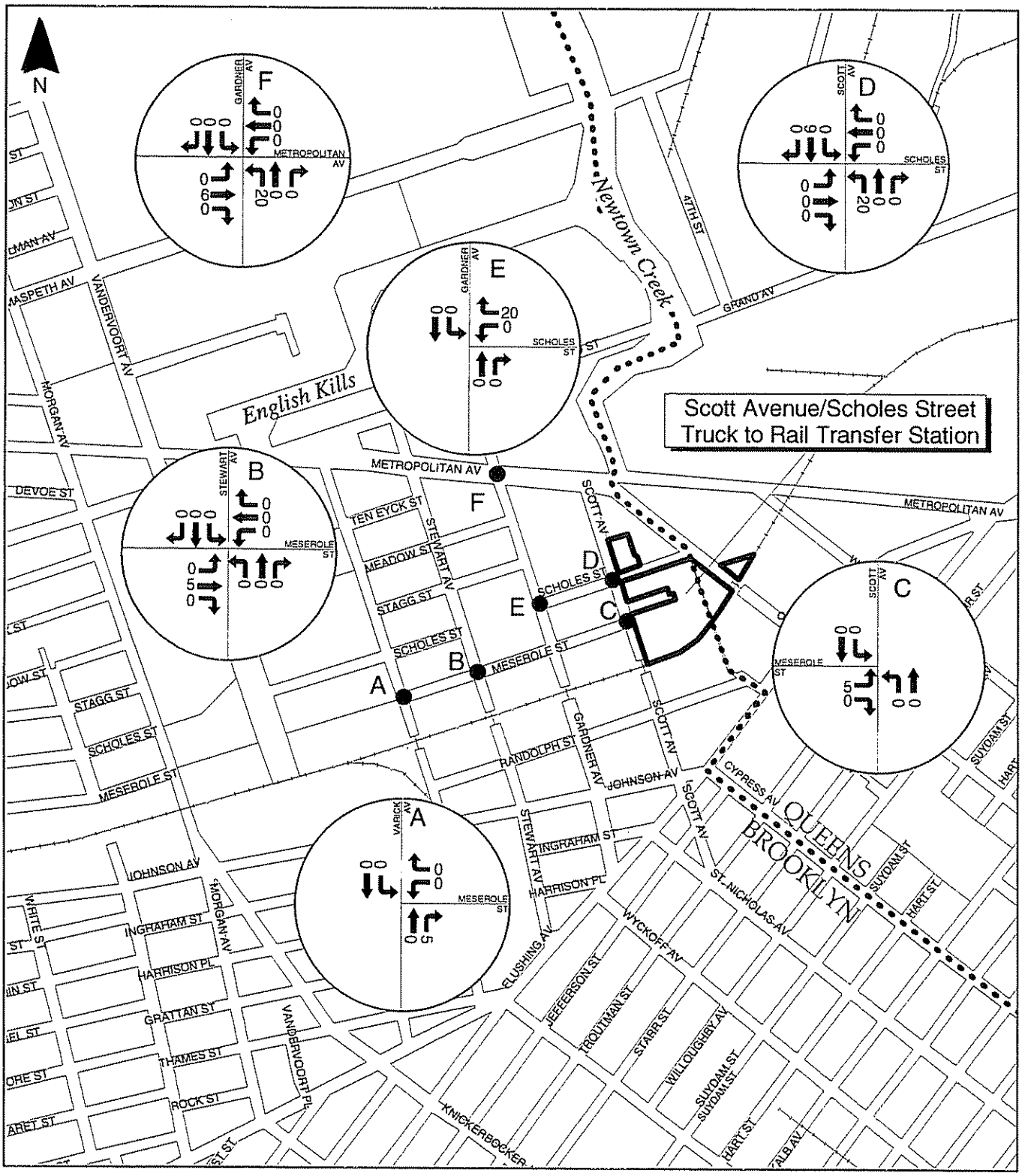
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Figure 14.14-12 2006 Build Traffic Volumes - PM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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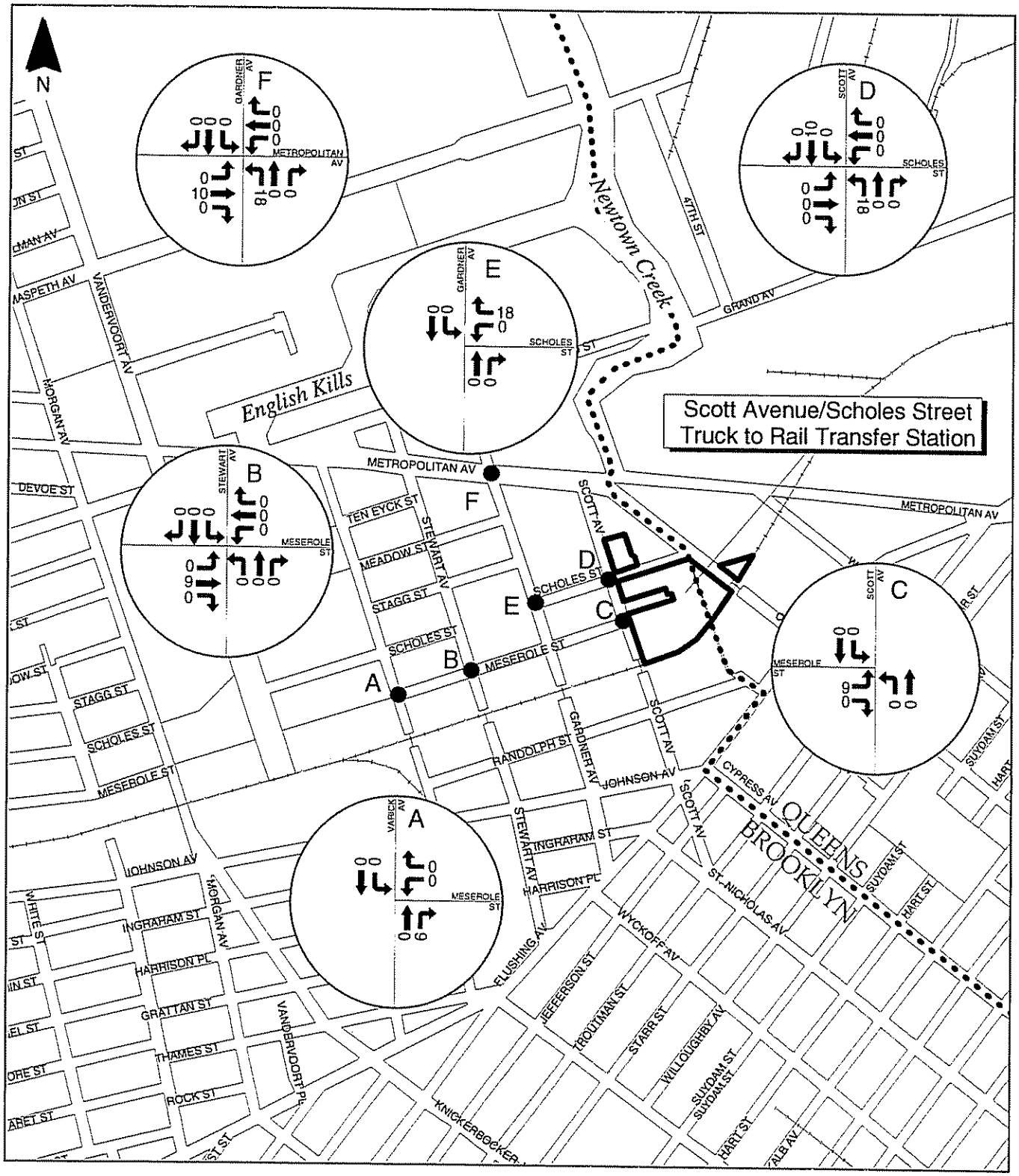
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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 14.14-13 2006 Net Traffic - AM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

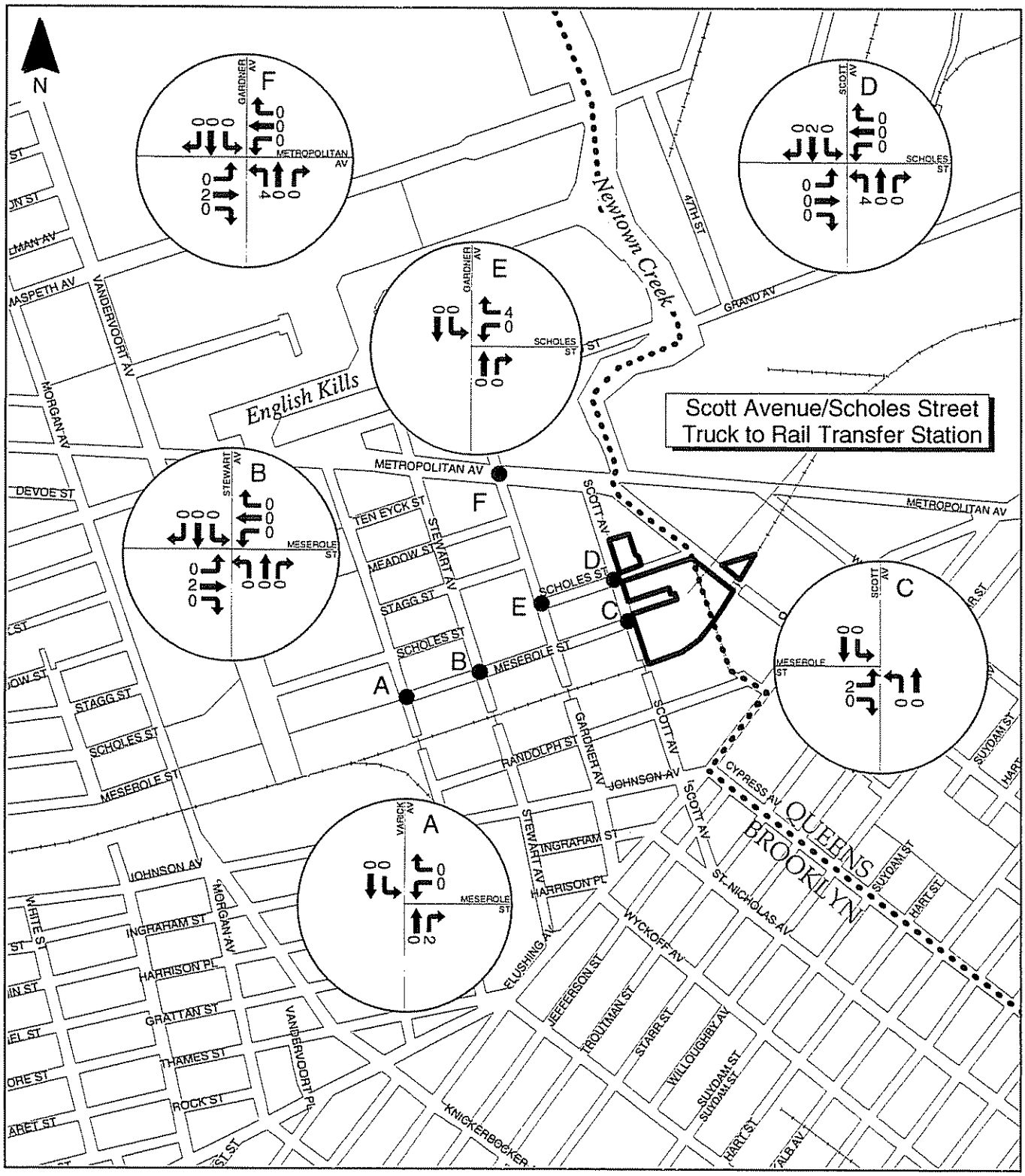
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HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 14.14-14 2006 Net Traffic - Facility Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 14.14-15 2006 Net Traffic - PM Peak
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 82% of weekday traffic volumes. Table 14.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Scott Avenue/Scholes Street Truck to Rail TS would not operate on Sundays to receive DSNY-managed Waste. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 14.14-3
Weekday and Weekend Traffic
Scott Avenue/Scholes Street Truck to Rail TS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Metropolitan Avenue [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
125	94	10,691	8,715

Note:
[1] EB and WB traffic data collected from ATR counts taken on Metropolitan Avenue between Gardener Avenue and Stewart Avenue from June 13 to 20, 2003.

Table 14.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Scott Avenue/Scholes Street Truck to Rail TS. Over an average peak day, the intersections should not experience an extended increase in delay. The one intersection that may experience potentially significant impacts is discussed in Section 14.14.3.2 and summarized in Table 14.14-5.

14.14.3.2 Impacts and Mitigation

One of the six intersections may experience impacts great enough to be considered significant during one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 14.14-5.

Table 14.14-4
HCM Analysis[(1)]— 2006 Future Build Conditions
Scott Avenue/Scholes Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.40	19.2	C	0.32	19.2	C	0.29	20.1	C
SB LT	0.05	8.3	A	0.06	8.7	A	0.01	7.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.4	A	0.00	7.4	A	0.00	8.4	A
NB LTR	0.02	12.6	B	NA	NA	NA	0.01	10.1	B
SB LTR	0.09	10.4	B	0.07	10.8	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.18	10.1	A	0.12	9.7	A	0.05	9.0	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.06	9.9	A	0.03	9.3	A	0.01	9.1	A
WB LTR	0.02	9.7	A	0.03	9.5	A	0.05	9.4	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.5	A	0.00	7.4	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
WB LR	0.06	9.1	A	0.08	9.2	A	0.02	8.8	A
SB LT	0.01	7.3	A	0.01	7.3	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Gardener Avenue (signalized)									
EB L	0.04	11.3	B	0.25	14.7	B	0.11	12.0	B
EB TR	0.30	13.2	B	0.49	15.6	B	0.73	20.8	C
WB L	0.20	13.1	B	0.11	12.2	B	0.29	18.0	B
WB TR	0.61	17.8	B	0.38	14.0	B	0.37	13.9	B
NB LTR	0.40	35.4	D	0.86	69.4	E	0.31	32.2	C
SB LTR	0.63	41.3	D	0.35	32.8	C	0.30	31.4	C
OVERALL		20.2	C		21.7	C		19.7	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
LT = left through movement
LR = left right movement
L = left movement
TR = through right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

Table 14.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
Scott Avenue/Scholes Street Truck to Rail TS

Intersection and Lane Group	2006 Future No-Build (unsignalized)			2006 Future Build (unsignalized)			2006 Future Build after Mitigation (signalized)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Metropolitan Avenue and Gardener Avenue (signalized) – Facility Peak									
EB L	0.24	14.5	B	0.25	14.7	B	0.28	18.1	B
EB TR	0.48	15.4	B	0.49	15.6	B	0.52	18.9	B
WB L	0.11	12.2	B	0.11	12.2	B	0.12	14.9	B
WB TR	0.37	13.9	B	0.38	14.0	B	0.41	17.0	B
NB LTR	0.67	47.9	D	0.86	69.4	E	0.75	50.0	D
SB LTR	0.35	32.8	C	0.35	32.8	C	0.31	28.5	C
OVERALL		19.0	B		21.7	C		22.0	

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left through movement
L = left movement
TR = through right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

Gardener Avenue/Metropolitan Avenue – During the Facility peak hour a potential impact was identified on the northbound approach when the delay increased from 47.9 seconds to 69.4 seconds. An increase in green time of five seconds for the northbound and southbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second from the eastbound and westbound approach green time. The southbound approach delay would decrease by less than four seconds, the northbound approach delay would increase by less than three seconds, the eastbound approach delay would increase by less than four seconds and the westbound approach delay would decrease by less than one second, compared to Future No-Build Conditions. This mitigation should not generate any adverse impacts on the lane groups during other time periods.

14.14.3.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

14.14.3.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

14.15 Air Quality

14.15.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Scott Avenue/Scholes Street Truck to Rail TS. The study area for the off-site air quality analysis is defined as the area or intersection listed in Section 14.15.4.65.1.

14.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 14.15-1. This data was compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 14.15-1
Representative Ambient Air Quality Data
Scott Avenue/Scholes Street Truck to Rail TS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	Brooklyn	8-Hour	2,634 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	3,321 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	57 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	Greenpoint	3-Hour	189 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	87 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	21 $\mu g/m^3$	80 $\mu g/m^3$

Note:
Source: NYCDEP, April 2003

14.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

14.15.4 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.15.4.1 On-site Emissions

On-site emissions related to the Department's use of this existing facility are considered only as part of total concentrations predicted for the Scott Avenue/Scholes Street Truck to Rail TS. Because the potential impacts from the operation of the Scott Avenue/Scholes Street Truck to Rail TS were estimated and found to be within applicable standards and guidelines for criteria pollutants, impacts of the DSNY-managed Waste contribution to the emissions from the Scott Avenue/Scholes Street Truck to Rail TS would also be within standards and guidelines, so an analysis of this alternative would likewise not result in a finding of significant impacts.

14.15.4.1.1 Sources considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table ~~7~~14.15-2. Figure ~~17.150-1~~14.15-1 shows the locations of these sources within the site.

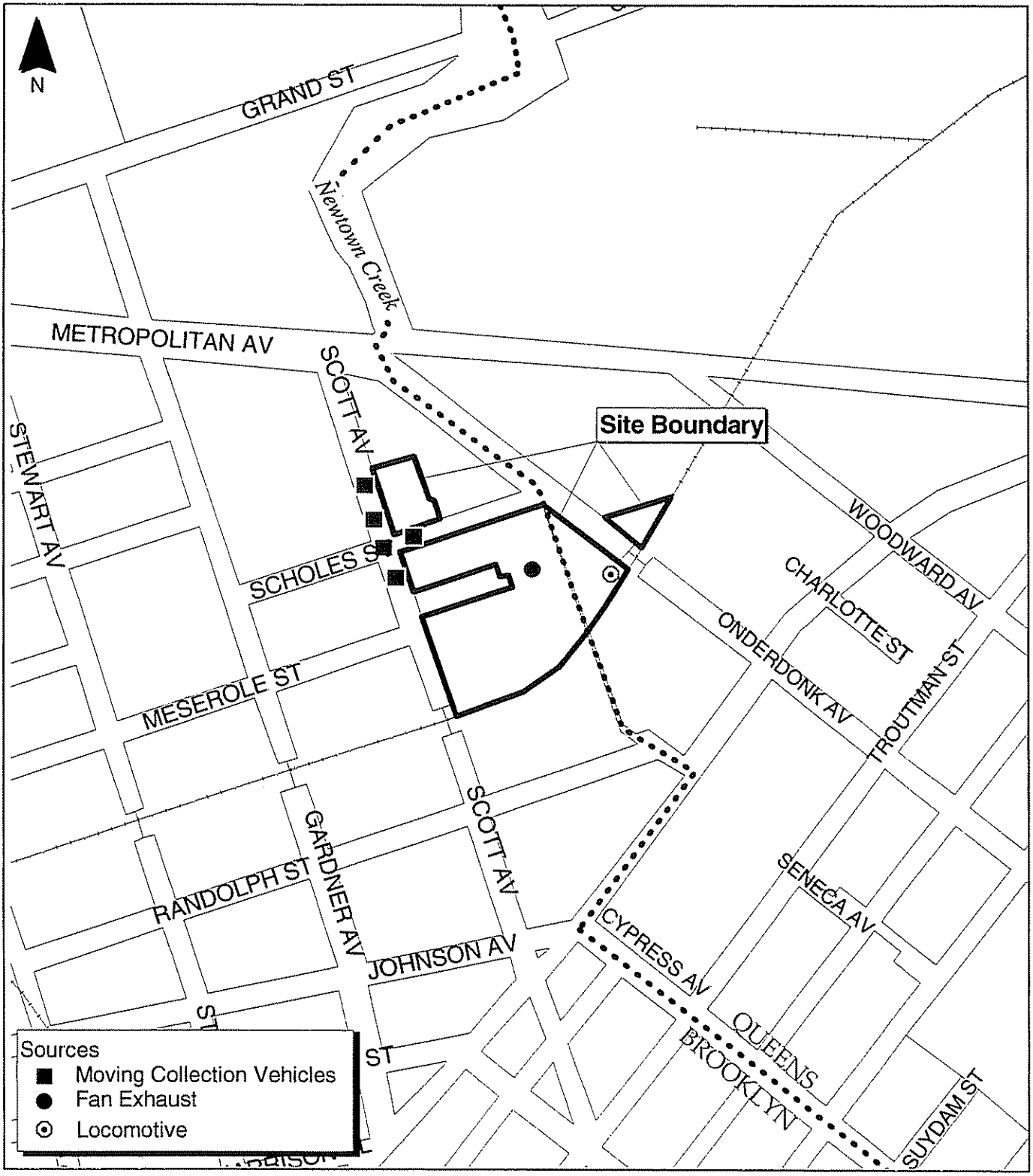
Table14.15-2
Emission Sources Considered for On-site Air Quality Analysis[1]
Scott Avenue/Scholes Street Truck to Rail TS

Type of Emission Source	Maximum Number of Sources Operated During a Single Peak Hour[2]	Number of Sources Operated During 24 Hour and Annual Average Period
Within Processing Building		
Moving/Queuing Collection Vehicles	47	6
Wheel Loaders	1	1
Track Loaders	1	1
Grapples	1	1
Moving Street Sweepers	1	1
Locomotives	1	1
Outside Processing Building	None	None

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in Technical Backup to be provided upon request.

(2) Peak 24-hour average number of moving collection vehicles: 13.
Peak 24-hour average number of queuing collection vehicles: 1.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

Figure 14.15-1 On-Site Air Quality Analysis
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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14.15.4.3 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any one of the receptor sites considered are provided in Table 14.15-3. These values are compared with the applicable standards for the appropriate averaging time periods. Based on the results presented in Table 14.15-3, operations proposed at this facility would not adversely impact air quality in the area. The total predicted concentrations (including appropriate background concentrations) are below the national and state ambient air quality standards.

14.15.4.4 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 14.15-4.[7] The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Scott Avenue/Scholes Street Truck to Rail TS are not considered to be significant.

[7] These concentrations have been estimated according to the methodology discussed in Section 3.11.2.2.

Table 14.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Scott Avenue/Scholes Street Truck to Rail TS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~1,836~~1,730	~~2,635~~3,321	~~4,471~~5,051	40,000	NA
	8-hour[6]	~~1,048~~987	~~3,322~~2,635	~~4,370~~3,622	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	38	56	94	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~24~~25	~~57~~90	~~81~~115	150	NA
	Annual	2	~~23~~20	~~25~~22	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	~~3.5~~3.6	NA	NA	NA	5
	Annual Neighborhood Average[5]	0.06	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	~~112~~81	~~189~~186	~~301~~267	1,300	NA
	24-hour[6]	~~21~~20	~~87~~107	~~108~~127	365	NA
	Annual	~~2~~1.6	~~2~~118	~~23~~20	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

Table 14.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Scott Avenue/Scholes Street Truck to Rail TS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	1.01E+00	1.30E+03	7.79E-04	1.39E-02	1.30E-01	1.07E-01	1.39E-02	8.30E-06	1.16E-07
2	Formaldehyde	1.28E+00	3.00E+01	4.27E-02	1.76E-02	6.00E-02	2.94E-01	1.76E-02	1.30E-05	2.29E-07
3	1,3 Butadiene	4.25E-02	-	-	5.84E-04	3.60E-03	1.62E-01	5.84E-04	2.80E-04	1.64E-07
4	Acetaldehyde	8.33E-01	4.50E+03	1.85E-04	1.15E-02	4.50E-01	2.55E-02	1.15E-02	2.20E-06	2.52E-08
5	Benzo(a)pyrene	2.04E-04	-	-	2.81E-06	2.00E-03	1.40E-03	2.81E-06	1.70E-03	4.77E-09
Non-Carcinogenic Pollutants [10]										
6	Propylene	2.80E+00	-	-	3.85E-02	3.00E+03	1.28E-05	3.85E-02	NA	NA
7	Acrolein	1.00E-01	1.90E-01	5.29E-01	1.38E-03	2.00E-02	6.91E-02	1.38E-03	NA	NA
8	Toluene	4.44E-01	3.70E+04	1.20E-05	6.11E-03	4.00E+02	1.53E-05	6.11E-03	NA	NA
9	Xylenes	3.10E-01	4.30E+03	7.20E-05	4.26E-03	7.00E+02	6.08E-06	4.26E-03	NA	NA
10	Anthracene	2.03E-03	-	-	2.79E-05	2.00E-02	1.40E-03	2.79E-05	NA	NA
11	Benzo(a)anthracene	1.82E-03	-	-	2.51E-05	2.00E-02	1.25E-03	2.51E-05	NA	NA
12	Chrysene	3.83E-04	-	-	5.27E-06	2.00E-02	2.64E-04	5.27E-06	NA	NA
13	Naphthalene	9.21E-02	7.90E+03	1.17E-05	1.27E-03	3.00E+00	4.22E-04	1.27E-03	NA	NA
14	Pyrene	5.19E-03	-	-	7.14E-05	2.00E-02	3.57E-03	7.14E-05	NA	NA
15	Phenanthrene	3.19E-02	-	-	4.39E-04	2.00E-02	2.20E-02	4.39E-04	NA	NA
16	Dibenz(a,h)anthracene	6.33E-04	-	-	8.71E-06	2.00E-02	4.36E-04	8.71E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		5.73E-01	**Total Estimated Chronic Non-Cancer Hazard Index**		6.89E-01	**Total Estimated Combined Cancer Risk**		5.38E-07
		Acute Non-Cancer Hazard Index Threshold [11]		1.0E+00	**Chronic Non-Cancer Hazard Index Threshold** [11]		1.0E+00	**Cancer Risk Threshold** [11]		1.0E-06

Notes to Table 14.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

14.15.4.5 Off-Site ~~Emissions~~Analysis

~~14.15.4.6 Off-Site Emission Sources~~

14.15.4.65.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other collection agency's collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

- The multiple intersections around Meserole Street and Varick Street and Scott Avenue at Scholes Street to determine whether facility-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- The multiple intersections around Meserole Street and Varick Street and Scott Avenue at Scholes Street to determine whether facility-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 14.15-2.

14.15.4.5.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 14.15-5, are all within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$). Therefore, the off-site operations of the Scott Avenue/Scholes Street Truck to Rail TS, therefore, are not considered to be significant.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 14.15-2 Off-Site Air Quality Intersections Studied
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Table 14.15-5
Estimated Pollutant Concentrations Near Selected Roadway Intersections
Scott Avenue/Scholes Street Truck to Rail TS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Meserole Street/Scott Avenue/Scholes Street									
Existing Conditions	NA[5]	142	40						
Future No-Build Conditions	NA[5]	139	39						
Future Build Conditions	NA[5]	140	39						
Future Build Incremental				3.6	0.52	~~3.9~~14.12	**0.057**	0.022	0.097

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (24-hr PM_{10} = ~~57~~90 $\mu g/m^3$; Annual PM_{10} = ~~23~~20 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways averaged over the mobile source analysis grid using AM, Facility, or PM peak traffic conditions.

(5) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.~~

~~(4)~~

~~(5)Results determined by performing a TIER II ananlysis.~~

(6) Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

Notes for Table 14.15-5 (Continued)
ppm: parts per million
µg/m3: microgram per cubic meter
NA = Not Applicable

~~*14.15.4.6.2 Results of the Off-Site Analysis*~~

~~Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 14.15-5, are all within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$). Therefore, the off-site operations of the Scott Avenue/Scholes Street Truck to Rail TS, therefore, are not considered to be significant.~~

14.16 Odor

14.16.1 Existing Conditions

To evaluate all potential odors from the proposed Scott Avenue/Scholes Street Truck to Rail TS, the analysis assumes there are no existing sources of odor on site.

14.16.2 Future No-Build Conditions

No additional odor-producing sources are anticipated in the vicinity of the Scott Avenue/Scholes Street Truck to Rail TS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

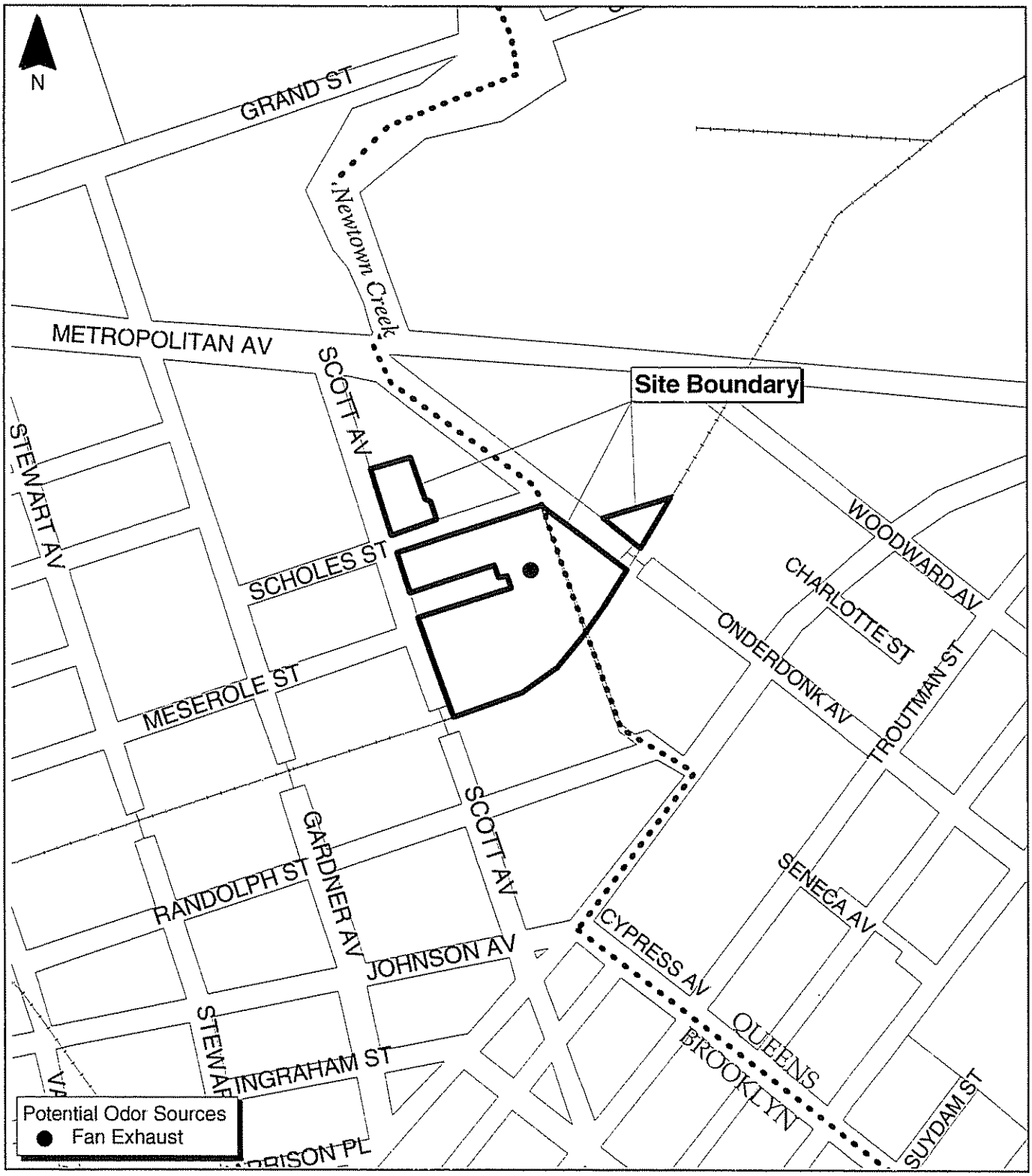
14.16.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.16.3.1 Odor Source Types and Locations Considered in the Analysis

The number and type of odor sources assumed to be on-site with the Scott Avenue/Scholes Street Truck to Rail TS (while processing waste at proposed capacity for DSNY waste) are provided in Table 14.16-1. Figure 14.16-1 shows the locations of these sources within the project site.

Table 14.16-1
Odor Sources Included in Odor Analysis
Scott Avenue/Scholes Street Truck to Rail TS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

Figure 14.16-1 Potential Odor Sources
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Scott Avenue/Scholes Street Truck to Rail TS.

14.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 14.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Scott Avenue/Scholes Street Truck to Rail TS at any nearby sensitive receptor is less than 1, so odors from the Scott Avenue/Scholes Street Truck to Rail TS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 14.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Scott Avenue/Scholes Street Truck to Rail TS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	0.57
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.016
Type of Receptor	~~Apartment Building~~Residential House
Distance to Receptor[2]	~~1,188~~535 Feet

Notes:
(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.
(3) Measured from the site boundary.
~~(3) Measured from the site property line.~~

14.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Scott Avenue/Scholes Street Truck to Rail TS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

14.17.1 Existing Conditions

14.17.1.1 Introduction

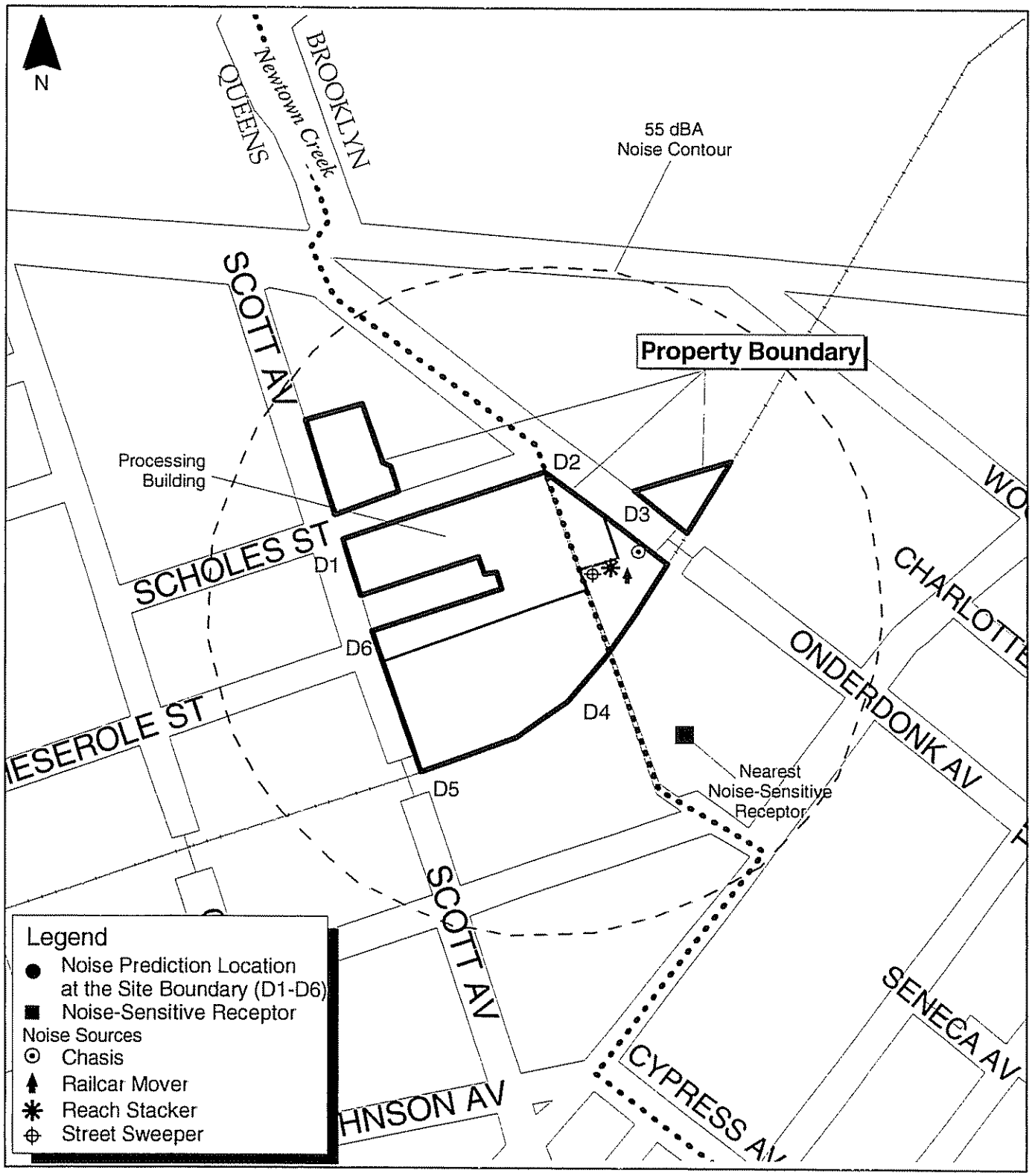
Figure 14.17-1 shows the location of the Scott Avenue/Scholes Street Truck to Rail TS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is the non-conforming residential house located on Flushing Avenue between Metropolitan Avenue and Woodward Avenue, approximately 163 meters (535 feet) southeast of the site boundary.

14.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the non-conforming house. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[8] and the statistical metrics of L_5, L_{50} and L_{90}.[9] Table 14.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 3:00 a.m. and 4:00 a.m. and had an $L_{eq(1)}$ of 59.3 dBA on June 25, 2004. Activities and events that contribute to the on-site noise levels include:

- Transportation of railcars on the adjacent Railroad line; and
- Other noise sources associated with activities in the surrounding industrial areas.

[8] Terms $L_{eq(1)}$, L_{min} and L_{max} are explained in Section 3.19.2.
[9] Terms L_{10}, L_{50} and L_{90} are explained in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN DD EEA Cambridge Environmental Inc

Figure 14.17-1 Noise Sources and Receptors
Scott Avenue/Scholes Street
Truck to Rail Transfer Station

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Table 14.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Scott Avenue/Scholes Street Truck to Rail TS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_5 (dBA)	L_{min} (dBA)	L_{max} (dBA)
10:00-11:00 a.m.	73.0	61.5	65.5	82.0	58.6	89.4
11:00 a.m.-12:00 p.m.	72.9	61.4	65.2	80.6	58.9	88.2
12:00-1:00 p.m.	66.7	59.9	62.3	71.0	58.1	86.8
1:00-2:00 p.m.	66.7	61.3	63.7	71.9	59.1	82.8
2:00-3:00 p.m.	69.6	62.3	64.4	73.9	60.0	91.9
3:00-4:00 p.m.	68.3	60.9	63.6	73.5	59.0	87.8
4:00-5:00 p.m.	67.6	60.7	65.0	71.9	59.1	81.8
5:00-6:00 p.m.	71.1	60.8	63.9	77.2	59.3	93.4
6:00-7:00 p.m.	70.6	58.6	61.0	74.2	57.5	89.2
7:00-8:00 p.m.	66.7	58.0	61.7	72.5	56.5	80.6
8:00-9:00 p.m.	66.5	58.4	60.8	72.0	56.8	82.0
9:00-10:00 p.m.	67.1	57.9	60.0	73.5	56.6	84.3
10:00-11:00 p.m.	67.2	57.9	61.2	72.8	56.7	84.6
11:00 p.m.-12:00 a.m.	62.9	58.7	60.4	68.0	57.3	79.7
12:00-1:00 a.m.	62.9	58.7	60.3	66.7	57.0	78.5
1:00-2:00 a.m.	64.5	58.0	61.7	69.8	56.7	80.0
2:00-3:00 a.m.	60.4	55.2	57.8	64.9	54.2	77.9
3:00-4:00 a.m.	59.3	54.9	57.0	63.6	53.9	74.9
4:00-5:00 a.m.	64.2	57.6	59.5	70.0	53.6	83.8
5:00-6:00 a.m.	68.0	59.8	63.6	75.6	58.0	81.6
6:00-7:00 a.m.	65.2	58.3	61.3	69.3	56.7	85.4
7:00-8:00 a.m.	65.7	60.9	63.8	70.2	58.2	82.5
8:00-9:00 a.m.	68.0	62.5	64.6	71.3	60.7	86.4
9:00-10:00 a.m.	67.7	62.0	64.6	72.6	60.3	86.2

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

14.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Scott Avenue/Scholes Street Truck to Rail TS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required, and therefore, off-site noise monitoring was not conducted.

14.17.2 Future No-Build Conditions

14.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

14.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 14.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on the first-level screening.

Table 14.17-2
Off-Site Noise Traffic Volume
Scott Avenue/Scholes Street Truck to Rail TS

Location	Hour	Existing Traffic Volume [1] (Vehicles/Hour)	Future No-Build Traffic Volume [2] (Vehicles/Hour)
Metropolitan Avenue between Olive St. and Catherine St.	10:00 a.m.	763	786
Grand Avenue between Olive St. and Catherine St	2:00 a.m.	128	132
Flushing Avenue between Vandevoort and Knickerbocker Avenue	2:00 a.m.	156	159

Notes:
(1) Existing traffic volumes are based on ATR data.
(2) Future No-Build traffic volumes are based on CEQR annual traffic growth rates.

14.17.3 Potential Impacts with the Scott Avenue/Scholes Street Truck to Rail TS

14.17.3.1 On-Site Noise Levels

Proposed equipment assumed to be operating at the Scott Avenue/Scholes Street Truck to Rail TS and its reference noise levels used in the CEQR analysis are shown in Table 14.17-3. The number and types of equipment assumed for this analysis were based on the Scott Avenue/Scholes Street Truck to Rail TS's average design capacity. Shown earlier, Figure 14.17-1 indicates the Scott Avenue/Scholes Street Truck to Rail TS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 14.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Scott Avenue/Scholes Street Truck to Rail TS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Wheel Loader (1)	80.6
Track Loader (1)	80.6
Excavator 450PC (1)	75.4
~~Moving/Queuing Collection Vehicle (15)~~	~~73~~
~~**Outdoor**~~	
Reachstacker (Container Handler) (1)	76.2
Yard Jockey (1)	73.8
Shuttle Wagon (1)	76.3
Sweeper (1)	81.8
Moving/Idling Collection Vehicles (15)	79

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

14.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Scott Avenue/Scholes Street Truck to Rail TS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 186 meters (610 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is approximately 163 meters (535 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (See Figure 14.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 14.17-1 above. Table 14.17-4 below identifies the existing background noise level during the quietest hour. The table shows the distance from the Scott Avenue/Scholes Street Truck to Rail TS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, Scott Avenue/Scholes Street Truck to Rail TS-related predicted noise level at the noise-sensitive receptor, and the predicted noise level with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. This difference represents the predicted incremental change in noise level from the Scott Avenue/Scholes Street Truck to Rail TS. Because this incremental change is less than the CEQR threshold of 3 dBA during nighttime hours at the nearest noise-sensitive receptor, there is no predicted impact that would be caused by the Scott Avenue/Scholes Street Truck to Rail TS on-site operations.

Table 14.17-4
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Scott Avenue/Scholes Street Truck to Rail TS

Noise-Sensitive Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
House	163/535	73.4	~~51.9~~ 28.8	73.4	0	No

Notes:
(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.
(2) Existing noise levels measured on July 2, 2003 at 3:00 a.m.
(3) Predicted noise level calculations at the noise-sensitive receptor include on-site and off-site shielding from structures.
(4) According to CEQR, an increase of 3 dBA at nighttime is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Scott Avenue/Scholes Street Truck to Rail TS with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the nighttime hours for the noise-sensitive receptor; therefore, only nighttime impact criteria are discussed in this analysis for this noise-sensitive receptor.

~~25~~14.17.3.3 *Off-Site Noise Levels*

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Scott Avenue/Scholes Street Truck to Rail TS. The assumed DSNY and other agency collection vehicles routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, a second-level screening was not required; therefore an off-site noise analysis and off-site noise monitoring was not required. Results of the first-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) are provided in Table 14.17-5.

~~25~~14.17.3.4 *Combined On-Site and Off-Site Noise Levels*

An on-site noise analysis was performed for the Scott Avenue/Scholes Street Truck to Rail TS. As a result of the off-site screening analysis, which is described above in ~~25~~14.17.3.3, no off-site noise analysis was required. Since an off-site analysis was not required, a combined noise analysis was not performed.

Table 14.17-5
Off-Site Noise Screening[1] Results
Scott Avenue/Scholes Street Truck to Rail TS

Location	Hour	Future No-Build PCEs[2]	Collection Vehicles	Employee Vehicles	Total Net Collection Vehicle PCEs[2][3]	Future Build PCEs[2][3]	Possible Impact[4]
Metropolitan Avenue between Olive and Catherine	2:00 a.m.	1,473	25	0	1,175	2,648	No
Grand Avenue between Olive and Catherine	2:00 a.m.	247	2	0	94	341	No
Flushing Avenue between Vandevoort and Knickerbocker	2:00 a.m.	254	2	0	94	348	No

Notes:

(1) Based on first-level screening since a second-level screening was not required.

(2) Total PCEs are rounded to the nearest whole number.

(3) Future Build PCEs include Scott Avenue/Scholes Street Truck to Rail TS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.

(4) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

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CHAPTER 15 ENVIRONMENTAL REVIEW – REVIEW AVENUE SITE

15.1 Introduction

The Review Avenue TS is currently permitted for receipt and processing of waste into outbound transfer trailers at 958 tpd, and an increase in permitted capacity to 1,200 tpd is proposed. A Part 360 permit application to modify the facility for barge transport (Review Avenue Truck to Barge Transfer Station) and a capacity expansion from 958 to 1,200 tpd was submitted to NYSDEC in January 2003. Review Avenue is currently contracted to accept up to 958 tpd of DSNY-managed Waste under Interim Export and receives, on an average peak day, approximately 934 tons. The facility was subject to EAS review for Interim Export in June 2000, which did not consider $PM_{2.5}$. The facility would be modified to enable lidding of containers and transport of containerized waste by barge. Since Review Avenue was evaluated in the 2000 SWMP FEIS as a truck to barge operation at a planned average peak capacity of 1,200 tpd (37 collection vehicles during the peak hour), no on or off-site analysis is required, except for $PM_{2.5}$ (which was not evaluated in the 2000 SWMP FEIS).

The Review Avenue Truck to Rail TS would containerize DSNY-managed Waste and then dray the containers to the Maspeth Rail Yard in Queens CD 2, where the containers would be loaded onto rail cars. The 2000 SWMP FEIS analyzed a truck-to-rail design for this site at a capacity of 2,300 tpd, which included off-site air quality (PM_{10} and CO), traffic and noise analyses assuming 56 collection vehicles during the peak hour. The 56 collection vehicles assumption is equivalent to operating at 1,200 tpd and draying containers to Maspeth. The 2000 SWMP FEIS will be referred to as sufficient for evaluating impacts associated with the current proposal, except for $PM_{2.5}$, which will need to be reported in the New SWMP FEIS. Supplemental analyses will be conducted, as required, as detailed designs are developed, if the Review Avenue ~~Transfer Station~~TS is included in the Proposed Plan.

The RFP procurement issued by the City requires that proposers commit to exporting all waste (both DSNY and commercial) processed at their facility by rail or barge. The Maspeth Rail Yard will be permitted as an intermodal yard subject to DSNY's new rules, as a non-discretionary

action, and thus not subject to environmental review. An off-site traffic, air quality (including $PM_{2.5}$) and noise impact analysis for the Maspeth Rail Yard will be performed for the equivalent of 1,200 tpd in round-trip truck traffic.

The results of the environmental analyses of the facility options at the Review Avenue Site are presented in the following sections:

15.2 Land Use, Zoning, and Public Policy
15.3 Socioeconomic Conditions
15.4 Community Facilities and Services
15.5 Open Space
15.6 Cultural Resources
15.7 Urban Design, Visual Resources, and Shadows
15.8 Neighborhood Character
15.9 Natural Resources
15.10 Hazardous Materials
15.11 Water Quality
15.12 Waterfront Revitalization Program
15.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
15.14 Traffic, Parking, Transit, and Pedestrians
15.15 Air Quality
15.16 Odor
15.17 Noise

A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3.

The facility options evaluated for this site are:

- Review Avenue Truck to Barge TS;
- Review Avenue Truck to Rail TS; and
- Maspeth Rail Yard.

Section 2.2.12 provides a summary description of the site and important characteristics of the design and operation of these options. Supplemental information on the site or the study area is provided in the following sections when appropriate.

15.2 Land Use, Zoning, and Public Policy

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the land use, zoning, and public policy impacts.

15.3 Socioeconomic Conditions

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the socioeconomic impacts.

15.4 Community Facilities and Services

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the community facilities and services impacts.

15.5 Open Space

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the open space impacts.

15.6 Cultural Resources

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the cultural resources impacts.

15.7 Urban Design, Visual Resources, and Shadows

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the urban design, visual resources, and shadows impacts.

15.8 Neighborhood Character

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the neighborhood character impacts.

15.9 Natural Resources

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the natural resources impacts.

15.10 Hazardous Materials

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the hazardous materials impacts.

15.11 Water Quality

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the water quality impacts.

15.12 Waterfront Revitalization Program

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the waterfront revitalization program impacts.

15.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the infrastructure, solid waste and sanitation services, and energy impacts.

15.14 Traffic, Parking, Transit, and Pedestrians

15.14.1 Introduction

The Review Avenue ~~Site~~ TS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles and other on-site-generated traffic in the study area. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

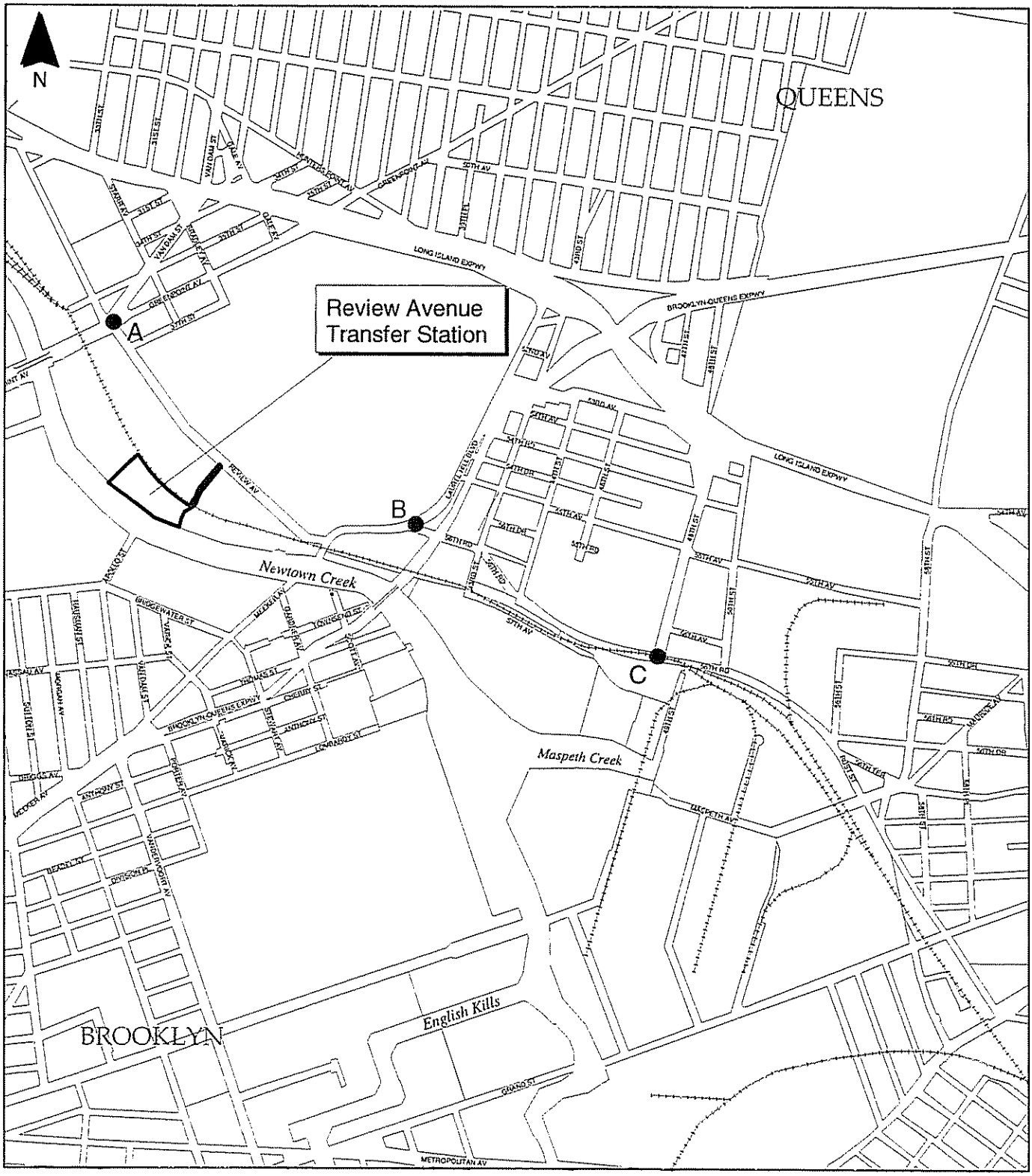
15.14.2 Existing Conditions

15.14.2.1 Definition of Study Area

The traffic analysis study area is broad and includes the Greenpoint and Maspeth neighborhoods of Brooklyn and Queens, respectively. It includes the corridor along Review Avenue, Laurel Hill Boulevard, and 56th Road that is bounded by Greenpoint Avenue on the west and 48th Street on the east. The traffic study area is predominantly light industrial in nature. There are no CEQR-defined areas of concern located within the study area. Figure 15.14-1 shows the locations of the intersections selected for analysis (locations A through C). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicles routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Eastbound and southbound collection vehicles would approach the site along the BQE and Greenpoint Avenue and turn eastbound onto Review Avenue. Westbound collection vehicles would approach from the east via 56th Road, which turns into Laurel Hill Boulevard and then into Review Avenue.

~~The site is currently permitted to handle 558 tpd of solid waste and 400 tpd of recyclable materials as a truck transfer facility. Waste is exported from the site via transfer trailer. The site currently accepts up to 934 tpd of DSNY managed Waste under Interim Export.~~



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 15.14-1 Traffic Analysis Study Area
Review Avenue Transfer Station

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15.14.2.2 Surface Network

Two major highways, the predominantly east-west LIE and the predominantly north-south BQE, service the traffic analysis study area. 48th Street and Greenpoint Avenue are local truck routes that provide access from the north of the site. Laurel Hill Boulevard and 56th Road are local truck routes that provide access from south of the site. Review Avenue is a local truck route that provides access to the site from the west. Maps showing all major truck routes and local truck routes in Brooklyn and Queens are provided in Section 3.16 (see Figures 3.16-3 and 3.16-5).

Greenpoint Avenue (and Van Dam Street in Queens) is a principal arterial that provides access to the LIE. Review Avenue, Laurel Hill Boulevard, and 56th Road are minor arterials and designated truck routes that service the industrial areas adjacent to Newtown Creek. 48th Street is a collector that provides access from 56th Road to points north in Queens.

DSNY and other agency collection vehicles approaching the Review Avenue TS from the LIE would exit at Greenpoint Avenue and proceed to Review Avenue to access the facility. Other collection vehicles approaching the TS follow Van Dam Street and Greenpoint Avenue to Review Avenue. DSNY and other agency vehicles traveling to the Review Avenue TS from the west use 48th Street to access 56th Road. Collection vehicles follow 56th Road west, which turns into Laurel Hill Boulevard and then Review Avenue. All inbound DSNY and other agency collection vehicles converge at the intersection of the facility entrance and Review Avenue. At this intersection, all vehicles would proceed south into the TS. Exiting vehicles would follow the same truck routes back to their respective CDs.

Dray vehicles transporting waste containers to and from the Review Avenue TS would travel to and from the facility along Review Avenue, Laurel Hill Boulevard, and 56th Road between Maspeth Avenue and the facility entrance.

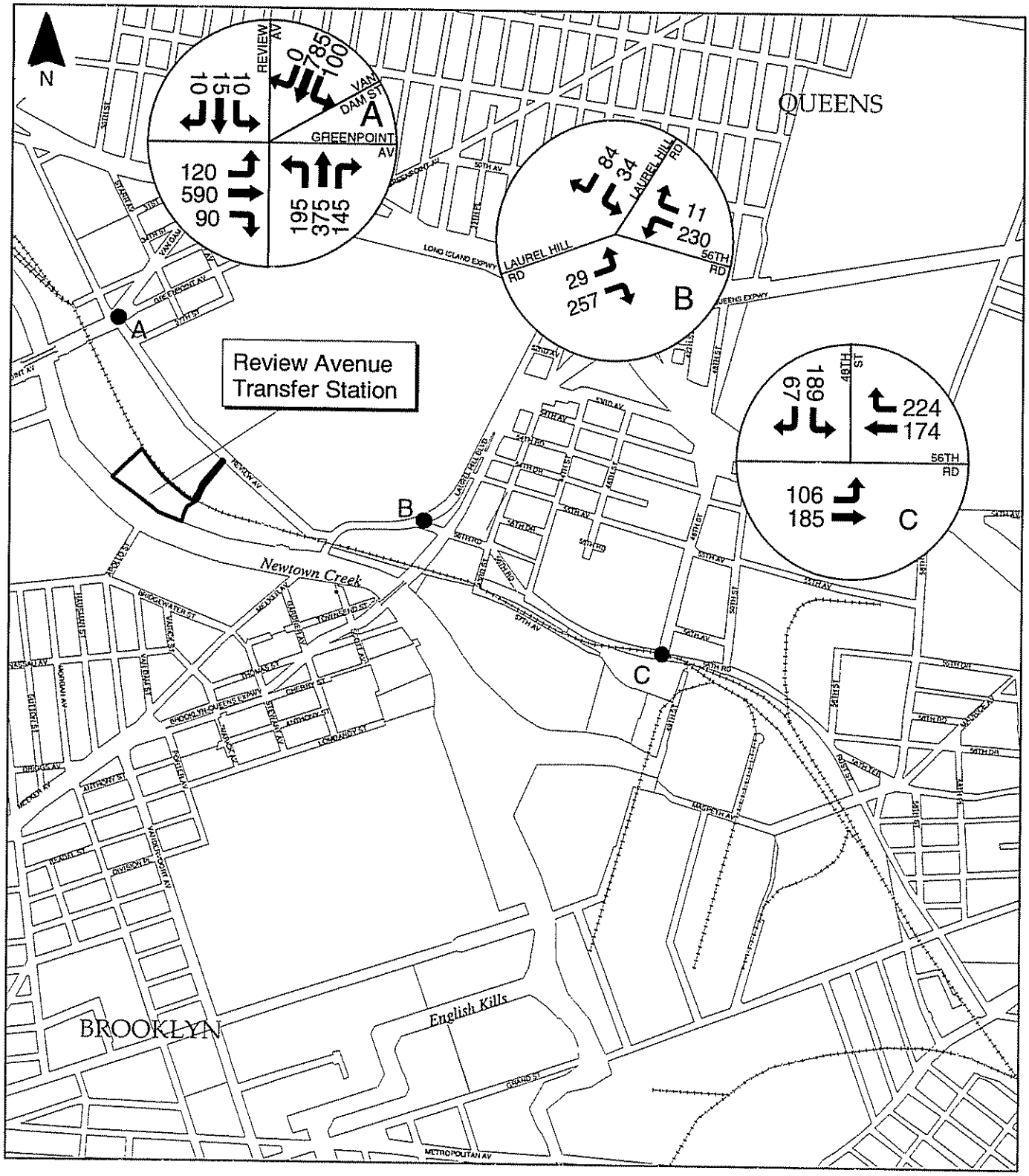
15.14.2.3 Existing Traffic Operations

The three intersections listed below were identified for analysis because they are the most likely to be impacted by the Review Avenue TS. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Greenpoint Avenue and Review Avenue and Van Dam Street – Signalized Intersection (see Figure 15.14-1 – location A)
- Laurel Hill Boulevard and 56th Road – Unignalized Intersection (see Figure 15.14-1 – location B)
- 48th Street and 56th Road – Signalized Intersection (see Figure 15.14-1 – location C)

Greenpoint Avenue (and Van Dam Street in Queens) is a principal arterial that provides access to the LIE. Review Avenue, Laurel Hill Boulevard, and 56th Road are minor arterials that service the industrial areas adjacent to Newtown Creek. 48th Street is a collector that provides access to 56th Road from points north.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 4 and February 6, 2003 and on June 10, 2004, while ATR counts were conducted between February 3 and February 7, 2003 and between June 9 and June 16, 2004. Figures 15.14-2, 15.14-3 and 15.14-4 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 8:00 a.m. and 9:00 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 15.14-1 presents the v/c ratio, delay and LOS for the three intersections during the AM, Facility, and PM peaks.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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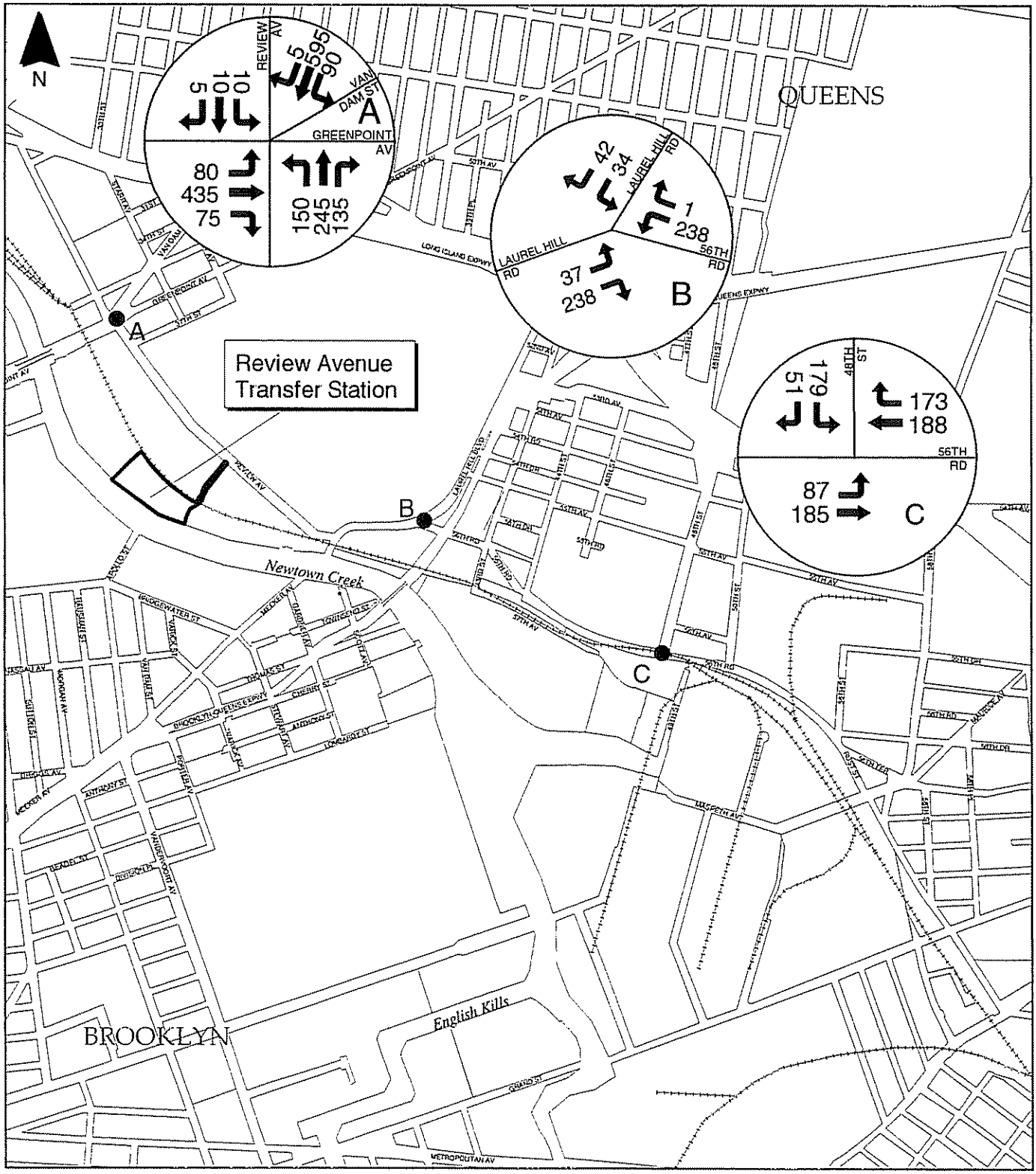
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Figure 15.14-2 Existing Traffic Volumes - AM Peak

Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

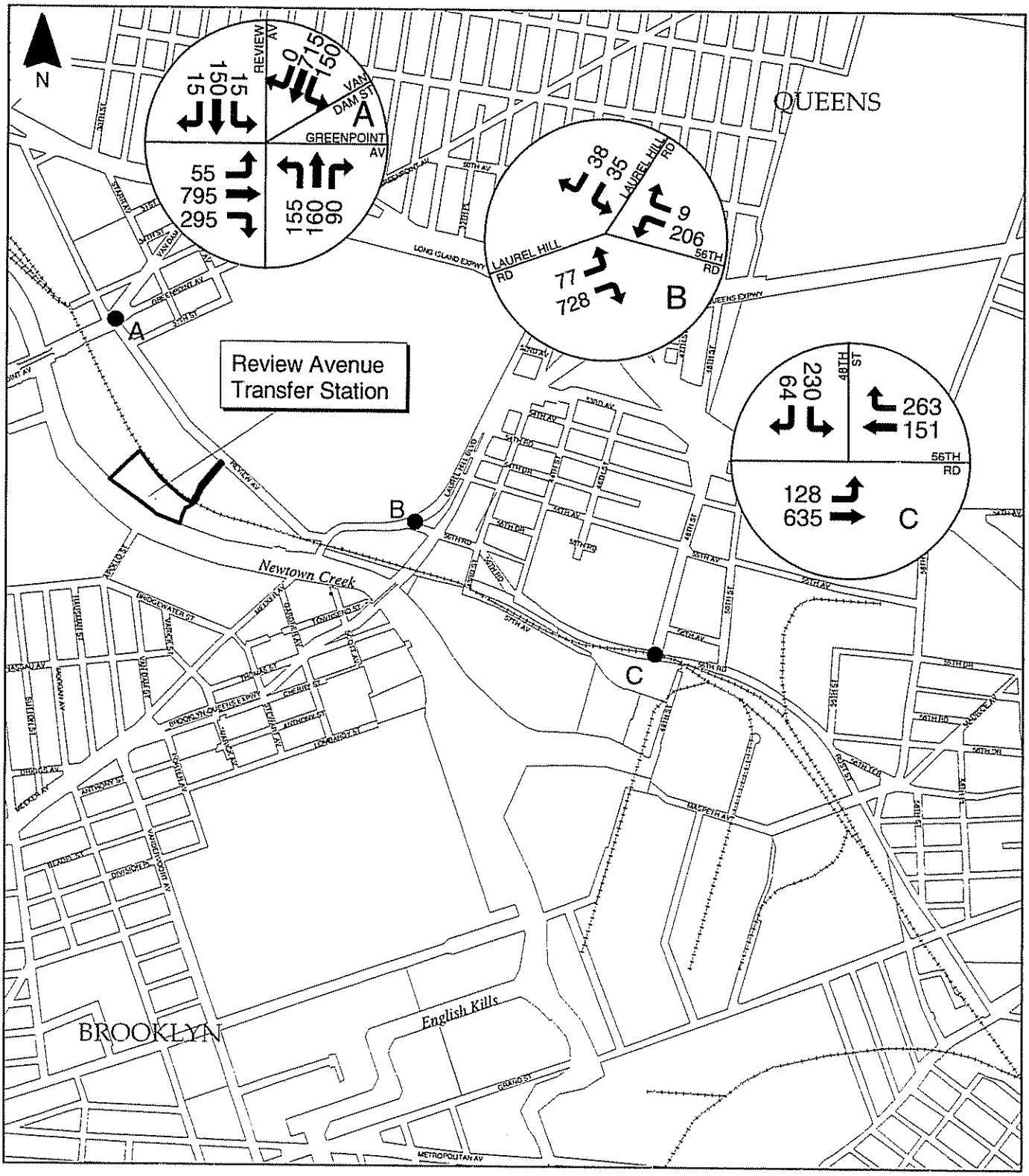
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Figure 15.14-3 Existing Traffic Volumes Facility Peak Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 15.14-4 Existing Traffic Volumes - PM Peak

Review Avenue Transfer Station

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Table 15.14-1
HCM Analysis[1]— Existing Conditions
Review Avenue TS

Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
Greenpoint Avenue and Review Avenue and Van Dam Street (signalized)									
EB LTR	0.98	36.9	D	0.67	12.8	B	0.97	29.7	C
WB LTR	0.88	20.6	C	0.71	13.5	B	1.05	57.5	E
NB LTR	0.76	21.5	C	0.63	18.4	B	0.44	15.2	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.34	14.4	B
OVERALL		26.2	C		14.6	B		35.1	D
56th Road and Laurel Hill Boulevard (unsignalized)									
WB LR	0.45	15.9	C	0.48	16.5	C	0.62	27.9	D
SB LT	0.04	8.3	A	0.05	8.3	A	0.07	10.3	B
OVERALL		-	-		-	-		-	-
56th Road and 48th Street (signalized)									
EB LT	-	-	-	0.27	6.7	A	0.60	10.0+	B
EB DFL	0.30	8.1	A	-	-	-	-	-	-
EB T	0.26	7.0	A	-	-	-	-	-	-
WB TR	0.28	6.7	A	0.26	6.5	A	0.28	6.6	A
SB LR	0.67	28.8	C	0.60	26.4	C	0.76	33.0	C
OVERALL		12.7	B		11.3	B		13.6	B

Notes:
[1] Highway Capacity Manual (HCM) output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement

Existing truck traffic through most of the intersections was relatively high. The percentages of trucks increase steadily during the morning hours, remaining between 25% and 30% during mid-day hours, then decreases to 17% or lower during the PM peak hours.

15.14.2.3.1 LOS at Signalized Intersections

Table 15.14-1 shows that the signalized intersections generally operated at an overall LOS of B or C with the following exception. At the intersection of Greenpoint Avenue, Review Avenue, and Van Dam Street during the AM peak hour, the eastbound approach operated at LOS D. During the PM peak, the westbound approach operates at LOS E.

15.14.2.3.2 LOS at Unsignalized Intersections

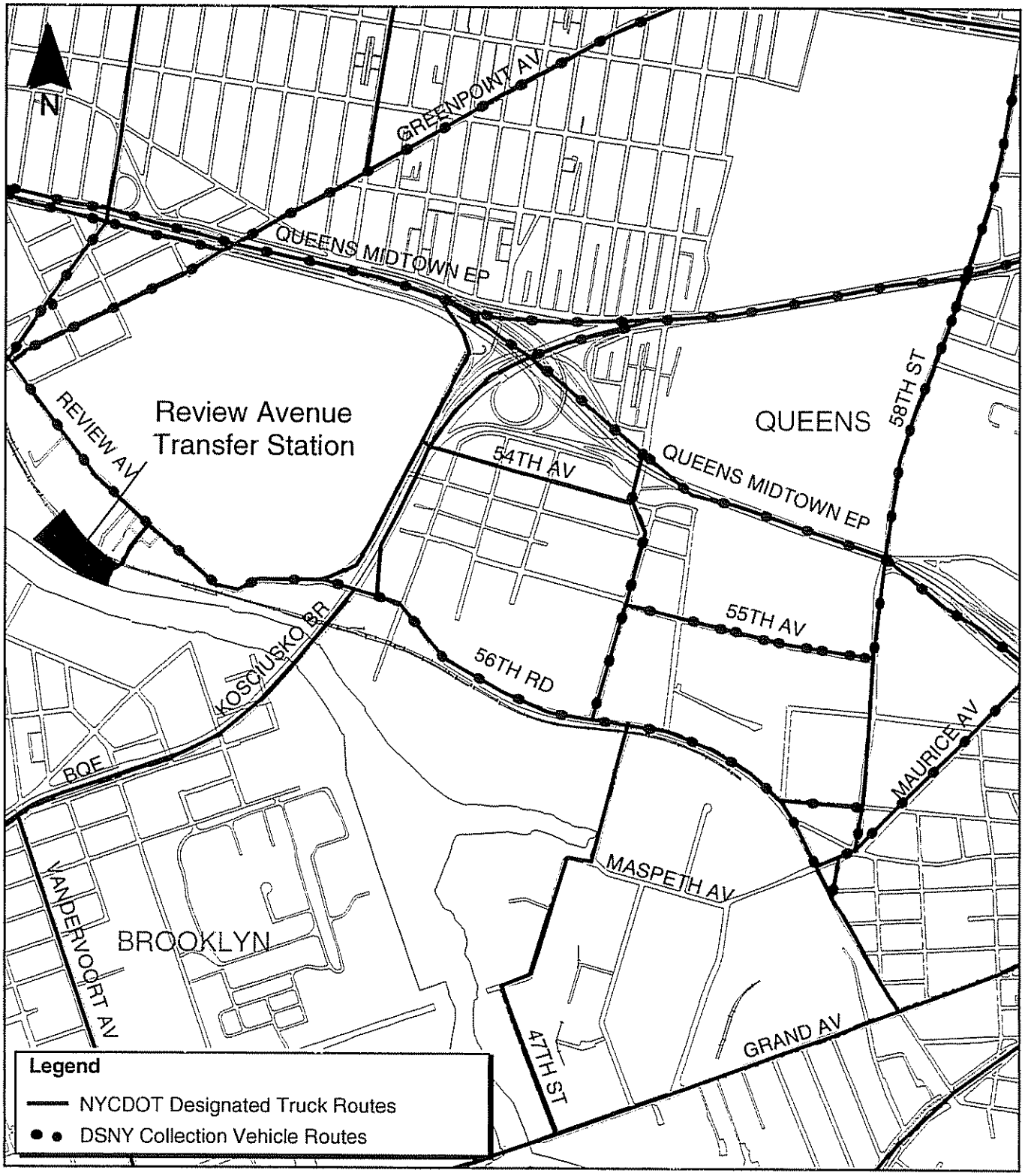
Table 15.14-1 shows that the unsignalized intersection generally operated at an overall LOS of B or C with the following exceptions. During the PM peak hour at the intersection of Laurel Hill Boulevard and 56th Road, the westbound approach operated at LOS D.

15.14.2.4 Existing DSNY-Related Traffic

The privately owned Waste Management Review transfer facility, located on Review Avenue in the West Maspeth section of Queens, currently accepts waste from Queens CDs 2, 3, 4, 5, 6 and 14 under the Interim Export Program. The existing DSNY-related traffic in the vicinity of the existing Review Avenue TS is generated by the Review Avenue facility. Within the study area, DSNY-related traffic is primarily routed along Greenpoint Avenue, Review Avenue and Van Dam Street. The NYCDOT designated truck routes in the area are presented in Figure 15.14-5.

15.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "Greenpoint Avenue" stop on the MTA's "G" subway line is located approximately one mile southwest of the site at the Greenpoint Avenue/Manhattan Avenue intersection. The MTA operates one bus line, B24, along Greenpoint Avenue. A bus stop is located at the Greenpoint Avenue/Review Avenue/Van Dam Street intersection and scheduled stops occur at various times during the day.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 15.14-5 DSNY Collection Vehicle Routes
Review Avenue Transfer Station

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15.14.2.6 Pedestrian Activity

Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at all signalized study intersections. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

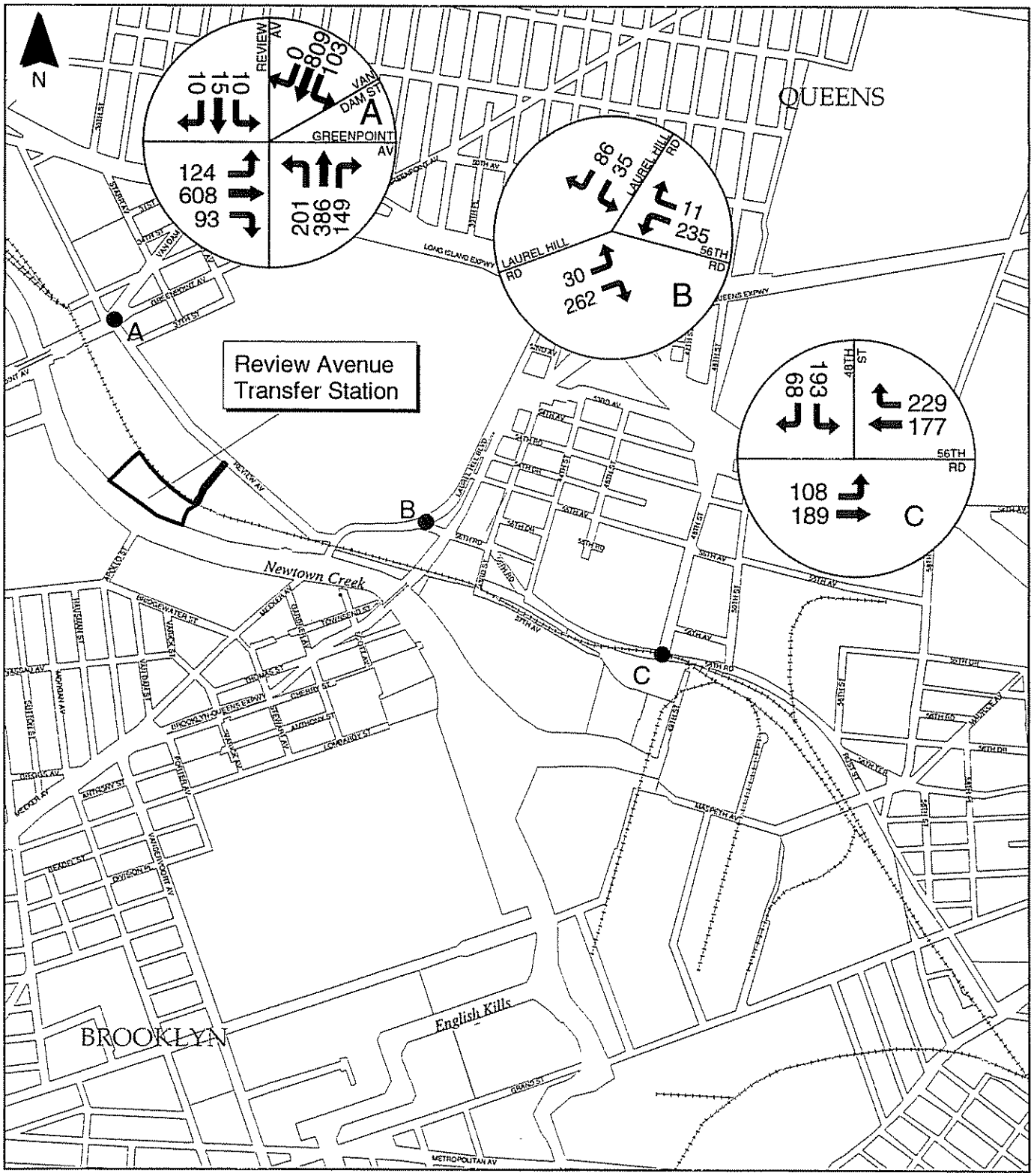
15.14.3 Future No-Build Conditions

15.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 100 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 15.14-6, 15.14-7 and 15.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 15.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their Existing Condition LOS, with the following exceptions:

- During the AM peak hour, the delay of the eastbound approach at the intersection of Greenpoint Avenue and Review Avenue and Van Dam Street increased from 36.9 to 51.2 seconds (LOS D in both cases).
- During the PM peak hour, the eastbound and westbound approaches at the Greenpoint Avenue and Review Avenue and Van Dam Street intersection experienced an increase in delay (29.7 to 37.4 seconds, and 57.3 to 75.6 seconds, respectively). Also, the overall intersection delay increased from 34.5 to 44.3 (LOS C to LOS D).



Site delineations are approximate
Base Map Source: New York City Department of City Planning

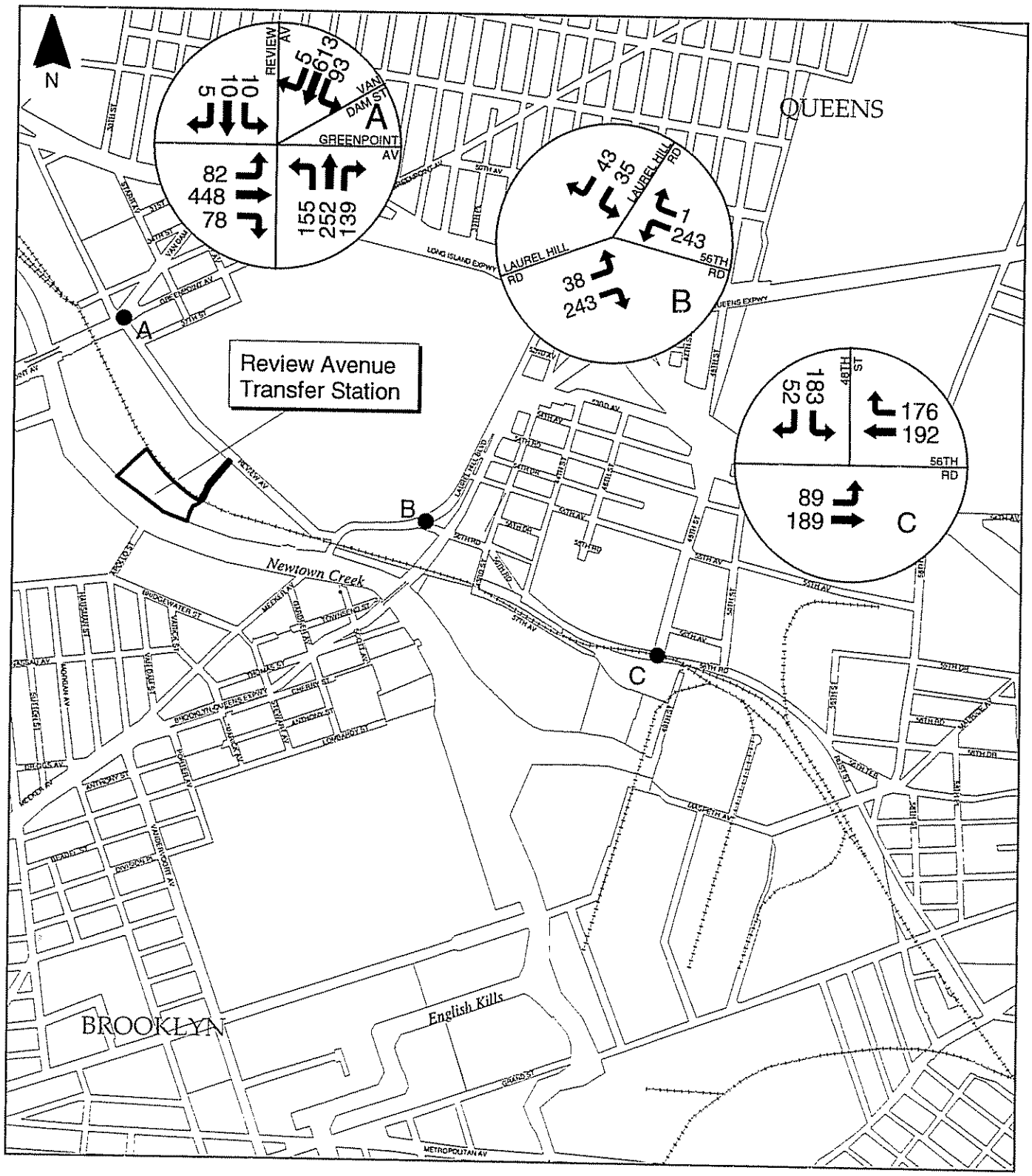
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Figure 15.14-6 Future No-Build Traffic Volumes
AM Peak
Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

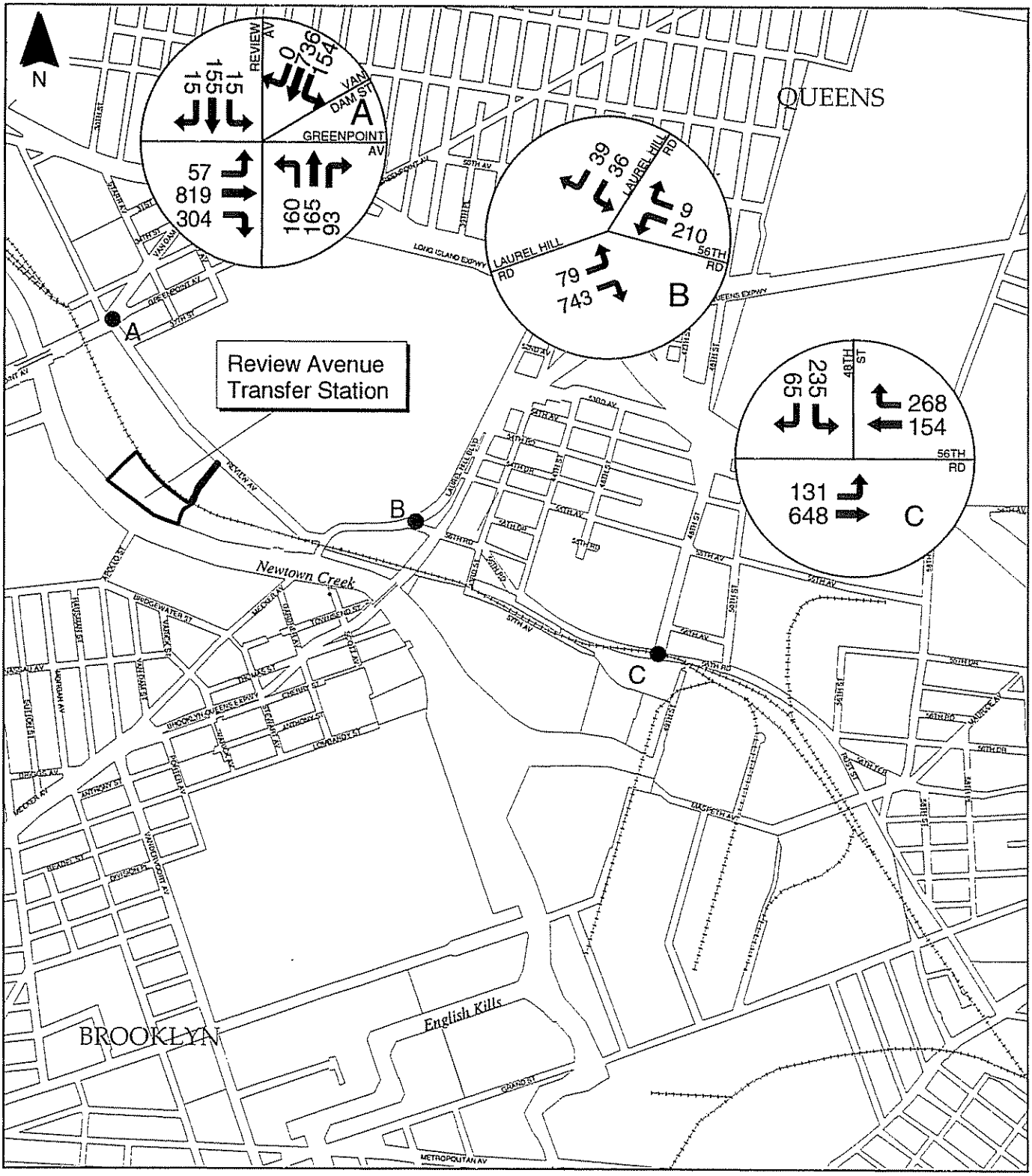
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Figure 15.14-7 Future No-Build Traffic Volumes
Facility Peak
Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 15.14-8 Future No-Build Traffic Volumes
PM Peak
Review Avenue Transfer Station

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Table 15.14-2
HCM Analysis[1]— Future No Build Conditions
Review Avenue TS

Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
Greenpoint Avenue and Review Avenue and Van Dam Street (signalized)									
EB LTR	1.04	51.2	D	0.70	13.4	B	1.00	37.4	D
WB LTR	0.92	25.0	C	0.74	14.4	B	1.11	75.6	E
NB LTR	0.78	22.4	C	0.65	18.8	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERAL L		32.9	C		15.3	B		44.3	D
56th Road and Laurel Hill Boulevard (unsignalized)									
WB LR	0.46	16.4	C	0.49	17.1	C	0.65	30.1	D
SB LT	0.04	8.3	A	0.05	8.3	A	0.07	10.4	B
OVERAL L		-	-		-	-		-	-
56th Road and 48th Street (signalized)									
EB LT	-	-	-	0.27	6.8	A	0.62	10.3	B
EB DFL	0.31	8.3	A	-	-	-	-	-	-
EB T	0.27	7.1	A	-	-	-	-	-	-
WB TR	0.29	6.7	A	0.26	6.5	A	0.28	6.6	A
SB LR	0.68	29.3	C	0.62	26.9	C	0.78	33.9	C
OVERAL L		12.9	B		11.5	B		13.9	B

Notes:

[1] Highway Capacity Manual (HCM) output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound

WB = westbound

LT = left through movement

L = left movement

TR = through right movement

T = through movement

~~Because analysis of traffic impacts was not required for the Review Avenue Site, as discussed in Sections 15.14.4, 15.14.5 and 15.14.6, Future No-Build Conditions were not estimated.~~

15.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

15.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions

15.14.4 Potential Impacts with the Review Avenue Truck to Barge TS

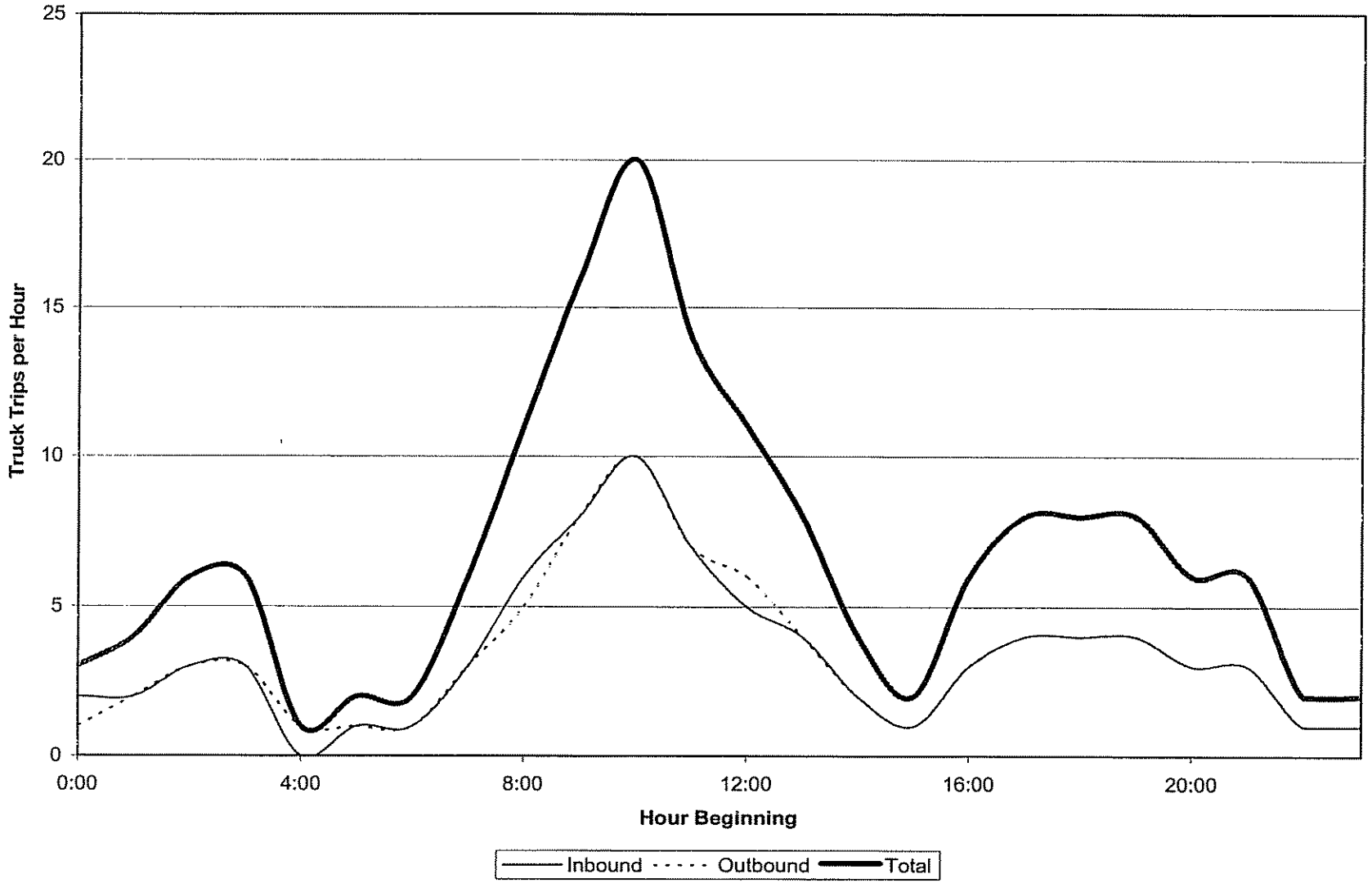
The Review Avenue Truck to Barge TS would receive waste from Queens CDs 1 through 6, (approximately 1,464 tons on an average peak day). The assumed 24-hour truck distribution to the Review Avenue TS Truck to Barge TS is depicted in Figure 15.14-9~~1~~. The assumed DSNY and other agency collection vehicle routes are depicted in Figure 15.14-5~~2~~.

Peak hour traffic generation for this facility is expected to be 30 PCEs, which falls below the CEQR screening threshold of 50 trip ends per hour. (See Table 3.16-2 in Section 3.16 for a listing of peak hour trip ends by facility.) Additionally, transfer trailer trips currently generated by the facility would be eliminated. Therefore, no additional traffic analysis is required at this site for this option.

15.14.5 Potential Impacts with the Review Avenue Truck to Rail TS

The Review Avenue TS would potentially receive waste from Queens (CDs 1, 2, 3, 4, 5 and 6). Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. The Review Avenue TS would also generate new trips from dray trucks transporting waste containers to and from the Maspeth Railyard located by the intersection of 56th Road, Rust Road, and Maspeth Avenue. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

Figure 15.14-~~9~~1
Truck Trips per Hour
Review Avenue Truck to Barge ~~Rail~~ TS

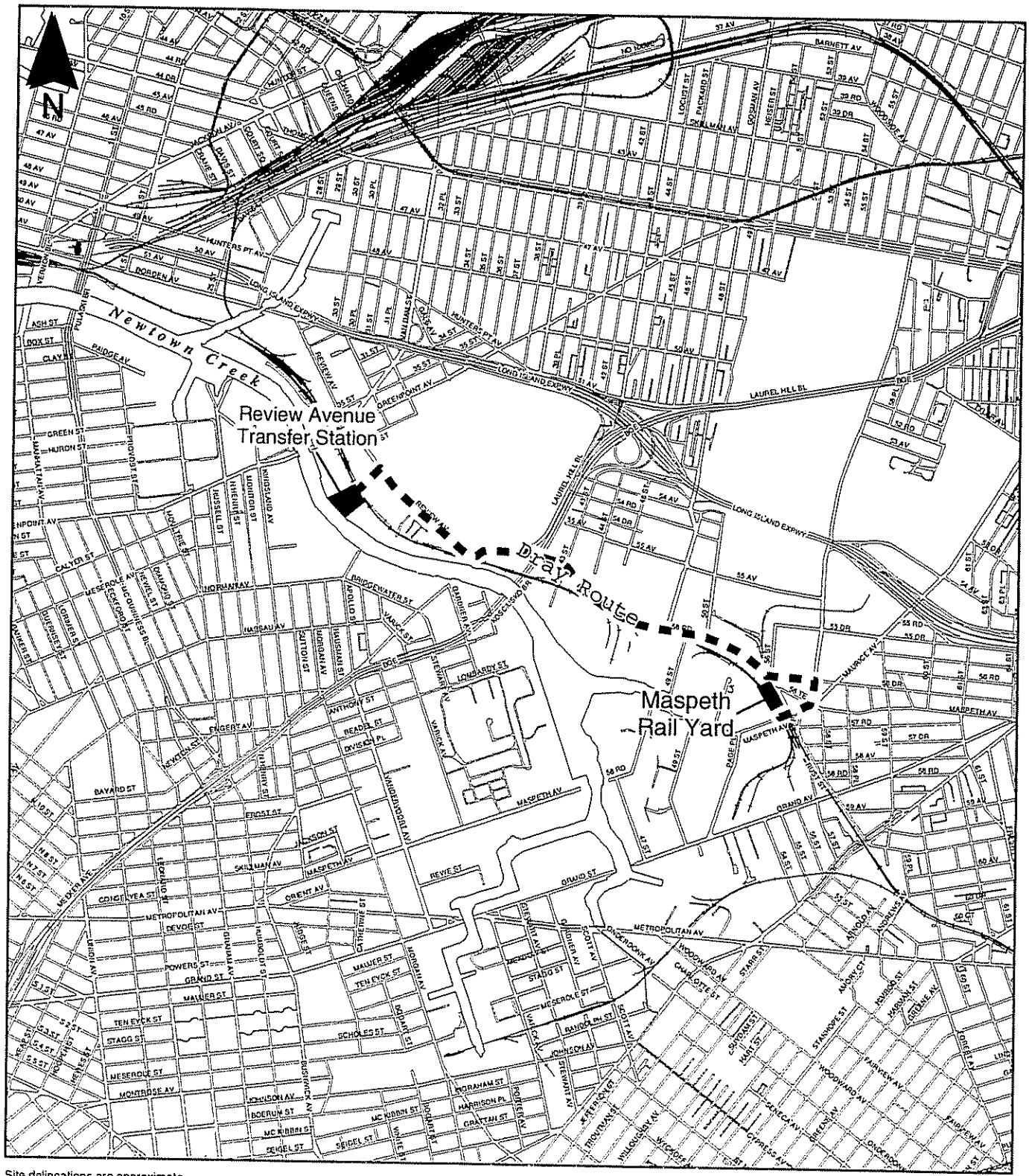


15.14.5.1 2006 Future Build Traffic Conditions

2006 Future Build Conditions assume that the Review Avenue TS would generate 81 net inbound collection vehicles per average peak day. The facility would also generate 144 inbound dray truck trips per day transporting waste containers to the facility from the Maspeth Railyard. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the Review Avenue TS are shown in Figure 15.14-5. The proposed dray truck route to Maspeth Rail Yard from the Review Avenue Transfer Station is shown in Figure 15.14-10.

Figure 15.14-11 presents the average peak day temporal distribution of additional collection vehicles for the Review Avenue TS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the additional number of collection vehicles generated by the Review Avenue TS is expected to vary between approximately 2 to 18 truck trips per hour in the late evening/early morning, 18 to 42 truck trips per hour in the mid-morning/early afternoon, and 5 to 17 truck trips per hour in the late afternoon/early evening. The peak hourly net number of collection vehicle truck trips (42) occurs at approximately 10:00 a.m.

Increased employee trips generated as a result of the Review Avenue TS are expected to be about 12 per shift (6 entering and 6 departing). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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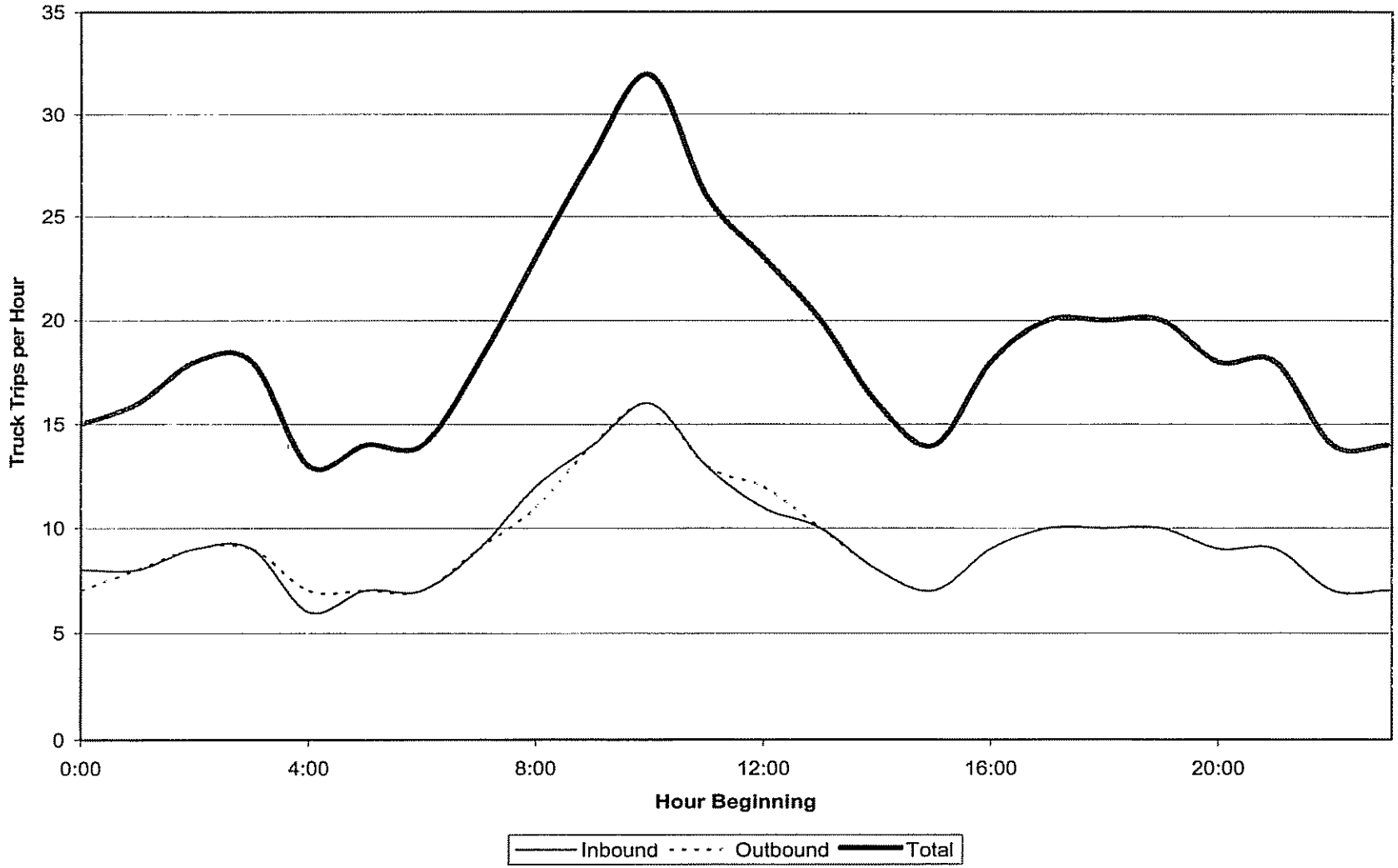
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Figure 15.14-10 Truck to Rail Dray Route
Review Avenue Transfer Station

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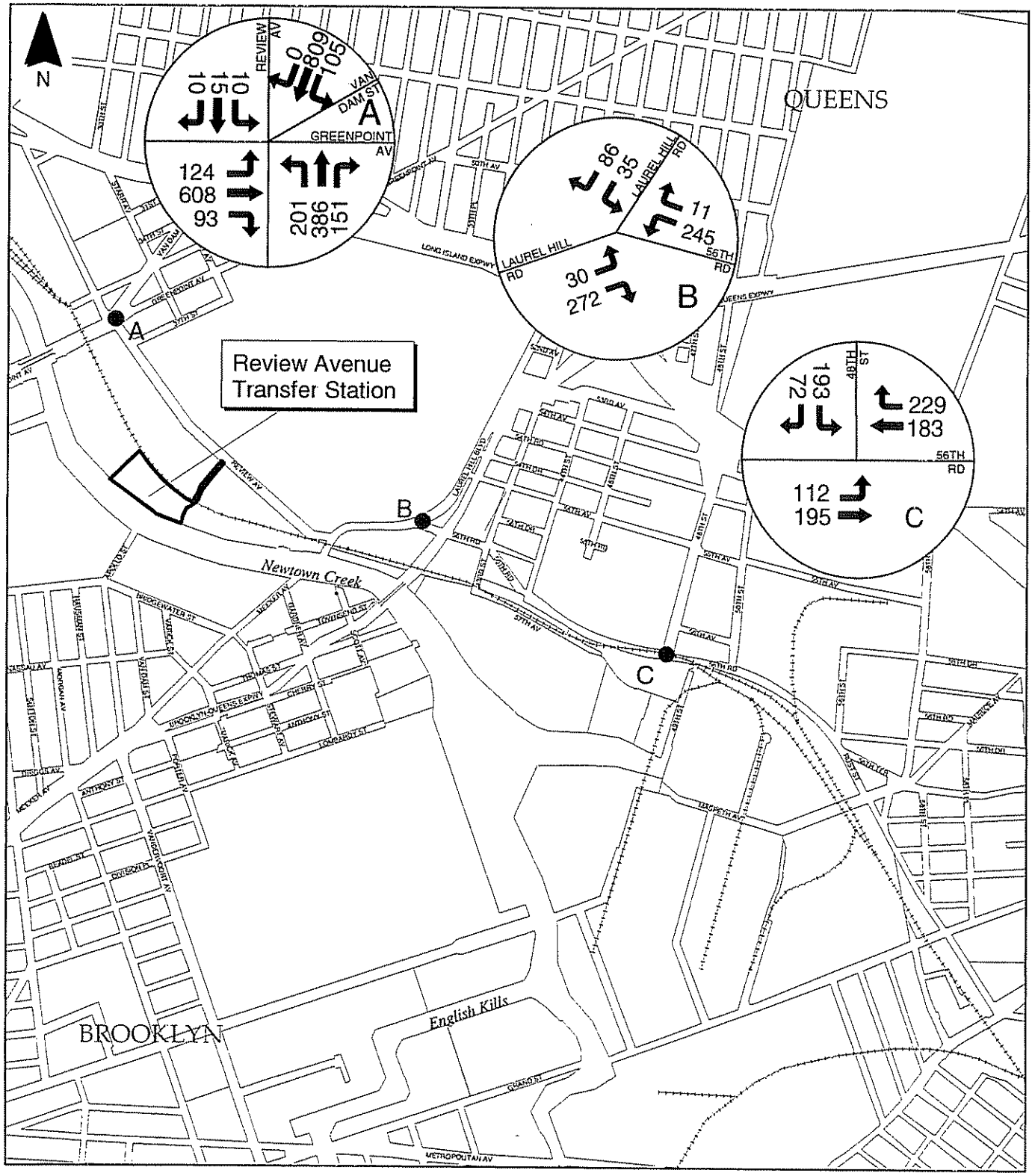
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Figure 15.14-11
Truck Trips per Hour
Review Avenue Truck to Rail TS



ruck Trips per Hour

Because only the AM peak (8:00 a.m. to 9:00 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the Review Avenue TS during the shift change (6) were considered as part of the net increase in site-generated traffic. Figures 15.14-12, 15.14-13 and 15.14-14 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 15.14-15, 15.14-16 and 15.14-17 show the intersections analyzed with only the net increase in site generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Review Avenue TS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 13. The highest net increase at any one intersection was 26 trucks. Both of these net increases occurred at the intersection of Laurel Hill Boulevard and 56th Road.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

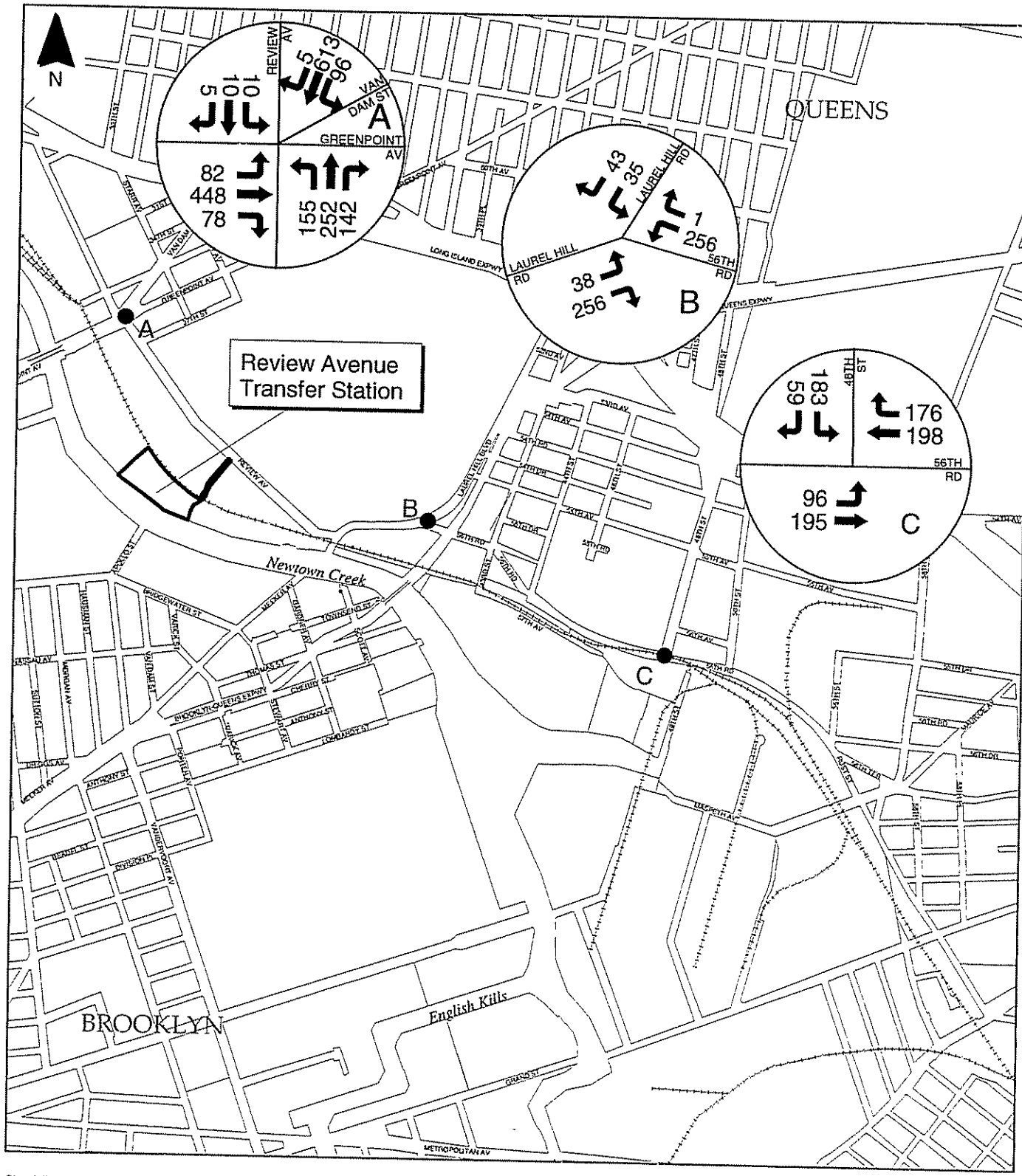
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Figure 15.14-12 2006 Build Traffic Volumes AM Peak Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

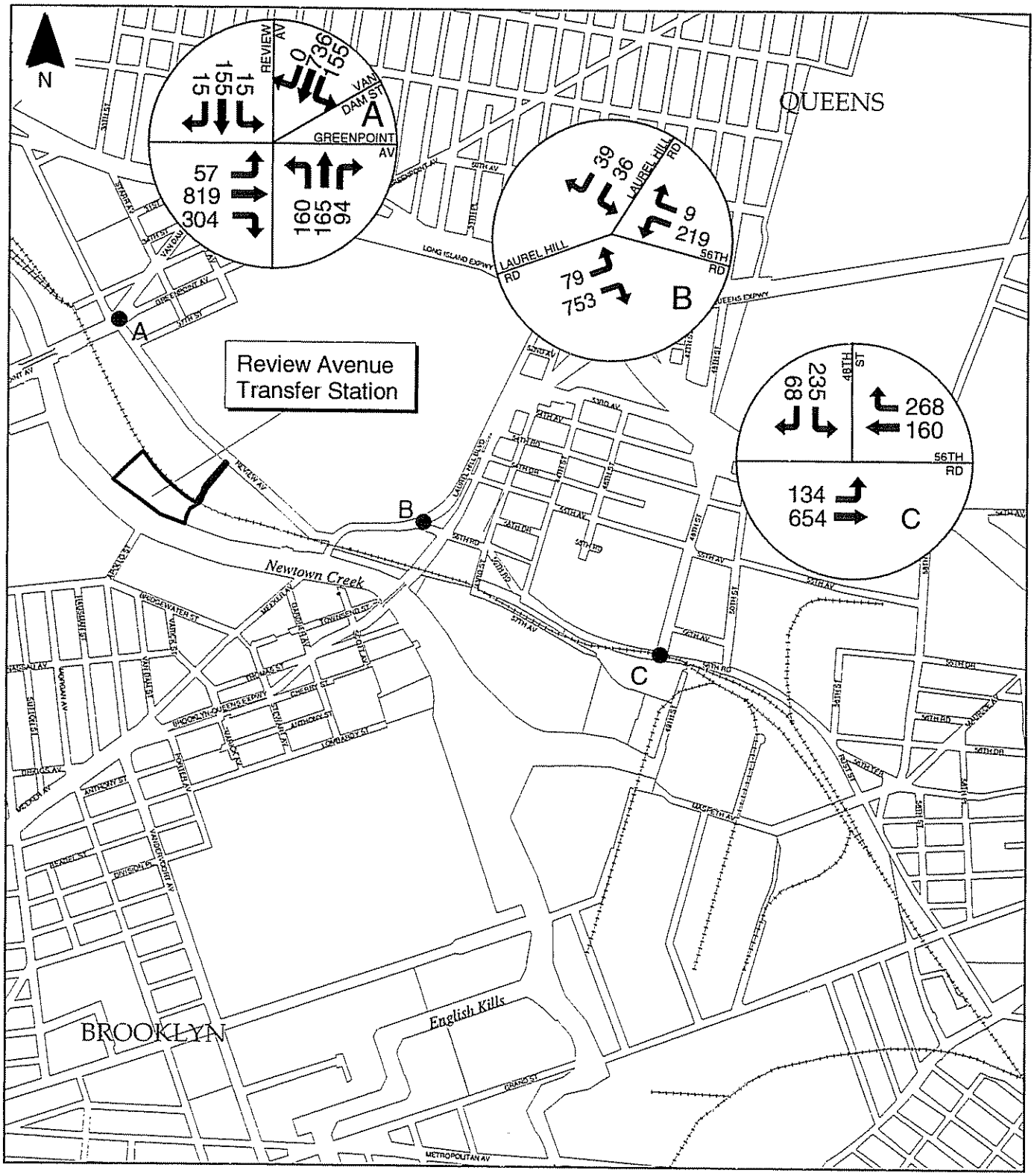
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Figure 15.14-13 2006 Build Traffic Volumes Facility Peak Review Avenue Transfer Station

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Site delineations are approximate
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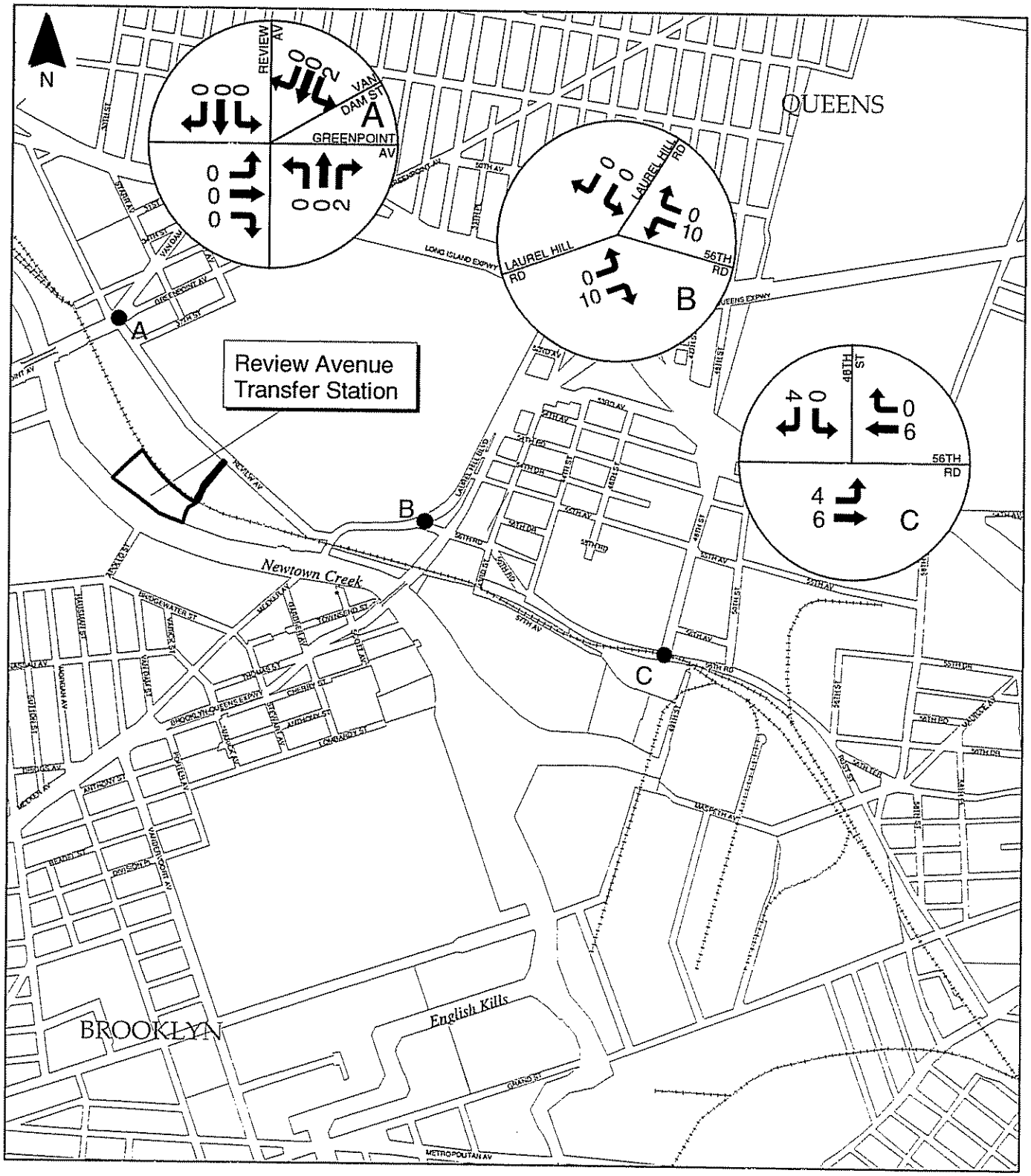
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Figure 15.14-14 2006 Build Traffic Volumes PM Peak Review Avenue Transfer Station

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Site delineations are approximate
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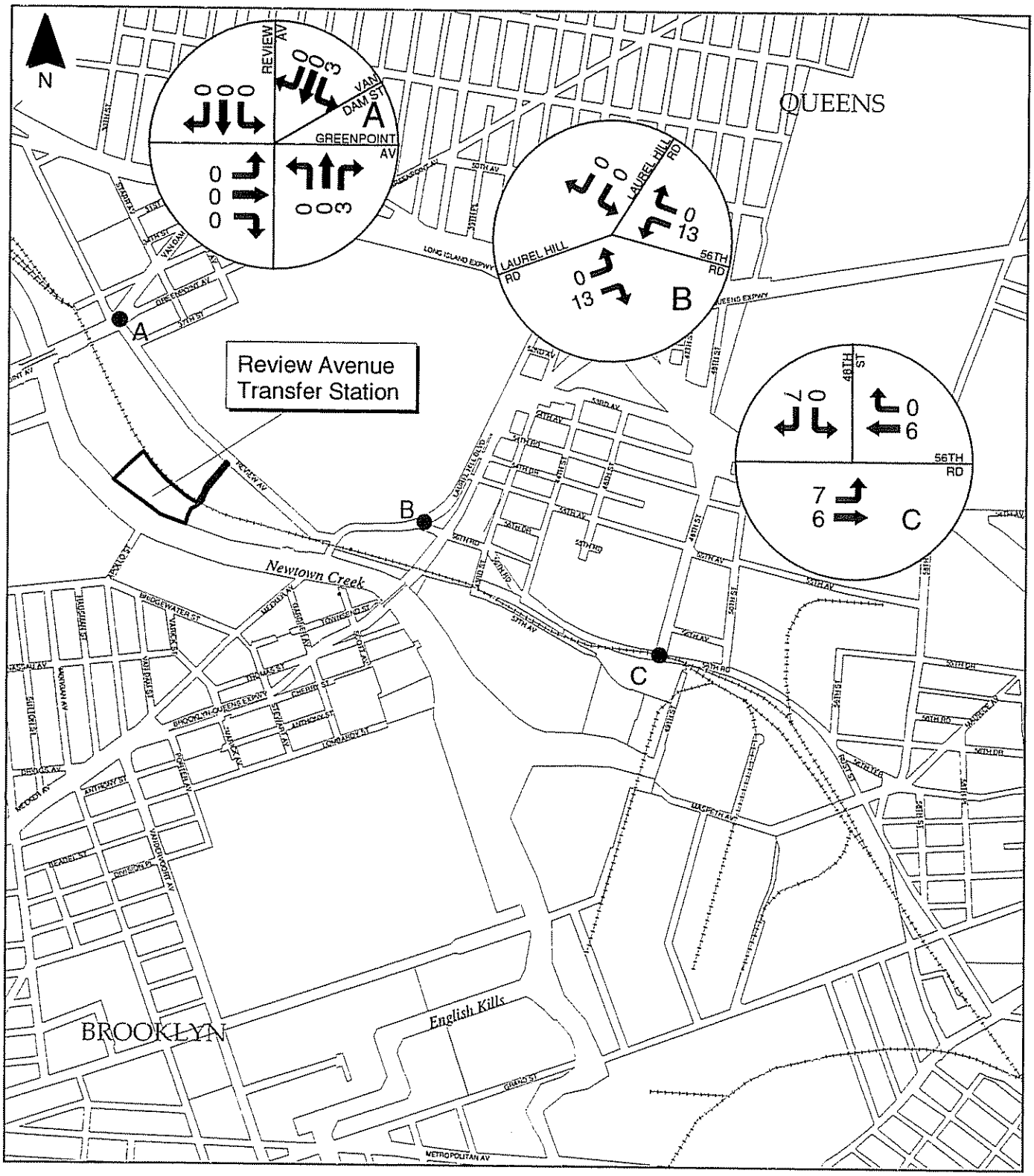
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Figure 15.14-15 2006 Net Traffic - AM Peak

Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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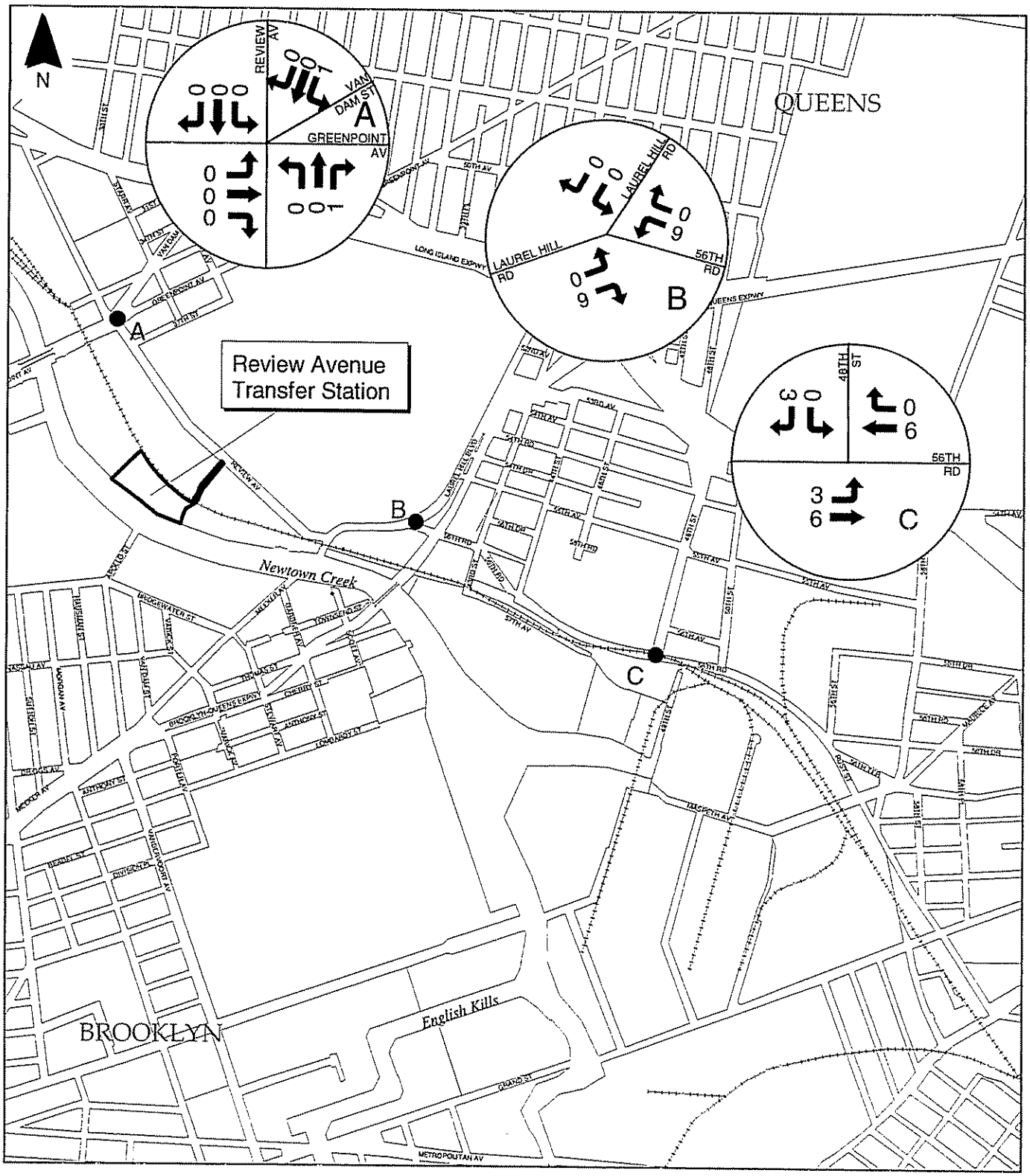
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Figure 15.14-16 2006 Net Traffic - Facility Peak

Review Avenue Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

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Figure 15.14-17 2006 Net Traffic - PM Peak

Review Avenue Transfer Station

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 55% of weekday traffic volumes. Table 15.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Review Avenue TS would not operate on Sundays for receipt of DSNY-managed Waste. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 15.14-3
Weekday and Weekend Traffic
Review Avenue TS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Greenpoint Avenue [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
172	129	29,296	16,171

Note:
[1] EB and WB traffic data collected from ATR counts taken on Greenpoint Avenue between Kingsland Avenue and Monitor Street from September 11 to 17, 2003.

Table 15.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Review Avenue TS. Over an average peak day, the intersections should not experience an extended increase in delay.

Table 15.14-4
HCM Analysis[1]— Future Build Conditions
Review Avenue Transfer Station

Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
Greenpoint Avenue and Review Avenue and Van Dam Street (signalized)									
EB LTR	1.04	52.0	D	0.70	13.5	B	1.00	37.4	D
WB LTR	0.94	26.6	C	0.76	14.9	B	1.11	77.1	E
NB LTR	0.79	22.5	C	0.66	19.0	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERALL		33.8	C		15.6	B		44.7	D
56th Road and Laurel Hill Boulevard (unsignalized)									
WB LR	0.50	17.5	C	0.55	18.8	C	0.71	34.8	D
SB LT	0.04	8.4	A	0.05	8.4	A	0.07	10.5	B
OVERALL		-	-		-	-		-	-
56th Road and 48th Street (signalized)									
EB LT	-	-	-	0.30	7.0	A	0.64	10.6	B
EB DFL	0.33	8.6	A	-	-	-	-	-	-
EB T	0.29	7.2	A	-	-	-	-	-	-
WB TR	0.30	6.8	A	0.27	6.6	A	0.29	6.7	A
SB LR	0.70	30.2	C	0.65	28.0	C	0.79	34.7	C
OVERALL		13.2	B		11.9	B		14.2	B

Notes:
[1] Highway Capacity Manual (HCM) output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
T = through movement

15.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

15.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

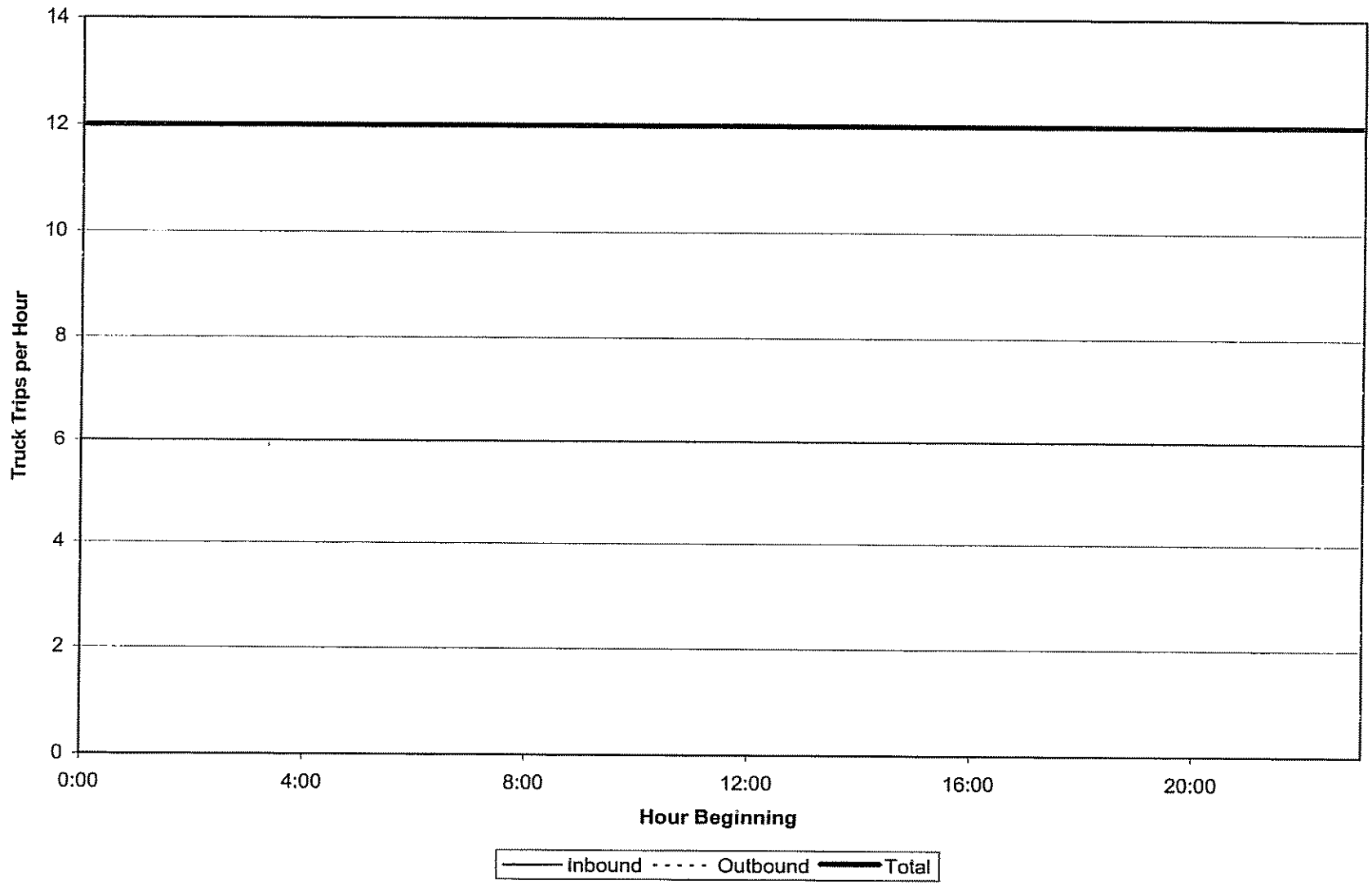
~~The assumed 24-hour truck distribution to the Review Avenue Truck to Rail TS is depicted in Figure 15.14-3. The assumed 24-hour truck distribution included dray trucks used to transport containers between the Maspeth Rail Yard and Review Avenue Truck to Rail TS. . The assumed dray truck route to and from the Maspeth Rail Yard is depicted in Figure 15.14-4.~~

~~Peak hour traffic generation for this facility is expected to be 54 PCEs, which does not fall below the CEQR screening threshold of 50 trip ends per hour, which includes the outbound container dray trips. (See Table 3.16-2 in Section 3.16 for a listing of peak hour trip ends by facility.) However, no intersection in the study area would experience an increase of more than 45 PCEs, which falls below the CEQR screening threshold. The 2000 SWMP FEIS also contained an analysis of 56 peak trips per hour, with no unmitigatible significant adverse environmental impacts. Finally, an inspection of the intersections within the study area did not indicate that significant increases in delay would result from the addition of less than 50 PCEs, based on the type of traffic control and characteristics of the intersecting streets. Therefore, no additional traffic analysis is required at this site for this option.~~

15.14.5~~6~~ Potential Impacts with the Maspeth Rail Yard

Dray trucks would transport containers filled with waste to the Maspeth Rail Yard from the Review Avenue Truck to Rail TS and deliver empty containers from the Maspeth Rail Yard to the Review Avenue Truck to Rail TS. The Maspeth Rail Yard would receive an average of 1,200 tpd (or approximately 1,440 tpd with a 20% contingency) of containerized waste. The assumed 24-hour truck distribution to the Maspeth Rail Yard is depicted in Figure 15.14-5~~1~~8. The assumed dray truck route to and from the Maspeth Rail Yard is depicted in Figure 15.14-4-10 (shown earlier). Peak hour traffic generation for this facility is expected to be 24 PCEs, which falls below the CEQR screening threshold of 50 trip ends per hour. (See Table 3.16-2 in Section 3.16 for a listing of peak hour trip ends by facility.) Therefore, no additional traffic analysis is required at this site for this option.

Figure 15.14-~~5~~18
Truck Trips per Hour
Maspeth~~Review~~ Rail Yard ~~Truck to Rail TS~~



15.15 Air Quality

The 2000 SWMP FEIS evaluated this facility as a truck-to-barge and truck-to-rail operation and included an assessment of the on- and off-site air quality impacts, except for the analysis of $PM_{2.5}$.

15.15.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Review Avenue Truck to Barge TS and Truck to Rail TS. The study area for the off-site air quality analysis is defined as the area or intersection listed in Section 15.15.5.2.

15.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 15.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

15.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

Table 15.15-1
Representative Ambient Air Quality Data
Review Avenue Truck to Barge TS and Review Avenue Truck to Rail TS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	MTA, Flatbush Avenue Between Tillary Street and Johnson Avenue	8-Hour	3,436 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	51 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	Greenpoint	3-Hour	188 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	84 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	18 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1999 calendar year.

15.15.4 Potential Impacts with the Review Avenue Truck to Barge TS

15.15.4.1 On-Site Emissions

Based on the 2000 SWMP FEIS, at 1,200 tpd, the potential impacts from the operation of the Review Avenue Truck to Barge TS were estimated for criteria pollutants and found to be within applicable standards and guidelines, impacts under the Truck to Rail TS would also be within standards and guidelines, so an analysis of this facility would likewise not result in a finding of significant impacts.

15.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be operating during the peak hour and in an average hour are provided in Table 15.15-2. Figure 15.15.1 shows the locations of these sources within the site.

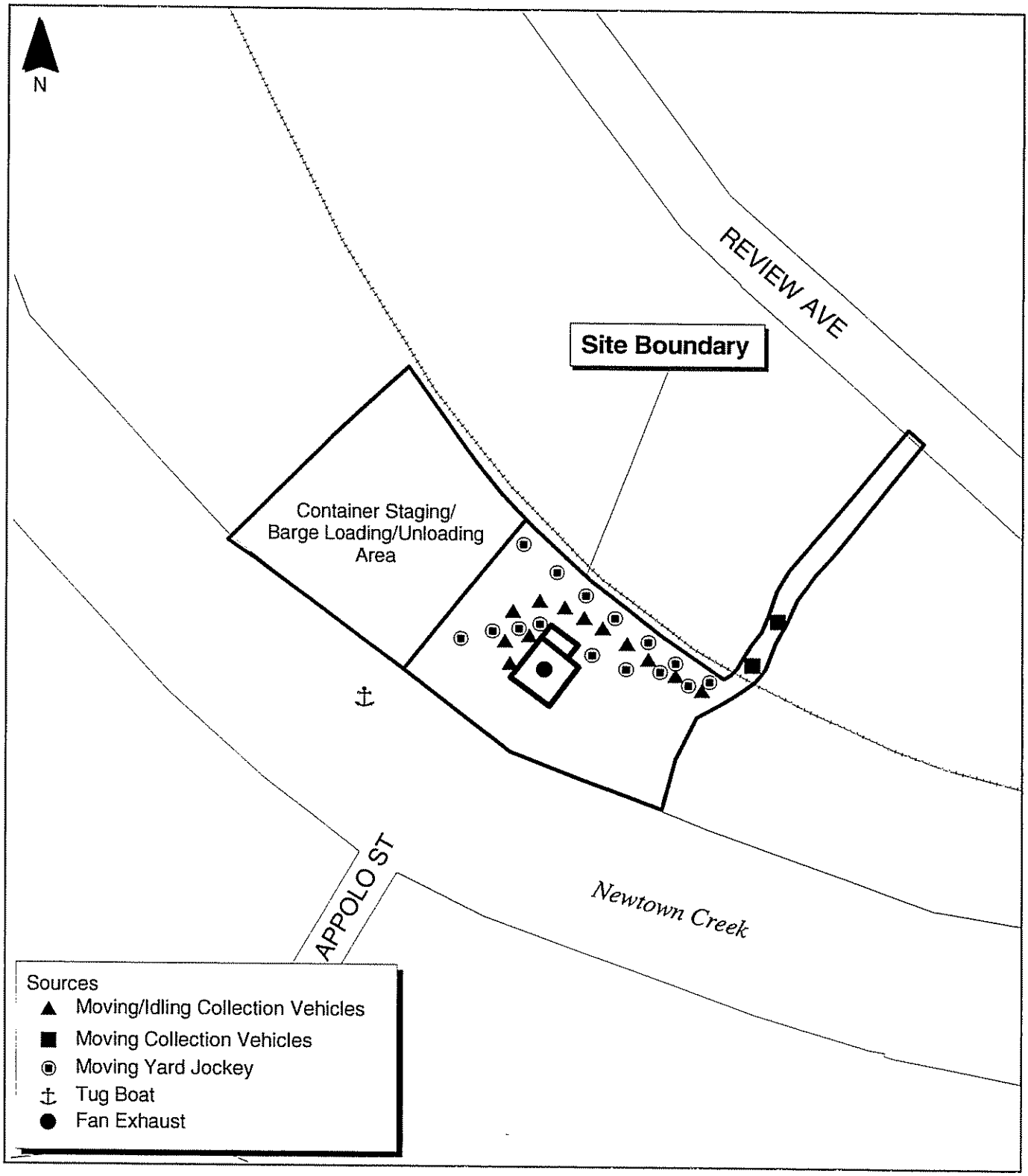
Table 15.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
Review Avenue Truck to Barge TS

Type of Emission Source	Maximum Number of Sources Operated During a Single Peak Hour	Number of Sources Operated During Annual Average Hour
Within Processing Building		
Moving/Queuing Collection Vehicles [2]	15	5
Wheel Loaders	1	1
Track Loaders	1	1
Grapples	1	1
Moving Street Sweepers	1	1
Outside Processing Building		
Moving/Queuing Collection Vehicles [2]	15	5
Moving Yard Jockey	6	3
Stick Crane	1	1
Container Handler	1	1
Tug Boat	1	1

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.
(2) Peak 24-hour average number of moving collection vehicles: 6.
Peak 24-hour and annual average number of queuing collection vehicles: 3.

15.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any one of the receptor sites considered are provided in 2000 SWMP FEIS. These values are compared with the applicable standards for the appropriate averaging time periods. $PM_{2.5}$ results are presented in Table 15.15-3. Based on the results presented in Table 15.15-3 and 2000 SWMP FEIS, operations proposed at this facility would not adversely impact air quality in the area. The total predicted concentrations (including appropriate background concentrations) are below the national and state ambient air quality standards.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 15.15-1 On-Site Air Quality Analysis

Review Avenue Truck to Barge Transfer Station

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Table 15.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Review Avenue Truck to Barge TS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources	STV[2]
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$[3]	24-hour [1]	~~4.96~~2.94	5
	Annual Neighborhood Average[3]	~~0.07~~0.03	0.1

Notes:
(1) The highest estimated incremental pollutant concentrations found at any of the ~~off-site~~ receptor locations.
(2) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(3) Incremental Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

15.15.5 Potential Impacts with the Review Avenue Truck to Rail TS

15.15.5.1 On-Site Emissions

Based on 2000 SWMP FEIS, at 1,200 tpd, the potential impacts from the operation of the Review Avenue Truck to Rail TS were estimated and found to be within applicable standards and guidelines for criteria pollutants, impacts under the Truck to Rail TS would also be within standards and guidelines, so an analysis of this facility would likewise not result in a finding of significant impacts.

15.15.5.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be operating during the peak hour and in an average hour are provided in Table 15.15-4. Figure 15.15.2 shows the locations of these sources within the site.

Table 15.15-4

Emission Sources Considered for On-Site Air Quality Analysis[1]
Review Avenue Truck to Rail TS

Type of Emission Source	Number of Sources Operated During Peak Hour	Number of Sources Operated During Annual Average Hour
Within Processing Building		
Moving/Queuing Collection Vehicles [2]	15	5
Wheel Loaders	1	1
Track Loaders	1	1
Grapples	1	1
Moving Street Sweepers	1	1
Outside Processing Building		
Moving/Queuing Collection Vehicles [2]	15	5
Container Handler	1	1
Moving Yard Tractors	6	3
Moving Yard Jockey	6	3

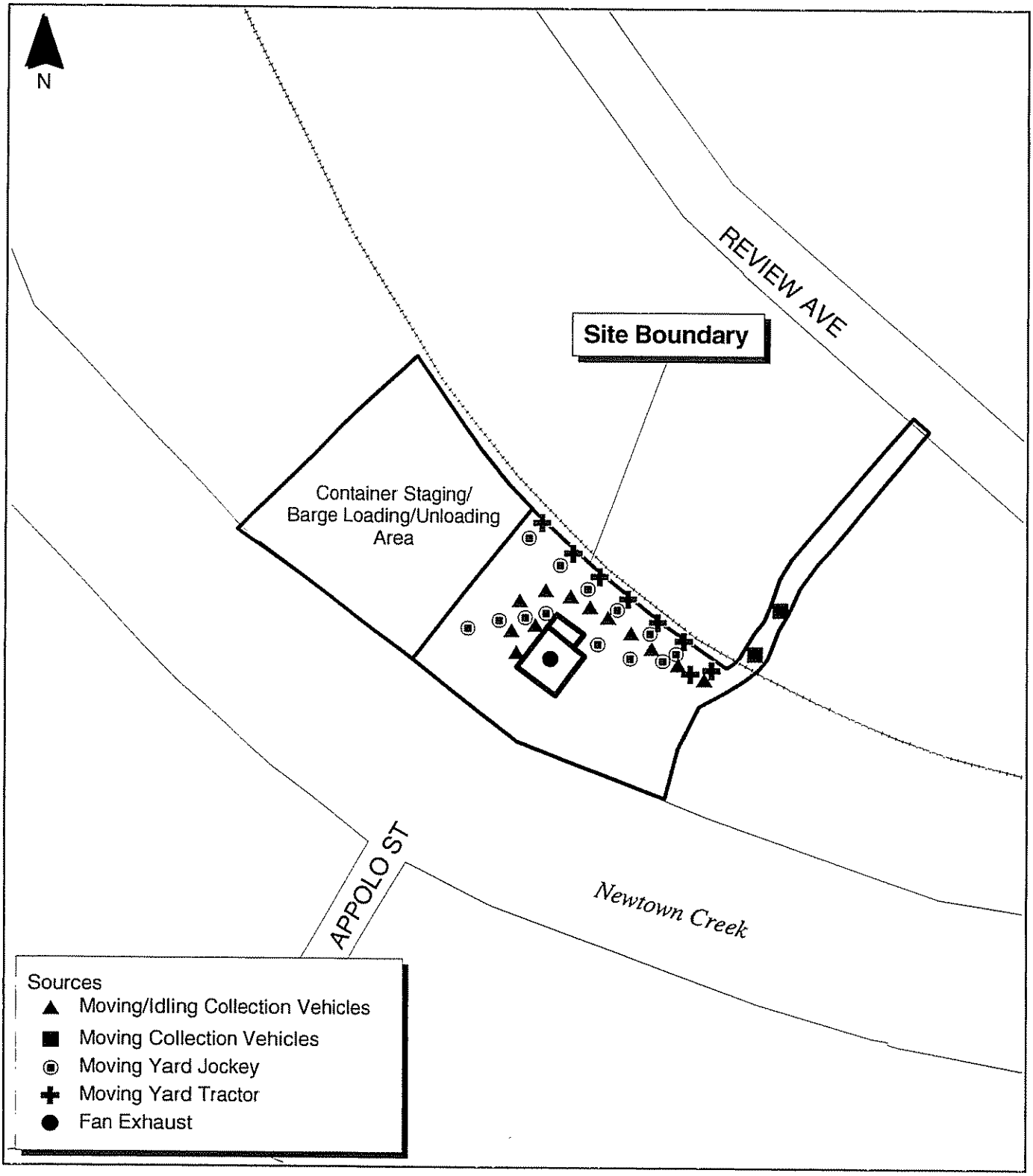
Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.
(2) ~~—~~Peak 24-hour average number of moving collection vehicles: 6.
~~—~~Peak 24-hour and annual average number of queuing collection vehicles: 3.

15.15.5.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any one of the receptor sites considered are provided in 2000 SWMP FEIS. These values are compared with the applicable standards for the appropriate averaging time periods. $PM_{2.5}$ results are presented in Table 15.15-5. Based on the results presented in Table 15.15-5 and 2000 SWMP FEIS, operations proposed at this facility would not adversely impact air quality in the area. The total predicted concentrations (including appropriate background concentrations) are below the national and state ambient air quality standards.

15.15.5.1.3 Results of the Toxic Pollutant Analysis

Based on 2000 SWMP FEIS, the potential impacts of the toxic pollutant emissions from the on-site operations of the Review Avenue Truck to Rail TS are not considered to be significant.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

100 0 100 Feet

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Figure 15.15-2 On-Site Air Quality Analysis

Review Avenue Truck to Rail Transfer Station

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Table 15.15-5
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Review Avenue Truck to Rail TS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources	STV[2]
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$[3]	24-hour [1]	~~2.6~~4.3	5
	Annual Neighborhood Average	0.03	0.1

Notes:
(1) The highest estimated incremental pollutant concentrations found at any of the off-site receptor locations.
(2) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(3) Incremental a~~A~~verage $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

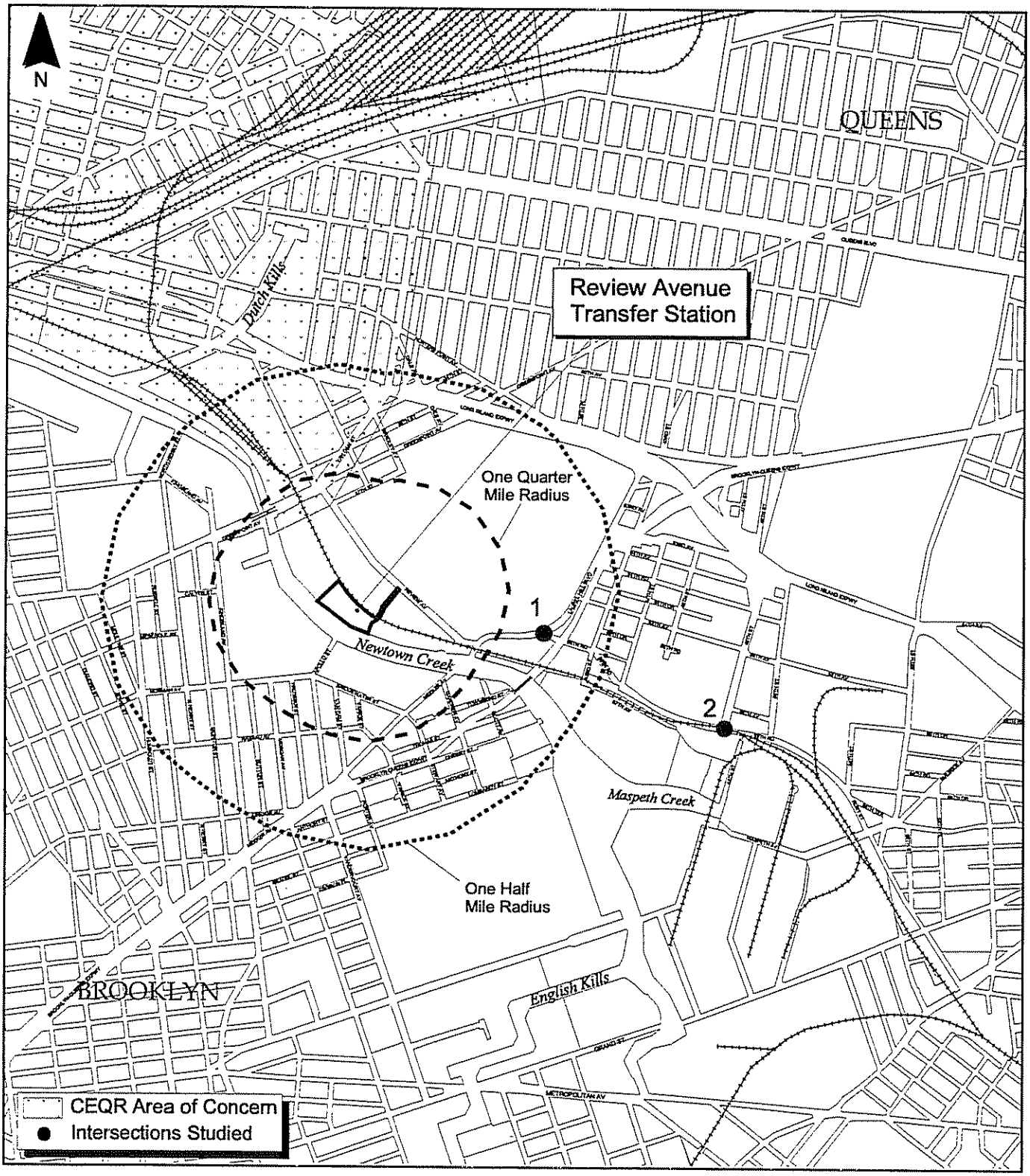
15.15.5.2 Off-Site Emission Sources

15.15.5.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other collection agency's collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

- The intersections of Laurel Hill Boulevard west of the BQE and 48th Street at 56th Road to determine whether TS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- The intersections of Laurel Hill Boulevard west of the BQE and 48th Street at 56th Road to determine whether TS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 15.15-3.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

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Figure 15.15-3 Off-Site Air Quality Intersections Studied Review Avenue Transfer Station

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15.15.5.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 15.15-6, are all within (less than) the applicable state and federal ambient air quality standards and STVs (for PM_{25}). The off-site operations of the Review Avenue Truck to Barge and Truck to Rail TS, therefore, are not considered to be significant.

Table 15.15-6
Estimated Pollutant Concentrations Near Selected Roadway Intersections
Review Avenue Truck to Barge and Truck to Rail TS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Laurel Hill Boulevard & BQE									
Existing Conditions	NA[5]	91	35						
Future No-Build Conditions	NA[5]	90	34						
Future Build Conditions	NA[5]	88	34						
Future Build Incremental				0.13	0.26	0.39	0.01	0.021	0.031
48th Street & 56th Road									
Existing Conditions	NA[5]	77	31						
Future No-Build Conditions	NA[5]	76	30						
Future Build Conditions	NA[5]	76	30						
Future Build Incremental				0.066	0.40	0.47	0.005	0.036	0.041

Notes for Table 15.15-6:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (24-hr PM_{10} = 57 $\mu g/m^3$; Annual PM_{10} = 23 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways averaged over the mobile source analysis grid using AM, Facility, or PM peak traffic conditions.

NA = Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

ppm = parts per million

$\mu g/m^2$ = microgram per cubic meter

15.16 Odor

15.16.1 Existing Conditions

Although the existing Review Avenue TS is located at the site, the analyses of the Review Avenue Truck to Barge and Truck to Rail TS assume there are no existing on-site sources of odor. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is an apartment building at the intersection of Varick Street and Nassau Avenue, approximately, 312 meters (1,023) feet from the property boundary.

15.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the Review Avenue TS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

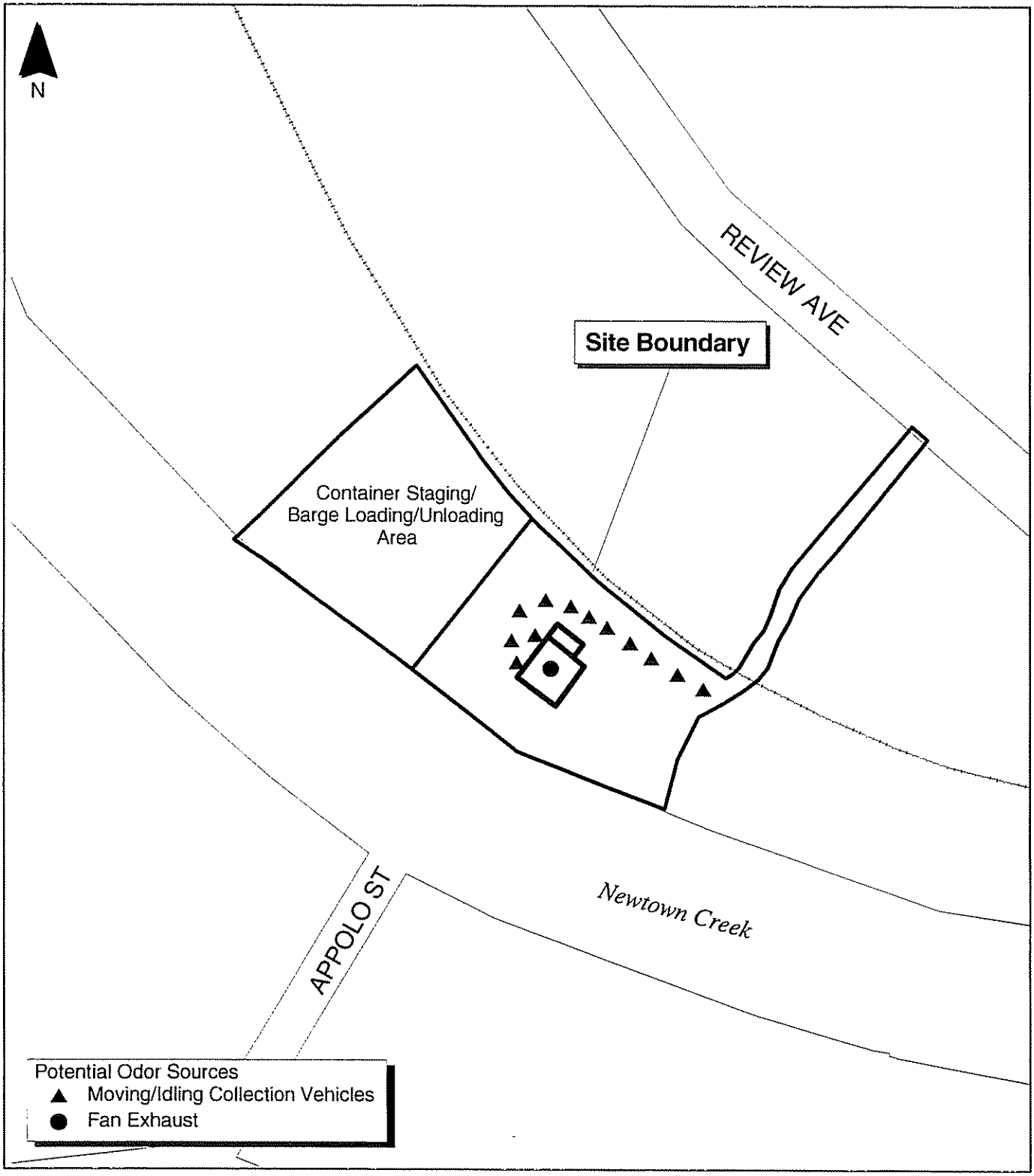
15.16.3 Potential Impacts with the Review Avenue TS~~South Bronx Converted MTS~~

15.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Review Avenue TS are provided in Table 15.16-1. The odor sources are the same for Review Avenue Truck to Barge and Truck to Rail TS. Figures 15.16-1 and 15.16-2 show the locations of these sources within the site.

Table 15.16-1
Odor Sources Included in Odor Analysis
Review Avenue TS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving /Idling Collection Vehicles	1



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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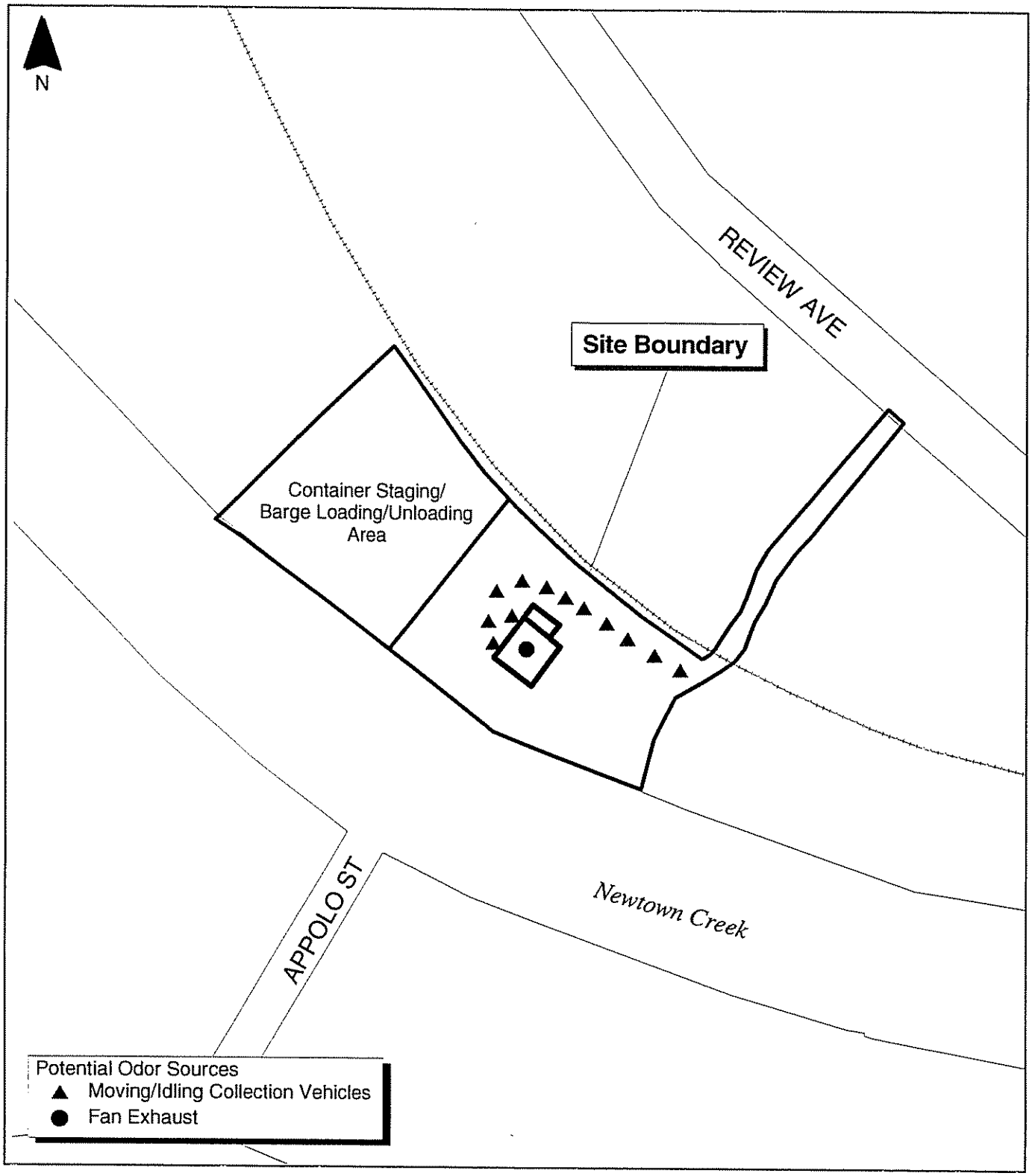
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Figure 15.16-1 Potential Odor Sources

Review Avenue Truck to Barge Transfer Station

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

100 0 100 Feet

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Figure 15.16-2 Potential Odor Sources

Review Avenue Truck to Rail Transfer Station

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Review Avenue TS.

15.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 15.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Review Avenue TS at any nearby sensitive receptor is less than 1, so odors from the Review Avenue TS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 15.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Review Avenue TS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	0.27
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result[2]	0.03
Type of Receptor	Apartment Buildings
Distance to Receptor[3]	1,023 Feet

Notes:
(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.
~~(1) D/T ratio is dimensionless.~~
~~(2) Measured from the site boundary.~~
~~(3) Measured from the site property line.~~

15.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from the Review Avenue TS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for on-site and off-site sources for both the Review Avenue Truck to Barge TS option and the Review Avenue Truck ~~t~~To Rail TS option. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

15.17.1 Existing Conditions

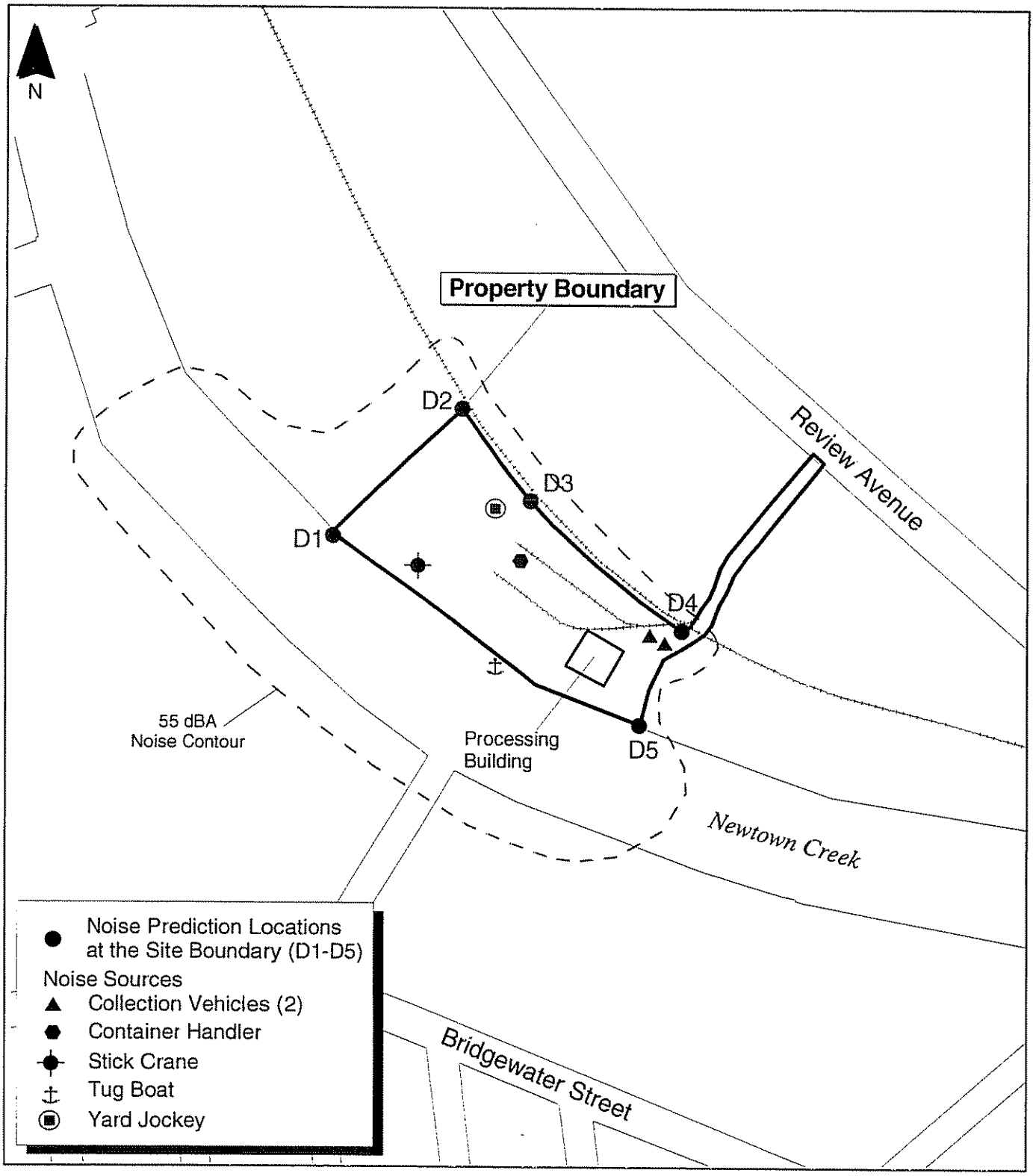
15.17.1.1 Introduction

Figure 15.17-1 shows the location of the Review Avenue Truck to Barge TS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. Figure 15.17-2 shows the location of the Review Avenue Truck to Rail TS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building at the intersection of Varick Street and Nassau Avenue, approximately, 312 meters (1,023) feet from the property boundary.

15.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included: $L_{eq(1)}$, L_{min} and L_{max},[1] and the statistical metrics of L_{10}, L_{50} and L_{90}.[2]

[1] Terms $L_{eq(1)}$ L_{min} and L_{max} are defined in Section 3.19.2.
[2] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

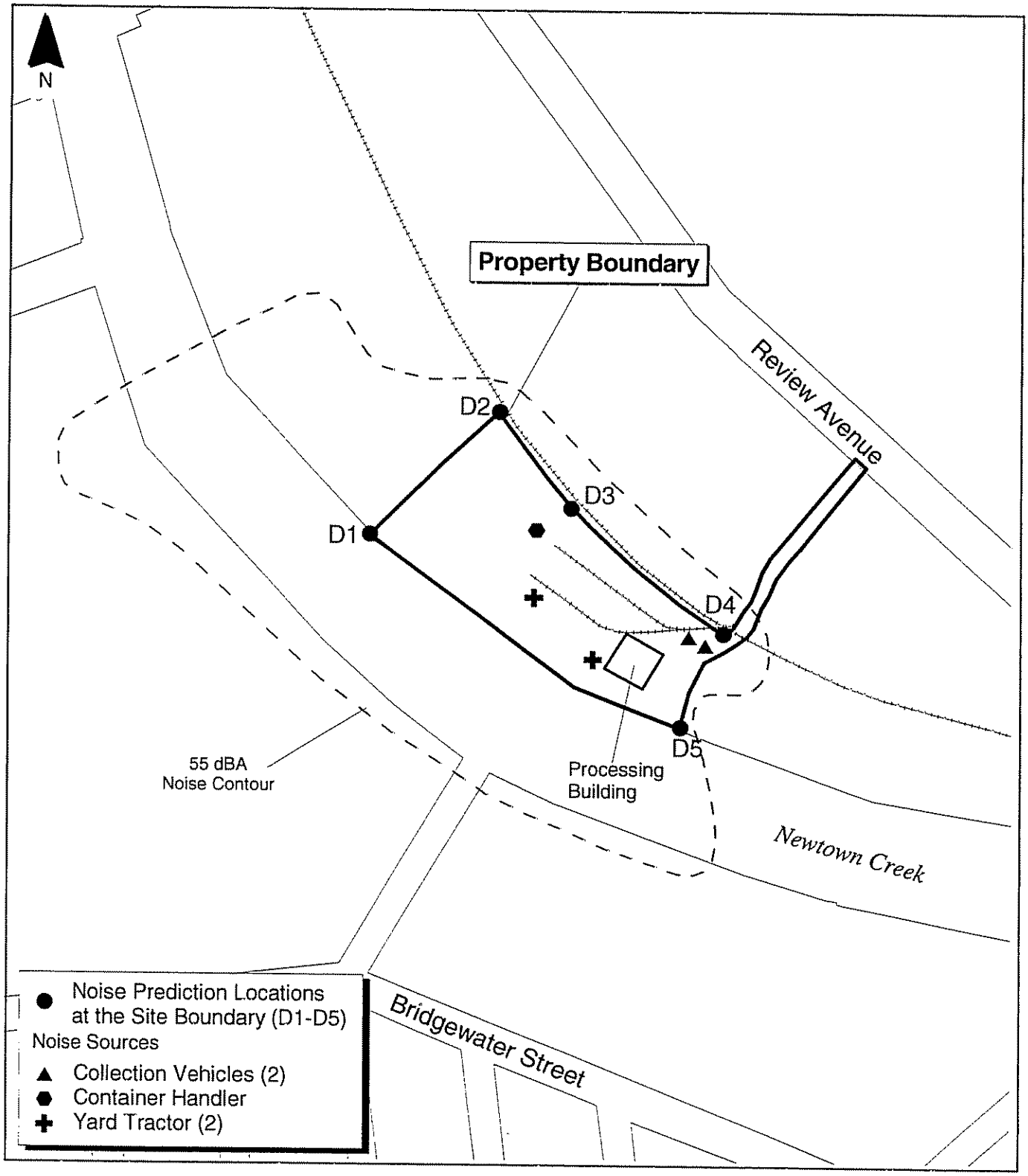
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HDR | URBITRAN | EEA Cambridge Environmental Inc

Figure 15.17-1 Noise Sources and Receptors

Review Avenue Truck to Barge TS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 15.17-2 Noise Sources and Receptors

Review Avenue Truck to Rail TS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

Table 15.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 1:00 a.m. and 2:00 a.m. and had an $L_{eq(1)}$ of 49 dBA on March 10, 1999. Activities and events that contribute to the on-site noise levels include:

- Industrial activities across Newtown Creek and along Review Avenue;
- Train traffic on the LIRR tracks located between the Existing Review Avenue TS and Review Avenue;
- Commercial watercraft traffic on Newtown Creek; and
- Other noise sources associated with activities in the surrounding industrial areas.

15.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Review Avenue TS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required, and therefore, off site noise monitoring was not conducted.

15.17.2 Future No-Build Conditions

15.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

15.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 15.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on the first-level screening.

Table 15.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Review Avenue TS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 a.m.	50	48.4	50.0	53.1	46	66
1:00-2:00 a.m.	49	48.0	49.3	51.2	45	75
2:00-3:00 a.m.	50	47.1	48.6	50.3	45	66
3:00-4:00 a.m.	52	47.4	49.2	50.9	46	78
4:00-5:00 a.m.	52	48.3	49.7	51.3	48	70
5:00-6:00 a.m.	58	49.7	51.5	53.6	51	73
6:00-7:00 a.m.	60	53.2	55.2	60.5	52	84
7:00-8:00 a.m.	57	54.1	56.6	62.3	51	78
8:00-9:00 a.m.	56	53.3	55.7	59.5	49	84
9:00-10:00 a.m.	57	52.0	53.9	58.2	50	78
10:00-11:00 a.m.	58	52.5	54.6	58.4	50	80
11:00 a.m.-12:00 p.m.	60	52.4	54.4	58.2	51	92
12:00-1:00 p.m.	52	52.4	54.3	57.4	48	67
1:00-2:00 p.m.	53	48.6	50.1	53.9	46	72
2:00-3:00 p.m.	51	48.1	49.8	54.4	46	70
3:00-4:00 p.m.	56	48.2	49.6	52.3	47	79
4:00-5:00 p.m.	61	49.3	51.1	55.3	47	87
5:00-6:00 p.m.	53	49.5	51.5	56.7	48	83
6:00-7:00 p.m.	52	49.6	51.2	54.3	47	66
7:00-8:00 p.m.	54	49.2	50.8	54.0	48	84
8:00-9:00 p.m.	53	49.8	51.3	54.5	48	72
9:00-10:00 p.m.	52	49.8	51.3	54.7	48	73
10:00-11:00 p.m.	52	49.3	50.7	53.1	47	68
11:00 p.m.-12:00 a.m.	54	49.1	50.7	54.3	47	90

~~Note for Table 15.17-1:~~

(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

Table 15.17-2
Off-Site Noise Traffic Volume
Review Avenue TS

Location	Hour	Existing Traffic Volume [1] (Vehicles/Hour)	Future No-Build Traffic Volume [2] (Vehicles/Hour)
Greenpoint Avenue eEast of Bradley Avenue	3:00 a.m.	114	119
Van Dam Street between Star Avenue and Bradley Avenue	2:00 a.m.	87	89

Notes:
[1] Existing traffic volumes are based on ATR data
[2] Future No-Build traffic volumes are based on the CEQR annual traffic growth rates

15.17.3 Potential Impacts with the Review Avenue Truck to Barge TS

15.17.3.1 On-Site Noise Levels

Proposed equipment assumed to be operating at the Review Avenue Truck to Barge TS and its reference noise levels used in the CEQR analysis are shown in Table 15.17-3. The number and type of equipment assumed for this analysis was based on the Review Avenue Truck to Barge TS's average design capacity. Shown earlier, Figure 15.17-1 indicates the Review Avenue Truck to Barge TS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

15.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Review Avenue Truck to Barge TS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 65 meters (213 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 312 meters (1,023 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (See Figure 15.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

Table 15.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Review Avenue Truck to Barge TS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Track Loader (1)	80.6
Overhead Crane (1)	70
Outdoor	
Yard Jockey (1)	73.8
Container Handler (1)	76.2
Stick Crane (1)	77.2
Tugboat (1)	73
Collection Vehicles (moving/idling) (2)	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

15.17.3.3 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Review Avenue Truck to Barge TS. The assumed DSNY and other agency collection vehicles routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, a second-level screening was not required; therefore an off-site noise analysis and off-site noise monitoring was not required. Results of the first-level screening for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) are provided in Table 15.17-4.

15.17.3.4 Combined On-Site and Off-Site Noise Levels

The on- and off-site screening analyses performed for the Review Avenue Truck to Barge TS, neither on- or off-site noise analyses were required; therefore, a combined noise analysis was not performed.

Table 15.17-4
Off-Site Noise Screening[1] Results
Review Avenue Truck to Barge TS

Location	Hour	Future No-Build PCEs[2]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicles PCEs[2][3]	Future Build PCEs[2][3]	Possible Impact[4]
Greenpoint Avenue East of Bradley Avenue	3:00 a.m.	222	4	0	188	410	No
Van Dam Street between Star Avenue and Bradley Avenue	2:00 a.m.	142	2	0	94	236	No

Notes:
(1) Based on first-level screening, since a second-level screening was not required.
(2) Total PCEs are rounded to the nearest whole number.
(3) Future Build PCEs include Review Avenue TS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.
(4) There is a possible impact if the Future Build PCEs are double the Future No Build PCEs or more.

15.17.4 Potential Impacts with the Review Avenue Truck to Rail TS

15.17.4.1 On-Site Noise Levels

Proposed equipment assumed to be operating at the Review Avenue Truck to Rail TS and its reference noise levels used in the CEQR analysis are shown in Table 15.17-5. The number and type of equipment assumed for this analysis was based on the Review Avenue Truck to Rail TS's average design capacity. Shown earlier, Figure 15.17-2 indicates the Review Avenue Truck to Rail TS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 15.17-5
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Review Avenue Truck to Rail TS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Track Loader (1)	80.6
Overhead Crane (1)	70
Yard Jockey (1)	73
Outdoor	
Container Handler (1)	76.2
Tractor (2)	80.6
Collection Vehicles (moving/idling) (2)	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

15.17.4.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Review Avenue Truck to Rail TS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 94 meters (307 feet) from the property line in the direction of the nearest

noise-sensitive receptor, which is 312 meters (1,023 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 15.17-2); therefore, an on-site noise analysis, including noise monitoring, at the nearest noise-sensitive receptor, was not required.

15.17.4.3 Off-Site Noise Levels

The Review Avenue Truck to Rail TS option includes DSNY and other agency collection vehicles en route to and from the Review Avenue Truck to Rail TS, as well as trucks hauling loaded containers to the Maspeth Railyard for loading onto locomotives. Since noise-sensitive receptors are not located along the truck route from the Review Avenue Truck to Rail TS to the Maspeth Railyard, an off-site noise analysis was not required for those routes. Therefore, the off-site noise analysis for the Review Avenue Truck to Rail TS is the same as the off-site noise analysis for the Review Avenue Truck to Barge TS, which is presented in Section 15.17.3.3.

15.17.4.4 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Review Avenue Truck to Rail TS, neither the on- or the off-site noise analyses were required; therefore, a combined noise analysis was not performed.

CHAPTER 16 ENVIRONMENTAL REVIEW - COLLECTION VEHICLE TRANSPORT TO OUT-OF-CITY WASTE-TO-ENERGY FACILITIES

16.1 Introduction

The Essex County Resource Recovery Facility (RRF) is an existing permitted waste--to--energy (WTE) facility, and as such, the facility itself is not subject to environmental review in this FDEIS. It is currently utilized for Manhattan waste under Interim Export. Environmental analyses are limited to the evaluation of off-site impacts associated with vehicle traffic to the site in New Jersey, and this scenario is currently being evaluated under the Interim Export re-bid evaluation. The results of the environmental analyses of the Essex County RRF -are presented in the following sections:

16.2 Land Use, Zoning, and Public Policy
16.3 Socioeconomic Conditions
16.4 Community Facilities and Services
16.5 Open Space
16.6 Cultural Resources
16.7 Urban Design, Visual Resources, and Shadows
16.8 Neighborhood Character
16.9 Natural Resources
16.10 Hazardous Materials
16.11 Water Quality
16.12 Waterfront Revitalization Program
16.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
16.14 Traffic, Parking, Transit, and Pedestrians
16.15 Air Quality
16.16 Odor
16.17 Noise

Section 2.2.13 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

16.2 Land Use, Zoning, and Public Policy

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.3 Socioeconomic Conditions

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.4 Community Facilities and Services

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.5 Open Space

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.6 Cultural Resources

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.7 Urban Design, Visual Resources, and Shadows

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.8 Neighborhood Character

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.9 Natural Resources

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.10 Hazardous Materials

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.11 Water Quality

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.12 Waterfront Revitalization Program

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.14 Traffic, Parking, Transit, and Pedestrians

Refer to Section 2.2.13 for an explanation of the traffic, parking, transit, and pedestrians analysis for this site.

16.15 Air Quality

Refer to Section 16.1 for an explanation of the on site air quality analyses required for this site. Refer to Section 2.2.13 or an explanation of the off-site air quality analysis for this site.

16.16 Odor

Refer to Section 16.1 for an explanation of the analyses required for this site.

16.17 Noise

Refer to Section 16.1 for an explanation of the on site noise analyses required for this site. Refer to Section 2.2.13 for an explanation of the off-site noise analysis for this site.

CHAPTER 17 ENVIRONMENTAL REVIEW: ~~MANHATTAN~~ BROOKLYN CURBSIDE RECYCLABLES TO 30TH STREET PIER AT SOUTH BROOKLYN MARINE TERMINAL

17.1 Introduction

The 30th Street Pier at South Brooklyn Marine Terminal (SBMT) is a complex of facilities that would be designed to receive and process DSNY Curbside Recyclables. Curbside Recyclables collected in Brooklyn would be delivered by truck to this facility. Curbside Recyclables from other boroughs would be delivered by barge. Once a design is developed, the 30th Street Pier at SBMT will be the subject of a future environmental review. The environmental review of trucking of ~~Manhattan~~Brooklyn Curbside Recyclables (~~MCR~~BCR) to the 30th Street Pier at the SBMT in this F~~D~~EIS is limited to off-site traffic, air quality and noise impacts, and impacts from the on-site waterfront construction activities that require USACE Section 10/404 permits and the NYSDEC Article 15/25 permits. ~~Pursuant to Title 6 of the NYCRR Sections 360-12.1 and 1.8 (h), the NYSDEC authorizes recycling facilities by registration – they are not subject to regulation as a solid waste facility~~. Recycling facilities are subject to regulation under NYSDEC regulation 6 NYCRR Part 360.

The results of the environmental analyses of the 30th Street Pier at SBMT are presented in the following sections:

17.2 Land Use, Zoning, and Public Policy
17.3 Socioeconomic Conditions
17.4 Community Facilities and Services
17.5 Open Space
17.6 Cultural Resources
17.7 Urban Design, Visual Resources, and Shadows
17.8 Neighborhood Character
17.9 Natural Resources
17.10 Hazardous Materials
17.11 Water Quality

17.12 Waterfront Revitalization Program

17.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

17.14 Traffic, Parking, Transit, and Pedestrians

17.15 Air Quality

17.16 Odor

17.17 Noise

Section 2.3.1 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

17.2 Land Use, Zoning, and Public Policy

See Section 17.1 for a description of the analysis required.

17.3 Socioeconomic Conditions

See Section 17.1 for a description of the analysis required.

17.4 Community Facilities and Services

See Section 17.1 for a description of the analysis required.

17.5 Open Space

See Section 17.1 for a description of the analysis required.

17.6 Cultural Resources

See Section 17.1 for a description of the analysis required.

17.7 Urban Design, Visual Resources, and Shadows

See Section 17.1 for a description of the analysis required.

17.8 Neighborhood Character

See Section 17.1 for a description of the analysis required.

17.9 Natural Resources

17.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the 30th Street Pier at SBMT.

17.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bounded by the Gowanus Canal to the north (see Figure 2.3.1-1 in Chapter 2 of this FDEIS). The site is zoned M3-1 (heavy manufacturing) and was used for marine vessel loading and off-loading, long-term import/export cargo storage and processing, trailer inspection and repair, and office space. The upland portion of the study site is comprised of a parking lot with wrecked vehicles. The pier that extends from the site is essentially fill material with finger piers to the north and south. These finger piers were recently demolished, and now the main pier is surrounded by pile fields and debris. It is proposed that the facility be converted to a materials recovery facility (MRF) to accept and process the City's recyclables. To accomplish this, the pile field and debris must be removed; 40,000 cubic yards of dredge material must be removed from the site to accommodate the draft of working vessels; and two 400-foot-long, 60-foot-wide platforms, covering 48,000 square feet of water, will be constructed. The upland portions of the site and the surrounding neighborhood

parcels are fully developed and contain very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because Future Build Conditions would include dredging of bottom sediments and construction of new platforms for the facility, a description of aquatic communities is included.

17.9.1.2 Geology

The borings taken for this project closest to the site were taken at the Existing Hamilton Avenue MTS, which is located northeast of the site on the Gowanus Canal. According to borings performed for the MTS Conversion Conceptual Design Report (2003), multiple strata of sediment are located beneath the Existing Hamilton Avenue MTS. The first layer, the surficial stratum, ranges in thickness from 10 to 25 feet and consists of loose fill material comprised of concrete, brick, glass, asphalt mixed with sand and gravel, and materials such as cinders, wood and vegetation.

A 10- to 20-foot-thick stratum of soft black to gray organic soil, with loose gray silty sand and loose gray poorly-graded sand with silt, underlays the fill. Shells and vegetation are also encountered in this layer. In addition, a one- to four-foot-thick layer of dark-brown-to-black peat is located in this layer.

A stratum of stiff gray silt with sand approximately 2 to 14 feet thick is located beneath most of the organic soil. A dense red-brown poorly- to well-graded sand with silt stratum 20 to 30 feet thick, with occasional gravel layers, is located beneath the silt with sand stratum.

A second stratum of silt is located beneath the sand with silt stratum. This silt stratum consists of stiff to very stiff gray silt sand layered with stiff gray lean clay. It ranges in thickness from 4 to 20 feet.

The deepest stratum encountered is a very dense red-brown poorly- to well-graded sand with silt layer with occasional layers of gravel. The thickness of the stratum is undetermined.

Based on information derived from a review of the Bedrock and Geologic Maps of New York County by Charles A. Baskerville, 1994, the bedrock lies 130 to 140 feet below surface sediment.[1] Surface sediment collected from the Existing Hamilton Avenue MTS, located just northeast of this site at the mouth of the Gowanus Canal, is mainly composed of fine-grained sediment and is somewhat degraded by contaminants.[2]

17.9.1.3 Floodplains

The site is within the 100-year coastal floodplain (sSee Figure 17.9-1). Just to the south of the pier is an area between the limits of the 100- and 500-year floodplain and an area of minimal flooding. No intertidal wetlands exist in the study area. Gowanus Canal, however, is a NYSDEC-designated littoral zone (see Figure 17.9-2). The site is located within the City's WRP boundaries and is a designated SMIA.

17.9.1.4 Ecosystems

The northwest portion of the SBMT site was investigated for plant species presence. The site is bordered by a chain-link fence along its southeast boundary, and by the Gowanus Bay along the remaining boundaries. The property on the opposite side of the southeastern boundary fence and the on-site parking lot is paved and devoid of vegetation. However, a band of vegetation occurs along the northeastern, northwestern and southwestern boundaries of the site between the pavement and the Gowanus Bay. The vegetated area varies from approximately 15 to 50 feet in width. Plant species observed in the vegetated areas include herbaceous plants, trees and shrubs. The herbaceous plants observed include poor-man's peppergrass (*Lepidium virginicum*), tall goldenrod (*Solidago altissima*), seaside goldenrod (*Solidago sempervirens*), lady's thumb (*Polygonum persicaria*), lamb's quarters (*Chenopodium album*), common mugwort (*Artemesia vulgaris*), wild carrot (*Daucus carota*), English plantain (*Plantago lanceolata*), spotted spurge (*Chamaesyce maculate*), black medic (*Medicago lupulina*), small white aster (*Aster vimineus*), common reed (*Phragmites australis*), horseweed (*Conyza canadensis*), Pennsylvania smartweed (*Polygonum pennsylvanicum*), white sweet clover (*Melilotus alba*), yellow sweet clover

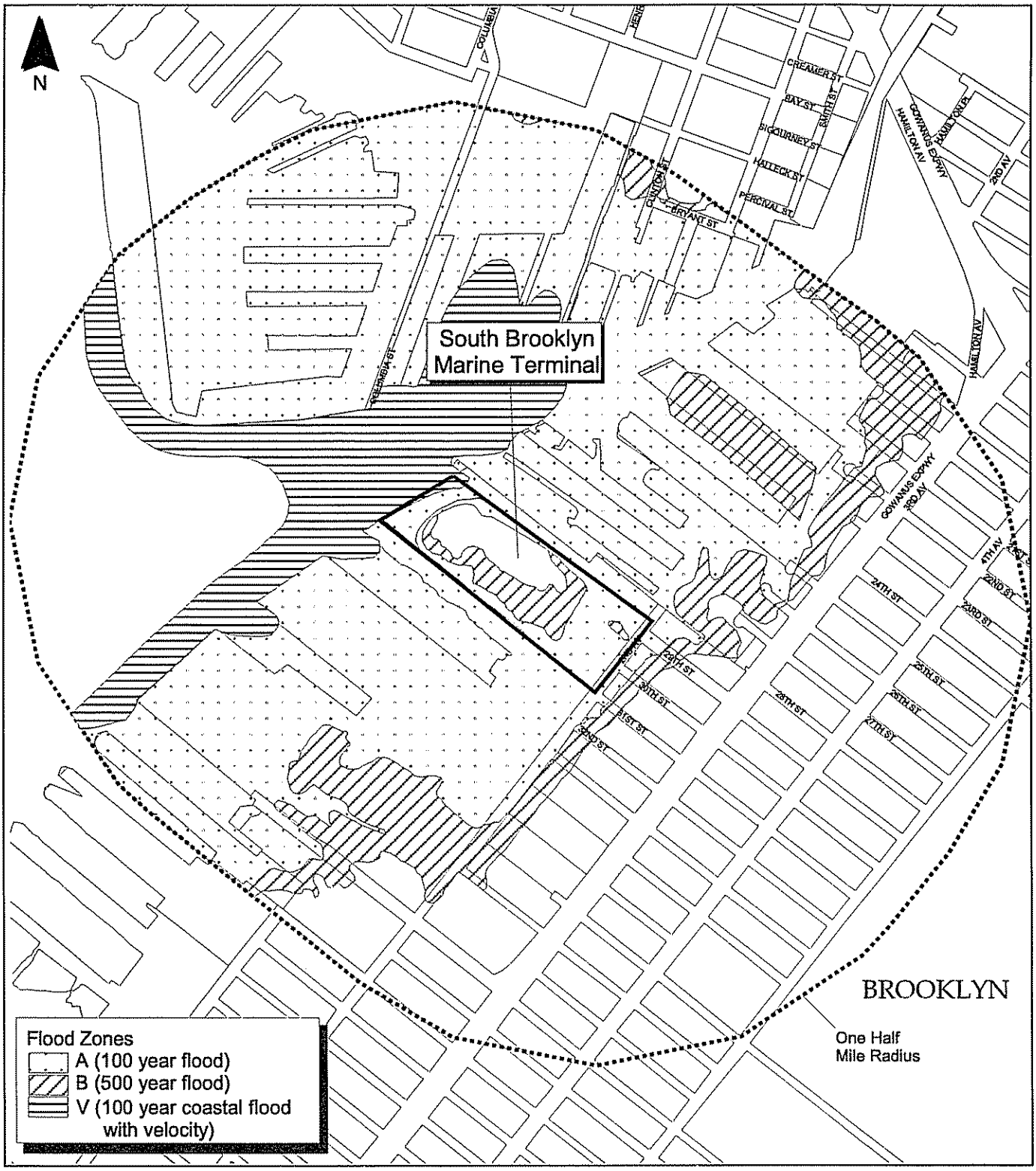
[1] Baskerville, C.A., 1994. Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York and Parts of Bergen and Hudson Counties, New Jersey.

(*Melilotus officinalis*), panic grass (*Panicum* sp.), redroot pigweed (*Amaranthus retroflexus*), Kentucky bluegrass (*Poa pratensis*), green foxtail (*Setaria viridis*), common ragweed (*Ambrosia artemisiifolia*), common evening primrose (*Oenthera biennis*), annual wormwood (*Artemesia annua*), Asiatic bittersweet (*Celastrus orbiculatus*), pokeweed (*Phytolacca americana*), intermediate dogbane (*Apocynum medium*), common mullein (*Verbascum thapsus*), goose grass (*Eleusine indica*), field bindweed (*Convolvulus arvensis*), red clover (*Trifolium repens*), barnyard grass (*Echinochola crusgalli*), Canada thistle (*Cirsium arvense*), curly dock (*Rumex crispus*) and tufted lovegrass (*Eragrostis pectinacea*). The tree and shrub species observed on site were hackberry (*Celtis occidentalis*), cottonwood (*Populus deltoides*), princess tree (*Paulownia tomentosa*), smooth sumac (*Rhus glabra*), American basswood (*Tilia americana*), tree-of-heaven (*Ailanthus altissima*), black cherry (*Prunus serotina*), pin oak (*Quercus palustris*), black locust (*Robinia pseudo-acacia*) and rose (*Rosa* sp.). No species known as rare, threatened or endangered were observed on the site.

According to the USF&WS, except for occasional transients, there are no federally listed or proposed endangered or threatened species, or any "critical habitats," present on the site. According to the NYSDEC, there are no records of rare or state-listed animals or plants, significant natural communities or other significant habitats on or in the immediate vicinity of the site.

A field program conducted in 2003 was designed to fully characterize the marine biological resources of DSNY's eight existing MTSs. The program included monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for benthic organisms and sessile colonizing organisms. This site was not one of the locations extensively sampled; however, it is near the Existing Hamilton Avenue MTS (located at the mouth of the Gowanus Canal), which was thoroughly sampled. The physical and biological characteristics of the community at this site are expected to be similar to the communities at the Existing Hamilton Avenue MTS. These communities are described in the following paragraph.

[2] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

600 0 600 Feet

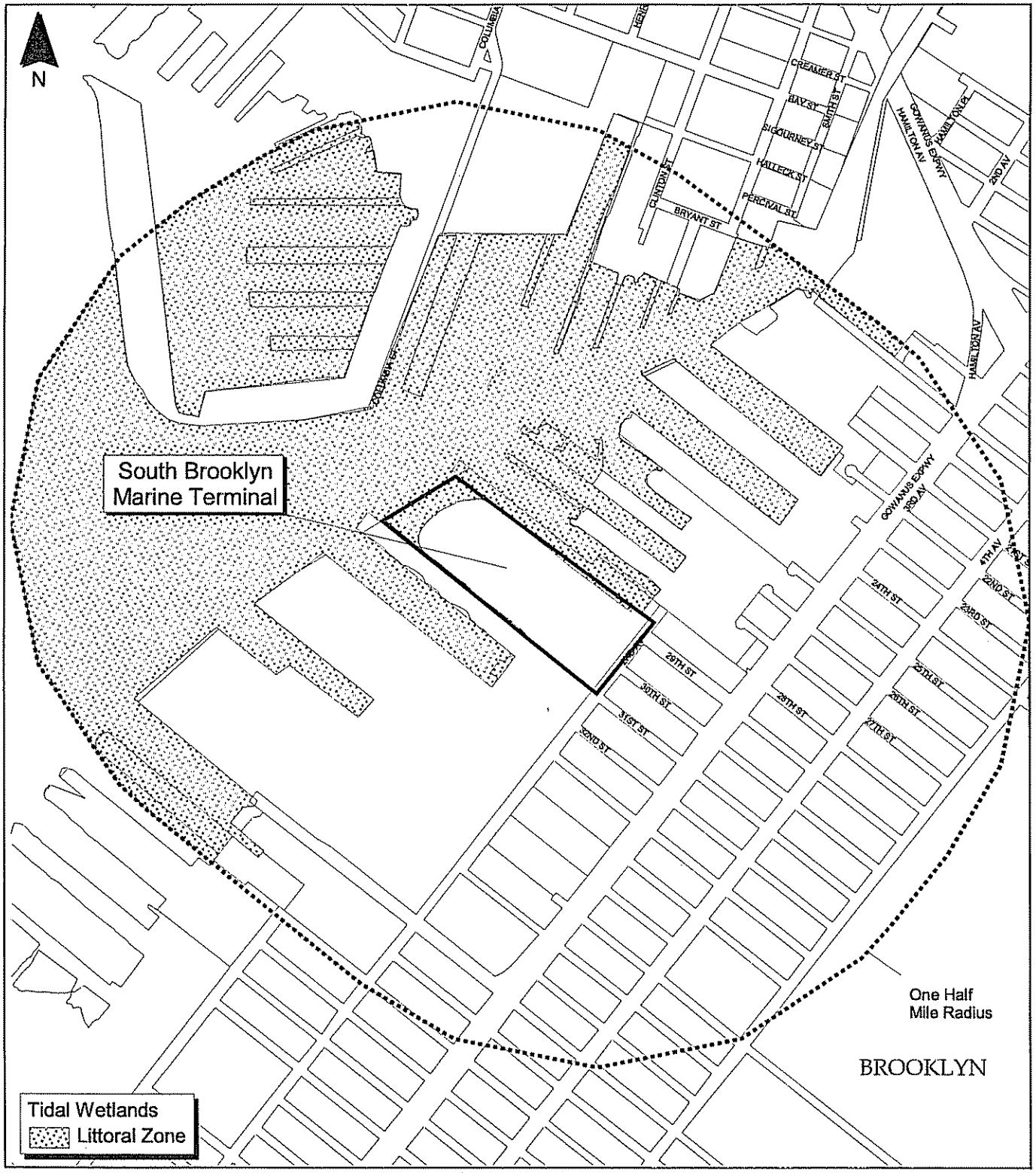
HDR | URBITRAN | EEA Cambridge Environmental Inc | PB

Figure 17.9-1 Floodplains

30th Street Pier at SBMT

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

600 0 600 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 17.9-2 Wetlands

30th Street Pier at SBMT

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The dominant finfish larvae collected at the Existing Hamilton Avenue MTS were winter flounder (*Pleuronectes americanus*), anchovy spp. (*Anchoa* spp.), Atlantic menhaden (*Brevoortia tyrannus*) and goby spp. (*Gobiosoma* spp.). The dominant finfish eggs collected were cunner (*Tautogolabrus adspersus*), bay anchovy (*Anchoa mitchilli*), tautog (*Tautoga onitis*) and Atlantic menhaden. The species that have EFH listing (and the life stage collected) include windowpane (*Scophthalmus aquosus*) (eggs and larvae), winter flounder (larvae) and Atlantic herring (*Clupea harengus*) (larvae). The benthic invertebrates that were found at the Existing Hamilton Avenue MTS are similar to those found throughout New York Harbor. The most abundant species collected were worms – *Capitella capitata*, *Streblospio benedicti* and oligochaetes – all of which are tolerant of polluted areas. The dominant epibenthic colonizers found at the Existing Hamilton Avenue MTS were *Polydora* sp. (worms), *Molgula manhattensis* (sea grapes), *Balanus* sp. (barnacles), and hydrozoa, mud and algal film.[3]

17.9.2 Future No-Build Conditions

If the 30th Street Pier at SBMT was not developed, the study area would remain as is. The limited aquatic and terrestrial natural resources will remain and the study area will continue to be a stressed urban area with limited ecological productivity.

17.9.3 Potential Impacts with ~~MCR~~BCR to the 30th Street Pier at SBMT

It is proposed that this pier be used to accept and process the City's recyclables. The changes to the existing facility will include removal of piles and underwater debris in the area, dredging approximately 40,000 cubic yards of material, and the construction of two new piers. The piers would each be 400 feet long by 60 feet wide, and the supporting piles would penetrate the underlying sediment to approximately 120 feet.

[3] Ibid

17.9.3.1 Geology

The geology of the study area would not be impacted as a result of the 30th Street Pier at SBMT other than by potential dredging activity, which would remove layers of sediments deposited over time, and by the expansion of the land area of the facility by bulkheading and backfilling.

17.9.3.2 Floodplains

Potential development of the 30th Street Pier at SBMT would have no effect on the elevation of the site. The potential development does not include any provisions for raising any portions of the site over this level. The facility would be constructed within the 100-year floodplain and within the SMIA. The proposed activity, however, does not "substantially hinder" the area, and therefore, complies with New York State's CMP as expressed in the City's local WRP.

17.9.3.3 Ecosystems

Construction of the 30th Street Pier at SBMT would involve dredging 40,000 cubic yards of sediment from the site and the construction of two 400-foot-by-60-foot platforms that cover 48,000 square feet of water. Assuming normal operations, this procedure should not involve any permanent impacts to the aquatic or terrestrial natural resources. During the removal of the existing pier and pile fields, the upper organic silts lying beneath the structure would be disturbed to some degree, resulting in re-suspension of the sediments. However, the amount of re-suspended sediments is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term lowered dissolved oxygen are possible, but not measurable, against the normal background fluctuations. The dredging activities in the area to accommodate tugboats and barges would result in an immediate, short-term destruction of the benthic invertebrates in the area; however, recolonization of the area by benthic invertebrates could be expected

within 6 to 12 months after cessation of dredging activities.[4] Given the relatively small size of the project and the existing impacts to the natural resources of the study area, minimal impact is expected from the disturbance of the environment associated with the 30th Street Pier at SBMT.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water, which results in shading that will block sunlight and hinder primary production. The total over-water coverage of the platforms is proposed to be 48,000 square feet. Recently, finger piers that were to the north and south of Pier 30 were demolished. Pier 30, which is essentially fill material, still remains. According to the conceptual site plan, the two proposed platforms appear to be smaller than the platforms that were recently demolished; however, the sizes of the demolished piers were not included in the site plan for comparison. If the new platforms truly cover less water than the platforms that were demolished, then there will be an overall increase in unshaded water on site allowing more sunlight to penetrate the water for primary production.

Any upland construction would not have significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation

[4] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft – Phase I-II. During Construction and 1st Year Post-Construction Studies.

observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the 30th Street Pier at SBMT because the site is already fully developed.

17.10 Hazardous Materials

See Section 17.1 for a description of the analysis required.

17.11 Water Quality

17.11.1 Existing Conditions

17.11.1.1 Definition of the Study Area

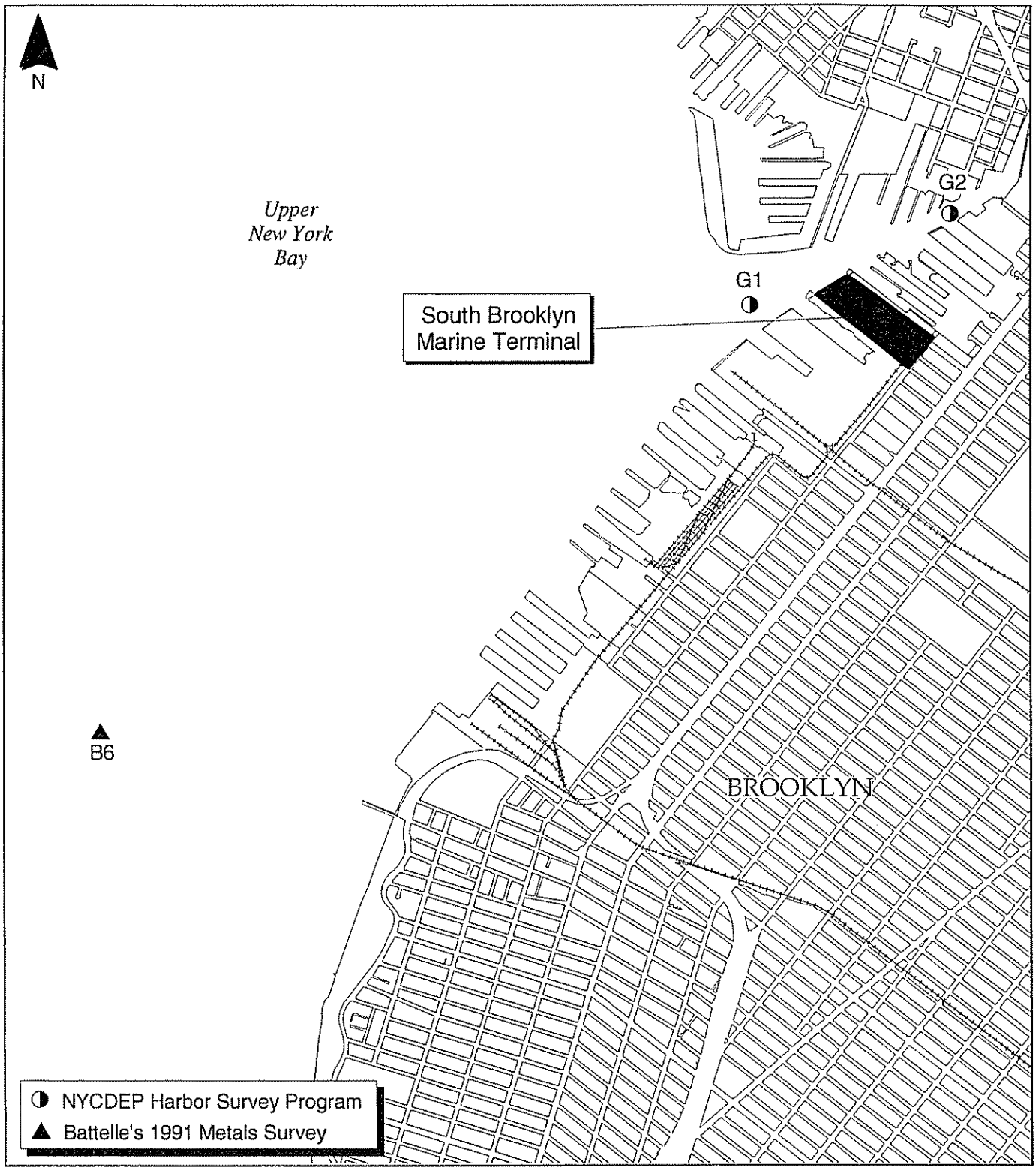
The water quality study area encompasses the Gowanus Bay, Gowanus Channel and Upper New York Bay and includes discharges from point sources and CSOs located within ½-mile of the site.

17.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 17.11-1, are generally representative of water quality conditions in the study area:

- NYCDEP Harbor Survey Program – Station G-1 in Gowanus Bay and Station G-2 at Gowanus Channel; and
- Battelle's 1991 Metals Survey – Station B-6 in Upper New York Bay.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 17.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 17.11-1 Ambient Water Quality Stations

30th Street Pier at SBMT

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Table 17.11-1
Existing Water Quality Conditions and Standards
30th Street Pier at SBMT

Average Concentration					
Parameter	Units	Station G-1[1]	Station G-2[2]	Station B-6[3]	NYS Class SD Standard
Dissolved Oxygen (surface/minimum)	mg/L	7.2 [4]/4.0 [5]	6.74 [6] / 2.5 [7]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	7.0 [8]/3.7 [5]	5.5 [9] / 2.8 [7]	-------	3.0
BOD (surface)	mg/L	2.4 [10]	2.3 [10]	-------	-------
BOD (bottom)	mg/L	2.4 [10]	2.5 [10]	-------	-------
Total Coliform (surface)	MPN/100 ml	970 [11]	1,945 [11]	-------	-------
Total Coliform (bottom)	MPN/100 ml	407 [11]	985 [11]	-------	-------
Fecal Coliform (top)	MF	15	236	-------	-------
Fecal Coliform (bottom)	MF	5	20 [12]	-------	-------
Total Suspended Solids (surface)	mg/L	6	129	-------	-------
Total Suspended Solids (bottom)	mg/L	8	17	-------	-------
NH_3-N	mg/L	0.362	0.301	-------	-------
(NO_3 + NO_2)	mg/L	0.341	0.369	-------	-------
Total Phosphorous	mg/L	0.468 [13]	0.510 [13]	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	5.5	9.6	-------	-------
Arsenic	µg/L	-------	-------	1 [14]	120 [14,15]
Cadmium	µg/L	-------	-------	0.06 [14]	21 [14,15]
Chromium	µg/L	-------	-------	-------	-------
Copper	µg/L	-------	-------	1.15 [16]	7.9 [15,16]
Lead	µg/L	-------	-------	1.14 [14]	204 [14,15]
Mercury	µg/L	-------	-------	0.0039 [14]	0.0026 [14,15]
Nickel	µg/L	-------	-------	0.78 [14]	74 [14,15]
Silver	µg/L	-------	-------	1.1000 [17]	2.3 [15,17]
Zinc	µg/L	-------	-------	4.85 [14]	95 [14,15]
Cyanide	µg/L	-------	-------	-----	1.0 [15]

Notes:

[1] Average concentrations for 1999 NYCDEP Harbor Survey Station G-1, located in Gowanus Bay.
[2] Average concentrations for 2002 NYCDEP Harbor Survey Station G-2, located in the Gowanus Channel.
[3] Average concentrations for 1991 Battelle Ambient Survey Station B-6, located in Upper New York Bay.
[4] Represents average between February and December 1999.
[5] Minimum between June 1, 1999 and September 30, 1999.
[6] Represents average between January and December 2002.
[7] Minimum between June 1, 2002 and September 30, 2002.
[8] Represents average between February and October 1999.
[9] Represents average between June and December 2002.
[10] Latest available data 1997.
[11] Latest available data 1996.
[12] Latest available data 1999.
[13] Latest available data 1998.
[14] Guidance value and data are for dissolved metals.
[15] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).
[16] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

Notes for Table 17.11-1 (continued):
(17) Guidance value and data are for acid-soluble metal.
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

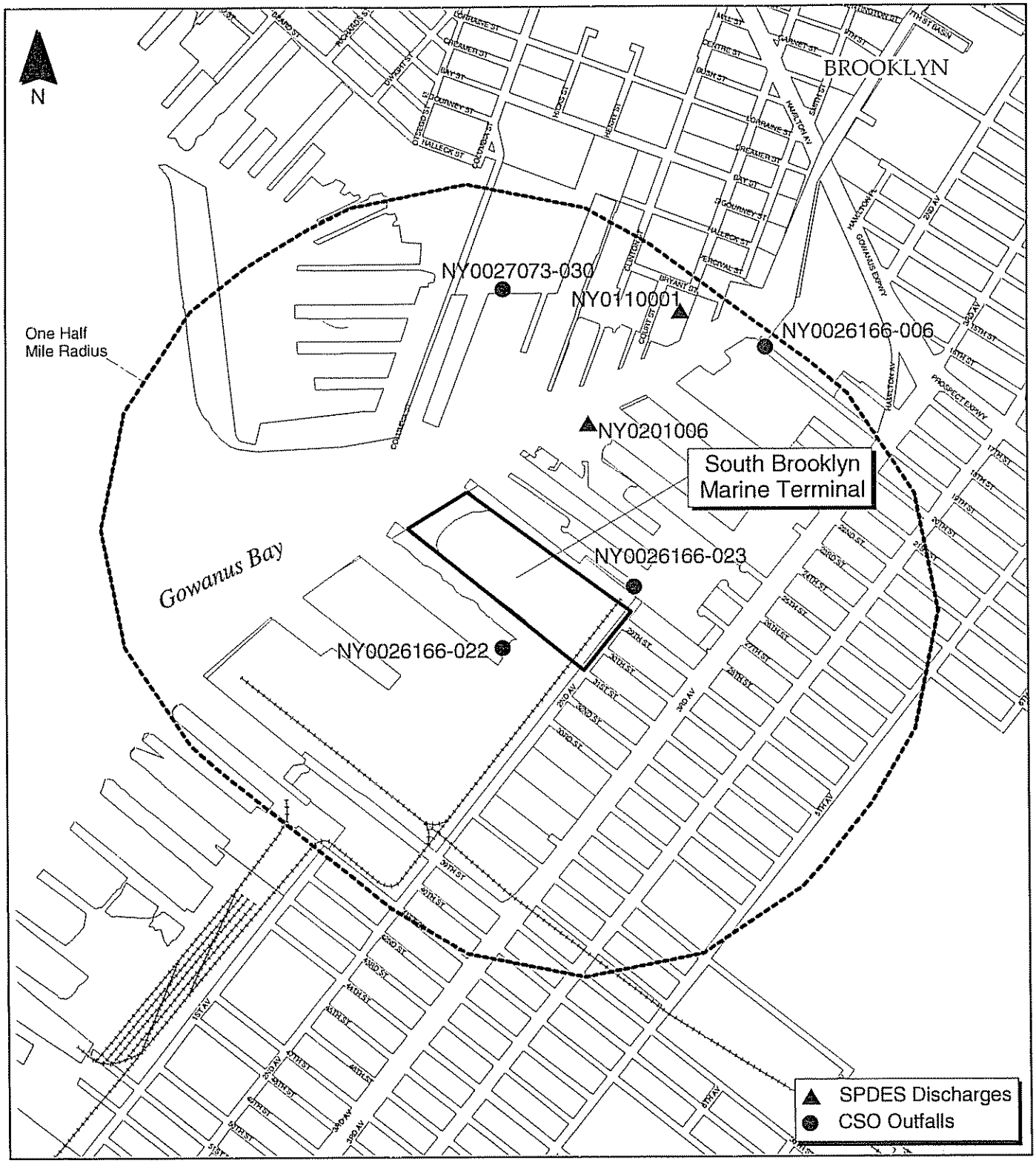
As shown in Table 17.11-1, on average, NYSDEC standards and guidance values are met. For NYCDEP Harbor Survey Program Station G-2, however, the minimum surface and bottom dissolved oxygen between June 1, 2002 and September 30, 2002 did not meet the water quality standards for dissolved oxygen. In addition, the mercury concentration for Battelle Station B-6 did not conform to the water quality standard for mercury.

17.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the 30th Street Pier at SBMT site are listed in Table 17.11-2 and shown in Figure 17.11-2. The discharges consist of four CSOs and two industrial sites, all of which are permitted by the NYSDEC.

Table 17.11-2
Existing Permitted Discharges
30th Street Pier at SBMT

Combined Sewer Overflows (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
19th Street/Owls Head	NY0026166-006	Kings	Gowanus Canal
Port Authority Grain Terminal/Red Hook	NY0027073-030	Kings	Gowanus Bay
32nd Street/Owls Head	NY0026166-022	Kings	Gowanus Bay
28th Street/Owls Head	NY0026166-023	Kings	Gowanus Bay
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Amerada Hess Corp.	NY0110001	Kings	Gowanus Bay
Astoria Generating Co., LTD	NY0201006	Kings	Gowanus Bay



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

700 0 700 Feet

Figure 17.11-2 Permitted Outfalls and CSO Locations 30th Street Pier at SBMT

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17.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and/or infiltration. A runoff flow of 0.823 cfs was calculated using the impervious site area (13.6 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 17.11-3, represent the existing loads at the site.

Table 17.11-3
Estimated Existing Pollutant Loads and Runoff Flows
30th Street Pier at SBMT

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	150,757[1]
BOD mg/L	11	48.8
Heavy Metals		
Copper µg/L	35	0.155
Lead µg/L	28	0.124
Zinc µg/L	154	0.683
Total Impervious Area (acre) = 13.6		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Flow (cfs) = 0.823

Notes:
[1] Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
[2] Based on Central Park Rain Data (1969 – 2002); The National Climatic Data Center.

17.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to ongoing water improvement programs such as the NYCDEP CSO Abatement Program, which would reduce untreated discharges to the receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from the City WPCPs; and other programs. Stormwater loads from the site would not be expected to change, so no significant water quality impacts would be expected.

17.11.3 Potential Impacts with ~~MCR~~ BCR to the 30th Street Pier at SBMT

With the development of the 30th Street Pier at SBMT, the overall area of the site would be increased by 1.1 acres. Table 17.11-4 shows the existing impervious area, the change in impervious area and pollutant loads.

Table 17.11-4
Impervious Area and Estimated Pollutant Loads
30th Street Pier at SBMT

Impervious Area Change			Estimated Pollutant Loadings/Incremental Change [1]				
Condition	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	13.6	NA	150,757/NA	48.8/NA	0.155/NA	0.124/NA	0.68/NA
Future Build Conditions	14.7	1.1	162,847/12,090	52.7/3.9	0.168/0.013	0.134/0.01	0.74/0.06

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and the Future Build Conditions.
(2) Coliform loads are not shown in pounds/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

The potential impact of the stormwater pollutant loadings on surface water quality was evaluated using the New York Harbor Seasonal Steady State Water Quality 208 Model (208 Model). This model was developed under Section 208 of the Clean Water Act to help state and local water quality management agencies integrate water quality activities and goals. The 208 Model was used to predict the incremental changes in BOD, fecal coliform, copper, zinc and lead that resulted from the stormwater loadings.

The 208 Model predicted no significant impact on existing surface water quality due to fecal coliform, BOD, copper, zinc and lead loadings from the 30th Street Pier at SBMT. Stormwater runoff from the 14.7 acres of the 30th Street Pier at SBMT area would not result in any further violation of water quality standards or guidance values beyond existing violations. Therefore, the development of the 30th Street Pier at SBMT would not affect water quality.

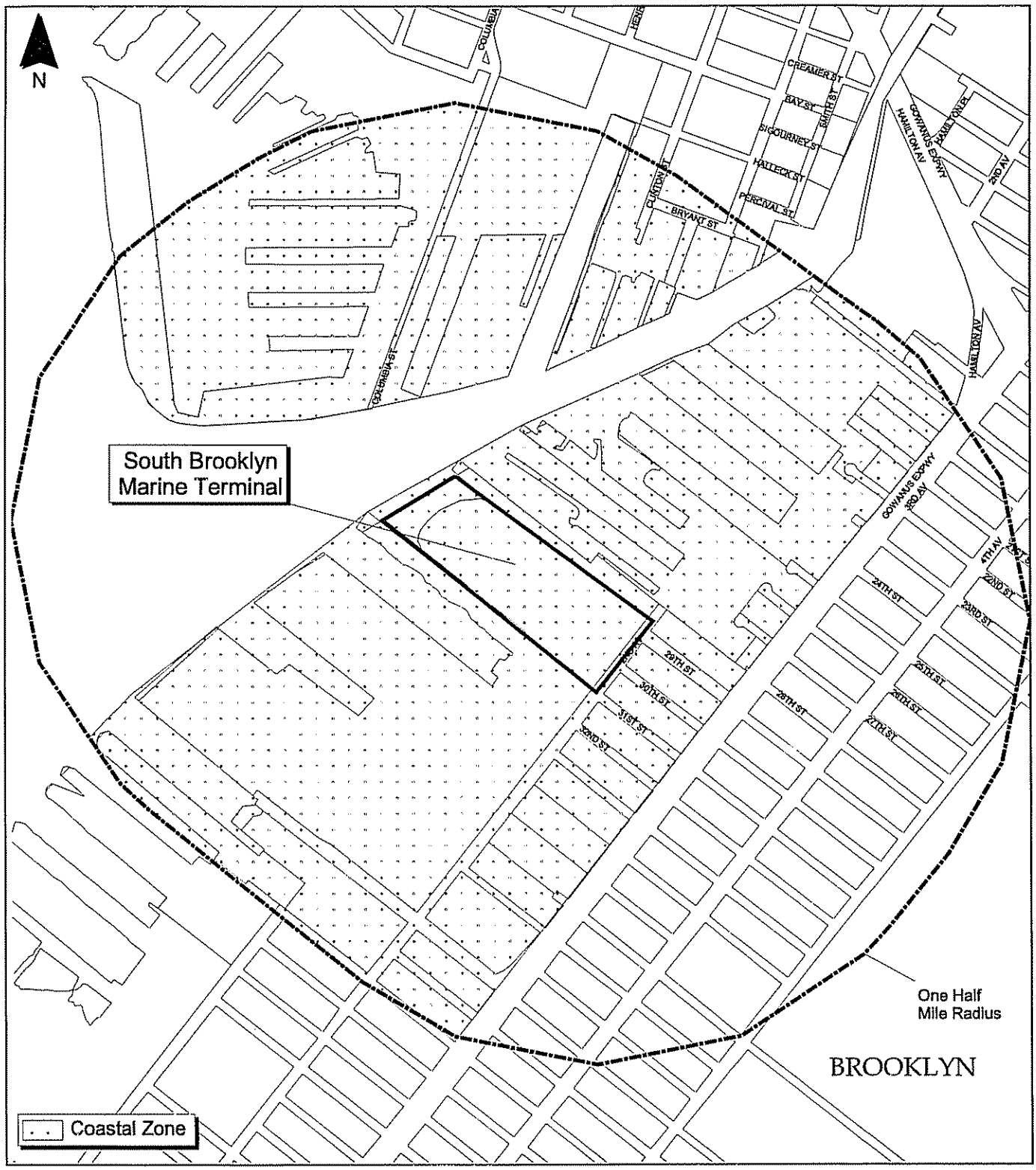
Unimpeded operation of the 30th Street Pier at SBMT may also require dredging activities to construct the waterfront structures and to improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired before any such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not be expected to result in any significant adverse long-term impacts.

17.12 Waterfront Revitalization Program

17.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the Gowanus Bay, the 30th Street Pier Material Recoveryycling Facility (MRF) at the ~~South Brooklyn Marine Terminal (~~SBMT~~)~~ would be within the City's coastal zone boundary (Figure 17.12-1). According to "The New Waterfront Revitalization Program," the 30th Street Pier MRF at the SBMT would be classified as a water-dependent, industrial use. The site is within the designated Sunset Park Significant Maritime and Industrial Area (SMIA). It would be located within Reach 14/East River and Upper New York Bay Sunset Park Subarea as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." The 30th Street Pier MRF at the SBMT is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The 30th Street Pier MRF at the SBMT was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3, 8.1, 8.5, 9.2 and 10.2. All policies and subpolicies, including those identified as not applicable, are listed in Section 3.14.2. In instances where a component of the 30th Street Pier MRF at the SBMT required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

600 0 600 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 17.12-1 Coastal Zone Boundary

30th Street Pier at SBMT

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17.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

Sufficient public services and facilities to support the new 30th Street Pier MRF at the SBMT are present in the vicinity of the proposed site. As part of the 30th Street Pier MRF at the SBMT, connections from the new facility to existing utilities (e.g., sewer connections, etc.) in the vicinity would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The 30th Street Pier at the SBMT would be located within the Sunset Park SMIA. The pier would be developed into a complex of facilities designed to receive and process DSNY curbside recyclables. Development of the 30th Street Pier would involve the conversion of the existing site, which was previously used for marine vessel loading and off-loading, long-term import/export cargo storage and processing, into a MRF that would accept and process the City's recyclables. Some recyclables from DSNY South Brooklyn collection districts would be delivered to the facility by truck, while recyclables from other boroughs would be brought to the facility by barge.

Development of the proposed 30th Street Pier at the SBMT would help to restore and revitalize industrial waterfront property and would be compatible with existing and neighboring heavy industrial uses. Construction activities would predominantly occur on the existing 30th Street Pier at the SBMT. Demolition activities associated with development of the pier would involve the removal of piling remnants and other underwater debris from previous demolition of finger piers that abutted the 30th Street Pier. Development of the 30th Street Pier would require the construction of two docks in order to support the proposed recycling operations. Development of the MRF would involve: (1) construction of a receiving building, which would include a tipping area, processing area and an enclosed barge unloading area; (2) two piers for barge loading and unloading; (3) loadout docks for truck transfers; (4) new fendering and bulkhead system; and (5) a three-story administration/visitor center with parking.

Operations at the MRF would include accepting curbside recyclables by barge or truck, processing the material in an enclosed facility, then transporting the processed recyclables to other locations by barge. Development of the 30th Street Pier at the SBMT would be consistent with the existing land uses in the vicinity of the site and with the "Plan for the Brooklyn Waterfront" which recommends the expansion and continued industrial use of the area. The proposed development of the 30th Street Pier would involve the development of a new industrial water-dependent use within an area of the Brooklyn waterfront that has been designated as an SMIA and an area suitable for waterfront industrial uses. The 30th Street Pier at the SBMT would, therefore, be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The proposed MRF would be located at the existing 30th Street Pier at the SBMT. Modifications to the existing pier would involve the construction of two additional docks that would be used for loading/unloading of incoming and outgoing barges servicing the proposed facility. To allow for the unimpeded

operation of the facility, piling remnants and other underwater debris from previous demolition of finger piers that abutted the 30th Street Pier would also need to be removed. In addition, new fendering systems and dredging would be required to improve existing water depths at and in the vicinity of the site and to allow for the unimpeded operation of barges and tugboats once the site became operational. All required dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any proposed dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The development of the 30th Street Pier at SBMT would involve the reactivation of a historic waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within Gravesend Bay resulting from the 30th Street Pier at SBMT would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four or five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The 30th Street Pier at SBMT would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

Development of the 30th Street Pier at SBMT would involve the conversion of the existing site, which was previously used for marine vessel loading and off-loading, long-term import/export cargo storage and processing, into a MRF where recyclables would be brought to the facility by either barge or truck and processed in an enclosed building prior to transport. All unloading, processing and

unloading would be conducted within an enclosed area and, therefore, would be protective of the aquatic environment and surrounding land and water uses.

In addition, inbound barges carrying mixed recyclables would be equipped with netting or fencing to prevent windblown litter from entering the surrounding environment. Litter control methods, such as fencing and regular housekeeping of the site perimeter, placement of booms and/or the use of a skimmer boat as needed, and operating personnel using dip nets to control litter in the enclosed barge unloading/loading area, would be implemented to minimize or eliminate the potential for litter entering surface waters. All process wastewaters generated on site (e.g., washdown waters, etc.) would be treated prior to their discharge to the municipal sewer system. In addition, any on-site storage of petroleum products related to the operation of the MRF at the 30th Street Pier, if required, would be done in accordance with applicable federal, state and local regulations. Therefore, the proposed 30th Street Pier would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, as described in "The Waterfront Revitalization Program," as well as Recognized Ecological Complexes and SCFWH information, the 30th Street Pier at the SBMT is not located within a designated area. The proposed MRF would be a water-dependent use that would involve the unloading, processing and loading of materials largely within an enclosed structure. The proposed facility would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. Development of the 30th Street Pier MRF would therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted to determine the presence of wetlands within the site. As noted in Section 17.9.3.3, sections of the proposed MRF would be situated on pilings within Gowanus Bay, a NYSDEC-designated littoral zone. No freshwater wetlands exist on site. The proposed development of the 30th Street Pier would not be anticipated to result in any significant long-term impacts to tidal wetlands.

Dredging would be required to remove accumulated sediments in order to provide adequate draft for barges and tugboats. In addition to dredging, piling remnants and other underwater debris from previous demolition of finger piers that abutted the 30th Street Pier would need to be removed. Potential impacts due to dredging and the removal of the pilings, however, would be minimal and all activities would be conducted in compliance with applicable federal, state and local regulations. Mitigation of potential impacts, as appropriate and applicable, would be proposed as part of the permitting of the MRF at the 30th Street Pier.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of USF&WS and NYSDEC NHP databases indicates that no known species of concern were located in the vicinity of the site. The MRF at the 30th Street Pier would be largely situated on an existing pier with additional development activities within Gowanus Bay. Dredging and removal of existing underwater debris would be required prior to the operation of the facility. Dredging would result in limited impacts to water quality, which would be of short-term duration and highly localized. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the 30th Street Pier would be

managed in accordance with applicable federal, state and local regulations. The 30th Street Pier at the SBMT would not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The MRF at the 30th Street Pier would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, sanitary and process wastewaters would be conveyed to an on-site treatment system, which would discharge to the municipal sewer system. Stormwater runoff from the 30th Street Pier at the SBMT would be managed in accordance with all applicable federal, state and local regulations.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

BMPs would be used to the extent possible during the construction activities and during the operation of the proposed facility in order to minimize and nonpoint discharges. The MRF at the 30th Street Pier would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling of recyclables would be conducted within an enclosed processing building. During dredging and construction activities, non-structural, and if necessary, structural measures would be used to minimize nonpoint source pollution.

In addition, in-bound barges carrying mixed recyclables would be equipped with netting or fencing to prevent windblown litter from entering the surrounding environment. Litter control methods, such as fencing and regular housekeeping of the site perimeter, placement of booms and/or the use of a skimmer boat as needed, and the use of dip nets to control litter in the enclosed barge unloading/loading area, would be implemented to minimize or eliminate the

potential for litter entering surface waters. All process wastewaters generated on site (e.g., washdown waters, etc.) would be treated prior to their discharge to the municipal sewer system. In addition, on-site storage of petroleum products related to the operation of the MRF, if required, would be done in accordance with applicable federal, state and local regulations. Therefore, the proposed MRF would be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

Dredging would be required to improve existing water depths at and in the vicinity of the site and to allow for the unimpeded operation of barges and tugboats once the site became operational. In addition, removal of existing piling remnants and other underwater debris from the previous demolition of finger piers that abutted the 30th Street Pier would be required prior to operation of the proposed facility. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired prior to any dredging activities. Applicable and appropriate measures, such as the use of closed clamshell buckets and silt curtains would be implemented during dredging activities to minimize and/or eliminate short-term impacts to local water quality. Dredging and the subsequent development of the proposed facility would not be expected to result in any long-term impacts to water quality. Development and operation of the 30th Street Pier at the SBMT would, therefore, be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The 30th Street Pier at the SBMT would have no impact of the quality or quantity of surface or ground waters. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. Process wastewaters would be conveyed to an on-site treatment system and then discharged to the municipal sewer system. Stormwater runoff from the 30th Street Pier at the SBMT would be managed in accordance with all applicable federal, state and local regulations. The proposed facility would, therefore, be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of FEMA National Flood Insurance Program maps, portions of the proposed facility would be situated within the 100-year floodplain (Zone A). The proposed MRF would be located at the site of the existing 30th Street Pier, but would require the addition of two new piers. The piers would be equipped with a new fendering and sheet pile bulkhead to prevent erosion. The redevelopment of the site would not affect the potential for flooding or erosion. Construction of the facility would comply with applicable building code requirements. To the extent practicable, non-structural or structural measures would be implemented to minimize potential impacts from flooding or erosion.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The MRF at the 30th Street Pier would not involve the storage, treatment or disposal of hazardous waste. The proposed facility would, however, involve the processing of recyclables consisting of glass, metal and plastics. The development of the proposed 30th Street Pier would involve the conversion of the existing site, which was previously used for marine vessel loading and off-loading, long-term import/export cargo storage and processing, into a MRF that would accept and process the City's recyclables. The storage of petroleum products at the proposed facility, if required, would be conducted in accordance with applicable federal, state and local regulations. The proposed MRF would be constructed and

operated in a manner that would not result in adverse impacts to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

In-bound barges carrying mixed recyclables would be equipped with netting or fencing to prevent windblown litter from entering the surrounding environment. Litter control methods, such as fencing and regular housekeeping of the site perimeter, placement of booms and/or the use of a skimmer boat as needed, and the use of dip nets to control litter in the enclosed barge unloading/loading area, would be implemented to minimize or eliminate the potential for litter entering surface waters. Therefore, the proposed MRF would be consistent with this subpolicy.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Due to the existing industrial uses at and in the immediate vicinity of the 30th Street Pier, public access would generally not be compatible. Therefore, this subpolicy is not applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The 30th Street Pier would involve the development of a new water-dependent industrial use. Public access would not be compatible with the proposed 30th

Street Pier; however, its development would not preclude any future development of public access at other locations along the Gowanus Bay or Upper New York Bay waterfront.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Development of the 30th Street Pier at the SBMT would involve the development of new facilities on an existing pier within a heavily industrialized area. The proposed facility would not be anticipated to impair existing visual access to coastal lands, waters or open space. The 30th Street Pier at the SBMT would not be anticipated to significantly impact visual access within the heavy industrial area. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

The proposed MRF at the 30th Street Pier would be located in a heavy industrialized area and does not have waterfront open space and recreation area in the immediate vicinity of the proposed site. A cluster of several small parks and open space collectively known as the Red Hook Recreation Area, is located northwest of the 30th Street Pier. There would be no impact to this area because the proposed facility would be are located across Gowanus Bay and would be approximately 2,000 feet, therefore, physically separated from the proposed site. There are no other mapped parklands or open space resources in the vicinity of the 30th Street Pier. Therefore, the proposed development of the 30th Street Pier would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 *Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.*

The 30th Street Pier at the SBMT would involve the development of a new MRF at the location of previous industrial uses and would, therefore, be compatible with the existing urban design context and visual conditions of this portion of the industrialized Gowanus Bay waterfront. The proposed 30th Street South Pier would, therefore, be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The 30th Street Pier would pose no new impact to scenic values associated with natural resources. It would be compatible with existing industrial uses in the vicinity of the site, which do not provide scenic views. Therefore, this subpolicy would not be applicable.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

There are no known designated historical or cultural resources at the proposed 30th Street Pier at the SBMT; therefore, the proposed facility would not have an adverse impact upon cultural or historical resources and would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No known archaeologically significant resources are located at the site. This subpolicy is, therefore, not applicable.

17.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

See Section 17.1 for a description of the analysis required.

17.14 Traffic, Parking, Transit, and Pedestrians

17.14.1 Introduction

The 30th Street Pier at SBMT would receive recyclable materials from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

17.14.2 Existing Conditions

The site of the 30th Street Pier at SBMT was used for loading and off-loading marine vessels and long-term import/export cargo storage and processing, office space and trailer inspections and repair.

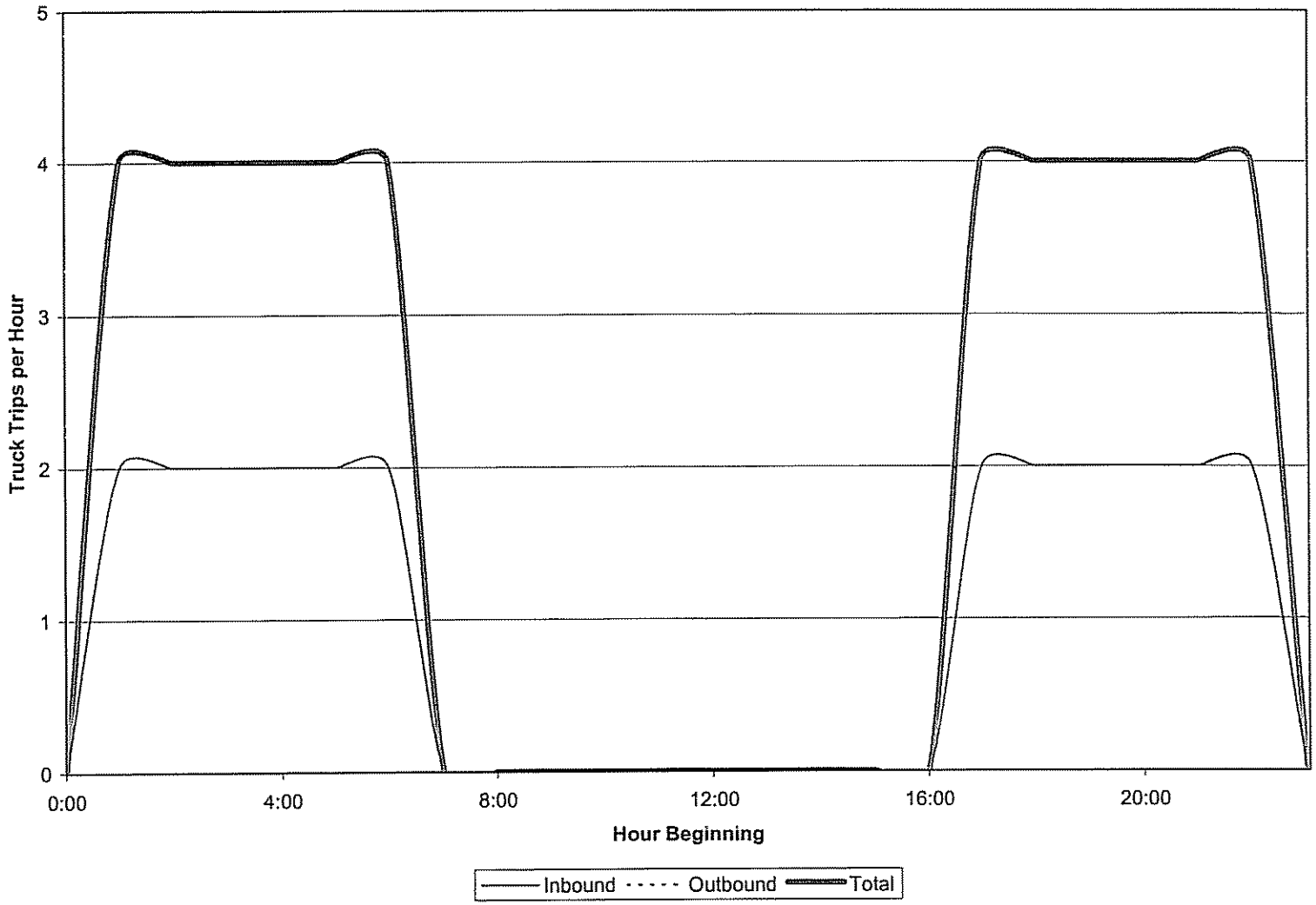
17.14.3 Future No-Build Conditions

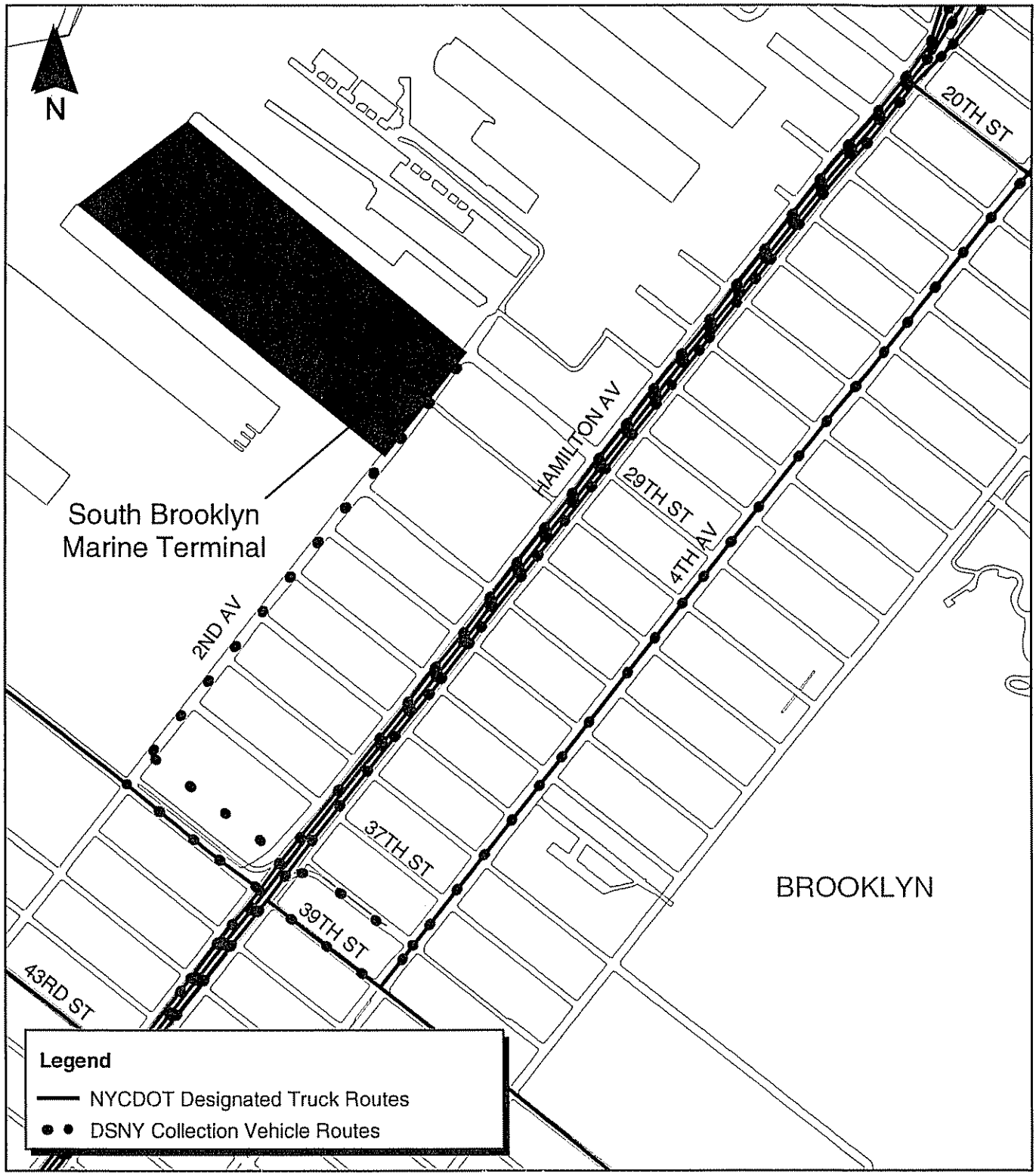
Because analysis of traffic impacts was not required for the 30th Street Pier at SBMT, as discussed in Section 17.14.4, Future No-Build Conditions were not estimated.

17.14.4 Potential Impacts with ~~MCR~~ BCR to the 30th Street Pier at SBMT

The 30th Street Pier at SBMT would receive recycling materials from Brooklyn CDs 9, 14 and 15 ~~and Manhattan CDs 1 through 4~~. The assumed 24-hour truck distribution for the 30th Street Pier at SBMT is depicted in Figure 17.14-1. The assumed DSNY recycling collection vehicle routes are depicted in Figure 17.14-2. Peak hour traffic generation for this facility is expected to be ~~21~~ 17 PCEs (which includes 11 employee trips and 4 DSNY collection vehicles (6PCEs)), which falls below the CEQR screening threshold of 50 trip ends per hour. (See Table 3.16-2 in Section 3.16 for a listing of peak hour trip ends by facility.) Therefore, no additional traffic analysis is required at this site.

Figure 17.14-1
Truck Trips per Hour
30th Street Pier at SBMT





Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 17.14-2 DSNY Collection Vehicle Routes
30th Street Pier at SBMT

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17.15 Air Quality

See Section 17.1 for a description of the on-site analysis required.

Off-site air quality locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, it was determined that the total number of collection vehicles generated by the facility during peak hours was well below the mobile source analysis screening thresholds for CO and $PM_{2.5}$. No appreciable increase in PM_{10} is expected due to the fact that the peak number of facility-generated collection vehicles added to major signalized intersections along 2nd Avenue during peak traffic hours accounts for only 1.4% of the total number of background vehicles at these intersections during these periods (a maximum of 10 facility-generated trucks versus 717 background vehicles during the peak hour at the intersection of 37th Street at 2nd Avenue). In addition, there were no PM_{10} impacts predicted at other intersections analyzed as part of this FDEIS that had a significantly higher number of collection vehicles at key intersections during peak background traffic conditions. Therefore, it was determined that the off-site air quality impacts from operations of the 30th Street Pier at SBMT are not considered to be significant.

17.16 Odor

See Section 17.1 for a description of the analysis required.

17.17 Noise

See Section 17.1 for a description of the on-site analysis required.

The noise analysis addresses off-site sources of noise emission from the 30th Street Pier at SBMT-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

17.17.1 Existing Conditions

17.17.1.1 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the 30th Street Pier at SBMT-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was not required; therefore, off-site noise monitoring was not conducted.

17.17.2 Future No-Build Conditions

17.17.1.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 17.17-1 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on the first-level screening.

Table 17.17-1
Off-Site Noise Traffic Volume
30th Street Pier at SBMT

Location	Hour	Existing Traffic Volume[1] (Vehicles/Hour)	Future No-Build Traffic Volume[2] (Vehicles/Hour)
39th Street between 5th Avenue and 6th Avenue	3:00 a.m.	108	110
39th Street between 3rd Avenue and 4th Avenue	3:00 a.m.	108	110
3rd Avenue between 22nd Street and 23rd Street	3:00 a.m.	193	199

Notes:
(1) Existing Traffic Volumes are based on ATR data.
(2) Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

17.17.3 Potential Impacts with ~~MCR~~BCR to the 30th Street Pier at SBMT

17.17.3.1 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the 30th Street Pier at SBMT. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis and off-site noise monitoring was not required. Results of the screening for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) are provided in Table in Table 17.17-2.

17.17.3.2 Combined On-Site and Off-Site Noise Levels

An off-site noise screening analysis was performed for the 30th Street Pier at SBMT. An on-site noise analysis was not required; therefore, a combined noise analysis was not performed.

Table 17.17-2
Off-Site Noise Screening Results
30th Street Pier at SBMT

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
39th Street between 3rd Avenue and 4th Avenue	3:00 a.m.	316	4	0	188	504	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include DSNY collection vehicles delivering ~~MCR~~BCR and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

CHAPTER 18 ENVIRONMENTAL REVIEW: MANHATTAN CURBSIDE RECYCLABLES TO GANSEVOORT RECYCLABLES ACCEPTANCE FACILITY

18.1 Introduction

The NYCEDC is in the planning stages for the Gansevoort Recyclables Acceptance Facility. Once a design is developed, the Gansevoort Recyclables Acceptance Facility will be the subject of a future environmental review. The environmental review of this Alternative in this FDEIS is limited to off-site impacts associated with traffic, air quality and noise.

The results of the environmental analyses of the Gansevoort Recyclables Acceptance Facility are presented in the following sections:

18.2 Land Use, Zoning, and Public Policy
18.3 Socioeconomic Conditions
18.4 Community Facilities and Services
18.5 Open Space
18.6 Cultural Resources
18.7 Urban Design, Visual Resources, and Shadows
18.8 Neighborhood Character
18.9 Natural Resources
18.10 Hazardous Materials
18.11 Water Quality
18.12 Waterfront Revitalization Program
18.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
18.14 Traffic, Parking, Transit, and Pedestrians
18.15 Air Quality
18.16 Odor
18.17 Noise

Section 2.3.2 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

18.2 Land Use, Zoning, and Public Policy

See Section 18.1 for a description of the analysis required.

18.3 Socioeconomic Conditions

See Section 18.1 for a description of the analysis required.

18.4 Community Facilities and Services

See Section 18.1 for a description of the analysis required.

18.5 Open Space

See Section 18.1 for a description of the analysis required.

18.6 Cultural Resources

See Section 18.1 for a description of the analysis required.

18.7 Urban Design, Visual Resources, and Shadows

See Section 18.1 for a description of the analysis required.

18.8 Neighborhood Character

See Section 18.1 for a description of the analysis required.

18.9 Natural Resources

See Section 18.1 for a description of the analysis required.

18.10 Hazardous Materials

See Section 18.1 for a description of the analysis required.

18.11 Water Quality

See Section 18.1 for a description of the analysis required.

18.12 Waterfront Revitalization Program

See Section 18.1 for a description of the analysis required.

18.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

See Section 18.1 for a description of the analysis required.

18.14 Traffic, Parking, Transit, and Pedestrians

18.14.1 Introduction

The Gansevoort Recyclables Acceptance Facility would receive MCR delivered in DSNY collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on

the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

18.14.2 Existing Conditions

The former Gansevoort Street MTS was used as an MTS, but has been closed since July 1991.

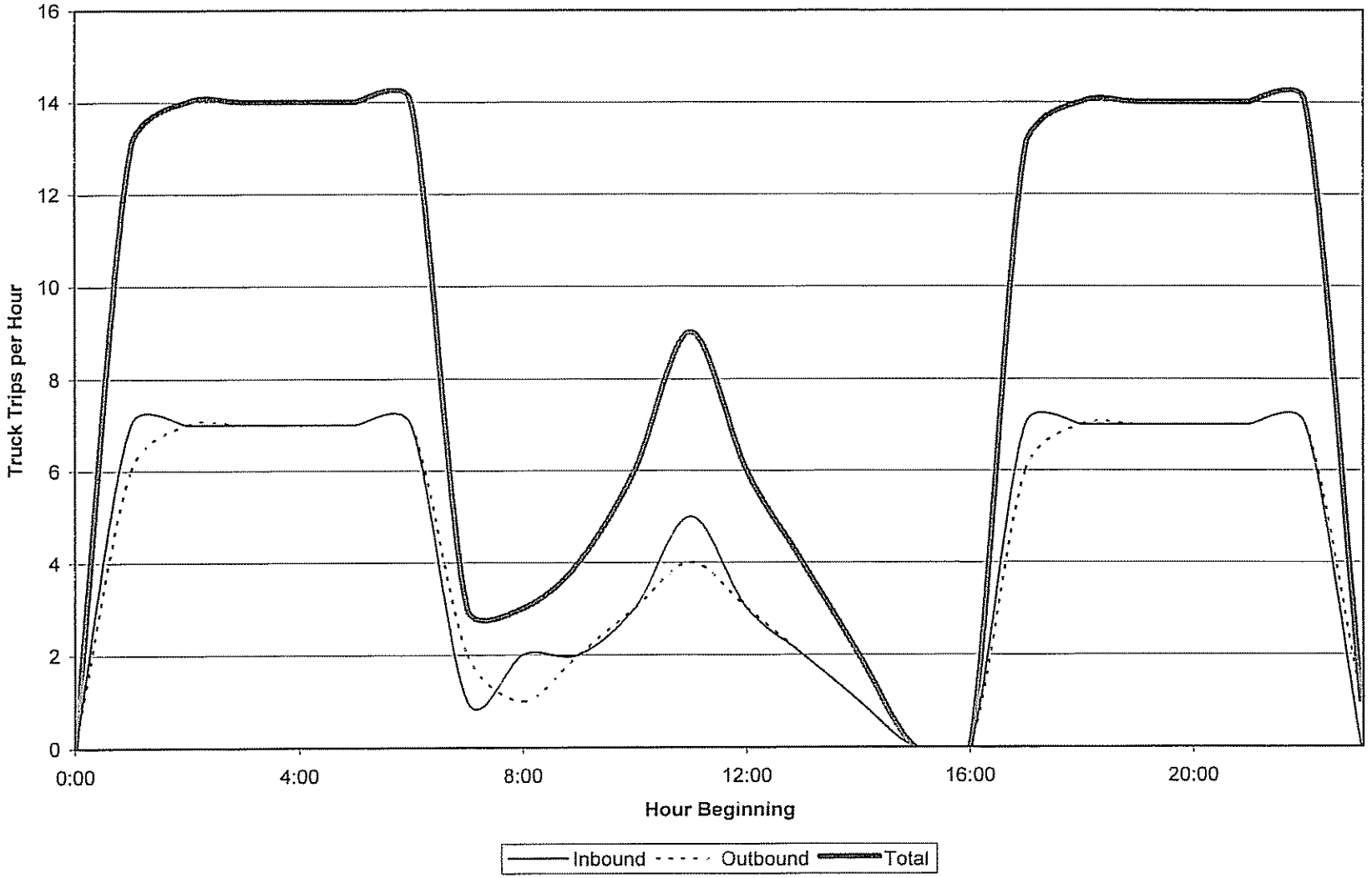
18.14.3 Future No-Build Conditions

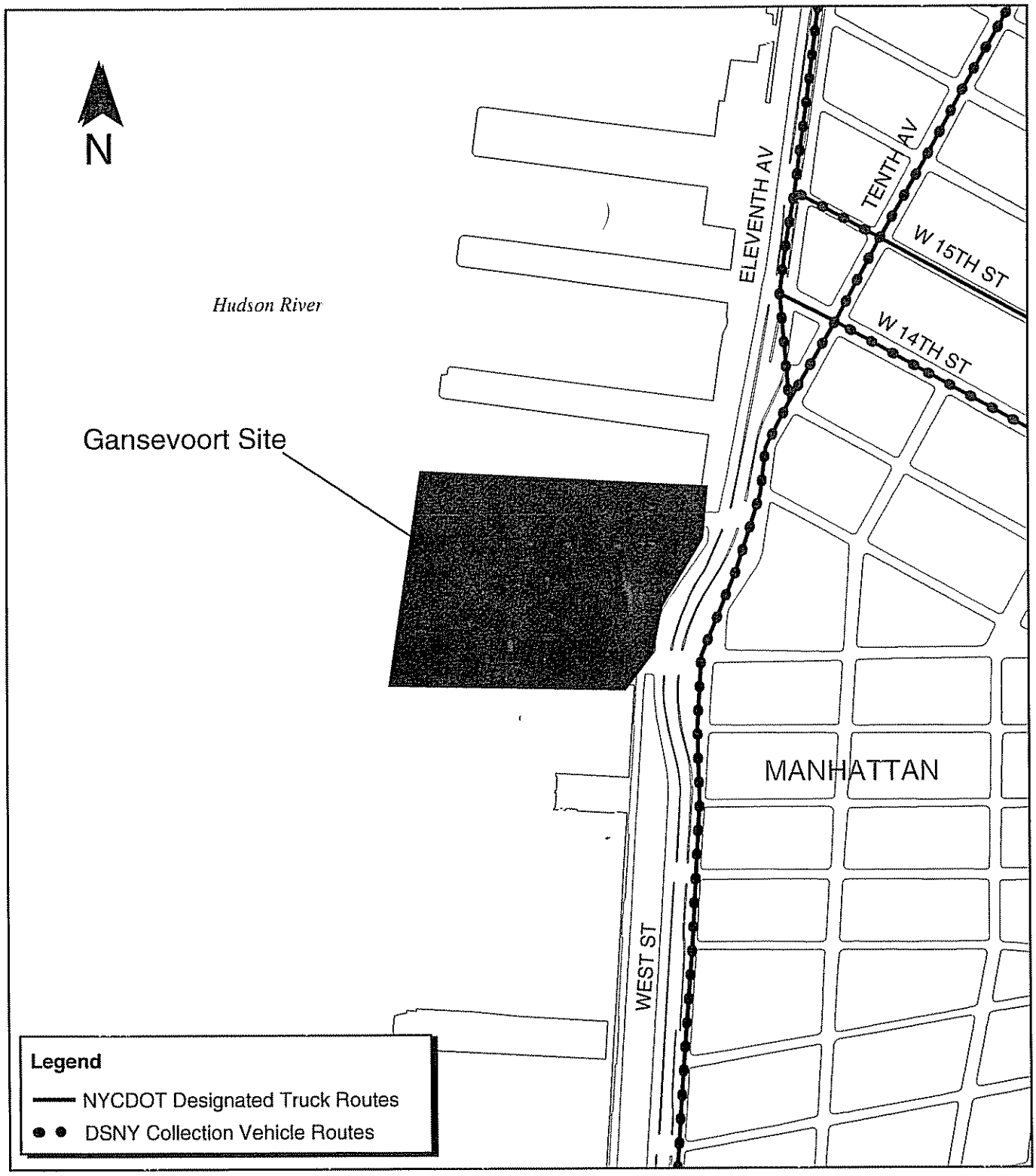
The NYCEDC is currently in the planning stages for converting the Gansevoort property into parkland with recreational activities. Because analysis of traffic impacts was not required for the Gansevoort Recyclables Acceptance Facility, as discussed in Section 18.14.4, Future No-Build Conditions were not estimated.

18.14.4 Potential Impacts with MCR to the Gansevoort Recyclables Acceptance Facility

The Gansevoort Recyclables Acceptance Facility would receive MCR from Manhattan CDs 1 through 12. The assumed 24-hour truck distribution for the Gansevoort Recyclables Acceptance Facility is depicted in Figure 18.14-1. The assumed DSNY recycling collection vehicle routes are depicted in Figure 18.14-2. Peak hour traffic generation for this facility is expected to be 32 PCEs (including employee vehicles), which falls below the CEQR screening threshold of 50 trip ends per hour. (See Table 3.16-2 in Section 3.16 for a listing of peak hour trip ends by facility). Therefore, no additional traffic analysis is required at this site.

Figure 18.14-1
Truck Trips per Hour
Gansevoort Recyclables Acceptance Facility





Site delineations are approximate.
Base Map Source: New York City Department of Information Technology & Telecommunications

HDR | URBITRAN | EEA | HydroQual | PB | Cambridge Environmental Inc

Figure 18.14-2 DSNY Collection Vehicle Routes
Gansevoort Recyclables Acceptance Facility

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18.15 Air Quality

See Section 18.1 for a description of the on-site analysis required.

18.15.1 Definition of Study Area

The study area for the off-site air quality analysis consists of the intersection of Route 9A and West 14th Street, as listed in Section 18.15.4.2.

18.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 18.15.1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 18.15-1
Representative Ambient Air Quality Data
Gansevoort Recyclables Acceptance Facility

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	225 East 34th Street between Second and Third Avenues	8-Hour	3.0 ppm	9 ppm
		1-Hour	4.0 ppm	35 ppm
NO_2	P.S. 59 (288 East 57th Street)	Annual	0.038 ppm	0.05 ppm
PM_{10}	1 Pace Plaza	Annual	27 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	80 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	P.S. 59 (288 East 57th Street)	3-Hour	0.071 ppm	0.5 ppm
		24-Hour	0.047 ppm	0.14 ppm
		Annual	0.014 ppm	0.03 ppm

Notes:
Source: USEPA Airdata/NYCDEP, April 2003

18.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the 2006 analysis year. As such, no significant changes to air quality levels are anticipated, and Future No-Build Conditions are expected to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be reduced by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

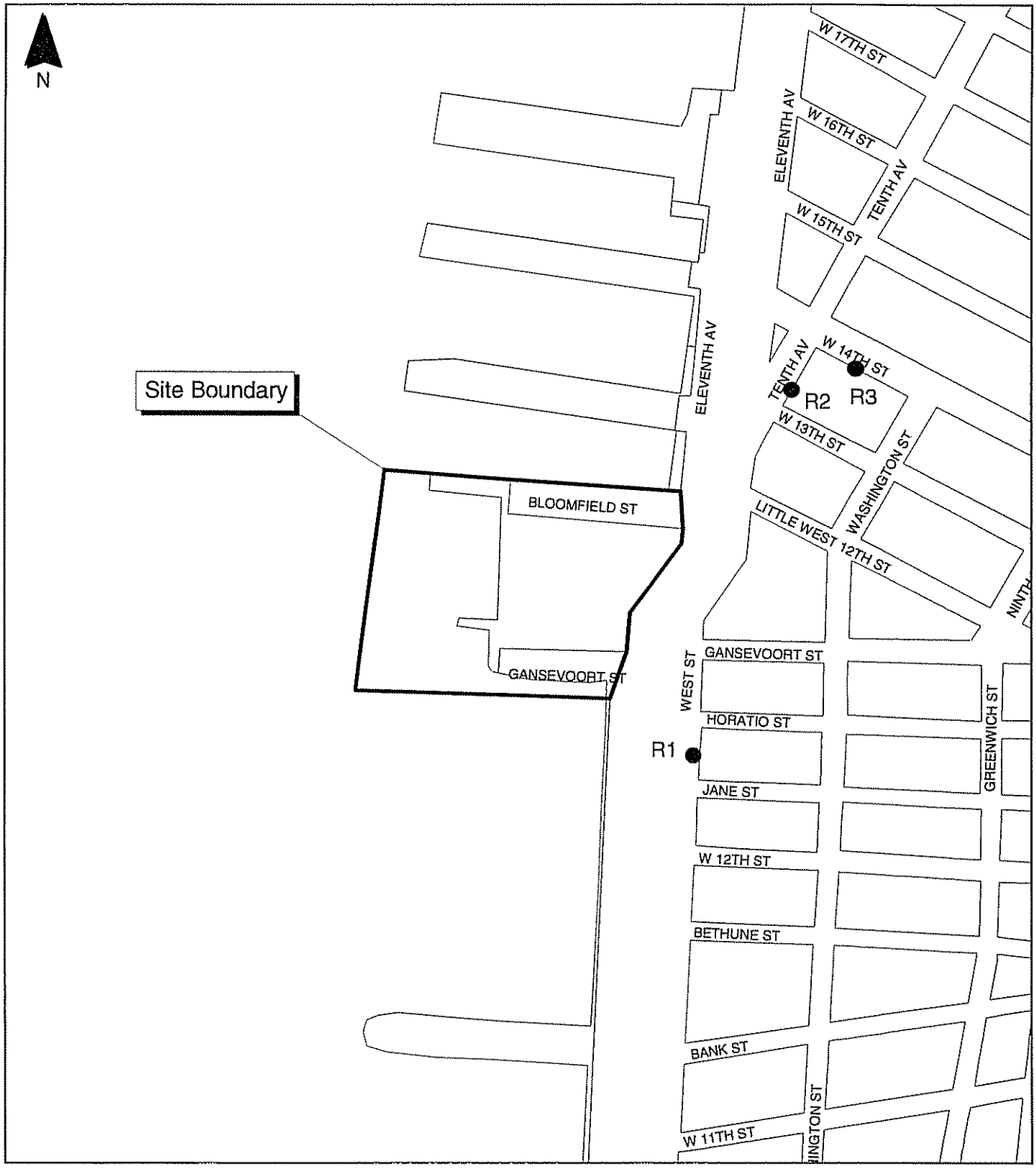
18.15.4 Potential Off-Site Air Quality Impacts with MCR to the Gansevoort Recyclables Acceptance Facility

18.15.4.1 Pollutants Considered and Analyses Conducted

Using 2001 CEQR Technical Manual guidelines for the selection of analysis locations, one intersection was identified as potentially having significant impacts by the proposed collection vehicles: the intersection of Route 9A and West 14th Street. Detailed mobile source analyses were then conducted at this location during the applicable (i.e., worst-case) time periods to determine whether the facility-generated traffic has the potential to cause exceedances of the PM_{10} NAAQS, or NYCDEP's and~~or~~ NYSDEC's 24-hour and annual $PM_{2.5}$ STVs. No CO analysis was conducted because the number of proposed vehicle trips to and from the facility is below CEQR CO screening thresholds. Figure 18.15-1 shows the location of the intersection analyzed.

18.15.4.2~~.2~~ Results of the Off-Site Analysis

Maximum PM_{10} concentrations and $PM_{2.5}$ project-related impacts estimated near the intersection of Route 9A and West 14th Street are provided in Table 18.15-2. These results show that all estimated concentrations are within (less than) the applicable state and federal ambient air quality standards and/or STVs for $PM_{2.5}$. As such, proposed recycling operations at this facility would not result in significant off-site air quality impacts.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

300 0 300 Feet

Figure 18.15-1 Off-Site Air Quality Intersections Analyzed
Gansevoort Recyclables Acceptance Facility

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Table 18.15-2
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
Gansevoort Recyclables Acceptance Facility

Air Quality Receptor Site	PM_{10}		$PM_{2.5}$ [2]	
	24-hr PM_{10} Concentrations[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Concentrations[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[2a] $\mu g/m^3$ (24 Hour STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (Annual Neighborhood Average STV: 0.1 $\mu g/m^3$)
Route 9A & West 14th Street				
Existing Conditions	~~110.8~~121	~~49.5~~43		
Future No-Build Conditions	~~111.4~~121	~~49.7~~43		
Future Build Conditions	~~111.6~~122	~~49.9~~43		
Future Build Incremental			~~0.07~~0.1	0.010

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration; 24-hr PM_{10} = 6188 $\mu g/m^3$; Annual PM_{10} = 2134 $\mu g/m^3$).

(2) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking~~ The difference between the ~~maximum~~ $PM_{2.5}$ concentrations under~~for the~~ Future No-Build and Future Build conditions~~scenarios~~ at ~~any~~ maximum slope walk receptors~~, three meters from the edge of the roadways~~ under ~~using~~ AM, Facility, or PM peak traffic conditions.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking~~ The difference between ~~the maximum~~ $PM_{2.5}$ concentrations under~~for the~~ ~~f~~Future No-Build and ~~f~~Future Build scenarios at maximum~~any~~ receptors 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

18.16 Odor

See Section 18.1 for a description of the on-site analysis required.

18.17 Noise

See Section 18.1 for a description of the on-site analysis required.

The noise analysis addresses off-site sources of noise emission from the Gansevoort Recyclables Acceptance Facility-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

18.17.1 Existing Conditions

18.17.1.1 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Gansevoort Recyclables Acceptance Facility-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was not required; therefore, off-site noise monitoring was not conducted.

18.17.2 Future No-Build Conditions

18.17.2.1 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 18.17-1 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on the first-level screening.

Table 18.17-1
Off-Site Noise Traffic Volume
Gansevoort Recyclables Acceptance Facility

Location	Hour	Existing Traffic Volume [1] (Vehicles/Hour)	Future No-Build Traffic Volume[2] (Vehicles/Hour)
Route 9A between Horatio and Jane Streets	3:00 a.m.	751	763
Route 9A Between West 13th and West 14th Streets	3:00 a.m.	751	763
West 14th Street Between Washington Street and Route 9A	4:00 a.m.	~~335~~336	341

Notes:
(1) Existing Traffic Volumes are based on ATR data.
(2) Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

18.17.3 Potential Impacts with MCR to the Gansevoort Recyclables Acceptance Facility

18.17.3.1 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Gansevoort Recyclables Acceptance Facility. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis and off-site noise monitoring was not required. Results of the screening for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) are provided in Table 18.17-2.

18.17.3.2 Combined On-Site and Off-Site Noise Levels

An off-site noise screening analysis was performed for the Gansevoort Recyclables Acceptance Facility. An on-site noise analysis was not required; therefore, a combined noise analysis was not performed.

Table 18.17-2
Off-Site Noise Screening Results
Gansevoort Recyclables Acceptance Facility

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Route 9A between Horatio and Jane Streets	3:00 a.m.	1159	14	0	658	1817	No
Route 9A Between West 13th and West 14th Streets	3:00 a.m.	1159	7	0	329	1488	No
West 14th Street Between Washington Street and Route 9A	4:00 a.m.	932	7	0	329	1261	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include DSNY collection vehicles delivering MCR and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

CHAPTER 19 ENVIRONMENTAL REVIEW: SOUTH BRONX CONVERTED MTS

19.1 Introduction

The results of the environmental analyses of the South Bronx Converted MTS are presented in the following sections:

19.2 Land Use, Zoning, and Public Policy
19.3 Socioeconomic Conditions
19.4 Community Facilities and Services
19.5 Open Space
19.6 Cultural Resources
19.7 Urban Design, Visual Resources, and Shadows
19.8 Neighborhood Character
19.9 Natural Resources
19.10 Hazardous Materials
19.11 Water Quality
19.12 Waterfront Revitalization Program
19.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
19.14 Traffic, Parking, Transit and Pedestrians
19.15 Air Quality
19.16 Odor
19.17 Noise
19.18 Commercial Waste to the South Bronx Converted MTS

Section 2.4.1 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

19.2 Land Use, Zoning, and Public Policy

19.2.1 Existing Conditions

19.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 19.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 19.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.1 provides information on existing land uses and operations on the site.

19.2.1.2 Land Use Patterns

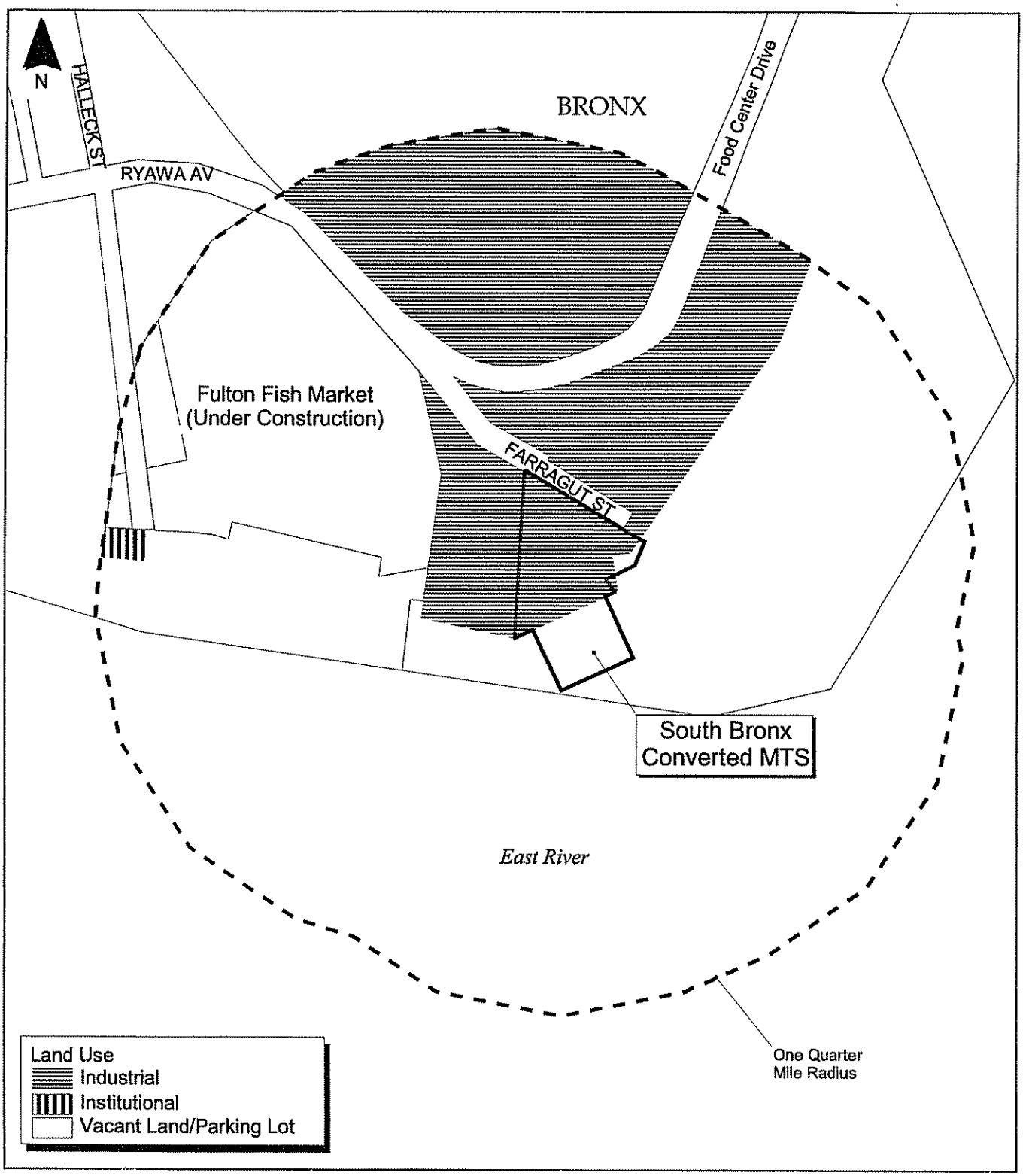
19.2.1.2.1 General Context

The site is set on the industrial Hunts Point waterfront. A number of nearby City-owned properties and operations surround the site. The predominant use is the 329-acre Hunts Point Market, which is administered by NYCEDC.

19.2.1.2.2 Land Uses in the Primary Study Area

All property immediately adjacent to the site is owned by the City or its agencies (i.e., DSNY, Department of Correction, NYCDEP and NYCEDC). A small area with deteriorated paving that abuts the site near the East River's edge is used informally by local residents as a point of public access for fishing and viewing the water.

An active SHS on the site is comprised of a paved area surrounded by concrete walls topped with cyclone fencing. Accessed through a 30-foot sliding gate facing Farragut Street (formerly Hunts Point Avenue), the SHS accepts materials such as tires, metal, wood, C&D materials and glass from non-commercial vehicles. An office trailer is also located within this area.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

500 0 500 Feet

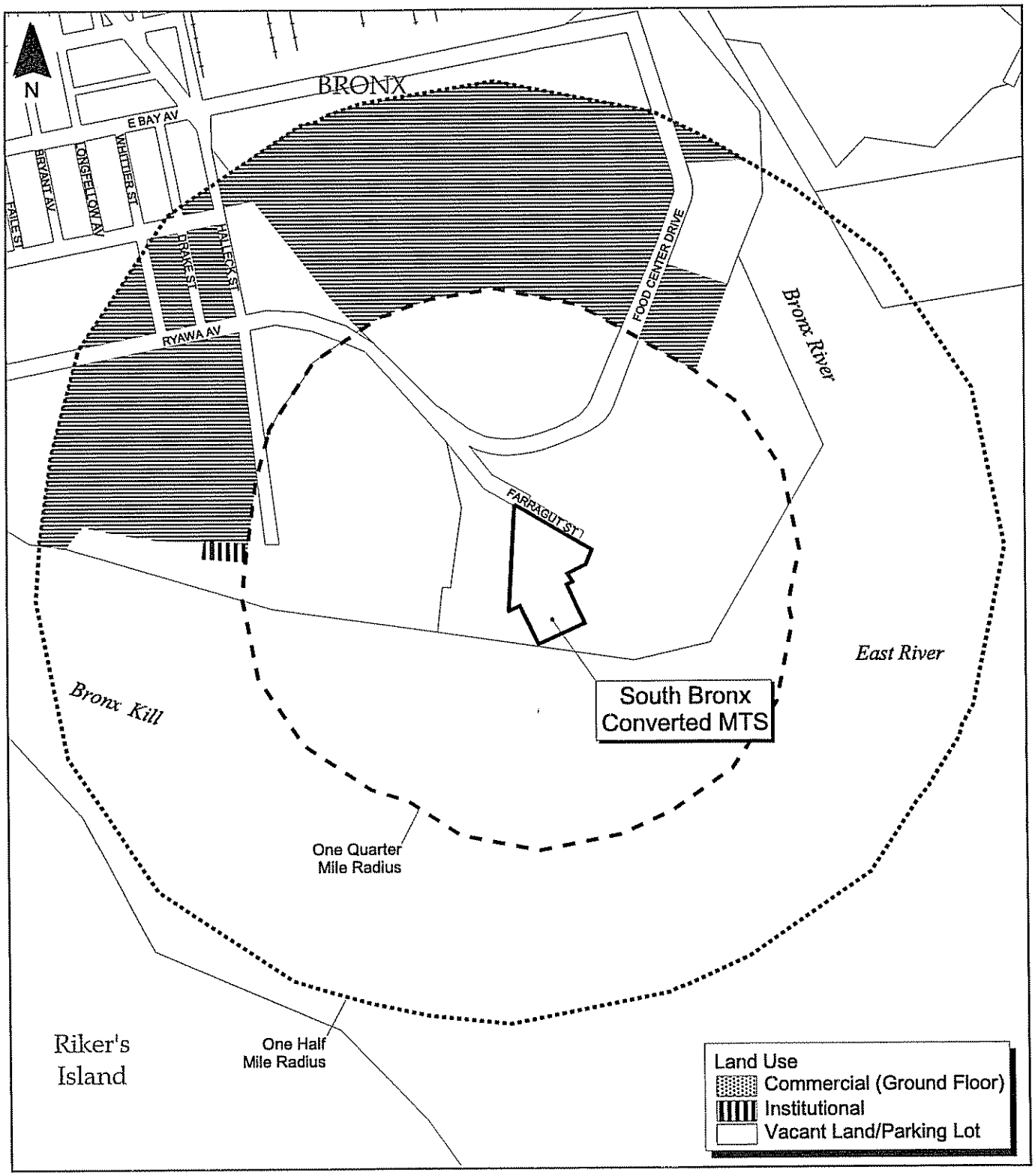
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Figure 19.2-1 Land Use in the Primary Study Area

South Bronx Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

Figure 19.2-2 Land Use in the Secondary Study Area

South Bronx Converted MTS

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A one-story, vacant goods distribution warehouse operated formerly by National Foods is located opposite the site, across Farragut Street. This facility is part of the City-owned Hunts Point Market, the wholesale food market and distribution center built in the 1970s that covers nearly the entire eastern half of the Hunts Point peninsula. The Hunts Point Market serves as the primary distribution point for meat and produce within the tri-state area. The meat market is located within the primary and secondary study areas, while the produce market extends north from East Bay Avenue.

Outdoor movement of meat occurs around the meat market buildings. Distribution and delivery to these buildings and some of the other facilities in the Hunts Point Market is by both truck and rail. The Hunts Point Rail Loop Spur extends into the primary study area, following Food Center Drive, a loop roadway serving the market.

The City Department of Correction's prison barge, known as the Vernon C. Bain Center (City Correctional Facilities Maritime Facility III), is located at 1280 Ryawa Avenue to the west of the site. The land area adjacent to the barge is fenced off from the site and is undeveloped and partly wooded. The prison barge is one of the Department of Correction's reserve facilities that is closed or opened on an as-needed basis in response to inmate population fluctuations. It is an 80-bed facility currently in use at full capacity. The 30-acre parcel vacant upland of the prison barge is currently being graded for construction of the relocated Fulton Fish Market.

19.2.1.2.3 Land Uses in the Secondary Study Area

Several one-story market buildings and a two-story cold storage warehouse building are located in the secondary study area, north-northeast of the site within the Hunts Point Market. Paved storage and parking areas that surround these distribution warehouses are separated from Farragut Street by wire fencing. Major food distribution businesses including National Foods, Krasdale Foods, and Bazzini Nut Corporation are located off Food Center Drive.

Additional Department of Correction vacant property is to the west of the site. Further west, just within the ½-mile secondary study area is the Hunts Point WPCP operated by NYCDEP. Private industrial and heavy commercial uses, such as auto salvage yards, are located on Ryawa Avenue, Halleck Street, Drake Street and Whittier Street.

Beyond the secondary study area to the northwest and east, respectively, the Hunts Point peninsula contains additional industrial uses and the Hunts Point residential community (with approximately 11,400 residents).

19.2.1.3 Zoning On and Near the Site

19.2.1.3.1 Zoning Within the Primary Study Area

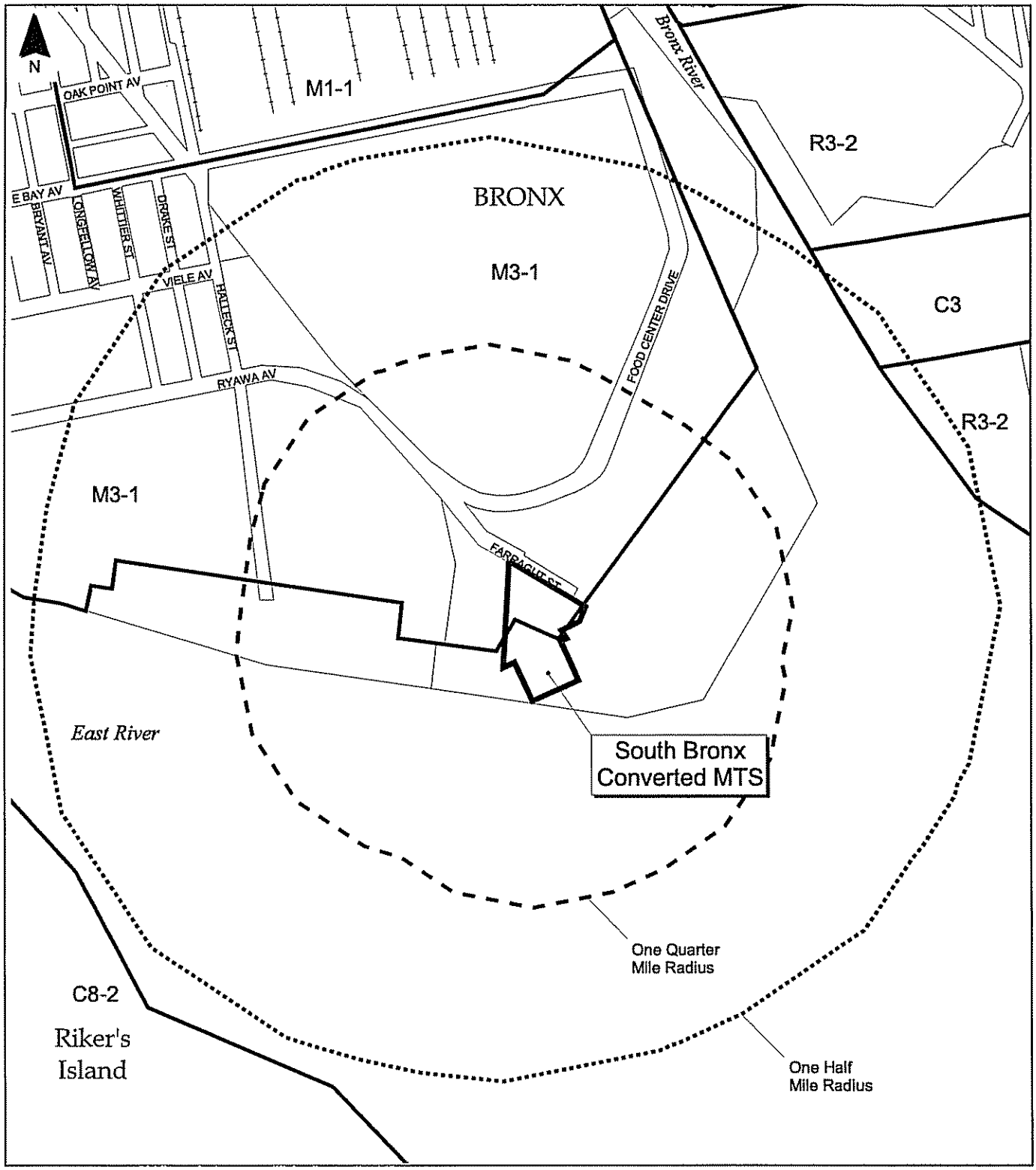
The site and surrounding properties within both the primary and secondary study areas fall within an M3-1 heavy industrial district that extends north to approximately East Bay Avenue and Randall Avenue, where it abuts an M1-1 light industrial district. Most of the Hunts Point peninsula is zoned for manufacturing, with the exception of the 20-block residential area located at the northeastern end (see Figure 19.2-3 and Table 3.4-1: Zoning District Characteristics), about one mile from the site.

19.2.1.3.2 Zoning Within the Secondary Study Area

North of the subject M3 district is an M1-1 light industrial zoning district that covers areas outside of the secondary study area surrounding Randall Avenue and east to approximately Longfellow Avenue.

19.2.1.4 Plans and Policies

In its FY 2004 CDNS, Bronx Community Board 2 (South Bronx) refers to the community's anticipated use of the Bronx River and shoreline areas outside the study area for recreational and educational purposes, but it refers to the designation of the Hunts Point waterfront as an SMIA, thus making it suitable for water-dependent industry. However, the document states that because the district perceives that it is unfairly burdened by private and public waste transfer facilities located in the district, the Community Board has adopted a policy of "zero tolerance for any proposed new waste transfer station in the district."



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of Planning

500 0 500 Feet

Figure 19.2-3 Zoning

South Bronx Converted MTS

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The proposed Hunts Point Streetscaping and Transportation Enhancement Program is intended to improve the quality of life in residential areas on the Hunts Point peninsula. It includes traffic calming measures, landscaping and other improvements, including improving the industrial park with color-coded signage, lighting and streetscape improvements. Program recommendations include the decommissioning of certain truck routes. The Hunts Point Action Plan is a separate $20 million City initiative to pave streets and sidewalks and undertake bridge improvements on the peninsula.

Reach 7 of the NYCDCP's Plan for the Bronx Waterfront, which covers the South Bronx, makes several recommendations for the Hunts Point peninsula in the vicinity of the site. The plan recommends:

- Conservation of the existing natural edge along the waterfront for shoreline areas to the north of the site in order to soften the industrial character of the Hunts Point Market as seen from the East River and Soundview Park.
- Increased use of barge transport, including for solid waste transport. (Two sites within the Hunts Point Market food distribution center are cited as having barge access potential, including one point approximately ¼-mile northeast of the South Bronx Converted MTS site.)
- Waterfront public access improvements that emphasize sites within other parts of Hunts Point, such as the Tiffany Street Pier and Lafayette Street. However, a pedestrian access point is recommended at the end of Farragut Street adjacent to the South Bronx Converted MTS site, where local residents already access the waterfront informally for fishing.
- Exploring the reuse of the site as a waterfront park with an esplanade and fishing pier serving the Hunts Point community, in the event that it is vacated by DSNY.

The only element of the Reach 7 plan that is being implemented currently is the reconstruction of the Tiffany Street Pier as a public access pier with fishing and passive recreation facilities (see Section 19.12 for a review of consistency with the WRP).

19.2.2 Future No-Build Conditions

Two major developments are underway or proposed within ½-mile of the site. Figure 19.2-4 shows the planned development sites. Development plans include the following:

- The Fulton Street Fish Market will be relocated from Manhattan to the largest site, a 30-acre parcel site west of the South Bronx Converted MTS site, by the end of 2004. The newly constructed two-story 450,000-square-foot facility will house 55 businesses.
- The Hunts Point WPCP Expansion Project is currently underway. It encompasses a large waterfront site west of the South Bronx Converted MTS site and the prison barge, and will be substantially complete by 2006.

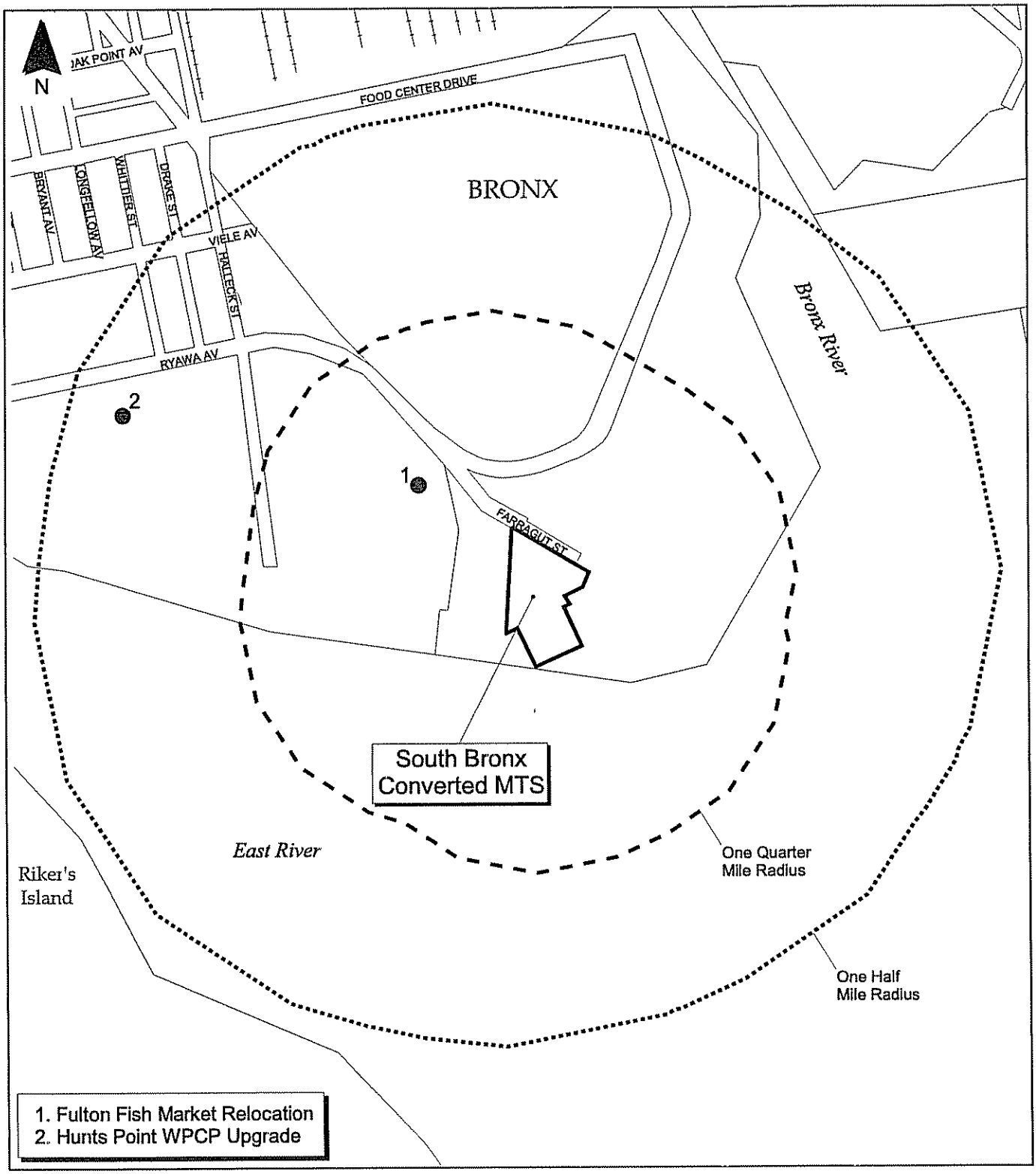
The Hunts Point Action Plan, developed in 1997 to improve signage on the peninsula and to address truck routing, will be in place by 2006.

The only element of the Reach 7 plan expected to be implemented is the reconstruction of the Tiffany Street Pier as a public access pier for fishing and passive recreation. This project will enhance waterfront public amenities on the greater Hunts Point peninsula. The site itself will remain DSNY property, and the existing MTS will remain standing. The associated DSNY salt storage facility and SHS will continue to be fully operational.

19.2.3 Potential Impacts with the South Bronx Converted MTS

19.2.3.1 Land Use and Zoning

The South Bronx Converted MTS represents a slight physical upgrading of the site. The existing MTS, which extends over water, would be demolished, and the new facility would be built in approximately the same location. The South Bronx Converted MTS processing operation would be designed to containerize waste and prepare containers for transfer to barges for disposal outside the City. The entrance to the facility would be moved slightly to the west. The existing salt shed and SHS would remain intact.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 19.2-4 Planned Development Sites

South Bronx Converted MTS

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The reactivation of waste transfer activities on the site would have no effect on land uses nearby and the truck traffic would be consistent with the heavy industrial character and zoning of the primary and secondary study areas.

19.2.3.2 Consistency with Public Plans and Policies

The South Bronx Converted MTS is consistent with recommendations of the Reach 7 plan, which promote increased use of barge for solid waste transport. While the Reach 7 plan discussed a potential future Hunts Point waterfront park on the site, this is only recommended in the event that the site is no longer used by DSNY. Therefore, this recommendation does not conflict with the South Bronx Converted MTS. The South Bronx Converted MTS would not preclude use of land at the end of Farragut Street as a designated pedestrian waterfront access point, although it could detract from the enjoyment of that adjacent waterfront experience. It is reasonable to assume, however, that pedestrian waterfront access would be better accommodated by the new Tiffany Street Pier and Barretto Point Park, which will be in place west of the site by 2006. Although the presence of the South Bronx Converted MTS operations would be consistent with the SMIA designation, as the Community District (CD) 2 Statement of Needs says, it would be inconsistent with the Community Board's zero-tolerance policy.

19.3 Socioeconomic Conditions

19.3.1 Existing Conditions

19.3.1.1 Definition of the Study Areas

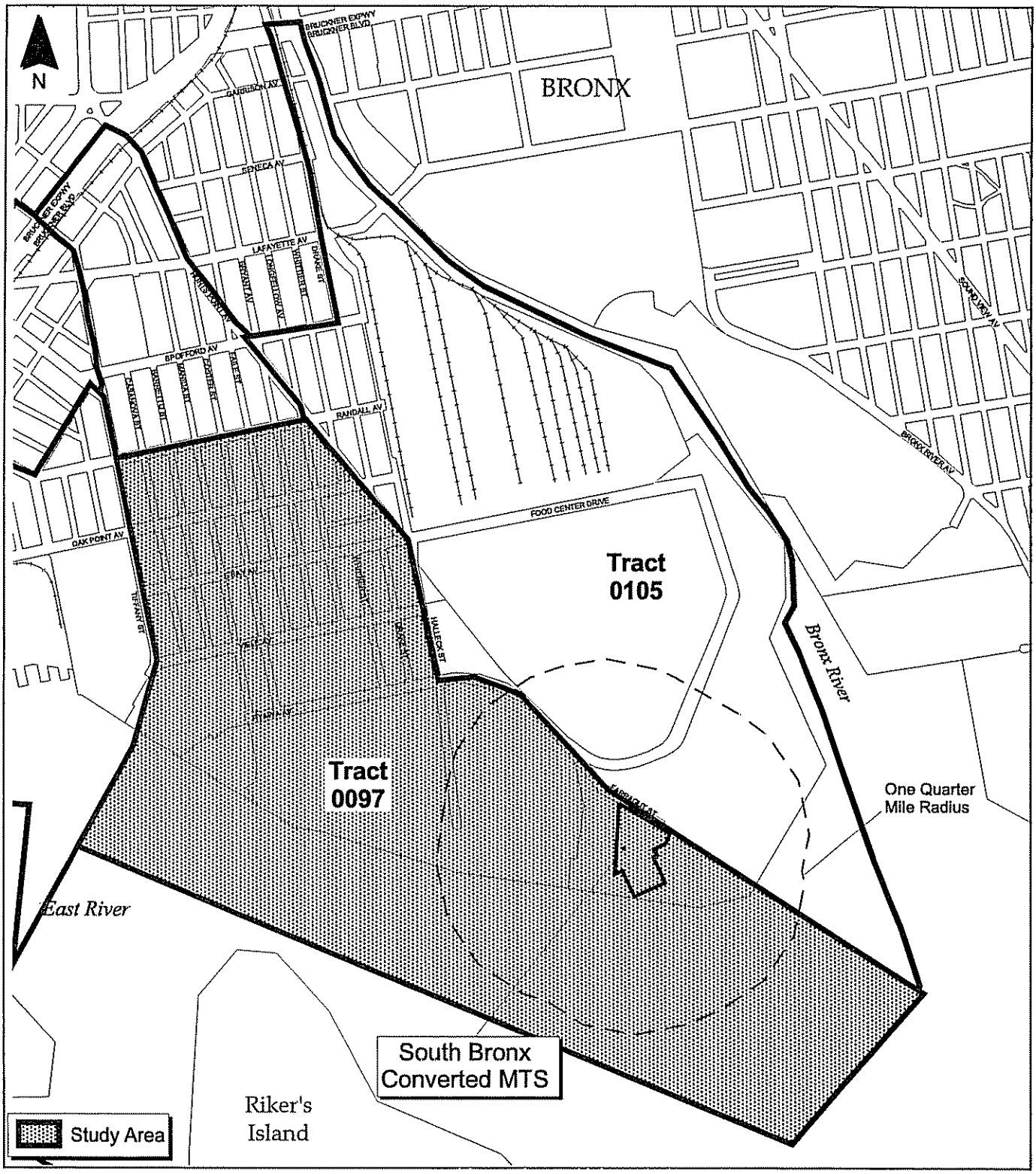
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area consists of Census Tract 97 (see Figure 19.3-1). The tract encompasses predominantly industrial areas on the southern and eastern portions of the Hunts Point peninsula and contains some scattered residential areas. The study area for the assessment of potential impacts on economic conditions extends to approximately Viele Avenue.

19.3.1.2 Demographic Characteristics

Because the 2000 population of the study area consisted of only 92 individuals and 13 families, none of who would be directly displaced by the South Bronx Converted MTS, a detailed demographic review is not presented here. Socioeconomic data (comparing 1990 and 2000 census data for the study area, borough and City) were collected, however, and are provided in Appendix B.

19.3.1.3 Economic Conditions

The site is adjacent to the Hunts Point Market, a City-administered (NYCEDC) industrial park that is the main wholesale food distribution center for the New York region. A vacant one-story, canned food goods distribution warehouse formerly operated by National Foods is across Farragut Street from the site. Other business and institutional uses within ¼-mile north of the site include additional Hunts Point Market distribution and warehouse uses, including meat market buildings, and a City Department of Corrections property (prison barge). Several other one-story market buildings and a two-story cold storage warehouse building are between ¼- and ½-mile north-northeast of the site within the Hunts Point Market. Major food distribution



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

Figure 19.3-1 Census Tracts

South Bronx Converted MTS

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businesses, including Krasdale Foods and Bazzini Nut Corporation, are off Food Center Drive, a loop roadway serving the market. Industrial and heavy commercial uses, including auto salvage yards and waste transfer stations, are outside of the market in the industrially-zoned portions of Hunts Point. These industrial and heavy commercial uses are located at a distance of approximately ½-mile to the west of the site.

The Hunts Point EDZ extends beyond the boundaries of the ½-mile study area. The EDZ was developed to stimulate economic activity in distressed areas and encourage business development through targeted incentives and benefits to new and expanding commercial and industrial firms. State benefits are available through wage tax credits, investment tax credits, sales tax refunds on building/construction costs and financial assistance. Utility discounts and free security surveys are provided to relocating or expanding businesses. This is one of the City's most successful EDZs, with 130 businesses certified to participate in its programs. In 1998, 500 new jobs were created in the EDZ and $25 million in private investment was leveraged. The Hunts Point Local Development Corporation (LDC) is the local sponsor of the EDZ. It has been involved with planning and upgrading initiatives for the entire Hunts Point peninsula.

Current forecasts indicate that about 22,757 employees worked in Bronx CD 2 in 2005, which was about 8% of the borough's total employment.[1]

19.3.2 Future No-Build Conditions

19.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Bronx CD 2 will remain about the same as current conditions.[2]

The Department of Correction's prison barge adjacent to the site is currently fully occupied (800 inmates) and is expected to operate at this capacity in the Future No-Build Conditions.

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[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

19.3.2.2 Economic Conditions

Regional projections indicate that employment in Bronx CD 2 will remain about 8% of the borough total.[3]

The near-term economic health of industrial areas, such as Hunts Point, may be supported by established City programs available through the IDA. The Industrial Incentive Program and the Small Industry Incentive Program provide business tax incentives for capital renovation and expansion projects.

Hunts Point is part of the South Bronx portion of the Harlem/South Bronx EZ. The EZ is one of six such designated zones in the country where state and federal matching funds and tax incentives are available to attract private investment, generate job growth, stimulate business openings and expansions, construct new housing, expand home ownership and stabilize deteriorating neighborhoods. Bronx Overall Economic Development Corporation (BOEDC) is the designated LDC responsible for administering and implementing programs and initiatives within the Bronx portion of the EZ. The EZ is expected to expand the range of economic opportunities in Hunts Point.

19.3.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS represents the reactivation of solid waste transfer operations with added containerization operations. It would be compatible with its industrial surroundings and not be expected to have a significant adverse impact on socioeconomic conditions within the study area. Given the existing industries in the study area and the already high volume of truck traffic on designated truck routes in Hunts Point, no significant adverse impacts on socioeconomic conditions are anticipated.

[3] Historical Perspectives, Inc. Phase 1A Archaeological Sensitivity Report for DSNY Resource Recovery Project, Bronx, NY. 1986.

19.3.3.1 Residential Impacts

Because the South Bronx Converted MTS would be relatively removed from the interior residential concentrations on the Hunts Point peninsula and because trucks accessing the site would use existing designated truck routes, it is not expected to significantly affect the residential population of Hunts Point. A six-story apartment building located at the intersection of Spofford Avenue and Tiffany Street and an adjacent small home, both of which are adjacent to a designated truck route, would likely experience the greatest effects from the expected increase in truck traffic. However, analyses of traffic, air quality and noise indicate that there would be no significant project-related impacts at these locations (see Sections 19.14, 19.16, and 19.17). Therefore, the South Bronx Converted MTS is not expected to result in indirect displacement of residents.

19.3.3.2 Direct Business and Institutional Impacts

No direct displacement of businesses or institutions would occur as a result of the South Bronx Converted MTS.

19.3.3.3 Indirect Business and Institutional Impacts

The South Bronx Converted MTS would be compatible with its industrial surroundings. The adjacent Hunts Point Market uses are not expected to experience significant adverse effects related to air quality or odor as a result of the operations of the South Bronx Converted MTS. While noise levels will increase on the site, they are not expected to affect the surrounding food distribution activities, which themselves would be expected to generate high noise levels, or the industrial operations of businesses in the study area. The site was used previously as an MTS within the same Hunts Point Market environs and its reuse for this purpose would not be expected to preclude food distribution activities nearby.

Increased truck volumes on designated truck routes in Hunts Point resulting from the South Bronx Converted MTS would not be expected to result in indirect displacement of existing businesses or institutional uses, as these routes are already heavily used by trucks and have an

industrial character. The Corpus Christi Monastery and the Spofford Juvenile Detention Center, located adjacent to the Tiffany Street truck route, may experience some additional environmental effects from increased truck traffic, such as air and noise emissions; however, these increases would not be expected to result in significant adverse impacts.

19.3.3.4 Employment Impacts

The South Bronx Converted MTS would be expected to generate approximately 85 jobs associated with its operation and maintenance (crane operators, mechanics, supervisors), marine operations (barge personnel, crane operators) and transportation operations (drivers, dispatchers). In addition to direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

19.4 Community Facilities and Services

19.4.1 Existing Conditions

19.4.1.1 Definition of the Study Areas

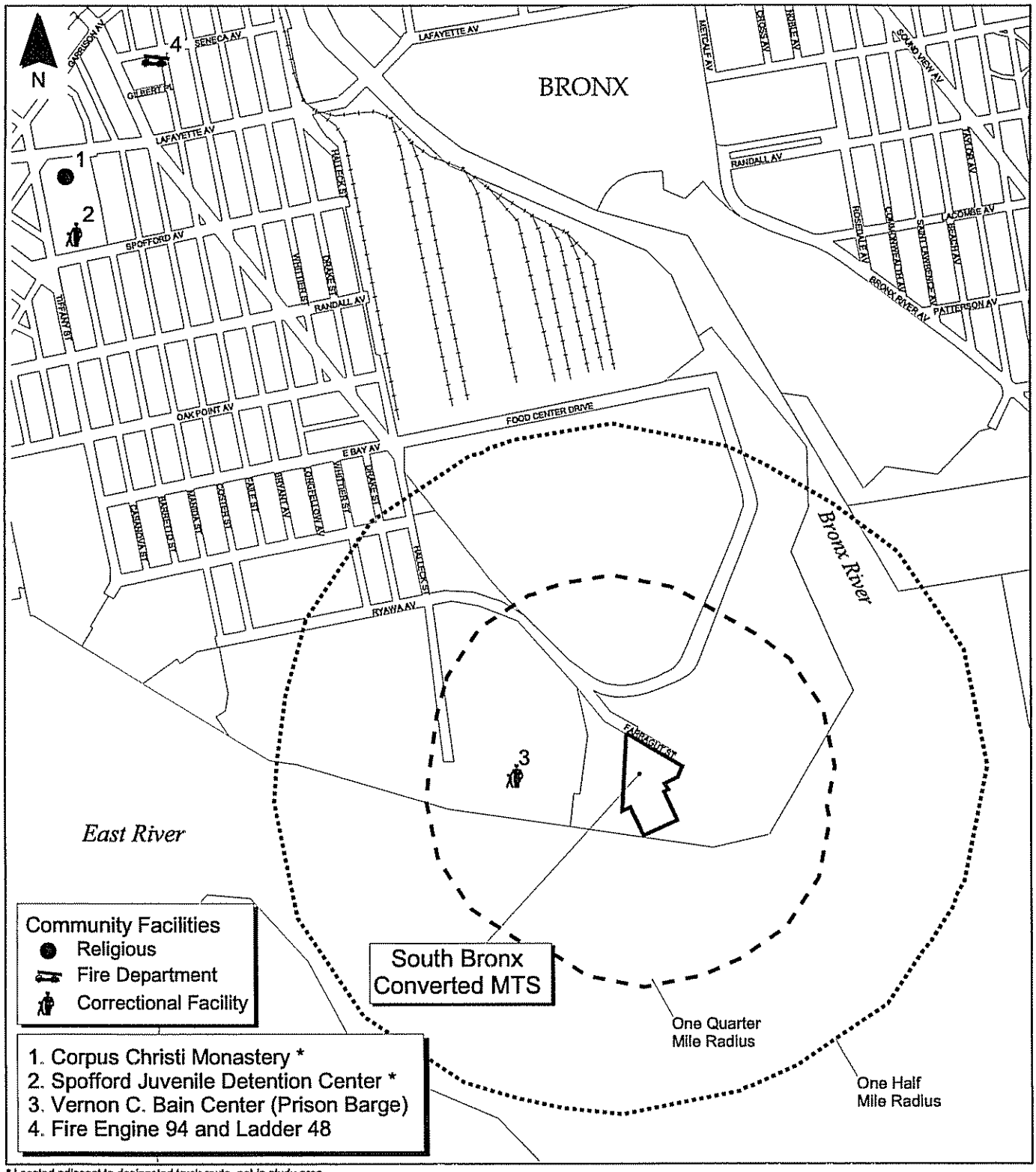
The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile from the site.

19.4.1.2 Summary of the Community Facilities and Services

There are no community facilities or institutional uses in or closely bordering the primary or secondary study area other than the Vernon C. Bain Center (prison barge) immediately to the west of the site (see Figure 19.4-1). The Corpus Christi Monastery and the Spofford Juvenile Detention Center are on a block bounded on the west by Tiffany Street, which is part of the inbound truck route. Although neither facility is within or serves the study area, the potential for impacts on these uses is analyzed within this section. The prison barge and community facilities located outside of the secondary study area are listed in Table 19.4-1.

19.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions.



* Located adjacent to designated truck route, not in study area.
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations, and hospitals outside the secondary study area may not be shown on the figure.

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Figure 19.4-1 Community Facilities and Services

South Bronx Converted MTS

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Table 19.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Correctional Facilities	
Vernon C. Bain Center (prison barge)	1 Halleck Street
Outside the Secondary Study Area	
Hospitals	
Lincoln Medical Center	234 East 149th Street
Police	
41st Precinct – Police Station	1035 Longwood Avenue
Fire	
1st Engine and Ladder Company – Engine 94 and Ladder 48	1226 Seneca Avenue
2nd Engine and Ladder Company – Engine 96 and Ladder 54	1689 Story Avenue
Correctional Facilities	
Spofford Juvenile Detention Center	1221 Spofford Avenue
Religious and Cultural Institutions	
Corpus Christi Monastery	1230 Lafayette Avenue

19.4.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the South Bronx Converted MTS.

19.5 Open Space

19.5.1 Existing Conditions

19.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

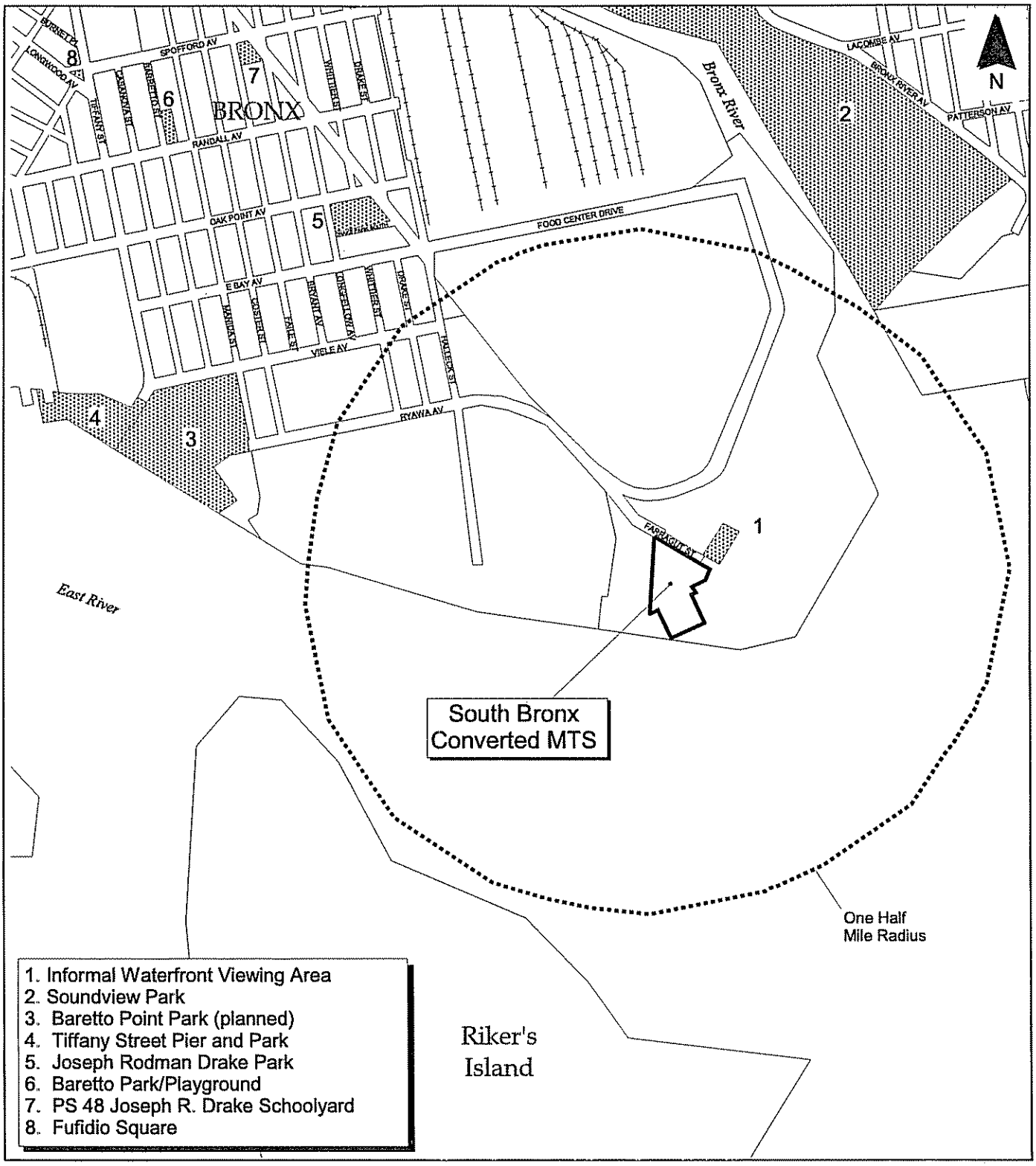
19.5.1.2 Summary of Open Space in the Study Area

There is only one small informal open space in the study area at the terminus of Farragut Street and Easter River (approximately 0.1 acres) and a large undeveloped City park (Soundview Park) just outside the study area, with no direct access to the peninsula. They are shown on Figure 19.5-1. The outdoor exercise area on the prison barge is not included because it is not publicly accessible. Joseph Rodman Drake Park is also located just outside the study area on Oak Point Avenue and Farragut Street.

19.5.2 Future No-Build Conditions

No changes are expected by 2006 to the informal open space located at the end of Farragut Street. It is reasonable to expect that waterfront access in the vicinity, however, will be better accommodated by Barretto Point Park, which will be complete by 2006.

Future No-Build park improvements outside the study area include three projects in Soundview Park: (1) a new playground; (2) a street park in the northern portion; and (3) a canoe/kayak access point incorporated into greenway parks to allow kayaking up the Bronx River as well as the East River.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of Planning

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Figure 19.5-1 Open Space/Parkland
South Bronx Converted MTS

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19.5.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS is not expected to result in significant impacts on the parkland. People who use the informal open space at the end of Farragut Street may be affected by the re-introduced MTS operations and the associated presence of trucks and hopper barges. However, the effect would not be considered significant. The new Tiffany Street Pier, including parkland to the west of it, and Barretto Point Park located adjacent and to the east of it, are under development and will be completed by 2006. These new park areas would accommodate the demand for waterfront access currently met by the inadequately maintained informal access point at the end of Farragut Street. Though outside the study area, these new parks provide more than 11 acres of waterfront public open space, which has long been demanded by the Hunts Point community. The South Bronx Converted MTS would not otherwise physically change, diminish or eliminate any open space or reduce its use, utilization or aesthetic value, nor would it introduce a substantial new user population that would create or exacerbate an over-utilization of this resource.

19.6 Cultural Resources

19.6.1 Existing Conditions

19.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site.

19.6.1.2 Development History of the Area

Native Americans called the peninsula Quinnahung, while the English name, "Hunts Point," was derived from its late 17th-century proprietor, Thomas Hunt. Thomas Hunt built his mansion in 1668 at the end of the Hunts Point peninsula, in the vicinity of the site, where it remained, although in disrepair, until the early 20th century.

In the 19th century, wealthy people settled in Hunts Point and mansions were constructed. Hunts Point was an independent village until it was annexed by the City in 1874. Three prominent families who settled on the peninsula, the Leggetts, Foxes and Tiffanys, were descendants of the original Leggetts who had owned the land on the western portion of the peninsula. This area, which includes Oak Point, eventually contained an amusement park, ball fields, picnic grounds and a bathing beach from the time of the Civil War until around 1908.

Northwestern portions of Hunts Point developed rapidly with apartment buildings in the early decades of the 20th century, following the introduction of IRT subway service to Manhattan. In the first half of the 20th century the population was mainly Jewish, with some German, Irish and Italian immigrants. The American Banknote Building was a prominent early structure in the northern portion of the peninsula.

Starting in the 1960s, the area declined due to housing abandonment, poverty, crime and drugs, as did other areas in the South Bronx. Only recently have most of the vacant apartment buildings in Hunts Point been renovated through City housing programs. The Hunts Point Market has replaced former residential development on much of the southeastern portion of Hunts Point peninsula with food distribution facilities.

Further inland from the Hunts Point peninsula, though within the greater Hunts Point community, is the Longwood Historic District, which is listed on both the State and National Registers of Historic Places. It is nearly two miles from the site, located several blocks northwest of the Bruckner Expressway, between Leggett Avenue and Longwood Avenue. It features mostly semi-detached neo-Renaissance two- and three-family houses as well as single-family homes, apartment buildings, a church and a former synagogue.

19.6.1.3 Cultural Resources on the Site

There are no standing structures of architectural significance on the site.

Historians have identified records of prehistoric sites in the vicinity of, and further to the north of, the site. Bolton (1922) describes "masses of shells" found on the shore at a site near the end of the peninsula and other prehistoric sites located at Farragut Street and Randall Avenue, and near the current location of the Bruckner Expressway.[4] Previous cultural resources analyses of the area have suggested that these probably were not Native American village sites but were probably temporary and seasonal specialized camps for food collection. These sites are not expected to be intact, given past development activity that has likely disturbed them. However, there may be undiscovered prehistoric cultural resources on the site or in the area.

[4] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03. Historical Perspectives, Inc. Phase 1A Archeological sensitivity Report for DSNY Resource Recovery Project, Bronx, NY. 1986.

19.6.1.4 Cultural Resources Within the Study Area

There are no state, national or local historic districts or individually-designated properties within the site or the study area.

19.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review. Anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

19.6.3 Potential Impacts with the South Bronx Converted MTS

Based upon its review, SHPO has stated that the South Bronx Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, State and National Registers of Historic Places. The LPC has stated that the site contains no architectural or archeological significance (see Appendix A). The South Bronx Converted MTS would not result in adverse impacts to cultural resources and no mitigation measures would be warranted.

19.7 Urban Design, Visual Resources, and Shadows

19.7.1 Existing Conditions

19.7.1.1 Definition of the Study Area

The urban design and visual quality study area is limited roughly to the tip of the Hunts Point peninsula, marked by the intersection of East Bay Avenue, with Farragut Street as the northernmost point and Manida Street as the westernmost edge. The site has been developed in a manner consistent with adjacent properties and the overall study area. It currently is a non-sensitive industrial area in terms of urban design and visual quality conditions. There are no view corridors or publicly accessible open areas or formal points of waterfront access that reasonably would be expected to experience visual-quality impacts from the South Bronx Converted MTS. The study area includes planned park development in the vicinity of the site that may be sensitive in order to allow full assessment of potential urban design and visual quality impacts to the planned new uses.

19.7.1.2 Description of the Site

Views of the site include the existing MTS, which is no longer in use. It is a large shed-like, grey, metal structure with a sloping roof and a maximum height of 67 feet (see Figure 19.7-1). A wide ramp leads from Farragut Street to an open, 41-foot-wide entrance on the building's north side. A nearby SHS faces Farragut Street. The SHS consists of a concrete slab and asphalt pavement surrounded by concrete bin walls that are topped with cyclone fencing (see Figure 19.7-2). To its rear between the SHS and existing MTS is a conical-shaped salt storage shed that is several stories high.

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Figure 19.7-1 : View of the MTS building looking south from the site entrance. (Photo 2000)



Figure 19.7-2 : SHS facility and storage shed on western portion of the project site as viewed from Hunts Point Avenue. (Photo 2000)

Figure 19.7-1 and 19.7-2
Urban Design and Visual Quality
South Bronx Converted MTS

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19.7.1.3 Urban Design and Visual Resources of the Study Area

The area has an industrial character. Its appearance suffers from barbed-wired fences, debris and a lack of landscaping (see Figure 19.7-3). In the immediate vicinity of the site, Farragut Street is lined with chain link fences. Debris is visible on the periphery of the truck distribution facility parking lot that extends upland within the interior of the property north of the site. A small open area at the end of Farragut Street is used informally for fishing and water viewing, though this area is not landscaped, and concrete barricades prohibit vehicular access (see Figure 19.7-4).

The southeastern end of the Hunts Point peninsula is characterized by low-scale, light industrial uses, including food distribution warehouses that are part of the Hunts Point Market, abutting the Bronx River. Several large, one-story distribution warehouses are oriented around the Food Center Drive loop, in the market area northeast of the site.

The waterfront property west of the site is graded for construction of the Fulton Fish Market, with the moored prison barge abutting the bulkhead (see Figure 19.7-5). The top of the white and blue prison barge can be seen from the end of Farragut Street, beyond the overgrown wooded area at its base. It is approximately five to six stories high and has a stark, modern appearance. The area abutting the site at the end of Farragut Street reveals views of the waterfront and the distant Queens shoreline to the south and east, and Queens and Rikers Island to the southwest (see Figure 19.7-6).

19.7.2 Future No-Build Conditions

Changes to the visual environment will result from the relocation of the Fulton Fish Market and the expansion of the Hunts Point WPCP, two large-scale projects that, in addition to Hunts Point Market development, will develop much of the land that currently stands vacant and increase the density of large-scale development. The additional development of food distribution and warehouse uses will increase the built density of this area. The area surrounding the site is likely to continue to be an industrial area with no significant visual amenities other than waterfront views.

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Figure 19.7-3 : The terminus of Hunts Point Avenue looking southeast. (Photo 2000)



Figure 19.7-4 : Hunts Point Market and informal waterfront viewing area, looking northeast from the site. (Photo 2000)

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Figure 19.7-5 : View of southwestern portion of the site, looking toward the moored Prison Barge. (Photo 2000)



Figure 19.7-6 : View of the East River and Riker's Island looking southwest from the site. (Photo 2000)

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The site will remain DSNY property, the existing MTS will remain standing and the DSNY salt storage facility and SHS will continue to be fully operational.

19.7.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS would be constructed over water in approximately the same location as the existing MTS, which would be demolished. It would not result in significant visual impacts on the study area since it is already industrial in character and contains no residential uses, parkland areas or historic structures. Views from the informal waterfront area nearby would be affected by increased truck presence and barge traffic, but these changes would not have significant adverse impacts on the urban design or visual quality of the area. Views to the east from the prison barge, a residential facility that houses detainees on a temporary basis, would be altered slightly.

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.) If this site were chosen and a noise wall used as the preferred mitigation, a supporting analysis would be conducted.

A survey was conducted within this 430-foot area and found that there were no parks, publicly-accessible open spaces, historic resources or important natural features; therefore, no assessment of shadows was deemed necessary and no shadow impact is expected as a result of the proposed project.

19.8 Neighborhood Character

19.8.1 Existing Conditions

19.8.1.1 Definition of the Study Area

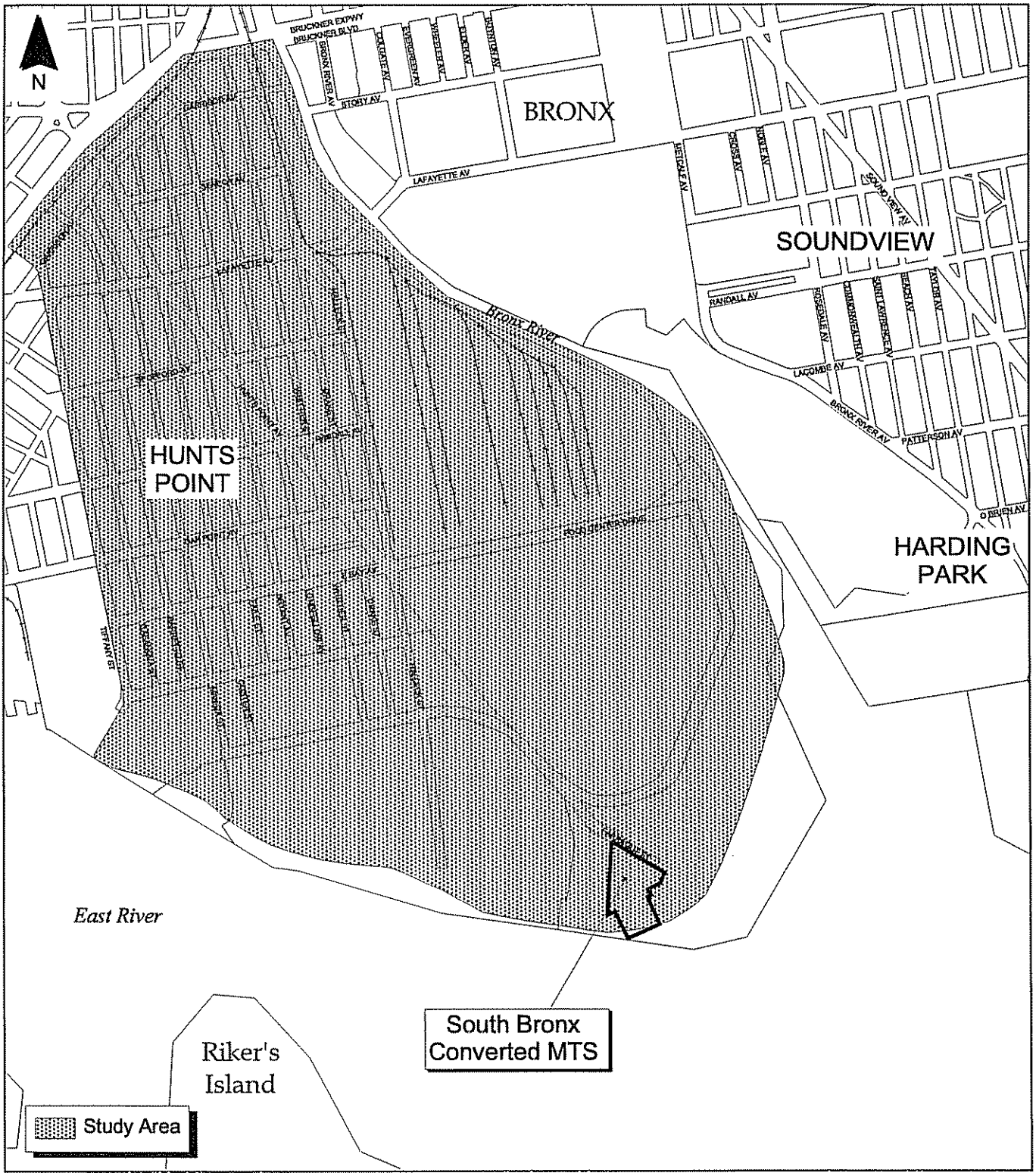
The neighborhood character study area for the site is defined by the predominantly industrial land use and visual quality, which are the two major factors contributing to the neighborhood character of the site and surrounding properties. Additionally, traffic patterns contribute to the definition of the study area because project-related increases in truck traffic would occur on routes that traverse the peninsula from the Bruckner Expressway via Tiffany Street, Halleck Street, Randall Avenue and Viele Avenue. The study area, therefore, also includes the residential and commercial areas comprising the remainder of the peninsula upland from the site. The study area is defined as the overall Hunts Point peninsula east of Tiffany Street, which extends from the Bronx River to the East River, southeast of the Bruckner Expressway (see Figure 19.8-1).

19.8.1.2 Description of Neighborhood Character

The character of the area within ½-mile of the site is defined by low-scale, low-density heavy commercial and industrial uses, large municipal facilities and vacant land.

The Hunts Point Market, the largest property in the vicinity of the site, shapes the character of the area. This wholesale food distribution center is the largest such facility in the country, and as such, generates considerable amounts of truck traffic. Its large warehouse and refrigerated warehouse buildings are oriented around Food Center Drive.

In addition to the pervasive industrial character of the southern and eastern portions of the peninsula, there is a vital residential neighborhood comprising approximately two dozen blocks about one mile north of the site. This neighborhood features dense housing and ground-floor commercial services clustered along Farragut Street between the Bruckner Expressway and Randall Avenue. Schools and other community facilities are located nearby.



Site Delineations are approximate.
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 19.8-1 Neighborhood Location

South Bronx Converted MTS

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The elevated Bruckner Expressway to the north visually separates the peninsula from the inland areas (extending to Westchester Avenue) that are also considered part of the larger Hunts Point community. This highway and the CSX/Amtrak rail line below grade present a physical barrier, limiting roadway crossings into the peninsula. The peninsula community contains relatively little open space, aside from the Tiffany Street Pier west of the site, and Joseph Rodman Drake Park, which is located 2/3-mile northwest of the site, and it contains a historic cemetery and passive recreation areas.

Farragut Street serves as the primary entry point into the peninsula and is the central hub of the larger community. A 19th-century rail depot building on the north side of Farragut Street between Garrison Avenue and Bruckner Boulevard is a visual landmark that can be seen as one crosses below the Bruckner Expressway onto the peninsula. Farragut Street is lined with heavier commercial uses farther to the southeast, such as auto glass repair establishments. It eventually leads into the industrial districts to the south.

The overall Hunts Point area developed in the early 20th century with the extension of the subway towards Pelham Bay. At this time, the area was settled predominantly by Jewish, German, Irish and Italian immigrants. It later became a predominantly Puerto Rican and Black community. Hunts Point has experienced declining population and disinvestment since the 1970s. Public safety concerns have included high crime rates, prostitution and drug dealing.

19.8.2 Future No-Build Conditions

No significant variations to the area's industrial neighborhood character are expected by 2006, though the industrial development will be intensified. The Hunts Point WPCP upgrade will be substantially complete by 2006 and the relocated Fulton Fish Market will be in full operation. Some upgrading of the area's housing stock, business uses and street conditions may occur as well.

Various other City agency plans for Hunts Point may have a positive impact on neighborhood character in the Future No-Build year, though they would increase truck traffic on the Hunts Point peninsula to some degree and replace undeveloped land with food distribution warehouses. Hunts Point Market expansion plans, truck routing and signage improvement plans, which are discussed in Section 19.2, would also further develop the industrial suitability and character of the area.

The site will remain DSNY property and the existing MTS will remain standing. The salt storage facility and SHS would continue to be operational.

19.8.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS is not expected to result in significant impacts on neighborhood character since it would be consistent with the heavy industrial character of the area within ½-mile of the site, which is considerably removed from the residential portion of the community. The South Bronx Converted MTS would be visible only from the end of Farragut Street by visitors to the informal waterfront viewing location, which is not a permitted access point, and is barricaded and strewn with garbage. As described in Section 19.5, Open Space, the Tiffany Street Pier and Barretto Point Park will be developed west of the site by 2006 and will safely accommodate the need for waterfront access in the vicinity.

The increase in truck traffic would increase delays at some intersections, but these delays could be mitigated through minor shifts in traffic signal timing. Technical studies predicted no significant air quality or odor impacts that would result from the South Bronx Converted MTS (Sections 19.14, 19.15 and 19.16).

Significant facility-generated noise impacts are predicted at the prison barge (approximately 400 feet away). These impacts, as described in Section 19.17 could not be mitigated. The prison barge is situated and designed so as to not be part of the surrounding community and neighborhood, however, so noise impacts to the prison barge are not indicative of potential changes to the character of the neighborhood as experienced throughout the study area overall, where no other impacts are predicted.

19.9 Natural Resources

19.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of the Bronx. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the South Bronx Converted MTS.

19.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bounded by the East River to the south (see Figure 2.4.1-1). The upland sections of the study area and the surrounding neighborhood are completely developed and, therefore, have very limited terrestrial natural resources. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of aquatic communities is included.

19.9.1.2 Geology

Based on August 1, 1995, boring data collected from within or directly adjacent to the proposed MTS site, the depth to bedrock at the site is roughly 15 to 51 feet below the existing grade. The borings ranged from 23 to 67 feet in depth. Geologic strata was encountered that had the following characteristics. Organic soil was encountered at ground surface and ranged from 2 to 8 feet in thickness. Below the organic soil, silty sand was present and ranged from 11.8 to 48 feet thick. The bedrock was encountered below the silty sand. Sediment grain size was 61% silt and clay, 22% sand and 17% gravel. The sediment was somewhat degraded due to contaminants in the sample material. Lead (approximately 71 mg/kg) and barium (approximately 64 mg/kg) had the highest metal concentrations in the sediment, followed by chromium and arsenic.

19.9.1.3 Floodplains

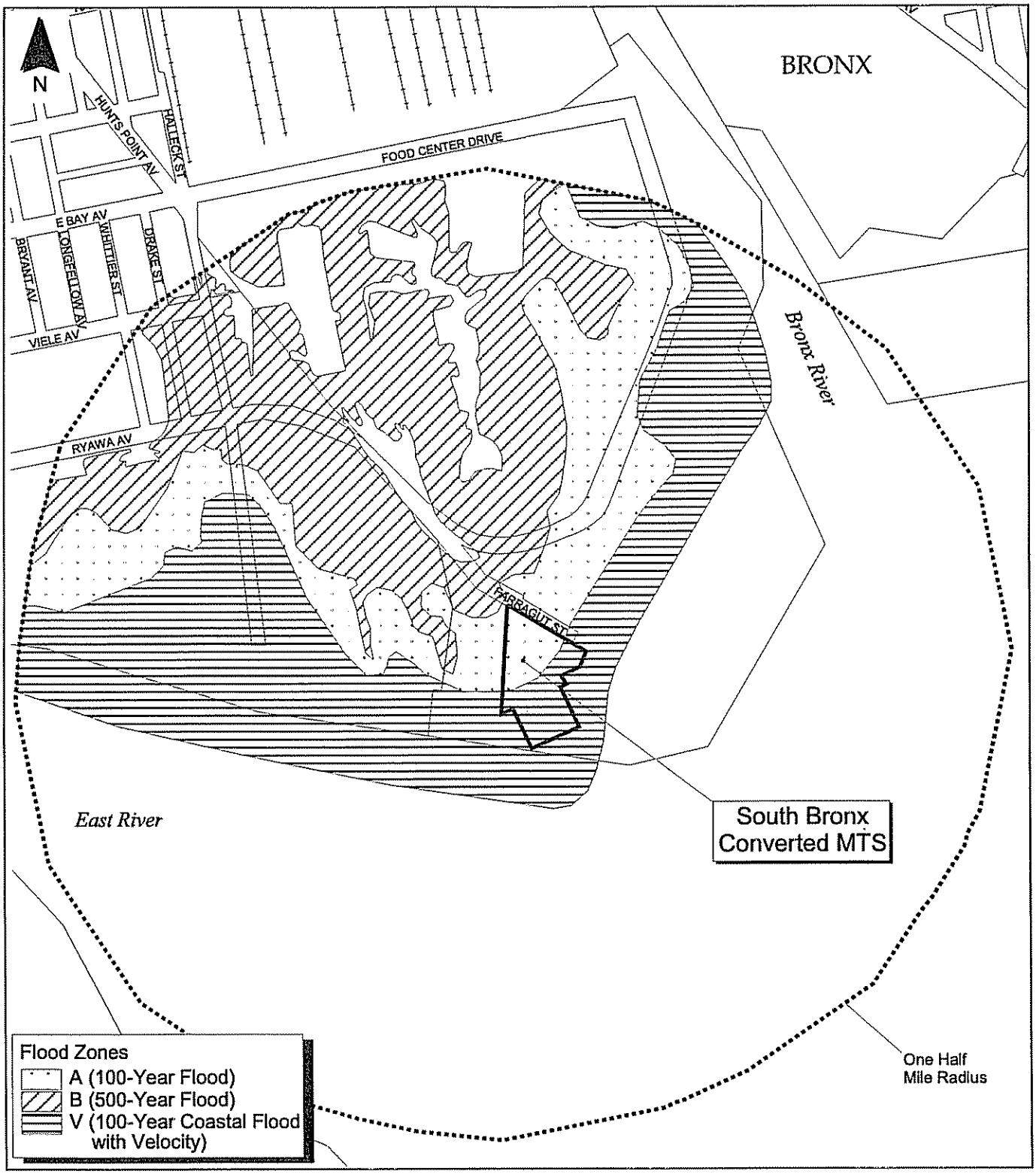
The site is constructed within the 100-year coastal floodplain (see Figure 19.9-1). There are no wetlands in the study area other than the East River, which is a NYSDEC-designated littoral zone (see Figure 19.9-2).

19.9.1.4 Ecosystems

The existing MTS is located on a platform linked to the south shore of the Bronx by a causeway. The upland portion of the study area is mostly developed and covered by structures and hard surfaces. The portions not developed have been altered by clearing and leveling and have no substantial ground cover other than opportunistic weeds. Vegetation within the study area is consistent with that of an urban vacant lot, as classified by Reschke[5] (see Figure 19.9-3).

The waters surrounding the study area are dominated by the East River, and the aquatic resources are typical of the eastern sections of the East River. A one-year survey of the marine habitat surrounding the South Bronx Converted MTS provided information on the baseline marine communities surrounding the MTS in 2003. This MTS was determined to be one of the most biologically productive MTSs sampled. The benthic and megainvertebrate communities and finfish egg diversity were all among the highest of the MTSs sampled. *Dyspanopeus sayi*, a mud crab unable to survive in low dissolved oxygen conditions, was also present at the South Bronx Converted MTS. Additionally, six adult and two larval EFH-listed finfish species were identified at the South Bronx Converted MTS.

[5] Reschke, Carol, 1990. *Ecological Communities of New York State*. New York Natural Heritage Program, NYSDEC.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

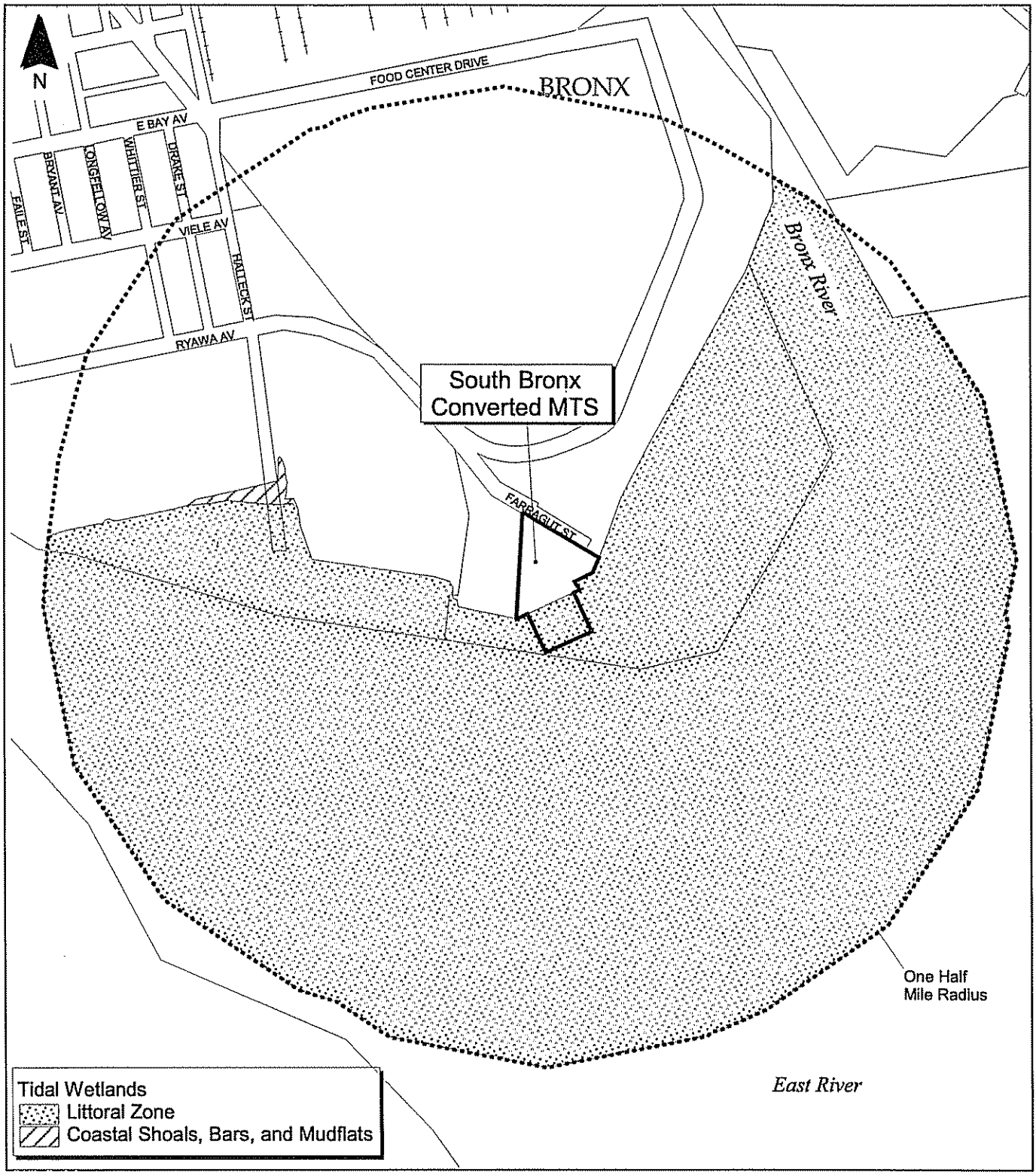
HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.9-1 Floodplains

South Bronx Converted MTS

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Site delinations and study area boundaries are approximate
Base Map Source: New York City Department of Planning

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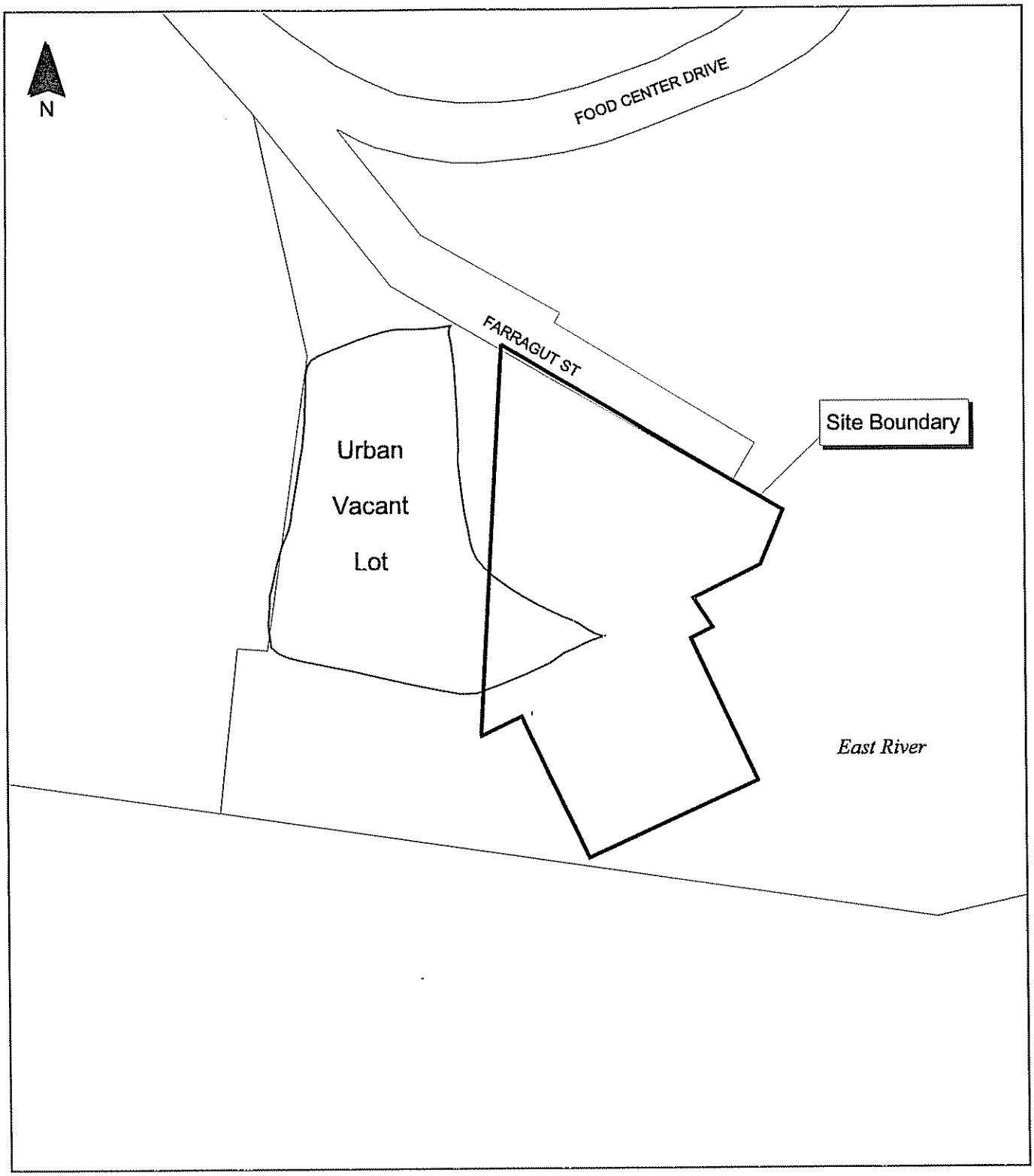
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Figure 19.9-2 Wetlands

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA Hydroqual PB Cambridge Environmental Inc

Figure 19.9-3 Vegetative Cover
South Bronx Converted MTS
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A total of 95 finfish were collected during the year, with bay anchovy (*Anchoa mitchilli*) and Atlantic butterfish (*Peprilus triacanthus*) as the most abundant.[6] The South Bronx Converted MTS had the lowest total adult finfish catch of all the MTSs sampled; however, six species that have EFH designated in the waters surrounding the MTS were collected: Atlantic butterfish (*P. triacnathus*), summer flounder (*Paralichthys dentatus*), winter flounder (*Plueronectes americanus*), Atlantic herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*) and windowpane (*Scophthalmus aquosus*). Atlantic menhaden (*Brevoortia tyrannus*), cunner (*Tautogolabrus adspersus*) and fourbeard rockling (*Enchelyopus cimbrius*) were the most abundant finfish eggs collected, and Atlantic menhaden, winter flounder and goby spp. (*Gobiosoma* spp.) were the most abundant finfish larvae collected. Eggs and larvae of EFH-listed windowpane and winter flounder were also found here. A Jaccard's Index[7] indicated the South Bronx Converted MTS to have the most finfish eggs and larvae in common with the other MTSs.

The portly spider crab (*Libinia emarginata*), horseshoe crab (*Limulus polyphemus*), colonial plumose anemone (*Metridium senile*) and sevenspine bay shrimp (*Crangon septemspinosa*) were the most abundant megainvertebrates collected at the South Bronx Converted MTS. The numerically dominant benthic invertebrates collected were worms: *Streblospio benedicti*, Oligochaeta and Cirratulidae. These worms are tolerant of polluted environments. A Shannon-Weaver Index[8] indicated the South Bronx Converted MTS to have the second highest benthic species diversity and a Jaccard's Index indicated that the South Bronx Converted MTS had the least number of benthic species in common with the other MTSs. Amphipods – *Jassa falcata*, *Corophium insidiosum* and Stenothoidae – were the numerically dominant epibenthic colonizers at South Bronx Converted MTS. *Molgula manhattensis* (the sea squirt) and hydrozoa, mud and algal film were also abundant. Many of these species are pollution tolerant.

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[6] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.

[7] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs. The index ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

[8] The Shannon-Weaver Index is a measure of community diversity. If an individual of the community is selected at random, the index gives a measure of the uncertainty that the selected individual will be of a particular species. The higher the index, the more diverse the community.

The east side of this facility had the greatest diversity of adult finfish, megainvertebrates, finfish larvae and benthic invertebrates. The metal concentrations were highest in sediment from this side of the South Bronx Converted MTS, but the dominant benthic community is highly pollution tolerant. The diversity of species associated with the community on the east side of this MTS is most likely influenced by submerged structures. During sampling events, the otter trawl used to sample for adult finfish often became entangled with debris on the seafloor on the east side of the South Bronx Converted MTS. This debris provides structure upon which encrusting organisms settle, which in turn provides food and shelter for finfish and megainvertebrates. Tautog (Tautoga onitis) was also collected in gill nets at the South Bronx Converted MTS, a species that is associated with reefs and submerged structure. A mini "reef effect" was probably occurring as submerged structure is highly attractive to many species of marine organisms.

According to the USF&WS and NYSDEC Breeding Bird Atlas records, there are no endangered, threatened or special concern birds living or breeding on the site. The peregrine falcon (Falco peregrinus), a federally-listed endangered species, was not listed as present for this site in the recent response from the USF&WS. Also, current data specific to the site indicate that there are no barn owls on the site.

19.9.2 Future No-Build Conditions

If the South Bronx Converted MTS were not to be built, the study area would remain in its current condition. The site would remain DSNY property and the existing MTS would remain standing. The absence of terrestrial natural resources would remain, and the upland portion of the study area would continue to be an ecologically unproductive and stressed urban area. Reasonably diverse and abundant aquatic natural resources would prevail in the waters in and around the study area.

19.9.3 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS would be an over-water structure. It would result in an increase of 25,037 square feet of shaded marine environment. Removal of the above-water structure would be carried out presumably with a barge-mounted crane and the demolished pieces carried off by barge to a permitted disposal facility. Assuming normal operations, this procedure should not involve any measurable impacts to the aquatic or terrestrial natural resources. Removal of the subsurface pilings would also be by crane. During this operation, the upper organic silts would be disturbed to some degree, resulting in re-suspension of the sediments. Because of the swift currents in the area, mitigation measures, such as silt curtains, would not be feasible. However, the amount of re-suspended sediments is expected to be low and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable, against the normal background fluctuations.

Construction of the South Bronx Converted MTS would involve installing piles for the foundation supports and dredging to accommodate the deeper draft of the coastal barges. The following paragraphs will discuss the possible impacts.

19.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

19.9.3.2 Floodplains

Implementation of the South Bronx Converted MTS would have no effect on the elevation of the site. The facility would be constructed within the 100-year floodplain as it currently exists today and would not include any provisions for raising any portion of the study area over and above this level.

19.9.3.3 Ecosystems

Construction of the South Bronx Converted MTS would involve installing piles for the foundation supports and dredging to accommodate the deeper draft of the coastal barges, resulting in an immediate, short-term destruction of the benthic invertebrates in the area. Because the benthic diversity is high and marine construction causes turbidity and siltation that could smother the benthic organisms, the short-term degree of impact is expected to be high. However, recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[9] Given the relatively small size of the project and the fact that periodic maintenance dredging has been repeatedly performed at the site since its original construction, minimal overall impact to the benthic community is expected at the South Bronx Converted MTS. The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the South Bronx Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction, and flatfish (flounders) are least sensitive. Flounder catch was much higher at the South Bronx Converted MTS than herring catch, so it can be assumed that this site is not an important herring habitat that will be temporarily impacted. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. Also, larvae will be able to swim away from the impacted environments. Winter flounder eggs were found at the South Bronx Converted MTS, but construction impacts are expected to be negligible.

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[9] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the South Bronx Converted MTS is for an increase in 25,037 square feet of pier. This will result in increased shading that will block sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[10] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by Energy and Environmental Analysts, Inc. (EEA) in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[11] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the increase in shading over water is very small, there are not expected to be significant deleterious results. There is a possibility of a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

The South Bronx Converted MTS would not have any significant impact on the upland vegetation because the only vegetation is opportunistic weeds. The vegetation of the area would remain that of an urban vacant lot.

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[10] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

[11] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

19.10 Hazardous Materials

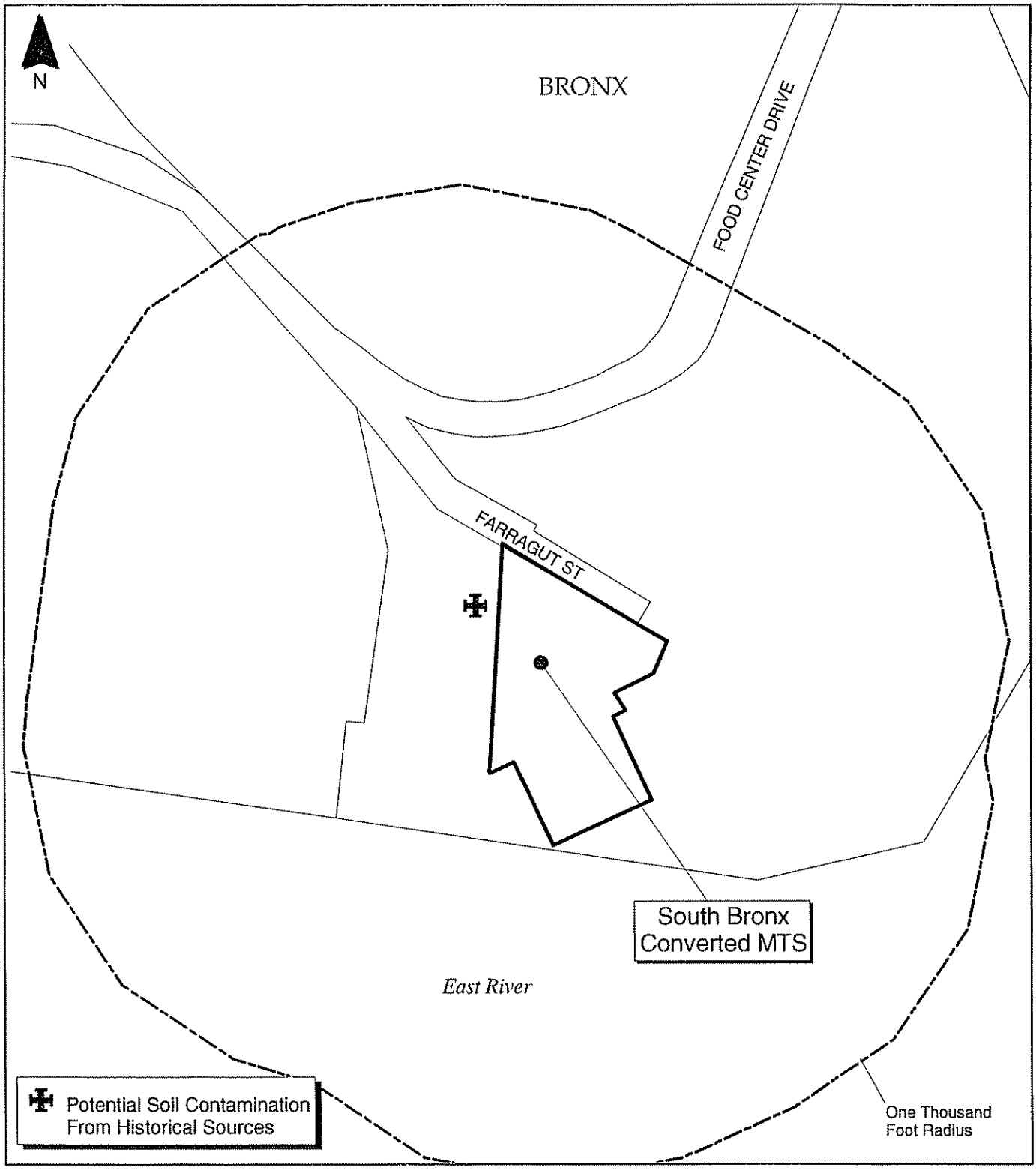
19.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater, and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual (October 2001) and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. Pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers, and unusual stains and odors. Topographic maps, visual observations, and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

19.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 19.10-1).



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 19.10-1 Hazardous Materials Sites

South Bronx Converted MTS

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19.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and implementation of the South Bronx Converted MTS could lead to an increased exposure of people or the environment to those materials. The areas of concern within the study area include:

- Possible subsurface contamination migrating to the site from the former Hunts Point Coking Station, which operated as a coal gasification plant. This coking station site is located north and west of the South Bronx Converted MTS site. Historical Sanborn atlases indicate the presence of numerous underground and aboveground oil storage tanks at the former coking station. The coking station site was also identified within the USEPA CERCLIS, which inventories and tracks sites that might be candidates for listing in the National Priorities List (NPL) for cleanup under Superfund. The coking station site was assigned a No Further Remediation Action Planned (NFRAP) designation by the USEPA on September 22, 1987. An NFRAP designation means that USEPA has completed its preliminary assessment and determined that no further steps are to be taken to list this coking station site on the NPL. The coking station site was also entered into the NYSDEC Hazardous Substance Waste Disposal Site Study, a database of sites that cannot be remediated using state monies from the Hazardous Waste Remedial Fund.

- Potential soil contamination due to the fact that the South Bronx Converted MTS site is comprised primarily of fill material from unknown origins. Depending on its origins, the fill material may be contaminated.

- Probable presence of lead-based paint in underlying layers of the existing MTS building. However, painted surfaces appeared in relatively good condition during a February 2003 reconnaissance.

- Suspected ACMs (corrugated transite) in the external sheeting and roofing, which are extensive at the existing MTS building.

- Possibility of PCBs in a working transformer that is mounted on a concrete pad along Farragut Street. It should be noted that there were no obvious indications that the transformer had leaked.

19.10.2 Future No-Build Conditions

The site would remain as is. Contamination may exist on the property due to the nature of the fill material and historical activities that occurred on the adjacent property.

19.10.3 Potential Impacts with the South Bronx Converted MTS

The areas of concern included possible subsurface contamination, possible historical soil contamination because of contaminated fill material, lead-based paint, and suspected ACMs. These areas of concern would be mitigated during construction of the South Bronx Converted MTS and/or demolition of the existing MTS. Lead-based paint and ACMs that may be in the existing MTS would be removed prior to its demolition in accordance with City building codes and practices. Contaminated soils that may be present in fill material would be excavated and disposed of in a manner that is consistent with the levels of contamination as specified in New York State regulations. The necessary and appropriate health and safety measures would be used during construction/demolition to mitigate and minimize any exposure risk to workers or the general public related to the possible subsurface contamination.

19.11 Water Quality

19.11.1 Existing Conditions

19.11.1.1 Definition of the Study Area

The water quality study area encompasses the East River, which would be the receiving water for the site, as well as discharges from CSOs and point sources located within ½-mile of the site.

19.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 19.11-1, are generally representative of water quality conditions in the study area:

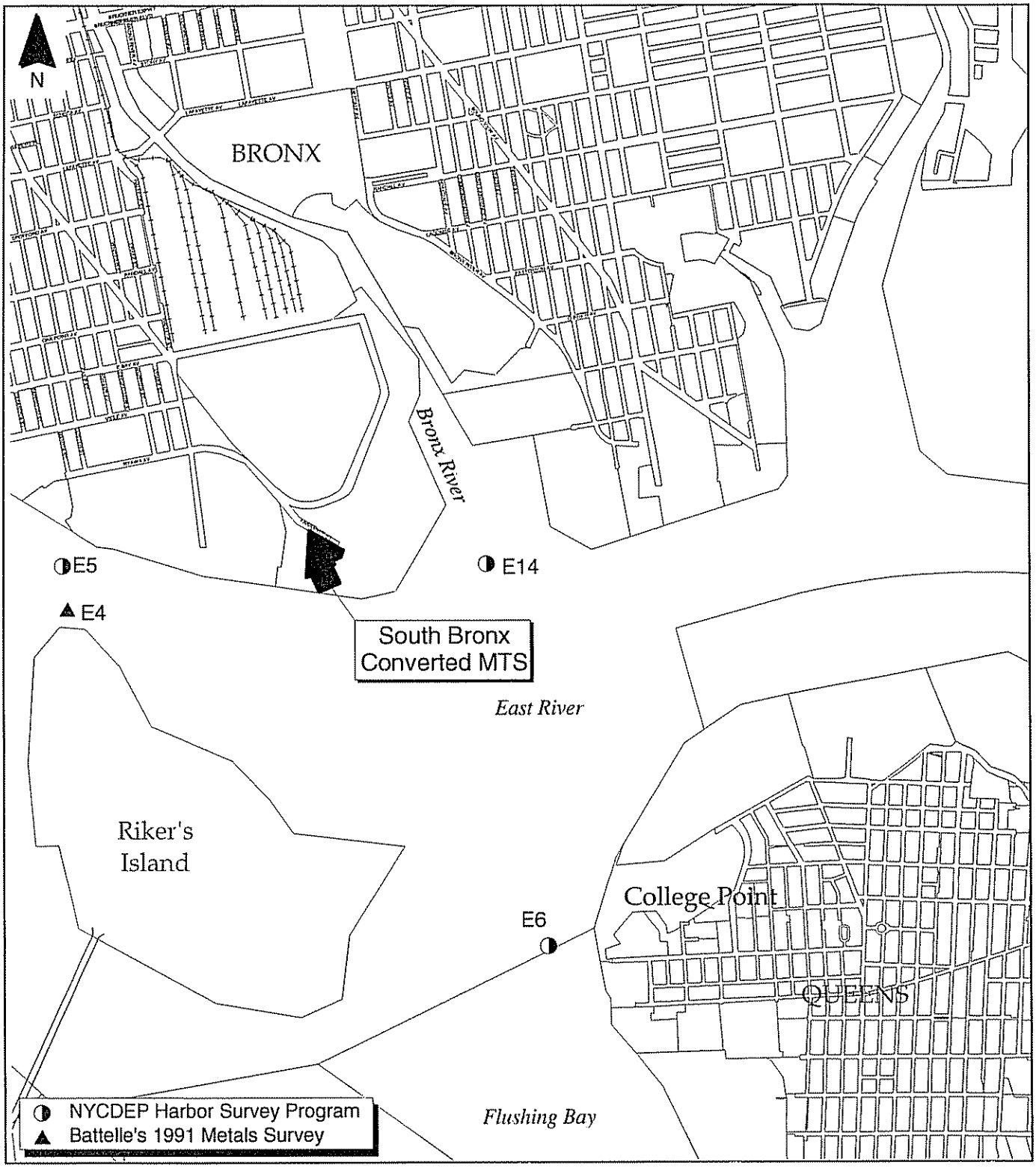
- NYCDEP Harbor Survey Program – Station E-5 at Barretto Point, Station E-6 at Flushing Bay and Station E-14 at the Bronx River; and
- Battelle's 1991 Metals Survey – Stations E-4T and E-4B[12] off Hunts Point, in the East River.

These data, along with NYSDEC water quality standards and guidance values, are presented in Table 19.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 19.11-1, on average, NYSDEC standards and guidance values are met. For NYCDEP Harbor Survey Program Station E-6, however, the minimum surface and bottom dissolved oxygen between June 1, 2002 and September 30, 2002 did not meet water quality standards for dissolved oxygen. For NYCDEP Harbor Survey Program Station E-14, the minimum surface dissolved oxygen between June 1, 2002 and September 31, 2002 did not meet water quality standards for dissolved oxygen. In addition, the mercury concentration for Battelle Stations E-4T and E-4B off Hunts Point did not conform to the water quality standard for mercury.

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[12] Stations E-4T and E-4B are located at the same longitude and latitude off Hunts Point. Station E-4T is located at the surface of the East River. Station E-4B is located at the bottom of the East River.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

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Figure 19.11-1 Ambient Water Quality Stations

South Bronx Converted MTS

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Table 19.11-1
Existing Water Quality Conditions and Standards
South Bronx Converted MTS Study Area

Parameter	Units	Average Concentration					
		Station E-5[1]	Station E-6[2]	Station E-14[3]	Station E-4T[4]	Station E-4B[5]	NYS Class I Standards
Dissolved Oxygen (surface/minimum)	mg/L	5.24 [6]/4.2 [7]	6.7 [8]/3.2 [9]	7.0.[8]/3.4[9]	-------	-------	4.0
Dissolved Oxygen (bottom/minimum)	mg/L	5.2 [6]/4.1 [7]	6.6 [11]/3.0 [9]	6.5[10]/3.2[9]	-------	-------	4.0
BOD (surface)	mg/L	3.2 [12]	3.1 [12]	3.1 [12]	-------	-------	-------
BOD (bottom)	mg/L	3.2 [12]	3.3 [12]	3.0 [12]	-------	-------	-------
Total Coliform (surface)	MPN/100 ml	874 [13]	1171 [13]	972 [13]	-------	-------	10,000
Total Coliform (bottom)	MPN/100 ml	548 [13]	1003 [13]	700 [13]	-------	-------	10,000
Fecal Coliform (top)	MF	30	57	105	-------	-------	2,000
Fecal Coliform (bottom)	MF	38 [14]4	96 [14]	63[14]	-------	-------	2,000
Total Suspended Solids (surface)	mg/L	6	10	11	-------	-------	-------
Total Suspended Solids (bottom)	mg/L	10	16	13	-------	-------	-------
NH_3-N	mg/L	0.41	0.524	0..461	-------	-------	-------
(NO_3 + NO_2)	mg/L	0.318	0.364	0.348	-------	-------	-------
Total Phosphorous	mg/L	0.364 [15]	0.195	0.184	-------	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------	-------	-------
Chlorophyll-a	µg/L	2.7	3.1	5.7	-------	-------	-------
Arsenic	µg/L	-------	-------	-------	-------	-------	36 [16,17]
Cadmium	µg/L	-------	-------	-------	0.07 [16])	0.06[16]	7.7 [16,17]
Chromium	µg/L	-------	-------	-------	-------	-------	-------
Copper	µg/L	-------	-------	-------	1.83 [16]	1.83[18]	5.6 [17,18]
Lead	µg/L	-------	-------	-------	0.20 [16]	0.19[18]	8.0 [16,17]
Mercury	µg/L	-------	-------	-------	0.0028[16]	0.0029[16]	0.0026 [16,17]
Nickel	µg/L	-------	-------	-------	1.50 [16]	1.46[16]	8.2 [16,17]
Silver	µg/L	-------	-------	-------	0.0083 [16]	0.0078[16]	-------
Zinc	µg/L	-------	-------	-------	5.32 [16]	5.11[16]	66 [16,17]
Cyanide	µg/L	-------	-------	-------		-----	1.0 [17]

Notes:

[1] Average concentrations for 2000 NYCDEP Harbor Survey Station E-5, located at Barretto Point.

[2] Average concentrations for 2003 NYCDEP Harbor Survey Station E-6, located in Flushing Bay.

[3] Average concentrations for 2003 NYCDEP Harbor Survey Station E-14, located in the Bronx River.

[4] Average concentrations for 1991 Battelle Ambient Survey Station E-4T, located off Hunts Point on the surface of the East River.

[5] Average concentrations for 1991 Battelle Ambient Survey Station E-4B located off Hunts Point on the bottom of the East River.

[6] Represents average between May and September 2000.

[7] Minimum between June 1, 2000 and September 30, 2000.

[8] Represents average between January and December 2003.

[9] Minimum between June 1, 2003 and September 30, 2003.

Notes for Table 19.11-1 (continued):

(10) Represents average between March and December 2003.
(11) Represents average between January and December 2003.
(12) Latest available data 1997.
(13) Latest available data 1996.
(14) Latest available data 1999.
(15) Latest available data 1998.
(16) Guidance values and data are for dissolved metals.
(17) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).
(18) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

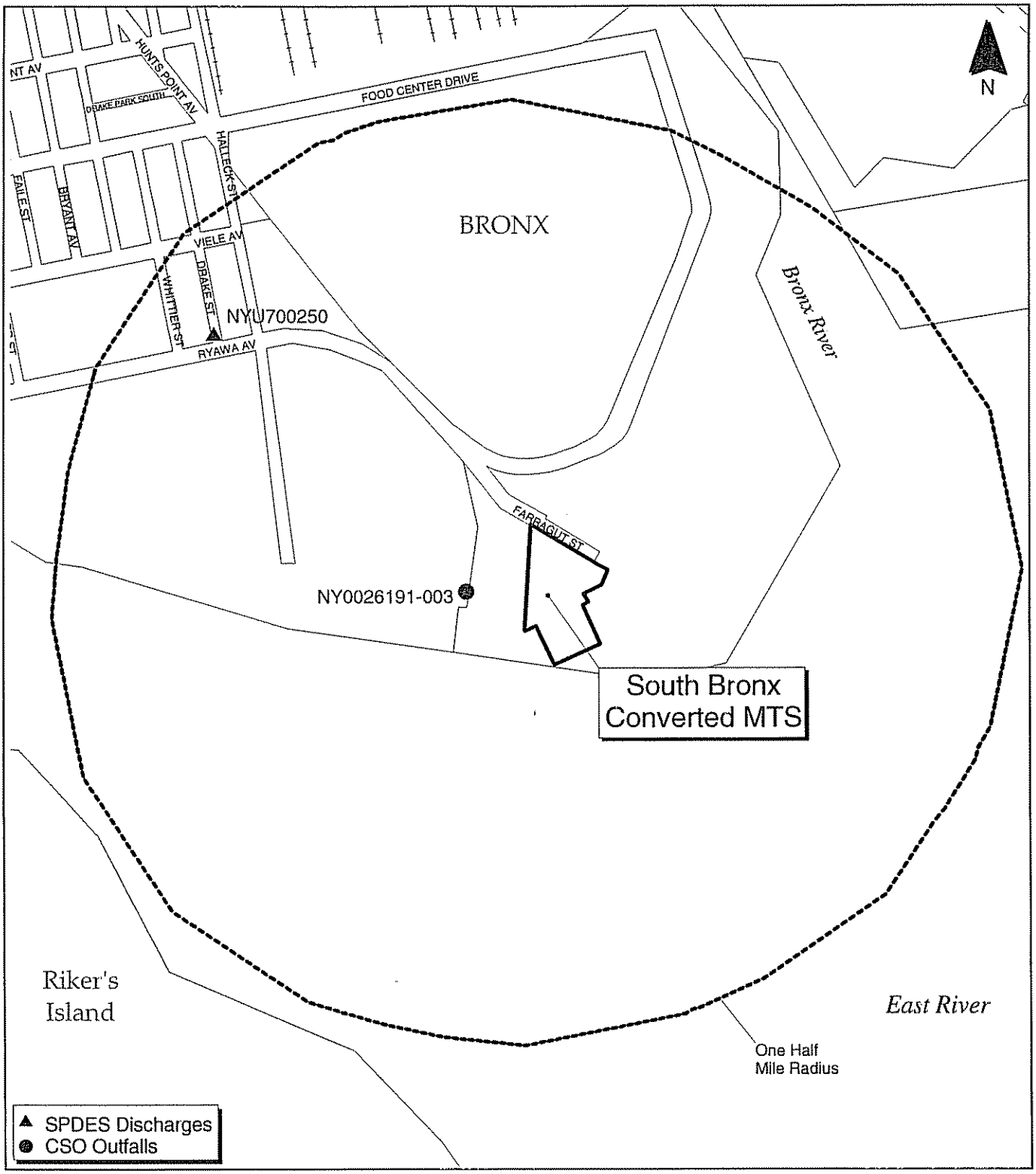
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

19.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there are two permitted discharges in the vicinity of the site. These discharges, which are permitted by the NYSDEC, are within ½-mile of the site. One discharge is a CSO outfall west of the site and the other is an industrial site northwest of the site. The locations are shown on Figure 19.11-2 and are listed in Table 19.11-2.

19.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, an estimate of existing stormwater pollutant loadings was calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and/or infiltration. A runoff flow of 0.246 cfs was calculated using the impervious site area (4.1 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 19.11-3, represent the existing loads at the site.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 19.11-2 Permitted Outfalls and CSO Locations South Bronx Converted MTS

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Table 19.11-2
Existing Permitted Discharges
South Bronx Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
Farragut Street/Hunts Point	NY0026191-003	Bronx	East River
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
US-1 Auto Wreckers, Inc.	NYU700250	Bronx	Not listed

Table 19.11-3
Estimated Existing Pollutant Loads and Runoff Flows
South Bronx Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	45,008[1]
BOD mg/L	11	15
Heavy Metals		
Copper µg/L	35	0.046
Lead µg/L	28	0.037
Zinc µg/L	154	0.204
Total Impervious Area (acre) = 4.1		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Flow (cfs) = 0.246

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

19.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the ongoing water improvement programs such as the NYCDEP CSO Abatement Program, which will reduce untreated discharges to the receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

19.11.3 Potential Impacts with the South Bronx Converted MTS

An inoperative MTS that has been closed since July 1994 is on the site. With development and operation of the South Bronx Converted MTS, there would be an increase in the impervious area and, therefore, an increase in stormwater loadings. Water quality conditions would not be significantly different from Future No-Build Conditions and, as a result, no significant impacts to water quality would be anticipated. Table 19.11-4 shows the existing impervious area, the change in impervious area and pollutant loads. After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the Hunts Point WPCP, where it would be treated prior to discharge to the East River and, therefore, would not adversely affect water quality.

Table 19.11-4
Impervious Area and Estimated Pollutant Loads
South Bronx Converted MTS

			Estimated Pollutant Loadings/Incremental Change[1]				
Conditions	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	4.09	0.0	45,008/NA	15/NA	0.046/NA	0.037/NA	0.204/NA
Future Build Conditions	5.67	1.58	62,391/17,383	20/5	0.064/0.018	0.051/0.014	0.283/0.079

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

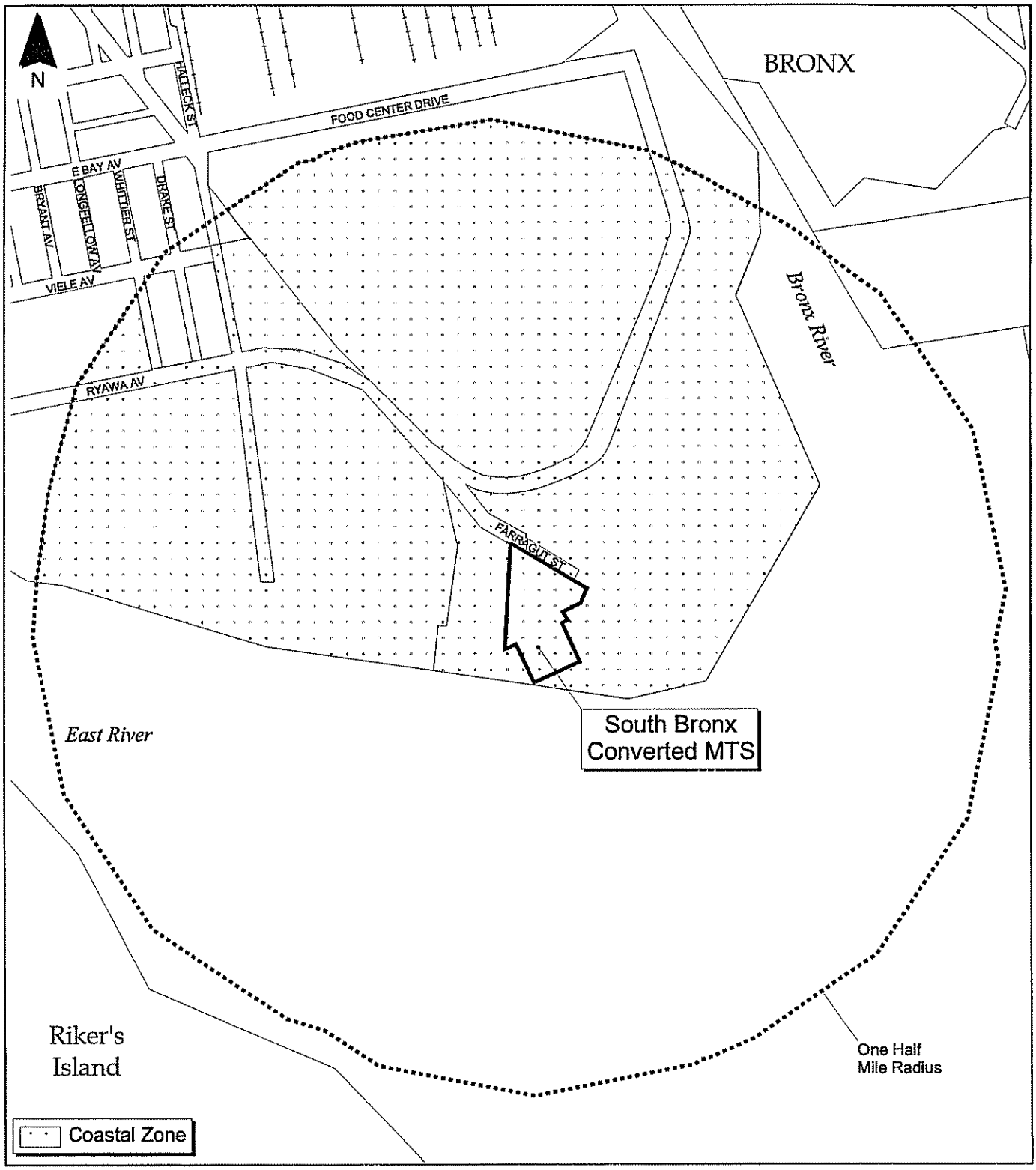
Unimpeded operation of the South Bronx Converted MTS may also require dredging to refurbish the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired before such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

19.12 Waterfront Revitalization Program

19.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the East River, the South Bronx Converted MTS would be within the City's coastal zone boundary (see Figure 19.12-1). According to "The New Waterfront Revitalization Program," the South Bronx Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 7/South Bronx, as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Bronx Waterfront," and within the South Bronx SMIA. The South Bronx Converted MTS is subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The South Bronx Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable, including subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14-1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the South Bronx Converted MTS. A description of waste handling operations that would occur at the South Bronx Converted MTS is provided in Section 2.4.1.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.12-1 Coastal Zone Boundary

South Bronx Converted MTS

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19.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the South Bronx Converted MTS. As part of the South Bronx Converted MTS, connections from the facility to existing utilities (e.g., sewer and electrical connections, etc.) in the vicinity would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The South Bronx Converted MTS would be located within the South Bronx SMIA. It would involve the conversion of the existing over-water MTS facility from a truck-to-barge waste transfer station to a TCB transfer station that would transport DSNY-managed Waste by marine transport to remote out-of-City disposal facilities. The proposed MTS would involve the removal of the existing MTS building and its support structures and the development of a new MTS, constructed over water on a pile-supported platform.

The South Bronx Converted MTS, as described in Section 2.4.1, would largely represent the continuation of an existing industrial and water-dependent use. Waterfront construction would involve four primary components: (1) elevated access ramps to the main structure; (2) an enclosed processing building, which would include the tipping floor, loading floor and pier level; (3) an outside gantry

crane system; and (4) a new bulkhead and fendering system. The South Bronx Converted MTS would serve to maintain this use while restoring and revitalizing industrial waterfront property. It would be consistent and compatible with surrounding industrial land uses and current zoning, and it would be consistent with the "Plan for the Bronx Waterfront," which recommends increased use of water-borne transportation for solid waste and other recyclables. Although the South Bronx Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an expansion in building size of an existing water-dependent use and would be compatible with surrounding uses. The South Bronx Converted MTS would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The South Bronx Converted MTS would involve the complete demolition of the existing MTS and the subsequent development of a new and expanded facility within the East River. It would allow for marine transport of solid waste to licensed out-of-City disposal facilities. Waterfront development would involve four primary components: (1) elevated access ramps to the main structure; (2) an enclosed processing building, which would include the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a new bulkhead and fendering system. An existing salt shed and SHS would remain on the South Bronx Converted MTS site.

Based on historical information, navigable depths in the area have generally been maintained by natural scouring. However, dredging will be required to improve existing water depths at and in the vicinity of the site to allow for the unimpeded operation of barges and tugboats once the South Bronx Converted MTS became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any dredging activities.

Although the "Plan for the Bronx Waterfront" recommends that the parcel be converted to parkland serving the Hunts Point community should DSNY decide to vacate the site, expansion of the existing site by DSNY would be consistent and compatible with the plan, surrounding land uses and current zoning. The new facility would be consistent with existing industrial uses in the vicinity of the site and would be consistent with this subpolicy.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The South Bronx Converted MTS would be located within the East River and would be expanded from its existing footprint. In addition, the facility would be located within an existing, heavily industrialized area and would not interfere with any other maritime industrial, commercial or recreational vessel activities in the area. Activities within the East River resulting from the South Bronx Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four of five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The South Bronx Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The South Bronx Converted MTS would involve the conversion of an existing over-water facility truck-to-barge waste transfer station where loose waste was placed in open barges, into a TCB transfer station where waste would be transferred into containers that were sealed and placed into flat deck barges that would transport the DSNY-managed Waste to remote out-of-City disposal facilities. All waste would be placed in sealed containers before leaving the processing building. All solid waste handling would be done within an enclosed processing building and, therefore, would be protective of the aquatic environment and surrounding land and water uses. Litter control methods, such as routine sweeping and washing of the tipping floor, would also be implemented to minimize or eliminate the potential for litter entering surface waters. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, any on-site storage of petroleum or hazardous materials related to the South Bronx Converted MTS would be managed in accordance with all applicable federal, state and local regulations.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, Recognized Ecological Complexes, and SCFWHs, the South Bronx Converted MTS would not be located within any designated areas. It would represent an expansion in size of a previous use and

would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. The South Bronx Converted MTS would be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and National Wetland Inventory (NWI) maps was conducted to determine the presence of wetlands. As noted in Section 19.9.1, the site contains no freshwater wetlands. The South Bronx Converted MTS would be located within the East River, which is identified as a littoral zone, a state-designated wetland. The demolition of the existing MTS and subsequent development of the South Bronx Converted MTS would result in limited, short-term impacts to these tidal wetlands.

Impacts to littoral zones would be minimized due to previous and ongoing industrial activities at and in the vicinity of the site. Future Build Conditions would involve demolition and removal of the existing MTS and pile-supported structures, and construction of waterfront facilities for barge loading and mooring. Historical information indicates that natural scouring of sediments occurs in the immediate vicinity of the site, which has limited the need for ongoing dredging. However, dredging will be required to provide sufficient depths for barge and tugboat operations. Potential impacts due to dredging would be short-term and localized. All dredging would be conducted in accordance with applicable federal, state and local regulations. Mitigation for potential impacts, as appropriate and applicable, would be proposed during the environmental review and permitting of the South Bronx Converted MTS. Mitigation, if required, would be proposed to address any potential impacts to wetlands that may occur due to the development of the South Bronx Converted MTS. The South Bronx Converted MTS would, therefore, be consistent with this policy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

There are no vulnerable plant, fish or wildlife species found in the vicinity of the site. A review of the USF&WS and NYSDEC Breeding Bird Atlas records indicates that there are no federally-listed endangered, threatened or special concern species found in the area surrounding the South Bronx Converted MTS.

The South Bronx Converted MTS would involve the demolition of the existing MTS facility. The proposed facility would remain as an over-water facility. Waterfront development would include elevated access ramps; an enclosed processing building, which includes a tipping floor, loading floor and pier level; a gantry crane system; and a fendering and bulkhead system. Although navigable depths in the area have historically been maintained by natural scouring, the development of the South Bronx Converted MTS will require dredging. However, potential impacts to plant, fish and wildlife species would be minimized and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be obtained prior to any dredging activities.

In addition, all handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the South Bronx Converted MTS and the storage of any petroleum products would be managed in accordance with applicable federal, state and local regulations. The South Bronx Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The South Bronx Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the processing areas would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site treatment system, which would include an oil-water separator, and then discharged to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the South Bronx Converted MTS would be managed in accordance with applicable regulations.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the South Bronx Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The South Bronx Converted MTS would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment. In addition, litter control methods would be implemented to minimize or eliminate the potential for litter to enter surface waters.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The majority of the proposed demolition and construction would occur within the East River. The existing MTS structures and foundations would be removed. During removal of the existing pile-supported structure and over-water pier structures, disturbances to upper organic silts may occur, resulting in the temporary resuspension of sediment. Due to the swift currents in the area, mitigation measures (e.g., silt screens) would not be feasible; however, potential impacts would be short-term. Although navigable depths in the area have historically been maintained by natural scouring, dredging will be necessary to rehabilitate the existing bulkhead and to provide sufficient water depths for the unimpeded operation of barges and tugboats once the facility is operational. Potential impacts due to dredging would also be short-term and highly localized. All dredging would be done in compliance with applicable federal, state and local regulations and removed materials would be disposed of at a permitted facility.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The South Bronx Converted MTS would result in no adverse impact to the quality or quantity of surface waters at or in the vicinity of the site. Sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site treatment system and would then discharge to the municipal sewer system. Stormwater runoff from the South Bronx Converted MTS would be managed in accordance with federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source of water supply. The South Bronx Converted MTS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion

6.1 *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

According to a review of the FEMA National Flood Insurance Program maps, the majority of the site is located within the 100-year flood plain boundary (Zone A). As part of the Future Build Conditions, the existing MTS would be demolished and a new MTS would be constructed within an expanded footprint that would encompass the existing site. The South Bronx Converted MTS would not affect the potential for flooding or erosion. All demolition and construction would comply with applicable building code requirements and, to the extent practicable, non-structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 *Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.*

The South Bronx Converted MTS would not involve the storage, treatment or disposal of hazardous waste, but would involve the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Waste would be transported in airtight, waterproof sealed containers. All waste handling operations would occur within an enclosed processing building, which would minimize or eliminate the escape of litter into the surrounding water body. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations

(6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the South Bronx Converted MTS. Litter control methods would be implemented at the facility to minimize or eliminate litter entering surface waters. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility.

On-site storage of petroleum or hazardous materials related to the operation of the South Bronx Converted MTS would be minimal. All storage would be in accordance with applicable federal, state and local regulations. The South Bronx Converted MTS would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8. Provide public access to and along New York City's coastal waters.

8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.

Due to the existing, heavy industrial uses at and in the immediate vicinity of the South Bronx Converted MTS, public access would generally not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

Located at the end of Farragut Street and adjacent to the site, approximately where the Reach 7/South Bronx "Plan for the Bronx Waterfront" recommends waterfront public access be developed, is an informal and unimproved, City-owned area used for water viewing and fishing. While the operation of the South Bronx Converted MTS could detract from the enjoyment of the waterfront experience at the end of Farragut Street, it would not preclude this non-designated and informal use. The Reach Plan also recommends that if the site were abandoned by DSNY, its redevelopment as a waterfront park could be explored. Since the plan was prepared, however, waterfront park planning on Hunts Point has advanced other alternatives, and by 2006 waterfront access in the vicinity will be accommodated by Barretto Point Park, which will not be affected by the South Bronx Converted MTS (see Section 19.5). Therefore, the South Bronx Converted MTS is consistent with this policy.

The South Bronx Converted MTS would be a stand-alone, water-dependent facility within the East River. Public access would not be compatible with the South Bronx Converted MTS; however, its development would not preclude any future development of public access at other waterfront locations along the East River.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Development of the South Bronx Converted MTS would be compatible with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. It would represent an expansion of an existing water-dependent facility. As discussed in Section 19.7.3, visual access to coastal lands would not be impacted. See also response to Subpolicy 9.1.

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

Located at the end of Farragut Street and adjacent to the site is the only existing open space resource in the study area. It is an informal and unimproved, City-owned area used for water viewing and fishing. The South Bronx Converted MTS would not be expected to result in significant impacts on this parkland resource. According to the plan for Reach 7/South Bronx in the "Plan for the Bronx Waterfront," it is recommended that this and the adjacent MTS site be incorporated into a large park. This park is only recommended in the event that DSNY no longer uses the site.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 *Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.*

The South Bronx Converted MTS would not result in a significant impact on visual quality, as noted in Section 19.7.3. Based on the information discussed in that section, the South Bronx Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The South Bronx Converted MTS would involve an expansion of an existing water-dependent use and would pose no significant new impacts to scenic values associated with natural resources. It would be compatible with surrounding industrial uses and would be constructed within the East River. The South Bronx Converted MTS would be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The South Bronx Converted MTS would have no effect on any cultural resources, as stated in Section 19.6.3. There are no historic structures listed or eligible for listing on the National or State Registers of Historic Places. Based on the information presented in Section 19.6.3, the South Bronx Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site, or in the immediate vicinity of the site. This subpolicy is, therefore, not applicable.

19.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

19.13.1 Existing Conditions

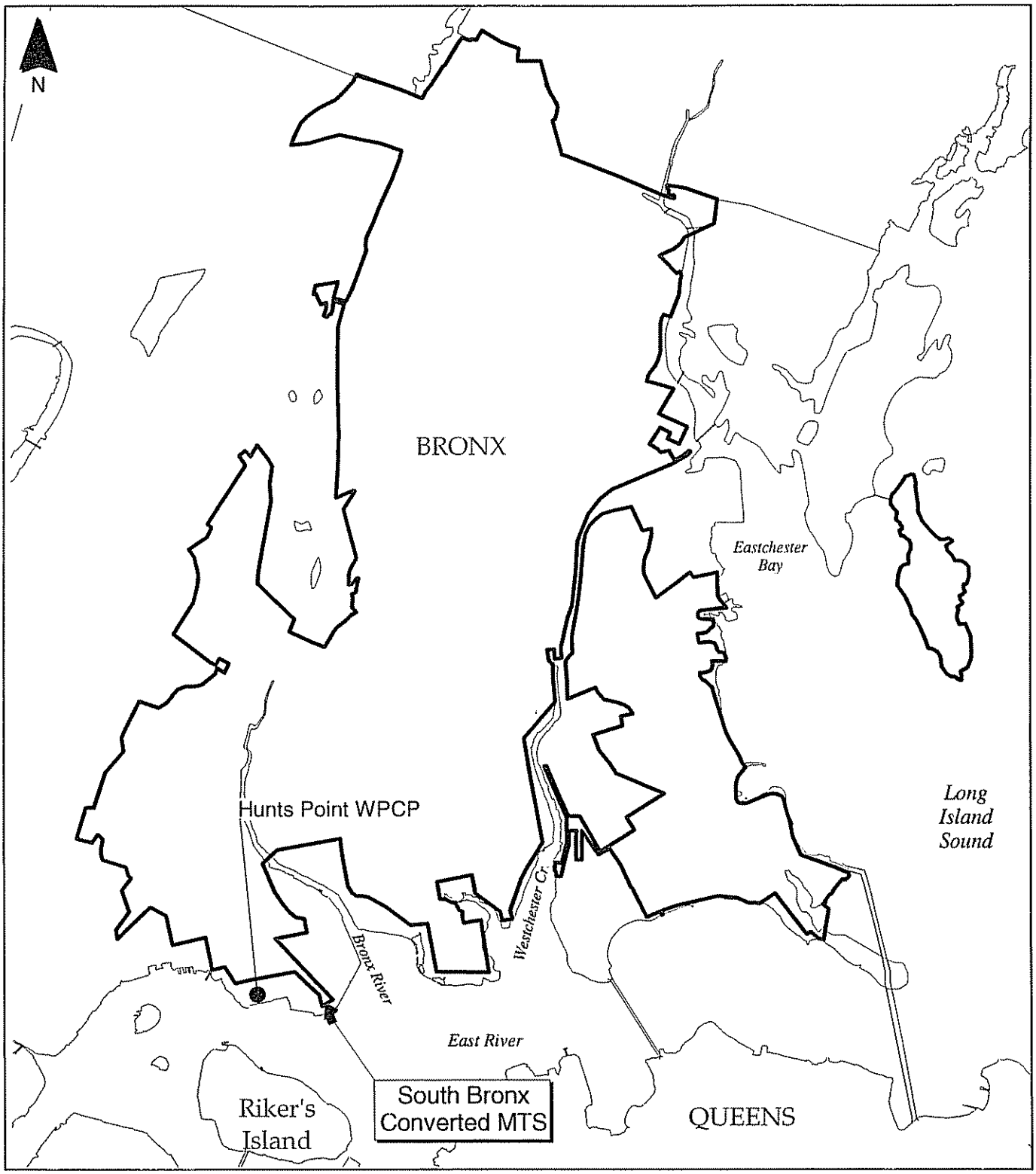
19.13.1.1 Water Supply

Water is supplied to the existing South Bronx MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter water line along Farragut Street provides potable water for both process and sanitary requirements. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

19.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Hunts Point WPCP, which serves the majority of the Bronx. The WPCP drainage area is illustrated in Figure 19.13-1. From July 2002 through June 2003, the WPCP treated an average of 99 mgd of wastewater under dry weather flow conditions and an average flow of 114 mgd, which includes the sanitary and stromwater flows received by the WPCP during wet weather (Table 19.13-1). The maximum dry weather flow during this period was 124 mgd in June 2003 and the maximum average flow was 144 mgd during June 2003. Effluent from the plant is discharged to the East River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Hunts Point WPCP is 200 mgd.

It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on three security employees (one guard per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). No additional potable water is used as the facility is currently not accepting waste, and no operational staff are currently assigned to the site. Sanitary wastewater generated at the facility is discharged to a 15-inch sanitary sewer line along Hunts Point Avenue. The 15-inch sanitary sewer line discharges to a pumping station from which wastewater is sent to the Hunts Point WPCP for treatment.



Site delineations are approximate.

1 0 1 Miles

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Figure 19.13-1 Existing WPCP Drainage Area

South Bronx Converted MTS

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Table 19.13-1
Average Monthly Dry Weather and Average Flows
Hunts Point Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flows[1](1) (mgd)
July 2002	94	96
August	88	100
September	92	110
October	96	116
November	98	119
December	104	119
January 2003	101	111
February	98	112
March	103	121
April	101	115
May	89	100
June	124	144
Average Effluent	**99**	**114**

Notes:
(1) -Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

19.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately four pounds per day). As the facility is not currently accepting waste, no operational personnel are assigned to the site. Solid waste produced at the facility is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

19.13.1.4 Energy

Consolidated Edison of New York supplies electricity and gas to the facility. As the facility is currently not operating, the existing South Bronx MTS utilizes a negligible amount of energy due to the low staffing levels that supply only security for the site. The facility has no gas supply; however, a review of Consolidated Edison utility maps shows that gas mains are located in the vicinity of the facility along East Bay Avenue and currently serve the National Foods facility north of the site.

19.13.2 Future No-Build Conditions

The South Bronx MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would, therefore, be anticipated to remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Hunts Point WPCP would continue to increase and would be projected to 113.5 mgd by 2006.

19.13.3 Potential Impacts with the South Bronx Converted MTS

19.13.3.1 Water Supply

The South Bronx Converted MTS would have a total of up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The South Bronx Converted MTS would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

19.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the South Bronx Converted MTS, the small quantities of wastewater sent to the Hunts Point WPCP would not significantly impact the sewage flow rate or the ability of the Hunts Point WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 113.5 mgd in 2006, which would be well below the permitted capacity of 200 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

19.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the South Bronx Converted MTS and would not significantly impact the system.

19.13.3.4 Energy

The South Bronx Converted MTS would require approximately 5.51E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the South Bronx Converted MTS and has stated that all demands generated by the South Bronx Converted MTS could be met without any impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the South Bronx Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility.

19.14 Traffic, Parking, Transit, and Pedestrians

19.14.1 Introduction

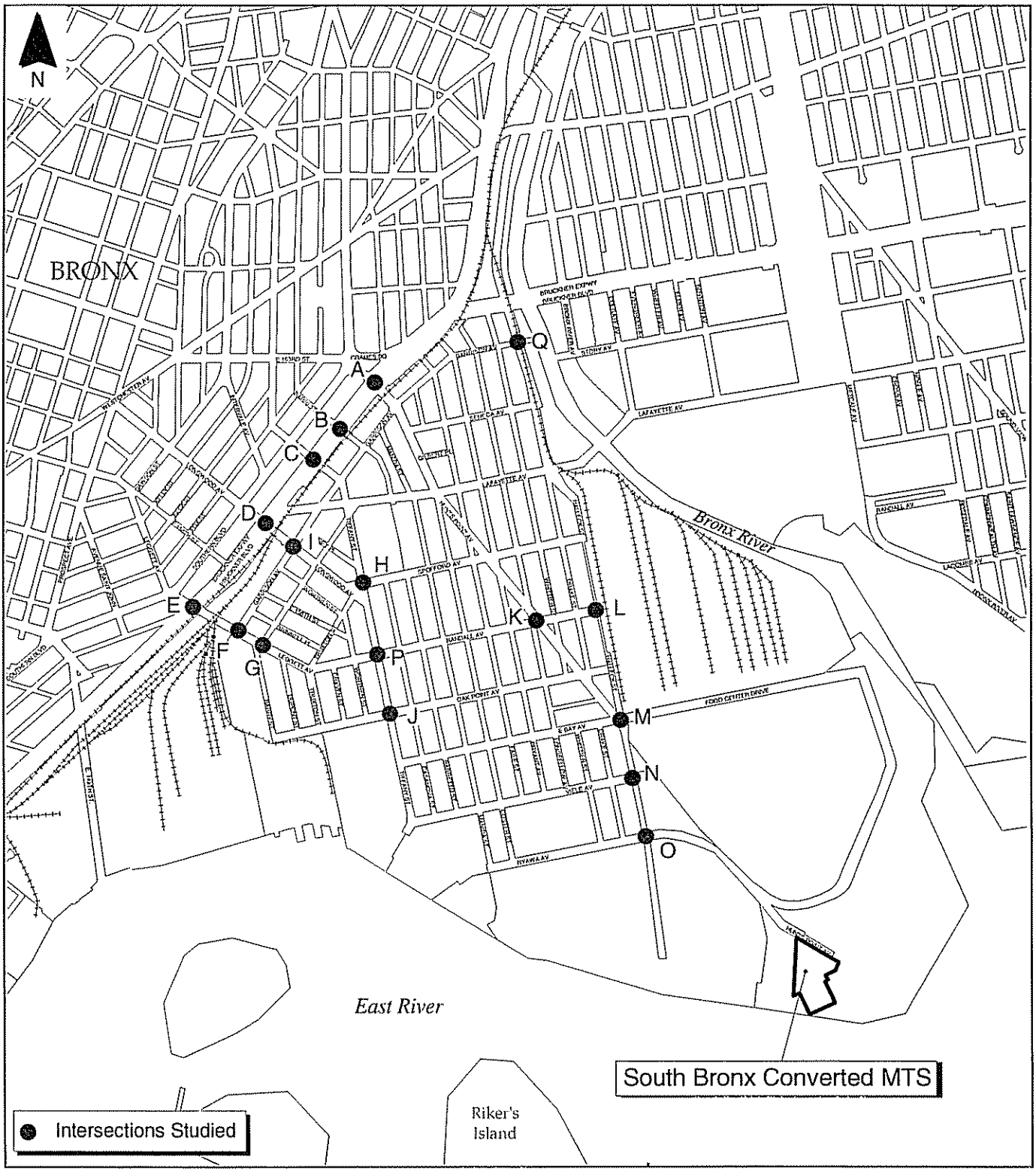
The South Bronx Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

19.14.2 Existing Conditions

19.14.2.1 Definition of Study Area

This site is located on the Hunts Point peninsula in the Bronx bounded on the land side by the elevated Bruckner Expressway, the depressed railroad right-of-way and the at-grade Bruckner Boulevard on the west, and the Bronx River and East River on the north, east and south. Thus, the peninsula and the adjacent Bruckner Boulevard provide a well-defined geographic boundary for the study area where concentrations of trips to and from the site would be expected to occur. The study area is characterized by a mixture of light industrial/manufacturing land uses with several residential areas. There are no CEQR-defined areas of concern located within the study area.

Bruckner Boulevard is a major corridor that extends from the Third Avenue Bridge in the Port Morris area of the Bronx west of the site to the interchange of the Bruckner and Sheridan Expressways. Vehicle trips into and out of the Hunts Points peninsula are limited to those portals where roadways bridge over the railroad right-of-way parallel to the Bruckner Expressway. Figure 19.14-1 shows the locations of the intersections selected for analysis (locations A through R). Intersections analyzed were selected using the procedures defined in Section 3.16. Section 19.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the South Bronx Converted MTS.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 19.14-1 Traffic Analysis Locations

South Bronx Converted MTS

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19.14.2.2 Surface Network

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the site or the intersection nearest the site if streets adjacent to the site are not designated truck routes. A map showing all major truck routes and local truck routes in the Bronx is provided in Section 3.16 (see Figure 3.16-2).

The primary truck access route to and from the Hunts Point peninsula is Bruckner Boulevard, a major arterial located at grade and below the Bruckner Expressway (I-278) for much of its length, with both express (mainline)- and service road-separated roadways. Through-truck routes connect the South Bronx with Queens via the Triborough, Bronx-Whitestone or Throgs Neck Bridges and with Manhattan via the Willis Avenue, Third Avenue or Madison Avenue Bridges.

Within the Hunts Point peninsula, NYCDOT is expected to implement several significant changes to the local truck route network by the end of 2003. These changes initially included the de-designation of a segment of Tiffany Street (from Bruckner Boulevard to Longwood Avenue), which is to be replaced with Longwood Avenue from Bruckner Boulevard to Tiffany Street, and the de-designation of Garrison Avenue from Longwood Avenue to Bryant Avenue. The analysis was based on these proposed modifications which were incorporated in Figure 3.16-2 and in all future truck routing considered in this analysis (not Existing Conditions). At the time of the analysis, DSNY and other agency collection vehicles would use Leggett Avenue and Longwood Avenue to enter the peninsula and proceed along Randall Avenue to Tiffany Street, which they would take to Viele Avenue, and from Viele take Halleck Street to Farragut Street. Leaving the site, trucks could utilize similar routing or a route following Halleck Street to Edgewater Road, then to the Bruckner Expressway and service road.

In addition, NYCDOT was expected to institute one-way travel westbound on Leggett Avenue (away from Bruckner Boulevard) between Southern Boulevard and Bruckner Boulevard. This modification would improve traffic operations on the westbound Leggett Avenue approach to

Bruckner Boulevard. Eastbound traffic from Leggett Avenue is expected to divert to alternate routes, including Longwood Avenue and Tiffany Street. This traffic diversion was also incorporated in the Future No-Build and Build Conditions described herein.

On July 21, 2004, the NYCDOT published the Updated Truck Routes in Hunts Point that no longer de-designated the segment of Tiffany Street from Bruckner Boulevard to Longwood Avenue and replaced it with Longwood Avenue from Bruckner Boulevard to Tiffany Street, as analyzed. The analysis presented herein will be updated in the FEIS if the South Bronx Converted MTS is included in the Proposed Plan.

DSNY and other agency collection vehicles would use Leggett Avenue and Longwood Avenue to enter the peninsula. Once on the Hunts Point Peninsula, DSNY and other agency collection vehicles would proceed to the South Bronx Converted MTS along using the a variety of different routes along the following designated truck routes: Randall Avenue, Tiffany Street, Viele Avenue, Halleck Street and Food Center Drive. All DSNY and other agency collection vehicles would turn from Food Center Drive onto Farragut Street, which is not a designated truck route, to access the South Bronx Converted MTS. Upon leaving the Converted MTS, DSNY and other agency collection vehicles would travel along the same designated truck routes as listed above, with the addition of Edgewater Street, to gain access to Bruckner Boulevard.

19.14.2.3 Existing Traffic Operations

The 18 intersections listed below were identified for analysis because they are most likely to be impacted from the South Bronx Converted MTS. Diagrams of these intersections were included in technical backup submitted to NYCDOT.

- Bruckner Boulevard and Hunts Point Avenue- Signalized Intersection (see Figure 19.14-1 - location A)
- Bruckner Boulevard and Barretto Street - Signalized Intersection (see Figure 19.14-1 - location B)
- Bruckner Boulevard and Tiffany Street - Signalized Intersection (see Figure 19.14-1 - location C)

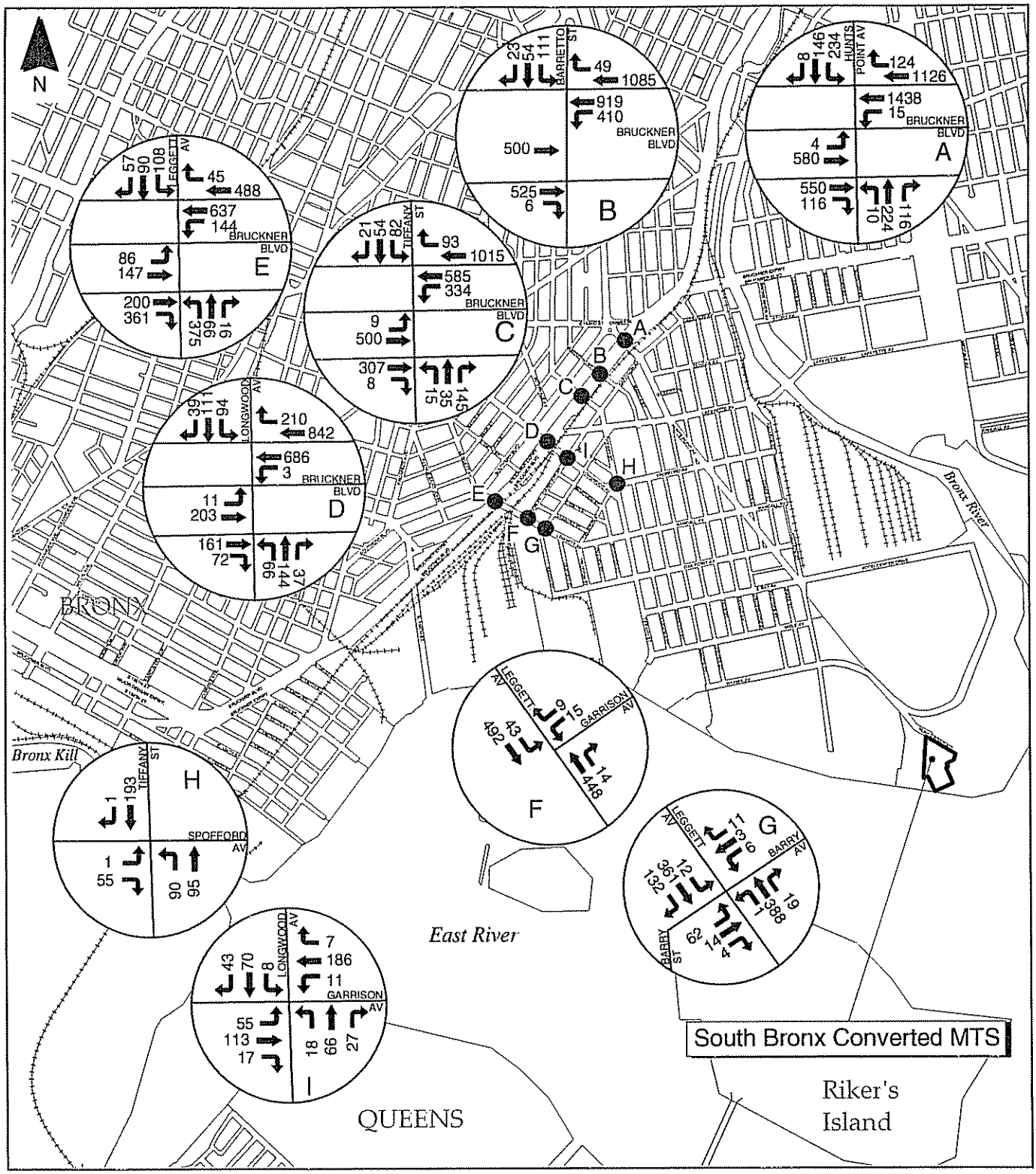
- Bruckner Boulevard and Longwood Avenue - Signalized Intersection (see Figure 19.14-1 - location D)
- Bruckner Boulevard and Leggett Avenue - Signalized Intersection (see Figure 19.14-1 - location E)
- Leggett Avenue and Garrison Avenue - Signalized Intersection (see Figure 19.14-1 - location F)
- Leggett Avenue and Barry Street - Signalized Intersection (see Figure 19.14-1-location G)
- Longwood Avenue and Garrison Avenue - Unsignalized Intersection (see Figure 19.14-1 - location H)
- Longwood Avenue and Tiffany Street - Unsignalized Intersection (see Figure 19.14-1 - location I)
- Tiffany Street and Oak Point Avenue - Signalized Intersection (see Figure 19.14-1 - location J)
- Hunts Point Avenue and Randall Avenue - Signalized Intersection (see Figure 19.14-1 - location K)
- Randall Avenue and Halleck Street - Unsignalized Intersection (see Figure 19.14-1 - location L)
- East Bay Avenue, Hunts Point Avenue and Halleck Street - Signalized Intersection (see Figure 19.14-1 - location M)
- Halleck Street and Viele Avenue - Unsignalized Intersection (see Figure 19.14-1 - location N)
- Halleck Street and Ryawa Avenue - Unsignalized Intersection (see Figure 19.14-1 - location O)
- Tiffany Street and Randall Avenue - Signalized Intersection (see Figure 19.14-1 - location P)
- Edgewater Road and Garrison Avenue - Unsignalized Intersection (see Figure 19.14-1 - location Q)
- Tiffany Street and Spofford Avenue - Unsignalized Intersection (see Figure 19.14-1 - location R)

As noted above, Bruckner Boulevard is a major surface arterial in the South Bronx. Leggett Avenue, Longwood Avenue, Tiffany Street, Randall Avenue and Halleck Street currently serve, or will serve after the truck route changes are implemented, as the primary routes for trucks in the Hunts Point peninsula.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Counts were conducted in late February 2003. Figures 19.14-2, 19.14-3, 19.14-4, 19.14-5, 19.14-6 and 19.14-7 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 8:00 a.m. and 9:00 a.m., the Facility peak between 11:00 a.m. and 12:00 noon, and the PM peak between 5:00 p.m. and 6:00 p.m. Table 19.14-1 presents the v/c ratio, delay and LOS for the 18 intersections during the AM, Facility, and PM peaks.

For simplicity in this analysis, Bruckner Boulevard is described as north-south and Tiffany Street, Leggett Street, etc., as east-west. On Bruckner Boulevard, existing traffic volumes peak between 7:00 a.m. and 9:00 a.m., then decrease, but remain at a fairly high relative level throughout the Facility peak period. Traffic volumes peak again between 4:00 p.m. and 6:30 p.m. Throughout Hunts Point peninsula, traffic remains at a fairly consistent level from 6:00 a.m. through 4:00 p.m., and then begins to decrease through the late afternoon

The composition of vehicles in the traffic stream varies by location and time of day but is typically comprised of a high proportion of trucks. Along Bruckner Boulevard, trucks and buses comprise between 10% and 20% of the total traffic during the AM peak and slightly less during the PM peak. Trucks and buses typically comprise 15% to 25% of the total traffic volume during the Facility peak hour on Bruckner Boulevard. The proportion of trucks is higher within Hunts Point peninsula, where truck levels are well over 30% of total traffic during the AM and Facility peak periods and dip only slightly, typically to between 20% and 30%, during the PM peak.



1500 0 1500 Feet

Site delineations are approximate
Base Map Source: New York City Department of City Planning

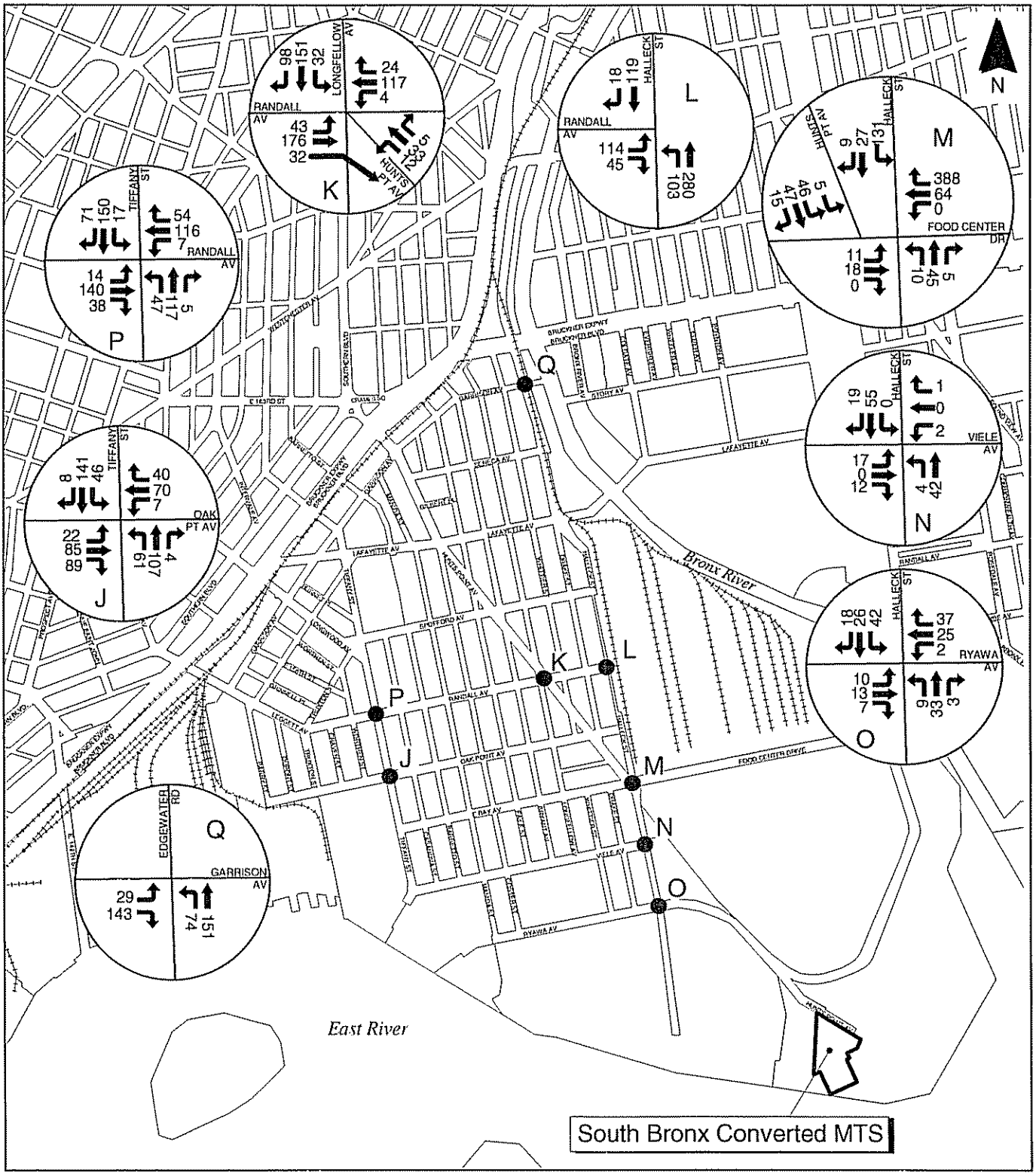
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Figure 19.14-2 Existing Traffic Volumes - AM Peak

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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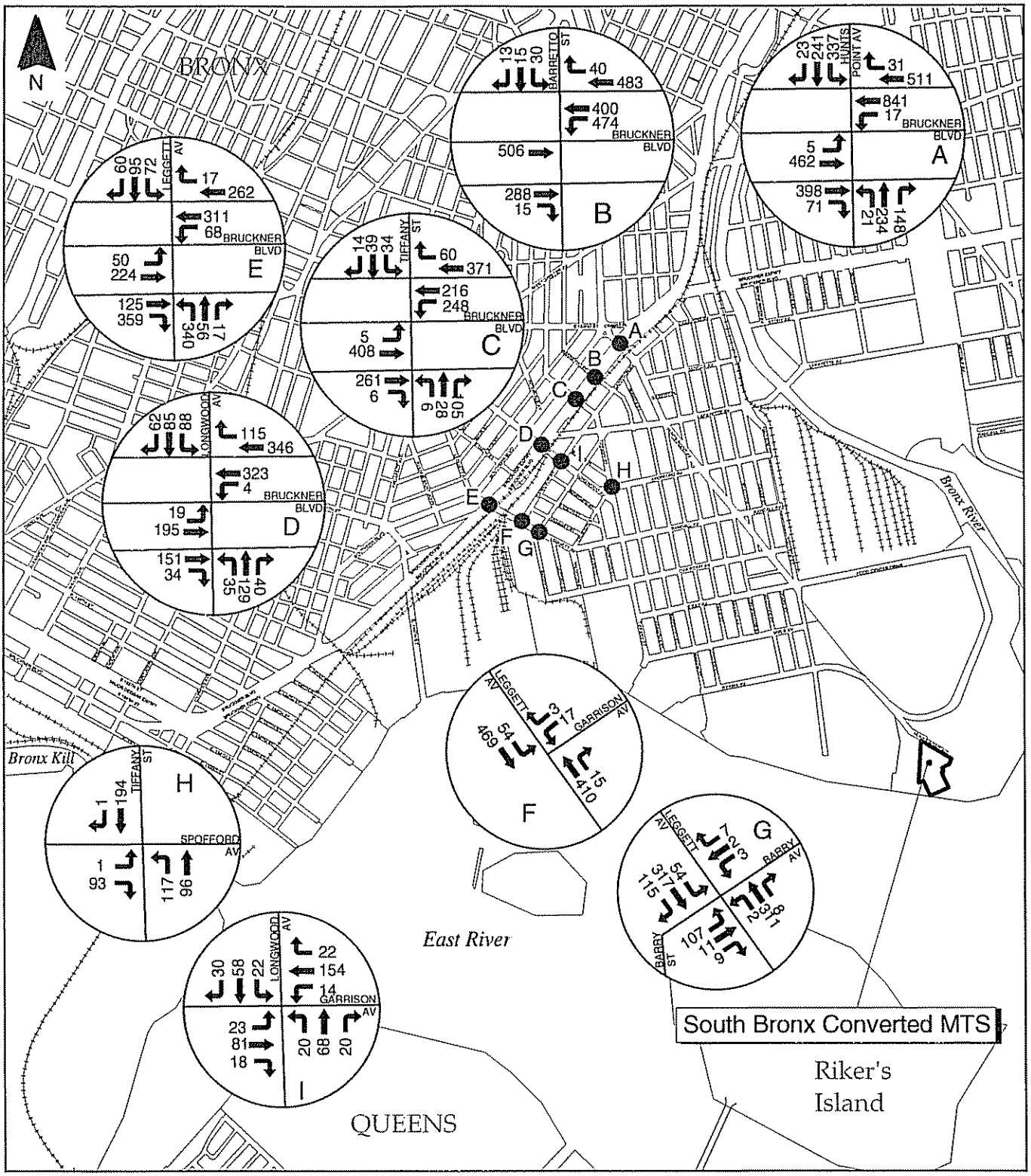
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Figure 19.14-3 Existing Traffic Volumes - AM Peak

South Bronx Converted MTS

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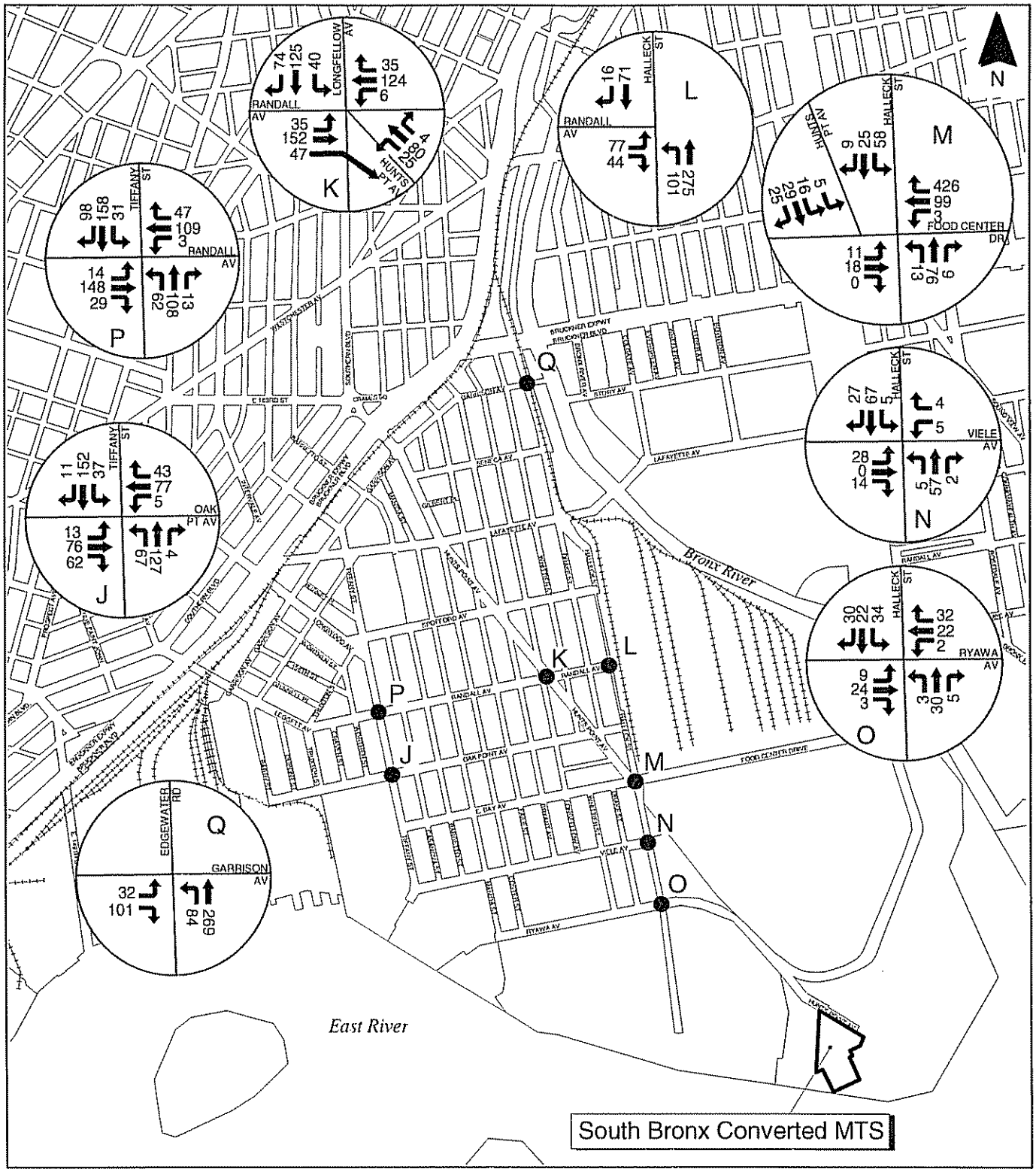
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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 19.14-4 Existing Traffic Volumes
Facility Peak
South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

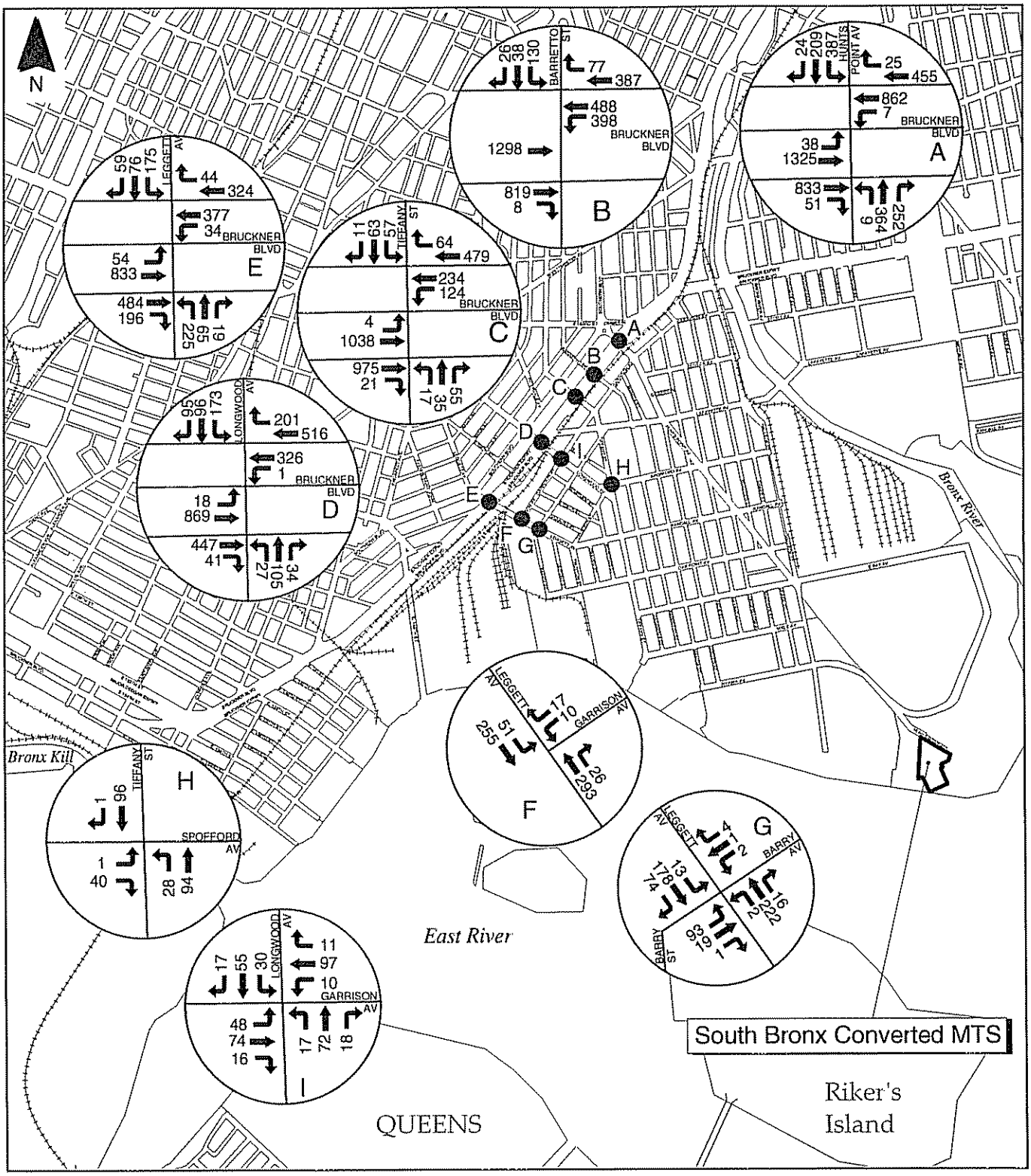
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-5 Existing Traffic Volumes
Facility Peak
South Bronx Converted MTS

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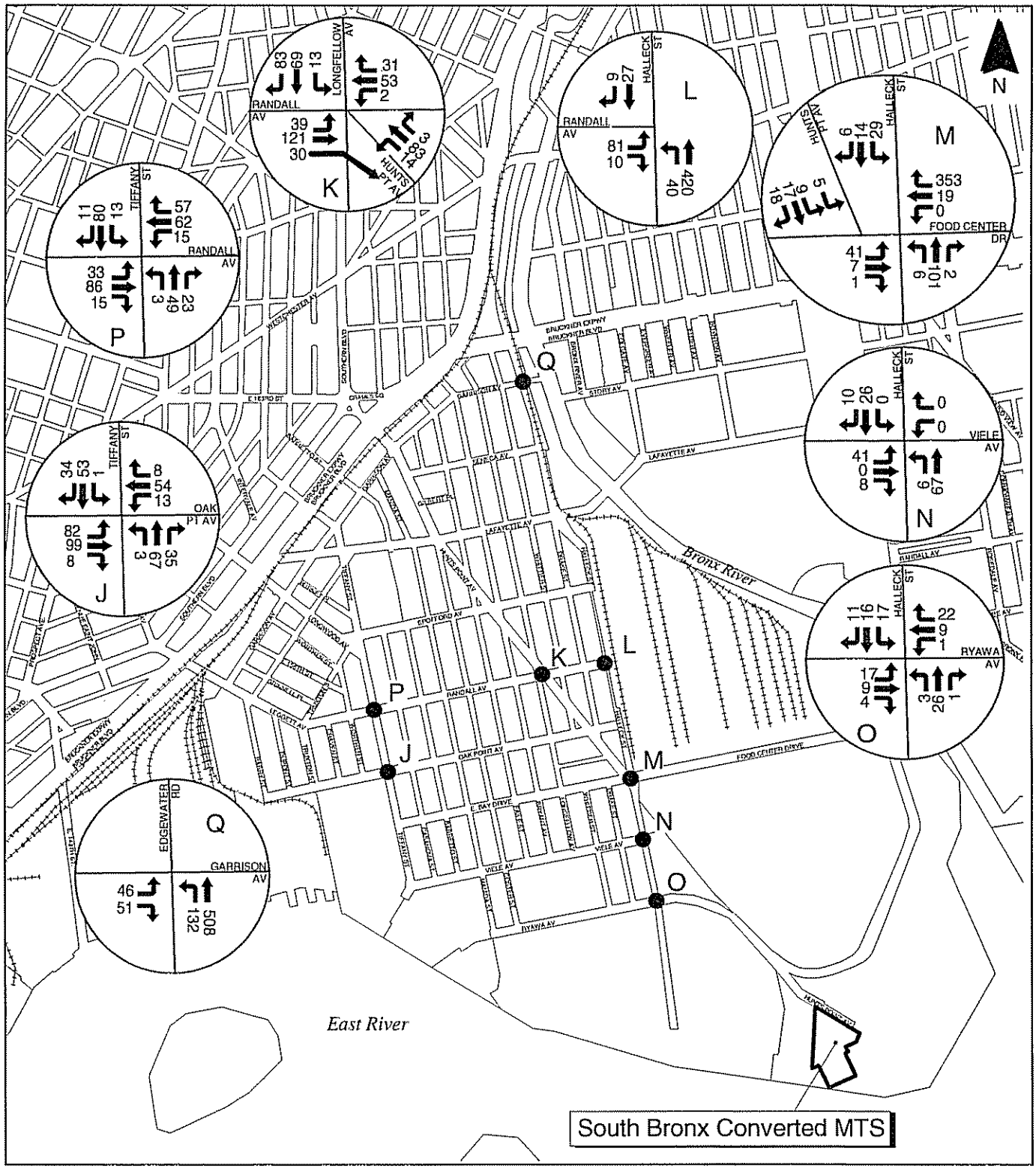
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 19.14-6 Existing Traffic Volumes - PM Peak

South Bronx Converted MTS

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

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Figure 19.14-7 Existing Traffic Volumes - PM Peak

South Bronx Converted MTS

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Table 19.14-1
HCM Analysis[1] – Existing Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Garrison Street (signalized)									
SB LTR	0 11	14.0	B	0 08	13.8	B	0.09	13.9	B
EB LT	0 51	10.6	B	0.56	11.5	B	0.31	8.6	A
WB TR	0.52	10.8	B	0.37	9.0	A	0.27	8.1	A
OVERALL		10.8	B		10.5	B		8.6	A
Leggett Avenue & Barry Street (signalized)									
NB DFL	0.26	15.1	B	0 43	16 4	B	0 33	15.4	B
NB TR	0 09	13.9	B	0.08	13 8	B	0 06	13 6	B
SB LTR	0 10	13.9	B	0.07	13 7	B	0.05	13.6	B
EB LTR	0 51	10 7	B	0 63	13.1	B	0 32	8 6	A
WB LTR	0.46	10.2	B	0.33	8.7	A	0.21	7.7	A
OVERALL		11.0	B		12.2	B		9.7	A
Tiffany Street & Randall Avenue (signalized)									
NB DFL	-	-	-	-	-	-	-	-	-
NB LTR	0.33	10.3	B	0.35	10.4	B	0.21	8.9	A
SB LTR	0.36	10.3	B	0.39	10.7	B	0.23	9.0	A
EB LTR	0.48	18.6	B	0.39	17.2	B	0.23	15.3	B
WB LTR	0.39	17.0	B	0.28	15.7	B	0.14	14.3	B
OVERALL		14.0	B		13.2	B		11.2	B
Tiffany Street & Oak Point Avenue (signalized)									
NB LTR	0 42	17 4	B	0.39	16 7	B	0.34	15.7	B
SB LTR	0.33	15.6	B	0.35	16.0	B	0.19	14.2	B
EB LTR	0.25	9.8	A	0.20	9.3	A	0.12	8.8	A
WB LTR	0.17	9.2	A	0.17	9.0	A	0.34	15.7	B
OVERALL		13.2	B		13.2	B		12.6	B
Hunts Point Avenue & Randall Avenue (signalized)									
NB LTR	0.06	10 0	B	0.17	10.7	B	0.10	10.2	B
SB LTR	0.35	12 2	B	0 30	11 8	B	0.20	11.0	B
EB LTR	0 38	12.9	B	0.34	12.4	B	0.26	11.5	B
WB LTR	0.21	11.2	B	0.25	11.5	B	0.13	10.5	B
OVERALL		12.1	B		11.7	B		10.5	B
Longwood Avenue & Garrison Avenue (unsignalized)									
NB LTR	-	10.4	B	-	10.3	B	-	8.8	A
SB LTR	-	11.3	B	-	10.0	B	-	9.0	A
EB LT	-	10.7	B	-	9.7	A	-	9.5	A
EB TR		10.2	B		10.0	B		8.8	A
WB LT	-	10.7	B	-	10.4	B	-	8.7	A
WB TR		11.9	B		11.4	B		8.9	A
OVERALL		10.9	B		10.5	B		8.9	A
Longwood Avenue & Tiffany Street (unsignalized)									
NB LT	-	9.6	A	-	9.0	A	-	7.6	A
EB LR	-	10.4	B	-	11.4	B	-	9.7	A

Table 19.14-1 (continued)
HCM Analysis[1] – Existing Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East Bay Avenue & Halleck Street (signalized)									
NB L	0 04	17.3	B	0 05	17.3	B	0.02	17.0	B
NB TR	0 06	17.3	B	0.09	17.6	B	0.09	17 6	B
SB L	0 43	23 6	C	0.20	19.5	B	0 12	18 5	B
SB TR	0 07	17 4	B	0.04	17.1	B	0 04	17.1	B
EB LTR	0.10	23 1	C	0 09	22.9	C	-	-	-
EB DFL	-	-	-	-	-	-	0 17	24.4	C
EB TR							0 06	22.7	C
WB LTR	0 24	24.7	C	0.35	26.2	C	0 12	23.2	C
WB R	0.59	20.2	C	0.65	22.1	C	0.52	17.7	B
OVERALL		21.3	C		22.0	C		18.9	B
East Bay Avenue & Hunts Point Avenue (signalized)									
SB LTR	0.33	36.7	D	0.31	36.7	D	0.21	35.2	D
EB LTR	0 10	23 1	C	0 09	22 9	C	0 05	22 7	C
EB DFL							0 17	24.4	C
WB LTR	0.24	24 7	C	0.35	26.2	C	0 12	23.2	C
WB R	0.59	20.2	C	0.65	22.1	C	0.52	17.7	B
OVERALL		24.7	C		25.4	C		21.6	B
Hunts Point Avenue & Bruckner Boulevard NB ML (signalized)									
NB L	0 01	23 0	C	0 01	23 0	C	0.06	23 6	C
NB T	0 62	32 4	C	0 53	30 5	C	1 00	60 0	E
EB L	0 52	42 0	D	0 73	49 2	D	0.82	57.0	E
EB T	0 19	29 5	C	0 25	30 4	C	0 24	30 2	C
WB T	0 38	37 9	D	0 29	36 5	D	0 33	37 1	D
WB R	0.41	40.3	D	0.50	43.1	D	0.69	49.9	D
OVERALL		35.3	D		36.9	D		53.0	D
Hunts Point Avenue & Bruckner Boulevard NB SR (signalized)									
NB TR	0 75	37 0	D	0 54	30 8	C	0 75	36 4	D
EB L	0 52	42 0	D	0 73	49 2	D	0 82	57 0	E
EB T	0 19	29 5	C	0 25	30 4	C	0 21	29 8	C
WB T	0 38	37 9	D	0 29	36 5	D	0 33	37 1	D
WB R	0 41	40 3	D	0 50	43 1	D	0 69	49 9	D
OVERALL		37.4	D		37.3	D		41.5	D
Hunts Point Avenue & Bruckner Boulevard SB ML (signalized)									
SB LT	0 70	18 7	B	0 37	13 3	B	0 38	13 4	B
EB TR	0 38	37 5	D	0 57	40 8	D	0 62	41 8	D
WB LT	0 28	30 9	C	0 34	31 8	C	0 50	34 5	C
OVERALL		23 3	C		25 9	C		27 5	C
Hunts Point Avenue & Bruckner Boulevard SB SR (signalized)									
SB TR	0 78	22 2	C	0 34	13 0	B	0 26	12 2	B
EB TR	0 38	37 5	D	0 57	40 8	D	0 62	41 8	D
WB LT	0 28	30 9	C	0 34	31 8	C	0 50	34 5	C
OVERALL		26 4	C		27 9	C		30 9	C
Barretto Street & Bruckner Boulevard ML (signalized)									
NB T	0 53	35 0	D	0 52	34 7	C	0 94	46 0	D
SB L	0 67	17 2	B	0 72	19 3	B	1 01	85 2	F
SB LT	0 64	14 1	B	0 43	10 7	B	0 38	9 3	A
EB LT	0 76	57 7	E	0 26	37 3	D	0 57	45 7	D
OVERALL		24 1	C		22 4	C		45 0	D

Table 19.14-1 (continued)
HCM Analysis[1] – Existing Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Barretto Street & Bruckner Boulevard SR (signalized)									
NB TR	0.80	44.14	D	0.43	33.5	C	0.66	30.2	C
SB TR	0.69	14.14	B	0.32	9.3	A	0.26	8.0	A
EB TR	0.76	56.7	E	0.25	37.1	D	0.58	45.8	D
OVERALL		28.7	C		19.8	B		25.4	C
Tiffany Street & Bruckner Boulevard ML (signalized)									
NB L	0.07	28.5	C	0.03	27.8	C	0.02	16.2	B
NB T	0.63	37.4	D	0.50	34.4	C	0.72	27.4	C
SB L	0.77	28.5	C	0.67	19.3	B	0.71	40.8	D
SB T	0.32	9.3	A	0.13	7.8	A	0.13	7.8	A
EB LT	0.69	54.4	D	0.35	39.4	D	0.71	54.5	D
WB LT	0.13	34.5	C	0.08	33.9	C	0.10	34.2	C
OVERALL		27.4	C		25.8	C		28.6	C
Tiffany Street & Bruckner Boulevard SR (signalized)									
NB TR	0.40	32.9	C	0.36	32.0	C	0.72	27.4	C
SB TR	0.64	13.7	B	0.26	8.8	A	0.29	9.0	A
EB TR	0.61	47.0	D	0.33	38.6	D	0.62	47.5	D
WB TR	0.44	40.0	D	0.36	38.2	D	0.21	35.5	D
OVERALL		23.4	C		23.6	C		25.0	C
Longwood Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.07	10.1	B	0.08	10.0	A	0.05	10.9	B
NB T	0.14	10.2	B	0.13	10.1	B	0.49	15.5	B
SB LT	0.42	13.1	B	0.16	10.4	B	0.22	12.3	B
EB DFL	0.49	39.3	D	0.29	33.6	C	0.51	36.7	D
EB T	0.37	35.1	D	0.24	32.4	C	0.23	30.1	C
WB LT	0.42	35.1	D	0.35	33.8	C	0.22	29.4	C
OVERALL		20.8	C		19.8	B		19.2	C
Longwood Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0.16	10.4	B	0.15	10.4	B	0.36	13.7	B
SB TR	0.65	17.0	B	0.31	11.7	B	0.40	14.3	B
EB TR	0.44	34.8	C	0.30	32.5	C	0.43	32.5	C
WB TR	0.43	35.0	C	0.38	34.2	C	0.27	30.0	C
OVERALL		21.6	C		19.7	B		19.6	B
Leggett Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.31	42.4	D	0.16	39.9	D	0.31	51.4	D
NB T	0.14	25.0	C	0.25	26.4	C	0.55	22.5	C
SB L	0.49	47.1	D	0.43	46.8	D	0.27	52.0	D
SB T	0.61	32.7	C	0.32	27.4	C	0.23	17.9	B
EB DFL	0.50	41.8	D	0.37	37.2	D	0.80	64.6	E
EB T	0.24	33.7	C	0.27	34.2	C	0.21	36.1	D
WB L	0.97	92.7	F	0.86	68.4	E	0.58	47.0	D
WB LT	0.85	67.3	E	0.63	46.3	D	0.53	44.1	D
OVERALL		46.3	D		39.3	D		31.7	C

Table 19.14-1 (continued)
HCM Analysis[1] – Existing Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0.69	35.7	D	0.65	34.7	C	0.58	23.3	C
SB TR	0.48	30.0	C	0.29	27.0	C	0.26	18.1	B
EB TR	0.35	34.6	C	0.34	34.4	C	0.40	38.3	D
WB TR	0.71	43.9	D	0.58	39.6	D	0.47	39.6	D
OVERALL		35.8	D		34.3	C		27.9	C
Halleck Street & Randall Avenue (unsignalized)									
NB LT	-	8.9	A	-	8.3	A	-	7.6	A
EB L	-	23.1	C	-	18.6	C	-	14.0	B
EB R	-	9.5	A	-	9.1	A	-	8.8	A
Halleck Street & Viele Avenue (unsignalized)									
NB L	-	8.1	A	-	8.0	A	-	7.4	A
SB L	-	-	-	-	-	-	-	-	-
EB LT	-	10.1	B	-	10.6	B	-	10.3	B
EB TR	-	9.2	A	-	9.4	A	-	8.8	A
WB LTR	-	9.2	A	-	9.5	A	-	-	-
Ryawa Avenue & Halleck Street (unsignalized)									
NB L	-	7.8	A	-	7.7	A	-	-	-
SB LT	-	8.0	A	-	7.7	A	-	7.8	A
EB L	-	11.5	B	-	10.7	B	-	10.1	B
EB T	-	12.8	B	-	12.2	B	-	10.8	B
EB TR	-	10.8	B	-	11.5	B	-	9.7	A
WB LT	-	12.0	B	-	10.9	B	-	9.8	A
WB TR	-	10.3	B		9.8	A		9.3	A
Garrison Avenue & Edgewater Road (unsignalized)									
NB LT	-	7.9	A	-	7.6	A	-	7.5	A
EB LT	-	10.3	B	-	11.1	B	-	19.6	C

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
EB = eastbound
LTR = left, through and right movements
ML = mainline
NB = northbound
SB = southbound
SR = service road
WB = westbound
LT = left through movement
L = left movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

19.14.2.3.1 LOS at Signalized Intersections

Table 19.14-1 shows the existing v/c ratio, delay and LOS for each analysis peak period. Overall, most signalized intersections operate at LOS A, B or C during each analysis period, except the intersections of Bruckner Boulevard at Hunts Point Avenue, Bruckner Boulevard at Barretto Street, and Bruckner Boulevard at Leggett Avenue. LOS D occurs northbound on both the mainline road and service road of Bruckner Boulevard at Hunts Point Avenue during all three time periods. LOS D also occurs during the PM peak hour on the mainline road of Bruckner Boulevard at Barretto Street as well as during both the AM and Facility peak hours on the mainline road of Bruckner Boulevard at Leggett Avenue.

Specific lane groups at study intersections typically operate at LOS C or better, but a number operate at LOS E or LOS F, specifically lane groups related to the above-mentioned intersections. These include the northbound through lane group and eastbound left turn lane group on the mainline intersection of Bruckner Boulevard at Hunts Point Avenue as well as the eastbound left turn lane group on the service road intersection during the PM peak hour. All of these lane groups operate at LOS E.

The intersection of Bruckner Boulevard at Barretto Street also has specific lane groups operating at LOS E or LOS F. On the mainline road intersection, the southbound left turn during the PM peak hour operates at LOS F, while the shared eastbound left and through lane group during the AM peak hour operates at LOS E. The shared eastbound through and right lane group on the service road intersection operates at LOS E as well during the AM peak hour. At the mainline road intersection of Bruckner Boulevard at Leggett Avenue, the westbound left turn is operating at LOS F during the AM peak hour. Lane groups operating at LOS E include the shared westbound left and through lane group during the AM peak hour, the westbound left turn during the Facility peak hour and the eastbound defacto left turn during the PM peak hour.

19.14.2.3.2 LOS at Unsignalized Intersections

Table 19.14-1 also indicates intersection operations at each of the unsignalized intersections analyzed. All unsignalized intersection movements analyzed operate at LOS A and LOS B with the exception of the eastbound left turn from Randall Avenue to Halleck Street, which operates

at LOS C during the AM and Facility peak hours. The shared eastbound left and through lane group from Garrison Avenue to Edgewater Road during the PM peak hour also operates at LOS C. (HCM output was included in technical backup submitted to NYCDOT.)

19.14.2.4 Existing DSNY-Related Traffic

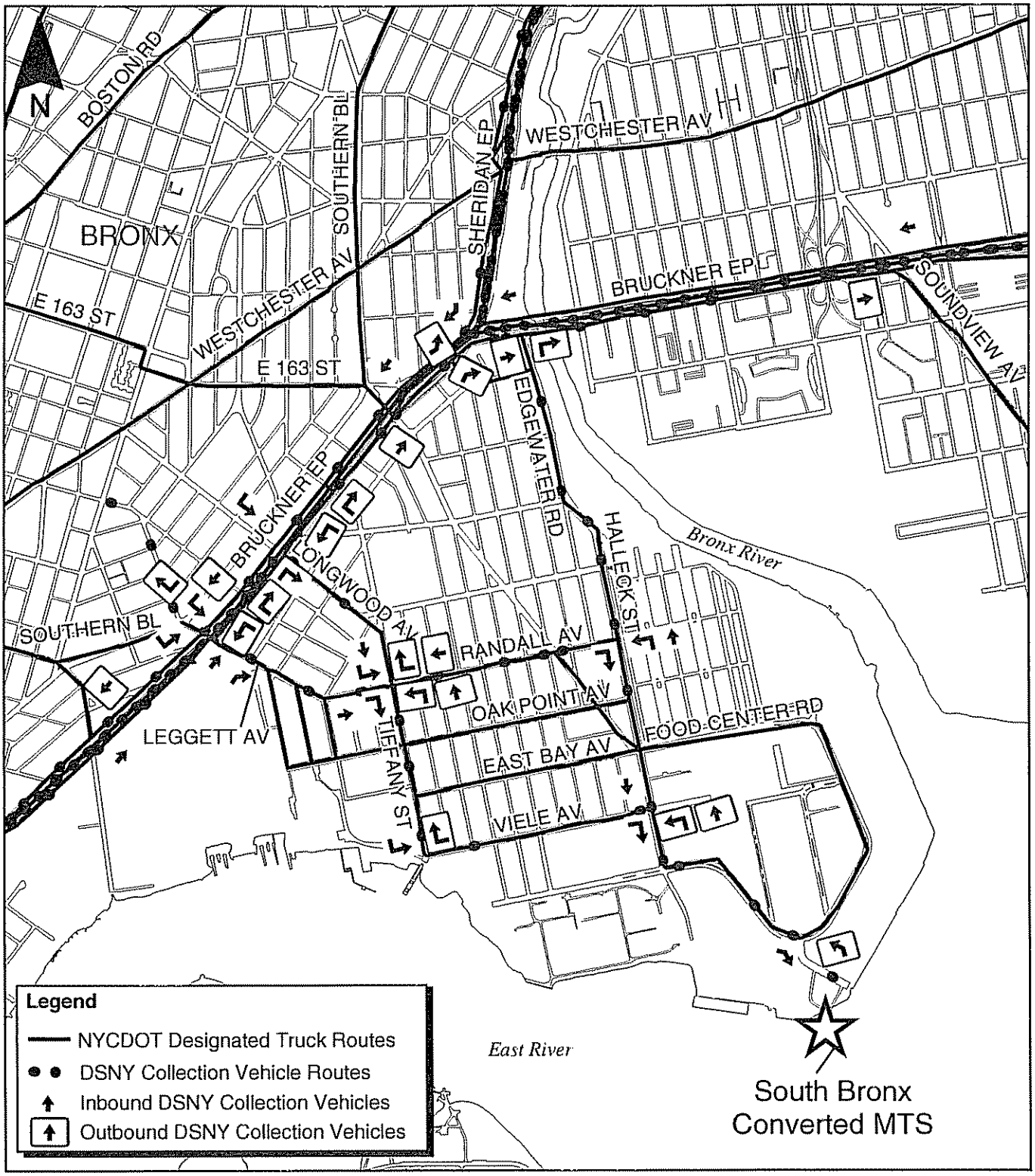
MSW generated by Bronx CDs BX1 through BX8, BX11 and BX12 is currently transported under the Bronx interim export program to USA Waste Management of NY's Harlem River Yard facility, a commercial vendor located at 98 Lincoln Avenue in the Port Morris section of the Bronx. Municipal waste generated by CDs BX9 and BX10 is transported to the Waste Services of NY facility at 920 East 132nd Street, also in Port Morris. E-Z Pack loads from BX1 and BX6 are delivered to either the Waste Services facility or to Triboro Fibers, located at 770 Barry Street in the Bronx, as are all borough-wide collection activities. Existing DSNY collection vehicles in the traffic study area proceeding to and from these vendors are routed primarily along Bruckner Boulevard.

19.14.2.5 Public Transportation

Public transportation within the study area consists of the NYCT BX6 bus route with service along Hunts Point Avenue, Spofford Avenue, Halleck Street and Food Center Drive. The BX6 route crosses the Macombs Dam Bridge into Manhattan. No other transit service is available within ½-mile of the site.

19.14.2.6 Pedestrian Activity

There is little pedestrian activity in the study area. Most pedestrian activity is concentrated in the area of the commercial establishments near the intersection of Hunts Point Avenue and Garrison Avenue.



1,000 0 1,000 Feet

Site delineations are approximate.
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 19.14-8 DSNY Collection Vehicle Routes South Bronx Converted MTS

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19.14.3 Future No-Build Conditions

19.14.3.1 Traffic Conditions

The following assumptions and traffic assignments were applied in the development of Future No-Build traffic volumes:

- Continued operation of the Bronx interim export program with MSW delivered to the vendors noted above;
- Discrete assignment of auto and truck trips generated by the relocation of the Fulton Fish Market at Hunts Point, as detailed in the 2001 FEIS prepared for the NYCEDC; and
- Background traffic growth of 0.5% per year in accordance with the 2001 CEQR Technical Manual.

In addition, background truck traffic was reassigned due to the changes expected to be implemented to the truck route network by NYCDOT and the one-way westbound restriction on Leggett Avenue between Bruckner Boulevard and Southern Boulevard, as described in Section 19.14.2.2.

- Due to the truck route changes assumed for 2006 Future No-Build Conditions, trucks traveling southbound on Bruckner Boulevard and turning left onto Tiffany Street will be re-routed to Longwood Avenue, thus turning left onto Longwood Avenue when traveling southbound on Bruckner Boulevard. As discussed with the NYCDOT, the installation of a southbound left turn lane on Bruckner Boulevard was assumed and the signal timing at the intersection of Bruckner Boulevard at Longwood Avenue was modified to accommodate the additional left turn volumes. The existing two-phase signal operation was modified to a three-phase operation.

Figures 19.14-9, 19.14-10, 19.14-11, 19.14-12, 19.14-13 and 19.14-14 provide the AM, Facility peak and PM peak-hour Future No-Build traffic volumes for the intersections analyzed in conjunction with this site.

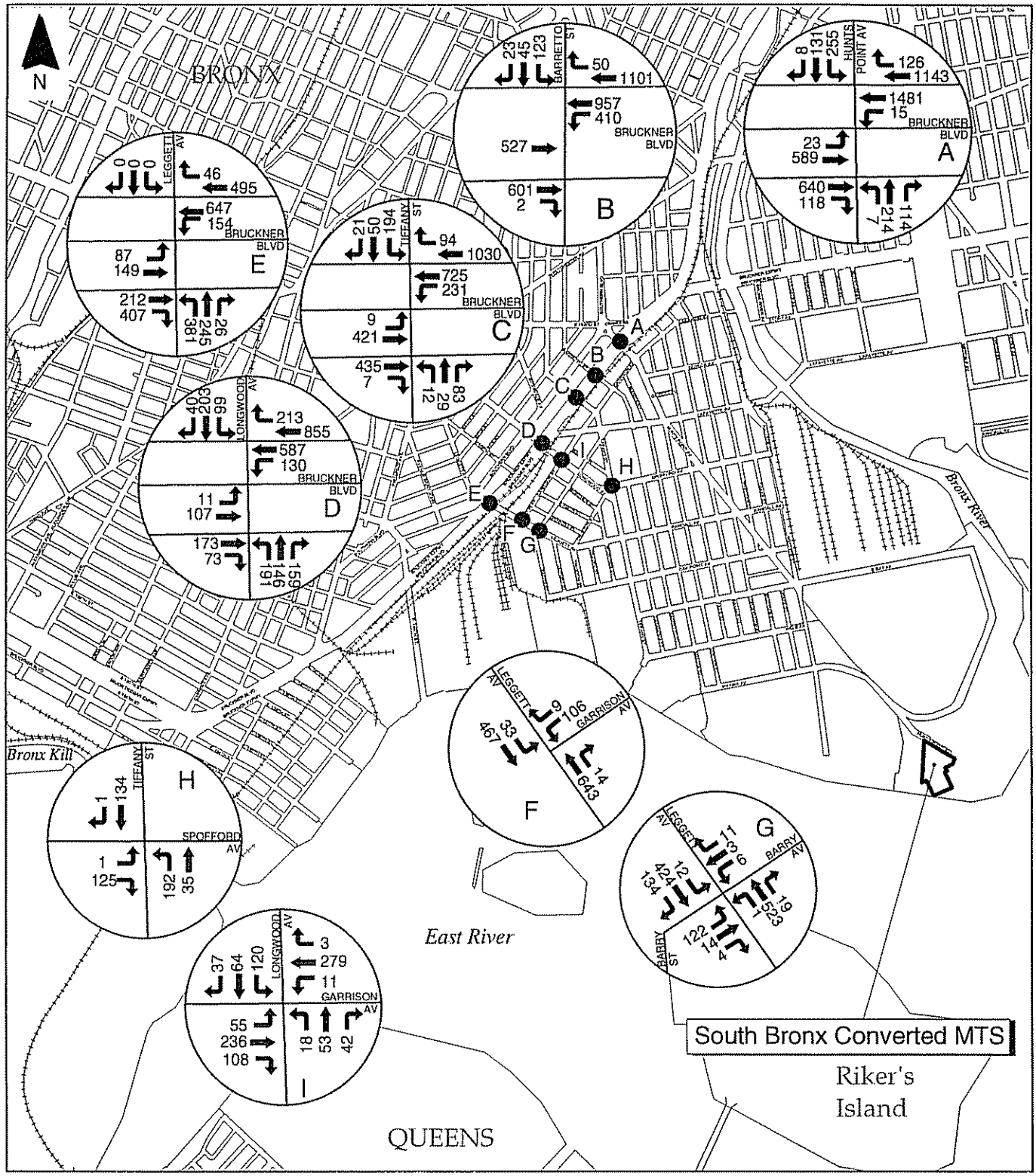
Table 19.14-2 provides the Future No-Build v/c ratio, delay and LOS for each study intersection. As shown, the majority of the intersections are forecast to operate at LOS B or LOS C, although a significant number are predicted to operate at LOS D. The additional volume of the background growth and new development did not significantly deteriorate any one intersection,

but, as expected, the re-routing of truck trips to Longwood Avenue would generate a LOS D at the mainline road intersection of Bruckner Boulevard at Longwood Avenue for both the AM and PM peak periods and on the service road for all three time periods.

During the PM peak period, the mainline road intersection of Bruckner Boulevard and Barretto Street would also operate at LOS D. Traffic operations during all three time periods on the northbound mainline road and service roads of Bruckner Boulevard at Hunts Point Avenue would also operate at LOS D, with the exception of the PM peak period on the northbound mainline road, which would operate at LOS E. Lastly, operations at the intersection of Bruckner Boulevard at Leggett Avenue was shown to improve slightly in comparison to existing conditions due to the elimination of conflicts for westbound left-turning vehicles.

Individual movements generally operate at LOS D or better, but a number operate at LOS E or F. During the PM peak hour, at the intersection of Bruckner Boulevard at Hunts Point Avenue, both the eastbound left and northbound through lane groups on the northbound mainline road intersection would operate at LOS E, as would the eastbound left turn lane group on the northbound service road intersection. The eastbound left turn lane group at the intersection of mainline Bruckner Boulevard at Tiffany Street would operate at LOS E, both during the AM and PM peak hours. LOS F was projected for the southbound left turn lane group on the mainline road at the intersection of Bruckner Boulevard with Barretto Street during the PM peak hour, while LOS E was projected for the shared eastbound left and through lane group during the AM peak hour. LOS E was also projected for the eastbound shared through and right turn lane group during the AM peak hour.

At the service road intersection of Bruckner Boulevard with Longwood Avenue, the westbound shared through and right turn lane group during the AM peak hour and the southbound shared through and right lane group during the PM peak hour would operate at LOS E. Lastly, the westbound left turn lane group and the westbound shared left and through lane group at the mainline road intersection of Bruckner Boulevard with Leggett Avenue and at the service road intersection shared through and right turn lane group would operate at LOS E during the AM peak period.

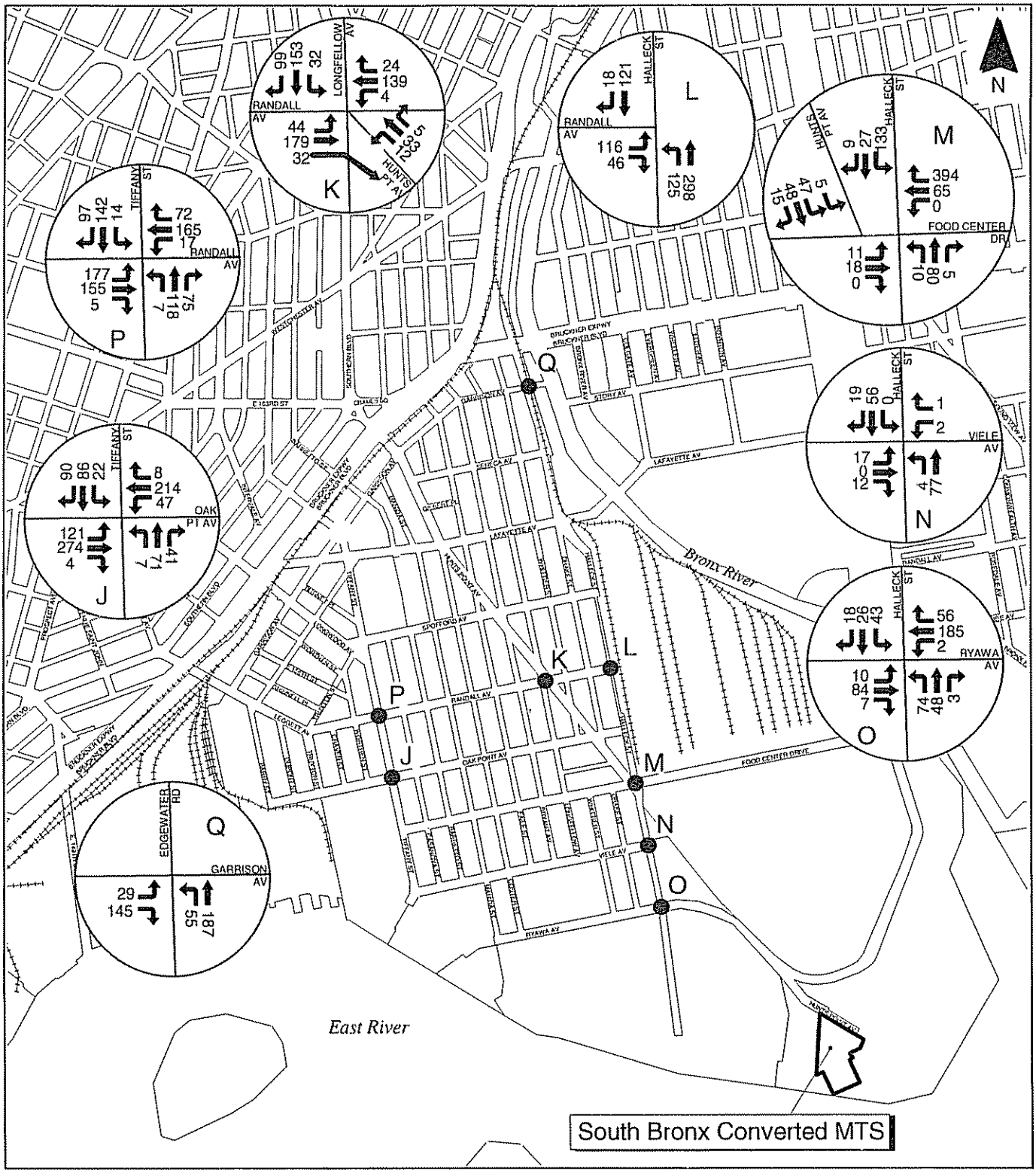


Site delineations are approximate
Base Map Source: New York City Department of City Planning

1500 0 1500 Feet

Figure 19.14-9 Future No-Build Traffic Volumes - AM Peak
South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

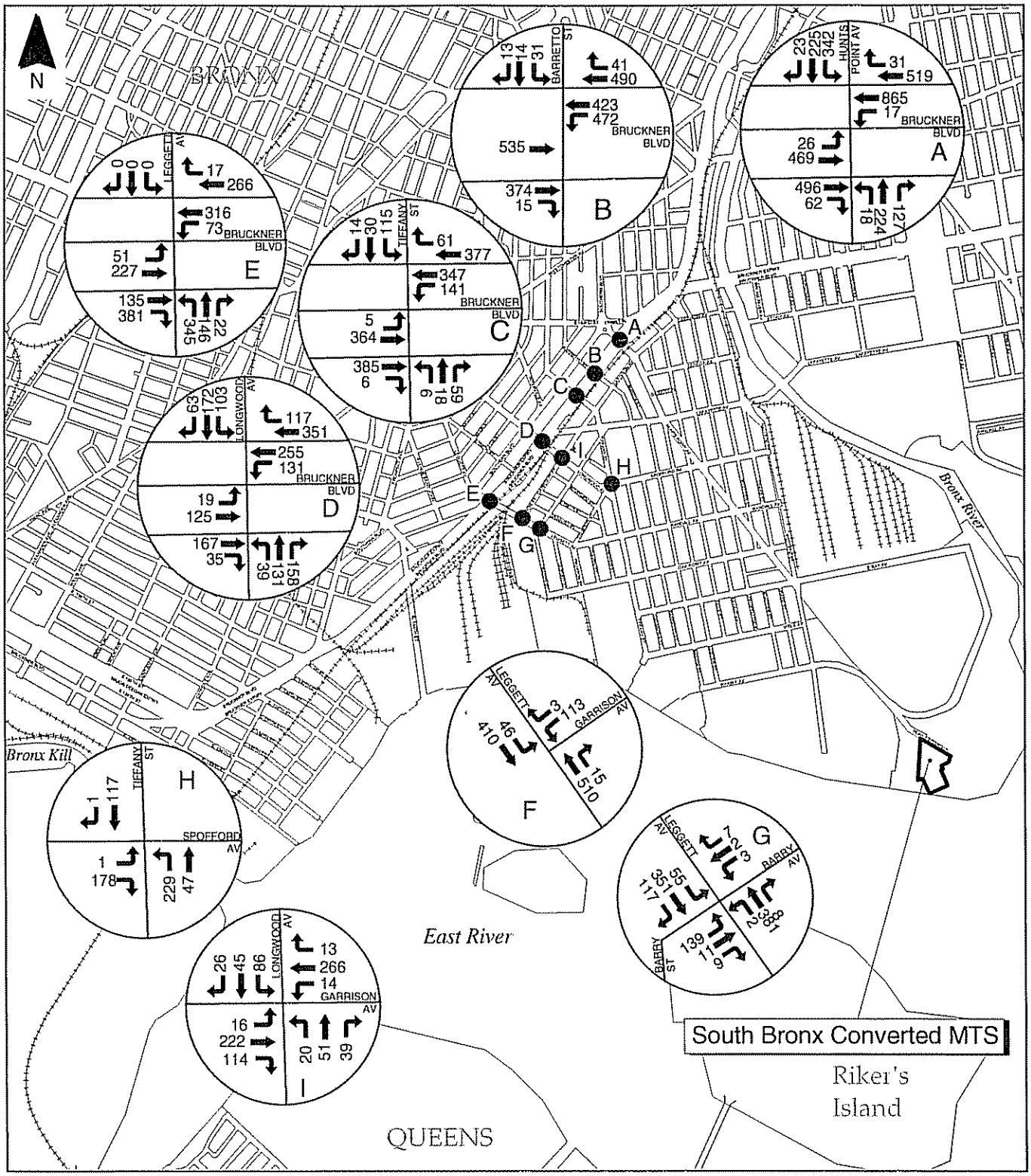
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Figure 19.14-10 Future No-Build Traffic Volumes - AM Peak South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

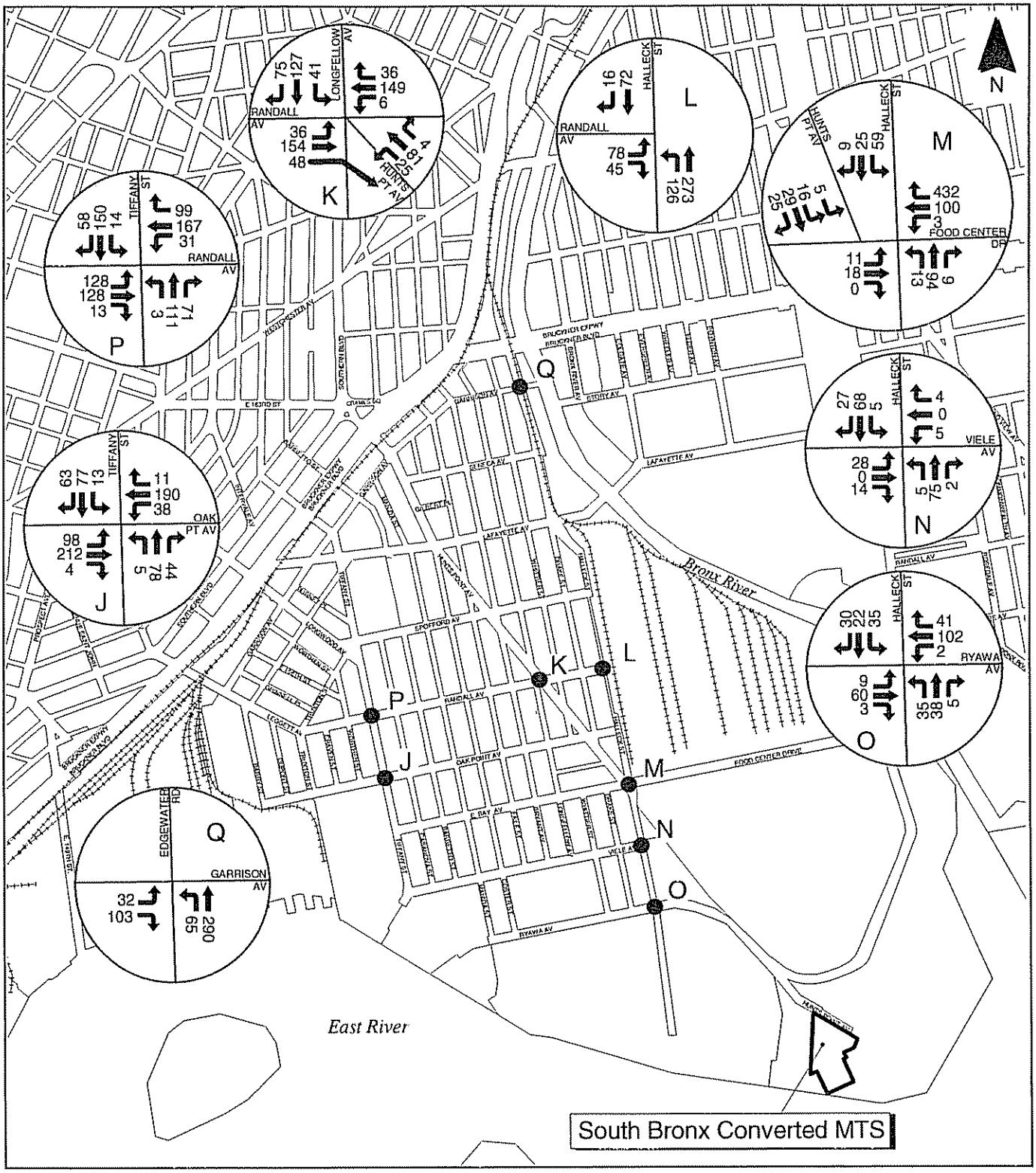
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Figure 19.14-11 Future No-Build Traffic Volumes - Facility Peak South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

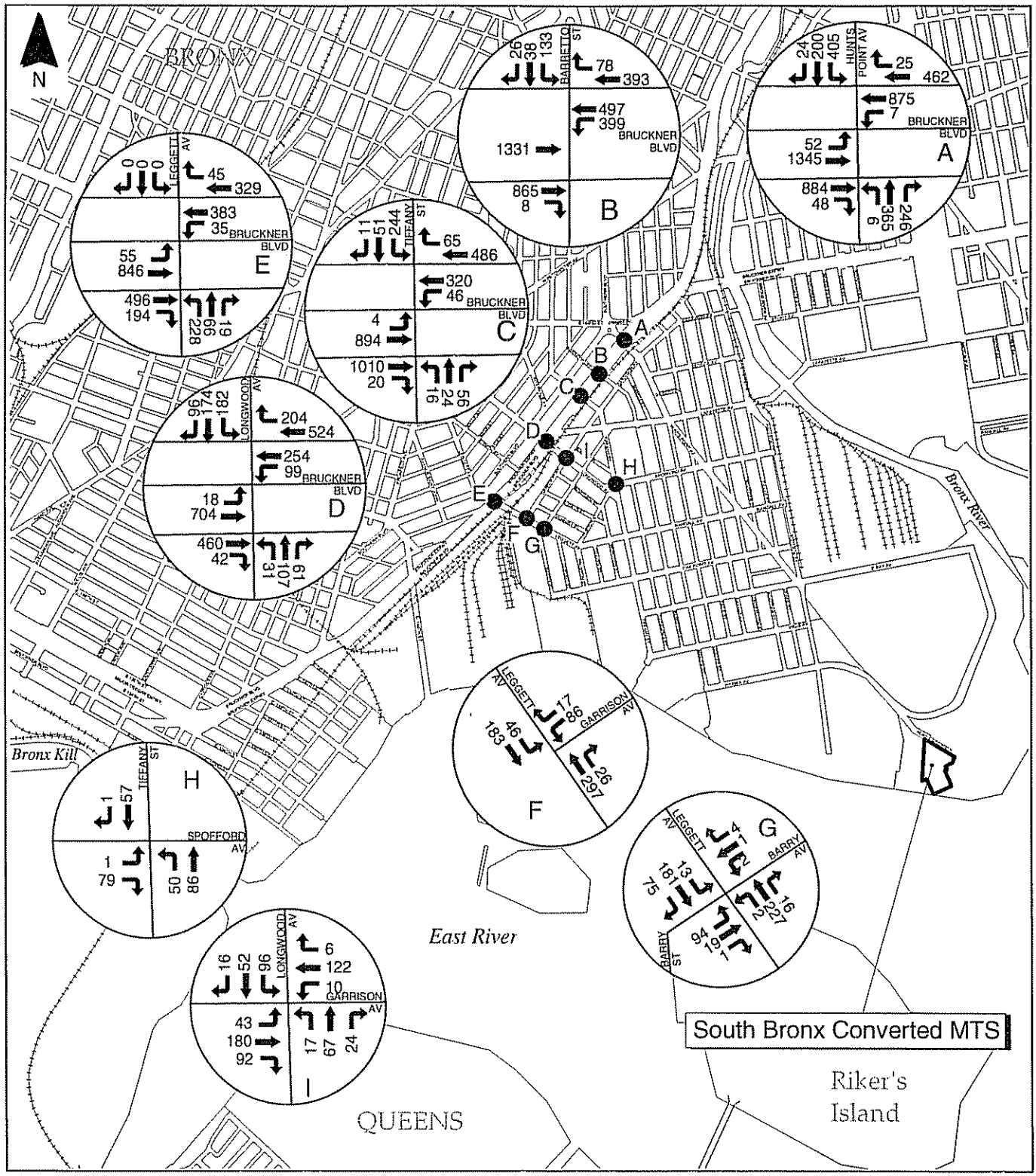
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Figure 19.14-12 Future No-Build Traffic Volumes - Facility Peak South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

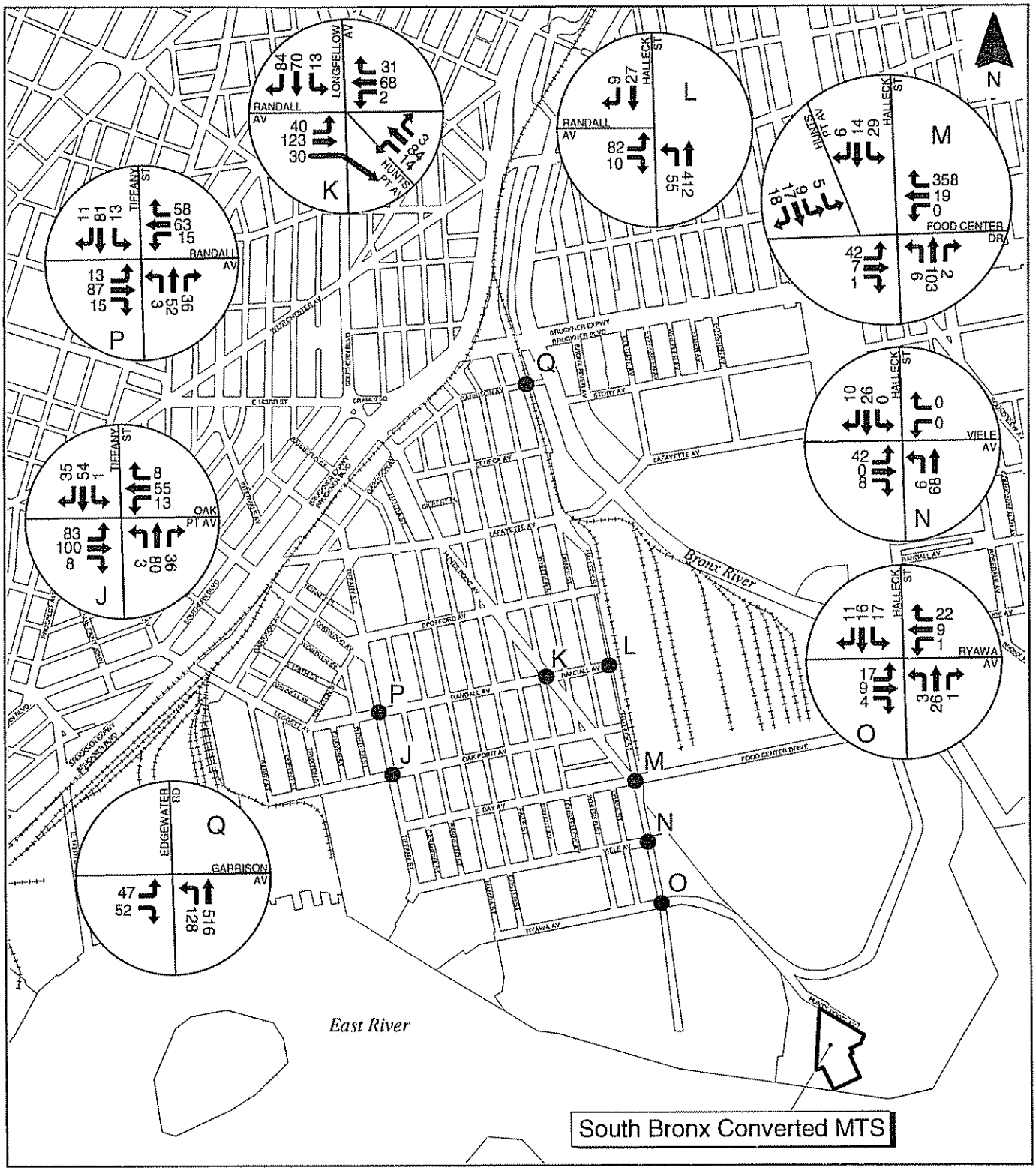
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Figure 19.14-13 Future No-Build Traffic Volumes - PM Peak South Bronx Converted MTS

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Figure 19.14-14 Future No-Build Traffic Volumes - PM Peak South Bronx Converted MTS

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Table 19.14-2
HCM Analysis[1] – Future No-Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Garrison Street (signalized)									
SB LTR	0.38	15.8	B	0.32	15.4	B	0.34	15.5	B
EB LT	0.48	10.2	B	0.52	11.1	B	0.25	8.1	A
WB TR	0.69	13.7	B	0.44	9.7	A	0.27	8.1	A
OVERALL		12.6	B		10.9	B		9.4	A
Leggett Avenue & Barry Street (signalized)									
NB DFL	0.46	16.7	B	0.55	18.2	B	0.33	15.4	B
NB TR	0.09	13.9	B	0.08	13.8	B	0.06	13.6	B
SB LTR	0.10	13.9	B	0.07	13.7	B	0.05	13.6	B
EB LTR	0.56	11.4	B	0.69	14.4	B	0.32	8.6	A
WB LTR	0.57	11.6	B	0.39	9.2	A	0.21	7.7	A
OVERALL		12.2	B		13.2	B		9.7	A
Tiffany Street & Randall Avenue (signalized)									
NB DFL	0.69	20.7	C	0.39	12.0	B	-	-	-
NB TR	0.46	13.1	B	0.48	13.7	B	-	-	-
NB LTR	-	-	-	-	-	-	0.21	8.9	A
SB LTR	0.37	10.4	B	0.40	10.7	B	0.23	9.1	A
EB LTR	0.64	21.7	C	0.45	18.0	B	0.23	15.3	B
WB LTR	0.46	18.2	B	0.36	16.7	B	0.19	14.8	B
OVERALL		17.1	B		14.2	B		11.4	B
Tiffany Street & Oak Point Avenue (signalized)									
NB LTR	0.83	31.3	C	0.60	20.3	C	0.34	15.7	B
SB LTR	0.45	17.2	B	0.41	16.6	B	0.19	14.3	B
EB LTR	0.26	9.8	A	0.21	9.4	A	0.13	8.8	A
WB LTR	0.18	9.2	A	0.17	9.1	A	0.14	8.8	A
OVERALL		20.3	C		15.2	B		12.6	B
Hunts Point Avenue & Randall Avenue (signalized)									
NB LTR	0.06	10.0	B	0.17	10.7	B	0.13	10.4	B
SB LTR	0.35	12.3	B	0.31	11.9	B	0.20	11.0	B
EB LTR	0.39	13.0	B	0.35	12.5	B	0.26	11.5	B
WB LTR	0.24	11.5	B	0.29	11.9	B	0.13	10.5	B
OVERALL		12.2	B		11.9	B		11.0	B
Longwood Avenue& Garrison Avenue (unsignalized)									
NB LTR	-	14.0	B	-	13.3	B	-	10.1	B
SB LTR	-	22.2	C	-	13.3	B	-	11.2	B
EB LT	-	15.4	C	-	11.8	B	-	11.3	B
EB TR	-	32.2	D	-	35.3	E	-	16.0	C
WB LT	-	13.8	B	-	14.6	B	-	10.1	B
WB TR	-	19.6	C	-	19.6	C	-	10.4	B
OVERALL		22.0	C		22.2	C		12.6	B
Longwood Avenue & Tiffany Street (unsignalized)									
NB LT	-	9.8	A	-	9.0	A	-	7.4	A
EB LR	-	11.1	B	-	12.2	B	-	9.6	A

Table 19.14-2 (continued)
HCM Analysis[1] – Future No-Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East Bay Avenue & Halleck Street (signalized)									
NB L	0 04	17 3	B	0.05	17.3	B	0 02	17 0	B
NB TR	0.09	17.5	B	0 11	17 7	B	0 09	17.6	B
SB L	0 46	24.5	C	0.21	19.7	B	0 12	18.5	B
SB TR	0 07	17.4	B	0.04	17.1	B	0.04	17.1	B
EB LTR	0 10	23.1	C	0 09	22 9	C	-	-	-
EB DFL	-	-	-	-	-	-	0 17	24.4	C
EB TR	-	-	-	-	-	-	0 06	22 7	C
WB LTR	0.25	24 8	C	0 36	26 3	C	0.12	23 2	C
WB R	0.60	20.5	C	0.66	22.4	C	0.52	17.9	B
OVERALL		21.4	C		22.1	C		19.0	B
East Bay Avenue & Hunts Point Avenue (signalized)									
SB LTR	0.34	36 8	D	0.31	36 7	D	0.21	35.2	D
EB LTR	0 10	23 1	C	0 09	22 9	C	-	-	-
EB DFL	-	-	-	-	-	-	0.17	24.4	C
EB TR	-	-	-	-	-	-	0.05	22.7	C
WB LTR	0 25	24 8	C	0.36	26 3	C	0.12	23 2	C
WB R	0.60	20.5	C	0.66	22.4	C	0.52	17.9	B
OVERALL		24.14	C		25.6	C		21.6	C
Hunts Point Avenue & Bruckner Boulevard NB ML (signalized)									
NB L	0 07	23.6	C	0 14	24.14	C	0 11	24.3	C
NB T	0 63	32.6	C	0.54	30.7	C	1 01	63.7	E
EB L	0 61	45.8	D	0.76	50.4	D	0 88	64.0	E
EB T	0 15	29.1	C	0 22	29 9	C	0 19	29.5	C
WB T	0 36	37 6	D	0 26	36 1	D	0 32	37 0	D
WB R	0.42	40.5	D	0.38	39.3	D	0.65	47.6	D
OVERALL		35.8	D		36.5	D		55.9	E
Hunts Point Avenue & Bruckner Boulevard NB SR (signalized)									
NB TR	0 86	43.7	D	0 66	34.0	C	0 82	39 6	D
EB L	0 61	45 8	D	0 76	50.4	D	0 88	64 0	E
EB T	0 15	29.1	C	0 22	29 9	C	0 19	29.5	C
WB T	0 38	38 0	D	0 26	36 1	D	0 32	37 0	D
WB R	0 39	39 8	D	0 38	39 3	D	0 65	47 6	D
OVERALL		41.3	D		38.0	D		44.1	D
Hunts Point Avenue & Bruckner Boulevard SB ML (signalized)									
SB LT	0 65	17 6	B	0 38	13 4	B	0 39	13 4	B
EB TR	0 38	37 6	D	0 57	40 9	D	0 63	42 0	D
WB LT	0.25	30.4	C	0.30	31.1	C	0.47	33.7	C
OVERALL		22.6	C		25.8	C		27.4	C
Hunts Point Avenue & Bruckner Boulevard SB SR (signalized)									
SB TR	0.79	22.7	C	0.34	13.1	B	0.27	12.2	B
EB TR	0 38	37 6	D	0 57	40 9	D	0 63	42 0	D
WB LT	0.25	30.4	C	0.30	31.1	C	0.47	33.7	C
OVERALL		26.6	C		27.8	C		30.7	C
Barretto Street & Bruckner Boulevard ML (signalized)									
NB T	0 58	36 1	D	0 58	36 0	D	0 97	51 8	D
SB L	0 68	17 7	B	0 71	19 2	B	1 02	89 5	F
SB LT	0 67	14 14	B	0 45	11 0	B	0 41	9 7	A
EB LT	0 78	59 1	E	0 26	37 3	D	0 57	45 8	D
OVERALL		24.14	C		22.9	C		48.9	D

Table 19.14-2 (continued)
HCM Analysis[1] – Future No-Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Barretto Street & Bruckner Boulevard SR (signalized)									
NB TR	0.91	54.7	D	0.59	37.2	D	0.73	32.2	C
SB TR	0.70	15.1	B	0.32	9.3	A	0.27	8.1	A
EB TR	0.77	57.5	E	0.26	37.2	D	0.58	46.0	D
OVERALL		33.5	C		22.4	C		26.7	C
Tiffany Street & Bruckner Boulevard ML (signalized)									
NB L	0.08	28.8	C	0.04	27.9	C	0.02	16.2	B
NB T	0.59	36.5	D	0.49	34.3	C	0.63	25.0	C
SB L	0.36	11.0	B	0.23	9.3	A	0.14	11.3	B
SB T	0.40	10.1	B	0.21	8.4	A	0.22	8.5	A
EB L	0.90	74.6	E	0.55	45.3	D	0.84	65.5	E
EB T	0.18	35.7	D	0.11	34.6	C	0.15	35.2	D
WB LT	0.09	34.0	C	0.06	33.6	C	0.08	33.9	C
OVERALL		27.5	C		24.5	C		27.5	C
Tiffany Street & Bruckner Boulevard SR (signalized)									
NB TR	0.62	38.0	D	0.61	37.6	D	0.76	28.7	C
SB TR	0.71	15.5	B	0.32	9.4	A	0.29	9.0	A
EB TR	0.48	39.9	D	0.27	36.4	D	0.44	39.1	D
WB TR	0.18	35.1	D	0.15	34.8	C	0.19	35.3	D
OVERALL		25.5	C		26.2	C		25.5	C
Longwood Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.09	43.9	D	0.14	40.6	D	0.05	28.0	C
NB T	0.34	47.3	D	0.27	41.8	D	0.72	40.0	D
SB L	0.41	28.6	C	0.38	31.1	C	0.51	47.5	D
SB T	0.51	27.9	C	0.31	27.9	C	0.39	39.6	D
EB DFL	0.46	37.6	D	-	-	-	0.60	42.5	D
EB T	0.69	45.9	D	-	-	-	0.46	37.2	D
EB LT	-	-	-	0.49	36.4	D	-	-	-
WB DFL	0.88	70.8	E	-	-	-	-	-	-
WB LT	-	-	-	0.39	34.6	C	0.26	32.0	C
WB T	0.49	38.6	D	-	-	-	-	-	-
OVERALL		39.8	D		34.0	C		39.4	D
Longwood Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0.65	54.14	D	0.52	46.6	D	0.67	38.4	D
SB TR	0.97	53.8	D	0.51	31.3	C	0.99	74.5	E
EB TR	0.61	38.6	D	0.44	34.14	C	0.59	37.9	D
WB TR	0.95	65.7	E	0.68	42.8	D	0.43	35.1	D
OVERALL		53.6	D		37.4	D		50.4	D
Leggett Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.31	42.5	D	0.16	39.9	D	0.31	51.6	D
NB T	0.14	25.0	C	0.25	26.4	C	0.56	22.7	C
SB L	0.52	48.2	D	0.44	47.3	D	0.28	52.2	D
SB T	0.62	32.9	C	0.33	27.5	C	0.24	17.9	B
WB L	0.79	56.1	E	0.62	44.4	D	0.43	40.6	D
WB LT	0.95	75.9	E	0.71	47.8	D	0.44	40.4	D
OVERALL		46.6	D		36.8	D		26.8	C

Table 19.14-2 (continued)
HCM Analysis[1] – Future No-Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0.75	38.1	D	0.68	35.7	D	0.58	23.5	C
SB TR	0.49	30.1	C	0.30	27.0	C	0.26	18.2	B
WB TR	0.95	64.1	E	0.70	43.1	D	0.48	39.7	D
OVERALL		44.7	D		36.2	D		25.9	C
Halleck Street & Randall Avenue (unsignalized)									
NB LT	-	8.9	A	-	8.2	A	-	7.9	A
EB L	-	24.3	C	-	21.3	C	-	14.8	B
EB R	-	9.5	A	-	9.1	A	-	8.8	A
Halleck Street & Viele Avenue (unsignalized)									
NB L	-	8.1	A	-	8.0	A	-	7.4	A
SB L	-	-	-	-	-	-	-	-	-
EB LT	-	10.4	B	-	10.8	B	-	10.3	B
EB TR	-	9.2	A	-	9.4	A	-	8.8	A
WB LTR	-	9.5	A	-	9.6	A	-	-	-
Ryawa Avenue & Halleck Street (unsignalized)									
NB L	-	7.8	A	-	7.7	A	-	-	-
SB LT	-	8.1	A	-	7.7	A	-	7.8	A
EB L	-	38.0	E	-	17.3	C	-	10.1	B
EB T	-	17.5	C	-	15.0+	C	-	10.8	B
EB TR	-	16.6	C	-	14.6	B	-	9.7	A
WB LT	-	21.2	C	-	14.14	B	-	9.8	A
WB TR	-	19.0	C	-	13.3	B	-	9.3	A
Garrison Avenue & Edgewater Road (unsignalized)									
NB LT	-	7.6	A	-	7.4	A	-	7.5	A
EB LR	-	10.2	B	-	10.9	B	-	19.8	C

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
EB = eastbound
LTR = left, through and right movements
ML = mainline
NB = northbound
SB = southbound
SR = service road
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

Table 19.14-2 also indicates Future No-Build traffic operations at unsignalized intersections. As indicated, operations for all lane groups would remain at LOS A, LOS B or LOS C, with the exception of the eastbound left turn lane group from Ryawa Avenue to Halleck Street during the AM peak hour and the eastbound shared right and through lane group at the intersection of Garrison Avenue and Longwood Avenue. The additional traffic on Halleck Street is expected to be generated primarily by the Fulton Fish Market relocation and would result in the increased delay for the left turn from Ryawa Avenue to Halleck Street. Additionally, the re-routing of trucks onto Longwood Avenue will increase delay on both the Longwood Avenue and Garrison Avenue approaches.

19.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

19.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

19.14.4 Potential Impacts with the South Bronx Converted MTS

The South Bronx Converted MTS would receive waste from all 12 CDs in the Bronx. Additionally, the waste collected via borough-wide collection activities would also be delivered to the South Bronx Converted MTS. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

19.14.4.1 2006 Future Build Traffic Conditions

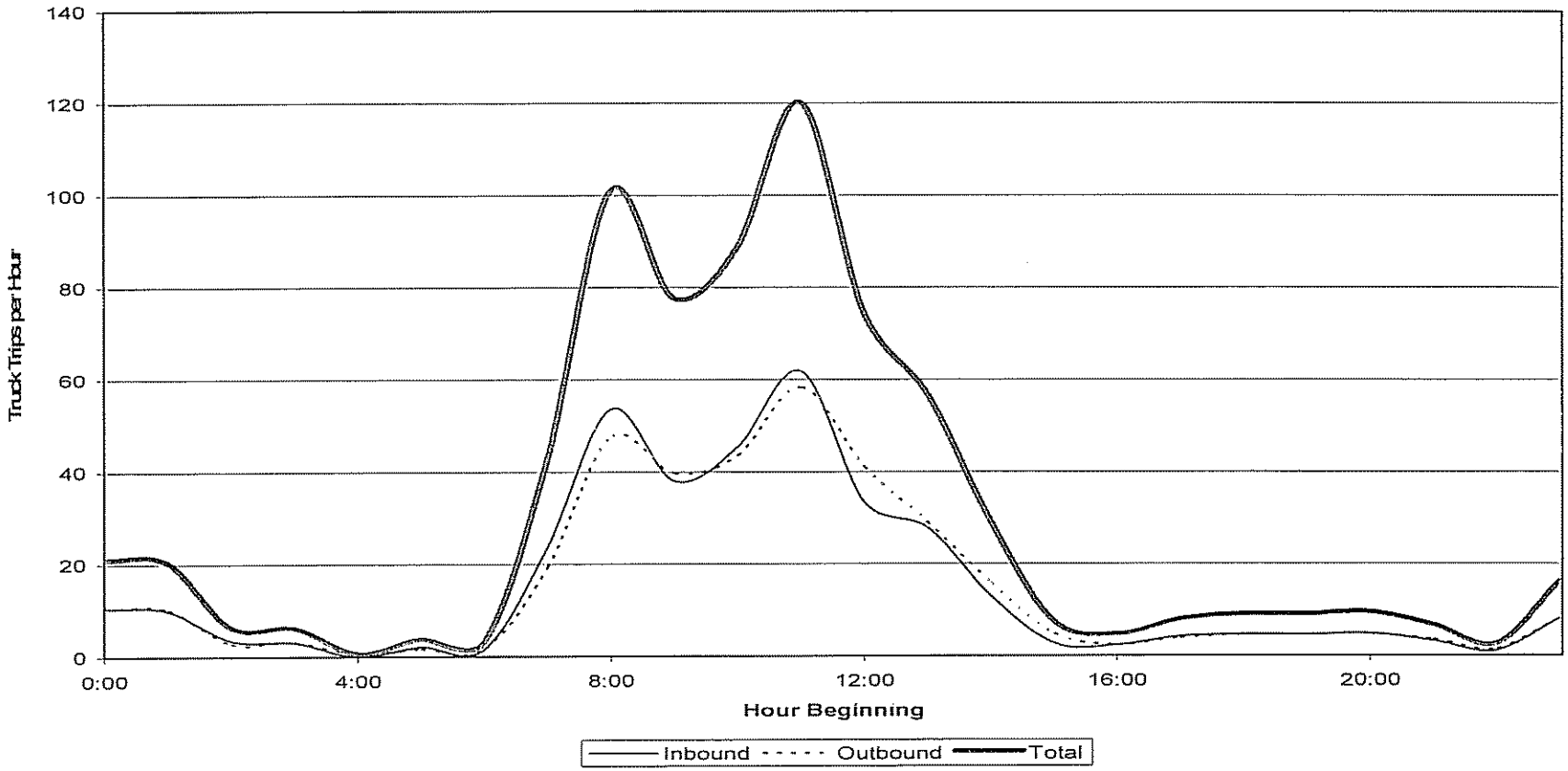
2006 Future Build Traffic Conditions assume that the South Bronx Converted MTS would generate 363 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site

of the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the South Bronx Converted MTS are shown in Figure 19.14-8.

Figure 19.14-15 presents the average peak day temporal distribution of collection vehicles for the South Bronx Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicle trips generated by the South Bronx Converted MTS is expected to vary between approximately 2 to 20 truck trips per hour in the late evening/early morning, 30 to 120 truck trips per hour in the mid-morning/early afternoon, and 5 to 10 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (122) occurs from 11:00 a.m. to 12 noon.

Employee person trips generated as a result of the South Bronx Converted MTS are expected to be about 44 per shift (22 coming in and 22 leaving). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Most related trips would occur around shift changes when employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m. Because only the AM peak (8:00 a.m. to 9:00 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the South Bronx Converted MTS during the shift change (44) were considered part of the net increase in site-generated traffic.

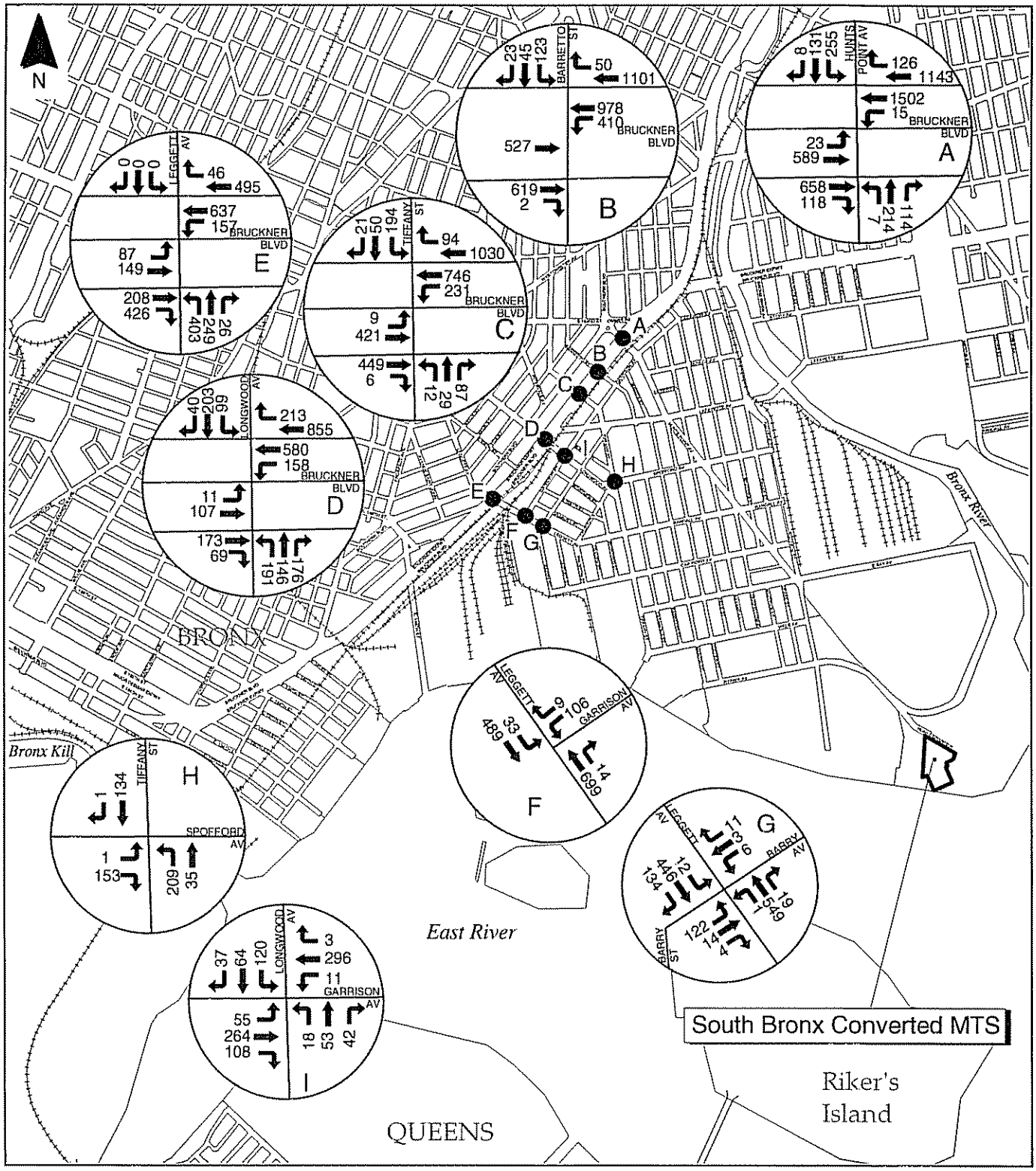
Figure 19.14-15
Truck Trips per Hour
South Bronx Converted MTS



Figures 19.14-16, 19.14-17, 19.14-18, 19.14-19, 19.14-20 and 19.14-21 provide the 2006 Future Build Condition traffic volumes, which are a combination of Future No-Build and South Bronx Converted MTS traffic volumes at the study intersections. These traffic volumes were derived using a two-stage process. First, the truck trips generated by existing interim export program were subtracted from the truck trips expected to be generated by the South Bronx Converted MTS. These net trips were added to the Future No-Build traffic volumes along the paths specified in Figure 19.14-8.

Figures 19.14-22, 19.14-23, 19.14-24, 19.14-25, 19.14-26 and 19.14-27 illustrate the resulting net change in traffic at each study intersection. A negative value indicates that the volume of existing DSNY-related collection vehicle trips to the interim export facilities removed from a movement would be greater than the volume of truck traffic added to the movement by the operation of the South Bronx Converted MTS. The highest net increase in truck trips on Bruckner Boulevard would occur at the southbound left turn at Longwood Avenue. An additional 33 truck trips are projected for this movement during the Facility peak hour. During the AM peak hour, the highest net increase in truck trips along Bruckner Boulevard would occur on this movement as well, resulting in an additional 28 truck trips. Within the Hunts Point peninsula, the highest overall increase in truck traffic would occur at the analysis intersections closest to the South Bronx Converted MTS, such as Halleck Street and Ryawa Avenue, through which an additional 122 site-generated truck and auto trips are projected during the Facility peak hour. At the intersection of Leggett Avenue with Tiffany Street, an increase of 106 site-generated trips is projected during the Facility peak.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 63% of weekday traffic volumes. Table 19.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the South Bronx Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

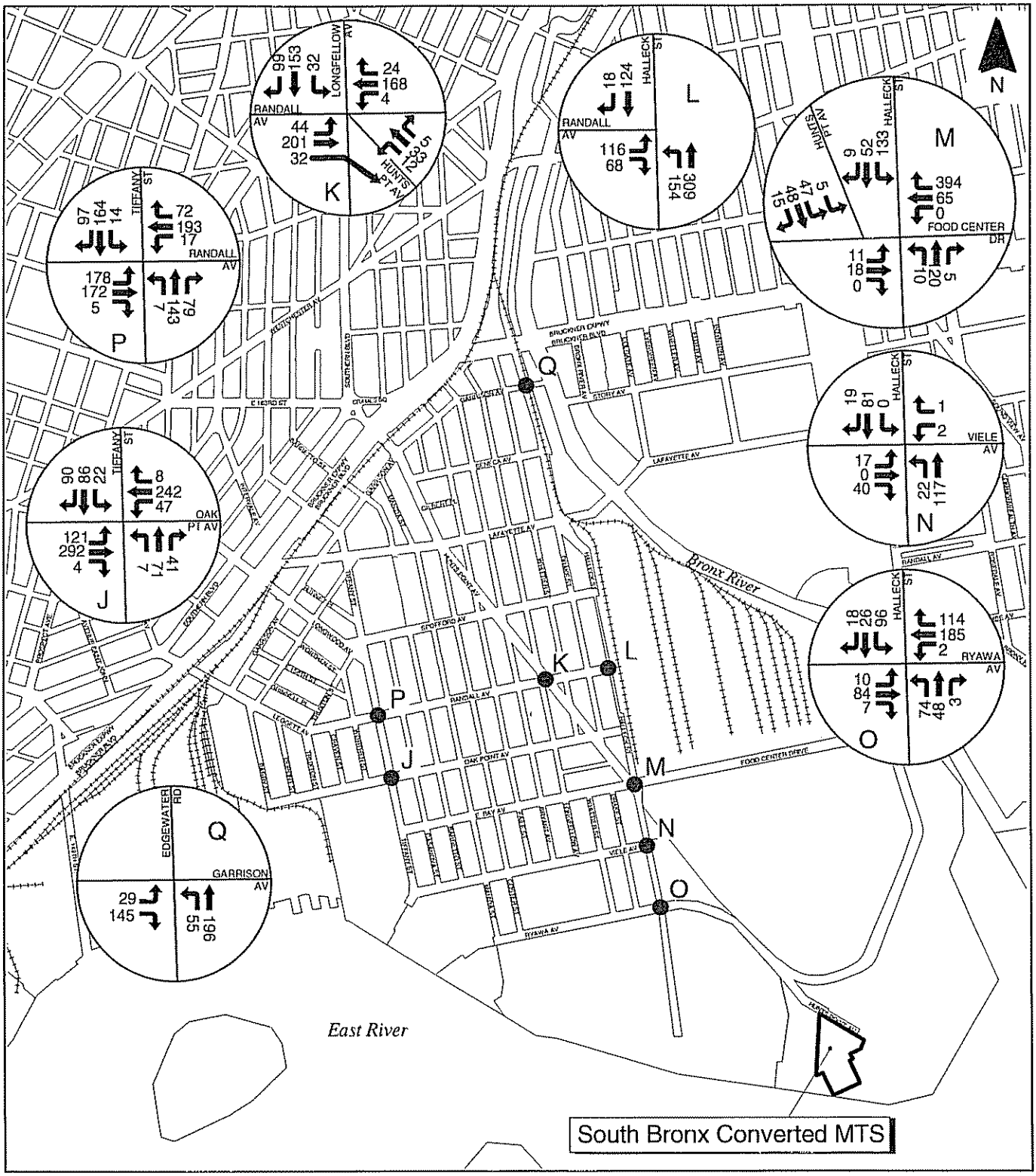


Site delineations are approximate.
Base Map Source: New York City Department of City Planning

1500 0 1500 Feet

Figure 19.14-16 2006 Future Build Traffic Volumes AM Peak South Bronx Converted MTS

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

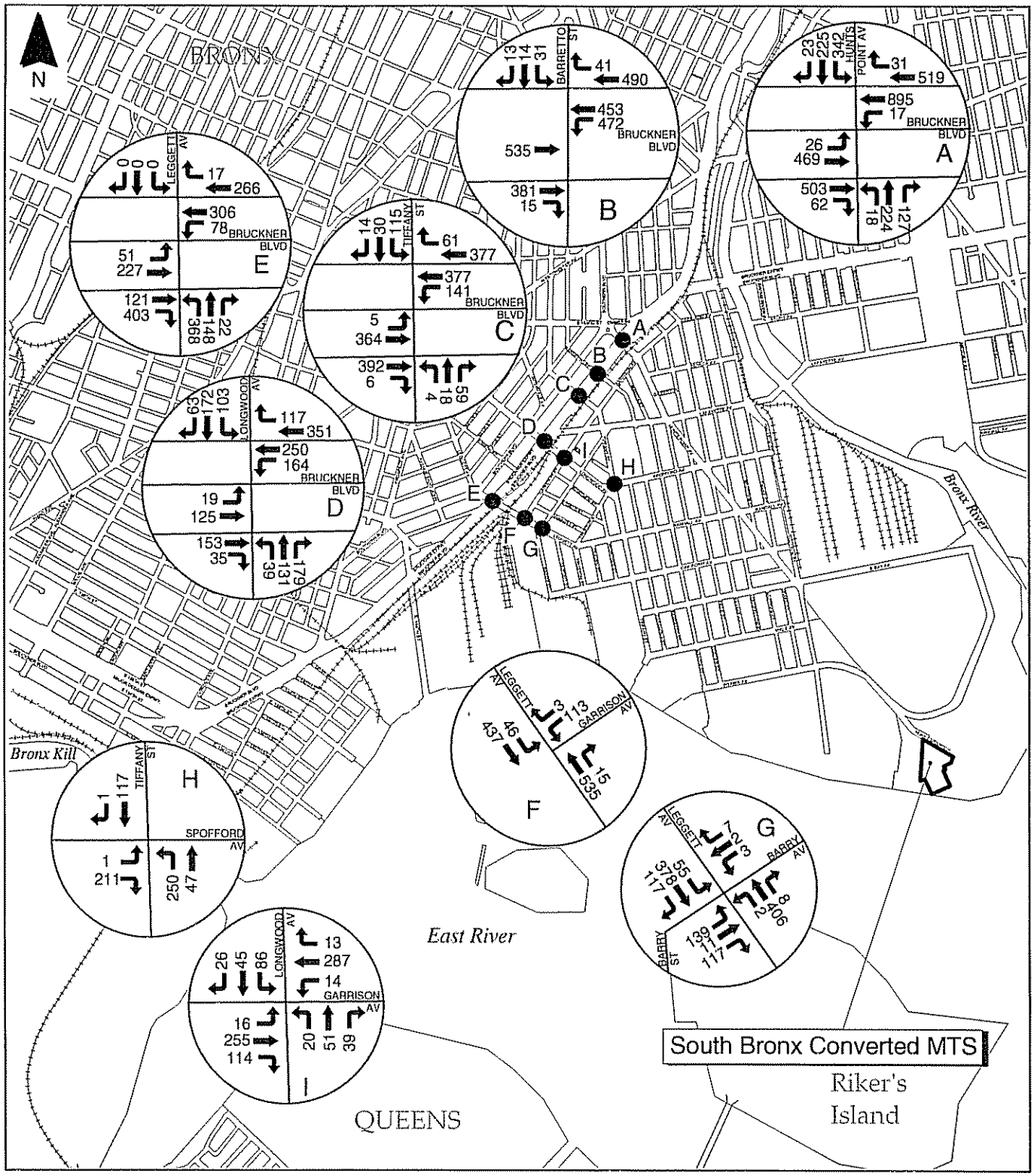
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-17 2006 Future Build Traffic Volumes AM Peak South Bronx Converted MTS

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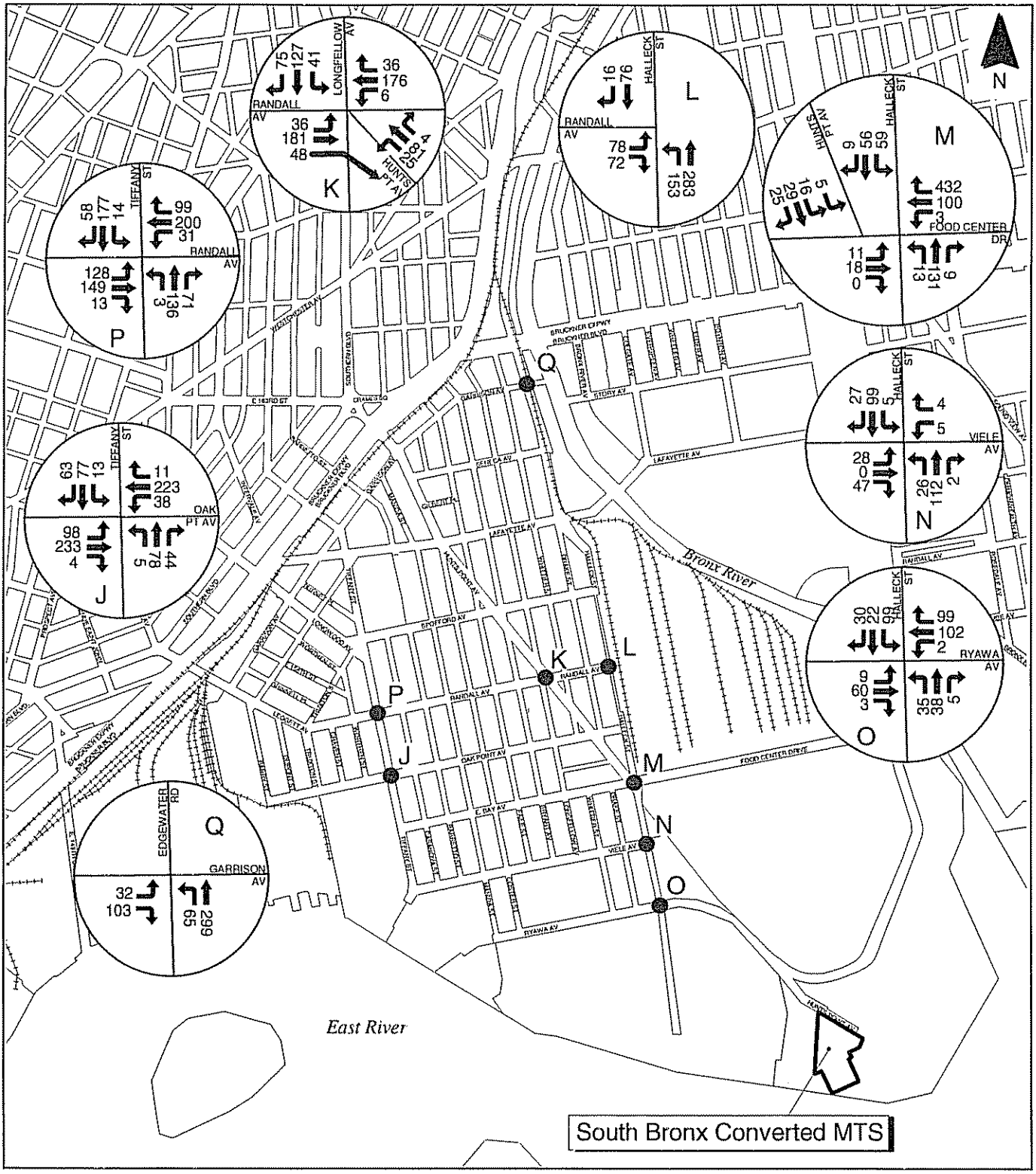


Site delineations are approximate.
Base Map Source: New York City Department of City Planning

1500 0 1500 Feet

Figure 19.14-18 2006 Future Build Traffic Volumes
Facility Peak
South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

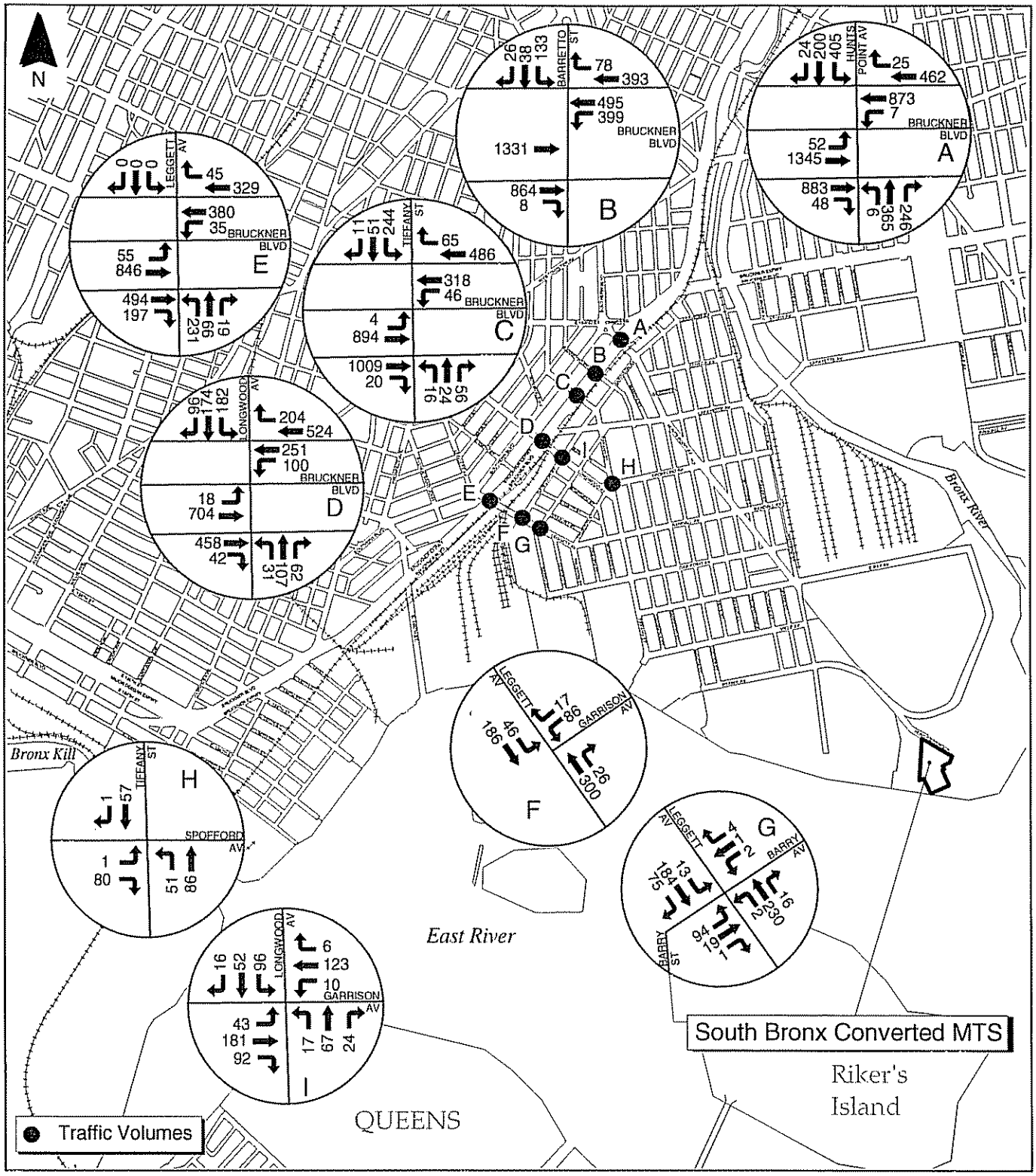
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-19 2006 Future Build Traffic Volumes
Facility Peak
South Bronx Converted MTS

CITY OF NEW YORK
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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

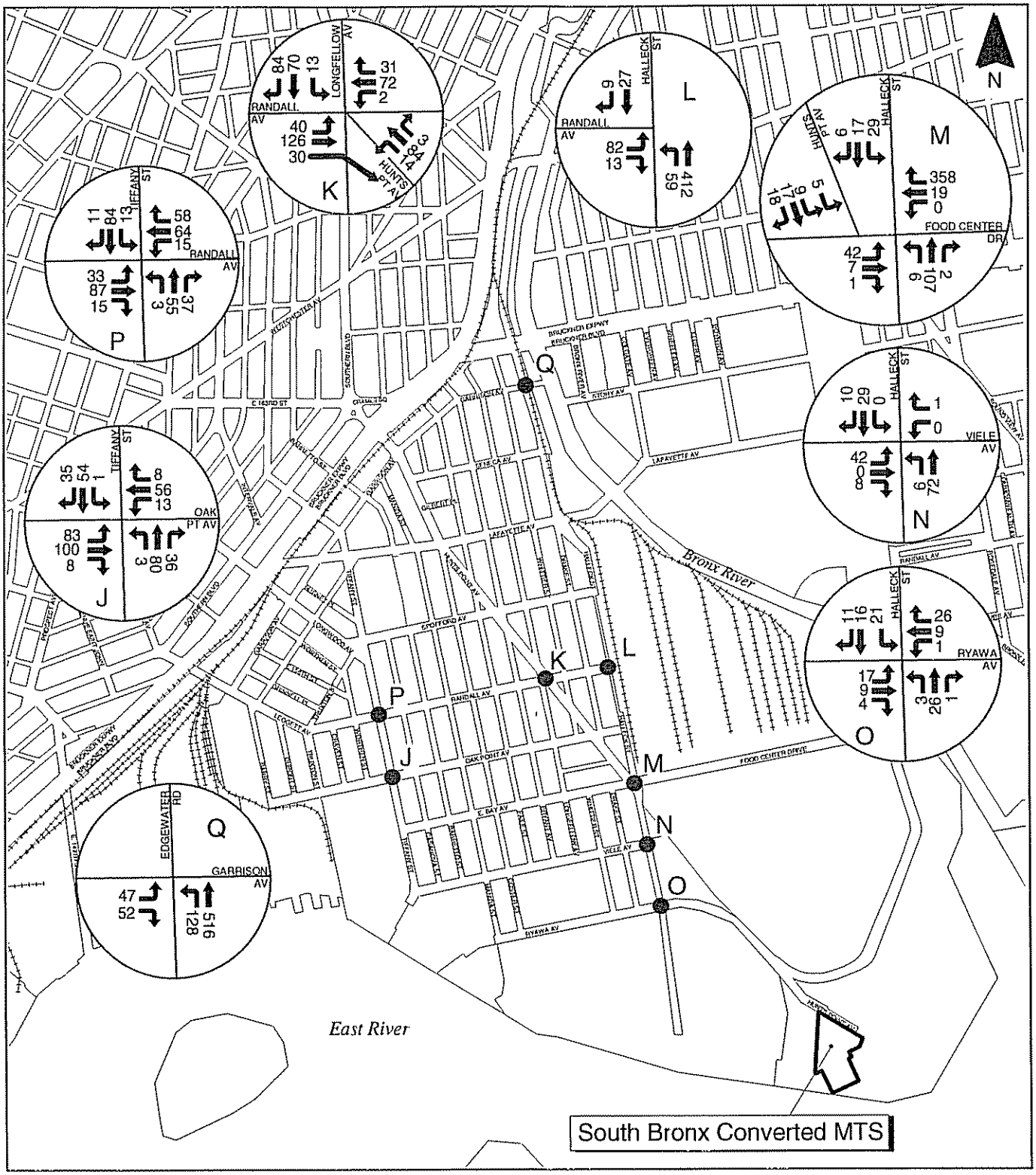
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-20 2006 Future Build Traffic Volumes
PM Peak
South Bronx Converted MTS

CITY OF NEW YORK
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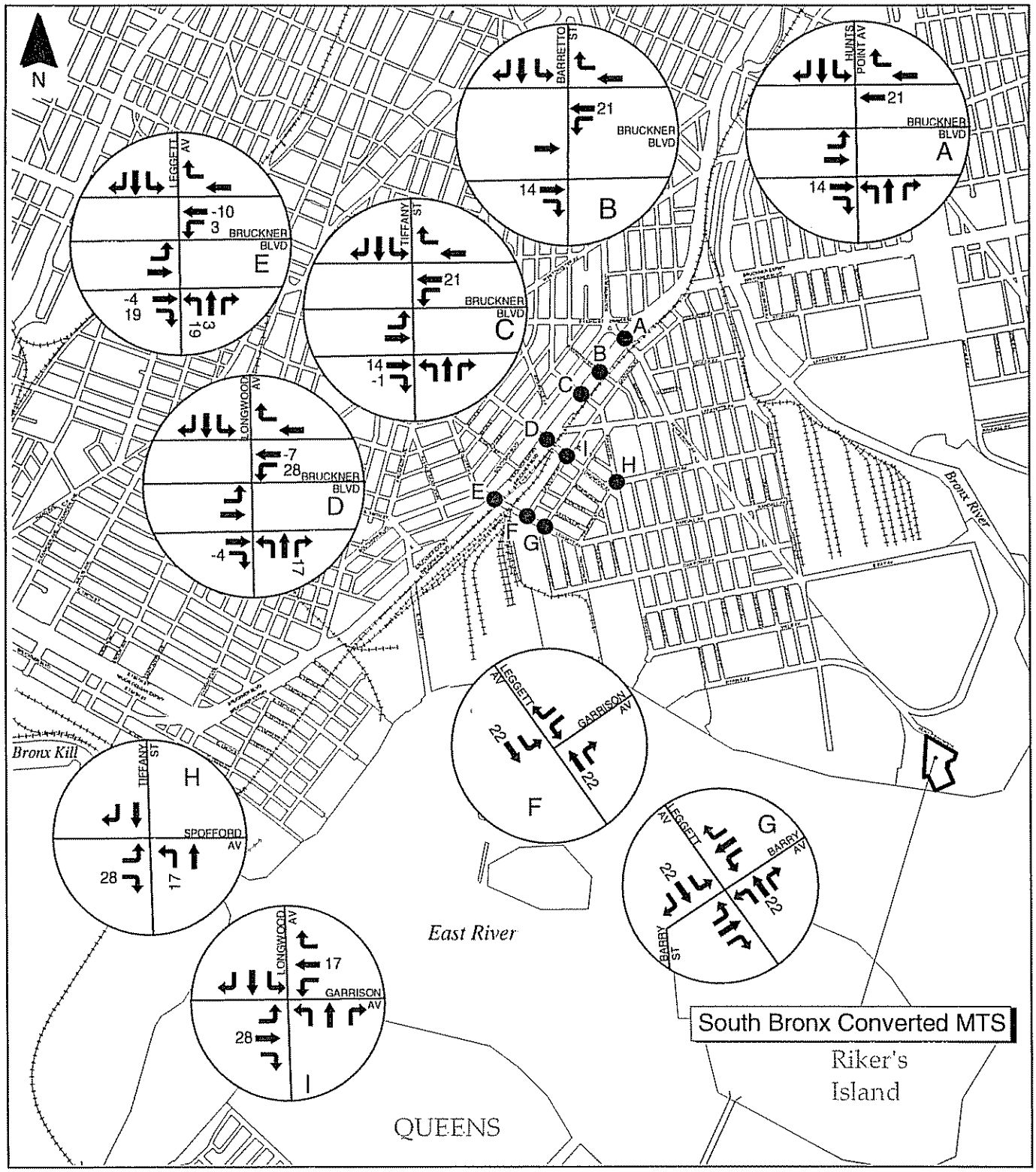


Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 19.14-21 2006 Future Build Traffic Volumes
PM Peak
South Bronx Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



Site delineations are approximate
Base Map Source: New York City Department of City Planning

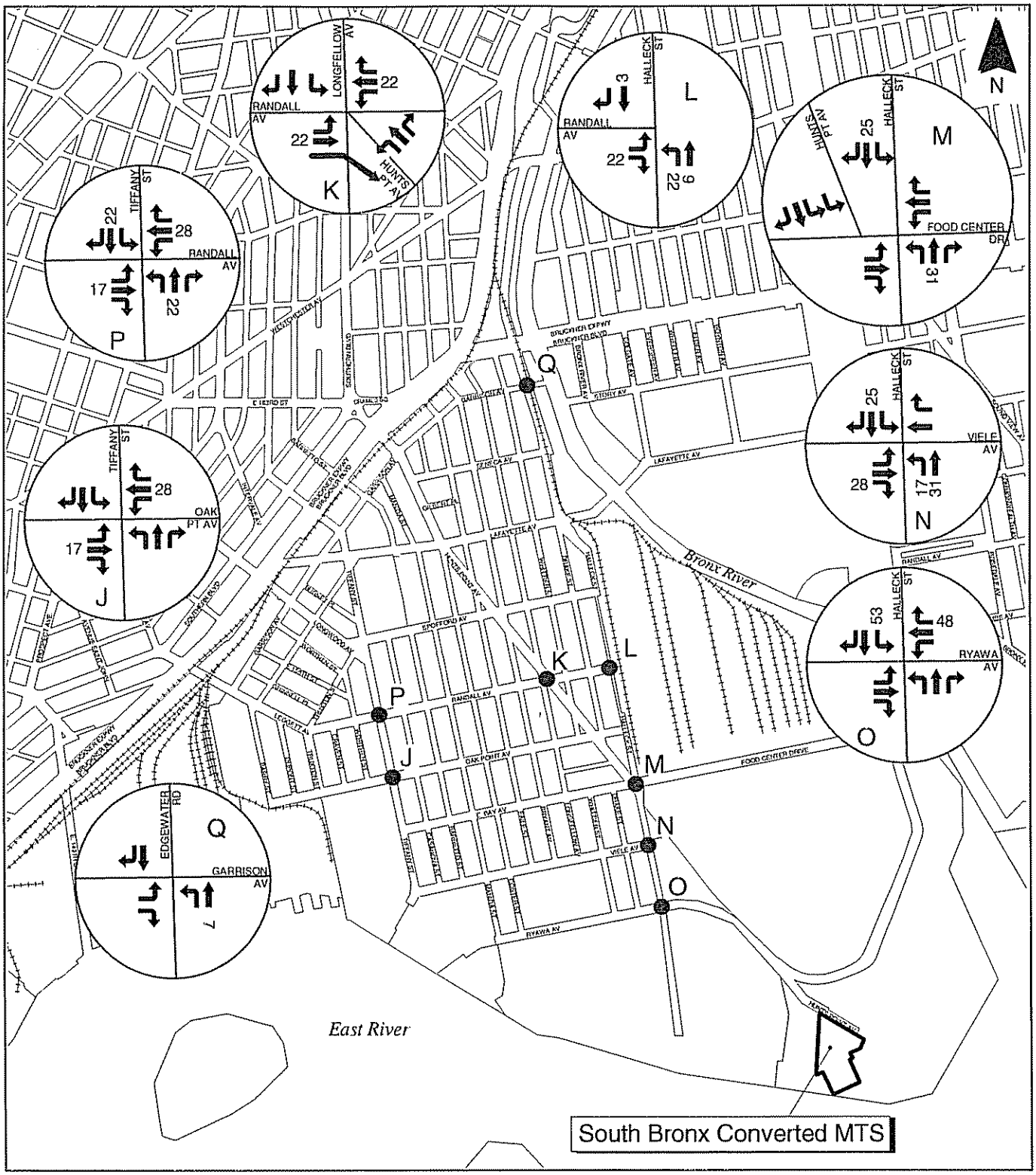
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-22 2006 Net Traffic
AM Peak
South Bronx Converted MTS

CITY OF NEW YORK
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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

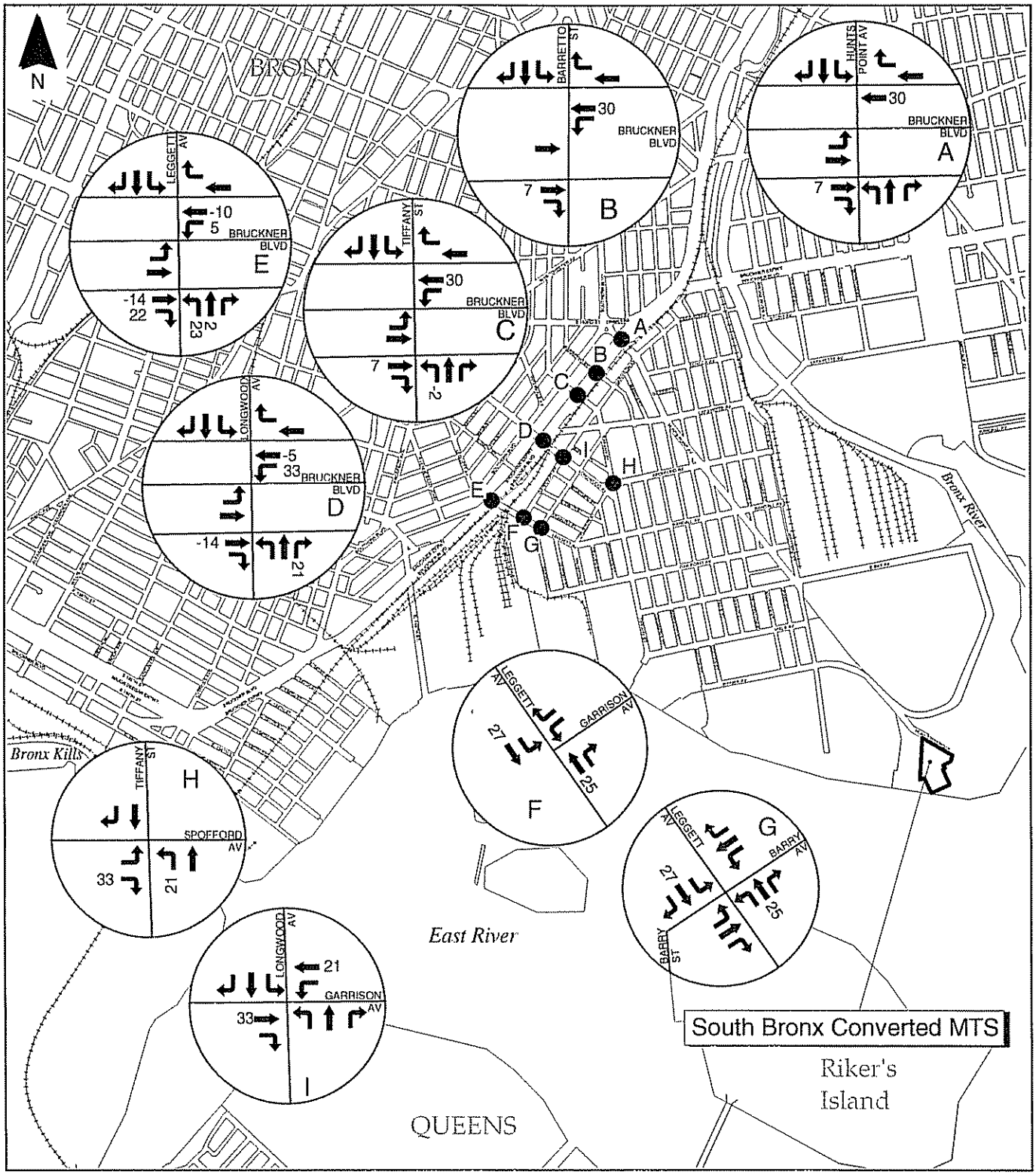
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HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-23 2006 Net Traffic AM Peak South Bronx Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

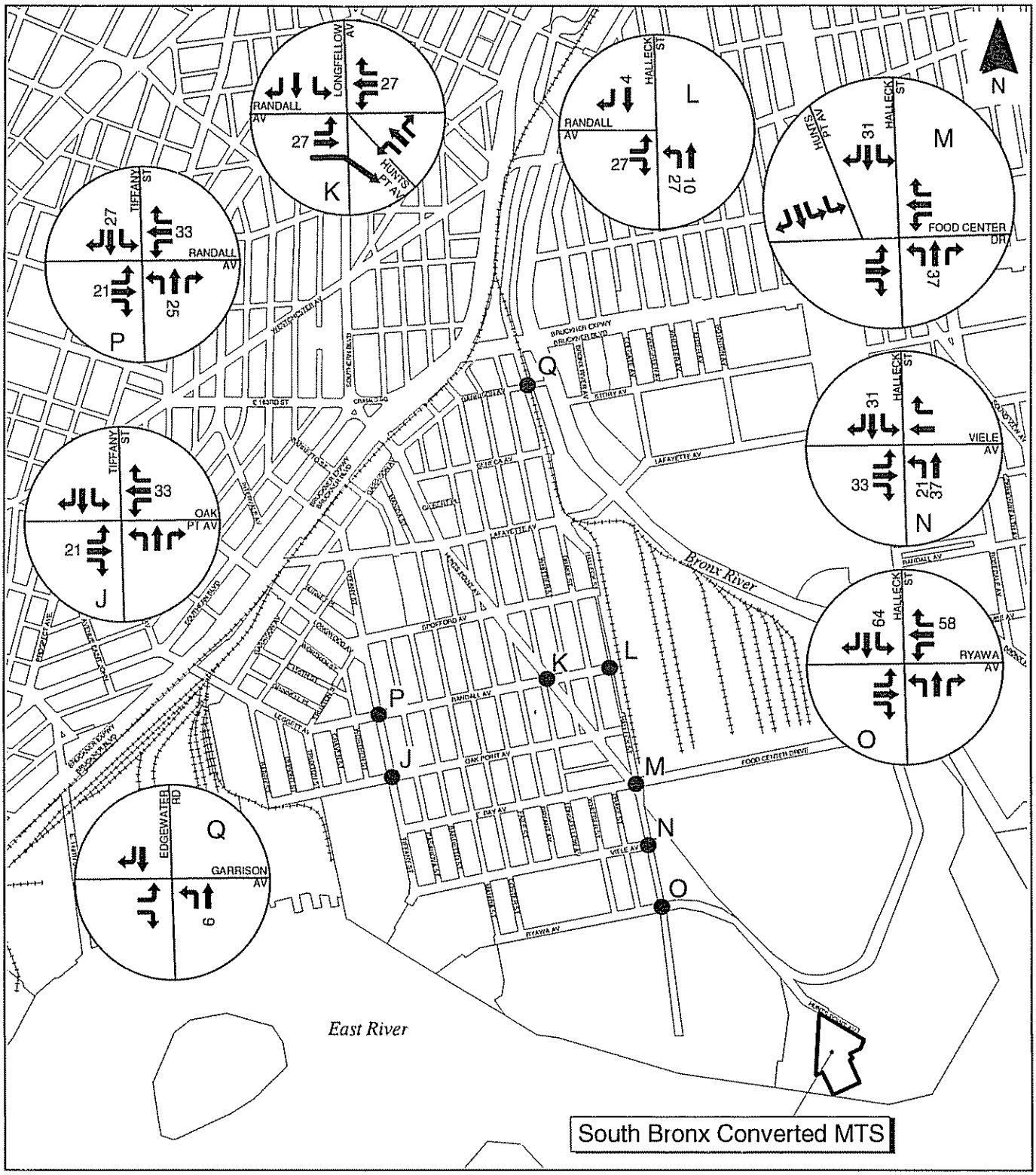
1500 0 1500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 19.14-24 2006 Net Traffic Facility Peak South Bronx Converted MTS

CITY OF NEW YORK
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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

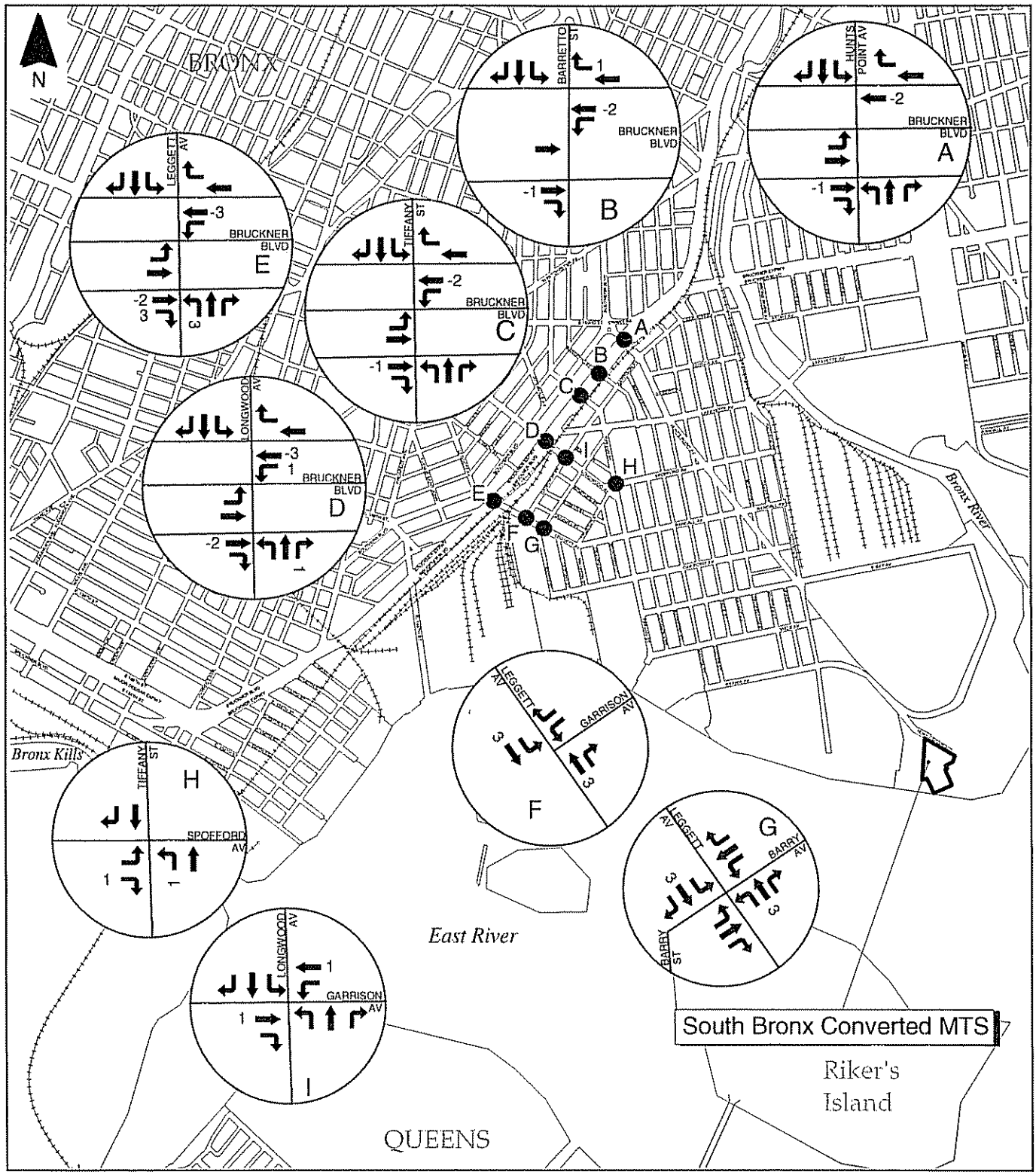
1000 0 1000 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-25 2006 Net Traffic Facility Peak South Bronx Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

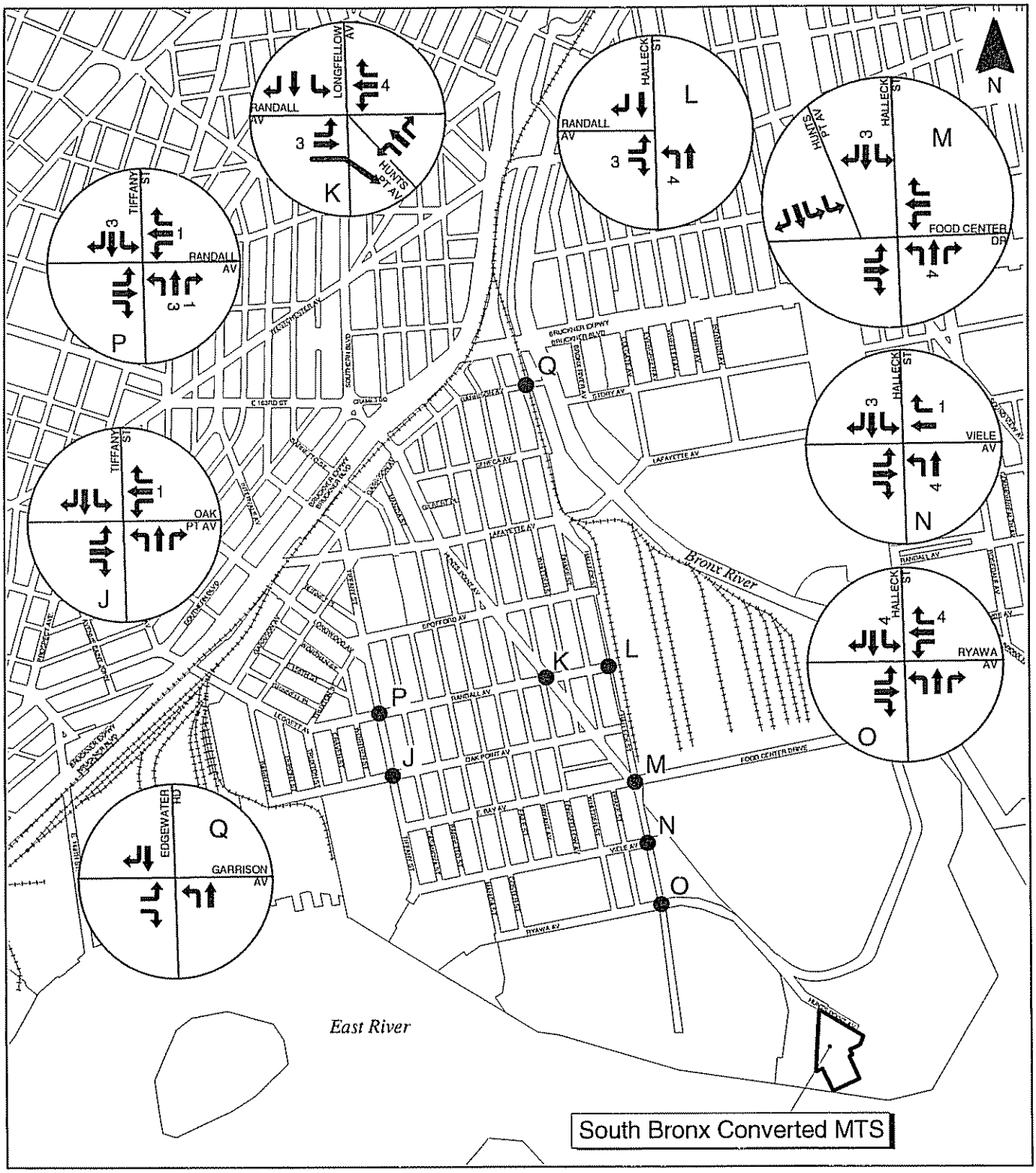
1500 0 1500 Feet

HDR URBITRAN EEA Hydroqual DB Cambridge Environmental Inc

Figure 19.14-26 2006 Net Traffic
PM Peak
South Bronx Converted MTS

CITY OF NEW YORK
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Site delineations are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.14-27 2006 Net Traffic
PM Peak
South Bronx Converted MTS

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Table 19.14-3
Weekday and Weekend Traffic
South Bronx Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic NB and SB on Bruckner Boulevard [1]	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
363	271	20,464	12,841

Note:
(1) NB and SB traffic data collected from ATR counts taken on Bruckner Boulevard between Tiffany Street and Barretto Street from September 17 to 22, 2003.

Table 19.14-4 provides the v/c ratios, delay and LOS for each signalized analysis intersection under the Future No-Build with Bronx Converted MTS traffic levels. Overall 2006 Future Build intersection traffic operations, expressed in terms of delay, would deteriorate slightly for certain intersections, but LOS would change only at the intersections of Bruckner Boulevard at Barretto Street (LOS C to LOS D) and at Bruckner Boulevard at Leggett Avenue (LOS D to LOS E) during the AM peak hour. The unsignalized intersection at Longwood Avenue and Garrison Avenue would also deteriorate (LOS C to LOS D) during both the AM and Facility peak hours. Significant traffic impacts, as defined by the 2001 CEQR Technical Manual and listed in Section 3.16, were identified for specific lane groups at the signalized intersections of Barretto Street/Bruckner Boulevard, Leggett Avenue/Bruckner Boulevard, Longwood Avenue/Garrison Avenue, and Ryawa Avenue/Halleck Street. These impacts and suggested mitigation are discussed below.

Table 19.14-4
HCM Analysis[1] – 2006 Future Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Garrison Street (signalized)									
SB LTR	0.38	15.8	B	0.32	15.4	B	0.34	15.5	B
EB LT	0.51	10.6	B	0.56	11.7	B	0.25	8.1	A
WB TR	0.73	14.7	B	0.47	10.0	B	0.27	8.1	A
OVERALL		13.3	B		11.3	B		9.4	A
Leggett Avenue & Barry Street (signalized)									
NB DFL	0.46	16.7	B	0.55	18.2	B	0.33	15.4	B
NB TR	0.09	13.9	B	0.08	13.8	B	0.06	13.6	B
SB LTR	0.10	13.9	B	0.07	13.7	B	0.05	13.6	B
EB LTR	0.60	11.9	B	0.73	15.9	B	0.33	8.7	A
WB LTR	0.61	12.2	B	0.42	9.6	A	0.22	7.8	A
OVERALL		12.6	B		13.9	B		9.8	A
Tiffany Street & Randall Avenue (signalized)									
NB DFL	0.72	22.6	C	0.40	12.3	B	-	-	-
NB TR	0.53	14.7	B	0.56	16.0	B	-	-	-
NB LTR	-	-	-	-	-	-	0.21	8.9	A
SB LTR	0.43	11.1	B	0.45	11.5	B	0.23	9.1	A
EB LTR	0.70	23.8	C	0.56	20.4	C	0.24	15.4	B
WB LTR	0.55	19.8	B	0.45	18.1	B	0.20	14.14	B
OVERALL		18.6	B		15.7	B		11.5	B
Tiffany Street & Oak Point Avenue (signalized)									
NB LTR	0.88	36.7	D	0.66	22.2	C	0.34	15.7	B
SB LTR	0.51	18.4	B	0.49	18.1	B	0.20	14.3	B
EB LTR	0.26	9.8	A	0.21	9.4	A	0.13	8.8	A
WB LTR	0.18	9.2	A	0.17	9.1	A	0.14	8.8	A
OVERALL		22.9	C		16.5	B		12.6	B
Hunts Point Avenue & Randall Avenue (signalized)									
NB LTR	0.06	10.0	B	0.17	10.7	B	0.13	10.4	B
SB LTR	0.35	12.3	B	0.31	11.9	B	0.20	11.0	B
EB LTR	0.44	13.7	B	0.40	13.1	B	0.27	11.6	B
WB LTR	0.29	12.0	B	0.34	12.5	B	0.14	10.6	B
OVERALL		12.5	B		12.2	B		11.0	B
Longwood Avenue & Garrison Avenue (unsignalized)									
NB LTR	-	14.5	B	-	13.9	B	-	10.1	B
SB LTR	-	23.6	C	-	14.1	B	-	11.3	B
EB LT	-	16.1	C	-	12.3	B	-	11.3	B
EB TR	-	41.6	E	-	51.8	F	-	16.0	C
WB LT	-	15.2	C	-	15.6	C	-	10.1	B
WB TR	-	20.8	C	-	22.5	C	-	10.5	B
OVERALL		25.6	D		29.0	D		12.6	B
Longwood Avenue & Tiffany Street (unsignalized)									
NB LT	-	10.0	B	-	9.9	A	-	8.4	A
EB LR	-	11.6	B	-	13.2	B	-	10.7	B

Table 19.14-4 (continued)
HCM Analysis[(1)] – 2006 Future Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East Bay Avenue & Halleck Street (signalized)									
NB L	0.04	17.3	B	0.05	17.4	B	0.02	17.0	B
NB TR	0.14	18.0	B	0.17	18.2	B	0.10	17.6	B
SB L	0.48	25.4	C	0.22	20.0	B	0.12	18.6	B
SB TR	0.13	18.1	B	0.09	17.6	B	0.05	17.2	B
EB LTR	0.10	23.1	C	0.09	22.9	C	-	-	-
EB DFL	-	-	-	-	-	-	0.17	24.4	C
EB TR	-	-	-	-	-	-	0.06	22.7	C
WB LTR	0.25	24.8	C	0.36	26.3	C	0.12	23.2	C
WB R	0.60	20.5	C	0.66	22.4	C	0.52	17.9	B
OVERALL		21.4	C		22.1	C		19.0	B
East Bay Avenue & Hunts Point Avenue (signalized)									
SB LTR	0.34	36.8	D	0.31	36.7	D	0.21	35.2	D
EB LTR	0.10	23.1	C	0.09	22.9	C	-	-	-
EB DFL	-	-	-	-	-	-	0.17	24.4	C
EB TR	-	-	-	-	-	-	0.05	22.7	C
WB LTR	0.25	24.8	C	0.36	26.3	C	0.12	23.2	C
WB R	0.60	20.5	C	0.66	22.4	C	0.52	17.9	B
OVERALL		24.14	C		25.6	C		21.6	C
Hunts Point Avenue & Bruckner Boulevard NB ML (signalized)									
NB L	0.14	25.0	C	0.15	25.1	C	0.11	24.3	C
NB T	0.63	32.6	C	0.54	30.7	C	1.01	63.7	E
EB L	0.63	47.0	D	0.76	50.4	D	0.88	64.0	E
EB T	0.17	29.3	C	0.22	29.9	C	0.19	29.5	C
WB T	0.38	38.0	D	0.26	36.1	D	0.31	37.0	D
WB R	0.41	40.1	D	0.38	39.3	D	0.65	47.6	D
OVERALL		36.0	D		36.5	D		55.9	E
Hunts Point Avenue & Bruckner Boulevard NB SR (signalized)									
NB TR	0.89	46.7	D	0.66	34.2	C	0.82	39.6	D
EB L	0.63	47.0	D	0.76	50.4	D	0.88	64.0	E
EB T	0.17	29.3	C	0.22	29.9	C	0.19	29.5	C
WB T	0.38	38.0	D	0.25	36.1	D	0.32	37.0	D
WB R	0.41	40.1	D	0.38	39.3	D	0.65	47.6	D
OVERALL		43.2	D		38.0	D		44.1	D
Hunts Point Avenue & Bruckner Boulevard SB ML (signalized)									
SB LT	0.67	17.9	B	0.40	13.6	B	0.39	13.4	B
EB TR	0.40	37.9	D	0.57	40.9	D	0.62	42.0	D
WB LT	0.26	30.6	C	0.30	31.1	C	0.47	33.7	C
OVERALL		22.9	C		25.8	C		27.4	C
Hunts Point Avenue & Bruckner Boulevard SB SR (signalized)									
SB TR	0.79	22.7	C	0.34	13.1	B	0.27	12.2	B
EB TR	0.40	37.9	D	0.57	40.9	D	0.62	42.0	D
WB LT	0.26	30.6	C	0.63	37.7	D	0.47	33.7	C
OVERALL		26.7	C		30.4	C		30.6	C
Barretto Street & Bruckner Boulevard ML (signalized)									
NB T	0.58	36.1	D	0.58	36.0	D	0.97	51.8	D
SB L	0.68	17.7	B	0.71	19.4	B	1.02	89.5	F
SB LT	0.70	15.6	B	0.49	11.6	B	0.41	9.7	A
EB LT	0.78	59.1	E	0.28	37.6	D	0.57	45.8	D
OVERALL		25.2	C		23.0	C		48.9	D

Table 19.14-4 (continued)
HCM Analysis[1] – 2006 Future Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Barretto Street & Bruckner Boulevard SR (signalized)									
NB TR	0.95	61.4	E	0.60	37.6	D	0.73	32.2	C
SB TR	0.70	15.1	B	0.32	9.3	A	0.27	8.1	A
EB TR	0.77	57.5	E	0.26	37.2	D	0.58	46.0	D
OVERALL		35.2	D		22.7	C		26.7	C
Tiffany Street & Bruckner Boulevard ML (signalized)									
NB L	0.08	28.9	C	0.04	28.0	C	0.02	16.2	B
NB T	0.59	36.5	D	0.49	34.3	C	0.63	25.0	C
SB L	0.36	11.0	B	0.23	9.3	A	0.14	11.3	B
SB T	0.42	10.3	B	0.25	8.7	A	0.22	8.4	A
EB L	0.90	74.6	E	0.55	45.3	D	0.84	65.5	E
EB T	0.18	35.7	D	0.11	34.6	C	0.15	35.2	D
WB LT	0.09	34.0	C	0.05	33.6	C	0.08	33.9	C
OVERALL		27.5	C		24.2	C		27.5	C
Tiffany Street & Bruckner Boulevard SR (signalized)									
NB TR	0.65	38.9	D	0.64	38.8	D	0.75	28.7	C
SB TR	0.71	15.5	B	0.32	9.4	A	0.29	9.0	A
EB TR	0.48	39.9	D	0.27	36.4	D	0.44	39.9	D
WB TR	0.19	35.2	D	0.15	34.7	C	0.19	35.3	D
OVERALL		25.8	C		26.7	C		25.5	C
Longwood Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.09	43.9	D	0.14	40.6	D	0.05	28.0	C
NB T	0.34	47.3	D	0.27	41.9	D	0.72	40.0	D
SB L	0.55	32.5	C	0.47	33.5	C	0.54	48.9	D
SB T	0.50	27.8	C	0.30	27.8	C	0.38	39.4	D
EB DFL	0.47	38.3	D	-	-	-	0.60	42.5	D
EB T	0.69	45.9	D	-	-	-	0.46	37.2	D
EB LT	-	-	-	0.49	36.4	D	-	-	-
WB DFL	0.88	70.8	E	-	-	-	-	-	-
WB LT	-	-	-	0.39	34.6	C	0.26	32.0	C
WB T	0.49	38.6	D	-	-	-	-	-	-
OVERALL		39.9	D		34.2	C		43.8	D
Longwood Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0.63	54.2	D	0.47	45.3	D	0.66	38.2	D
SB TR	0.97	53.8	D	0.51	31.3	C	0.99	74.5	E
EB TR	0.62	38.7	D	0.44	34.14	C	0.59	37.9	D
WB TR	0.96	68.7	E	0.76	47.0	D	0.44	35.2	D
OVERALL		54.3	D		38.3	D		50.3	D
Leggett Avenue & Bruckner Boulevard ML (signalized)									
NB L	0.31	42.5	D	0.16	39.9	D	0.31	51.6	D
NB T	0.14	25.0	C	0.25	26.4	C	0.56	22.7	C
SB L	0.94	83.7	F	0.49	49.0	D	0.28	52.2	D
SB T	0.60	32.4	C	0.31	27.3	C	0.23	17.8	B
WB L	0.84	61.1	E	0.68	47.7	D	0.44	40.8	D
WB LT	1.05	102.2	F	0.75	50.4	D	0.44	40.5	D
OVERALL		58.6	E		38.4	D		26.9	C

Table 19.14-4 (continued)
HCM Analysis[(1)] – 2006 Future Build Conditions
South Bronx Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. - 9:00 a.m.)			Facility Peak Hour (11:00 a.m. – 12:00 p.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Leggett Avenue & Bruckner Boulevard SR (signalized)									
NB TR	0 78	39.5	D	0.71	36.7	D	0.59	23.5	C
SB TR	0 49	30 1	C	0.30	27.0	C	0.26	18.2	B
WB TR	1.00	74.8	E	0.76	45.6	D	0.49	39.9	D
OVERALL		49.2	D		37.6	D		26.0	C
Halleck Street & Randall Avenue (unsignalized)									
NB LT	-	9 2	A	-	8.9	A	-	7.9	A
EB L	-	31 3	D	-	26.7	D	-	15.0	B
EB R	-	10.0	A	-	10.2	B	-	9.1	A
Halleck Street & Viele Avenue (unsignalized)									
NB L	-	8 9	A	-	8.9	A	-	7 4	A
SB L	-	-	-	-	-	-	-	-	-
EB LT	-	12 1	B	-	12 6	B	-	10 4	B
EB TR	-	10 2	B	-	10.2	B	-	8.9	A
WB LTR	-	10.8	B	-	10.6	B	-	-	-
Ryawa Avenue & Halleck Street (unsignalized)									
NB L	-	7 8	A	-	7 7	A	-	-	-
SB LT	-	8 4	A	-	8 5	A	-	7 9	A
EB L	-	-	F	-	28 4	D	-	10 3	B
EB T	-	23 6	C	-	19 8	C	-	11 0	B
EB TR	-	22 0	C	-	19 0	C	-	9 7	A
WB LT	-	32 9	D	-	19 8	C	-	9 9	A
WB TR	-	29.4	D	-	16.3	C	-	9.3	A
Garrison Avenue & Edgewater Road (unsignalized)D									
NB LT	-	7.7	A	-	7.5	A	-	7.5	A
EB LR	-	10.3	B	-	10.9	B	-	19.8	C

Notes:

[(1)] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
EB = eastbound
LTR = left, through and right movements
ML = mainline
NB = northbound
SB = southbound
SR = service road
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement
T = through movement
LR = left right movement

19.14.4.2 Impacts and Mitigation

Table 19.14-5 provides a comparison of v/c ratio, delay and LOS for the Future No-Build, Future Build before mitigation, and Future Build after mitigation scenarios at each intersection where impacts were identified. The following describes proposed mitigation and projected results with mitigation.

- During the AM peak hour, an impact was identified on the northbound approach at the intersection of Bruckner Boulevard at Barretto Street on the service road. LOS D deteriorated to LOS E with an increase in delay from 54.7 seconds to 61.4 seconds. The existing signal operates as a three-phase signal. The mitigation is as follows:
- Add one second of green time to the eastbound/westbound phase;
- Reduce the green time of the southbound exclusive left turn phase from 35 to 30 seconds; and
- Increase the green time of the northbound/southbound phase from 39 to 43 seconds.
- These changes would improve the approach of the northbound service road to LOS D with a delay of 46.5 seconds. There would be no impacts induced for either the eastbound/westbound lane group or the southbound exclusive left turn lane group. These changes would also continue to provide adequate clearance time for pedestrian crossings.
- During the AM peak hour, impacts were identified on the westbound approach at the mainline road intersection of Bruckner Boulevard at Leggett Avenue. At LOS E, delay would increase from 56.1 seconds to 61.1 seconds for the westbound left turn lane group, and from 75.9 seconds to 102.2 seconds for the westbound shared left and through lane group. On the service road, during the AM peak period, delay would increase from 64.1 seconds to 74.8 seconds for the westbound shared through and right turn lane group at LOS E.

Table 19.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
South Bronx Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Barretto Street & Bruckner Boulevard SR (signalized) - AM Peak									
NB TR	0.91	54.7	D	0.95	61.4	E	0.86	46.5	D
SB TR	0.70	15.1	B	0.70	15.1	B	0.71	15.9	B
EB TR	0.77	57.5	E	0.77	57.5	E	0.74	54.6	D
OVERALL		33.5	C		35.2	D		30.3	C
Barretto Street & Bruckner Boulevard ML (signalized) - AM Peak									
NB L	0.58	36.1	D	0.58	36.1	D	0.52	32.2	C
SB L	0.68	17.7	B	0.68	17.7	B	0.72	19.5	B
SB LT	0.67	14.14	B	0.70	15.6	B	0.71	16.3	B
EB LT	0.78	59.1	E	0.78	59.1	E	0.75	55.9	E
OVERALL		24.14	C		25.2	C		24.6	C
Leggett Avenue & Bruckner Boulevard SR (signalized) - AM Peak									
NB TR	0.75	38.1	D	0.78	39.5	D	0.78	39.5	D
SB TR	0.49	30.1	C	0.49	30.1	C	0.49	30.1	C
WB TR	0.95	64.1	E	1.00	74.8	E	0.94	61.6	E
OVERALL		44.7	D		49.2	D		44.5	D
Leggett Avenue & Bruckner Boulevard ML (signalized) - AM Peak									
NB L	0.31	42.5	D	0.31	42.5	D	0.34	44.7	D
NB T	0.14	25.0	C	0.14	25.0	C	0.14	25.0	C
SB L	0.52	48.2	D	0.53	48.6	D	0.58	52.3	D
SB T	0.62	32.9	C	0.60	32.4	C	0.60	32.4	C
WB L	0.79	56.1	E	0.84	61.1	E	0.79	54.1	D
WB LT	0.95	75.9	E	1.05	102.2	F	0.96	75.5	E
OVERALL		46.6	D		53.9	D		47.2	D
Longwood Avenue & Garrison Avenue (unsignalized 2006 No-Build & Build, signalized 2006 Future Build with Mitigation) – Facility Peak									
NB LTR	0.36	13.3	B	0.36	13.9	B	0.31	16.6	B
SB LTR	0.40	13.3	B	0.40	14.1	B	0.44	19.3	B
EB LT(R)	0.22	11.8	B	0.24	12.3	B	0.40	10.4	B
EB TR	0.83	35.3	E	0.93	51.8	F	-	-	-
WB LT(R)	0.39	14.6	B	0.41	15.6	C	0.41	10.5	B
WB TR	0.57	19.6	C	0.63	22.5	C	-	-	-
OVERALL		22.2	C		29.0	D		12.3	B

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
EB = eastbound
LTR = left, through and right movements
ML = mainline
NB = northbound
SB = southbound
SR = service road
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement
T = through movement

Currently, the existing signal operates as a three-phase signal. The mitigation is as follows:

- Provide a two-second increment in green time to the eastbound/westbound lane group by taking one second from both the southbound exclusive left turn phase and the northbound/southbound phase.

This change would decrease the delay of the westbound left turn lane group on the mainline from 61.1 seconds to 54.1 seconds and increase the LOS (LOS D to LOS C). The westbound shared left and through lane group delay would decrease from 102.2 seconds (at LOS F) to 75.5 seconds (at LOS E). Additional improvement would also be achieved for the westbound approach lane group on the service road. The westbound shared through and right turn lane group delay would reduce at LOS E from 74.8 seconds to 61.6 seconds. There would be no impacts induced for the northbound/southbound lane groups.

During the AM and Facility peak hour periods, impacts were identified on the eastbound left turn lane group at the intersection of Ryawa Avenue at Halleck Street. However, the traffic volume for this movement is very low (less than 25 PCEs during any peak hour in the Build Condition) and therefore does not qualify as an impact for unsignalized intersections under CEQR guidelines.

During the Facility peak, at the four-way STOP controlled intersection of Longwood Avenue and Garrison Avenue, impacts were identified at the eastbound shared through and right turn lane group. The first mitigation measure tested was to modify the intersection operations to two-way STOP control with Garrison Avenue as the minor street. This measure resulted in LOS F on Garrison Avenue. Therefore, the mitigation proposed is to signalize the intersection. A preliminary warrant analysis indicates that Traffic Signal Warrant 10, Peak Hour Delay would be satisfied. (There are 11 warrants that have been developed by the FHWA that are contained in the Manual on Uniform Traffic Control Devices. Traffic Signal Warrants are defined as minimum conditions under which signal installations may be justified. In this case, a traffic signal is warranted if for one hour of an average day the minor street traffic suffers undue delay in entering or crossing the major street.)

19.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

19.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

19.15 Air Quality

19.15.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the South Bronx Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 19.15.4.2.

19.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 19.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 19.15-1
Representative Ambient Air Quality Data
South Bronx Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	200th Street and Southern Boulevard	8-Hour	2,519 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	200th Street and Southern Boulevard	Annual	51 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}	East 156th Street between Dawson and Kelly Streets	Annual	22 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	60 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	200th Street and Southern Boulevard	3-Hour	207 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	134 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	24 $\mu g/m^3$	80 $\mu g/m^3$

Note:
Source: USEPA Airdata, 2003 – Monitor Values Report (http://oaspub.epa.gov/airdata)

19.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the 2006 analysis year. Therefore, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

19.15.4 Potential Impacts with the South Bronx Converted MTS

19.15.4.1 On-Site Analysis

19.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that is anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 19.15-2. Figure 19.15-1 shows the locations of these sources within the site.

19.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 19.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from South Bronx Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 19.15-3, are below the STVs. The South Bronx Converted MTS would not, therefore, significantly impact air quality in the area.

Table 19.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
South Bronx Converted MTS

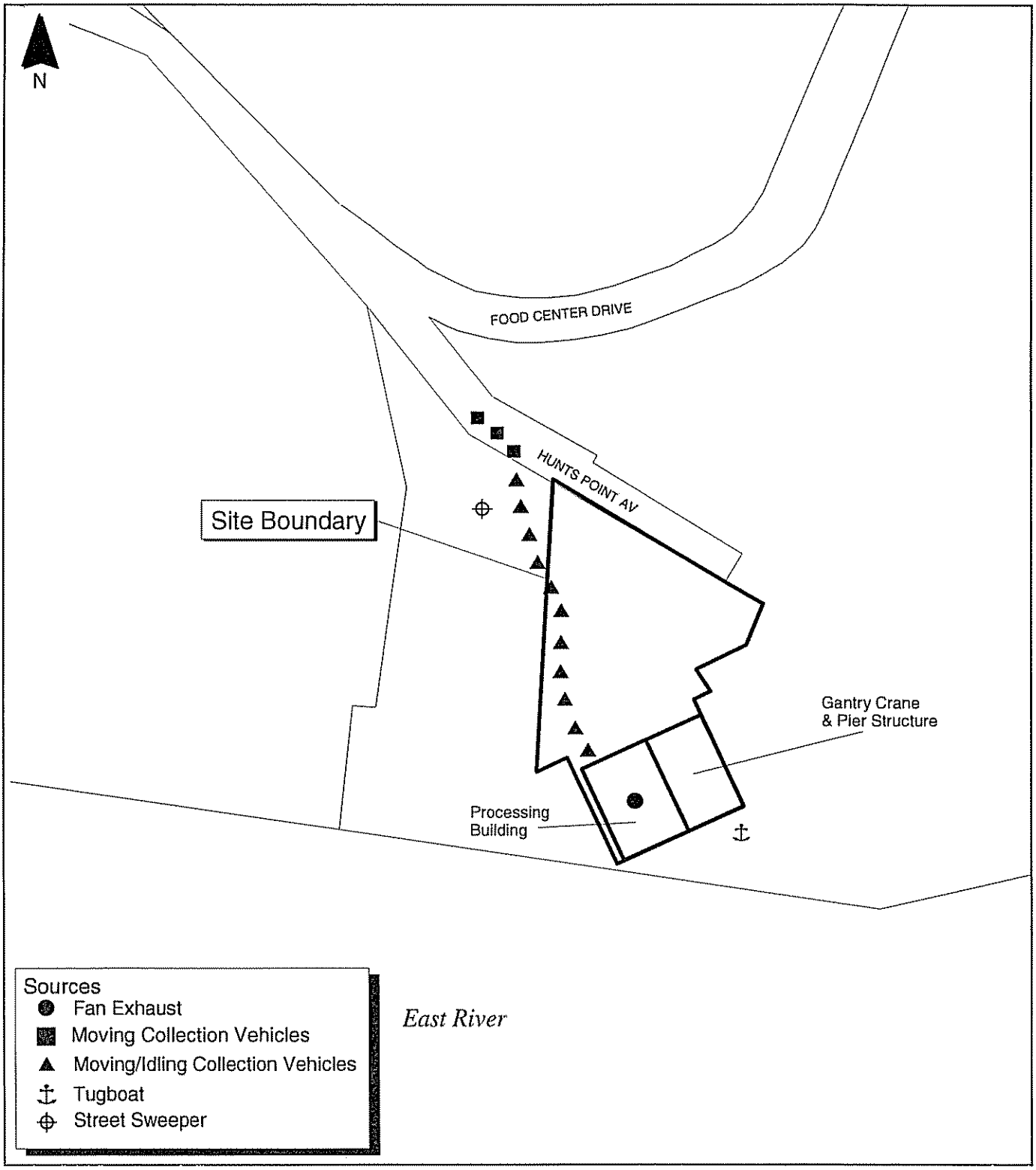
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	10
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	17 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (17), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

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Figure 19.15-1 On-Site Air Quality Analysis

South Bronx Converted MTS

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Table 19.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
South Bronx Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	549	3,781	4,330	40,000	NA
	8-hour[6]	253	2,635	2,888	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	4	~~68~~60	64	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	23	91	114	150	NA
	Annual	3	21	24	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2	NA	NA	NA	5
	Annual Neighborhood Average	0.021[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	96	254	350	1,300	NA
	24-hour[6]	5	136	141	365	NA
	Annual	0.4	37	37	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

19.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 19.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the South Bronx Converted MTS are not considered to be significant.

19.15.4.2 Off-Site Analysis

19.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of Tiffany Street and Randall Avenue, Halleck Street/East Bay Avenue and Hunts Point Avenue, and Bruckner Boulevard and Leggett Avenue to determine whether South Bronx Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO de minimus value or a violation of the 8-hour NAAQS;
- An analysis of the intersections of Bruckner Boulevard and Leggett Avenue, Bruckner Boulevard and Longwood Avenue, Tiffany Street and Randall Avenue, Halleck Street/East Bay Avenue and Hunts Point Avenue, and Halleck Street and Ryawa Avenue to determine whether South Bronx Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the intersections of Bruckner Boulevard and Leggett Avenue, Bruckner Boulevard and Longwood Avenue, Tiffany Street and Randall Avenue, Halleck Street/East Bay Avenue and Hunts Point Avenue, and Halleck Street and Ryawa Avenue to determine whether South Bronx Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 19.15-2.

Table 19.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions South Bronx Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	317E-01	1.30E+03	2.44E-04	1.37E-03	1.30E-01	1.06E-02	1.37E-03	8.30E-06	1.14E-08
2	Formaldehyde	4.01E-01	3.00E+01	1.34E-02	1.74E-03	6.00E-02	2.89E-02	1.74E-03	1.30E-05	2.26E-08
3	1,3 Butadiene	1.33E-02	-	-	5.75E-05	3.60E-03	1.60E-02	5.75E-05	2.80E-04	1.61E-08
4	Acetaldehyde	2.61E-01	4.50E+03	5.79E-05	1.13E-03	4.50E-01	2.51E-03	1.13E-03	2.20E-06	2.48E-09
5	Benzo(a)pyrene	6.39E-05	-	-	2.77E-07	2.00E-03	1.38E-04	2.77E-07	1.70E-03	4.70E-09
Non-Carcinogenic Pollutants [10]										
6	Propylene	8.77E-01	-	-	3.80E-02	3.00E+03	1.27E-06	3.80E-03	NA	NA
7	Acrolein	3.14E-02	1.90E-01	1.65E-01	1.36E-04	2.00E-02	6.81E-03	1.36E-04	NA	NA
8	Toluene	1.39E-01	3.70E+04	3.76E-06	6.02E-04	4.00E+02	1.50E-06	6.02E-04	NA	NA
9	Xylenes	9.68E-02	4.30E+03	2.25E-05	4.19E-04	7.00E+02	5.99E-07	4.19E-04	NA	NA
10	Anthracene	6.35E-04	-	-	2.75E-06	2.00E-02	1.38E-04	2.75E-06	NA	NA
11	Benzo(a)anthracene	5.71E-04	-	-	2.47E-06	2.00E-02	1.24E-04	2.47E-06	NA	NA
12	Chrysene	1.20E-04	-	-	5.19E-07	2.00E-02	2.60E-05	5.19E-07	NA	NA
13	Naphthalene	2.88E-02	7.90E+03	3.65E-06	1.25E-04	3.00E+00	4.16E-05	1.25E-04	NA	NA
14	Pyrene	1.62E-03	-	-	7.03E-06	2.00E-02	3.52E-04	7.03E-06	NA	NA
15	Phenanthrene	9.99E-03	-	-	4.33E-05	2.00E-02	2.16E-03	4.33E-05	NA	NA
16	Dibenz(a,h)anthracene	1.98E-04	-	-	8.58E-07	2.00E-02	4.29E-04	8.58E-07	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.79E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**6.78E-02**	**Total Estimated Combined Cancer Risk**		**5.30E-08**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 19.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGCs) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGCs) established by NYSDEC

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants

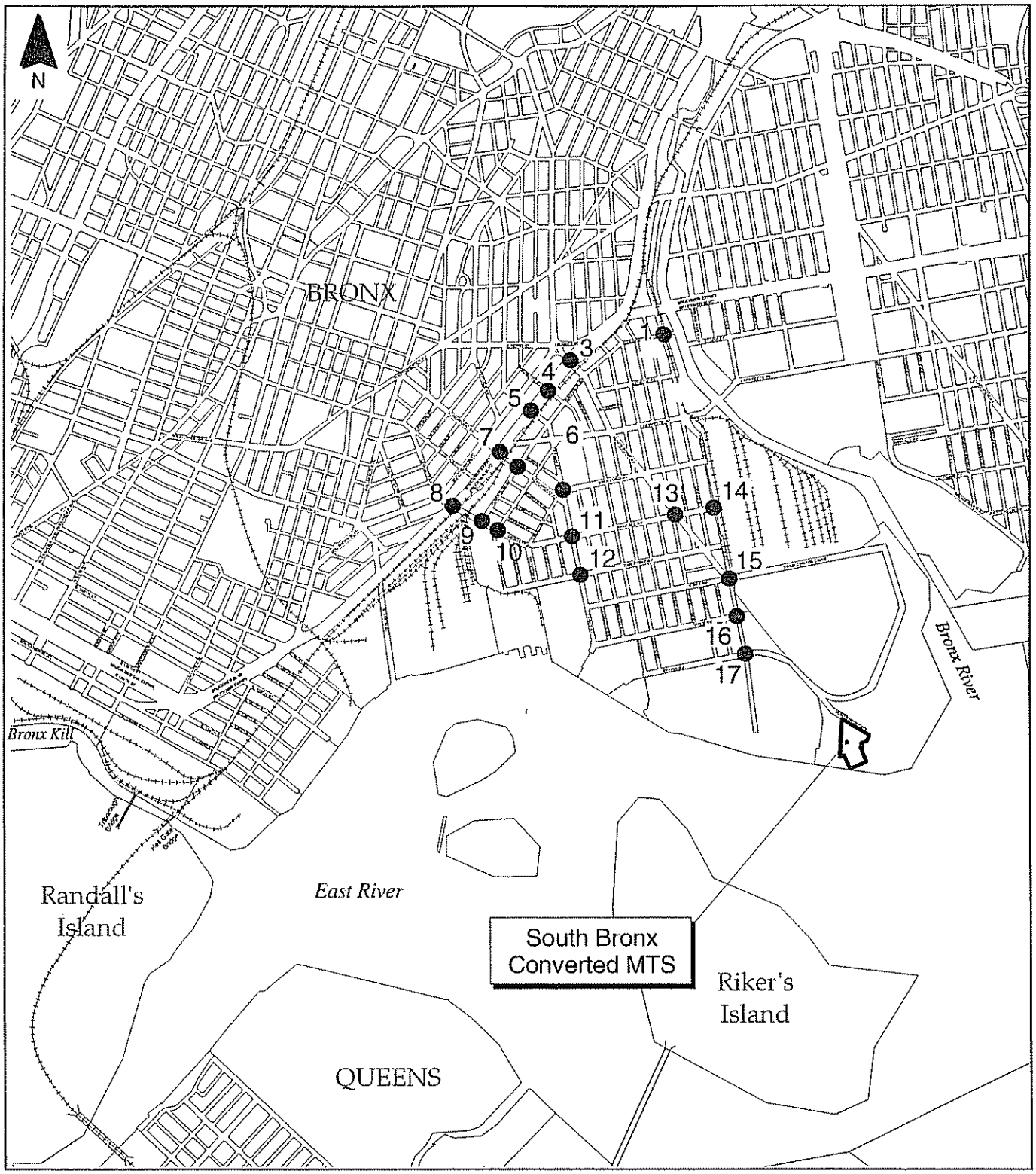
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

1500 0 1500 Feet

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Figure 19.15-2 Off-Site Air Quality Intersections Studied South Bronx Converted MTS

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19.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 19.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). The off-site operations of the South Bronx Converted MTS are not, therefore, considered to be significant. (A Tier II analysis of the intersections at Tiffany Street and Randall Avenue, Halleck Street/East Bay Avenue and Hunts Point Avenue, and Halleck Street and Ryawa Avenue was necessary to determine the off-site annual impacts for $PM_{2.5}$.)

Table 19.15-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
South Bronx Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Bruckner Boulevard & Leggett Avenue									
Existing Conditions	6	~~121~~137	~~42~~39						
Future No-Build Conditions	5	~~117~~133	~~41~~38						
Future Build Conditions	5	~~118~~134	~~41~~38						
Future Build Incremental				0.02	0.993	~~1.01~~0.32	0.0002	0.08090	~~0.08~~0.090
Bruckner Boulevard & Longwood Avenue									
Existing Conditions		~~132~~148	~~42~~39						
Future No-Build Conditions		~~129~~145	~~41~~38						
Future Build Conditions	NA [4]	~~129~~145	~~43~~39						
Future Build Incremental				0.03	0.47	~~0.50~~0.43	0.0003	0.080	~~0.08~~0.080

Table 19.15-5 (Continued)
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
South Bronx Converted MTS

Intersection	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Tiffany Street & Randall Avenue[6]									
Existing Conditions	3	~~93~~109	~~32~~29						
Future No-Build Conditions	3	~~88~~113	~~34~~30						
Future Build Conditions	3	~~99~~115	~~34~~31						
Future Build Incremental				0.03	0.~~1~~93	~~0.22~~0.33	0.035	0.~~04~~060[6]	~~0.08~~0.095
Halleck Street & Ryawa Avenue[6]									
Existing Conditions		~~84~~100	~~28~~25						
Future No-Build Conditions		~~95~~111	~~32~~28						
Future Build Conditions	NA [5]	~~98~~114	~~33~~30						
Future Build Incremental				0.10	0.~~2~~25	~~0.32~~0.60	0.035	0.049[7]	0.084
Halleck Street & East Bay Avenue/Hunts Point Avenue[6]									
Existing Conditions	4	~~111~~127	~~44~~41						
• Future No-Build Conditions	4	~~110~~126	~~43~~40						
Future Build Conditions	4	~~113~~129	~~44~~41						
Future Build Incremental				0.07	0.~~1~~93	~~0.26~~0.37	0.035	~~0.03~~0.050[6]	~~0.07~~0.085

Notes for Table 19.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration (8-hr CO = 2.3 ppm; 24-hr PM_{10} = ~~75~~ 91 $\mu g/m^3$; Annual PM_{10} = 24 $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions near the intersection considered.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for~~ under the ~~Future~~ future No-Build and ~~Future~~ future Build ~~scenarios~~ conditions at ~~any~~ sidewalk receptors ~~three meters from the edge of the roadways~~ under ~~using~~ AM, Facility, or PM peak traffic conditions.

(4) NA=Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds

(5) Results determined using a Tier II analysis.

(6) The difference between $PM_{2.5}$ concentrations under future No-Build and future Build conditions at receptors 15 meters from the edge of the roadways under AM, Facility, or PM peak traffic conditions.

(7) The difference of the average concentration of the mobile receptor grid between future No Build and future Build conditions at receptors 15 meters from the edge of the roadways under AM, Facility, or PM peak traffic conditions.

~~(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.~~

~~(5) Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.~~

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

~~NA = Not Applicable~~

19.16 Odor

19.16.1 Existing Conditions

The existing MTS is currently not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations of sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the Vernon C. Bain Center (prison barge), which is located approximately 645 feet from the site boundary.

19.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the South Bronx Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

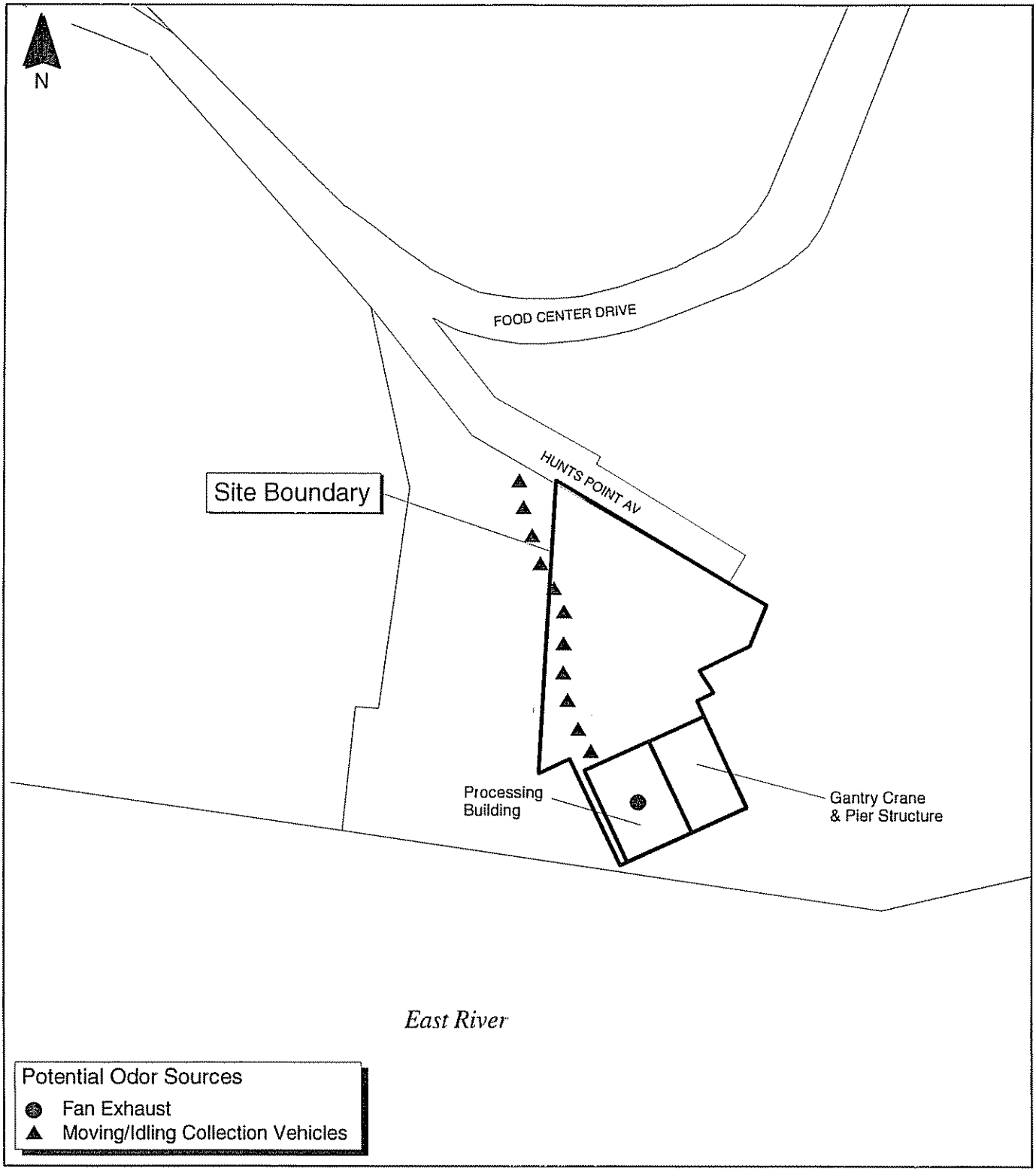
19.16.3 Potential Impacts with the South Bronx Converted MTS

19.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the South Bronx Converted MTS are provided in Table 19.16-1. Figure 19.16-1 shows the locations of these sources within the site.

Table 19.16-1
Odor Sources Included in Odor Analysis
South Bronx Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection Vehicles	18



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.16-1 Potential Odor Sources

South Bronx Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the South Bronx Converted MTS.

19.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 19.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the South Bronx Converted MTS at any nearby sensitive receptor is less than 1, so odors from the South Bronx Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 19.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
South Bronx Converted MTS

Parameter	Resulting Odor Unit [1]
Estimated Detectable Concentration	5.0
Highest Result	0.25
Type of Receptor	Over-Water Receptor
Receptor	36 feet from the facility
Closest Sensitive Receptor Result [2]	0.03
Type of Receptor	Prison Barge
Distance to Receptor	645 Feet

Notes:
[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
[2] Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

19.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from South Bronx Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

19.17.1 Existing Conditions

19.17.1.1 Introduction

Figure 19.17-1 shows the location of the South Bronx Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is the Vernon C. Bain Center (prison barge), which is moored off the East River shore, approximately 197 meters (645 feet) west of the site boundary.

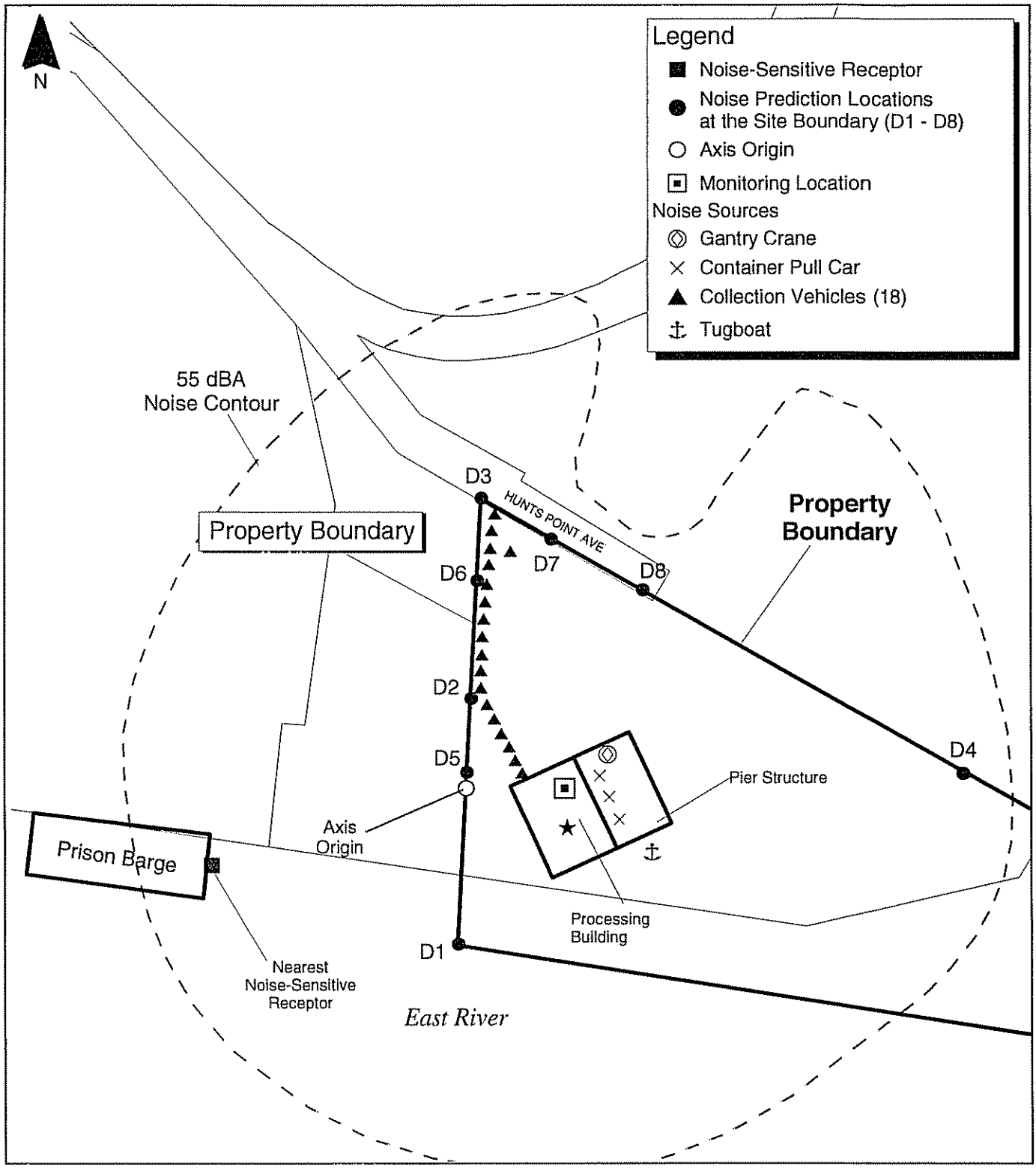
19.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line nearest the prison barge. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[13] and the statistical metrics of L_{10}, L_{50} and L_{90}.[14] Table 19.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 53.5 dBA on May 15, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic on Hunts Point Avenue; and
- Other noise sources associated with activities in the surrounding industrial areas.

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[13] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[14] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 19.17-1 Noise Sources and Receptors

South Bronx Converted MTS

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Table 19.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
South Bronx Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 a.m.	54.7	52.1	53.1	56.1	50.7	64.5
1:00-2:00 a.m.	54.3	52.8	53.8	55.2	51.3	67.3
2:00-3:00 a.m.	53.5	52.4	53.2	54.4	51.0	66.9
3:00-4:00 a.m.	54.6	52.6	53.5	55.0	50.9	67.2
4:00-5:00 a.m.	54.4	53.2	54.1	55.2	51.6	65.9
5:00-6:00 a.m.	55.1	54.0	54.8	55.9	52.5	64.6
6:00-7:00 a.m.	65.8	54.4	57.1	68.3	52.6	88.1
7:00-8:00 a.m.	64.3	53.8	56.7	66.2	51.1	84.4
8:00-9:00 a.m.	61.8	53.2	55.1	62.3	50.6	83.5
9:00-10:00 a.m.	55.1	51.0	52.9	57.0	48.7	74.7
10:00-11:00 a.m.	57.5	51.8	54.1	59.9	49.0	88.5
11:00 a.m.-12:00 p.m.	56.4	51.4	53.4	58.2	49.2	74.9
12:00-1:00 p.m.	65.0	53.4	56.6	66.6	50.9	95.4
1:00-2:00 p.m.	66.1	54.7	57.2	66.3	52.5	90.5
2:00-3:00 p.m.	64.7	54.4	57.9	67.0	51.6	84.6
3:00-4:00 p.m.	65.2	54.7	58.1	68.4	51.6	84.5
4:00-5:00 p.m.	63.1	54.7	58.1	66.3	51.7	81.9
5:00-6:00 p.m.	64.3	55.0	58.2	68.3	52.1	83.2
6:00-7:00 p.m.	64.6	54.5	57.8	67.3	51.6	86.6
7:00-8:00 p.m.	64.1	54.0	56.7	66.3	51.7	84.4
8:00-9:00 p.m.	65.0	53.2	55.5	64.8	51.4	91.0
9:00-10:00 p.m.	66.6	53.3	55.6	65.2	51.0	89.9
10:00-11:00 p.m.	57.7	53.0	54.1	55.8	51.3	84.1
11:00 p.m.-12:00 a.m.	55.6	52.5	53.5	55.1	50.9	72.8

Note:
(1) The 24-hour background noise levels were measured at site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

19.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the South Bronx Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Therefore, no noise monitoring data were collected for off-site noise levels.

19.17.2 Future No-Build Conditions

19.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

19.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 19.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime and nighttime for locations where there is a possible impact based on the first-level screening.

19.17.3 Potential Impacts with the South Bronx Converted MTS

19.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the South Bronx Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 19.17-3. Spectral noise levels used in the Performance Standards analysis are shown in Table 19.17-4. The number and types of equipment assumed for this analysis were based on the South Bronx Converted MTS's peak design capacity. Shown earlier, Figure 19.17-1 indicates the South Bronx Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 19.17-2
Off-Site Noise Traffic Volume
South Bronx Converted MTS

Location	Hour	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
Randall Avenue between Manida Street and Coster Avenue	11:00 a.m.	545	553
Tiffany Street between Spofford and Randall Avenues	1:00 a.m.	135	137
Tiffany Street between Spofford and Randall Avenues	11:00 a.m.	564	573
Bruckner Boulevard between Longwood Avenue and Tiffany Street	11:00 a.m.	1,124	1,141
Longwood Avenue between Garrison and Barry Streets	1:00 a.m.	91	92
Longwood Avenue between Garrison and Barry Streets	10:00 a.m.	438	445

Notes:
(1) Existing Traffic Volumes are based on ATR data.
(2) Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

Table 19.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
South Bronx Converted MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA) [2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1) [3]	67
Harbor Tug Boat (1) [4]	69
Moving/Queuing DSNY Collection Vehicles (18) [5]	67

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Noise level representative of each piece of equipment.

(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the converted MTS's.

(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the converted MTS's.

(5) Quantity includes one truck queuing on the outbound scale.

Table 19.17-4
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
South Bronx Converted MTS

Equipment Name (quantity) (1),(2)	Reference Sound Pressure Noise Level at 50 feet (dB) (3)							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) (4)	78	81	78	71	66	60	55	55

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.

(3) Noise level representative of each piece of equipment.

(4) Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTS's.

Hz = Hertz
K = Thousand

19.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the South Bronx Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 214 meters (702 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 197 meters (645 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. Since the background noise level at the receptor is 54.0 dBA, which is less than 55 dBA, the contour of the predicted facility L_{eq} equivalent to the background noise level is also shown in Figure 19.17-1. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 19.17-1). Therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 19.17-1 above. Table 19.17-5 below identifies the existing background noise level during the quietest hour. The table shows the distance from the South Bronx Converted MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, South Bronx Converted MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. This difference represents the predicted incremental change in noise level from the South Bronx Converted MTS. Because this incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, since the daytime noise level is 62 dBA or greater, there is a predicted impact that would be caused by the South Bronx Converted MTS on-site operations.

Table 19.17-5
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
South Bronx Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Prison Barge	197 / 645	~~54.0~~53.5	~~62.2~~62.0	~~62.8~~62.6	~~8.8~~9.1	Yes

Notes:
(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.
(2) Existing noise levels measured on May 7, 2003 at 3:00 p.m.
(3) Predicted noise level calculations at the noise-sensitive receptor include on-site and off-site shielding from structures.
(4) According to CEQR, if the existing noise level is less than 60 dBA, an increase over 5 dBA during the daytime is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the South Bronx Converted MTS with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the daytime hours for the noise-sensitive receptor; therefore, only daytime impact criteria are discussed in this analysis for this noise-sensitive receptor.

19.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the South Bronx Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (see Table 19.17-6). Based on this analysis, no exceedances to the Performance Standards are predicted.

Table 19.17-6
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
South Bronx Converted MTS

Manufacturing District Regulation (M3)								
Frequency (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Threshold	**79**	**74**	**69**	**63**	**57**	**52**	**48**	**45**
Total Lp dB: D1	68.0	62.5	52.7	46.7	39.2	30.7	21.3	16.8
Total Lp dB: D2	71.5	67.4	61.1	54.3	48.4	41.6	35.0	33.3
Total Lp dB: D3	62.0	57.5	50.6	43.9	37.6	30.3	22.6	19.5
Total Lp dB: D4	61.6	58.6	53.4	46.4	40.6	33.5	26.0	23.2
Total Lp dB: D5	73.0	68.4	61.1	54.5	48.3	41.2	34.3	32.4
Total Lp dB: D6	65.4	60.9	53.7	47.1	40.9	33.7	26.9	24.9
Total Lp dB: D7	61.0	60.8	57.0	50.0	44.6	37.9	31.4	29.4
Total Lp dB: D8	65.7	63.8	59.4	52.4	47.0	40.4	34.2	32.7

Notes:

Hz = Hertz
Lp = Sound pressure level
dB = Decibel
D1 through D8 are the points representative of the South Bronx Converted MTS boundary that are used in all noise analyses
K = Thousand

19.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the South Bronx Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 19.17-7. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 19.17-7
Current Noise Code Analysis
South Bronx Converted MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	63.8
D2	**76.32**
D3	**71.65**
D4	~~61.5~~60.4
D5	**70.8**
D6	**76.7**
D7	68.8
D8	65.3

Note:
D1 through D8 are the points representative of the South Bronx Converted MTS boundary that are used in all noise analyses.

Bold= Exceedence

19.17.3.5 Mitigation Measures

Mitigation measures available were limited to those that affect the source, the propagation path or the receiver. The typical mitigation measure for the path of noise between source and receiver is a noise wall. Noise walls can be designed to provide noise attenuation for noise-sensitive areas located relatively close to the wall. Noise attenuation provided by the wall decreases as distance from the wall increases. Receiver treatments may include the construction of noise walls at residential property lines or the installation of replacement windows and air conditioning. The latter two mitigation measures are suggested in the 2001 CEQR Technical Manual. Typical mitigation measures at the source include: (1) changes in operations schedules to reduce noise emissions; (2) reduction in DSNY collection vehicles; (3) using noise mufflers for the exhaust pipes of material handling equipment (e.g., side loaders, yard tractors, etc.) or other source noise reduction methods; and (4) maintaining the equipment through regularly scheduled maintenance and repairs.

The data presented in this section is for the analysis to date. If the South Bronx Converted MTS is included in the New SWMP, a supplemental analysis will be performed.

19.17.3.6 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the South Bronx Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime and nighttime are provided in Table 19.17-8.

Because the screening results presented above showed that the PCEs would not double on a roadway due to DSNY and other agency collection vehicles coming to or going from the South Bronx Converted MTS, a detailed off-site noise analysis was not required.

19.17.3.7 Combined On-Site and Off-Site Noise Levels

An on-site noise analysis was performed for the South Bronx Converted MTS. As a result of the off-site screening analysis, which is described above in 19.17.3.5, no off-site noise analysis was required. Since an off-site analysis was not required, a combined noise analysis was not performed.

Table 19.17-8
Off-Site Noise Screening Results
South Bronx Converted MTS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Randall Avenue between Manida Street and Coster Avenue	11:00 a.m.	5,106	54	7	2,538	7,644	No
Tiffany Street between Spofford and Randall Avenues	1:00 a.m.	2,093	9	0	423	2,516	No
Tiffany Street between Spofford and Randall Avenues	11:00 a.m.	8,530	54	4	2,538	11,068	No
Bruckner Boulevard between Longwood Avenue and Tiffany Street	11:00 a.m.	8,373	61	0	2,867	11,240	No
Longwood Avenue between Garrison and Barry Streets	1:00 a.m.	934	9	0	423	1,357	No
Longwood Avenue between Garrison and Barry Streets	10:00 a.m.	4,383	44	0	2,068	6,451	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include South Bronx Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

19.18 Commercial Waste to the South Bronx Converted MTS

19.18.1 Existing Conditions

No commercial waste is delivered to the South Bronx MTS site under Existing Conditions. Commercial waste generated in the Bronx is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

19.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the South Bronx Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

19.18.3 Potential Impacts of Sending Commercial Waste to the South Bronx Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

19.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the South Bronx Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 19.15, 19.16 and 19.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

19.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the South Bronx Converted MTS were evaluated in Sections 19.14, 19.15 and 19.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 19.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 64 (inbound trip ends) per hour, which occurred during the AM peak. These 64 DSNY and other agency collection vehicles are more than the 23 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the South Bronx Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 64 DSNY and other collection agency vehicle trip ends at the South Bronx Converted MTS during the AM peak hour. Therefore, the addition of the 23 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the South Bronx Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 64 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 64 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period at several analyzed intersections. Results showed there would be no unmitigatible significant adverse environmental impacts. Consequently, because the 23 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could travel through these intersections during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed over a 24-hour period, there would be no significant adverse off-site air quality impacts.

For the intersections of Tiffany Street and Randall Avenue, Halleck Street/East Bay Avenue and Hunts Point Avenue, and Halleck Street and Ryawa Avenue, a Tier II analysis was required. The estimated actual hourly distribution over 24 hours included the estimated 23 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could potentially be processed at the South Bronx Converted MTS, and no unmitigatible significant adverse environmental impacts were identified.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the South Bronx Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the South Bronx Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,611 tons (or 150 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

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CHAPTER 20 ENVIRONMENTAL REVIEW: GREENPOINT CONVERTED MTS

20.1 Introduction

The results of the environmental analyses of the Greenpoint Converted MTS are presented in the following sections:

20.2 Land Use, Zoning, and Public Policy
20.3 Socioeconomic Conditions
20.4 Community Facilities and Services
20.5 Open Space
20.6 Cultural Resources
20.7 Urban Design, Visual Resources, and Shadows
20.8 Neighborhood Character
20.9 Natural Resources
20.10 Hazardous Materials
20.11 Water Quality
20.12 Waterfront Revitalization Program
20.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
20.14 Traffic, Parking, Transit, and Pedestrians
20.15 Air Quality
20.16 Odor
20.17 Noise
20.18 Commercial Waste to the Greenpoint Converted MTS

Section 2.4.2 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

20.2 Land Use, Zoning, and Public Policy

20.2.1 Existing Conditions

20.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 20.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 20.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.2 provides information on existing land uses and operations on the site.

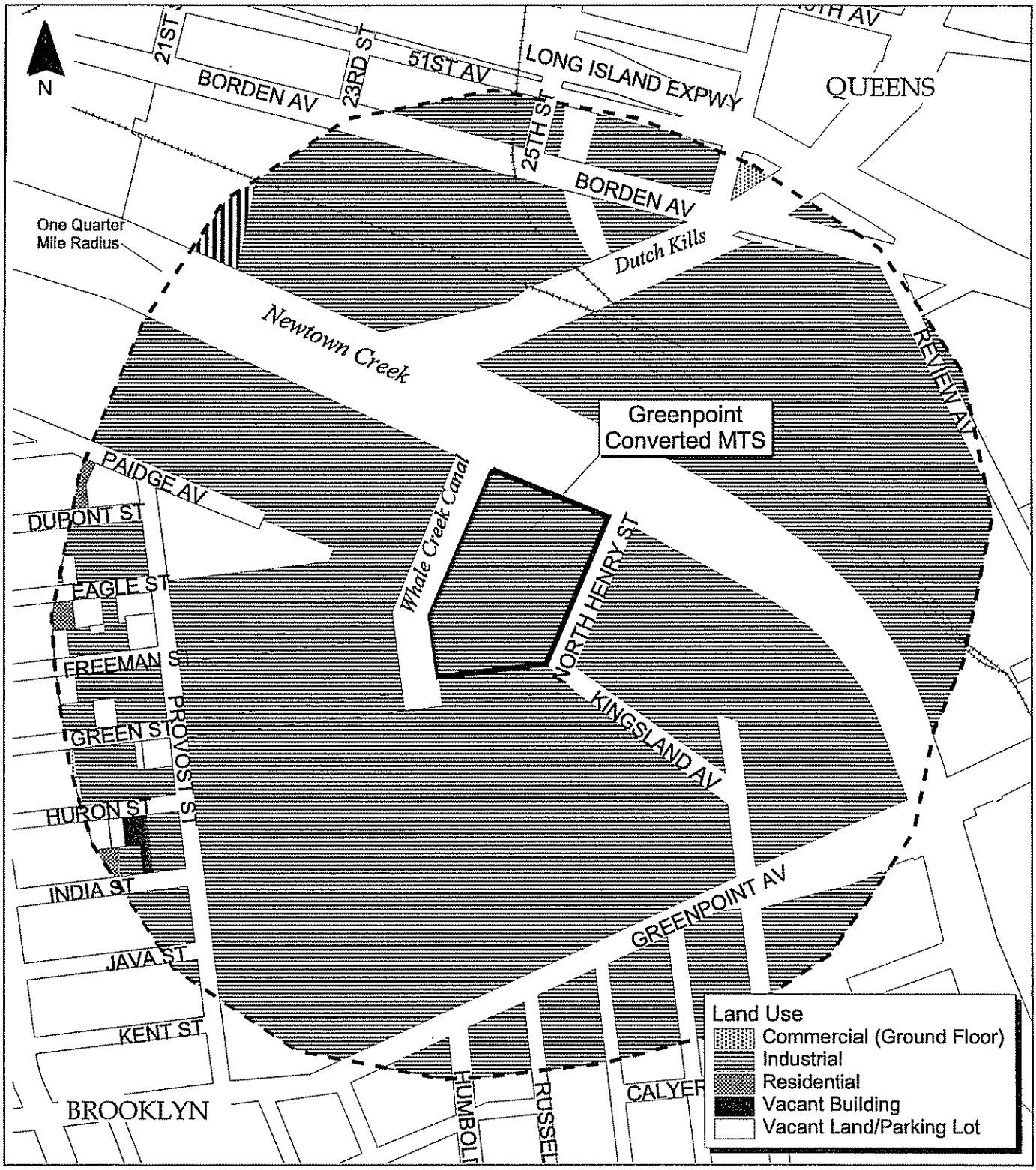
20.2.1.2 Land Use Patterns

20.2.1.2.1 General Context

The site is located on the heavily industrial Newtown Creek waterfront in Greenpoint, Brooklyn. It is surrounded by large-lot, primarily truck-dependent, heavy industrial uses on both the Queens and Brooklyn sides of the creek. These uses include various municipal facilities, petroleum (outdoor loading) facilities and warehousing.

20.2.1.2.2 Land Uses in the Primary Study Area

The primary study area is comprised almost exclusively of heavy industrial uses concentrated along Newtown Creek and dominated by the Newtown Creek WPCP. The WPCP, which occupies a large area immediately south of the site, is currently being expanded to the east and to the north (west of Whale Creek Canal), across from the site. A NYCDOT asphalt production facility and private recycling center for construction debris and fill are located east of the site on Kingsland Avenue. The Queens side of Newtown Creek is also characterized by industrial uses such as The Exhibit Company and numerous warehouses fronting on Borden and Review Avenues across from the site.



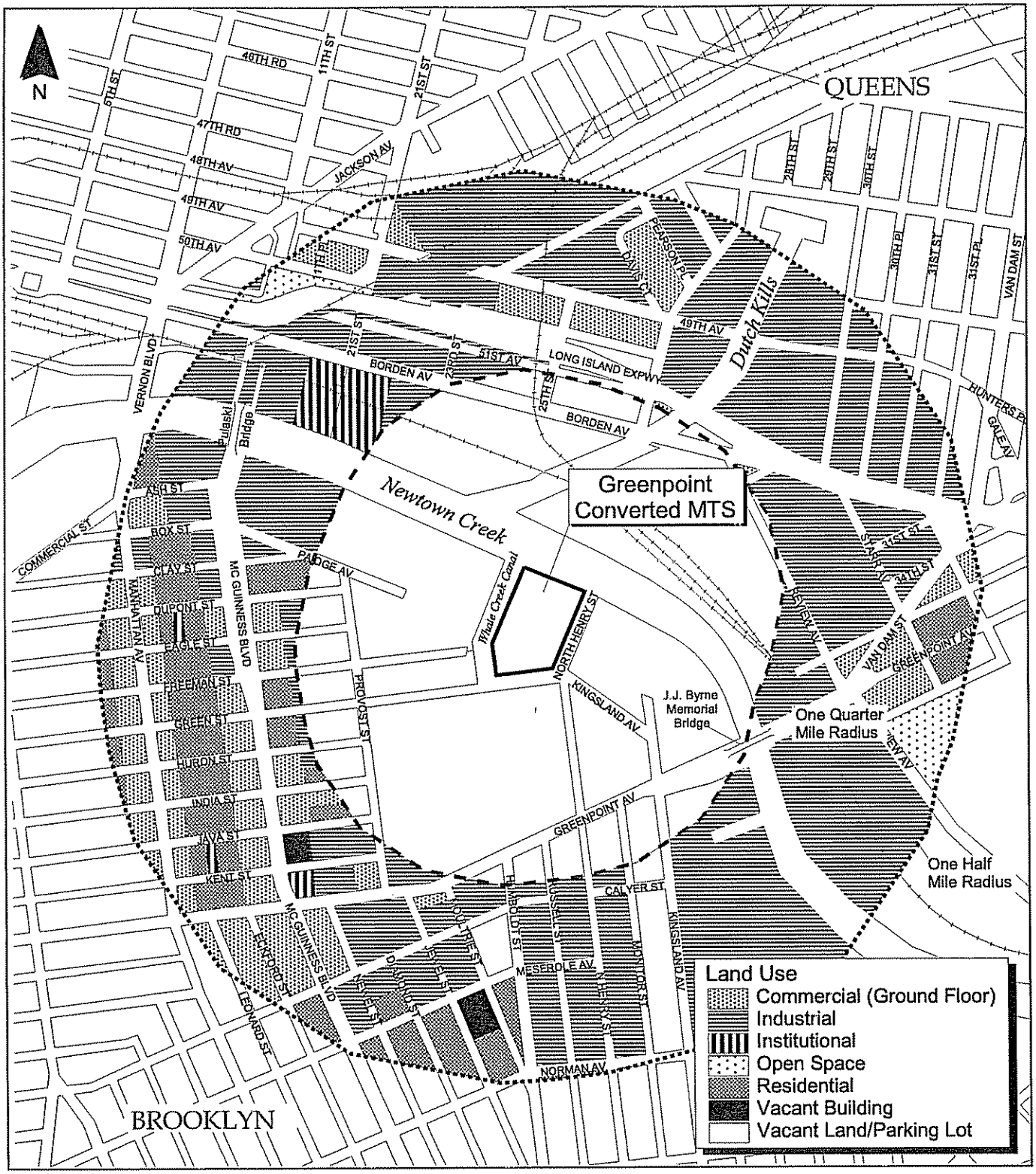
Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area

300 0 300 Feet

Figure 20.2-1 Land Use in the Primary Study Area

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area.

500 0 500 Feet

HDR | Hydroqual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 20.2-2 Land Use in the Secondary Study Area

Greenpoint Converted MTS

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In addition to the uses bordering the site, the blocks south of the site along the west side of Provost Street are almost exclusively warehouses. Most of these are active, though there are some vacant warehouse buildings and vacant lots scattered throughout. Southeast of the site beyond a private recycling center and WPCP sites are Metro Fuel Oil Depot petroleum outdoor-loading facilities.

20.2.1.2.3 Land Uses in the Secondary Study Area

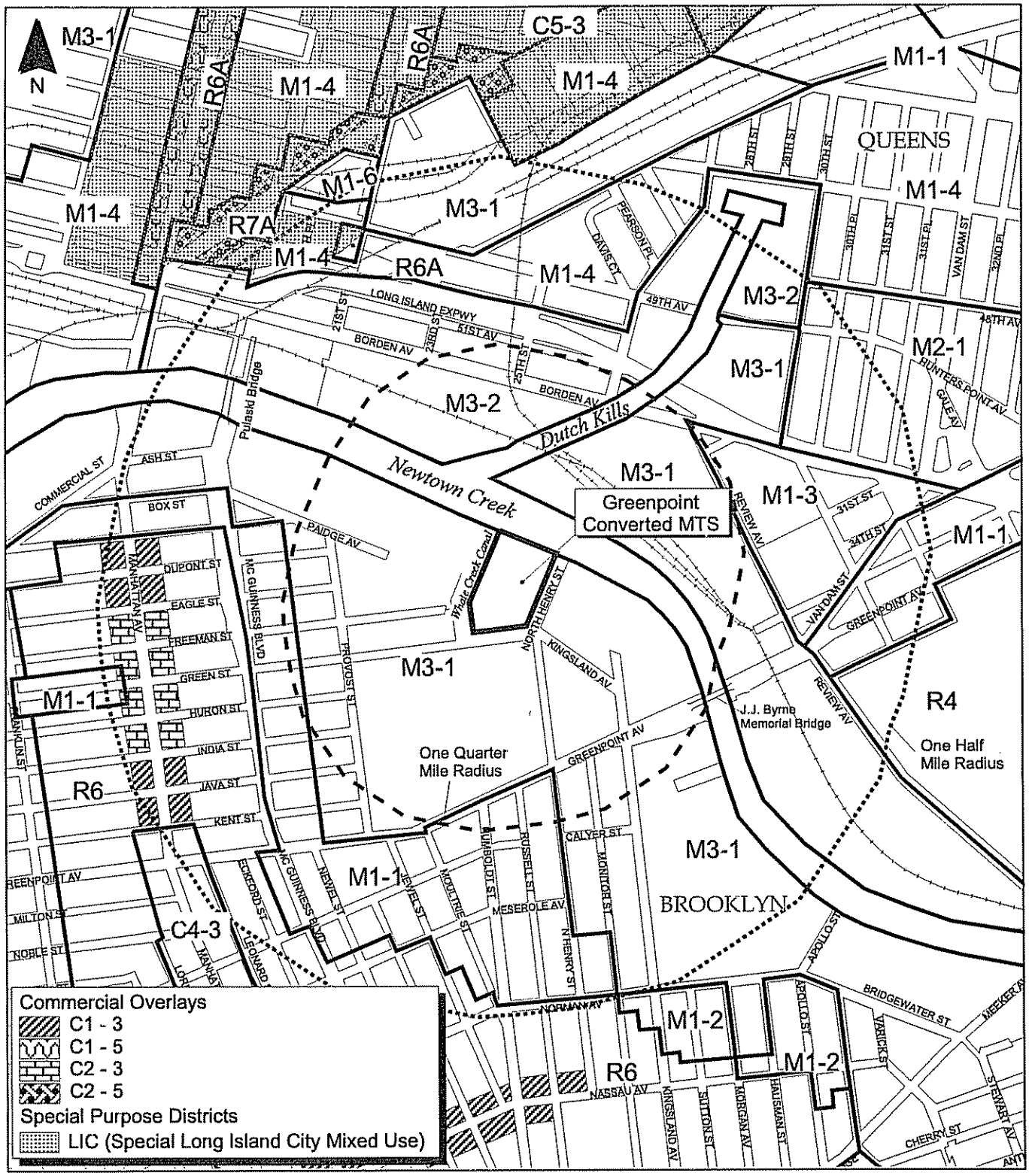
Within the secondary study area, heavy industrial uses are concentrated along both sides of Newtown Creek and Dutch Kills, and in about half of the study area in Brooklyn, particularly south of Greenpoint Avenue. West of the site in the secondary study area is a residential area comprised mostly of three- to four-story apartment buildings, whose ground-floor commercial uses line McGuinness Boulevard and Manhattan Avenue. In this area, an apartment building recently converted from industrial uses stands west of Provost Street on Dupont Street. South of Meserole Avenue in the southern portion of the study area, residential uses are interspersed with active warehouses.

The portion of the secondary study area that lies north of the site in Queens is comprised almost entirely of industrial uses and warehouses with the exceptions of the Salvation Army Veterans Residence northwest of the site at 21st Street and Borden Avenue, and some commercial uses north of the site along 49th Avenue and east of the site along Greenpoint Avenue.

20.2.1.3 Current Zoning On and Near the Site

20.2.1.3.1 Zoning Within the Primary Study Area

The site and the entire primary study area lie within manufacturing zoning districts. In Brooklyn, an M3-1 district extends along the southern side of Newtown Creek. In Queens, an M3-2 zoning district defines the area west of the Dutch Kills and an M3-1 defines the area to its east. (See Figure 20.2-3 and Table 3.4-1: Zoning District Characteristics.)



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.2-3 Zoning

Greenpoint Converted MTS

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20.2.1.3.2 Zoning Within the Secondary Study Area

The secondary study area in Brooklyn is zoned M3-1 along the creek, and M1-1 inland, serving as a buffer between the heavier industrial district and residentially zoned (R6) district to the west and south. Nearly all of the secondary study area in Queens is zoned for manufacturing (M1-1, M1-3, M1-4, M2-1, M3-1 and M3-2), except for part of a block in the northwestern section, which is zoned R6A. The Long Island City Mixed Use District (overlay zone), intended to spur new mixed-use development, includes the R6A block and extends northward to cover a large area outside the secondary study area.

20.2.1.4 Plans and Policies

The FY 2004 CDNS for Brooklyn CD 1 contains only one recommendation that applies to the site and study area. It states explicitly that the community is opposed to any reopening of the Greenpoint Incinerator and recommends that it be demolished as soon as possible. Otherwise, the community expresses its concern over hosting new large-scale waterfront facilities, such as power plants, and its general dissatisfaction with hosting a large number of private waste transfer stations. Also, the Community District Board requests that DSNY garages for District 3 be relocated to District 3 and that the construction of new garages for Districts 1 and 4 proceed.

The CDNS for Queens CD 2 states the community's concerns over air quality and the effects of waste transfer stations on air quality, but does not make reference to recommended or anticipated physical development affecting the site or primary or secondary study areas.

The Greenpoint 197-a Plan has been prepared for an area in Brooklyn approximating the 11222 zip code district, which extends to Newtown Creek to the north, the East River to the west and far enough south to include McCarren Park and east to include the Keyspan site on Newtown Creek east of the Brooklyn-Queens Expressway (BQE). The plan overall supports redevelopment of the waterfront, but it notes a necessary balance between existing necessary uses, such as DSNY facilities, and the desire to have a waterfront that is accessible and enjoyable to the public. To this end, the plan notes those artistic and community open space elements that

are planned to be incorporated in the Newtown Creek WPCP upgrade. (See Future No-Build Conditions, Section 20.2.2, for details regarding the WPCP design features likely to be complete by 2006.) Regarding the DSNY site, the plan refers to the community's concern with dismantling the incinerator in a way that is environmentally sensitive. Although several areas of rezoning are proposed, Newtown Creek is planned to remain M3, thus suitable for heavy industry and municipal uses.

Reach 13, Newtown Creek, is a tidal inlet of the East River, stretching eastward to include English Kills. The plan for Reach 13 states that there are many economic opportunities in this vicinity given its proximity to rail lines and deep water access. The area is identified as an SMIA and continues to be an important location for manufacturing, wholesale, distribution and municipal uses. The plan recommends maintenance of these activities and enhancements to accommodate water-dependent uses. It also calls for coordinated efforts to resolve existing environmental problems and to safeguard against new ones.

One recommendation of the plan is to develop environmentally sound designs and clear performance standards for municipal uses in Newtown Creek, including coordinating municipal agencies with the public and encouraging the consideration of such site development mitigation strategies as the use of landscape buffers, odor control measures and truck routing guidelines.

The plan for Reach 13 makes the point that the reach is not an appropriate location for the development of public access to the waterfront. Public access does not exist, and the best views of the creek are from sidewalks on the Pulaski Bridge and the J.J. Byrne Memorial Bridge, which are used by pedestrians and cyclists. The plan suggests that communities in neighboring reaches provide better opportunities for public access to the waterfront. (See Section 20.12 for a review of consistency with the WRP.)

20.2.2 Future No-Build Conditions

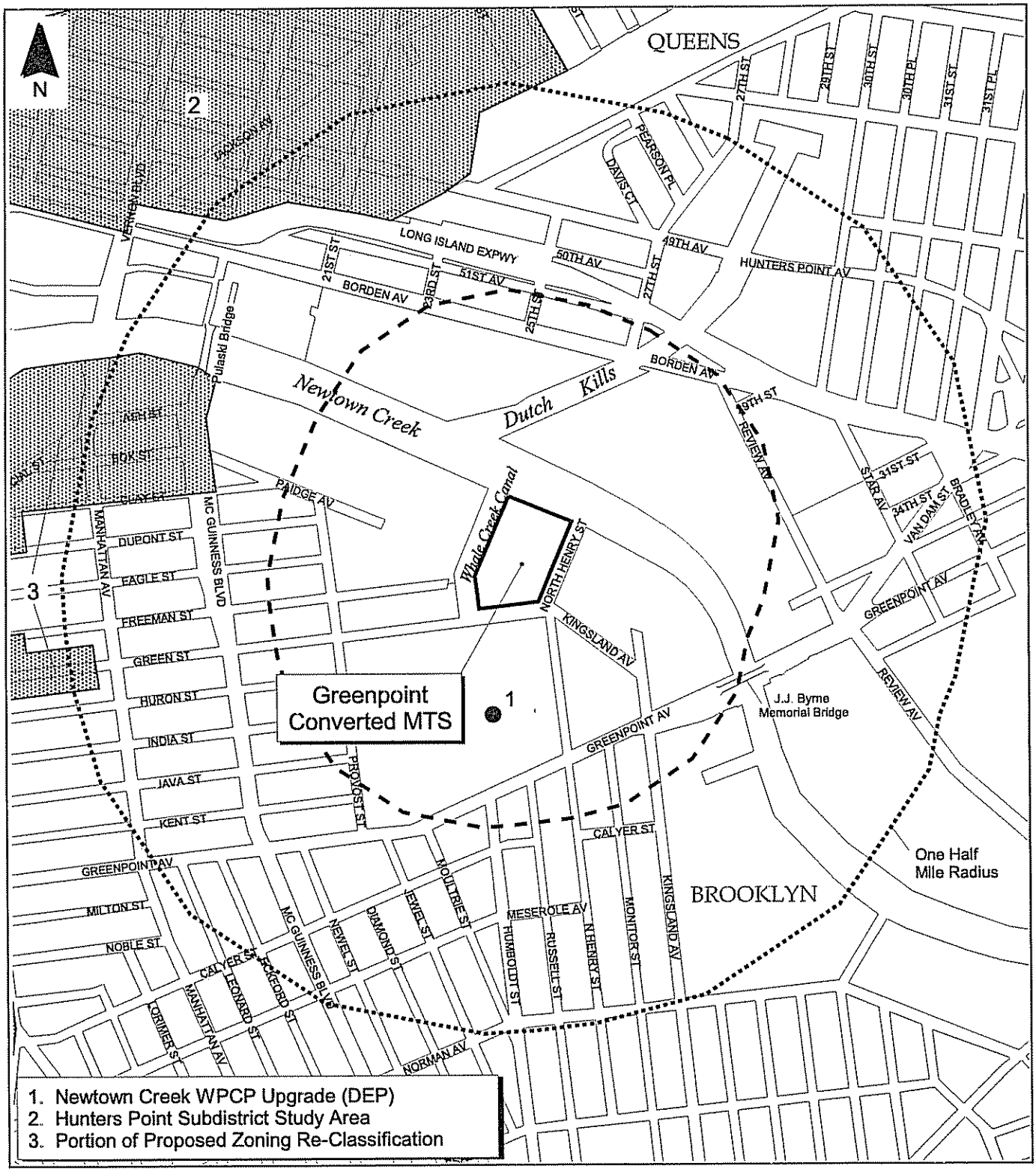
It is reasonable to anticipate that Future No-Build Conditions in the primary and secondary study areas generally will resemble the Existing Conditions. The site will remain DSNY property and the existing, inactive MTS will remain, as will the associated DSNY parking. The DSNY auxiliary field force will continue to use some interior spaces of the defunct incinerator until the incinerator is demolished prior to 2006.

Planned developments near the site generally will maintain existing development intensity and reinforce the existing land use pattern. Figure 20.2-4 shows the planned development sites. The Newtown Creek WPCP, southeast of the site, is in the midst of major expansion/rehabilitation on the adjacent block between Kingsland Avenue and Greenpoint Avenue. The WPCP support building, under construction west of the Whale Creek, and the adjacent landscaped nature walk along the water, are scheduled for completion in 2004. The redeveloped WPCP will also feature a pool and park for children and a series of 10 public art projects to be installed along the 10-block-long chain-link fence surrounding the facility.

20.2.3 Potential Impacts with the Greenpoint Converted MTS

20.2.3.1 Land Use and Zoning

The Greenpoint Converted MTS would entail replacement of the existing MTS with a similar, new facility that would include containerization functions. The new facility would be constructed further inland from the location of the incinerator, thus somewhat decreasing the density of the site and its waterfront. The Greenpoint Converted MTS, which would be situated in relative isolation amid an increasingly industrial context, would not affect the use of the site, nor would it likely affect the surrounding land uses or zoning patterns.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 20.2-4 Planned Development Sites

Greenpoint Converted MTS

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20.2.3.2 Consistency with Public Plans and Policies

The Greenpoint Converted MTS would be consistent with the stated objectives of the pertinent plans and policies affecting the site and environs, primarily because development of the facility would maintain the waterfront industrial uses and zoning and incorporate environmentally sound design, as recommended in the Reach 13 plan. The Greenpoint Incinerator already will have already been demolished.

20.3 Socioeconomic Conditions

20.3.1 Existing Conditions

20.3.1.1 Definition of the Study Areas

Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (See Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Census Tract 579 in Brooklyn (see Figure 20.3-1), which has a northeastern boundary of Newtown Creek and is bounded on the west, south and east roughly by McGuiness Boulevard, Calyer Street and Greenpoint Avenue. For comparison purposes, census data were also gathered at the borough and City levels.

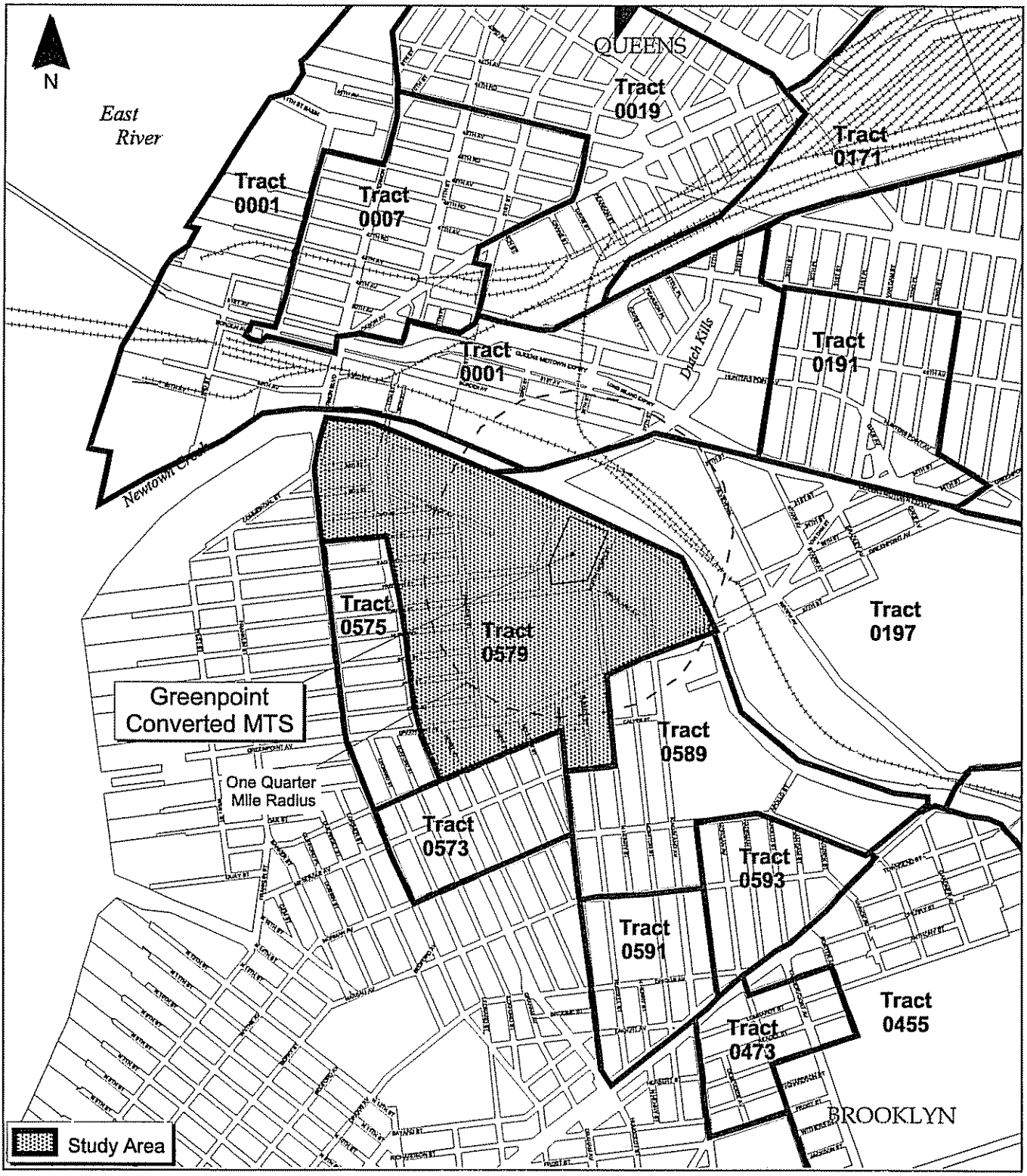
Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

20.3.1.2 Demographic Characteristics

20.3.1.2.1 Population

In 2000, the study area population consisted of 1,440 persons (see Table 20.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a greater percentage increase (12%) than did the borough (7%) and the City (9%) during the same period.

The age-sex distribution for the area was slightly different from the population distribution of the borough and the City, with a slightly greater proportion of males to females. The study area contained relatively the same percentage of children and teenagers as the borough or City; approximately 28% of the study area population was under the age of 20, compared to 30% for the borough and 27% for the City.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

1000 0 1000 Feet

Figure 20.3-1 Census Tracts

Greenpoint Converted MTS

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Table 20.3-1
1990-2000 Population

	Study Area	Brooklyn	City
2000	1,440	2,465,326	8,008,278
1990	1,288	2,300,664	7,322,564
Percent Change	+11.8%	+7.2%	+9.4%

Source: U.S. Census, 1990, 2000

20.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a far greater proportion (59%) of people of Hispanic origin (all races) than did Brooklyn (20%) or the City (27%). Of the 41% not of Hispanic origin, 6% were Black, 74% were White and 12% were Asian. In Brooklyn and the City, Blacks represented approximately 43% and 33% of the non-Hispanic populations, respectively, while Whites represented 43% and 48%, respectively, and Asians represented 9% and 13%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate (18%) than in the borough (9%) but a smaller rate than in the City (24%) during the same period. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

20.3.1.2.3 Families and Households

There were 325 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (47%) was slightly smaller than those families in Brooklyn with children under 18 (51%) and in the City (49%). There was roughly the same percentage of married-couple families in the study area (61%) as in the borough (59%) or the City (62%), and 55% of these families in the study area had children, more than those of Brooklyn (50%) and the City (48%).

Twenty-nine percent of families in the study area were headed by a female householder, similar to the borough (33%) and the City (30%). Forty percent of the female householder families in the study area had children under the age of 18, a percentage noticeably lower than the percentage in the borough and the City, which were equal (55%).

There were 543 households in the study area in 2000. The average number of persons per household in 1990 was nearly the same for the study area (2.7 persons), Brooklyn (2.8 persons) and the City (2.6 persons).

From 1990 to 2000, the number of households in the study area increased by 21%, compared with a 6% increase in the borough and a 7% increase in the City.

20.3.1.2.4 Employment

In 2000, the labor force and employment rate for the three areas (study area, borough, City) was approximately the same. Within the study area, 59% of persons aged 16 and older participated in the labor force in 2000, compared to 55% in Brooklyn and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

In the study area, 13% of employed persons 16 years of age and older were government workers, slightly less than the proportion in Brooklyn (19%) and the City (16%). Four percent of the study area's working population was self-employed, about the same proportion as in Brooklyn (5%) and the City (6%).

From 1990 to 2000, the number of employed persons within the three areas remained steady. However, among employed persons, while the study area showed an increase in government workers, the borough and City decreased. Those engaged in government jobs increased by 6% in the study area, compared to a 14% decrease in the Borough and a 10% decrease in the City.

Current forecasts indicate that about 13,550 employees worked in Brooklyn CD 1 and Queens CD 2 in 2005.[1]

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03

20.3.1.2.5 Housing

Most housing units (80%) in the study area were constructed before 1960, which is more than in Brooklyn and the City (73% and 67%, respectively). As of 2000, there were 521 housing units in the study area with a vacancy rate of about 7%, slightly higher than the borough (5%) and the City (6%). Like the borough and the City, there were more renters than owners. Nearly all of the housing units were renter-occupied (88%), considerably greater than the borough (69%) and the City (66%).

Although the 2000 median value of housing units in the study area ($233,900) was similar to those of Brooklyn ($224,100) and the City ($211,900), the change in value from 1990 to 2000 was much different. The median housing unit in the study area increased in value by 450%, compared to a 15% increase in the borough and a 13% increase in the City. Additionally, while the value of the housing units in the study area was higher than those of Brooklyn and the City, the median gross rents ($585) were lower than those in the borough ($672) and the City ($705).

The turnover in the study area (42%) from 1995 until 2000 was roughly equal to that of the borough and the City (both 43%).

From 1990 to 2000, a total of 12 housing units were added in the study area, representing a 2% increase, lower than the borough and the City (both 7%).

20.3.1.2.6 Education

In 2000, the school enrollment for the three areas was roughly the same, with the study area at 30%, the borough at 31% and the City at 29%. Of those enrolled in school within the study area, 67% were enrolled in elementary school or high school and 19% were enrolled in college or beyond. In Brooklyn, 64% were enrolled in elementary or high school and 24% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

The study area witnessed a 12% increase in the number of persons enrolled in school from 1990 to 2000 (141 more people), with the largest increase in enrollments occurring at the pre-primary school level (1,325%, or from 4 people to 57). Brooklyn and the City also experienced tremendous growth in the pre-primary school age group (145% and 150%, respectively).

A markedly smaller proportion (29%) of the study area population aged 25 and over had a college degree or some college education compared to Brooklyn (42%) and the City (48%). Compared to the borough and the City, a larger portion of the study area population (aged 25 and older) did not graduate from high school. A higher percentage of people in the study area (21%) had some high school education but lacked a diploma versus 18% in the borough and 16% in the City. Additionally, the study area had twice the proportion of people over the age of 25 with less than a 9th-grade education (27%) as the borough (13%) and the City (12%).

Despite the lower educational levels, from 1990 to 2000 the study area witnessed slightly rising levels of educational attainment. The number of college graduates in the study area increased 8%, although the trend in the borough and the City was much greater (41% and 29%, respectively).

20.3.1.2.7 Income and Poverty

In 2000, both median household income ($23,445) and median family income ($25,594) were lower than in Brooklyn ($32,135 and $36,188, respectively) and the City ($38,293 and $41,887, respectively). Compared to the larger two areas, a greater percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes (55%) below $25,000. About 30% of the area households had annual incomes less than $10,000, compared with 19% in Brooklyn and 16% in the City. Only 21% of households in the study area had incomes of $50,000 and above, compared with 33% in the borough and 40% in the City.

A similar percentage of persons under the age of 18 were living below the poverty level in the study area (32%), the borough (34%) and the City (30%) in 2000. The 2000 Census also reported that a greater percentage of the population aged 65 and older were living below the poverty level in the study area (44% percent) compared to Brooklyn (22% percent) and the City (18%).

From 1990 to 2000, the percentage of people living below the poverty level in the study area decreased by 8%, compared to an increase in Brooklyn of 19% and in the City of 20%.

20.3.1 3 Economic Conditions

The study area contains a range of industrial uses concentrated along Newtown Creek, from warehouse and distribution facilities to oil loading facilities and private waste transfer operations. In Brooklyn, DSNY-owned property used as a storage yard and the NYCDEP Newtown Creek WPCP occupy large areas adjacent to the site, with an NYCDOT asphalt production facility nearby. Further southeast, are the outdoor-loading facilities of the Metro Fuel Oil Depot. The Queens side of Newtown Creek has similar industries, with Case Paper Manufacturers, the Exhibit Company and other warehouses fronting on Borden Avenue and Review Avenue.

Further beyond the surrounding industrial uses are ground-floor stores on the north-south avenues west of the site, along McGuinness Boulevard and Manhattan Avenue. Small-scale commercial establishments line the south side of Greenpoint Avenue south of the site. Further to the south along Meserole Avenue is a mix of residential uses and warehouses.

20.3.2 Future No-Build Conditions

20.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 1 and Queens CD 2 will remain about the same as current conditions.[2]

[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

20.3.2.2 Economic Conditions

The study area contains stable industrial areas that are not expected to see significant new business development by the Future No-Build year. South of the site, the NYCDEP plans to expand and double the capacity of the WPCP, adding approximately 14 new government sector jobs as a result of the plant upgrade.

Regional projections indicate that employment in Brooklyn CD 1 and Queens CD 2 will remain about the same as current conditions.[3]

The near-term economic health of industrial areas such as Greenpoint may be supported by established City programs available through IDA. Programs such as the Industrial Incentive Program and the Small Industry Incentive Program provide business tax incentives for capital renovation and expansion projects. However, no significant changes are expected through 2006.

20.3.3 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS represents the reactivation of solid waste transfer operations on the site with added containerization operations. Therefore, it would not result in socioeconomic changes in the study area. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

20.3.3.1 Residential Impacts

No direct displacement of residential uses would occur as a result of the Greenpoint Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

[3] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

20.3.3.2 Direct Business and Institutional Impacts

The Greenpoint Converted MTS would not result in direct displacement of businesses or institutional uses nearby.

20.3.3.3 Indirect Business and Institutional Impacts

The businesses adjacent to and near the Greenpoint Converted MTS are industrial uses that would not be affected by reactivating MTS operations and added containerization activities.

20.3.3.4 Employment Impacts

The Greenpoint Converted MTS is expected to generate approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

20.4 Community Facilities and Services

20.4.1 Existing Conditions

20.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile from the site.

20.4.1.2 Summary of Community Facilities and Services

Consistent with its industrial character, the primary study area contains no community facilities. Nine community facilities are located within the secondary study area and nine are outside the secondary study area. Community facilities serving or located within or near the study area are listed in Table 20.4-1 and shown in Figure 20.4-1.

20.4.2 Future No-Build Conditions

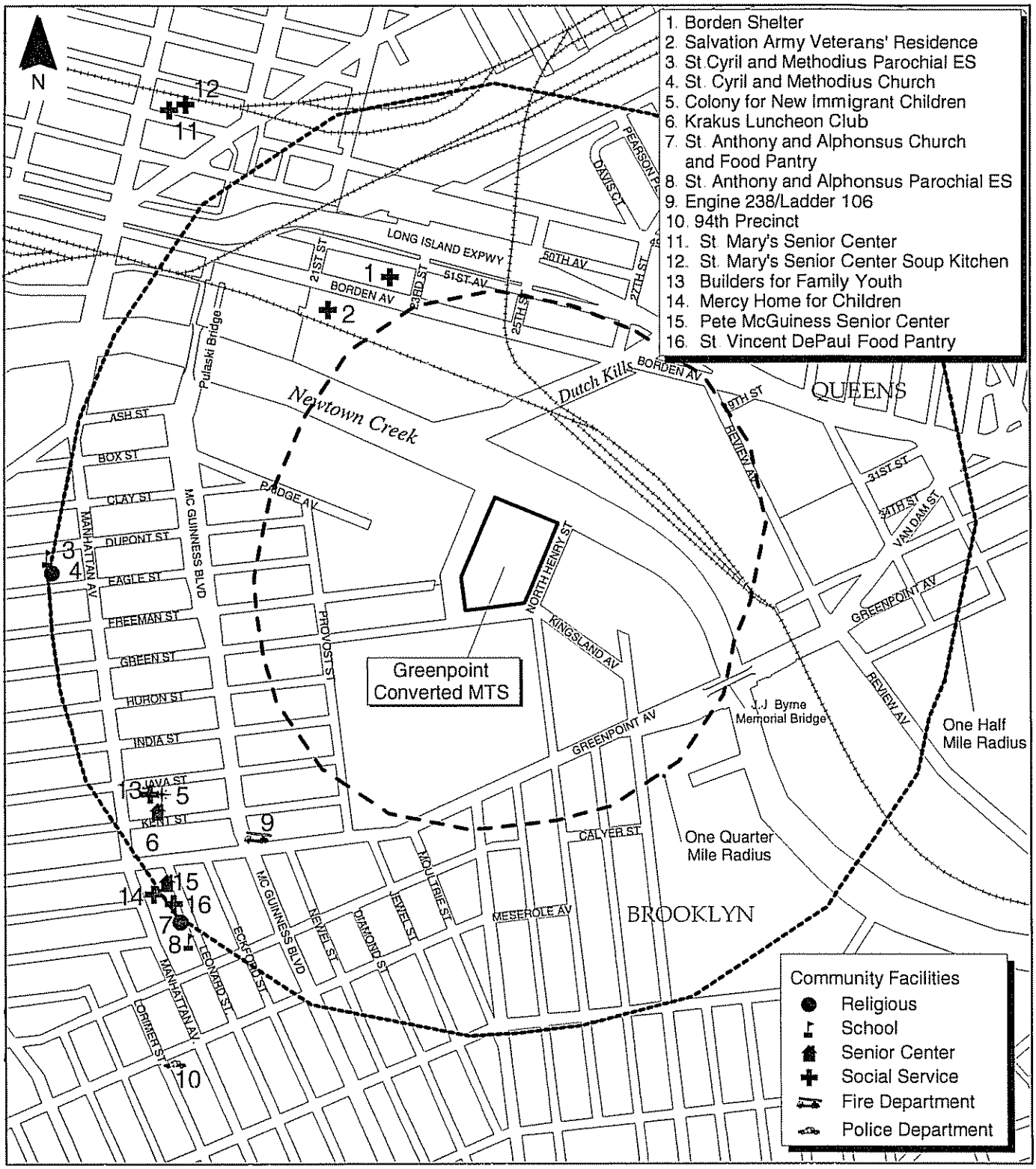
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

20.4.3 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would create no significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the Greenpoint Converted MTS (see Appendix A).

Table 20.4-1
Community Facilities and Services

Name	Address
Within the Secondary Study Area	
Senior Centers	
Krakus Luncheon Club	177 Kent Street
Pete McGuinness Senior	715 Leonard
Day Care Centers	
Colony for New Immigrant Child	176 Java Street
Religious and Cultural Institutions	
St. Cyril and Methodius Church	96 Dupont Street
Health Care Facilities and Social Services	
Borden Shelter	21-10 Borden Avenue
Salvation Army Veteran's Residence	21-20 Borden Avenue
Builders for Family and Youth	174 Java Street
St. Vincent DePaul Food Pantry	715 Leonard
Fire	
1st Engine Company – Engine 238 and 1st Ladder Company – Ladder 106	205 Greenpoint Avenue
Outside the Secondary Study Area	
Schools	
St. Anthony and Alphonsus Parochial ES	725 Leonard Street
St. Cyril and Methodius School	96 Dupont Street
Senior Centers	
St. Mary's Senior Center	10-15 49th Avenue
Religious and Cultural Institutions	
St. Anthony and Alphonsus Church (food pantry)	725 Leonard Street
Health Care Facilities and Social Services	
St. Mary's Senior Center Soup Kitchen	10-15 49th Avenue
Mercy Home for Children	878 Manhattan Avenue
Fire	
2nd Engine Company – Engine 259 and 2nd Ladder Company – Ladder 128	33-51 Greenpoint Avenue
Police	
94th Police Precinct	100 Meserole Avenue
108th Police Precinct	5-47 50th Avenue



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary area may not be shown on the figure

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Figure 20.4-1 Community Facilitites and Services

Greenpoint Converted MTS

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20.5 Open Space

20.5.1 Existing Conditions

20.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

20.5.1.2 Summary of Open Space in the Study Area

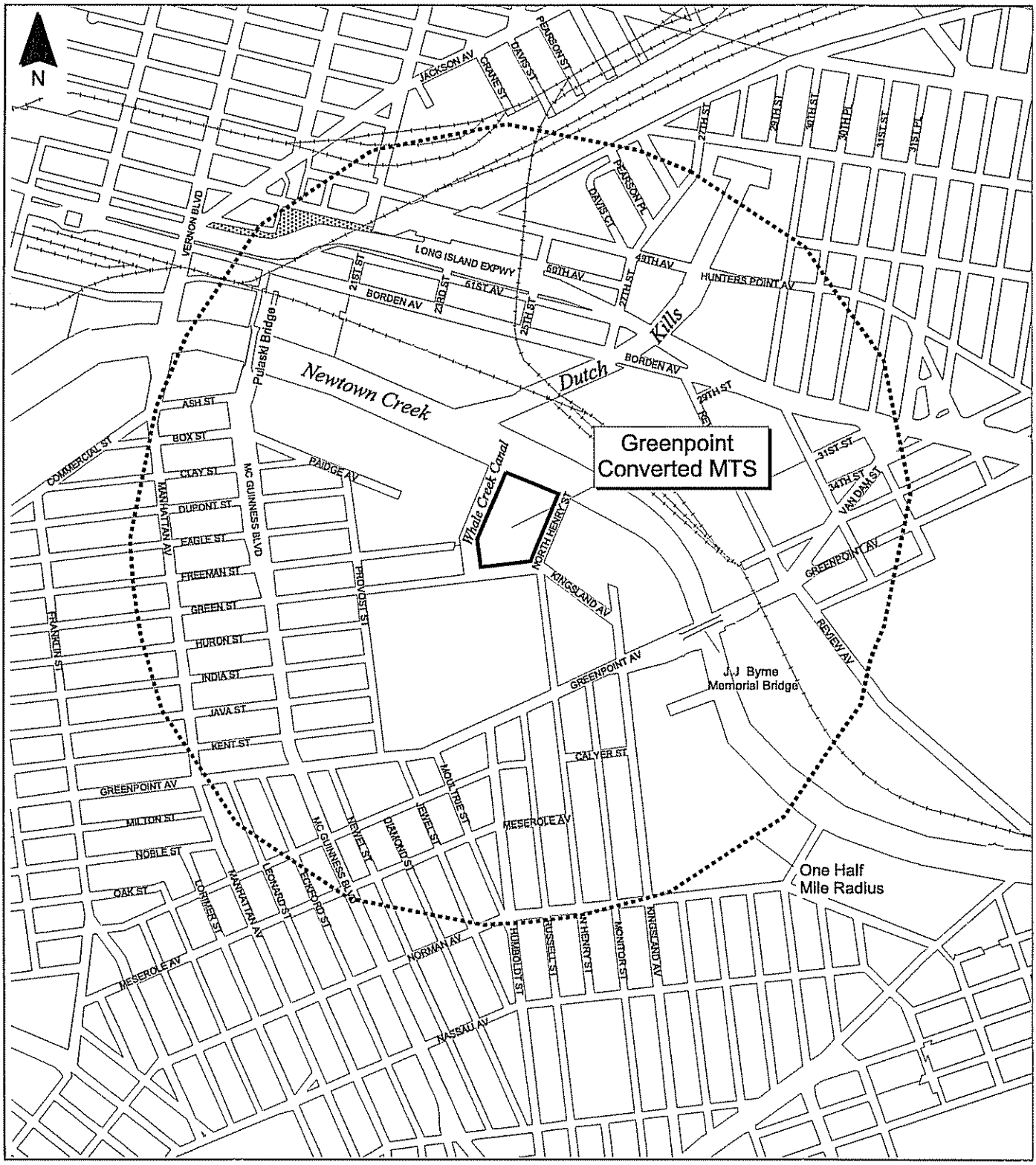
Currently the only designated open space in the study area is an undeveloped park area northwest of the site situated adjacent to the north side of the Long Island Expressway (LIE) (see Figure 20.5-1). Though mapped parkland, it is not suitable for use by visitors, nor is it landscaped to provide visual relief in this heavily trafficked area.

20.5.2 Future No-Build Conditions

The nature walk and children's pool and park that are planned as part of the Newtown Creek WPCP support building construction west of Whale Creek Canal would be completed during the final stages of WPCP construction in 2004. There are no DPR plans for new open space resources in the study area or improvements by the Future No-Build year.

20.5.3 Potential Impacts with the Greenpoint Converted MTS

No impacts to either the existing park area along the northern edge of the LIE or the planned open space features of the WPCP would result from the Greenpoint Converted MTS. Newtown Creek and the LIE buffer the existing park area from the site.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.5-1 Open Space/Parkland
Greenpoint Converted MTS

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The landscaped walkway has been designed under the assumption that the existing Greenpoint MTS would remain in operation throughout the construction period. Because the Greenpoint Converted MTS would be a similar use to the former one and in the same approximate location, it would not present any notable new challenges to be assumed in the design and use of the publicly accessible area. However, views of the Greenpoint Converted MTS from the future nature walk west of Whale Creek Canal would include the barge loading area where gantry cranes would load containerized waste onto barges moored in the canal, not unlike other industrial views on both sides of the creek.

20.6 Cultural Resources

20.6.1 Existing Conditions

20.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site.

20.6.1.2 Development History of the Area

The 946-acre triangular parcel of land that is now known as Greenpoint was bought by Dutch settlers in 1638 from the Keshaechqueren Indians and named for a grassy expanse that extended into the East River. In the early 19th century, Greenpoint was sparsely populated by Dutch Huguenot descendents and by 1850 it had become an industrial center. Greenpoint was the site of "the five black arts: printing, pottery, petroleum and gas refining, glassmaking, and iron making."[4] Shipbuilding industries also developed along the East River, supporting the Brooklyn Navy Yard to the south. Consequently, area streets were named for people, places and items important to local industries. Major industrial firms of the time were located here, such as the Continental Iron Works, which built the ironclad ship the Monitor used in the Civil War, and the Astral Oil Works, which was opened by Charles Pratt and merged with the Standard Oil Company in 1874. The Astral Apartments on Franklin Street, built by Pratt in 1886 to provide workers with decent housing, are now landmarked by the City as significant examples of model tenements.

The history of Newtown Creek, which forms the boundary separating Brooklyn from Queens, is an important part of the study area's history. It was the route to Maspeth taken by European colonists in 1642. The British spent the winter near the creek during the Revolutionary War, and in the early 1800s it was a major channel for commercial vessels and small boats.

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[4] Jackson, Kenneth T., Editor, Encyclopedia of New York City. Yale University Press, New Haven (The New York Historical Society, New York), 1995, p.506.

The first oil and coal oil refineries opened along its banks around 1860. Long Island City and Sunnyside were home to waterside industrial uses such as oil refineries and factories for varnish, ceramic pipe and barrel-making in the mid- to late-1800s. Due to the practice of dumping sludge and acids into the creek, the creek was, by 1900, already well known for its foul odors and pollution, with water corroding the paint on ships and leaving noxious deposits on the shore.

The state and City tried to improve Newtown Creek, and the channel was constantly dredged and widened by the federal government. Ship building, manufacturing and warehousing gradually diminished during the first half of the 20th century, with the active factory life of Greenpoint largely ending after World War II. After World War II, the creek was no longer important for marine traffic, with waterborne transport being replaced by trucks and airplanes, but many industries continued to be located along the creek.

20.6.1.3 Cultural Resources on the Site

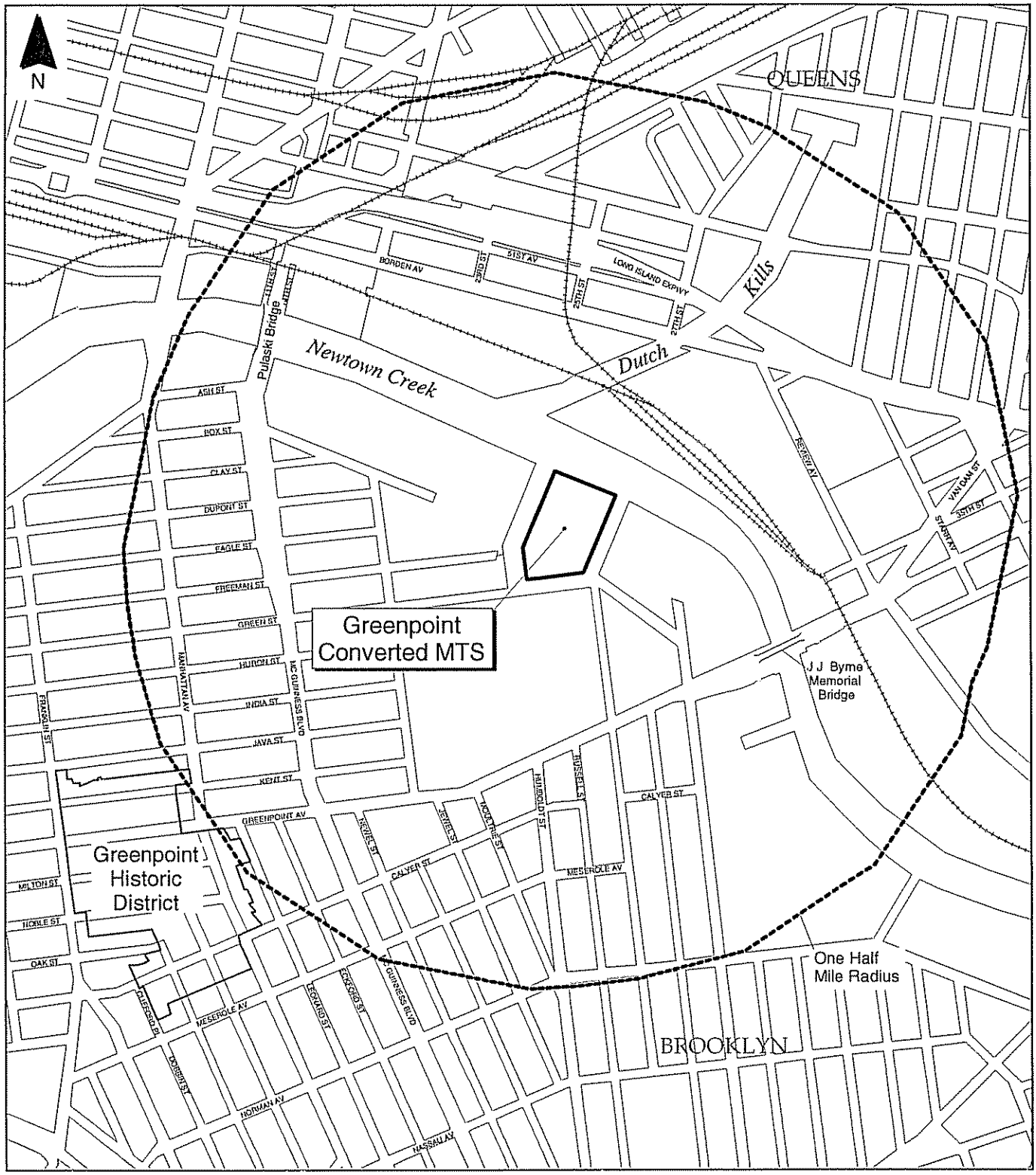
There are no elements of architectural or archaeological significance within the site.

20.6.1.4 Historic Resources Within the Study Area

A small portion of the Greenpoint Historic District lies at the study area's southwestern edge (see Figure 20.6-1). This City-designated district is listed on the State and National Registers of Historic Places and it contains a wide variety of buildings and types dating to the 1860s and 1870s.

20.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review. Therefore, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.6-1 Cultural Resources

Greenpoint Converted MTS

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20.6.3 Potential Impacts with the Greenpoint Converted MTS

As there are no existing or anticipated architecturally or archaeologically significant resources on the site or the study area, the Greenpoint Converted MTS would have no effect on any cultural resources. SHPO has concluded that the project would have no impact upon cultural resources in, or eligible for inclusion on, the State and National Registers of Historic Places. The LPC has stated that the site contains no architectural or archaeological significance (see Appendix A).

20.7 Urban Design, Visual Resources, and Shadows

20.7.1 Existing Conditions

20.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 20.8-1). The site has been developed in a manner consistent with adjacent properties and the overall study area. It is a non-sensitive industrial area, in terms of urban design and visual quality assessment. There are no sensitive-view corridors or publicly accessible open areas or points of waterfront access areas that would reasonably be expected to experience visual-quality impacts from the proposed development.

20.7.1.2 Description of the Site

The existing MTS and non-operational incinerator comprise most of the on-site development. The five-story main building of the incinerator blocks much of the existing MTS and Newtown Creek waterfront from inland views (see Figure 20.7-1). A fenced-in parking area is located south of the incinerator and the remainder of the site is paved. There is no formal landscaping on the site, although tall grass and a few small trees are present along the edges of Whale Creek Canal and the slip along North Henry Street, as described in Section 20.9.1.4.

20.7.1.3 Urban Design and Visual Resources of the Study Area

20.7.3.1 Visual Quality and Urban Design

The visual quality of the study area is characterized by the wide streets and industrial uses that surround the site, dominated by the Newtown Creek WPCP located to the south and west of the site and an auto scrap yard across Newtown Creek (in Queens) to the north (see Figure 20.7-1 and Figure 20.7-2).

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Figure 20.7-1 : View toward site from Green Street.



Figure 20.7-2: Newtown Creek WPCP, looking west along Green Street.

Figure 20.7-1 and 20.7-2
Urban Design and Visual Quality
Greenpoint Converted MTS

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The only publicly accessible views of the existing MTS are from North Henry Street and Kingsland Avenue, neither of which are through-streets used by the general public. Rather, these streets serve primarily as access roads to the site and the surrounding industrial uses. A portion of North Henry Street north of Greenpoint Avenue and a segment of Kingsland Avenue at Green Street and Greenpoint Avenue have been demapped as part of the WPCP expansion, thus further insulating the site from the community (see Figure 20.7-3).

The area around the site is almost entirely paved. In fact, because there are many truck-dependent uses in the area, the wide streets and sidewalks, where they exist, tend to be used for truck parking. There is little or no pedestrian activity.

20.7.2 Future No-Build Conditions

The only plans for the surrounding environs that would lead to changes in urban design or visual quality conditions by the Future No-Build year are those related to the expansion of the Newtown Creek WPCP and removal of the Greenpoint Incinerator. This multi-site WPCP development would intensify the industrial character of the area but not change the visual conditions significantly. It would, however, further isolate the site from view. The planned nature walk, children's pool and park and art installations along the WPCP site perimeter are to be completed around 2004, introducing a new recreational opportunity to the study area. Otherwise, the anticipated Future No-Build Conditions are fundamentally the same as Existing Conditions.

20.7.3 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would replace the existing MTS with a similar, new containerization facility on a widened platform. It would be located further inland, where the incinerator, which will have been demolished, stood, and an administration building and parking lot would be built south of it. The Greenpoint Converted MTS would be more visible from North Henry Street and Kingsland Avenue than the existing MTS because it would be larger and no incinerator would block it from view. The container storage area near the northern edge of the platform may be visible from North Henry Street as well. Views from the proposed walkway

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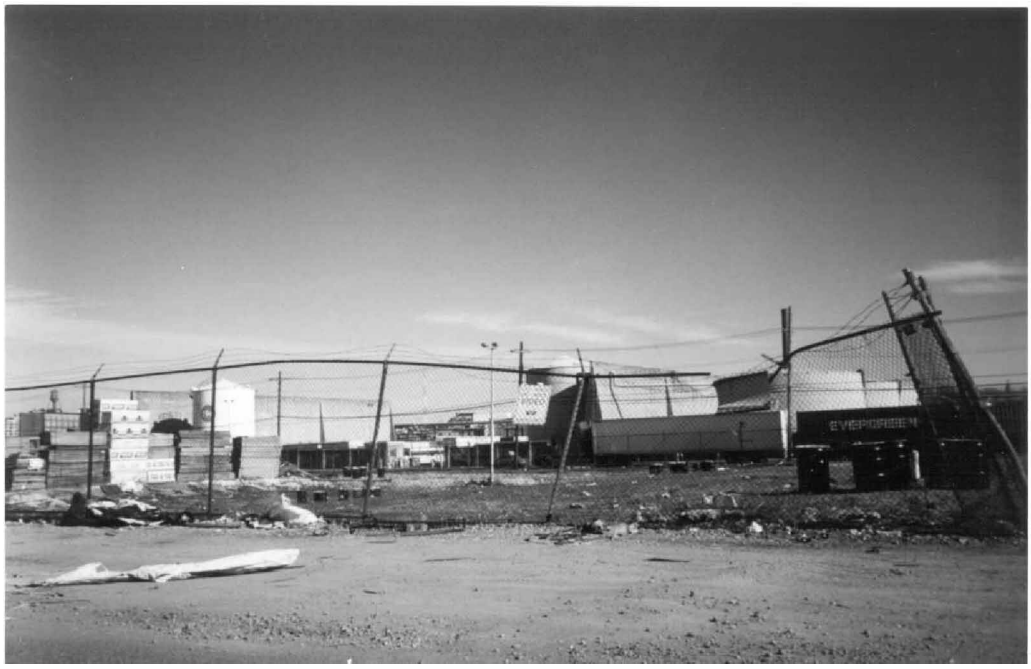


Figure 20.7-3 : Newtown Creek Water Pollution Control Plant construction area.

Figure 20.7-3
Urban Design and Visual Quality
Greenpoint Converted MTS

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across the canal would be of industrial operations, including containerization barge loading activities. The development, however, would be in keeping with the established industrial urban design and visual character of the area, and so no significant adverse impacts to urban design or visual quality would result.

20.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

With the expected completion of a public nature walk on the west side of Whale Creek Canal, across from the site (less than 200 feet away), a full shadow impact assessment was prepared. There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the Greenpoint Converted MTS development.

The proposed 100-foot-tall Greenpoint Converted MTS facility would result in minimal shadows across the new nature walk (for 10 minutes each in March and June (7:30 to 7:40 a.m. and 7:00 to 7:10 a.m., respectively). Due to the short presence of the project shadow on resources during these times, significant impacts are not anticipated.

For the December 21st analysis period, project shadows are anticipated to fall over the new nature walk for 30 minutes, between 8:50 a.m. and 9:20 a.m. During this period, sunrise would occur at 7:16 a.m. and sunset would occur at 4:32 p.m. (see Figure 20.7-4.) At its time of greatest penetration, shadows are projected to cover approximately 150 feet of the greater than 500-foot long walkway. The affected features of the walk are anticipated to include benches for sitting and manmade landscape areas. While these features would be affected by the reduction in sunlight, 30 minutes per day along a short stretch of the walk is not considered a significant impact.

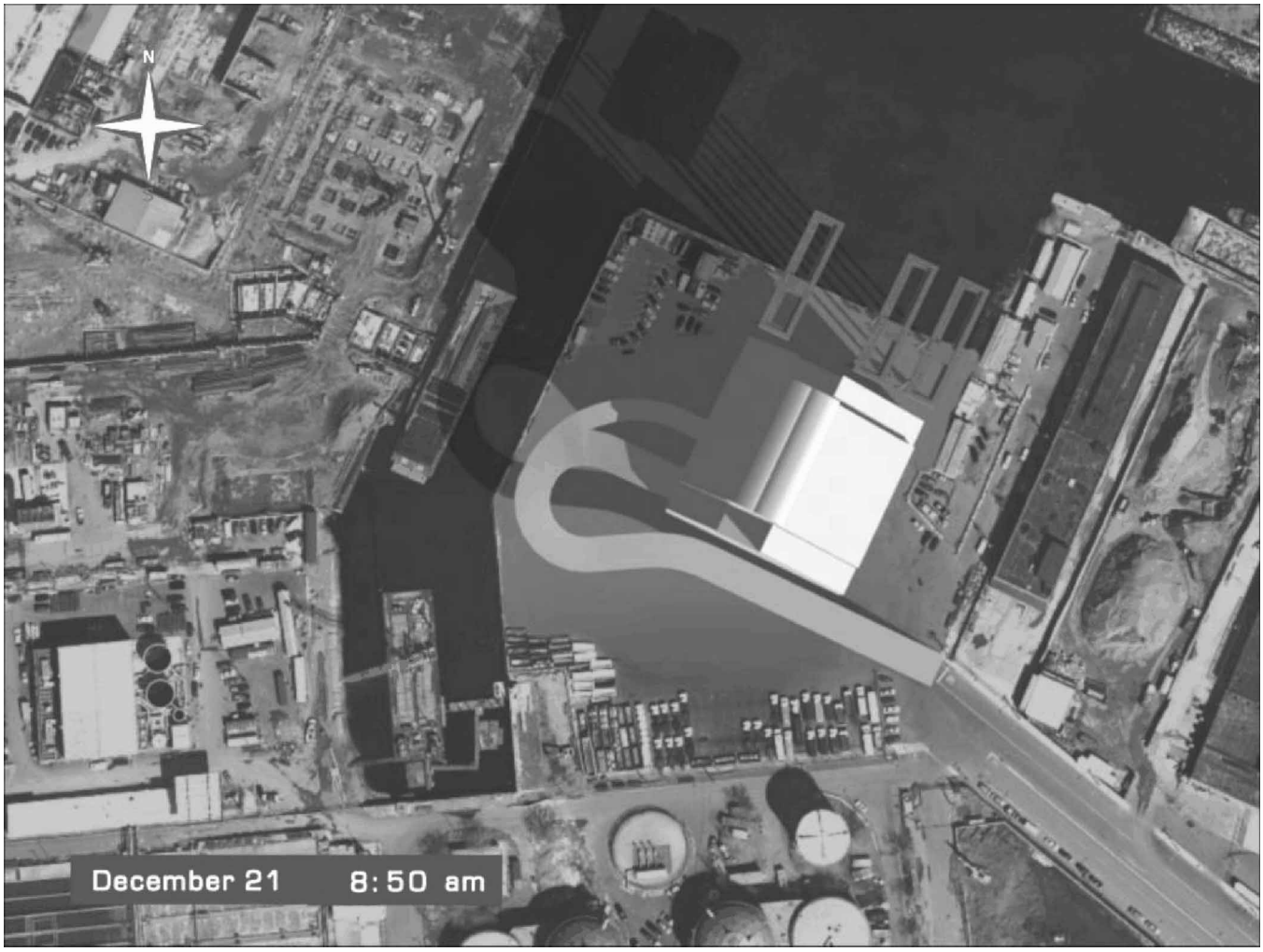


Figure 20.7-4 Shadow Diagram

Greenpoint Converted MTS

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20.8 Neighborhood Character

20.8.1 Existing Conditions

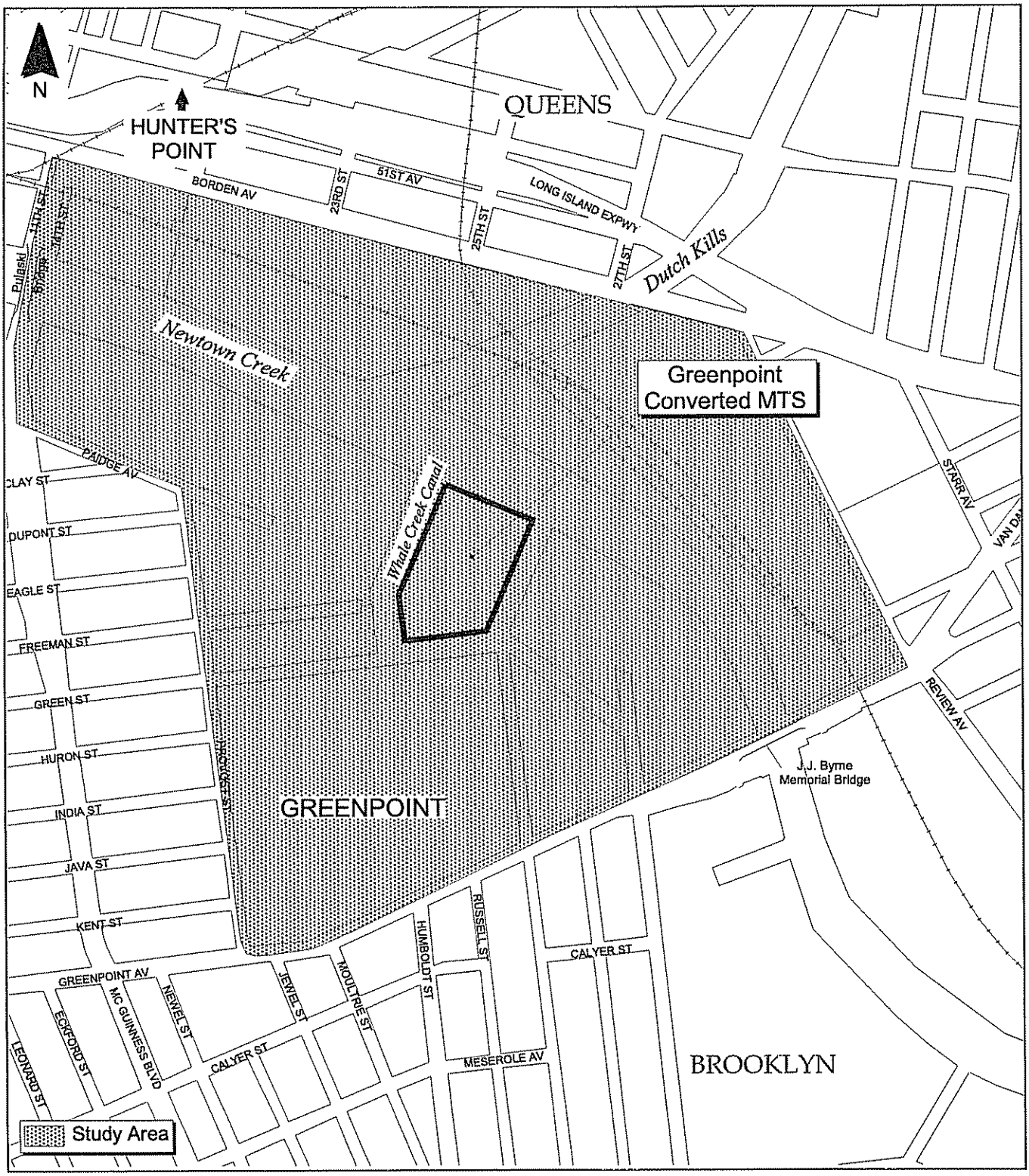
20.8.1.1 Definition of the Study Area

The neighborhood character study area is defined by predominantly industrial land use and visual quality, which are the two major factors contributing to the neighborhood character of the site and surrounding properties. The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas.

With these criteria, the study area is bounded by McGuinness Boulevard and the Pulaski Bridge, Paidge Avenue and Provost Street to the west; Greenpoint Avenue and the J. J. Byrne Memorial Bridge to the south and east and Borden Avenue to the north (see Figure 20.8-1). It includes a portion of the industrial waterfront in Sunnyside, Queens, north of the site across Newtown Creek. Although the creek clearly is a physical barrier limiting access to the site from the north, this portion of the Queens waterfront is included in the study area because it mirrors the industrial character of the study area south of the creek and is visually connected with it. While the land uses and visual quality along most of the Newtown Creek waterfront beyond the study area are similar to that within the study area, Greenpoint Avenue and McGuinness Boulevard — the major arterial roadways that cross the creek — effectively define the eastern and western ends of the study area.

20.8.1.2 Description of Neighborhood Character

The study area, which encompasses a working waterfront, is characterized by large-scale, municipal facilities and water-dependent industrial uses on large lots. It contains no residential uses, although there are some mid-block residential uses just beyond, west of Provost Street on the Brooklyn side. Consistent with a heavily industrial area, there are no sensitive visual resources or unique features, and the streets are generally not well suited to pedestrian activity.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.8-1 Neighborhood Location
Greenpoint Converted MTS

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The Newtown Creek WPCP to the south of the site comprises a large portion of the study area. In addition, there are fuel storage facilities along the waterfront and entire blocks under construction for the Newtown Creek WPCP expansion. Similarly, the northern portion of the study area in Queens is comprised of industrial activities and related unbuilt spaces.

20.8.2 Future No-Build Conditions

The expansion of the Newtown Creek WPCP would contribute to the industrial character of the area and will change the street pattern in the immediate area. Designs for the WPCP expansion include a nature walk, a pool and park for children adjacent to it and the incorporation of public art installations along the perimeter of the WPCP site. However, there are no other known plans for development on the site or in the study area that would potentially lead to changes in neighborhood character. This portion of industrial waterfront would be more isolated in 2006 than currently by the expansive WPCP facility. The incinerator will be demolished, but the site will remain DSNY property and Future No-Build Conditions are otherwise expected to be the same as Existing Conditions.

20.8.3 Potential Impacts with the Greenpoint Converted MTS

No change to the industrial neighborhood character would be expected because the Greenpoint Converted MTS would be a reactivation of waste-handling operations on a site that, except for the demolition of the incinerator, would remain otherwise unchanged. Technical analyses predict no unmitigatible impacts associated with traffic, air, odor or noise would result. Moreover, the area will be more industrial and isolated, making it less likely that the site would be observable from much of its surroundings in the neighborhood character study area. Therefore, no impacts to neighborhood character are predicted.

20.9 Natural Resources

20.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the Greenpoint Converted MTS.

20.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bulkheaded and bounded by Newtown Creek to the north and Whale Creek Canal to the west (see Figure 2.4-1). The existing MTS, incinerator and associated parking areas occupy the entire upland portion of the site. This part of the study area and the surrounding neighborhood areas are completely developed and, therefore, have very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of aquatic communities is included.

20.9.1.2 Geology

Based on borings conducted for the *MTS Conversion Conceptual Design Report* (2003), the geology of the site consists of bedrock, located at depths ranging from 59 to 79 feet below grade, overlain with multiple layers of sediment. The first layer, the surficial stratum, ranged in thickness from 25 to 36 feet and consisted of loosely packed, silty sand with miscellaneous aggregate including deleterious materials. A compressed organic silt layer, approximately 4 feet in thickness, was located beneath the surficial stratum, which was in turn underlain with an approximately 8-foot-thick layer of dense, silty sand. A stiff layer of varied clay and silt ranging in thickness from 18 to 30 feet was encountered beneath the fill, organic silt, and silty sand. Lastly, a 4- to 12-foot-thick layer of medium dense silty sand overlaid the bedrock, which consisted of a hard, slightly weathered, gray, fine-grained gneiss.

Surface sediment collected from the site in 2003 indicates the sediment make-up to be 95.2% silt and clay, 4.8% sand and 0.1% gravel.[5] There were approximately 155,916 mg/kg TOC in the sediment. The sediment was found to be somewhat degraded due to contaminants in the sample material. The metal with the highest concentration in the sediment was lead, with 288.33 mg/kg. Barium and chromium also had high concentrations at this location, with 128.83 mg/kg and 117.33 mg/kg, respectively.

20.9.1.3 Floodplains

The site is constructed within the 100-year coastal floodplain (see Figure 20.9-1). No intertidal wetlands exist in the study area. Newtown Creek and Whale Creek, which are NYSDEC-designated littoral zones, are part of the study area (see Figure 20.9-2).

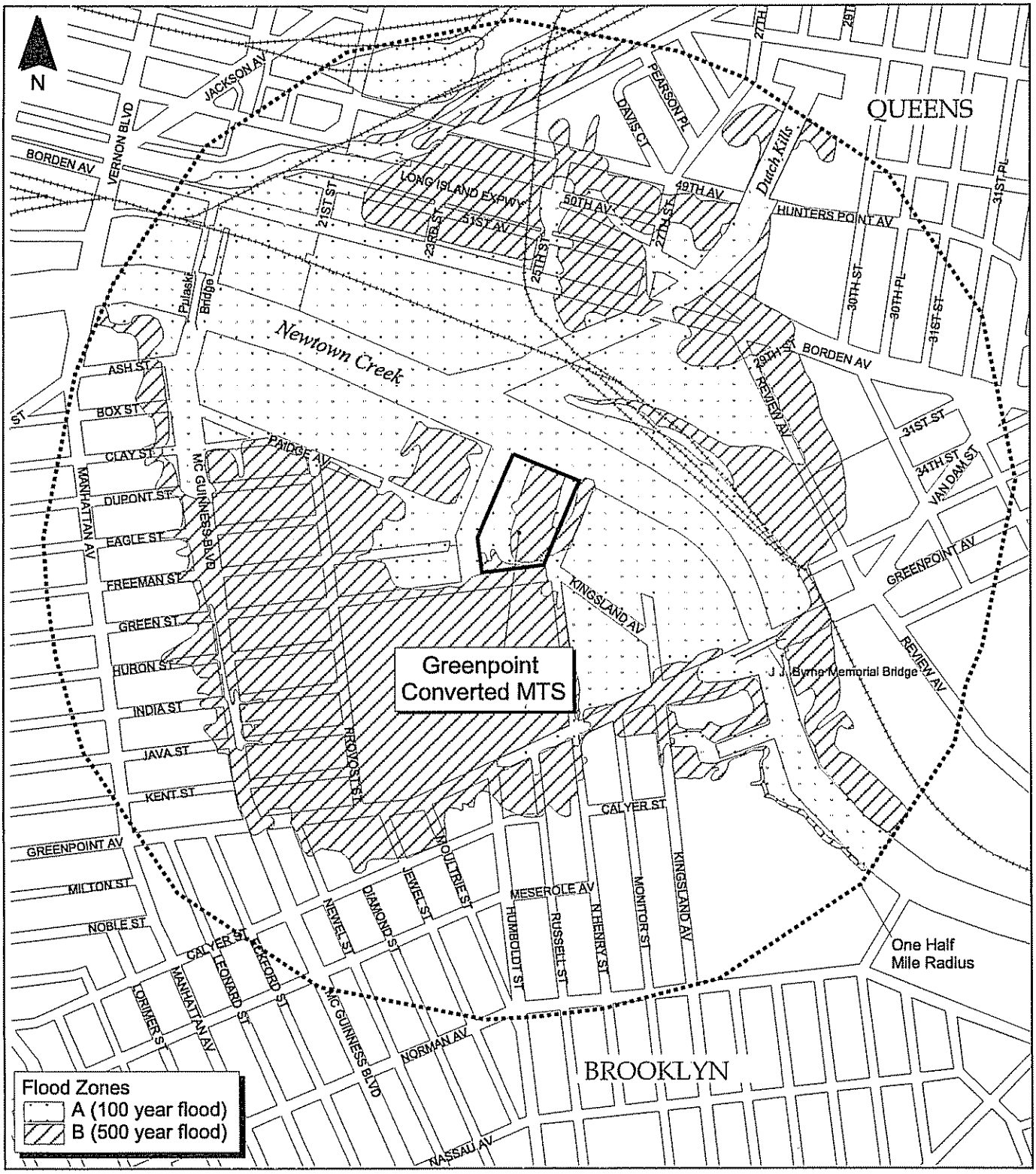
20.9.1.4 Ecosystems

The site is essentially fully developed with the existing MTS and incinerator buildings. Parking areas and paved roadways comprise the remainder of the site, leaving little terrestrial natural resources to be impacted. A few opportunistic species of Japanese knotweed (*Polygonum cuspidatum*), eastern cottonwood (*Populus deltoides*) and tree-of-heaven (*Ailanthus altissima*) were observed on the far side of the barge basin bordering the adjacent property on the east side of the study area and to the south along the fence line between the incinerator and the adjacent oil storage facility. The vegetative cover was too sparse in these areas to be mapped.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the study area. The program included monthly sampling for adult finfish, finfish eggs and larvae, and water quality; and quarterly sampling for benthic organisms and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

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[5] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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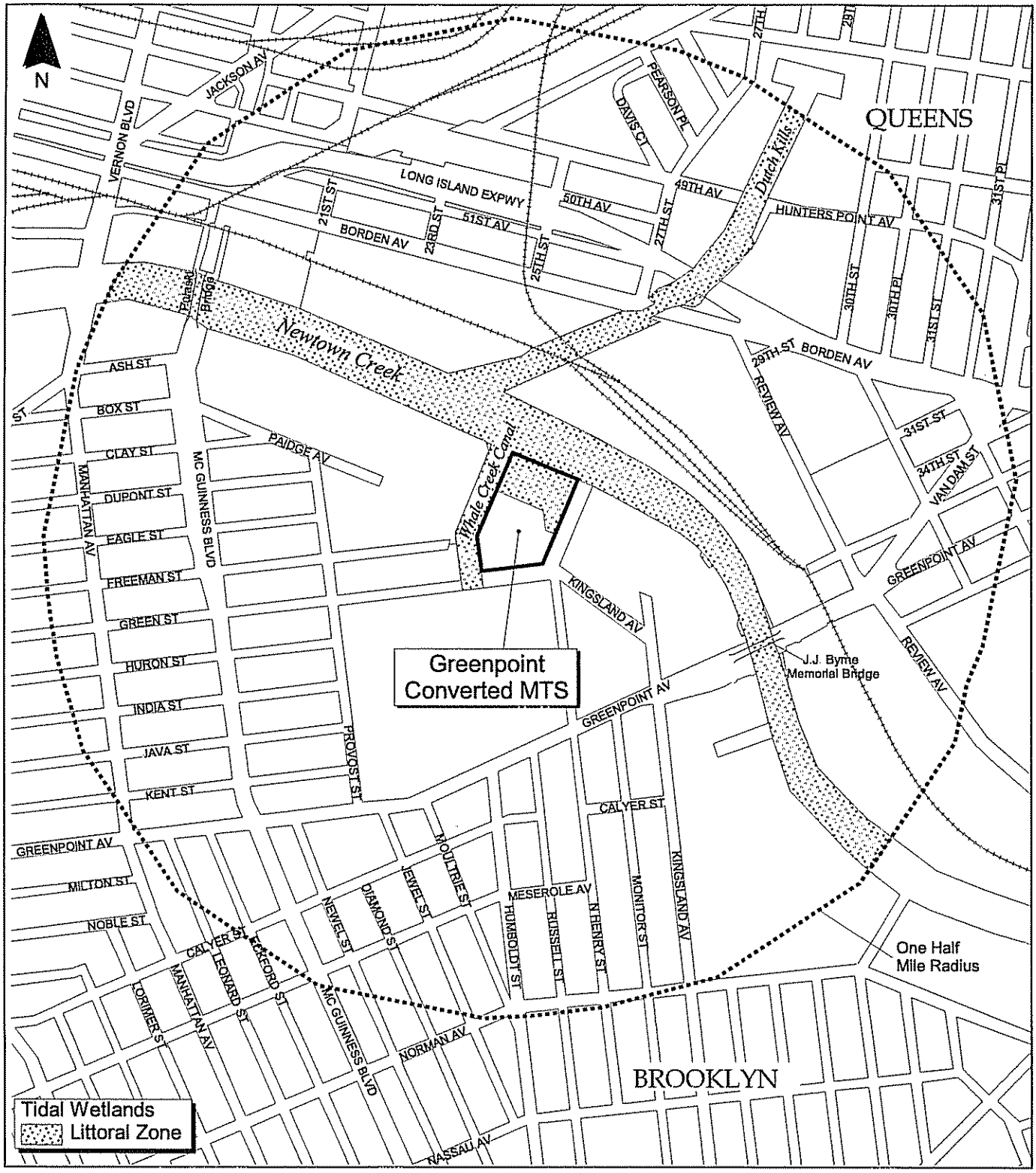
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Figure 20.9-1 Floodplains

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.9-2 Wetlands

Greenpoint Converted MTS

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The sediment and water surrounding the Greenpoint Converted MTS are highly contaminated. Visible oil slicks and floating debris were seen in the water, water quality was poor and the sediment held the highest metal concentrations of the eight MTSs studied. There are two major stressors on the environment surrounding this facility. One, it is located directly across from a scrap metal facility that loads shredded metal pieces to barge for transport. Metal dust and pieces are constantly falling into the water, leading to increased metal concentrations in the sediment. And two, the facility is located along Newtown Creek, a narrow, organically enriched waterway that is not strongly influenced by currents. These two stressors surely influenced the marine communities described below.

Ninety-eight (98) adult finfish, representing 16 species, were collected at the Greenpoint Converted MTS in 2003.[6] The most abundant finfish collected was the striped bass (*Morone saxatilis*). Four species that have EFH listing were collected at the Greenpoint Converted MTS: Atlantic herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), winter flounder (*Pleuronectes americanus*) and summer flounder (*Paralichthys dentatus*). Bay anchovy (*Anchoa mitchilli*) eggs and larvae were most abundant at this facility. There were winter flounder and windowpane (*Scophthalmus aquosus*) larvae, both of which are EFH-listed, but no EFH-listed eggs were recovered. A Jaccard's Index[7] also revealed that the Greenpoint Converted MTS had the fewest finfish larvae and egg species in common with the other MTSs studied in 2003.

The most abundant megainvertebrate collected at the Greenpoint Converted MTS was the sea grape (*Molgula manhattensis*). This organism attaches to hard substrate and was most often collected from debris that was removed from the seabed during trawling events. Sevenspine bay shrimp (*Crangon septemspinosa*) was also collected in high numbers. The highest total number and abundance of benthic invertebrates was collected from the Greenpoint Converted MTS. The most abundant species collected was *Streblospio benedicti*, a polychaete worm tolerant of degraded environmental conditions. Abundances of this species were 80,000 individuals per

[6] Ibid.

[7] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs The index ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

square meter. The dominant epibenthic colonizers were *Corophium insidiosum* (amphipods), *Molgula manhattensis* (sea grape) and *Polydora* sp. (polychaete worms), and hydrozoans, mud and algal film, all organisms tolerant of degraded environments.

The highest number of adult finfish was collected in front of the MTS structure and the highest number of megainvertebrates was collected to the west, both locations closest to the scrap metal facility. Large pieces of debris were encountered monthly during trawling events, especially in front and to the west of the MTS. Several tires, pilings, bumpers, car parts, and an engine block were also encountered. Often within the garbage, finfish and megainvertebrates were encountered. A mini reef-effect was occurring where these animals were using the trash as protective environments and many of the items had encrusting organisms that would provide food for finfish and megainvertebrates. The structure was apparently attractive enough to some organisms that they endured the stressed environmental conditions.

NYSDEC Breeding Bird Atlas records list the common nighthawk (*Chordeiles minor*) as a species suspected of breeding in the area surrounding the study area. The state legal status of this wild bird is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds. The peregrine falcon (*Falco peregrinus*), a federally listed endangered species, was not listed as present for this site in the recent response from the USF&WS.

20.9.2 Future No-Build Conditions

If the Greenpoint Converted MTS were not to be constructed, the study area would remain as it is except for the demolition and removal of the incinerator. The limited aquatic and terrestrial natural resources would remain, and the study area would continue to be an ecologically unproductive and stressed urban area.

20.9.3 Potential Impacts with the Greenpoint Converted MTS

20.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

20.9.3.2 Floodplains

Potential development of the Greenpoint Converted MTS would have no effect on the elevation of the site. The facility would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the site over this level.

20.9.3.3 Ecosystems

Construction of the Greenpoint Converted MTS would involve removal of the existing MTS and construction of a new, upland facility. The existing platform will be replaced by a smaller platform. This would result in 21,647 square feet of unshaded marine environment that was previously shaded by the existing MTS. Assuming normal operations, this procedure should not involve any measurable impacts to the aquatic or terrestrial natural resources. During the demolition of the existing MTS, the upper organic silts lying beneath the structure that was above water would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Any dredging activities in the area to accommodate barges would result in an immediate, short-term destruction of the benthic invertebrates in the area; however, recolonization of the area by benthic invertebrates could be expected within 6 to 12 months after cessation of dredging activities.[8] Given the relatively small

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8 U.S. Army Corps of Engineers, 1999 The New York District's Biological monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

size of the project, the low benthic diversity, and the existing impacts to the natural resources of the study area, minimal impact is expected from the disturbance of the environment associated with the Greenpoint Converted MTS. The removal of the existing platform will also remove the existing epibenthic community; however, the new platform will give some surface area, though decreased, for epibenthic communities to colonize the site.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Herring catch was higher at the Greenpoint Converted MTS than flounder catch, so it can be assumed that this site will experience avoidance by this species. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. The number of finfish eggs and larvae were lower at the Greenpoint Converted MTS than at the other MTSs studied. The lower ichthyoplankton numbers, along with the lesser degree of marine construction (fabrication of a small pier), will minimize impacts to ichthyoplankton. Additionally, larvae exposed to degraded environmental conditions will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the Greenpoint Converted MTS is for a decrease of 21,647 square feet of pier. This will result in decreased shading that will allow more sunlight for primary production in the area. The smaller platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[9] Epibenthic communities, however, will have a smaller surface area to colonize, but the decrease should not be significant, and finfish should return to the area with the return of food sources.

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9 Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[10]

Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the decrease in shading over water is very small, there are not expected to be significant community changes. There is a possibility of a slight shift in the finfish community with the decrease in over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

Construction of the new upland facility would not have any significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the Greenpoint Converted MTS because the site is already fully developed and the creek is heavily contaminated. The construction of a smaller platform will eliminate some shading of the marine environment in this area, lending to more primary production capabilities in the water column.

According to the Atlas of Breeding Birds in New York State, the common nighthawk nests on flat-roofed structures in cities and towns and feeds upon insects during flight. The Greenpoint Converted MTS is not likely to directly impact any potential nesting habitat or prey species that the nighthawk depends upon.[11]

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[10] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

[11] Andrle, R.F. & Carroll, J.R., eds., 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

20.10 Hazardous Materials

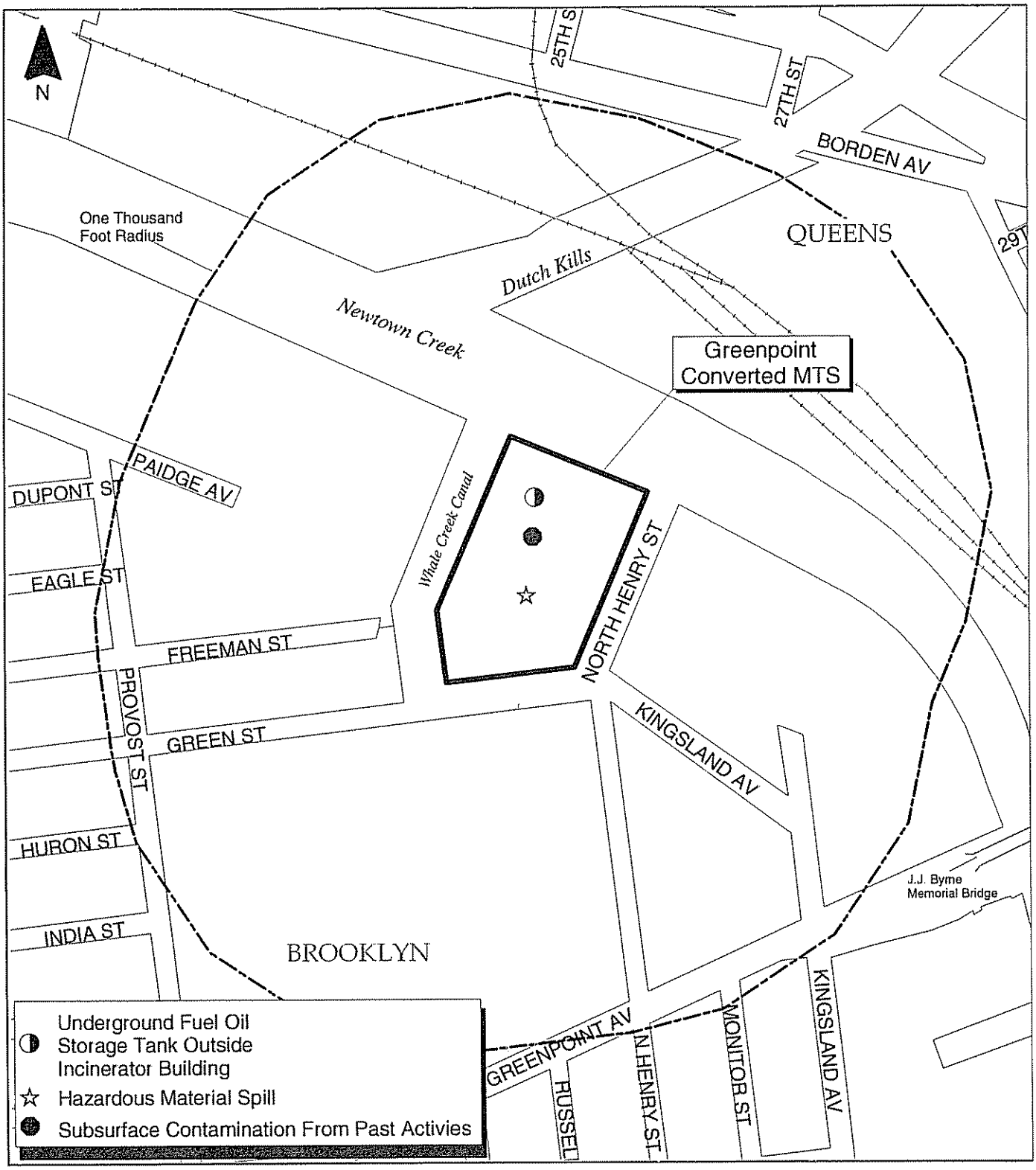
20.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

20.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 20.10-1).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 20.10-1 Hazardous Materials Sites

Greenpoint Converted MTS

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20.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and implementation of the Greenpoint Converted MTS could lead to an increased exposure of people or the environment to those hazardous materials. The areas of concern within the study area include:

- Residual contamination of the subsurface soils and groundwater may exist. Portions of the site were occupied by manufacturing facilities and an oil storage terminal. In addition, the site was filled with soils and ash that may have contained hazardous materials.
- The site is adjacent to the former Mobil Oil Brooklyn Terminal, which is listed on the NPL for cleanup under Superfund. The site was assigned an NFRAP designation by the USEPA. An NFRAP designation means that USEPA has completed its preliminary assessment and determined that no further steps are to be taken to list this site on the NPL.
- The incinerator building may contain ACMs and lead-based paints.
- A 5,000 gallon underground oil tank is located adjacent to the incinerator building. On February 22, 2001, the underground tank failed tightness testing. NYSDEC information indicated there was a minimal potential for hazard; however, the spill report is still administratively "active."

A field program to investigate the potential impacts to the soil and groundwater from the historic use of the property as an incinerator and MTS was completed in November 2003 in accordance with a NYSDEC-approved work plan.[12] The field investigation included:

- Performing a ground-penetrating radar and magnetometer survey over accessible areas of the site.
- Collection of one subsurface soil sample for analysis from 11 boring locations.
- Collection of one surface soil sample from one of the boring locations.
- Collection and analysis of one groundwater sample from two boring locations.

[12] New York City Department of Sanitation, October 2003. Final Phase II Site Investigation Work Plan, Greenpoint Marine Transfer Station, Brooklyn, New York.

- Collection and analysis of one groundwater sample from three permanent monitoring wells.
- Laboratory analysis of the soil samples for asbestos, VOCs, SVOCs, pesticides/PCBs and RCRA metals.
- Laboratory analysis of the groundwater samples for VOCs, SVOCs, pesticides/PCBs and RCRA metals.
- Resampling and analysis of soils for total and TCLP lead in all locations where total lead concentrations exceeded NSYDEC TAGM guidelines.
- Determination of the direction of the groundwater gradient by land survey measurements and measurement to the top of the groundwater surface.
- Comparison of the analytical results obtained from the soil and groundwater sampling program with NYSDEC TAGM guidelines.
- Preparation and submittal of a detailed site investigation report.[13]

Low level soil and groundwater contamination was detected throughout many areas of the site. Additional soil sampling and analysis was required to determine if the soil samples that were above the TAGM guidance values exhibited characteristics to be classified as a hazardous waste. No soil samples exhibited hazardous waste characteristics. Soil and groundwater contamination discovered in this area is consistent with the current and former land uses as an incinerator and MTS, and surrounding land uses by petroleum bulk storage facilities and petroleum pipelines.

20.10.2 Future No-Build Conditions

The site would remain as is except for the demotion of the incinerator. Any asbestos-containing building materials and lead based paints found in the incinerator building would be removed prior to demolition in a manner that is consistent with City building codes and practices. Any subsurface contamination existing in the soils and groundwater would remain. An active groundwater recovery and treatment system is operational on adjacent parcels. Exposure to contaminated soils is minimal because most of the site is paved or built over

20.10.3 Potential Impacts with the Greenpoint Converted MTS

[13] New York City Department of Sanitation. July 2004. Phase II Site Investigation, Greenpoint Marine Transfer Station, Brooklyn, New York. Prepared by EEA, Inc.

Low level soil and groundwater contamination is present at the existing MTS; however, this contamination should not prevent development of the site. If the Greenpoint Converted MTS were implemented, any residual contaminated soil would require appropriate disposal in a manner that is consistent with the level of contamination found during the demolition/construction phase. The necessary and appropriate health and safety measures would be used during construction to mitigate and minimize any exposure risk to workers or the general public.

20.11 Water Quality

20.11.1 Existing Conditions

20.11.1.1 Definition of the Study Area

The water quality study area encompasses the East River, Newtown Creek and Whale Creek Canal, and also includes discharges from point sources and CSOs within ½-mile of the site.

20.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 20.11-1, are generally representative of water quality in the study area:

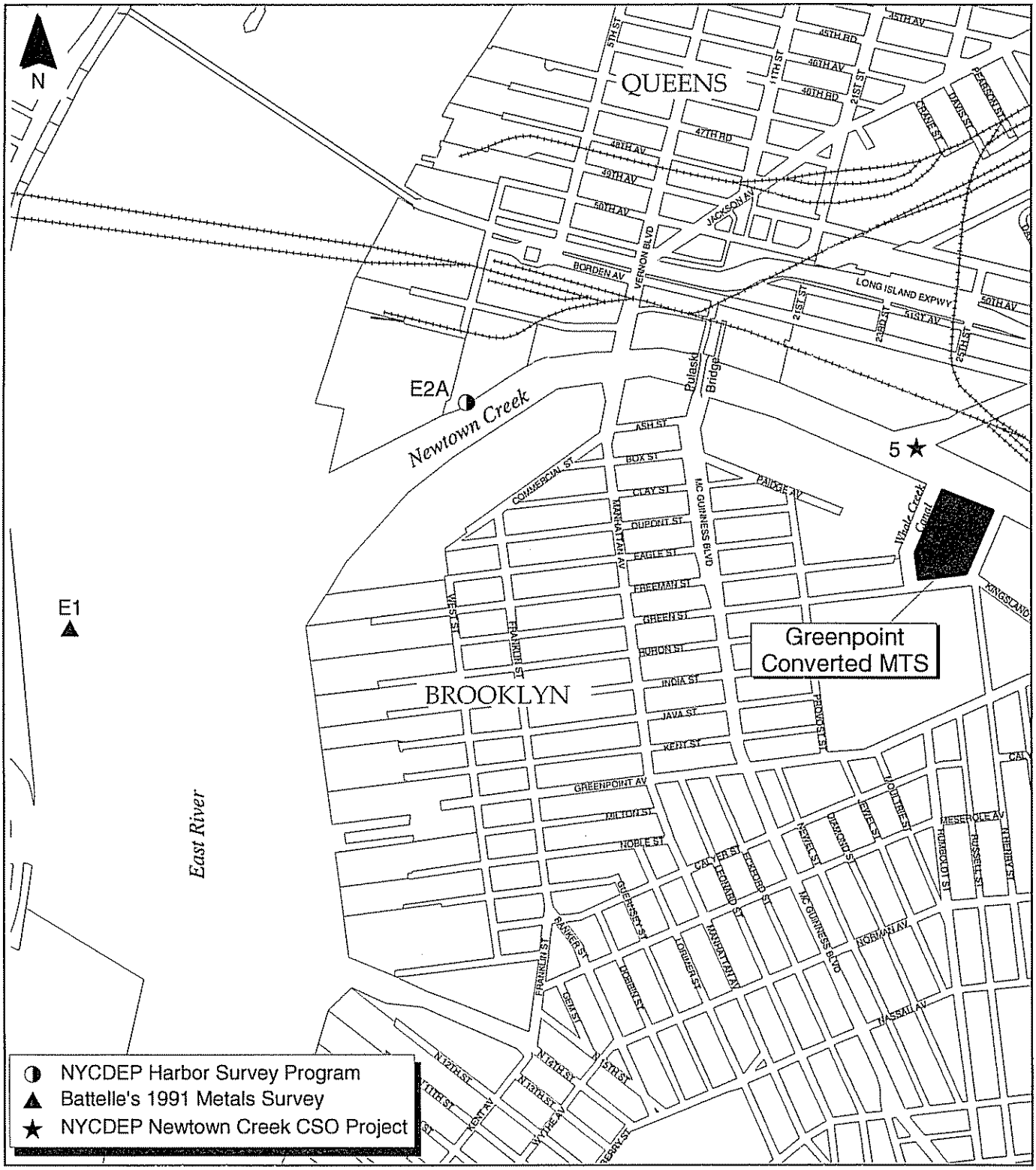
- NYCDEP Harbor Survey Program – Station E-2A at Newtown Creek; and
- Battelle's 1991 Metals Survey – Station E-1 in the lower East River.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 20.11-1. These standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.

As shown in Table 20.11-1, the data indicate that, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station E-1 did not conform to the water quality standard for mercury.

20.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there are sixteen permitted discharges in the vicinity of the site. Those within a ½-mile radius are shown in Figure 20.11-2 and listed in Table 20.11-2. These discharges consist of 11 CSOs and five industrial sites, all of which are permitted by the NYSDEC.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 20.11-1 Ambient Water Quality Stations

Greenpoint Converted MTS

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Table 20.11-1
Existing Water Quality Conditions and Standards
Greenpoint Converted MTS Study Area

Average Concentration				
Parameter	Units	Station E-2A[1]	Station E-1[2]	NYS Class SD Standards
Dissolved Oxygen (surface/minimum)	mg/L	7.1 [3] / 3.3 [4]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	6.7 [3] / 3.4 [4]	-------	3.0
BOD (surface)	mg/L	2.4 [5]	-------	-------
BOD (bottom)	mg/L	2.4 [5]	-------	-------
Total Coliform (surface)	MPN / 100 ml	2,579 [6]	-------	-------
Total Coliform (bottom)	MPN / 100 ml	1,982 [6]	-------	-------
Fecal Coliform (top)	MF	384	-------	-------
Fecal Coliform (bottom)	MF	35	-------	-------
Total Suspended Solids (surface)	mg/L	10	-------	-------
Total Suspended Solids (bottom)	mg/L	19	-------	-------
NH_3-N	mg/L	0.429	-------	-------
(NO_3 + NO_2)	mg/L	0.363	-------	-------
Total Phosphorous	mg/L	0.433 [7]	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------
Chlorophyll-a	µg/L	11.4	-------	-------
Arsenic	µg/L	-------	-------	120 [8,9]
Cadmium	µg/L	-------	0.06 [8]	21 [8,9]
Chromium	µg/L	-------	-------	-------
Copper	µg/L	-------	1.93 [10]	7.9 [9,10]
Lead	µg/L	-------	0.27 [8]	204 [8,9]
Mercury	µg/L	-------	0.0048 [8]	0.0026 [8,9]
Nickel	µg/L	-------	1.60 [8]	74 [8,9]
Silver	µg/L	-------	0.0566 [11]	2.3 [8,11]
Zinc	µg/L	-------	7.40 [8]	95 [8,9]
Cyanide	µg/L	-------	-----	1.0 [9]

Notes:

[1] Average concentrations for 1999 NYCDEP Harbor Survey site E-2A located at Newtown Creek.

[2] Average concentrations for 1991 Battelle Ambient Survey site E-1, located at the lower East River.

[3] Represents average between March and December 1999.

[4] Minimum between June 1, 1999 and September 30, 1999.

[5] Latest available data 1997.

[6] Latest available data 1996.

[7] Latest available data 1998.

[8] Guidance values and data are for dissolved metals.

[9] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000)

[10] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

[11] Guidance value and data are for acid-soluble metal.

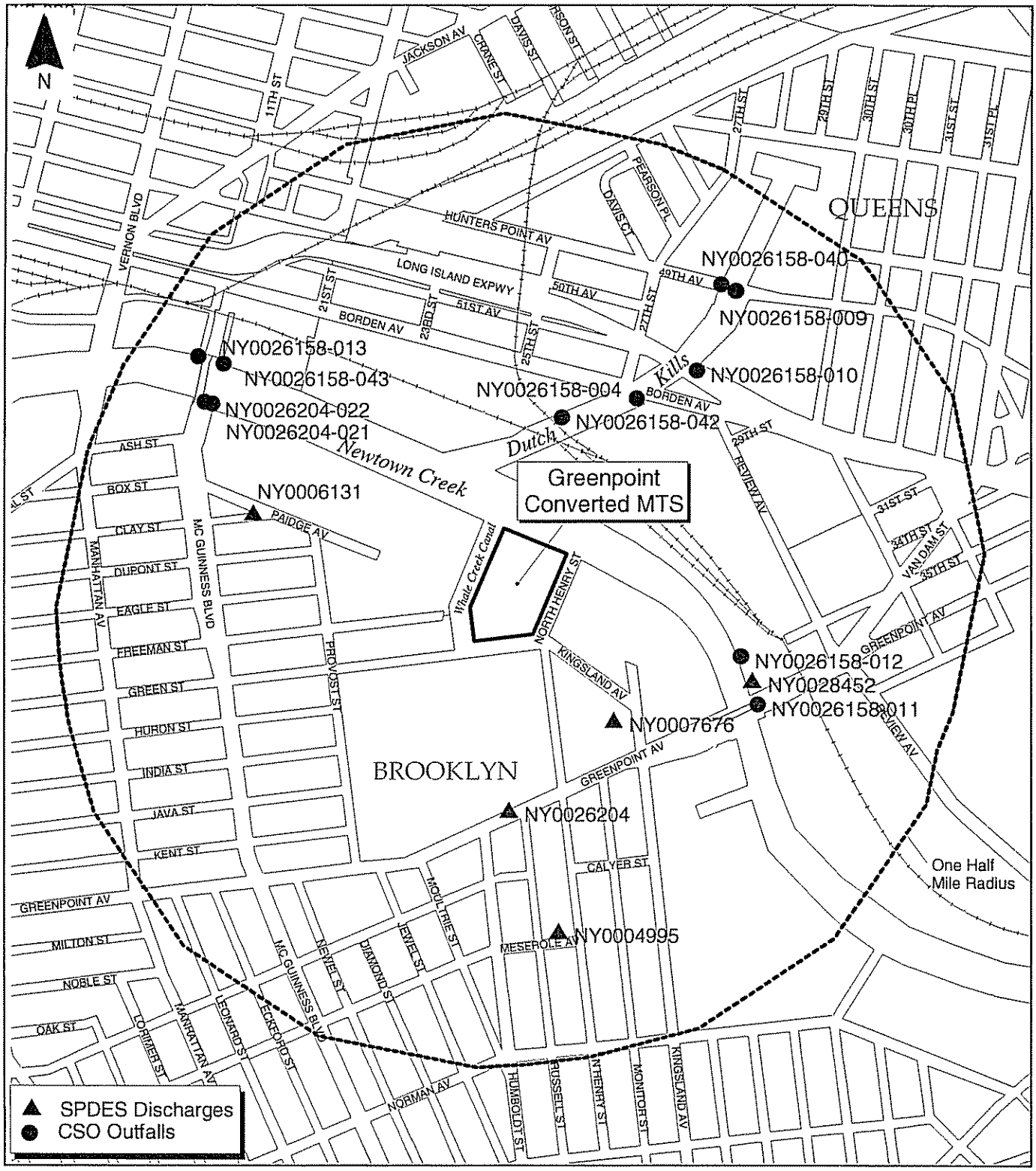
BOD = biochemical oxygen demand

NH_3-N = ammonia

NO_3 = nitrate; NO_2 = nitrite

PO_4 = phosphate MPN/100 ml = most probable number per 100 milliliters

mg/L = milligrams per liter MF = membrane filter MF = membrane filter µg/L = micrograms per liter



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 20.11-2 Permitted Outfalls and CSO Locations Greenpoint Converted MTS

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Table 20.11-2
Existing Permitted Discharges
Greenpoint Converted MTS Study Area

Combined Sewer Overflows (CSOs)			
Outfall Location /WPCP	**Permit Number**	**County**	**Receiving Water Body**
McGuiness Boulevard./Newtown Creek	NY0026204-022	Kings	Newtown Creek
McGuiness Boulevard./Newtown Creek	NY0026204-021	Kings	Newtown Creek
Greenpoint Avenue/Bowery Bay	NY0026158-011	Queens	Newtown Creek
35th Street/Bowery Bay	NY0026158-012	Queens	Newtown Creek
Borden Avenue/Bowery Bay	NY0026158-004	Queens	Dutch Kills
Hunterspoint Avenue/Bowery Bay	NY0026158-009	Queens	Dutch Kills
Midtown Tunnel/Bowery Bay	NY0026158-010	Queens	Dutch Kills
49th Avenue/Bowery Bay	NY0026158-040	Queens	Dutch Kills
27th Street/Bowery Bay	NY0026158-042	Queens	Dutch Kills
11th Street/Bowery Bay	NY0026158-043	Queens	Newtown Creek
11th Street/Bowery Bay	NY0026158-013	Queens	Newtown Creek
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Metro Terminals Corp.	NY0007676	Kings	Newtown Creek
Getty Terminal Corp.	NY0028452	Queens	Newtown Creek
Newtown Creek WPCP	NY0026204	Kings	Newtown Creek
Motiva Enterprises LLC	NY0006131	Kings	Newtown Creek
Exxon Mobile Oil Corp.	NY0004995	Kings	Newtown Creek

20.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and infiltration. A runoff flow of 0.341 cfs was calculated using the impervious site area (5.7 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 20.11-3, represent the existing loads at the site.

Table 20.11-3
Estimated Existing Pollutant Loads and Runoff Flows
Greenpoint Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	62,577[1]
BOD mg/L	11	20
Heavy Metals		
Copper µg/L	35	0.064
Lead µg/L	28	0.052
Zinc µg/L	154	0.283
Total Impervious Area (acre) = 5 69		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0 06[2]		Runoff Flow (cfs) = 0.341

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

20.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the ongoing NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from the City WPCPs; and as other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

20.11.3 Potential Impacts with the Greenpoint Converted MTS

With the development and operation of the Greenpoint Converted MTS, there would be a decrease in the impervious area and therefore the stormwater loadings at the site would decrease. Table 20.11-4 shows the existing impervious area, the change in the impervious area and pollutant loads. With the development of the Greenpoint Converted MTS, conditions would not be significantly different from Future No-Build Conditions.

All solid waste processing at the Greenpoint Converted MTS would occur within structures on the site. All process wastewater from waste handling operations in the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the Newtown Creek WPCP, where it would be treated prior to discharge to the East River and, therefore, would not adversely affect water quality.

Stormwater loads and the impervious area for the Greenpoint Converted MTS, shown in Table 20.11-4, would be expected to decrease from Existing Conditions. According to the 208 Model, the decreased loads would have no significant impact on water quality in the adjacent surface waters.

Unimpeded operation of the Greenpoint Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

Table 20.11-4
Impervious Area and Estimated Pollutant Loads
Greenpoint Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Condition	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	5.69	0.0	62,577/NA	20/NA	0.064/NA	0.052/NA	0.283/NA
Future Build Conditions	4.90	-0.79	53,908/-8,670	17/-3	0.055/-0.008	0.044/-0.007	0.244/-0.039

Notes:

[1] Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.

[2] Coliform loads are not shown in lbs/day Loading comparable to MPN/100 ml.

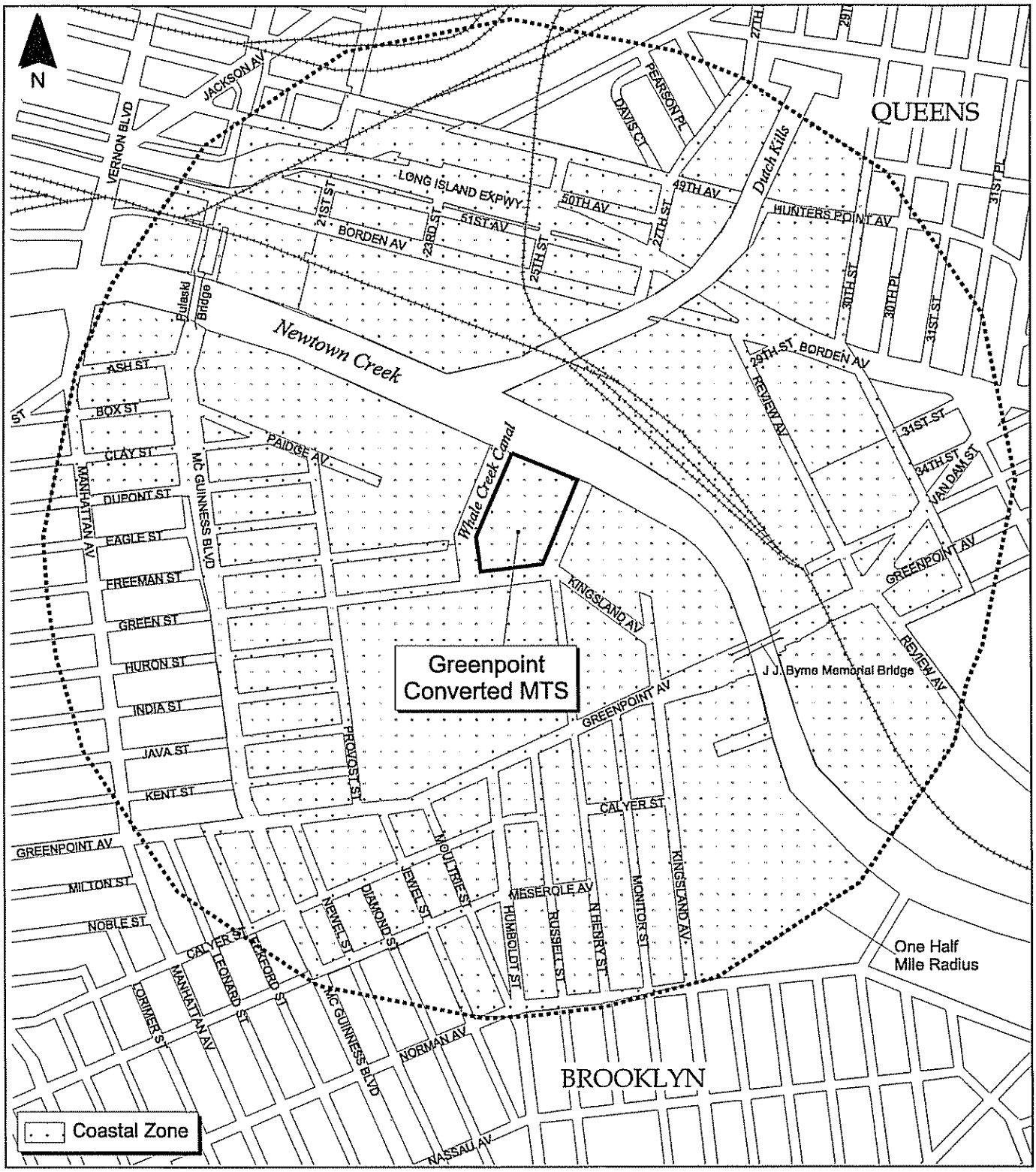
NA = Not Applicable

20.12 Waterfront Revitalization

20.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of Newtown Creek, the Greenpoint Converted MTS would be within the City's coastal zone boundary (see Figure 20.12-1). According to "The New Waterfront Revitalization Program," the Greenpoint Converted MTS would be classified as a water-dependent industrial use and would be located within Reach 13/Newtown Creek as indicated within the "New York City Comprehensive Waterfront Plan – Reclaiming the City's Edge" and the "Plan for the Brooklyn Waterfront." The site would also be located within the Newtown Creek SMIA. The Greenpoint Converted MTS is subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Greenpoint Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3, and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the Greenpoint Converted MTS. A description of waste handling operations that would occur at the Greenpoint Converted MTS is provided in Section 2.4.2.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 20.12-1 Coastal Zone Boundary

Greenpoint Converted MTS

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20.12.2 Consistency Assessment

Policy 1. Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the Greenpoint Converted MTS. As part of the Greenpoint Converted MTS, connections from the new facility to existing utilities (e.g., sewer and electrical connections, etc) in the vicinity would be established.

Policy 2. Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The Greenpoint Converted MTS would be located within the Newtown Creek SMIA and would be located within an existing M3-1 zoning designation at the site of the existing MTS. It would involve the conversion of the existing over-water, truck-to-barge waste MTS into an upland TCB transfer station that would transport DSNY-managed Waste to remote out-of-City disposal facilities via marine transport. A large portion of the Greenpoint Converted MTS would be located on the site of the existing Greenpoint incinerator building, which will be demolished under the Future No-Build Conditions.

The Greenpoint Converted MTS site, as described in Section 2.4.2, would largely represent the reactivation of an existing industrial and water-dependent use. It would serve to maintain this use while restoring and revitalizing existing

industrial waterfront property, and it would be compatible with existing neighboring industrial uses. Upland development would involve construction of four primary components: (1) an elevated access ramp; (2) an enclosed processing building, including the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a bulkhead/fendering system. The Greenpoint Converted MTS would be consistent with existing land uses in the immediate vicinity of the site and the "Plan for the Brooklyn Waterfront," which recommends the continued industrial use of the site. Although the Greenpoint Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an upland expansion and reactivation of an existing water-dependent use and would be compatible with surrounding uses.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses*

The Greenpoint Converted MTS would involve the demolition of the existing MTS and the construction of a new MTS within the upland portions of the site. It would allow for marine transport of solid waste to licensed out-of-City disposal facilities. Upland development would involve four primary components: (1) an elevated access ramp; (2) an enclosed processing building, which includes the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a rehabilitated bulkhead and fendering system. The entire pier deck floor area serviced by the gantry cranes would be located outside the confines of the enclosed facility. The Greenpoint Converted MTS would be consistent with existing waterfront uses in the vicinity of the site.

The Greenpoint Converted MTS would require dredging to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once it became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any proposed dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The Greenpoint Converted MTS would be located within an existing, heavily industrialized area, and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within Newtown Creek resulting from the Greenpoint Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four of five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The Greenpoint Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The Greenpoint Converted MTS would involve the conversion of the existing over-water MTS where loose waste was placed in open barges, into an upland TCB transfer station where DSNY-managed Waste would be transferred into containers that would be sealed and placed into flat deck barges, then transported to an out-of-City disposal site. All solid waste handling would be done within an

enclosed processing building and, therefore, would be protective of the aquatic environment and surrounding land and water uses. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would also be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, any on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with applicable federal, state and local regulations.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, Recognized Ecological Complexes, and SCFWHs, the Greenpoint Converted MTS would not be located within any designated areas. It would represent an upland expansion in size of a previous over-water use and would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. The Greenpoint Converted MTS would be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and NWI maps was conducted to determine the presence of wetlands. As noted in Section 20.9.1, the site contains no freshwater wetlands. The Greenpoint Converted MTS would be

within Newtown Creek, which is identified as a littoral zone, a state-designated wetland. The demolition of the existing MTS and subsequent development of the Greenpoint Converted MTS would result in limited, short-term impacts to these tidal wetlands.

Impacts to littoral zones would be minimized due to the impacted nature of the existing waterway, previous and ongoing industrial activities at and in the vicinity of the site, and permitted dredging activities that have historically occurred at the site. The Greenpoint Converted MTS would be largely land-based and would require the demolition of the existing MTS. It will be sited at the approximate location of the Greenpoint incinerator, which will be demolished as part of the Future No-Build Conditions. Dredging would be required to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once the Greenpoint Converted MTS is operational. Potential impacts due to dredging would be short-term and localized. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any dredging activities. Mitigation, if required, would be proposed during the environmental review and permitting of the Greenpoint Converted MTS to address any potential impacts to wetlands that may occur due to its development. The Greenpoint Converted MTS would, therefore, be consistent with this policy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

There are no known vulnerable fish or plant species found within the vicinity of the Greenpoint Converted MTS. A review of the "Atlas of Breeding Birds in New York," indicates the Common Nighthawk (*Chordeiles minor*) as a species suspected to be breeding in the area. The Common Nighthawk is classified by the state as a Protected-Special Concern species. As noted in Section 20.9.3, the Greenpoint Converted MTS would not impact these species and their habitats.

The Greenpoint Converted MTS would involve the demolition of the existing MTS and construction of the new facility, which will be located upland to minimize potential impacts to natural resources. Upland development would include an elevated access ramp; an enclosed processing building, which includes the tipping floor, loading floor and pier level; an outside gantry crane system; and a rehabilitated bulkhead and fendering system. Development of the Greenpoint Converted MTS would involve dredging, but potential impacts to plant, fish and wildlife species would be minimized and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be obtained prior to any dredging activities.

In addition, all handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer systems. Stormwater runoff from the Greenpoint Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The Greenpoint Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The Greenpoint Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the processing areas would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system that would include an oil-water separator, and then discharged to the municipal sewer system. In addition, the slope of the tipping

floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the Greenpoint Converted MTS would be managed in accordance with applicable regulations.

5.2 *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

During the development and operation of the Greenpoint Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The Greenpoint Converted MTS would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the enclosed processing building, limiting the risk for the introduction of hazardous wastes or other pollutants into the environment. During construction, non-structural (such as silt curtains) or structural measures would be used to manage erosion and stormwater runoff. In addition, litter control methods would be implemented at the facility to minimize or eliminate the potential for litter to enter surface waters.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

Development of the Greenpoint Converted MTS would include demolition of the existing MTS. Barges would be staged along a refurbished or reconstructed bulkhead wall for loading and unloading of containers. Dredging would be needed to remove accumulated sediments in the barge berthing areas to provide adequate draft for barges and tugboats. Potential impacts due to dredging would be short-term and localized. All dredging would be conducted in compliance with applicable federal, state and local regulations and removed materials would be disposed of at a permitted upland facility.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The Greenpoint Converted MTS would result in no adverse impact to the quality or quantity of groundwaters or surface waters at or in the immediate vicinity of the site. Applicable and appropriate measures would be implemented at the Greenpoint Converted MTS in accordance with federal, state and local regulations. The Greenpoint Converted MTS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

According to a review of the FEMA National Flood Insurance Program maps, the site is located within the 100-year flood plain (Zone A) and the 500-year flood plain boundary (Zone B). Development of the Greenpoint Converted MTS would not affect the potential for flooding or erosion. All demolition and redevelopment activities would comply with applicable building code requirements and, to the extent practicable and necessary, non-structural (such as silt curtains) or structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 *Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.*

The Greenpoint Converted MTS would involve the management and processing of solid waste through a TCB system. Waste would be transported in waterproof, airtight, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding water body. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the Greenpoint Converted MTS. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. Litter control methods would be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. The Greenpoint Converted MTS would not result in adverse impacts and would operate in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

On-site storage of petroleum or hazardous materials related to the operation of the Greenpoint Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. Spill prevention and control plans would be used to prevent any hazardous materials from entering the environment.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.

Due to the existing, heavy industrial uses at and in the immediate vicinity of the Greenpoint Converted MTS, public access would generally not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

The Greenpoint Converted MTS would be a stand-alone, water-dependent facility fronting Newtown Creek. Public access would not be compatible with the Greenpoint Converted MTS; however, its development would not preclude any future development of public access along Newtown Creek.

8.3 Provide visual access to coastal lands, waters and open space where physically practical.

The Greenpoint Converted MTS would be compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. It would involve construction of a new TCB MTS at the location of the incinerator, which will have been demolished, but it would have little effect on the visual quality of its industrial setting. The barge slip gantry cranes were designed as slender structures to minimize their visual impact. As discussed in Section 20.7.3, visual access to the coastal lands is minimal and, therefore, no impacts to visual access would be anticipated. See also response to Subpolicy 9.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

No mapped parklands or open space areas have been identified at or within the immediate vicinity of the site. Therefore, this subpolicy is not applicable.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The Greenpoint Converted MTS would not result in a significant impact on views, as noted in Section 20.7.3. Based on the information discussed in that section, the Greenpoint Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The Greenpoint Converted MTS would be an upland expansion of an existing over-water use and would pose no new impacts to scenic values associated with natural resources. It would be compatible with surrounding buildings and would be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

No effects on cultural resources would result from the Greenpoint Converted MTS, as stated in Section 20.6.3. Based on the information presented in that section, the Greenpoint Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the immediate vicinity of the site. This subpolicy is, therefore, not applicable.

20.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

20.13.1 Existing Conditions

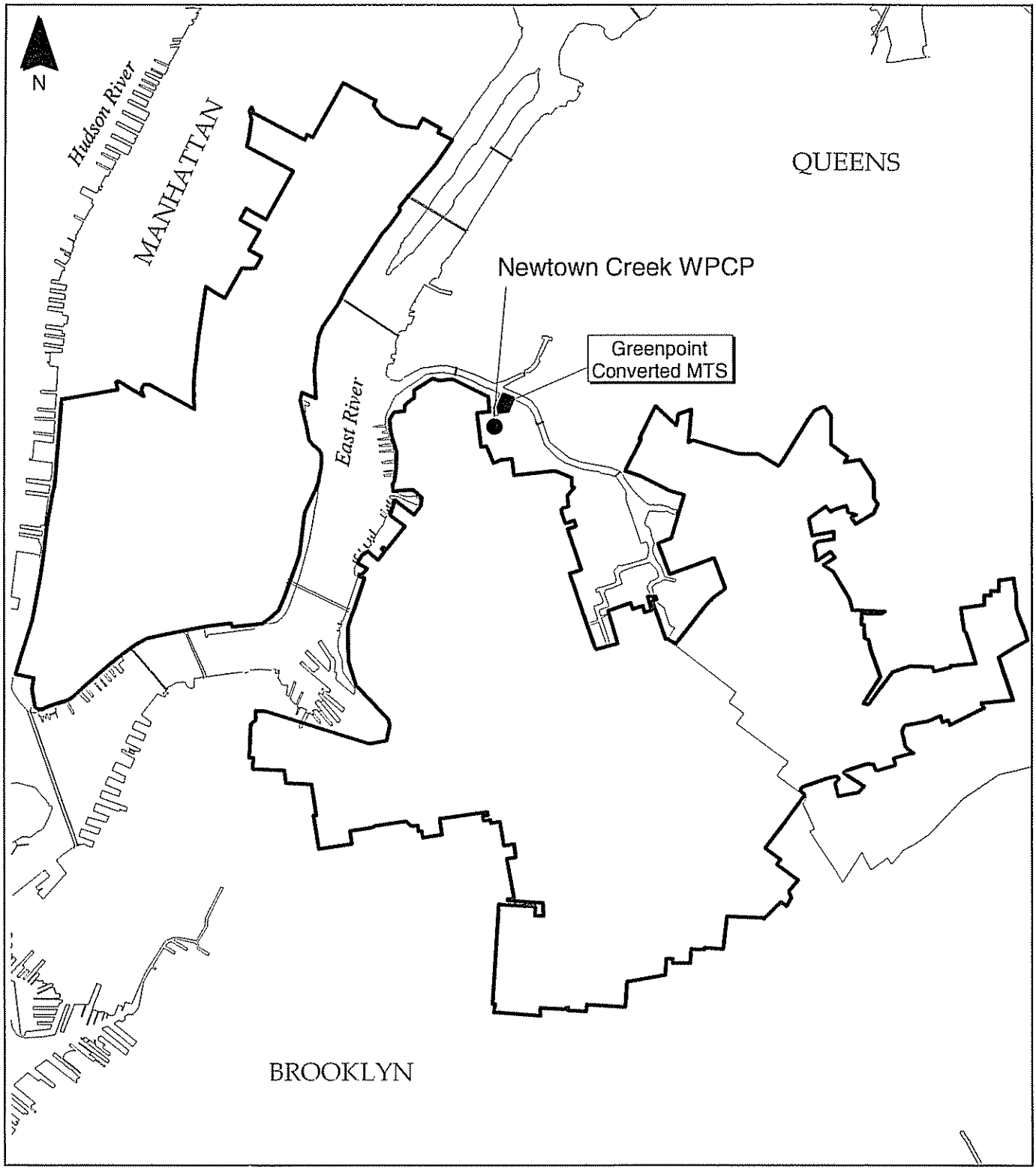
20.13.1.1 Water Supply

Water is supplied to the existing Greenpoint MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 6-inch-diameter water line provides potable water for both process and sanitary requirements. Adjacent to the existing site is a pump house connected to an incoming 6-inch water line, which ensures adequate pressure for the fresh water fire system. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

20.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Newtown Creek WPCP, which serves portions of Manhattan, Queens and Brooklyn. The WPCP drainage area is illustrated in Figure 20.13-1. From July 2002 through June 2003, the WPCP treated an average of 216 mgd of wastewater under dry weather flow conditions and an average flow of 238 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 20.13-1). The maximum dry weather flow during this period was 239 mgd in August 2002 and the maximum average flow was 259 during June 2003. Effluent from the plant is discharged to the East River and is regulated by NYSDEC under the SPDES program. The current SPDES permit limit for flow to the Newtown Creek WPCP is 310 mgd. It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on three employees (one guard per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). As the facility does not currently accept waste, no significant process water is used and no operations personnel are currently assigned to the site.

Duplex sewage ejection pumps within the existing Greenpoint MTS convey wastewaters to the municipal sewer system through a 6-inch-diameter pipe that discharges to a 15-inch sewer (combined sanitary and stormwater system) running south along North Henry Street. The sewer connects to an interceptor that eventually conveys the wastewater to the Newtown Creek WPCP for treatment.



Site delineations are approximate

5000 0 5000 Feet

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Figure 20.13-1 Existing WPCP Drainage Area

Greenpoint Converted MTS

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Table 20.13-1
Average Monthly Dry Weather -and Average Flows
Newtown Creek Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flows-[1] (mgd)
July 2002	223	229
August	239	256
September	229	253
October	224	255
November	208	238
December	213	228
January 2003	212	223
February	204	224
March	218	240
April	207	228
May	201	219
June	218	259
Average Effluent	**216**	**238**

Note:
[1] Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

20.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each of the three employees at the existing MTS produces approximately 9 pounds of solid waste per week for a facility total of 27 pounds per week (approximately 4 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

20.13.1.4 Energy

Consolidated Edison of New York supplies electrical service to the facility. A review of applicable service plans shows electric lines along North Henry Street. Utility maps from KeySpan show that there is a 2-inch gas main running up North Henry Street that serves the facility. Current electricity and gas utilization is negligible due to the low staffing levels for security.

20.13.2 Future No-Build Conditions

The existing Greenpoint MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Newtown Creek WPCP would continue to increase and would be projected to be 240.4 mgd by 2006.

20.13.3 Potential Impacts with the Greenpoint Converted MTS

20.13.3.1 Water Supply

The Greenpoint Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The Greenpoint Converted MTS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

20.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,330 gpd for the Greenpoint Converted MTS, the small quantities of wastewater sent to the Newtown Creek WPCP would not significantly impact the sewage flow rate or the ability of the Newtown Creek WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 240.4 mgd in 2006, which would be well below the permitted capacity of 310 mgd. In addition, the new wastewater flows from the proposed action would not result in a significant increase in combined sewer overflows (CSO).

20.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the Greenpoint Converted MTS and would not significantly impact the system.

20.13.3.4 Energy

The Greenpoint Converted MTS would require approximately 5.51E+10 BTU/year of electricity to operate the facility. Natural gas facility heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the Greenpoint Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the Greenpoint Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility.

20.14 Traffic, Parking, Transit, and Pedestrians

20.14.1 Introduction

The Greenpoint Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

20.14.2 Existing Conditions

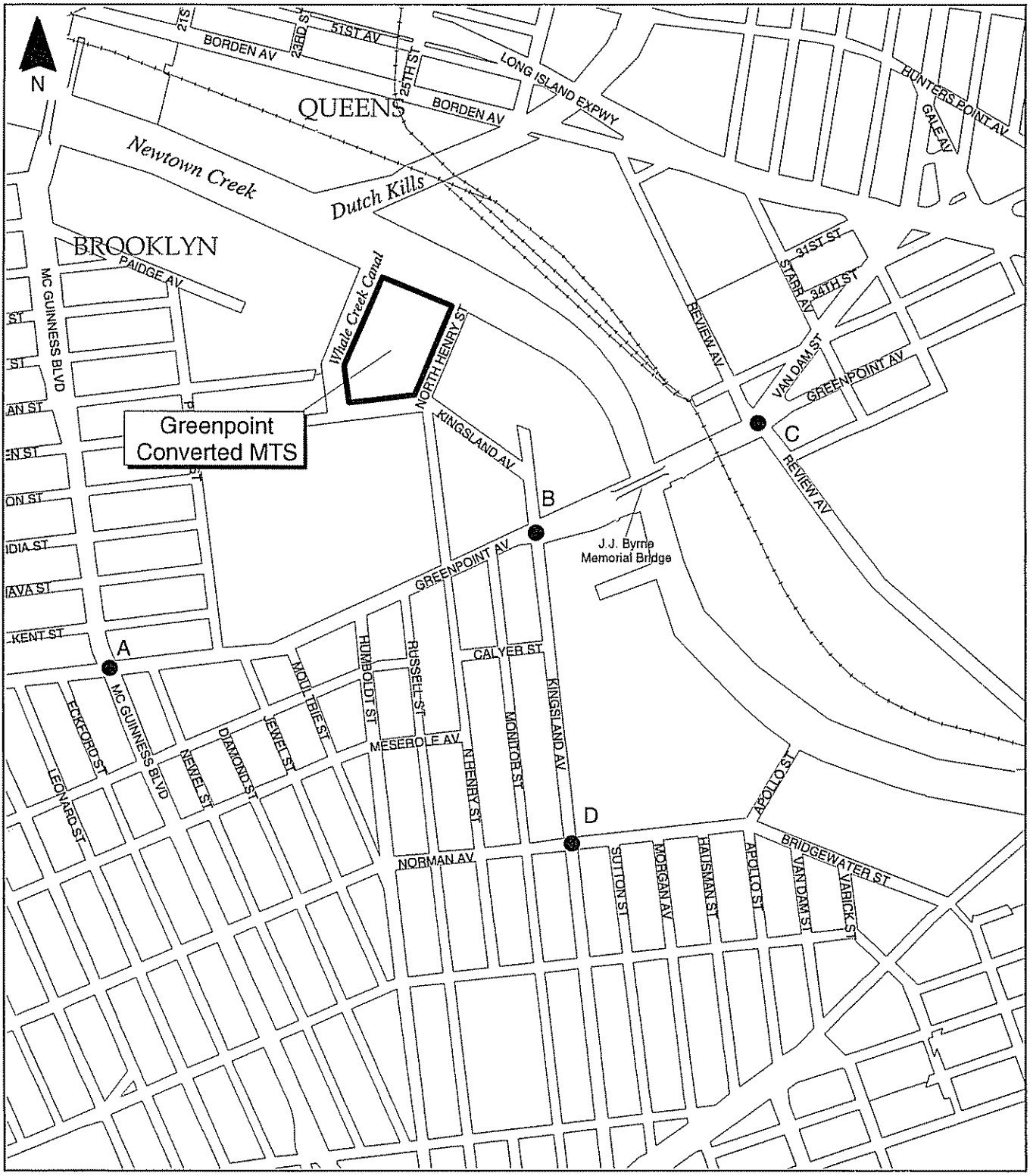
20.14.2.1 Definition of Study Area

The traffic analysis study area is broad and includes the Greenpoint and Long Island City neighborhoods of Brooklyn and Queens, respectively. It includes the corridor along Greenpoint Avenue that is bounded by McGuiness Boulevard on the west and the LIE on the east. The traffic study area is predominantly light industrial in nature. There are no CEQR-defined areas of concern located within the study area. Figure 20.14-1 shows the locations of the intersections selected for analysis (locations A through D). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Eastbound and westbound collection vehicles would approach the site along Greenpoint Avenue and turn northbound onto Kingsland Avenue. Northbound collection vehicles would approach from the south via Kingsland Avenue.

20.14.2.2 Surface Network

Two major highways, the predominantly east-west LIE and the predominantly north-south BQE, service the traffic analysis study area. Greenpoint Avenue is a local truck route that provides access from the east and west of the site. McGuiness Boulevard and Kingsland Avenue are local truck routes that provide access from south of the site. Maps showing all major truck routes and local truck routes in Brooklyn and Queens are provided in Section 3.16 (see Figures 3.16-3 and 3.16-5).



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.14-1 Traffic Analysis Study Area

Greenpoint Converted MTS

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Greenpoint Avenue (and Van Dam Street in Queens) and McGuiness Boulevard are principal arterials that provide access to the LIE and BQE, respectively. Norman Avenue is a minor arterial that provides local east-west truck access through the industrial areas of Greenpoint. Kingsland Avenue is a northbound collector road for local traffic and provides access for local and industrial traffic between the BQE (and points south) and Greenpoint Avenue. Review Avenue is a minor arterial and a designated truck route that services the industrial areas north and adjacent to Newtown Creek in Queens.

DSNY and other agency collection vehicles approaching the Greenpoint Converted MTS from the LIE would exit at Greenpoint Avenue and travel west towards the Converted MTS. Other vehicles approaching the Converted MTS from Queens would follow Van Dam Street or Review Avenue to Greenpoint Avenue. DSNY and other agency collection vehicles traveling to the facility from the south would approach the area using the BQE and exit onto Meeker Street. Other vehicles would travel north along Vandervoort Avenue to Meeker Street. From Meeker Street, the vehicles would proceed north along McGuiness Avenue or along various local roads to Norman Avenue and then to Kingsland Avenue. All inbound DSNY and other agency collection vehicles converge at the intersection of Greenpoint Avenue and Kingsland Avenue. At this intersection, all vehicles would proceed north along Kingsland Avenue to the Converted MTS. Exiting vehicles would follow the same truck routes back to their respective CDs, except for vehicles that traveled north on Kingsland Avenue. These vehicles would turn west on Greenpoint Avenue, then travel south on Monitor Street to Norman Avenue, and then follow truck routes back to their CDs.

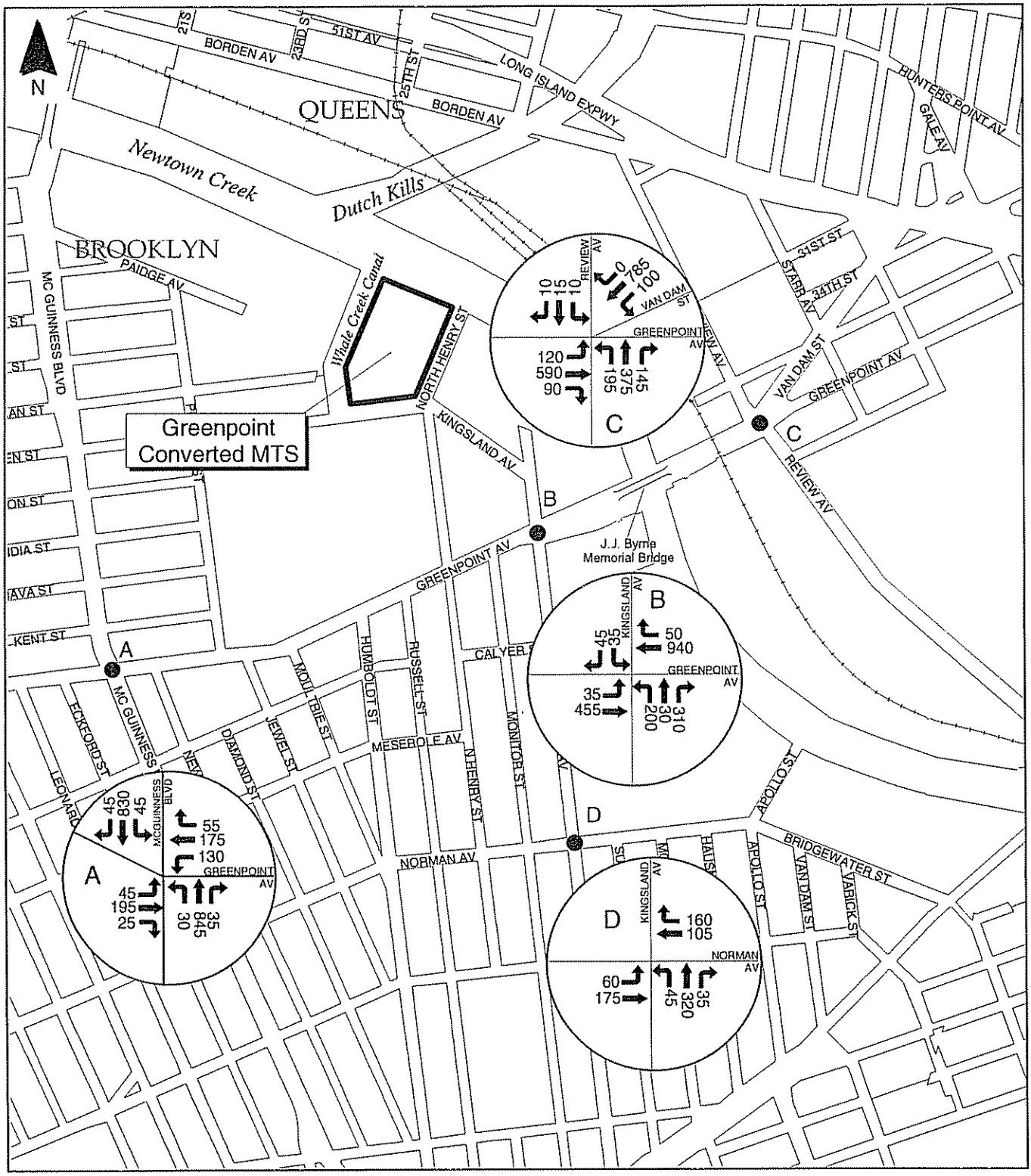
20.14.2.3 Existing Traffic Operations

The four intersections listed below were identified for analysis because they are the most likely to be impacted by the Greenpoint Converted MTS. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Greenpoint Avenue and McGuiness Boulevard – Signalized Intersection (see Figure 20.14-1 – location A)
- Greenpoint Avenue and Kingsland Avenue – Signalized Intersection (see Figure 20.14-1 – location B)
- Greenpoint Avenue and Review Avenue and Van Dam Street – Signalized Intersection (see Figure 20.14-1 – location C)
- Norman Avenue and Kingsland Avenue – Signalized Intersection (see Figure 20.14-1 – location D)

Greenpoint Avenue (and Van Dam Street in Queens) and McGuiness Boulevard are principal arterials that provide access to the LIE and BQE, respectively. Norman Avenue is a minor arterial that provides east-west access through the industrial areas of Greenpoint. Kingsland Avenue is a northbound collector road for local traffic and provides access for local and industrial traffic between the BQE (and points south) and Greenpoint Avenue. Review Avenue is a minor arterial that services the industrial areas north and adjacent to Newtown Creek in Queens.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 4 and February 6, 2003, while ATR counts were conducted between February 3 and February 7, 2003. Figures 20.14-2, 20.14-3 and 20.14-4 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 20.14-1 presents the v/c ratio, delay and LOS for the four intersections during the AM, Facility, and PM peaks.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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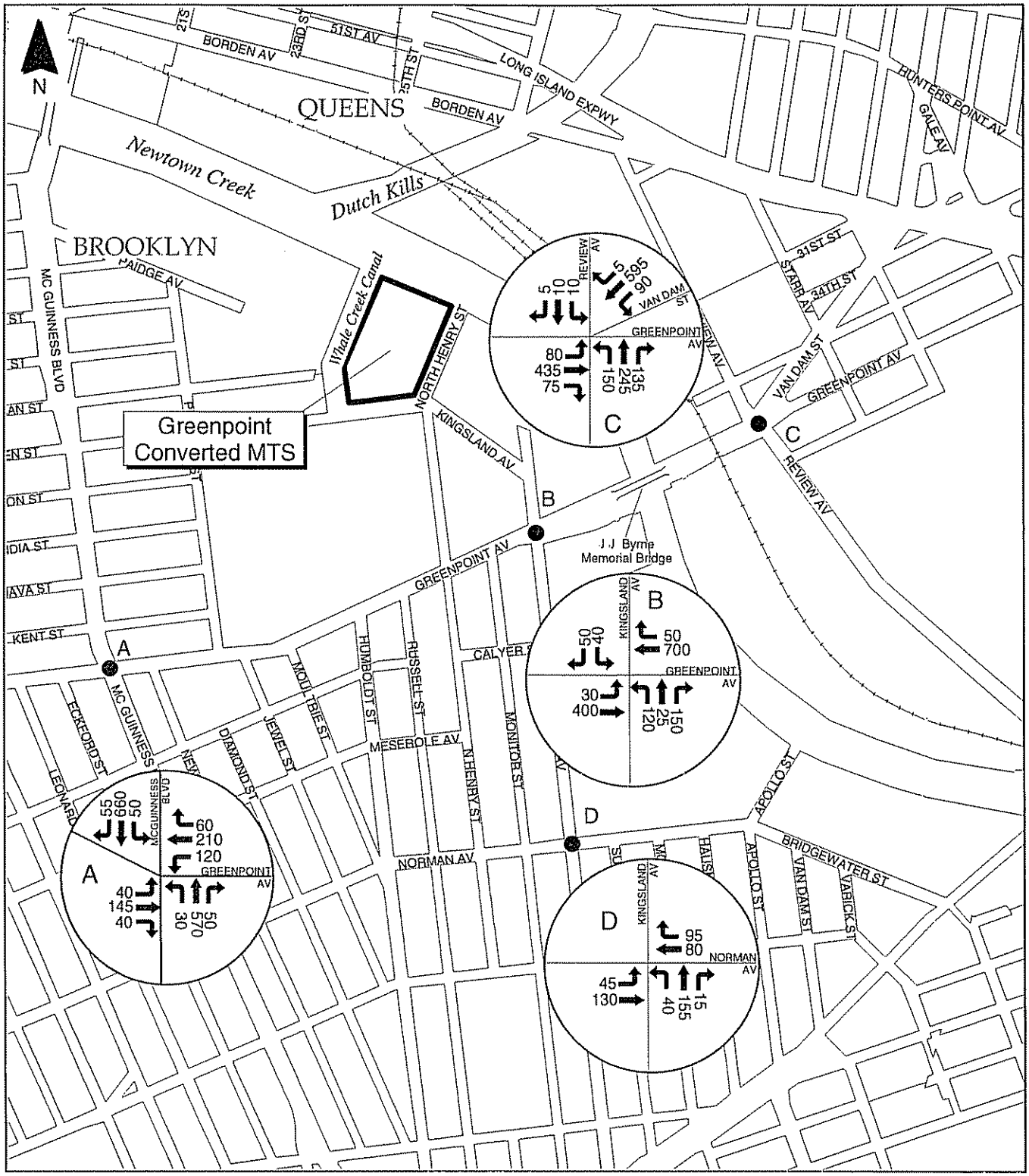
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Figure 20.14-2 Existing Traffic Volumes - AM Peak

Greenpoint Converted MTS

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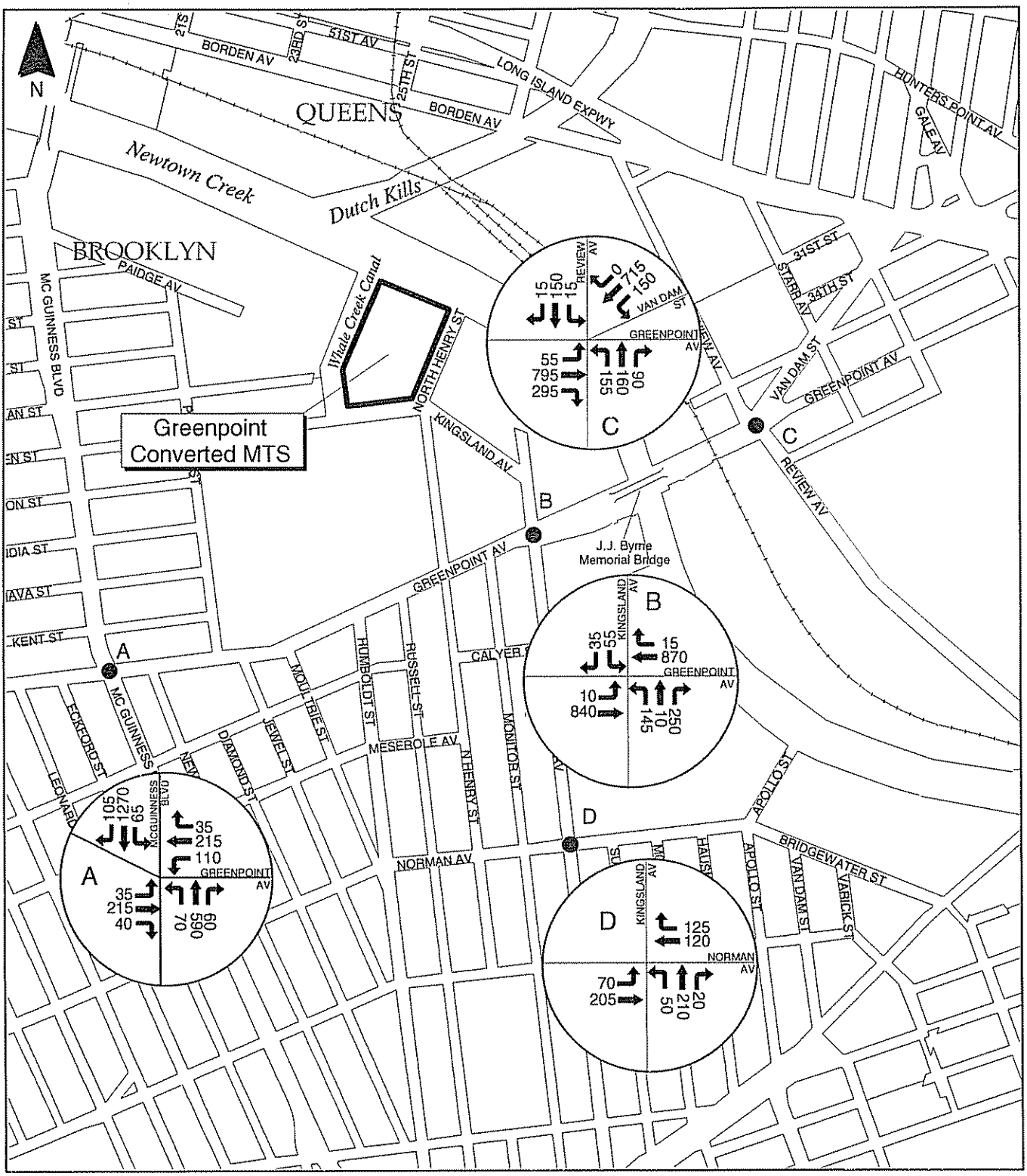
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-3 Existing Traffic Volumes Facility Peak Greenpoint Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-4 Existing Traffic Volumes - PM Peak

Greenpoint Converted MTS

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Table 20.14-1
HCM Analysis[1] – Existing Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.73	50.6	D	0.69	48.4	D	0.77	52.2	D
WB LTR	0.78	46.5	D	1.04	86.9	F	1.04	87.4	F
NB L	0.15	3.8	A	0.10	3.3	A	0.53	16.1	B
NB TR	0.49	4.7	A	0.40	4.1	A	0.39	4.1	A
SB L	0.18	4.2	A	0.16	3.8	A	0.21	4.3	A
SB TR	0.51	4.8	A	0.41	4.2	A	0.80	9.3	A
OVERALL		16.0	B		25.1	C		23.4	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.52	16.3	B	0.38	13.7	B	0.67	20.6	C
WB TR	0.60	18.4	B	0.41	14.2	B	0.50	15.2	B
SB LTR	0.50	14.1	B	0.29	11.8	B	0.33	12.2	B
OVERALL		15.9	B		13.1	B		16.1	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.41	6.9	A	0.39	6.8	A	0.64	9.3	A
WB TR	0.68	9.4	A	0.55	7.9	A	0.62	8.6	A
NB LTR	0.71	22.4	C	0.48	17.8	B	0.54	18.8	B
SB L	0.33	21.7	C	0.23	17.4	B	0.55	28.5	C
SB R	0.19	15.7	B	0.24	16.6	B	0.16	15.3	B
OVERALL		12.5	B		10.2	B		11.6	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	0.98	36.9	D	0.67	12.8	B	0.97	29.7	C
WB LTR	0.88	20.6	C	0.71	13.5	B	1.05	57.5	E
NB LTR	0.76	21.5	C	0.63	18.4	B	0.44	15.2	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.34	14.4	B
OVERALL		26.2	C		14.6	B		35.1	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement

Existing truck traffic through most of the intersections was relatively high. The percentages of trucks increases steadily during the morning hours, remaining at between 20% and 25% during mid-day hours, then decreases to 12% or lower during the PM peak hours.

20.14.2.3.1 LOS at Signalized Intersections

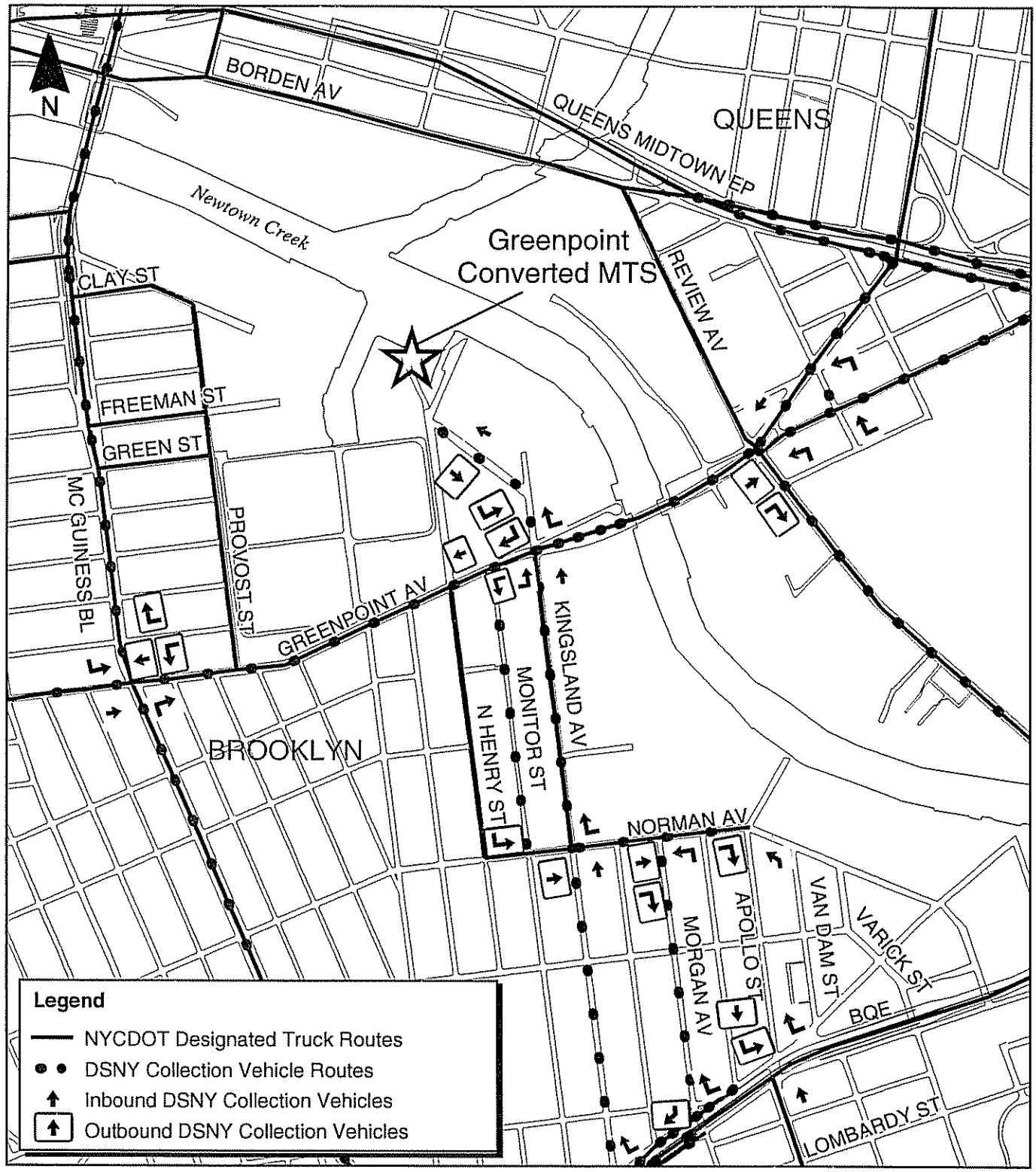
Table 20.14-1 shows that the signalized intersections generally operated at an overall LOS of B or C with the following exceptions. The lane group with the least favorable LOS was the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard. During both the Facility and PM peak hours, this approach operated at LOS F with delays of 86.9 and 87.4 seconds, respectively. During the PM peak hour, the westbound approach at the intersection of Greenpoint Avenue and Review Avenue and Van Dam Street operated at LOS E with 57.5 seconds of delay. Several other lane groups at various intersections operated at LOS D during various peak hours.

20.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

20.14.2.4 Existing DSNY-Related Traffic

The privately owned Waste Management Review transfer facility, located on Review Avenue between Greenpoint Avenue and Laurel Hill Boulevard in the nearby West Maspeth section of Queens, accepts waste from Queens CDs 2, 3, 4, 5, 6 and 14. The existing DSNY-related traffic in the vicinity of the Greenpoint Converted MTS is generated by the Review Avenue facility. Within the study area, DSNY-related traffic is primarily routed along Greenpoint Avenue, Review Avenue and Van Dam Street. The existing routes to the commercial vendors are presented in Figure 20.14-5.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 20.14-5 DSNY Collection Vehicle Routes
Greenpoint Converted MTS

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20.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "Greenpoint Avenue" stop on the MTA's "G" subway line is located approximately one mile southwest of the site at the Greenpoint Avenue/Manhattan Avenue intersection. The MTA operates one bus line, B24, along Greenpoint Avenue. Bus stops are located at the Greenpoint Avenue/McGuiness Boulevard and Greenpoint Avenue/Review Avenue/Van Dam Street intersections and scheduled stops occur at various times during the day.

20.14.2.6 Pedestrian Activity

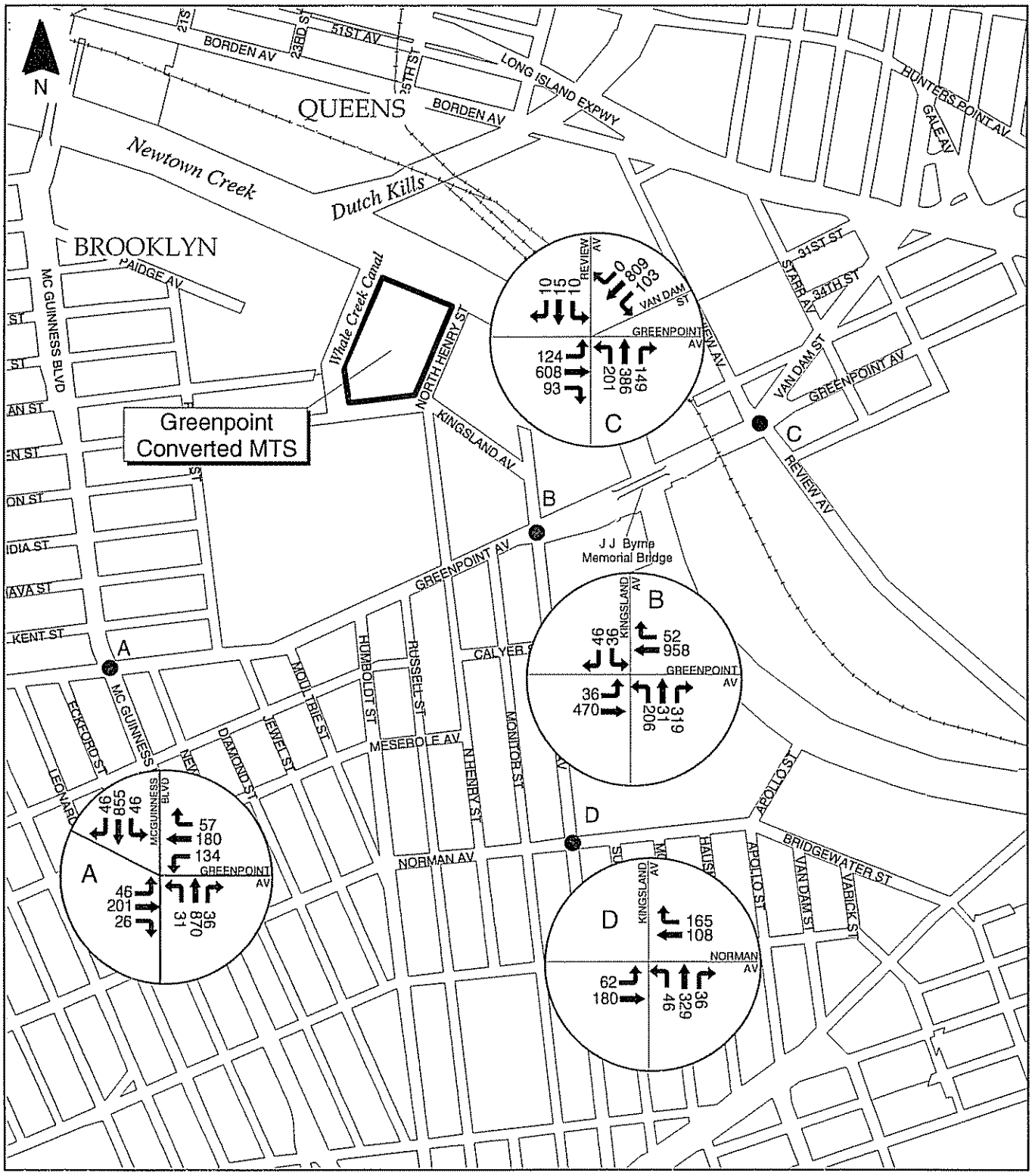
Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at all signalized study intersections. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

20.14.3 Future No-Build Conditions

20.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 100 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

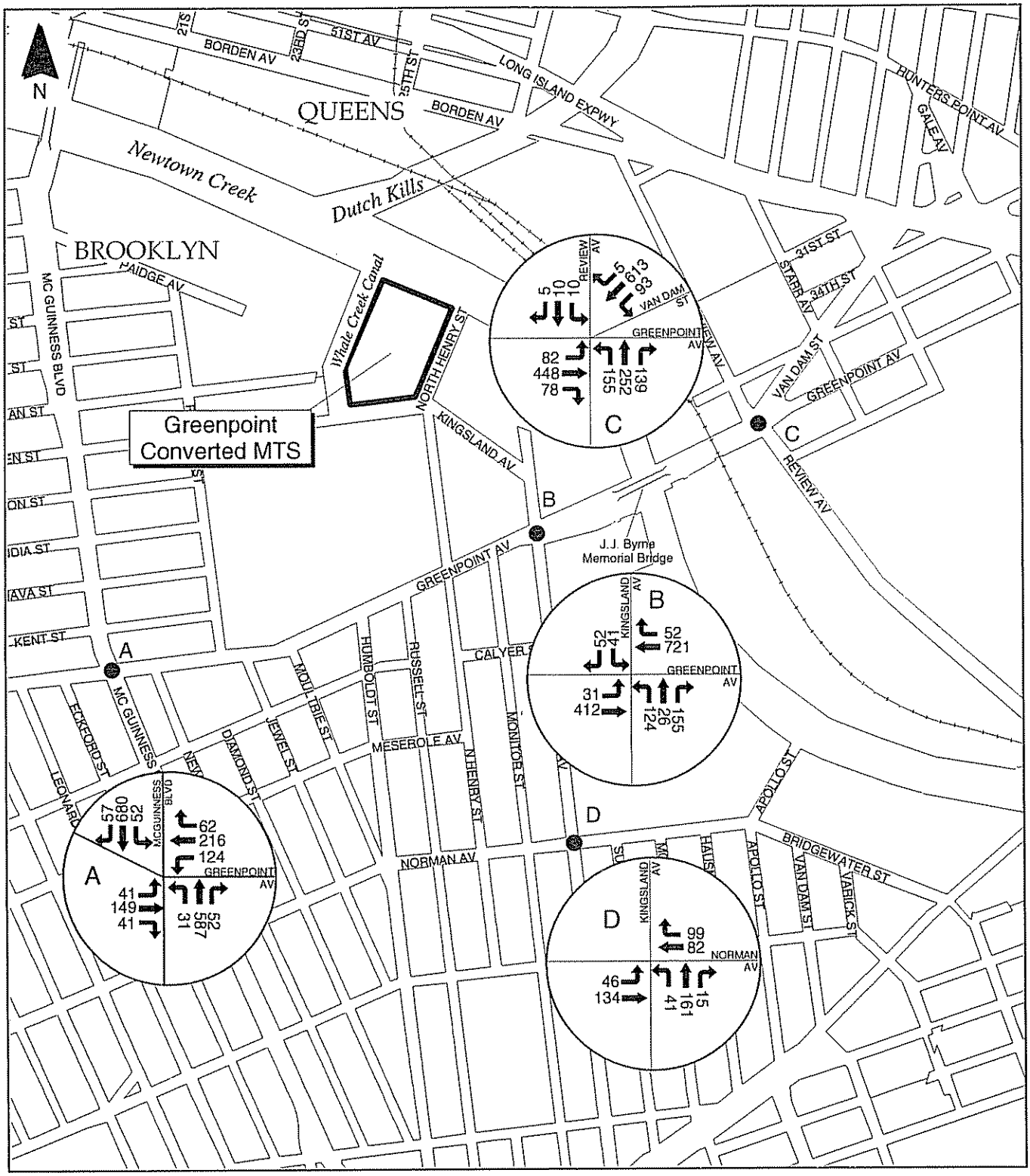
Figures 20.14-6, 20.14-7 and 20.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 20.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their Existing Condition LOS, with the following exceptions:



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

Figure 20.14-6 Future No-Build Traffic Volumes AM Peak Greenpoint Converted MTS

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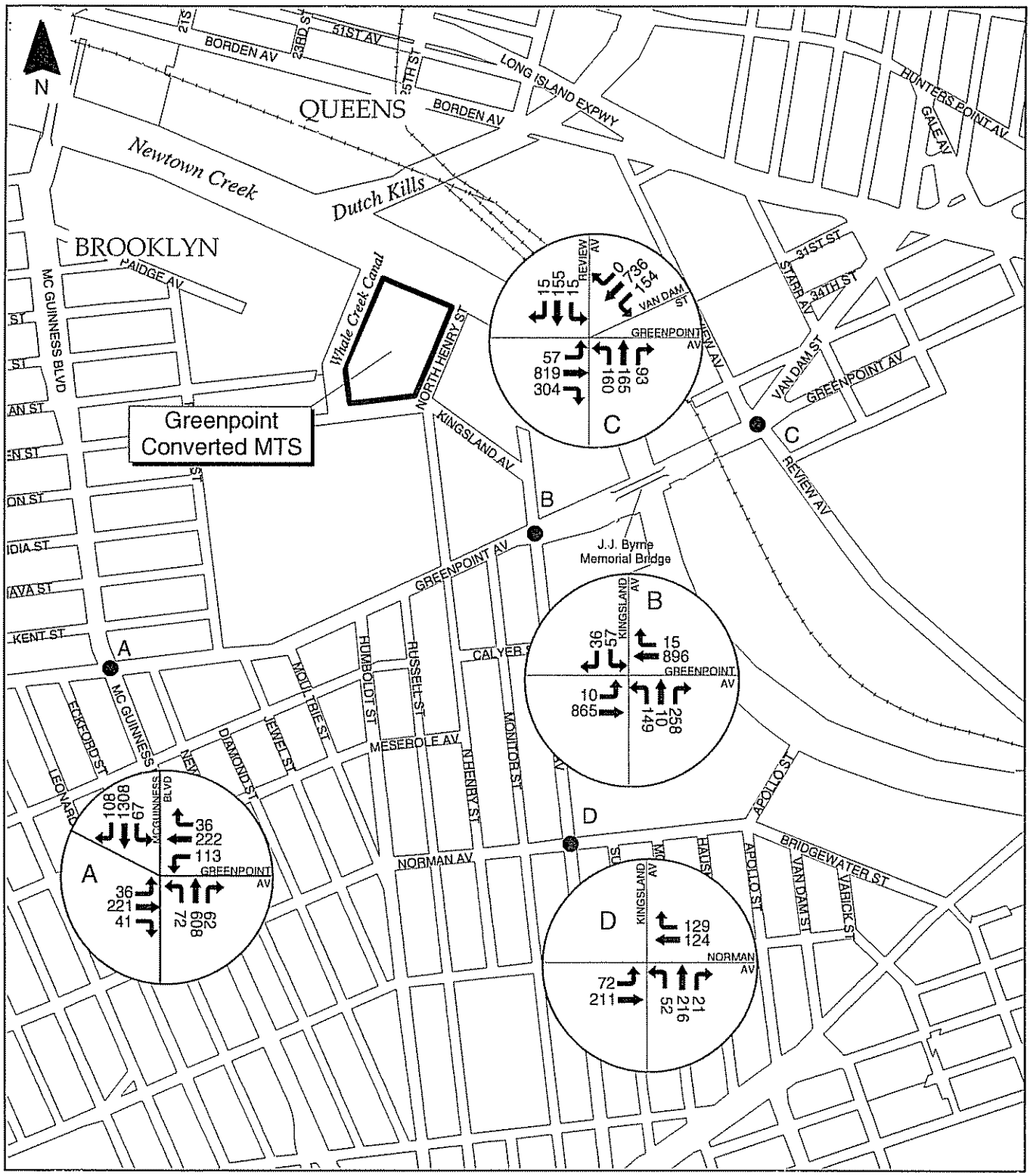
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-7 Future No-Build Traffic Volumes Facility Peak Greenpoint Converted MTS

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.14-8 Future No-Build Traffic Volumes PM Peak Greenpoint Converted MTS

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Table 20.14-2
HCM Analysis[1] – Future No-Build Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.77	53.5	D	0.72	49.9	D	0.80	54.5	D
WB LTR	0.81	48.3	D	1.08	99.8	F	1.08	100.0	F
NB L	0.16	4.0	A	0.11	3.4	A	0.59	20.1	C
NB TR	0.51	4.8	A	0.42	4.2	A	0.41	4.2	A
SB L	0.19	4.4	A	0.17	3.9	A	0.23	4.4	A
SB TR	0.52	4.9	A	0.43	4.3	A	0.83	10.1	B
OVERALL		16.8	B		27.7	C		25.8	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.54	16.8	B	0.40	13.9	B	0.70	21.9	C
WB TR	0.62	18.9	B	0.42	14.5	B	0.51	15.6	B
SB LTR	0.51	14.3	B	0.30	11.9	B	0.34	12.3	B
OVERALL		16.3	B		13.3	B		16.7	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.43	7.0	A	0.41	6.9	A	0.66	9.6	A
WB TR	0.70	9.8	A	0.57	8.1	A	0.63	8.9	A
NB LTR	0.73	23.0	C	0.49	18.0	B	0.56	19.1	B
SB L	0.35	22.6	C	0.24	17.7	B	0.58	30.5	C
SB R	0.20	15.8	B	0.25	16.7	B	0.16	15.4	B
OVERALL		12.9	B		10.4	B		11.9	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	1.04	51.2	D	0.70	13.4	B	1.00	37.4	D
WB LTR	0.92	25.0	C	0.74	14.4	B	1.11	75.6	E
NB LTR	0.78	22.4	C	0.65	18.8	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERALL		32.9	C		15.3	B		44.3	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement

- During the AM peak hour, the delay of the eastbound approach at the intersection of Greenpoint Avenue and Review Avenue and Van Dam Street increased from 36.9 to 51.2 seconds (LOS D in both cases).

- During the Facility peak hour, the delay of the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard increased from 86.9 to 99.8 seconds (LOS F in both cases).

- During the PM peak hour, the delay of the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard increased from 87.4 to 100.0 seconds (LOS F in both cases). Also during this period, both the eastbound (29.7 to 37.4 seconds) and westbound (57.5 to 75.6 seconds) approaches at the Greenpoint Avenue and Review Avenue and Van Dam Street intersection experienced an increase in delay.

20.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

20.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

20.14.4 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would receive waste from Brooklyn (CDs 1, 3, 4 and 5 and the Auxiliary Field Force [AFF]), Queens (CDs 1, 2, 3, 4, 5 and 6) and Manhattan (AFF). Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

20.14.4.1 2006 Future Build Traffic Conditions

2006 Future Build Conditions assume that the Greenpoint Converted MTS would generate 423 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes.

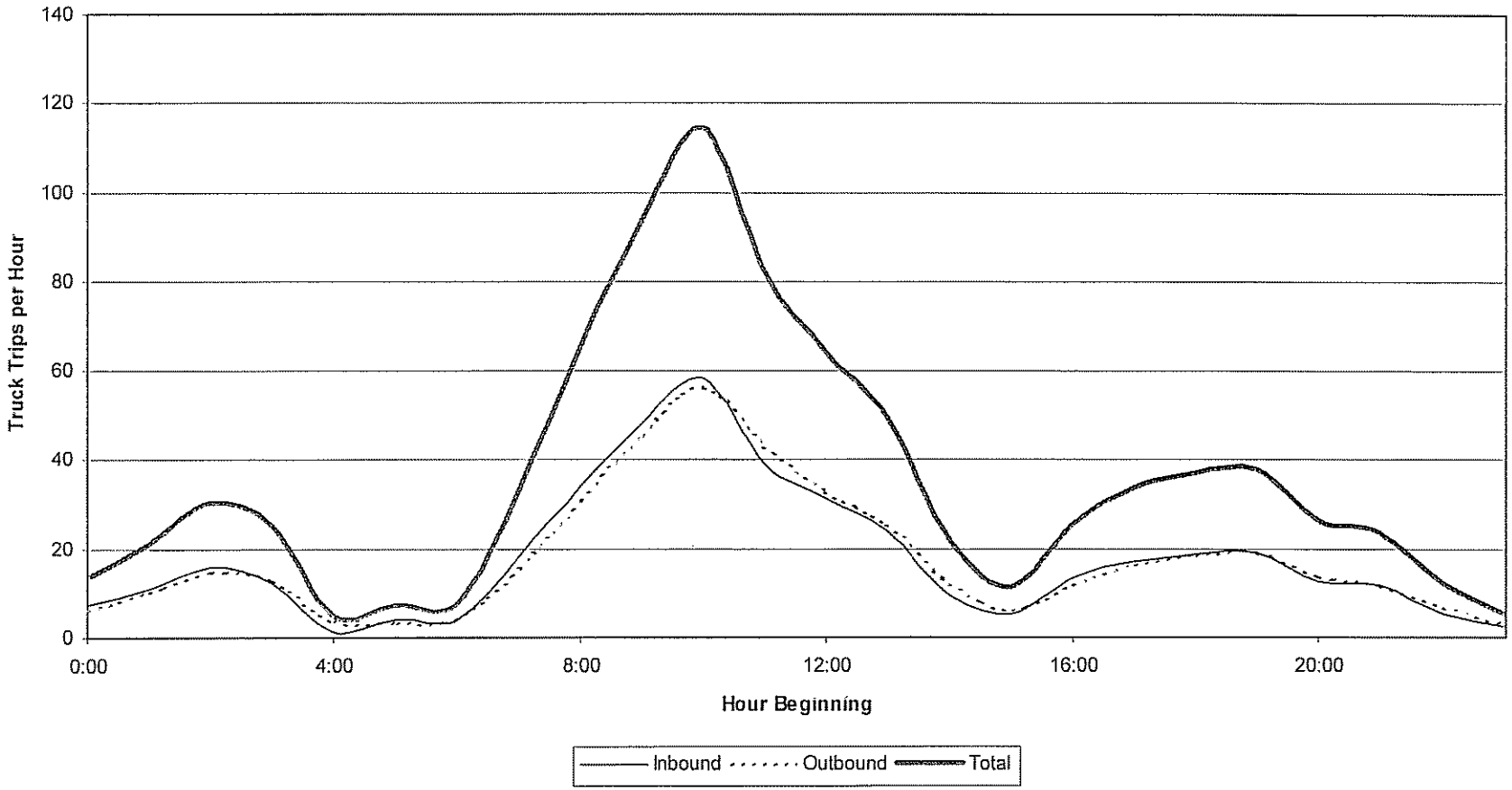
The proposed collection vehicle truck routes for the Greenpoint Converted MTS are shown in Figure 20.14-5.

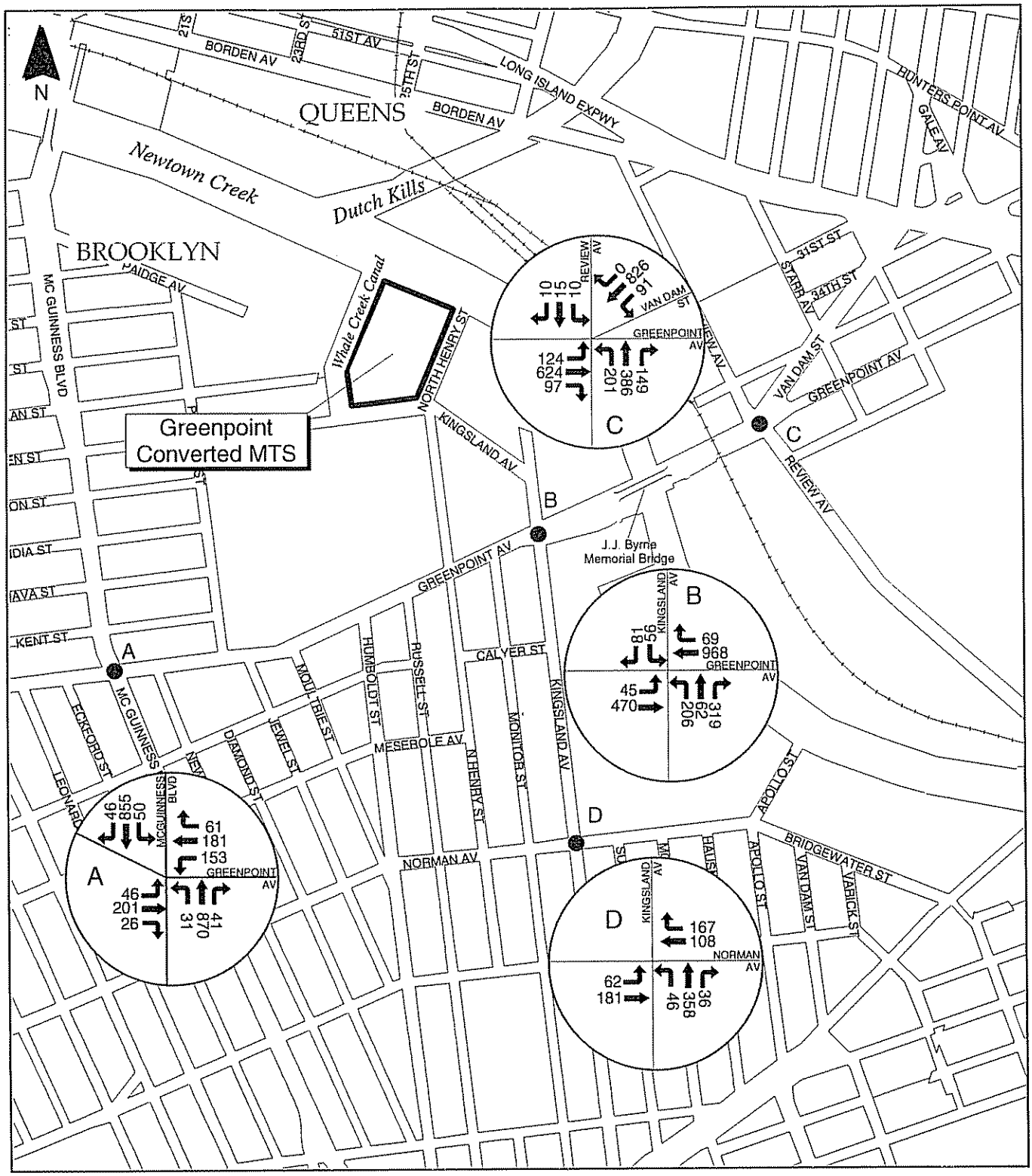
Figure 20.14-9 presents the average peak day temporal distribution of collection vehicles for the Greenpoint Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Greenpoint Converted MTS is expected to vary between approximately 5 to 30 truck trips per hour in the late evening/early morning, 10 to 118 truck trips per hour in the mid-morning/early afternoon, and 10 to 40 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (118) occurs at approximately 10:00 a.m.

Employee trips generated as a result of the Greenpoint Converted MTS are expected to be about 44 per shift (22 entering and 22 departing). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (7:30 a.m. to 8:30 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the Greenpoint Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic. Figures 20.14-10, 20.14-11 and 20.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 20.14-13, 20.14-14 and 20.14-15 show the intersections analyzed with only the net increase in site generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Greenpoint Converted MTS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 60. The highest net increase at any one intersection was 118 trucks. Both of these net increases occurred at the intersection of Greenpoint and Kingsland Avenues.

Figure 20.14-9
Truck Trips per Hour
Greenpoint Converted MTS



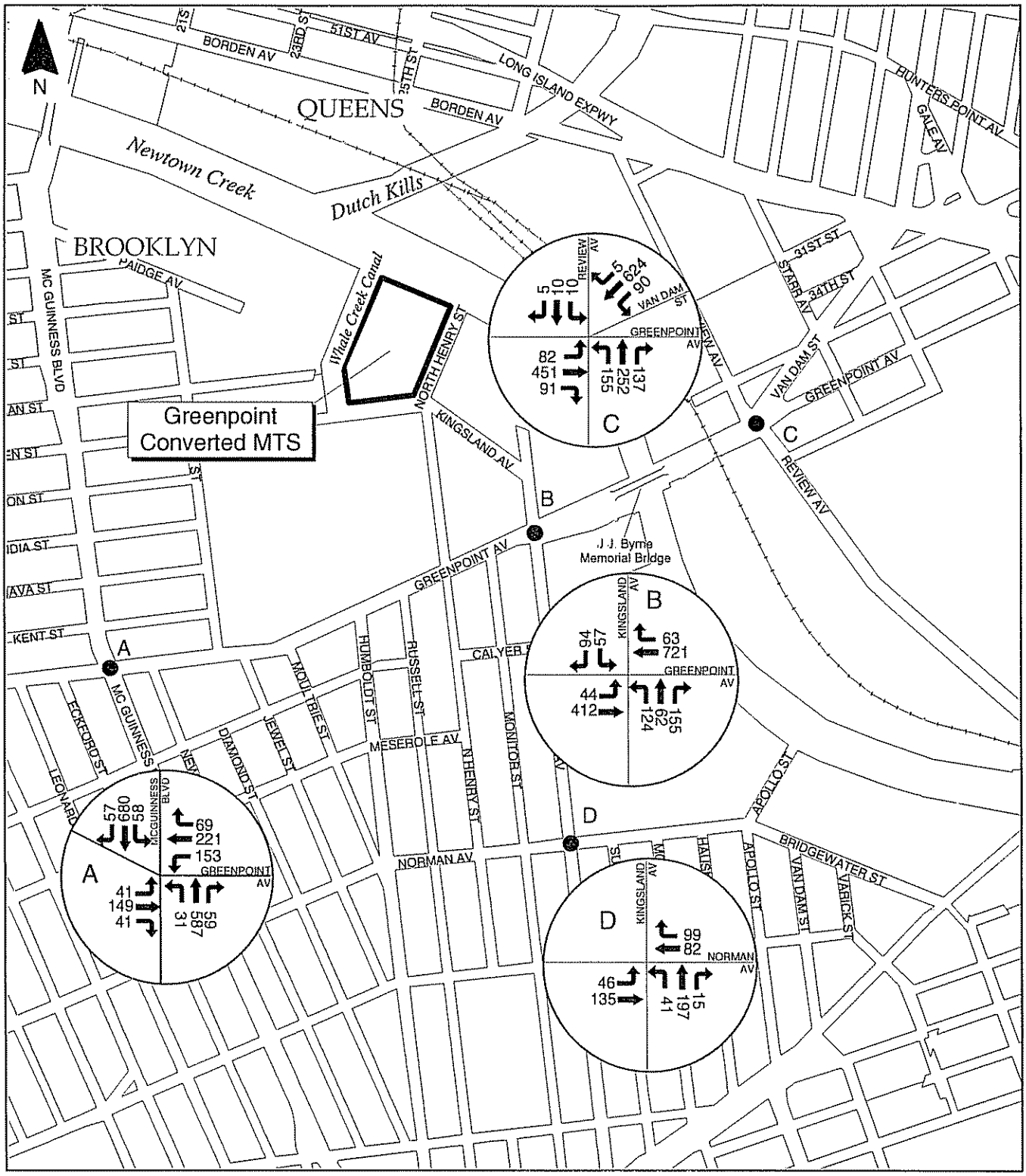


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Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 20.14-10 2006 Future Build Traffic Volumes
AM Peak
Greenpoint Converted MTS

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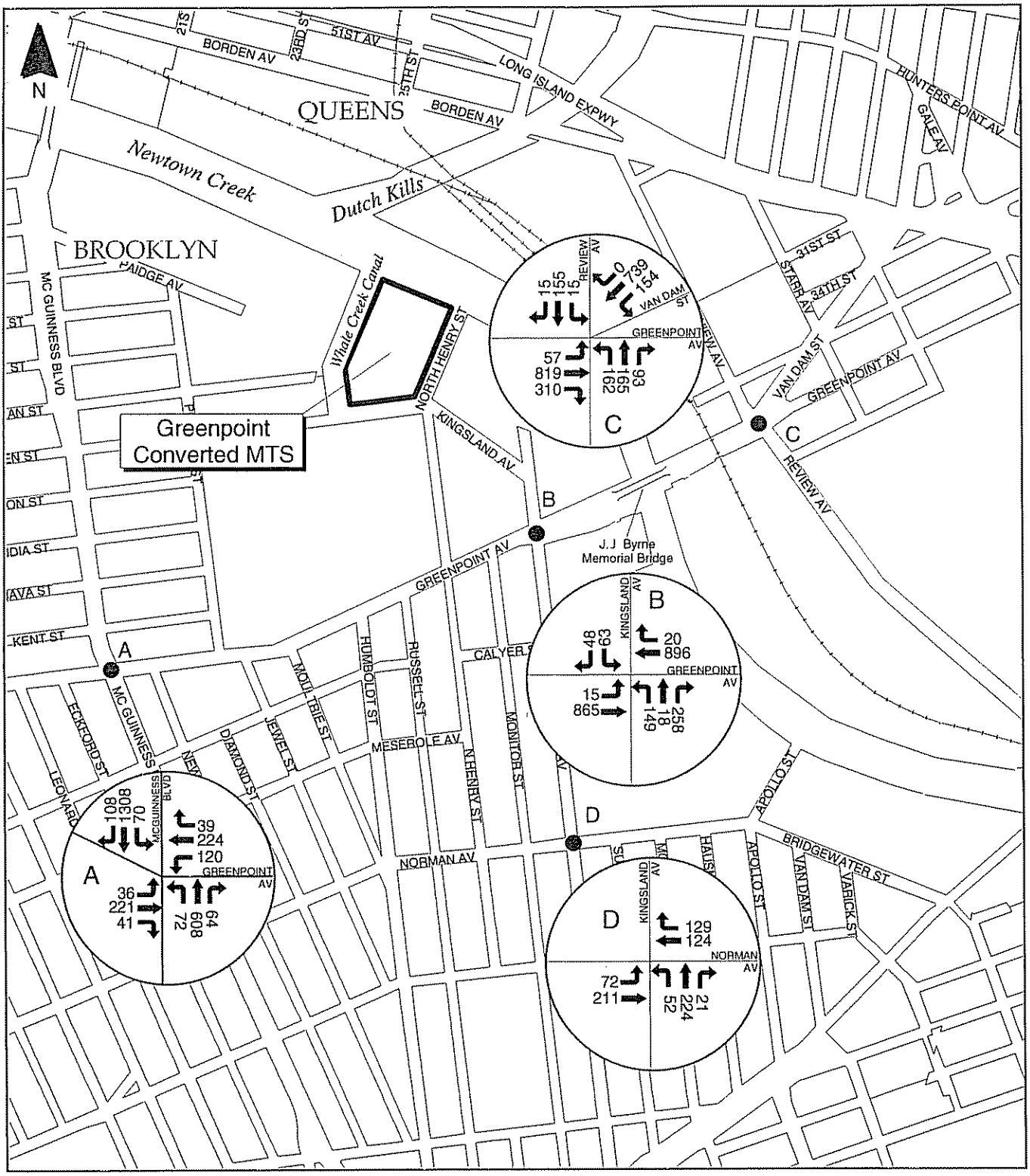
Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.14-11 2006 Future Build Traffic Volumes Facility Peak Greenpoint Converted MTS

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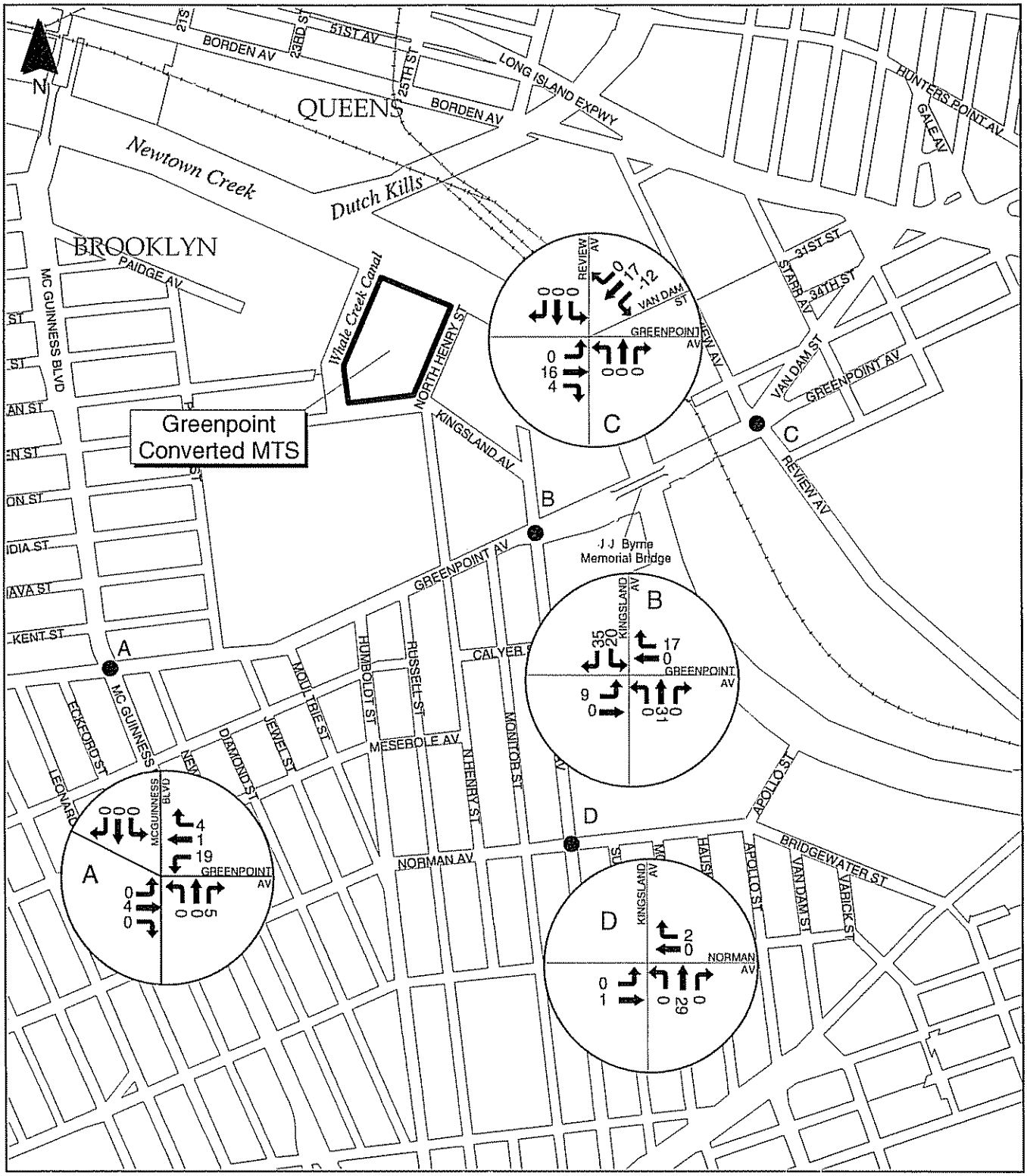
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-12 2006 Future Build Traffic Volumes PM Peak Greenpoint Converted MTS

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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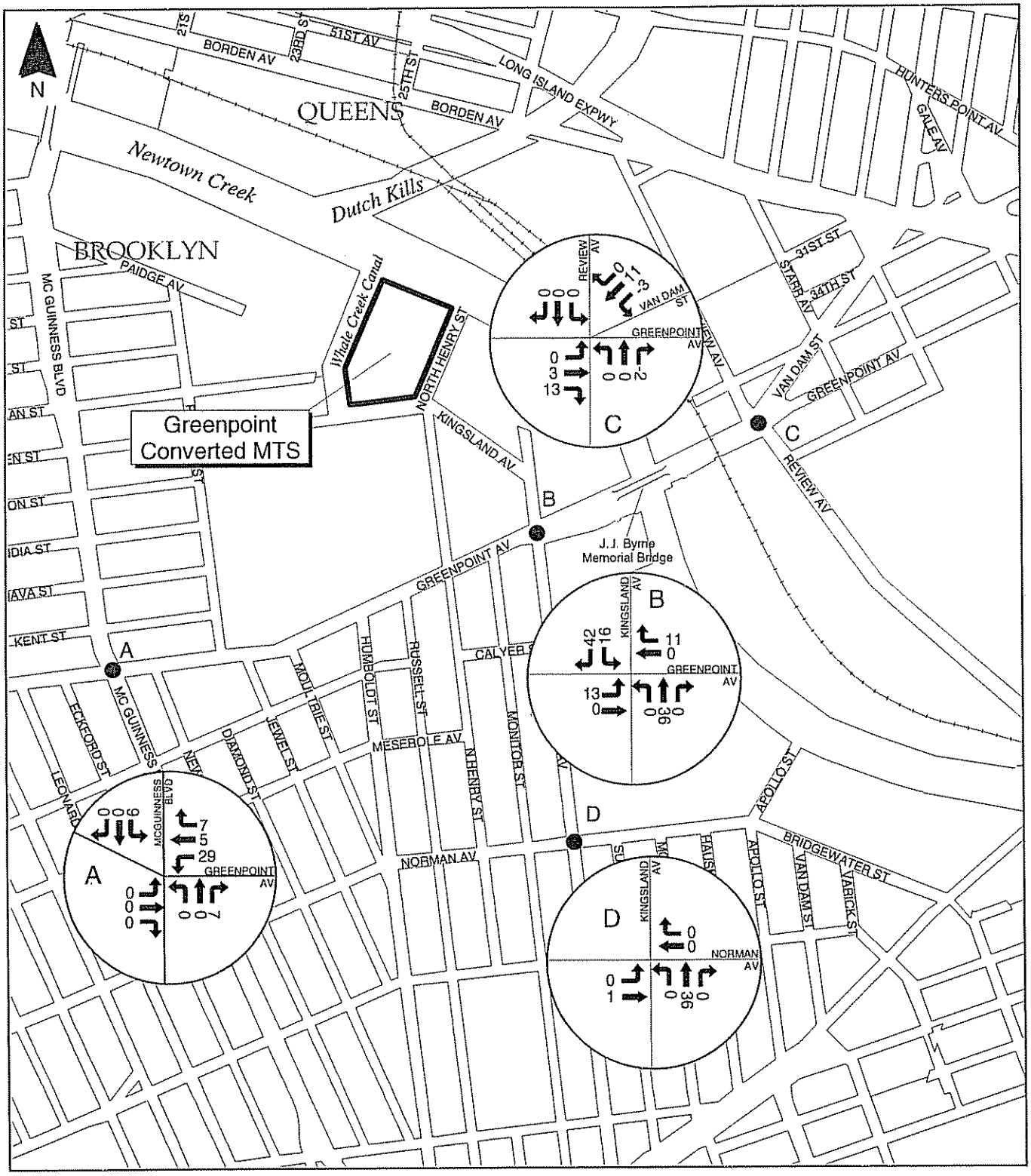
HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 20.14-13 2006 Net Traffic - AM Peak

Greenpoint Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

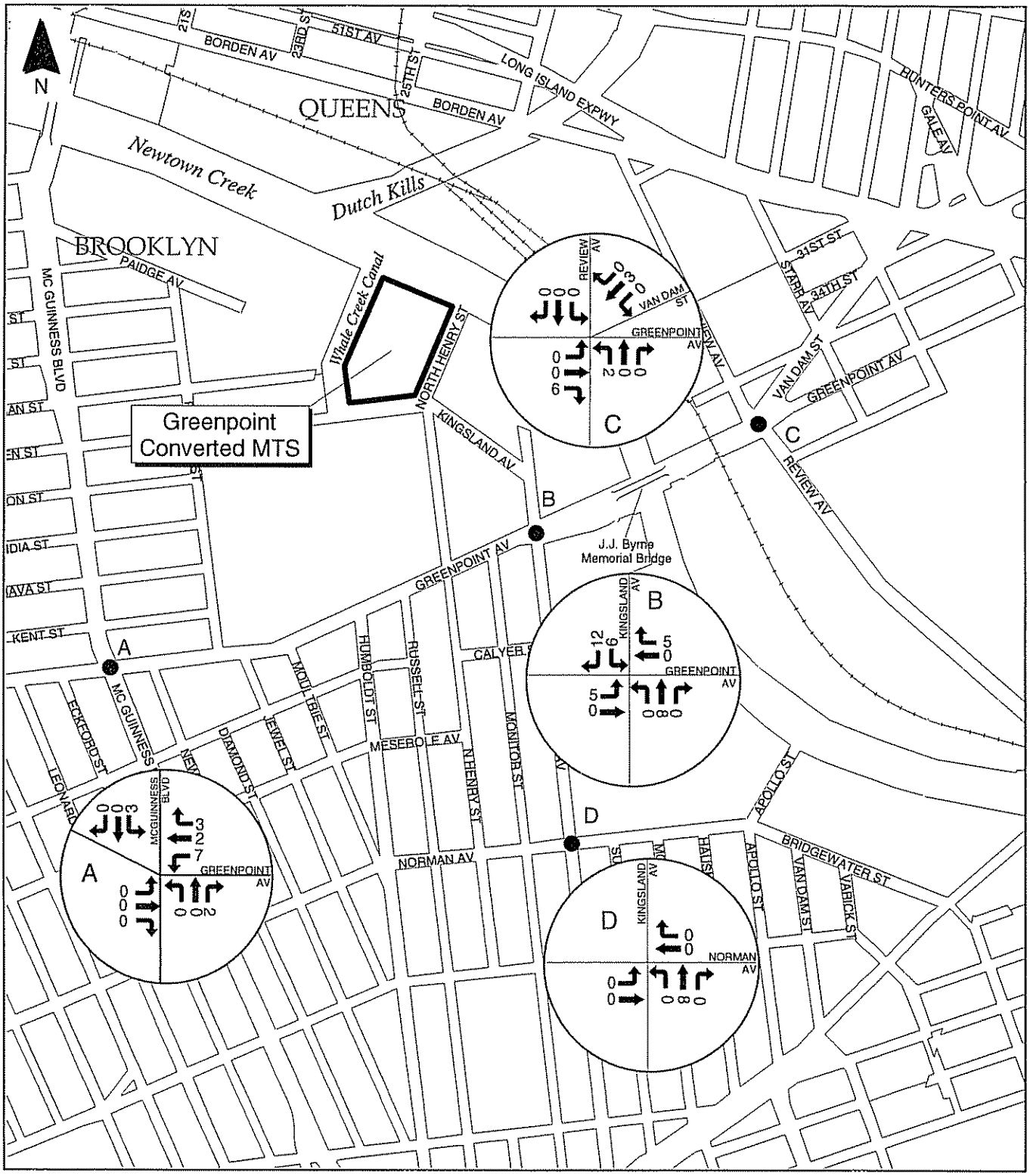
HDR | HydroQual | URBITRAN | PB | EEA | Cambridge Environmental Inc

Figure 20.14-14 2006 Net Traffic - Facility Peak

Greenpoint Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-15 2006 Net Traffic - PM Peak

Greenpoint Converted MTS

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 55% of weekday traffic volumes. Table 20.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Greenpoint Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 20.14-3
Weekday and Weekend Traffic
Greenpoint Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Greenpoint Avenue [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
423	318	29,296	16,171

Note:
[1] EB and WB traffic data collected from ATR counts taken on Greenpoint Avenue between Kingsland Avenue and Monitor Street from September 11 to 17, 2003.

Table 20.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Greenpoint Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The three intersections that may experience potentially significant impacts are discussed in Section 20.14.4.2 and summarized in Table 20.14-5.

20.14.4.2 Impacts and Mitigation

Three of the four intersections may experience impacts great enough to be considered significant during one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines requires mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 20.14-5.

Table 20.14-4
HCM Analysis[1] – 2006 Future Build Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.71	48.3	D	0.75	52.0	D	0.82	56.1	E
WB DFL	0.84	60.8	E	-	-	-	-	-	-
WB TR	0.70	44.9	D	-	-	-	-	-	-
WB LTR	-	-	-	1.23	156.6	F	1.15	125.0	F
NB L	0.16	4.0	A	0.11	3.4	A	0.59	20.1	C
NB TR	0.51	4.8	A	0.42	4.3	A	0.41	4.2	A
SB L	0.22	4.7	A	0.21	4.3	A	0.24	4.6	A
SB TR	0.52	4.9	A	0.43	4.3	A	0.83	10.1	B
OVERALL		16.9	B		40.6	D		29.8	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.54	16.9	B	0.40	14.0	B	0.70	21.9	C
WB TR	0.63	19.2	B	0.42	14.5	B	0.51	15.6	B
SB LTR	0.56	15.0	B	0.37	12.6	B	0.36	12.5	B
OVERALL		16.5	B		13.4	B		16.7	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.47	7.5	A	0.48	7.7	A	0.69	10.0	B
WB TR	0.72	10.1	B	0.59	8.3	A	0.64	9.0	A
NB LTR	0.78	24.9	C	0.56	19.0	B	0.58	19.5	B
SB L	0.57	35.0	C	0.43	23.7	C	0.71	40.5	D
SB R	0.40	19.6	B	0.55	24.1	C	0.24	16.6	B
OVERALL		14.2	B		11.7	B		12.9	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	1.07	60.3	E	0.73	14.3	B	1.01	39.8	D
WB LTR	0.87	19.9	B	0.75	14.8	B	1.12	79.4	E
NB LTR	0.78	22.4	C	0.65	18.7	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERALL		34.6	C		15.8	B		46.5	D

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement

Table 20.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
Greenpoint Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized) – AM Peak									
EB LTR	0.77	53.5	D	0.71	48.3	D	0.59	39.8	D
WB DFL	-	-	-	0.84	60.8	E	0.78	50.7	D
WB TR	-	-	-	0.70	44.9	D	0.60	38.1	D
WB LTR	0.81	48.3	D	-	-	-	-	-	-
NB L	0.16	4.0	A	0.16	4.0	A	0.17	6.3	A
NB TR	0.51	4.8	A	0.51	4.8	A	0.55	7.7	A
SB L	0.19	4.4	A	0.22	4.7	A	0.24	7.7	A
SB TR	0.52	4.9	A	0.52	4.9	A	0.56	7.9	A
OVERALL		16.8	B		16.9	B		16.6	B
Greenpoint Avenue & McGuinness Boulevard (signalized) – Facility Peak									
EB LTR	0.72	49.9	D	0.75	52.0	D	0.62	41.2	D
WB LTR	1.08	99.8	F	1.23	156.6	F	1.09	99.2	F
NB L	0.11	3.4	A	0.11	3.4	A	0.12	5.4	A
NB TR	0.42	4.2	A	0.42	4.3	A	0.45	6.9	A
SB L	0.17	3.9	A	0.21	4.3	A	0.22	6.6	A
SB TR	0.43	4.3	A	0.43	4.3	A	0.45	6.9	A
OVERALL		27.7	C		40.6	D		27.9	C
Greenpoint Avenue & McGuinness Boulevard (signalized) – PM Peak									
EB LTR	0.80	54.5	D	0.82	56.1	E	0.75	49.0	D
WB LTR	1.08	100.0	F	1.15	125.0	F	1.07	94.8	F
NB L	0.59	20.1	C	0.59	20.1	C	0.63	25.3	C
NB TR	0.41	4.2	A	0.41	4.2	A	0.42	5.1	A
SB L	0.23	4.4	A	0.24	4.6	A	0.25	5.6	A
SB TR	0.83	10.1	B	0.83	10.1	B	0.85	12.4	B
OVERALL		25.8	C		29.8	C		26.3	C
Greenpoint Avenue & Kingsland Avenue (signalized) – PM Peak									
EB LT	0.66	9.6	A	0.69	10.0	B	0.71	11.2	B
WB TR	0.63	8.9	A	0.64	9.0	A	0.66	10.1	B
NB LTR	0.56	19.1	B	0.58	19.5	B	0.55	18.2	B
SB L	0.58	30.5	C	0.71	40.5	D	0.67	35.2	D
SB R	0.16	15.4	B	0.24	16.6	B	0.23	15.6	B
OVERALL		11.9	B		12.9	B		13.2	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized) – AM Peak									
EB LTR	1.04	51.2	D	1.07	60.3	E	1.02	43.7	D
WB LTR	0.92	25.0	C	0.87	19.9	B	0.84	16.7	B
NB LTR	0.78	22.4	C	0.78	22.4	C	0.82	24.9	C
SB LTR	0.08	12.1	B	0.08	12.1	B	0.09	12.8	B
OVERALL		32.9	C		34.6	C		28.3	C

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound L = left movement
SB = southbound TR = through right movement
EB = eastbound TR = through right movement
WB = westbound R = right movement

Greenpoint Avenue/McGuiness Boulevard – During the AM peak hour, a potential impact was identified on the westbound approach when the increase in delay created a defacto left movement operating at LOS E with a delay of 67.6 seconds. During the Facility peak hour, the same (westbound) approach is expected to experience an increase in delay from 99.8 seconds to 185.3 seconds (LOS F in both cases). During the PM peak hour, the delay of the westbound approach is expected to increase from 100.0 seconds to 126.0 seconds (LOS F in both cases). During both the AM and Facility peak hours, an increase in green time of five seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay.

This mitigation measure would subtract five seconds from the northbound and southbound approach green time, but would improve the LOS for the westbound approach to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches. During the PM peak hour, an increase in green time of two seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract two seconds from the northbound and southbound approach green time, but would improve the LOS for the westbound approach (again) to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches.

Greenpoint Avenue/Kingsland Avenue – During the PM peak hour, a potential impact was identified on the southbound left movement when the delay increased from 30.5 seconds to 40.5 seconds (LOS C to LOS D).

An increase in green time of one second for the northbound and southbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second of green time from the eastbound and westbound approaches, but would reduce the delay for the southbound left movement from 40.5 seconds to 35.2 seconds. The delay of both the northbound and southbound (right) approaches would decrease by approximately one second. The eastbound and westbound approach delays would increase by approximately one second. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Greenpoint Avenue/Review Avenue/Van Dam Street – During the AM peak hour, a potential impact was identified on the eastbound approach when the delay increased from 51.2 seconds to 60.3 seconds (LOS D to LOS E).

An increase in green time of one second for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second of green time from the northbound and southbound approaches, but would reduce the delay for the eastbound approach from 60.3 seconds to 43.4 seconds. The delay of the westbound approach would decrease by 3.5 seconds. The eastbound and westbound approach delays would increase by 2.5 seconds and 0.7 seconds, respectively. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Overall, the mitigation measures suggested would greatly enhance the intersection performance by reducing the delays to LOSs similar to those under the Future No-Build Condition.

20.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

20.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

20.15 Air Quality

20.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Greenpoint Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersection listed in Section 20.15.4.2.

20.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 20.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 20.15-1
Representative Ambient Air Quality Data
Greenpoint Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	MTA, Flatbush Avenue between Tillary Street and Johnson Avenue	8-Hour	3,436 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}[(2)]	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	51 $\mu g/m^3$	150 $\mu g/m^3$
SO_2[(2)]	Greenpoint	3-Hour	188 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	84 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	18 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1999 calendar year.

20.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

20.15.4 Potential Impacts with the Greenpoint Converted MTS

20.15.4.1 On-Site Analysis

20.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 20.15-2. Figure 20.15-1 shows the locations of these sources within the site.

20.15.2.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 20.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Greenpoint Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 20.15-3, are below the STVs. Based on the results presented in Table 20.15-3, operations at the Greenpoint Converted MTS would not significantly impact air quality in the area.

20.15.2.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 20.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest

Table 20.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
Greenpoint Converted MTS

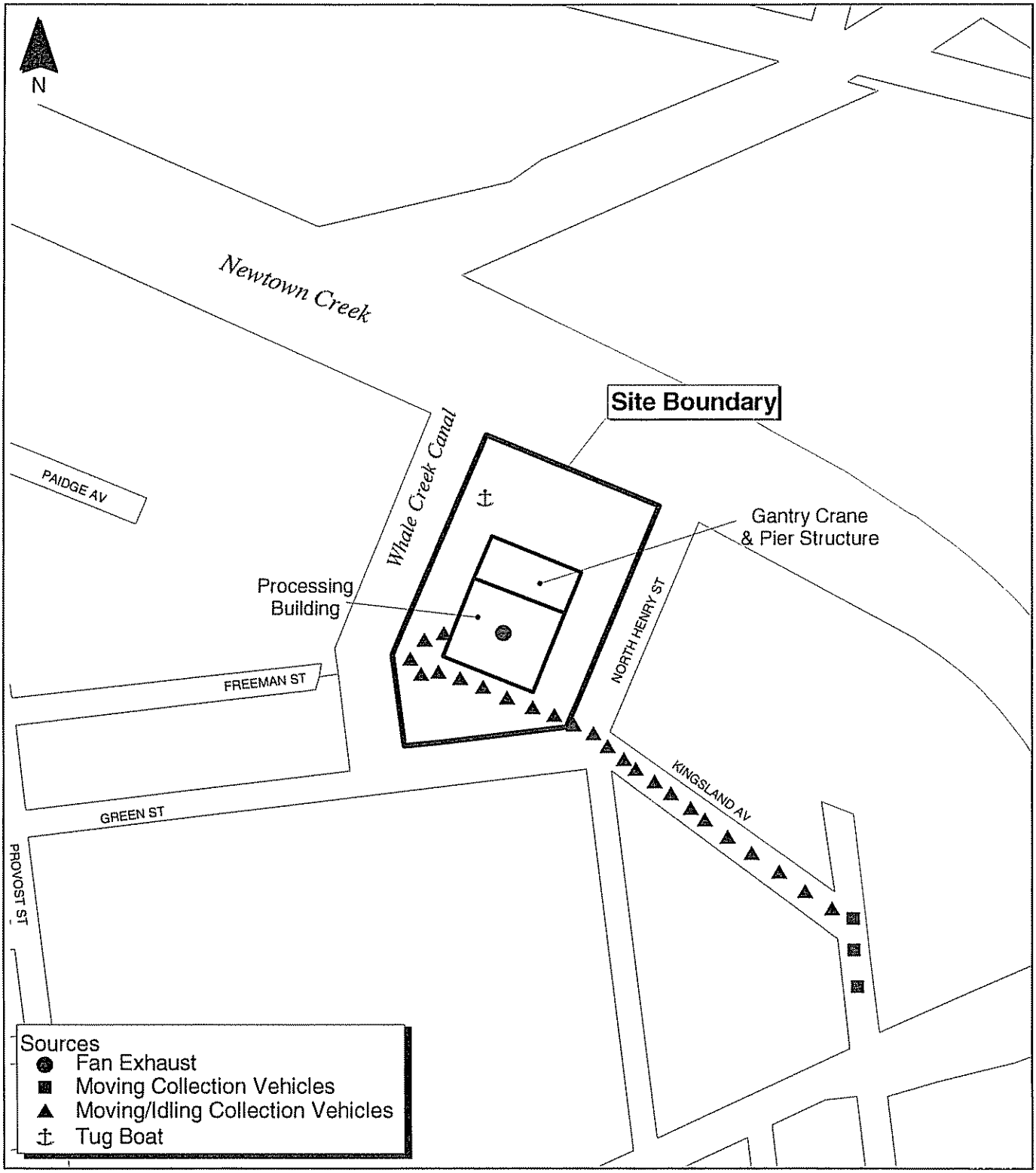
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	10
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	37 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (37), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

HDR HydroQual URBITRAN PB 122 EEA Cambridge Environmental Inc

Figure 20.15-1 On-Site Air Quality Analysis

Greenpoint Converted MTS

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Table 20.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Greenpoint Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	726	~~2,635~~ 3,781	~~3,361~~ 4,507	40,000	NA
	8-hour[6]	302	~~3,322~~ 2,635	~~3,624~~ 2,937	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	11	56	67	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	12	~~57~~ 90	~~69~~ 102	150	NA
	Annual	2	~~23~~ 20	~~25~~ 22	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2.36	NA	NA	NA	5
	Annual Neighborhood Average [5]	0.029[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	143	~~189~~ 186	~~332~~ 329	1,300	NA
	24-hour[6]	11	~~87~~ 107	~~98~~ 118	365	NA
	Annual	2	~~21~~ 18	~~23~~ 20	80	NA

Notes:

[1] The highest estimated pollutant concentrations found at any of the off-site receptor locations.

[2] Background concentrations were obtained from the NYCDEP in ~~April 2003~~memorandum dated February 18, 2005.

[3] NAAQS = National Ambient Air Quality Standard.

[4] Screening threshold value (STV) established by the NYCDEP and NYSDEC.

[5] Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

[6] The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

[7] The 24-hour PM_{10} NAAQS is based on a 99^{th} percentile concentration, which means that the high, 4^{th} high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

Table 20.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Greenpoint Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs)[5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Unit Risk Factors[7] ($\mu g/m^3$)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	5.02E-01	1.30E+03	3.86E-04	3.48E-03	1.30E-01	2.68E-02	3.48E-03	8.30E-06	2.89E-08
2	Formaldehyde	6.34E-01	3.00E+01	2.11E-02	4.40E-03	6.00E-02	7.33E-02	4.40E-03	1.30E-05	5.72E-08
3	1,3 Butadiene	2.10E-02	-	-	1.46E-04	3.60E-03	4.05E-02	1.46E-04	2.80E-04	4.08E-08
4	Acetaldehyde	4.12E-01	4.50E+03	9.16E-05	2.86E-03	4.50E-01	6.36E-03	2.86E-03	2.20E-06	6.29E-09
5	Benzo(a)pyrene	1.01E-04	-	-	7.01E-07	2.00E-03	3.50E-04	7.01E-07	1.70E-03	1.19E-09
Non-Carcinogenic Pollutants[10]										
6	Propylene	1.39E+00	-	-	9.62E-03	3.00E+03	3.21E-06	9.62E-03	NA	NA
7	Acrolein	4.97E-02	1.90E-01	2.62E-01	3.45E-04	2.00E-02	1.72E-02	3.45E-04	NA	NA
8	Toluene	2.20E-01	3.70E+04	5.94E-06	1.53E-03	4.00E+02	3.81E-06	1.53E-03	NA	NA
9	Xylenes	1.53E-01	4.30E+03	3.56E-05	1.06E-03	7.00E+02	1.52E-06	1.06E-04	NA	NA
10	Anthracene	1.01E-03	-	-	6.97E-06	2.00E-02	3.49E-04	6.97E-06	NA	NA
11	Benzo(a)anthracene	9.03E-04	-	-	6.26E-06	2.00E-02	3.13E-04	6.26E-06	NA	NA
12	Chrysene	1.90E-04	-	-	1.32E-06	2.00E-02	6.58E-05	1.32E-06	NA	NA
13	Naphthalene	4.56E-02	7.90E+03	5.77E-06	3.16E-04	3.00E+00	1.05E-04	3.16E-04	NA	NA
14	Pyrene	2.57E-03	-	-	178E-05	2.00E-02	8.91E-04	1.78E-05	NA	NA
15	Phenanthrene	1.58E-02	-	-	1.10E-05	2.00E-02	5.48E-03	1.10E-04	NA	NA
16	Dibenz(a,h)anthracene	3.14E-04	-	-	2.17E-06	2.00E-02	1.09E-04	2.17E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**2.83E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**1.72E-01**	**Total Estimated Combined Cancer Risk**		**1.34E-07**
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold[11]**		**1.0E+00**	**Cancer Risk Threshold[11]**		**1.0E-06**

Notes to Table 20.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Greenpoint Converted MTS are not considered to be significant.

20.15.4.2 Off-Site Analysis

20.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other collection agency's collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

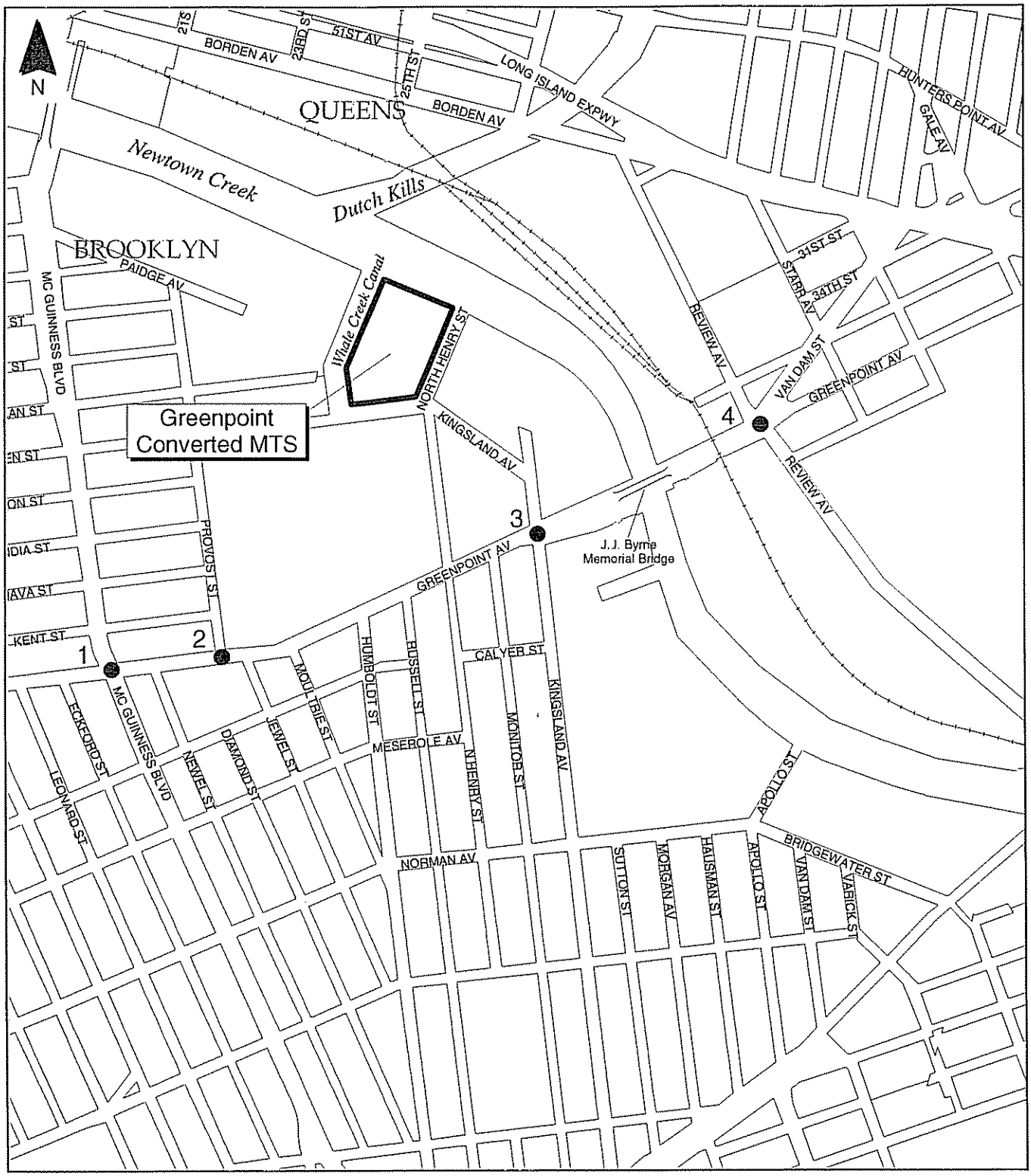
- The intersections of Kingsland Avenue at Greenpoint Avenue and Kingsland Avenue at Norman Avenue to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO "de minimus" value or a violation of the 8-hour NAAQS;
- The intersections of Kingsland Avenue at Greenpoint Avenue, Kingsland Avenue at Norman Avenue, Greenpoint Avenue at Review Avenue and Van Dam Street, and Greenpoint Avenue at McGuiness Boulevard and Provost Street to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- The intersections of Kingsland Avenue at Greenpoint Avenue, Kingsland Avenue at Norman Avenue, Greenpoint Avenue at Review Avenue and Van Dam Street, and Greenpoint Avenue at McGuiness Boulevard and Provost Street to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 20.15-2.

20.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 20.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or "de minimus" impact values (for CO) with the exception of the annual $PM_{2.5}$ neighborhood STV at the intersection of Kingsland Avenue at Greenpoint

Avenue. However, it should be noted that the off-site air analysis at this intersections as performed using a conservative Tier I approach which assumes peak hour conditions for every hour of the day. If a Tier II approach was performed for the annual $PM_{2.5}$ neighborhood analyses, the concentrations reported in Table 20.15-5 would decrease by as much as 40%, thereby bringing the results below the STV. In addition, a precipitation factor adjustment could be applied to Equation 1 in Section 13.2.1.3 of AP-42 used to determine the $PM_{2.5}$ emission factors. This factor assumes that annual average emissions are inversely proportional to the frequency of measurable (>0.01 inch) precipitation. Applying the precipitation factor to the off-site annual $PM_{2.5}$ neighborhood analysis would further decrease the concentrations reported in Table 20.15-5. —Therefore, the off-site operations of the Greenpoint Converted MTS, ~~therefore,~~ are not considered to be significant.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 20.15-2 Off-Site Air Quality Intersections Studied Greenpoint Converted MTS

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Table 20.15-5
Estimated Pollutant Concentrations Near Selected Roadway Intersections
Greenpoint Converted MTS

Air Quality Receptor Site	CO	PM_{10}		$PM_{2.5}$					
				24 -hrs			Annual Neighborhood		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Kingsland Avenue, Greenpoint Avenue & Norman Avenue									
Existing Conditions	5.2	137	40						
Future No-Build Conditions	4.8	138	40						
Future Build Conditions	4.9	138	40						
Future Build Incremental				0.22	0.70	0.92	0.029	0.05[6]	0.079
Greenpoint Avenue, Review Avenue & VanDam Street									
Existing Conditions	NA[5]	148	46						
Future No-Build Conditions	NA[5]	135	37						
Future Build Conditions	NA[5]	136	37						
Future Build Incremental				0.13	0.30	0.43	0.029	0.07	0.099
Greenpoint Avenue, McGuiness Boulevard & Provost Street									
Existing Conditions	NA[5]	137	37						
Future No-Build Conditions	NA[5]	138	37						
Future Build Conditions	NA[5]	139	38						
Future Build Incremental				0.13	0.50	0.63	0.029	0.05	0.079

Notes for Table 20.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8 hr CO = 2.3 ppm; 24-hr PM_{10} = ~~57~~ 90 $\mu g/m^3$; Annual PM_{10} = ~~23~~ 20 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(5) Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

(6) The result of a Tier I analysis for this intersection (0.13$\mu g/m^3$) which assumed that peak period project traffic occur every hour of a 24-hour analysis period, was multiplied by a conservative ratio (0.40) of peak period project-induced traffic to average project-induced traffic to approximate the Tier II result (0.05$\mu g/m^3$).

ppm: parts per million

$\mu g/m^3$: microgram per cubic meter

NA = Not Applicable

20.16 Odor

20.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the apartment building located on Van Dam Street southwest of the LIE, approximately 1,188 feet away from the site boundary.

20.16.2 Future No-Build Conditions

No additional odor-producing sources are anticipated in the vicinity of the Greenpoint Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

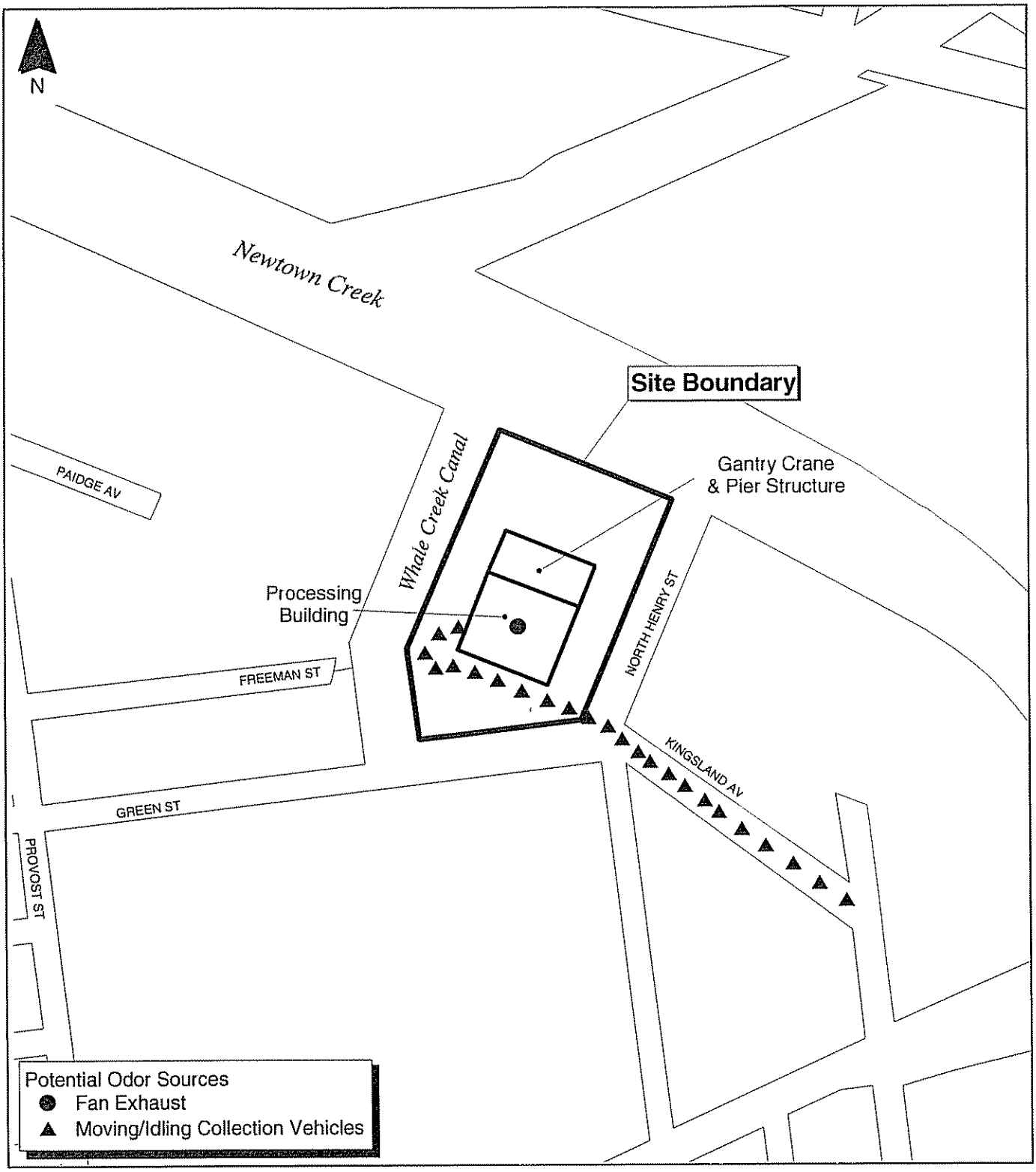
20.16.3 Potential Impacts with the Greenpoint Converted MTS

20.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Greenpoint Converted MTS are provided in Table 20.16-1. Figure 20.16-1 shows the locations of these sources within the site.

Table 20.16-1
Odor Sources Included in Odor Analysis
Greenpoint Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection Vehicles	38



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 20.16-1 Potential Odor Sources

Greenpoint Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Greenpoint Converted MTS.

20.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 20.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Greenpoint Converted MTS at any nearby sensitive receptor is less than 1, so odors from the Greenpoint Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 20.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Greenpoint Converted MTS

Parameter	Resulting Odor Unit [1]
Estimated Detectable Concentration	5.0
Highest Result	0.35
Type of Receptor	Fence Line Receptor
Location of Receptor	Site Boundary
Closest Sensitive Receptor Result [2]	0.03
Type of Receptor	Apartment Building
Distance to Receptor	2,498 Feet

Notes:
[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
[2] Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

20.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Greenpoint Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

20.17.1 Existing Conditions

20.17.1.1 Introduction

Figure 20.17-1 shows the location of the Greenpoint Converted MTS, the surrounding area and points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building on Van Dam Street southwest of the LIE, approximately 761 meters (2,498 feet) from the Greenpoint Converted MTS property line.

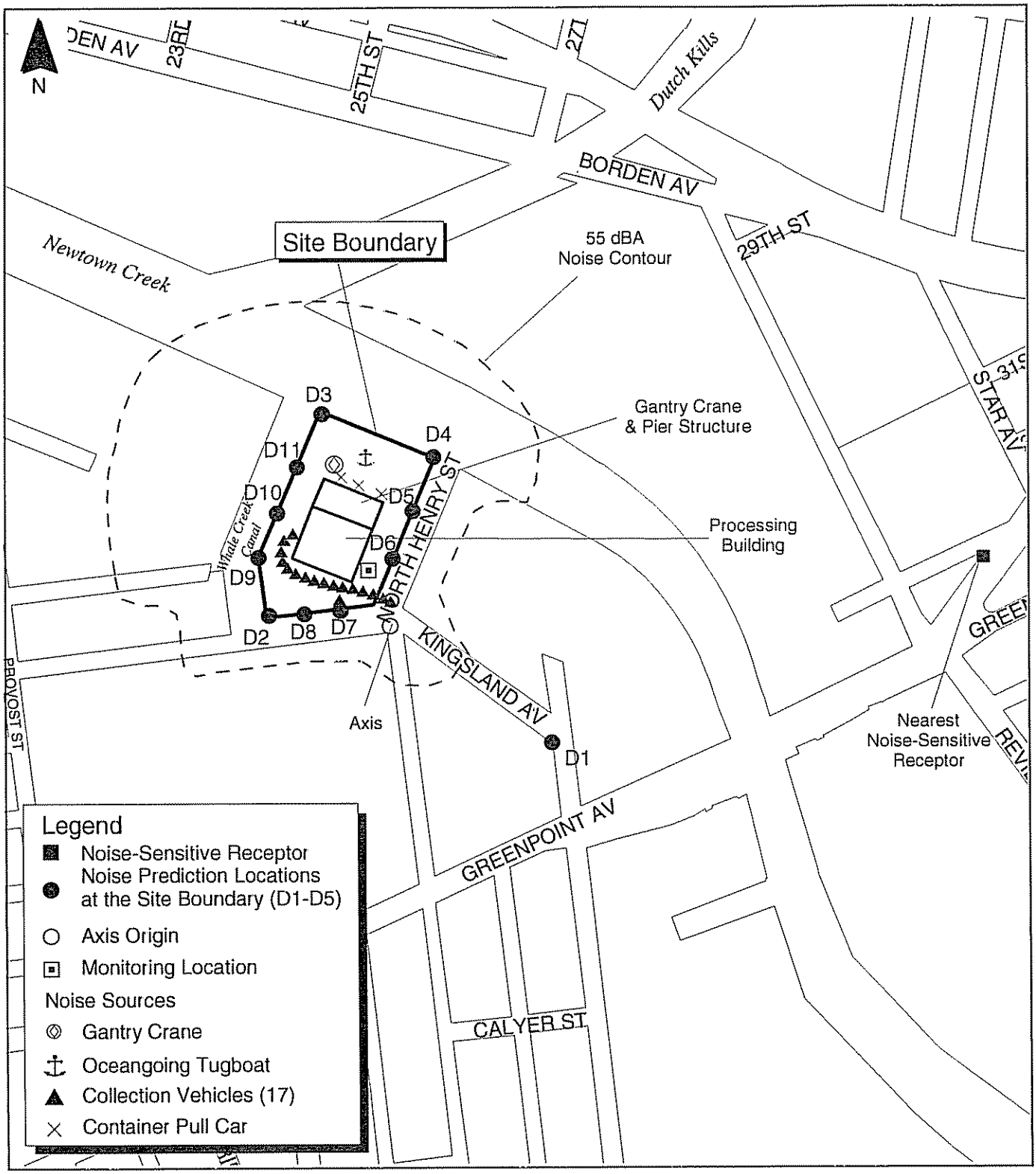
20.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[14] and the statistical metrics of L_{10}, L_{50} and L_{90}.[15] Table 20.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 65.9 dBA on January 10, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Heavy truck traffic in the area;
- Boat traffic on Newtown Creek;
- Construction at the Newtown Creek WPCP; and
- Train traffic on LIRR tracks.

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[14] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[15] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 20.17-1 Noise Sources and Receptors

Greenpoint Converted MTS

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Table 20.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Greenpoint Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
3:00-4:00 p.m.	75.4	70.4	73.7	78.0	67.7	93.9
4:00-5:00 p.m.	72.0	68.2	70.1	75.0	66.3	82.8
5:00-6:00 p.m.	69.8	67.2	68.8	71.5	65.8	82.5
6:00-7:00 p.m.	70.3	67.3	69.3	72.8	65.8	81.8
7:00-8:00 p.m.	70.9	67.9	70.1	73.2	66.0	80.9
8:00-9:00 p.m.	68.6	66.2	68.2	70.6	64.0	76.3
9:00-10:00 p.m.	70.0	64.7	68.7	72.6	61.6	87.7
10:00-11:00 p.m.	68.6	63.4	65.8	71.3	61.7	84.7
11:00 p.m.-12:00 a.m.	70.6	64.5	68.2	73.1	62.1	86.8
12:00-1:00 a.m.	71.4	66.6	70.1	74.0	62.2	83.7
1:00-2:00 a.m.	67.1	62.1	66.0	69.8	60.5	79.4
2:00-3:00 a.m.	65.9	61.1	63.0	68.5	59.5	80.9
3:00-4:00 a.m.	74.7	62.4	66.6	74.1	59.9	98.4
4:00-5:00 a.m.	74.6	63.9	69.8	78.6	60.5	90.9
5:00-6:00 a.m.	72.6	65.1	69.5	75.9	62.1	89.5
6:00-7:00 a.m.	74.3	70.0	72.8	77.0	66.8	86.1
7:00-8:00 a.m.	76.0	71.7	74.3	78.7	69.6	89.6
8:00-9:00 a.m.	76.1	71.3	74.8	78.5	69.1	91.8
9:00-10:00 a.m.	79.8	70.4	73.9	82.4	68.2	99.9
10:00-11:00 a.m.	83.0	73.3	78.8	86.7	69.3	99.2
11:00 a.m.-12:00 p.m.	83.5	72.6	78.6	86.6	69.6	102.7
12:00-1:00 p.m.	80.2	71.9	76.9	83.6	68.4	94.1
1:00-2:00 p.m.	76.9	70.7	74.1	80.1	68.1	93.4
2:00-3:00 p.m.	76.3	69.9	73.1	79.4	67.5	90.8

Note:
[1] The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

20.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of noise from the existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the facility-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Therefore, off-site noise monitoring was not conducted.

20.17.2 Future No-Build Conditions

20.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

20.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 20.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 20.17-2
Off-Site Noise Traffic Volume
Greenpoint Converted MTS

Location	Hour	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
Greenpoint Avenue east of McGuiness Boulevard	2:00 a.m.	88	92
Greenpoint Avenue east of McGuiness Boulevard	10:00 a.m.	766	797
Greenpoint Avenue east of Kingsland Avenue	2:00 a.m.	152	159
McGuiness Boulevard north of India Street	2:00 a.m.	39	40

Notes:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

20.17.3 Potential Impacts with the Greenpoint Converted MTS

20 17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Greenpoint Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analyses are shown in Table 20.17-3. Spectral noise levels used in the Performance Standards analysis are shown in Table 20.17-4. The number and types of equipment assumed for this analysis were based on the Greenpoint Converted MTS's peak design capacity. Shown earlier, Figure 20.17-1 indicates the Greenpoint Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 20.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Greenpoint Converted MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA) [2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1) [3]	67
Harbor Tug Boat (1) [4]	69
Moving/Queuing DSNY Collection Vehicles (17) [5]	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.
(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the converted MTS's.
(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the converted MTS's.
(5) Quantity includes one truck queuing on the outbound scale.

Table 20.17-4
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
Greenpoint Converted MTS

Equipment Name (quantity) [1],[2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [4]	78	81	78	71	66	60	55	55

Notes:

[1] Instantaneous maximum number of pieces of equipment on site at any given time.

[2] Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.

[3] Noise level representative of each piece of equipment.

[4] Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTS's.

Hz = Hertz

K = Thousand

20.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Greenpoint Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 62 meters (203 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 761 meters (2,498 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 20.17-1); therefore, an on-site noise analysis, including noise monitoring, was not required.

20.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the Greenpoint Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 20.17-5). Based on this analysis, ~~no~~ exceedances to the Performance Standards are predicted.

Table 20.17-5
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
Greenpoint Converted MTS

Manufacturing District Regulation (M3)								
Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Threshold	79	74	69	63	57	52	48	45
Total Lp dB: D1	73.8	68.2	58.2	52.3	44.7	36.1	26.7	22.8
Total Lp dB: D2	61.8	57.6	51.1	44.4	38.2	31.1	23.8	21.2
Total Lp dB: D3	65.0	62.8	58.2	51.3	45.7	39.1	32.7	31.0
Total Lp dB: D4	67.3	64.3	59.1	52.2	46.6	39.9	33.9	32.8
Total Lp dB: D5	71.2	67.8	62.2	55.4	49.8	43.2	37.8	37.5
Total Lp dB: D6	80.5	75.0	65.3	59.3	51.9	43.7	36.3	35.6
Total Lp dB: D7	74.7	69.2	59.6	53.5	46.2	37.9	29.2	25.8
Total Lp dB: D8	63.5	59.0	52.1	45.4	39.2	32.0	24.7	22.2
Total Lp dB: D9	69.3	65.2	58.9	52.2	46.2	39.3	32.4	30.2
Total Lp dB: D10	71.1	67.6	62.0	55.2	49.5	42.9	36.6	35.2
Total Lp dB: D11	67.7	65.5	61.0	54.0	48.6	42.1	36.0	34.8

Notes:
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
D1 through D11 are the points representative of the Greenpoint Converted MTS boundary that are used in all noise analyses.
K = Thousand

20.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Greenpoint Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 20.17-6. Based on this analysis, the total L_{eq} does ~~not~~ exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 20.17-6
Current Noise Code Analysis
Greenpoint Converted MTS

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	~~59.0~~ 71.6
D2	~~66.8~~ 66.2
D3	~~64.4~~ 62.8
D4	~~63.6~~ 60.0
D5	62.9
D6	64.65
D7	**71.1**
D8	64.0
D9	**72.4**
D10	68.4
D11	64.8

Notes:
[1] D1 through D11 are the points representative of the Greenpoint Converted MTS boundary that are used in all noise analyses.
Bold=Exceedence

20.17.3.5 Mitigation Measures

Mitigation measures available were limited to those that affect the source, the propagation path or the receiver. The typical mitigation measure for the path of noise between source and receiver is a noise wall. Noise walls can be designed to provide noise attenuation for noise-sensitive areas located relatively close to the wall. Noise attenuation provided by the wall decreases as distance from the wall increases. Receiver treatments may include the construction of noise walls at residential property lines or the installation of replacement windows and air conditioning. The latter two mitigation measures are suggested in the 2001 CEQR Technical Manual. Typical mitigation measures at the source include: (1) changes in operations schedules to reduce noise emissions; (2) reduction in DSNY collection vehicles; (3) using noise mufflers for the exhaust pipes of material handling equipment (e.g., side loaders, yard tractors, etc.) or other source noise reduction methods; and (4) maintaining the equipment through regularly scheduled maintenance and repairs.

The data presented in this section is for the analysis to date. If the Greenpoint Converted MTS is included in the New SWMP, a supplemental analysis will be performed.

20.17.3.~~5~~6 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Greenpoint Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 20.17-7.

Because the screening results presented below showed that the PCEs would not double on a roadway due to DSNY and other agency collection vehicles coming to or going from the Greenpoint Converted MTS, a detailed off-site noise analysis was not required.

20.17.3.~~6~~7 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Greenpoint Converted MTS, neither the on- or the off-site noise analyses were required; therefore, a combined noise analysis was not performed.

Table 20.17-7
Off-Site Noise Screening Results
Greenpoint Converted MTS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Greenpoint Avenue east of McGuiness Boulevard	2:00 a.m.	1,132	13	0	611	1,743	No
Greenpoint Avenue east of McGuiness Boulevard	10:00 a.m.	5,644	46	0	2,162	7,806	No
Greenpoint Avenue east of Kingsland Avenue	2:00 a.m.	1,891	11	0	517	2,408	No
McGuiness Boulevard north of India Street	2:00 a.m.	161	3	0	141	302	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include Greenpoint Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

20.18 Commercial Waste to the Greenpoint Converted MTS

20.18.1 Existing Conditions

No commercial waste is delivered to the Greenpoint MTS site under Existing Conditions. Commercial waste generated in Brooklyn is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

20.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the Greenpoint Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

20.18.3 Potential Impacts of Sending Commercial Waste to the Greenpoint Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

20.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the Greenpoint Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 20.15, 20.16 and 20.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

20.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the Greenpoint Converted MTS were evaluated in Sections 20.14, 20.15 and 20.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 20.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 61 (inbound trip ends) per hour, which occurred during the AM peak. These 61 DSNY and other agency collection vehicles are also more than the 24 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the Greenpoint Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 61 DSNY and other collection agency vehicle trip ends at the Greenpoint Converted. Therefore, the addition of the 24 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the Greenpoint Converted MTS during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 61 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 61 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts. Consequently, because the 24 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can be processed at the Greenpoint Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the Greenpoint Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,145 tons (or 109 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

CHAPTER 21 ENVIRONMENTAL REVIEW: WEST 135TH STREET CONVERTED MTS

21.1 Introduction

The results of the environmental analyses of the West 135th Street Converted MTS are presented in the following sections:

21.2 Land Use, Zoning, and Public Policy
21.3 Socioeconomic Conditions
21.4 Community Facilities and Services
21.5 Open Space
21.6 Cultural Resources
21.7 Urban Design, Visual Resources, and Shadows
21.8 Neighborhood Character
21.9 Natural Resources
21.10 Hazardous Materials
21.11 Water Quality
21.12 Waterfront Revitalization Program
21.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
21.14 Traffic, Parking, Transit, and Pedestrians
21.15 Air Quality
21.16 Odor
21.17 Noise
21.18 Commercial Waste to the West 135th Street Converted MTS

Section 2.4.3 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

21.2 Land Use, Zoning, and Public Policy

21.2.1 Existing Conditions

21.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 21.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 21.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.3 provides information on existing land uses and operations on the site.

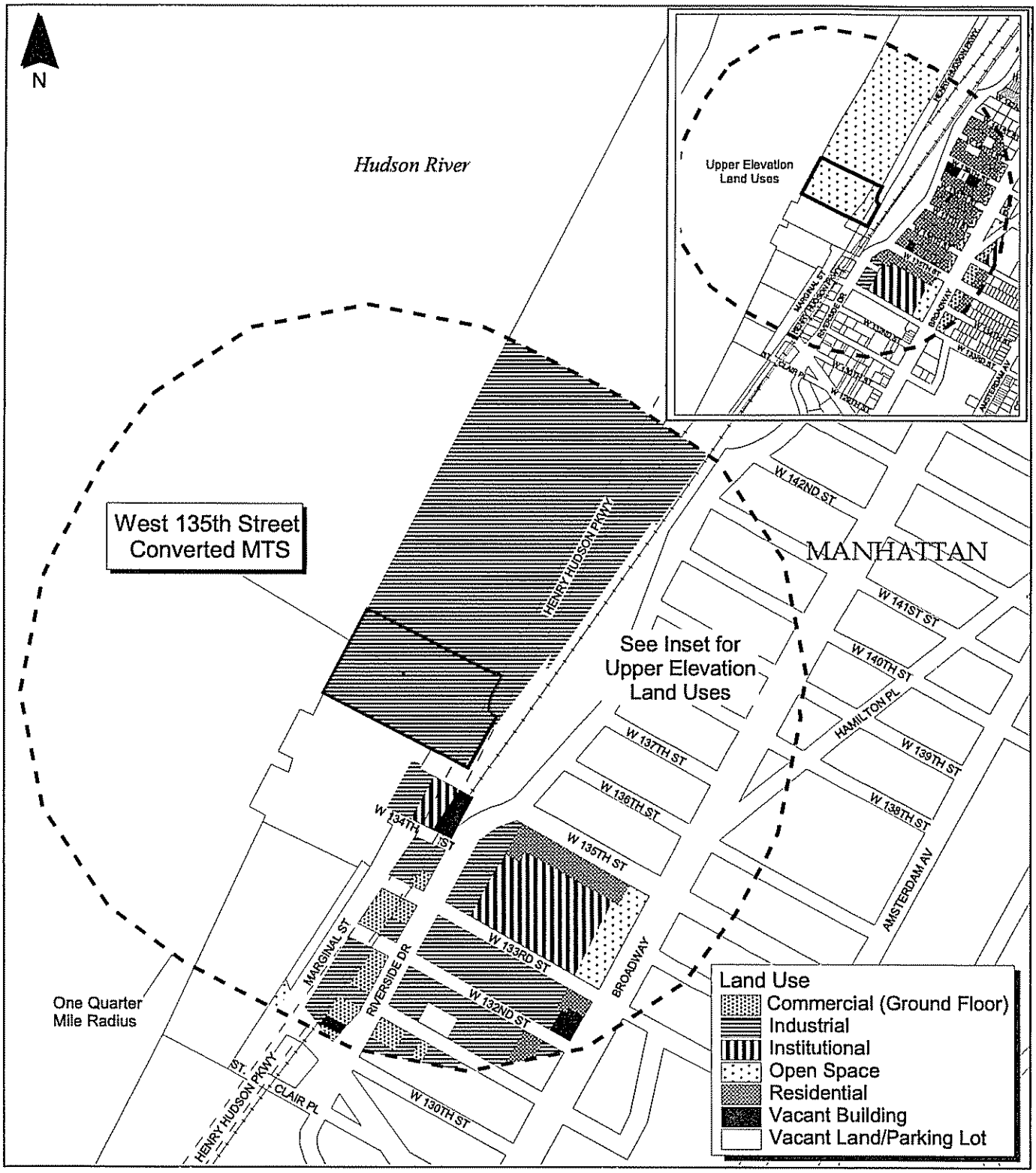
21.2.1.2 Land Use Patterns

21.2.1.2.1 General Context

Set in the larger context of Manhattan's Upper West Side and Hudson River waterfront, the site is surrounded by a variety of land uses in the immediate area, including primarily water-dependent municipal uses, parks and recreational areas and transportation infrastructure.

21.2.1.2.2 Land Uses in the Primary Study Area

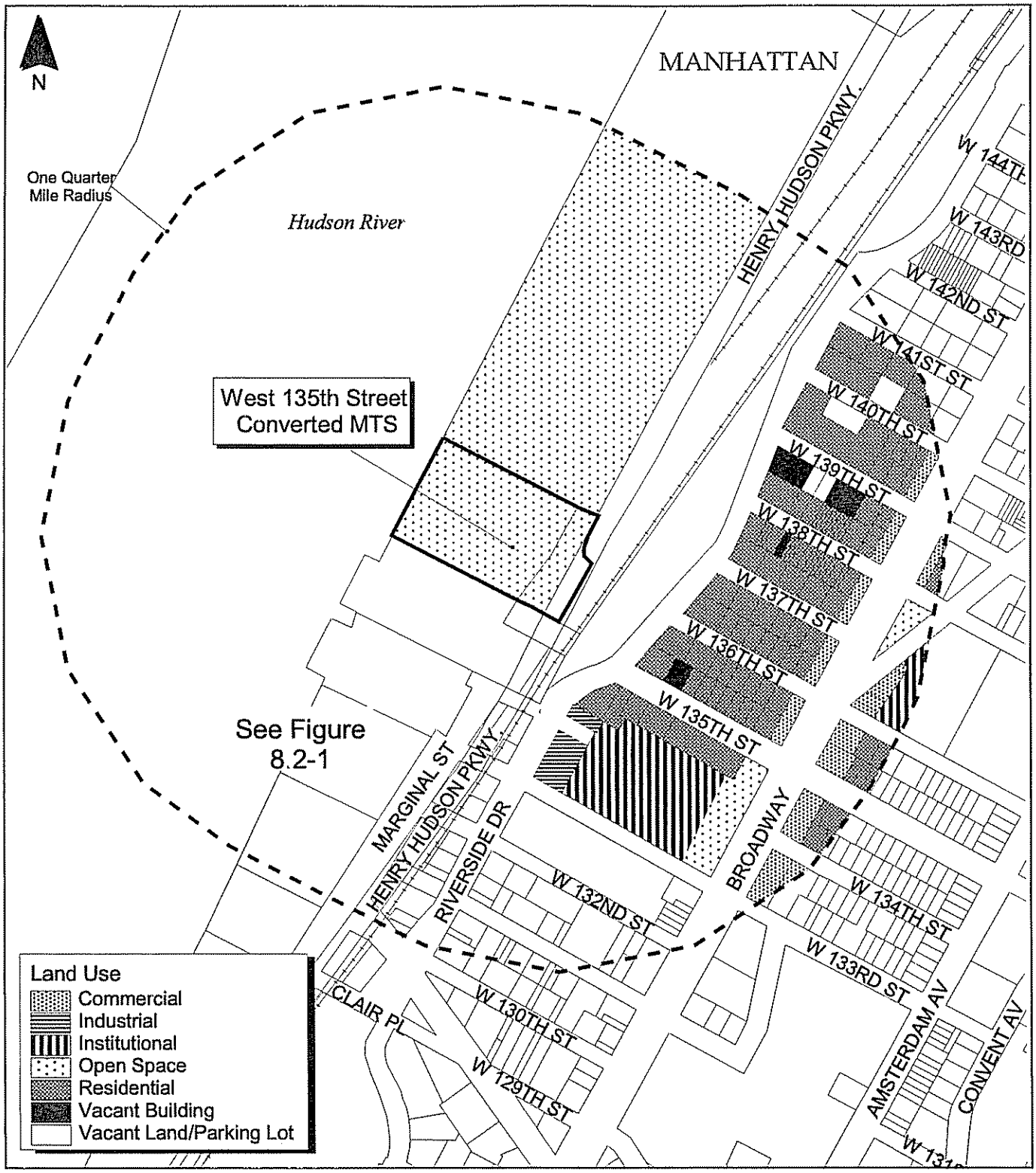
Two major roadways, the Henry Hudson Parkway and Riverside Drive, separate the site from upland elevated areas to the east by providing a buffer of about 450 feet between the site and residential uses. In addition, these residential upland areas sit at a higher elevation than the site and do not have direct access to it via the cross streets. Most streets around the site are dead-end or one-way and directed away from the site. Essentially, the only way to access the site is to approach West 135th Street from the south via Twelfth Avenue, which runs between St. Clair Place and 137th Street under Riverside Drive.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

Figure 21.2-1 Land Use in the Primary Study Area
Lower Elevation
West 135th Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominate land uses by lot in the primary study area (upper elevation).

300 0 300 Feet

Figure 21.2-2 Land Use in the Primary Study Area
Upper Elevation
West 135th Street Converted MTS

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Immediately north of and adjacent to the site is the City's North River WPCP between West 135th and West 145th Streets, upon which Riverbank State Park is located. The park is an active recreation facility encompassing 28 acres of playing fields and courts, a café, cultural center and amphitheater. (See Section 21.5 for more detail on the park.) Adjacent to the WPCP, at grade level below the Henry Hudson Parkway, is a staging area used by the NYCDEP for ongoing construction at the plant. A variety of other uses are also below the parkway, including the 26th Precinct Police Station at West 135th Street, various warehouses, vacant buildings and commercial establishments. Immediately to the south of the site is a Consolidated Edison natural gas pumping facility.

A narrow portion of Riverside Park runs just to the east of the site, along the western edge of Riverside Drive and at the same elevation as Riverside Drive and the residential area adjacent to it.

The undeveloped piers and shore area south of the site located between West 125th and West 133rd Streets, known as "Harlem Piers," are publicly owned property currently used as informal public waterfront access and the subject of a current NYCEDC redevelopment plan.

East of Riverside Drive, the primary study area is almost entirely residential. These upland areas are comprised of apartment buildings generally six to seven stories tall, except for River View Towers on Riverside Drive north of West 139th Street, which is 24 stories tall. Toward the southern portion of the primary study area, particularly around Broadway, there are ground-level commercial uses and various automotive repair, garage and warehouse storage spaces on the cross streets, including NYCT's Manhattanville Bus Depot (between West 132nd and West 133rd Streets).

21.2.1.2.3 Land Uses in the Secondary Study Area

Land use in the secondary study area is generally characterized as residential, with related uses such as schools, churches and libraries, and commercial uses along Broadway and Amsterdam Avenue, the north-to-south arteries. City College, located east of the site on Amsterdam Avenue,

covers the area along the eastern perimeter of the secondary study area from about West 130th to West 140th Streets. Grant's Tomb, a national landmark and tourist attraction, is located south of the secondary study area at West 122nd Street and Riverside Drive.

21.2.1.3 Zoning On and Near the Site

21.2.1.3.1 Zoning Within the Primary Study Area

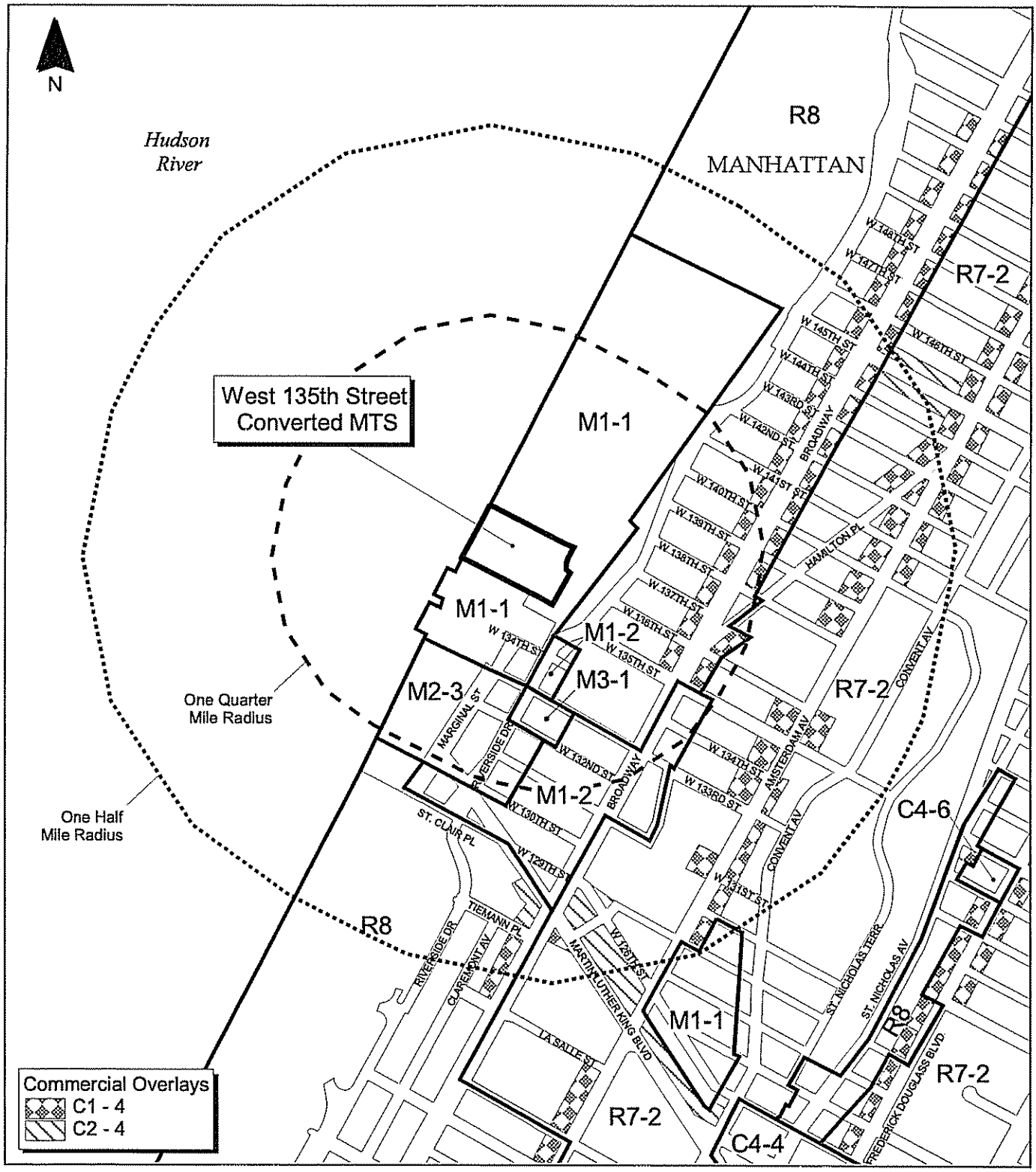
The site is located within an M1-1 zoning district, which extends along the waterfront from West 133rd to West 145th Streets and includes the North River WPCP and Riverbank State Park atop it. The remainder of the primary study area to the east of the Henry Hudson Parkway is zoned for high-density residential development (R8), with a commercial overlay along Broadway. The nearest residentially zoned area is approximately 220 feet from the site. Manufacturing zones cover the waterfront north and south of the site. (See Figure 21.2-3 and Table 3.4-1: Zoning District Characteristics.).

21.2.1.3.2 Zoning Within the Secondary Study Area

The shoreline areas north of the site within the secondary study area are zoned for industrial uses as far north as 145th Street. The manufacturing zoning continues into the secondary study area south of the site to about St. Clair Place and inland to include the area around the intersection of Broadway and West 132nd Street. The remainder of the secondary study area is zoned for residential use with commercial overlay zoning along Broadway and Amsterdam Avenue.

21.2.1.4 Plans and Policies

As described in NYCDPR's Comprehensive Manhattan Waterfront Plan (CMWP) (197-a Plan), Harlem Piers is the site of potential future mixed-use development, where interim improvements to bulkhead and areas along Marginal Street should be coordinated with DSNY to minimize pedestrian-vehicular conflicts. (See Section 21.5 for details on NYCDPR park plans and Section 21.12 for a review of consistency with the WRP.)



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.2-3 Zoning

West 135th Street Converted MTS

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The CMWP recommends that NYCDEP's construction staging area be used "at least in part" to provide access between Riverside Park North and the proposed Harlem Piers. The plan also recommends extending public bus service to Riverbank State Park. Additionally, the CMWP recommends designating the northern portion of the park as a scenic landmark.

The NYCEDC prepared the West Harlem Master Plan, a master plan for the area extending from about St. Clair Place/West 125th Street to West 133rd Street and from the east side of Broadway west to the Hudson River, including the site of the West 135th Street Converted MTS (published in August 2002). The plan suggests three redevelopment components: the transportation system serving the waterfront, transportation, and upland development. Potential transportation improvements include an intermodal center, off-street parking improvements, reconfiguration of the Henry Hudson Parkway ramps and streetscape improvements. The intermodal center would be located between St. Clair Place and West 125th Street, west of Twelfth Avenue, and could include a new Metro-North station (currently being considered by MTA as part of the Penn Station Access Study), as well as provide for bus and ferry connections. The intermodal center is portrayed as the key to making West Harlem a regional attraction.

In the waterfront parcel just west and north of the proposed intermodal center, multi-use recreational activities are envisioned, while upland development largely through infill is expected to occur as a result of proposed infrastructure improvements and potential zoning changes.

Development of the Harlem Piers area is recommended as part of the CMWP and the New WRP. As specified by the Plan for the Manhattan Waterfront, a focus of this development is pedestrian planning and ensuring pedestrian and bikeway connectivity along the Hudson River near the proposed intermodal center; however, while the Harlem Piers development project is planned for completion by 2006, the timeframe for development of the intermodal center and other recreational facilities is not yet known.

CD 9, in its CDNS (FY 2004), is organized to emphasize the primary concerns for promoting an improved quality of life and advancing the economic development of the community. To this end, the CDNS refers to the Harlem Piers area as the last remaining opportunity for community

development and supports the notion of developing the area as a means of providing jobs and open space/waterfront access. Otherwise, the CDNS makes no reference to the site or its immediate environs. The Community Board's goals for the district are to see their prepared 197-a plan through approval and implementation, and to work to improve the quality of housing in the area.

The Frederick Douglass Boulevard Rezoning Study, also conducted by NYCDCP, makes recommendations in four categories: housing stock, quality of urban fabric, Frederick Douglass Boulevard image, and the development of public space. This proposed zoning map amendment would affect 44 blocks in south-central Harlem, and aims to balance growth and preservation in the residential core. The area to be rezoned is generally bounded by Central Park North, West 124th Street, Morningside Avenue and Adam Clayton Powell Boulevard, about one mile from the site.

Of particular interest is the proposed Hudson River Valley Greenway to be developed under the act of the same name. The goal of this act is to provide a continuous waterfront pathway from Albany to Battery Park in lower Manhattan. Currently, there is a "gap" between West 125th Street and West 135th Street. An interim pedestrian and bicycle route connection is currently provided on street until a formal connection can be developed. The driveway to the existing MTS at West 135th Street presents a cross-traffic obstacle to pedestrians and bicyclists traveling on the interim route. According to the Greenway Plan for New York City: Greenway Map, NYCDCP, 1996, this route includes an on-street path following St. Nicholas Avenue along St. Nicholas Park. The more recent New York City Cycling Map (2002) shows proposed on-street routes near the site along Convent Avenue, West 125th Street, West 120th Street and Twelfth Avenue where an off-street path is also proposed (to be part of a Hudson River Greenway route).

21.2.2 Future No-Build Conditions

According to NYCEDC, the Harlem Piers redevelopment (the waterfront component of the West Harlem Master Plan) will be completed by 2006. Current designs show that the Harlem Piers will include a park and wharf along the water's edge, a covered market square and a 10,000-square-foot multi-use structure at the western end of the piers site that could include retail and restaurant uses, as well as cultural and visitor's centers. Certain streetscape improvements are also planned, such as wider sidewalks, new street plantings and street art.

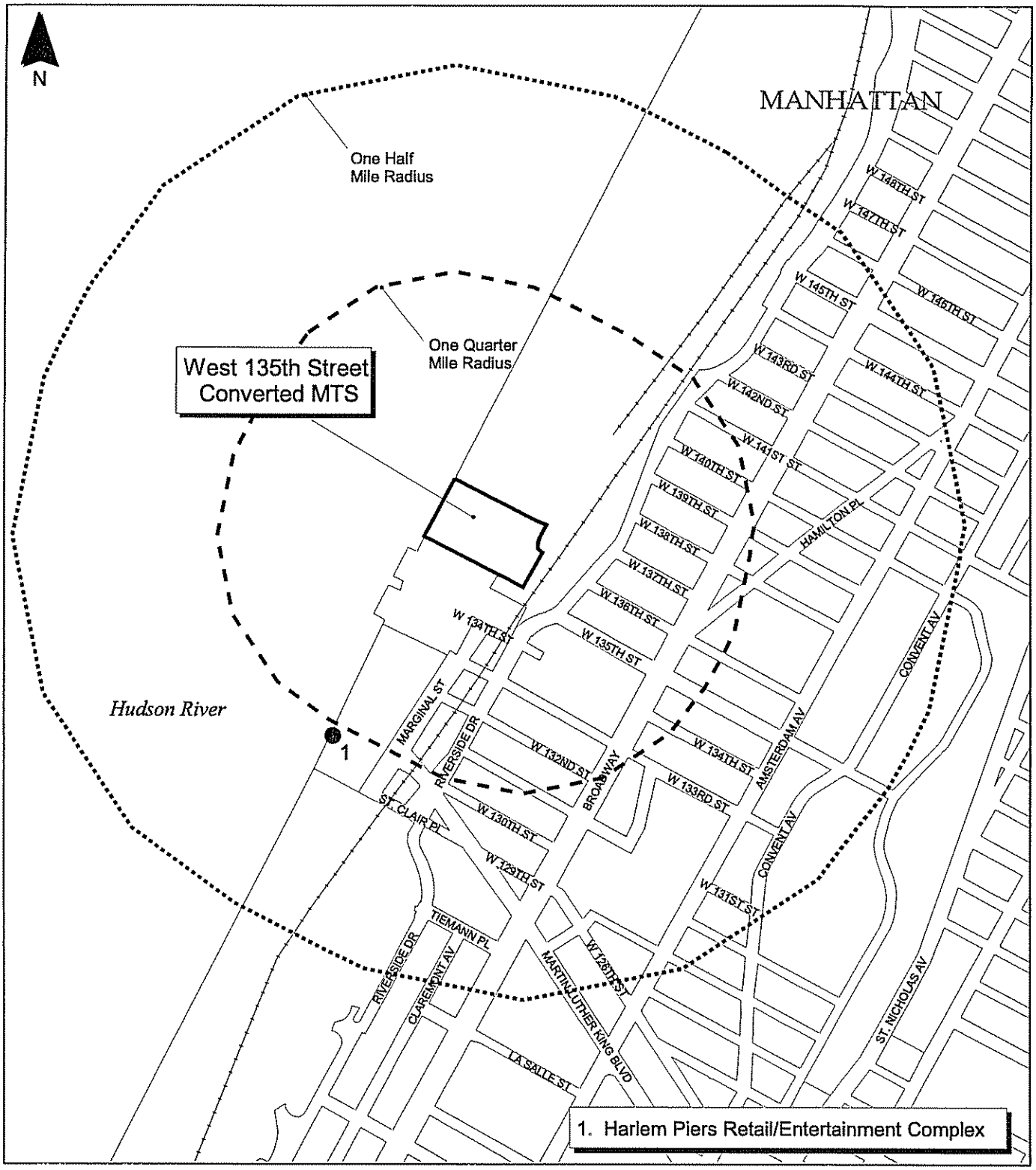
NYCDPR is working with NYCEDC to incorporate elements of its Hudson River Valley Greenway bicycle and pedestrian plan into work implemented as part of the Harlem Piers Redevelopment. Specific solutions to the problematic crossing of West 135th Street — a historically notable disjuncture in the bikeway — are still being discussed. Solutions may include the construction of a cantilever to carry the route from West 133rd Street to the north side of West 135th Street. (See Section 21.5 for a discussion of parks improvement in the area.)

The site will remain DSNY property, and the existing MTS will remain standing.

21.2.3 Potential Impacts with the West 135th Street Converted MTS

21.2.3.1 Land Use and Zoning

Reactivating waste transfer activities on the site and replacing the existing MTS with the West 135th Street Converted MTS would be consistent with zoning on or near the site and existing and proposed land uses, including the planned Harlem Piers development (see Figure 21.2-4). Notably, the location for waterborne waste transfer here is congruent with the North River WPCP immediately north. There are no sensitive uses beneath the viaduct or at the same elevation as the West 135th Street Converted MTS north of West 133rd Street.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.2-4 Planned Development Sites
West 135th Street Converted MTS

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21.2.3.2 Consistency with Public Plans and Policies

There are no recommendations or objectives stated in relevant plans and policies that specifically relate to the site, study area or the West 135th Street Converted MTS, which would be consistent with the applicable 197-a Plan (the CMWP) insofar as it would not preclude the developments recommended in the plan for nearby areas.

21.3 Socioeconomic Conditions

21.3.1 Existing Conditions

21.3.1.1 Definition of the Study Areas

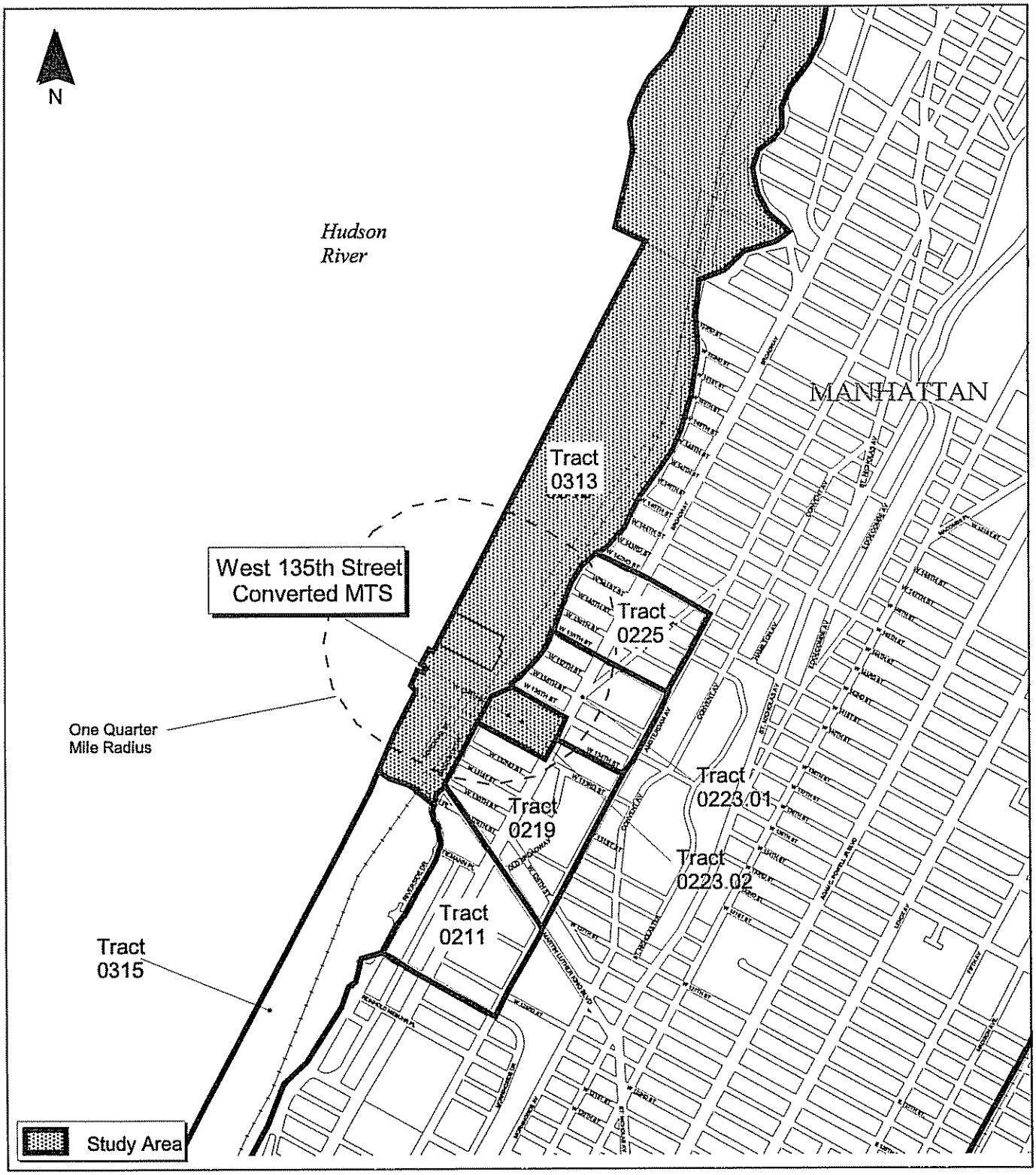
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site, and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) The demographic study area is comprised of Census Tracts 223.02 and 313 (see Figure 21.3-1). Census Tract 223.03 covers an area bounded by Twelfth Avenue to the west, 133rd Street to the south, 135th Street to the north and Broadway to the east. Census Tract 313 covers the Hudson River south until St. Clair Place, east along Henry Hudson Parkway and Riverside Drive and north until I-95. For comparison purposes, census data were also gathered at the borough and City levels. The study area for the assessment of potential impacts on economic conditions extends as far north as West 145th Street, south to Tiemann Place and east to Convent Avenue.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

21.3.1.2 Demographic Characteristics

21.3.1.2.1 Population

The total 2000 study area population was 4,102 persons (see Table 21.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a greater percentage increase (7%) than did the borough during the same period (3%), but its population did not grow as rapidly as the City's as a whole (9%).



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.3-1 Census Tract

West 135th Street Converted MTS

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Table 21.3-1
1990-2000 Population

	Study Area	Manhattan	City
2000	4,102	1,537,195	8,008,278
1990	3,836	1,487,536	7,322,564
Percent Change	+6.9%	+3.3%	+9.4%

Source: U.S. Census 1990, 2000

The age-sex distribution was slightly different from the population distribution of the borough and the City with an even greater proportion of females to males. The study area contained a considerably greater percentage of children and teenagers than did the borough or City; approximately 33% of the study area population was under the age of 20 compared to 19% for the borough and 27% for the City.

21.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a far greater proportion (66%) of people of Hispanic origin (all races) than did Manhattan or the City (27%). Of the 34% not of Hispanic origin, 92% were Black and 3% were White. In Manhattan and the City, Blacks represented approximately 21% and 33% of the non-Hispanic populations, respectively, while Whites represented 63% and 48%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate (45%) than in the borough (10%) and in the City (24%) during the same period. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

21.3.1.2.3 Families and Households

There were 987 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (about 55%) was considerably larger than those families in Manhattan with children under 18 (43%) and in New York City (49%). There was a

considerably smaller percentage of married-couple families in the study area than in the borough or the City, and 49% of these families had children, greater than Manhattan (39%) but about the same as the City (48%).

Fifty-one percent of the families in the study area were headed by a female householder, which is a higher percentage than in the borough or the City (both 30%). Sixty-four percent of the female householder families in the study area had children under the age of 18, slightly greater than the percentages in the borough (53%) and the City (55%).

There were 1,582 households in the study area in 2000, with an average household size of 2.6 persons, greater than Manhattan (2 persons) but equal to the City.

From 1990 to 2000, the number of households in the study area increased by 8%, compared with a 3% increase in the borough and a 7% increase in the City.

21.3.1.2.4 Employment

Within the study area, 45% of persons aged 16 and older participated in the labor force in 2000, compared to 64% in Manhattan and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

Twenty-two percent of employed persons 16 and over were government workers, compared to Manhattan (10%) and the City (16%). Moreover, 10% of the study area's working population was self-employed, about the same proportion as in Manhattan (9%) and somewhat higher than in the City (6%).

From 1990 to 2000, the number of employed persons within the study area decreased by 12%, while the number of employed persons in the borough and the City remained approximately the same. Among employed persons, those engaged in government jobs decreased by 47%, compared to a 15% decrease in the borough and a 10% decrease in the City.

Current forecasts indicate that about 36,397 employees worked in Manhattan CD 9 in 2005, which was about 1.6% of the borough's total employment.[1]

21.3.1.2.5 Housing

Most housing units in the two census tracts in the study area were constructed between 1970 and 1979, while the majority of housing units in both Manhattan and the City were built at least before 1959. As of 2000, there were 1,600 housing units in the study area, with a vacancy rate of about 1.2%, lower than either the borough (8%) or the City (6%). Nearly all the housing units were renter-occupied (94%), considerably greater than the borough (74%) and the City (66%). Median monthly rent ($496) was far lower than in the borough ($796), and in the City ($705).

The turnover in the study area (30%) from 1995 until 2000 was lower than that of the borough (45%) and the City (43%).

From 1990 to 2000, a total of 136 housing units were added in the study area, representing a 9% increase, markedly greater than the borough (2%) and slightly higher than the City (7%).

21.3.1.2.6 Education

Consistent with the higher percentage of children in the study area than in the borough or the City, there was a slightly higher rate of school enrollment (34%) than in either the borough (24%) or the City (29%). Of those enrolled in school within the study area in 2000, 73% were enrolled in elementary school or high school and 18% were enrolled in college or beyond. In Manhattan, 51% were enrolled in elementary school or high school and 39% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

The study area witnessed an 18% increase in the number of persons enrolled in school from 1990 to 2000, with the largest increase in enrollments occurring at the pre-primary school level (190%), comparable to City-wide trends.

The study area had a far lower educational attainment level than either the borough or the City. A markedly smaller proportion (37%) of the study area population aged 25 and over had a college degree or some college education compared to Manhattan (66%) and the City (48%). The study area had a similar percentage of people with only high school diplomas (23%) compared to the City (24%), and a far greater percentage than those in the borough (14%).

Despite the lower educational levels, from 1990 to 2000 the study area witnessed rising levels of educational attainment. The number of college graduates increased 34%, and the same trend was evident in the borough and the City, which experienced increases of 20% and 29%, respectively. Correspondingly, the number of people with less than a college education (between 8% and 14%) declined in the study area overall.

21.3.1.2.7 Income and Poverty

In 2000, both median household income ($17,400) and median family income ($25,196) were far lower than in Manhattan ($47,030 and $50,229, respectively) and the City ($38,293 and $41,887, respectively). Compared to the two larger areas, a greater percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes below $25,000. Only 22% of households in the study area had incomes of $50,000 and above, compared with 48% in the borough and 40% in the City.

A greater percentage of persons in the study area under the age of 18 were living below the poverty level in 2000 (47%) than in Manhattan (32%) or the City (30%). The 2000 Census also reported that 38% of the persons 65 and older were living below the poverty level in the study area, compared to 19% in Manhattan and 18% in the City.

Within the study area, the percentage of families living below the poverty level (34%) was nearly twice that of Manhattan (18%) or the City (19%). The percentage of families living below the poverty level with children under the age of 18 (62%) was greater than the percentages in Manhattan (48%) or the City (55%).

From 1990 to 2000, the percentage of people living below the poverty level in the study area increased by 16%, as compared to a minimal change in Manhattan and 20% increase in the City.

21.3.1.3 Economic Conditions

The part of Harlem within approximately ½-mile of the site contains a mix of commercial, automotive repair, distribution and storage-related businesses. This area has experienced a strengthening of its retail sector in the last several years through the establishment of a major food retailer in the area (Fairway). The introduction of this use and the Harlem USA further east on West 125th Street outside of the study area is indicative of the increased momentum of economic activity in Harlem.

21.3.2 Future No-Build Conditions

21.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Manhattan CD 9 will remain about the same as current conditions.[2]

21.3.2.2 Economic Conditions

Ground-level commercial uses and various automotive repair, garage and warehouse storage spaces on and near Broadway will likely continue to comprise the mix of business uses near the site for the near term. Major commercial and public uses are planned south of the project site on

[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

undeveloped piers between West 125th and West 133rd Streets,[3] known as the Harlem Piers. The initial phases of this project involve the creation of waterfront open space as well as yet undetermined retail services. They are expected to be completed by 2006.

The near-term economic health of industrial areas, such as the industrial area in this section of Harlem, may also be supported by established City programs available through the IDA. These programs, such as the Industrial Incentive Program and the Small Industry Incentive Program, provide business tax incentives for capital renovation and expansion projects.

The designation of a portion of the study area as part of the Harlem/South Bronx EZ will likely have a positive economic effect on the larger Harlem community in the long-term. The EZ is expected to expand the range of economic opportunities in the portions of Harlem and Upper Manhattan that it covers.

Regional projections indicate that employment in Manhattan CD 9 will remain about 1.6% of the borough total.[4]

21.3.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS represents the reactivation of solid waste transfer operations at the site with added containerization operations, which is a compatible activity given the site's industrial surroundings.

21.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the West 135th Street Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

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[3] *Comprehensive Manhattan Waterfront Plan: A 197-a Plan as Modified and Adopted by the City Planning Commission and the City Council*; Rudolph W. Giuliani, Mayor; Joseph B. Rose, Director of Department of City Planning; Summer 1997, NYCDCP #98-07.

21.3.3.2 Direct Business and Institutional Impacts

The West 135th Street Converted MTS would not result in the direct displacement of businesses or institutional uses.

21.3.3.3 Indirect Business and Institutional Impacts

The West 135th Street Converted MTS would not result in indirect impacts to study area businesses or institutions.

21.3.3.4 Employment Impacts

The West 135th Street Converted MTS is expected to generate a total of approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

[4] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

21.4 Community Facilities and Services

21.4.1 Existing Conditions

21.4.1.1 Definition of the Study Areas

The primary study area is defined as that area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile of the site.

21.4.1.2 Summary of Community Facilities and Services

There are three community facilities in the primary study area and 30 in the secondary study area. These facilities and others serving the site but located outside of the secondary study area are listed below in Table 21.4-1 and shown on Figure 21.4-1.

21.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. CD 7 has expressed an interest in having a high school within its district, but no plans have been made. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

21.4.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the West 135th Street Converted MTS.

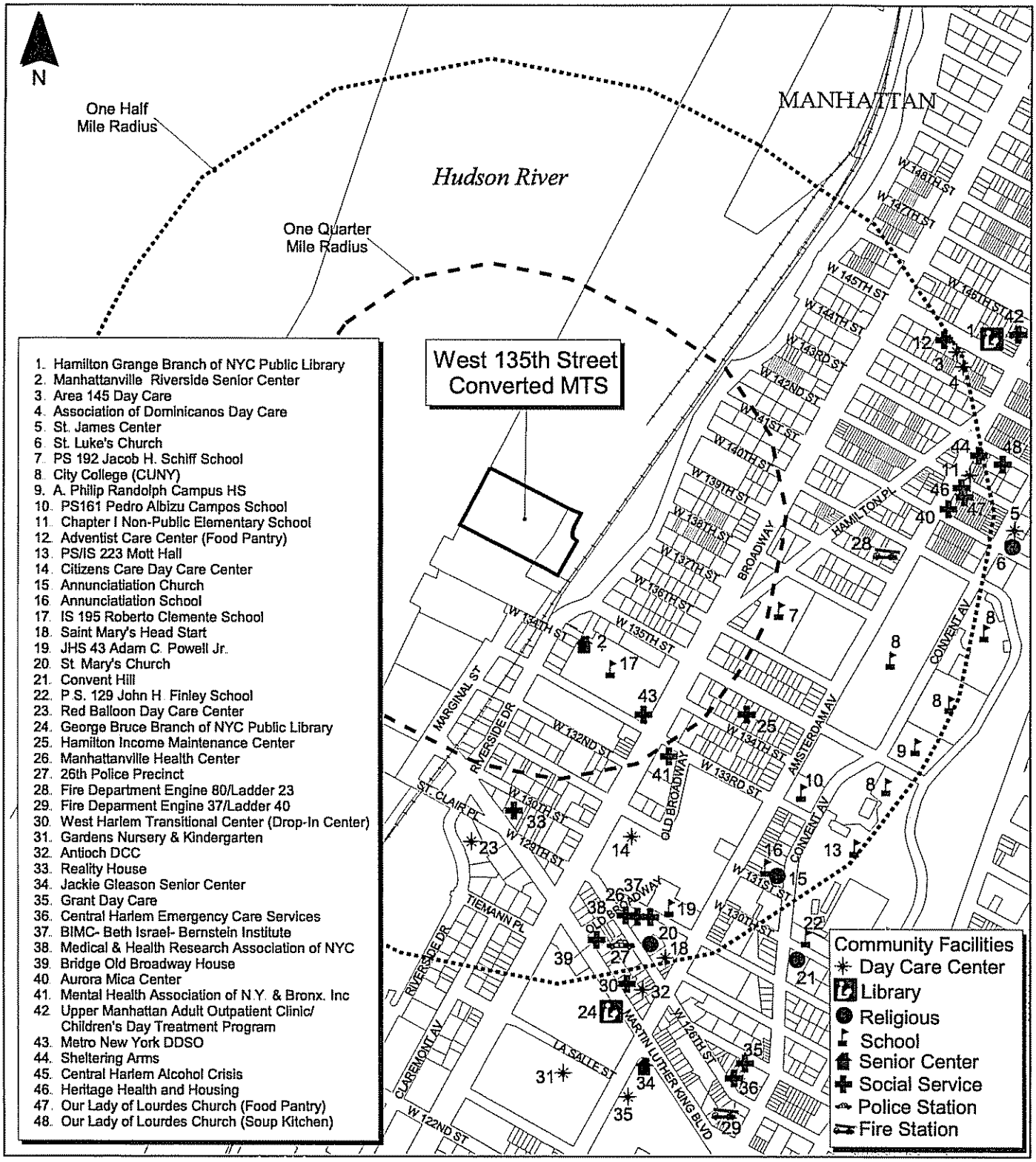
Table 21.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Schools	
I.S. 195 Roberto Clemente School	625 West 133rd Street
Senior Centers	
Manhattanville Riverside Senior Center	3333 Broadway
Health Care Facilities and Social Services	
Metro New York DDSO(1)	3333 Broadway
Within the Secondary Study Area	
Schools	
P.S. 192 Jacob H. Schiff School	500 West 138th Street
City College (CUNY)	138th Street Convent Avenue
P.S. 161 Pedro Albizu Campos School	499 West 133rd Street
P.S./I.S. 223 Mott Hall	West 131st Street and Convent Avenue
J.H.S. 43 Adam C. Powell, Jr. Junior High School	509 West 129th Street
A. Philip Randolph Campus High School	Convent Avenue and West 135th Street
Annunciation School	461 West 131st Street
Chapter I Non-Public Elementary School	474 West 142nd Street
Health Care Facilities and Social Services	
Adventist Care Center (food pantry)	528 West 145th Street
Reality House	637 West 125th Street
BIMC-Beth Israel-Bernstein Institute	21 Old Broadway
Medical and Health Research Association of New York City	21 Old Broadway
Bridge Old Broadway House	551 West 125th Street
Aurora Mica Center	1640 Amsterdam Avenue
Mental Health Association of New York and Bronx, Inc.	3280 Broadway
Sheltering Arms	474 West 143rd Street
Heritage Health and Housing	1649 Amsterdam Avenue
Hamilton Income Maintenance Center	530 West 135th Street
Day Care Centers	
Citizens Care Day Care Center	3240 Broadway
Association of Dominicanos Day Care	510 West 145th Street
Area 145 Day Care Center	510 West 145th Street
Morningside Community Head Start Center IV	2967 Eighth Avenue
Red Balloon Day Care Center	560 Riverside Drive
St. Mary's Head Start	5 West 126th Street
Religious and Cultural Institutions	
Annunciation Church	461 West 131st Street
St. Mary's Church	521 West 126th Street

Table 21.4-1 (continued)
Community Facilities and Services

Name	Address
Health Care Facilities and Social Services	
Hamilton Income Maintenance Center	530 West 135th Street
Manhattanville Health Center	21 Old Broadway
Police	
26th Police Precinct	520 West 126th Street
Fire	
Engine 80/Ladder 23	503 West 139th Street
Outside the Secondary Study Area	
Day Care Centers	
St. James Center	25 St. James Place
Gardens Nursery & Kindergarten	90 LaSalle Street
Antioch Day Care Center	515 West 125th Street
Grant Day Care	1299 Amsterdam Avenue
Senior Centers	
Jackie Gleason Senior Center	1301 Amsterdam Avenue
Schools	
P.S. 129 John H. Finley School	425 West 130th Street
Public Libraries	
Hamilton Grange Branch of the New York Public Library	503 West 145th Street
George Bruce Branch of the New York Public Library	518 West 125th Street
Religious and Cultural Institutions	
Convent Hill (area including several convents: St. Agnes, St. Helen, St. Augusta, St. Cecelia, St. Monica, St. Elizabeth and St. Francis)	Block of West 130th and 129th Streets from Convent to St. Nicholas Avenues
St. Luke's Church	424 West 141st Street
Health Care Facilities and Social Services	
St. Luke's/Roosevelt Hospital Center – St. Luke's Division	114th Street and Amsterdam Avenue
Central Harlem Emergency Care Services	419 West 126th Street
Upper Manhattan Adult Outpatient Clinic/Children's Day Treatment Program	1728 Amsterdam Avenue
West Harlem Transitional Center (drop-in center)	521 West 126th Street
Central Harlem Alcohol Crisis	
Our Lady of Lourdes (food pantry)	472 West 142nd Street
Our Lady of Lourdes (soup kitchen)	468 West 143rd Street
Fire	
Engine 37/Ladder 40	415 West 125th Street

Note:
(1) Developmentally Disabled Service Office



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

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Figure 21.4-1 Community Facilities and Services
West 135th Street Converted MTS

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21.5 Open Space

21.5.1 Existing Conditions

21.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

21.5.1.2 Summary of Open Space in the Study Area

There are 16 public parks and open spaces within the study area and five just beyond. They are listed in Table 21.5-1 and shown on Figure 21.5-1.

Of particular interest is the proposed Hudson River Valley Greenway under development to provide a continuous waterfront pathway from Albany to Battery Park in lower Manhattan. Currently, there is a "gap" between West 125th Street and West 135th Street and an interim pedestrian and bicycle route connection is provided on street until a formal connection can be developed.

21.5.2 Future No-Build Conditions

The NYCDPR has several projects programmed for Riverside Park and assumed to be completed by the 2006 Build year. These include:

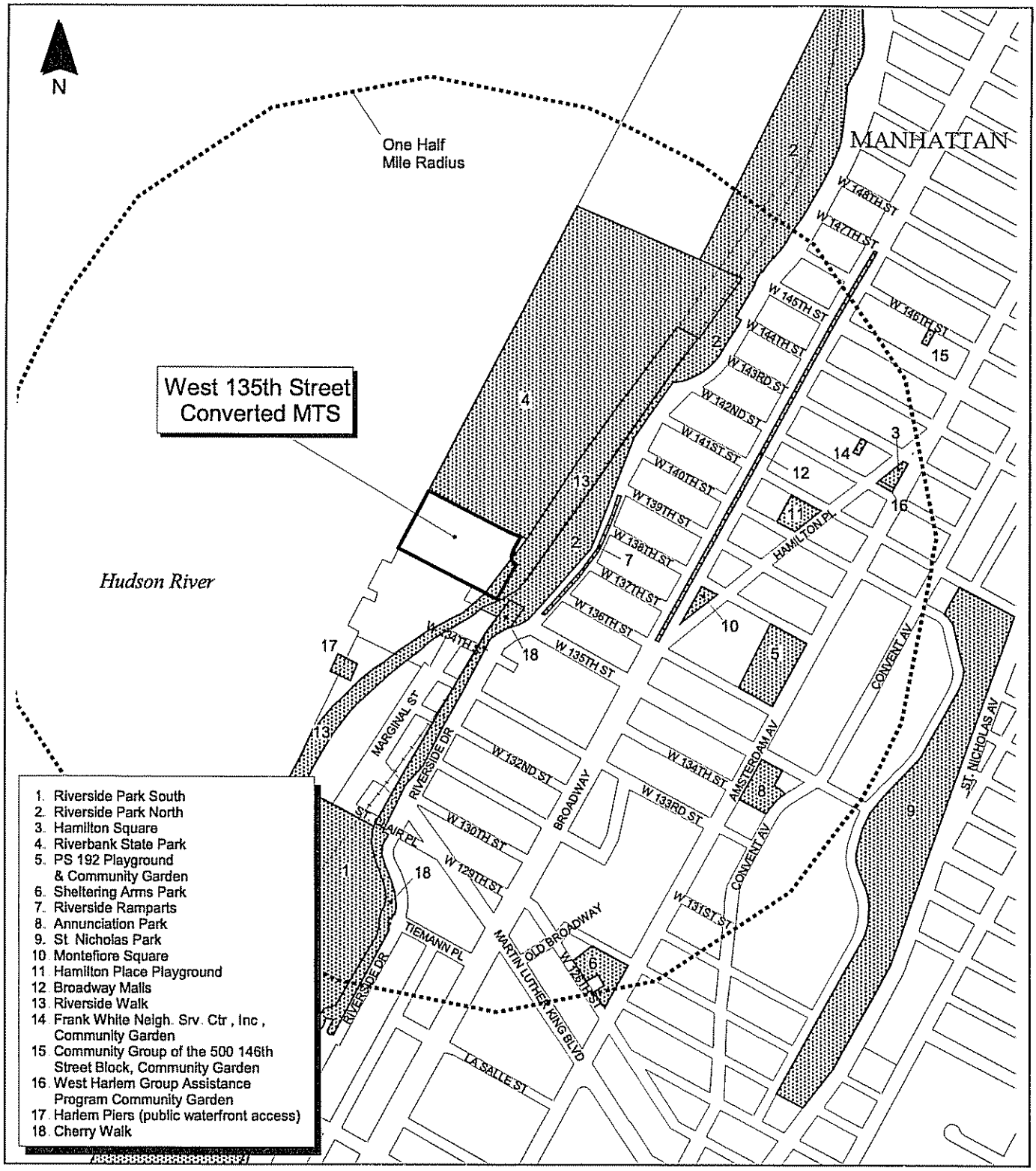
- "Riverside Walk" Bicycle and Pedestrian Path (West 83rd – West 153rd Street) construction;
- West 143rd – West 148th Street path restoration;
- Broadway Malls Reconstruction (West 135th – West 168th Street);
- Application of artificial turf to P.S. 192 Playground (Jacob Schiff Playground); and
- Riverside Park Drive (Ralph Ellison Island West 149th – West 153rd Street).

Table 21.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Frank White Neighborhood Service Center, Inc., Community Garden	506-508 West 143rd Street	0.1
West Harlem Group Assistance Program Community Garden	1656 Amsterdam Avenue	0.1
Community Group of the 500 146th Street Block Community Garden	522 West 146th Street	0.1
Riverbank State Park	West 137th to West 145th Street, on top of the North River WPCP	28.0
Riverside Park North	West 135th Street to West 155th Street	49.6
Riverside Islands	Riverside Drive, West 135th Street to West 158th Street	---
Riverside Park South (only northern tip included in study area)	West 72nd Street to West 129th Street	266.8 (total)
"Riverside Walk" Streets	Western edge of Henry Hudson Parkway, West 83rd Street to West 143rd Street	---
"Cherry Walk"	Riverside Drive to Hudson River, West 92nd Street to West 134th Street	---
Sheltering Arms Park	West 126th Street to West 129th Street, Amsterdam Avenue to Old Broadway	1.4
Montefiore Square	Broadway, Hamilton Plaza, West 138th Street	0.3
Hamilton Square	Amsterdam Avenue, West 143rd Street and Hamilton Plaza	0.1
Saint Nicholas Park	Between St. Nicholas Avenue/Terrace from West 128th Street to West 141st Street	22.7
P.S. 192 Playground and Community Garden	Amsterdam Avenue, West 136th Street	3.9
P.S. 192 School Garden	West 136th Street between Broadway and Amsterdam Avenue	---
Broadway Malls	Broadway from West 135th Street to West 156th Street and West 156th Street to West 158th Street	2.2 and 1.1
Annunciation Park	1491 Amsterdam Avenue and West 135th Street	1.2

Table 21.5-1 (Continued)
Public Parks and Open Spaces

Name	Location	Acreage
Hamilton Place Playground	Hamilton Plaza, West 140th Street to West 141st Street	0.8
Harlem Piers (under development by NYCEDC in cooperation with NYCDPR) includes existing waterfront access at approximately West 132nd Street	Hudson River Waterfront, 125th to 135th Streets	---
Riverside Valley Community Garden	West 139th Street and Riverside Drive	---



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.5-1 Open Space/Parkland
West 135th Street Converted MTS

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NYCEDC has begun the site planning for "Harlem Piers," the waterfront component of the West Harlem Master Plan. A fundamental component of this is the creation of new strip of waterfront parkland extending along the Hudson River between West 129th Street and West 133rd Street.

NYCDPR currently has funding to design and construct a cantilever between 133rd Street and 135th Street, along the western side of the Henry Hudson Parkway and then continuing north of 135th Street along the North River WPCP haul road temporary path.

21.5.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would have no effect on any open space resources within the study area. It would not physically change, diminish or eliminate any open space or reduce its use or aesthetic value, or introduce a substantial new user population that would create or exacerbate over-utilization of open space resources.

21.6 Cultural Resources

21.6.1 Existing Conditions

21.6.1.1 Definition of the Study Area

The cultural resources study area is defined as that area within ½-mile of the site.

21.6.1.2 Development History of the Area

Portions of three distinct Upper Manhattan neighborhoods with their own development histories are part of the study area: Manhattanville, Hamilton Heights and Morningside Heights.

The Manhattanville area on the Upper West Side was a village with a population of about 500 people in the mid-19th century. The village contained churches, a grade school and Manhattan College (1853). It was set in the valley near the present intersection of West 125th Street and Broadway and was surrounded by country residences and open land. There was a ferry terminus on the Hudson River, a mill and a brewery.

The Hamilton Heights area to the northeast includes the neighborhood of Sugar Hill, which is often considered part of Harlem. The area was named for Alexander Hamilton, who spent the last two years of his life in what is now the Hamilton Grange National Monument at 287 Convent Avenue. Elevated subway lines were extended to the neighborhood around the turn of the century, and most of the housing dates to that time. City College of New York (now the north campus) is located on Convent Avenue between West 132nd and West 140th Streets. The Trinity Church cemetery is located at West 155th Street on one of the highest hills of Hamilton Heights.

Morningside Heights is located south of the site and is bounded by West 125th Street to the north, Morningside Park to the east, West 110th Street to the south and the Hudson River to the west. The area was known as Vandewater's Heights in the 17th century, named after a local landowner when farms covered much of the area. Farmland gave way to other uses in the 18th century,

including the Bloomingdale Insane Asylum and an orphan asylum. Since the late 19th century, the area has been home to Riverside Church, Riverside Park, Columbia University, Barnard College and other prominent educational institutions.

21.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

21.6.1.4 Historic Resources Within the Study Area

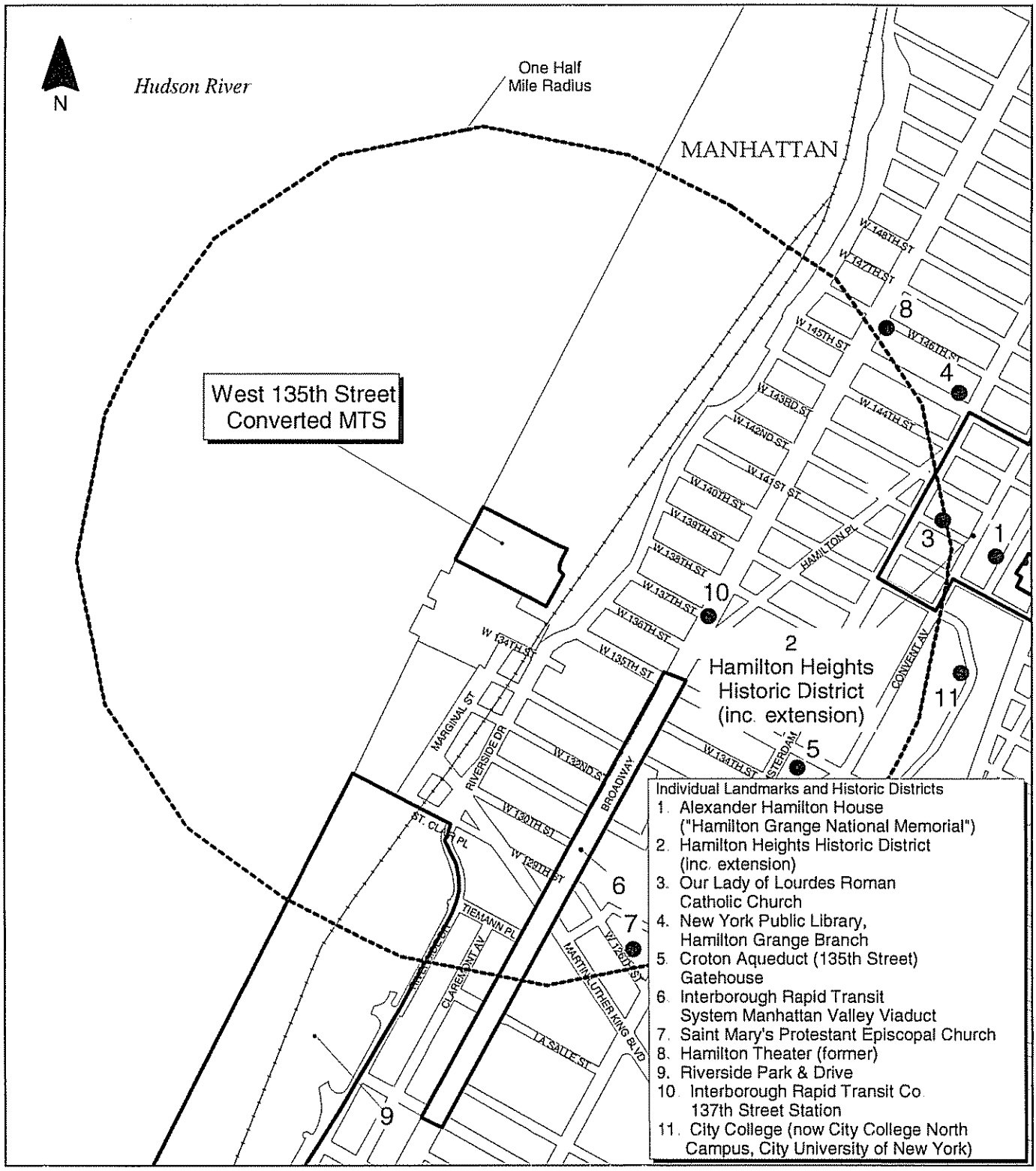
A historic district and ten historic properties are located within or near the study area (see Figure 21.6-1). These properties are listed in Table 21.6-1.

21.6.2 Future No-Build Conditions

There are no additional elements of potential historic significance slated for review. Because of the nature of architectural and archaeological resources and the fact that there is no reason to anticipate the designation of such resources in this area in the near future, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

21.6.3 Potential Impacts with the West 135th Converted MTS

Development of the West 135th Street Converted MTS would have no effect on the cultural resources named above. Based upon its review, SHPO has stated that the West 135th Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, the State and National Registers of Historic Places (see Appendix A). The LPC has stated that the site does not have architectural or archeological significance (see Appendix A).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.6-1 Cultural Resources
West 135th Street Converted MTS

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Table 21.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Hamilton Heights Historic District	Between St. Nicholas Avenue, Amsterdam Avenue, West 140th and 145th Streets (recently extended by LPC north to West 155th Street)	NYCL, SRHP, NR
Hamilton Grange National Memorial	287 Convent Avenue	NYCL, SRHP, NR, also a National Historical landmark
Our Lady of Lourdes Roman Catholic Church	467 West 142nd Street	NYCL, SRHP
New York Public Library, Hamilton Grange Branch	503-505 West 145th Street	NYCL, SRHP, NR
City College, City University of New York	Convent Ave. between West 138th and West 140th Streets.	NYCL, SRHP, NR
Croton Aqueduct Gatehouse	West 135th Street at Convent Avenue	NYCL, SRHP, NR
IRT Manhattan Valley Viaduct	Broadway between West 122nd to West 135th Streets	NYCL, SRHP, NR
IRT 137th Street Station	West 137th Street and Broadway	Interior NYCL, NR-eligible
St. Mary's Protestant Episcopal Church	517-523 West 125th Street	NYCL
(Former) Hamilton Theater	3560-3568 Broadway	NYCL
Riverside Park and Drive	West 72nd to West 129th Streets	NYCL, SRHP, NR

Notes:
SRHP= New York State Register of Historic Places
NR= National Register of Historic Places
NYCL= New York City Landmark

21.7 Urban Design, Visual Resources, and Shadows

21.7.1 Existing Conditions

21.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 21.8-1), although it also includes upland areas east of the Henry Hudson Parkway. The site has been developed in a manner consistent with adjacent properties along the waterfront but not the upland areas. The adjacent Riverbank State Park and upland areas, including warehouses and residential buildings, are visible from the site and have views of the site, so are included as part of the study area.

21.7.1.2 Description of the Site

The site extends over water beyond the existing MTS platform (see Figure 21.7-1). The land portion of the site is paved and has no landscaping or decorative features. The remainder of the built site consists of paved road surfaces, the existing MTS facility (which is built entirely over the water) and the curved ramp that leads to its entrance.

21.7.1.3 Urban Design and Visual Resources of the Study Area

The shoreline surrounding the site has some grass cover and several scrub trees and appears to be managed as necessary to protect the soundness of Marginal Street where it runs along the shore. The 26th Precinct Police Station, located beneath the elevated Henry Hudson Parkway, resembles surrounding warehouses and vacant buildings found beneath the elevated highway (see Figure 21.7-2), which are generally nondescript, with no façade treatment. The design context of the shoreline, however, is defined by the functionalistic style of the existing MTS and the North River WPCP.



Figure 21.7-1 : View of MTS, looking west along 135th Street. (Photo 2000)

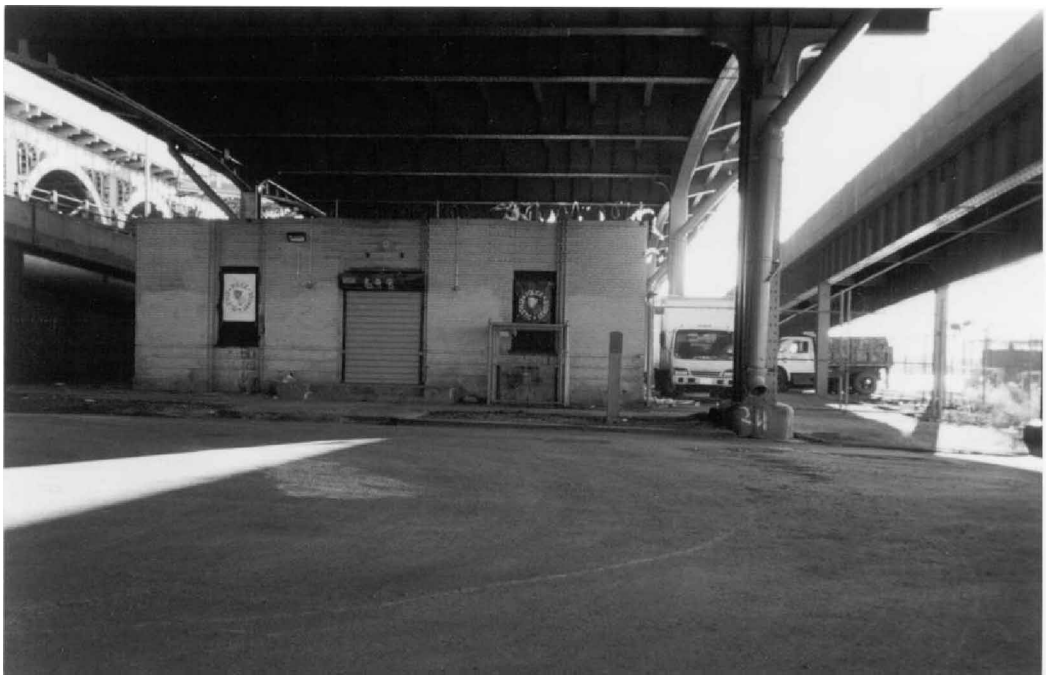


Figure 21.7-2 : Police precinct building located beneath Henry Hudson Parkway, on 135th Street.

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Although not excessively ornamented, the North River WPCP exhibits a designed finish uncharacteristic of many such municipal facilities, with such details as decorative arches, textured concrete and marine blue-glazed brick (see Figure 21.7-3). The low-density appearance of the area south of the North River WPCP is typical of shoreline industrial areas in the City, although the contemporary design of the existing MTS and the adjacent North River WPCP establish a more finished look to the area than may be found on other working waterfront areas.

The railroad tracks, elevated Henry Hudson Parkway and elevated Riverside Drive separate the site from the residential Manhattanville neighborhood visible to the east. This upland area east of Riverside Drive is characterized by massive residential blocks with pre-war apartment buildings stretching from about West 135th Street to West 139th Street. They typically stand approximately six to seven stories tall and feature combinations of brick veneer and stone lintels and sills. The lower floors of the buildings are visually buffered from views of the site and shoreline by distance and a change in elevation as well as mature deciduous trees in Riverside Park, while some upper-floor apartments may have views of the site.

Within the vicinity of P.S. 195, east of Twelfth Avenue and south of West 135th Street (approximately 700 feet east of the site), is a conglomeration of buildings that rises above the Twelfth Avenue viaduct. At the corner of Twelfth Avenue and West 135th Street is a light-brick Italianate building about seven stories high. Adjacent to and south of that building is the Lee Brother's, Inc. building (now used by Manhattan Mini-Storage) that stands about seven stories high, the upper five stories of which contain a vertical portico set into the white west-facing façade (see Figure 21.7-4). This building retains a commanding position over the viaduct and is topped with a large billboard that faces northbound and southbound traffic on Riverside Drive. The shorter building (about three stories tall) just to the south of it is also topped with a billboard. Behind these buildings are tall, red brick apartment buildings 20 to 29 stories tall that may have views of the site

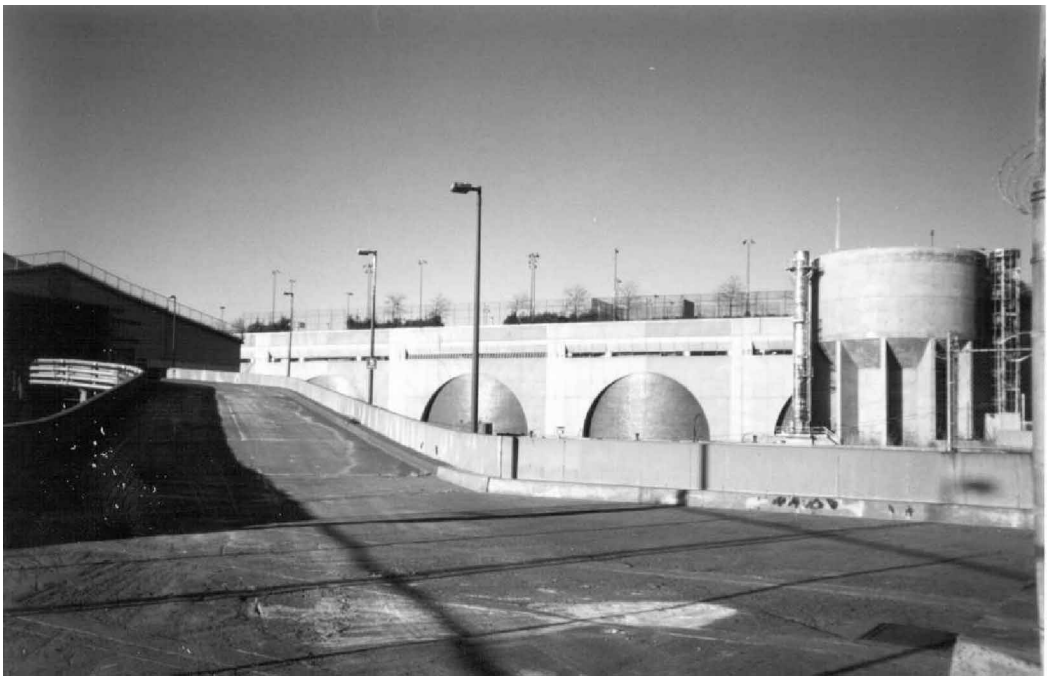


Figure 21.7-3 : View of the North River WPCP and Riverbank State Park, looking north from the site.



Figure 21.7-4 : View looking east from the site. (Photo 2000)

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The area's landscaping and vegetation are within maintained park areas, Riverbank State Park and portions of Riverside Park, in particular. These park areas are oriented to the land uses east of Twelfth Avenue in terms of access, elevation and location. There is little visual connectivity to the site from the portion of Riverside Park that runs east of the site along Riverside Drive, although the trees in the park are visible from the site.

Just as there are views of the site from some upland residential areas, there are clear views of the site from the ball courts and sitting areas along the entire southern edge of the adjacent Riverbank State Park (seeFigure 21.7-5). The existing MTS does not obstruct views of the river from these locations, however, and it is visually compatible with its adjacent shoreline uses.

The proposed Harlem Piers development site between West 125th and West 135th Streets includes waterfront area by the Fairway parking lot (see Figure 21.7-6). This publicly owned property, which currently is used as a point of public waterfront access, affords views of the site and the North River WPCP to the north (see Figure 21.7-7).

21.7.2 Future No-Build Conditions

Redevelopment of Harlem Piers will be a notable improvement to the urban design of the area by 2006 (see Section 21.2.2). Coupled with the improvements planned by the NYCDPR (see Section 21.5.2), which include enhancement of the bicycle and pedestrian route that follows the water's edge, the Harlem Piers will also provide for a larger visitor population Among the improvements planned by the NYCEDC are the development of a public park area, also featuring retail and passive recreational opportunities. Streetscape improvements, including new streetlights, curbing and sidewalk enhancement, will extend from approximately West 129th Street to West 133rd Street.

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Figure 21.7-5 : View of the MTS and site from the southern edge of Riverbank State Park. (Photo 2000)



Figure 21.7-6 : View of Harlem Piers waterfront area.(Photo 2000)

Figure 21.7-5 and 21.7-6
Urban Design and Visual Quality
West 135th Street Converted MTS

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Figure 21.7-7 : The MTS, North River WPCP and Riverbank State Park as viewed from the parking lot of Fairway.

Figure 21.7-7 Urban Design and Visual Quality

West 135th Street Converted MTS

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The site is expected to remain unchanged, however, under Future No-Build Conditions. Though industrial in nature, the design of the existing MTS and the façade treatment of the North River WPCP will provide suitably designed definition to the northward view from the Harlem Piers rather than merely standing as nondescript neighboring industrial facilities.

21.7.3 Potential Impacts with the West 135th Street Converted MTS

21.7.3.1 Visual Quality and Urban Design

The West 135th Street Converted MTS would entail replacement of the existing MTS with a new facility that would include containerization functions and occupy more water-covered area north of the existing platform. Views of the West 135th Street Converted MTS from the elevated residential neighborhoods, the adjacent park or the Harlem Piers area would be similar to existing views, because the West 135th Street Converted MTS would be similar to the existing facility in industrial type and function, physical size, location and operation. While it would be visible from some upland residential and recreational uses, it would not obstruct views of the river. Furthermore, the West 135th Street Converted MTS would be compatible with the existing urban design context of this portion of the Manhattan waterfront, including the proposed Harlem Piers development, and would not result in significant adverse impacts to the urban design and visual quality of the study area.

21.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

Four park and open space resources are located within shadow impact area:

- Riverbank State Park;
- Cherry Walk;
- Riverside Park North; and
- River Walk Path.

Riverbank State Park is located north of the West 135th Street Converted MTS, on the rooftop level of the North River WPCP, approximately 70 feet above the Hudson River on a ½-mile long platform.

Cherry Walk is a pedestrian path from Riverside Drive to the Hudson River, between West 92nd Street and West 134th Street.

Riverside Park North and River Walk Path are both located at-grade, below and shadowed by the elevated structure of the Henry Hudson Parkway.

There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the Converted West 135th Street MTS development. During most of the year, shadows generated by the 100-foot tall West 135th Street Converted MTS and 80-foot cranes would completely fall across portions of the Hudson River. Analysis of June 21st and May 6th indicates that shadows would fall across any land for 20 to 30 minutes in the evening hours: from 6:30 p.m. to 7:00 p.m. on June 21st and 6:00 p.m. to 6:20 p.m. on May 6th, and would not touch any portion of the nearby sensitive resources. (See Figure 21.7-8.)

On December 21st, shadows would fall across the base of the North River WPCP in the afternoon, but never climb higher than North River WPCP's portion of the wall. Since no shadows are projected to fall across Riverbank State Park by 2:50 p.m. (approximately one hour before sunset per CEQR guidelines), or on any of the area's other relevant resources, no impacts from shadows are anticipated from the West 135th Street Converted MTS.

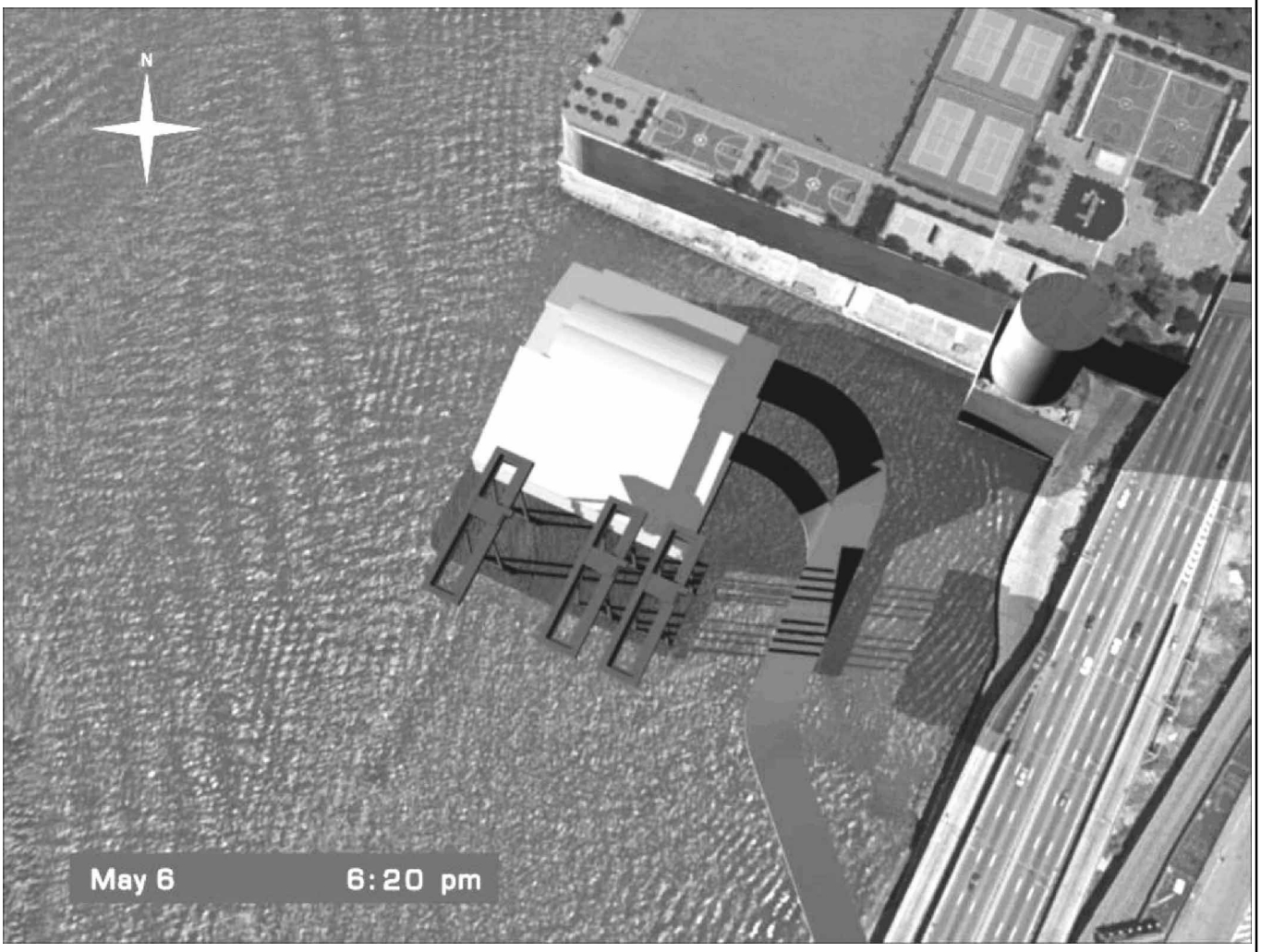


Figure 21.7-8 Shadow Diagram

West 135th Street Converted MTS

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21.8 Neighborhood Character

21.8.1 Existing Conditions

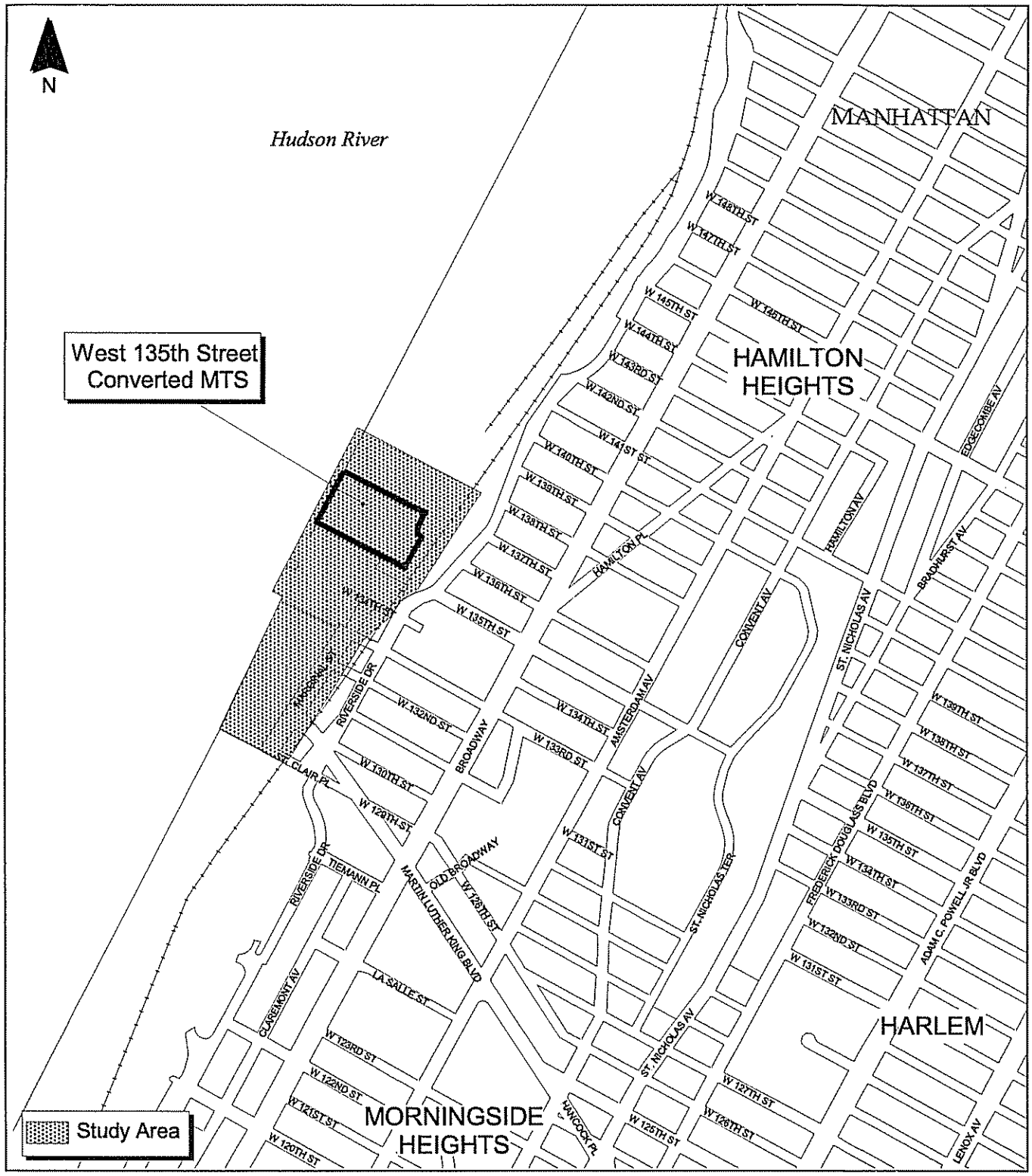
21.8.1.1 Definition of the Study Area

The site is separated from inland residential neighborhoods by the Henry Hudson Parkway, Riverside Drive and the change in elevation that separates the inland properties from the waterfront. The neighborhood character study area is defined by the visual and physical isolation created by the proximity and scale of surrounding transportation infrastructure and municipal uses. The two major factors contributing to the neighborhood character of the site and surrounding shoreline properties are the unique combination of land uses — large-scale municipal uses, regional park use, public waterfront access, shoreline industrial uses, parking areas and commercial land uses — and the resultant, albeit nondescript, visual quality.

The study area is bounded by the Henry Hudson Parkway to the east and includes the portions of blocks facing Marginal Street south of the site (see Figure 21.8-1). View corridors connecting upland residential areas to the site are also included. The southern edge of the study area is defined by St. Clair Place, the southernmost point of egress from the shoreline within the study area. The northern boundary of the study area includes the southern edge of the elevated Riverbank State Park which, in addition to being adjacent to the site, is the only portion of the park that has direct views of the site.

21.8.1.2 Description of Neighborhood Character

The waterfront development consists of the existing MTS and a Consolidated Edison natural gas pumping facility immediately to the south. The remainder of the shoreline south of the existing MTS is City-owned property. A portion of the land west of Marginal Street is used as a parking lot for the Fairway store between West 132nd and West 133rd Streets. The waterfront is publicly accessible at the southern end of this parking lot, approximating the extension of West 131st Street to the shore. The parking lot is not landscaped, and the area of waterfront access is equally utilitarian, lacking landscaping, seating or decorative elements. North of the site and adjacent to it is the Riverbank State Park, which is at approximately the same elevation as the



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 21.8-1 Neighborhood Location

West 135th Street Converted MTS

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DEPARTMENT OF SANITATION

upland residential areas, east of the Henry Hudson Parkway. The position of the park atop the North River WPCP affords people along the southern edge of the park (where there are ball courts and sitting areas) views down upon the site and virtually the entire study area.

The visual quality in the study area is not one of a consistent character, nor is it aesthetically pleasing near the site, beneath the elevated roadway. Generally speaking, the upland residential areas are characterized by apartment blocks that include active commercial uses along the avenues. Row houses and smaller apartment buildings are found on cross streets. These upland residential areas have no direct connection to the site, except via usage of Riverbank State Park, but they are visible from the site and have views of it and the adjacent shoreline uses.

21.8.2 Future No-Build Conditions

The redevelopment of Harlem Piers by NYCEDC will figure prominently in redefining the neighborhood character of the study area by 2006. The introduction of a new park area as well as complementary commercial activity as part of the Harlem Piers will create a new destination point and in essence extend inland Harlem development efforts westward to the waterfront.

The Hudson River Valley Greenway is also under development, as discussed in Section 21.5. It is reasonable to anticipate increased use of Riverside Park by residents of the surrounding neighborhoods, as bicycling will be encouraged through the Hudson River Valley Greenway development, which will follow the river. NYCDPR is working in cooperation with NYCEDC to ensure that the necessary bicycle and pedestrian ways are developed by the 2006 Build year. Complementary streetscape and sidewalk improvements proposed as part of the Harlem Piers include improved sidewalks, curbing and street lighting. Taken together, these improvements would ensure that the redeveloped area would not exist in limited-access isolation from street activities even though it is adjacent to industrial uses to the north and generally nondescript warehouses under the Hudson River Parkway to the east.

The site would remain DSNY property, and the existing MTS would remain standing.

21.8.3 Potential Impacts with the West 135th Street Converted MTS

No change to the mixed neighborhood character would be expected to result from the reactivation of waste transfer activities at the site. The West 135th Street Converted MTS would be constructed over the water with a similar point of access as the existing MTS, though it would be situated further north, nearer the North River WPCP and Riverbank State Park. Trucks would follow the same route as they did formerly and the operations would feature containerization operations rather than the transport of loose waste by barge.

Riverbank State Park is the nearest destination point attracting people to the neighborhood and near the site. Traffic, air, odor and noise analyses predict no unmitigatible impact on the park or other receptors in the neighborhood character study area (see Sections 21.14, 21.15, 21.16 and 21.17 for detailed discussions of the traffic, air, odor and noise analyses, respectively). Therefore, it is reasonable to conclude that renewed MTS operations would result in no significant adverse impacts to the character of this specific portion of the neighborhood character study area, including the park. (See Section 21.5 for a discussion of potential impacts to parks and open spaces.)

21.9 Natural Resources

21.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Manhattan. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from implementation of the West 135th Street Converted MTS.

21.9.1.1 Definition of Study Area

The study area includes the existing site, including the waterfront section that is located on the Hudson River to the west (see Figure 2.6-1). The existing facility is a platform structure extending out from the shore into the river with a small employee parking area being the only upland feature. As a result, no terrestrial natural resources exist to be discussed. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of the aquatic communities is included.

21.9.1.2 Geology

Boring data from the City of New York Public Works drawing, entitled Record of Borings, Marine Transfer Station W. 135th Street, Manhattan (January 8, 1954), indicates that bedrock was encountered between elevations -153 and –184, based on the Manhattan Borough Datum. The bedrock was described as hard, badly weathered and seamy, dark gray Schist.

Organic soils were encountered at the mud line and ranged between 20 and 74 feet thick. The organic soils typically consisted of soft, black to gray organic soils with occasional layers of loose gray silty sand. A sand stratum consisting of medium dense to dense, brown to red brown poorly graded sand was encountered underlying the organic soils stratum and ranged from 20 to 41 feet in thickness. Underlying the sand stratum was a silt stratum consisting of stiff, gray to brown silt with sand. This stratum ranged from 4 to 34 feet in thickness. A sand stratum ranging

in thickness from 5 to 55 feet was encountered under the silt stratum and consisted of very dense, red brown silty sand with occasional layers of gravel, silt, and fine sand layers interbedded throughout the unit.

Results of the sediment samples collected for analysis in 2003 show that surficial sediments are composed of 94.3% silt and clay, 5.3% sand and 0.6% gravel.[5] The sediment contains 52,916 mg/kg TOC and was found to be somewhat degraded due to contaminants in the sample material. The three metals with the highest concentrations in the sediment were lead, chromium and barium with concentrations of 76.08 mg/kg, 59.67 mg/kg and 54.83 mg/kg, respectively.

21.9.1.3 Floodplains

The site is constructed within the 100-year coastal floodplain (see Figure 21.9-1). No wetlands, other than the Hudson River, a NYSDEC-designated littoral zone, exist on the site (see Figure 21.9-2).

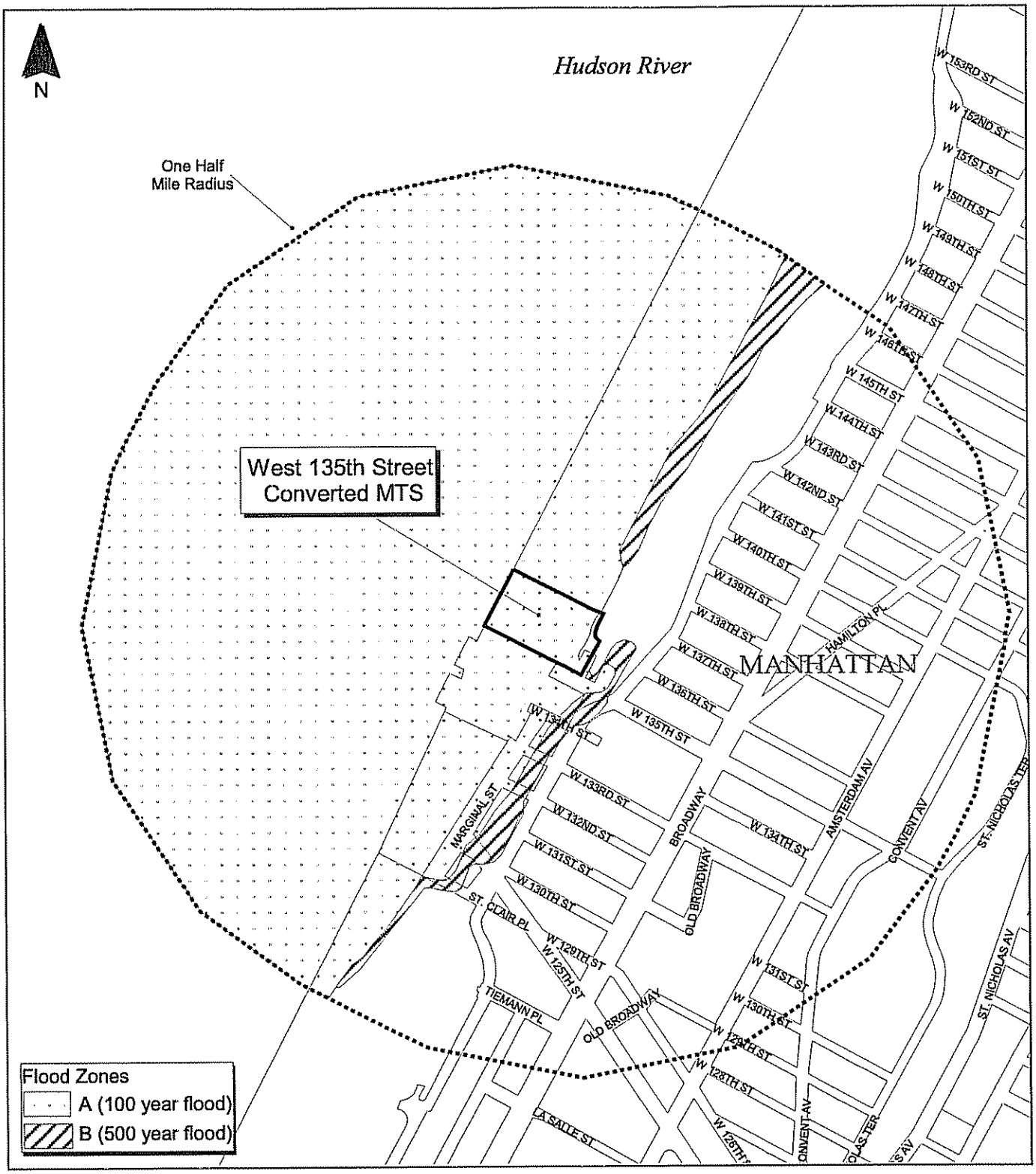
21.9.1.4 Ecosystems

Because the site is located on an offshore platform, there are no upland natural resources to consider, describe or map. The majority of the approaches leading to the facility are hard surface, devoid of vegetation. A 12-space parking area is the only upland feature of the site.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the area. The program included monthly sampling for finfish eggs and larvae and water quality, and quarterly sampling for adult finfish, benthic invertebrates and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

The marine communities surrounding the West 135th Street Converted MTS showed signs of ecological stress. Adult finfish and megainvertebrate species richness were amongst the lowest of MTSs sampled. A large number of finfish was collected, but the catch was dominated by a

[5] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



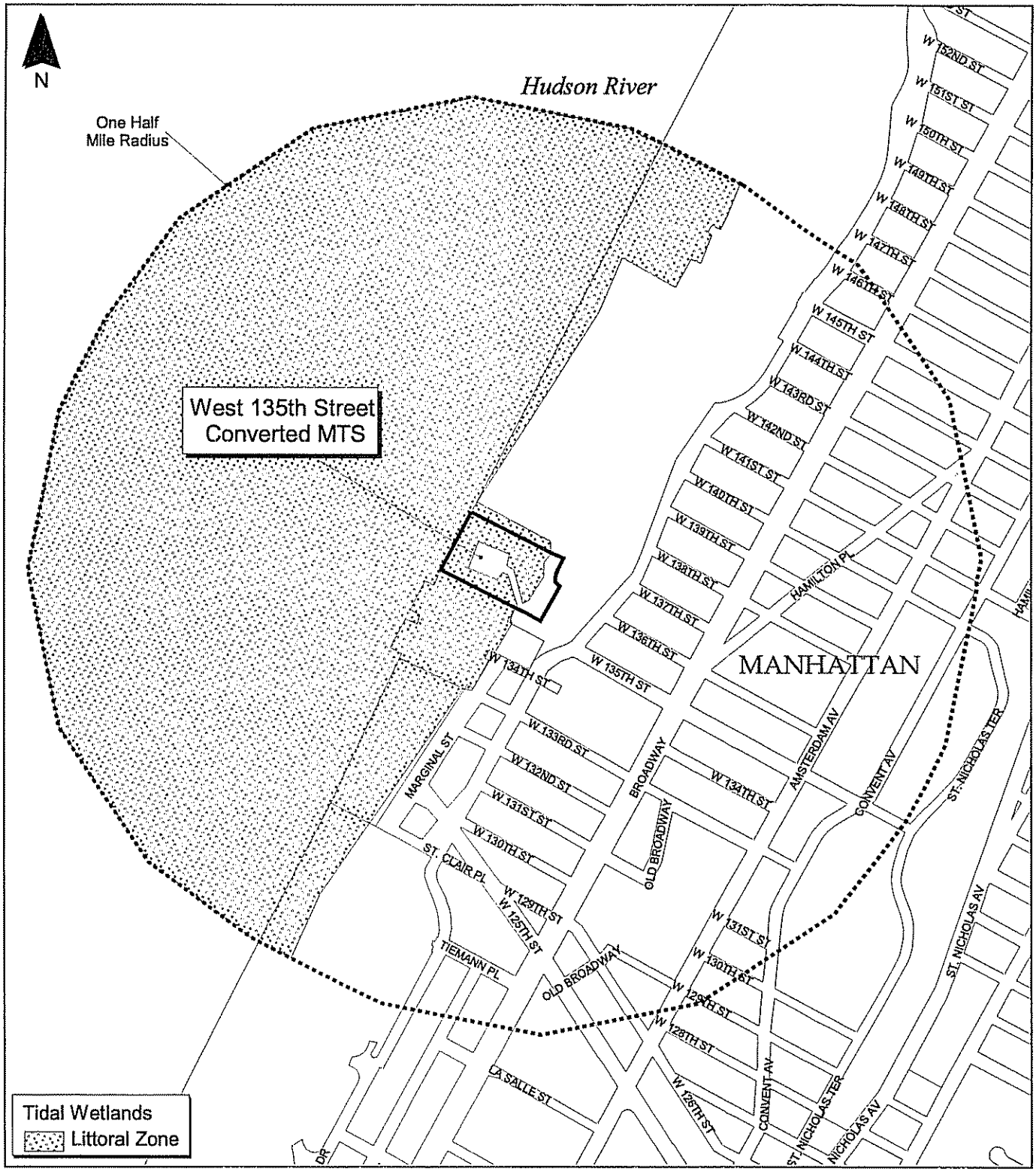
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.9-1 Floodplains
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Site delineations and study area boundaries are approximate
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Figure 21.9-2 Wetlands
West 135th Street Converted MTS

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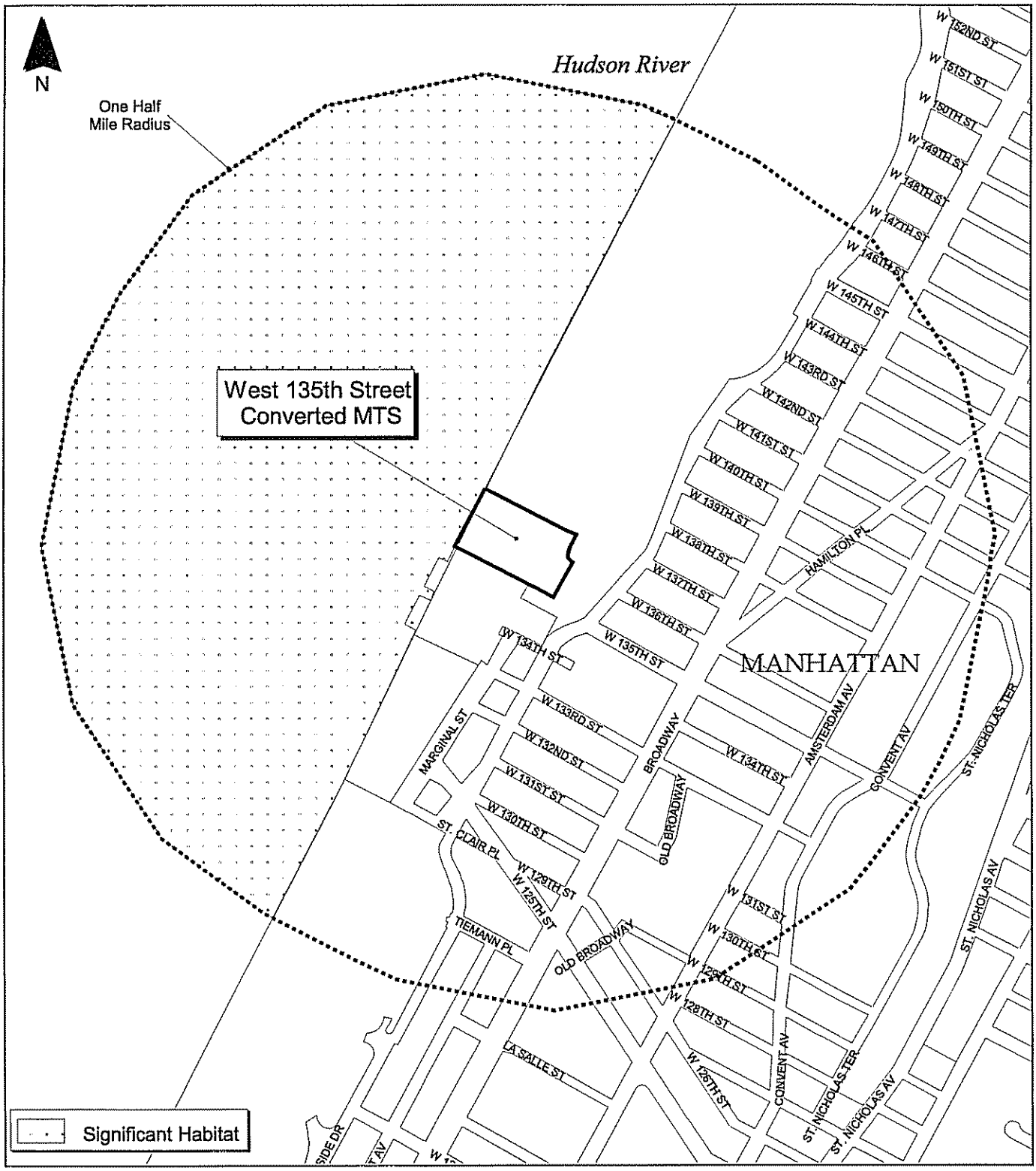
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single species, a sign that indicates environmental stress. Finfish larvae also exhibited low densities in the water column around this structure. The benthic community had a high diversity index, but it had low species abundances and was dominated by pollution-tolerant organisms. A reason for the stressed environmental conditions could be the wastewater treatment plant directly north of the MTS.

A total of 948 adult finfish were collected during the year long study at this MTS. Juvenile Atlantic croaker (*Micropogonias undulatus*) was by far the most abundant species collected, comprising 93% of the total catch. The next most abundant species were striped bass (*Morone saxatilis*) and winter flounder (*Pleuronectes americanus*). There were five adult finfish species collected that have EFH listing. These species were: winter flounder, bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), windowpane (*Scophthalmus aquosus*) and summer flounder (*Paralichthys dentatus*). The most abundant finfish eggs collected at the 135th Street Converted MTS were bay anchovy (*Anchoa mitchilli*). Abundant larval species collected were winter flounder, anchovy spp. and goby spp. (*Gobiosoma* spp.). Two larval species having EFH listing were collected at this MTS – winter flounder and windowpane. There were no EFH-listed eggs collected here.

The most abundant megainvertebrate species collected at the West 135th Street Converted MTS was the sevenspine bay shrimp (*Crangon septemspinosa*). Oligochaetes and polychaetes (worms) were the most abundant benthic organisms collected. Of the eight MTSs studied, abundances of benthic organisms per square meter were second lowest at the West 135th Street Converted MTS. Oligochaetes were 11,000 per square meter and *Streblospio benedicti* and polychates were 4,000 and 3,750 per square meter, respectively. The dominant epibenthic colonizers were *Pleusymtes glaber* (amphipod), *Balanus* sp. (barnacle), *Polydora* sp. (polychaete worm), and hydrozoa, mud and algal film.

It should be noted that the Lower Hudson Reach, in which the study area is located, is a New York State Department of State Division of Coastal Resources and Waterfront Revitalization-designated SCFWH (see Figure 21.9-3). New York State's CMP



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.9-3 Significant Habitat
West 135th Street Converted MTS

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includes a specific policy for the protection of fish and wildlife habitats that are determined to be of statewide significance. An inventory of the coastline was conducted to identify the most valuable habitats according to the following criteria: ecosystem rarity, species population levels, support of vulnerable species, human use and replaceability. A numerical rating system using these criteria was applied to more than 300 areas, and approximately 235 have qualified for official designation and mapping as SCFWHs.

NYSDEC's NHP records list the common nighthawk (*Chordeiles minor*) as a species known to be suspected of breeding in the study area. The state legal status of this wild bird is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds.

A pesticide survey was conducted in the nearshore sediments. All organic levels were below detection limits (i.e., very low levels) for the USEPA's Toxicity Extraction Procedure, the test in use at the time of the sampling.[6]

21.9.2 Future No-Build Conditions

If the West 135th Street Converted MTS were not to be built, the study area would remain as is. The absence of terrestrial natural resources would remain and the upland portion of the study area would continue to be an ecologically unproductive and stressed urban area. Aquatic natural resources would continue to be present in the waters in and around the study area.

[6] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

21.9.3 Potential Impacts with the West 135th Street Converted MTS

21.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

21.9.3.2 Floodplains

Implementation of the West 135th Street Converted MTS would have no effect on the elevation of the study area. The facility would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the study area over this level.

21.9.3.3 Ecosystems

Upland impacts to the current natural resources in the study area are expected to be minimal due to the limited size and fully developed condition of the study area.

Removal of the existing facility would presumably be carried out by a barge-mounted crane. During the extraction of the subsurface pilings, the upper organic silts would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low and the impacts, if any, highly localized. Turbidity and short-term, lower, dissolved oxygen are possible, but not measurable, against normal background fluctuations. The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the West 135th Street Converted MTS.

Construction of the new pile-supported facility would involve the driving of new piles through the upper organic silts, through the sand layers and to bedrock or sufficient depth for friction support. Penetration of the upper silts may cause small amounts of re-suspension, and dredging will result in an immediate, short-term destruction of the benthic invertebrates in the area.

Because the benthic diversity is high and marine construction causes turbidity and siltation that could smother the benthic organisms, the short-term degree of impact is expected to be high. However, recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[7] Given the relatively small size of the project, minimal overall impact to the benthic community is expected at the West 135th Street Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Flounder catch was much higher at the West 135th Street Converted MTS than herring catch, so it can be assumed that this site is not an important herring habitat that will be temporarily impacted. Finfish eggs and larvae are more sensitive to suspended sediment, and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the West 135th Street Converted MTS is for an increase in 36,089 square feet of pier. This will result in increased shading that will block sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[8] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

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[7] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

[8] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[9] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the increase in shading over water is very small, there are not expected to be significant deleterious results. There is a possibility of a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

According to the Atlas of Breeding Birds in New York State, the common nighthawk (*Chordeiles minor*) regularly nests on flat-roofed structures in cities and towns and feeds upon insects during flight. The West 135th Street Converted MTS is not likely to directly impact any potential nesting habitat or prey species that the nighthawk depends upon.[10]

[9] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

[10] Andrle, R.F. & Carroll, J.R., eds, 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

21.10 Hazardous Materials

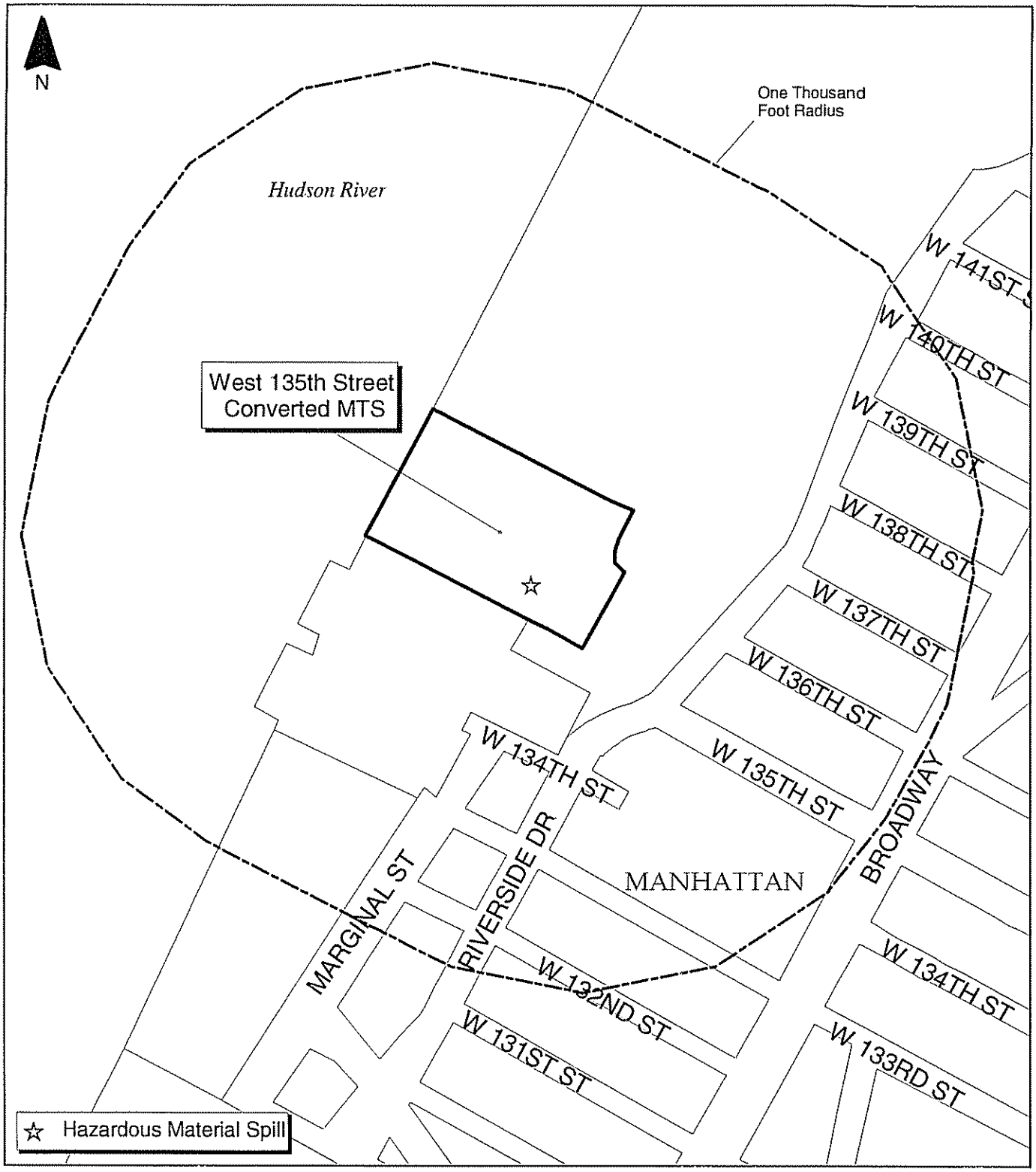
21.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

21.10.1.1 Definition of Study Area

The study area includes the existing MTS site and neighboring properties within a 1,000-foot radius (see Figure 21.10-1).



Site delineations and study area boundaries are approximate
Base Mp Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA HydroGeoLogic PB Cambridge Environmental Inc

Figure 21.10-1 Hazardous Material Sites

West 135th Street Converted MTS

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21.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the ground, groundwater, surface water or structures within the study area where the presence or likely presence of hazardous materials exists and implementation of the West 135th Street Converted MTS could lead to an increased exposure of people or the environment to those materials. No specific areas of concern were identified at this site during the assessment.

21.10.2 Future No-Build Conditions

The site would remain as is. There would be no areas of significant concern with regard to hazardous materials.

21.10.3 Potential Impacts with the West 135th Street Converted MTS

The West 135th Street Converted MTS would not result in adverse impacts. Some benefits may be realized because a new facility would replace the existing MTS. No additional testing would be required other than an asbestos inspection prior to demolition of the existing MTS. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.

21.11 Water Quality

21.11.1 Existing Conditions

21.11.1.1 Definition of the Study Area

The water quality study area encompasses the Hudson River and includes discharges from CSOs located within ½-mile of the site.

21.11.1.2 Water Quality

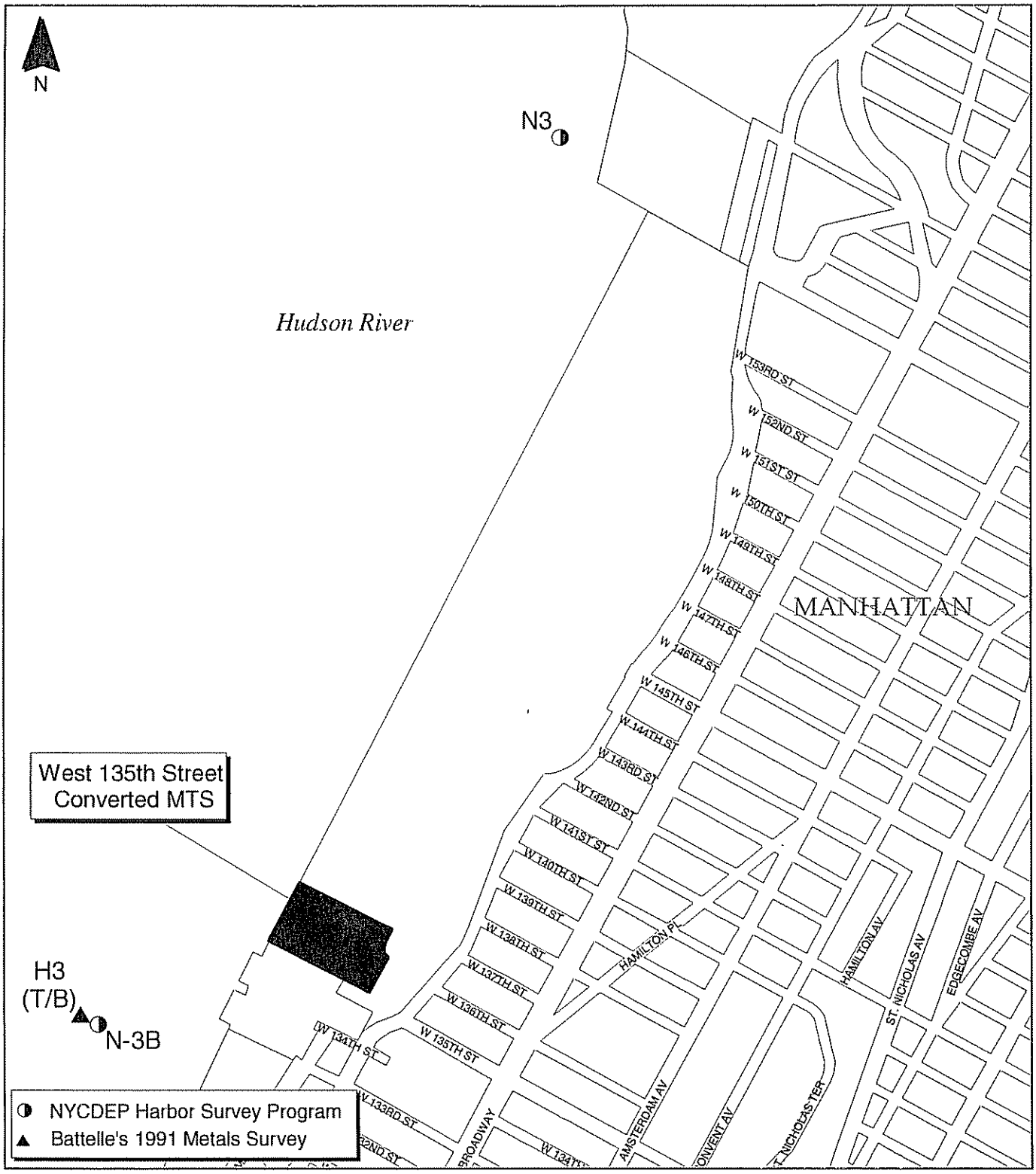
The water quality data for the following monitoring stations, shown in Figure 21.11-1, are generally representative of water quality in the study area:

- NYCDEP Harbor Survey Program –Stations N-3 and N-3B in the Hudson River off of Manhattan; and
- Battelle's 1991 Metals Survey –Stations H-3T and H-3B[11] in the Hudson River at mid-Manhattan.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 21.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates water suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 21.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Stations H-3T and H-3B did not conform to the water quality standard for mercury.

[11] Stations H-3T and H-3B are located at the same longitude and latitude. Station H-3T is located at the surface of the Hudson River. Station H-3B is located at the bottom of the Hudson River.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 21.11-1 Ambient Water Quality Stations
West 135th Street Converted MTS

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Table 21.11-1
Existing Water Quality Conditions and Standards
West 135th Street Converted MTS Study Area

Average Concentration						
Parameter	**Units**	**Station N-3[1]**	**Station N-3B[2]**	**Station H-3T[3]**	**Station H-3B[4]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	8.7[5]/5.2[6]	8.69[7]/5.51[8]	-------	-------	4
Dissolved Oxygen (bottom/minimum)	mg/L	7.1[5]/4.5[6]	6.95[9]/4.69[8]	-------	-------	4
BOD (surface)	mg/L	2.0[10]	2.0[10]	-------	-------	-------
BOD (bottom)	mg/L	3.0.[10]	2.7[10]	-------	-------	-------
Total Coliform (surface)	MPN/100 ml	718[11]	838[11]	-------	-------	10,000
Total Coliform (bottom)	MPN/100 ml	1,893[11]	1,411[11]	-------	-------	10,000
Fecal Coliform (top)	MF	37	94	-------	-------	2,000
Fecal Coliform (bottom)	MF	43	35	-------	-------	2,000
Total Suspended Solids (surface)	mg/L	19	13.1	-------	-------	-------
Total Suspended Solids (bottom)	mg/L	66	71.2	-------	-------	-------
NH_3-N	mg/L	0.244	0.21	-------	-------	-------
(NO_3 + NO_2)	mg/L	0.453	0.52	-------	-------	-------
Total Phosphorous	mg/L	0.433[12]	0.12	-------	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------	-------
Chlorophyll-a	µg/L	10.3	6.6	-------	-------	-------
Arsenic	µg/L	-------	-------	-------	-------	36[12,13]
Cadmium	µg/L	-------	-------	0.06[12]	0.07[12]	7.7[12,13]
Chromium	µg/L	-------	-------	-------	-------	------
Copper	µg/L	-------	-------	2.00[14]	1.91[14]	5.6[13,14]
Lead	µg/L	-------	-------	0.13[12]	0.16[12]	8[12,13]
Mercury	µg/L	-------	-------	0.0027[12]	0.0033[12]	0.0026[12,13]
Nickel	µg/L	-------	-------	0.98[12]	1.03[12]	8.2[12,13]
Silver	µg/L	-------	-------	0.0106[12]	0.0135[12,15]	-------
Zinc	µg/L	-------	-------	3.76[12]	5.23[12]	66[12,13]
Cyanide	µg/L	-------	-------	-------	-------	1.0[12]

Notes:

(1) Average concentrations for 1999 NYCDEP Harbor Survey site N-3, located at mid-Manhattan in the Hudson River.

(2) Average concentrations for 2003 NYCDEP Harbor Survey site N-3B, located at mid-Manhattan in the Hudson River.

(3) Average concentrations for 1991 Battelle Ambient Survey site H-3T, located at mid-Manhattan on the surface of the Hudson River.

(4) Average concentrations for 1991 Battelle Ambient Survey site H-3B, located at mid-Manhattan at the bottom of the Hudson River.

(5) Represents average between March and December 1999.

(6) Minimum between June 1, 1999 and September 30, 1999.

(7) Represents average between January and December 2003.

(8) Minimum between June 1, 2003 and September 30, 2003.

(9) Represents average between January and December 2003.

(10) Latest available data 1997.

(11) Latest available data 1996.

(12) Latest available data 1998.

(13) Guidance values and data are for dissolved metals.

(14) NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata January 1999 and addendum April 2000).

Notes for Table 21.11-1 (Continued)
(15) Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

21.11.1.3 Permitted Discharges

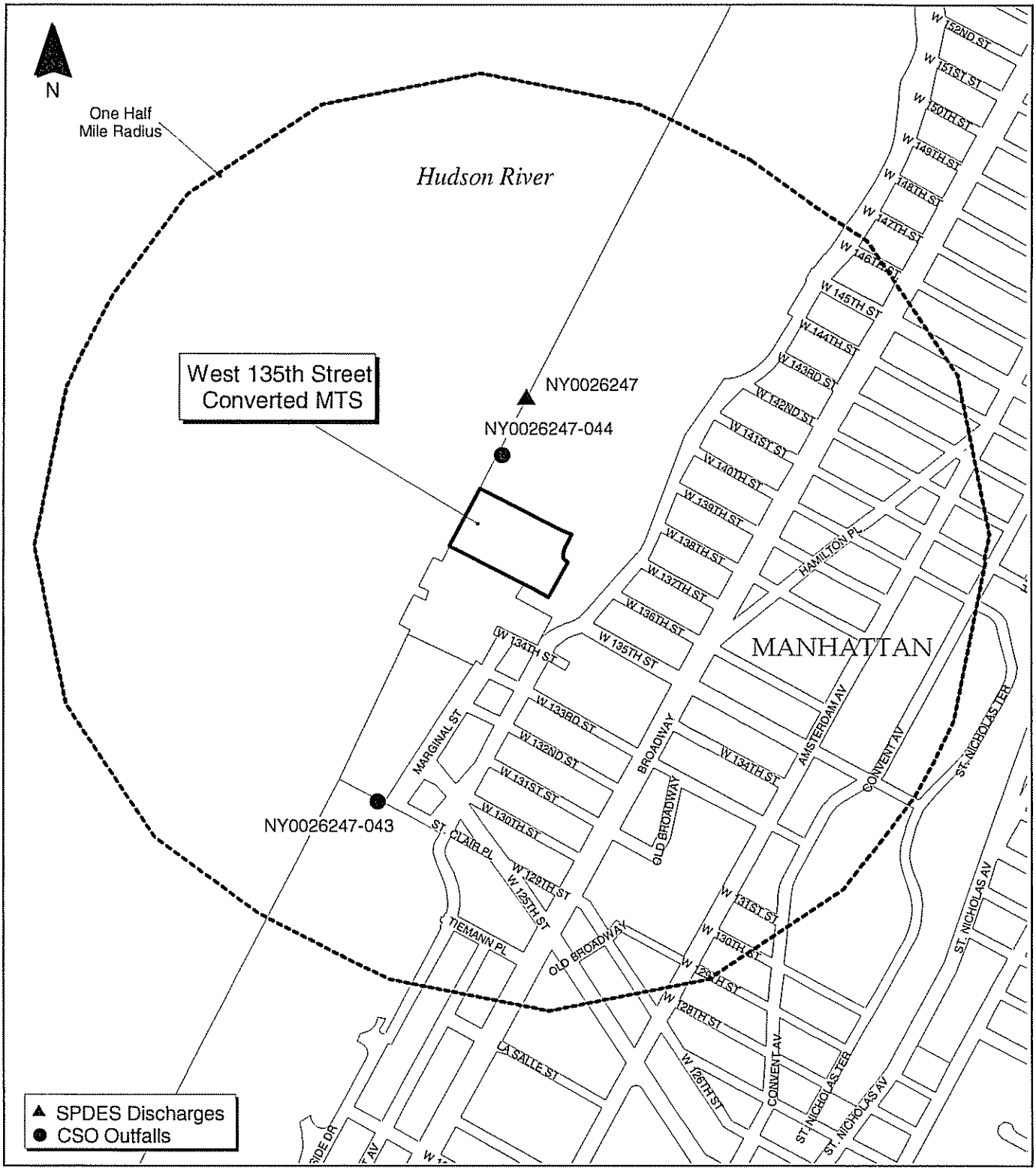
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the West 135th Street Converted MTS site are shown in Figure 21.11-2 and listed in Table 21.11-2. These discharges consist of two CSOs and one point source, all of which are permitted by the NYSDEC. One CSO outfall and the point source are located to the north of the site. The other CSO outfall is located to the south of the site.

21.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and infiltration. A runoff flow of 0.078 cfs was calculated using the impervious site area (1.30 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 21.11-3, represent the existing loads at the existing site.

21.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to ongoing water quality improvement programs such as the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from the City WPCPs; and other water improvement programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 21.11-2 Permitted Outfalls and CSO Locations West 135th Street Converted MTS

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Table 21.11-2
Existing Permitted Discharges
West 135th Street Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
St. Clair Place/North River	NY0026247-043	New York	Hudson River
West 138th Street/North River	NY0026247-044	New York	Hudson River
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
North River WPCP	NY0026247	New York	Hudson River

Table 21.11-3
Estimated Existing Pollutant Loads and Runoff Flows
West 135th Street Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	14,273[(1)]
BOD mg/L	11	5
Heavy Metals		
Copper µg/L	35	0.015
Lead µg/L	28	0.012
Zinc µg/L	154	0.065
Total Impervious Area (acre) = 1.30		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[(2)]		Runoff Volume (cfs) = 0.078

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

21.11.3 Potential Impacts with the West 135th Street Converted MTS

All solid waste processing at the West 135th Street Converted MTS would occur within the proposed structures. All process wastewater from waste handling operations at the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After pretreatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the North River WPCP, where it would be treated prior to discharge to the Hudson River and, therefore, would not adversely affect water quality.

With the development and operation of the West 135th Street Converted MTS, there would be an increase in the impervious area and, therefore, an increase in stormwater loadings. Table 21.11-4 shows the existing impervious area, the change in impervious area and the pollutant loads for the West 135th Street Converted MTS. According to the 208 Model, however, these increased loads would have no significant impact on water quality in the adjacent surface waters.

Table 21.11-4
Impervious Area and Estimated Pollutant Loads
West 135th Street Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Conditions	Total Impervious Area (acres)	Change in Impervious Area (acres)	Fecal Coliform[2]	BOD (lbs/day)	Copper (lbs/day)	Lead (lbs/day)	Zinc (lbs/day)
Existing Conditions	1.30	0 0	14,273/NA	5/NA	0.015/NA	0 012/NA	0.065/NA
Future Build Conditions	2.08	0.78	23,081/8,808	8/3	0 024/0 009	0 019/0 007	0.105/0.040

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

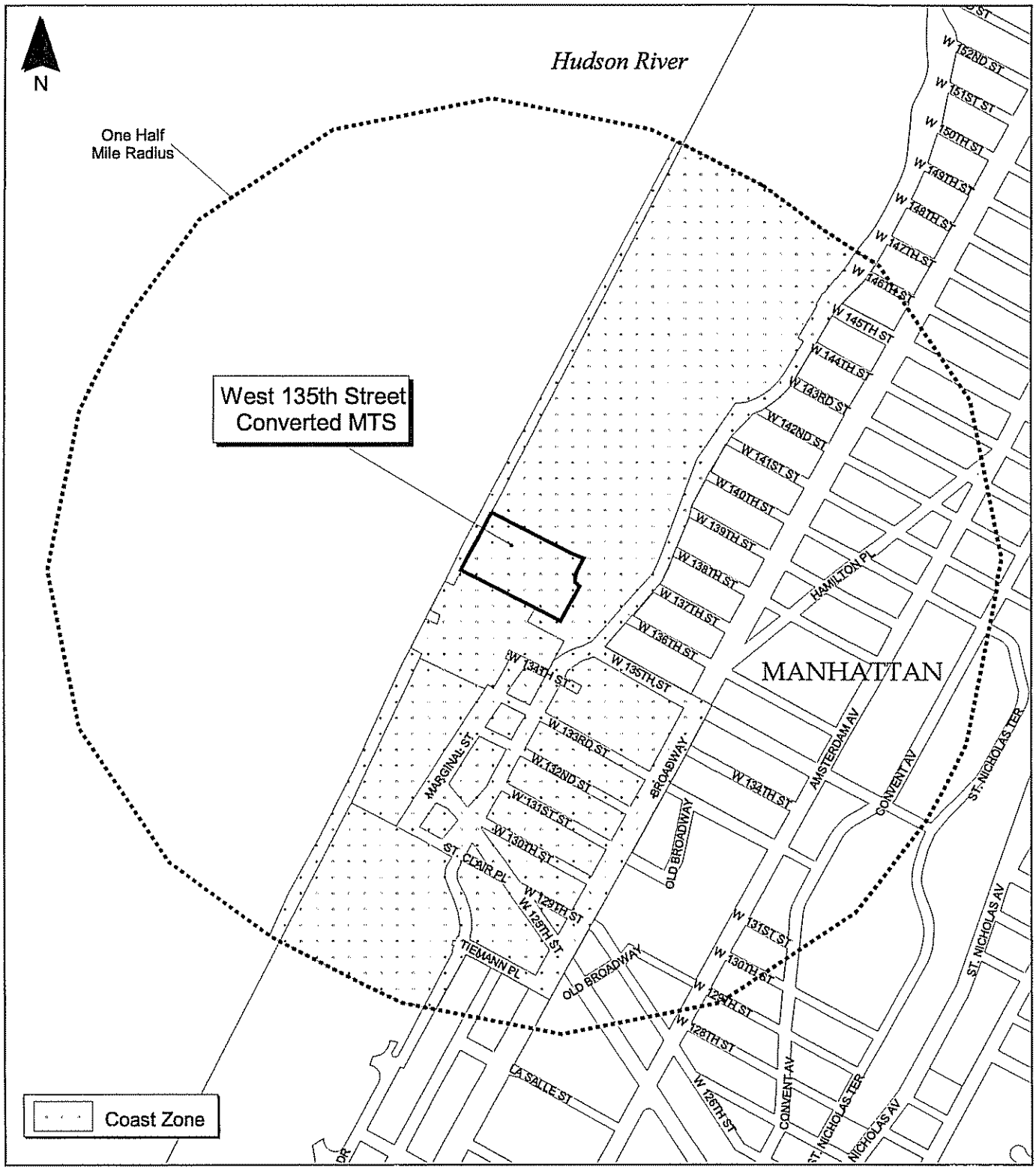
The West 135th Street Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant adverse long-term impacts.

21.12 Waterfront Revitalization Program

21.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the Hudson River, the West 135th Street Converted MTS would be within the City's coastal zone boundary (see Figure 21.12-1). According to "The New Waterfront Revitalization Program," the West 135th Street Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 5/Northern Manhattan as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Manhattan Waterfront." It is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The West 135th Street Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3 and 21.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the West 135th Street Converted MTS. A description of waste handling operations that would occur at the South Bronx Converted MTS is provided in Section 2.4.3.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 21.12-1 Coastal Zone Boundary

West 135th Street Converted MTS

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21.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the West 135th Street Converted MTS. As part of the West 135th Street Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The West 135th Street Converted MTS would not be located within an SMIA. It would involve the conversion of the existing facility from a truck-to-barge waste transfer station into a TCB transfer station that would transport DSNY-managed Waste to remote out-of-City disposal facilities. The West 135th Street Converted MTS would be largely located at the site of the existing MTS and would extend further north.

The West 135th Street Converted MTS, as described in Section 2.4.3, would involve the complete demolition of the existing MTS to accommodate its expanded function, size and configuration. Waterfront development would involve over-water construction of four primary components: (1) an elevated

access ramp; (2) an enclosed processing building, which would include the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a barge fendering system and bulkheads. The West 135th Street Converted MTS would largely involve the continuation of an existing industrial and water-dependent use. It would serve to maintain this use while restoring and revitalizing an existing industrial waterfront property, and it would be compatible with existing neighboring industrial uses. Although the West 135th Street Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an expansion and revitalization of an existing water-dependent use and would be compatible with surrounding uses.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The West 135th Street Converted MTS structure would require the complete demolition of the existing MTS to accommodate the expanded function, size and configuration of the new facility. The majority of the construction would occur over the Hudson River. The West 135th Street Converted MTS would be located at the site of the existing MTS and extend further north. Waterfront development would involve four primary components: (1) an elevated access ramp; (2) an enclosed processing building, which includes the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a barge fendering system and bulkheads. The West 135th Street Converted MTS would be consistent with existing waterfront uses in the vicinity of the site.

The West 135th Street Converted MTS would require dredging to remove accumulated sediments and to provide adequate draft for barges and tugboats once it became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The West 135th Street Converted MTS would be located within the Hudson River at the location of the existing MTS. The use of tugboats or its day-to-day operations would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within the Hudson River resulting from the West 135th Street Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four of five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The West 135th Street Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The existing MTS managed solid waste through a truck-to-barge system under which loose waste was placed in open barges. The West 135th Street Converted MTS would be a TCB MTS where waste would be transferred into containers that would be sealed and placed into flat deck barges that would transport DSNY-managed Waste to remote out-of-City disposal facilities. All solid waste handling would be done within an enclosed processing building and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All waste would be placed in sealed containers before leaving the building for loading on barges. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environments. Litter control methods, such as routine sweeping and

washing of the tipping floor, would be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, any on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with applicable federal, state and local regulations.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes and SCFWH information, the site is located within a New York State Department of State Division of Coastal Resources and Waterfront Revitalization-designated SCFWH, specifically the Lower Hudson Reach. The West 135th Street Converted MTS would represent an expansion of a previous use and would not be anticipated to result in any long-term impacts to the natural resources in the vicinity of the site. As described in Section 21.9.2, disturbances to surficial sediments would have short-term and minimal effects on the benthic community found in the immediate vicinity of the site. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and NWI maps was conducted to determine the presence of wetlands. As noted in Section 21.9.1, the site contains no freshwater wetlands. The West 135th Street Converted MTS would be within the Hudson River, which is identified as a littoral zone, a state-

designated wetland. The demolition of the existing MTS and subsequent development of the West 135th Street Converted MTS would not be anticipated to result in any significant long-term impacts to tidal wetlands. Dredging would be required to remove accumulated sediments in order to provide adequate draft for staged barges and tugboats. Potential impacts due to dredging, however, would be minimal and all dredging would be conducted in compliance with applicable federal, state and local regulations. Mitigation for potential impacts, as appropriate and applicable, would be proposed during the environmental review and permitting of the West 135th Street Converted MTS.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

There are no known vulnerable fish or plant species found to be inhabiting areas within the vicinity of the West 135th Street Converted MTS. A review of NYSDEC NHP records list the Common Nighthawk (*Chordeiles minor*) as a known species potentially breeding in the area; it is classified by the state as a Protected-Special Concern species. As noted in Section 21.9.3, the West 135th Street Converted MTS would not impact these species and their habitats.

The West 135th Street Converted MTS would involve the demolition of the existing MTS facility and replacement with a larger, expanded MTS facility. Development of the West 135th Street Converted MTS would involve removal of the existing MTS and its adjoining vehicle ramp and over-water construction of a new, expanded facility. Dredging activities would be required to remove existing piers and structures, install a new pile-supported platform and footings and accommodate barges and tugboats. Potential impacts to plant, fish and wildlife species would be minimal and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be obtained prior to any dredging activities. In addition, all handling and

containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer system. Stormwater runoff from the West 135th Street Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The West 135th Street Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, all sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system that would include an oil-water separator, and then be discharged to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the West 135th Street Converted MTS would be managed in accordance with applicable regulations. All handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of pollutants into the environment.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the West 135th Street Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The West 135th Street Converted MTS would comply with federal, state and local

requirements concerning the management of stormwater runoff and erosion. During construction, non-structural (such as silt curtains) and, if necessary, structural, measures would be used to manage stormwater runoff and erosion. The West 135th Street Converted MTS would also comply with applicable federal, state and local requirements and would be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The majority of the demolition and construction would occur over the Hudson River. The existing MTS would be demolished and replaced with a new and expanded TCB MTS. Dredging would be necessary during the demolition and construction of pier structures and footings, and would also be necessary to accommodate future barge and tugboat activity. All dredging would be conducted in accordance with applicable federal, state and local permit requirements and would be conducted in a manner that minimizes any impacts to the water quality. Potential impacts to water quality would be short-term and localized. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The West 135th Street Converted MTS would have no adverse impact on the quality or quantity of surface or ground waters at or in the vicinity of its site. No surface or ground waters in the vicinity of the site constitute a primary source of water supply. Applicable and appropriate measures would be implemented at the facility in accordance with federal, state and local regulations. The West 135th Street Converted MTS would be consistent with this subpolicy.

Policy 6. Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to review of the FEMA National Flood Insurance Program maps, the entire West 135th Street Converted MTS site would be located within the 100-year floodplain boundary (Zone A). Redevelopment of the site, however, would not affect the potential for flooding or erosion. All demolition of the existing MTS and construction of new pier structure, platforms and bulkheads would comply with applicable building code requirements and, to the extent practicable and necessary, non-structural (such as silt curtains) or structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7. Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The West 135th Street Converted MTS would involve the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Waste would be transported in airtight, waterproof, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding water body. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. Waste processing would be done in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the West 135th Street Converted MTS. Radiation detection equipment would be located at the facility, and

contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. The West 135th Street Converted MTS would not result in adverse impacts and would operate in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

On-site storage of petroleum or hazardous materials related to the operation of the West 135th Street Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. Spill prevention and control plans would be used to prevent any hazardous materials from entering the environment.

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Public access would generally not be compatible with the principal use of the site due to the existing industrial uses at and in the immediate vicinity of the West 135th Street Converted MTS, such as the North River WPCP. Riverbank State

Park is located above the North River WPCP and currently offers visual and recreational access to the waterfront. Several additional parks located in the area of the West 135th Street Converted MTS providing public access and recreation facilities are discussed in Section 21.5.1.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The West 135th Street Converted MTS would be a stand-alone, water-dependent facility on the Hudson River. Public access would not be compatible with the West 135th Street Converted MTS; however, its development would not preclude any future development of public access along the Hudson River.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

Expansion of the West 135th Street Converted MTS would be compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. As discussed in Section 21.7.3, visual access to the coastal lands would not be obstructed or impaired. See also response to Subpolicy 9.1

8.4 *Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.*

There are numerous park and open space areas identified in the vicinity of the West 135th Street Converted MTS. Major mapped parklands in the vicinity of the site include Riverbank State Park, Riverside Park (North) and Riverside Park (South), which are north, east and south of the site, respectively. Riverbank State Park is located atop the North River WPCP and would be elevated above the West 135th Street Converted MTS; therefore impacts, if any, would be minimal. Riverside Park (North) is northeast and east of the site and is physically separated

and shielded from the site by the Henry Hudson Parkway. Riverside Park (South) is located south of St. Clair Place and would not be significantly impacted by the West 135th Street Converted MTS. Expansion of the West 135th Street Converted MTS would cause no new significant impacts to these areas and, therefore, is consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The West 135th Street Converted MTS would not result in a significant impact on views, as noted in Section 21.7.3. Based on the information discussed in that section, the West 135th Street Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The West 135th Street Converted MTS would be an expansion and rehabilitation of an existing facility and would pose no new impacts to scenic values associated with natural resources. The West 135th Street Converted MTS would also be compatible with surrounding buildings and, therefore, would be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

Designated historic resources are found within the study area, as noted in Section 21.6.1. However, the West 135th Street Converted MTS would have no impacts on these resources. Based upon information discussed in Section 21.6.2, the West 135th Street Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

As noted in Section 21.6.3, the site does not have any architectural or archaeological significance, nor are any resources located in its vicinity. The West 135th Street Converted MTS would, therefore, be consistent with this subpolicy.

21.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

21.13.1 Existing Conditions

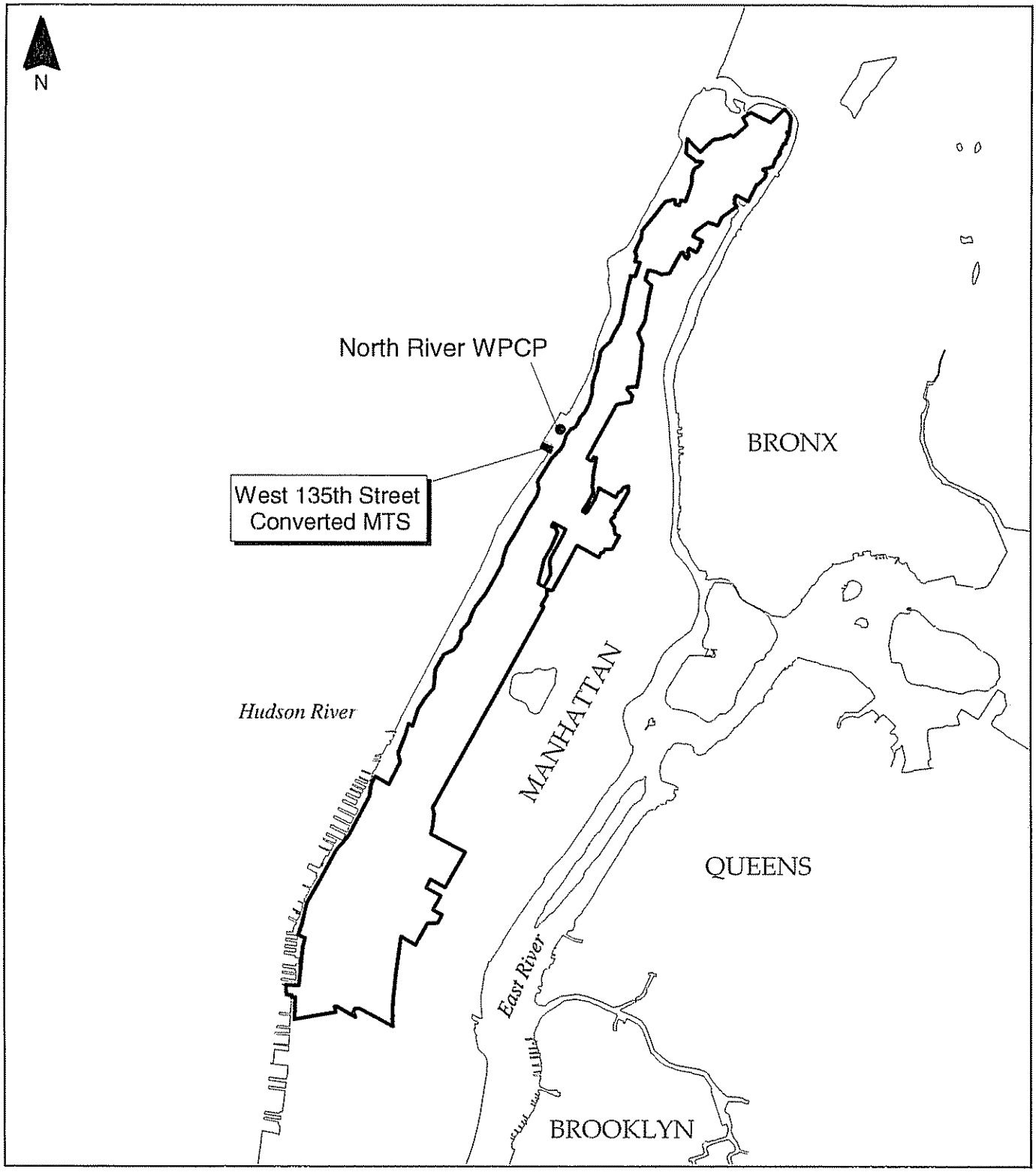
21.13.1.1 Water Supply

Water is supplied to the existing West 135th Street MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter pipe in the immediate area of the site at the intersection of West 135th Street and 12th Avenue provides water to the existing potable and fire water systems.

An off-site 6-inch-diameter line along West 135th Street provides potable water for both consumption and sanitary requirements. A second 6-inch-diameter fire water service line located on site provides potable water to charge the fresh water sprinkler system at the existing MTS. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual). To ensure that adequate pressure is provided on site, each water system is currently supplemented with a pump.

21.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the North River WPCP, which serves the western section of Manhattan from Chelsea to Inwood and is located immediately north of the existing West 135th Street MTS. The WPCP drainage area is illustrated in Figure 21.13-1. From July 2002 through June 2003, the North River WPCP treated an average of 124 mgd of wastewater underdry weather flow conditions and an average flow of 133 mgd, which includes the sanitary and stormwater flows by the WPCP during wet weather. (Ssee Table 21.13-1.). The maximum dry weather flow during this period was 130 mgd during August 2002 and June 2003 and the maximum average flow was 149 mdg during June 2003. Effluent from the plant is discharged into the Hudson River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the North River WPCP is 170 mgd. It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on the current



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

4000 0 4000 Feet

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Figure 21.13-1 Existing WPCP Drainage Area
West 135th Street Converted MTS

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Table 21.13-1
Average Monthly Dry Weather and Average Flows
North River Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	127	129
August	130	137
September	124	135
October	121	140
November	118	130
December	120	128
January 2003	119	125
February	125	129
March	122	130
April	128	134
May	122	129
June	130	149
Average Effluent	**124**	**133**

Notes:
(1) Average flows include the sanitary and stormwater flows received by the plant in wet weather.

staff of three security employees (one employee per shift, three shifts per day) using 25 gallons per person, per day (2001 CEQR Technical Manual). As the facility is currently not accepting waste, no other potable water is used and no operational staff is assigned to the site.

A 12-inch-diameter sewer at West 135th Street and 12th Avenue serves the site. The sewer is connected to a 16-foot, square interceptor line (combined sanitary and storm water system) that runs north along Riverside Drive where waste is directed north to the North River WPCP. Stormwater runoff from the MTS parking area and ramp are routed to catch basins that discharge to the combined sewer system.

21.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the MTS produces approximately nine pounds of solid waste per week for a facility total of 27 pounds per week (approximately four pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriate licensed solid waste management facility.

21.13.1.4 Energy

Electricity to the facilty is provided by Consolidated Edison of New York. A review of applicable utility plans shows electric lines along 12th Avenue and 135th Street. The MTS service is connected to the Consolidated Edison system on West 135th Street to the west of 12th Avenue. The existing West 135th Street MTS currently utilizes a negligible amount of energy due to low staffing levels providing only security. Currently, no gas is supplied to the facility.

21.13.2 Future No-Build Conditions

The existing West 135th Street MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near Existing Condtions levels for security employees. Wastewater flows to the North River WPCP would continue to increase and would be projected to be 135.1 mgd by 2006.

21.13.3 Potential Impacts with the West 135th Street Converted MTS

21.13.3.1 Water Supply

The West 135th Street Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The West 135th Street Converted MTS would have no impact on the existing system's ability to supply water reliably. According to Division 6 of the FDNY, the water pressure in the area is about 90 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

21.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the West 135th Street Converted MTS, the small quantities of wastewater sent to the North River WPCP would not significantly impact the sewage flow rate or the ability of the North River WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 135.1 mgd in 2006, which would be well below the permitted capacity of 170 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

21.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the West 135th Street Converted MTS and would not significantly impact the system.

21.13.3.4 Energy

The West 135th Street Converted MTS would require an additional 5.51E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the West 135th Street Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the West 135th Street Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts.

21.14 Traffic, Parking, Transit, and Pedestrians

21.14.1 Introduction

The West 135th Street Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

21.14.2 Existing Conditions

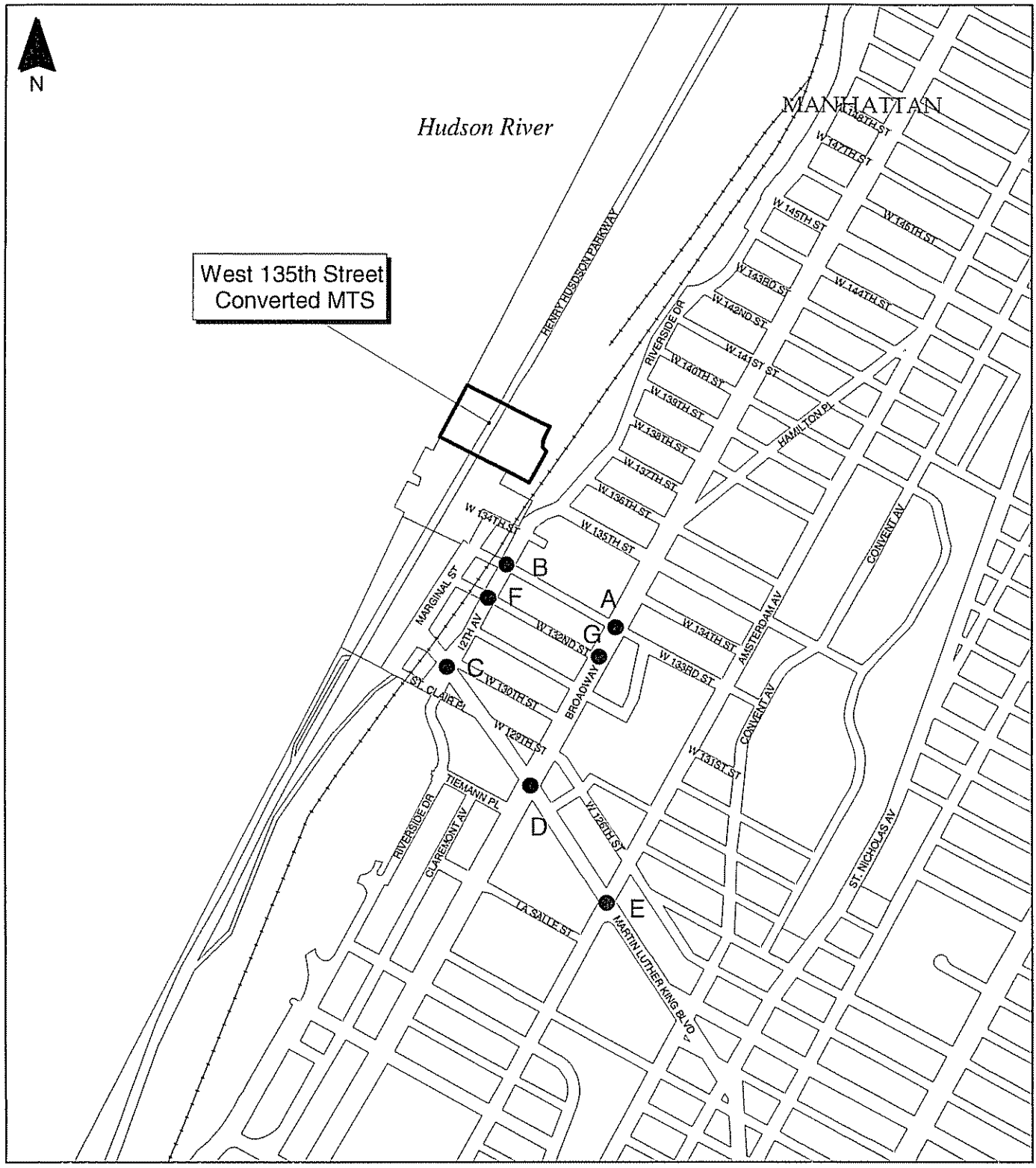
21.14.2.1 Definition of Study Area

The West 135th Street Converted MTS is located on the Hudson River at West 135th Street. The study area, which is bounded on the east by Amsterdam Avenue, on the south by West 125th Street and on the north by West 135th Street, was defined based upon a determination of the expected concentration of vehicle trips to and from the West 135th Street Converted MTS and also by the configuration of the arterial street network in the site area. The study area is characterized primarily by mixed commercial and residential land uses with some light industrial.

The major roadways in the study area include 12th Avenue, Broadway, West 125th Street and Amsterdam Avenue. Figure 21.14-1 shows the locations of the intersections selected for analysis (locations A through G). (Intersections analyzed were selected using the procedures defined in Section 3.16). Section 21.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the West 135th Street Converted MTS.

21.14.2.2 Surface Network

Trucks are required by NYCDOT Title 34 to travel on truck routes directly to the site or the intersection nearest the site if adjacent streets are not designated truck routes. A map showing all major truck routes and local truck routes in Manhattan is provided in Section 3.16 (see Figure 3.16-4).



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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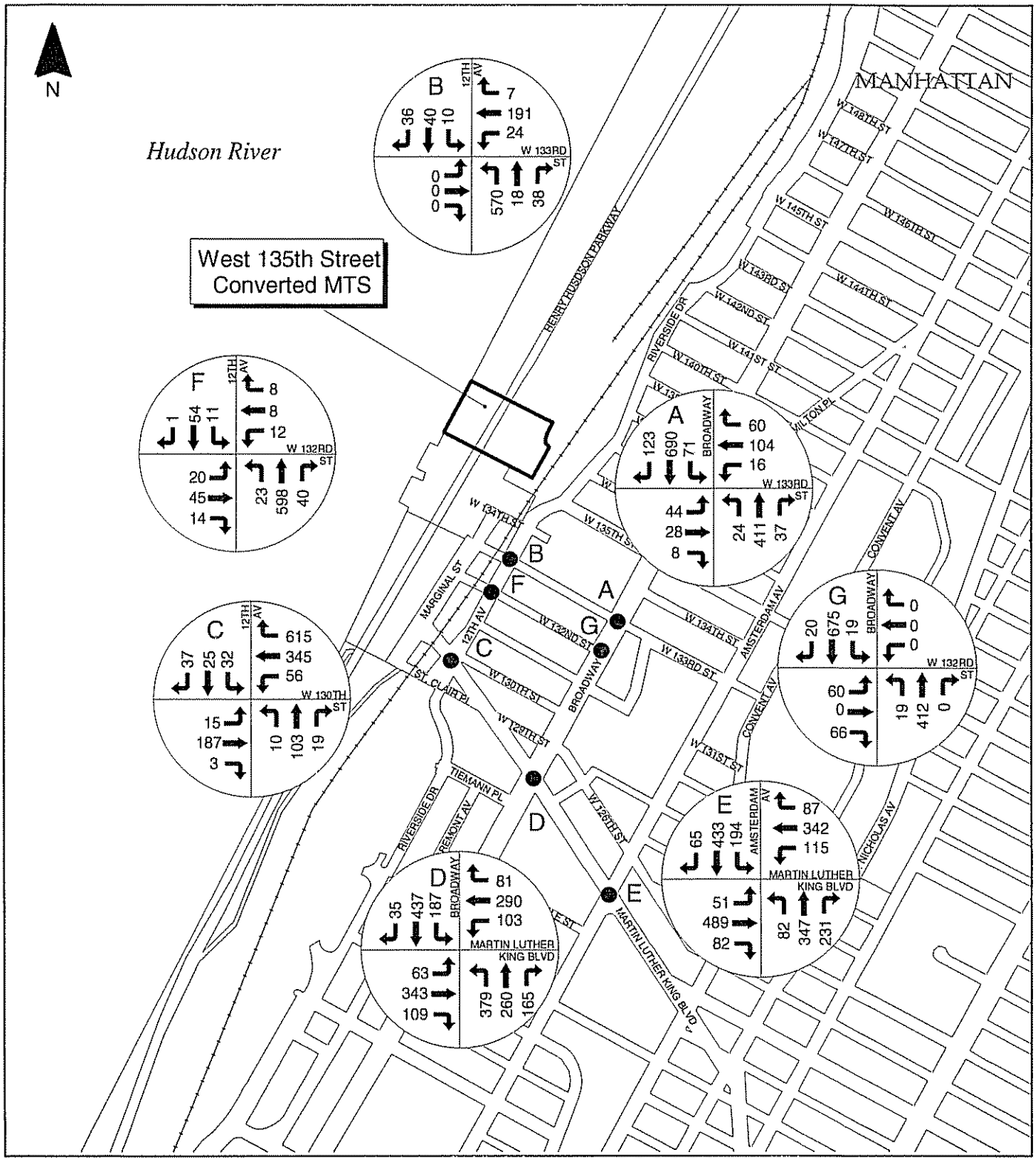
Figure 21.14-1 Traffic Analysis Study Area
West 135th Street Converted MTS

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The primary truck access routes between the West 135th Street Converted MTS and CDs M9, M10 and M12 and their associated garages are Broadway, Amsterdam Avenue and West 125th Street. Broadway and Amsterdam Avenue are major north/south Manhattan arterials. Broadway extends throughout the length of Manhattan and is a two-way arterial in the study area. The NYCT Broadway/7th Avenue Local No. 1/9 line runs on an elevated structure over Broadway in the study area. Amsterdam Avenue is also a two-way arterial in the study area. West 125th Street is a two-way major east-west commercial corridor extending from the east to the west shorelines of Manhattan. Direct access to the site is provided by 12th Avenue and a short segment of West 135th Street. 12th Avenue is a short street segment in the study area extending generally between West 125th Street and West 135th Street. Riverside Drive is on an elevated structure over 12th Avenue. Ramps to northbound Route 9A and to and from southbound Route 9A are located in the study area.

DSNY and other agency collection vehicles traveling to the West 135th Street Converted MTS from the north on Broadway can turn west on West 133rd Street to gain access to 12th Avenue and then proceed to the site. Vehicles coming from the north along Amsterdam Avenue would proceed to West 125th Street and then to 12th Avenue. Vehicles approaching from the south on Broadway or Amsterdam Avenue would use West 125th Street to gain access to 12th Avenue and then West 135th Street by the Converted MTS. DSNY and other agency collection vehicles exiting the West 135th Street Converted MTS and returning north along Broadway must use West 132nd Street in order to turn north onto Broadway. A height restriction due to an NYCT bridge located above Broadway at West 133rd Street prevents DSNY and other agency collection vehicles from making a left onto Broadway from West 133rd Street. Other exiting vehicles travel south along 12th Avenue to West 125th Street and then proceed to a designated truck route to return to their respective CDs. Figure 21.14-2 depicts NYCDOT designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

Figure 21.14-2 Existing Traffic Volumes
AM Peak
West 135th Street Converted MTS

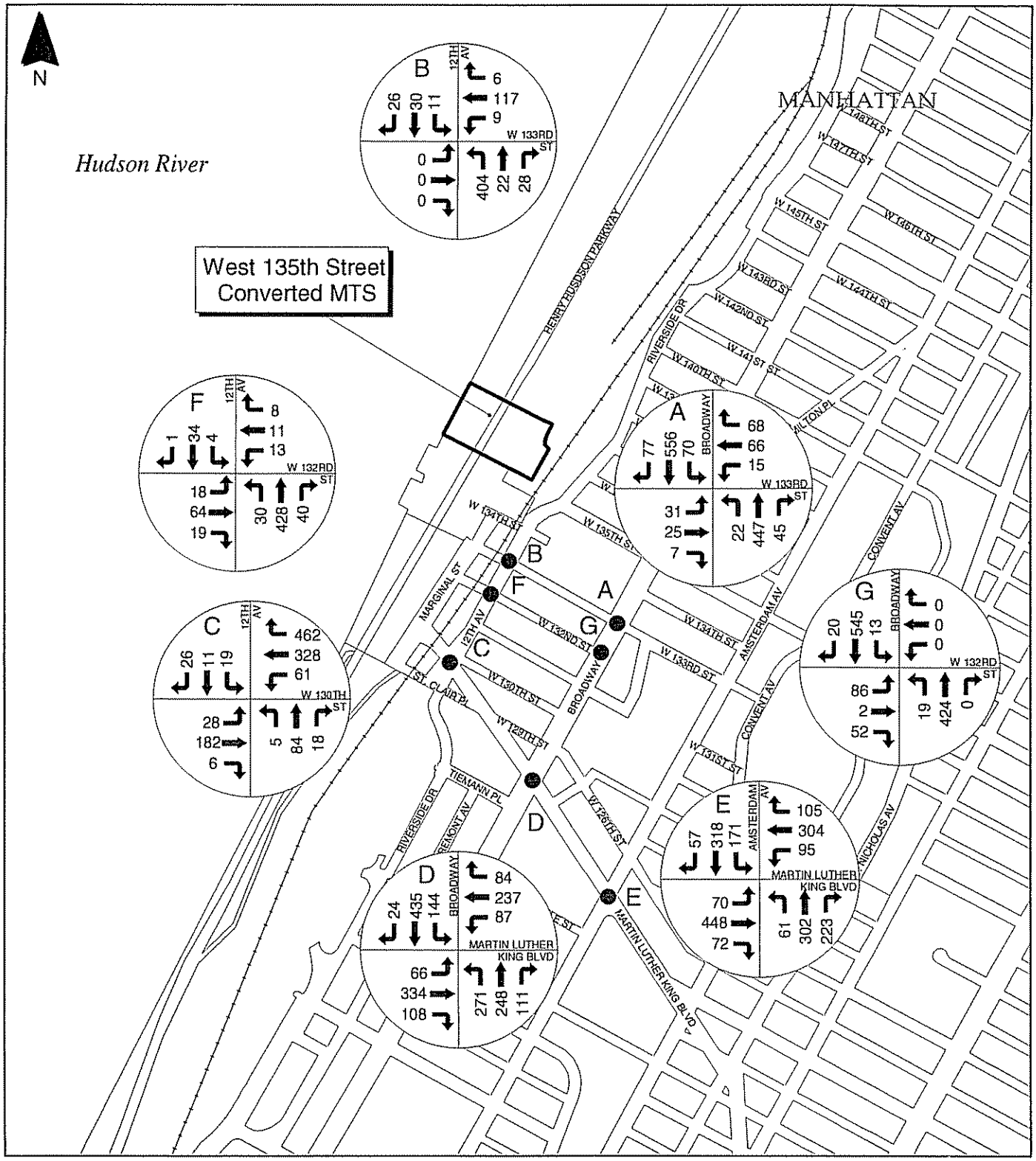
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21.14.2.3 Existing Traffic Operations

The seven intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the West 135th Street Converted MTS. All are on major arterials and/or collection vehicle routes. Diagrams of the following intersections are included in technical backup submitted to NYCDOT.

- Broadway and West 133rd Street – Signalized Intersection (see Figure 21.14-1, Location A)
- 12th Avenue and West 133rd Street – Signalized Intersection (see Figure 21.14-1, Location B)
- 12th Avenue and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location C)
- Broadway and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location D)
- Amsterdam Avenue and West 125th Street – Signalized Intersection (see Figure 21.14-1, Location E)
- 12th Avenue and West 132nd Street – Signalized Intersection (see Figure 21.14-1, Location F)
- Broadway and West 132nd Street – Signalized Intersection (see Figure 21.14-1, Location G)

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement and ATR counts were conducted primarily in November 2002 with some additional counts conducted in March 2003. Figures 21.14-3, 21.14-4 and 21.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 8:00 a.m. and 9:00 a.m., the Facility peak between 9:00 a.m. and 10:00 a.m., and the PM peak between 5:00 p.m. and 6:00 p.m. Table 21.14-1 presents the v/c ratio, delay and LOS for the seven study intersections during the AM, Facility, and PM peaks.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

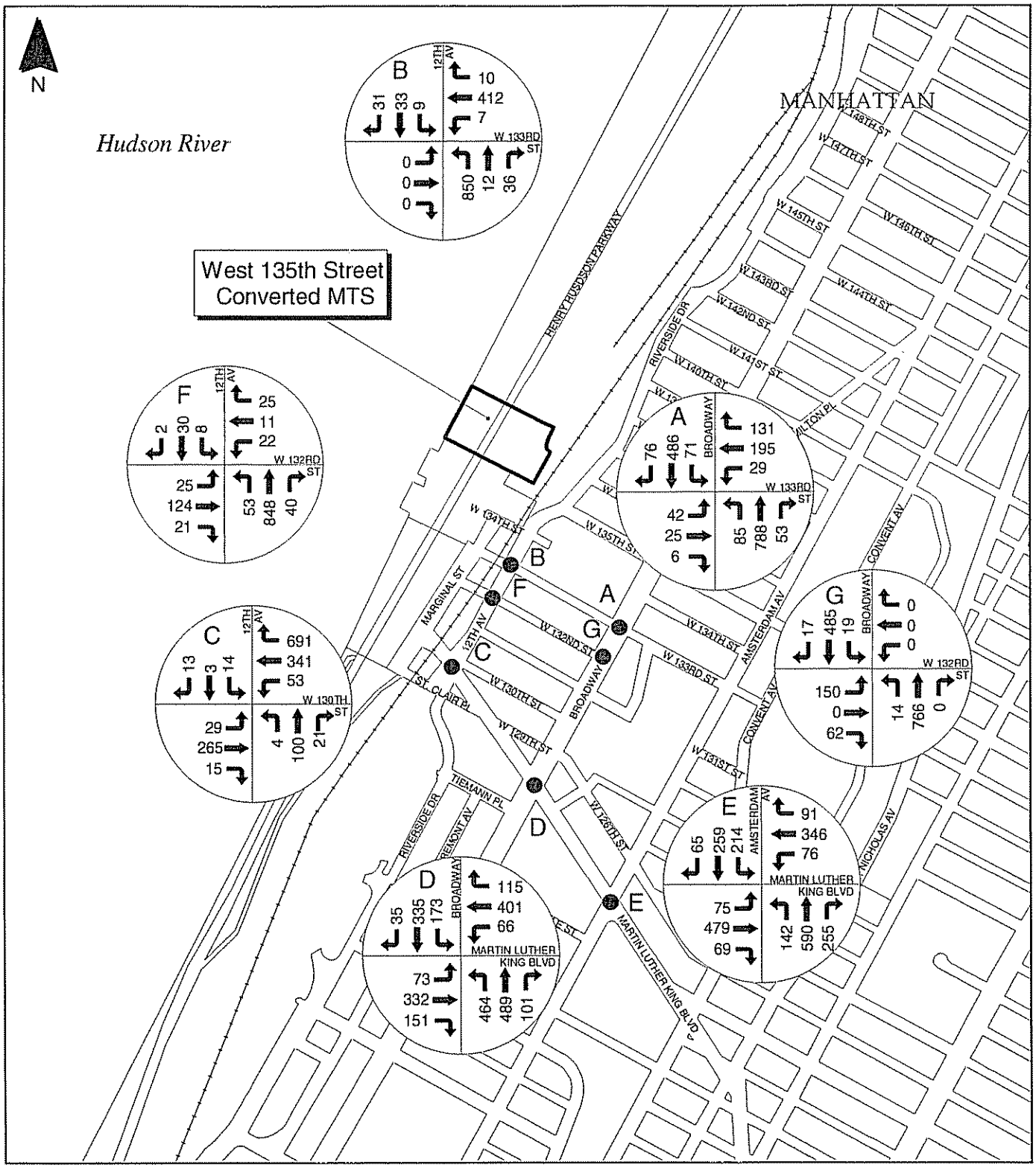
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Figure 21.14-3 Existing Traffic Volumes Facility Peak West 135th Street Converted MTS

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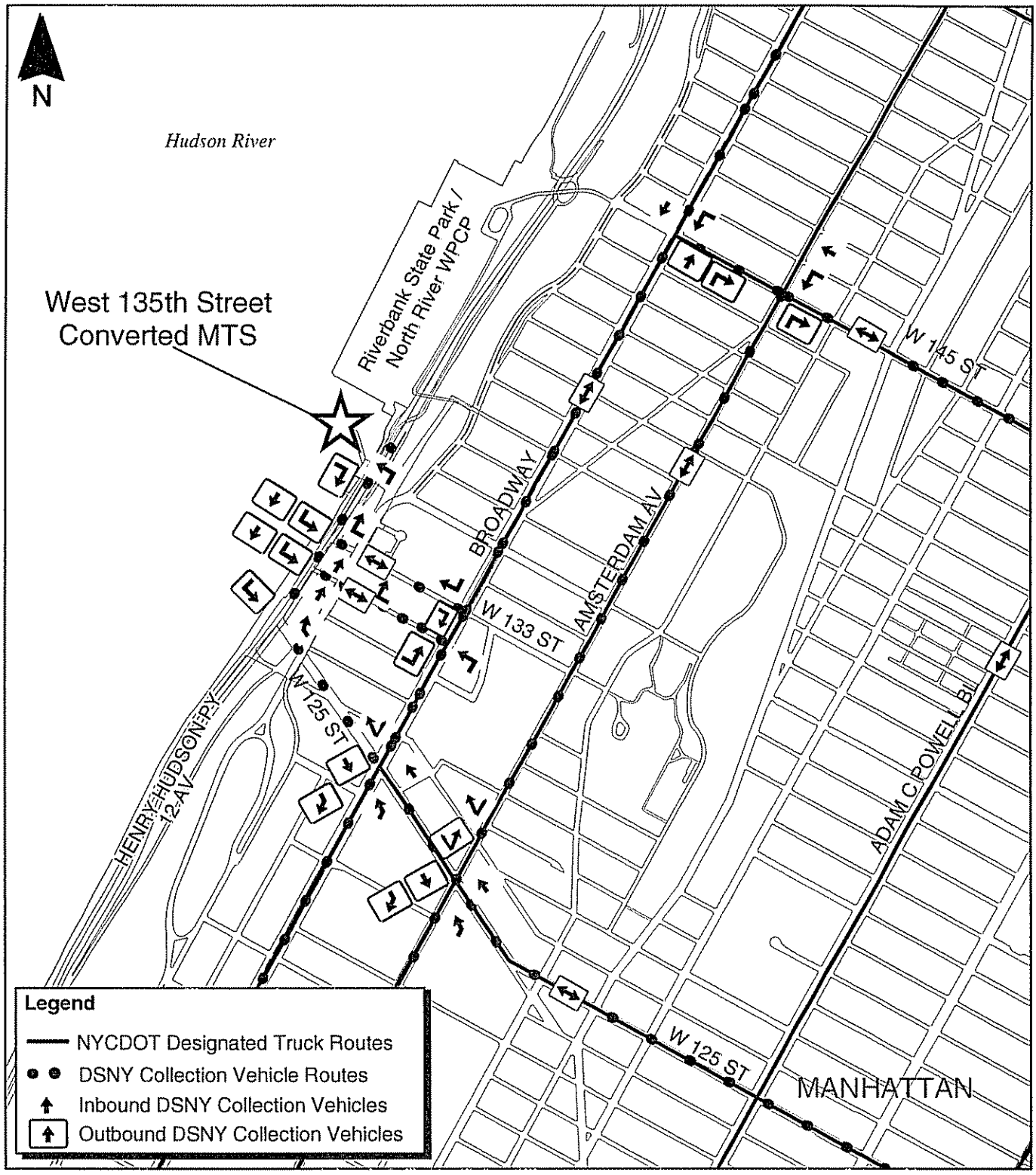


Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-4 Existing Traffic Volumes PM Peak West 135th Street Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 21.14-5 DSNY Collection Vehicle Routes West 135th Street Converted MTS

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Table 21.14-1
HCM Analysis[1] - Existing Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0.25	28.2	C	0.20	27.7	C	0.21	27.8	C
SB LTR	0.32	30.4	C	0.27	29.6	C	0.18	28.0	C
EB LTR	0.18	6.7	A	0.16	6.6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.4	A
WB TR	0.67	12.3	B	0.55	10.2	B	0.62	11.1	B
OVERALL		13.9	B		12.3	B		12.2	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0.41	10.7	B	0.35	10.2	B	0.61	13.5	B
SB LTR	0.11	8.4	A	0.07	8.1	A	0.09	8.3	A
EB LTR	0.29	27.4	C	0.32	27.9	C	0.53	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.2	B		14.0	B		16.9	B
133rd Street & 12th Avenue (signalized)									
NB L	0.73	20.0+	C	0.55	14.4	B	0.99	50.7	D
NB LTR	0.26	9.8	A	0.21	9.2	A	0.35	11.0	B
SB LTR	0.07	8.0	A	0.06	7.9	A	0.06	7.9	A
WB LTR	0.61	33.1	C	0.33	27.0	C	1.06	88.0	F
OVERALL		20.7	C		15.3	B		54.4	D
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0.79	31.1	C	0.74	29.0	C	1.03	64.1	E
SB DFL	0.45	18.2	B	0.43	16.9	B	0.58	28.2	C
SB TR	0.91	47.0	D	0.76	32.6	C	0.60	26.5	C
EB L	0.33	27.5	C	0.39	28.6	C	0.43	30.3	C
EB TR	0.76	33.5	C	0.67	30.1	C	0.63	28.6	C
WB L	0.99	108.0	F	0.71	52.9	D	0.53	36.5	D
WB TR	0.62	29.0	C	0.58	28.0	C	0.55	27.0	C
OVERALL		36.9	D		29.7	C		41.2	D
133rd Street & Broadway (signalized)									
NB LTR	0.48	16.3	B	0.43	15.5	B	0.99	46.1	D
SB LTR	0.80	24.7	C	0.72	21.6	C	0.70	21.6	C
EB LTR	0.21	19.3	B	0.17	18.8	B	0.20	19.3	B
WB LTR	0.38	21.6	C	0.32	20.6	C	0.67	28.6	C
OVERALL		21.4	C		19.3	B		34.8	C
132nd Street & Broadway (signalized)									
NB LTR	0.46	15.9	B	0.40	15.1	B	0.62	18.5	B
SB LTR	0.61	18.4	B	0.47	15.9	B	0.46	15.9	B
EB LTR	0.34	21.2	C	0.34	21.0	C	0.48	23.5	C
OVERALL		17.8	B		16.4	B		18.4	B
125th Street & Broadway (signalized)									
NB L	0.97	75.9	E	0.68	41.1	D	1.08	103.9	F
NB LTR	0.97	65.0	E	0.75	39.8	D	1.08	93.0	F
SB L	0.46	32.5	C	0.37	30.9	C	0.40	31.3	C
SB LTR	0.74	38.1	D	0.73	38.1	D	0.56	33.0	C
EB L	0.31	25.3	C	0.26	23.7	C	0.42	29.4	C
EB TR	0.55	26.3	C	0.50	25.3	C	0.55	26.0	C
WB L	0.62	39.0	D	0.47	30.9	C	0.36	27.1	C
WB TR	0.48	25.0	C	0.39	23.7	C	0.55	26.1	C
OVERALL		43.5	D		33.0	C		54.5	D

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements

NB = northbound

SB = southbound

EB = eastbound WB = westbound

LT = left through movement L = left movement

TR = through right movement

Existing truck traffic on the major streets in the study area is substantial in the AM and mid-day periods, but less during the PM peak. Heavy vehicles generally consist of 10% to 15% of the total traffic on Broadway, Amsterdam Avenue and West 125th Street during the AM and mid-day periods; and range from 5% to 10% on Amsterdam Avenue and Broadway, and less than 3% on West 125th Street during the PM peak period.

The intersection of Amsterdam Avenue with West 125th Street has been identified as a high pedestrian accident location. Thirteen accidents involving pedestrians were reported at this intersection in the year 2000. Overall, 51 accidents occurred at the intersection in 2000, of which 26 were reportable and 17 involved personal injury. There were no fatalities reported over the last three-year period, but the total number of accidents and the number of injury accidents have increased over the period.

21.14.2.3.1 LOS at Signalized Intersections

Table 21.14-1 shows that the study signalized intersections generally operated at an overall LOS of B or C with the following exceptions. During the AM peak period both West 125th Street at Amsterdam Avenue and West 125th Street at Broadway operated at LOS D. These two intersections also operated at LOS D during the PM peak hour, as did the intersection of West 133rd Street at 12th Avenue.

Overall, most of the individual lane groups at each intersection generally operate at LOS D or better during each analysis period, with some exceptions. At the intersection of West 133rd Street at 12th Avenue, the westbound left, through and right lane group operates at LOS F during the PM peak hour. The westbound left turn lane group operates at LOS F during the AM peak hour at the intersection of 125th Street and Amsterdam Avenue and during the PM peak hour, the northbound left, through and right turn lane group operates at LOS E. Lastly, the northbound left turn lane group and the northbound left, through and right turn lane group at the intersection of 125th Street and Broadway operates at LOS E during the AM peak hour and LOS F during the PM peak hour.

21.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

21.14.2.4 Existing DSNY-Related Traffic

MSW generated by Manhattan CDs M9 and M10 is currently transported under the Manhattan interim export program to American Ref-Fuel, a commercial vendor located at 183 Raymond Boulevard in Newark, New Jersey. MSW generated by Manhattan CD M12 is currently transported to ACS PEN PAC-Eastern located at 30-35 Fulton Street in Paterson, New Jersey. In all instances, MSW is transported from Manhattan to New Jersey in collection vehicles.

21.14.2.5 Public Transportation

Within the study area, NYCT bus and subway systems provide public transportation service. The Broadway-7th Avenue Local No. 1/9 subway line runs north/south on Broadway through the study area with station stops at West 125th Street and West 137th Street. There are also a number of NYCT bus routes that traverse the study area as follows:

- Bx15: Harlem to Fordham in the Bronx serving West 125th Street within the study area.
- M4: Midtown to Washington Heights through the Upper East Side and Harlem. Service is provided along Broadway within the study area.
- M5: Greenwich Village to Washington Heights. Service is provided along Broadway, Riverside Drive and 5th Avenue.
- M11: Greenwich Village to Riverbank State Park making stops in the study area along Amsterdam Avenue.
- M100: East Harlem crosstown and into Inwood. Within the study area, service is provided along West 125th Street and Amsterdam Avenue.
- M101: East Village to Washington Heights through both East Harlem and Harlem, servicing West 125th Street and Amsterdam Avenue within the study area.
- M104: Murray Hill crosstown and into Harlem. Within the study area, stops are made along West 125th Street and Amsterdam Avenue.

21.14.2.6 Pedestrian Activity

Pedestrian activity is substantial along Broadway, West 125th Street and Amsterdam Avenue, but is significantly less in the western part of the study area, such as along 12th Avenue. The highest pedestrian volumes were identified at the intersection of Amsterdam Avenue and West 125th Street, where counts exceeded 300 pedestrians per hour crossing a crosswalk. Slightly lower pedestrian volumes were counted at the intersection of Broadway and West 125th Street. In contrast, fewer than 20 pedestrians per hour on each crosswalk were identified along 12th Avenue.

21.14.3 Future No-Build Conditions

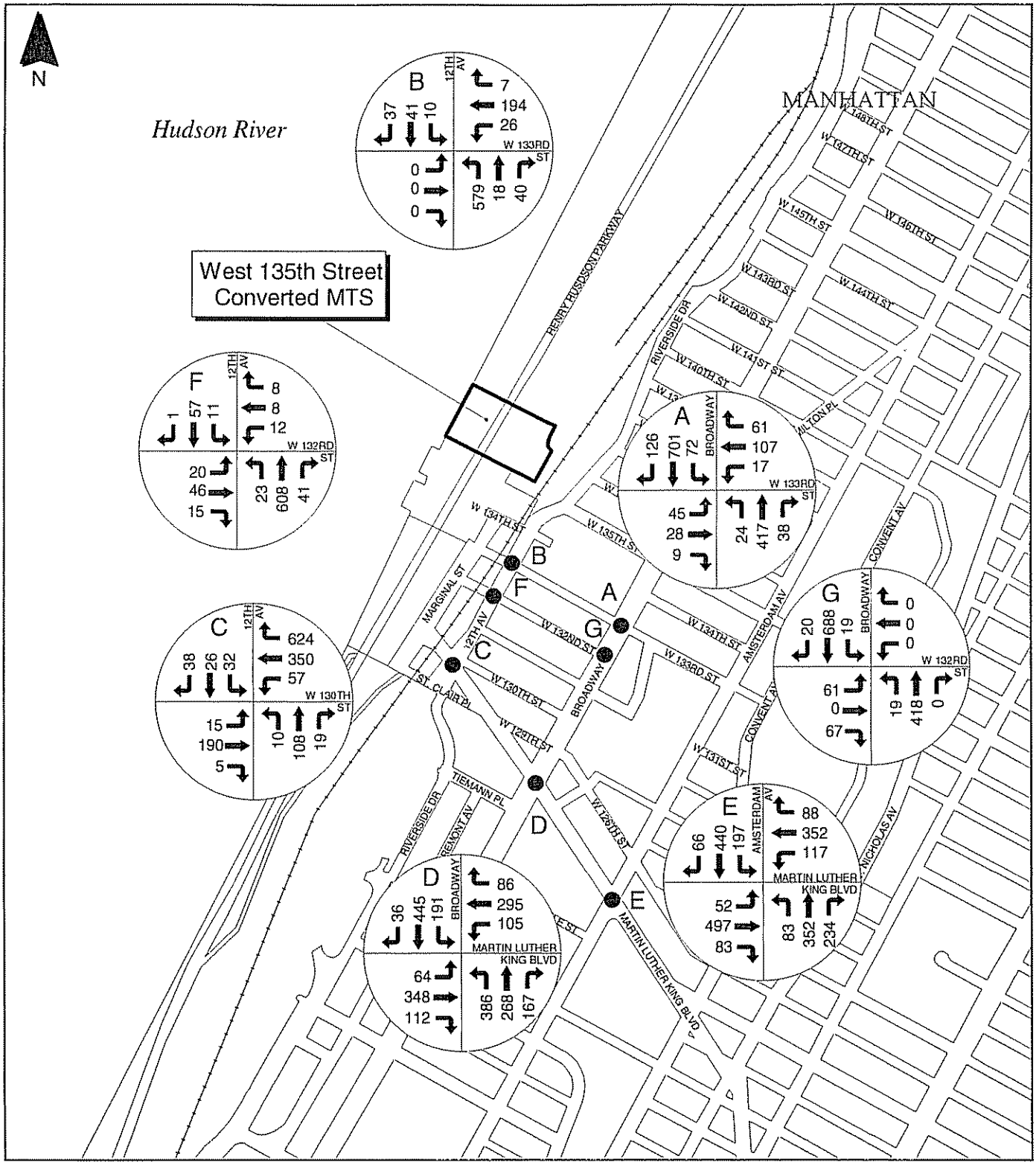
21.14.3.1 Traffic Conditions

The following assumptions and traffic assignments were applied in the development of Future No-Build traffic volumes:

- Continued operation of the Manhattan interim export program with MSW delivered to the vendors noted above.
- Discrete assignment of auto and truck trips expected to be generated by the West Harlem Master Plan Waterfront Development Complex, which is expected to be completed by 2006, and the redevelopment of the Studebaker Building at 615 West 131st Street as a 35,000-square-foot office building.
- Background traffic growth of 0.5% per year in accordance with the 2001 CEQR Technical Manual.

Figures 21.14-6, 21.14-7 and 21.14-8 provide the AM, Facility, and PM peak hour Future No-Build traffic volumes for the intersections analyzed in conjunction with this site.

Table 21.14-2 provides the Future No-Build v/c ratio, delay and LOS for each study intersection. As shown, the study intersections will operate at a LOS B or C during most time periods. During the AM peak hour, however, the intersections of both West 125th Street and Amsterdam Avenue, as well as West 125th Street and Broadway, will operate at LOS D. During the PM peak hour,



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

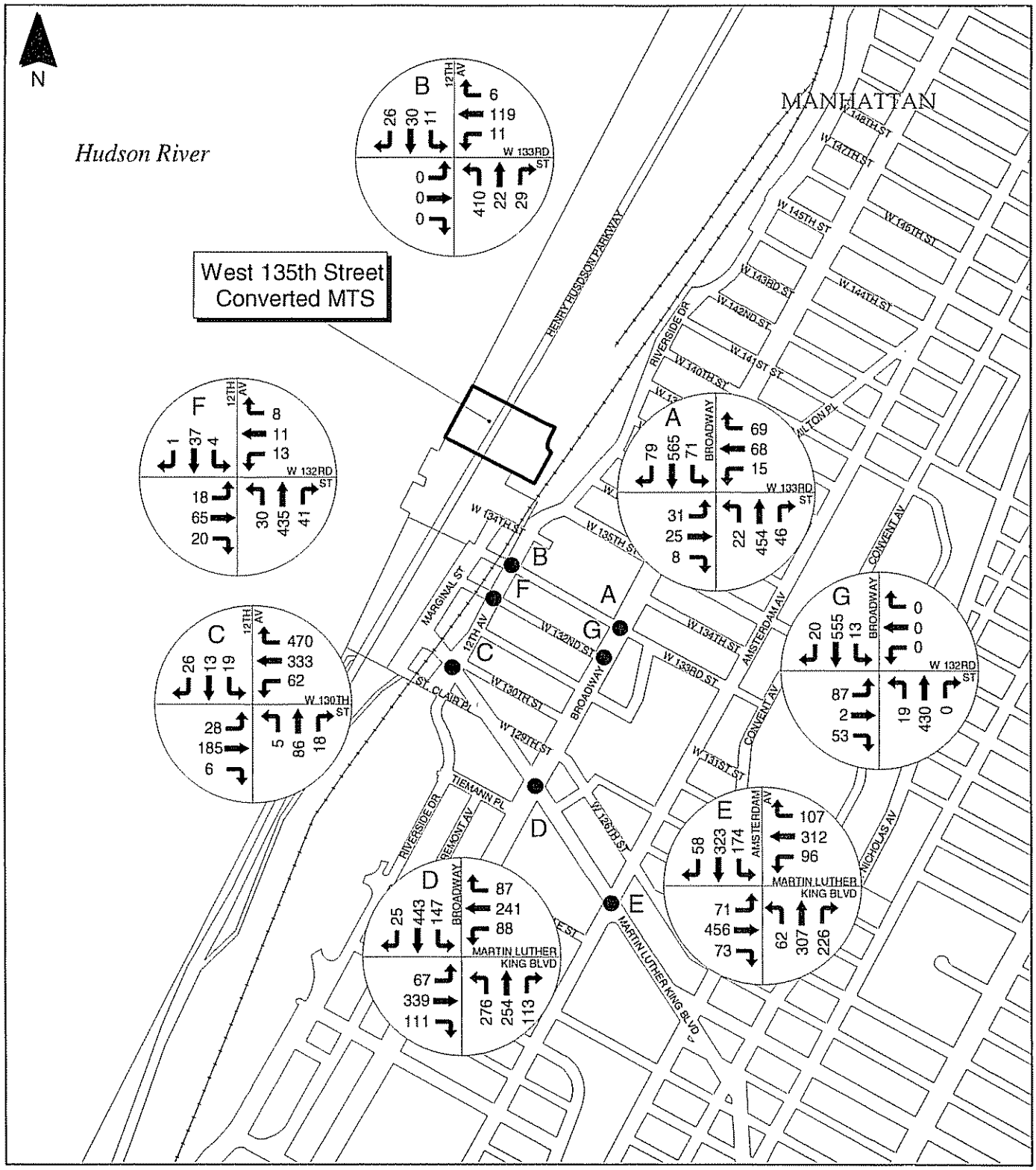
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Figure 21.14-6 Future No-Build Traffic Volumes AM Peak West 135th Street Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

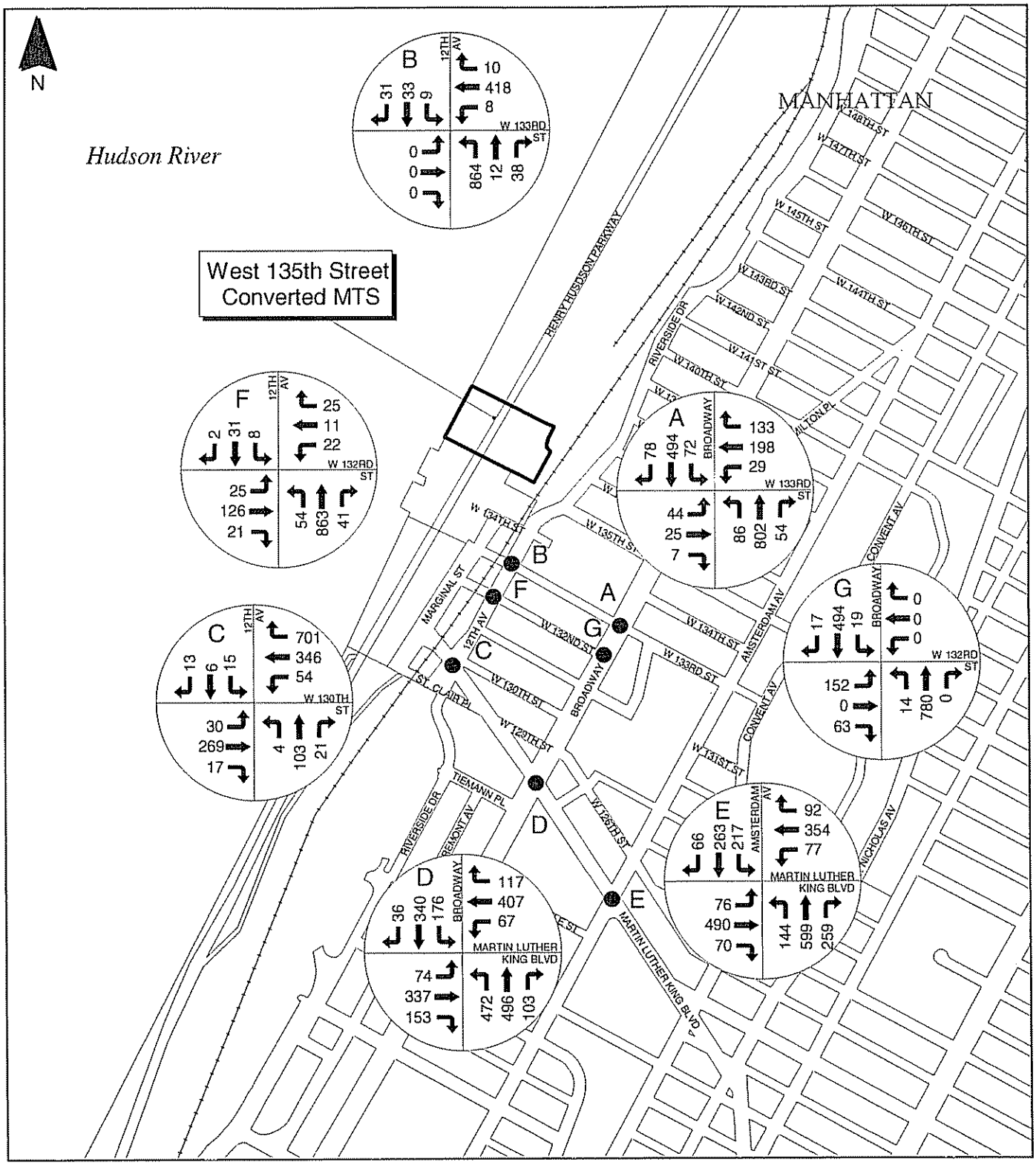
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Figure 21.14-7 Future No-Build Traffic Volumes
Facility Peak
West 135th Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-8 Future No-Build Traffic Volumes PM Peak West 135th Street Converted MTS

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Table 21.14-2
HCM Analysis[1] - Future No-Build Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0.26	28.4	C	0.20	27.7	C	0.22	27.9	C
SB LTR	0.33	30.5	C	0.28	29.7	C	0.20	28.3	C
EB LTR	0.19	6.7	A	0.17	6.6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.5	A
WB TR	0.68	12.5	B	0.56	10.4	B	0.63	11.3	B
OVERALL		14.1	B		12.4	B		12.4	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0.41	10.8	B	0.36	10.2	B	0.62	13.7	B
SB LTR	0.11	8.4	A	0.08	8.2	A	0.09	8.3	A
EB LTR	0.30	27.4	C	0.33	28.0	C	0.54	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.3	B		14.0	B		17.1	B
133rd Street & 12th Avenue (signalized)									
NB L	0.74	20.8	C	0.56	14.6	B	1.01	54.9	D
NB LTR	0.26	9.9	A	0.21	9.3	A	0.36	11.1	B
SB LTR	0.07	8.0	A	0.06	7.9	A	0.06	7.9	A
WB LTR	0.62	33.5	C	0.34	27.2	C	1.08	94.5	F
OVERALL		21.2	C		15.5	B		58.5	E
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0.80	31.7	C	0.75	29.5	C	1.05	69.1	E
SB DFL	0.46	18.6	B	0.43	17.3	B	0.59	29.1	C
SB TR	0.93	49.4	D	0.77	33.3	C	0.61	26.9	C
EB L	0.34	28.1	C	0.40	29.0	C	0.44	30.9	C
EB TR	0.78	34.1	C	0.69	30.4	C	0.65	29.0	C
WB L	1.03	120.1	F	0.74	56.0	E	0.55	38.0	D
WB TR	0.63	29.4	C	0.59	28.4	C	0.56	27.3	C
OVERALL		38.3	D		30.2	C		43.2	D
133rd Street & Broadway (signalized)									
NB LTR	0.49	16.4	B	0.44	15.6	B	1.01	52.2	D
SB LTR	0.82	25.5	C	0.74	22.1	C	0.72	22.4	C
EB LTR	0.22	19.4	B	0.18	18.9	B	0.21	19.4	B
WB LTR	0.39	21.8	C	0.32	20.7	C	0.68	28.9	C
OVERALL		21.9	C		19.6	B		38.0	D
132nd Street & Broadway (signalized)									
NB LTR	0.46	16.0	B	0.41	15.1	B	0.63	18.7	B
SB LTR	0.62	18.7	B	0.48	16.0	B	0.47	16.0	B
EB LTR	0.34	21.2	C	0.35	21.2	C	0.48	23.6	C
OVERALL		18.0	B		16.5	B		18.6	B
125th Street & Broadway (signalized)									
NB L	0.99	80.9	F	0.69	41.7	D	1.10	110.2	F
NB LTR	0.99	69.8	E	0.77	40.7	D	1.10	99.3	F
SB L	0.47	32.7	C	0.38	31.0	C	0.41	31.4	C
SB LTR	0.75	38.6	D	0.75	38.8	D	0.57	33.2	C
EB L	0.32	25.7	C	0.27	23.9	C	0.44	30.0	C
EB TR	0.56	26.5	C	0.51	25.5	C	0.56	26.2	C
WB L	0.64	41.0	D	0.48	31.3	C	0.37	27.6	C
WB TR	0.49	25.3	C	0.40	23.8	C	0.56	26.3	C
OVERALL		45.4	D		33.5	C		57.1	E

Notes for Table 21.14-2:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L = left movement
TR = through right movement

the intersection of West 133rd Street and 12th Avenue will operate at LOS E, as would the intersection of West 125th Street and Broadway. Also, the intersections of West 125th Street and Amsterdam Avenue as well as West 133rd Street and Broadway would operate at LOS D.

The individual movements generally would operate at LOS D or better with a few exceptions. At the intersection of West 125th Street and Amsterdam Avenue, the westbound left turn lane group would operate at LOS F during the AM peak hour, LOS E during the Facility peak hour and LOS D during the PM peak hour, and the northbound approach would operate at LOS E during the PM peak hour. The westbound left, through and right turn lane group would operate at LOS F during the PM peak hour at the intersection of West 133rd Street and 12th Avenue. At the intersection of West 125th and Broadway, the northbound approach would operate at LOS E or worse during the AM and PM peak hours.

21.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

21.14.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

21.14.4 Potential Impacts with the West 135th Street Converted MTS

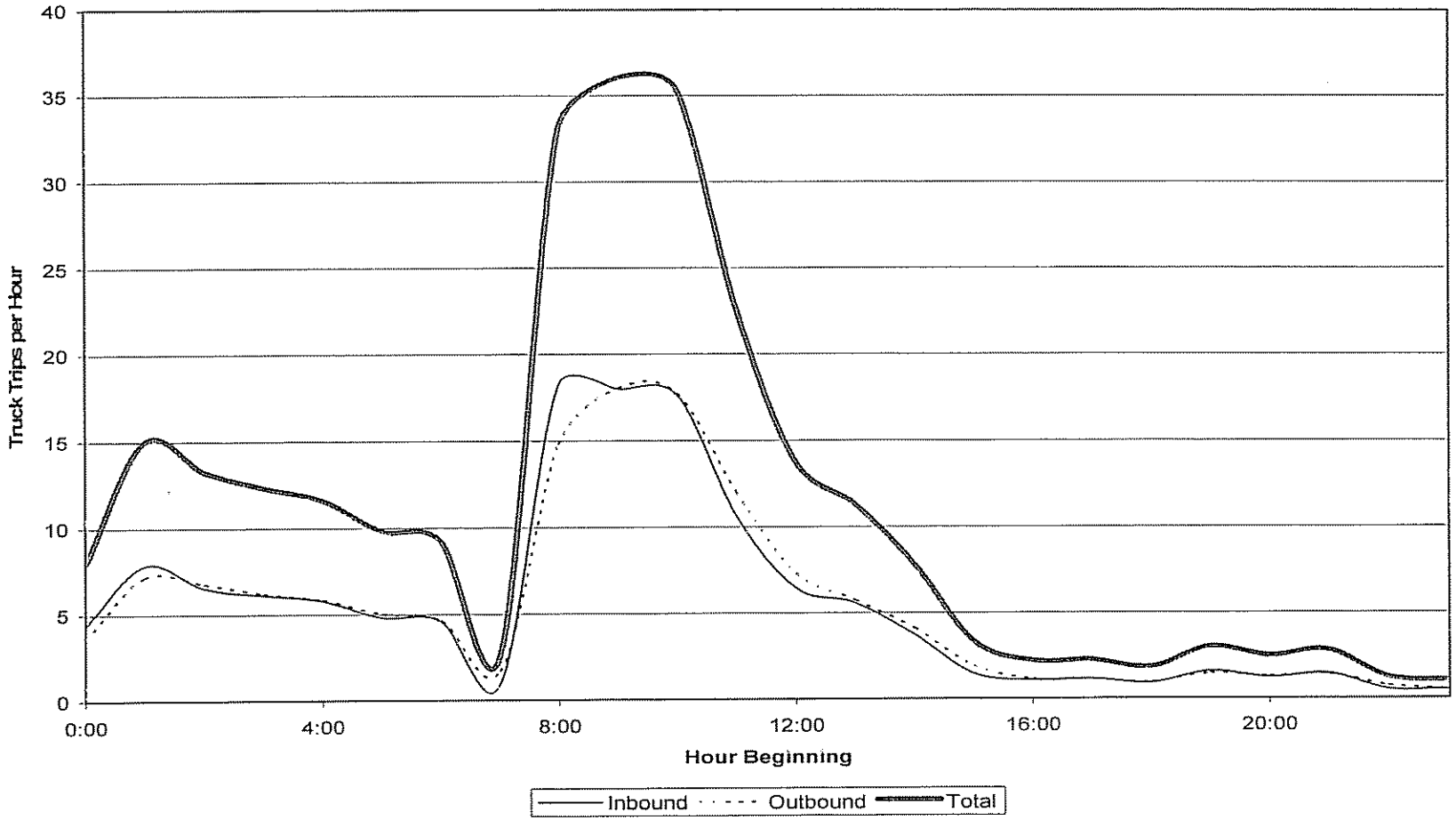
The West 135th Street Converted MTS would receive municipal waste from CDs M9, M10 and M12 in Manhattan. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

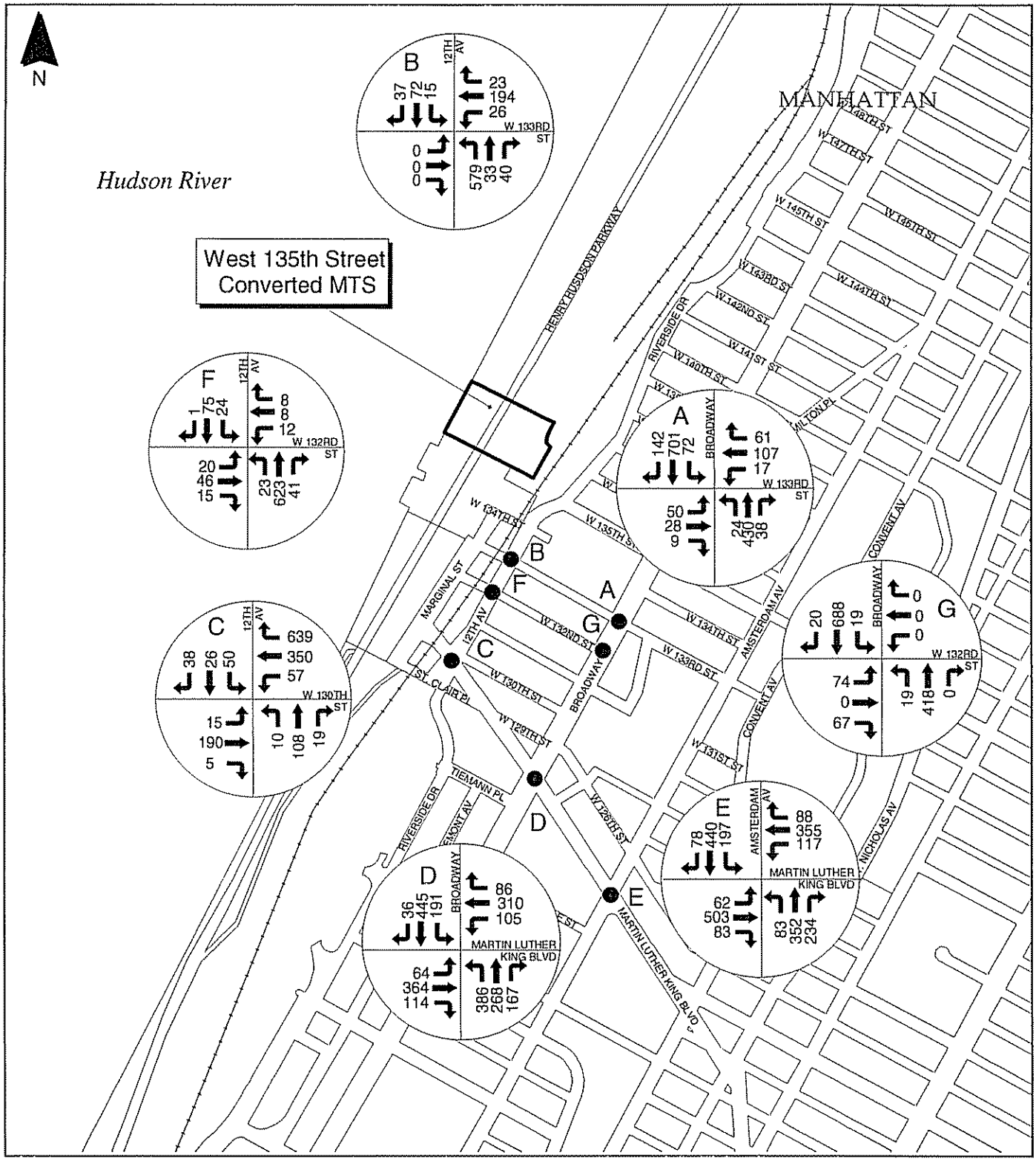
21.14.4.1 2006 Future Build Traffic Conditions

2006 Future Build Traffic Conditions assume that the West 135th Street Converted MTS would generate 222 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site to the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the West 135th Street Converted MTS are shown in Figure 21.14-2.

Figure 21.14-9 presents the average peak day temporal distribution of collection vehicles for the West 135th Street Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicle trips generated by the West 135th Street Converted MTS is expected to vary between 2 to 25 truck trips per hour in the late evening/early morning; approximately 15 to nearly 60 truck trips per hour in the mid-morning/early afternoon; and 5 to 15 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle trips (60) occurs during both 9:00 a.m. and 10:00 a.m. and 10:00 a.m. to 11:00 a.m. Figures 21.14-10, 21.14-11 and 21.14-12 depict the Future Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Figures 21.14-13, 21.14-14 and 21.14-15 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM, Facility, and PM peaks at the intersections analyzed.

Figure 21.14-9
Truck Trips per Hour
West 135th Street Converted MTS





Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

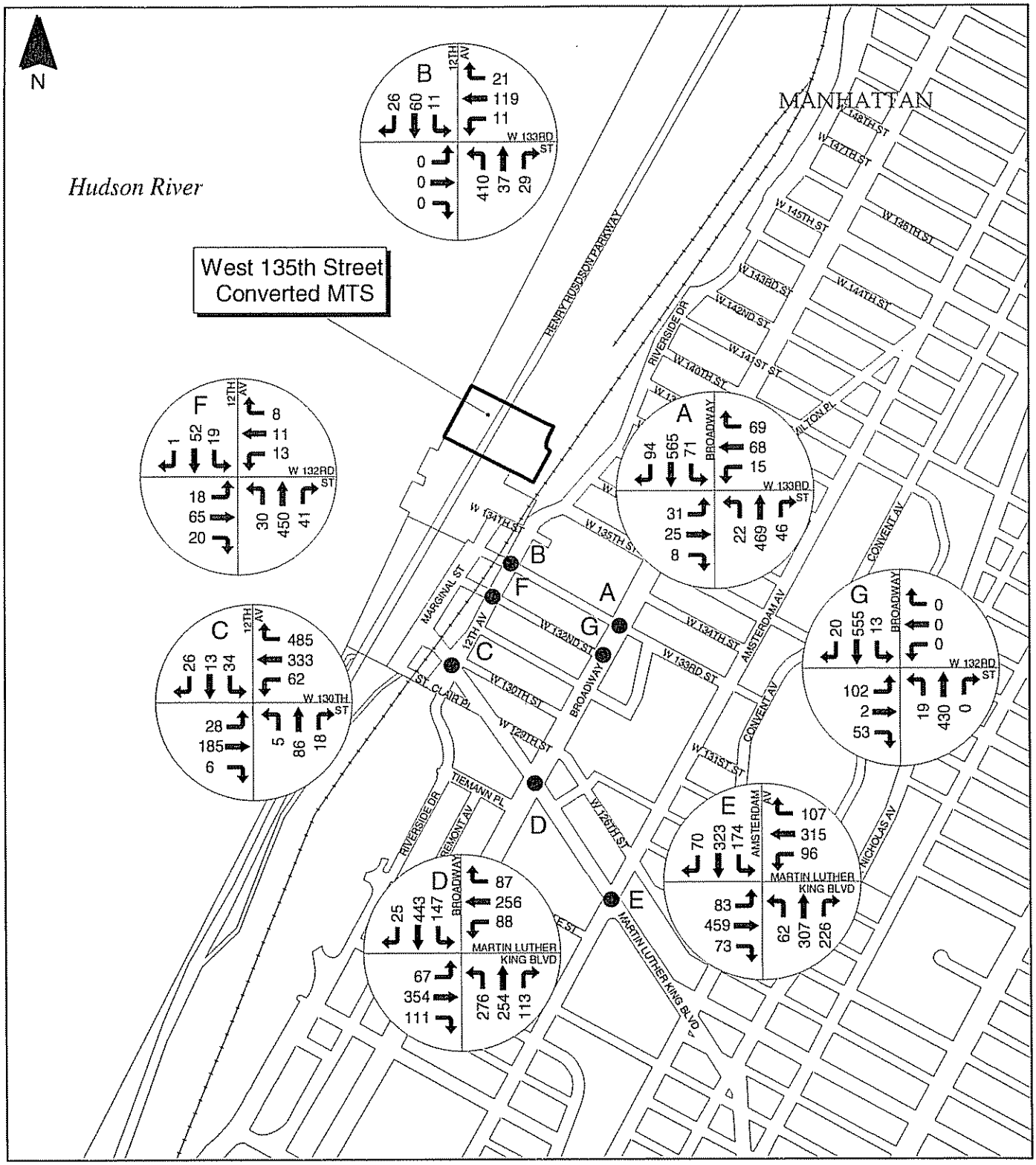
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Figure 21.14-10 2006 Future Build Traffic Volumes AM Peak West 135th Street Converted MTS

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Base Map Source: New York City Department of City Planning

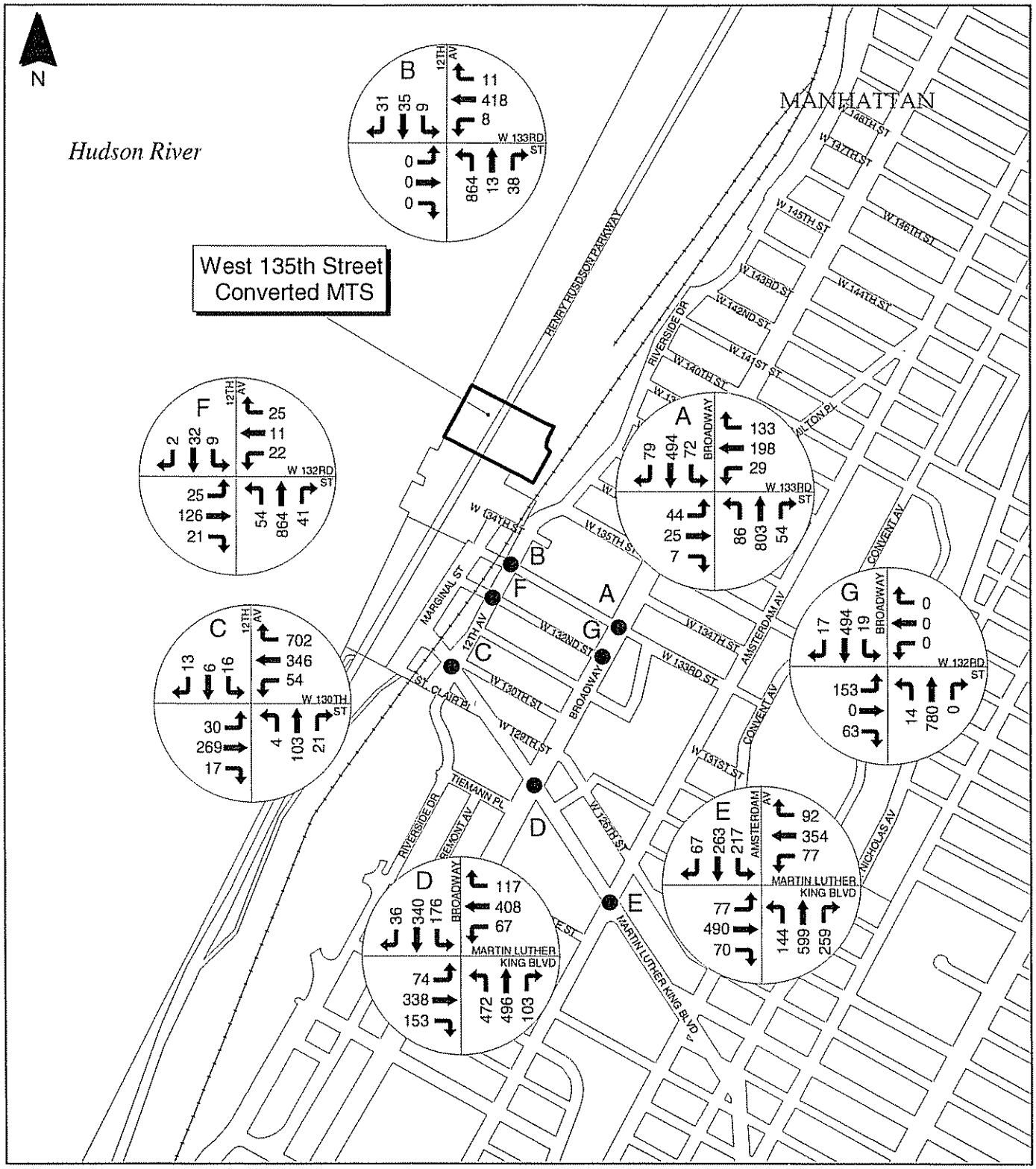
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Figure 21.14-11 2006 Future Build Traffic Volumes
Facility Peak
West 135th Street Converted MTS

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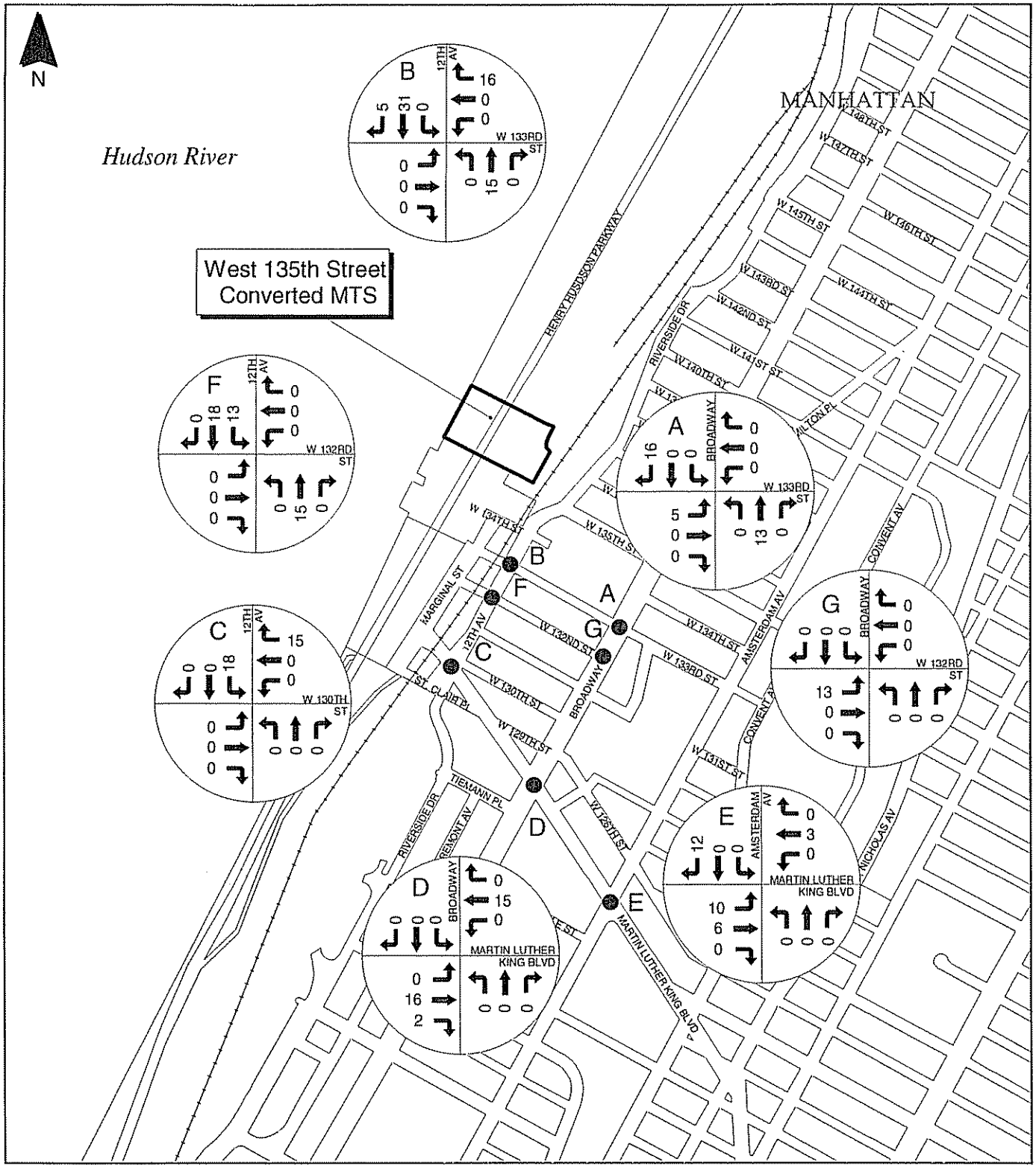


Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 21.14-12 2006 Future Build Traffic Volumes PM Peak West 135th Street Converted MTS

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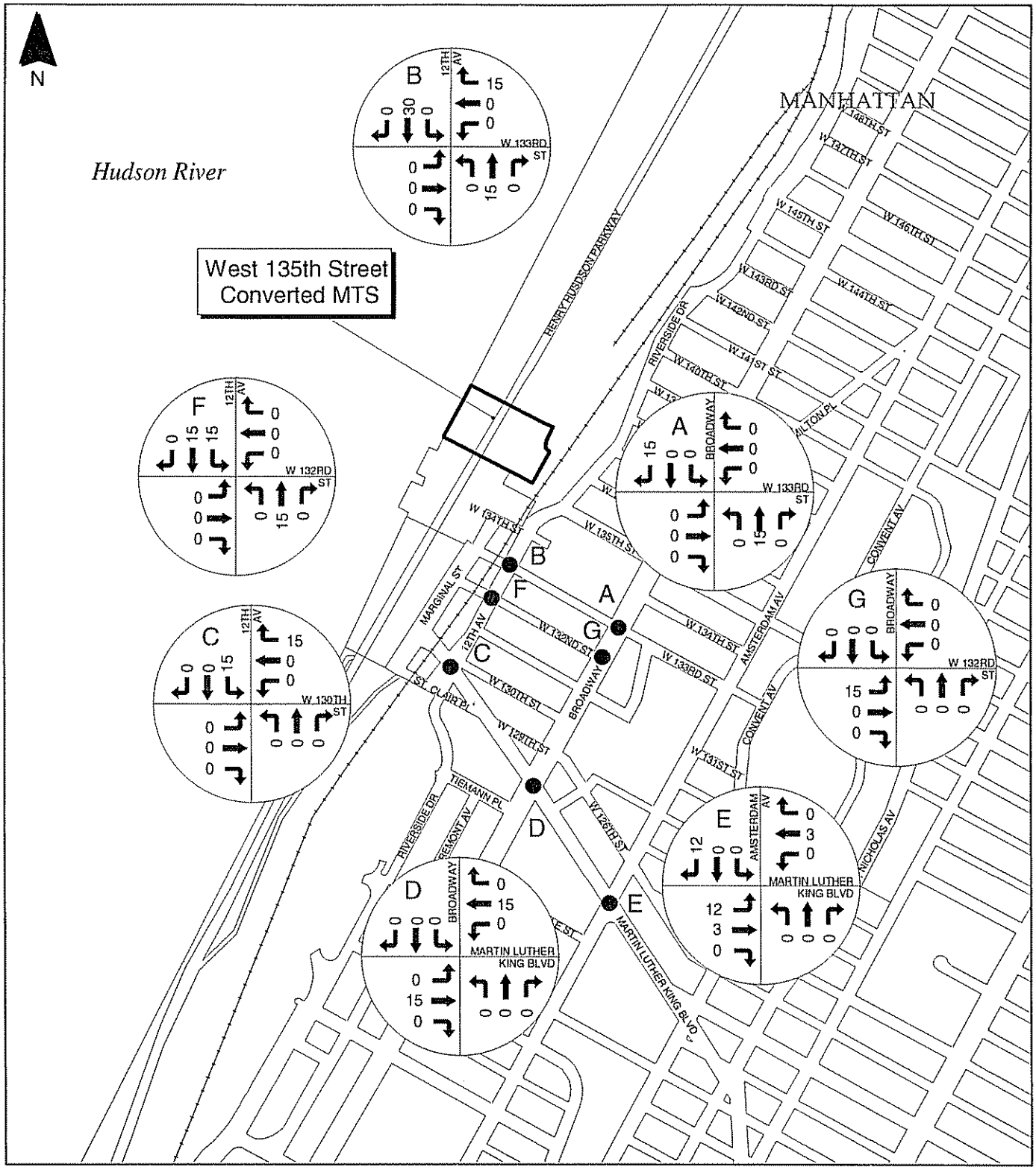


Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-13 2006 Net Traffic Volumes AM Peak West 135th Street Converted MTS

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

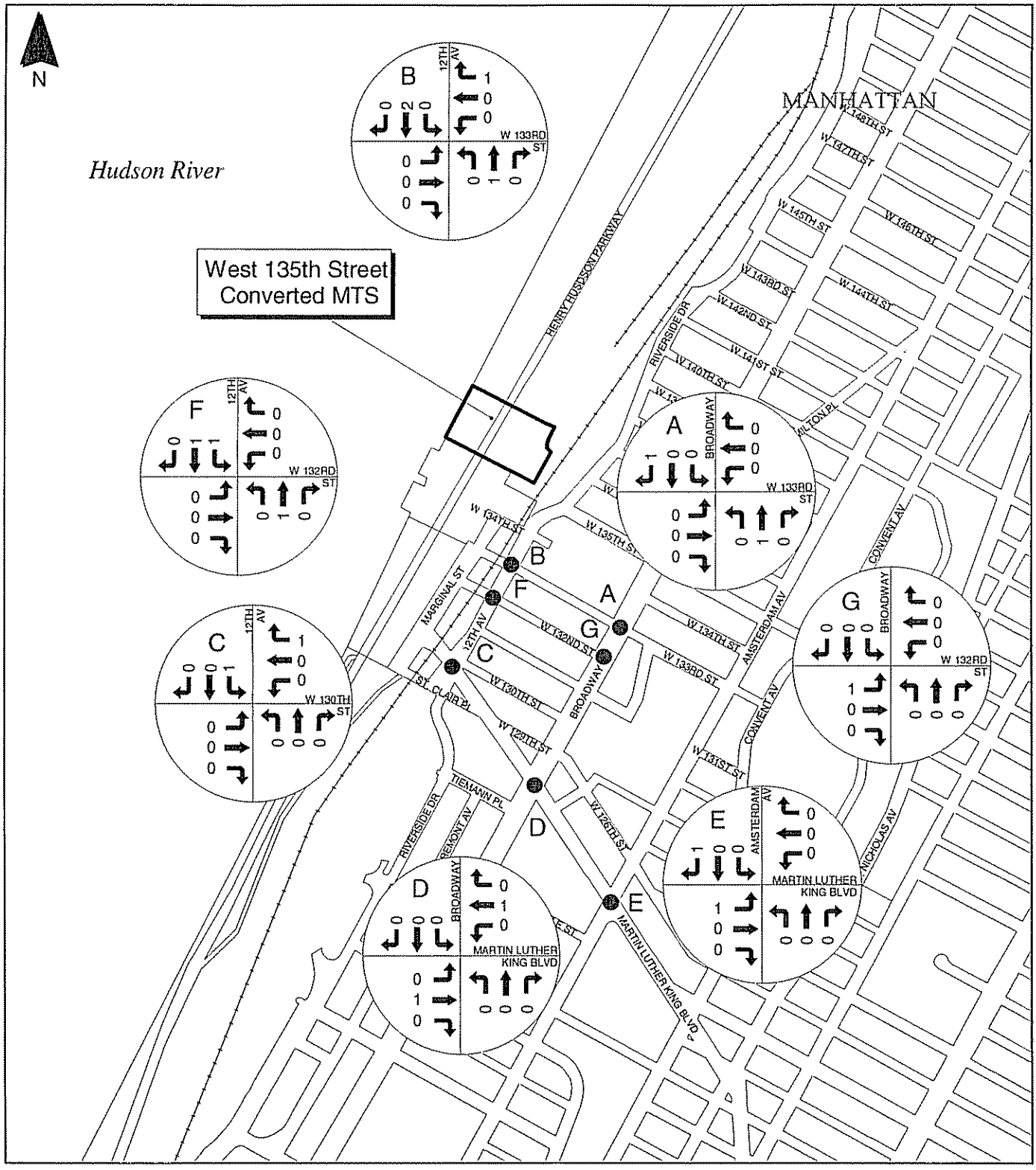
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Figure 21.14-14 2006 Net Traffic Volumes Facility Peak West 135th Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 21.14-15 2006 Net Traffic Volumes PM Peak West 135th Street Converted MTS

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Employee person trips generated as a result of the West 135th Street Converted MTS are expected to be about 44 per shift (22 coming in and 22 leaving). There are three employee shifts per day: 8:00 a.m. to 4:00 p.m.; 4:00 p.m. to 12:00 a.m.; and 12:00 a.m. to 8:00 a.m. It is assumed that employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected to occur between 7:30 a.m. and 8:30 a.m.; 3:30 p.m. and 4:30 p.m.; and 11:30 p.m. and 12:30 a.m. Because only the AM peak (8:00 to 9:00 a.m.) coincided with a projected employee shift change (7:30 to 8:30 a.m.), employee trips both to and from the West 135th Street Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic.

Figures 21.14-10, 21.14-11 and 21.14-12 illustrate the 2006 Build Condition traffic volumes, which are a combination of Future No-Build and 135th Street MTS traffic volumes at the study intersections. A two-stage process was used to derive these traffic volumes. First, the truck trips generated by the existing interim export program were subtracted from the truck trips expected to be generated by the West 135th Street Converted MTS. These net trips were added to the Future No-Build traffic volumes along the paths specified in Figure 21.14-2. In the case of the West 135th Street Converted MTS, there was no overlap of truck trips generated by the interim export program with that expected to be generated by the West 135th Street Converted MTS.

Figures 21.14-13, 21.14-14 and 21.14-15 illustrate the resulting net change in traffic at each study intersection. The highest net increase in truck trips occurred at the intersection of 133rd Street and 12th Avenue. All of the trucks proceeding to and from the West 135th Street Converted MTS would pass through this intersection.

As noted in Section 21.14.2.3, the intersection of West 125th Street and Amsterdam Avenue was identified as a high pedestrian accident location and the overall number of accidents at this intersection has been increasing over the last three-year period. As also noted in Section 21.14.2.6, the highest pedestrian crossing volumes were identified in the study area at this intersection. High pedestrian volumes, coupled with turning movement volumes ranging from 50 to nearly 260 vehicles per hour and only a short lag-protected green phase for the southbound Amsterdam Avenue approach, likely result in a level of pedestrian/vehicle conflict that is contributory to the high number of pedestrian accidents. The maximum volume of collection vehicles that would pass through this intersection proceeding to and from the West 135th Street Converted MTS during one hour is estimated at 30. This represents less than 2% of the total

traffic flow that would enter the intersection under Future Build Conditions and should not represent a measurable change in safety. The provision of additional split phases to separate pedestrian and turning traffic should be investigated at this intersection.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 70% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 94% of weekday traffic volumes. Table 21.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the West 135th Street Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 21.14-3
Weekday and Weekend Traffic
West 135th Street Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic NB and SB on Broadway (1)**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
222	153	26,501	25,043

Note:
(1) NB and SB traffic data collected from ATR counts taken on Broadway between 133rd Street and 134th Street from September 11 to 17, 2003.

Table 21.14-4 provides the v/c ratio, delay and LOS for each analyzed signalized intersection under the Future Build with the West 135th Street Converted MTS. Overall, 2006 Build intersection traffic operations, expressed in terms of delay, would deteriorate very minimally and except during the facility peak hour at the intersection of 133rd Street and Broadway, the LOS does not change at any intersection. While there are no changes in the LOS at most signalized intersections, a significant traffic impact, as defined by the 2001 CEQR Technical Manual and listed in Section 3.16, was identified for the westbound left turn lane group at the intersection of 125th Street and Amsterdam Avenue during the AM peak hour. Suggested mitigation for this impact is discussed below.

Table 21.14-4
HCM Analysis[(1)]- 2006 Future Build Conditions
West 135th Street Converted MTS

Intersection & Lane Group	AM Peak Hour (8:00 a.m. – 9:00 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (5:00 p.m. – 6:00 p.m.)		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & 12th Avenue (signalized)									
NB LTR	0 26	28.4	C	0.20	27.7	C	0 22	27.9	C
SB LTR	0 45	33.7	C	0.43	33.7	C	0.21	28.5	C
EB LTR	0.19	6.8	A	0.17	6 6	A	0.21	6.9	A
WB L	0.12	6.6	A	0.13	6.7	A	0.10	6.5	A
WB TR	0.70	13.0	B	0.58	10.7	B	0.63	11.3	B
OVERALL		14.8	B		13.2	B		12.4	B
132nd Street & 12th Avenue (signalized)									
NB LTR	0 43	11 0	B	0.38	10 4	B	0.62	13.7	B
SB LTR	0 21	9 5	A	0.22	9 8	A	0 10	8 4	A
EB LTR	0 30	27.4	C	0.33	28 0	C	0 54	32.4	C
WB LTR	0.13	25.2	C	0.19	26.1	C	0.24	26.7	C
OVERALL		13.4	B		13.9	B		17.1	B
133rd Street & 12th Avenue (signalized)									
NB L	0 77	22 8	C	0.58	15.2	B	1.01	55 3	E
NB LTR	0 31	10 5	B	0.25	9 8	A	0.36	11.1	B
SB LTR	0 11	8 3	A	0.10	8 2	A	0 07	8.0	A
WB LTR	0.71	37.8	D	0.42	28.9	C	1.08	95.9	F
OVERALL		22.9	C		16.0	B		59.1	E
125th Street & Amsterdam Avenue (signalized)									
NB LTR	0 80	31 9	C	0.75	29.6	C	1.05	69 1	E
SB DFL	0 46	18 6	B	0 43	17 3	B	0.59	29 1	C
SB TR	0 98	59.5	E	0 82	37.1	D	0 62	27.1	C
EB L	0 46	33 5	C	0 52	35.0+	D	0 45	31 3	C
EB TR	0 78	34 5	C	0 69	30.7	C	0 65	29 0	C
WB L	1 05	125 7	F	0 74	56 9	E	0 55	38 0	D
WB TR	0.64	29.5	C	0.60	28.6	C	0.56	27.3	C
OVERALL		40.9	D		31.3	C		43.2	D
133rd Street & Broadway (signalized)									
NB LTR	0 53	17.0	B	0 46	15.9	B	1.01	52.4	D
SB LTR	0 85	27 5	C	0 77	23.4	C	0 72	22.5	C
EB LTR	0 23	19 7	B	0 18	18 9	B	0 21	19 4	B
WB LTR	0.39	21.8	C	0.32	20.7	C	0.68	28.9	C
OVERALL		23.1	C		20.4	C		38.2	D
132nd Street & Broadway (signalized)									
NB LTR	0 46	16.0	B	0 41	15.1	B	0 63	18 7	B
SB LTR	0 62	18 7	B	0 48	16 0	B	0 47	16.0	B
EB LTR	0.40	22.4	C	0.42	22.6	C	0.49	23.7	C
OVERALL		18.2	B		16.8	B		18.6	B
125th Street & Broadway (signalized)									
NB L	0 99	80 9	F	0 69	41 7	D	1.10	110 2	F
NB LTR	0 99	69 8	E	0 77	40.7	D	1.10	99.3	F
SB L	0 47	32 7	C	0 38	31 0	C	0 41	31 4	C
SB LTR	0 75	38 6	D	0 75	38 8	D	0 57	33 2	C
EB L	0 33	26 0	C	0 28	24 1	C	0 44	30 0	C
EB TR	0 59	27 2	C	0 54	26 1	C	0 56	26 2	C
WB L	0 66	43 2	D	0 49	32 1	C	0 37	27 6	C
WB TR	0.52	25.9	C	0.43	24.3	C	0.56	26.3	C
OVERALL		45 5	D		33 6	C		57 1	E

Notes for Table 21.14-4:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
DFL = defacto left
NB = northbound
WB = westbound
EB = eastbound
SB = southbound
L = left movement
TR = through right movement

During the AM peak hour, an impact was identified on the westbound left turn lane group at the intersection of West 125th Street and Amsterdam Avenue. As shown, the westbound left turn lane group remains at LOS F, but the delay increases from 120.1 seconds to 125.7 seconds. Currently, the existing signal operates as a three-phase signal. The mitigation proposed is as follows:

- Increase eastbound/westbound green time to 31 seconds; and
- Reduce northbound/southbound exclusive left turn green time to 9 seconds.

This would reduce the westbound left turn lane group, with LOS F, from a delay of 125.7 seconds to 104.5 seconds. This would not generate any impacts for the southbound exclusive left turn lane group and it would provide adequate clearance time for pedestrian crossings.

21.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

21.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

Table 21.14-5
HCM Analysis[1] - 2006 Future Build Conditions with Mitigation
West 135th Street Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS	V/C Ratio	Delay (sec)	LOS
125th Street & Amsterdam Avenue (signalized) – AM Peak									
NB LTR	0.80	31.7	C	0.80	31.9	C	0.80	31.9	C
SB DFL	0.46	18.6	B	0.46	18.6	B	0.47	19.5	B
SB TR	0.93	49.4	D	0.98	59.5	D	0.98	59.5	E
EB L	0.34	28.1	C	0.46	33.5	C	0.44	31.4	C
EB TR	0.78	34.1	C	0.78	34.5	C	0.76	32.5	C
WB L	1.03	120.1	F	1.05	125.7	F	0.98	104.5	F
WB TR	0.63	29.4	C	0.64	29.5	C	0.62	28.2	C
OVERALL		38.3	D		40.9	D		39.2	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
L = left movement
TR = through right movement

21.15 Air Quality

21.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the West 135th Street Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 21.15.4.2.

21.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 21.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 21.15-1
Representative Ambient Air Quality Data
West 135th Street Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	P.S. 59	8-Hour	2,978 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	5,268 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	P.S. 59	Annual	71 $\mu g/m^3$ (1)	100 $\mu g/m^3$
PM_{10}	P.S. 59	Annual	34 $\mu g/m^3$ (2)	50 $\mu g/m^3$
		24-Hour	88 $\mu g/m^3$ (2)	150 $\mu g/m^3$
SO_2	P.S. 59	3-Hour	186 $\mu g/m^3$ (1)	1,300 $\mu g/m^3$
		24-Hour	123 $\mu g/m^3$ (1)	365 $\mu g/m^3$
		Annual	37 $\mu g/m^3$ (1)	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Air data – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.

21.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

21.15.4 Potential Impacts with the West 135th Street Converted MTS

21.15.4.1 On-Site Analysis

21.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that is anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 21.15-2. Figure 21.15-1 shows the locations of these sources within the site.

21.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 21.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from West 135th Street Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 21.15-3, are below the STVs. The West 135th Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 21.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
West 135th Street Converted MTS

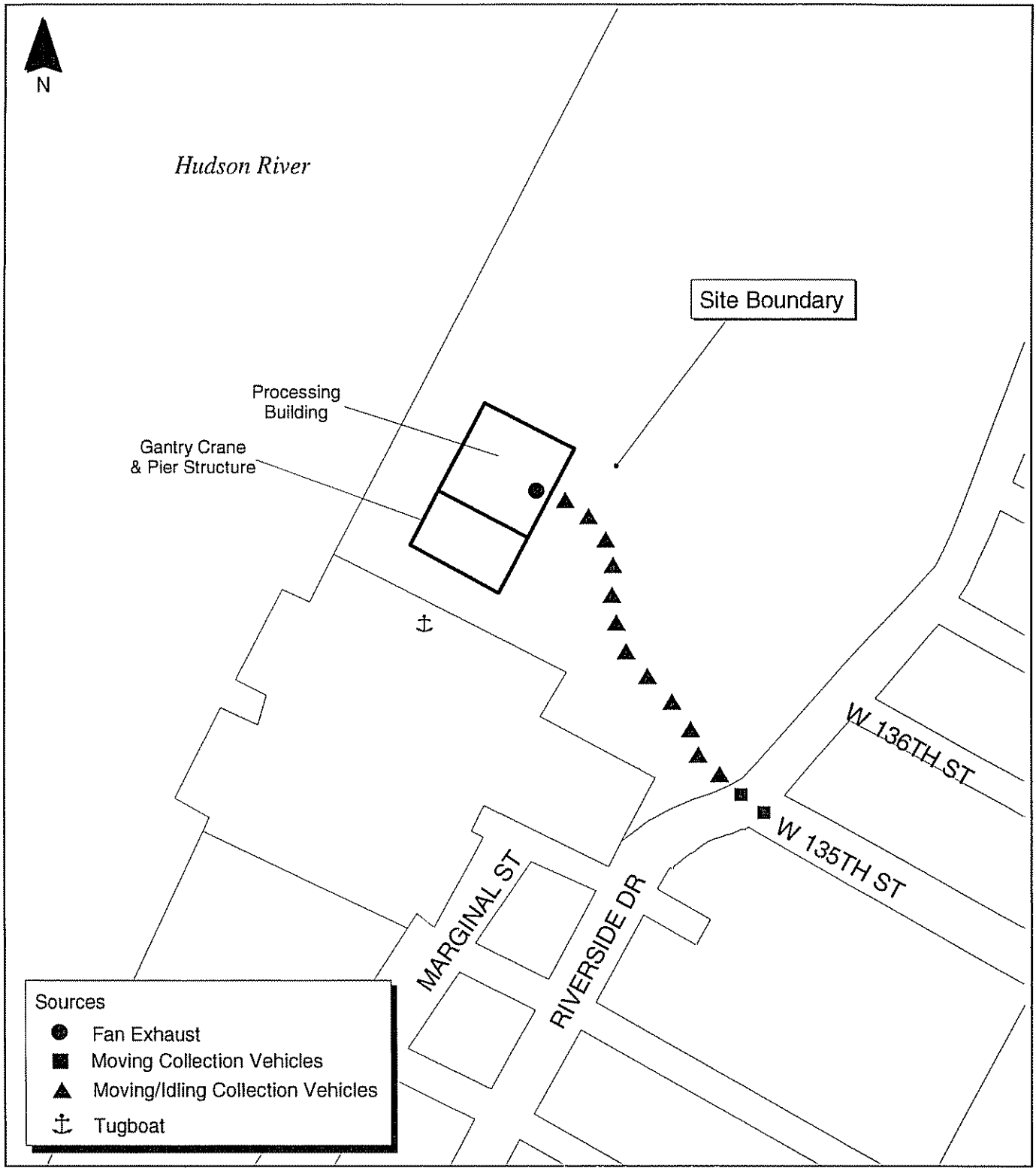
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	10
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	17 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup ~~provided to the NYCDEP~~to be provided upon request.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) The peak 8-hour and 3-hour average number of queuing collection vehicles outside of the processing building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (17), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 21.15-1 On-Site Air Quality Analysis
West 135th Street Converted MTS

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Table 21.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
West 135th Street Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~2,091~~ 2,100	~~4,352~~ 4,400	~~443~~ 6,500	40,000	NA
	8-hour[6]	1,000 ~~019~~	~~3,321~~ 3,300	~~340~~ 4,300	10,000	NA
Nitrogen Dioxide (NO_2) [6]; $\mu g/m^3$	Annual	~~56~~	77	~~82~~ 83	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~26~~ 27	~~46~~ 61	~~72~~ 88	150	NA
	Annual	5	21	26	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2	~~NA~~	~~NA~~	NA	5
	Annual Neighborhood Average	0.~~036~~ 0.023[5]	~~NA~~	~~NA~~	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	264	265	529	1,300	NA
	24-hour[6]	7	139	146	365	NA
	Annual	1	~~34~~ 37	~~35~~ 38	80	NA

Notes:
(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.
(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~on February 18, 2005.
(3) NAAQS = National Ambient Air Quality Standard.
(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.
(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.
(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.
NA = Not Applicable

21.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 21.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the West 135th Street Converted MTS are not considered to be significant.

21.15.4.2 Off-Site Analysis

21.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of 12th Avenue and West 133rd Street, and Broadway and West 133rd Street to determine whether West 135th Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the same two intersections, to determine whether West 135th Street Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 21.15-2.

Table 21.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
West 135th Street Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] (µg/m³)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] (µg/m³)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] (µg/m³)	Long-Term (Annual) Guideline Conc. (AGCs)[5] (µg/m³)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] (µg/m³)	Unit Risk Factors[7] (µg/m³)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	1.41E-01	1.30E+03	1.08E-04	1.99E-03	1.30E-01	1.53E-02	1.99E-03	8.30E-06	1.55E-08
2	Formaldehyde	1.78E-01	3.00E+01	5.95E-03	2.52E-03	6.00E-02	4.20E-02	2.52E-03	1.30E-05	3.28E-08
3	1,3 Butadiene	5.91E-03	-	-	8.35E-05	3.60E-03	2.32E-02	8.35E-05	2.80E-04	2.51E-09
4	Acetaldehyde	1.16E-01	4.50E+03	2.58E-05	1.64E-03	4.50E-01	3.64E-03	1.64E-03	2.20E-06	3.60E-09
5	Benzo(a)pyrene	2.84E-05	-	-	4.02E-07	2.00E-03	-	4.02E-07	1.70E-03	6.83E-10
Non-Carcinogenic Pollutants[10]										
6	Propylene	3.90E-01	-	-	5.51E-03	3.00E+03	1.84E-06	5.51E-03	NA	NA
7	Acrolein	1.40E-02	1.90E-01	7.36E-02	1.98E-04	2.00E-02	9.88E-03	NA	NA	NA
8	Toluene	6.18E-02	3.70E+04	1.67E-06	8.74E-04	4.00E+02	2.18E-06	NA	NA	NA
9	Xylenes	4.31E-02	4.30E+03	1.00E-05	6.09E-04	7.00E+02	8.70E-07	NA	NA	NA
10	Anthracene	2.83E-04	-	-	4.00E-06	2.00E-02	2.00E-04	NA	NA	NA
11	Benzo(a)anthracene	2.54E-04	-	-	3.59E-06	2.00E-02	1.79E-04	NA	NA	NA
12	Chrysene	5.34E-05	-	-	7.54E-07	2.00E-02	3.77E-05	NA	NA	NA
13	Naphthalene	1.28E-02	7.90E+03	1.62E-06	1.81E-04	3.00E+00	6.04E-05	NA	NA	NA
14	Pyrene	7.23E-04	-	-	1.02E-05	2.00E-02	5.11E-04	NA	NA	NA
15	Phenanthrene	4.44E-03	-	-	6.28E-05	2.00E-02	3.14E-03	NA	NA	NA
16	Dibenz(a,h)anthracene	8.82E-05	-	-	1.25E-06	2.00E-02	6.23E-05	NA	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		7.97E-02	**Total Estimated Chronic Non-Cancer Hazard Index**		9.83E-02	**Total Estimated Combined Cancer Risk**		5.51E-08
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold**[11]		**1.0E+00**	**Cancer Risk Threshold**[11]		**1.0E-06**

Notes to Table 21.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

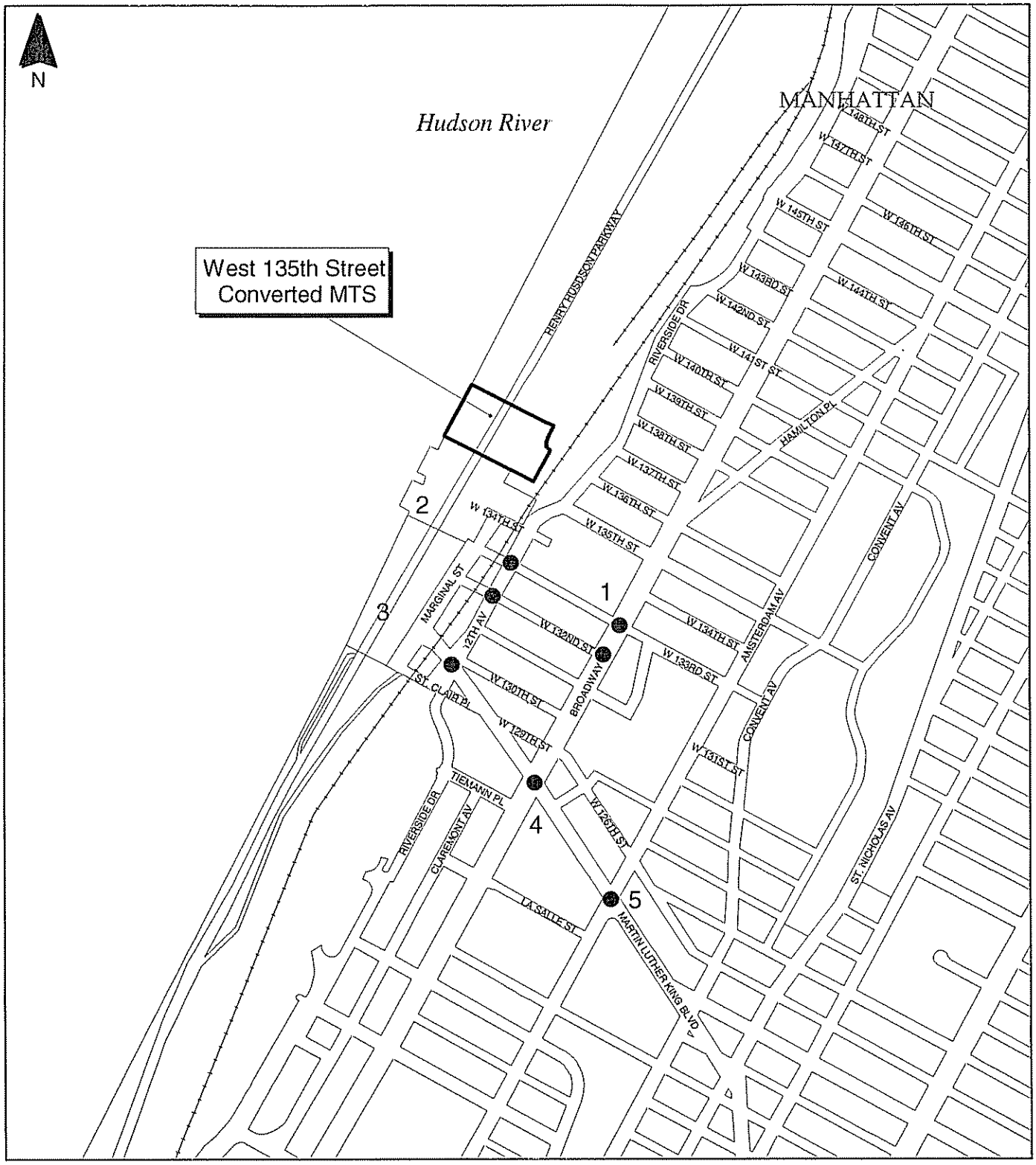
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 21.15-2 Off-Site Air Quality Intersections Studied West 135th Street Converted MTS

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21.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 21.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). The West 135th Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 21.15-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
West 135th Street Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources [3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources [2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
12th Avenue & West 133rd Street									
Existing Conditions		~~77~~92	34						
Future No-Build Conditions		~~77~~92	34						
Future Build Conditions	NA[5]	~~77~~92	34						
Future Build Incremental				0.4	0.2~~1~~	0.6~~6~~4	0.0402	0.0~~4~~4050	0.0~~8~~8070
Broadway & West 133rd Street									
Existing Conditions		~~77~~92	33						
Future No-Build Conditions		~~77~~92	33						
Future Build Conditions	NA[5]	~~78~~93	34						
Future Build Incremental				0.4	0.1~~6~~62	0.5~~6~~66	0.0402	0.020	0.0~~6~~6040

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration (24-hr PM_{10} = ~~46~~61 $\mu g/m^3$; Annual PM_{10} = 21 $\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions near the intersection considered.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for the~~under ~~Future~~ Future No-Build and ~~Future~~ Future Build ~~scenarios~~ conditions at ~~any~~ sidewalk receptors ~~three meters from the edge of the roadways using~~ under AM, Facility, or PM peak traffic conditions.

(4) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking T~~the maximum difference between ~~the maximum~~ $PM_{2.5}$ concentrations ~~for the~~under ~~Future~~ Future No-Build and ~~Future~~ Future Build ~~scenarios~~ conditions at ~~any~~ receptors 15 meters from the edge of the roadways ~~using~~ under AM, Facility, or PM peak traffic conditions.

(5) NA = Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter ~~NA = Not Applicable~~

21.16 Odor

21.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the Riverbank State Park located approximately 60 feet from the site boundary.

21.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the West 135th Street Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

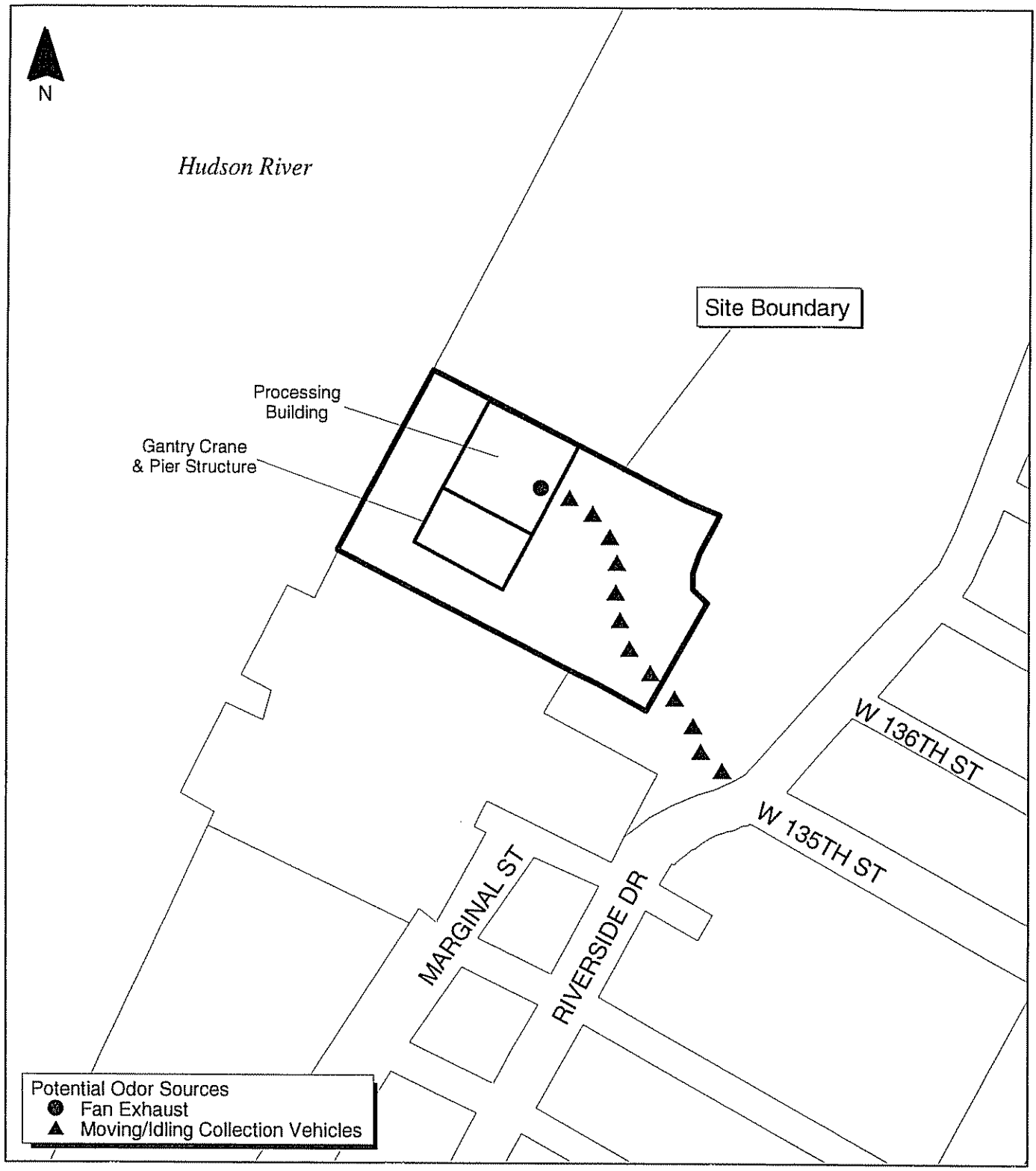
21.16.3 Potential Impacts with the West 135th Street Converted MTS

21.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the West 135th Street Converted MTS are provided in Table 21.16-1. Figure 21.16-1 shows the locations of these sources within the site.

Table 21.16-1
Odor Sources Included in Odor Analysis
West 135th Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection	18



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 21.16-1 Potential Odor Sources

West 135th Street Converted MTS

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THE CITY OF NEW YORK DEPARTMENT OF SANITATION

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the West 135th Street Converted MTS.

21.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 21.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the West 135th Street Converted MTS at any nearby sensitive receptor is less than 1, so odors from the West 135th Street Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 21.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
West 135th Street Converted MTS

Parameter	Resulting Odor Unit (1)
Estimated Detectable Concentration	5.0
Highest Result	0.31
Type of Receptor	Discrete Receptor
Receptor(2)	On Land
Closest Sensitive Receptor Result (2)	0.09
Type of Receptor	Riverbank State Park
Distance to Receptor	~~60~~ 90 Feet

Notes:

(1) Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.

(2) Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

~~(1) D/T ratio is dimensionless.~~

~~(2) Measured from the site boundary.~~

~~(3) Measured from the site property line.~~

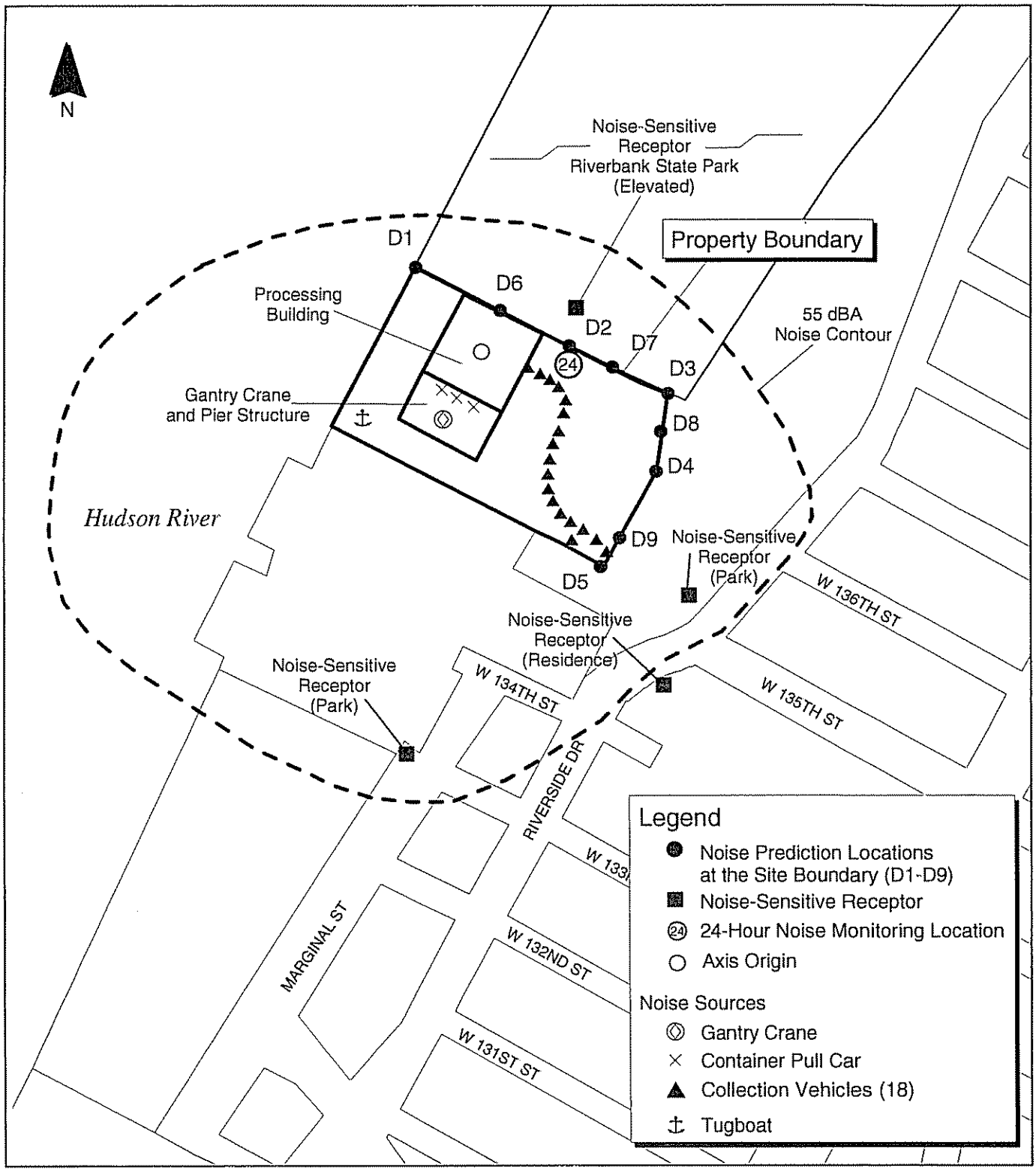
21.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from West 135th Street Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

21.17.1 Existing Conditions

21.17.1.1 Introduction

Figure 21.17-1 shows the location of the West 135th Street MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptors are Riverbank State Park, located adjacent to the elevated West Side Highway approximately 27 meters (90 feet) north of the property boundary; Riverside Ramparts, located on Riverside Drive approximately 67 meters (220 feet) southeast of the property boundary; an apartment building located on the corner of Riverside Drive and West 135th Street, approximately 99 meters (325 feet) southeast of the property boundary; and Harlem Piers Park, located approximately 183 meters (600 feet) from the property boundary. The other noise-sensitive land uses within the study area are residential areas on top of the bluff across the West Side Highway, where traffic noise from the elevated highway dominates the ambient acoustic environment and obscures noise from the site. No other noise-sensitive land uses are found nearby.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

Figure 21.17-1 Noise Sources and Receptors
West 135th Street Converted MTS
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21.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptors. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}[13] Table 21.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 61.6 dBA on March 18, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic noise from the elevated West Side Highway; and
- Occasional watercraft on the Hudson River.

21.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the West 135th Street Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required and, therefore, off-site noise monitoring was conducted. Table 21.17-2 presents monitored noise levels near noise-sensitive receptors during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) based on first-level screening.

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.

Table 21.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
West 135th Street Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
12:00-1:00 a.m.	62.7	61.1	62.3	63.8	59.1	72.9
1:00-2:00 a.m.	62.0	60.2	61.8	63.2	58.1	74.8
2:00-3:00 a.m.	61.6	59.9	61.3	62.7	57.3	77.2
3:00-4:00 a.m.	62.2	59.8	61.6	63.1	57.5	77.9
4:00-5:00 a.m.	62.7	61.3	62.5	63.7	59.7	76.1
5:00-6:00 a.m.	64.7	63.1	64.3	65.9	61.2	69.8
6:00-7:00 a.m.	66.3	64.6	65.9	67.5	61.9	76.6
7:00-8:00 a.m.	65.9	64.1	65.3	67.0	61.6	78.9
8:00-9:00 a.m.	65.6	63.7	65.0	66.6	61.1	82.7
9:00-10:00 a.m.	64.6	62.6	64.0	65.7	60.4	78.4
10:00-11:00 a.m.	66.3	63.8	65.0	66.6	61.6	85.7
11:00 a.m.-12:00 p.m.	65.5	63.4	64.6	66.7	60.8	81.6
12:00-1:00 p.m.	65.5	63.5	64.8	66.4	61.3	80.6
1:00-2:00 p.m.	65.6	63.5	64.9	66.7	61.0	83.8
2:00-3:00 p.m.	66.2	64.5	65.6	67.2	62.4	80.8
3:00-4:00 p.m.	65.1	63.2	64.3	66.1	61.0	78.2
4:00-5:00 p.m.	65.0	63.2	64.5	66.0	61.3	77.1
5:00-6:00 p.m.	65.6	63.7	64.7	66.1	62.0	84.2
6:00-7:00 p.m.	67.7	65.6	67.3	68.7	63.6	88.6
7:00-8:00 p.m.	66.8	65.0	66.3	67.8	62.9	80.8
8:00-9:00 p.m.	65.2	63.6	64.8	66.2	61.1	77.7
9:00-10:00 p.m.	64.4	62.6	63.8	65.4	60.1	77.7
10:00-11:00 p.m.	64.1	61.7	63.1	65.0	59.8	80.6
11:00 p.m.-12:00 a.m.	63.7	62.2	63.4	64.7	60.3	75.1

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

Table 21.17-2
Existing Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor for Off-Site Analysis
West 135th Street Converted MTS

Location	Existing Noise Levels During Quietest Hour (dBA)[1][2]
West 132nd Street between 12th Avenue and Broadway	71.3
West 133rd Street between 12th Avenue and Broadway	66.1

Notes:
(1) The noise level reading was measured at the closest noise-sensitive receptor during the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The existing noise levels were measured on June 16, 2004 at 3:00 a.m. for West 132nd Street and July 31, 2003 at 1:00 a.m. for West 133rd Street.

21.17.2 Future No-Build Conditions

21.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

21.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 21.17-3 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 21.17-3
Off-Site Noise Traffic Volume
West 135th Street Converted MTS

Location	Hour	Existing Traffic Volume[1] (Vehicles / Hour)	Future No-Build Traffic Volume[2] (Vehicles / Hour)
West 132nd Street between 12th Avenue and Broadway	2:00 a.m.	16	16
West 132nd Street between 12th Avenue and Broadway	8:00 a.m.	100	104
West 133rd Street between 12th Avenue and Broadway	2:00 a.m.	41	42
West 133rd Street between 12th Avenue and Broadway	10:00 a.m.	237	247
West 125th Street between Broadway and Amsterdam	2:00 a.m.	225	228
West 125th Street between Broadway and Amsterdam	10:00 a.m.	1,001	1,016
~~West 125th Street between Broadway and 12th Avenue~~	~~1:00 a.m.~~	~~251~~	~~255~~
West 125th Street between Broadway and 12th Avenue	3:00 a.m.	152	154
West 125th Street between Broadway and 12th Avenue	9:00 a.m.	1,070	1,086
Broadway between West 132nd Street and West 133rd Street	2:00 a.m.	225	228
Broadway between West 132nd Street and West 133rd Street	10:00 a.m.	1,001	1,016

Notes:
[1] Existing Traffic Volumes are based on ATR data
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates

21.17.3 Potential Impacts with the West 135th Street MTS

21.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the West 135th Street Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 21.17-4. Spectral noise levels used in the Performance Standards analysis are shown in Table 21.17-5. The number and types of equipment assumed for this analysis were based on the West 135th Street Converted MTS's peak design capacity. Shown earlier, Figure 21.17-1 indicates the West 135th Street layout, the locations of the points along its property boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

21.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the West 135th Street Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 79 meters (260 feet) from the property boundary in the direction of Riverbank State Park, which is approximately 27 meters (90 feet) away from the property boundary. Similarly, the 55 dBA contour line is approximately 84 meters (275 feet) from the property boundary in the direction of the apartment building on Riverside Drive, which is 99 meters (325 feet) away from the property boundary; approximately 98 meters (320 feet) from the property boundary in the direction of Riverside Ramparts, which is approximately 67 meters (220 feet) away from the property boundary; and approximately 229 meters (750 feet) from the property boundary in the direction of Harlem Piers Park, which is approximately 183 meters (600 feet) away from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that ~~three of the four~~ there are noise-sensitive receptors ~~are~~ located within the 55 dBA contour line (see Figure 21.17-1). Therefore, an on-site noise analysis, including noise monitoring at Riverbank State Park, Riverside Ramparts, Riverside Drive Apartment Building and Harlem Piers Park, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Table 21.17-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
West 135th Street Converted MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Crane (1)[3]	67
Harbor Tug Bboat (1)[4])	69
Moving/Queuing DSNY Collection Vehicles (18)[5]	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.
(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the converted MTS's.
(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the converted MTS's.
(5) Quantity includes one truck queuing on the outbound scale.

Table 21.17-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
West 135th Street Converted MTS

Equipment Name (quantity)[1], [2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
~~Wheel~~ Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT325 (1)	95	90	85	85	81	78	73	64
~~Bridge/~~ Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
~~Mini-Sweeper~~Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars ~~Puller~~ (3)	31	30	47	44	36	35	42	46
Gantry Crane (1) [~~24~~]	79	81	78	71	66	60	55	55

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.
(3) Noise level representative of each piece of equipment.
(4) ~~N~~noise level ~~that~~ will be specified for the gantry crane in DSNY's plans and specification for construction of the ~~C~~converted MTS's.
Hz = Hertz
K = Thousand

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on monitoring data provided in Table 21.17-1 above. Table 21.17-6 below identifies the existing monitored background noise levels. The table shows the distance from the West 135th Street Converted MTS to the noise-sensitive receptors, the monitored existing background noise level at the noise-sensitive receptors, West 135th Street Converted MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptors. This difference represents the predicted incremental change in noise level from the West 135th Street Converted MTS. Because this incremental change is ~~less~~ greater than the CEQR threshold of 3 dBA, at one of the

noise-sensitive receptors, since the existing background noise level is 62 dBA or greater at all of the noise-sensitive receptors analyzed, there is ~~no~~ a predicted impact that would be caused by the West 135th Street Converted MTS on-site operations.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

21.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the West 135th Street Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 21.17-7). Based on this analysis, ~~no~~ exceedances to the Performance Standards are predicted.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-6
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ~~ID~~	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1]~~[2]~~	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]~~[4]~~	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise ~~Levels~~ Level (dBA)	Impact[4]~~[5]~~ (yes or no)
Riverbank State Park	27 / 90	64.2	67.0	~~67.1~~ 69.0	~~2.9~~ 4.8	~~No~~ Yes
~~Harlem Piers Park~~Riverside Ramparts Park	67/200	62 ~~24~~	59.0	~~64.6~~ 64.0	1.6	No
Riverside Drive ~~Ramparts~~Apartment	~~67 / 200~~ 119/389	58.0	~~58.5~~ 58.0	~~63.9~~ 61.8	~~1.5~~ 2.5	No
Harlem Piers Park	183/600	62.2	~~60.1~~ 61.0	~~64.3~~ 64.5	~~2.1~~ 2.3	No

Notes:

(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels at the proposed Harlem Piers Park were measured July 16, 2004 at 10:15 a.m. Existing noise levels at Riverside Ramparts were measured at August 18, 2004 at 10:40 a.m. Existing noise levels at Riverbank State Park were measured on April 16, 2003 at 2:45 p.m. Existing noise levels at Riverside Drive Apartment were measured on May 9, 2003 at 2:30 a.m.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase of 3 dBA during the daytime if the existing noise level is greater than 62 dBA is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the West 135th Street Converted MTS with the quietest background noise levels that occur during its operation. Only an analysis during the quietest daytime noise level was performed since the parks are not expected to be open during nighttime hours.

Table 21.17-7
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
West 135th Street Converted MTS

Manufacturing District Regulation (M1)								
Frequency Range (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
Threshold	**78**	**73**	**64**	**57**	**52**	**46**	**40**	**38**
Total Lp dB: D1	74.5	69.1	59.1	52.7	44.9	36.1	25.7	17.8
Total Lp dB: D2	77.0	71.7	61.9	55.4	47.8	39.3	30.3	27.1
Total Lp dB: D3	70.1	70.0	**66.4**	**59.4**	**54.1**	**47.9**	**42.6**	**42.3**
Total Lp dB: D4	70.9	71.0	**67.4**	**60.4**	**55.2**	**49.0**	**43.7**	**43.4**
Total Lp dB: D5	66.5	64.3	59.6	52.6	47.1	40.5	34.4	33.0
Total Lp dB D6	**85.8**	**80.4**	**70.3**	**63.9**	**56.1**	**47.1**	36.2	25.3
Total Lp dB D7	73.2	70.7	**65.8**	**58.8**	**53.4**	**47.0**	**41.5**	**41.2**
Total Lp dB D8	73.7	**75.2**	**71.9**	**64.9**	**59.8**	**53.7**	**48.5**	**48.2**
Total Lp dB D9	68.0	66.3	61.9	54.9	49.5	43.0	37.2	36.3

Notes:
Hz = Hertz
Lp = sound pressure level
dB = decibel
D1 through D9 are the points representative of the West 135th Street Converted MTS boundary that were used in all noise analyses
K = Thousand
Bold = Exceedance

21.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the West 135th Street Converted MTS boundary (D1, etc.) to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 21.17-8. Based on this conservative analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-8
Current Noise Code Analysis
West 135th Street Converted MTS

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	58.5
D2	**71.4**
D3	69.0
D4	**71.5**
D5	**78.4**
D6	65.0
D7	**72.4**
D8	**71.0**
D9	**73.4**

Notes:
(1) D1 through D9 are the points representative of the West 135th Street Converted MTS boundary that were used in all noise analyses
Bold = Exceedance

21.17.3.6 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the West 135th Street Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 21.17-9.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles coming to or going from the West 135th Street Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between

Table 21.17-9
Off-Site Noise Screening Results
West 135th Street Converted MTS

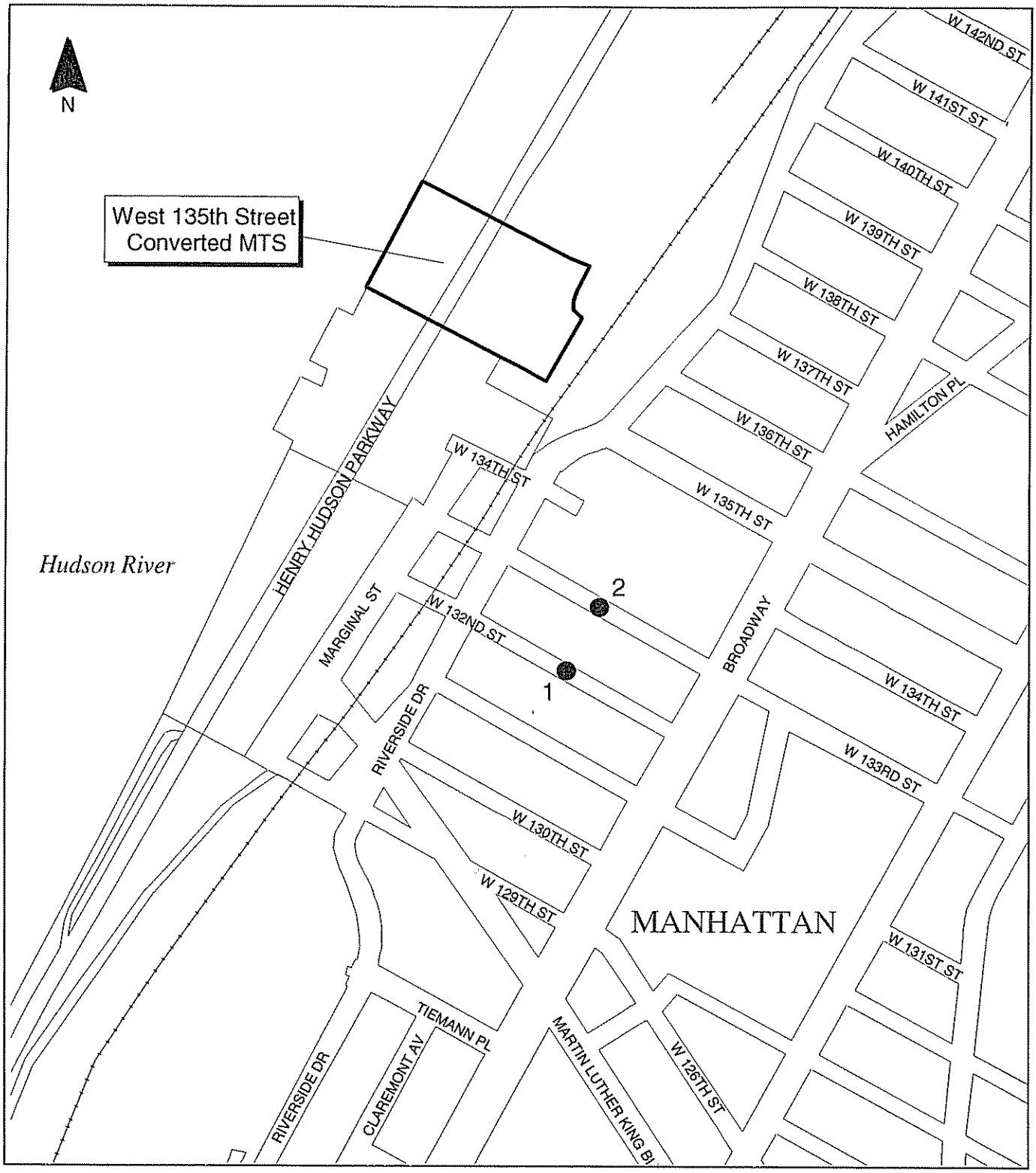
Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net Collection Vehicle PCEs[1][2]	Future Build PCEs[1][2]	Possible Impact[3]
West 132nd Street between 12th Avenue and Broadway	2:00 a.m.	16	6	0	282	298	Yes
West 132nd Street between 12th Avenue and Broadway	8:00 a.m.	248	13	0	611	859	Yes
West 133rd Street between 12th Avenue and Broadway	2:00 a.m.	42	5	0	235	277	Yes
West 133rd Street between 12th Avenue and Broadway	10:00 a.m.	344	15	0	705	1,049	Yes
West 125th Street between Broadway and Amsterdam	2:00 a.m.	616	12	0	564	1,180	No
West 125th Street between Broadway and Amsterdam	10:00 a.m.	3,935	30	0	~~5,345~~ 1410	5,345	No
West 125th Street between Broadway and 12th Avenue	1:00 a.m.	626	13	0	611	1,237	No
West 125th Street between Broadway and 12th Avenue	3:00 a.m.	577	12	0	564	1,141	No
West 125th Street between Broadway and 12th Avenue	9:00 a.m.	2,226	30	0	1,410	3,636	No
Broadway between West 132nd Street and West 133rd Street	2:00 a.m.	616	11	0	517	1,133	No
Broadway between West 132nd Street and West 133rd Street	10:00 a.m.	3,935	30	0	1,410	5,345	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include West 135th Street Converted MTS-related DSNY and other agency collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 21.17-2 Mobile Noise Analysis
Intersections Analyzed
West 135th Street Converted MTS

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traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. Figure 21.17-2 depicts the location of the roadways when a detailed off-site noise analysis was performed.

TNM results for locations/hours that indicated an impact based on a second-level screening are presented in Appendix E of this FDEIS. Because the incremental noise-level change, which is calculated by obtaining the difference between the TNM-predicted Future Build noise level and the TNM-predicted Future No-Build noise level, is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, an impact is predicted by TNM from the West 135th Street Converted MTS-related collection and employee vehicles.

To determine if these TNM-predicted impacts were accurate, site-specific truck simulations were conducted at the noise-sensitive receptor site. The truck simulation analysis provides a more realistic determination of DSNY and other agency collection vehicle noise impacts based on the proposed number of DSNY and other agency collection vehicles expected to travel through the roadways analyzed during the nighttime hours. Truck simulations were conducted with DSNY collection vehicles, as described in Section 3.19.7.2, for each roadway and hour that the first-level screening analysis resulted in potential impacts. For this procedure, two sets of noise measurements were taken, one with and one without DSNY trucks, by routing a set number of DSNY trucks during the affected nighttime hours past the noise-sensitive receptor. Tables 21.17-10 and 21.17-11 below contain the results of the site-specific DSNY collection vehicle simulations.

A comparison of the simulation results for the hour resulting in an impact and the TNM results for this hour for the same traffic conditions and background noise levels estimated from recordings during the simulations is provided in Appendix E of this FDEIS. Based on this comparison, it is determined that TNM over-predicted the incremental change. The over-prediction can be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the West 135th Street Converted MTS-related collection vehicles.

The results of the site-specific truck simulations show that an impact would not be caused at a noise-sensitive receptor by the West 135th Street Converted MTS-related collection vehicles.

Table 21.17-10
Off-Site Noise Analysis Truck Simulation
West 133rd Street between Broadway and 12th Avenue
West 135th Street Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Estimated) (dBA)	Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	66.1	14	68.7	No (2.6)
2:00 a.m.	66.7	12	69.2	No (2.5)
3:00 a.m.	66.9	11	69.1	No (2.2)
4:00 a.m.	66.7	12	69.2	No (2.5)
5:00 a.m.	68.7	12	70.5	No (1.8)
9:00 a.m.	71.5	15	72.2	No (0.7)
10:00 a.m.	72.1	15	72.7	No (0.6)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations for hours 1:00 a.m. to 6:00 a.m. were performed on July 31, 2003. Simulations for hours 9:00 a.m. to 11:00 a.m. were performed on June 16, 2004.

Table 21.17-11
Off-Site Noise Analysis Truck Simulation
West 132nd Street between Broadway and 12th Avenue
West 135th Street Converted MTS

Hour	Existing Background Noise Level[1] (L_{eq}) (Measured) (dBA)	Collection Vehicles	Truck Simulation[2] Noise Level (L_{eq}) for Existing Traffic plus Collection Vehicles (dBA)	Impact (Noise Level Difference) (dBA)
1:00 a.m.	71.9	6	72.5	No (0.6)
2:00 a.m.	71.4	6	71.9	No (0.5)
3:00 a.m.	71.3	5	71.9	No (0.6)
4:00 a.m.	72.0	5	72.4	No (0.4)
8:00 a.m.	72.0	13	72.5	No (0.5)
9:00 a.m.	71.8	15	72.7	No (0.9)
10:00 a.m.	72.4	15	73.3	No (0.9)

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.
(2) Simulations for hours 1:00 a.m. to 5:00 a.m. were performed on June 16, 2004. Simulations for hours 8:00 a.m. to 11:00 a.m. were performed on May 25, 2004.

21.17.3.6 Combined On-Site and Off-Site Noise Levels

An on-site and off-site noise analysis was performed for the West 135th Street Converted MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis was conducted to determine if a combined noise analysis would be required for the operations at the West 135th Street Converted MTS. The combined analysis study area was defined by the 55 dBA isopleth contours from the on-site source and the bottom driveway entrance to the site. The other limits for the combined analysis study area were defined by the first row of buildings along the roadway between the 55 dBA contour and the driveway entrance to the site. The results of the screening analysis show that the West 132nd Street apartment building and West 133rd Street apartment building noise-sensitive receptors are located within the study area that can be impacted by both on-site and off-site West 135th Street Converted MTS operations; therefore, a combined noise analysis, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on the off-site analysis discussed in Section 21.17.3.5 above. Tables 21.17-12 and 21.17-13 show the distance from the West 135th Street Converted MTS to the noise-sensitive receptors, the monitored existing background noise level at the noise-sensitive receptors, West 135th Street Converted MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted off-site noise levels at the noise-sensitive receptors. The table also provides the combined on-site and off-site noise levels and the difference between these combined noise levels. This difference represents the predicted incremental change in noise level from the West 135th Street Converted MTS on-site and off-site operations at the noise-sensitive receptor. Because this incremental change is not greater than the CEQR threshold of 3 dBA during nighttime hours for the West 132nd Street apartment building and West 133rd Street apartment building noise-sensitive receptors analyzed, there is ~~no~~ a predicted impact that would be caused by the West 135th Street Converted MTS combined on-site operations and off-site operations.

The data presented in this section is for the analyses performed to date. If this facility is chosen to be part of the new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 21.17-12
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (L_{eq}) at the
West 132nd Street Apartment Building Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
West 132nd ~~Street between Broadway and 12th Avenue~~Apt. Building	350 / 1147	1:00 a.m.	71.9	~~52.3~~ 57.3	6	72.5	~~72.5~~ 72.6	~~0.6~~ 0.7	No
		2:00 a.m.	71.4	~~52.3~~ 57.3	6	71.9	72.0	0.6	No
		3:00 a.m.	71.3	~~52.3~~ 57.3	5	71.9	72.0	0.7	No
		4:00 a.m.	72.0	~~52.3~~ 57.3	5	72.4	~~72.4~~ 72.5	~~0.4~~ 0.5	No
		8:00 a.m.	72.0	~~52.3~~ 57.3	13	72.5	~~72.5~~ 72.6	~~0.5~~ 0.6	No
		9:00 a.m.	71.8	~~52.3~~ 57.3	15	72.7	~~72.7~~ 72.8	~~0.9~~ 1.0	No
		10:00 a.m.	72.4	~~52.3~~ 57.3	15	73.3	~~73.3~~ 73.4	~~0.9~~ 1.0	No

Notes:

(1) Existing background noise levels were estimated from noise monitoring performed during truck simulations.
(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(3) According to CEQR, an increase over 3 dBA at nighttime is considered an impact.

Table 21.17-13
Combined On-Site and Off-Site Noise Analysis
Existing and Predicted Noise Levels (L_{eq}) at the
West 133rd Street Apartment Building Noise-Sensitive Receptor
West 135th Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters /feet)	Hour Analyzed	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted On-Site Noise Level at Noise-Sensitive Receptor (dBA)[2]	Collection Vehicles	Predicted Off-site Noise Level at Noise-Sensitive Receptor (dBA)	Combined On-Site and Off-Site Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[3] (yes or no)
West 133rd ~~Street between Broadway and 12th~~ Avenue Apt. Building	418 / 1373	1:00 a.m.	66.1	~~49.1~~ 53.3	14	~~68.7~~ 72.5	~~68.8~~ 72.6	~~2.7~~ 6.5	~~No~~ Yes
		2:00 a.m.	66.7	53.3 ~~49.1~~	12	~~69.2~~ 71.9	~~69.2~~ 72.0	~~2.5~~ 5.3	~~No~~ Yes
		3:00 a.m.	66.9	53.3 ~~49.1~~	11	~~69.1~~ 71.9	~~69.1~~ 72.0	~~2.2~~ 5.1	~~No~~ Yes
		4:00 a.m.	66.7	53.3 ~~49.1~~	12	~~69.2~~ 72.4	~~69.2~~ 72.5	~~2.5~~ 5.8	~~No~~ Yes
		5:00 a.m.	68.7	53.3 ~~49.1~~	12	~~70.5~~ 72.5	~~70.5~~ 72.6	~~1.8~~ 3.9	~~No~~ Yes
		9:00 a.m.	71.5	53.3 ~~49.1~~	15	~~72.2~~ 72.7	~~72.2~~ 72.8	~~0.7~~ 1.3	No
		10:00 a.m.	72.1	53.3 ~~49.1~~	15	~~72.7~~ 73.3	~~72.7~~ 73.3	~~0.6~~ 1.2	No

Notes:
(1) Existing background noise levels were estimated from noise monitoring performed during truck simulations.
(2) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(3) According to CEQR, an increase over 3 dBA at nighttime is considered an impact.

21.18 Commercial Waste to the West 135th Street Converted MTS

21.18.1 Existing Conditions

No commercial waste is delivered to the West 135th Street MTS site under Existing Conditions. Commercial waste generated in Manhattan is taken directly out of the City to remote disposal locations.

21.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the West 135th Street Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

21.18.3 Potential Impacts of Sending Commercial Waste to the West 135th Street Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

21.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the West 135th Street Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 21.15, 21.16 and 21.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

21.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the West 135th Street Converted MTS were evaluated in Sections 21.14, 21.15 and 21.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 21.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 30 (inbound trip ends) per hour, which occurred during the AM peak. These 30 DSNY and other agency collection vehicles are also more than the 22 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the West 135th Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 30 DSNY and other collection agency vehicles at the West 135th Street Converted MTS. Therefore, the addition of the 22 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the West 135th Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 30 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 30 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts. Consequently, because the 22 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can be processed at the West 135th Street Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the West 135th Street Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,029 tons (or 95 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

CHAPTER 22 ENVIRONMENTAL REVIEW: WEST 59TH STREET CONVERTED MTS

22.1 Introduction

The results of the environmental analyses of the West 59th Street Converted MTS are presented in the following sections:

22.2 Land Use, Zoning, and Public Policy
22.3 Socioeconomic Conditions
22.4 Community Facilities and Services
22.5 Open Space
22.6 Cultural Resources
22.7 Urban Design, Visual Resources, and Shadows
22.8 Neighborhood Character
22.9 Natural Resources
22.10 Hazardous Materials
22.11 Water Quality
22.12 Waterfront Revitalization Program
22.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
22.14 Traffic, Parking, Transit, and Pedestrians
22.15 Air Quality
22.16 Odor
22.17 Noise
22.18 Commercial Waste to the West 59th Street Converted MTS

Section 2.7 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

22.2 Land Use, Zoning, and Public Policy

22.2.1 Existing Conditions

22.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 22.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 22.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.7 provides information on existing land uses and operations on the site.

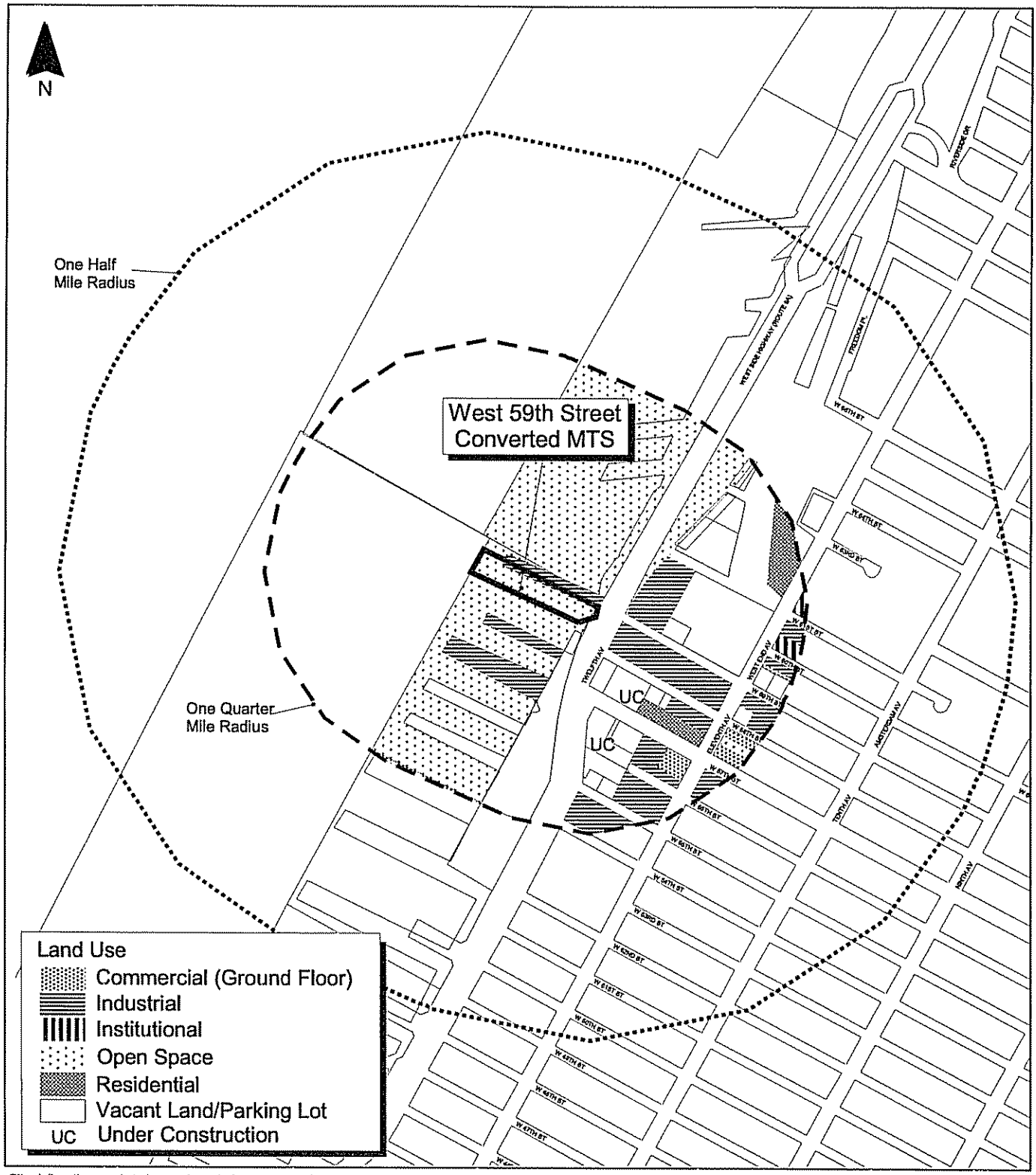
22.2.1.2 Land Use Patterns

22.2.1.2.1 General Context

Set in the larger context of Manhattan's changing Hudson River waterfront, west of the Clinton/Lincoln Center neighborhoods, the site is surrounded by a large surface parking lot, construction sites, industrial activities, and the elevated West Side (Miller) Highway.

22.2.1.2.2 Land Uses in the Primary Study Area

The primary study area is characterized by active industrial uses, municipal operations, and transportation infrastructure, as well as extensive construction activity. The elevated Miller Highway itself dominates the study area immediately surrounding the site, as it touches down to grade at West 57th Street, as does the massive generating plant across Twelfth Avenue and the large surface parking lot north of West 59th Street. In addition to the plant, Consolidated Edison occupies Pier 98 (at the terminus of West 58th Street), immediately south of the MTS site, which is used for fuel transfer operations. Just south of this pier is Pier 97, which DSNY utilizes for vehicle parking and various storage operations. Piers 95 and 96 (at the terminus of West 55th and West 56th Streets, respectively), which are under construction as part of the



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

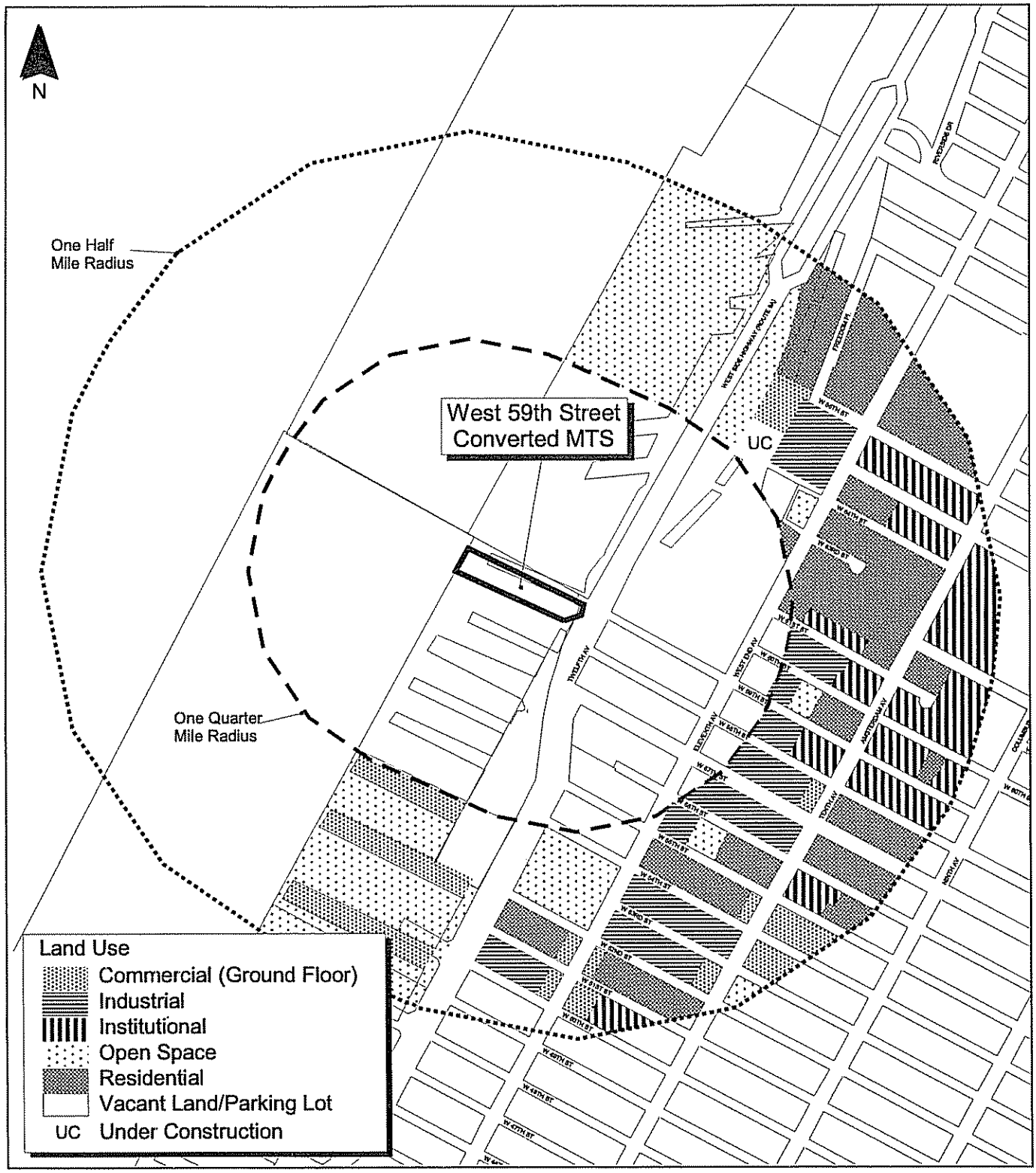
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Figure 22.2-1 Land Use in the Primary Study Area
West 59th Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the secondary study area

500 0 500 Feet

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Figure 22.2-2 Land Use in the Secondary Study Area

West 59th Street Converted MTS

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Hudson River Park's "Clinton Cove Park" will feature a boathouse and other waterfront amenities. This section of park is scheduled to open in 2005. (Pier 97 is also planned to be rehabilitated in the future as part of the Clinton Cove Park and may include passive and active recreational areas.)

East of Twelfth Avenue between West 58th and West 57th Streets is the expansive ArtKraft Sign Corp. factory, as well as other industrial activities located along the side streets. Interspersed with these one- and two-story warehouses are parking garages and surface lots. A large site has been cleared for the new DSNY District (4, 4A and 7) Garage construction across Twelfth Avenue, spanning West 56th Street (from West 55th to West 57th Streets). It is due to be completed by 2007. Further east, the land use pattern changes with a mix of century-old low-rise tenement buildings and recent high-rise apartment towers that have come to characterize the Clinton neighborhood.

Directly north of the site is an unbuilt section of Riverside Park South, which will connect the developing upland residential and commercial development north of West 59th Street to the waterfront under the elevated Miller Highway structure. The northern section, between West 65th and West 72nd Streets, is already completed and features expansive lawn areas, landscaped waterfront walkways, seating and a new 750-foot pier (West 70th Street). The park segment between West 62nd and West 65th Streets (Phase 3) is actively under construction and due to be completed in 2005. The planned park terminates at West 59th Street, where the upland area is restricted to street right-of-way, such that the adjacent bicycle/pedestrian path is the only physical and visual link between Riverside Park South and the emerging Hudson River Park to the south.

The West End Towers Park is a relatively new park that is privately owned, though open to the public on West End Avenue, between West 63rd and West 64th Streets. De Witt Clinton Park is located south of the site, between West 52nd and West 54th Streets and Eleventh and Twelfth Avenues.

The Riverside South Development will ultimately extend from West 59th to West 72nd Streets on the site of the former Penn Central Yards. In conjunction with the park, the northern segments – between West 65th and West 72nd Streets – were completed first. Construction continues as a new ABC studio building is rising at West 66th Street.

Further northeast of the site (along West End/Eleventh Avenue and Amsterdam/Tenth Avenue), the Upper West Side mix of high-rise residential buildings, institutions and neighborhood shopping has moved steadily southward, though upscale car dealership and headquarters still remain, particularly on Eleventh Avenue (and West 57th Street).

22.2.1.2.3 Land Uses in the Secondary Study Area

Fairly discrete concentrations of industrial, residential, commercial and institutional uses characterize the secondary study area. In addition to Riverside South, whose residential towers line the west side of West End Avenue north of West 61st Street, residential uses can also be found concentrated between Tenth and Eleventh Avenues north of West 63rd Street, south of West 56th Street, and east of Tenth Avenue between West 56th and West 63rd Streets. Large new residential developments have recently opened in the secondary study area, including the Westport (500 West 56th Street) with more than 300 apartments and ground-floor retail; and the Clinton Parkview Apartments (555 West 52nd Street) with 96 apartments and space for a community garden and offices. The Clinton Parkview Apartments is the first entirely income-restricted building to be constructed in Clinton since 1981. Otherwise, the blocks between Tenth and Eleventh Avenues are mostly industrial and institutional in nature, featuring uses such as John Jay College of Criminal Justice, Fordham University at Lincoln Center and St. Luke's/Roosevelt Hospital Center. New residential buildings are proposed or under construction within the area as well. Commercial uses are concentrated south of West 58th Street.

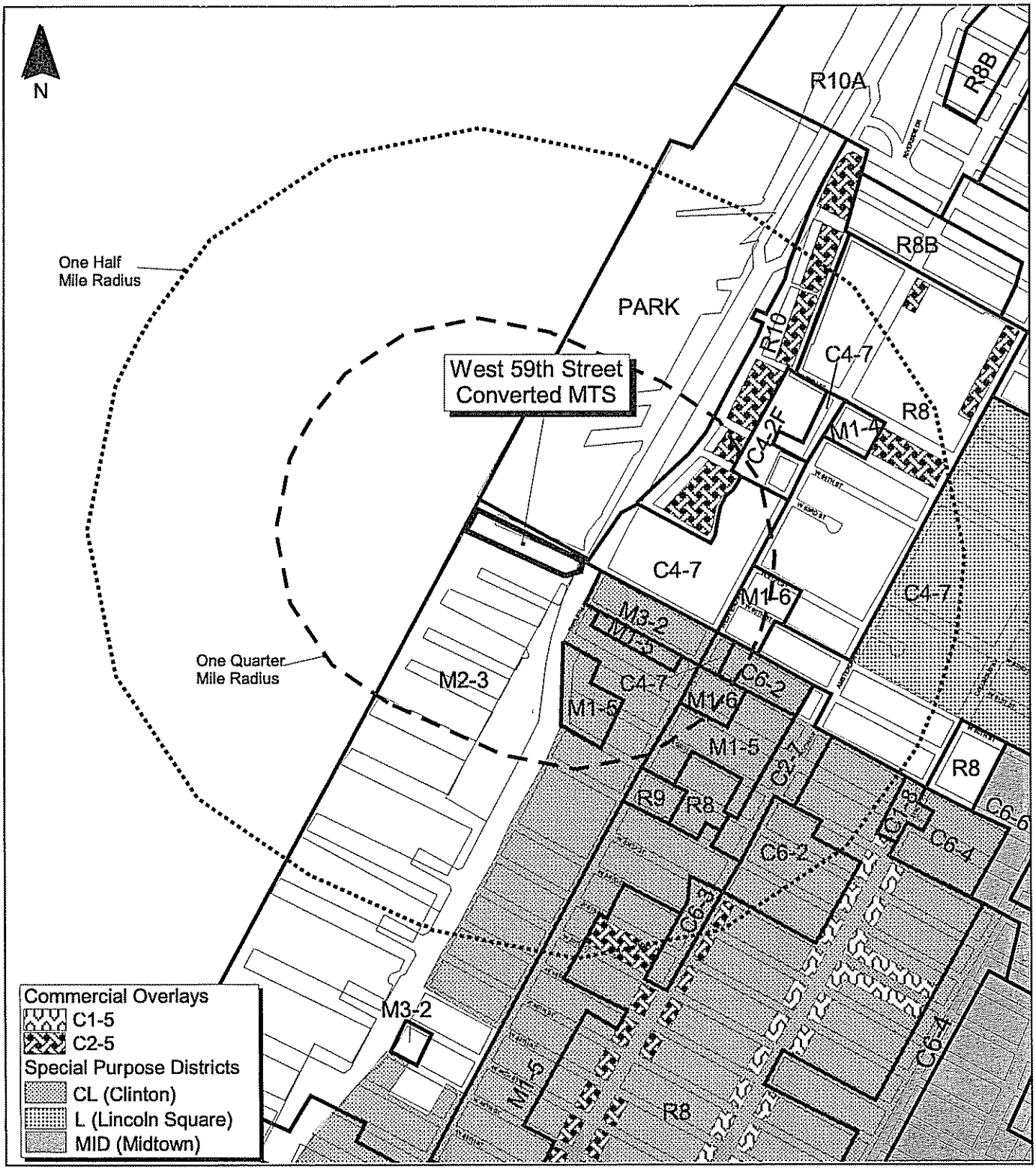
DeWitt Clinton Park is a nearly six-acre City park, located approximately ¼-mile south of the site, between Eleventh and Twelfth Avenues and West 52nd and West 54th Streets. South of the park, the remainder of the study area is largely residential with small-scale, ground-floor commercial properties lining both sides of Eleventh Avenue southward.

22.2.1.3 Current Zoning On and Near the Site

22.2.1.3.1 Zoning Within the Primary Study Area

The site is located at the northern edge of an M2-3 manufacturing zone, which extends south along the Hudson River waterfront to the Gansevoort Peninsula and then continues south again to Battery Park City. Adjacent to the site's northern boundary, ~~is a large R10 district that covers the waterfront~~ the water (extending to the Pierhead line) comprises an area of mapped parkland, which extends inland to between Miller Highway and Riverside Drive, where R10 residential zoning covers ~~and~~ the residential portion of the new Riverside South Development. Directly northeast of the site is a C4-7 zoning district and an M1-6 district.

Southeast of the site, the immediate area is predominantly zoned for a range of industrial uses (M1-5 and M3-2). There are also two small recently-rezoned commercial districts, east of West End Avenue, between West 59th and West 60th Streets. This rezoning allows the construction of a 31-story apartment building and underground garage. This is one of several rezoning actions since 1999 that allows land uses and building forms that are compatible with the context of the blocks north and northwest of West End Avenue. The Clinton Special Purpose District also extends south of West 59th Street and west to Twelfth Avenue in the primary study area. This zoning district was established in 1974 to preserve the residential character of the community, located between the waterfront on the west and the growing CBD on the east. (See Figure 22.2-3.)



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 22.2-3 Zoning

West 59th Street Converted MTS

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22.2.1.3.2 Zoning Within the Secondary Study Area

As in the primary study area, the shoreline south of the site is zoned M2-3. Northeast of the site is a mix of zoning, with mostly commercial (C4-2F, C4-7) and high-density residential districts (R10 and R8). There are a couple of discrete industrial zones on West End Avenue (M1-6 and M1-4), but largely it is zoned for residential and commercial activities. The Lincoln Square Special Purpose District extends into the secondary study area between West 60th and West 65th Streets. This district was created to protect and promote the unique cultural and architectural character of the Lincoln Center area. Southeast of the site is a mix of commercial (C6-2, C2-7, C6-3), industrial (M1-6 and M1-5) and residential (R8 and R9) districts, including a portion of the Clinton Special Purpose District.

22.2.1.4 Plans and Policies

The site lies right at the border of CD 4 (south of West 59th Street) and CD 7 (to the north). In the FY 2004 CDNS prepared by CD 4, the Governing Board of the CDs lists criteria for new development proposed for the Clinton Urban Renewal Area, which covers the mixed-use community between West 50th and West 56th Streets and Tenth and Eleventh Avenues southeast of the site, to protect residents and businesses from displacement. A 197-a Plan is currently being prepared for the South Hell's Kitchen (Chelsea) area. The statement urges the relocation of the DSNY garage and salt storage to another pier in the CD to minimize potential conflict with the proposed Hudson River Park in which the West 59th Street converted MTS site is located. In the statement, the Governing Board supports improvement and maintenance of DeWitt Clinton Park and the improvement of the West 59th Street Recreation Center, a former bath house structure with pool located between West 59th and West 60th Streets east of Eleventh Avenue.

In its 2004 CDNS, CD 7 expressed general concerns of its generally residential district. There are no statements referring to DSNY, the site or its environs.

The Plan for Reach 3, which includes the site and extends south from West 59th Street to several blocks below Canal Street, makes no recommendations pertinent to the West 59th Street Converted MTS. The site and the Consolidated Edison Pier (Pier 98) to the south are working waterfront sites, though Pier 97 is recommended as a public access site and a continuous "esplanade" is recommended for part of the "Hudson River Valley Greenway", Twelfth Avenue throughout the study area. In the intervening years, the bikeway/pedestrian path along Route 9A has been constructed.

22.2.2 Future No-Build Conditions

- The new ABC Studio in Riverside South, is are currently under construction on West End Avenue between West 64th and West 66th Streets. It is scheduled to be completed in 2005. Other development parcels (residential and mixed use) within The Riverside South project area are expected to be under construction in 2006.

- Clinton Cove Park (part of Hudson River Park) is currently under construction on Piers 95 and 96. It will include a large grassy area and feature a boathouse and kayak launch on Pier 96, and a passive open space near the river on Pier 95. It is due to be completed in Spring 2005. Pier 97, which currently functions as a DSNY storage pier, will ultimately be rehabilitated for active recreation and historic ships when it is redeveloped as part of the Hudson River Park (schedule unknown).

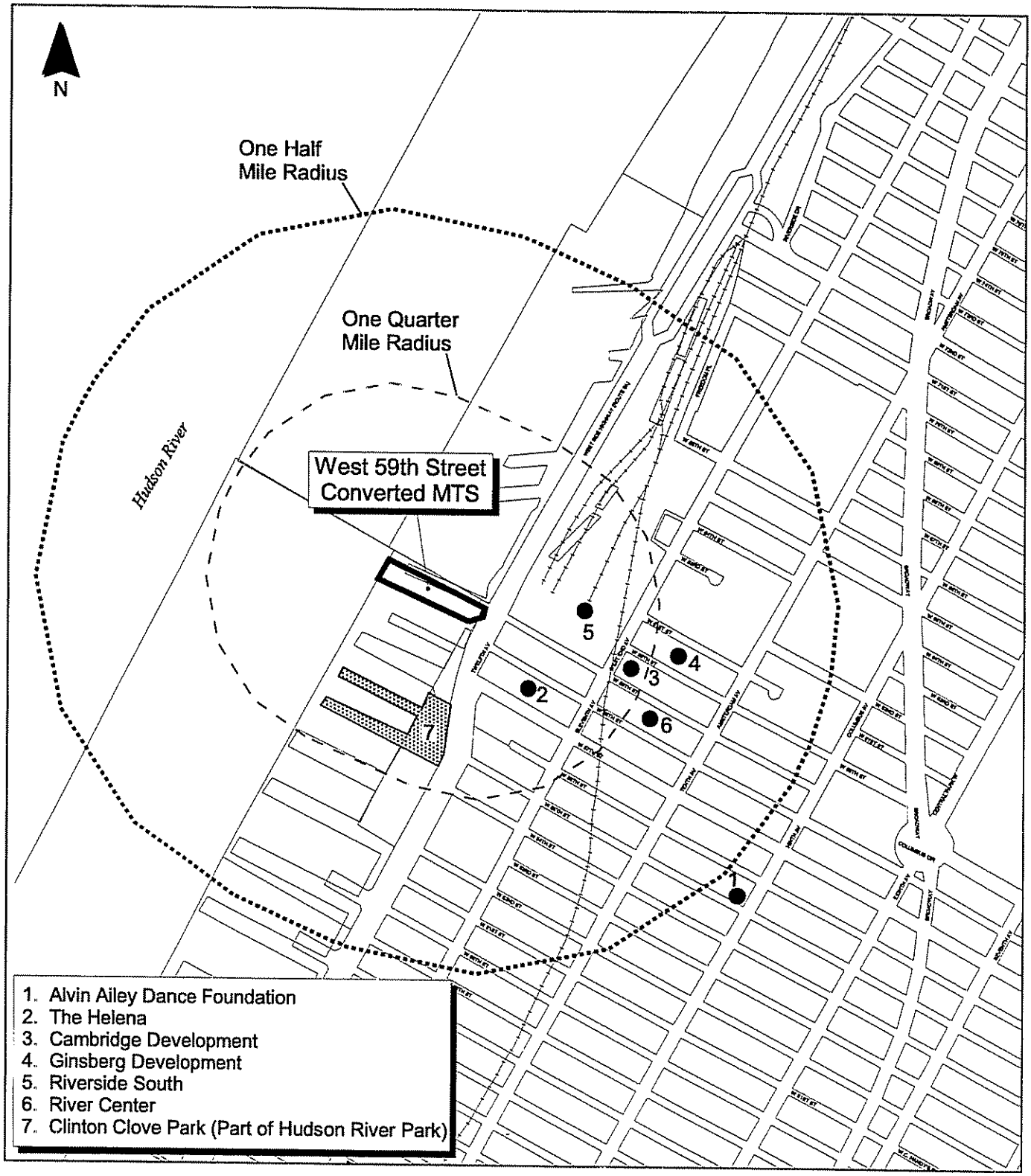
- The Alvin Ailey Dance Foundation is currently completing construction of a 25,970-square-foot studio and 5,000-square-foot theater at West 55th Street and Ninth Avenue. It is expected to open in late 2004.

- River Center is a mixed-use project proposed (and approved) for a site located between 58th and 59th Streets and Tenth and Eleventh Avenues. It will contain 1,200 dwelling units; 166,000 square feet of retail space; 900,000 square feet of community facility space; and 655 associated parking spaces.

- Construction is underway on The Helena - a Durst Organization apartment building, located between West 57th and West 58th Streets and Eleventh and Twelfth Avenues. The 300,000-square-foot luxury residential tower stands 31 stories and will be ready for occupancy by late 2004.

- Cambridge Development has proposed the construction of 224 to 309 dwelling units combined with up to 20,000 square feet retail space on West End Avenue at West 59th Street. It is assumed to be completed in 2005.

These planned development sites are shown in Figure 22.2-4.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 22.2-4 Planned Development Sites
West 59th Street Converted MTS

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The Passenger Ship Terminal located on Piers 88, 90 and 92 (at the southern end of, and beyond, the secondary shady area) is planned for internal site circulation and signage improvements to upgrade pedestrian and vehicular movements within the terminal. Pier 94 (at 54th Street) would continue to function as a venue for trade shows in the future.

In the future No-Build Condition, the site will remain DSNY property and the existing MTS will continue to be used for the transfer of paper recyclables from truck to barge.

22.2.3 Potential Impacts with the West 59th Street Converted MTS

22.2.3.1 Land Use and Zoning

The West 59th Street Converted MTS would entail replacing the existing MTS with a new facility that would feature containerization functions. It would represent a slight physical upgrading of the site itself. The facility's processing operation would be designed to containerize waste and prepare containers for transfer to barge for disposal outside of the City. The existing MTS, which extends over the water, would be demolished and the new, larger one would be built in almost precisely the same place, still extending as a linear pier, with a footprint resembling those of neighboring piers. The location of the entrance to the site would remain unchanged.

The addition of waste containerization and associated truck traffic to ongoing recycling activities on the site would not be a change in on-site land use, nor would it encourage similar types of land uses or discourage other types of land use in the study areas, (e.g. residential, commercial and parkland development) which have already been redefining the area West of West End/10th Avenue. Therefore, no significant adverse impacts to land use or zoning in the primary or secondary study areas would result.

22.2.3.2 Consistency with Public Plans and Policies

With the exception of park development (Riverside Park South) to the north and the Hudson River Park, and completion of the Hudson River Valley Greenway further south (the pedestrian/bike path alongside the MTS), there are no recommendations or objectives stated in relevant plans or policies that specifically relate to the site, study area or West 59th Street Converted MTS. Continued municipal waste transfer activity on the site is a permitted use noted in the Hudson River Park Act Plan and would therefore not conflict with its implementation. The Converted MTS would similarly have no effect on the completion or use of Riverside Park South to the north. The adjacent bike/pedestrian path segment is already in place and will continue to serve as a connection to the parks north and south of the site's industrial sub-area.

22.3 Socioeconomic Conditions

22.3.1 Existing Conditions

22.3.1.1 Definition of the Study Areas

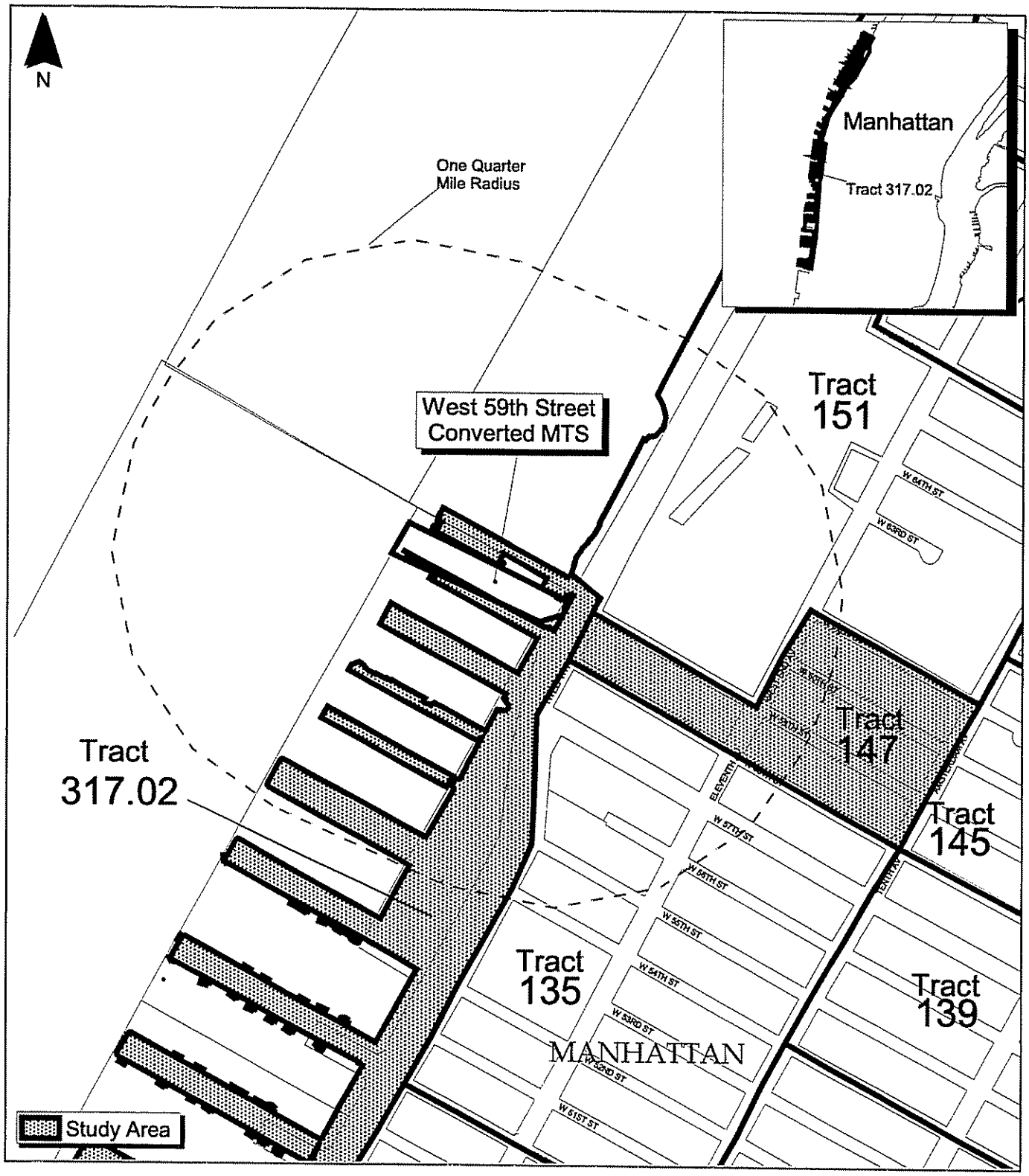
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site, and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) The demographic study area is comprised of Census Tracts 147 and 317.02 (see Figure 22.3-1), which include the waterfront south of West 59th Street and an area along West 59th Street inland to Tenth Avenue. For comparison purposes, both 1990 and 2000 census data were gathered at the borough and City levels. The study area for the assessment of potential impacts on economic conditions extends as far north as West 69th Street, as far south as West 49th Street, and far enough east to include Tenth Avenue.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

22.3.1.2 Demographic Characteristics

22.3.1.2.1 Population

The total 2000 study area population was 2,198 persons (see Table 22.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a considerably greater percentage increase (72%) than did the borough (3%) and the City (9%) during the same period.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 22.3-1 Census Tracts

West 59th Street Converted MTS

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The age-sex distribution was slightly different from the population distribution of the borough and the City, with an even greater proportion of females to males within the study area. The study area contained a slightly greater percentage of children and teenagers than the borough but less than the City; approximately 23% of the study area population was under the age of 20, compared to 19% for the borough and 27% for the City.

Table 22.3-1
-1990-2000 Population

	Study Area	Manhattan	City
2000	2,198	1,537,195	8,008,278
1990	1,278	1,487,536	7,322,564
Percent Change	+72.0%	+3.3%	+9.4%

Source: U.S. Census 1990, 2000

22.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a far smaller proportion (6%) of people of Hispanic origin (all races) than did Manhattan or the City (27%). Of the 94% not of Hispanic origin, 9% were Black, 23% were Asian and 64% were White. In Manhattan and the City, Blacks represented approximately 21% and 33% of the non-Hispanic populations, respectively; Asians represented 13% at both levels and Whites represented 63% and 48%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin decreased by 50% while this population grew proportionally in the borough (10%) and in the City (24%) during the same period. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

22.3.1.2.3 Families and Households

There were 326 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (about 40%) was slightly smaller than those families in Manhattan (43%) and in the City (49%). There was a considerably larger percentage of married-couple families in the study area (71%) than in the borough (62%) and the City (62%), and 51% of these families had children, greater than Manhattan (39%) but about the same as the City (48%).

Eighteen percent of the families in the study area were headed by a female householder. This percentage is lower than that in the borough or the City (both 30%). Only 7% of the female householder families in the study area had children under the age of 18, far less than the percentages in the borough (53%) and the City (55%).

There were 789 households in the study area in 2000, with an average household size of 1.7 persons, less than Manhattan (2.0 persons) or the City (2.6 persons).

From 1990 to 2000, the number of households in the study area increased by 30%, far greater than the 3% increase in the borough and 7% increase in the City.

22.3.1.2.4 Employment

Within the study area, 71% of persons aged 16 and older participated in the labor force in 2000, greater proportionally than the 64% in Manhattan and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

Five percent of employed persons 16 and over were government workers, compared to Manhattan (10%) and the City (16%). Moreover, 3% of the study area's working population was self-employed, less than that of Manhattan (9%) and the City (6%).

From 1990 to 2000, the number of employed persons within the study area increased by 101%, while the number of employed persons in the borough and the City remained approximately the same. Among employed persons, those engaged in government jobs decreased by 21%, compared to a 15% decrease in the borough and a 10% decrease in the City.

Current forecasts indicate that about 280,288 employees worked in Manhattan CDs 4 and 7 in 2005.[1]

[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

22.3.1.2.5 Housing

Most housing units in the study area were constructed in two periods – 1970 to 1979 and 1995 to 2000 – while the majority of housing units in both Manhattan and the City were built before 1960. As of 2000, there were 866 housing units in the study area with a vacancy rate of about 3.7%, lower than either the borough (8%) or the City (6%). Nearly all the housing units were renter-occupied (96%), considerably greater than the rate in the borough (74%) or the City (66%). Median monthly rent ($1,174) was far higher than in the borough ($796) or the City ($705).

The turnover in the study area (63%) from 1995 until 2000 was greater than that of the borough (45%) and the City (43%) in the same period.

From 1990 to 2000, a total of 344 housing units were added in the study area, representing a 66% increase, markedly greater than the borough (2%) or the City (7%).

22.3.1.2.6 Education

Although the proportion of children in the study area was similar to that of the larger areas, the rate of school enrollment (49%) was approximately twice that of the borough (24%) or the City (29%). Of those enrolled in school within the study area in 2000, 8% were enrolled in elementary school or high school and 89% were enrolled in college or beyond. In Manhattan, 51% were enrolled in elementary or high school and 39% in college or beyond, while 62% of the City's enrolled population were in elementary or high school and 27% in college or beyond.

The study area witnessed a 388% increase in the number of persons enrolled in school from 1990 to 2000, with the largest increase in enrollments occurring at the college level (804%), whereas the borough experienced an 8% increase in enrollees and, of that, a 98% increase in pre-primary students, comparable to the City (18% and 150%, respectively).

The study area had a far higher educational attainment level than either the borough or the City. A markedly larger proportion (94%) of the study area population aged 25 and over had a college degree or some college education, compared to Manhattan (65%) and the City (48%). The study area had a smaller percentage of people with only high school diplomas (4%) compared to the borough (14%) and a considerably smaller percentage than that of the City (24%).

Consistent with the higher educational levels, from 1990 to 2000 the study area witnessed rising levels of educational attainment. The number of college graduates increased 74%, and the same trend was evident in the borough and the City, which experienced increases of 20% and 29%, respectively. Meanwhile, the number of people with less than a college education declined significantly in the study area overall.

22.3.1.2.7 Income and Poverty

In 2000, both median household income ($68,750) and median family income ($93,164) were far higher than in Manhattan ($47,030 and $50,229, respectively) and the City ($38,293 and $41,887, respectively). Compared to the larger two areas, a greater percentage of study area households were concentrated at the highest income levels, with the majority of annual household incomes (64%) above $50,000. Only 10% of households in the study area had incomes of $25,000 or below, compared with 30% in the borough and 35% in the City.

Within the study area, the percentage of families living below the poverty level (2%) was far less than that of Manhattan (18%) or the City (19%). However, there were no families living below the poverty level with children under the age of 18, which contrasts greatly with Manhattan (48%) and the City (55%).

There were no people either under the age of 18, or 65 and older, living below the poverty level in the study area as compared to 32% and 19% for the borough, and 30% and 18% for the City, respectively.

22.3.1.3 Economic Conditions

The portion of Manhattan's West Side within approximately ½-mile of the site contains light industrial development, including waterfront piers, warehouses and television studios. Ground-floor commercial establishments serving the neighborhood line Eleventh Avenue, along with several of Manhattan's major automobile retail establishments.

22.3.2 Future No-Build Conditions

22.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Manhattan CDs 4 and 7 will remain about the same as current conditions,[2] although some new residential population growth is anticipated due to the ABC Studio on Riverside South (mixed-use development), River Center (mixed-use development), the Helena (Residential Tower), and the Cambridge Development residences (See Section 22.2.2). The NYMTC-projected total net change for the two CDs is an increase of about 3,500 people (about 1.20 percent) between 2003 and 2006. The planned developments were considered in all analyses, both as potential sensitive receptors and as potential generators of transit and traffic; no impacts were found to result assuming these planned developments. It is reasonable to assume that new retail establishments will follow to serve the new residential population.

22.3.2.2 Economic Conditions

The current paper recycling transfer operations at the existing MTS are expected to continue in the Future No-Build Conditions.

~~Several new developments are predicted for the area by 2006, with the primary changes to the socioeconomic landscape being the introduction of additional residential space and some retail. The second phase of the Riverside South development will be under way or complete, replacing much of the parking lot and vacant land east of the site on West End Avenue between West 59th~~

[2] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.

~~and West 60th Streets with new residential and mixed-use towers. It is reasonable to assume that new retail establishments will follow to serve the new residential population.~~

Regional projections indicate that employment in Manhattan CDs 4 and 7 will remain about the same as current conditions.[3]

22.3.3 Potential Impacts with the West 59th Street Converted MTS

The West 59th Street Converted MTS represents the reactivation of solid waste transfer operations on the site with added containerization operations. Therefore, it would not result in socioeconomic changes in the study area. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

22.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the West 59th Street Converted MTS, and land use and neighborhood character analyses predict no adverse impacts. (See Sections 22.2.3.1 and 22.8.3, respectively.)

22.3.3.2 Direct Business and Institutional Impacts

The West 59th Street Converted MTS would not result in the direct displacement of businesses or institutional uses. The transfer of paper recyclables from truck to barge that would continue in the Future No-Build Condition would continue as part of the West 59th Street Converted MTS.

22.3.3.3 Indirect Business and Institutional Impacts

The West 59th Street Converted MTS would not result in indirect impacts to study area businesses or institutions since local truck routes follow busy avenues and side streets that will remain predominantly industrial in nature. No traffic, air or noise impacts or neighborhood character impacts are predicted.

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[3] Ibid.

22.3.3.4 Employment Impacts

The West 59th Street Converted MTS is expected to generate a total of 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts (likely to reach beyond the study area), the new workers would generate a minor amount of indirect economic benefits in the study area through local spending.

22.4 Community Facilities and Services

22.4.1 Existing Conditions

22.4.1.1 Definition of the Study Areas

The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼- and ½-mile of the site.

22.4.1.2 Summary of Community Facilities and Services

There is one community facility in the primary study area and 24 in the secondary study area. These facilities and others serving the site, but located outside the secondary study area, are listed in Table 22.4-1 and shown on Figure 22.4-1.

22.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by 2006. Therefore, anticipated Future No-Build Conditions are expected to remain fundamentally the same as Existing Conditions.

22.4.3 Potential Impacts with the West 59th Street Converted MTS

The West 59th Street Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. The NYFD states that it would have no problem supporting the reactivation of the site (see Appendix A). No significant adverse impacts to service delivery are expected.

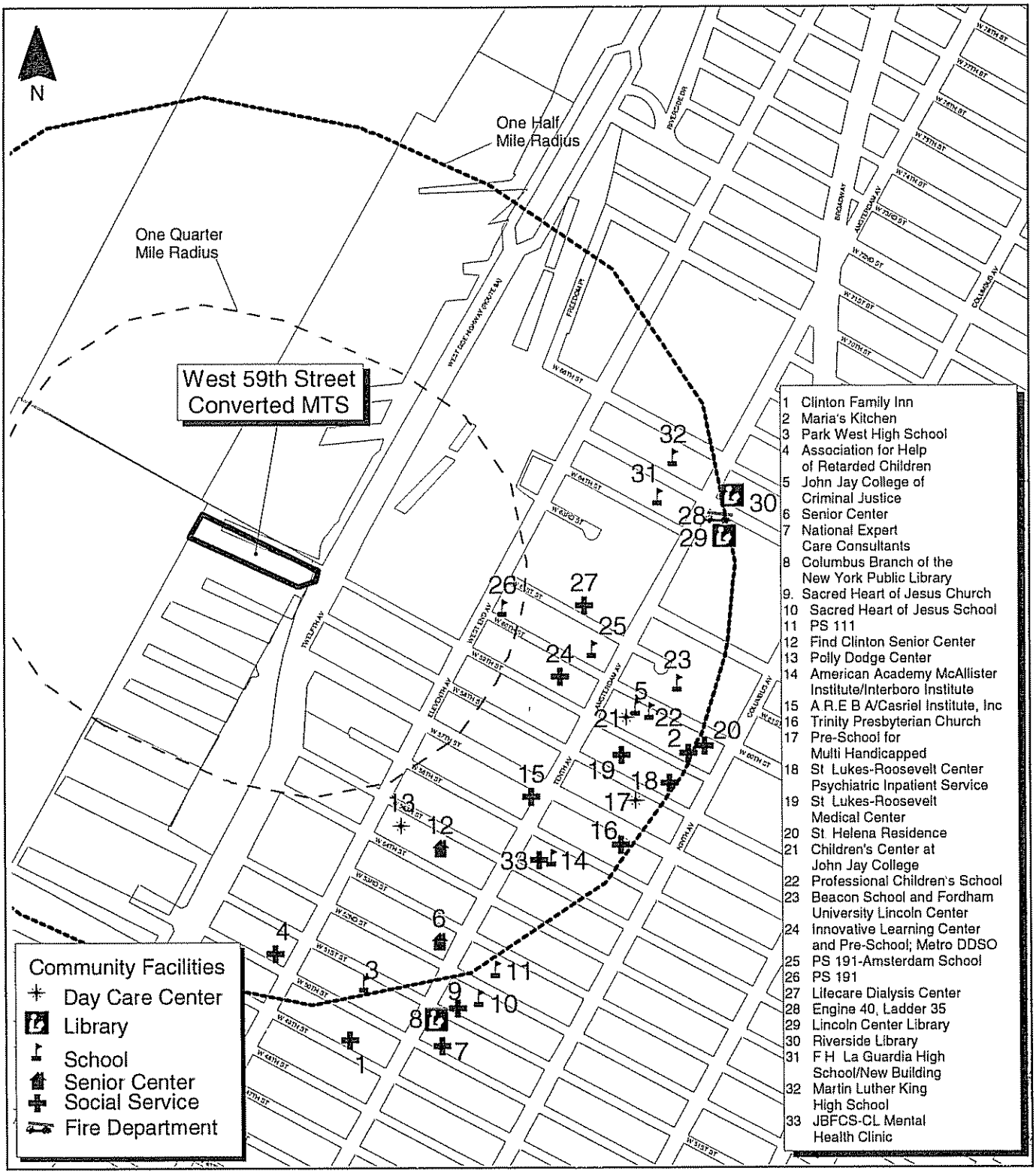
Table 22.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Schools	
P.S. 191	210 West 61st Street
Within the Secondary Study Area	
Day Care Centers	
Polly Dodge Center	538 West 55th Street
Pre-School for Multi Handicapped	432 West 58th Street
Children's Center at John Jay College	445 West 59th Street
Libraries	
Lincoln Center Library	111 Amsterdam Avenue
Schools and Colleges	
Park West High School	525 West 50th Street
American Academy McAllister Institute/Interboro Institute	450 West 56th Street
Professional Children's School	132 West 60th Street
Beacon School and Fordham University Lincoln Center	113 West 60th Street
P.S. 191 – Amsterdam School	210 West 61st Street
F.H. LaGuardia High School/New Building	108 Amsterdam Avenue
Martin Luther King High School	122 Amsterdam Avenue
John Jay College of Criminal Justice	899 Tenth Avenue
Senior Centers	
Senior Center, Department for the Aging	777 Tenth Avenue
Find Clinton Senior Center	530 West 55th Street
Social Services	
Association for Help of Retarded Children	601 West 50th Street
A.R.E.B.A/Casriel Institute, Inc.	500 West 57th Street
Trinity Presbyterian Church	422 West 57th Street
St. Luke's – Roosevelt Center Psychiatric Inpatient Service	428 West 59th Street
St. Luke's – Roosevelt Medical Center	1000 Tenth Avenue
Innovative Learning Center and Pre-School; Metro DDSO[1]	515 West 59th Street
Life Care Dialysis Center	221 West 61st Street
Maria's Kitchen	415 West 59th Street
JBFCS-CL Mental Health Clinic	444 West 56th Street
Fire Departments	
Engine 40, Ladder 35	131 Amsterdam Avenue

Table 22.4-1 (continued)
Community Facilities and Services

Name	Address
Outside the Secondary Study Area	
Libraries	
Columbus Branch of the New York Public Library	742 Tenth Avenue
Riverside Library	127 Amsterdam Avenue
Schools	
Sacred Heart of Jesus School	456 West 52nd Street
P.S. 111	440 West 53rd Street
Social Services	
St. Helena Residence	120 West 60th Street
Clinton Family Inn	521 West 49th Street
National Expert Care Consultants	455 West 50th Street
Sacred Heart of Jesus Church (food pantry)	457 West 51st Street

Note:
(1) Developmentally Disabled Service Office



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

Figure 22.4-1 Community Facilities and Services

West 59th Street Converted MTS

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22.5 Open Space

22.5.1 Existing Conditions

22.5.1.1 Definition of the Study Area

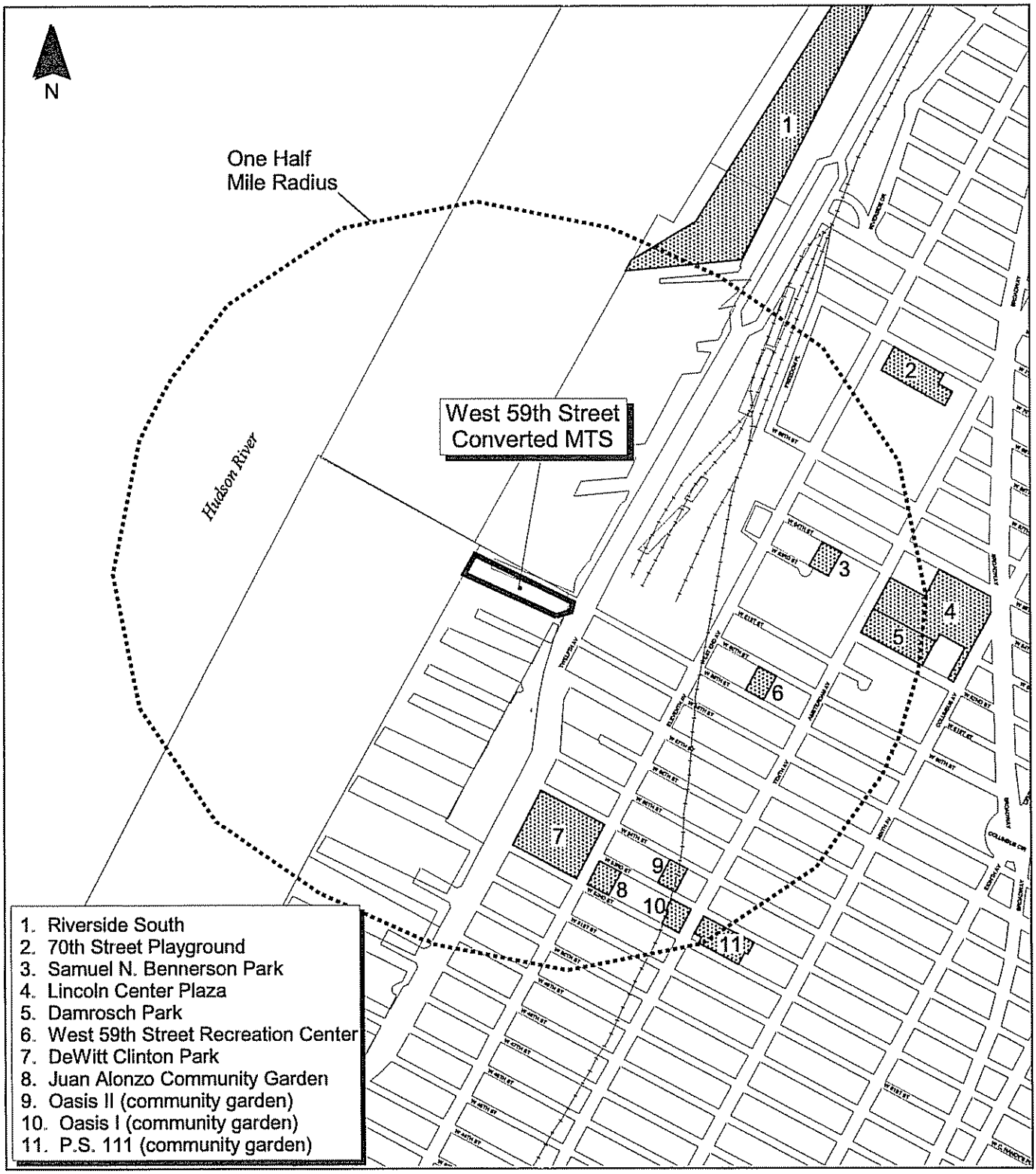
The study area for open space is defined as being the area within a ½-mile radius of the site.

22.5.1.2 Summary of Open Space in the Study Area

There are 10 public parks and open spaces within the study area, and one just outside to the north. They are listed in Table 22.5-1 and shown on Figure 22.5-1.

Table 22.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Inside the Study Area		
Riverside Park South	West 66th to West 72nd Streets	11
Riverside Park	West 72nd to West 129th Streets	266.8 (total)
Samuel N. Bennerson Park	64th Street (west of Tenth Avenue)	0.75
Lincoln Center Plaza	Columbus Avenue and West 63rd Street	7.19
Damrosch Park	Amsterdam Avenue and West 62nd Street	2.44
West 59th Street Recreation Center	West 59th and West 60th Streets (between Eleventh and Tenth Avenues)	0.69
DeWitt Clinton Park	West 52nd to West 54th Streets (Eleventh to Twelfth Avenues)	5.83
Juan Alonzo Community Garden	West 52nd to West 53 Streets (Eleventh Avenue)	0.81
Oasis II (Community Garden)	West 53rd to West 54th Streets (between Tenth and Eleventh Avenues)	0.67
Oasis I (Community Garden)	West 52nd to West 53rd Streets (Tenth Avenue)	0.70
P.S. 111 (Community Garden)	West 52nd to West 53rd Streets (Tenth Avenue)	1.80
Outside the Study Area		
70th Street Playground	West 70th Street (East of Eleventh Avenue)	2.29



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 22.5-1 Open Space/Parkland
West 59th Street Converted MTS

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In addition to the typical urban parks and open spaces serving the study area, is the linear Hudson River Valley Greenway. The Hudson River Valley Greenway comprises a pedestrian and bicycle pathway stretching along the Hudson River in Manhattan and the Bronx, and a greenway of developed waterfront parkland extending from Battery Place to about West 181st Street in Manhattan. In 1998, the Hudson River Park Act authorized that an approximately 550-acre park to be built in phases along a five-mile stretch from West 59th Street to Battery Place. The park, which is delineated to include the West 59th Street Converted MTS, is designed to reserve extensive portions of the waterfront exclusively for public recreation and to significantly limit the types and locations of commercial activities allowed. The act also designated the river itself as an estuarine sanctuary, and it requires that every dollar earned within the park be directed to fund the park's construction, maintenance, or operations.

Along the Hudson River from West 59th to West 72nd Street, the privately funded Riverside Park South is being constructed in phases and will ultimately fall under NYCDPR jurisdiction. As Riverside Park South and adjacent waterfront park areas are developed, they host an interim multi-use path, including the Route 9A Bikeway (part of the Greenway), which was implemented by the NYSDOT as part of the reconstruction of Route 9A (also known as Joe DiMaggio Highway/West Street/West Side Highway). This multi-use path, which will become permanent when park construction is complete, lies roughly 150 feet inland and travels directly beneath the elevated West Side Highway from West 70th Street to West 65th Street. To the east, future phases of Riverside South residential buildings will be developed, while the first two phases of waterfront parkland to the west of the path are already open for public use (West 65th to West 72nd Streets).

South of West 59th Street where the West Side Highway returns to street level, the path lies directly adjacent to the highway, passing a mixture of waterfront uses to the west.

The multi-use path is divided south of West 57th Street, where a pedestrian promenade hugs the waterfront to the west and the main path remains adjacent to the West Side Highway. To the south, at West 56th and West 55th Streets, construction of Clinton Cove Park is underway on Piers 95 and 96 as part of Hudson River Park. At West 55th Street, the promenade merges back into the bikeway, which continues south, ultimately connecting to the Battery Park City esplanade.

22.5.2 Future No-Build Conditions

Segment 7 of Hudson River Park, which stretches from West 44th Street to West 59th Street, is currently in final design stages, with construction underway and set to be completed by 2005. Segment 7 will include Clinton Cove Park which will feature a boat and kayak lunch and provide passive recreational opportunities at the waterfront. Phase I interior reconstruction of the nearby West 59th Street Recreation Center (between Eleventh and Twelfth Avenues) is likely to be complete by 2006. Additional Riverside South development construction is expected to be underway by 2006, and will entail the reconstruction of that portion of the bike path north of the site, running beneath the elevated West Side Highway.

22.5.3 Potential Impacts with the West 59th Street Converted MTS

Due to the West 59th Street Converted MTS's industrial location within the Hudson River Park, adjacent to the developing Riverside South Park and in the vicinity of several other public parks, air quality, odor, noise and traffic studies were conducted to determine what the environmental consequences would be on these sensitive uses; no significant adverse impacts were found. Due to site constraints, the angle for the existing site entrance will remain unchanged and therefore the existing hazard created for southbound bicyclists would not be eliminated. Any increase in MTS truck traffic, therefore, could potentially worsen the safety conditions on the bike path. Appropriate measures, developed in coordination with the NYCDPR, would likely resolve this conflict.

22.6 Cultural Resources

22.6.1 Existing Conditions

22.6.1.1 Definition of the Study Area

The cultural resources study area is defined as that area within ½-mile of the site.

22.6.1.2 Development History of the Area

The study area straddles two neighborhoods: Clinton (formerly Hell's Kitchen), which is located south of West 59th Street; and a portion of the Upper West Side, which is located north of West 59th Street and includes the Lincoln Center Urban Renewal area and Riverside South development on the former Penn Central railyards.

As with much of Manhattan north of its southern tip, the study area was farmland and forest during the Colonial period and only later, in the early 1800s, was it divided into developable lots. In 1851, the New York and Hudson River Railroad began steam rail service along the east side of the Hudson River, connecting Manhattan with the Bronx and the rest of the mainland. Its terminal was located on Eleventh Avenue at West 30th Street, south of the study area. This rail line was the first to carry freight directly into Manhattan and, as such, it played a significant role in the Upper West Side's development. Related industries and activities sprang up around the route, as did worker housing.

During the mid-19th century, the study area was populated largely by Irish immigrants. The predominant land uses were slaughterhouses, freightyards, warehouses, lumberyards, factories and many adjacent blocks of tenements. At the end of the Civil War, Hell's Kitchen was known as one of the City's worst slums and the home of notorious gangs. With the advent of the Ninth Avenue El in the 1880s (along Columbus Avenue), more tenements were built west of Broadway.

After 1900, new populations immigrated and migrated to the area, beginning with Greeks and other eastern Europeans early in the century, followed by Blacks migrating from the south and Hispanics from Puerto Rico in the 1940s. Many of the area's earlier social problems remained.

Large areas of tenements were demolished during the first half of the 20th century to make way for large public works projects, such as the West Side Highway, Lincoln Tunnel, the New York Central Railroad West Side Improvement Project and the Port Authority Bus Terminal. Slums were cleared for urban renewal projects as well, such as Lincoln Towers, Lincoln Center and Fordham University in the 1960s. With the decline of the ocean liner industry, the piers in the area were abandoned and the neighborhood close to the waterfront further declined.

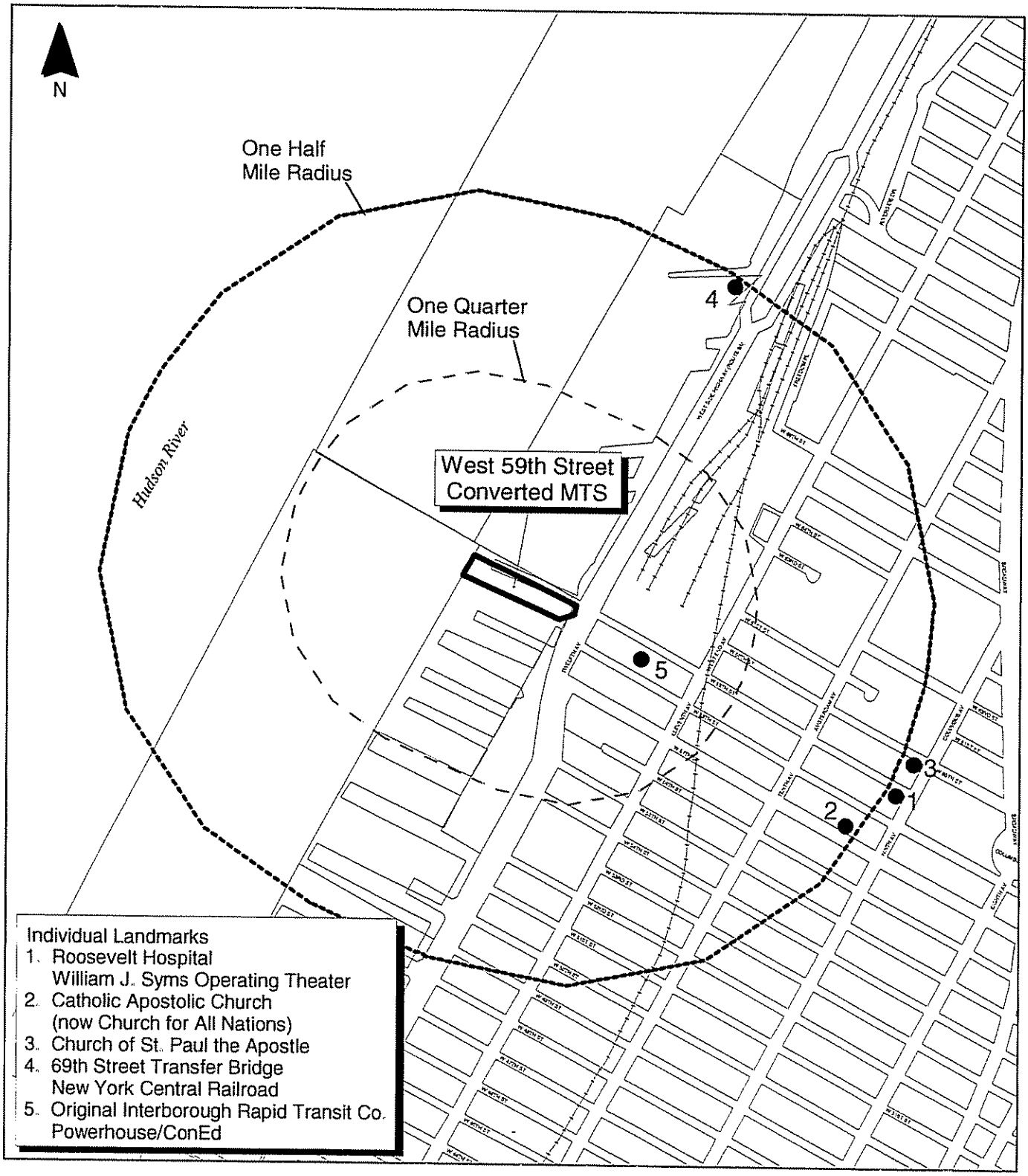
At about this same time, Hell's Kitchen was renamed Clinton (after nearby DeWitt Clinton Park) to improve its image and distance itself from its violent past. Later, during the 1980s and 1990s, new private and public residential construction and housing redevelopment efforts were undertaken to rejuvenate the area.

22.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site. The bulkhead within the vicinity of the site may be eligible for listing on the SRHP and NR.

22.6.1.4 Historic Resources Within the Study Area

There are five historic properties located within the study area, representing development from the late-19th century to the mid-20th century (see Figure 22.6-1). These properties are listed in Table 22.6-1. In addition, the Hudson River Park Trust (HRPT) has indicated that the bulkhead in the vicinity of the site may be eligible for listing on the State and National Registers of Historic Places, therefore, if the West 59th Street Converted MTS were selected as part of the Proposed Plan, additional consultation of SHPO, LPC and the HRPT may be appropriate.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.6-1 Cultural Resources

West 59th Street Converted MTS

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Table 22.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Riverside Park	West 72nd to West 129th	NRHP/SRHP, NMCL
Original IRT (Interborough Rapid Transit) Power House (now Consolidated Edison Generating Plant)	Streets, 58th-59th Streets, Eleventh to Twelfth Avenues	Eligible for listing on the SRHP
William J. Syms Operating Theater, Roosevelt Hospital	64th Street (west of Tenth Avenue), 400 West 59th Street	NYCL
Church of St. Paul the Apostle	415 West 59th Street	SRHP/NRHP
69th Street Transfer Bridge, New York Central Railroad	69th Street and Hudson River	Eligible for listing on the SRHP

Notes:
SRHP= New York State Register of Historic Places
NR= National Register of Historic Places
NYCL= New York City Landmark

22.6.2 Future No-Build Conditions

Two properties within the study area, the IRT Power House and 69th Street Transfer Bridge, have been determined to be eligible for listing on the ~~State Register of Historic Places~~SRHP; and the bulkhead in the vicinity may be eligible for listing on the SRHP and NR. Except for these properties, there is no reason to anticipate the designation of other resources in this area in the near future. Even with their potential designation, anticipated Future No-Build Conditions are assumed to be essentially the same as Existing Conditions.

22.6.3 Potential Impacts with the West 59th Street Converted MTS

Based upon its review, SHPO has stated that the West 59th Street Converted MTS will have no impact upon cultural resources in, or be eligible for inclusion in, State and National Registers of Historic Places. The LPC has stated that the site contains no architectural or archeological significance (see Appendix A). The West 59th Street Converted MTS would not result in adverse impacts to cultural resources and no mitigation measures would be warranted.

22.7 Urban Design, Visual Resources, and Shadows

22.7.1 Existing Conditions

22.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area. The neighborhood character study area is bounded by West 64th Street on the north, West 52nd Street on the south, Tenth Avenue (Amsterdam Avenue) on the east and the Hudson River on the west (see Figure 22.8-1). The site has been developed in a manner consistent with the uses of the adjacent properties, although new residential development as near as ¼-mile northeast and southeast of the site is changing the general character of the area. The site is separated from upland areas by the West Side Highway, which itself obstructs some street-level views to the waterfront throughout the area. There is, however, the bikeway that runs alongside Twelfth Avenue below the elevated West Side Highway, connecting Riverside Park South to Hudson River Park below West 59th Street. This feature and surrounding park facilities are sensitive to potential urban design and visual quality impacts.

22.7.1.2 Description of the Site

The existing MTS is unique among such facilities as it is the only one featuring a neon light installation, which was designed by the artist Stephen Antonakos as part of the its renovation in 1990. As such, the MTS makes a unique and positive contribution to the otherwise bleak visual quality of the immediate area. The neon is installed on the interior of the MTS and is visible outside through frosted plastic panels. It provides architectonic definition to the eastern facades of the station and adjacent office, with red light framing alternating windows on the northern elevation. The entrances are further emphasized with a neoclassical arch added to the eastern side of the MTS property, framing the MTS on the waterfront in the background (see Figure 22.7-1).

The artistically enhanced MTS façade is visible on land from the elevated West Side Highway, Twelfth Avenue, and the bikeway, and to some extent from points on West 59th Street approximately as far east as Tenth Avenue.

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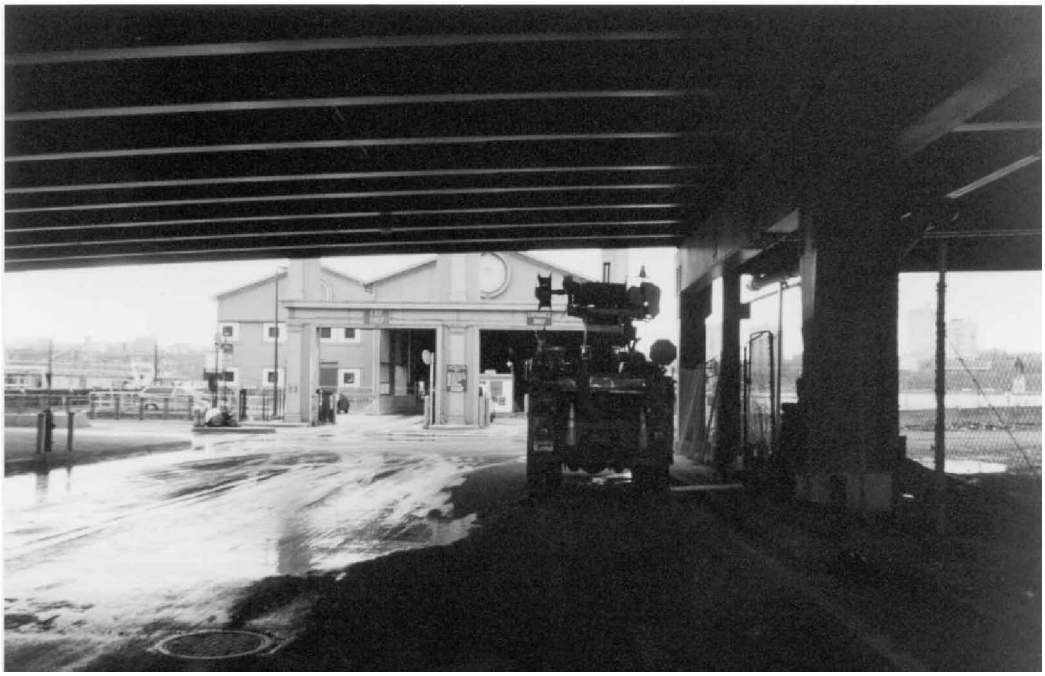


Figure 22.7-1 : The artistically treated entrance facade of the West 59th Street MTS, visible beneath the elevated West Side Highway.



Figure 22.7-2 : View of 12th Avenue, facing south from West 59th Street.

Figure 22.7-1 and 22.7-2
Urban Design and Visual Quality
West 59th Street Converted MTS

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Figure 22.7-3 : View of West 59th Street, facing east from 12th Avenue.



Figure 22.7-4 : View of West 59th Street MTS (behind highway signage), facing northwest from DeWitt Clinton Park
(West Side Highway and West 54th Street).

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lining the streets, while Tenth Avenue in the study area features stylishly designed large-scale commercial establishments, such as automobile showrooms, and small-scale groceries and restaurants defined by their signage and window treatments.

Construction of Clinton Cove Park is underway on Piers 95 and 96 (at West 55th and West 56th Streets) approximately 600 feet south of the site. This park will provide a boat launch and recreational open space on the river.

22.7.2 Future No-Build Conditions

There are no plans for the site or immediate environs that would lead to substantial changes in urban design or visual quality conditions of most of the study area by 2006. However, the southern extent of the Riverside South development, which is set to be under construction or complete by 2006, will substantially transform the landscape north of West 59th Street and west of Eleventh Avenue. Several new towers are planned for the area, currently occupied by a large surface parking lot. The sleek continuum of residential towers characteristic of Eleventh Avenue north of West 61st Street would thus be extended to transform the visual quality and urban form of the southward land immediately inland of the site, east of the elevated West Side (Miller) Highway.

Riverside Park South Phase III (West 62nd to West 65th Streets) is due to be completed by 2005, which will include extended timber walkways (with two additional overlooks), landscaped areas, and a major plaza at West 64th Street. The proposed park area immediately adjacent to the site would not yet be redeveloped.

The site would remain DSNY property and the existing MTS would remain in operation for the transfer of paper recyclables.

22.7.3 Potential Impacts with the West 59th Street Converted MTS

22.7.3.1 Visual Quality and Urban Design

Development of a containerization facility at the site would alter the visual quality or urban design of the changing waterfront. The new facility would be approximately 70 feet tall (about 20 feet taller than the existing MTS structure, but similarly sited on the linear pier. Transfer activities would resemble the ongoing waterborne transport of recyclables, though containerized waste would result in a slight improvement in aesthetics. Electric cranes used to load containers, which would be filled inside the new facility onto waiting barges, would be situated on the south side of the facility and stand approximately 80 feet tall. This loading activity would be screened by the active Consolidated Edison Pier (to the south). The existing neon ornament found on the MTS would not be incorporated into the proposed facility design, though the entrance portal will remain undisturbed. Overall, the larger new facility would not create notable changes to the urban design and visual quality of the site or study area, and no significant adverse impacts are predicted.

22.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment is warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.) If this site were chosen and a noise wall used as the preferred mitigation, a supporting analysis would be conducted.

While there are three mapped open space/parkland resources within the shadow impact area, only one facility – the bicycle/pedestrian path extending from Riverside Park South – is near enough to the site to be potentially affected by shadows. This path is generally used for active recreation, including bicycling, pedestrian activities, rollerblading, etc. (See Figure 22.7-5.)

There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the West 59th Street Converted MTS development.

During most of the year, shadows generated by the 71-foot-tall West 59th Street Converted MTS and 84-foot-tall cranes would completely fall across portions of the Hudson River. Analysis of December 21st indicates that the walkway would not be affected by shadows. During the three other analysis periods, approximately 40 feet in length of the bicycle/pedestrian path would be affected by shadow, for approximately one hour during each period. On June 21st, shadows would fall over the bicycle/pedestrian path from 5:50 p.m. to 7:00 p.m.; on March 21st, from 3:40 p.m. to 4:30 p.m.; and on May 6th, from 5:20 p.m. to 6:20 p.m. As shadows would only affect 40 feet of the walkway for approximately one hour during three periods, and since the walkway is not dependent upon direct sunlight for its active uses, the West 59th Street Converted MTS is not considered to cause a significant shadow impact.

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Figure 22.7-5 Shadow Diagram

West 59th Street Converted MTS

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22.8 Neighborhood Character

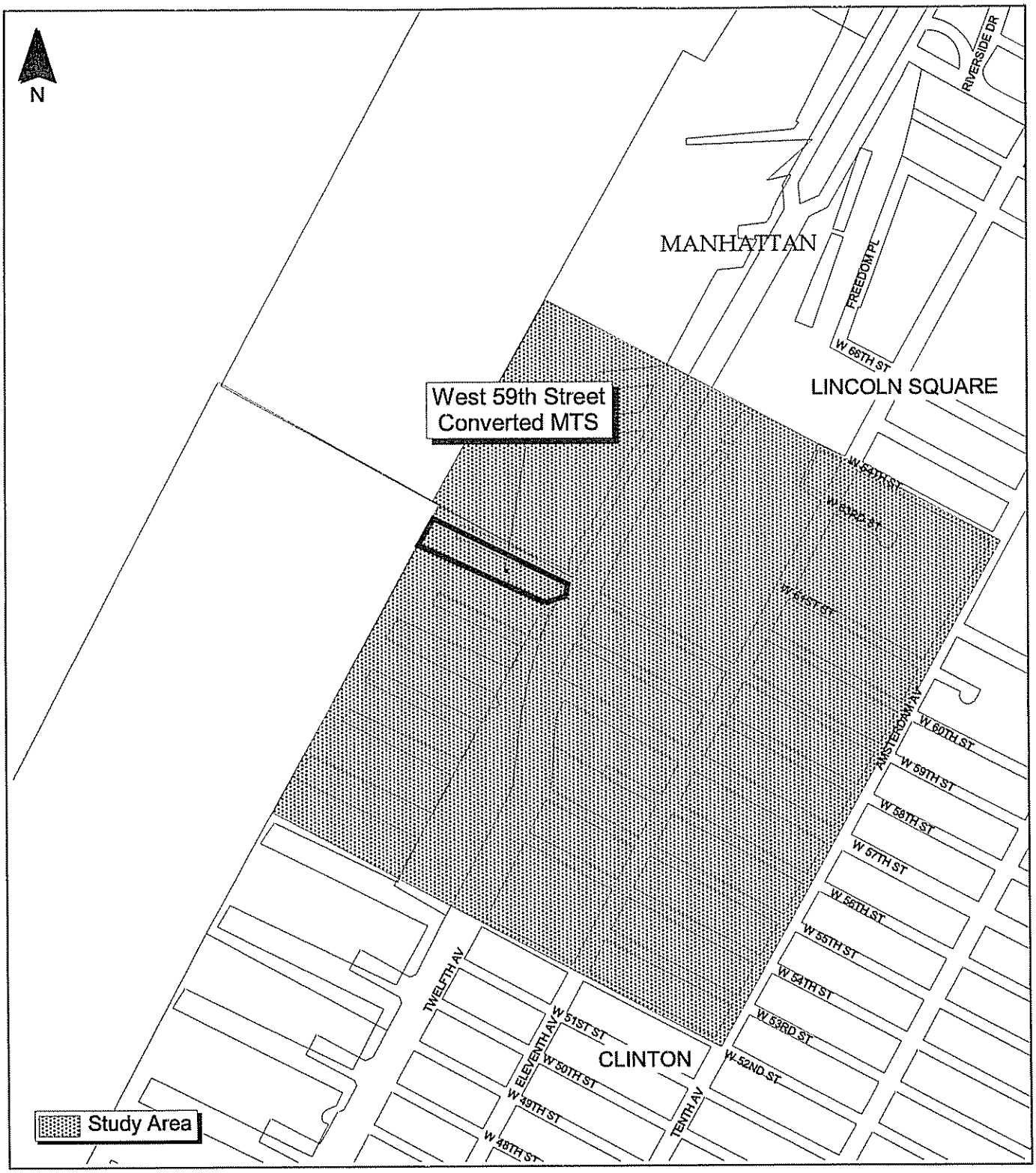
22.8.1 Existing Conditions

22.8.1.1 Definition of the Study Area

The site is surrounded by industrial uses and is effectively separated from inland blocks by the elevated West Side (Miller) Highway (West 59th to West 72nd Streets) and vacant land beneath it or in its immediate vicinity. Although there is a concentration of institutional uses, including Lincoln Center and John Jay College of Criminal Justice several blocks east of the site, the industrial uses and dense urban nature development inland are the major factors contributing to the neighborhood character. This is especially true near the West Side (Miller) Highway where a large Consolidated Edison generating plant is located one block inland of the site. Riverside South residential towers have recently been built, introducing a major new physical element to an area north of the site, but this residential development currently shares no direct connectivity to the site at this point, and is separated from it by the elevated West Side Highway, and the large parking lot between the two. The neighborhood character study area is bounded by West 64th Street on the north, West 52nd Street on the south, Tenth Avenue (Amsterdam Avenue) on the east and the Hudson River shore on the west (see Figure 22.8-1).

22.8.1.2 Description of Neighborhood Character

The general neighborhood character of the study area is mixed and changing, as described in the previous sections, though remains industrial immediately surrounding the site to the east and south. Industrial uses on densely-built blocks along with the presence of the elevated West Side (Miller) Highway, inhibit views to the waterfront from inland blocks in the study area, especially along West 59th Street. While construction is underway on several surrounding sites (to create waterfront parks to the north and south, a new sanitation garage, new large-scale residential and commercial developments), the character of the immediate environs remains largely industrial and transportation-oriented. There is no destination in the immediate area of the site that would attract anyone but workers employed in the warehouses and industries. The nearest destination points include the John Jay College of Criminal Justice, and St. Lukes/Roosevelt Hospital Center, east of Tenth Avenue — two blocks east of the site — and the DeWitt Clinton Park along the southern boundary of the study area, both of which would attract people from outside and within the study area.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 22.8-1 Neigborhood Location
West 59th Street Converted MTS

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The new residential towers of Riverside South stand about ¼-mile northeast of the site and an additional parcel (ABC studios) is under construction nearby. Together with Riverside Park South, whose Phase III is scheduled to open in 2005, these developments will introduce physical characteristics and visual resources unlike those currently associated with the Hudson River waterfront in this vicinity.

22.8.2 Future No-Build Conditions

Nearly all the proposed development expected to be complete or under way by 2006 will be located within the neighborhood character study area. The two developments nearest the site would be: (1) the extension of the Riverside South development, which entails construction of several residential and mixed-use towers north of the large surface parking lot across Twelfth Avenue, from the site and parkland along the waterfront north of West 59th Street; and (2) the Helena (Durst Organization) residential tower south of West 58th Street, east of Twelfth Avenue, to open later in 2004. (The new DSM District 4, 4A and 7 Garage is soon to be under construction on Twelfth Avenue, between West 55th and West 57th Streets, though not scheduled to open until 2007). While the Riverside South and associated park development will substantially alter the character of the waterfront west of the elevated West Side (Miller) Highway, north of the site, the remainder of the study area is expected to resemble Existing Conditions, particularly due to the continued presence of the monumental Consolidated Edison Power Plant, the West Side (Miller) Highway and neighboring industrial/municipal uses. The site will remain DSNY property and the existing MTS will continue to be used for transfer of paper recyclables from truck to barge.

22.8.3 Potential Impacts with the West 59th Street Converted MTS

The West 59th Street Converted MTS is not expected to result in significant impacts on neighborhood character since it would be a reactivation of waste transfer facilities on a site formerly used for that purpose and currently used for the transfer of recyclable paper from truck to barge. Traffic, air quality, odor and noise studies all indicated that nearby sensitive receptors would not experience significant adverse impacts. (See Sections 22.14, 22.15, 22.16 and 22.17.)

Because DSNY trucks currently run through the study area (along West 59th and West 57th Streets, as well as Twelfth, Eleventh and Tenth Avenues south of West 59th Street) and the site is somewhat buffered from the new residential and park uses to the north by the elevated Miller Highway, potential operational impacts from the facility would be largely contained to the immediate vicinity. (See Section 22.5 for a discussion of potential impacts to open space.)

The Converted MTS and barge movements will be partly visible from Riverside Park South to the north, particularly from the planned overlooks now under construction between West 62nd and West 65th Streets, and from the Clinton Cove Park some 600 feet south of the site, as part of the developing Hudson River Park. However, given the industrial nature of the immediate area, the impacts to neighborhood character would not be significantly adverse. Rather, the immediate industrial character would be reinforced and visual quality upgraded with the containerization facility, as opposed to the previous open barge transfer.

22.9 Natural Resources

22.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Manhattan. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from implementation of the West 59th Street Converted MTS.

22.9.1.1 Definition of Study Area

The study area includes the existing MTS and the waterfront section that is bounded by the Hudson River to the west (see Figure 2.7-1). The existing MTS is a platform structure extending out from the shore into the river. As a result, no terrestrial natural resources exist to be discussed. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of the aquatic communities is included.

22.9.1.2 Geology

Previous borings performed along the length of the existing MTS site ranged from 62 to 110 feet in depth.[4] These borings reference the water surface (Elevation 0.0 feet) as the top of the borings. Four borings terminated at rock between –57 and –110 feet. Bedrock generally dips to the west, as the two westernmost borings did not encounter bedrock at –110 feet. The uppermost layer generally consisted of organic soil, with shells and vegetation present within this stratum. At the bulkhead along 12th Avenue, riprap and boulders were present. In addition, occasional pieces of timber were encountered in this stratum beneath the existing pier. Below the organic soil, the surface of quartz-mica schist was encountered between –57 and –90 feet. The bedrock

[4] Geology discussion based on "Report of Subsurface Evaluation of West 59th Street (Manhattan) Marine Transfer Station, City of New York Department of Sanitation," September 1983, by Woodward-Clyde Consultants, Inc., as cited in the *MTS Conversion Conceptual Design Report*, April 2003, by Greeley and Hansen, LLC.

was described as soft to moderately hard, seamy, slightly weathered schist. Overlaying this schist are river sediments deposited over time that are characterized as dark to grey-brown hard clay with some silty sand, with approximately 38,250 mg/kg of TOC. The sediment surrounding the MTS was made up of 91.6% silt and clay, 8.0% sand and 0.6% gravel.[5] Sediment was found to be somewhat degraded due to contaminants in the sample material. The three metals with the highest concentrations in the sediment were lead, chromium and barium, with 91.77 mg/kg, 67.75 mg/kg and 55.42 mg/kg, respectively.

22.9.1.3 Floodplains

The site is located within the 100-year coastal floodplain (see Figure 22.9-1). No wetlands, other than the Hudson River, a NYSDEC-designated littoral zone, exist on the site (see Figure 22.9-2).

22.9.1.4 Ecosystems

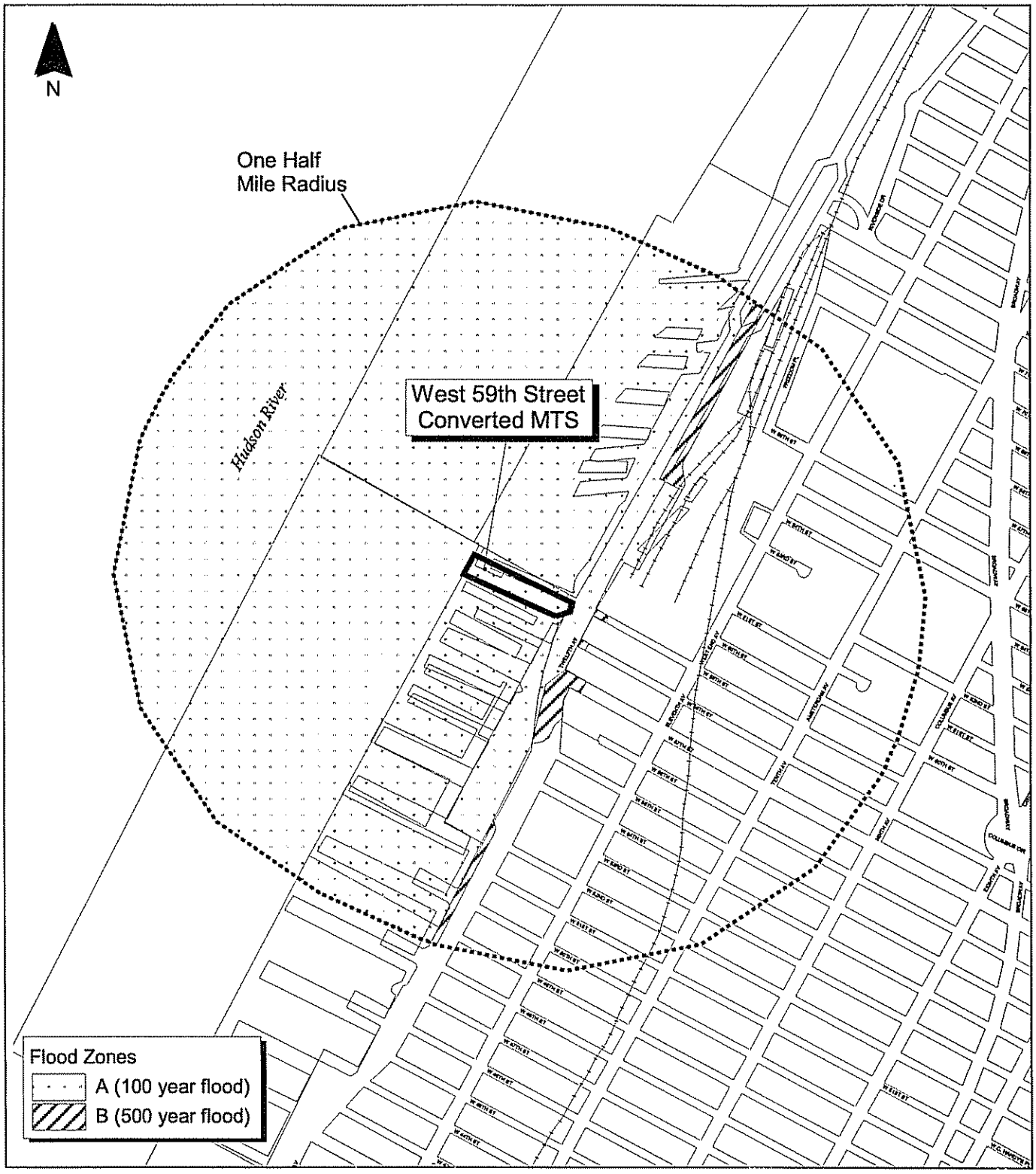
Because the site is located on an offshore platform, there are no upland natural resources to consider, describe or map. The majority of the approaches leading to the facility are hard surfaced and devoid of vegetation.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the study area. The program included monthly sampling for adult finfish, finfish eggs and larvae and water quality, and quarterly sampling for benthic invertebrates and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

The West 59th Street Converted MTS was determined to support one of the more biologically productive marine communities. It had one of the highest species richnesses of adult finfish and megainvertebrates and the highest total catch of both. It supported six EFH-listed adult finfish species and three larval species. It also had the highest concentration of finfish eggs.

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[5] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.

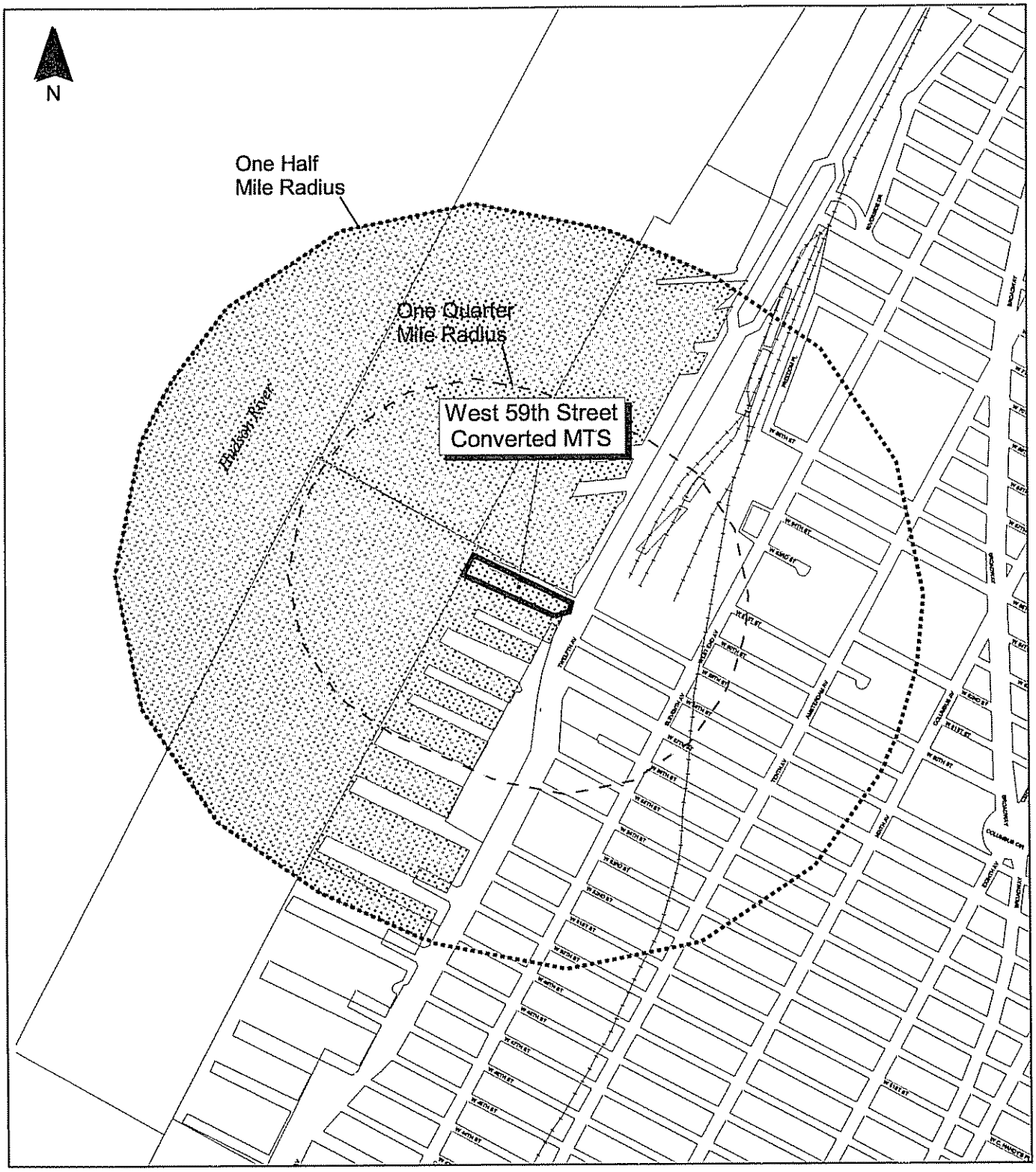


Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 22.9-1 Floodplains

West 59th Street Converted MTS

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 22.9-2 Wetlands

West 59th Street Converted MTS

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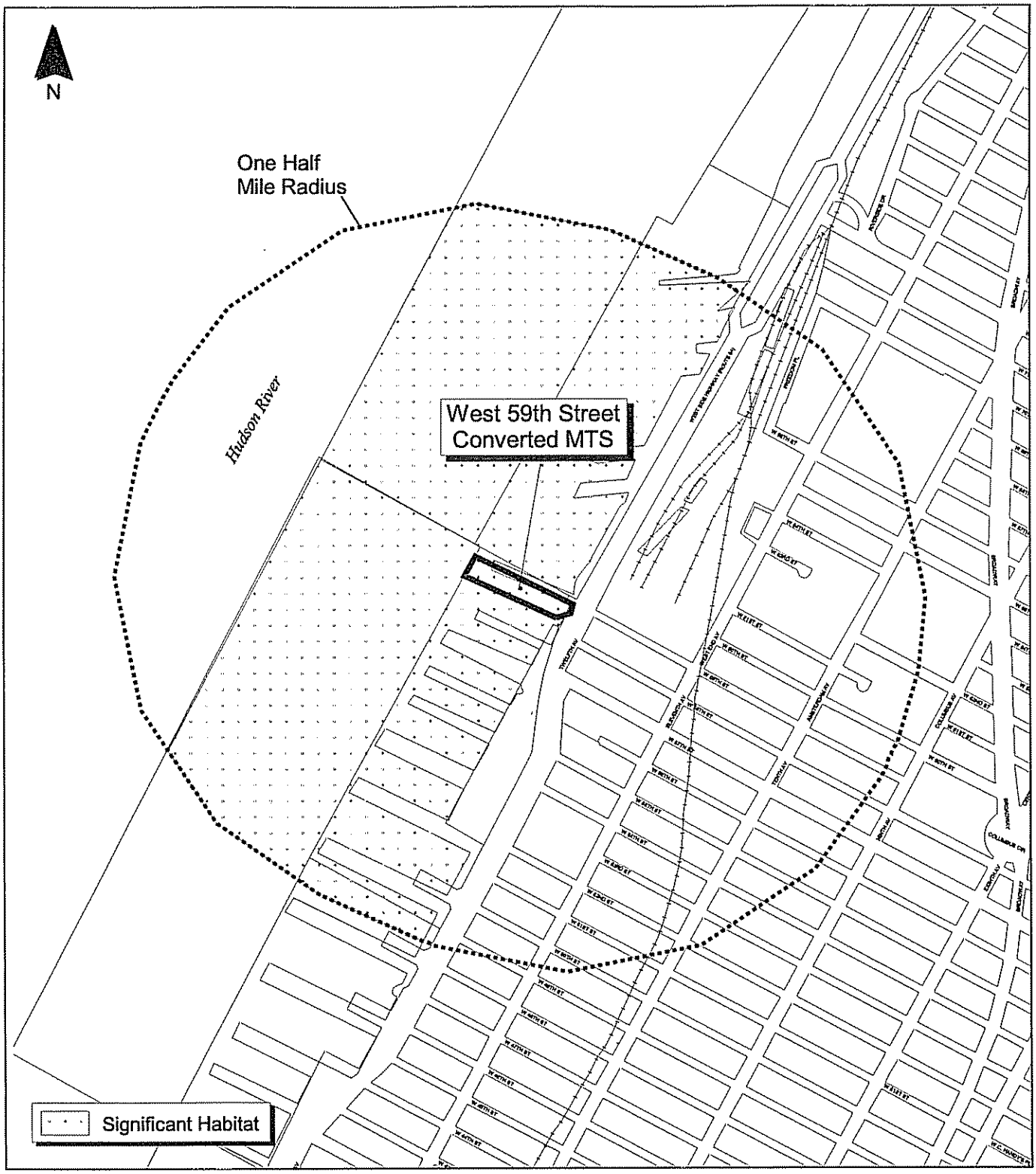
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A total of 1,390 adult finfish were collected at the West 59th Street Converted MTS, the highest catch of the eight MTSs studied.[6] The most abundant species collected was striped bass (*Morone saxatilis*), followed by hogchoker (*Trinectes maculates*), Atlantic tomcod (*Microgadus tomcod*), weakfish (*Cynoscion regalis*) and bay anchovy (*Anchoa mitchilli*). There were six EFH-designated species collected: windowpane (*Scophthalmus aquosus*), Atlantic butterfish (*Peprilus triacanthus*), winter flounder (*Pleuronectes americanus*), summer flounder (*Paralichthys dentatus*), Atlantic herring (*Clupea harengus*) and bluefish (*Pomatomus saltatrix*). Finfish eggs and larvae were least diverse at the West 59th Street Converted MTS. The most abundant finfish egg collected at this MTS was bay anchovy. Anchovy spp., winter flounder and goby spp. (*Gobiosoma* spp.) larvae were also abundant. Winter flounder and windowpane, both EFH listed, eggs and larvae were present at the West 59th Street Converted MTS.

Sevenspine bay shrimp (*Crangon septemspinosa*) and eastern mudsnail (*Ilyanassa obsoleta*) were the most abundant megainvertebrates collected from the West 59th Street Converted MTS. The fewest number of benthic invertebrates and lowest abundances were collected at this facility. Oligochaetes were the most abundant, followed by polychaetes. The West 59th Street Converted MTS also had a high number of species in common with the other MTSs sampled, suggesting that it is less distinct in its community composition. The most abundant epibenthic colonizers collected were *Pleusymtes glaber* (amphipods), *Polydora* sp. (polychaete worms), *Balanus* sp. (barnacles), and hydrozoa, mud and algal film.

It should be noted that the Lower Hudson Reach, in which the study area is located, is a New York State Department of State Division of Coastal Resources and Waterfront Revitalization-designated SCFWH (see Figure 22.9-3). New York State's CMP includes a specific policy for the protection of fish and wildlife habitats that are determined to be of statewide significance. An inventory of the coastline was conducted to identify the most valuable habitats according to the following criteria: ecosystem rarity, species population levels, support of vulnerable species, human use and replaceability. A numerical rating system using these criteria was applied to more than 300 areas and approximately 235 have qualified for official designation and mapping as SCFWHs.

[6] Ibid.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 22.9-3 Significant Habitat

West 59th Street Converted MTS

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NYSDEC's NHP records list the common nighthawk (*Chordeiles minor*) as a species suspected of breeding in the study area. The state legal status of this wild bird is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds.

22.9.2 Future No-Build Conditions

If the West 59th Street Converted MTS were not to be built, the study area would remain as is. The absence of terrestrial natural resources would remain, as the study area does not contain any upland features. Aquatic natural resources would continue to be present in the waters in and around the study area.

22.9.3 Potential Impacts with the West 59th Street Converted MTS

22.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

22.9.3.2 Floodplains

Implementation of the West 59th Street Converted MTS would have no effect on elevation of the study area. It would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the study area over this level.

22.9.3.3 Ecosystems

Construction of the West 59th Street Converted MTS would involve installing piles for the foundation supports and dredging to accommodate the deeper draft of the coastal barges, resulting in an immediate, short-term destruction of the benthic invertebrates in the area. Because the benthic diversity had a medium rank and marine construction causes turbidity and siltation that could smother the benthic organisms, the short-term degree of impact is expected to be medium to high. However, recolonization of the area by benthic invertebrates can be expected to occur within 6 to 12 months after cessation of dredging activities.[7] Given the relatively small size of the project, minimal overall impact to the benthic community is expected at the West 59th Street Converted MTS. The removal of the existing platform will also remove the existing epibenthic community; however, the new expanded platform will result in more surface area for epibenthic communities to colonize the site. This would positively affect the epibenthic communities at the West 59th Street Converted MTS.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Flounder catch was much higher at the West 59th Street Converted MTS than herring catch, so it can be assumed that this site is not an important herring habitat that will be temporarily impacted. Finfish eggs and larvae are more sensitive to suspended sediment, and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments. Winter flounder eggs were found at the West 59th Street Converted MTS, but construction impacts are expected to be negligible.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the West 59th Street Converted MTS is for an increase in 25,631 square feet of pier. This will result in increased shading that will block

[7] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.

sunlight and hinder primary production. The enlarged platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[8] Epibenthic communities will have a larger surface area to colonize, and finfish should return to the area with the return of food sources.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[9] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the increase in shading over water is very small, there are not expected to be significant deleterious results. There is a possibility of a slight shift in the finfish community with the addition of over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

According to the Atlas of Breeding Birds in New York State, the common nighthawk (*Chordeiles minor*) regularly nests on flat-roofed structures in cities and towns and feeds upon insects during flight. The West 59th Street Converted MTS is not likely to directly impact any potential nesting habitat or prey species on which the nighthawk depends.[10]

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[8] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp. by EEA, Inc.

[9] Duffy-Anderson, J.T. & Able, K.W., 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." Estuaries, Vol. 24, No. 3, p. 430-440.

[10] Andrle, R.F. & Carroll, J.R., eds. 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

22.10 Hazardous Materials

22.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in February 2003 and included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the NYFD for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

22.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius.

22.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the ground, groundwater, surface water or structures within the study area where the presence or likely presence of hazardous materials exists and implementation of the West 59th Street Converted MTS could lead to an increased exposure of people or the environment to those materials. No specific areas of concern were identified at this site during the assessment.

22.10.2 Future No-Build Conditions

The existing MTS would continue to be used for the transfer of paper recyclables from truck to barge. There would be no areas of significant concern with regard to hazardous materials.

22.10.3 Potential Impacts with the West 59th Street Converted MTS

The West 59th Street Converted MTS would not result in adverse impacts. No additional testing would be required. If any areas of concern were identified during the construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.

22.11 Water Quality

22.11.1 Existing Conditions

22.11.1.1 Definition of the Study Area

The water quality study area encompasses the Hudson River and includes discharges from CSOs located within ½-mile of the site.

22.11.1.2 Water Quality

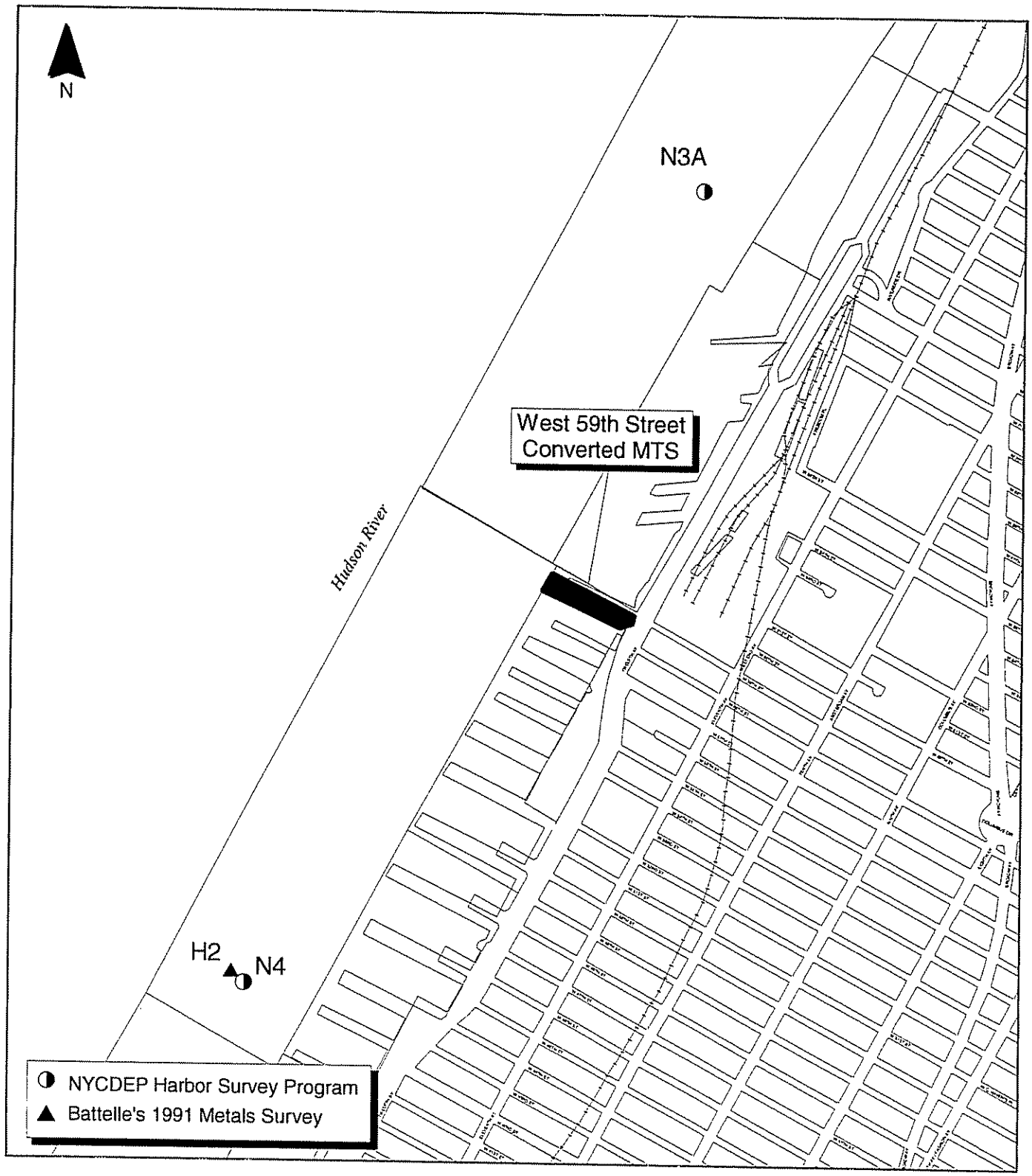
The water quality data for the following monitoring stations, shown in Figure 22.11-1, are generally representative of water quality in the study area:

- NYCDEP Harbor Survey Program – Stations N-3A, located one-third of the distance from the Manhattan shore at West 72nd Street to the New Jersey shore; and N-4, located one-third of the distance from the Manhattan shore at West 42nd Street to the New Jersey shore.
- Battelle's 1991 Metals Survey – Station H-2T and H-2B[11] located one-third of the distance from the Manhattan shore at West 42nd Street to the New Jersey shore.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 22.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 22.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Stations H-2T and H-2B did not conform to the water quality standard for mercury.

[11] Stations H-2T and H-2B are located at the same longitude and latitude. Station H-2T is located at the surface of the Hudson River. Station H-2B is located at the bottom of the Hudson River.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 22.11-1 Ambient Water Quality Stations
West 59th Street Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

Table 22.11-1
Existing Water Quality Conditions and Standards
West 59th Street Converted MTS Study Area

Average Concentration						
Parameter	**Units**	**N-3A[1]**	**N-4[2]**	**H-2T[3]**	**H-2B[4]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	8.4[5]/4.9[6]	8.37[7]/5.71[8]	-------	-------	4
Dissolved Oxygen (bottom/minimum)	mg/L	7.0[5]/4.4[6]	6.69[7]/4.37[8]	-------	-------	4
BOD (surface)	mg/L	2.1[9]	1.9[9]	-------	-------	-------
BOD (bottom)	mg/L	3.0[9]	2.6[9]	-------	-------	-------
Total Coliform (surface)	MPN/100 ml	1436[10]	1495[10]	-------	-------	10,000
Total Coliform (bottom)	MPN/100 ml	1284[10]	1316[10]	-------	-------	10,000
Fecal Coliform (top)	MF	46	85	-------	-------	2,000
Fecal Coliform (bottom)	MF	42	46	-------	-------	2,000
Total Suspended Solids (surface)	mg/L	22	12.7	-------	-------	-------
Total Suspended Solids (bottom)	mg/L	56	42.53	-------	-------	-------
NH_3-N	mg/L	0.238	0.24	-------	-------	-------
(NO_3 + NO_2)	mg/L	0.448	0.47	-------	-------	-------
Total Phosphorous	mg/L	0.521[11]	0.12	-------	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------	-------	-------
Chlorophyll-a	µg/L	11.6	6.3	-------	-------	-------
Arsenic	µg/L	-------	-------	-------	-------	36 [12, 13]
Cadmium	µg/L	-------	-------	0.08[12]	0.07[12]	7.7 [12, 13]
Chromium	µg/L	-------	-------	-------	-------	-------
Copper	µg/L	-------	-------	2.14[12]	1.78[12]	5.6 [13, 14]
Lead	µg/L	-------	-------	0.16[12]	0.18[12]	8 [12, 13]
Mercury	µg/L	-------	-------	0.0053[12]	0.0033[12]	0.0026 [12, 13]
Nickel	µg/L	-------	-------	1.37[12]	1.39[12]	8.2 [12, 13]
Silver	µg/L	-------	-------	0.0133[12]	0.0121[12]	-----
Zinc	µg/L	-------	-------	7.23[12]	7.19[12]	66 [12, 13]
Cyanide	µg/L	-------	-------	-----	-----	1.0 [13]

Notes:

[1] Average concentrations for 1999 NYCDEP Harbor Survey site N-3A, located off of Manhattan at West 72nd Street in the Hudson River.

[2] Average concentrations for 2003 NYCDEP Harbor Survey site N-4, located off of Manhattan at West 42nd Street in the Hudson River.

[3] Average concentrations for 1991 Battelle Ambient Survey site H-2T, located off of Manhattan at West 42nd Street on the surface of the Hudson River.

[4] Average concentrations for 1991 Battelle Ambient Survey site H-2B, located off of Manhattan at West 42nd Street on the bottom of the Hudson River.

[5] Represents average between March and December 1999.

[6] Minimum between June 1, 1999 and September 30, 1999.

[7] Represents average between January and December 2003.

[8] Minimum between June 1, 2003 and September 30, 2003.

[9] Latest available data 1997.

[10] Latest available data 1996.

[11] Latest available data 1998.

[12] Guidance values and data are for dissolved metals.

[13] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata January 1999 and addendum April 2000).

[14] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

Notes for Table 22.11-1 (continued)
BOD = biochemical oxygen demand
NH_3-N = ammonia
NO_3 = nitrate; NO_2 = nitrite
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

22.11.1.3 Permitted Discharges

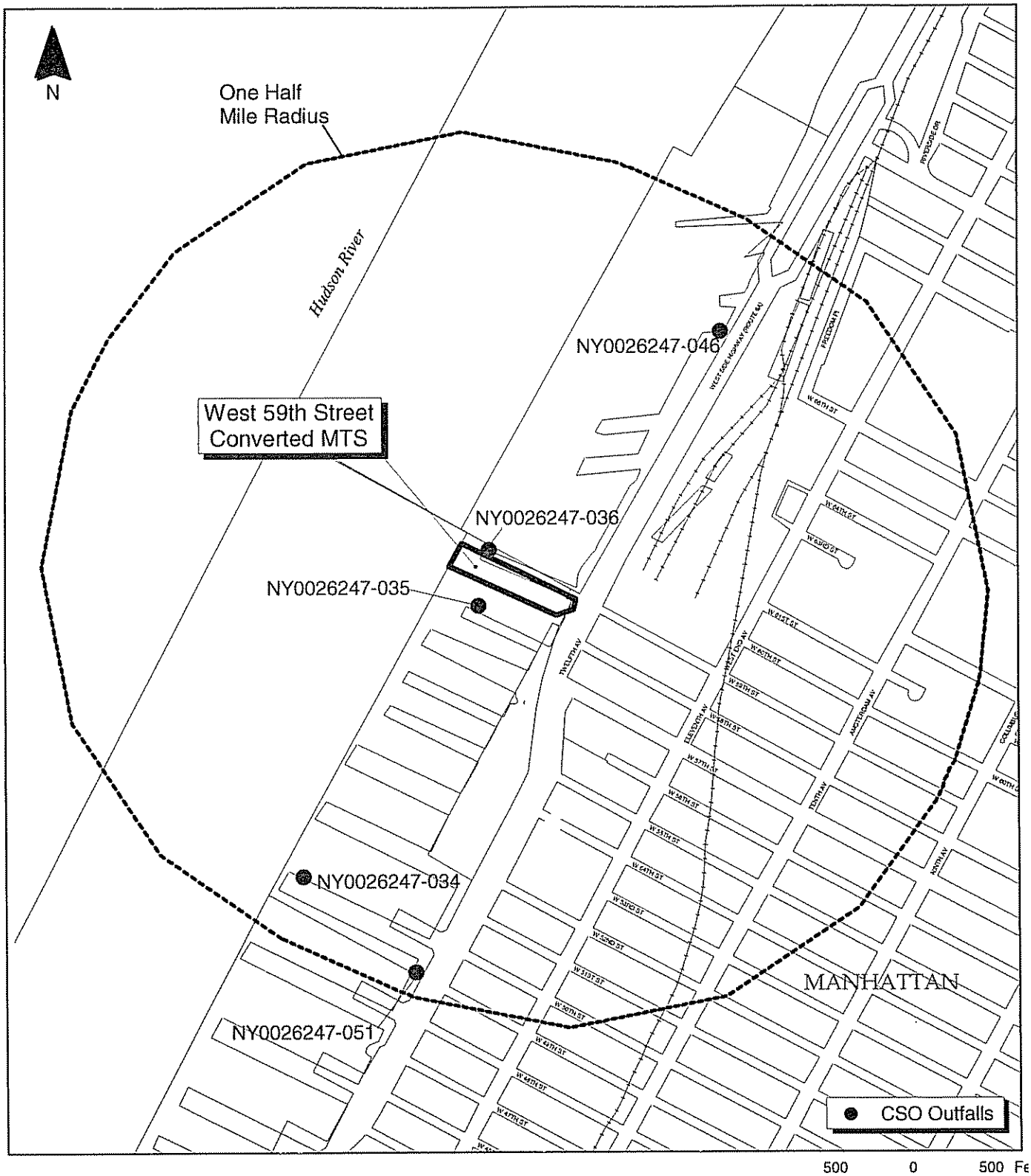
A review of the most recently available NYSDEC and USEPA databases indicated that there are five permitted discharges in the vicinity of the site. The existing discharges within a ½-mile radius are listed in Table 22.11-2 and shown in Figure 22.11-2. These discharges consist of five CSOs, all of which are permitted by the NYSDEC.

Table 22.11-2
-Existing Permitted Discharges
West 59th Street Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
West 59th Street/North River	NY0026247-036	New York	Hudson River
West 58th Street/North River	NY0026247-035	New York	Hudson River
West 50th Street/North River	NY0026247-034	New York	Hudson River
West 66th Street/North River	NY0026247-046	New York	Hudson River
West 49th Street/North River	NY0026247-051	New York	Hudson River

22.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, an estimate of existing stormwater pollutant loadings was calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% infiltration and/or storage. A runoff flow of 0.093 cfs was calculated using the impervious site area (1.55 acres), an average rainfall intensity of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 22.11-3, represent the existing loads at the West 59th Street site.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 22.11-2 Permitted Outfalls and CSO Locations

West 59th Street Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

Table 22.11-3
Estimated Existing Pollutant Loads and Runoff Flows
West 59th Street Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	17,010[1]
BOD mg/L	11	6
Heavy Metals		
Copper µg/L	35	0.018
Lead µg/L	28	0.014
Zinc µg/L	154	0.077
Total Impervious Area (acre) = 1.55		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06[2]		Runoff Volume (cfs) = 0.093

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

22.11.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways; nitrogen removal activities, which will reduce nitrogen loads from City WPCPs; and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

22.11.3 Potential Impacts with the West 59th Street Converted MTS

All solid waste processing at the West 59th Street Converted MTS would occur within structures on the site. All process wastewater from waste handling operations in the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the North River WPCP, where it would be treated prior to discharge to the Hudson River and, therefore, would not adversely affect water quality.

Stormwater loads and impervious area, shown in Table 22.11-4 would be expected to increase above Existing Conditions. According to the 208 Model, however, the increased loads would have no significant impact on water quality in the adjacent surface waters.

Table 22.11-4
-Impervious Area and Estimated Pollutant Loads
West 59th Street Converted MTS

			Estimated Pollutant Loadings/Incremental Change[1]				
Conditions	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	1.55	0	17,010/NA	6/NA	0.018/NA	0.014/NA	0.077/NA
Future Build Conditions	2.19	0.64	24,044/7,034	8/2	0.025/0.007	0.020/0.006	0.109/0.032

Notes:
(1) Incremental change refers to difference in the pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

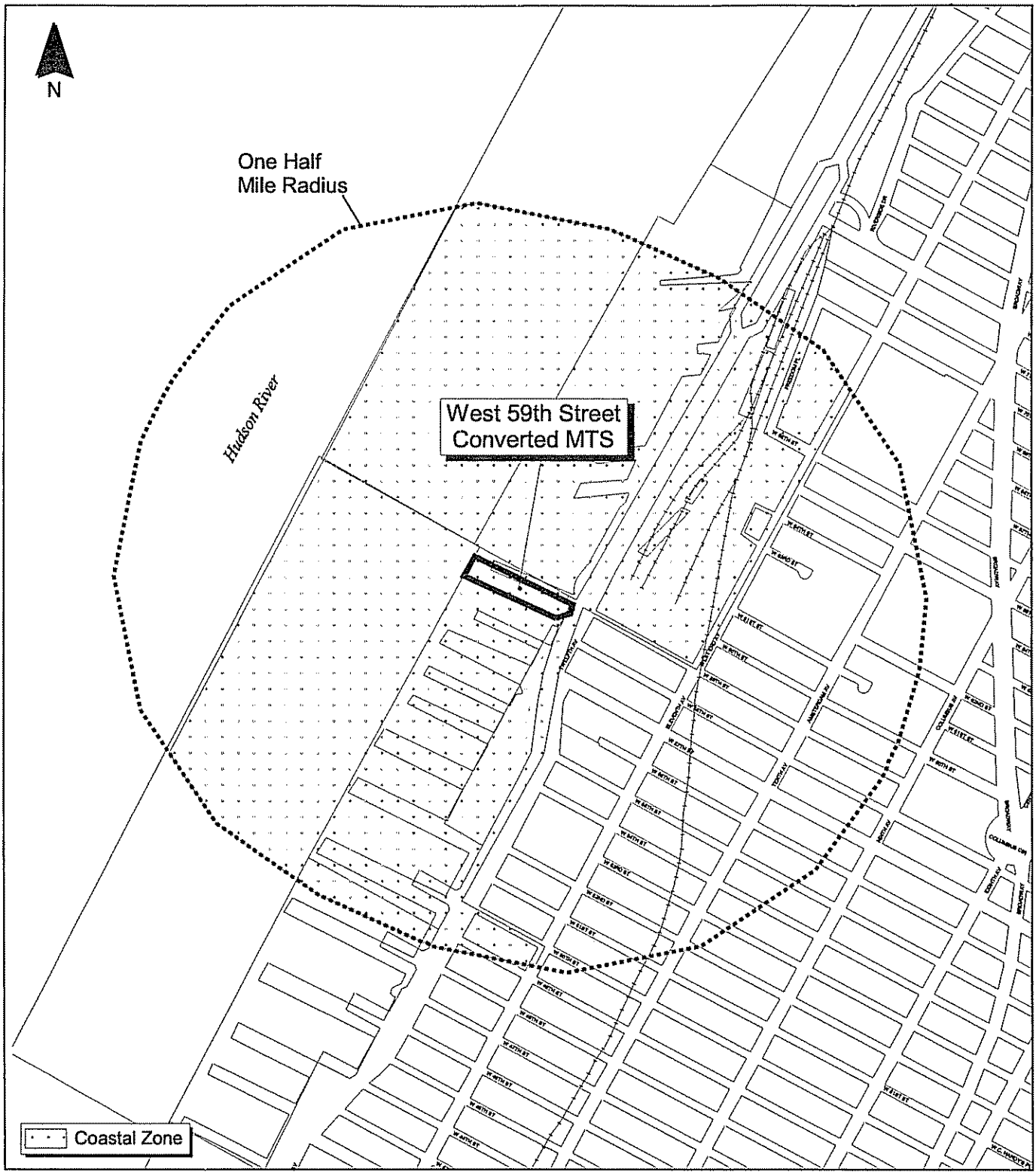
Unimpeded operation of the West 59th Street Converted MTS may also require dredging activities to construct the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any proposed dredging activities. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant long-term impacts.

22.12 Waterfront Revitalization Program

22.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the Hudson River, the West 59th Street Converted MTS would be within the City's coastal zone boundary (see Figure 22.12-1). According to "The New Waterfront Revitalization Program," the West 59th Street Converted MTS would be classified as a water-dependent, industrial use. The site is not within a designated SNWA or SMIA; it would be located within Reach 3/The West Side as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Manhattan Waterfront." The West 59th Street Converted MTS is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The West 59th Street Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. In instances where a component of the West 59th Street Converted MTS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations that would occur at the West 59th Street Converted MTS is provided in Section 2.7.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 22.12-1 Coastal Zone Boundary

West 59th Street Converted MTS

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22.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the new West 59th Street Converted MTS. As part of the West 59th Street Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.2 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The existing West 59th Street MTS is not currently located within an NYCDCP-designated SMIA. The development of the West 59th Street Converted MTS would involve the demolition of the existing MTS and the development of a new, expanded processing building in approximately the same location. The West 59th Street Converted MTS would involve the conversion of the existing facility from a truck-to-barge waste transfer station into a TCB transfer station that would transport DSNY-managed Waste to remote out-of-City disposal facilities. Paper recycling activities allowing for the transport by barge to recycling facilities would also be incorporated.

The site redevelopment, as described in Section 2.7.2, would enhance existing waterfront industrial property and would be generally compatible with existing manufacturing, industrial and maritime uses in the vicinity. The majority of reconstruction activities would occur over water and would consist of four primary components: (1) an expanded, enclosed processing building which would include a tipping floor, loading floor and pier level; (2) a new elevated access ramp with accompanying retaining walls to the truck gallery; (3) a gantry crane, outside of the processing building along the southern waterfront of the proposed pier; and (4) new bulkheads and fendering systems that may be required for the new facility. The West 59th Street Converted MTS would generally be consistent with existing land uses along the waterfront and with the "Plan for the Manhattan Waterfront," which recommends the continued industrial use of the pier. Although it would not encourage or facilitate the siting of any additional water-dependent uses, the West 59th Street Converted MTS would represent an expansion and revitalization of an existing water-dependent use and would be compatible with surrounding uses. Therefore, the West 59th Street Converted MTS would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The West 59th Street Converted MTS would involve the demolition of the existing MTS and the subsequent development of a new TCB transfer station at the site. Its development would allow for the truck delivery of waste to the MTS, where it would be transferred into sealed containers, loaded onto DSNY barges and transported by barges to out-of-City disposal facilities. In addition, once construction efforts were completed, paper recycling activities would continue in a manner similar to existing paper recycling operations at the site.

Waterfront development would be comprised of four primary components: (1) an expanded, enclosed processing building which would include a tipping floor, loading floor and pier level; (2) a new elevated access ramp with accompanying

retaining walls to the truck gallery; (3) a gantry crane, outside of the processing building along the southern waterfront of the proposed pier; and (4) new bulkheads and fendering systems that may be required for the new facility.

The West 59th Street Converted MTS would require dredging to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once it became operational. All required dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any proposed dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

Development of the West 59th Street Converted MTS would involve the expansion of an existing waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities resulting from the West 59th Street Converted MTS within this portion of the Hudson River would be limited to barge loading along the pier level and the periodic swapping of loaded barges along the southern bulkhead of the new MTS. Approximately four or five barges would be filled on a daily basis. These swapping activities would be in close proximity to the West 59th Street Converted MTS. Therefore, there would be no anticipated impact on other uses within the water body. In addition, barge movements associated with paper recycling operation at the westernmost portion of the pier would be comparable to current activities. Therefore, the West 59th Street Converted MTS would be consistent with this subpolicy.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The West 59th Street Converted MTS would involved the conversion of an existing truck-to-barge system where loose waste was placed in open barges, into a TCB transfer station where waste was transferred into containers that would be sealed and placed into flat deck barges that would transport DSNY-managed Waste to out-of-City disposal locations and, therefore, would be protective of the aquatic environment and surrounding land and water uses. All solid waste handling would occur within an enclosed processing building. All waste would be placed in sealed containers before leaving the building for loading on barges. Paper recycling activities would continue in a manner similar to existing paper recycling operations at the site. Paper would be placed in open-top barges, netted and transported to recycling facilities.

Inside the facility, several measures would be taken to minimize the potential for environmental degradation as a result of the facility. Building ventilation would be maintained under negative pressure, which would maintain dust inside the enclosed processing building. Additional dust, odor and vector control systems would be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would be implemented to minimize or eliminate the potential for litter entering surface waters. All process wastewaters generated on site (e.g. washdown waters, etc.) would be treated prior to their discharge to the municipal sewer system. In addition, on-site storage of petroleum products and hazardous materials related to the operation of the West 59th Street Converted MTS would be done in accordance with applicable federal, state and local regulations. The West 59th Street Converted MTS would be consistent with this subpolicy.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 *Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.*

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program", as well as Recognized Ecological Complexes, the West 59th Street Converted MTS would not be within a designated area. SCFWH information maintained by the New York State Department of State indicates that the West 59th Street Converted MTS would be located with the Lower Hudson Reach SCFWH.

The development of the West 59th Street Converted MTS would involve the demolition of the existing MTS and development of a new, expanded processing building that would incorporate existing paper recycling operations at the site. Construction of the Converted MTS would include dredging within the Hudson River to improve existing water depths at and in the immediate vicinity of the site in order to allow for unimpeded barge and tugboat operations. The West 59th Street Converted MTS would represent an expansion of an existing previous use and would not be anticipated to significantly impact natural resources in the vicinity of the site. The West 59th Street Converted MTS would, therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted in order to determine the presence of wetlands within the project site. As noted in Section 22.14.1, the West 59th Street Converted MTS would be located on the Hudson River, a NYSDEC-designated littoral zone. No freshwater wetlands exist on the site. The West 59th Street Converted MTS would involve the demolition and subsequent construction of a TCB transfer station that would incorporate the existing paper recycling operation. Dredging would also be required to improve

existing water depths at and in the immediate vicinity of the site to allow for the unimpeded operation of barges and tugboats. Dredging activities associated with the construction of the new facility would result in limited, short-term impact to these tidal wetlands.

The West 59th Street Converted MTS is not anticipated to have significant impacts on wetland areas in the vicinity due to existing water depths in excess of six feet at mean low water, previous and ongoing activities at and in the vicinity of the site and previous dredging activities that have historically occurred at the existing MTS. Mitigation for potential impacts would be proposed during the environmental review and permitting of the West 59th Street Converted MTS. This mitigation, if required, would address potential impacts that may occur due to the West 59th Street Converted MTS and would effectively restore these wetlands and their associated value. The West 59th Street Converted MTS would, therefore, be consistent with this subpolicy.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of the NYSDEC NHP database indicated the Common Nighthawk (*Chordeiles minor*) as a species suspected of breeding in the vicinity of the site. The Common Nighthawk is classified by the state as a Protected Special Concern species.

As part of the West 59th Street Converted MTS, the existing MTS and its support pilings would be removed as part of the demolition activities. Dredging will be necessary to allow for the unimpeded operation of barges and tugboats. As stated in Section 22.13.3, modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat for rare or endangered species due to previous and ongoing industrial and dredging activities at and in the vicinity of the site. Sanitary and process wastewaters would be routed to on-site treatment

systems and would then be discharged to the municipal sewer system. Stormwater runoff from the West 59th Street Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. Further, the West 59th Street Converted MTS would not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The West 59th Street Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site treatment system, which would consist of oil/water separators, etc., discharging eventually to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the West 59th Street Converted MTS would be managed in accordance with all applicable federal, state and local regulations.

In addition, the majority of activity associated with the West 59th Street Converted MTS would be conducted within an enclosed processing building. Only sealed, air- and watertight containers would be transferred to barges outside of the processing building by gantry cranes installed at the pier level. Inside the facility, several measures would be taken to minimize the potential for environmental degradation as a result of the facility. Building ventilation would be maintained under negative pressure, which is intended to keep dust inside the enclosed processing building. Litter control methods such as routine sweeping and washing of the tipping floor would be implemented to minimize or eliminate the potential for litter entering surface waters. Therefore, the West 59th Street Converted MTS would be consistent with this subpolicy.

5.2 *Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.*

BMPs would be used to the extent possible during all phases of construction and operation of the West 59th Street Converted MTS in order to minimize any nonpoint discharges. The West 59th Street Converted MTS would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be conducted within an enclosed processing building. During construction, non-structural and, if necessary, structural, measures would be used to minimize nonpoint source pollution.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

Dredging would be necessary to provide sufficient water depths for unimpeded operations once the West 59th Street Converted MTS were operational, as well as to construct its expanded pier structure. Any dredging done as part of construction would result in temporary impacts and would be conducted in a manner to minimize siltation, erosion and other short-term impacts to water quality. To the extent practical, non-structural and, if necessary, structural, measures would be used to minimize siltation and potential adverse impacts to tidal wetlands in the vicinity. All dredged materials would be disposed of at a permitted upland facility in accordance with applicable federal, state and local regulations. Therefore, the West 59th Street Converted MTS would be consistent with this subpolicy.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The West 59th Street Converted MTS would have no impact on the quality or quantity of surface or ground waters. Process wastewaters (e.g. washdown

waters, etc.) would be conveyed to an on-site treatment system and would then discharge to the municipal sewer system. Stormwater runoff from the facility would be managed in accordance with all applicable federal, state and local regulations. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. The West 59th Street Converted MTS would be consistent with this policy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to a review of the FEMA National Flood Insurance Program maps, the West 59th Street Converted MTS would be is located in a section of Zone C (outside of the 100-year and 500-year floodplains). The existing MTS would be demolished and the West 59th Street Converted MTS would be constructed at approximately the same location. Dredging would be required as part of the activity to allow for unimpeded barge operations at the site. Improvements to the existing bulkhead may also be required. Construction of the West 59th Street Converted MTS would not affect the potential for flooding or erosion. All structures would comply with applicable building code requirements. To the extent practicable, non-structural and, if necessary, structural, measures would be used to minimize damage from flooding and erosion during the demolition of the existing MTS and subsequent construction of the West 59th Street Converted MTS.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The West 59th Street Converted MTS would not involve the storage, treatment or disposal of hazardous waste, but would facilitate the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Recyclable paper would also continue to be handled by the facility. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the West 59th Street Converted MTS. The majority of activities would occur within an enclosed processing building. Only sealed, air- and watertight containers would be utilized outside of the facility. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility.

On-site storage of petroleum or hazardous materials related to the operation of the West 59th Street Converted MTS would be minimal. All storage would be in accordance with applicable federal, state and local regulations. The West 59th Street Converted MTS would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 Prevent and remediate discharge of petroleum products.

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

Due to the existing industrial uses at and in the immediate vicinity of the West 59th Street Converted MTS, public access would not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The West 59th Street Converted MTS would be a stand-alone, water-dependent, industrial facility on the Hudson River. Public access would not be compatible with the West 59th Street Converted MTS; however, its development would not preclude any future development of public access at other locations along the Hudson River that have been identified for potential public access sites.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

The West 59th Street Converted MTS site would be considered an expansion of an existing waterfront use and would not impair visual access to coastal lands, waters or open space. See also response to Subpolicy 22.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

Due to its isolated location to the west of the West Side Highway, it is not anticipated that the West 59th Street Converted MTS would have a significant impact on any open space resources within the study area. Furthermore, the development of the West 59th Street Converted MTS would not preclude development of waterfront parks to either the north or south. Therefore, it would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The West 59th Street Converted MTS would be an expansion and rehabilitation of an existing waterfront use and would be compatible with the existing urban design context and visual conditions of this portion of the Hudson River Waterfront, as noted in Section 9.7. Based on the information presented in that section, the West 59th Street Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The West 59th Street Converted MTS would pose no impact to scenic values associated with natural resources. Therefore, this subpolicy is not applicable.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

The West 59th Street Converted MTS would have no effect on any cultural resources on or near the site, as noted in Section 22.6.3. Based on the information presented in that section, the West 59th Street Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

22.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

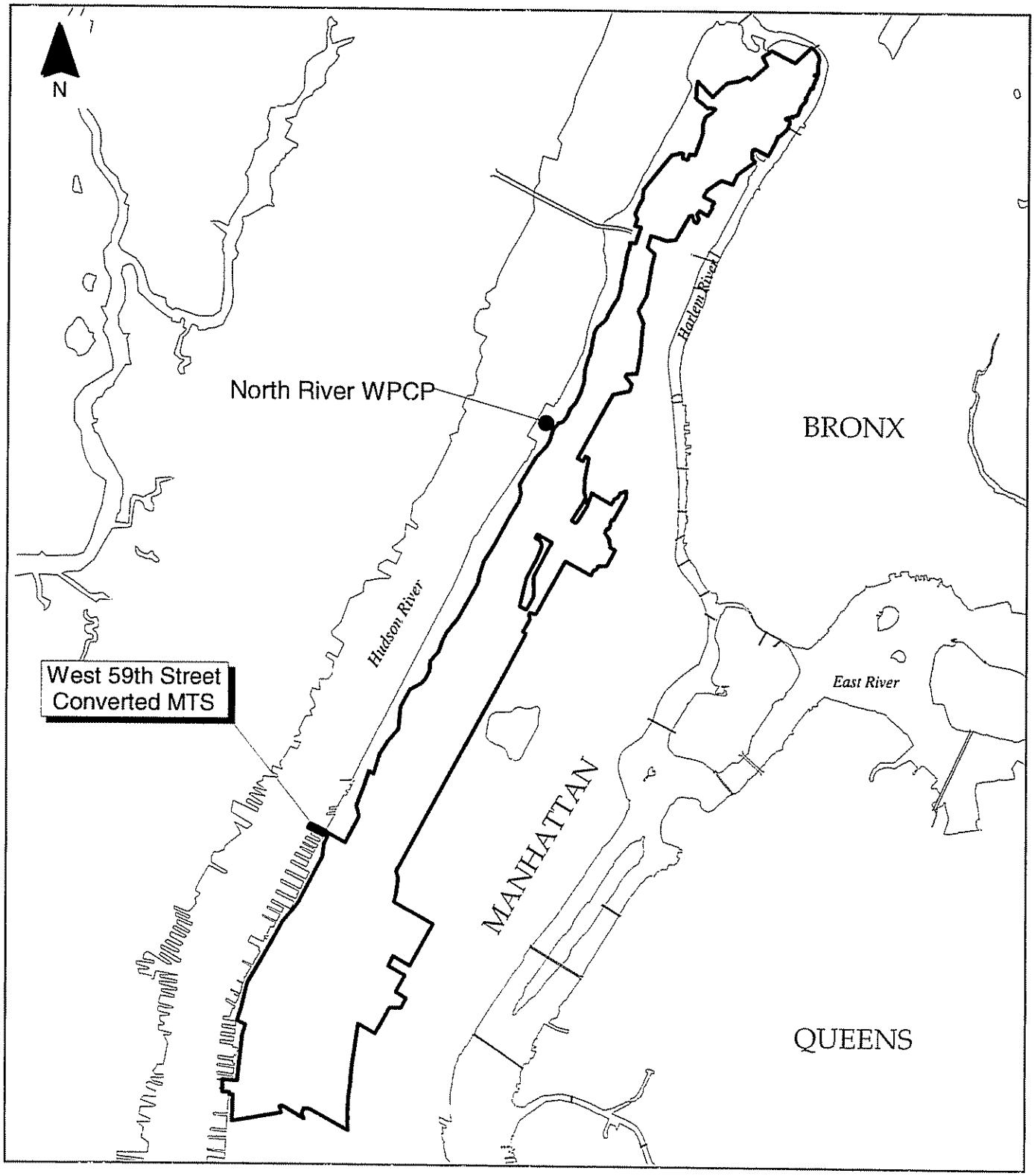
Existing Conditions

22.13.1.1 Water Supply

Water is supplied to the existing West 59th Street MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 16-inch-diameter pipe along West 59th Street provides potable water for both consumption and sanitary requirements. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual). To ensure that adequate pressure is provided on site, the potable and fire water systems are currently supplemented with a pump.

22.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the North River WPCP, which serves west Manhattan from Chelsea to Inwood. The WPCP drainage area is illustrated in Figure 22.13-1. From July 2002 through June 2003, the North River WPCP treated an average of 124 mgd of wastewater under dry weather flow conditions and an average flow of 133 mgd which include the sanitary and stormwater flows received by the WPCP during wet weather (see Table 22.13-1). The maximum dry weather flow during this period was 130 mgd during August 2002 and June 2003 and the maximum average flow was 149 mdg during June 2003. Effluent from the plant is discharged into the Hudson River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the North River WPCP is 170 mgd. It is estimated that current on-site employee water usage is about 475 gpd. This estimate is based on the current staff of 19 employees using 25 gallons per person, per day (2001 CEQR Technical Manual). In addition, approximately 180 gpd of potable water is used for tipping floor washdown and dust control. Total existing water usage is approximately 655 gpd.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.13-1 Existing WPCP Drainage Area

West 59th Street Converted MTS

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Table 22.13-1
Average Monthly Dry Weather and Average Flows
North River Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	127	129
August	130	137
September	124	135
October	121	140
November	118	130
December	120	128
January 2003	119	125
February	125	129
March	122	130
April	128	134
May	122	129
June	130	149
Average Effluent	**124**	**133**

Note:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

A 12-inch-diameter sewer on West 59th Street and 12th Avenue serves the site. The sewer is connected to a 10.5-foot, square interceptor line (combined sanitary and stormwater system) that runs north along Riverside Drive where waste is directed to the North River WPCP. Stormwater runoff from the existing MTS parking area and ramp are routed to catch basins that discharge to the combined sewer system.

22.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each employee at the existing MTS produces approximately nine pounds of solid waste per week for a facility total of 171 pounds per week (approximately 25 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

22.13.1.4 Energy

Electricity to the facility is provided by Consolidated Edison of New York. A review of applicable utility plans shows lines along West 59th Street and 12th Avenue with the existing MTS service connected to the Consolidated Edison system at the intersection of 12th Avenue and West 59th Street. The West 59th Street MTS utilized 0.24E + 10 BTU during FY 2002 (i.e., July 2001 through June 2002) based on operations information provided by DSNY. No gas is currently supplied to the facility.

22.13.2 Future No-Build Conditions

The existing West 59th Street MTS would continue to operate as it does today. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near Existing Conditions levels for security employees. Wastewater flows to the North River WPCP would continue to increase and would be projected to be 135.1 mgd by 2006.

22.13.3 Potential Impacts with the West 59th Street Converted MTS

22.13.3.1 Water Supply

The West 59th Street Converted MTS would have a total of up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 2,645 gpd above current consumption levels.

The West 59th Street Converted MTS would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

22.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,300 gpd for the West 59th Street Converted MTS, the small quantities of wastewater sent to the North River WPCP would not significantly impact the sewage flow rate or the ability of the North River WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 135.1 mgd in 2006, which would be well below the permitted capacity of 170 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

22.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 297 pounds per week (approximately 50 lbs/day) above current waste generation levels. This volume would be managed at the West 59th Street Converted MTS and would not significantly impact the system.

22.13.3.4 Energy

The West 59th Street Converted MTS would require an additional 5.48E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 2.00E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the West 59th Street Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the West 59th Street Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts to the utility.

22.14 Traffic, Parking, Transit, and Pedestrians

22.14.1 Introduction

The West 59th Street Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

22.14.2 Existing Conditions

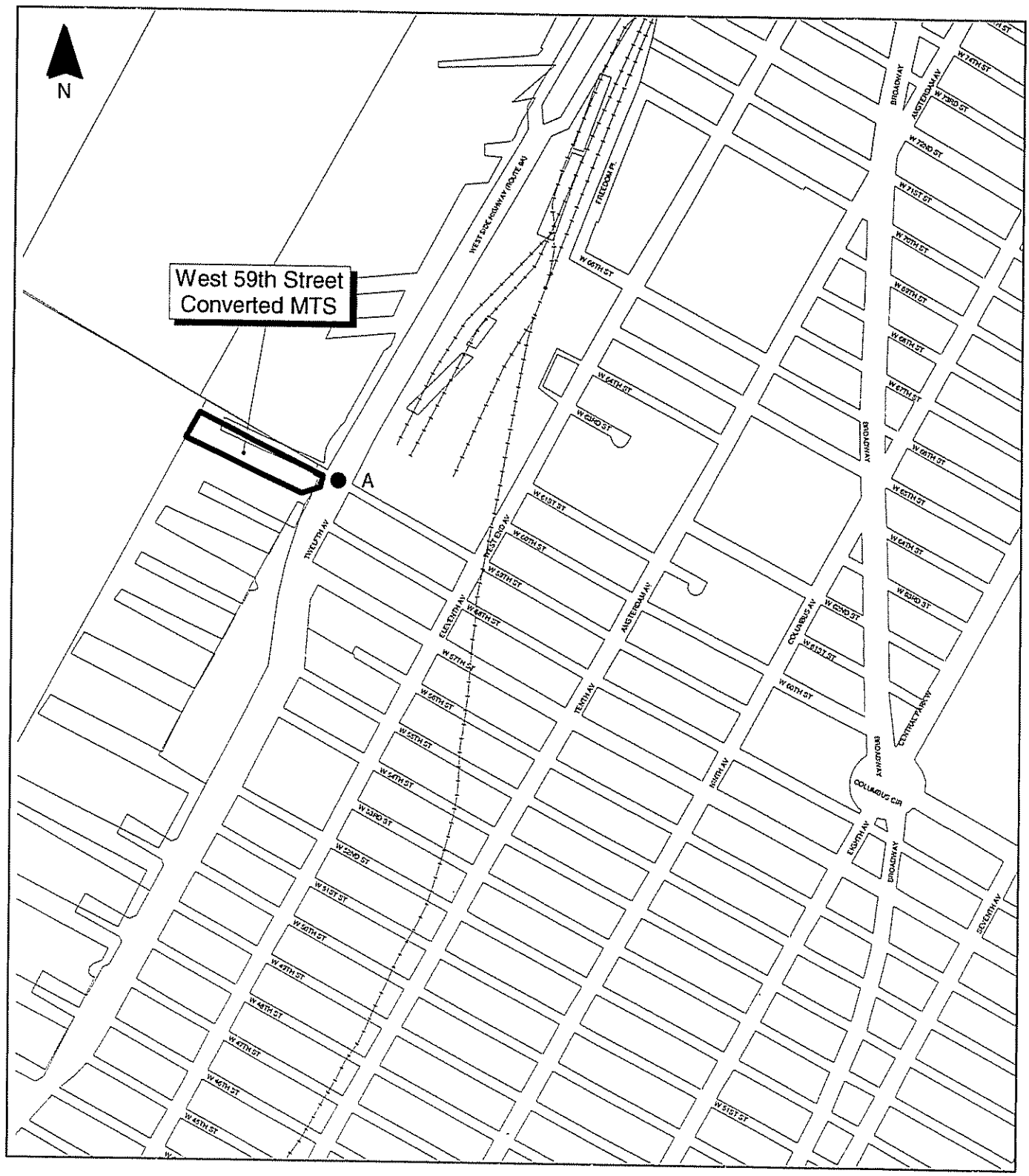
22.14.2.1 Definition of Study Area

Based on the number of anticipated DSNY and other agency collection vehicles using this site, the traffic analysis study area is limited, and is focused primarily along 12th Avenue (Route 9A). This study area is a mix of light industrial, commercial and residential uses. There are no CEQR-defined areas of concern located within the study area. Figure 22.14-1 shows the locations of the intersections selected for analysis (location A). The intersections analyzed were selected using the procedures defined in Section 3.16.

All collection vehicles must access the site from West 59th Street. Westbound collection vehicles would approach the site along West 59th Street. Northbound collection vehicles would approach from the south via 12th Avenue and turn west onto West 59th Street. Section 22.14.2.2 further discusses the specific routes used by DSNY and other agency collection vehicles to access the West 59th Street Converted MTS.

22.14.2.2 Surface Network

One major highway, the West Side Highway/Henry Hudson Parkway (Route 9A), services the study area. Tenth Avenue, 11th Avenue, 12th Avenue and West 57th Street are local truck routes that provide access to and from the site. A map showing all major truck routes and local truck routes in Manhattan is provided in Section 3.16 (see Figure 3.16-4).



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.14-1 Traffic Analysis Study Area
West 59th Street Converted MTS

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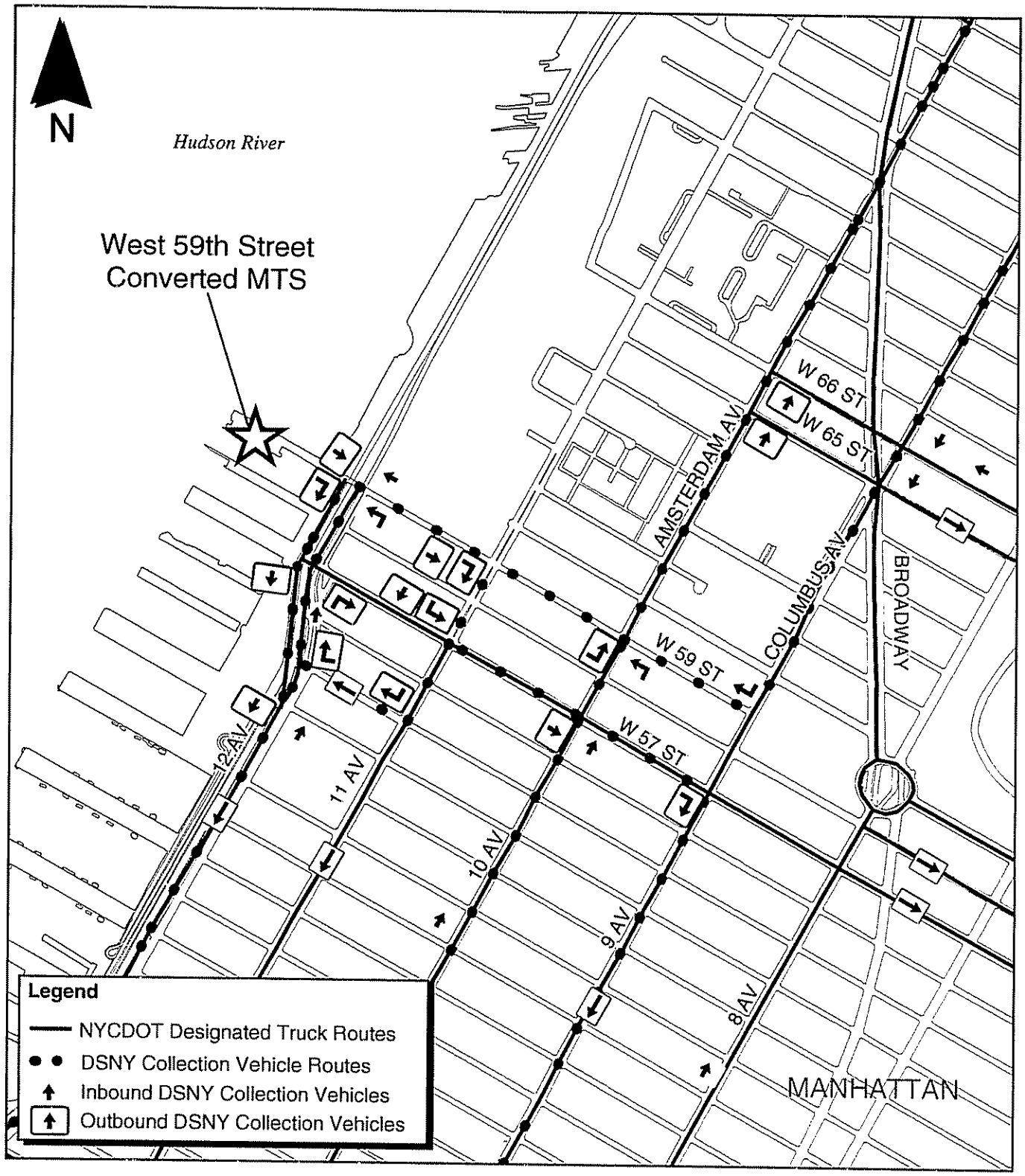
Twelfth Avenue (West Side Highway – Route 9A) is a principal arterial that is the major west side access route from downtown Manhattan to all points north. West 59th Street is an east-west collector road for local traffic. Ninth Avenue, 11th Avenue and Columbus Avenue run southbound only in the vicinity of the site and 8th Avenue, 10th Avenue and Amsterdam Avenue run northbound only.

DSNY and other agency collection vehicles traveling north to the facility from lower Manhattan would use Route 9A and exit onto 12th Avenue at West 57th Street. Twelfth Avenue is divided in the vicinity of the site by Route 9A as it ramps up into an elevated highway. Vehicles traveling north to the facility from more local areas would follow 10th Avenue north to West 59th Street and then turn west to enter the facility. Vehicles traveling south to the facility would follow Columbus Avenue to West 59th Street. All vehicles entering the facility pass through the intersection of 12th Avenue (northbound and southbound) and West 59th Street. All exiting vehicles pass through the intersection of West 59th Street and 12th Avenue (southbound). DSNY and other agency collection vehicles returning north follow West 59th Street east to Amsterdam Avenue and then turn north. Vehicles returning to lower Manhattan turn south at the exit of the facility onto 12th Avenue and merge onto Route 9A near West 55th Street, while vehicles returning to local areas south of the Converted MTS follow West 59th Street east to either 11th Avenue or 9th Avenue and then proceed south. Figure 22.14-2 depicts NYCDOT designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.

22.14.2.3 Existing Traffic Operations

The intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the West 59th Street Converted MTS. Both are on major arterials and/or collection vehicle routes. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Twelfth Avenue northbound and West 59th Street – Unsignalized Intersection (see Figure 22.14-1 – location A)
- Twelfth Avenue southbound and West 59th Street – Unsignalized Intersection (see Figure 22.14-1 – location A)



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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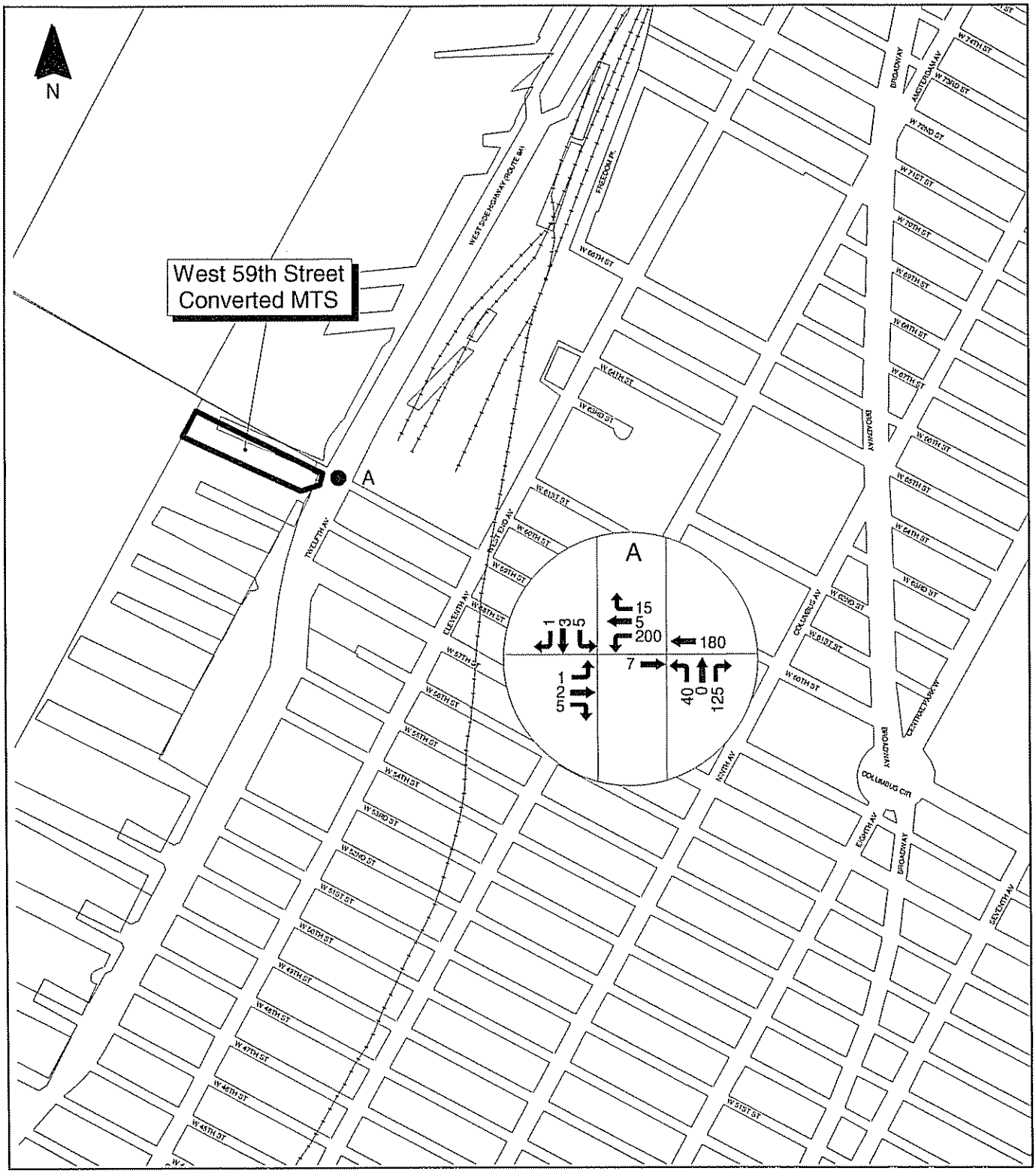
Figure 22.14-2 DSNY Collection Vehicle Routes
West 59th Street Converted MTS

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Twelfth Avenue (West Side Highway – Route 9A) is a principal arterial that is the major west side access route from downtown Manhattan to all points north. West 59th Street is an east-west collector road for local traffic.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 11 and February 13, 2003, while ATR counts were conducted between February 10 and February 14, 2003. Figures 22.14-3 and 22.14-4 depict the existing traffic volumes for AM and PM peaks at the intersections analyzed (the Facility peak coincides with the AM peak, thus only two peak hours were analyzed for this site). The AM peak generally occurred between 8:45 a.m. and 9:45 a.m. and the PM peak between 3:45 p.m. and 4:45 p.m. Table 22.14-1 presents the v/c ratio, delay and LOS for the two intersections during the AM and PM peaks.

Existing truck traffic through these intersections was relatively low. The percentage of trucks was 9% during the morning hours, then decreased to 4% or lower during the PM peak hours.

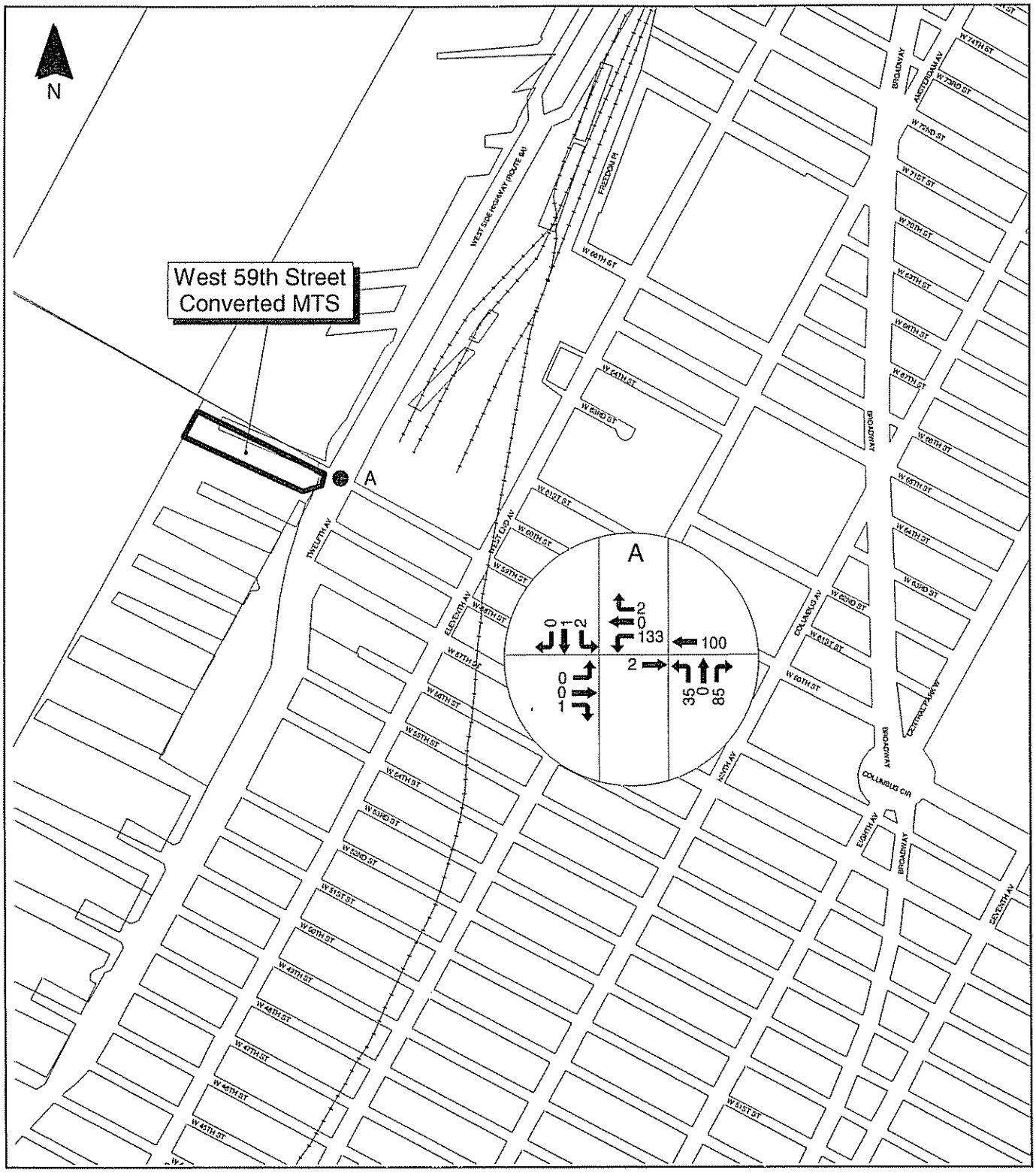


Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 22.14-3 Existing Traffic Volumes - AM Peak

West 59th Street Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.14-4 Existing Traffic Volumes - PM Peak
West 59th Street Converted MTS

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Table 22.14-1
HCM Analysis[(1)] – Existing Conditions
West 59th Street Converted MTS

Intersection & Lane Group	AM & Facility Peak Hour (8:45 a.m. – 9:45 a.m.)			PM Peak Hour (3:45 p.m. – 4:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
12th Avenue Northbound & West 59th Street (unsignalized)						
NB LR	0.31	13.1	B	0.23	11.8	B
12th Avenue Southbound & West 59th Street (unsignalized)						
EB LTR	0.00	7.8	A	0.00	7.5	A
WB LTR	0.18	7.8	A	0.10	7.5	A
SB TR	0.03	15.0	B	0.01	11.3	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
TR = through right movement
LR = left right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

22.14.2.3.1 LOS at Signalized Intersections

No signalized intersections were analyzed.

22.14.2.3.2 LOS at Unsignalized Intersections

Table 22.14-1 shows that the unsignalized intersections generally operated at an overall LOS of A or B.

22.14.2.4 Existing DSNY-Related Traffic

The existing DSNY-related traffic in the vicinity of the West 59th Street Converted MTS is generated by DSNY and related facilities in the immediate study area, most notably the DSNY Manhattan CD 7 garage (West 57th Street at 12th Avenue). Within the study area, DSNY-related traffic is routed primarily along West End/11th Avenue, Amsterdam Avenue/10th Avenue, and West 57th Street.

22.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "59th Street/Columbus Circle" station, located approximately ¾-mile to its east, is the closest subway stop to the site. Subway service on MTA's A, B, C, D, 1 and 2 lines is provided at this station. Two MTA bus lines, M31 and M57, provide service primarily along West 57th Street/York Avenue and West 57th Street/West End Avenue, respectively. There are no bus routes or bus stops located at either study intersection.

22.14.2.6 Pedestrian Activity

Pedestrian activity is generally moderate within the study area. Striped crosswalks are provided at major pedestrian crossings, including the bicycle/pedestrian path that is a part of the Hudson River Park.

22.14.3 Future No-Build Conditions

22.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 0.5% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. In addition, additional traffic generated by proposed developments in the study expected to be completed by the Future No-Build year (2006) was also included. The following is a listing of the approved or in-process developments that are expected to generate significant volumes of traffic through the study area, and thus were specifically accounted for as part of this analysis:

- Hearst Tower (retail and offices);
- AOL Time Warner (residential, retail, offices, hotel and theater);
- Alvin Ailey Dance Foundation (studio/showroom and theater);
- River Center (residential, retail and community facility);
- Durst Organization, Scheme "C" (residential, retail, office and studio/showroom);

- Cambridge Development: 2 West End Avenue (residential and retail);
- Ginsberg Development: West 60th to West 61st Streets (residential);
- Glenwood Management: 1926 Broadway (residential and retail);
- Riverside South: West End Avenue, between 59th Street and 60th Street (residential, retail, community facility, park and studio/showroom);
- Sidney Fetner Associates: southwest corner of 10th Avenue and West 42nd Street (residential);
- Chinese Embassy: West 43rd Street between 10th and 11th Avenues (residential);
- 345 West 42nd Street (residential and retail);
- J.D. Carlyle Development: 12th Avenue and West 42nd Street (office);
- Douglas Durst: northeast corner of 9th Avenue and West 42nd Street (residential and retail);
- National Video Studio expansion: 10th Avenue and West 42nd Street (office); and
- Milstein: 8th Avenue and West 42nd Street (office).

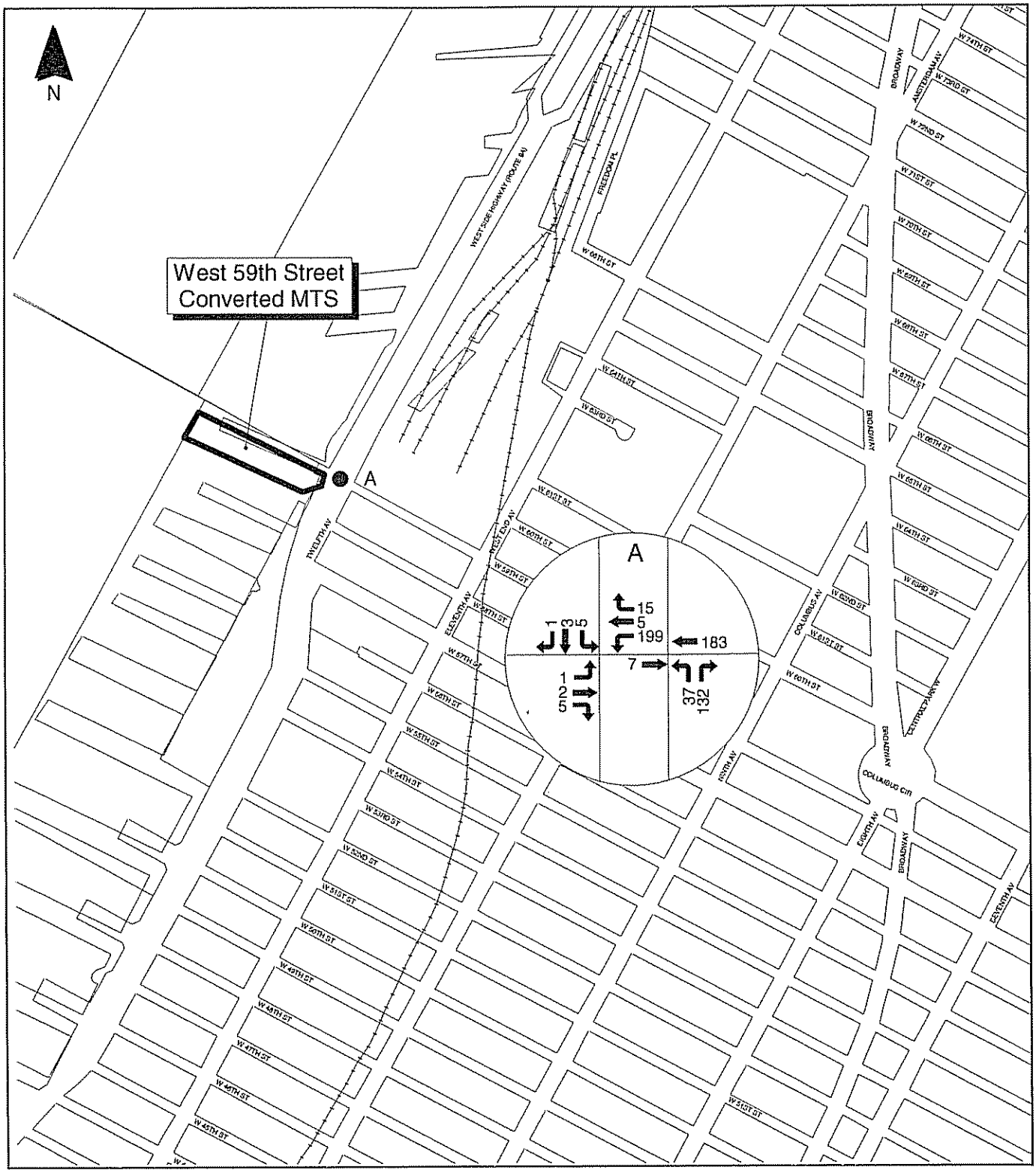
Figures 22.14-5 and 22.14-6 depict the Future No-Build traffic volumes for the AM and PM peaks at the intersections analyzed. Table 22.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, unsignalized intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their existing condition LOS.

22.14.3.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

22.14.3.3 Pedestrian Activity

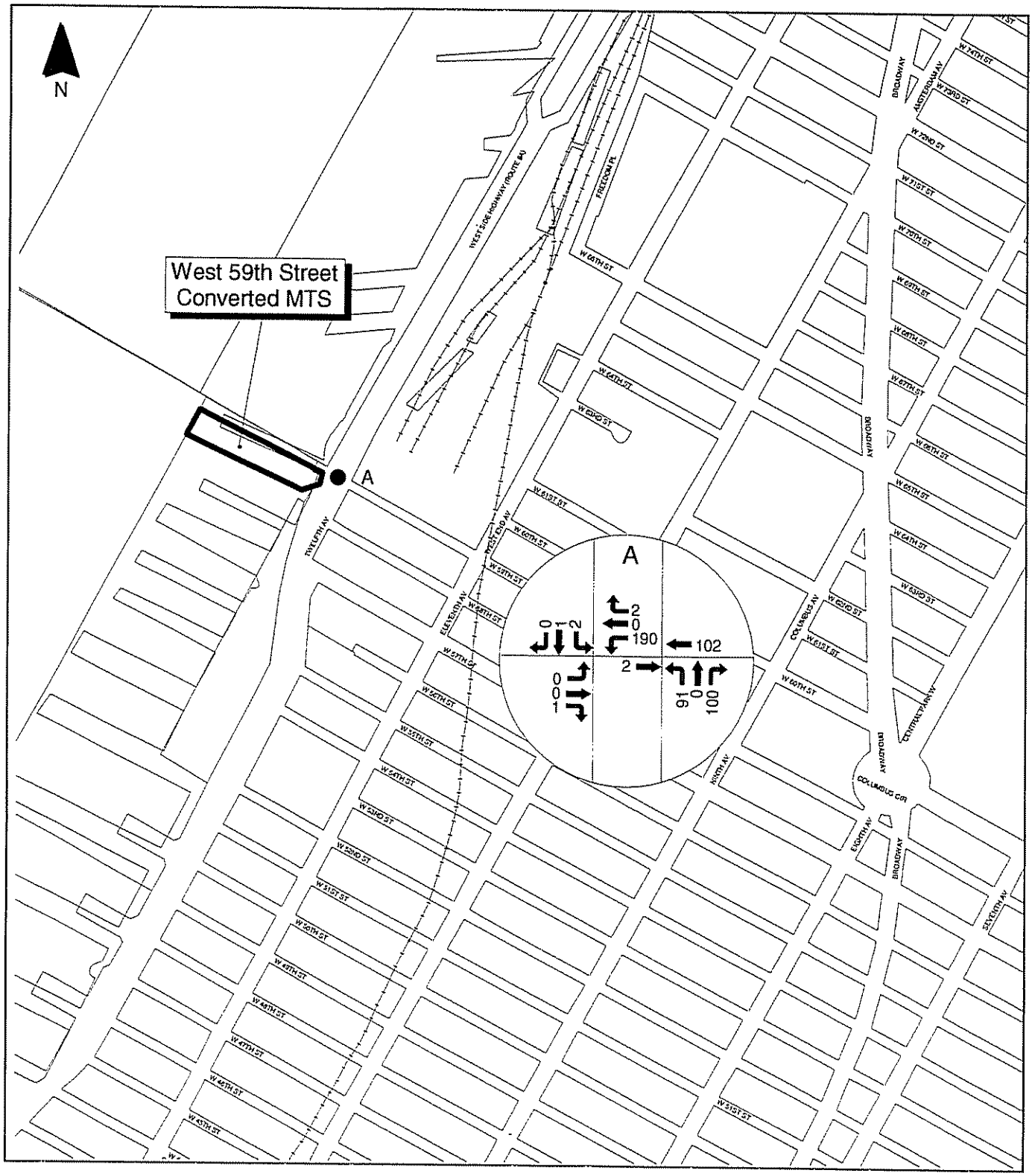
~~Future No-Build Conditions are expected to remain the same as Existing Conditions.~~Given imminent plans for completing Riverside Park South and for the construction of a greenway link between the Hudson and East River at Battery Park, it seems highly likely that more pedestrians and cyclists will travel through this area. ~~the West 59th Street Converted~~



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

Figure 22.14-5 Future No-Build Traffic Volumes AM Peak West 59th Street Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.14-6 Future No-Build Traffic Volumes PM Peak West 59th Street Converted MTS

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Table 22.14-2
HCM Analysis[(1)] – Future No-Build Conditions
West 59th Street Converted MTS

Intersection & Lane Group	AM & Facility Peak Hour (8:45 a.m. – 9:45 a.m.)			PM Peak Hour (3:45 p.m. – 4:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
12th Avenue Northbound & West 59th Street (unsignalized)						
NB LTR	0.31	13.1	B	0.38	13.4	B
12th Avenue Southbound & West 59th Street (unsignalized)						
EB LTR	0.00	7.8	A	0.00	7.5	A
WB LTR	0.18	7.8	A	0.14	7.6	A
SB LTR	0.03	15.0	B	0.01	12.9	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

22.14.4 Potential Impacts with the West 59th Street Converted MTS

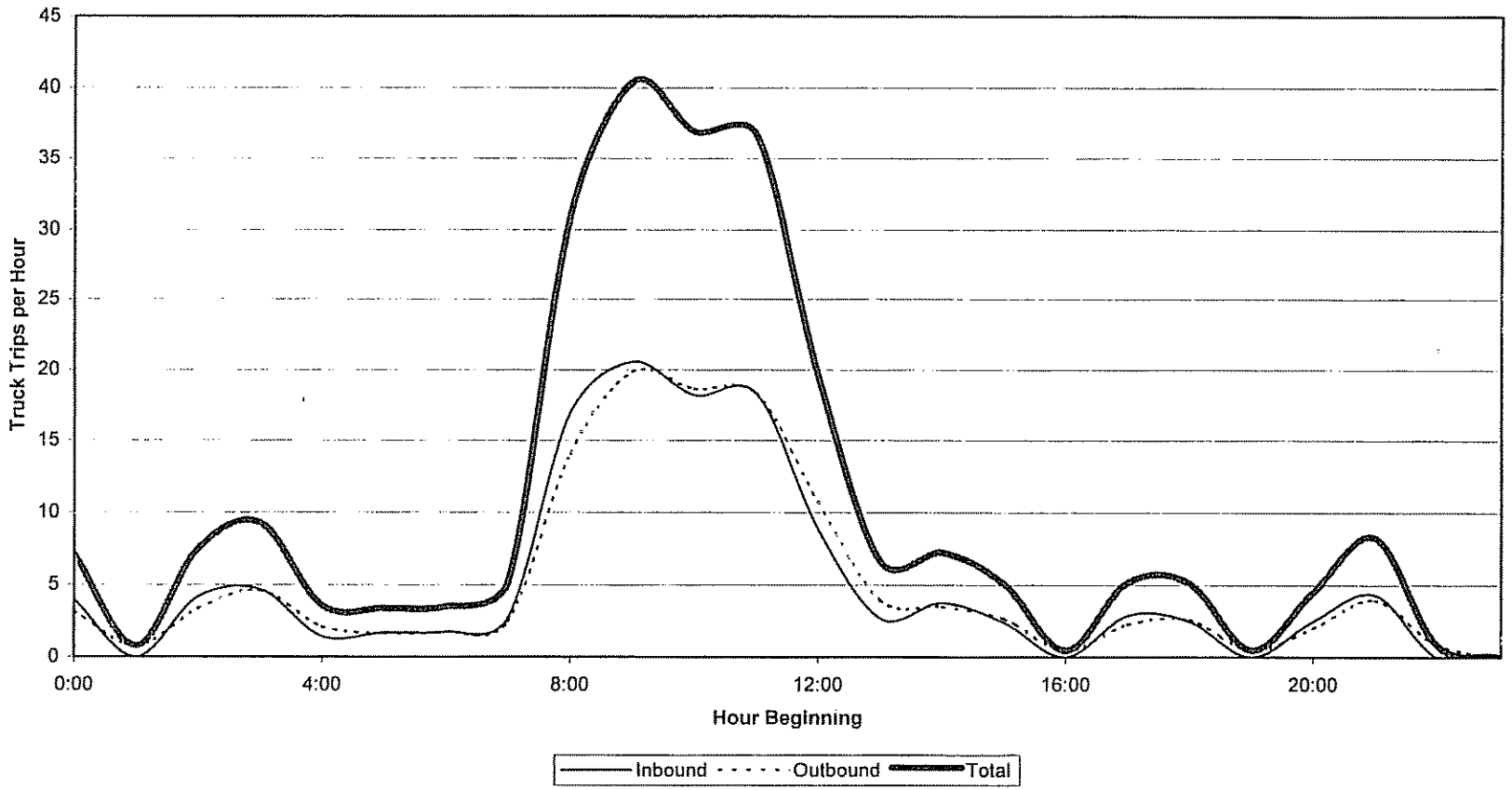
The West 59th Street Converted MTS would receive waste from five CDs in Manhattan - Manhattan CDs MN01 through MN04 and MN07. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours.

22.14.4.1 2006 Future Build Traffic Conditions

The 2006 Future Build Traffic Conditions assume that the West 59th Street Converted MTS would generate 124 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the West 59th Street Converted MTS are shown in Figure 22.14-2.

Figure 22.14-7 presents the average peak day temporal distribution of collection vehicles for the West 59th Street Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the West 59th Street Converted MTS is expected to vary from approximately 0 to 10 truck trips per hour in the late evening/early morning, 5 to 42 truck trips per hour in the mid-morning/early afternoon, and 0 to 10 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (42) occurs at approximately 9:00 a.m.

Figure 22.14-7
Truck Trips per Hour
West 59th Street Converted MTS

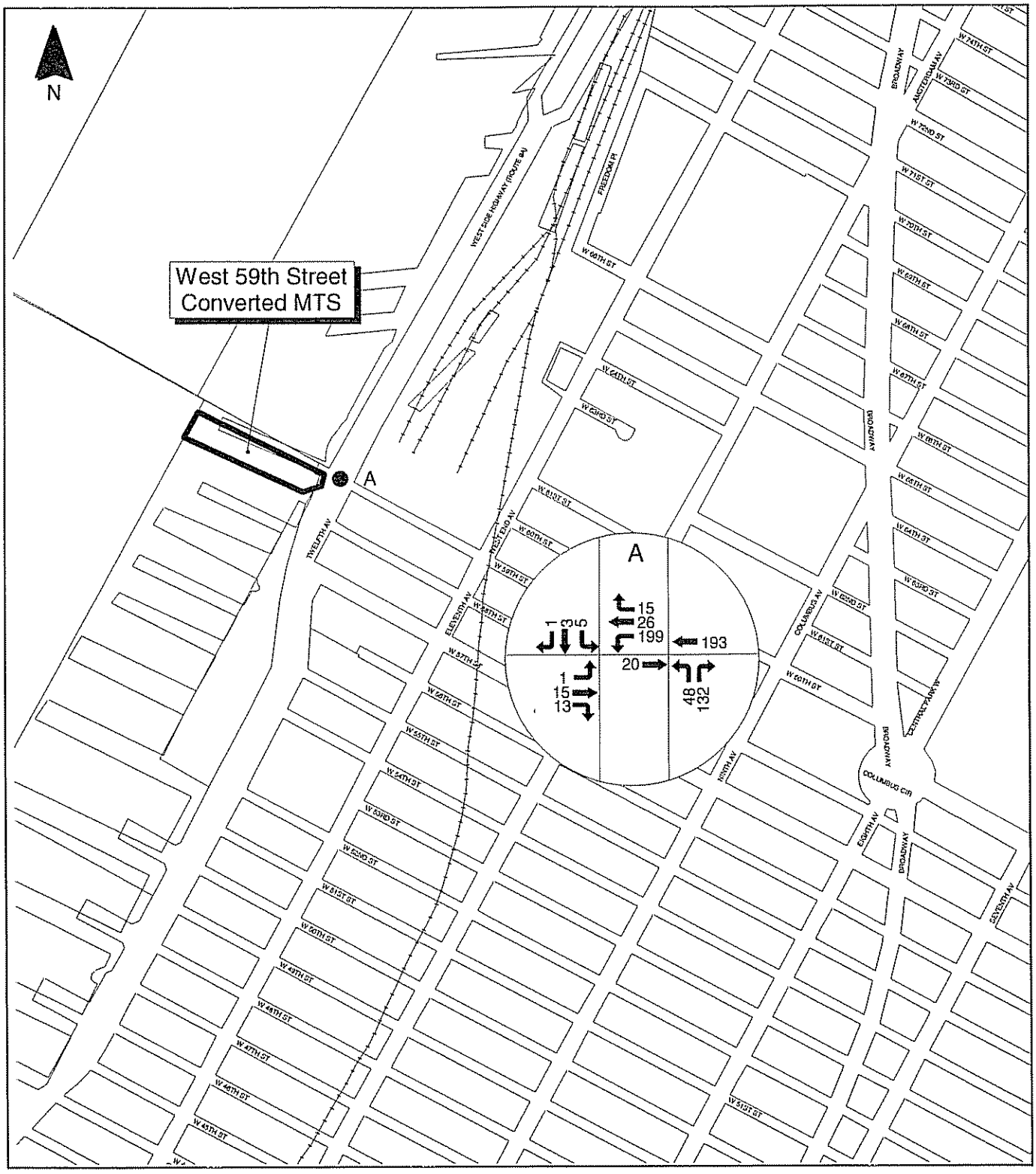


Figures 22.14-8 and 22.14-9 show the intersections analyzed with the Future Build traffic levels. Figures 22.14-10 and 22.14-11 depict the net future traffic volumes added to the Future No-Build Conditions to generate Future Build Conditions for AM and PM peaks at the intersections analyzed. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the West 59th Street Converted MTS. These projected net increases were routed through the intersections for the AM and PM peak hours. The highest net increase in trucks in the ingress or egress direction was 21. The highest net increase at any one intersection was 42 trucks. Both of these net increases occurred at the intersection of 12th Avenue southbound and West 59th Street.

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 69% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 81% of weekday traffic volumes. Table 22.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the West 59th Street Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 22.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM and PM peak times associated with the West 59th Street Converted MTS. Overall, unsignalized intersections experienced relatively small increases in delay (less than five seconds) and are projected to remain at their Future No-Build condition LOS, with the following exception:

- During the AM peak hour, the delay of the southbound approach at the intersection of 12th Avenue southbound and West 59th Street increased from 15.0 to 16.5 seconds (LOS B to LOS C)
- Figure 22.14-8 2006 Future Build Traffic Volumes – AM Peak – West 59th Street Converted MTS



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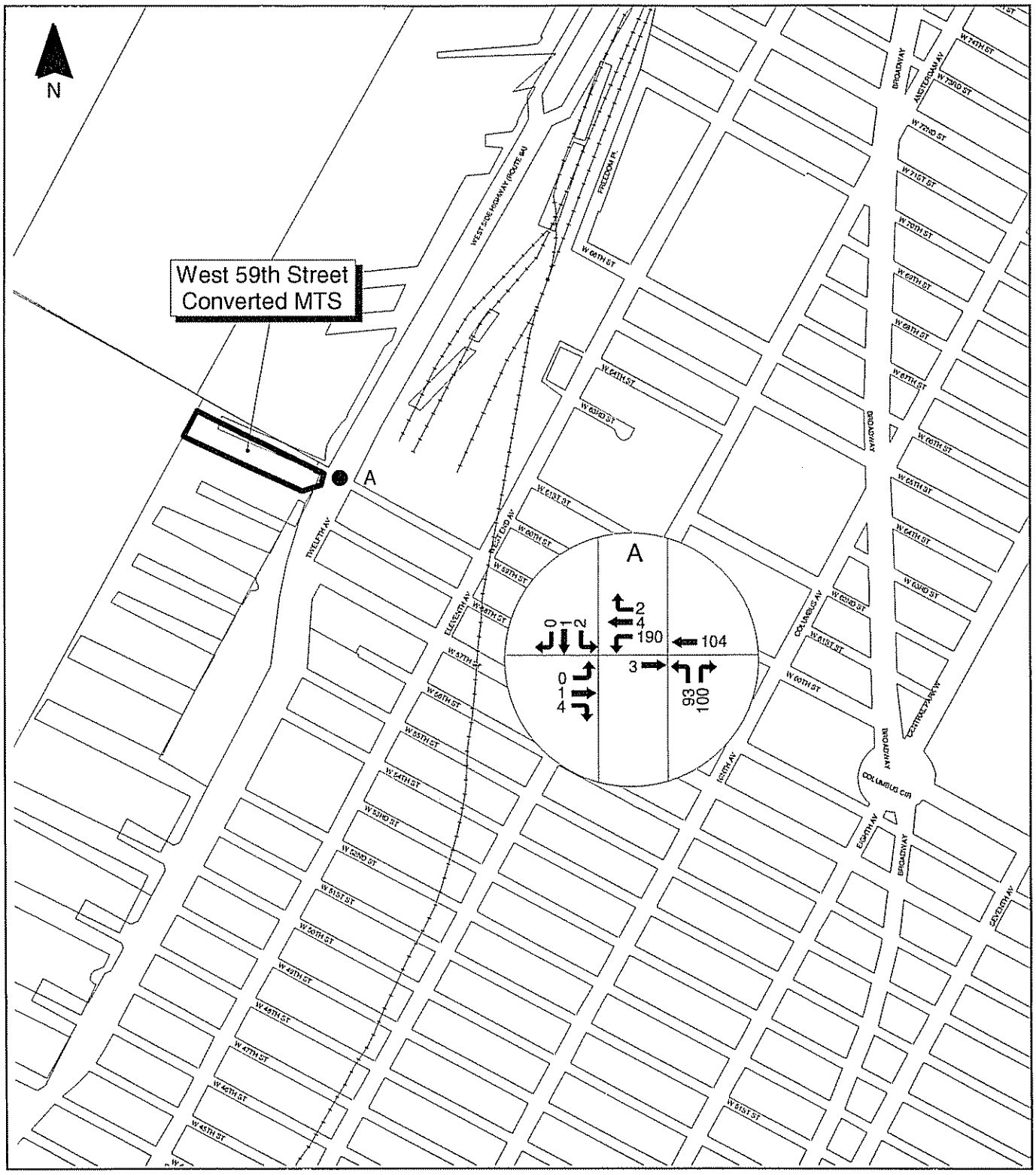
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.14-8 2006 Future Build Traffic Volumes AM Peak West 59th Street Converted MTS

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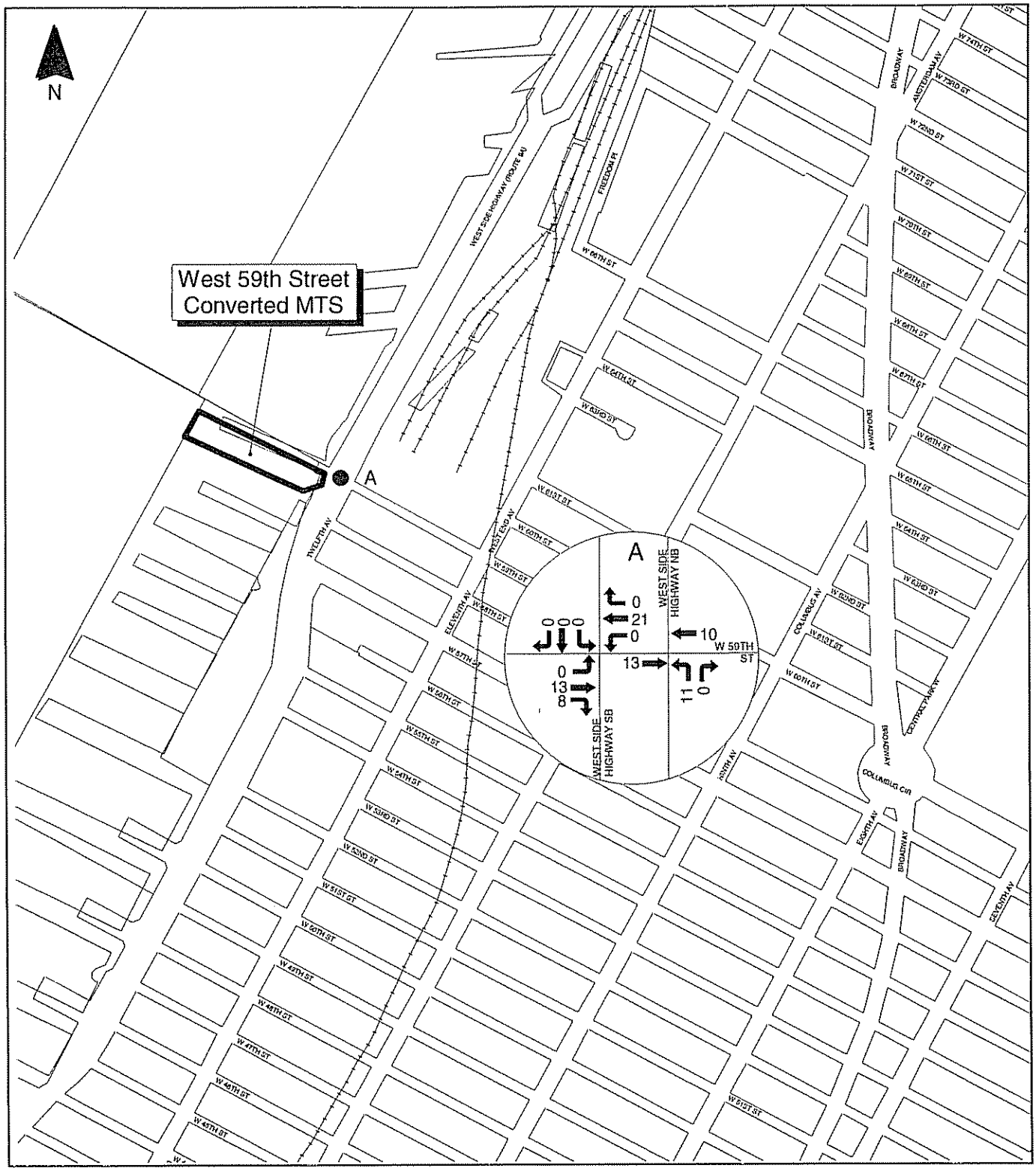
Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 22.14-9 2006 Future Build Traffic Volumes PM Peak West 59th Street Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

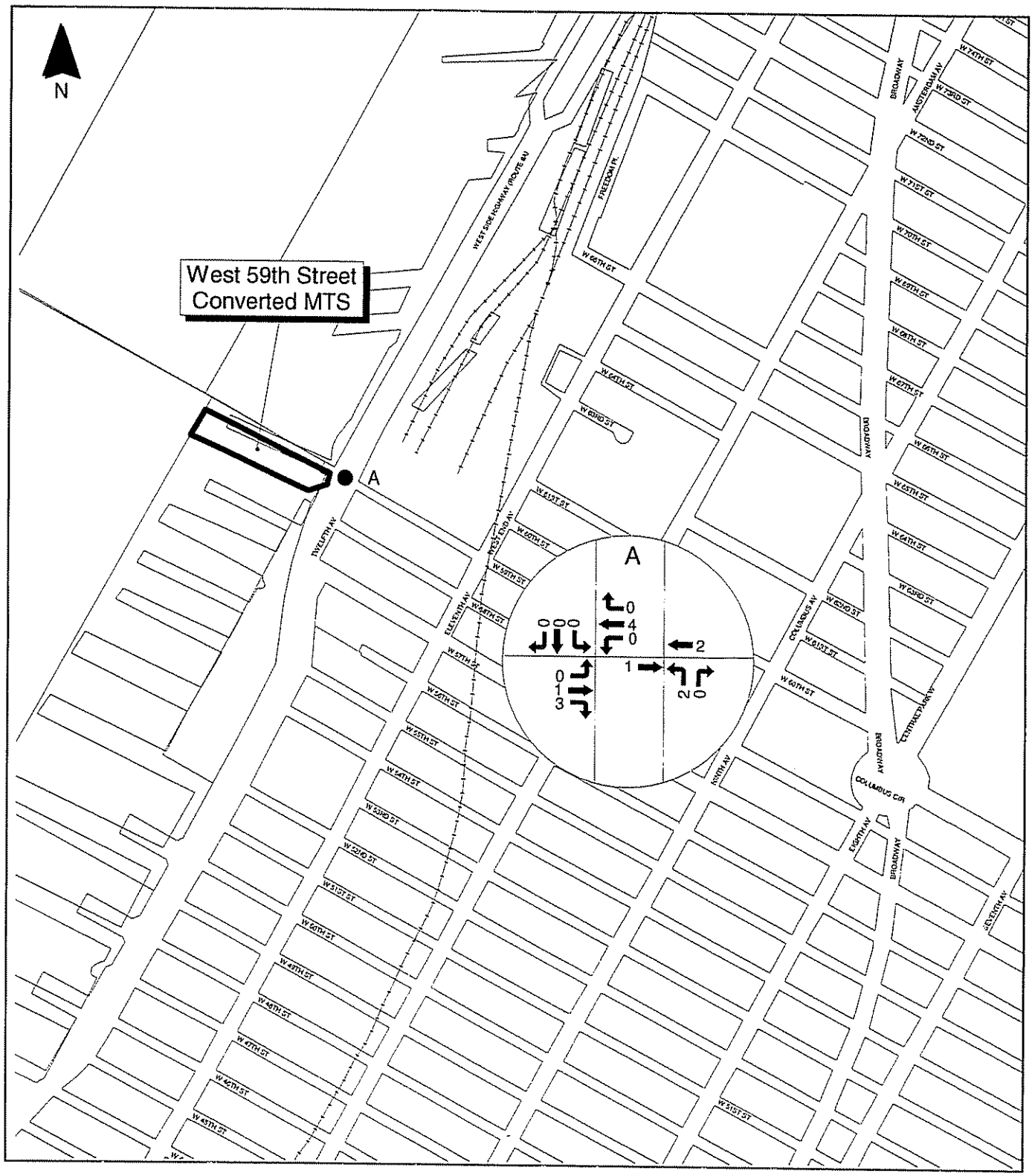
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Figure 22.14-10 2006 Net Traffic - AM Peak

West 59th Street Converted MTS

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.14-11 2006 Net Traffic - PM Peak

West 59th Street Converted MTS

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Table 22.14-3
Weekday and Weekend Traffic
West 59th Street Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		Background Traffic NB and SB on 11th Avenue (1)	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday Average Vehicles/Day	Weekend Average Vehicles/Day
124	110	27,133	21,991

Note:
(1) NB and SB traffic data collected from ATR counts taken on 11th Avenue between 58th Street and 59th Street from September 11 to 17, 2003.

Table 22.14-4
-HCM Analysis(1) – 2006 Future Build Conditions
West 59th Street Converted MTS

Intersection & Lane Group	AM & Facility Peak Hour (8:45 a.m. – 9:45 a.m.)			PM Peak Hour (3:45 p.m. – 4:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
12th Avenue Northbound & West 59th Street (unsignalized)						
NB LTR	0.38	14.7	B	0.38	13.5	B
12th Avenue Southbound & West 59th Street (unsignalized)						
EB LTR	0.00	7.9	A	0.00	7.5	A
WB LTR	0.19	7.9	A	0.14	7.6	A
SB LTR	0.04	16.5	C	0.01	13.1	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

Although the West 59th Street Converted MTS would remain within the vicinity of several parks, no air quality, odor, noise or traffic impacts are predicted to result. Due to site constraints, the angle for the existing site entrance will remain unchanged. The existing hazard created for southbound bicyclists will not be eliminated. Any increase in West 59th Street Converted MTS truck traffic, therefore, could potentially worsen the safety conditions on the bike path. Appropriate measures developed in coordination with NYCDPR would likely resolve this conflict.

22.14.4.2 Impacts and Mitigation

No traffic impacts are expected to occur as a result of Future Build Conditions.

22.14.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

22.14.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

22.15 Air Quality

22.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the West 59th Street Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 22.15.4.2.

22.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 22.15.1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 22.15-1
Representative Ambient Air Quality Data
West 59th Street Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	P.S.59	8-Hour	2,978µg/m^3	10,000 µg/m^3
		1-Hour	5,268µg/m^3	40,000 µg/m^3
NO_2[(1)]	P.S. 59	Annual	71 µg/m^3	100 µg/m^3
PM_{10}	P.S. 59	Annual	34 µg/m^3	50 µg/m^3
		24-Hour	88 µg/m^3	150 µg/m^3
SO_2[(1)]	P.S. 59	3-Hour	186 µg/m^3	1,300 µg/m^3
		24-Hour	123 µg/m^3	365 µg/m^3
		Annual	37 µg/m^3	80 µg/m^3

Notes:
Source: NYCDEP, April 2003& USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.

22.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build air quality conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

22.15.4 Potential Impacts with the West 59th Street Converted MTS

22.15.4.1 On-Site Analysis

22.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 22.15-2. Figure 22.15-1 shows the locations of these sources within the site.

22.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 22.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual PM_{25} concentrations from West 59th Street Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 22.15-3, are below the STVs. The West 59th Street Converted MTS would not, therefore, significantly impact air quality in the area.

Table 22.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
West 59th Street Converted MTS

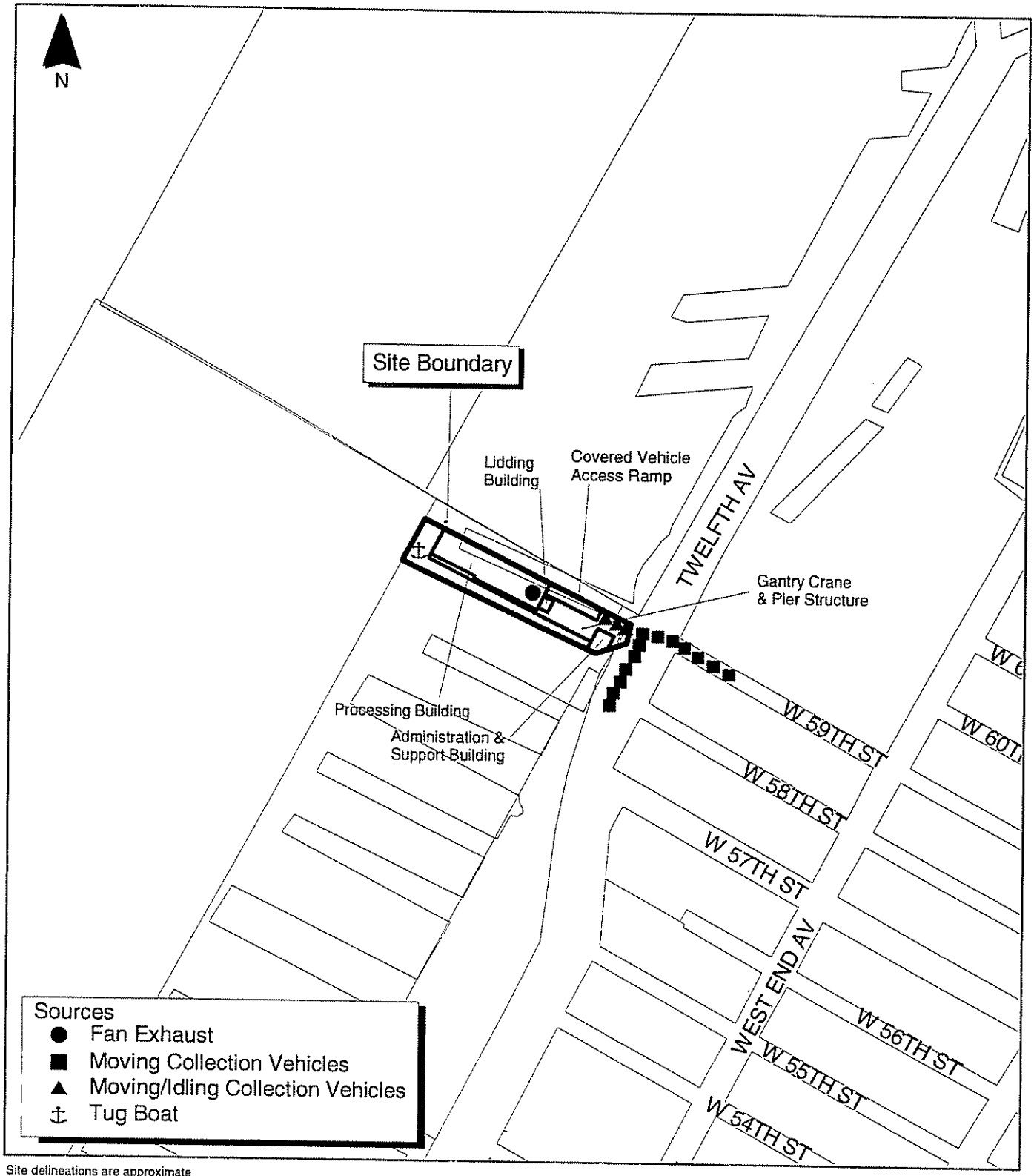
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	51	13
Space Heaters	10	3
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	51	13
Queuing Collection Vehicles[3]	4 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 4, the same as peak 1 hour value.



Site delineations are approximate
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

300 0 300 Feet

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Figure 22.15-1 On-Site Air Quality Analysis

West 59th Street Converted MTS

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Table 22.15-3
-Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
West 59th Street Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	491	~~4,352~~4,353	~~4,843~~4,844	40,000	NA
	8-hour[6]	174	~~3,321~~3,322	~~3,495~~3,496	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	9	77	86	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	8	~~88~~61	~~96~~69	150	NA
	Annual	2	~~34~~21	~~36~~23	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	3	NA	NA	NA	5
	Annual Neighborhood Average [5]	0.025[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	24	265	289	1,300	NA
	24-hour[6]	2	139	141	365	NA
	Annual	0.3	~~34~~37	~~34~~37	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~ memorandum dated February 18, 2005..

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM^{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.

NA = Not Applicable

22.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 22.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the West 59th Street Converted MTS are not considered to be significant.

22.15.4.2 Off-Site Analysis

22.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other agency collection vehicles were identified using 2001 CEQR Technical Manual guidelines that are outlined in Section 3.17. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-case) time periods:

- An analysis of the intersections of 12th Avenue and West 59th Street, and Route 9A and West 57th Street to determine whether West 59th Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis of the intersections of 12th Avenue and West 59th Street, and Route 9A and West 57th Street to determine whether West 59th Street Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM^{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 22.15-2.

Table 22.15-4
-Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions West 59th Street Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk: Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Acute Non-Cancer Risk: Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Risk: Acute Non-Cancer Hazard Index[3]	Chronic Non-Cancer Risk: Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Chronic Non-Cancer Risk: Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Risk: Chronic Non-Cancer Hazard Index [6]	Cancer Risk: Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Cancer Risk: Unit Risk Factors [7] ($\mu g/m^3$)	Cancer Risk: Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	1.92E-01	1.30E+03	1.47E-04	4.95E-03	1.30E-01	3.81E-02	4.95E-03	8.30E-06	4.11E-08
2	Formaldehyde	2.42E+01	3.00E+01	8.08E-03	6.27E-03	6.00E-02	1.04E-01	6.27E-03	1.30E-05	8.15E-08
3	1,3 Butadiene	8.03E-03	-	-	2.08E-04	3.60E-03	5.77E-02	2.08E-04	2.80E-04	5.81E-08
4	Acetaldehyde	1.58E-01	4.50E+03	3.50E-05	4.07E-03	4.50E-01	9.05E-03	4.07E-03	2.20E-06	8.96E-09
5	Benzo(a)pyrene	3.86E-05	-	-	9.98E-07	2.00E-03	4.99E-04	9.98E-07	1.70E-03	1.70E-09
Non-Carcinogenic Pollutants [10]										
6	Propylene	5.30E+01	-	-	1.37E-02	3.00E+03	4.57E-06	1.37E-02	NA	NA
7	Acrolein	1.90E-02	1.90E-01	1.00E-01	4.91E-04	2.00E-02	2.46E-02	4.91E-04	NA	NA
8	Toluene	8.40E-02	3.70E+04	2.27E-06	2.17E-03	4.00E+02	5.43E-06	2.17E-03	NA	NA
9	Xylenes	5.85E-02	4.30E+03	1.36E-05	1.51E-03	7.00E+02	2.16E-06	1.51E-03	NA	NA
10	Anthracene	3.84E-04	-	-	9.93E-06	2.00E-02	4.97E-04	9.93E-06	NA	NA
11	Benzo(a)anthracene	3.45E-04	-	-	8.92E-06	2.00E-02	4.46E-04	8.92E-06	NA	NA
12	Chrysene	7.25E-05	-	-	1.87E-06	2.00E-02	9.37E-05	1.87E-06	NA	NA
13	Naphthalene	1.74E-02	7.90E+03	2.20E-06	4.50E-04	3.00E+00	1.50E-04	4.50E-04	NA	NA
14	Pyrene	9.82E-04	-	-	2.54E-05	2.00E-02	1.27E-03	2.54E-05	NA	NA
15	Phenanthrene	6.04E-03	-	-	1.56E-04	2.00E-02	7.81E-03	1.56E-04	NA	NA
16	Dibenz(a,h)anthracene	1.20E-04	-	-	3.10E-06	2.00E-02	1.55E-04	3.10E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.08E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**2.45E-01**	**Total Estimated Combined Cancer Risk**		**1.91E-07**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold** [11]		**1.0E+00**	**Cancer Risk Threshold** [11]		**1.0E-06**

Notes to Table 22.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

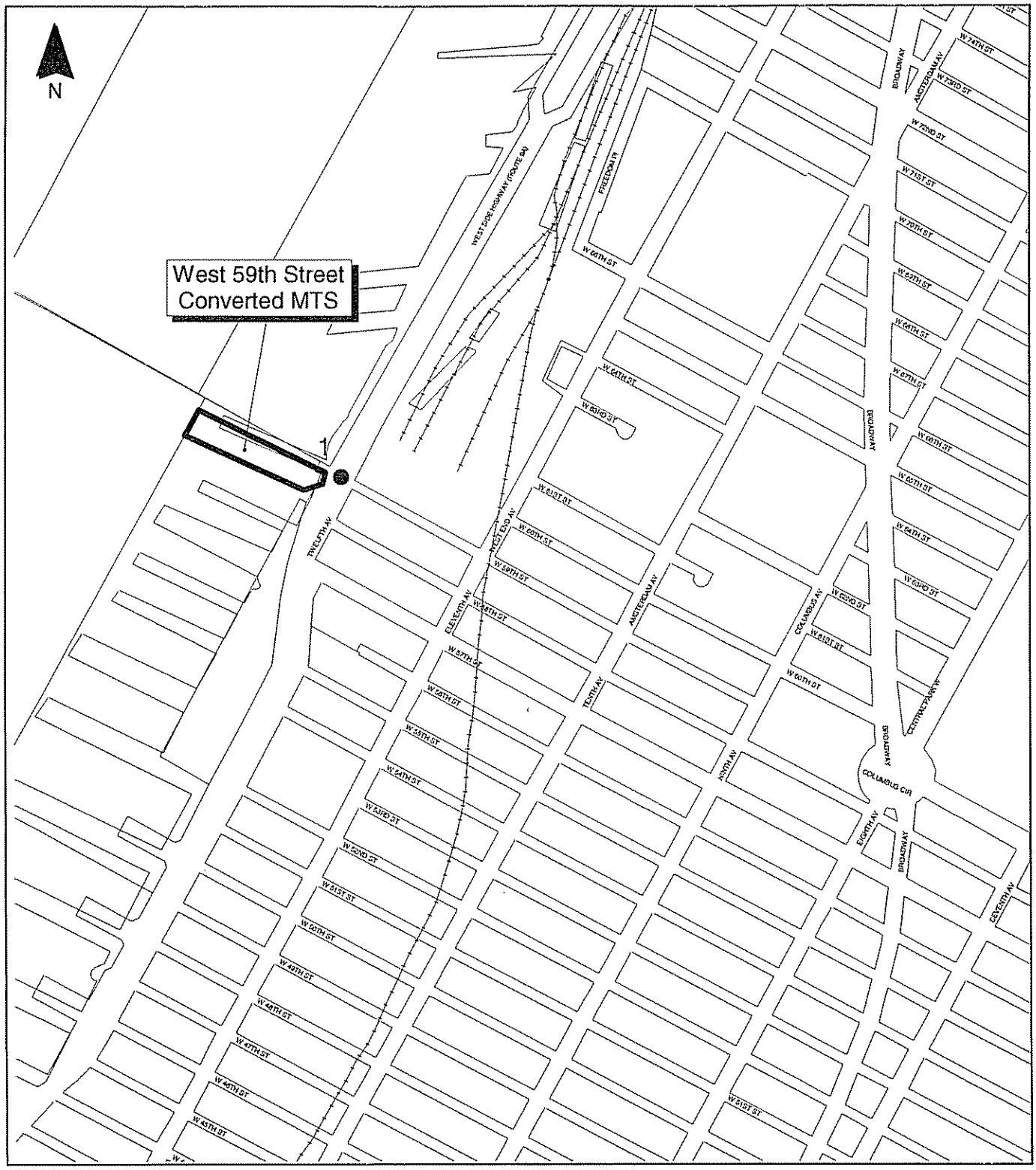
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts

NA = Not Applicable



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.15-2 Off-Site Air Quality Intersections Studied West 59th Street Converted MTS

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22.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 22.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or de minimus impact values (for CO). A Tier II analysis of the intersection of Route 9A and West 57th Street was done to determine the off-site annual impacts for $PM_{2.5}$. The results of this Tier II analysis are within the applicable annual STVs for $PM_{2.5}$. The off-site operations of the West 59th Street Converted MTS are not, therefore, considered to be significant.

Table 22.15-5
-Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections
West 59th Street Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
West 59th Street and 12th Avenue									
Existing Conditions		~~86~~ 84	~~36~~ 30						
Future No-Build Conditions		~~92~~ 89	~~40~~ 32						
Future Build Conditions	NA[5]	~~93~~ 90	~~41~~ 33						
Future Build Incremental				1.57	~~0.1~~84	~~1.75~~1.97	0.037	~~0.04~~0.043[4]	~~0.08~~0.080
Route 9A & West 57th Street									
Existing Conditions		105[7]	~~44~~34[7]						
Future No-Build Conditions		~~109~~114[7]	~~44~~37[7]						
Future Build Conditions	NA[5]	~~109~~114[7]	~~44~~37[7]						
Future Build Incremental				0.64	0.~~1~~2	~~0.75~~0.84	0.037	~~0.02~~0.043[6]	~~0.06~~0.080

Notes:

(1) PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic conditions plus background concentration (24-hr PM_{10} = 46~~-61~~ $\mu g/m^3$; Annual PM_{10} = 21$\mu g/m^3$).

(2) The maximum incremental concentrations of on-site emissions near the intersection considered.

(3) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between the maximum-$PM_{2.5}$ concentrations for the Future _No-Build and Future _Build scenarios at any sidewalk receptors ~~three meters from the edge of the roadways using~~ under AM, Facility, or PM peak traffic conditions.

(4) ~~The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project induced [or Future Build] traffic only) estimated by taking the~~ The maximum difference between the maximum the average $PM_{2.5}$ concentrations ~~for the~~under Future future No-Build and Future future Build ~~scenarios~~ conditions at any receptors located 15 meters from the edge of the roadways ~~using~~ under AM, Facility, or PM peak traffic conditions.

(5) NA= Not Applicable. Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

(6) The maximum difference between $PM_{2.5}$ concentrations under future No Build and future Build conditions at receptors 15 meters from the edge of the roadways under AM, facility, or PM peak traffic conditions.

Notes (Table 22.15-5 continued):

(7) Result determined using a Tier II analysis.

ppm = parts per million

$\mu g/m^3$ = microgram per cubic meter

~~NA = Not Applicable~~

22.16 Odor

22.16.1 Existing Conditions

Paper recycling activities are conducted at the existing MTS. There are no putrescible waste handling operations there, however, and, therefore, there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the bike path along the river and the apartment building located on 11th Avenue between 61st Street and 62nd Street, approximately 1,739 feet from the site boundary.

22.16.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the West 59th Street Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

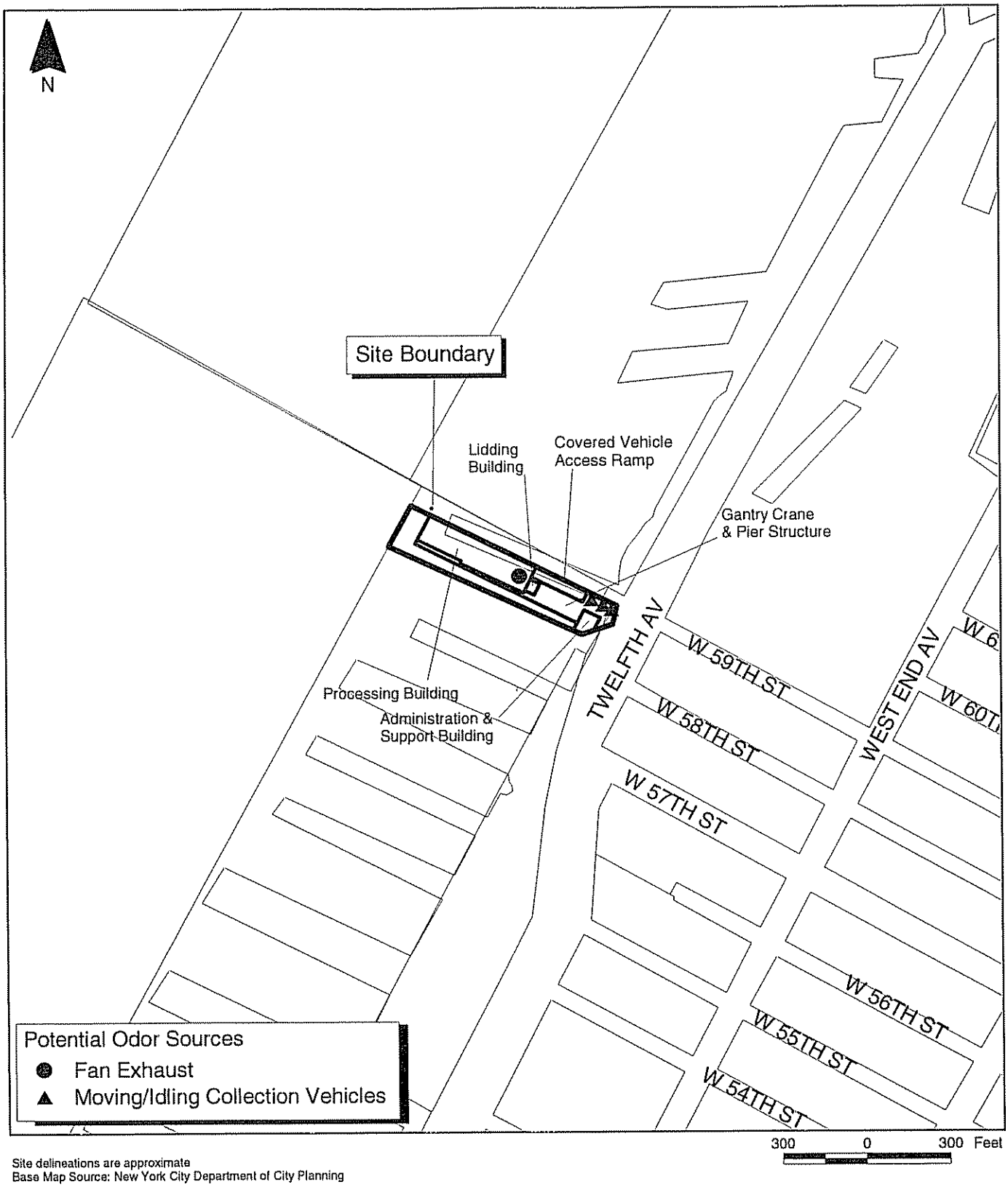
22.16.3 Potential Impacts with the West 59th Street Converted MTS

22.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the West 59th Street Converted MTS are provided in Table 22.16-1. Figure 22.16-1 shows the locations of these sources within the site.

Table 22.16-1
Odor Sources Included in Odor Analysis
West 59th Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection Vehicles	5



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 22.16-1 Potential Odor Sources

West 59th Street Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the West 59th Street Converted MTS.

22.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 22.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the West 59th Street Converted MTS at any nearby sensitive receptor is less than 1, so odors from the West 59th Street Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 22.16-2
~~-~~Highest Predicted Odor Concentration(s) from On-Site Sources
West 59th Street Converted MTS

Parameter	Resulting ~~D/T~~ ~~Ratio~~ Odor Units [1]
Estimated Detectable Concentration	5.0
Highest Result Type of Receptor Location of Receptor~~(2)~~	0.23 Discrete Receptor Over Water
Closest Sensitive Receptor Results [2] Bike Path Apartment Building 1.739 feet from the facility	~~0.02~~ ~~Apartment Building~~0.23 ~~1,739 Feet~~ 0.02

Notes:

[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.

[2] Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

~~(1) D/T ratio is dimensionless.~~

~~(2) Measured from the site boundary.~~

~~(3) Measured from the site property line~~

22.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from West 59th Street Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

22.17.1 Existing Conditions

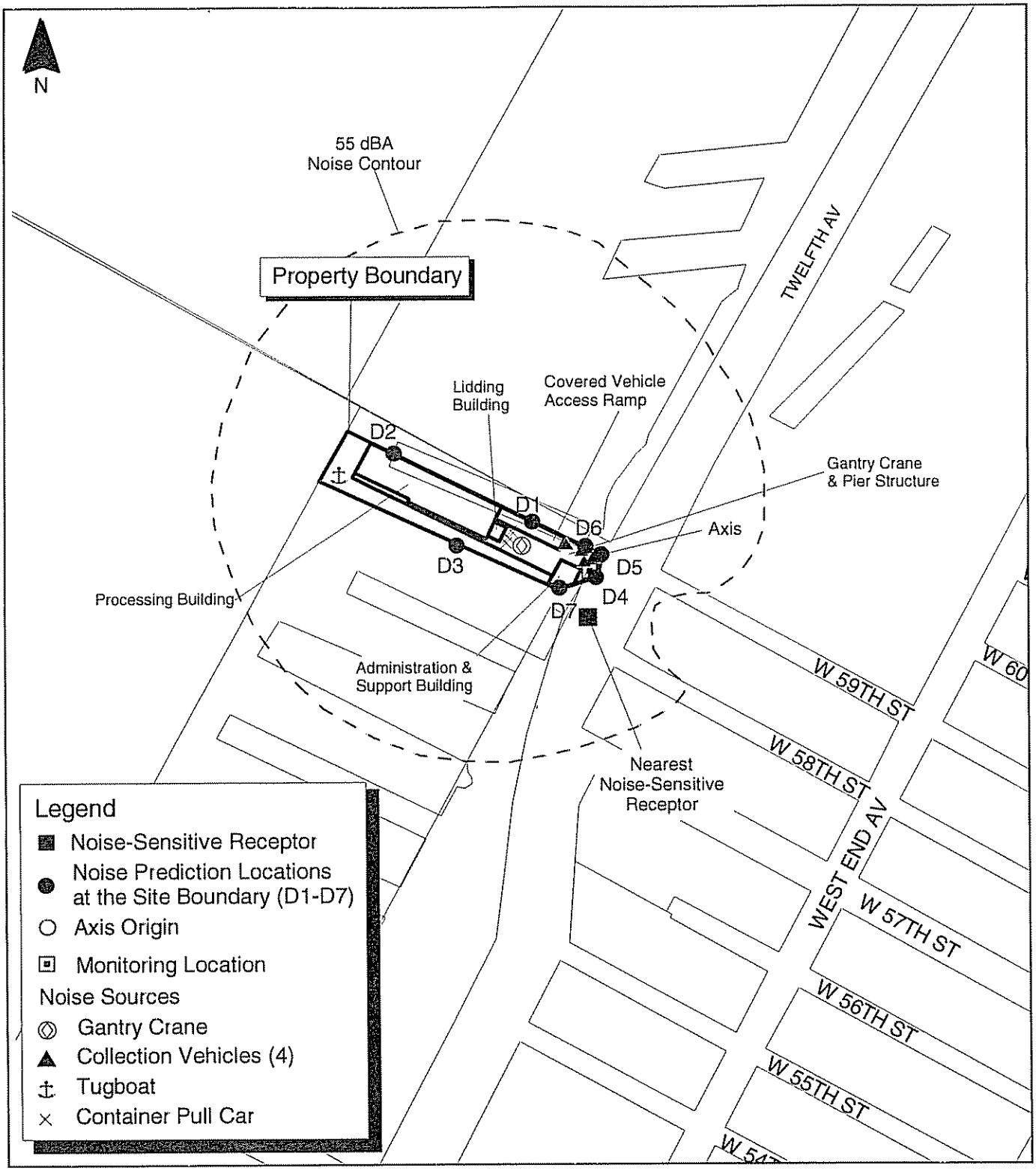
22.17.1.1 Introduction

Figure 22.17-1 shows the location of the West 59th Street Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is Riverside Park South directly adjacent the West 59th Street Converted MTS property line. Riverside Park South is a shared walkway area and public recreational bicycle path designated as parkland. It passes on the east side of the West 59th Street Converted MTS site. Additional residential areas exist immediately east and north of the path.

22.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included: $L_{eq(1)}$, L_{min} and L_{max},[12] and the statistical metrics of L_{10}, L_{50} and L_{90}.[13]

[12] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[13] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 22.17-1 Noise Sources and Receptors

West 59th Street Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

Table 22.17-1 presents monitored noise levels. As shown, the quietest hours at the monitoring location occurred between 5:00 p.m. to 6:00 p.m. and had an $L_{eq(1)}$ of 66.5 dBA on December 23, 2003. Although the quietest hour is typically a nighttime hour, the traffic conditions on the Henry Hudson Parkway during the evening rush hour, when cars are not moving, reduces the noise level that would normally be expected next to a highway. Activities and events that contribute to the on-site noise levels are as follows:

- Recycling activities at the existing West 59th Street MTS;
- Traffic from the Henry Hudson Parkway; and
- Marine activity on the Henry Hudson River.

22.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of noise from the existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the 59th Street Converted MTS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Therefore, no noise monitoring data were collected for off-site noise levels.

22.17.2 Future No-Build Conditions

22.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

22.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 22.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 22.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
West 59th Street Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
11:00 a.m.-12:00 p.m.	72.0	66.9	69.4	75.1	63.4	87.2
12:00-1:00 p.m.	69.5	64.3	67.7	70.9	60.1	87.8
1:00-2:00 p.m.	70.8	67.2	69.2	72.6	64.3	82.7
2:00-3:00 p.m.	70.4	66.9	69.2	72.2	63.4	85.6
3:00-4:00 p.m.	72.1	66.0	68.5	71.6	62.1	94.1
4:00-5:00 p.m.	68.8	65.6	67.9	70.2	62.2	83.3
5:00-6:00 p.m.	66.5	61.8	65.2	68.4	57.9	81.3
6:00-7:00 p.m.	72.8	60.6	64.7	68.4	58.0	102.1
7:00-8:00 p.m.	67.9	64.8	67.3	69.7	59.5	81.1
8:00-9:00 p.m.	69.0	64.7	67.4	70.5	56.7	81.9
9:00-10:00 p.m.	67.4	64.4	66.8	69.0	58.3	80.2
10:00-11:00 p.m.	68.6	64.4	67.3	69.8	59.3	82.8
11:00 p.m.-12:00 a.m.	67.8	64.1	67.0	69.4	57.8	81.7
12:00-1:00 a.m.	70.1	64.5	67.4	71.9	59.7	86.8
1:00-2:00 a.m.	68.1	60.6	65.1	71.3	53.9	81.0
2:00-3:00 a.m.	70.6	60.5	65.9	73.7	55.2	90.9
3:00-4:00 a.m.	68.8	59.0	64.6	71.5	54.4	88.8
4:00-5:00 a.m.	67.1	58.7	63.4	68.9	55.0	84.9
5:00-6:00 a.m.	68.9	61.3	65.7	70.3	55.0	91.9
6:00-7:00 a.m.	68.9	65.1	68.7	70.6	58.1	80.5
7:00-8:00 a.m.	70.3	67.8	69.8	71.8	63.1	79.0
8:00-9:00 a.m.	69.8	66.2	68.7	71.2	61.1	84.8
9:00-10:00 a.m.	69.6	65.4	68.2	70.9	59.0	87.0
10:00-11:00 a.m.	73.3	67.2	70.3	75.4	60.3	99.0

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest noise-sensitive receptor to identify the quietest background hour.

Table 22.17-2
Off-Site Noise Traffic Volume
West 59th Street Converted MTS

Location	Hour Beginning	Existing Traffic Volume (1) (Vehicles / Hour)	Future No-Build Traffic Volume (2) (Vehicles / Hour)
12th Avenue between West 58th & W 59th Streets	11:00 a.m.	94	95
West 59th Street between 10th & 11th Avenues	2:00 a.m.	68	69
West 59th Street between 10th & 11th Avenues	11:00 a.m.	375	381

Notes:
(1) Existing Traffic Volumes are based on ATR data.
(2) Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

22.17.3 Potential Impacts with the West 59th Street Converted MTS

22.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the West 59th Street Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 22.17-3. Spectral noise levels used in the Performance Standards Noise Code analysis are shown in Table 22.17-4. The number and types of equipment assumed for this analysis were based on the West 59th Street Converted MTS's peak design capacity. Shown earlier, Figure 22.17-1 indicates the West 59th Street Converted MTS layout, the locations of the points along the facility boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 22.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
West 59th Street Converted MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA) [2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (13)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1) [3]	67
Harbor Tug Boat (1) [4]	69
Moving/Queuing DSNY Collection Vehicles (4) [5]	67

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Noise level representative of each piece of equipment.

(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the Converted MTS's.

(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the Converted MTS's.

(5) Quantity includes one truck queuing on the outbound scale.

Table 22.17-4
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
West 59th Street Converted MTS

Equipment Name (quantity) [1],[2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [4]	78	81	78	72	66	60	55	55

Notes:

(1) Instantaneous maximum number of pieces of equipment on site at any given time.

(2) Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.

(3) Noise level representative of individual pieces of equipment.

(4) Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTS's.

Hz = Hertz

K = Thousand

22.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the West 59th Street Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 61 meters (199 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is directly abutting the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA, (i.e., the point off site where noises generated on site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 22.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on noise monitoring provided in Table 22.17-1 above. A detailed noise analysis was performed to calculate the West 59th Street Converted MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The difference between this combined noise level and the existing noise level at the noise-sensitive receptor represents the predicted incremental change in noise level from the West 59th Converted MTS. Since the quietest hour occurs during the daytime, the CEQR threshold is 65 dBA. However, since the background noise level is greater than 62 dBA, an impact would be caused if the predicted incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor. Therefore, there is a predicted impact that would be caused by the West 59th Converted MTS on-site operations based on this conservative analysis.

On-site queuing collection vehicles were further analyzed to refine the calculated noise levels from the West 59th Street Converted MTS facility truck ramp to the Riverside Park South receptor. Individual, position-specific utilization factors were assigned to each inbound collection vehicle position on the inbound side of the ramp, and to one collection vehicle position on the outbound scale based on the processing time at the West 59th Street Converted MTS. The utilization factor for each truck was estimated based on the peak hour of inbound collection vehicles, totaling 8 trucks and conservatively assuming these utilization factors would occur for 24 hours. The assumption was made that each inbound truck would be queuing on-site for approximately two minutes before proceeding one truck length further up the ramp towards the facility.

Table 22.17-5 below shows the results of the CEQR analysis with the refined queuing analysis at the Riverside Park South. The table includes the existing noise level at the noise-sensitive receptors, the West 59th Street Converted MTS-related noise levels and the combined noise level. The table also provides the difference between this combined noise level and the existing noise level at the sensitive receptors. This difference represents the predicted incremental change in noise level from the West 59th Street Converted MTS. Because this incremental change is less than the CEQR threshold of 3 dBA during nighttime hours, or during daytime hours when the daytime background noise level is greater than 62 dBA, for the Riverside Park South receptor analyzed, there is no predicted impact that would be caused by the West 59th Street Converted MTS on-site operations.

22.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the West 59th Street Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 22.17-6). ~~Based on this analysis, no exceedances to the Performance Standards are predicted.~~

The NYC Zoning Resolution Performance Standards for Noise (Article IV: Manufacturing District Regulations, Section 42-21) requires that a lower standard (Maximum Permitted Sound Pressure Levels identified in 42-213 lowered by 6 dB) be met at any point at the manufacturing district boundary that adjoins a residential district. Two locations analyzed that are residentially zoned, though use of this property is recreational (not residential), are points on the promenade between the Henry Hudson Parkway and the Hudson River to the north of the entrance ramp to the existing MTS. (The closest actual residence to this point is across the Henry Hudson Parkway, over 1,150 feet away on West End Avenue). Background noise levels at the point on the promenade are between 7.1 dB and 39.7 dB higher that the required standard, adjusted for residential zoning. At these levels, the theoretical exceedance at the boundary cannot be perceived and, therefore, no impact is predicted.

Table 22.17-5
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor with Refined On-Site Queuing Collection Vehicle Utilization Factor
West 59th Street Converted MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Riverside Park South	Directly abutting	65.4	~~61.0~~ 60.2	~~66.8~~ 66.6	~~1.4~~ 1.2	No

Notes:
(1) Twenty-minute noise level readings measured at the closest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.
(2) Existing noise levels measured on February 10, 2004 at 5:00 p.m.
(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(4) According to CEQR, an increase of 3 dBA or more, when the daytime existing noise level is greater than 62 dBA, is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the West 59th Street Converted MTS with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the daytime hours for the nearest noise-sensitive receptor; therefore, only daytime impact criteria are discussed in this analysis for this noise-sensitive receptor.

Table 22.17-6
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
West 59th Street Converted MTS

Manufacturing District Regulation (M3)								
Frequency (Hz)	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
M3 Threshold	**79**	**74**	**69**	**63**	**57**	**52**	**48**	**45**
Residential adj. to M3Threshold	**73**	**68**	**63**	**57**	**51**	**46**	**42**	**39**
Total Lp dB: D1[(1)]	65.5	63.5	59.0	52.2	46.8	40.6	36.1	37.0
Total Lp dB: D2[(1)]	62.0	56.8	48.2	41.9	35.0	27.3	19.4	17.1
Total Lp dB: D3	52.6	55.1	51.9	44.7	39.1	32.1	24.5	21.0
Total Lp dB: D4	59.8	62.1	59.0	52.0	46.8	40.6	35.0	34.3
Total Lp dB: D5[(1)]	64.0	66.8	**63.7**	56.6	**51.5**	45.2	39.6	38.8
Total Lp dB: D6[(1)]	65.3	68.0	**64.9**	**57.9**	**52.8**	**46.7**	41.4	**41.1**
Total Lp dB: D7	67.2	69.6	66.5	59.4	54.3	48.1	42.8	42.4

Notes:
(1) This boundary point is adjacent to a residential zone., therefore Residential adjacent to M3 threshold is applicable.
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
D1 through ~~D5~~ D7 are points representative of the West 59th Street Converted MTS boundary that are used in all noise analyses.
K = Thousand
Bold = Exceedance

22.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the West 59th Street Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. The overall noise predictions were based on the refined queuing analysis. ~~This is~~is The results are shown in Table 22.17-7. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 22.17-7
Current Noise Code Analysis
West 59th Street Converted MTS

Location at Plant Boundary(1)	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	~~61.6~~ 56.2
D2	~~51.3~~ 47.6
D3	~~63.0~~ 52.5
D4	~~64.6~~ 65.3
D5	~~68.2~~ 69.3
D6	69.7
D7	62.6

Note:
(1) D1 through D7 are points representative of the West 59th Street Converted MTS boundary that are used in all noise analyses.

analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 22.17-8.

Because the screening results presented above showed that the PCEs would not double on a roadway due to DSNY and other agency collection vehicles coming to or going from the West 59th Street Converted MTS, a detailed off-site noise analysis was not required.

22.17.3.6 Combined On-Site and Off-Site Noise Levels

An ~~off~~-on-site noise analysis was performed for the West 59th Street Converted MTS. The results of the ~~on~~off-site screening analysis showed that PCEs would not double on a roadway due to DSNY and other agency collection vehicles. ~~noise-sensitive receptors were not located within the 55-dBA contour line (see Figure 4.17-1); therefore~~Therefore, ~~on~~off-site noise monitoring and an ~~on~~off-site noise analysis were not required. Since an ~~on~~off-site analysis was not required, a combined noise analysis was not performed.

Table 22.17-8
Off-Site Noise Screening Results
West 59th Street Converted MTS

Location	Hour Beginning	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
12th Avenue between Westr 58th and West 59th Streets	11:00 a.m.	1,523	10	0	470	1993	No
West 59th Street between 10th and 11th Avenues	2:00 a.m.	528	3	0	141	669	No
West 59th Street between 10th and 11th Avenues	11:00 a.m.	1,736	17	0	799	2,535	No

Notes:
(1) Total PCEs are rounded to the nearest whole number.
(2) Future Build PCEs include West 59th Street Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47, and employee vehicles are converted to PCEs using a factor of 1.
(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

22.18 Commercial Waste to the West 59th Street Converted MTS

22.18.1 Existing Conditions

No commercial waste is delivered to the West 59th Street MTS site under Existing Conditions. Commercial waste generated in Manhattan is taken directly out of the City to remote disposal locations.

22.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the West 59th Street Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

22.18.3 Potential Impacts of Sending Commercial Waste to the West 59th Street Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

22.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the West 59th Street Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 2,145 tpd (see Sections 22.15, 22.16 and 22.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

22.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the West 59th Street Converted MTS were evaluated in Sections 22.14, 22.15 and 22.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 22.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 21 (inbound trip ends) per hour, which occurred during the AM peak. These 21 DSNY and other agency collection vehicles are also more than the 12 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the West 59th Street Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 21 DSNY and other collection agency vehicles at the West 59th Street Converted MTS. Therefore, the addition of the 12 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the West 59th Street Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 21 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 21 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts at several analyzed intersections. Consequently, because the 12 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can travel through these intersections per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

For the intersection of Route 9A and West 57th Street, a Tier II analysis was required. The estimated actual hourly distribution over 24 hours included the estimated 21 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that could potentially be processed at the West 59th Street Converted MTS, and no unmitigatible significant adverse environmental impacts were identified.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the West 59th Street Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 956 tons (or 91 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.

CHAPTER 22A ENVIRONMENTAL REVIEW – 215 VARICK AVENUE SITE (NEW CHAPTER)

22a.1 Introduction

The 215 Varick Avenue Transfer Station is a potential Alternative site that has been added after publication of the DEIS. Should the Alternative become a part of the Proposed Action, a detailed environmental review will be required and submitted in a supplemental environmental review to this FEIS.

22a.2 Land Use, Zoning, and Public Policy

See Section 22a.1 for a description of the analysis required.

22a.3 Socioeconomic Conditions

See Section 22a.1 for a description of the analysis required.

22a.4 Community Facilities and Services

See Section 22a.1 for a description of the analysis required.

22a.5 Open Space

See Section 22a.1 for a description of the analysis required.

22a.6 Cultural Resources

See Section 22a.1 for a description of the analysis required.

22a.7 Urban Design, Visual Resources, and Shadows

See Section 22a.1 for a description of the analysis required.

22a.8 Neighborhood Character

See Section 22a.1 for a description of the analysis required.

22a.9 Natural Resources

See Section 22a.1 for a description of the analysis required.

22a.10 Hazardous Materials

See Section 22a.1 for a description of the analysis required.

22a.11 Water Quality

See Section 22a.1 for a description of the analysis required.

22a.12 Waterfront Revitalization Program

See Section 22a.1 for a description of the analysis required.

22a.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

See Section 22a.1 for a description of the analysis required.

22a.14 Traffic, Parking, Transit, and Pedestrians

See Section 22a.1 for a description of the analysis required.

22a.15 Air Quality

See Section 22a.1 for a description of the analysis required.

22a.16 Odor

See Section 22a.1 for a description of the analysis required.

22a.17 Noise

See Section 22a.1 for a description of the analysis required.

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CHAPTER 22B ENVIRONMENTAL REVIEW – STEEL STYLE SHIPYARD (NEW CHAPTER)

22b.1 Introduction

The Steel Steel Shipyard is a potential Alternative site that has been added after publication of the DEIS. Should the Alternative become a part of the Proposed Action, a detailed environmental review will be required and submitted in a supplemental environmental review to this FEIS.

22b.2 Land Use, Zoning, and Public Policy

See Section 22b.1 for a description of the analysis required.

22b.3 Socioeconomic Conditions

See Section 22b.1 for a description of the analysis required.

22b.4 Community Facilities and Services

See Section 22b.1 for a description of the analysis required.

22b.5 Open Space

See Section 22b.1 for a description of the analysis required.

22b.6 Cultural Resources

See Section 22b.1 for a description of the analysis required.

22b.7 Urban Design, Visual Resources, and Shadows

See Section 22b.1 for a description of the analysis required.

22b.8 Neighborhood Character

See Section 22b.1 for a description of the analysis required.

22b.9 Natural Resources

See Section 22b.1 for a description of the analysis required.

22b.10 Hazardous Materials

See Section 22b.1 for a description of the analysis required.

22b.11 Water Quality

See Section 22b.1 for a description of the analysis required.

22b.12 Waterfront Revitalization Program

See Section 22b.1 for a description of the analysis required.

22b.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

See Section 22b.1 for a description of the analysis required.

22b.14 Traffic, Parking, Transit, and Pedestrians

See Section 22b.1 for a description of the analysis required.

22b.15 Air Quality

See Section 22b.1 for a description of the analysis required.

22b.16 Odor

See Section 22b.1 for a description of the analysis required.

22b.17 Noise

See Section 22b.1 for a description of the analysis required.

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CHAPTER 23 ENVIRONMENTAL REVIEW: EXISTING SOUTH BRONX MTS

23.1 Introduction

The results of the environmental analyses of the Existing South Bronx MTS are presented in the following sections:

23.2 Land Use, Zoning, and Public Policy
23.3 Socioeconomic Conditions
23.4 Community Facilities and Services
23.5 Open Space
23.6 Cultural Resources
23.7 Urban Design, Visual Resources, and Shadows
23.8 Neighborhood Character
23.9 Natural Resources
23.10 Hazardous Materials
23.11 Water Quality
23.12 Waterfront Revitalization Program
23.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
23.14 Traffic, Parking, Transit, and Pedestrians
23.15 Air Quality
23.16 Odor
23.17 Noise

Section 2.4.5 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

23.2 Land Use, Zoning, and Public Policy

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

23.3 Socioeconomic Conditions

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Socioeconomic Conditions section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.4 Community Facilities and Services

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Community Facilities and Services section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.5 Open Space

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Open Space section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.6 Cultural Resources

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Cultural Resources section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.7 Urban Design, Visual Resources, and Shadows

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

23.8 Neighborhood Character

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Neighborhood Character section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.9 Natural Resources

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Natural Resources section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information of the review of this facility in this category.

23.10 Hazardous Materials

The Existing South Bronx MTS is located at the site of the South Bronx Converted MTS. The analysis of the Hazardous Materials section of the South Bronx Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

23.11 Water Quality

The Existing South Bronx MTS has a smaller footprint than the South Bronx Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the South Bronx Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing South Bronx MTS.

23.12 Waterfront Revitalization Program

The Existing South Bronx MTS has a smaller footprint than the South Bronx Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts for the South Bronx Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing South Bronx MTS.

23.13 Infrastructure. Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing South Bronx MTS would be equal to or less than the staffing levels of the South Bronx Converted MTS. Therefore, the analyses performed for the South Bronx Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing South Bronx MTS.

23.14 Traffic, Parking, Transit, and Pedestrians

The Existing South Bronx MTS may receive the same amount of DSNY-managed and potential commercial waste as the South Bronx Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the South Bronx Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing South Bronx MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

23.15 Air Quality

The Existing South Bronx MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the South Bronx Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the South Bronx Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing South Bronx ~~Street~~ MTS.

23.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing South Bronx MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing South Bronx MTS operating at 4,800 tpd.

Table 23.16-1
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing South Bronx MTS

Parameter	Resulting Odor Unit [1]
Estimated Detectable Concentration	5.0
Highest Result Type of Receptor Location of Receptor[2]	1.02 Fence Line Receptor Site Boundary
Closest Sensitive Receptor Result [2] Type of Receptor Distance to Receptor [3]	0.16 Prison Barge 340 Feet

Notes:
[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
[2] Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.
~~[1] D/T ratio is dimensionless.~~
~~[2] Measured from the site boundary.~~
~~[3] Measured from the site property line.~~

Table 23.16-2
Odor Sources Included in Odor Analysis
Existing South Bronx MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles[1]	21
Barge	2

Notes:
[1] This is the number of collection vehicle inbound and outbound from the MTS.

23.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing South Bronx MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

23.17.1 Existing Conditions

23.17.1.1 Introduction

Figure 23.17-1 shows the location of the Existing South Bronx Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 19.17.1.1 for further information.

23.17.1.2 On-Site Noise Levels

See Section 19.17.1.2.

23.17.1.3 Off-Site Noise Levels

See Section 19.17.1.3.

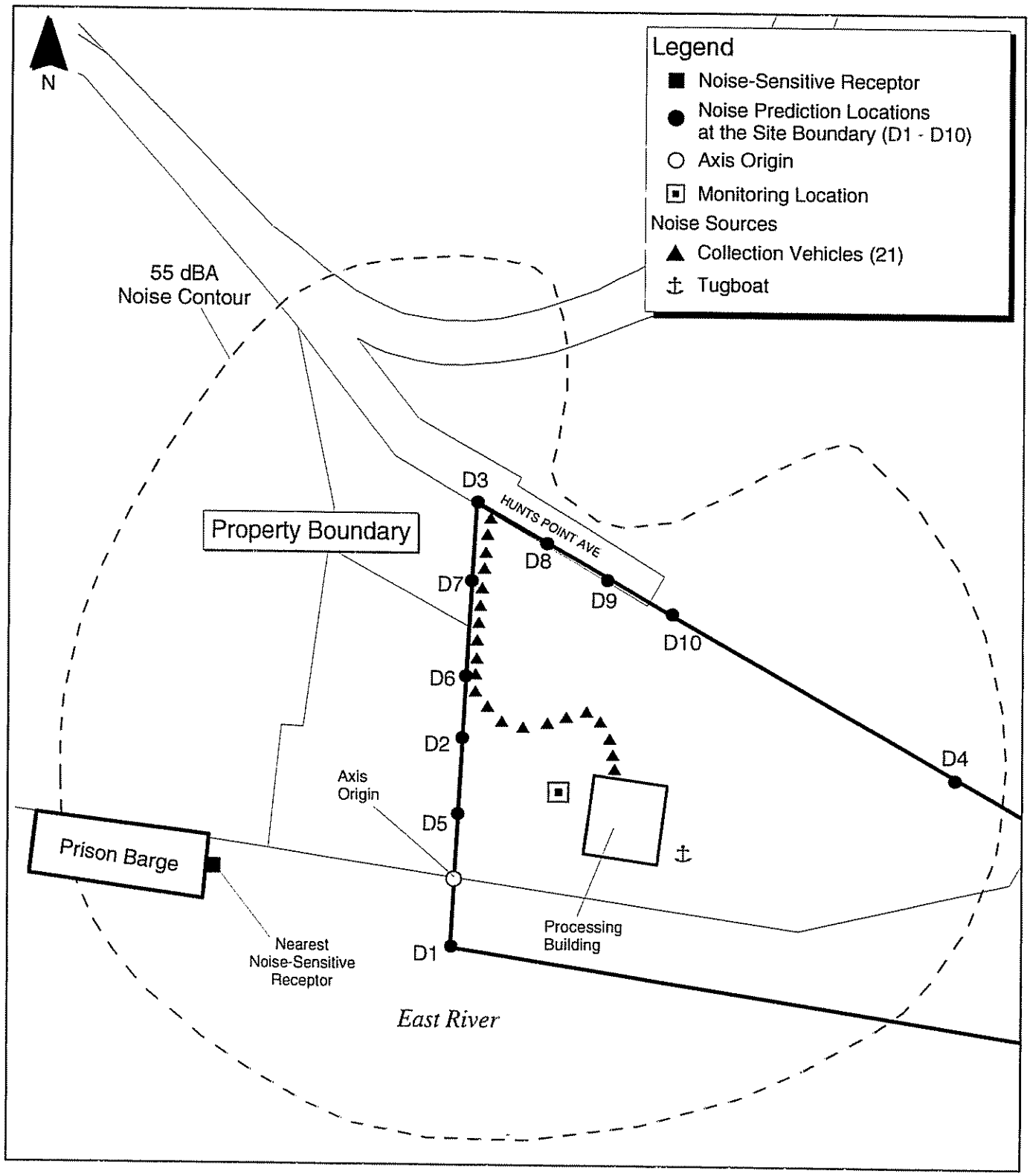
23.17.2 Future No-Build Conditions

23.17.2.1 On-Site Noise Levels

See Section 19.17.2.1.

23.17.2.2 Off-Site Noise Levels

See Section 19.17.2.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 23.17-1 Noise Sources and Receptors
Existing South Bronx MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

23.17.3 Potential Impacts with the Existing South Bronx MTS

23.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing South Bronx MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 23.17-1. The number and types of equipment assumed for this analysis were based on the Existing South Bronx MTS's peak design capacity. Shown earlier, Figure 23.17-1 indicates the Existing South Bronx MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

23.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing South Bronx MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 238 meters (781 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is approximately 197 meters (645 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. Since the background noise level at the receptor is 54.0 dBA, which is less than 55 dBA, the contour of the predicted facility L_{eq} equivalent to the background noise level is also shown in Figure 23.17-1. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 23.17-1). Therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitivereceptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Table 23.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing South Bronx MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Moving/Queuing Collection Vehicle (7)	~~73~~79.0
Outdoor	
Moving/Queuing Collection Vehicle (21)	67
Oceangoing Tugboat (1)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 19.17-1. Table 23.17-2 below identifies the existing background noise level during the quietest hour. The table shows the distance from the Existing South Bronx MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, Existing South Bronx MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. This difference represents the predicted incremental change in noise level from the Existing South Bronx MTS. Because this incremental change is greater than the CEQR threshold of 5 dBA at the nearest noise-sensitive receptor, since the existing daytime noise level is 60 dBA or less, there is a predicted impact that would be caused by the Existing South Bronx MTS on-site operations.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 23.17-2
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Existing South Bronx MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Prison Barge	197 / 645	53.5	62.0	62.6	9.1	Yes

Notes:
(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.
(2) Existing noise levels measured on May 7, 2003 at 3:00 p.m.
(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(4) According to CEQR, if the existing noise level is less than 60 dBA, an increase over 5 dBA during the daytime is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Existi South Bronx MTS with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the daytime hours for the noise-sensitive receptor; therefore, only daytime impact criteria are discussed in this analysis for this noise-sensitive receptor.

23.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

23.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing South Bronx MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 23.17-3. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 23.17-3
Current Noise Code Analysis
Existing South Bronx MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	63.9
D2	**71.6**
D3	69.0
D4	62.0
D5	**70.5**
D6	**73.9**
D7	**73.2**
D8	**73.5**
D9	67.7
D10	66.2

Notes:
D1 through D10 are points representative of the Existing South Bronx MTS boundary that are used in all noise analysis.
Bold = Exceedance

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis will be performed.

23.17.3.6 Off-Site Noise Levels

An off-site noise screening was performed in Section 19.17 for the Existing South Bronx MTS which did not require an off-site noise analysis; the trucks routed to the Existing South Bronx MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing South Bronx MTS.

23.17.3.7 Combined On-Site and Off-Site Noise Levels

An on-site noise analysis was performed for the Existing South Bronx MTS. As a result of the off-site screening analysis, which is described above in 19.17, no off-site noise analysis was required. Since an off-site analysis was not required, a combined noise analysis was not performed.

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CHAPTER 24 ENVIRONMENTAL REVIEW: EXISTING SOUTHWEST BROOKLYN MTS

24.1 Introduction

The results of the environmental analyses of the Existing Southwest Brooklyn MTS are presented in the following sections:

24.2 Land Use, Zoning, and Public Policy
24.3 Socioeconomic Conditions
24.4 Community Facilities and Services
24.5 Open Space
24.6 Cultural Resources
24.7 Urban Design, Visual Resources, and Shadows
24.8 Neighborhood Character
24.9 Natural Resources
24.10 Hazardous Materials
24.11 Water Quality
24.12 Waterfront Revitalization Program
24.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
24.14 Traffic, Parking, Transit, and Pedestrians
24.15 Air Quality
24.16 Odor
24.17 Noise

Section 2.4.6 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

24.2 Land Use, Zoning, and Public Policy

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

24.3 Socioeconomic Conditions

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Socioeconomic Conditions section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.4 Community Facilities and Services

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Community Facilities and Services section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.5 Open Space

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Open Space section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.6 Cultural Resources

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Cultural Resources section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.7 Urban Design, Visual Resources, and Shadows

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

24.8 Neighborhood Character

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Neighborhood Character section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.9 Natural Resources

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Natural Resources section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.10 Hazardous Materials

The Existing Southwest Brooklyn MTS is located at the site of the Southwest Brooklyn Converted MTS. The analysis of the Hazardous Materials section of the Southwest Brooklyn Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

24.11 Water Quality

The Existing Southwest Brooklyn MTS has a smaller footprint than the Southwest Brooklyn Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the Southwest Brooklyn Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing Southwest Brooklyn MTS.

24.12 Waterfront Revitalization Program

The Existing Southwest Brooklyn MTS has a smaller footprint than the Southwest Brooklyn Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the Southwest Brooklyn Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing Southwest Brooklyn MTS.

24.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing Southwest Brooklyn MTS would be equal to or less than the staffing levels of the Southwest Brooklyn Converted MTS. Therefore, the analyses performed for the Southwest Brooklyn Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing Southwest Brooklyn MTS.

24.14 Traffic, Parking, Transit, and Pedestrians

The Existing Southwest Brooklyn MTS may receive the same amount of DSNY-managed and potential commercial waste as the Southwest Brooklyn Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the Southwest Brooklyn Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing Southwest Brooklyn MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

24.15 Air Quality

The Existing Southwest Brooklyn MTS would have less on-site emission-generating equipment, but the sources located closer to the property line receptors, than the Southwest Brooklyn Converted MTS. This section presents the results of the air quality analysis for the Existing Southwest Brooklyn MTS operating at 4,800 tpd.

24.15.1 Potential Impacts with the Existing Southwest Brooklyn MTS

24.15.1.1 On-Site Analysis

24.15.1.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 24.15-1.

24.15.1.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 24.15-2. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Existing Southwest Brooklyn MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 24.15-2, are below the STVs. Based on the results presented in Table 24.15-2, operations at the Existing Southwest Brooklyn MTS would not significantly impact air quality in the area.

Table 24.15-1
Emission Sources Considered for On-Site Air Quality Analysis[1]
Existing Southwest Brooklyn MTS

Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Moving/Queuing Collection Vehicles	36	20
Space Heaters	10	4
Boiler	1	1
Outside Processing Building		
Moving Street Sweepers	0	0
Moving Collection Vehicles	69	20
Queuing Collection Vehicles[2]	33	3
Oceangoing Tugboats	1	1

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.
(2) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (33), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.

24.15.1.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 24.15-3. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Existing Southwest Brooklyn MTS are not considered to be significant.

Table 24.15-2
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Existing Southwest Brooklyn MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	914	3,781	4,695	40,000	NA
	8-hour[6]	403	2,635	3,038	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	18	56	74	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	19	~~91~~90	~~110~~109	150	NA
	Annual	2	~~27~~20	~~29~~22	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	3.5	NA	NA	NA	5
	Annual Neighborhood Average	0.02[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	155	~~152~~186	~~307~~341	1,300	NA
	24-hour[6]	16	~~94~~107	~~110~~123	365	NA
	Annual	2	~~24~~18	~~26~~20	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is quite conservative.

NA = Not Applicable

Table 24.15-3
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Existing Southwest Brooklyn MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk: Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Acute Non-Cancer Risk: Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Risk: Acute Non-Cancer Hazard Index[3]	Chronic Non-Cancer Risk: Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Chronic Non-Cancer Risk: Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Risk: Chronic Non-Cancer Hazard Index [6]	Cancer Risk: Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Cancer Risk: Unit Risk Factors [7] ($\mu g/m^3$)	Cancer Risk: Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	3.91E-01	1.30E+03	3.01E-04	4.39E-03	1.30E-01	3.38E-02	4.39E-03	8.30E-06	3.65E-08
2	Formaldehyde	4.95E-01	3.00E+01	1.65E-02	5.56E-03	6.00E-02	9.26E-02	5.56E-03	1.30E-05	7.23E-08
3	1,3 Butadiene	1.64E-02	-	-	1.84E-04	3.60E-03	5.12E-02	1.84E-04	2.80E-04	5.16E-08
4	Acetaldehyde	3.22E-01	4.50E+03	7.15E-05	3.61E-03	4.50E-01	8.03E-03	3.61E-03	2.20E-06	7.95E-09
5	Benzo(a)pyrene	7.89E-05	-	-	8.85E-07	2.00E-03	4.43E-04	8.85E-07	1.70E-03	1.51E-09
Non-Carcinogenic Pollutants [10]										
6	Propylene	1.08E+00	-	-	1.22E-02	3.00E+03	4.05E-06	1.22E-02	NA	NA
7	Acrolein	3.88E-02	1.90E-01	2.04E-01	4.36E-04	2.00E-02	2.18E-02	4.36E-04	NA	NA
8	Toluene	1.72E-01	3.70E+04	4.64E-06	1.93E-03	4.00E+02	4.82E-06	1.93E-03	NA	NA
9	Xylenes	1.20E-01	4.30E+03	2.78E-05	1.34E-03	7.00E+02	1.92E-06	1.34E-03	NA	NA
10	Anthracene	7.84E-04	-	-	8.81E-06	2.00E-02	4.40E-04	8.81E-06	NA	NA
11	Benzo(a)anthracene	7.05E-04	-	-	7.91E-06	2.00E-02	3.96E-04	7.91E-06	NA	NA
12	Chrysene	1.48E-04	-	-	1.66E-06	2.00E-02	8.31E-05	1.66E-06	NA	NA
13	Naphthalene	3.56E-02	7.90E+03	4.50E-06	3.99E-04	3.00E+00	1.33E-04	3.99E-04	NA	NA
14	Pyrene	2.00E-03	-	-	2.25E-05	2.00E-02	1.13E-03	2.25E-05	NA	NA
15	Phenanthrene	1.23E-02	-	-	1.38E-04	2.00E-02	6.92E-03	1.38E-04	NA	NA
16	Dibenz(a,h)anthracene	2.45E-04	-	-	2.75E-06	2.00E-02	1.37E-04	2.75E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**2.21E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**2.17E-01**	**Total Estimated Combined Cancer Risk**		**1.70E-07**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 24.15-3:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGCs) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGCs) established by NYSDEC

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

24.15.1.2 Off-Site Analysis

An off-site air quality analysis was performed for the Southwest Brooklyn Converted MTS. The trucks routed to the Existing Southwest Brooklyn MTS would be equivalent to or less than this analysis. Therefore, no additional off-site air quality analysis is required for the Existing Southwest Brooklyn MTS.

24.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing Southwest Brooklyn MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing Southwest Brooklyn MTS operating at 4,800 tpd.

Table 24.16-1
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing Southwest Brooklyn MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	1.27
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.97
Type of Receptor	Rehabilitation Center
Distance to Receptor[3]	780 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

Table 24.16-2
Existing Southwest Brooklyn MTS
Odor Sources Included in Odor Analysis

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Barge	2
Queuing Collection Vehicles[1]	33

Notes:
(1) This is the number of collection vehicle inbound and outbound from the MTS.

24.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing Southwest Brooklyn MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

24.17.1 Existing Conditions

24.17.1.1 Introduction

Figure 24.17-1 shows the location of the Existing Southwest Brooklyn MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 5.17.1.1 for further information.

24.17.1.2 On-Site Noise Levels

See Section 5.17.1.2.

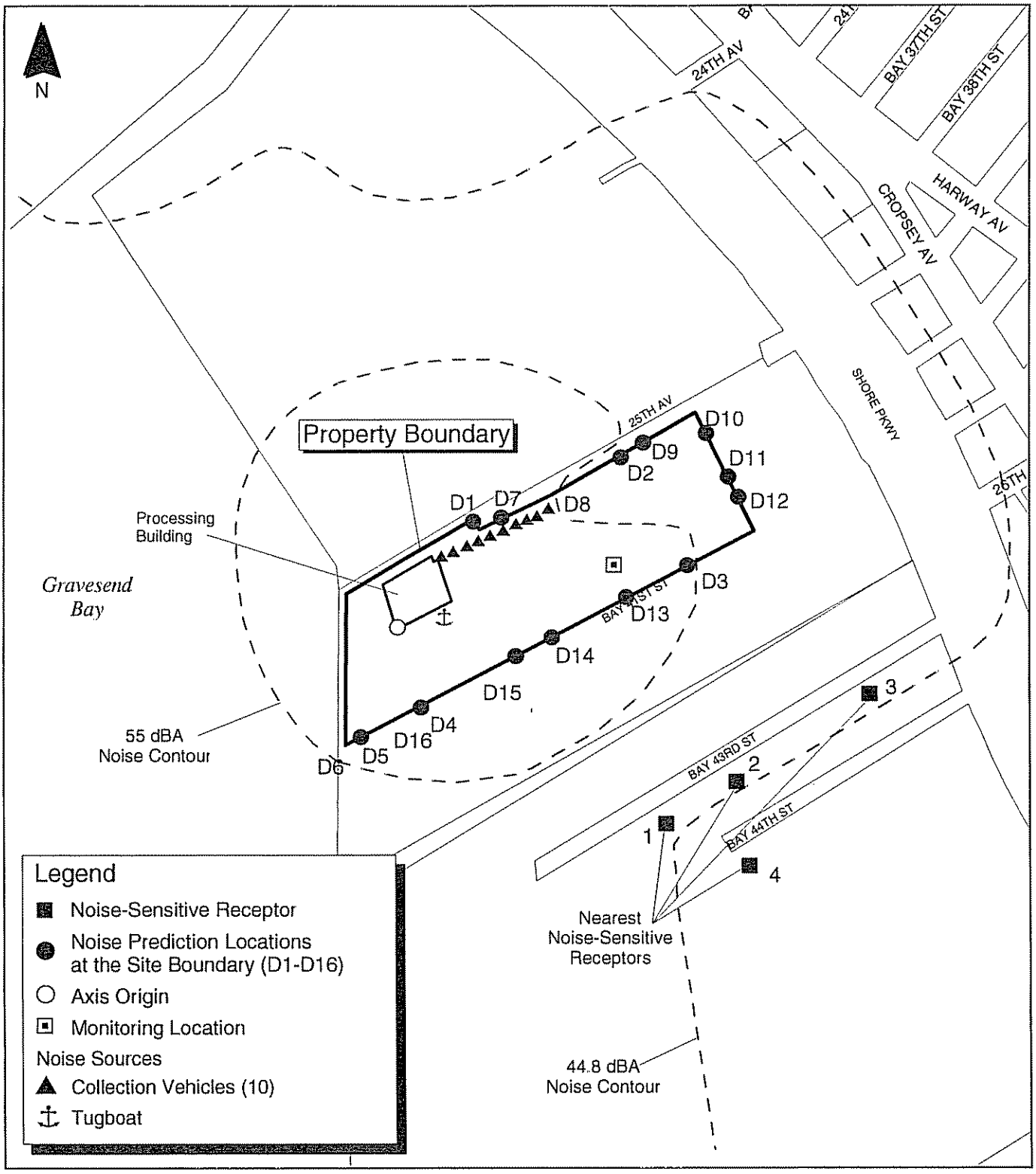
24.17.1.3 Off-Site Noise Levels

See Section 5.17.1.3.

24.17.2 Future No-Build Conditions

24.17.2.1 On-Site Noise Levels

See Section 5.17.2.1.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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Figure 24.17-1 Noise Sources and Receptors
Existing Southwest Brooklyn MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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24.17.2.2 Off-Site Noise levels

See Section 5.17.2.2.

24.17.3 Potential Impacts with the Existing Southwest Brooklyn MTS

24.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing Southwest Brooklyn MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 24.17-1. The number and types of equipment assumed for this analysis were based on the Existing Southwest Brooklyn MTS's peak design capacity. Shown earlier, Figure 24.17-1 indicates the Existing Southwest Brooklyn MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 24.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing Southwest Brooklyn MTS

Equipment Name (quantity) [1]	**Reference Sound Pressure Noise Level at 50 feet (dBA)**[2]
Indoor	
Moving/Queuing Collection Vehicle (8)	~~73~~79.0
Outdoor	
Moving/Queuing Collection Vehicle -(10)	67
Oceangoing Tugboat (1)	73

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

24.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing Southwest Brooklyn MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 72 meters (237 feet) from the property boundary in the direction of the rehabilitation center, which is approximately 277 meters (910 feet) from the property boundary, approximately 66 meters (217 feet) from the property boundary in the direction of the residential house, which is approximately 239 meters (785 feet) from the property boundary, directly abutting the property boundary in the direction of the school which is approximately 228 meters (749 feet) from the property boundary and approximately 76 meters (250 feet) from the baseball field which is approximately 340 meters (1,114 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. Since the background noise level at the receptor is 44.8 dBA, which is less than 55 dBA, the contour of the predicted facility L_{eq} equivalent to the background noise level is also shown in Figure 24.17-1. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line. However, they are located within the contour based on the background noise level (see Figure 24.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hour based on monitoring data provided in Table 5.17-1. Table 24.17-2 below identifies the existing background noise level during the quietest hour. The table shows the distance from the Existing Southwest Brooklyn MTS to the noise-sensitive receptor, Existing Southwest Brooklyn MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. The difference represents the predicted incremental change in noise level from the Existing

Table 24.17-2
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Existing Southwest Brooklyn MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[4]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[5] (yes or no)
Rehabilitation Center [2]	277 / 910	44.8	56.1	56.4	11.6	Yes
Residential House [2]	239 / 785	44.8	56.1	56.4	11.6	Yes
Public School [3]	228 / 749	50.5	55.8	56.9	6.4	Yes
Baseball Field [3]	340 / 1114	50.5	54.6	56.0	5.5	Yes

Notes:

[1] Twenty-minute noise level readings measured at the closest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

[2] Existing noise levels measured on February 10, 2004 at 2:00 a.m.

[3] Existing noise levels measured on February 10, 2004 at 1:00 p.m.. This was the quietest daytime hour. The quietest nighttime hour was not used since the Baseball Field and Public School are assumed to be closed during nighttime hours.

[4] Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

[5] According to CEQR, an increase of 3 dBA or more at nighttime is considered an impact. In addition, if the daytime background noise level is 62 dBA or more, an increase of 3 dBA or more is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Existing Southwest Brooklyn MTS with the quietest background noise levels that occur during facility operation.

Southwest Brooklyn MTS. Because this incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor, there is a predicted impact that would be caused by the Existing Southwest Brooklyn MTS on-site operations.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

24.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

24.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing Southwest Brooklyn MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 24.17-3. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 24.17-3
Current Noise Code Analysis
Existing Southwest Brooklyn MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	**70.5**
D2	63.1
D3	55.7
D4	60.4
D5	57.4
D6	57.4
D7	**72.4**
D8	67.0
D9	61.4
D10	59.3
D11	54.6
D12	53.7
D13	61.8
D14	62.7
D15	61.8
D16	59.4

Notes:
D1 through D16 are points representative of the Existing Southwest Brooklyn MTS boundary that are used in all noise analysis.
Bold= exceedence

24.17.3.6 Off-Site Noise Analysis

An off-site noise analysis was performed in Section 5.17 for the Southwest Brooklyn Converted MTS; the trucks routed to the Existing Southwest Brooklyn MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing Southwest Brooklyn MTS.

24.17.3.7 Combined On-Site and Off-Site Noise Levels

An on-site noise analysis was performed for the Existing Southwest Brooklyn MTS. As a result of the off-site screening analysis, which is described above in 5.17, no off-site noise analysis was required. Since an off-site analysis was not required, a combined noise analysis was not performed.

CHAPTER 25 ENVIRONMENTAL REVIEW: EXISTING GREENPOINT MTS

25.1 Introduction

The results of the environmental analyses of the Existing Greenpoint MTS are presented in the following sections:

25.2 Land Use, Zoning, and Public Policy
25.3 Socioeconomic Conditions
25.4 Community Facilities and Services
25.5 Open Space
25.6 Cultural Resources
25.7 Urban Design, Visual Resources, and Shadows
25.8 Neighborhood Character
25.9 Natural Resources
25.10 Hazardous Materials
25.11 Water Quality
25.12 Waterfront Revitalization Program
25.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
25.14 Traffic, Parking, Transit, and Pedestrians
25.15 Air Quality
25.16 Odor
25.17 Noise

Section 2.4.7 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

25.2 Land Use, Zoning, and Public Policy

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

25.3 Socioeconomic Conditions

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Socioeconomic Conditions section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.4 Community Facilities and Services

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Community Facilities and Services section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.5 Open Space

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Open Space section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.6 Cultural Resources

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Cultural Resources section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.7 Urban Design, Visual Resources, and Shadows

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

25.8 Neighborhood Character

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Neighborhood Character section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.9 Natural Resources

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Natural Resources section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.10 Hazardous Materials

The Existing Greenpoint MTS is located at the site of the Greenpoint Converted MTS. The analysis of the Hazardous Materials section of the Greenpoint Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

25.11 Water Quality

The Existing Greenpoint MTS has a smaller footprint than the Greenpoint Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the Greenpoint Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing Greenpoint MTS.

25.12 Waterfront Revitalization

The Existing Greenpoint MTS has a smaller footprint than the Greenpoint Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the Greenpoint Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing Greenpoint MTS.

25.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing Greenpoint MTS would be equal to or less than the staffing levels of the Greenpoint Converted MTS. Therefore, the analyses performed for the Greenpoint Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing Greenpoint MTS.

25.14 Traffic and Transportation

The Existing Greenpoint MTS may receive the same amount of DSNY-managed and potential commercial waste as the Greenpoint Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the Greenpoint Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing Greenpoint MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

25.15 Air Quality

The Existing Greenpoint MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the Greenpoint Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the Greenpoint Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing Greenpoint MTS.

25.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing Greenpoint MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing Greenpoint MTS operating at 4,800 tpd.

25.16.1 Potential Impacts with the Existing Greenpoint MTS

25.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing Greenpoint MTS are provided in Table 25.16-1.

Table 25.16-1
Odor Sources Included in Odor Analysis
Existing Greenpoint MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles[1]	9
Barge	2

Notes:
(1) This is the number of collection vehicle inbound and outbound from the MTS.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Existing Greenpoint MTS.

25.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 25.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing Greenpoint MTS at any nearby sensitive receptor is less than 1, so odors from the Existing Greenpoint MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 25.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing Greenpoint MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	1.43
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.06
Type of Receptor	Apartment Building
Distance to Receptor[3]	1,188 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

25.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing Greenpoint MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

25.17.1 Existing Conditions

25.17.1.1 Introduction

Figure 25.17-1 shows the location of the Existing Greenpoint MTS, the surrounding area and points that represent the property boundary (D1, etc.) for all noise analyses. See Section 20.17.1.1 for further information.

25.17.1.2 On-Site Noise Levels

See Section 20.17.1.2.

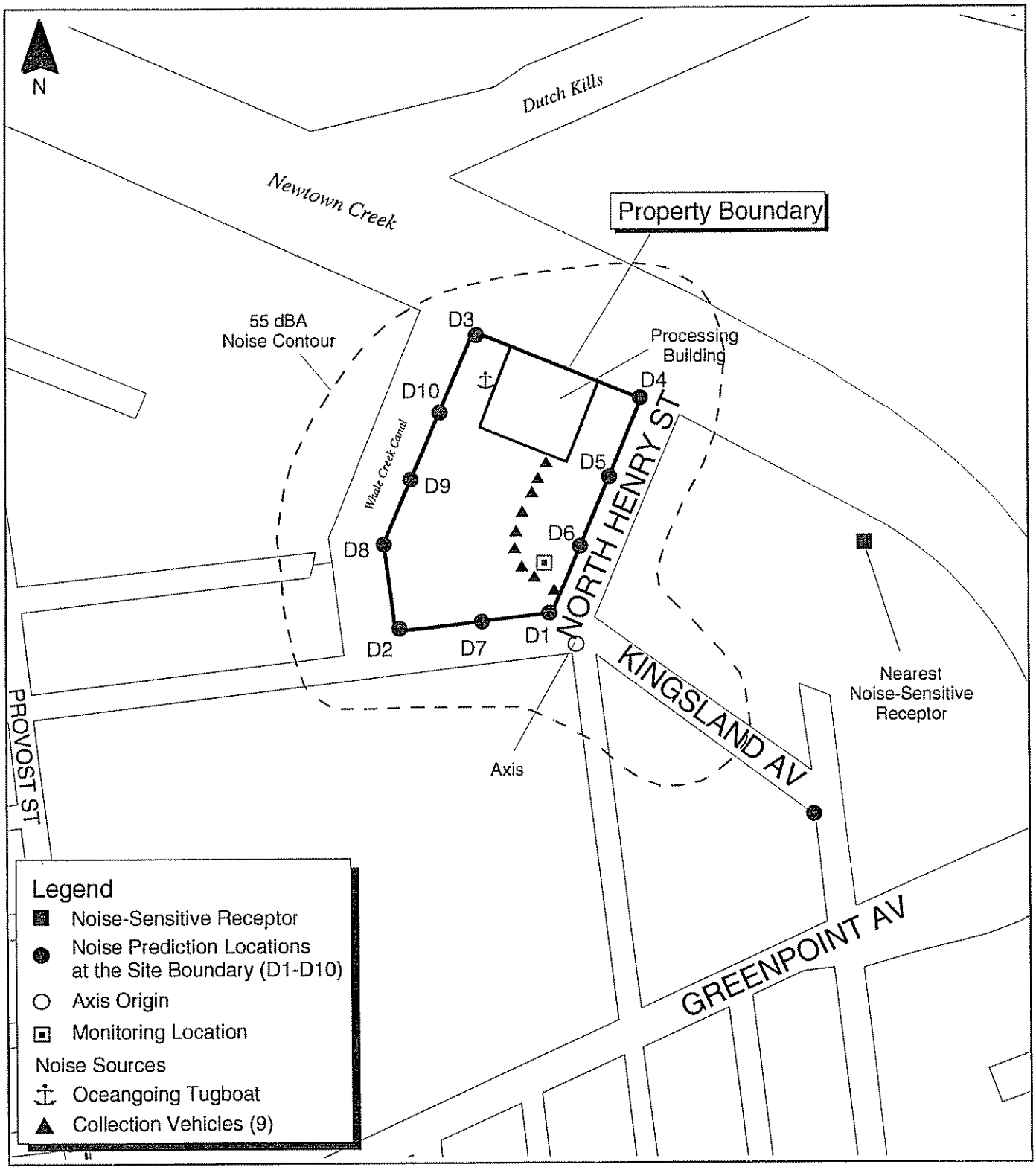
25.17.1.3 Off-Site Noise Levels

See Section 20.17.1.3.

25.17.2 Future No-Build Conditions

25.17.2.1 On-Site Noise Levels

See Section 20.17.2.1.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 25.17-1 Noise Sources and Receptors

Existing Greenpoint MTS

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25.17.2.2 Off-Site Noise Levels

See Section 20.17.2.2.

25.17.3 Potential Impacts with the Existing Greenpoint MTS

25.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing Greenpoint MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 25.17-1. The number and types of equipment assumed for this analysis were based on the Existing Greenpoint MTS's peak design capacity. Shown earlier, Figure 25.17-1 indicates the Existing Greenpoint MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

25.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing Greenpoint MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 51 meters (167 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is 761 meters (2,498 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 25.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

Table 25.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing Greenpoint MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Moving/Queuing Collection Vehicle (7)	~~73~~79.0
Outdoor	
Moving/Queuing Collection Vehicle (9)	67
Oceangoing Tugboat (1)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

25.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

25.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing Greenpoint MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 25.17-2. Based on this analysis, the total L_{eq} does ~~not~~ exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the New SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 25.17-2
Current Noise Code Analysis
Existing Greenpoint MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	65.7
D2	56.9
D3	62.9
D4	63.2
D5	68.5
D6	**71.1**
D7	63.8
D8	63.7
D9	66.0
D10	69.2

Notes:
D1 through D10 are points representative of the Existing Greenpoint MTS boundary that are used in all noise analysis.
Bold= exceedence

25.17.3.5 Off-Site Noise Levels

An off-site noise analysis was performed in Section 20.17 for the Greenpoint Converted MTS; the trucks routed to the Existing Greenpoint MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing Greenpoint MTS.

23.17.3.7 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Existing Greenpoint MTS, neither an on- or off-site noise analyses were required; therefore, a combined noise analysis was not performed.

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CHAPTER 26 ENVIRONMENTAL REVIEW: EXISTING HAMILTON AVENUE MTS

26.1 Introduction

The results of the environmental analyses of the Existing Hamilton Avenue MTS are presented in the following sections:

26.2 Land Use, Zoning, and Public Policy
26.3 Socioeconomic Conditions
26.4 Community Facilities and Services
26.5 Open Space
26.6 Cultural Resources
26.7 Urban Design, Visual Resources, and Shadows
26.8 Neighborhood Character
26.9 Natural Resources
26.10 Hazardous Materials
26.11 Water Quality
26.12 Waterfront Revitalization Program
26.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
26.14 Traffic, Parking, Transit, and Pedestrians
26.15 Air Quality
26.16 Odor
26.17 Noise

Section 2.4.8 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

26.2 Land Use, Zoning, and Public Policy

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

26.3 Socioeconomic Conditions

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Socioeconomic Conditions section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.4 Community Facilities and Services

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Community Facilities and Services section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.5 Open Space

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Open Space section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.6 Cultural Resources

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Cultural Resources section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.7 Urban Design, Visual Resources, and Shadows

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

26.8 Neighborhood Character

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Neighborhood Character section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.9 Natural Resources

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Natural Resources section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.10 Hazardous Materials

The Existing Hamilton Avenue MTS is located at the site of the Hamilton Avenue Converted MTS. The analysis of the Hazardous Materials section of the Hamilton Avenue Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

26.11 Water Quality

The Existing Hamilton Avenue MTS has a smaller footprint than the Hamilton Avenue Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the Hamilton Avenue Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing Hamilton Avenue MTS.

26.12 Waterfront Revitalization Program

The Existing Hamilton Avenue MTS has a smaller footprint than the Hamilton Avenue Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the Hamilton Avenue Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing Hamilton Avenue MTS.

26.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing Hamilton Avenue MTS would be equal to or less than the staffing levels of the Hamilton Avenue Converted MTS. Therefore, the analyses performed for the Hamilton Avenue Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing Hamilton Avenue MTS.

26.14 Traffic, Parking, Transit, and Pedestrians

The Existing Hamilton Avenue MTS may receive the same amount of DSNY-managed and potential commercial waste as the Hamilton Avenue Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the Hamilton Avenue Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing Hamilton Avenue MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

26.15 Air Quality

The Existing Hamilton Avenue MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the Hamilton Avenue Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the Hamilton Avenue Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing Hamilton Avenue MTS.

26.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing Hamilton Avenue MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing Hamilton Avenue MTS operating at 4,800 tpd.

26.16.1 Potential Impacts with the Existing Hamilton Avenue MTS

26.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing Hamilton Avenue MTS are provided in Table 26.16-1.

Table 26.16-1
Odor Sources Included in Odor Analysis
Existing Hamilton Avenue MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles[1]	13
Barge	2

Notes:
(1) This is the number of collection vehicle inbound and outbound from the MTS.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Existing Hamilton Avenue MTS.

26.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 26.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing Hamilton Avenue MTS at any nearby sensitive receptor is less than 1, so odors from the Existing Hamilton Avenue MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 26.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing Hamilton Avenue MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	~~1.54~~1.88
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.17
Type of Receptor	Apartment Buildings
Distance to Receptor[3]	372 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

26.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing Hamilton Avenue MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

26.17.1 Existing Conditions

26.17.1.1 Introduction

Figure 26.17-1 shows the location of the Existing Hamilton Avenue MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 4.17.1.1 for further information.

26.17.1.2 On-Site Noise Levels

See Section 4.17.1.2.

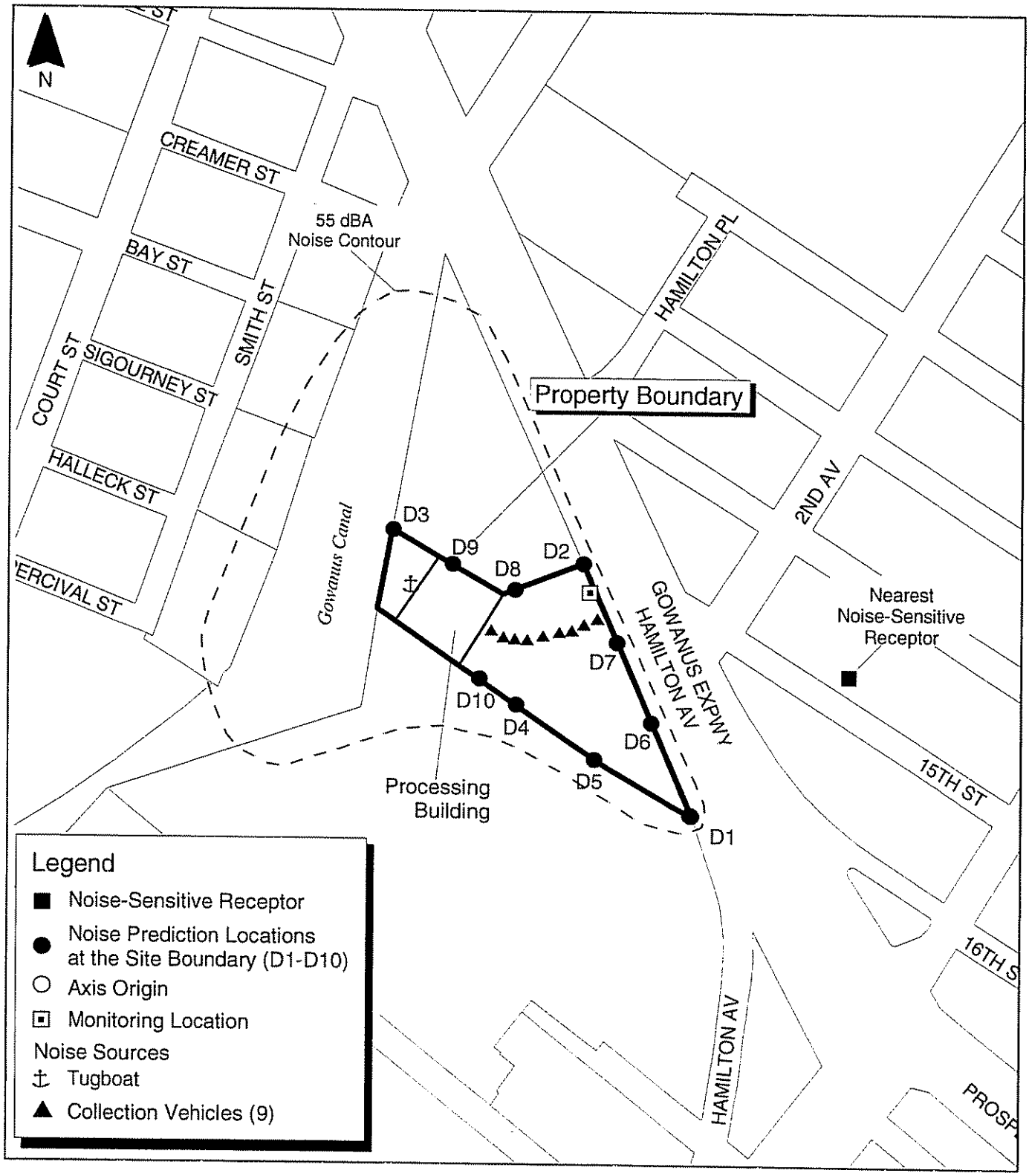
26.17.1.3 Off-Site Noise Levels

See Section 4.17.1.3.

26.17.2 Future No-Build Conditions

26.17.2.1 On-Site Noise Levels

See Section 4.17.2.1.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 26.17-1 Noise Sources and Receptors
Existing Hamilton Avenue MTS

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26.17.2.2 Off-Site Noise Levels

See Section 4.17.2.2.

26.17.3 Potential Impacts with the Existing Hamilton Avenue MTS

26.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing Hamilton Avenue MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 26.17-1. The number and types of equipment assumed for this analysis were based on the Existing Hamilton Avenue MTS's peak design capacity. Shown earlier, Figure 26.17-1 indicates the Existing Hamilton Avenue MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

26.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing Hamilton Avenue MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 22 meters (72 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is approximately 136 meters (447 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line; therefore, on-site noise monitoring and an on-site noise analysis were not required.

Table 26.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing Hamilton Avenue MTS

Equipment Name (quantity)[1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Moving/Queuing Collection Vehicle (6)	79
Outdoor	
Moving/Queuing Collection Vehicle (10)	67
Oceangoing Tugboat (1)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

26.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

26.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc) representative of the Existing Hamilton Avenue MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 26.17-2. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the ~~N~~new SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 26.17-2
Current Noise Code Analysis
Existing Hamilton Avenue MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	60.6
D2	68.3
D3	68.1
D4	66.1
D5	64.9
D6	**71.4**
D7	**70.3**
D8	67.6
D9	68.1
D10	63.4

Note:
Bold = Exceedance
D1 through D10 are points representative of the Existing Hamilton Avenue MTS boundary that are used in all noise analysis.

26.17.3.6 Off-Site Noise Levels

An off-site noise analysis was performed in Section 4.17 for the Hamilton Avenue Converted MTS; the trucks routed to the Existing Hamilton Avenue MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing Hamilton Avenue MTS.

26.17.3.7 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Existing Hamilton Avenue MTS, neither the on- or the off-site noise analyses were required; therefore, a combined noise analysis was not performed.

CHAPTER 27 ENVIRONMENTAL REVIEW: EXISTING WEST 135TH STREET MTS

27.1 Introduction

The results of the environmental analyses of the Existing West 135th Street MTS are presented in the following sections:

27.2 Land Use, Zoning, and Public Policy
27.3 Socioeconomic Conditions
27.4 Community Facilities and Services
27.5 Open Space
27.6 Cultural Resources
27.7 Urban Design, Visual Resources, and Shadows
27.8 Neighborhood Character
27.9 Natural Resources
27.10 Hazardous Materials
27.11 Water Quality
27.12 Waterfront Revitalization Program
27.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
27.14 Traffic, Parking, Transit, and Pedestrians
27.15 Air Quality
27.16 Odor
27.17 Noise

Section 2.4.9 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

27.2 Land Use, Zoning, and Public Policy

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

27.3 Socioeconomic Conditions

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Socioeconomic Conditions section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.4 Community Facilities and Services

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Community Facilities and Services section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.5 Open Space

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Open Space section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.6 Cultural Resources

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Cultural Resources section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.7 Urban Design, Visual Resources, and Shadows

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

27.8 Neighborhood Character

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Neighborhood Character section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.9 Natural Resources

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Natural Resources section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.10 Hazardous Materials

The Existing West 135th Street MTS is located at the site of the West 135th Street Converted MTS. The analysis of the Hazardous Materials section of the West 135th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

27.11 Water Quality

The Existing West 135th Street MTS has a smaller footprint than the West 135th Street Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the West 135th Street Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing West 135th Street MTS.

27.12 Waterfront Revitalization Program

The Existing West 135th Street MTS has a smaller footprint than the West 135th Street Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the West 135th Street Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing West 135th Street MTS.

27.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing West 135th Street MTS would be equal to or less than the staffing levels of the West 135th Street Converted MTS. Therefore the analyses performed for the West 135th Street Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing West 135th Street MTS.

27.14 Traffic, Parking, Transit, and Pedestrians

The Existing West 135th Street MTS may receive the same amount of DSNY-managed and potential commercial waste as the West 135th Street Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the West 135th Street Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing West 135th Street MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

27.15 Air Quality

The Existing West 135th Street MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the West 135th Street Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the West 135th Street Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing West 135th Street MTS.

27.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing West 135th Street MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing West 135th Street MTS operating at 4,800 tpd.

27.16.1 Potential Impacts with the Existing West 135th Street MTS

27.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing West 135th Street MTS are provided in Table 27.16-1.

Table 27.16-1
Odor Sources Included in Odor Analysis
Existing West 135th Street MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles[1]	46
Barge	2

Notes:
(1) This is the number of collection vehicle sources inbound and outbound from the MTS. The actual number of vehicles is 10.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Existing West 135th Street MTS.

27.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 27.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing West 135th Street MTS at any nearby sensitive receptor is less than 1, so odors from the Existing West 135th Street MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 27.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing West 135th Street MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	1.37
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.40
Type of Receptor	Riverbank State Park
Distance to Receptor(3)	60 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

27.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing West 135th Street MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

27.17.1 Existing Conditions

27.17.1.1 Introduction

Figure 27.17-1 shows the location of the Existing West 135th Street MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 21.17.1.1 for further information.

27.17.1.2 On-Site Noise Levels

See Section 21.17.1.2.

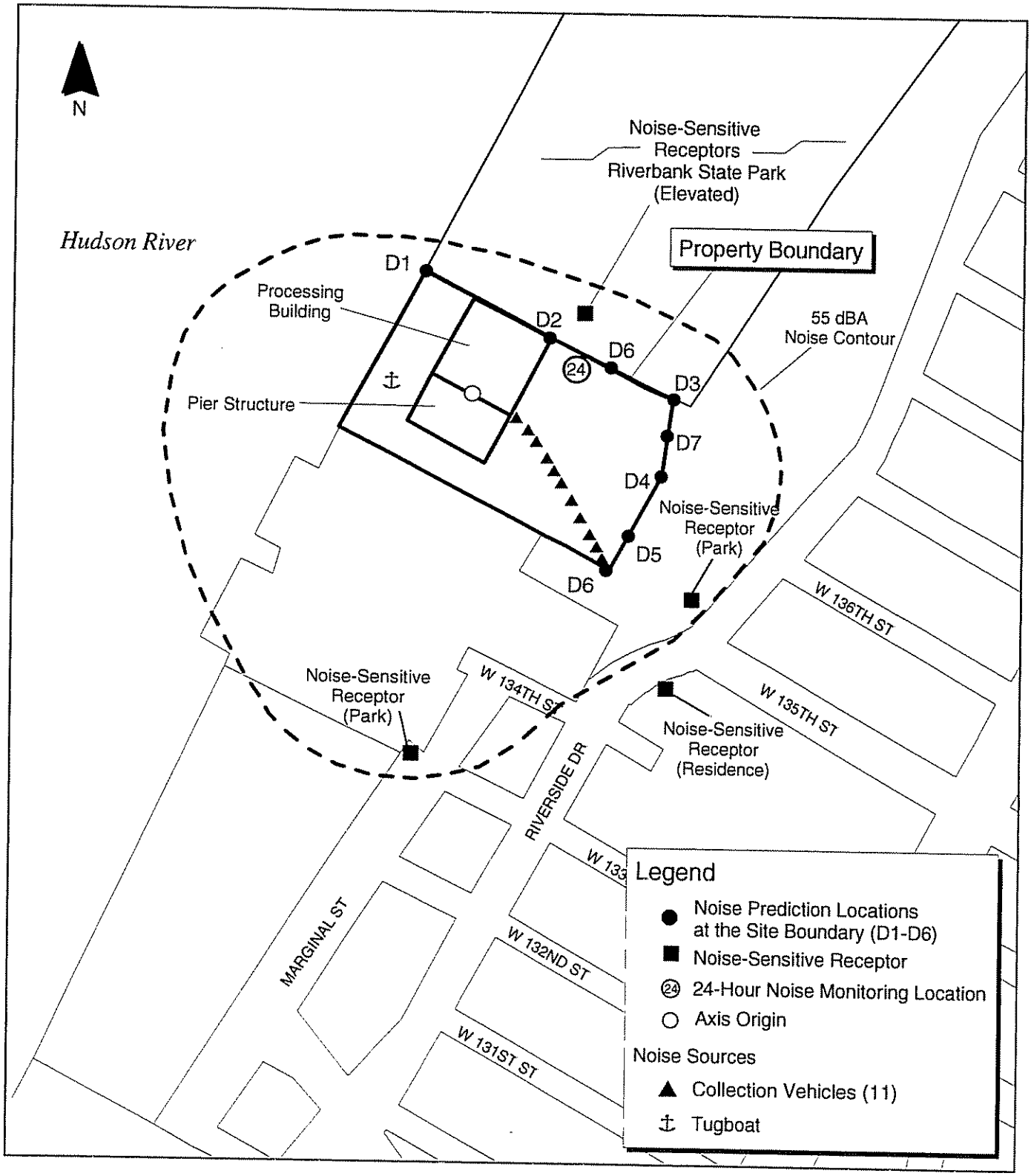
27.17.1.3 Off-Site Noise Levels

See Section 21.17.1.3.

27.17.2 Future No-Build Conditions

27.17.2.1 On-Site Noise Levels

See Section 21.17.2.1.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 27.17-1 Noise Sources and Receptors
Existing West 135th Street MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

27.17.2.2 Off-Site Noise Levels

See Section 21.17.2.2.

27.17.3 Potential Impacts with the Existing West 135th Street MTS

27.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing West 135th Street MTS and its reference noise levels, used in the CEQR and Current Noise Code analysis, are shown in Table 27.17-1. The number and types of equipment assumed for this analysis were based on the Existing West 135th Street MTS's peak design capacity. Shown earlier, Figure 27.17-1 indicates the Existing West 135th Street MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 27.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing West 135th Street MTS

Equipment Name (quantity)[1]	**Reference Sound Pressure Noise Level at 50 feet (dBA)**[2]
Indoor	
Moving/Queuing Collection Vehicle (7)	~~73~~79.0
Outdoor	
Moving/Queuing Collection Vehicle (10)	67
Oceangoing Tugboat (1)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

27.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing West 135th Street MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 61 meters (200 feet) from the property boundary in the direction of Riverbank State Park, which is approximately 27 meters (90 feet) away from the property boundary. The 55 dBA contour line is approximately 76 meters (250 feet) from the property boundary in the direction of Riverside Ramparts, which is approximately 67 meters (220 feet) away from the property boundary. Similarly, the 55 dBA contour line is approximately 69 meters (225 feet) from the property boundary in the direction of the apartment building on Riverside Drive, which is approximately 99 meters (325 feet) away from the property boundary. The 55 dBA contour line is approximately 213 meters (700 feet) from the property boundary in the direction of Harlem Piers Park, which is approximately 183 meters (600 feet) away from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55.dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1discusses this concept in greater detail. The results of the screening analysis show that three of the four noise-sensitive receptors are located within the 55 dBA contour line (see Figure 27.17-1). Therefore, an on-site noise analysis, including noise monitoring at the Riverbank State Park, Riverside Ramparts and Harlem Piers Park noise-sensitive receptors, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptors during the quietest hour based on monitoring data provided in Table 21.17-1. Table 27.17-2 below identifies the existing background noise level during the quietest hour. The table shows the distance from the Existing West 135th Street MTS to the noise-sensitive receptors, the monitored existing background noise level at the noise-sensitive receptors, Existing West 135th Street MTS-related predicted noise levels at the noise-sensitive receptors, and the predicted noise levels with both facility noise and

Table 27.17-2
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Existing West 135th Street MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/ feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Riverbank State Park	27 / 90	64.2	66.0	68.1	3.9	Yes
Riverside Ramparts Park	67/220	62.4	58.2	63.8	1.4	No
Riverside Drive Apartment	119/389	59.3	56.0	61.0	1.7	No
Harlem Piers Park	183 / 600	62.2	58.8	63.8	1.6	No

Notes:

(1) Twenty-minute noise level readings measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels at the proposed Harlem Piers Park were measured July 16, 2004 at 10:15 a.m. Existing noise levels at Riverside Ramparts were measured at August 18, 2004 at 10:40 a.m. Existing noise levels at Riverbank State Park were measured on April 16, 2003 at 2:45 p.m. Existing noise levels at Riverside Drive Apartment were measured on May 9, 2003 at 2:30 a.m.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase of 3 dBA during the daytime if the existing noise level is greater than 62 dBA is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Existing West 135th Street MTS with the quietest background noise levels that occur during its operation. Only an analysis during the quietest daytime noise levels was performed, since the parks are not expected to be opened during the nighttime hours.

background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptors. This difference represents the predicted incremental change in noise level from the Existing West 135th Street MTS. Because this incremental change is less than the CEQR threshold of 3 dBA, since the existing background noise level is 62 dBA or greater at all of the noise-sensitive receptors analyzed, there is ~~no~~ a predicted impact that would be caused by the Existing West 135th Street MTS on-site operations at the Riverbank State Park

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the New SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

27.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

27.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing West 135th Street MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 27.17-3. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the New SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 27.17-3
Current Noise Code Analysis
Existing West 135th Street MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	61.1
D2	65.1
D3	65.1
D4	**70.2**
D5	**72.7**
D6	**75.1**
D7	65.2
D8	67.6

Notes:
D1 through D8 are points representative of the Existing West 135th Street MTS boundary that are used in all noise analysis.
Bold= exceedence

27.17.3.6 Off-Site Noise Levels

An off-site noise analysis was performed in Section 21.17 for the West 135th Street Converted MTS. The trucks routed to the Existing West 135th Street MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis is required for the Existing West 135th Street MTS.

27.17.3.7 Combined On-Site and Off-Site Noise Levels

An on-site and off-site noise analysis was performed for the Existing West 135th Street MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis must be conducted to determine if a combined noise analysis would be required for the operations at the Existing West 135th Street MTS.

If this facility is chosen to be part of the New SWMP, a supplementary refined on-site noise analysis will be performed, including a combined noise analysis.

CHAPTER 28 ENVIRONMENTAL REVIEW: EXISTING WEST 59TH STREET MTS

28.1 Introduction

The results of the environmental analyses of the Existing West 59th Street MTS are presented in the following sections:

28.2 Land Use, Zoning, and Public Policy
28.3 Socioeconomic Conditions
28.4 Community Facilities and Services
28.5 Open Space
28.6 Cultural Resources
28.7 Urban Design, Visual Resources, and Shadows
28.8 Neighborhood Character
28.9 Natural Resources
28.10 Hazardous Materials
28.11 Water Quality
28.12 Waterfront Revitalization Program
28.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
28.14 Traffic, Parking, Transit, and Pedestrians
28.15 Air Quality
28.16 Odor
28.17 Noise

Section 2.4.10 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

28.2 Land Use, Zoning, and Public Policy

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

28.3 Socioeconomic Conditions

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Socioeconomic Conditions section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.4 Community Facilities and Services

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Community Facilities and Services section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.5 Open Space

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Open Space section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.6 Cultural Resources

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Cultural Resources section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.7 Urban Design, Visual Resources, and Shadows

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

28.8 Neighborhood Character

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Neighborhood Character section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.9 Natural Resources

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Natural Resources section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.10 Hazardous Materials

The Existing West 59th Street MTS is located at the site of the West 59th Street Converted MTS. The analysis of the Hazardous Materials section of the West 59th Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

28.11 Water Quality

The Existing West 59th Street MTS has a smaller footprint than the West 59th Street Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the West 59th Street Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing West 59th Street MTS.

28.12 Waterfront Revitalization Program

The Existing West 59th Street MTS has a smaller footprint than the West 59th Street Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the West 59th Street Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing West 59th Street MTS.

28.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing West 59th Street MTS would be equal to or less than the staffing levels of the West 59th Street Converted MTS. Therefore, the analyses performed for the West 59th Street Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing West 59th Street MTS.

28.14 Traffic, Parking, Transit, and Pedestrians

The Existing West 59th Street MTS may receive the same amount of DSNY-managed and potential commercial waste as the West 59th Street Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the West 59th Street Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing West 59th Street MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

28.15 Air Quality

The Existing West 59th Street MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the West 59th Street Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the West 59th Street Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing West 59th Street MTS.

28.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing West 59th Street MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing West 59th Street MTS operating at 4,800 tpd.

28.16.1 Potential Impacts with the Existing West 59th Street MTS

28.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing West 59th Street MTS are provided in Table 28.16-1.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% percent and 99% percent of odorous compounds. For purposes of modeling odor dispersion, a 90% percent reduction of odorous emissions was conservatively assumed for the Existing West 59th Street MTS.

Table 28.16-1
Odor Sources Included in Odor Analysis
Existing West 59th Street MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles[1]	1
Barge	4

Notes:
(1) This is the number of collection vehicle inbound and outbound from the MTS.

28.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 28.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing West 59th Street MTS at any nearby sensitive receptor is less than 1, so odors from the Existing West 59th Street MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 28.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing West 59th Street MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	1.54
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.2
Type of Receptor	Apartment Buildings
Distance to Receptor[3]	1,739 Feet

Notes:

(1) D/T ratio is dimensionless.

(2) Measured from the site boundary.

(3) Measured from the site property line.

28.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing West 59th Street MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

28.17.1 Existing Conditions

28.17.1.1 Introduction

Figure 28.17-1 shows the location of the Existing West 59th Street MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 22.17.1.1 for further information.

28.17.1.2 On-Site Noise Levels

See Section 22.17.1.2.

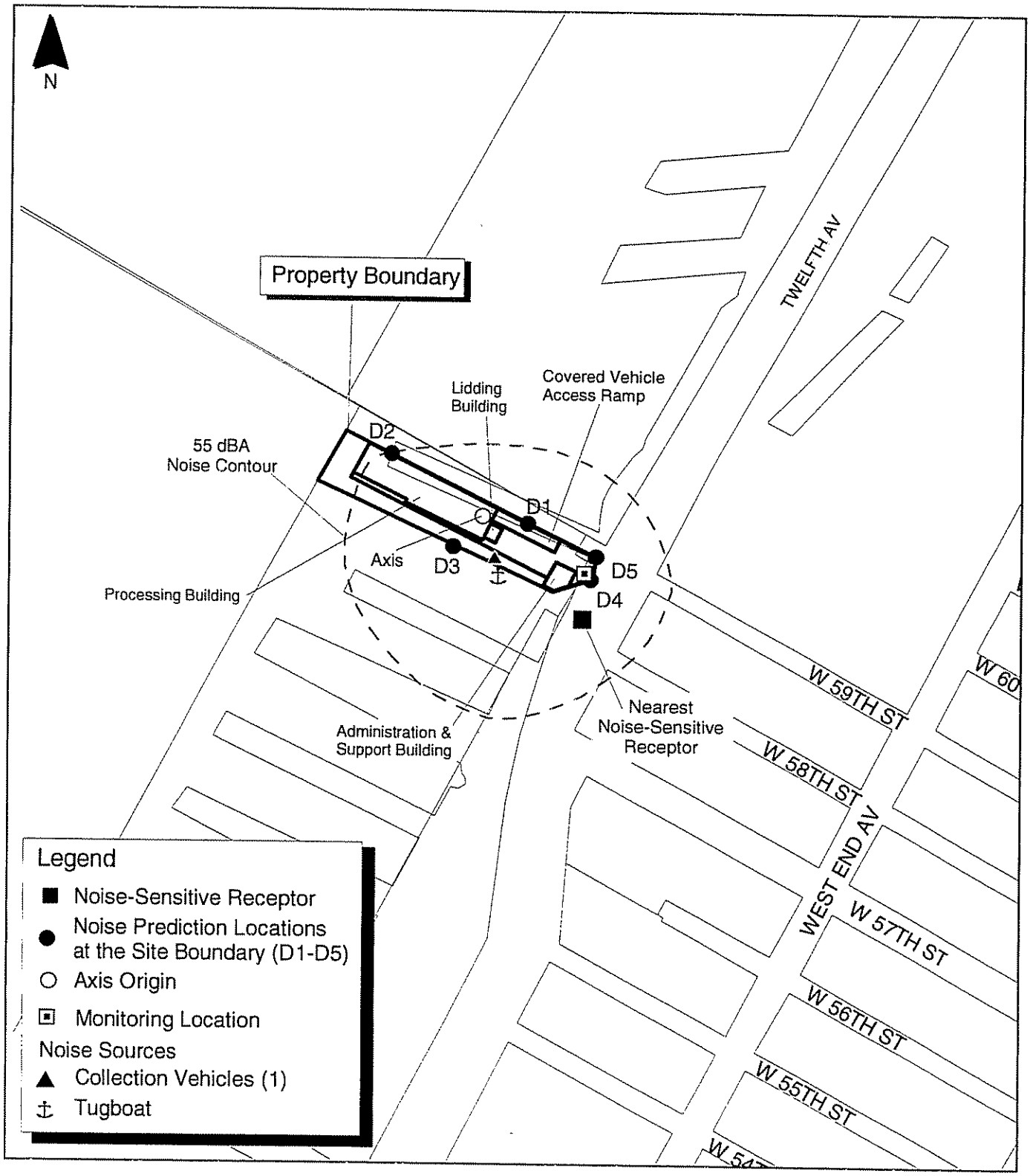
28.17.1.3 Off-Site Noise Levels

See Section 22.17.1.3.

28.17.2 Future No-Build Conditions

28.17.2.1 On-Site Noise Levels

See Section 22.17.2.1.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

Figure 28.17-1 Noise Sources and Receptors

Existing West 59th Street MTS

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28.17.2.2 Off-Site Noise Levels

See Section 22.17.2.2.

28.17.3 Potential Impacts with the Existing West 59th Street MTS

28.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing West 59th Street MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 28.17-1. The number and types of equipment assumed for this analysis were based on the Existing West 59th Street MTS's peak design capacity. Shown earlier, Figure 28.17-1 indicates the Existing West 59th Street MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 28.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing West 59th Street MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Moving /Queuing Collection Vehicle (13)	79.0
Outdoor	
Moving Queuing Collection Vehicle (1)	67
Oceangoing Tugboat (1)	73

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

28.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing West 59th Street MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 77 meters (253 feet) from the property boundary in the

direction of the nearest noise-sensitive receptor, which is directly abutting the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA, (i.e., the point off site where noises generated on site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are located within the 55 dBA contour line (see Figure 28.17-1). Therefore, an on-site analysis, including noise monitoring at the nearest sensitive receptor, was required to determine if an impact is predicted under Section R of 2001 CEQR Technical Manual.

Noise monitoring was conducted at the noise-sensitive receptor during the quietest hours based on monitoring data provided in Table 22.17-1. Table 28.17-2 below identifies the existing background noise level during the quietest hour. The table shows the distance from the Existing West 59th Street MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, Existing West 59th Street MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between this combined noise level and the existing noise level at the noise-sensitive receptor. This difference represents the predicted incremental change in noise level from the Existing West 59th Street MTS. Since the quietest hour occurs during the daytime, the CEQR threshold is 65 dBA. However, since the background noise level is greater than 62 dBA, an impact would be caused if the predicted incremental change is greater than the CEQR threshold of 3 dBA at the nearest noise-sensitive receptor. Based on this, there is no predicted impact that would be caused by the Existing West 59th Street MTS on-site operations.

28.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

Table 28.17-2
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Existing West 59th Street MTS

Noise-Sensitive Receptor	Distance from Facility (meters / feet)	Existing Noise Level During Quietest Hour (dBA) [1][2]	Predicted Facility Noise Level at Noise-Sensitive Receptor (dBA) [3]	Combined Facility and Background Noise Level at Noise-Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact [4] (yes or no)
Riverside Park South	Directly abutting property boundary	65.4	60.9	65.4	1.3	No

Notes:
(1) Twenty minute noise level reading measured at the nearest noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.
(2) Existing noise levels measured on February 10, 2003 at 5:00 p.m.
(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.
(4) According to CEQR, an increase of 3 dBA or more when the daytime existing noise level is 62 dBA or greater is considered an impact. The impact compares the loudest noise emissions from daily operations at the Existing West 59th Street MTS with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the daytime hours for the noise-sensitive receptor; therefore, only daytime impact criteria are discussed in this analysis for the noise-sensitive receptor.

28.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing West 59th Street MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 28.17-3. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 28.17-3
Current Noise Code Analysis
Existing West 59th Street MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	53.0
D2	40.4
D3	51.1
D4	59.8
D5	55.1
D6	66.2
D7	64.8
D8	64.2

Notes:
D1 through D8 are points representative of the Existing West 59th Street MTS boundary that are used in all noise analysis.
Bold= exceedence

28.17.3.5 Off-Site Noise Analysis

An off-site noise analysis was performed in Section 22.17 for the West 59th Street Converted MTS; the trucks routed to the Existing West 59th Street MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing West 59th Street MTS.

28.17.3.7 Combined On-Site and Off-Site Noise Levels

As a result of the on- and off-site screening analyses performed for the Existing West 59th Street MTS, neither an on- or off-site noise analyses were required; therefore, a combined noise analysis was not performed.

CHAPTER 29 ENVIRONMENTAL REVIEW: EXISTING EAST 91ST STREET MTS

29.1 Introduction

The results of the environmental analyses of the Existing East 91st Street MTS are presented in the following sections:

29.2 Land Use, Zoning, and Public Policy
29.3 Socioeconomic Conditions
29.4 Community Facilities and Services
29.5 Open Space
29.6 Cultural Resources
29.7 Urban Design, Visual Resources, and Shadows
29.8 Neighborhood Character
29.9 Natural Resources
29.10 Hazardous Materials
29.11 Water Quality
29.12 Waterfront Revitalization Program
29.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
29.14 Traffic, Parking, Transit, and Pedestrians
29.15 Air Quality
29.16 Odor
29.17 Noise

Section 2.4.11 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

29.2 Land Use, Zoning, and Public Policy

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

29.3 Socioeconomic Conditions

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Socioeconomic Conditions section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.4 Community Facilities and Services

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Community Facilities and Services section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.5 Open Space

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Open Space section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.6 Cultural Resources

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Cultural Resources section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.7 Urban Design, Visual Resources, and Shadows

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

29.8 Neighborhood Character

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Neighborhood Character section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.9 Natural Resources

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Natural Resources section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.10 Hazardous Materials

The Existing East 91st Street MTS is located at the site of the East 91st Street Converted MTS. The analysis of the Hazardous Materials section of the East 91st Street Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

29.11 Water Quality

The Existing East 91st Street MTS has a smaller footprint than the East 91st Street Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the East 91st Street Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing East 91st Street MTS.

29.12 Waterfront Revitalization Program

The Existing East 91st Street MTS has a smaller footprint than the East 91st Street Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the East 91st Street Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing East 91st Street MTS.

29.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing East 91st Street MTS would be equal to or less than the staffing levels of the East 91st Street Converted MTS. Therefore, the analyses performed for the East 91st Street Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing East 91st Street MTS.

29.14 Traffic, Parking, Transit, and Pedestrians

The Existing East 91st Street MTS may receive the same amount of DSNY-managed and potential commercial waste as the East 91st Street Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the East 91st Street Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing East 91st Street MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

29.15 Air Quality

The Existing East 91st Street MTS would have less on-site emission-generating equipment, and the sources located farther from the property line receptors, than the East 91st Street Converted MTS. Since there are no unmitigatible significant adverse environmental air quality impacts from the East 91st Street Converted MTS, there will be no unmitigatible significant adverse environmental air quality impacts from the Existing East 91st Street MTS.

29.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing East 91st Street MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing East 91st Street MTS operating at 4,800 tpd.

29.16.1 Potential Impacts with the Existing East 91st Street MTS

29.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing East 91st Street MTS are provided in Table 29.16-1.

Table 29.16-1
Odor Sources Included in Odor Analysis
Existing East 91st Street MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving Vehicles(1)	14
Barge	2

Notes:
(1) This is the number of collection vehicle inbound and outbound from the MTS.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% percent and 99% percent of odorous compounds. For purposes of modeling odor dispersion, a 90% percent reduction of odorous emissions was conservatively assumed for the Existing East 91st Street MTS.

29.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 29.16-2. The predicted odor unit OU values at sensitive receptor locations are compared to an OU odor unit of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted odor unit OU associated with the Existing East 91st Street MTS at any nearby sensitive receptor is less than 1, so odors from the Existing East 91st Street MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 29.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing East 91st Street MTS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	2.55
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.46
Type of Receptor	Apartment Building
Distance to Receptor(3)	360 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

29.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing East 91st Street MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

29.17.1 Existing Conditions

29.17.1.1 Introduction

Figure 29.17-1 shows the location of the Existing East 91st Street MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 6.7.1.1 for further information.

29.17.1.2 On-Site Noise Levels

See Section 6.17.1.2.

29.17.1.3 Off-Site Noise Levels

See Section 6.17.1.3.

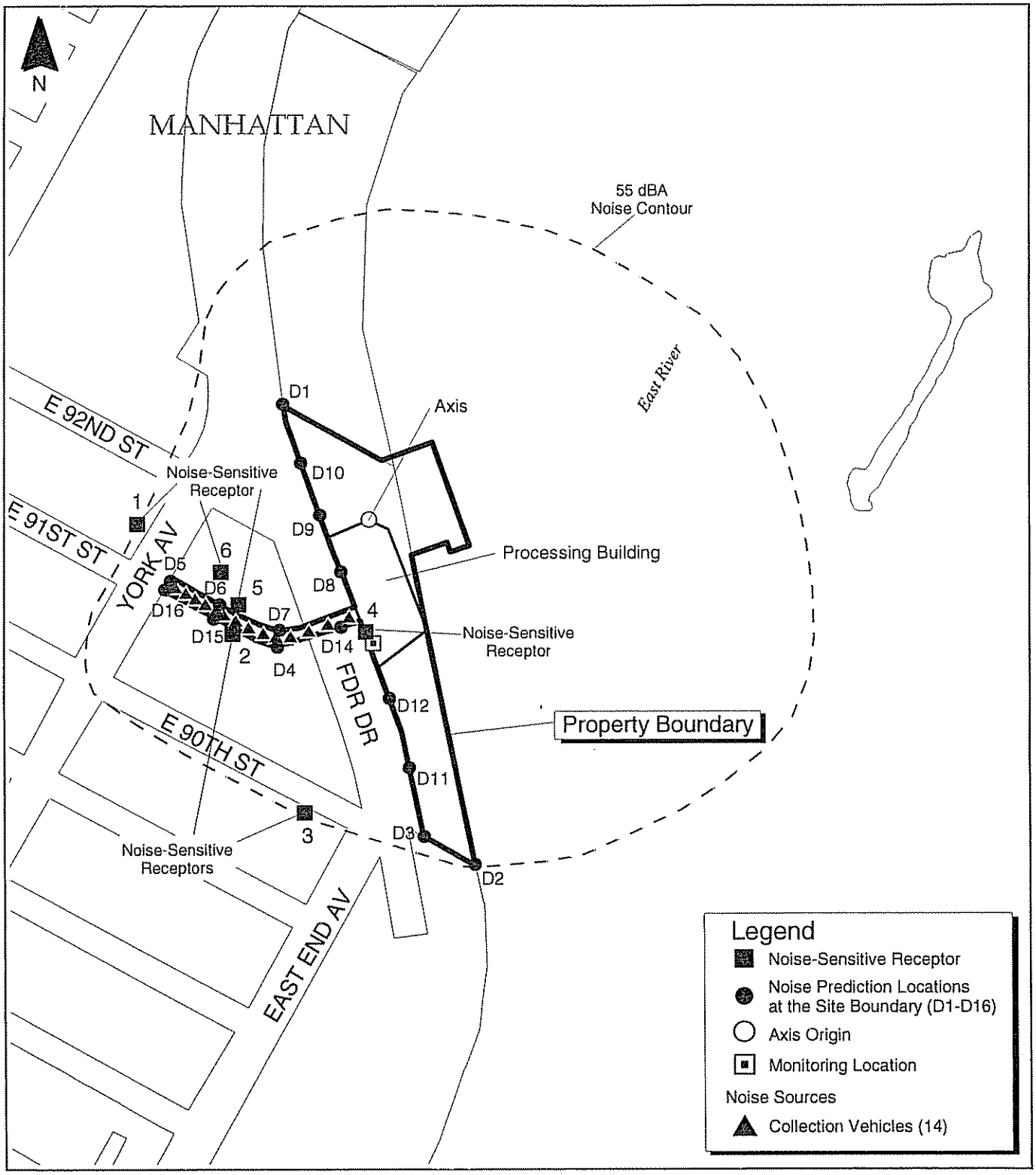
29.17.2 Future No-Build Conditions

29.17.2.1 On-Site Noise Levels

See Section 6.17.2.1.

29.17.2.2 Off-Site Noise Levels

See Section 6.17.2.2.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 29.17-1 Noise Sources and Receptors
Existing East 91st Street MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

29.17.3 Potential Impacts with the Existing East 91st Street MTS

29.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing East 91st —Street MTS, and its reference noise levels, which were used in the CEQR and Noise Code analysis, are shown in Table 29.17-1. The number and types of equipment assumed for this analysis were based on the facility's peak design capacity. Shown earlier, Figure 29.17-1 indicates the Existing East 91st Street MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and predicted the 55 dBA contour line.

Table 29.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing East 91st Street MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA)[2]
Indoor	
Moving/Queuing Collection Vehicle (7)	~~73~~79.0
Outdoor	
Moving/Queuing Collection Vehicle (14)	67
Oceangoing Tugboat (1)	73

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

29.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing East 91st Street MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 50 meters (164 feet) from the property boundary in the direction of the York Avenue Apartment Building, which is approximately 40 meters (131 feet) from the property boundary; approximately 114 meters (373 feet) from the property boundary in the direction of the Asphalt Green Recreational Field, which is directly abutting the property boundary; approximately 136 meters (446 feet) from the property boundary in the direction of

the East 90th Street Apartment Building, which is approximately 114 meters (375 feet) from the property boundary; approximately 160 meters (523 feet) from the property boundary in the direction of the Bobby Wagner Walk, which is directly abutting the property boundary; approximately 107 meters (353 feet) from the property boundary in the direction of Asphalt Green, which is directly abutting the property boundary; and approximately 144 meters (473 feet) from the property boundary in the direction of the Asphalt Green Playground, which is directly abutting the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that receptors are located within the 55 dBA contour line (see Figure 29.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was required to determine if an impact is predicted under Section R of the 2001 CEQR Technical Manual.

Noise monitoring was conducted at the receptor during the quietest hour based on monitoring data provided in Table 6.17-1. Table 29.17-2 identifies the existing background noise level during the quietest hour. The table shows the distance from the Existing East 91st Street MTS to the noise-sensitive receptor, the monitored existing background noise level at the noise-sensitive receptor, Existing East 91st Street MTS-related predicted noise levels at the noise-sensitive receptor, and the predicted noise levels with both facility noise and background noise combined. The table also provides the difference between the combined noise level and the existing noise level at the noise-sensitive receptor. The difference represents the predicted incremental change in noise level from the Existing East 91st Street MTS. Because this incremental change is greater than the CEQR threshold of 3 dBA during the nighttime hours or during the daytime hours when the daytime background noise level is greater than 62 dBA at the nearest noise-sensitive receptor, there is a predicted impact that would be caused by the Existing East 91st Street MTS on-site operations.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

Table 29.17-2
CEQR Analysis
Existing and Predicted Noise Levels (L_{eq}) at the Nearest Noise-Sensitive Receptor
Existing East 91st Street MTS

Noise-Sensitive Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
York Avenue Apartment Building-	40 / 131	~~63.6~~63.4	~~65.1~~65.2	67.4	~~3.8~~4.0	Yes
Asphalt Green Recreational Field[5]	Directly abutting truck ramp	~~69.0~~71.1	~~74.0~~76.5	~~75.2~~77.6	~~6.2~~6.5	Yes
East 90th Street Apartment Building	114 / 375	~~64.5~~63.4	~~63.8~~64.0	~~67.2~~66.7	~~2.7~~3.3	~~No~~Yes
Bobby Wagner Walk	Directly abutting property boundary	68.0	~~68.6~~75.4	~~71.3~~76.1	~~3.3~~8.1	Yes
Asphalt Green Building[5]	Directly abutting truck ramp	71.1	76.1	77.3	6.2	Yes
Asphalt Green Playground[5]	Directly abutting truck ramp	69.0	71.7	73.6	4.6	Yes

Notes:

(1) Twenty-minute noise level readings measured at the noise-sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels measured on ~~July 22, 2003~~August 10, 2004 at 3:00 a.m. at the York Avenue Apartment Building; ~~July 7, 2004~~September 1, 2004 at 5:00 p.m. for the Asphalt Green Recreational Field and ~~Playground~~Building; ~~January 30, 2003~~ August 10, 2004 at ~~5~~3:00 ~~p~~a.m. for the East 90th Street apartment building; July 8, 2004 at 5:00 p.m. at the Bobby Wagner Walk; and ~~September 1st~~July 7, 2004 at 5:00 p.m. for the Asphalt Green Playground.

(3) Predicted noise level calculations at noise-sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase over 65 dBA at daytime is considered an impact. However, if the existing noise level at the receptor during the daytime is 62 dBA or greater or if the analysis is for a nighttime hour, an increase over 3 dBA would be considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the Existing East 91st Street MTS with the quietest background noise levels that occur during facility operation

(5) This noise-sensitive receptor was assumed to only be in use during daytime hours. Therefore, noise monitoring and noise analysis were only performed for the quietest daytime hour.

29.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

29.17.3.4 NYC Noise Code Analysis-Current

Overall noise predictions were calculated at the locations of the points along the facility boundary to determine the total L_{eq} from all indoor and outdoor sources. This is shown in Table 29.17-3. Based on this analysis, the total L_{eq} does exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the Nnew SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

29.17.3.5 Off-Site Noise Analysis

An off-site noise analysis was performed in Section 6.17 for the East 91st Street Converted MTS. The trucks routed to the Existing East 91st Street MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis is required for the Existing East 91st Street MTS.

29.17.3.6 Combined On-Site and Off-Site Noise Levels

An on-site and off-site noise analysis was performed for the Existing East 91st Street MTS. Since the potential impacts of these analyses can affect the same noise-sensitive receptor, a screening analysis must be conducted to determine if a combined noise analysis would be required for the operations at the East 91st Street Converted MTS.

If this facility is chosen to be part of the New SWMP, a supplementary refined on-site noise analysis will be performed, including a combined noise analysis.

Table 29.17-3
Current Noise Code Analysis
Existing East 91st Street MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	61.9
D2	60.4
D3	61.5
D4	**77.2**
D5	**73.0**
D6	**75.9**
D7	**76.3**
D8	69.7
D9	65.9
D10	61.6
D11	62.7
D12	66.3
D13	**73.6**
D14	**80.8**
D15	**79.6**
D16	**73.4**

Notes:
D1 through D16 are points representative of the Existing East 91st Street MTS boundary that are used in all noise analysis.
Bold= exceedence

CHAPTER 30 ENVIRONMENTAL REVIEW: EXISTING NORTH SHORE MTS

30.1 Introduction

The results of the environmental analyses of the Existing North Shore MTS are presented in the following sections:

30.2 Land Use, Zoning, and Public Policy
30.3 Socioeconomic Conditions
30.4 Community Facilities and Services
30.5 Open Space
30.6 Cultural Resources
30.7 Urban Design, Visual Resources, and Shadows
30.8 Neighborhood Character
30.9 Natural Resources
30.10 Hazardous Materials
30.11 Water Quality
30.12 Waterfront Revitalization Program
30.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
30.14 Traffic, Parking, Transit, and Pedestrians
30.15 Air Quality
30.16 Odor
30.17 Noise

Section 2.4.12 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

30.2 Land Use, Zoning, and Public Policy

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analyses of the Land Use, Zoning, and Public Policy section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

30.3 Socioeconomic Conditions

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Socioeconomic Conditions section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.4 Community Facilities and Services

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Community Facilities and Services section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.5 Open Space

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Open Space section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.6 Cultural Resources

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Cultural Resources section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.7 Urban Design, Visual Resources, and Shadows

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analyses of the Urban Design, Visual Resources, and Shadows section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in these respective categories.

30.8 Neighborhood Character

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Neighborhood Character section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.9 Natural Resources

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Natural Resources section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.10 Hazardous Materials

The Existing North Shore MTS is located at the site of the North Shore Converted MTS. The analysis of the Hazardous Materials section of the North Shore Converted MTS chapter in this FDEIS provides the necessary information for the review of this facility in this category.

30.11 Water Quality

The Existing North Shore MTS has a smaller footprint than the North Shore Converted MTS. Since there are no unmitigatible significant adverse environmental water quality impacts from the North Shore Converted MTS, there will be no unmitigatible significant adverse environmental water quality impacts from the Existing North Shore MTS.

30.12 Waterfront Revitalization Program

The Existing North Shore MTS has a smaller footprint than the North Shore Converted MTS. Since there are no unmitigatible significant adverse environmental WRP impacts from the North Shore Converted MTS, there will be no unmitigatible significant adverse environmental WRP impacts from the Existing North Shore MTS.

30.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

It is assumed that the staffing levels of the Existing North Shore MTS would be equal to or less than the staffing levels of the North Shore Converted MTS. Therefore the analyses performed for the North Shore Converted MTS to assess impacts to water supply, sanitary sewage, and solid waste would also apply to the assessment of these utilities for the Existing North Shore MTS.

30.14 Traffic, Parking, Transit, and Pedestrians

The Existing North Shore MTS may receive the same amount of DSNY-managed and potential commercial waste as the North Shore Converted MTS. See the Traffic, Parking, Transit, and Pedestrians section of the North Shore Converted MTS chapter in this FDEIS. If the amount of waste delivered to the Existing North Shore MTS is less than or equal to that analyzed, there will be no unmitigatible significant adverse environmental impacts.

30.15 Air Quality

The Existing North Shore MTS would have less on-site emission-generating equipment, but the sources located closer to the property line receptors, than the North Shore Converted MTS. This section presents the results of the air quality analysis for the Existing North Shore MTS operating at 4,800 tpd.

30.15.1 Potential Impacts with the Existing North Shore MTS

30.15.1.1 On-Site Analysis

30.15.1.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 30.15-1.

Table 30.15-1
Emission Sources Considered for On-Site Air Quality Analysis[1]
Existing North Shore MTS

Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Moving/Queuing Collection Vehicles	37	20
Space Heaters	10	4
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	50	20
Queuing Collection Vehicles[2]	13	3
Oceangoing Tugboats	1	1

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.
(2) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 5. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (13), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.

30.15.1.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 30.15-2. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from project-generated vehicles at any of the receptor locations considered, which are also presented in Table 30.15-2, are below the STVs. The Existing North Shore MTS would not, therefore, significantly impact air quality in the area.

30.15.1.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 30.15-3. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Existing North Shore MTS are not considered to be significant.

30.15.1.2 Off-Site Analysis

An off-site air quality analysis was performed for the North Shore Converted MTS. The trucks routed to the Existing North Shore MTS would be equivalent to or less than this analysis. Therefore, no additional off-site air quality analysis is required for the Existing North Shore MTS.

Table 30.15-2
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Existing North Shore MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	782	3,781	4,563	40,000	NA
	8-hour[6]	221	2,635	2,856	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	10	56	66	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	19	90	109	150	NA
	Annual	5	20	25	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2	NA	NA	NA	5
	Annual Neighborhood Average	0.02[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	86	186	272	1,300	NA
	24-hour[6]	7	107	114	365	NA
	Annual	1	18	19	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP on ~~April 18, 2003~~ memorandum dated February 18, 2005.

(3) NAAQS = National Ambient Air Quality Standard.

(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is quite conservative.

NA = Not Applicable.

Table 30.15-3
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Existing North Shore MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	3.91E-01	1.30E+03	3.01E-04	4.39E-03	1.30E-01	3.38E-02	4.39E-03	8.30E-06	3.65E-08
2	Formaldehyde	4.95E-01	3.00E+01	1.65E-02	5.56E-03	6.00E-02	9.26E-02	5.56E-03	1.30E-05	7.23E-08
3	1,3 Butadiene	1.64E-02	-	-	1.84E-04	3.60E-03	5.12E-02	1.84E-04	2.80E-04	5.16E-08
4	Acetaldehyde	3.22E-01	4.50E+03	7.15E-05	3.61E-03	4.50E-01	8.03E-03	3.61E-03	2.20E-06	7.95E-09
5	Benzo(a)pyrene	7.89E-05	-	-	8.85E-07	2.00E-03	4.43E-04	8.85E-07	1.70E-03	1.51E-09
Non-Carcinogenic Pollutants [10]										
6	Propylene	1.08E+00	-	-	1.22E-02	3.00E+03	4.05E-06	1.22E-02	NA	NA
7	Acrolein	3.88E-02	1.90E-01	2.04E-01	4.36E-04	2.00E-02	2.18E-02	4.36E-04	NA	NA
8	Toluene	1.72E-01	3.70E+04	4.64E-06	1.93E-03	4.00E+02	4.82E-06	1.93E-03	NA	NA
9	Xylenes	1.20E-01	4.30E+03	2.78E-05	1.34E-03	7.00E+02	1.92E-06	1.34E-03	NA	NA
10	Anthracene	7.84E-04	-	-	8.81E-06	2.00E-02	4.40E-04	8.81E-06	NA	NA
11	Benzo(a)anthracene	7.05E-04	-	-	7.91E-06	2.00E-02	3.96E-04	7.91E-06	NA	NA
12	Chrysene	1.48E-04	-	-	1.66E-06	2.00E-02	8.31E-05	1.66E-06	NA	NA
13	Naphthalene	3.56E-02	7.90E+03	4.50E-06	3.99E-04	3.00E+00	1.33E-04	3.99E-04	NA	NA
14	Pyrene	2.00E-03	-	-	2.25E-05	2.00E-02	1.13E-03	2.25E-05	NA	NA
15	Phenanthrene	1.23E-02	-	-	1.38E-04	2.00E-02	6.92E-03	1.38E-04	NA	NA
16	Dibenz(a,h)anthracene	2.45E-04	-	-	2.75E-06	2.00E-02	1.37E-04	2.75E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		2.21E-01	**Total Estimated Chronic Non-Cancer Hazard Index**		2.17E-01	**Total Estimated Combined Cancer Risk**		1.70E-07
		Acute Non-Cancer Hazard Index Threshold [11]		1.0E+00	**Chronic Non-Cancer Hazard Index Threshold** [11]		1.0E+00	**Cancer Risk Threshold** [11]		1.0E-06

30.16 Odor

In addition to the odors from waste processing operations in the building that will be controlled through an odor neutralizing system, the Existing North Shore MTS would have full and empty barges moored and queued outdoors during operations. This section presents the results of the odor analysis for the Existing North Shore MTS operating at 4,800 tpd.

30.16.1 Potential Impacts with the Existing North Shore MTS

30.16.1.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Existing North Shore MTS are provided in Table 30.16-1.

Table 30.16-1
Odor Sources Included in Odor Analysis
Existing North Shore MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Barge	2
Queuing Collection Vehicles[1]	41

Notes:
(1) This is the number of collection vehicle sources inbound and outbound from the MTS. The actual number of vehicles is 13.

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Existing North Shore MTS.

30.16.1.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 30.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Existing North Shore MTS at any nearby sensitive receptor is less than 1, so odors from the Existing North Shore MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 30.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Existing North Shore MTS

Parameter	**Resulting Odor Unit[1]**
Estimated Detectable Concentration	5.0
Highest Result	1.56
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.18
Type of Receptor	Residential House
Distance to Receptor[3]	280 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

30.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Existing North Shore MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

30.17.1 Existing Conditions

30.17.1.1 Introduction

Figure 30.17-1 shows the location of the Existing North Shore MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. See Section 7.17.1.1 for further information.

30.17.1.2 On-Site Noise Levels

See Section 7.17.1.2.

30.17.1.3 Off-Site Noise Levels

See Section 7.17.1.3.

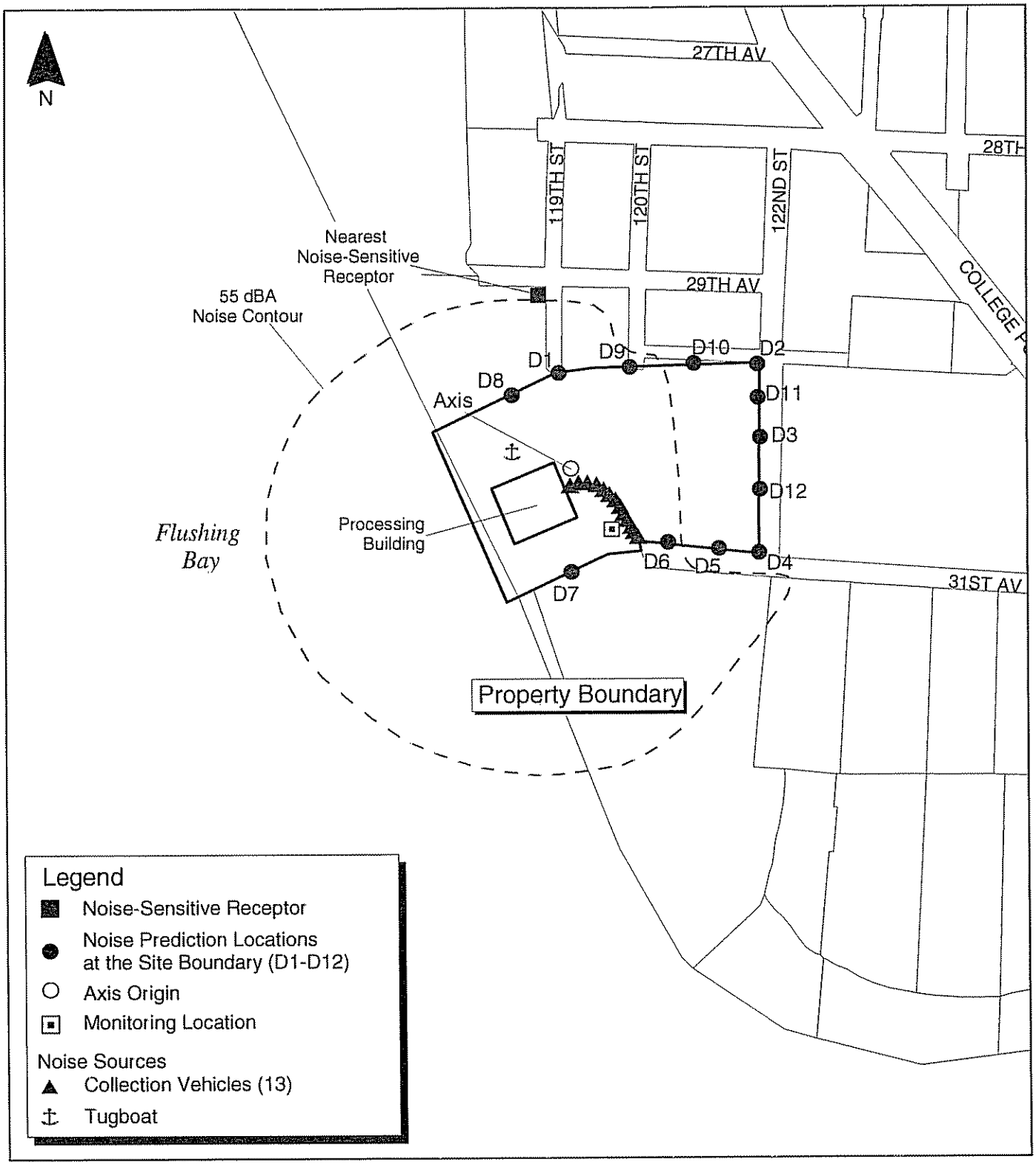
30.17.2 Future No-Build Conditions

30.17.2.1 On-Site Noise Levels

See Section 7.17.2.1.

30.17.2.2 Off-Site Noise Levels

See Section 7.17.2.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 30.17-1 Noise Sources and Receptors
Existing North Shore MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

30.17.3 Potential Impacts with the Existing North Shore MTS

30.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Existing North Shore MTS and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 30.17-1. The number and types of equipment assumed for this analysis were based on the Existing North Shore MTS's peak design capacity. Shown earlier, Figure 30.17-1 indicates the Existing North Shore MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 30.17-1
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Existing North Shore MTS

Equipment Name (quantity) (1)	Reference Sound Pressure Noise Level at 50 feet (dBA)(2)
Indoor	
Moving/Queuing Collection Vehicle (7)	~~73~~79
Outdoor	
Moving/Queuing Collection Vehicle (13)	67
Oceangoing Tugboat (1)	73

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.

30.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Existing North Shore MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is approximately 88 meters (290 feet) from the property boundary in the direction of the nearest noise-sensitive receptor, which is approximately 92 meters (301 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on-site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this

concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 30.17-1). Therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

30.17.3.3 Performance Standards for Zoning Code Analysis

Performance Standards do not apply to the Existing MTS analyses since the only on-site equipment are DSNY and other agency collection vehicles and tugboats, which are not to be included in the analyses per the Zoning Code (assuming tugboats are transportation facilities).

30.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Existing North Shore MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 30.17-3. Based on this analysis, the total L_{eq} does ~~not~~ exceed the current Noise Code Standard of 70 dBA at the property boundary.

The data presented in this section is for the analysis to date. If this facility is chosen to be part of the New SWMP, a supplementary refined analysis, including refining utilization factors for equipment, will be performed.

30.17.3.5 Off-Site Noise Analysis

An off-site noise analysis was performed in Section 7.17 for the North Shore Converted MTS; the trucks routed to the Existing North Shore MTS would be equivalent to or less than this analysis. Therefore, no additional off-site noise analysis was required for the Existing North Shore MTS.

30.17.3.6 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Existing North Shore MTS, neither an on- or off-site noise analyses were required; therefore, a combined noise analysis was not performed.

Table 30.17-3
Current Noise Code Analysis
Existing North Shore MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	63.7
D2	55.4
D3	56.9
D4	64.5
D5	66.7
D6	**74.6**
D7	69.4
D8	63.8
D9	63.2
D10	57.4
D11	54.1
D12	58.2

Notes:
D1 through D12 are points representative of the Existing North Shore MTS boundary that are used in all noise analysis.
Bold= exceedence

CHAPTER 31 MESEROLE STREET TRUCK TO RAIL TS

31.1 Introduction

The results of the environmental analyses of the Meserole Street Truck to Rail TS are presented in the following sections:

31.2 Land Use, Zoning, and Public Policy
31.3 Socioeconomic Conditions
31.4 Community Facilities and Services
31.5 Open Space
31.6 Cultural Resources
31.7 Urban Design, Visual Resources, and Shadows
31.8 Neighborhood Character
31.9 Natural Resources
31.10 Hazardous Materials
31.11 Water Quality
31.12 Waterfront Revitalization Program
31.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
31.14 Traffic, Parking, Transit, and Pedestrians
31.15 Air Quality
31.16 Odor
31.17 Noise

Section 2.4.13 provides a summary description of the site and important characteristics of the two Alternative facility designs. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

31.2 Land Use, Zoning, and Public Policy

31.2.1 Existing Conditions

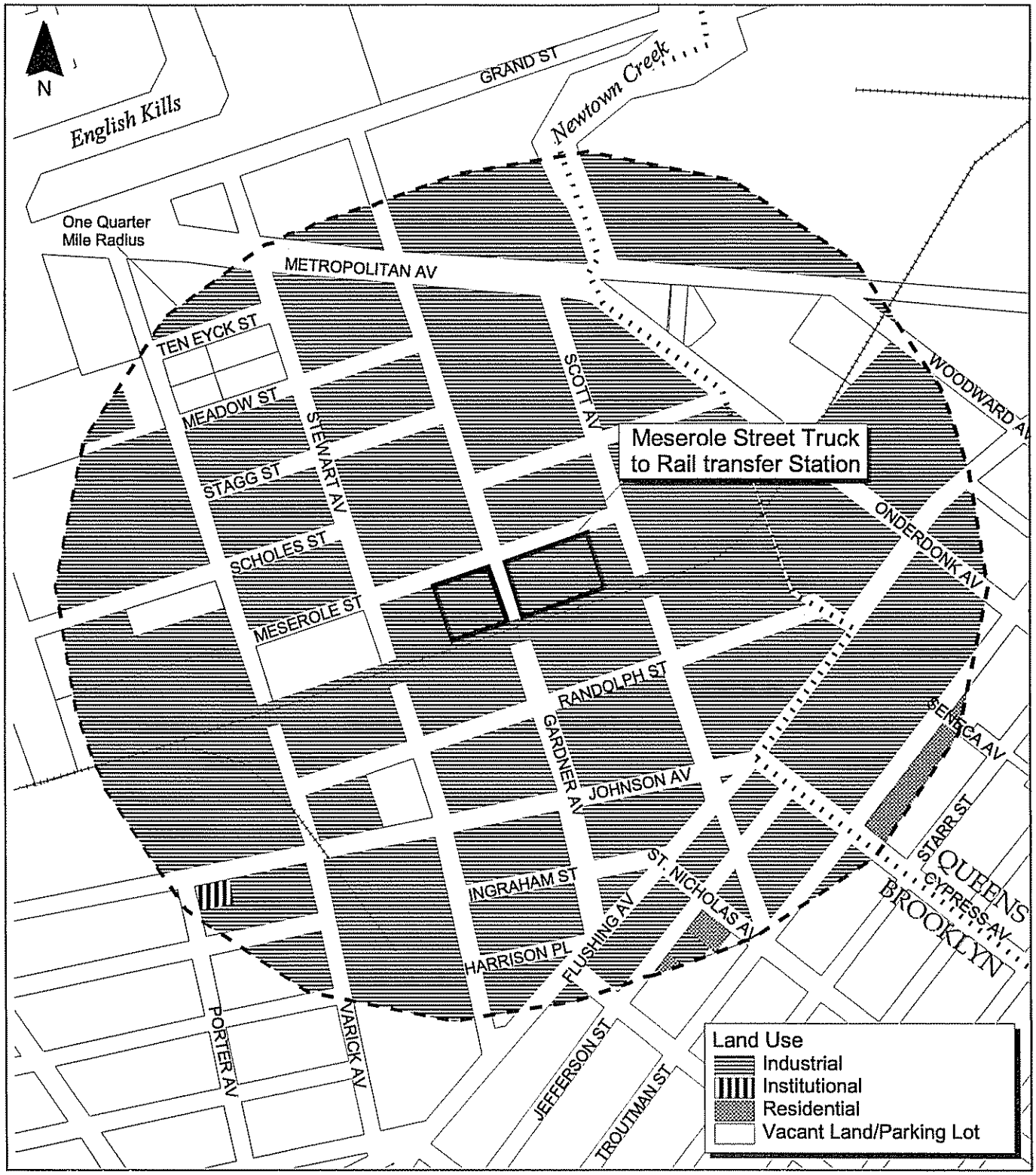
31.2.1.1 Definition of the Study Area

For the land use, zoning, and public policy analyses, the primary study area is defined as the area within ¼-mile of the site (Figure 31.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (Figure 31.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.13 provides information on existing land uses and operations on the site.

31.2.1.2 Land Use Patterns

31.2.1.2.1 General Context

The Meserole Street Truck to Rail TS site is located in Community District 1 near the Brooklyn/Queens border, in the predominantly industrial section of East Williamsburg, Brooklyn. It is largely surrounded by canals and railroad tracks: English Kills on the west, Newtown Creek on the east and LIRR tracks to the east and south, thus making it directly accessible on land only from the north. The site consists of two parcels on either side of Gardner Avenue. 568 Meserole Street contains the Meserole Street (paper) Recycling Facility on the southeast corner of Gardner Avenue and Meserole Street, and the Filco Carting Company's truck parking lot occupies most of the lot at 111 Gardner Avenue, on the southwest corner of Gardner Avenue.



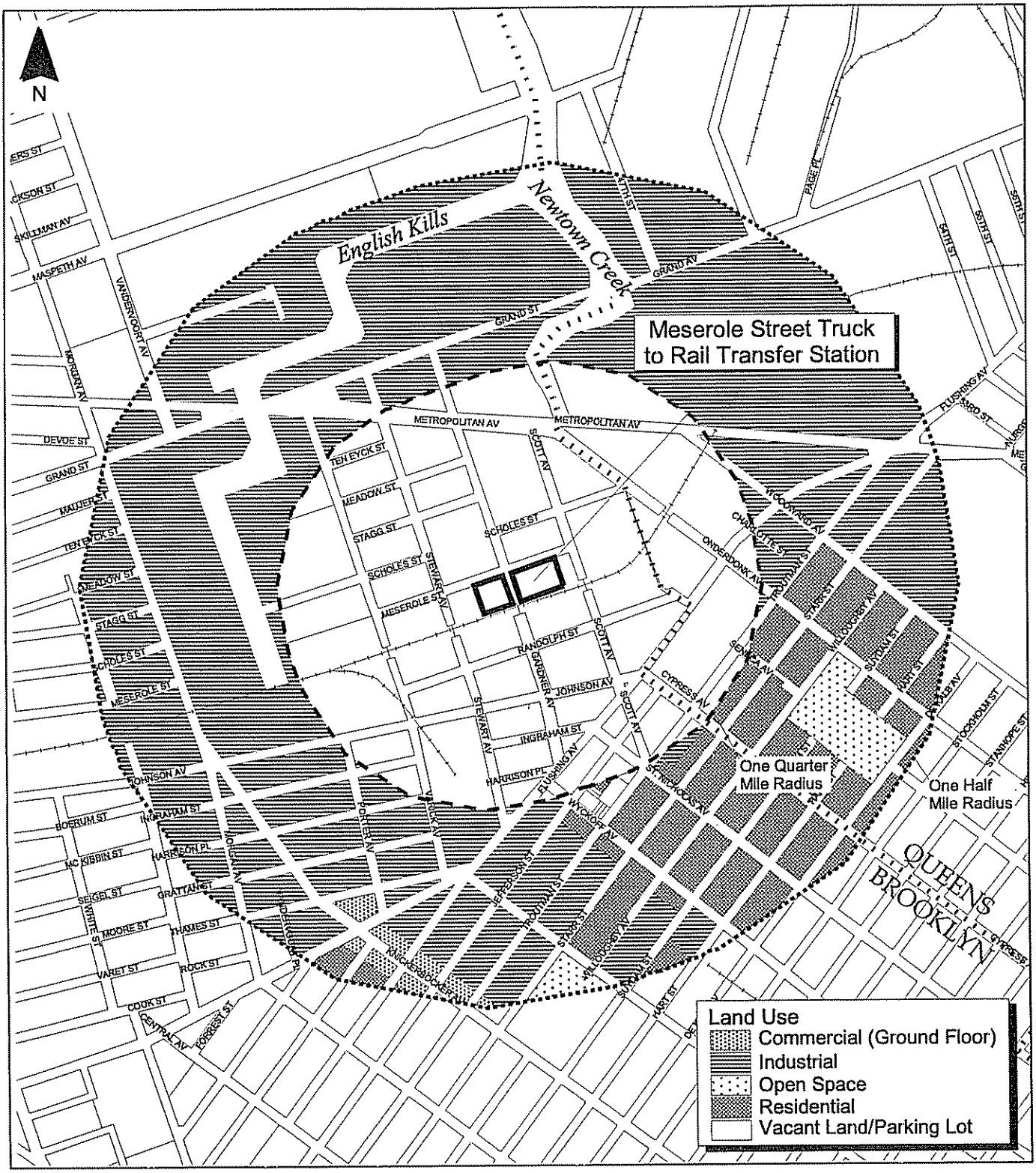
Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area

300 0 300 Feet

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Figure 31.2-1 Land Use in the Primary Study Area
Meserole Street Truck to Rail Transfer Station

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Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area

500 0 500 Feet

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Figure 31.2-2 Land Use in the Secondary Study Area

Meserole Street Truck to Rail Transfer Station

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31.2.1.2.2 Land Uses in the Primary Study Area

The Meserole Street Truck to Rail TS site is situated just west of the Brooklyn/Queens border which separates East Williamsburg, Brooklyn to the west and Maspeth, Queens to the east. The primary study area is characterized by several private waste transfer stations (including BFI Waste Systems facilities on Scholes Street and Gardner Avenue, and Waste Management of New York facilities on Stewart Avenue and Varick Avenue) as well as a DSNY parking lot on Meserole Street, a new CD 1 and 4 garage under construction on Varick Avenue and an existing garage on Johnson Avenue.

The English Kills canal runs along the eastern border of the primary study area, is approximately 200 feet wide and connects with Newtown Creek at the Brooklyn/Queens boundary. The LIRR tracks bisect the ½-mile study area east to west and pass immediately south of the site between Meserole and Randolph Streets. The NY&A operates freight trains on these tracks, with a terminal nearby, in Bushwick (to the west).

North and south of the existing site are scrap metal yards and plastic manufacturing facilities, window and door manufacturing facilities, lumber yards and hydraulic equipment leasing companies. Development surrounding the site is primarily low density with open parking lots and low-scale masonry buildings ranging from two to four stories in height.

The area surrounding the Meserole Street site includes some vacant land to the north on Gardner and Stewart Avenues, as well as lots undergoing construction. Some sites have been rehabilitated to accommodate new industrial loft space and community facilities such as a Peter Jay Sharp Center for Opportunity on Porter Street (89-111). The other community facilities include a fire station on Morgan Avenue and a daycare center on Knickerbocker Street. The area is also characterized by abundant parking lots and garage facilities, some of which are leased by DSNY for trucks and other equipment storage.

31.2.1.2.3 Land Uses in the Secondary Study Area

Within ½-mile of the site there is a mix of residential, industrial and some commercial uses. Industrial uses in the secondary area tend to be lighter than those found in the primary study area. These uses include printers, auto salvage and repair shops and food product manufacture and distribution companies. The residential area closest to the site is Bushwick, which is characterized by three- and four-story apartment buildings along Willoughby and Starr Streets to the southeast as well as single-family homes and townhouses ½-mile south of the site, and in Ridgewood (Queens), ½-mile east of the site.

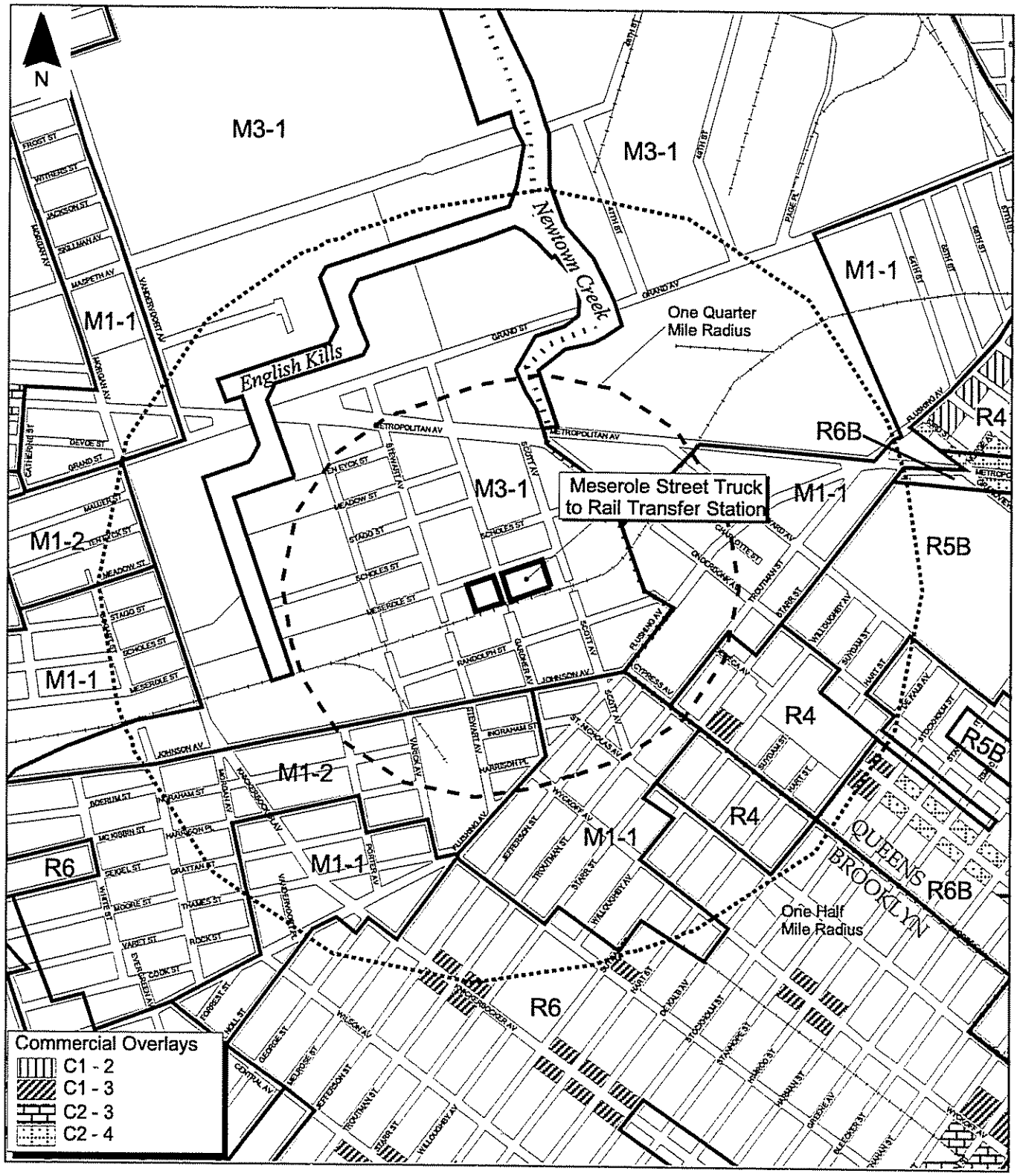
The secondary area contains a major city park: Maria Hernandez Park, located ½-mile south of the site. Another open space, the five-acre Grover Cleveland High School Athletic Field about 1/3-mile to the southeast, provides recreational opportunities to neighborhood residents, as well as students of the school.

Local commercial and retail activities are primarily concentrated along the western border of the secondary study area along Knickerbocker and Morgan Avenues. These corridors are characterized by ground floor retail uses and upper floor residences. Flushing and Jefferson Avenues serves as local retail streets as well as hubs of wholesale activity. Bakery and restaurant suppliers, plumbing and electrical equipment manufacturers, and window and door products manufacturers, are all found on these mixed-use streets.

31.2.1.3 Zoning On and Near the Site

31.2.1.3.1 Zoning Within the Primary Study Area

The project site is located within an M3-1 zoning district (see Figure 31.2-3 and Table 3.4-1 Zoning District Characteristics). This M3-1 zone extends from beyond the northern boundary of the primary study area to Johnson Avenue in the south. M1-2 and M1-1 zoning districts comprise the remainder of the primary study area to the south in Brooklyn and east, into Queens. The M1 zones act as a buffer between the residential and the heavier manufacturing districts and feature both residential and light manufacturing (e.g., distribution) activities.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.2-3 Zoning

Meserole Street Truck to Rail Transfer Station

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31.2.1.3.2 Zoning Within the Secondary Study Area

Zoning in the secondary area is largely comprised of M3-1 districts in the north and M1-1 and M1-2 districts in the south and east. In addition, there are R4 zoning districts covering Ridgewood (Queens and Brooklyn) and a small portion of a large R6 district in Bushwick which both permit residential development such as single-family homes and apartment buildings. Knickerbocker Avenue is mapped R6 with a commercial overlay of C1-3 which permits ground floor retail uses.

31.2.1.4 Plans and Policies

The project site lies within the City Coastal Zone, the East Williamsburg In-Place Industrial Park and the North Brooklyn Empire Zone. Since it is situated within the Coastal Zone, it is subject to the WRP. The Plan for the Brooklyn Waterfront recommends a restriction of public access within the Newtown Creek environs for Reach 13, since it is an important industrial area that should be retained.

The site is located within the East Williamsburg In-Place Industrial Park, which is now a 650-acre manufacturing district covering 150 City blocks in northern Brooklyn. The EWVIDC, a local development corporation, provides comprehensive business services and helps local firms access public incentive programs. The EWVIDC administers the North Brooklyn Empire Zone (a New York State designation) which offers tax and financial incentives to attract and retain businesses in the area.

The FY 2004 CDNS for CD 1 does not provide physical planning recommendations that may be relevant specifically to the site or the primary and secondary study areas.

31.2.2 Future No-Build Conditions

No major development changes are expected to result in the immediate project area by the Future No-Build year. The large DSNY Varick Avenue Garage (serving CDs 1 and 4) at 137-165 Varick Street is currently under construction a few blocks northwest of the site and due to be completed at the end of 2004.

The larger Greenpoint-Williamsburg neighborhood, north and west of the site (beyond the secondary study area), is expecting more mixed development as a result of the MX-1 rezoning (NYCDCP). This rezoning would introduce changes such as the conversion of manufacturing lofts to residential use. Long-term projects for the area include the Bushwick Creek Inlet Development, the Greenpoint Terminal Market and the Sludge Tank Adaptive Reuse Project, though the Build years for these projects are 2012 and 2013.

31.2.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

31.2.3.1 Land Use and Zoning

The potential land use impacts of the proposed Meserole Street Truck to Rail TS facility would be equivalent to the existing industrial recycling operations that occur at the site. While improvements would be made to the site, and the capacity of the facility increased, existing and proposed land uses in the area would not be significantly affected since land use would not change. Existing buildings on the two parcels will be demolished to accommodate new site construction. However, no significant adverse land use or zoning impacts are anticipated.

31.2.3.1 Consistency with Public Plans and Policies

The waste transfer station at 568 Meserole Street and 111 Gardener Avenue would be consistent with the stated objectives of the pertinent plans and policies affecting the site and environs.

31.2.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.2.3.

31.3 Socioeconomic Conditions

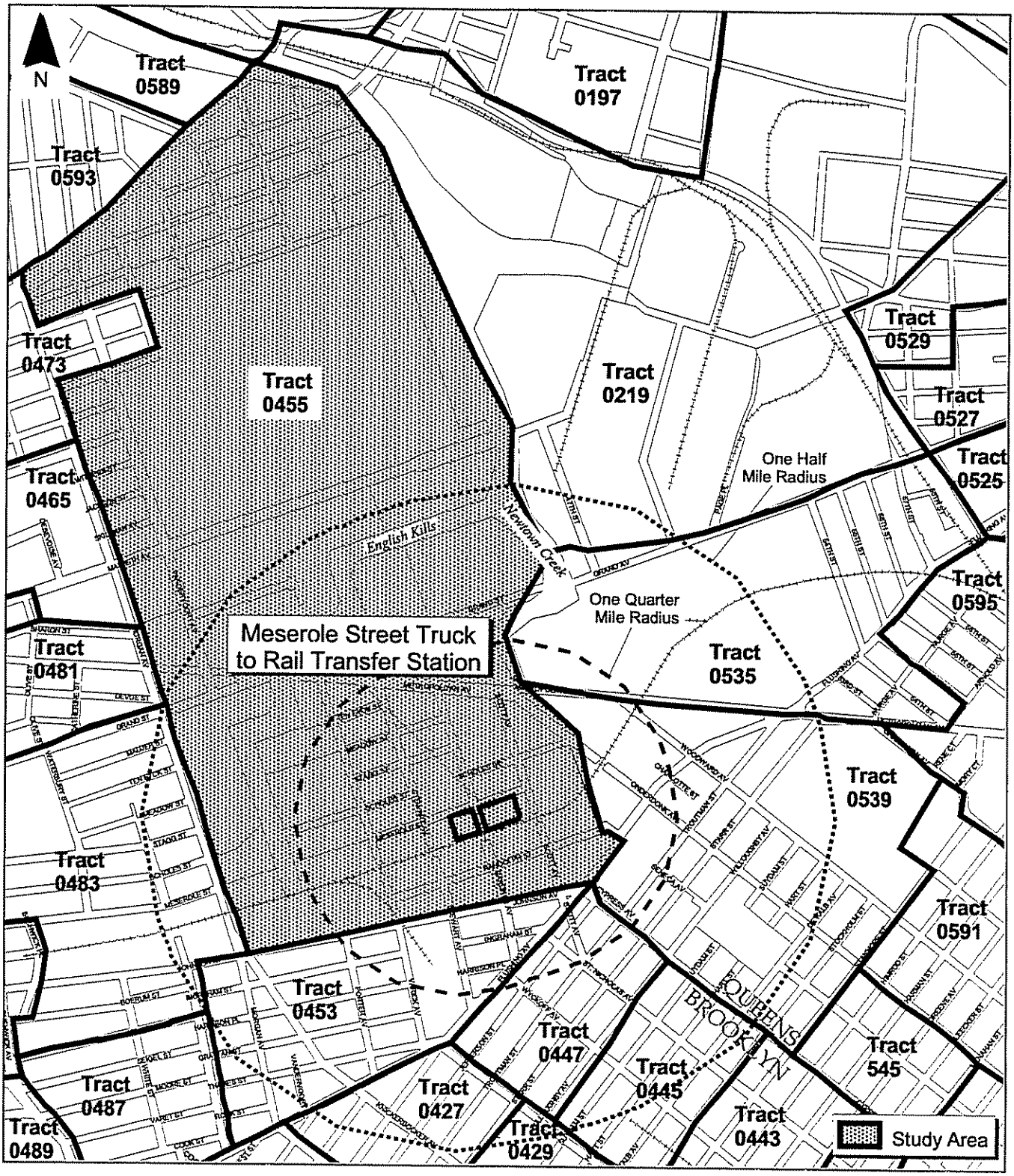
31.3.1 Existing Conditions

31.3.1.1 Definition of the Study Areas

Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area consists only of Census Tract 455 (Figure 31.3-1). This large tract surrounds the English Kills and the area west of Newtown Creek. It encompasses predominantly industrial areas on around the site along the northern border of Brooklyn.

31.3.1.2 Demographic Characteristics

The 2000 Census of the study area reported a population of only 103 individuals and 6 families, none of whom reside on or adjacent to the proposed site. Because the area is so lightly populated, socioeconomic data (comparing 1990 and 2000 Census data for the study area, borough and City) are provided in Appendix B.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.3-1 Census Tracts
Meserole Street Truck to Rail Transfer Station

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31.3.1.3 Economic Conditions

Current forecasts indicate that about 68,787 employees worked in Brooklyn CD 1 in 2005, which was about 9.4% of the borough's total employment.[1]

31.3.2 Future No-Build Conditions

31.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 1 will remain about the same as current conditions.[2]

31.3.2.2 Economic Conditions

Regional projections indicate that employment in Brooklyn CD 1 will remain about 9.4% of the borough total.[3]

31.3.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

The Meserole Street Truck to Rail TS would be compatible with its industrial surroundings and not be expected to have a significant adverse impact on socioeconomic conditions within the study area.

31.3.3.1 Residential Impacts

Because the site would be far removed from the nearest residential concentrations (approximate ½-mile to the east and south of the site), it is not expected to significantly affect residential populations in the general area. Analyses of traffic, air quality and noise indicate that there would be no significant project-related impacts at these locations (see Sections 31.14, 31.15 and 31.17). Therefore, the Meserole Street Truck to Rail TS is not expected to result in indirect displacement of residents.

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[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.
[2] Ibid.
[3] Ibid.

31.3.3.2 Direct Business and Institutional Impacts

No direct displacement of businesses or institutions would occur as a result of the Meserole Street Truck to Rail TS.

31.3.3.3 Indirect Business and Institutional Impacts

The site would continue to operate as a recycling facility under Future No-Build Conditions, and so the Meserole Street Truck to Rail TS would be compatible with its industrial surroundings. The adjacent industrial uses are not expected to experience significant adverse effects related to air quality or odor as a result of the operations of the transfer facility. While noise levels will increase on the site, they are not expected to affect the surrounding industrial operations of businesses in the study area.

Increased truck volumes on designated truck routes in the area resulting from the Meserole Street Truck to Rail TS would not be expected to result in indirect displacement of existing businesses or institutional uses, as these routes are already heavily used by trucks (some serving the existing operations) and have an industrial character.

31.3.3.4 Employment Impacts

The Meserole Street Truck to Rail TS would be expected to generate approximately 37 new jobs associated with its new operation and maintenance (crane operators, mechanics, supervisors) and transportation operations (drivers, dispatchers). In addition to direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

31.3.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.3.3.

31.4 Community Facilities and Services

31.4.1 Existing Conditions

31.4.1.1 Definition of the Study Areas

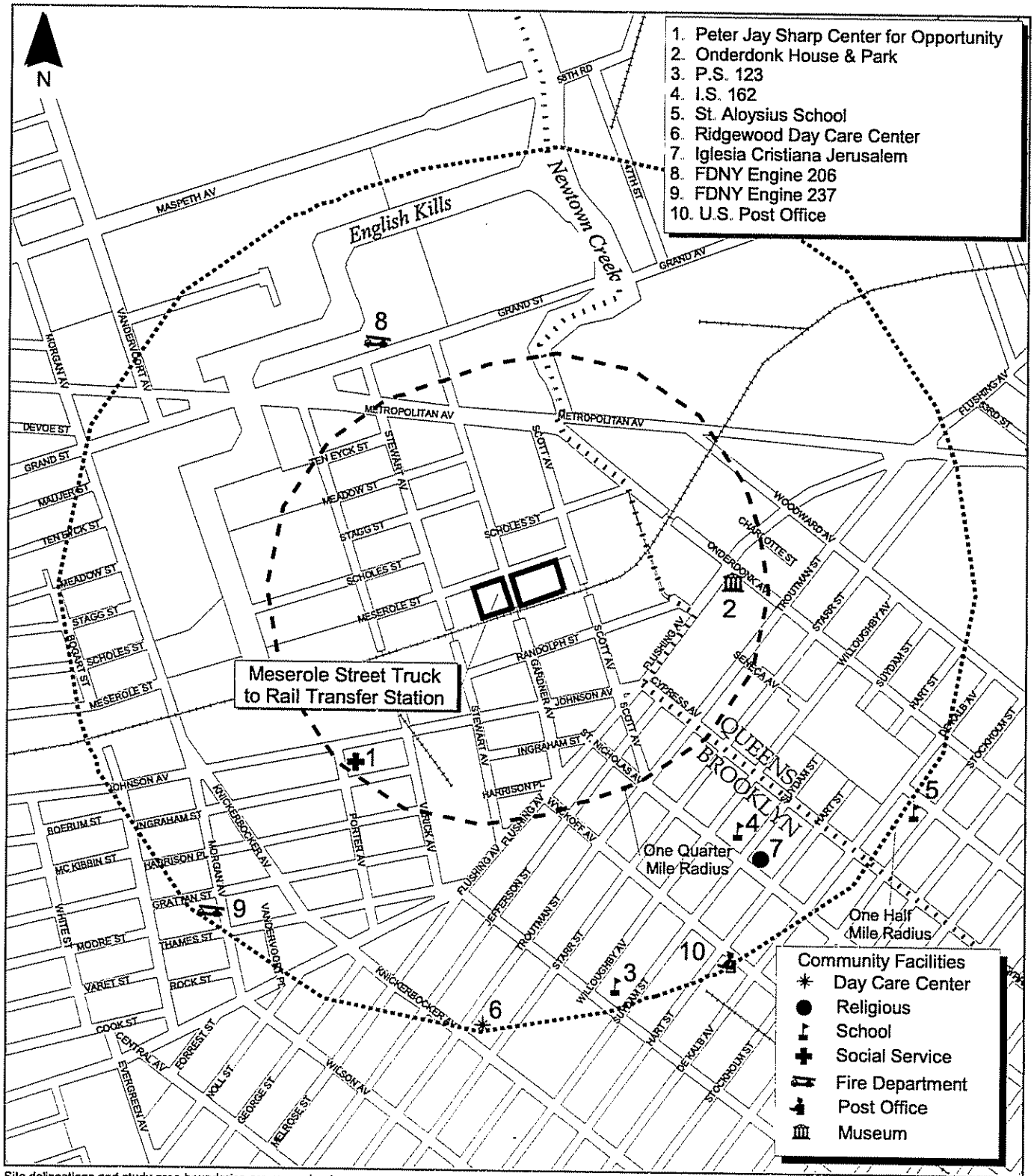
The primary study area is defined as the area within ¼-mile of the site. The secondary study area is defined as the area between ¼-mile and ½-mile of the site.

31.4.1.2 Summary of Community Facilities and Services

There are two community facilities within the primary study area: the Peter Jay Sharp Center for Opportunity (a homeless shelter and training center) and the Onderdonk House and Park (a local historical museum). Eight others are located within the secondary study area. The community facilities are listed in Table 31.4-1 and shown on Figure 31.4-1.

Table 31.4-1
Community Facilities

Name	Address
Within the Primary Study Area	
Peter Jay Sharp Center for Opportunity	89-111 Porter Avenue
Onderdonk House and Park	18-20 Flushing Avenue
Within the Secondary Study Area	
Schools	
P.S. 123	100 Irving Avenue
I.S. 162	1390 Willoughby Avenue
St. Aloysius School	360 Seneca Avenue
Day Care Center	
Ridgewood Day Care Center	227 Knickerbocker Avenue
Religious and Cultural Institutions	
Iglesia Cristiana Jerusalem	92 St. Nicholas Avenue
Fire	
First Engine and Ladder Company – Engine 206 and Ladder 140	1201 Grand Street, Brooklyn, and 56-07 Metropolitan Avenue, Queens
Second Engine and Ladder Company – Engine 237 and Ladder 124	43 Morgan Avenue and 394 Himrod Street
Municipal	
U.S. Post Office	86 Wyckoff Avenue



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals
outside the secondary area may not be shown on the figure

500 0 500 Feet

Figure 31.4-1 Community Facilitites and Services
Meserole Street Truck to Rail Transfer Station

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31.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

31.4.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

The Meserole Street Truck to Rail TS would create no significant new demand on services or community facilities, and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the new facility (see Appendix A).

31.4.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.4.3.

31.5 Open Space

31.5.1 Existing Conditions

31.5.1.1 Definition of the Study Area

The study area for open space is defined as being the area within a ½-mile radius of the site.

31.5.1.2 Summary of Open Space in the Study Area

There are five public parks and open spaces within the study area. They are listed in Table 31.5-1 and shown on Figure 31.5-1.

The study area's major recreational facility, Maria Hernandez Park, is located in Bushwick.

Maria Hernandez Park (formerly Bushwick Park) is a large City park – nearly seven acres – located ¼-mile south of the site. This community park recently underwent significant reconstruction to provide additional courts, game tables, paths, benches and other infrastructural improvements, as well as public performance space, ornamental gates, etc.

Though not NYCDPR property or jurisdiction, the five-acre Grover Cleveland High School Athletic Field was also recently reconstructed to provide passive and active recreational space for the neighborhood, including new play equipment for young children.

Table 31.5-1
Public Parks and Open Spaces

Name	Address	Acreage
Greenstreet	Grand Avenue and Metropolitan Avenue	--
Greenstreet	Johnson Street and Morgan Street	--
Maria Hernandez Park (formerly Bushwick Park)	Bounded by Knickerbocker Avenue, Starr Street, Irving Avenue and Suydam Street	6.87
Playground (a.k.a. Grover Cleveland High School Athletic Field)	210 Onderdonk Avenue	5.1
Starr Playground	Bounded by Starr Street, Onderdonk Avenue, Willoughby Avenue, and Seneca Street	0.9

31.5.2 Future No-Build Conditions

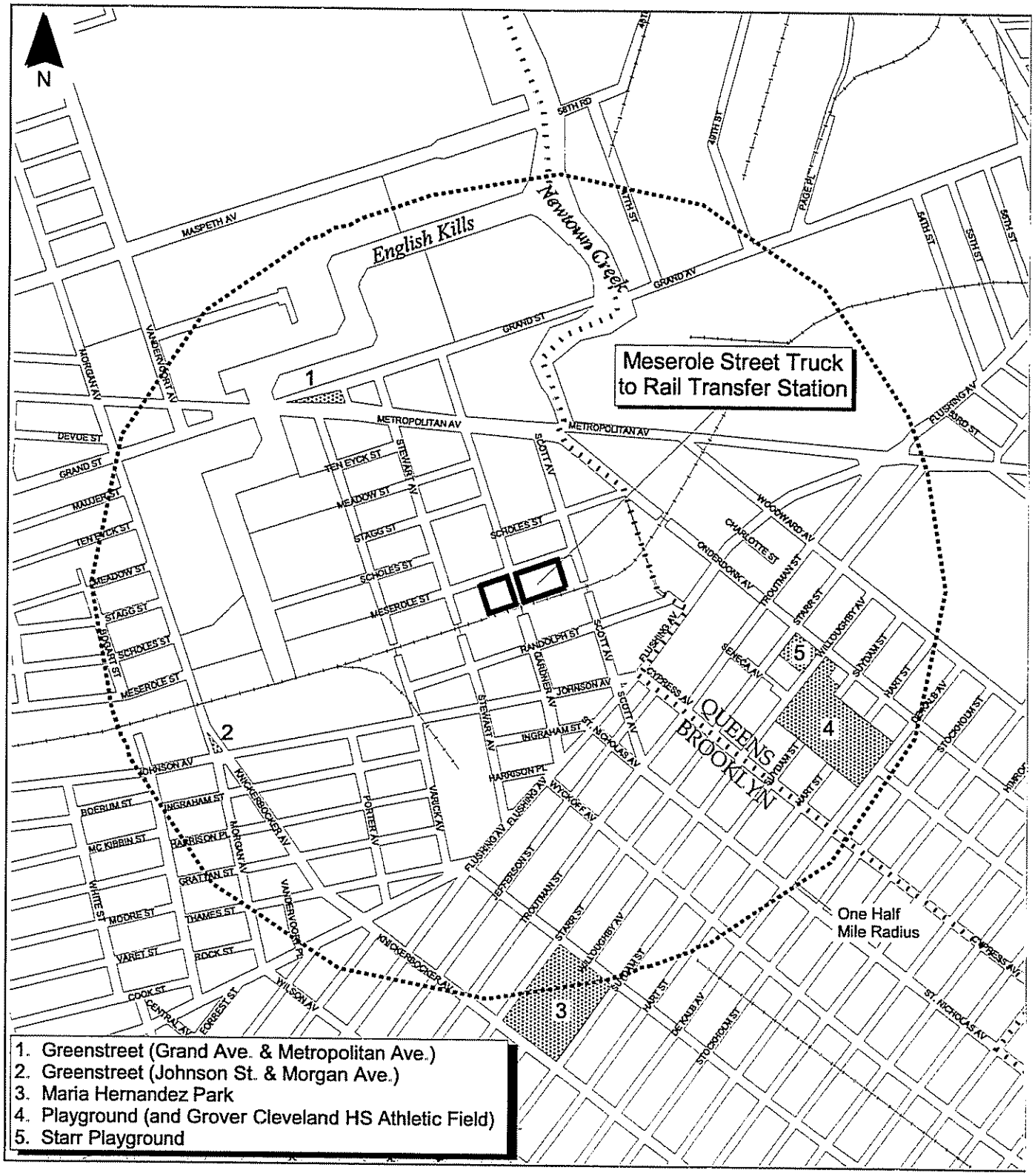
NYCDPR has no new development plans or notable development projects associated with open space resources in the study area. Therefore, Future No-Build Conditions are anticipated to resemble Existing Conditions.

31.5.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

The facility would not directly displace or significantly change demands on nearby parks. Therefore, no impacts to the public open spaces would result from the Meserole Street facility.

31.5.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.5.3.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.5-1 Open Space/Parkland
Meserole Street Truck to Rail Transfer Station

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31.6 Cultural Resources

31.6.1 Existing Conditions

31.6.1.1 Definition of the Study Area

The study area for cultural resources is defined as the area within ½-mile of the site and includes portions of four historic neighborhoods, all clustered along Newton Creek: East Williamsburg and Bushwick in Brooklyn, and Maspeth and Ridgewood in Queens.

31.6.1.2 Development History of the Area

East Williamsburg in Brooklyn was established as an independent village in 1664 and remained a small farming community until the opening of the Erie Canal in 1825. Williamsburg became an independent city in 1827 and joined the city of Brooklyn in 1854. During the Civil War, The Monitor, the world's first ironclad warship, was built at the Brooklyn Navy Yard in Williamsburg. It remains an industrial neighborhood along the waterfront with an expanding residential population further inland.

Bushwick in the southern portion of the study area was one of six original towns in Brooklyn during Dutch rule in the 17th century. It was an established farming community well into the 19th century. With a large influx of German immigrants in the mid 1800s, many breweries were established; between 1850 and 1880 there were at least 11 breweries located in the neighborhood. Bushwick became part of Brooklyn, along with Williamsburg, in 1854. Housing development and associated residential population surged after the opening of the elevated railroad to Manhattan in 1888. The area's demographics changed over the decades with the improved access and available housing supply. As with many other neighborhoods in the outer boroughs, Bushwick declined in the 1960s and 1970s, and has recently experienced some revitalization of its housing stock.

The Ridgewood neighborhood of Queens was originally developed as part of Newtown, the first of Queens' three original towns, established in 1642. Following the protracted economic depression of the mid-1870s, Ridgewood boomed as a residential community after the Brooklyn City Railroad built its car barns there in 1881. The coming of the Myrtle Avenue Elevated in 1888 furthered this process, attracting great numbers of people from other parts of the City.

Maspeth is a large neighborhood in west central Queens, named for the Mespat Indians who lived there, near the headwaters of Newtown Creek. Though it was initially settled by Europeans in 1642, it remained sparsely developed until the mid-19th century. Heavy industrial uses lined Newtown Creek (in the study area) and that section of Maspeth remains industrial, though there are many vacant sites where fertilizer plants, lumber yards and linoleum plants once stood.

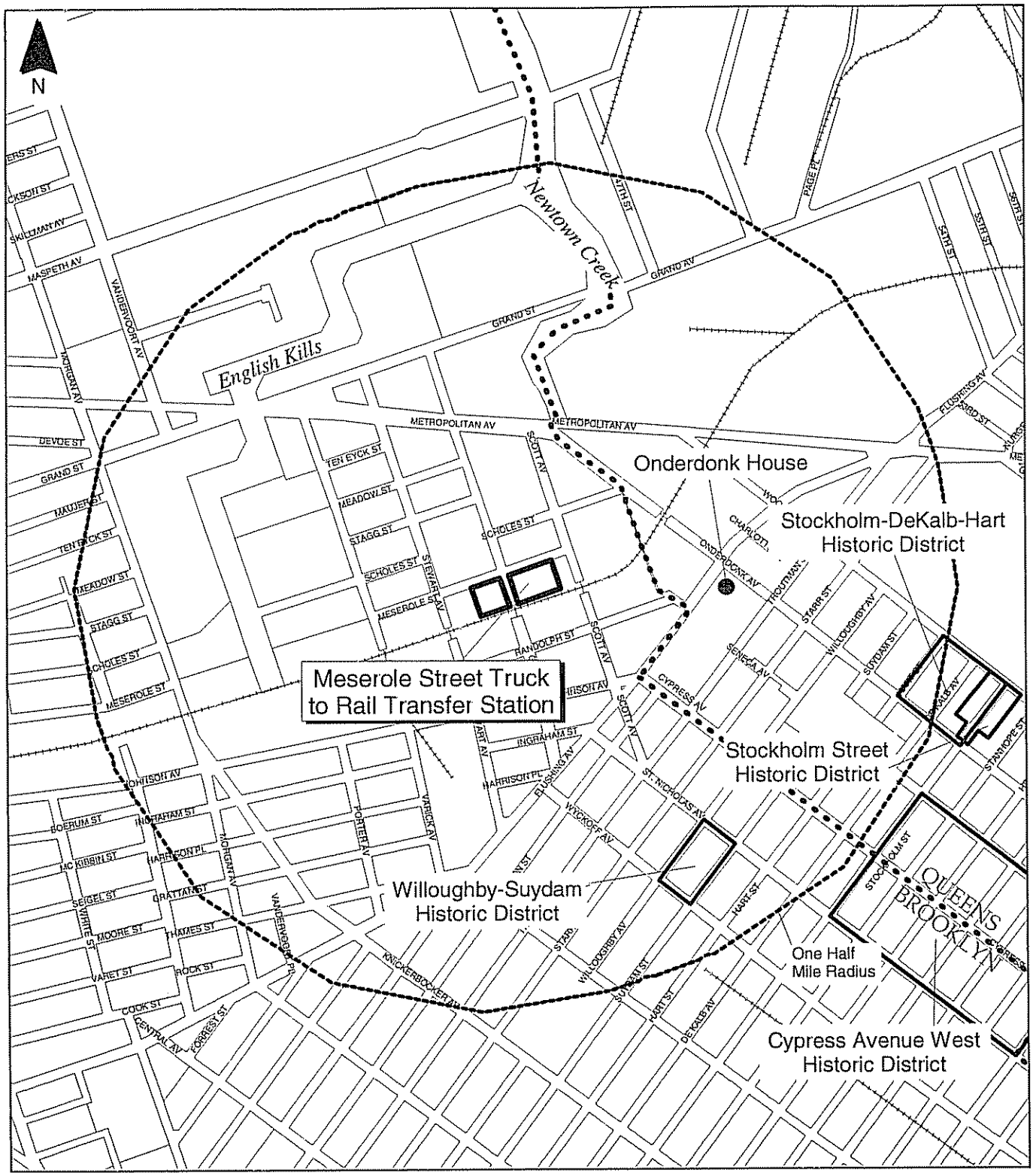
31.6.1.3 Cultural Resources on the Site

According to SHPO and LPC, there are no historic structures or areas of archaeological importance on the site.

31.6.1.4 Historic Resources Within the Study Area

Within or just beyond the study area, there are three early-20th-century historic districts and one individual property that are listed on the S/NR. The property and a large portion of one of the districts are also designated by the LPC. (See Figure 31.6-1.)

The Vander Ende-Onderdonk House (a.k.a., The Adrian and Anne Wyckoff Onderdonk House), located nearly ¼-mile east of the site, is a City landmark and is listed on the S/NR. It is the oldest Dutch-American fieldstone house in the City and houses the Greater Ridgewood Historical Society. The stone part of the house was built around 1709 and parts of the older frame date as far back as 1655. It served as a locus of 17th- and 18th-century Dutch and Huguenot settlement, and played a role in the boundary settlement between Kings and Queens Counties.



Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.6-1 Cultural Resources

Meserole Street Truck to Rail Transfer Station

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The three historic districts within (or just beyond) the study area are all intact groupings of late-19th-century/early-20th-century working class rowhouse and tenement housing. They are all in the bisected neighborhood of Ridgewood, which spans the Queens and Brooklyn border.

The Willoughby-Suydam Historic District covers 1½ blocks composed of 50 three-story brick tenements built between 1904 and 1906. Located more than ¼-mile southeast of the site, the district reflects the earliest phase of working class tenement housing constructed in Ridgewood, distinct from the rest of the Brooklyn Ridgewood community, which was developed with large industrial buildings at the time of construction. The district is listed on the S/NR.

The Stockholm-DeKalb-Hart Historic District covers 2½ blocks at the edge of the study area, east of the site. The two-story brick structures, designed in Romanesque and Renaissance Revival styles, are "an intact and cohesive neighborhood containing distinctive examples of working-class row houses constructed during Ridgewood's major period of development," between 1905 and 1921.[4] (The central portion of this district is also designated by LPC as the Stockholm Street Historic District.)

Located just beyond the study area boundary, further southeast of the site, the Cypress Avenue West Historic District is a 16-block district that stretches between Queens and Brooklyn. It serves as "an intact example of low-scale, working-class housing built at the turn of the twentieth century by German immigrants."[5] This district also contains two-story Romanesque and Renaissance Revival brick houses and other public buildings that were built between 1888 and 1906.

31.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review; therefore, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.

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[4] The New York State/National Register, Number 92NR00293, page 4.
[5] The New York State/National Register, Number 90NR01600, page 4.

31.6.3 Potential Impact with the TransRiver Marketing Company, L.P. Truck to Rail TS

The SHPO and ~~NYC~~LPC have determined that there are no elements of architectural or archaeological significance within the site.

31.6.4 Potential Impact with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.6.3.

31.7 Urban Design, Visual Resources, and Shadows

31.7.1 Existing Conditions

31.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (Figure 31.8-1). The site has been developed in a manner consistent with the urban design of the adjacent properties and visual quality of the overall study area. It is a non-sensitive industrial area, in terms of urban design and visual quality assessment. There are no sensitive-view corridors, publicly accessible open areas or points of waterfront access – areas that would likely experience visual quality impacts from the proposed transfer facility development.

31.7.1.2 Description of the Site

The existing transfer station comprises most of the on-site development. Both lots are surrounded by walls of about 8 to 12 feet in height, of cinder block or corrugated-metal fencing to block views into the site. While the gates are open, however, the trucks and containers are clearly visible from the street. Bales stacked on site are also visible from the streets where the stacks are several feet taller than the enclosing walls and fencing at the boundary. Where the interiors of the sites are visible from the street, however, they appear generally well organized. 111 Gardner Avenue features a two-story operations building and 586 Meserole Street contains a smaller wood-frame office building that seems to have once been a house. There is no formal landscaping on or adjacent to the site, but the perimeter walls are well maintained and free of graffiti.

31.7.1.3 Urban Design and Visual Resources of the Study Area

There are no sensitive-view corridors or important visual resources within the study area. The site is visually compatible with its industrial surroundings, which include several other waste transfer stations, recycling facilities and truck parking lots. Most industrial buildings in the area are two or three stories tall, with truck bays, and many with accompanying off-street parking. There is also on-street parking throughout the study area, but there is little daytime pedestrian activity. Vacant lots are adjacent to many of the buildings, though they tend to be maintained, some planted in grass. Although there is no formal and consistent landscaping for the public area, there are small strips of lawn along many of the area sidewalks, and there are mature trees throughout the study area. The area is generally tidy; the low-scale buildings, numerous parking lots and other unbuilt lots give the area an open quality. (See Figures 31.7-1 through 31.7-4.)

31.7.2 Future No-Build Conditions

There are no plans for development that would change the general street grid and development pattern throughout the area. Therefore, the urban design and visual resources of the area under Future No-Build Conditions are anticipated to resemble Existing Conditions.

31.7.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

While improvements would be made to the site, the industrial use would generally remain unchanged, and physical changes would be limited to the site. Although existing buildings on the two parcels will be demolished to accommodate new site construction, the improvements will likely produce a processing building, outdoor truck parking and container storage similar to the functional structures and open lot operations currently on the site. No significant adverse impacts to the urban design and visual quality of the area are anticipated.

31.7.4 Potential Impact with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.7.3.



Figure 31.7-1 : Meserole Street Truck Parking Lot (Lot 1).



Figure 31.7-2 : Meserole Street Recycling Facility (Lot 2).

Figure 31.7-1 and 31.7-2
Urban Design and Visual Quality
Meserole Street Truck to Rail Transfer Station

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Figure 31.7-3 : Looking west from the site entrance, along Meserole Street.



Figure 31.7-4 : Looking east from the site entrance, along Meserole Street.

Figure 31.7-3 and 31.7-4
Urban Design and Visual Quality
Meserole Street Truck to Rail Transfer Station

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31.8 Neighborhood Character

31.8.1 Existing Conditions

31.8.1.1 Definition of the Study Area

The neighborhood character study area and site is defined by predominantly industrial land use and visual quality. The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas.

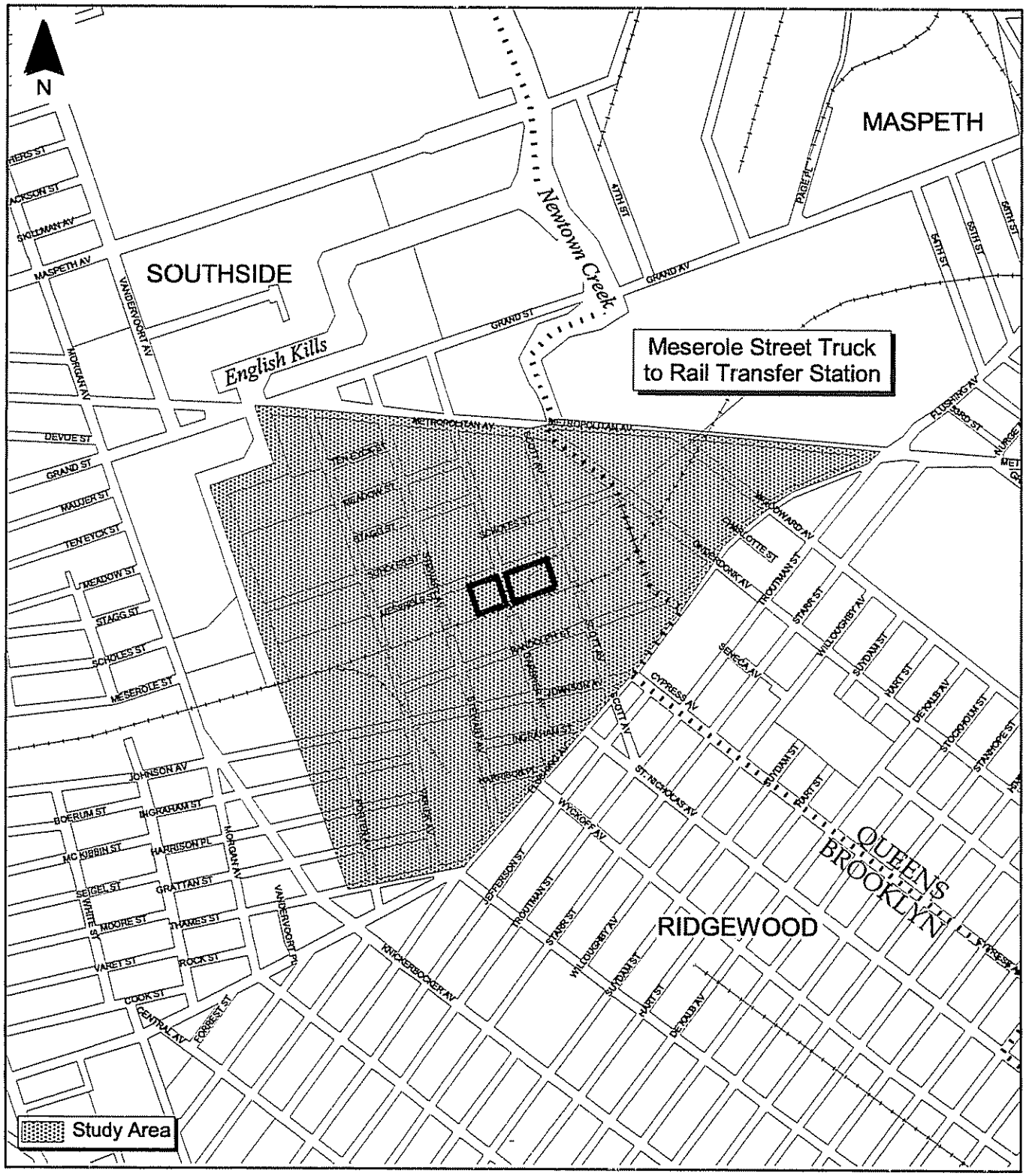
With these criteria, the study area is bounded by the English Kills to the west, LIRR tracks to the south, Newtown Creek to the east and Metropolitan Avenue to the north (Figure 31.8-1).

31.8.1.2 Description of Neighborhood Character

The study area is characterized by industrial uses, including several waste transfer and recycling operations. Consistent with a heavily industrial area, there are no sensitive visual resources or unique features, and while there are sidewalks and the area is generally tidy, with a few trees and some grass, there is little pedestrian activity. This is largely the result of there being no commercial or residential uses within the study area, heavy truck traffic through the area and limited pedestrian access into the study area.

31.8.2 Future No-Build Conditions

Future development plans in the vicinity of the site are beyond the study area and would not be expected to alter neighborhood character in their surroundings, particularly as they are industrial developments. The site will continue to operate as a recycling facility, and Future No-Build Conditions would generally resemble Existing Conditions.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR | HydroQual | URBITRAN | DB | EEA Cambridge Environmental Inc

Figure 31.8-1 Neighborhood Location

Meserole Street Truck to Rail Transfer Station

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31.8.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

No change to the industrial neighborhood character would be expected because the Meserole Street Truck to Rail TS operation would be similar to Future No-Build Conditions. Technical analyses for the new facility predict no unmitigatible impacts associated with traffic, air, odor or noise. Therefore, no impacts to neighborhood character are predicted.

31.8.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.8.3.

31.9 Natural Resources

31.9.1 Existing Conditions

Existing Conditions include stressed terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise if the Meserole Street Truck to Rail TS were developed.

31.9.1.1 Definition of Study Area

The study area includes the sites located at 568 Meserole Street and 111 Gardner Avenue. The 568 Meserole Street site is located on the southeast corner of Meserole Street and Gardner Avenue. The 111 Gardner Street site is located directly across Gardner Street, on the southwest corner of the intersection (Figure 2.4.13-1). Meserole Street Recycling, Inc. is presently on site. The area is zoned M3-1 for heavy manufacturing and is heavily developed. Therefore, the site has very limited terrestrial natural resources. Such resources that do exist are discussed in following sections.

31.9.1.2 Geology

Based on information derived from a review of the Bedrock and Engineering Geologic Maps of New York County by Charles A. Baskerville, 1994, the depth to bedrock is 125 feet below surface soil.[6] The property is paved with asphalt, covered with gravel and broken concrete, and has several buildings.

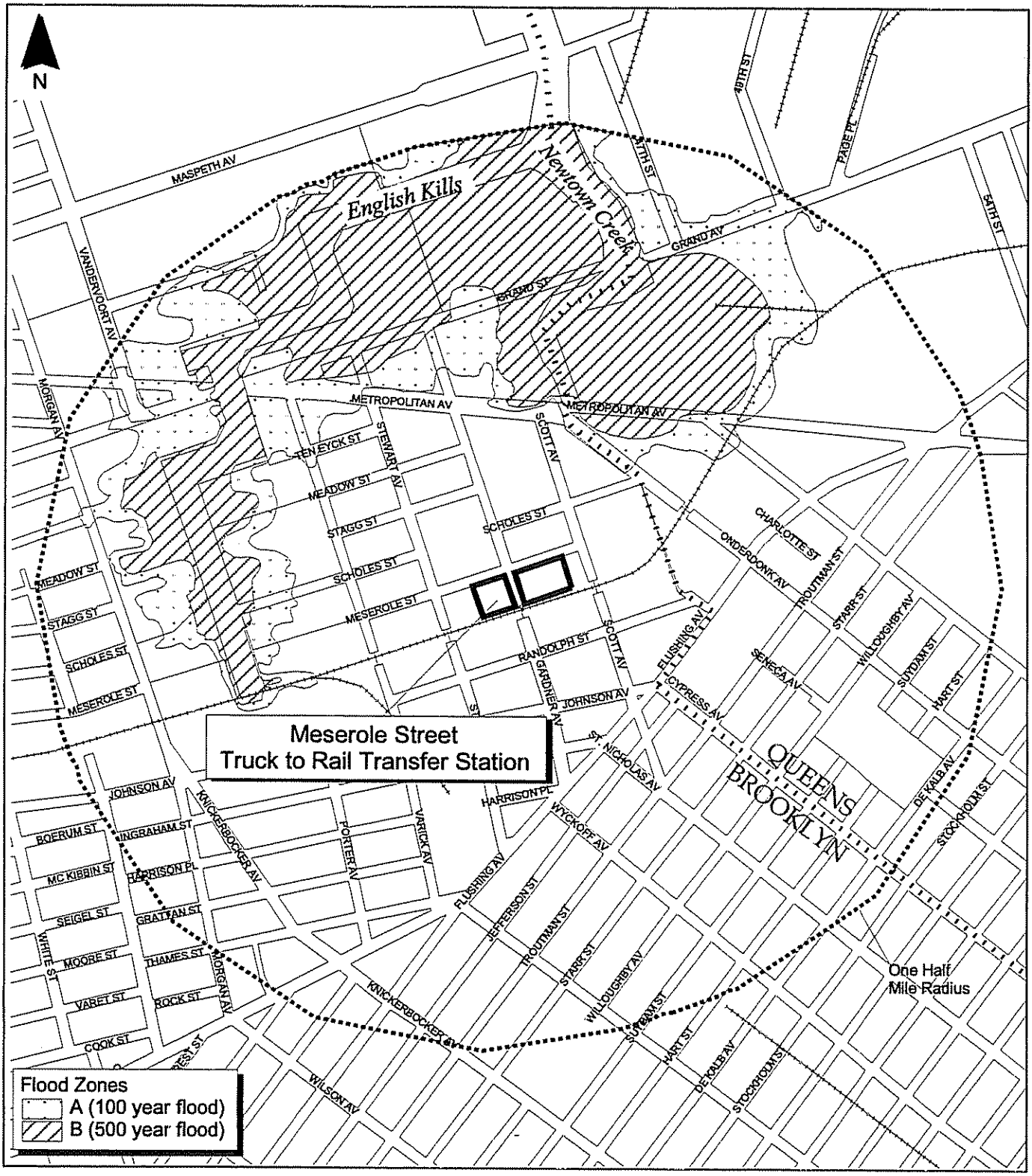
[6] Baskerville, C. A., 1994. Bedrock and Engineering Geologic Maps of New York County and Parts of Kings and Queens Counties, New York and Parts of Bergen and Hudson Counties, New Jersey.

31.9.1.3 Floodplains

The proposed Meserole Street Truck to Rail TS is located within a zone of minimal flooding (Figure 31.9-1). No intertidal wetlands exist in the study area. Newtown Creek and English Kills, which are NYSDEC-designated littoral zones, are to the northeast and west of the study area (Figure 31.9-2). The end of Newtown Creek falls just within a ¼-mile radius of the site and English Kills falls just outside the ¼-mile radius. The site is located within the City's WRP boundaries and is a designated SMIA.

31.9.1.4 Ecosystems

The site is essentially fully developed with buildings and paved lots, leaving little terrestrial natural resources to be impacted. The transfer station facility was devoid of vegetation; however, there was vegetation documented along the railroad tracks located immediately south of the facility. The species observed were non-native weed species, including: poor man's peppergrass (*Lepidium virginicum*), yellow nutsedge (*Cyperus esculentus*), lady's thumb (*Polygonum persicaria*), common mugwort (*Artemisia vulgaris*), redroot pigweed (*Amaranthus retroflexus*), common sow thistle (*Sonchus oleraceus*), crabgrass (*Digitaria sanguinalis*), green foxtail (*Setaria viridis*), common ragweed (*Ambrosia artemisiifolia*), Japanese knotweed (*Polygonum cuspidatum*), lamb's quarters (*Chenopodium album*), brome (*Bromus* sp.), daisy fleabane (*Erigeron annuus*), tree-of-heaven (*Ailanthus altissima*), black cherry (*Prunus serotina*), black medic (*Medicago lupulina*), horseweed (Conyza canadensis) and thistle (*Cirsium* sp.). Any construction along the railroad would impact the above-mentioned vegetation, but none of the species are threatened or endangered and all are considered to be invasive weed species.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

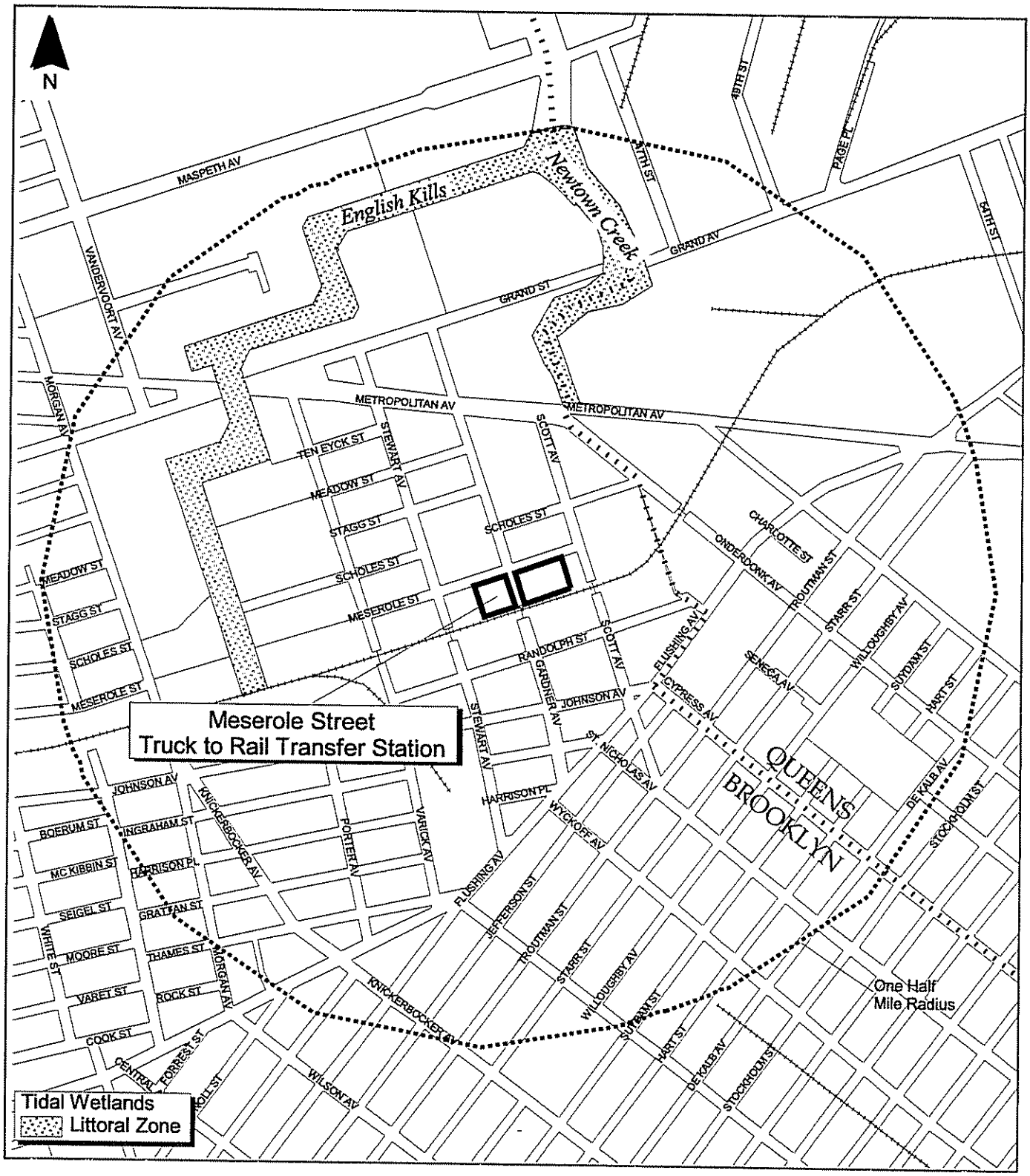
HDR URBITRAN EEA Cambridge Environmental Inc PB

Figure 31.9-1 Floodplains

Meserole Street Truck to Rail Transfer Station

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Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

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DB
EEA Cambridge Environmental Inc

Figure 31.9-2 Wetlands

Meserole Street Truck to Rail Transfer Station

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According to the USF&WS, except for occasional transients, there are no federally listed or proposed endangered or threatened species, or any "critical habitats" present on the site. According to the NYSDEC, there are no records of rare or state-listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the site.

31.9.2 Future No-Build Conditions

If the Meserole Street Truck to Rail TS were not developed, the study area would remain as is. The limited terrestrial natural resources will remain and the study area will continue to be an ecologically unproductive and stressed urban area.

31.9.3 Potential Impacts with TransRiver Marketing Company, L.P. TS

31.9.3.1 Geology

The geology of the study area would not be impacted as a result of the Meserole Street Truck to Rail TS.

31.9.3.2 Floodplains

Potential development of the Meserole Street Truck to Rail TS would have no effect on the elevation of the site. The potential development does not include any provisions for raising any portions of the site over this level. The facility would be constructed within the zone of minimal flooding and within the SMIA. The proposed activity, however, does not "substantially hinder" the area and therefore complies with New York State's CMP as expressed in the City's approved local WRP.

31.9.3.3 Ecosystems

The Meserole Street facility is covered with buildings and paved lots, which have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. Implementation of the new facility would not have any significant impact on the few areas of vegetation present on the site. The few opportunistic, invasive, weed species on the property are located along the railroad tracks. Any construction or alteration of the property will not impact the vegetative community, as only weeds are present. There may be a loss of the vegetative communities along the railroad tracks with increased usage, but the species present along the tracks are also opportunistic species that do not have a significant community value.

31.9.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

31.9.4.1 Geology

Impacts for this Alternative are assumed to be the same as described in Section 31.9.3.1.

31.9.4.2 Floodplains

Impacts for this Alternative are assumed to be the same as described in Section 31.9.3.2.

31.9.4.3 Ecosystems

Impacts for this Alternative are assumed to be the same as described in Section 31.9.3.3.

31.10 Hazardous Materials

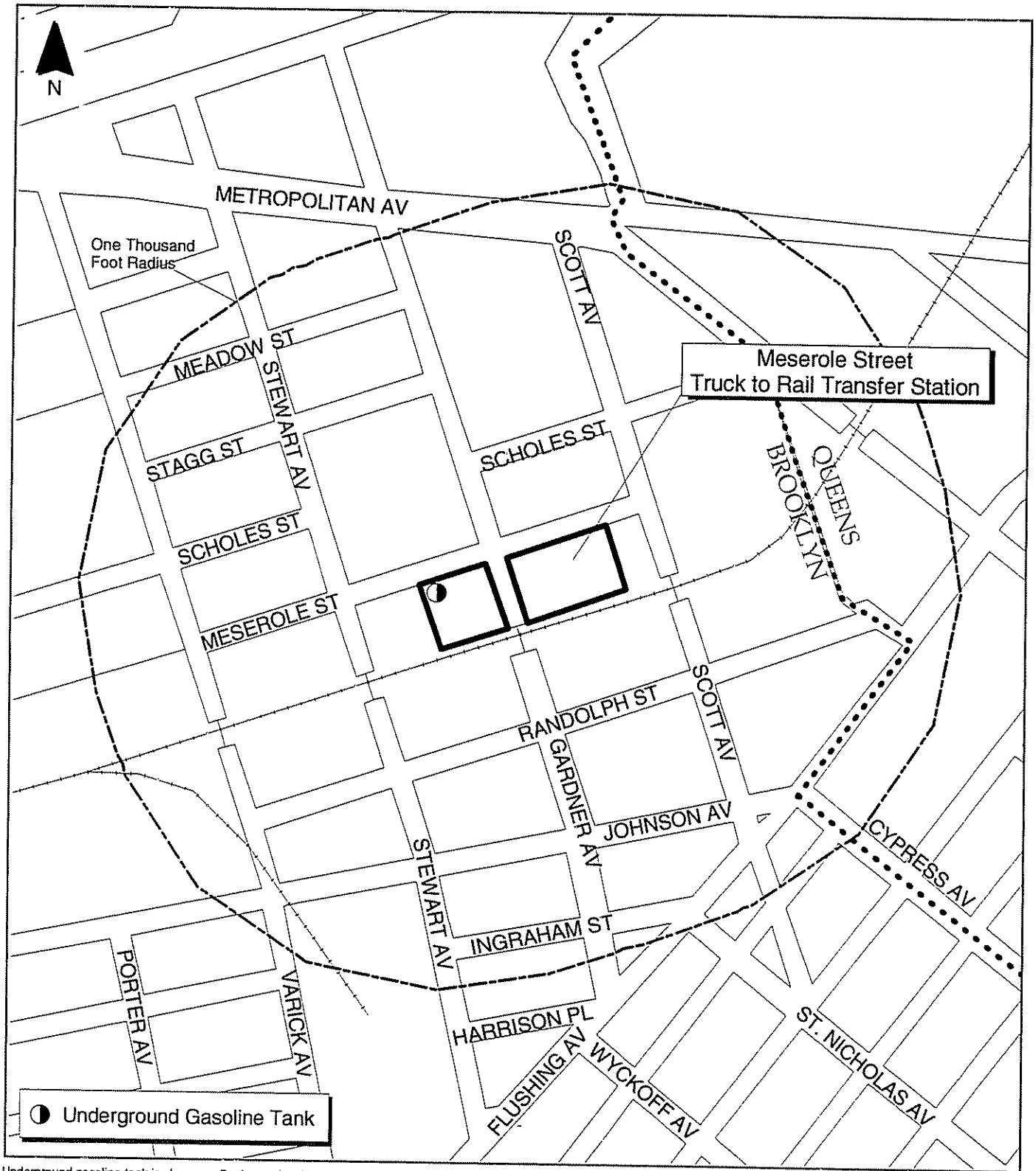
31.10.1 Existing Conditions

Existing Conditions associated with the presence or suspected presence of hazardous materials in soils, groundwater, and building components/equipment were assessed within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual, and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527-00). The assessment was performed in July and August of 2004. It included a historic land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps and information contained within City Building Department database records for the study area. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A Freedom of Information Law request was submitted to the NYCDEP to solicit records pertaining to toxic or hazardous materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted in July 2004. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers, and unusual stains and odors.

31.10.1.1 Definition of Study Area

The study area includes the existing site and its neighboring properties within an approximate 1,000-foot radius. (See Figure 31.10-1.) The existing site consists of two separate parcels: (1) 568 Meserole Street (Block 2978, Lot 1); and (2) 111 Gardner Avenue (Block 2977, Lots 14, 15 and 16).



Underground gasoline tank is shown on Sanborn atlas, but was not located during site visit
Site delineations and study area boundaries are approximate
Base Map Source: New York City Department of City Planning

300 0 300 Feet

HDR URBITRAN EEA Cambridge Environmental Inc

Figure 31.10-1 Hazardous Materials Sites
Meserole Street Truck to Rail Transfer Station

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31.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exist and implementation (i.e., development and construction) of the Meserole Street Truck to Rail TS could lead to possible increased exposure of people or the environment to those materials. The areas of concern within the study area identified during the assessment include:

- Previous Occupants and Uses – Historical Sanborn atlases and regulatory database records indicated former occupants and uses of the existing site included a liquid bleach manufacturer and a chemical distributor (111 Gardner Avenue site), and an iron frame works facility and lumberyards (568 Meserole Street site). Former building occupant, Alfred Chemical Corp. listed at 111 Gardner Avenue, was identified within the following regulatory databases: NYSDEC CBS Facility, Spill Log, and TRI Facilities; USEPA and NYSDEC RCRA Hazardous Waste Generator; and USEPA Civil & Administrative Enforcement Docket. Any improper releases of chemicals stored or used by these former on-site businesses, especially those occurring on then-unpaved property areas or within paved areas with drains, could have resulted in potential subsurface contamination at the existing site. It should be noted that exterior portions of the existing site, not covered by on-site buildings and structures, were either paved with asphalt and concrete, or covered with gravel and broken concrete. No visual evidence of stained soil or stressed vegetation was observed on the existing site during the site assessment.

- Underground Storage Tanks (USTs) - Historical Sanborn atlases (i.e., 1951, 1977, 1981 and 1991) depicted an outdoor buried gasoline tank on the northwest corner of the 111 Gardner Avenue site. In addition, City Building Department database records indicated a gasoline tank was installed circa 1904 at the 111 Gardner Avenue site, and oil burner applications were filed in 1954, 1956 and 1957 for the 111 Gardner Avenue site. It is unknown if the storage tanks associated with the installation of on-site oil-fired heating systems were located above ground and/or below ground. No fill ports or vent lines, normally associated with the presence of USTs, were noted at the 111 Gardner Avenue site. It should be noted that natural gas-fired systems presently supply heat within the 111 Gardner Avenue building.

- Past and Present Adjacent and Neighboring Uses – Review of historical Sanborn atlases and regulatory agency databases, as well as pedestrian reconnaissance of neighboring properties, indicated the study area is located within a neighborhood that has historically been developed for and occupied by a variety of manufacturing and industrial uses. Manufacturing and industrial operations typically involve the storage and use of toxic or hazardous materials, and generation of toxic or hazardous wastes.

Based upon this information, it is considered likely that some level of groundwater degradation exists within the study area.

31.10.2 Future No-Build Conditions

Under Future No-Build Conditions, the study area would remain as is. Contamination may exist within the study area from previous historic use, suspected USTs, and/or from documented and undocumented hazardous material releases at adjacent or neighboring properties.

31.10.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

Based on the land use history of the study area and the possible presence of on-site USTs, contamination may exist within the study area where the new construction of the Meserole Street Truck to Rail TS would occur. If the Meserole Street Truck to Rail TS project was to be implemented, a soil and groundwater Phase II sampling protocol would be developed for review and approval by NYCDEP (NYSDEC may be involved in the decisions to test and remediate the study area depending on the actual events and levels of contamination encountered). If elevated levels of contamination are encountered, remediation of said contamination would be performed in a manner that is consistent with the levels of contamination discovered to ensure that no significant impact to on-site and off-site occupants occurs. Since construction and excavation may increase the exposure to contaminants by dermal contact, ingestion or inhalation, the necessary and appropriate health and safety measures would be implemented to mitigate and minimize any exposure risk to workers and the general public.

31.10.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

Impacts for this Alternative are assumed to be the same as described in Section 31.10.3.

31.11 Water Quality

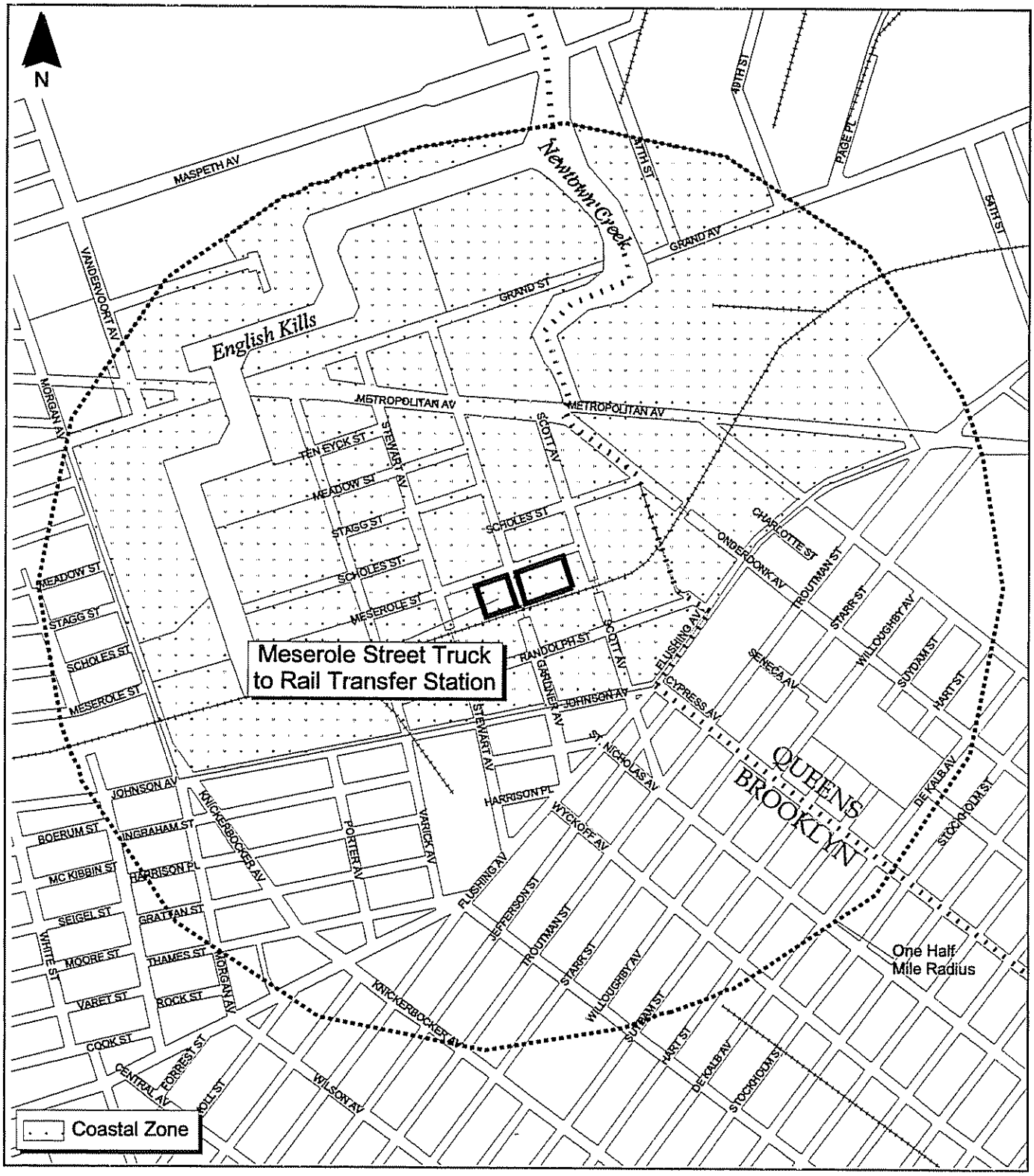
The Meserole Street Truck to Rail TS is not located near or adjacent to surface waters and would have no potential to impact water quality. Therefore, no analysis was required.

31.12 Waterfront Revitalization Program

31.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of English Kills and Newtown Creek, the proposed Meserole Street Truck to Rail TS would be located within the City's coastal zone boundary (Figure 31.12-1). The site is located within a designated SMIA and Reach 13/Newtown Creek as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." The proposed Meserole Street Truck to Rail TS is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Meserole Street Truck to Rail TS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14-1. In instances where a component of the proposed Meserole Street Truck to Rail TS required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below. A description of waste handling operations that would occur at the proposed site is provided in Section 2.4.13.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR Hydroqual URBITRAN DR R22 EEA Cambridge Environmental Inc

Figure 31.12-1 Coastal Zone Boundary

Meserole Street Truck to Rail Transfer Station

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31.12.2 Consistency Assessment for TransRiver Marketing Company, L.P. TS

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

A review of available information indicates that there are sufficient public services and facilities to support the new Meserole Street Truck to Rail TS. As part of the proposed facility, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation.

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The proposed Meserole Street Truck to Rail TS would be located within the boundaries of the NYCDCP-designated Newtown Creek SMIA. The proposed facility would serve as a truck-to-rail facility where MSW would be delivered, processed and containerized, then transported via rail lines to the American Ref-Fuel Company's waste-to-energy facility located in Niagara Falls, New York. The proposed facility would occupy two adjacent sites and would require demolition and construction activities in order to operate as a truck-to-rail transfer station. Development of the proposed facility would include the removal of existing buildings; development of a new 200-foot-by-200-foot building that would contain a tipping floor, rail line loading dock and weighing scales; and an additional building that would consist of the truck queuing area and container storage area. In addition, existing rail connections would need to be extended and

two new rail spurs constructed. The Meserole Street Truck to Rail TS would be consistent with existing land uses in the immediate vicinity of the site and would be compatible with surrounding uses. Therefore, the proposed facility would be consistent with this subpolicy.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses.*

The proposed Alternative would not be considered a waterfront use as it is not located at the waterfront. The action would involve the development of a truck-to-rail facility. The proposed facility would allow for rail transport of compacted containerized solid waste to a licensed out-of-City disposal facility. The proposed development would involve the demolition of existing buildings and subsequent development of a new 200-foot-by-200-foot building that would contain a tipping floor, rail loading dock and weighing scales, and an additional building which would include a truck queuing area and container storage area. In addition, existing rail connections would be extended and two new rail spurs constructed. Once development activities are completed, the facility would provide a site where MSW could be received, processed and containerized, then transported by rail to a licensed disposal facility. The Proposed Action would involve the demolition and redevelopment of existing buildings. It would not result in a need for significant infrastructure improvements and would, therefore, be consistent with this subpolicy.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 *Minimize conflicts between recreational, commercial, and ocean-going freight vessels.*

The Meserole Street Truck to Rail TS would not be a waterfront use and would not be located in an area that would cause conflicts with recreational, commercial or ocean-going vessels. This subpolicy would not, therefore, be applicable.

3.3 *Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.*

The proposed facility would not be a waterfront use. The proposed Meserole Street Truck to Rail TS would serve as a truck-to-rail facility where MSW would be delivered, processed and containerized, then transported via rail lines to an out-of-City disposal facility. No impacts on the aquatic environment and surrounding land and water uses would result from the development of the facility. This subpolicy would not be applicable.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 *Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.*

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes, the Meserole Street Truck to Rail TS would not be within a designated area. SCFWH information maintained by the New York State Department of State indicates that the Meserole Street Truck to Rail TS would also not be located within an SCFWH.

Development of the Meserole Street Truck to Rail TS would involve the demolition of existing structures and subsequent development of a new facility. The proposed facility would not be located on the waterfront, nor would it be a water-dependent use. The Proposed Action would not be anticipated to

significantly impact natural resources in the vicinity of the site. The Meserole Street Truck to Rail TS would, therefore, be consistent with this subpolicy.

4.2 *Protect and restore tidal and freshwater wetlands.*

A review of NYSDEC tidal and freshwater wetland maps was conducted in order to determine the presence of wetlands within the project site. No tidal or freshwater wetlands exist on the site. The proposed Meserole Street Truck to Rail TS would be a land-based facility. No impacts to wetlands would occur as a result of the Proposed Action. This subpolicy would not, therefore, be applicable.

4.3 *Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.*

A review of the NYSDEC NHP database indicates there are no vulnerable plant, fish and wildlife species or rare ecological communities on site or in the immediate vicinity of the proposed site.

Development of the proposed facility would involve the demolition of existing structures and the subsequent development of a new facility that would operate as a truck-to-rail TS. As stated in Section 31.9, modifications to the site would result in little, if any, adverse ecological impacts or loss of habitat for rare or endangered species due to the previous and ongoing industrial activities at and in the vicinity of the site. Sanitary and process wastewaters would be routed to on-site treatment systems and then discharged to the municipal sewer system. Management of stormwater runoff from the Meserole Street Truck to Rail TS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The Meserole Street Truck to Rail TS would also not introduce hazardous wastes or other pollutants into the

environment that could adversely impact fish and wildlife resources within the coastal area.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies.

The Meserole Street Truck to Rail TS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the solid waste processing areas would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system and then discharged to the municipal sewer system. Stormwater runoff from the Meserole Street Truck to Rail TS would be managed in accordance with applicable regulations. The proposed facility would be consistent with this subpolicy.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the Meserole Street Truck to Rail TS, BMPs would be used to the extent possible to minimize any nonpoint discharges. Construction and operation of the proposed facility would comply with applicable federal, state and local requirements for the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the processing building, limiting the risk for the introduction of hazardous wastes or other pollutants into the environment. Control methods would be implemented at the facility to minimize or eliminate the potential for litter to escape into the surrounding environment. The Proposed Action would be consistent with this subpolicy.

5.3 *Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.*

The proposed facility would be not be situated on a navigable water or within a natural area. Development of the proposed facility would involve demolition of existing buildings and subsequent construction of a new, land-based facility. There would be no excavation or placement of fill within any watercourse or wetlands associated with the proposed facility. Therefore, this subpolicy would not be applicable.

5.4 *Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.*

The proposed development of the Meserole Street Truck to Rail TS would have no impact on the quality or quantity of surface or ground waters. In addition, the facility would not be located on a surface water. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer or water supply. The Meserole Street Truck to Rail TS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 *Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.*

The proposed Meserole Street Truck to Rail TS would not be a waterfront facility. In addition, based upon a review of the FEMA National Flood Insurance Program maps, the Meserole Street Truck to Rail TS would not be located within a designated floodplain. This subpolicy would not, therefore, be applicable.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The proposed Meserole Street facility would involve the management and processing of solid waste through a truck-to-rail system. Waste would be transported in sealed containers via rail to an out-of-City disposal facility. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding environment. Solid waste would generally be containerized within 24 hours of arriving at the facility. All solid waste handling operations would be conducted in accordance with the NYSDEC Part 360 regulations (6 NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the proposed facility.

Contingency plans would be put in place to address the potential receipt of unauthorized waste and/or other situations that could disrupt the operation of the facility. Litter control methods would also be implemented at the facility to minimize or eliminate the potential for litter entering the environment. The proposed Meserole Street Truck to Rail TS would not result in adverse impacts and would be operated in a manner to ensure that there would be no impact to surface and ground waters, significant fish and wildlife habitats, recreational areas and scenic resources. The proposed facility would be consistent with this subpolicy.

7.2 Prevent and remediate discharge of petroleum products.

See response to Subpolicy 7.1.

7.3 *Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.*

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 *Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.*

The proposed Meserole Street Truck to Rail TS would not be located on the waterfront and, therefore, would not affect existing access to the waterfront. This subpolicy would not be applicable.

8.2 *Incorporate public access into new public and private development where compatible with proposed land use and coastal location.*

The proposed Meserole Street Truck to Rail TS would not be a waterfront facility, and public access would generally not be compatible with the principal use of the site or the surrounding areas. Therefore, this subpolicy would not be applicable.

8.3 *Provide visual access to coastal lands, waters and open space where physically practical.*

The Meserole Street Truck to Rail TS would be compatible with surrounding uses. It would involve the development of a new facility on an existing industrial site. As discussed in Section 31.7, existing visual access to coastal lands, waters and open space is minimal due to the highly industrial nature of the surrounding vicinity. Therefore, no impacts to visual access would be anticipated. See also response to Subpolicy 9.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

No mapped parklands or open space areas have been identified at or within the immediate vicinity of the proposed site. Therefore, this subpolicy is not applicable.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The proposed Meserole Street Truck to Rail TS would not result in significant impact upon visual quality, as noted in Section 31.7. Based on the information discussed in that section, the proposed facility would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The proposed facility would involve the removal of existing buildings and the subsequent development of a new facility. The existing facility provides no scenic values associated with natural resources, and the Proposed Action would pose no additional impacts to scenic values associated with natural resources. It would, therefore, be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

No adverse effects on cultural resources would result from the development of the Meserole Street Truck to Rail TS, as stated in Section 31.6. Based on the information presented in that section, the proposed facility would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

31.12.3 Consistency Assessment for IESI NY Corporation TS

Assessment for this Alternative is assumed to be the same as described in Section 31.12.2.

31.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

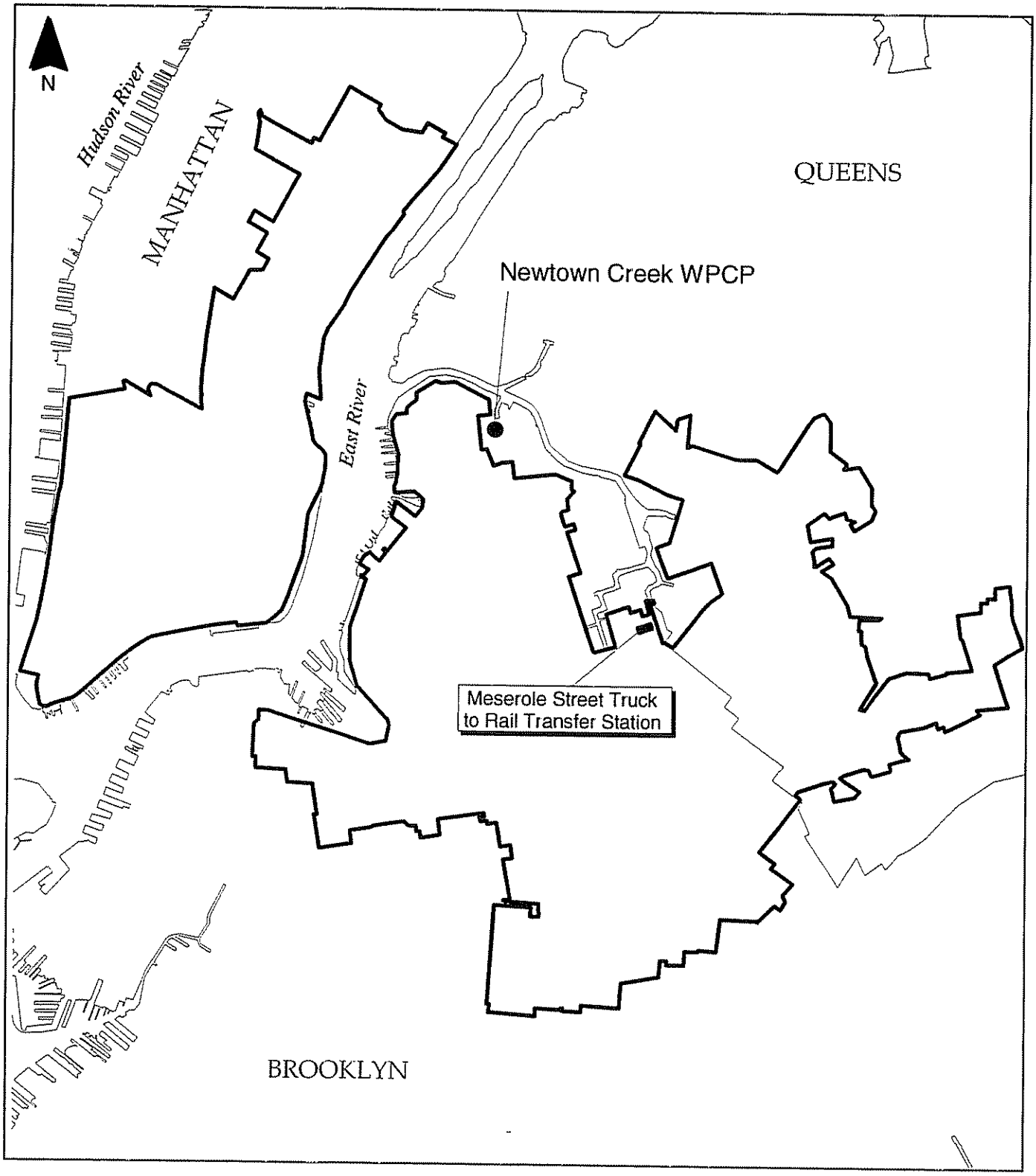
31.13.1 Existing Conditions

31.13.1.1 Water Supply

Potable water is supplied to the vicinity of the Meserole Street Truck to Rail TS site from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. An 8-inch-diameter water supply line exists along Meserole Street and a 12-inch line exists along Gardner Avenue, based on a review of the NYCDEP water distribution maps. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

31.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Newtown Creek WPCP, which serves portions of Manhattan, Queens and Brooklyn. The WPCP drainage area is illustrated in Figure 31.13-1. From July 2002 through June 2003, the WPCP treated an average of 216 mgd of wastewater under dry weather flow conditions and an average flow of 238 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 31.13-1). The maximum dry weather flow during this period was 239 mgd in August 2002 and the maximum average flow was 259 mgd during June 2003. Effluent from the plant is discharged to the East River and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Newtown Creek WPCP is 310 mgd. As the Meserole Street Truck to Rail TS is currently not staffed and no operations take place at the site, no water is used by personnel or process operations.



Site delineations are approximate

5000 0 5000 Feet

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Figure 31.13-1 Existing WPCP Drainage Area
Meserole Street Truck to Rail Transfer Station

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Table 31.13-1
Average Monthly Dry Weather and Average Flows
Newtown Creek Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow-(1) (mgd)
July 2002	223	229
August	239	256
September	229	253
October	224	255
November	208	238
December	213	228
January 2003	212	223
February	204	224
March	218	240
April	207	228
May	201	219
June	218	259
Average Effluent	**216**	**238**

Note:
(1)_-Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, the area in proximity to the Meserole Street Truck to Rail TS is served by two branches of a 10-inch-diameter sanitary sewer that flow east and west along Meserole Street to a 24-inch sanitary sewer on Gardner Avenue. The 24-inch line flows south to a 36-inch interceptor on Randolph Avenue, which conveys sanitary flow to the west and north along Varick, Johnson, Knickerbocker, Morgan and Lombardy Avenues and Monitor and Russell Streets, to the Newtown Creek WPCP.

Stormwater sewers in the vicinity of the site include a 12-inch-diameter line that conveys stormwater to the west along Meserole Street from the intersection with Scott Avenue. The storm sewer increases in diameter to a 42-inch line at the intersection of Meserole Street and Gardner Avenue and connects to a 48-inch storm sewer at the intersection of Meserole Street and Stewart Avenue, which conveys flow to the north along Stewart Avenue. The 48-inch line connects to a 54-inch storm sewer that flows west along Scholes Street, which increases to a 60-inch-diameter line at the Varick Avenue intersection before reaching the outfall at Scholes Street and English Kills. A 36-inch stormwater sewer also exists along Gardner Avenue and flows north to a connection with the 42-inch storm sewer on Meserole Street.

31.13.1.3 Solid Waste

Commercial and industrial wastes generated in the City are collected by private companies. Residential solid waste is collected and managed by DSNY. As the site is not currently staffed and no operations take place, no solid waste is generated at the site.

31.13.1.4 Energy

Based on a review of applicable service plates, Consolidated Edison maintains electric lines along Gardner Avenue and Meserole Street.

Keyspan maintains gas lines in the vicinity of the site, including a 6-inch-diameter line along Meserole Street and a 6-inch line north of Meserole Street along Gardner Avenue.

The Meserole Street Truck to Rail TS site currently utilizes a negligible amount of gas and electricity due to the absence of staff and a lack of operations.

31.13.2 Future No-Build Conditions

The Meserole Street Truck to Rail TS site would continue without operations. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for the site. Wastewater flows to the Newtown Creek WPCP would continue to increase and would be projected to be 240.4 mgd in 2006.

31.13.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

31.13.3.1 Water Supply

The Meserole Street Truck to Rail TS site would have up to 37 employees working three shifts per day. They would require approximately 925 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. It was assumed that this facility would use approximately the same amount of water for truck and tipping floor washdown and dust control as the Converted MTSs. The combined total usage of 2,725 gpd of potable water would represent an increase of 2,725 gpd above current consumption levels.

The Meserole Street Truck to Rail TS site would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

31.13.3.2 Sanitary Sewage

Based on the estimated water usage of 2,725 gpd for the Meserole Street Truck to Rail TS site, the small quantities of wastewater sent to the Newtown Creek WPCP would not significantly impact the sewage flow rate or the ability of the Newtown Creek WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 240.4 mgd in 2006, which would be well below the permitted capacity of 310 mgd. In addition, the new wastewater flows due to the proposed action would not result in a significant increase in CSOs.

31.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 37 facility employees per day, 289 pounds of solid waste would be generated per week (48 lbs/day) and would represent an incremental increase of approximately 289 pounds per week (48 lbs/day) above current waste generation levels. This volume would be managed at the Meserole Street Truck to Rail TS site and would not significantly impact the system.

31.13.3.4 Energy

Detailed energy requirements for the Meserole Street Truck to Rail TS site were not available at the time of this analysis. Therefore, it was assumed that energy requirements of the Meserole Street Truck to Rail TS site would be similar to the energy requirements of a Converted MTS. Based on this assumption, the Meserole Street Truck to Rail TS site would require approximately 5.51E+10 BTU/year of electricity to operate the facility and natural gas facility heating would be used with an estimated demand of 1.34E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the Greenpoint Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity. Based on this statement, it is assumed that Consolidated Edison would also be able to meet all power demands without impacts of the Meserole Street Truck to Rail TS site, which is located in close proximity to the location of the Greenpoint Converted MTS.

Consolidated Edison was also notified of the natural gas requirements of the Greenpoint Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility. Based on this statement, it is assumed that Consolidated Edison would also be able to meet all natural gas demands without impacts of the Meserole Street Truck to Rail TS site, which is located in close proximity to the location of the Greenpoint Converted MTS.

31.13.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

31.13.4.1 Water Supply

Impacts for this Alternative are assumed to be the same as described in Section 31.13.3.1.

31.13.4.2 Sanitary Sewage

Impacts for this Alternative are assumed to be the same as described in Section 31.13.3.2.

31.13.4.3 Solid Waste

Impacts for this Alternative are assumed to be the same as described in Section 31.13.3.3.

31.13.4.4 Energy

Impacts for this Alternative are assumed to be the same as described in Section 31.13.3.4.

31.14 Traffic, Parking, Transit, and Pedestrians

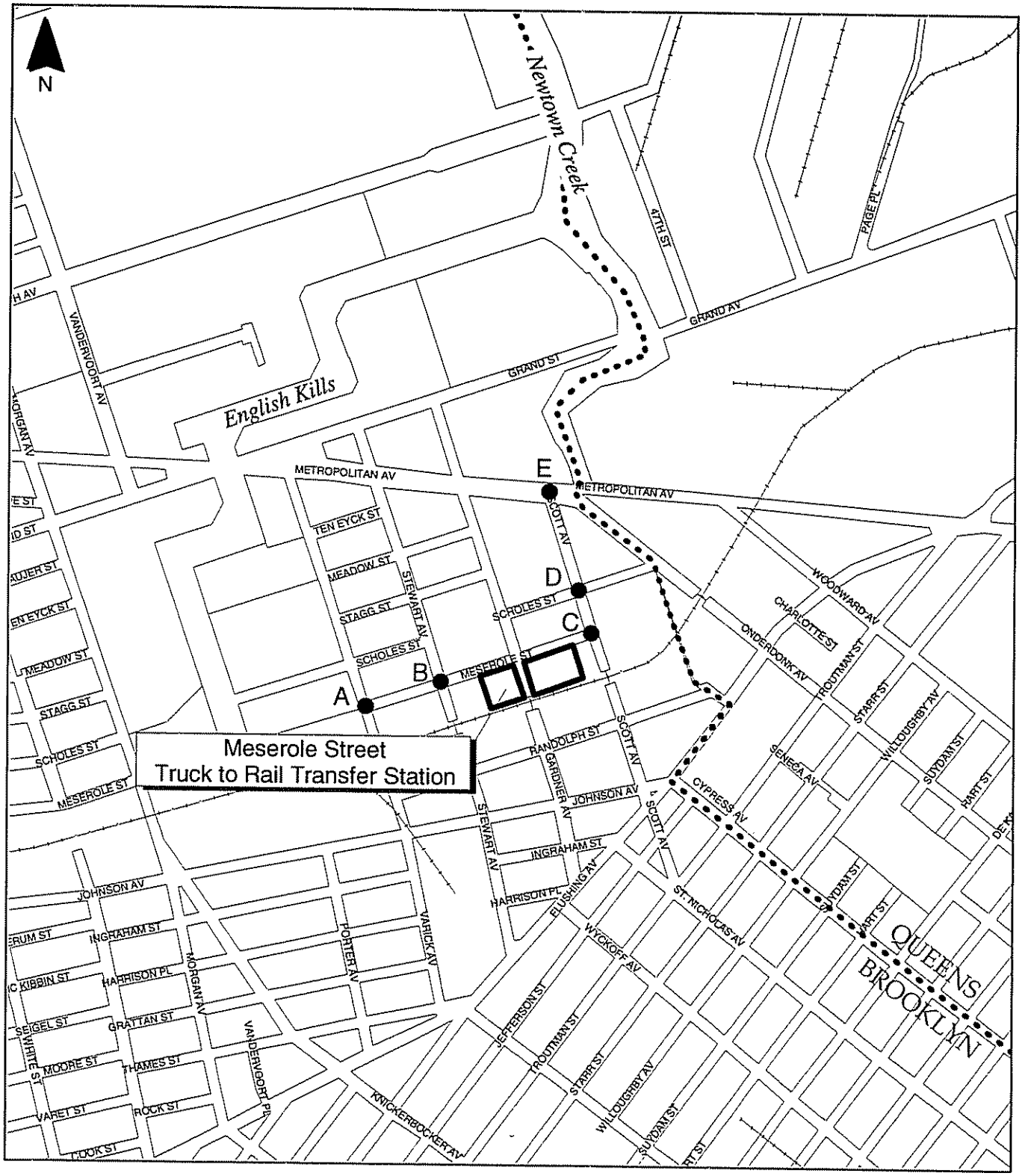
31.14.1 Existing Conditions

The Meserole Street Truck to Rail TS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

31.14.1.1 Definition of Study Area

The traffic analysis study area is broad and includes the East Williamsburg neighborhood of Brooklyn. It includes the area bounded by Grand Street on the north, Flushing Avenue on the south, the dividing line between Kings County and Queens County on the east (which approximately follows Onderdonk Avenue in the area), and Varick Avenue and Vandervoort Avenue on the west. The traffic study area is predominantly light industrial in nature. There are no CEQR-defined areas of concern located within the study area. Figure 31.14-1 shows the locations of the intersections selected for analysis (locations A through E). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Eastbound collection vehicles would approach the site along Flushing Avenue, Grand Street and Metropolitan Avenue and turn northbound or southbound onto Varick Avenue. Collection vehicles would then turn onto Meserole Street to access the facility. Northbound and southbound collection vehicles could travel along the BQE or local designated truck routes to Flushing Avenue, Grand Street or Metropolitan Avenue and then follow the same routes as eastbound collection vehicles. Westbound DSNY collection and other City agency vehicles are not expected to deliver DSNY-managed Waste to this facility.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-1 Traffic Analysis Study Area
Meserole Street Truck to Rail Transfer Station

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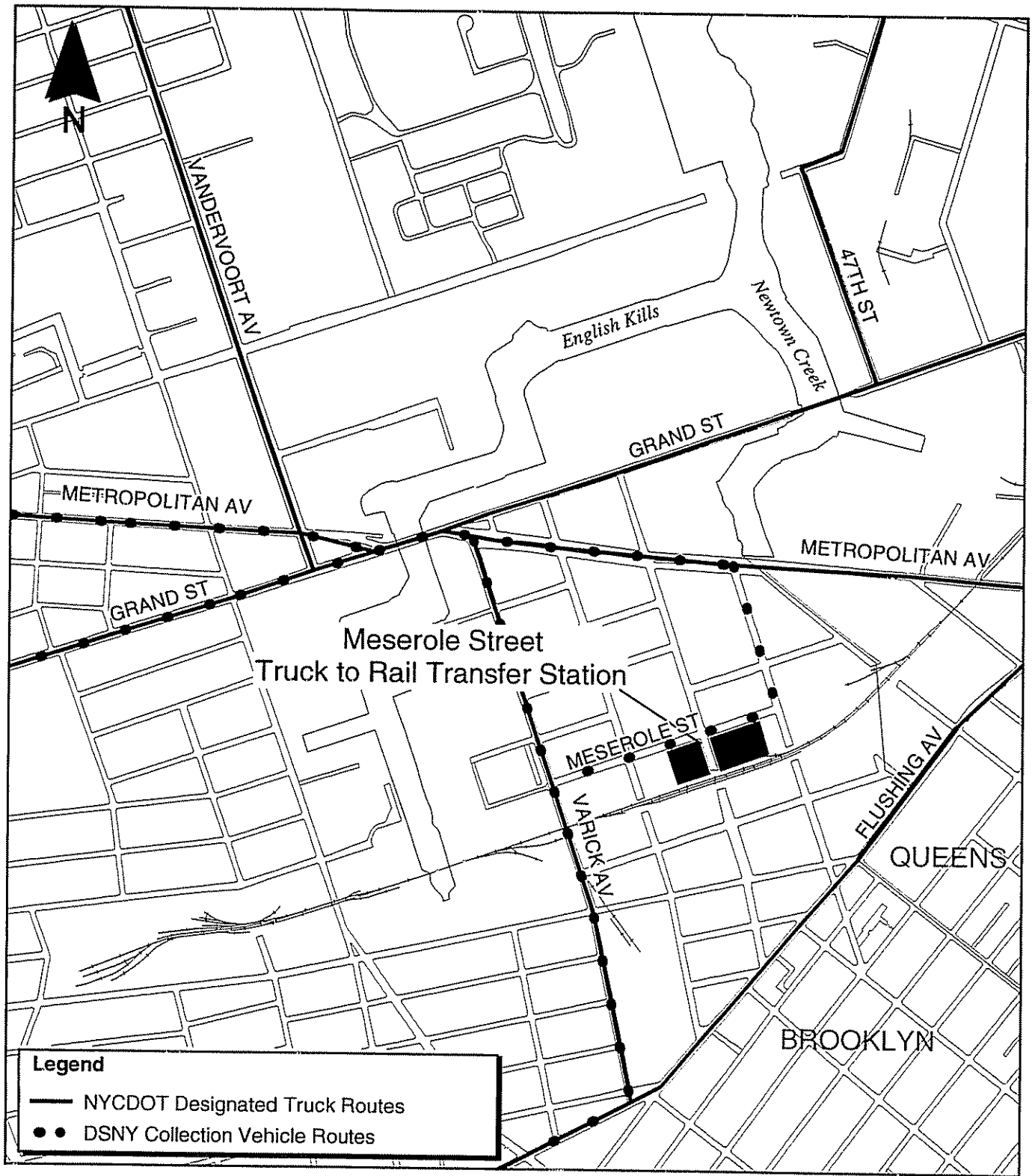
31.14.1.2 Surface Network

One major highway, the predominantly north-south BQE, services the traffic analysis study area. Flushing Avenue, Grand Street and Metropolitan Avenue are local truck routes that provide access from east and west of the site. Varick Avenue is a local truck route that provides access from north and south of the site. A map showing all major truck routes and local truck routes in Brooklyn is provided in Section 3.16 (Figures 3.16-3 and 3.16-5).

Flushing Avenue, Grand Street and Metropolitan Avenue are principal arterials that provide access to the BQE to the west of the facility. Varick Avenue is a collector road for local traffic and provides access for local and industrial traffic between Metropolitan Avenue and Flushing Avenue.

DSNY and other agency collection vehicles approaching the Meserole Street Truck to Rail TS from the south on the BQE would exit at Grand Street and travel east towards the facility. Other vehicles approaching the facility from the south would follow a designated truck route to Flushing Avenue and proceed east to Varick Avenue. DSNY and other agency collection vehicles traveling to the facility from the north would approach the area using local truck routes to Metropolitan Avenue and then proceed east towards the facility. Vehicles traveling east on Metropolitan Avenue and Grand Street merge onto the same street when crossing English Kills and then turn south onto Varick Avenue.. All inbound DSNY and other agency collection vehicles converge at the intersection of Varick Avenue and Meserole Street and turn east onto Meserole Street. Collection vehicles gain access to the facility from Meserole Street between Stewart Avenue and Gardener Avenue.

Exiting vehicles all turn east onto Meserole Street between Gardener Avenue and Scott Avenue, then north onto Scott Avenue. DSNY and other agency vehicles then would turn west onto Metropolitan Avenue and return to their CD of origin. Trucks returning to the south of the facility would turn onto Grand Street from Metropolitan Avenue and proceed to the BQE or a local designated truck route running north-south in the area. Trucks returning to areas north of the facility would follow Metropolitan Avenue to the west to a local designated truck route running north-south in the area. Figure 31.14-2 depicts NYCDOT-designated truck routes near the facility and the future DSNY and other agency collection vehicle routes to the facility.



Site delineations are approximate.
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 31.14-2 DSNY Collection Vehicle Routes
Meserole Street Truck to Rail Transfer Station

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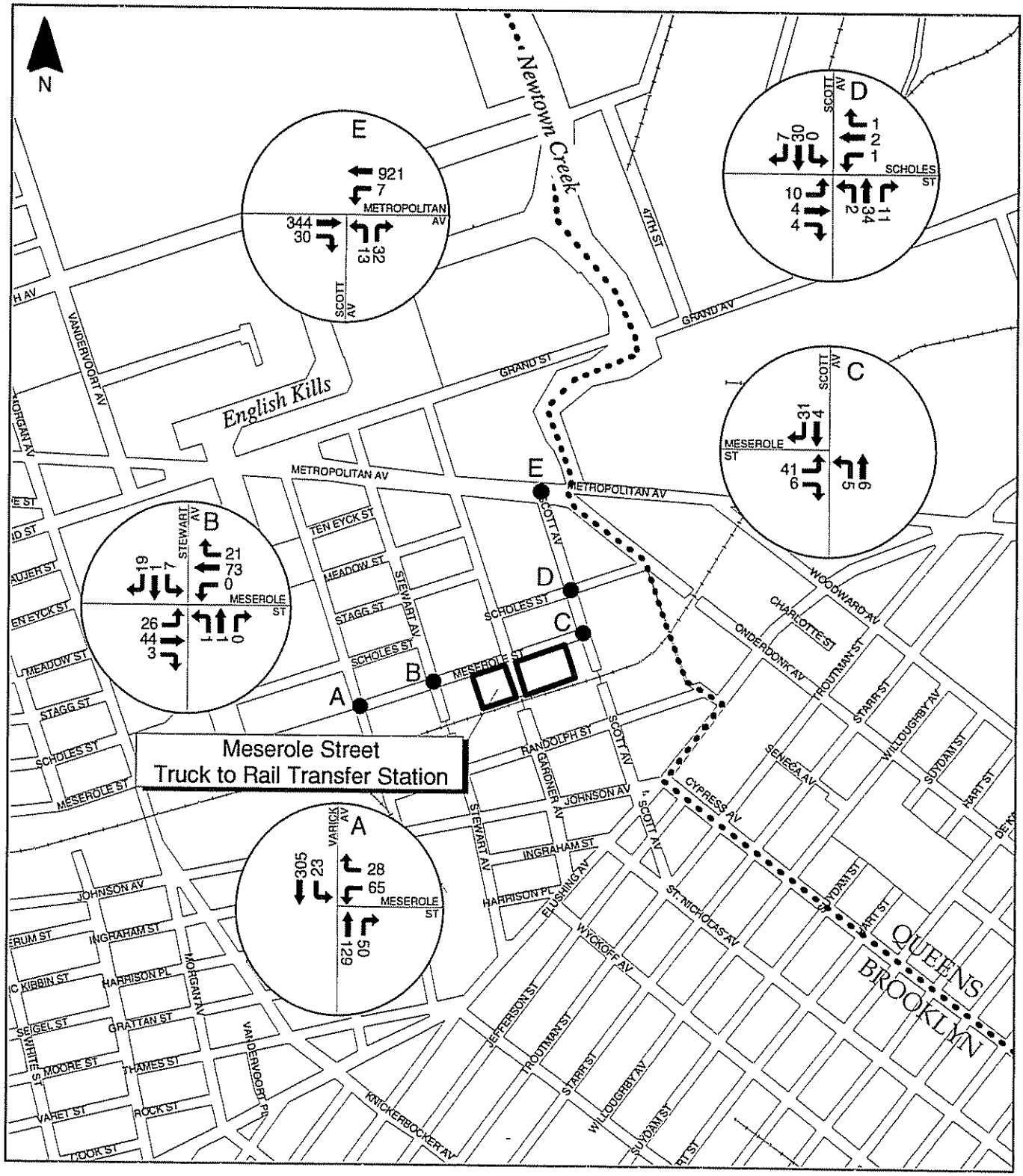
31.14.1.3 Existing Traffic Operations

The five intersections listed below were identified for analysis because they are the most likely to be impacted by the Meserole Street Truck to Rail TS. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Meserole Street and Varick Avenue– Unsignalized Intersection (Figure 31.14-1 – location A)
- Meserole Street and Stewart Avenue – Unsignalized Intersection (Figure 31.14-1 – location B)
- Meserole Street and Scott Avenue – Unsignalized Intersection (Figure 31.14-1 – location C)
- Scott Avenue and Scholes Street – Unsignalized Intersection (Figure 31.14-1 – location D)
- Scott Avenue and Metropolitan Avenue – Unsignalized Intersection (Figure 31.14-1 – location E)

Metropolitan Avenue is a principal arterial that provides access to the BQE to the west of the facility. Varick Avenue is a collector road for local traffic and provides access for local and industrial traffic between Metropolitan Avenue and Flushing Avenue. Meserole Street, Stewart Avenue, Scott Avenue and Scholes Street are local streets that are not designated truck routes.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted on May 26, 2004, while ATR counts were conducted between May 24 and May 31, 2004. Figures 31.14-3, 31.14-4 and 31.14-5 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 31.14-1 presents the v/c ratio, delay and LOS for the five intersections during the AM, Facility, and PM peaks.

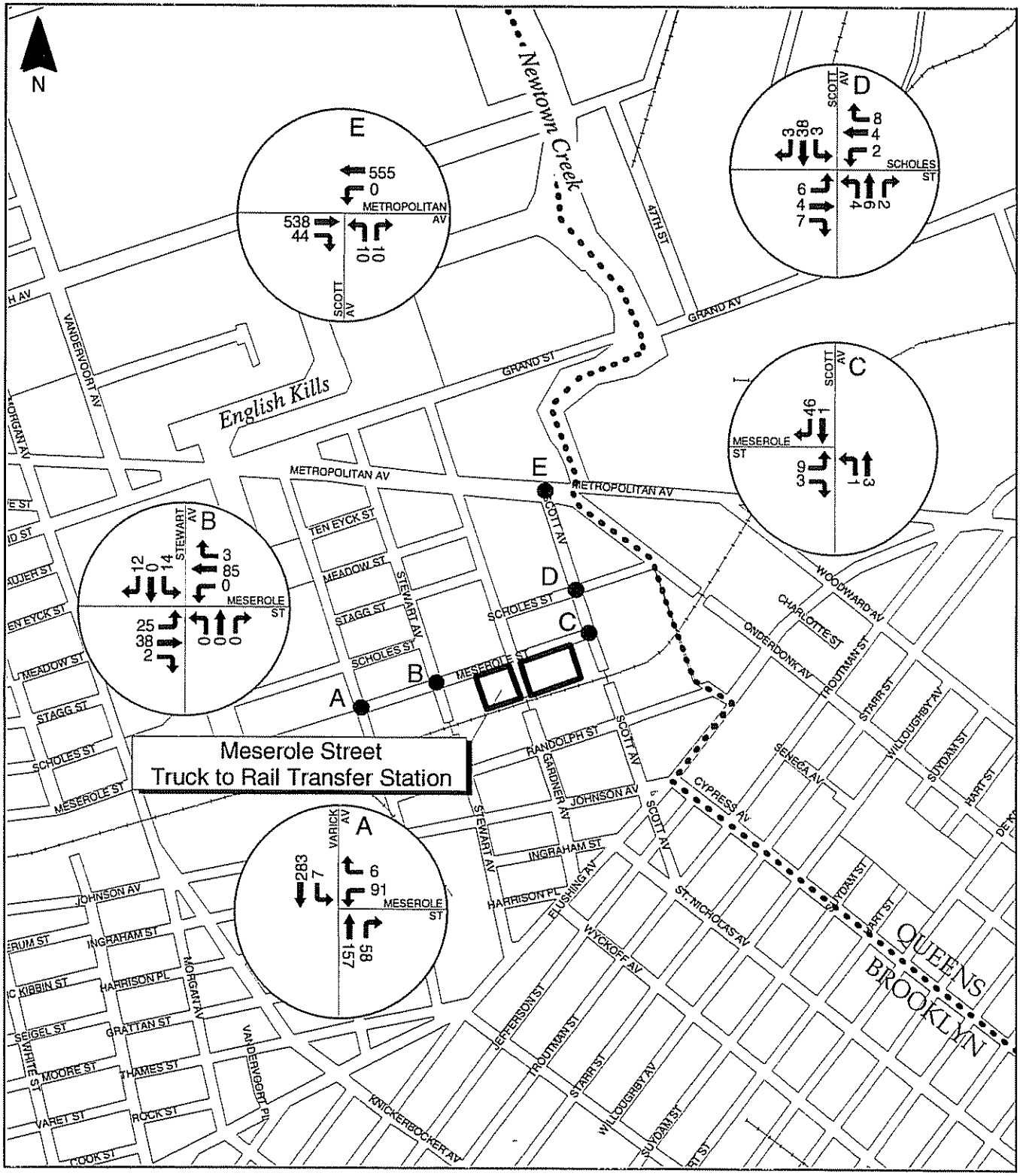


Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 31.14-3 Existing Traffic Volumes - AM Peak

Meserole Street Truck to Rail Transfer Station

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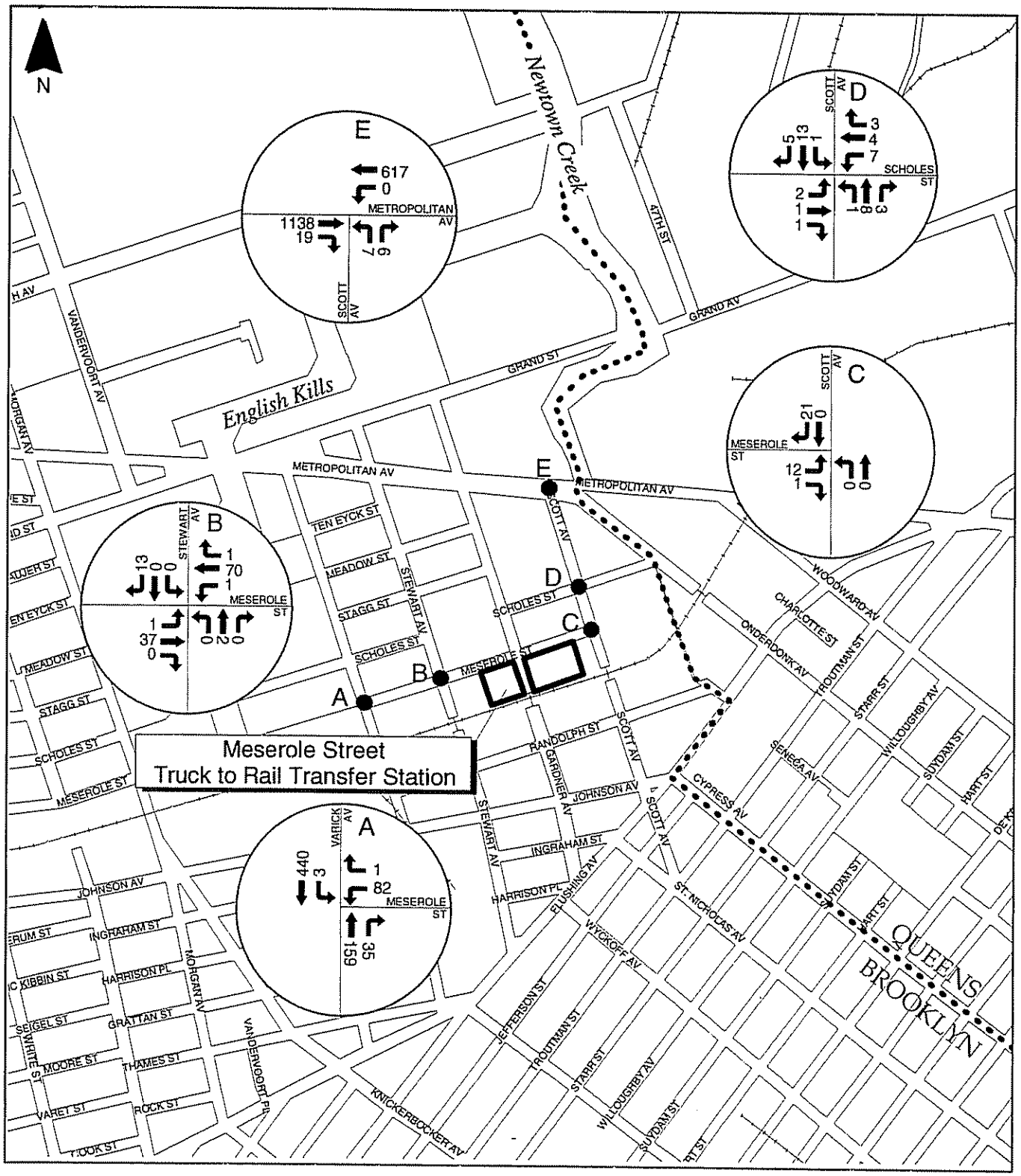


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-4 Existing Traffic Volumes Facility Peak Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-5 Existing Traffic Volumes - PM Peak

Meserole Street Truck to Rail Transfer Station

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Table 31.14-1
HCM Analysis[1] – Existing Conditions
Meserole Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.36	17.0	C	0.25	15.4	C	0.26	18.7	C
SB LT	0.03	8.2	A	0.01	8.4	A	0.00	7.7	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.3	A	0.00	7.3	A	0.00	8.3	A
NB LTR	0.02	12.0	B	NA	NA	NA	0.01	10.0	A
SB LTR	0.09	10.2	B	0.07	10.3	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.11	9.7	A	0.02	9.0	A	0.02	8.9	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.05	9.6	A	0.03	9.0	A	0.01	9.0	A
WB LTR	0.01	9.3	A	0.03	9.0	A	0.04	9.3	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.3	A	0.00	7.2	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Scott Avenue (unsignalized)									
WB LT	0.02	9.3	A	0.00	8.6	A	0.00	11.5	B
NB LR	0.13	13.2	B	0.09	15.1	C	0.11	29.1	D
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

(1) HCM output is included in technical backup submitted to the NYCDOT.

LTR = left, through and right movements
LT = left through movement
LR = left right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

Existing truck traffic through most of the intersections was relatively high. The percentages of trucks during the morning hours and Facility peak hours ranged between 32% and 61% at the study intersections and decreased to between 15% and 20% during the PM peak hours.

31.14.1.3.1 LOS at Signalized Intersections

No signalized intersections were analyzed.

31.14.1.3.2 LOS at Unsignalized Intersections

Table 31.14-1 shows that the unsignalized intersections generally operated at an LOS of C or better with the following exception. The only lane group with LOS below C was the northbound left-right lane at the intersection of Scott Avenue and Metropolitan Avenue. During the PM peak hour, this approach operated at LOS D with a delay of 29.1 seconds. During the AM and Facility peak hours, this lane group operated at LOS C or better.

31.14.1.4 Existing DSNY-Related Traffic

The Meserole Street Truck to Rail TS is a facility that will be built in the future if awarded a contract for the long-term export of DSNY-managed Waste. As the facility does not yet exist, no DSNY-related traffic currently travels to or from this facility. Other private transfer stations located in close proximity to the proposed location of the Meserole Street Truck to Rail TS currently accept DSNY-managed Waste. These transfer stations are located at 485 Scott Avenue and 598 Scholes Street, to the east of the proposed facility.

31.14.1.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "Jefferson Street" stop on the MTA's "L" subway line is located approximately three-tenths (3/10) of a mile southwest of the site at the Jefferson Street/Wycoff Avenue intersection. The MTA operates several Brooklyn and Queens bus lines that pass through the study area, but the closest bus stop to the facility is located over one mile away, next to the Linden Hill Cemetery by the intersection of Starr Street and Metropolitan Avenue in Queens.

31.14.1.6 Pedestrian Activity

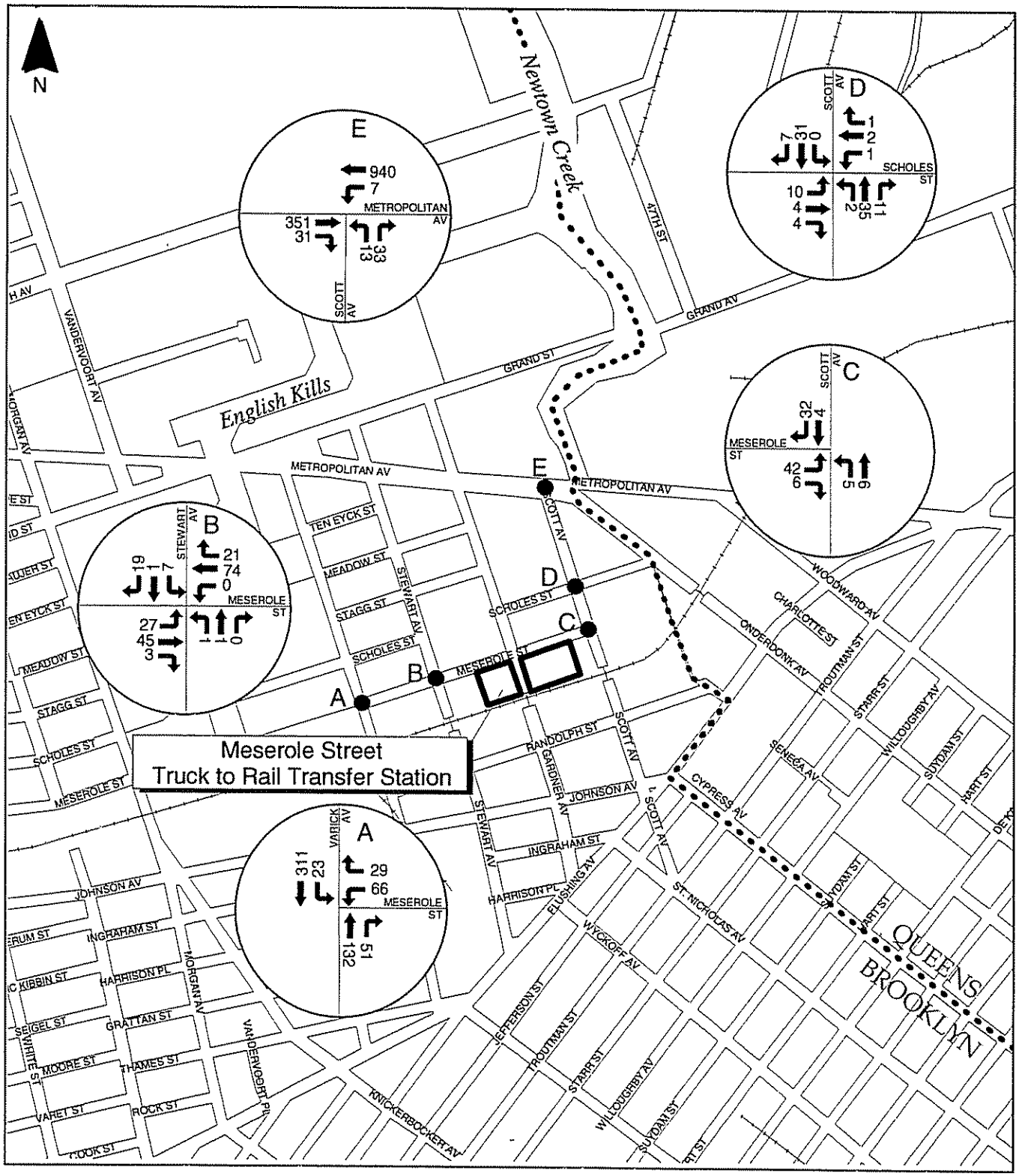
Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at signalized intersections in the study area. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

31.14.2 Future No-Build Conditions

31.14.2.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 25 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 31.14-6, 31.14-7 and 31.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 31.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their Existing Condition LOS.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

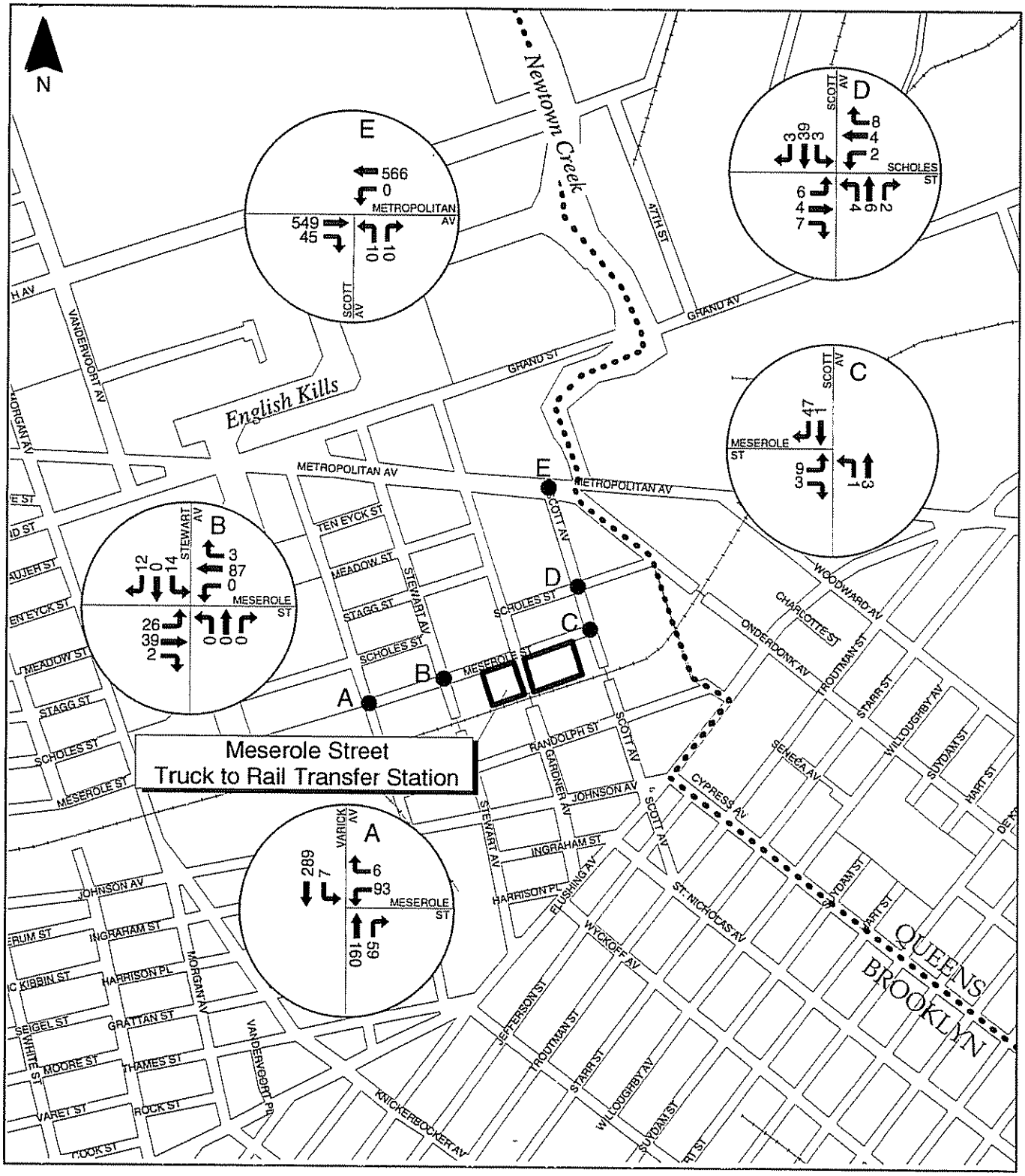
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Figure 31.14-6 Future No-Build Traffic Volumes AM Peak Meserole Street Truck to Rail Transfer Station

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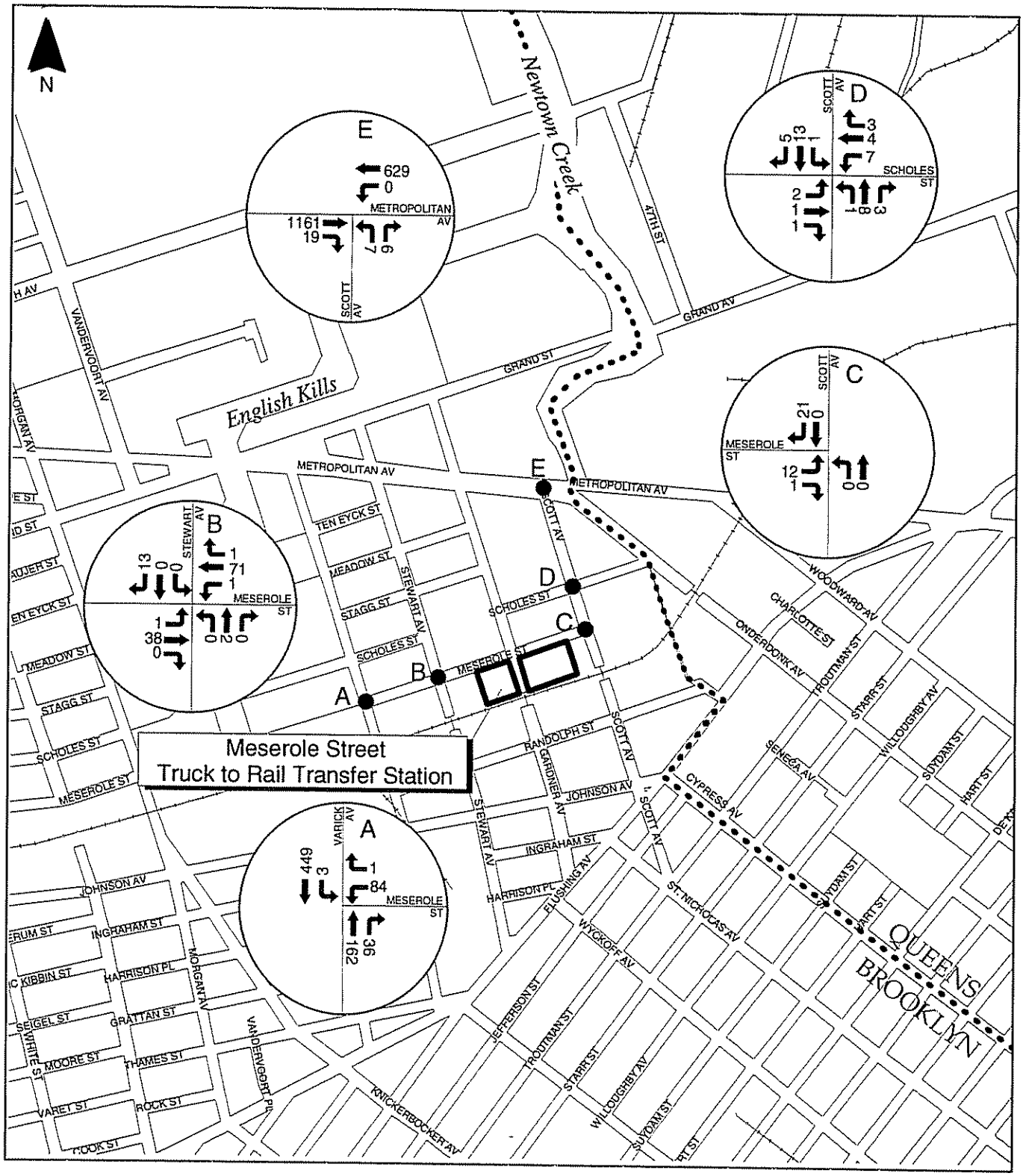


Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-7 Future No-Build Traffic Volumes Facility Peak Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-8 Future No-Build Traffic Volumes
PM Peak
Meserole Street Truck to Rail Transfer Station

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Table 31.14-2
HCM Analysis[(1)]— Future No-Build Conditions
Meserole Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.37	17.2	C	0.26	15.7	C	0.27	19.2	C
SB LT	0.03	8.2	A	0.01	8.4	A	0.00	7.7	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.3	A	0.00	7.3	A	0.00	8.3	A
NB LTR	0.02	12.1	B	NA	NA	NA	0.01	10.0-	A
SB LTR	0.09	10.3	B	0.07	10.3	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.11	9.7	A	0.02	9.0	A	0.02	8.9	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.05	9.6	A	0.03	9.0	A	0.01	9.0	A
WB LTR	0.01	9.3	A	0.03	9.0	A	0.04	9.3	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.4	A	0.00	7.2	A	0.00	7.2	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Scott Avenue (unsignalized)									
WB LT	0.02	9.4	A	0.00	8.7	A	0.00	11.6	B
NB LR	0.13	13.3	B	0.09	15.3	C	0.12	30.5	D
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
LT = left through movement
LR = left right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

31.14.2.2 Public Transportation

Future No-Build Conditions are expected to remain the same as Existing Conditions.

31.14.2.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

31.14.3 Potential Impacts with the TransRiver Marketing Company, L.P. Truck to Rail TS

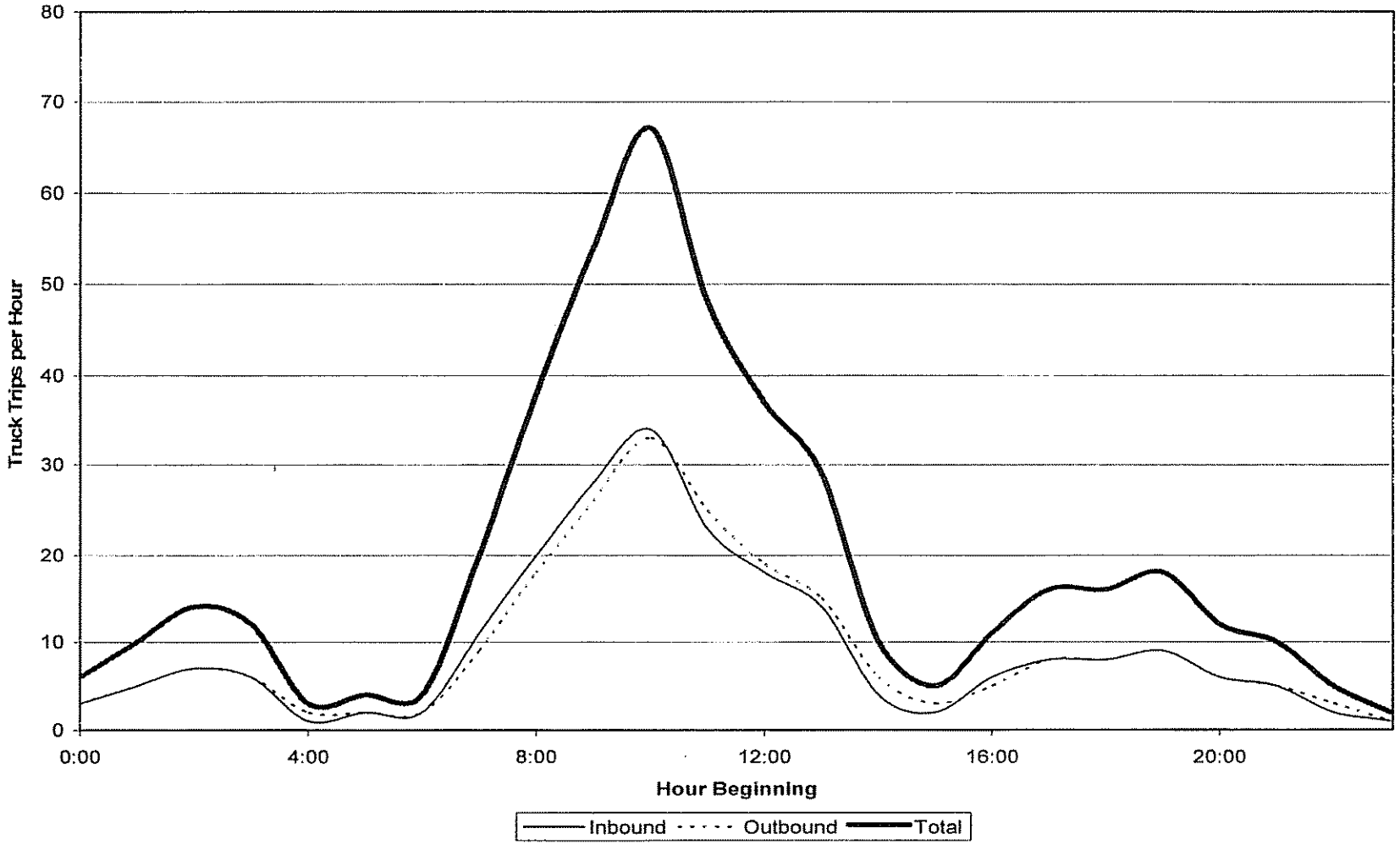
The Meserole Street Truck to Rail TS would receive waste from Brooklyn CDs 1, 3, 4 and 5 and the AFF. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

31.14.3.1 2006 Future Build Traffic Conditions

2006 Future Build Conditions assume that the Meserole Street Truck to Rail TS would generate 225 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the Meserole Street Truck to Rail TS are shown in Figure 31.14-2.

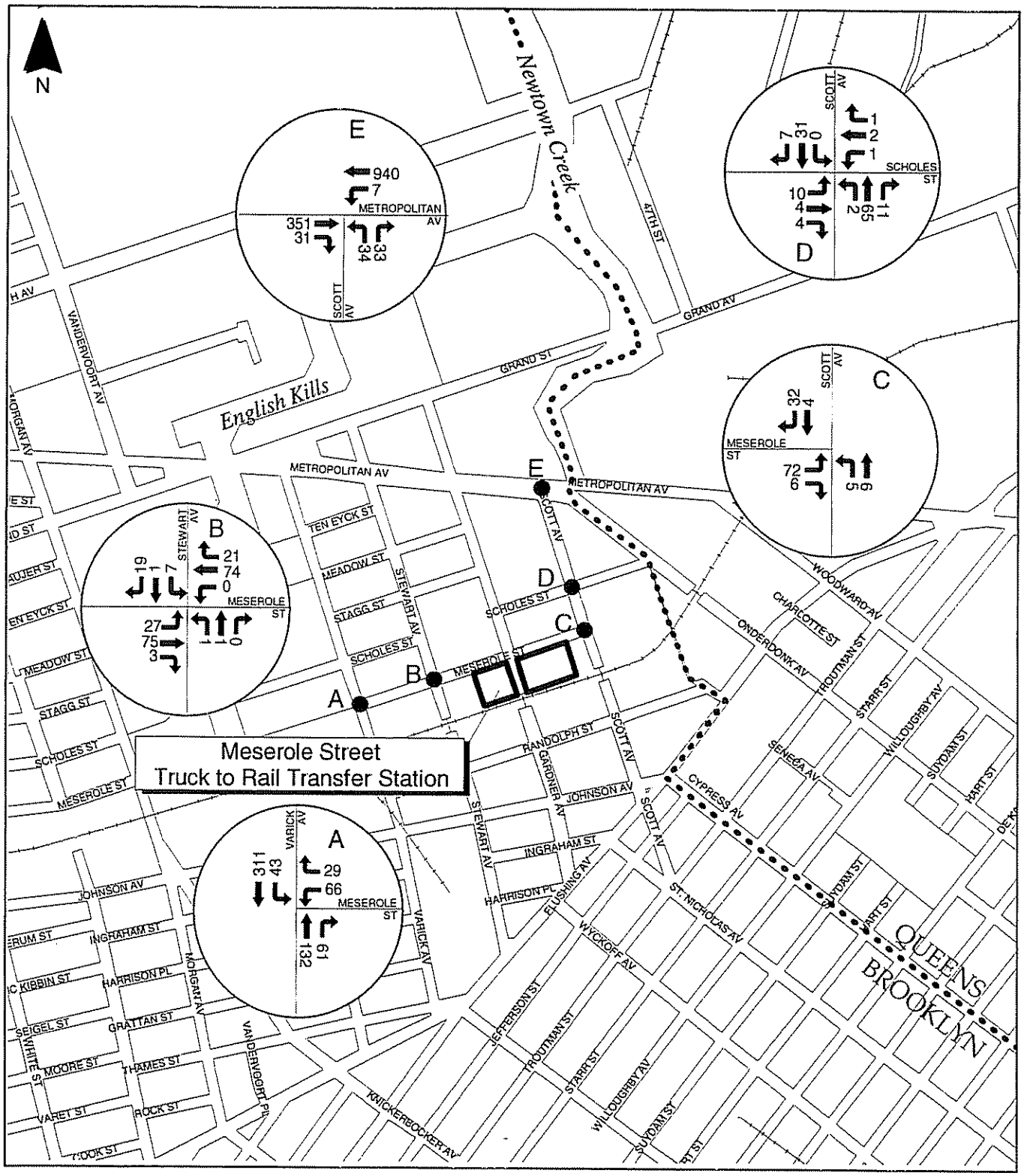
Figure 31.14-9 presents the average peak day temporal distribution of collection vehicles for the Meserole Street Truck to Rail TS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Meserole Street Truck to Rail TS is expected to vary between approximately 2 to 14 truck trips per hour in the late evening/early morning, 20 to 67 truck trips per hour in the mid-morning/early afternoon, and 5 to 18 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (67) occurs at approximately 10:00 a.m.

Figure 31.14-9
Truck Trips per Hour
Meserole Street Truck to Rail TS



Employee trips generated as a result of the Meserole Street Truck to Rail TS are expected to be about 36 per shift (18 arriving and 18 departing). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive within approximately 30 minutes before the start of a shift and leave within approximately 30 minutes after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (7:30 a.m. to 8:30 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the Meserole Street Truck to Rail TS during the shift change (36) were considered as part of the net increase in site-generated traffic. Figures 31.14-10, 31.14-11 and 31.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 31.14-13, 31.14-14 and 31.14-15 show the intersections analyzed with only the net increase in site-generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Meserole Street Truck to Rail TS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 34. The highest net increase at any one intersection was 34 trucks. Both of these net increases occurred at the intersection of Varick Avenue and Meserole Street and at the intersection of Stewart Avenue and Meserole Street.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

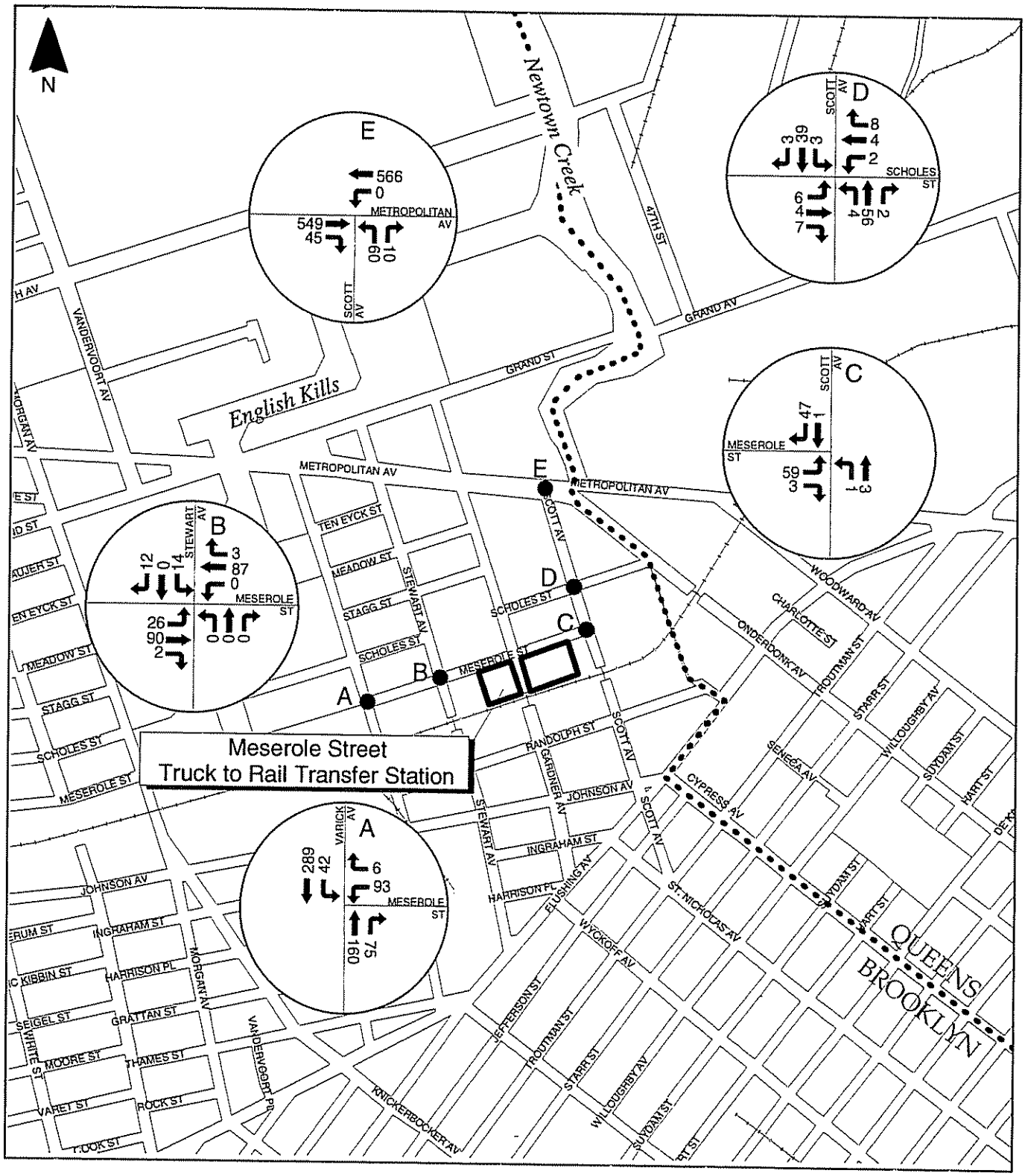
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Figure 31.14-10 2006 Build Traffic Volumes
AM Peak
Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

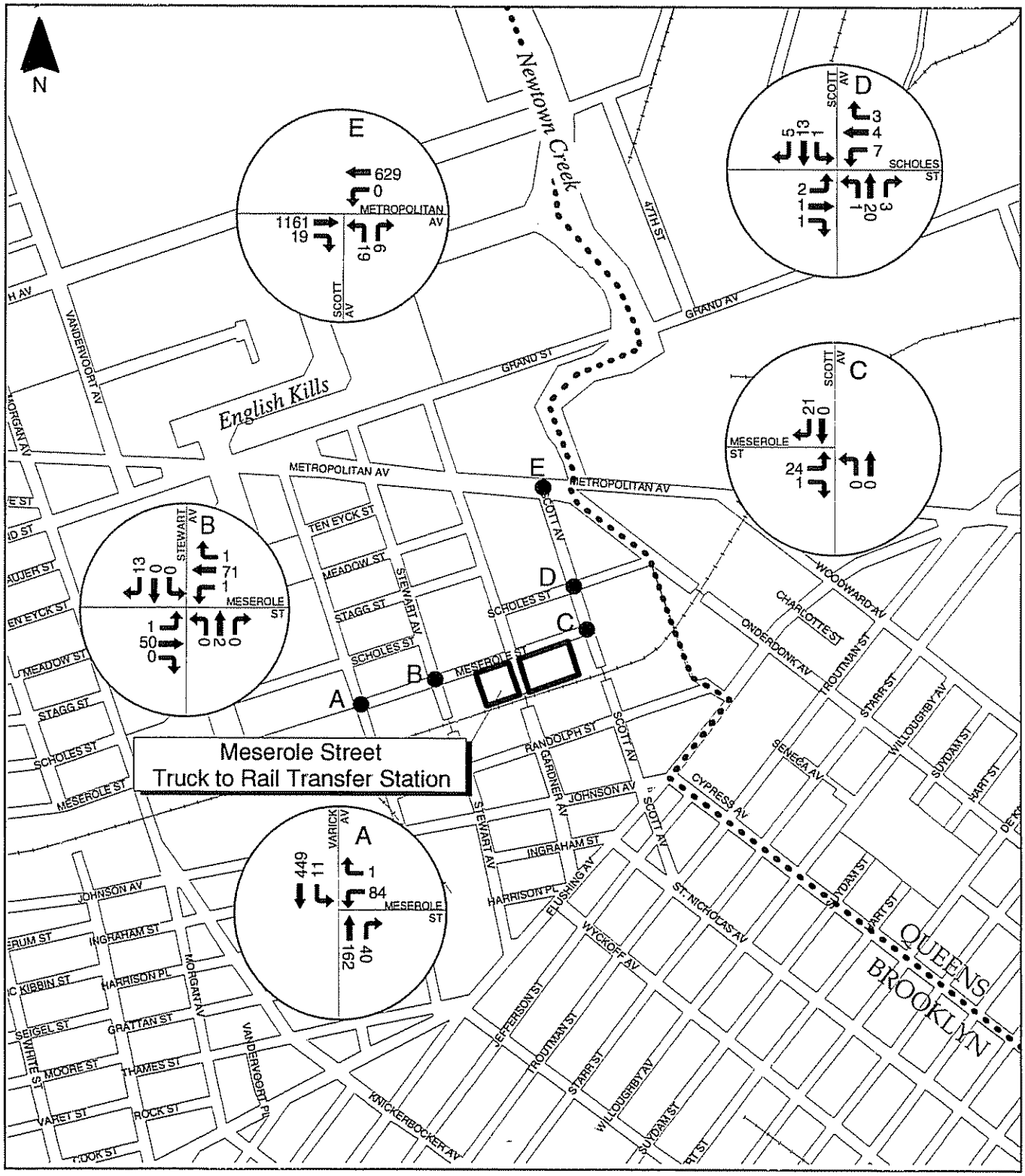
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Figure 31.14-11 2006 Build Traffic Volumes
Facility Peak
Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

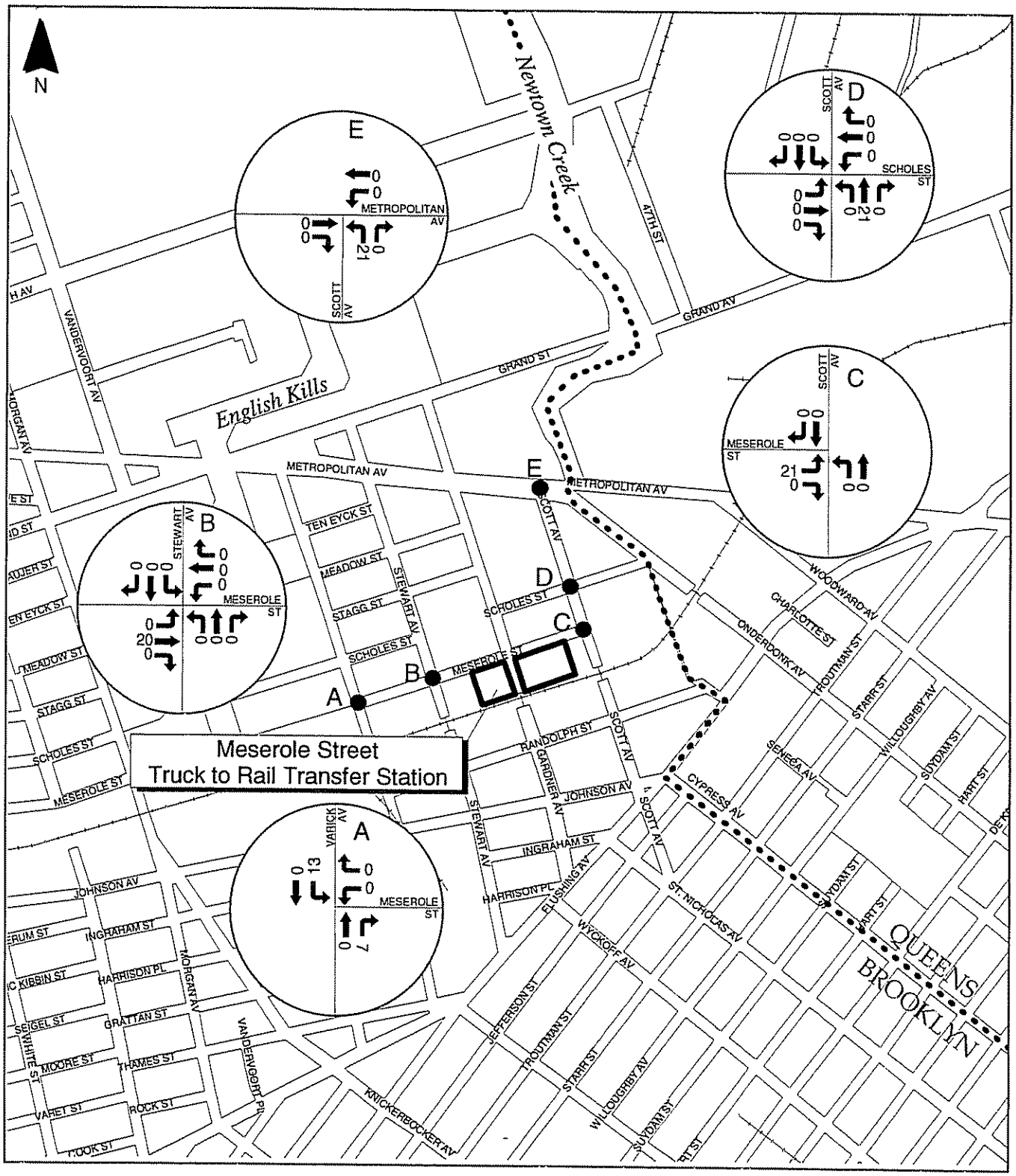
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Figure 31.14-12 2006 Build Traffic Volumes PM Peak Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

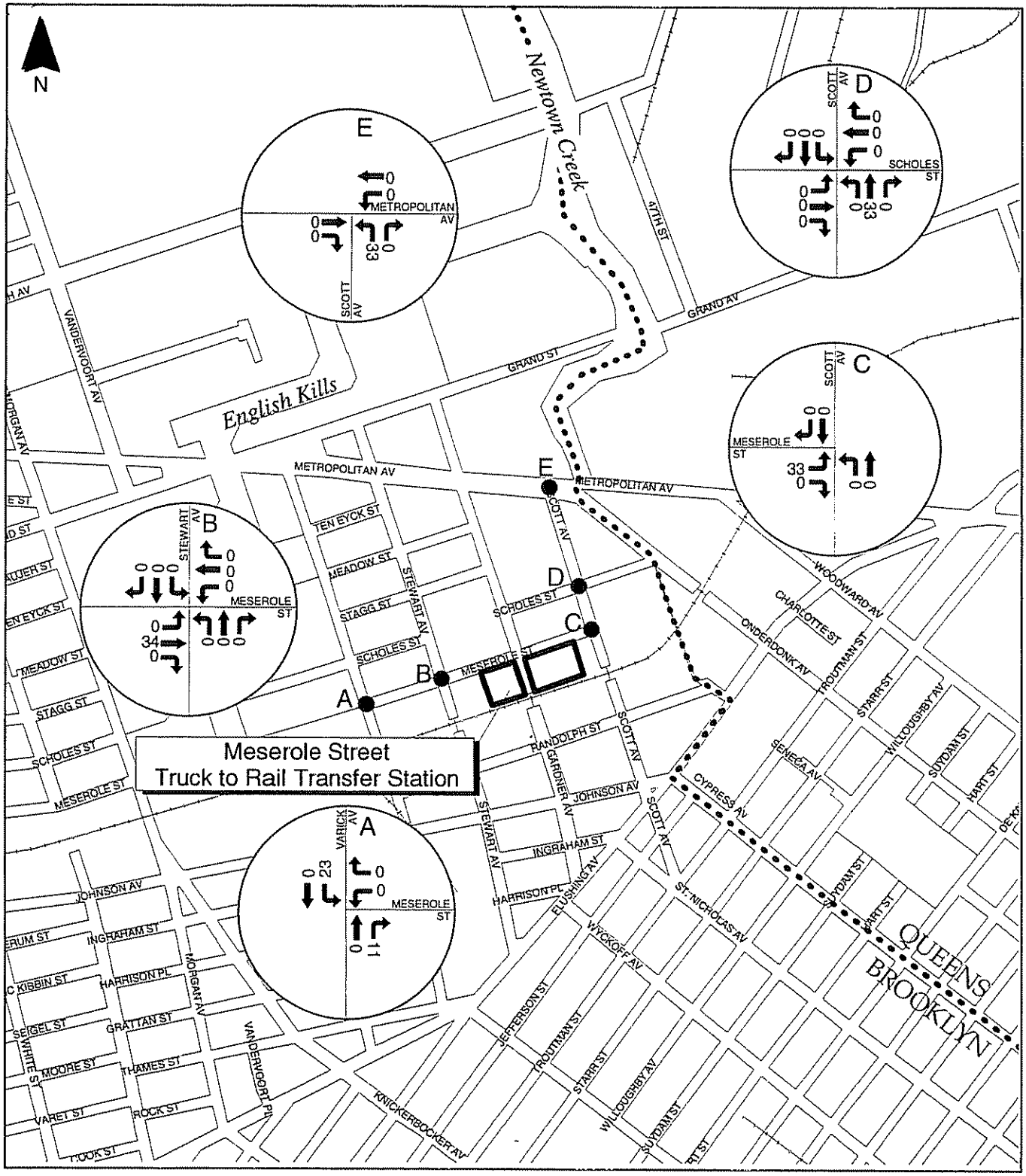
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Figure 31.14-13 2006 Net Traffic - AM Peak
Meserole Street Truck to Rail Transfer Station

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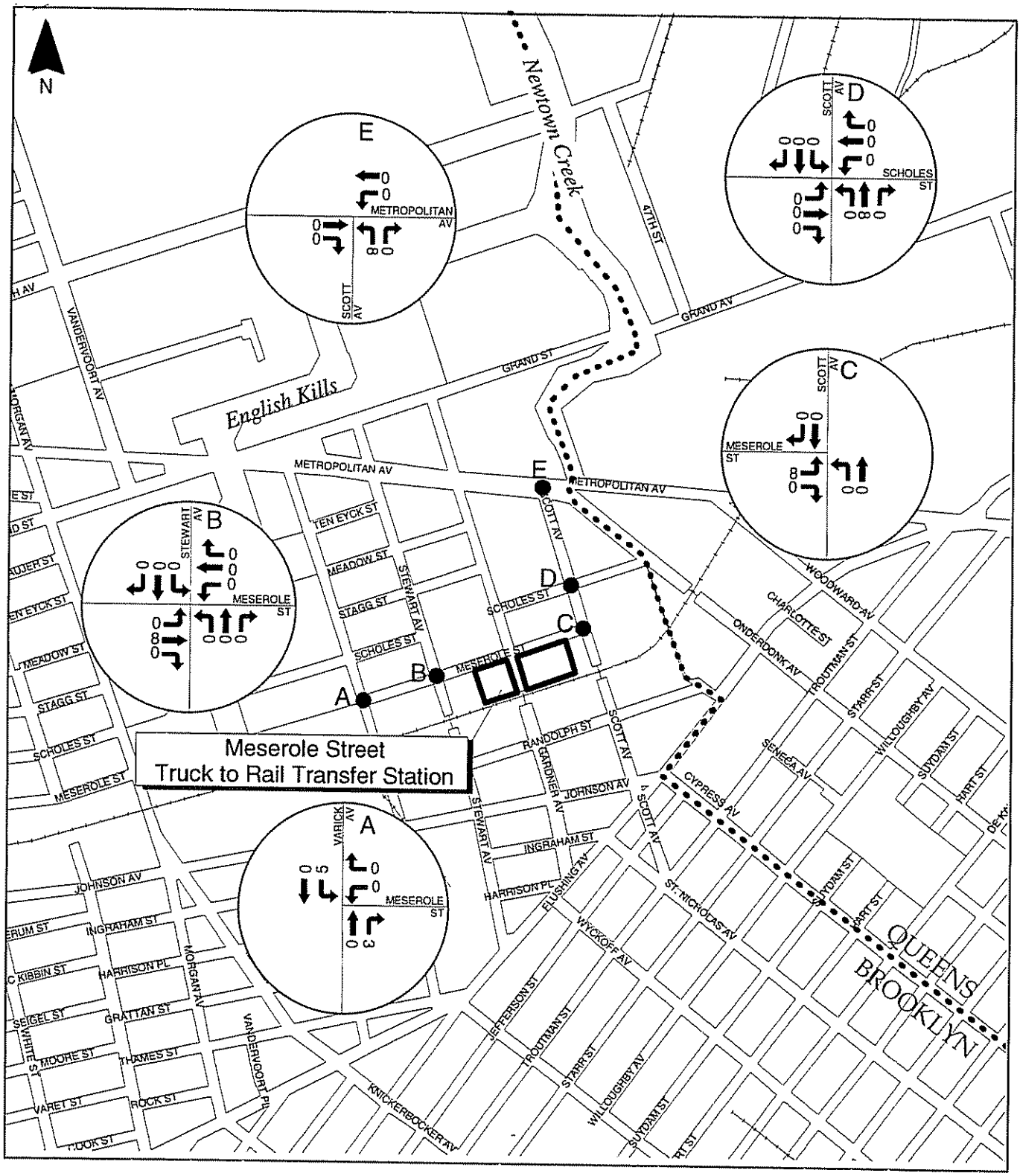
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 31.14-14 2006 Net Traffic - Facility Peak

Meserole Street Truck to Rail Transfer Station

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Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 31.14-15 2006 Net Traffic - PM Peak

Meserole Street Truck to Rail Transfer Station

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 82% of weekday traffic volumes. Table 31.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Meserole Street Truck to Rail TS would not operate on Sundays to receive DSNY-managed Waste. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 31.14-3
Weekday and Weekend Traffic
Meserole Street Truck to Rail TS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Metropolitan Avenue [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
225	169	10,691	8,715

Note:
[1] EB and WB traffic data collected from ATR counts taken on Metropolitan Avenue between Gardener Avenue and Stewart Avenue from June 13 to 20, 2003.

Table 31.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Meserole Street Truck to Rail TS. Over an average peak day, the intersections should not experience an extended increase in delay. The one intersection that may experience potentially significant impacts is discussed in Section 31.14.3.2 and summarized in Table 31.14-5.

31.14.3.2 Impacts and Mitigation

One of the five intersections may experience impacts great enough to be considered significant during one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines require mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 31.14-5.

Table 31.14-4
HCM Analysis[(1)]— 2006 Future Build Conditions
Meserole Street Truck to Rail TS

Intersection and Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Meserole Street and Varick Avenue (unsignalized)									
WB LR	0.40	19.2	C	0.32	19.2	C	0.29	20.1	C
SB LT	0.05	8.3	A	0.06	8.7	A	0.01	7.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Stewart Avenue (unsignalized)									
EB LTR	0.03	8.1	A	0.04	8.0	A	0.00	7.4	A
WB LTR	0.00	7.4	A	0.00	7.4	A	0.00	8.4	A
NB LTR	0.02	12.6	B	NA	NA	NA	0.01	10.1	B
SB LTR	0.09	10.4	B	0.07	10.8	B	0.02	8.8	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Meserole Street and Scott Avenue (unsignalized)									
EB LR	0.18	10.1	A	0.12	9.7	A	0.05	9.0	A
NB LT	0.01	7.5	A	0.00	7.3	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Scholes Street and Scott Avenue (unsignalized)									
EB LTR	0.06	9.9	A	0.03	9.3	A	0.01	9.1	A
WB LTR	0.02	9.7	A	0.03	9.5	A	0.05	9.4	A
NB LTR	0.01	7.3	A	0.00	7.3	A	0.00	7.3	A
SB LTR	0.00	7.5	A	0.00	7.4	A	0.00	7.3	A
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metropolitan Avenue and Scott Avenue (unsignalized)									
WB LT	0.02	9.4	A	0.00	8.7	A	0.00	11.6	B
NB LR	0.30	19.3	C	0.44	26.7	D	0.29	46.0	E
OVERALL	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
LT = left through movement
LR = left right movement
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
NA = Not Applicable

Table 31.14-5
HCM Analysis[(1)] – 2006 Future Build Conditions with Mitigation
Meserole Street Truck to Rail TS

Intersection and Lane Group	2006 Future No-Build (unsignalized)			2006 Future Build (unsignalized)			2006 Future Build after Mitigation (signalized)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Metropolitan Avenue and Scott Avenue – PM Peak									
EB T	NA	NA	NA	NA	NA	NA	0.63	9.8	A
EB R	NA	NA	NA	NA	NA	NA	0.06	5.6	A
WB LT	0.00	11.6	B	0.00	11.6	B	0.37	7.2	A
NB LR	0.12	30.5	D	0.12	30.5	D	0.15	18.7	B
OVERALL	NA	NA	NA	NA	NA	NA	NA	9.0	A

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
LT = left through movement
LR = left right movement
T = through movement
R = right movement
NB = northbound
EB = eastbound
WB = westbound
NA = Not Applicable

Metropolitan Avenue/Scott Avenue – During the PM peak hour, a potential impact was identified on the northbound approach when the delay increased from 30.5 seconds to 46.0 seconds. The mitigation measure would be to change the intersection from an unsignalized intersection to a signalized intersection to create ample gaps in through traffic on Metropolitan Avenue to allow northbound vehicles to make a left-turn movement. Under this mitigation measure, all lane groups would have a minimum LOS of B during the PM peak hour. Signalizing the intersection would provide LOS C or better for all lane groups during the AM and Facility peak hours, as well. An alternative mitigation measure to signalizing this intersection would be to send the DSNY-managed collection vehicles exiting the facility on an alternate route to Metropolitan Avenue from the facility. This option would require analysis of additional intersections in the study area which would be addressed in a supplemental EIS, if this facility is selected to receive DSNY-managed Waste as part of the Long Term Export Program.

31.14.3.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

31.14.3.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

31.14.4 Potential Impacts with IESI NY Corporation TS

Impacts for this Alternative are assumed to be the same as described in Section 31.14.3.

31.15 Air Quality

31.15.1 Definition of Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Meserole Street Transfer Station. The study area for the off-site air quality analysis is defined as the area or intersection listed in Section 31.15.4.2.

31.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 31.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 31.15-1
Representative Ambient Air Quality Data
TransRiver Marketing Company, L.P. TS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	Brooklyn	8-Hour	2,634 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	3,321 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	57 $\mu g/m^3$	150 $\mu g/m^3$
SO_2	Greenpoint	3-Hour	189 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	87 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	21 $\mu g/m^3$	80 $\mu g/m^3$

Note:
Source: NYCDEP, April 2003

31.15.3 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the Future No-Build 2006 analysis year. As such, no changes to air quality levels are anticipated, and Future No-Build Conditions are assumed to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be lowered by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

31.15.4 Potential Impacts with the TransRiver Marketing Company, L.P. TS

31.15.4.1 On-Site Analysis

31.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 31.15-2. Figure 31.15-1 shows the locations of these sources within the site.

31.15.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any one of the receptor sites considered are provided in Table 31.15-3. These values are compared with the applicable standards for the appropriate averaging time periods. Based on the results presented in Table 31.15-3, operations proposed at this facility would not adversely impact air quality in the area. The total predicted concentrations (including appropriate background concentrations) are below the national and state ambient air quality standards.

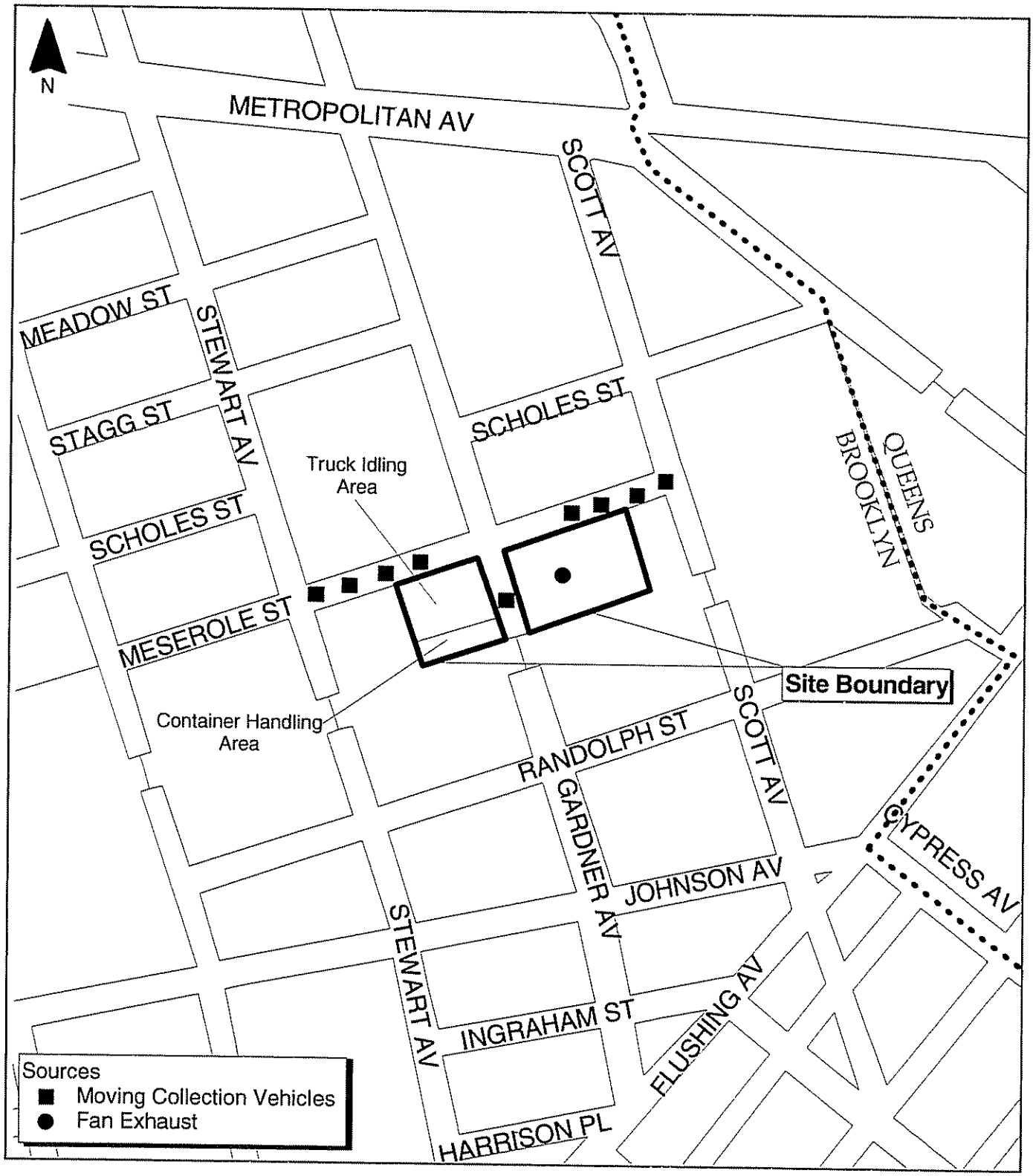
Table 31.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
TransRiver Marketing Company, L.P. TS

Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During Annual Average Hour
Within Processing Building		
Moving/Queuing Collection Vehicles	56	8
Wheel Loaders	2	1
Excavator	2	1
Reachstacker	2	1
Forklift	2	1
Outside Processing Building		
Moving Collection Vehicles [2]	56	8
Queuing Collection Vehicles [2]	56	8
Reachstacker	1	1
Locomotives	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

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Figure 31.15-1 On-Site Air Quality Analysis

Meserole Street Truck to Rail Transfer Station

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Table 31.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
TransRiver Marketing Company, L.P. TS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	~~2,149~~1,075	~~2,635~~3,321	~~4,784~~4,396	40,000	NA
	8-hour[6]	~~1,054~~419	~~3,322~~2,635	~~4,376~~3,054	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	~~70~~11	56	~~126~~67	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	~~86~~12	~~57~~90	~~143~~102	150	NA
	Annual	~~9~~1	~~23~~20	~~32~~21	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	~~4.3~~4.0	NA	NA	NA	5
	Annual Neighborhood Average	~~0.05~~0.04[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	~~70.5~~50	~~189~~186	~~260~~236	1,300	NA
	24-hour[6]	~~32~~11	~~87~~107	~~119~~118	365	NA
	Annual	~~3~~0.9	~~2~~18	~~24~~19	80	NA

Notes:
(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.
(2) Background concentrations were obtained from the NYCDEP ~~in April 2003~~memorandum dated February 18, 2005..
(3) NAAQS = National Ambient Air Quality Standard.
(4) Screening threshold value (STV) established by the NYCDEP and NYSDEC.
(5) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.
(6) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.
(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is ~~quite~~ very conservative.
NA = Not Applicable

31.15.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 31.15-4.[7] The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Meserole Street Truck to Rail TS are not considered to be significant.

31.15.4.2 Off-Site Analysis

31.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY collection and other City agency's collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

- The multiple intersections around Meserole Street and Varick Street and Scott Avenue at Scholes Street to determine whether transfer station-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO "de minimus" value or a violation of the 8-hour NAAQS;
- The multiple intersections around Meserole Street and Varick Street and Scott Avenue at Scholes Street to determine whether transfer station-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- The multiple intersections around Meserole Street and Varick Street and Scott Avenue at Scholes Street to determine whether transfer station-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 31.15-2.

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[7] These concentrations have been estimated according to the methodology discussed in Section 3.11.2.2.

Table 31.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
TransRiver Marketing Company, L.P. TS

		Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
No.	Toxic Air Pollutants	Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs)[5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Unit Risk Factors[7] ($\mu g/m^3$)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	2.89E-01	1.30E+03	2.22E-04	4.87E-03	1.30E-01	3.74E-02	4.87E-03	8.30E-06	4.04E-08
2	Formaldehyde	3.65E-01	3.00E+01	1.22E-02	6.16E-03	6.00E-02	1.03E-01	6.16E-03	1.30E-05	8.00E-08
3	1,3 Butadiene	1.21E-02	-	-	2.04E-04	3.60E-03	5.67E-02	2.04E-04	2.80E-04	5.71E-08
4	Acetaldehyde	2.38E-01	4.50E+03	5.28E-05	4.00E-03	4.50E-01	8.89E-03	4.00E-03	2.20E-06	8.80E-09
5	Benzo(a)pyrene	5.82E-05	-	-	9.81E-07	2.00E-03	4.90E-04	9.81E-07	1.70E-03	1.67E-09
Non-Carcinogenic Pollutants[10]										
6	Propylene	7.99E-01	-	-	1.35E-02	3.00E+03	4.49E-06	1.35E-02	NA	NA
7	Acrolein	2.87E-02	1.90E-01	1.51E-01	4.83E-04	2.00E-02	2.41E-02	4.83E-04	NA	NA
8	Toluene	1.27E-01	3.70E+04	3.42E-06	2.13E-03	4.00E+02	5.33E-06	2.13E-03	NA	NA
9	Xylenes	8.83E-02	4.30E+03	2.05E-05	1.49E-03	7.00E+02	2.12E-06	1.49E-03	NA	NA
10	Anthracene	5.79E-04	-	-	9.75E-06	2.00E-02	4.88E-04	9.75E-06	NA	NA
11	Benzo(a)anthracene	5.20E-04	-	-	8.76E-06	2.00E-02	4.38E-04	8.76E-06	NA	NA
12	Chrysene	1.09E-04	-	-	1.84E-06	2.00E-02	9.21E-05	1.84E-06	NA	NA
13	Naphthalene	2.63E-02	7.90E+03	3.32E-06	4.42E-04	3.00E+00	1.47E-04	4.42E-04	NA	NA
14	Pyrene	1.48E-03	-	-	2.49E-05	2.00E-02	1.25E-03	2.49E-05	NA	NA
15	Phenanthrene	9.10E-03	-	-	1.53E-04	2.00E-02	7.67E-03	1.53E-04	NA	NA
16	Dibenz(a,h)anthracene	1.81E-04	-	-	3.04E-06	2.00E-02	1.52E-04	3.04E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**1.63E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**2.40E-01**	**Total Estimated Combined Cancer Risk**		**1.88E-07**
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 31.15-4:

(1) Estimated by multiplying the total 1-hour HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(2) Short-term (1-hour) guideline concentrations (SGC) established by NYSDEC.

(3) Estimated by dividing the maximum 1-hour concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total HCs.

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

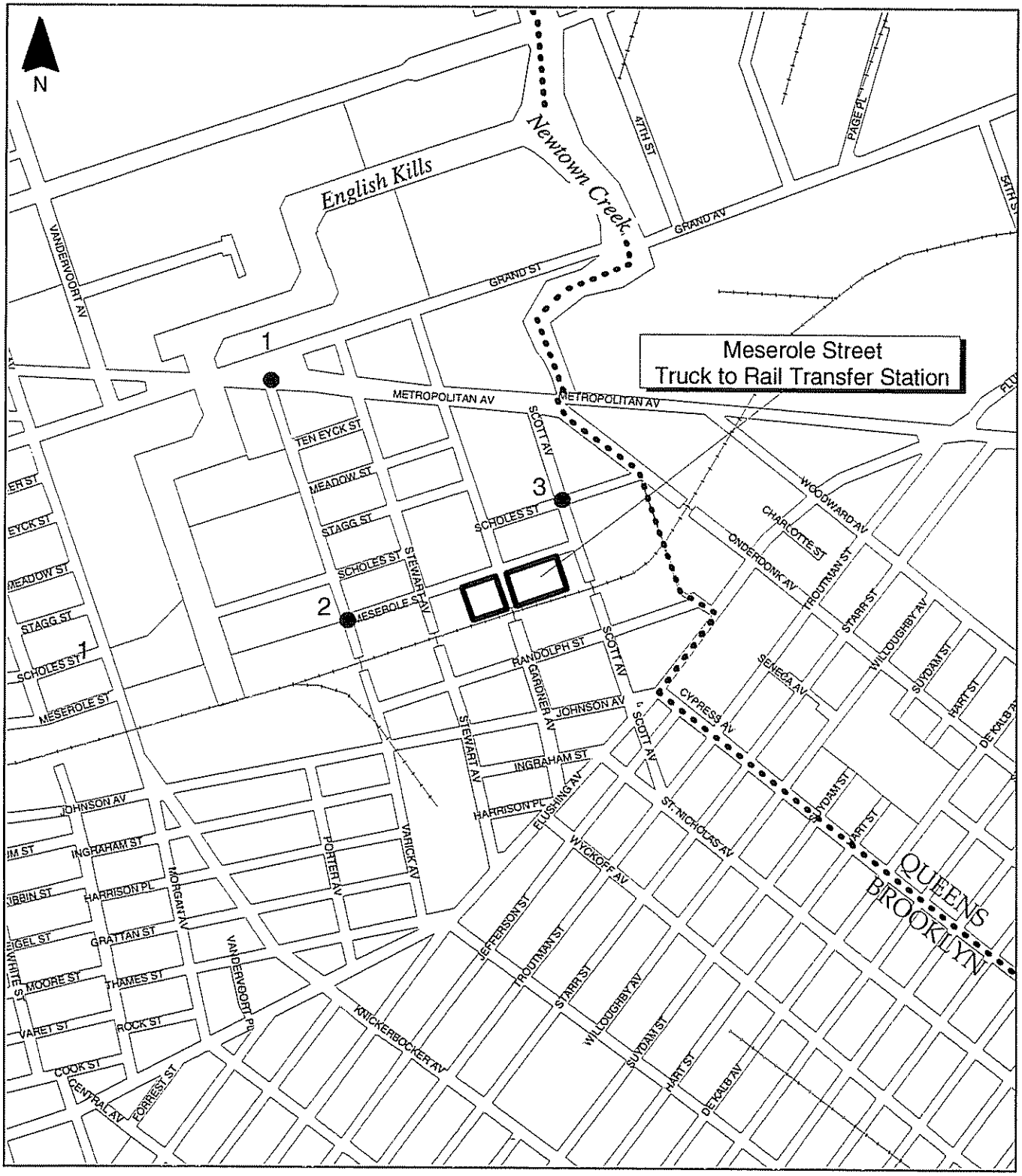
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable



Site delineations are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 31.15-2 Off-Site Air Quality Intersections Studied Meserole Street Truck to Rail Transfer Station

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31.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 31.15-5, are all within (less than) the applicable state and federal ambient air quality standards and STVs (for $PM_{2.5}$), with the exception of the ~~annual~~ 24-hour PM_{10} NAAQS for the existing conditions. However, it should be noted that the off-site air analyses were performed using a conservative Tier I approach which assumes peak hour conditions for every hour of the day. If a Tier II approach was performed for the annual PM_{10} analyses, the concentrations reported in Table 31.15-5 would decrease by as much as 40%. In addition, a precipitation factor adjustment could be applied to Equation 1 in Section 13.2.1.3 of AP-42 used to determine the PM_{10} emission factors. This factor assumes that annual average emissions are inversely proportional to the frequency of measurable (>0.01 inch) precipitation. Applying the precipitation factor to the off-site annual PM_{10} analyses would decrease the concentrations reported in Table 31.15-5 by as much as 8%, thereby bringing the results below NAAQS. Therefore, the off-site operations of the Meserole Street Truck to Rail TS are not considered to be significant.

31.15.5 Potential Impacts with IESI NY Corporation TS

Impacts with the IESI NY Corporation TS would be essentially the same as those predicted for the TransRiver Marketing Company, L.P. TS if facility designs are similar. A supplemental environmental air quality analysis will be conducted if this facility is part of the proposed Long Term Export Program.

Table 31.15-5
Estimated Pollutant Concentrations Near Selected Roadway Intersections
TransRiver Marketing Company, L.P. TS

Air Quality Receptor Site	CO	PM_{10}		$PM_{2.5}$					
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Metropolitan Avenue and Grand Avenue									
Existing Conditions	5.7	120	~~52~~49						
Future No-Build Conditions	4.5	119	~~50~~47						
Future Build Conditions	4.5	119	~~51~~48						
Future Build Incremental				0.07	1.19	1.26	~~0.045~~0.040	0.05[5]	~~0.095~~0.090

Notes for Table 31.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8-hr CO = 2.3 ppm; 24-hr PM_{10} = ~~57~~90 $\mu g/m^3$; Annual PM_{10} = ~~23~~20 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor three meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced [or Future Build] traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No-Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, Facility, or PM peak traffic conditions.

(5) Result estimated based on Tier II analysis of a similar site.

ppm: = parts per million

$\mu g/m^3$: = microgram per cubic meter

NA = Not Applicable

31.16 Odor

31.16.1 Existing Conditions

To evaluate all potential odors from the proposed Meserole Street Truck to Rail TS, the analysis assumes there are no existing sources of odor on site.

31.16.2 Future No-Build Conditions

Under Future No-Build Conditions, the TransRiver Marketing Company, L.P. TS would not exist. Therefore, odors would remain unchanged.

31.16.3 Potential Impacts with the TransRiver Marketing Company, L.P. TS

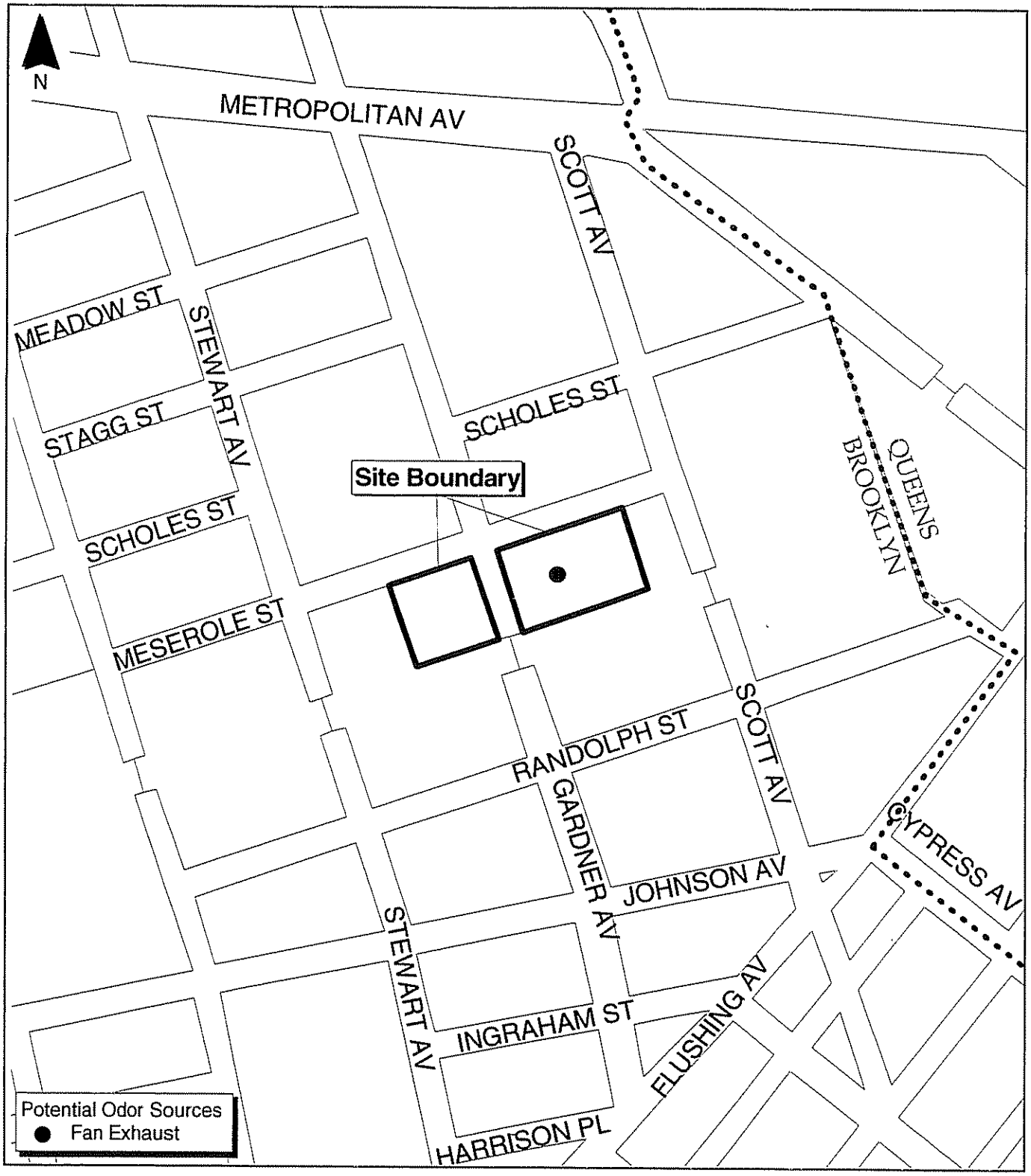
31.16.3.1 Odor Source Types and Locations Considered in the Analysis

The number and type of odor sources assumed to be on site with the Meserole Street Truck to Rail TS (while processing waste at proposed capacity for DSNY waste) are provided in Table 31.16-1. Figure 31.16-1 shows the locations of these sources within the project site.

Table 31.16-1
Odor Sources Included in Odor Analysis
Meserole Street Truck to Rail TS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Queuing Collection Vehicles	56

An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90% and 99% of odorous compounds. For purposes of modeling odor dispersion, a 90% reduction of odorous emissions was conservatively assumed for the Meserole Street Truck to Rail TS.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

HDR URBITRAN EEA PB

Figure 31.16-1 Potential Odor Sources

Meserole Street Truck to Rail Transfer Station

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31.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 31.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the TransRiver Marketing Company, L.P. TS at any nearby sensitive receptor is less than 1, so odors from the TransRiver Marketing Company, L.P. TS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 31.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
TransRiver Marketing Company, L.P. TS

Parameter	Resulting Odor Unit[1]
Estimated Detectable Concentration	5.0
Highest Result	1.74
Type of Receptor	Fence Line Receptor
Location of Receptor[2]	Site Boundary
Closest Sensitive Receptor Result	0.22
Type of Receptor	Apartment Building
Distance to Receptor[~~3~~2]	1,188 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
~~(3) Measured from the site property line.~~

31.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from the Meserole Street Truck to Rail TS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for on-site and off-site sources. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis.

31.17.1 Existing Conditions

31.17.1.1 Introduction

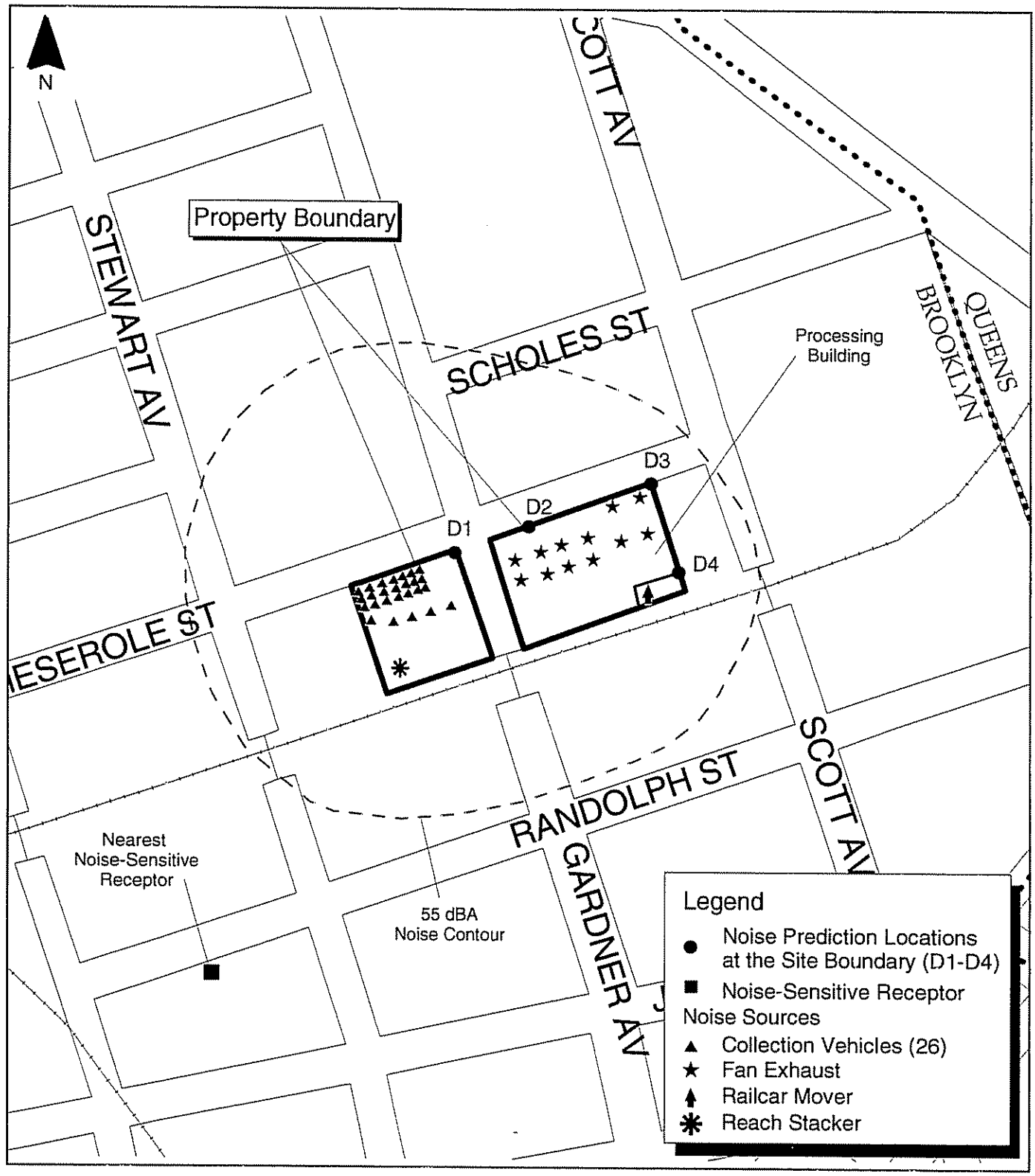
Figure 31.17-1 shows the location of the Meserole Street Truck to Rail TS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building located on Randolph Street between Stewart Avenue and Varick Avenue, approximately, 172 meters (566 feet) from the property boundary.

31.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included: $L_{eq(1)}$, L_{min} and L_{max},[8] and the statistical metrics of L_5, L_{50} and L_{90}.[9] Table 31.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 3:00 a.m. and 4:00 a.m. and had an $L_{eq(1)}$ of 59.3 dBA on June 25, 2004. Activities and events that contribute to the on-site noise levels include:

- Transportation of railcars on the adjacent Railroad line; and
- Other noise sources associated with activities in the surrounding industrial areas.

[8] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[9] Terms L_5, L_{50} and L_{90} are defined in Section 3.19.2.



Site delineations are approximate
Base Map Source: New York City Department of City Planning

200 0 200 Feet

Figure 31.17-1 Noise Sources and Receptors

Meserole Street Truck to Rail Transfer Station

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Table 31.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Meserole Street Truck to Rail TS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_5 (dBA)	L_{min} (dBA)	L_{max} (dBA)
10:00-11:00 a.m.	73.0	61.5	65.5	82.0	58.6	89.4
11:00 a.m.-12:00 p.m.	72.9	61.4	65.2	80.6	58.9	88.2
12:00-1:00 p.m.	66.7	59.9	62.3	71.0	58.1	86.8
1:00-2:00 p.m.	66.7	61.3	63.7	71.9	59.1	82.8
2:00-3:00 p.m.	69.6	62.3	64.4	73.9	60.0	91.9
3:00-4:00 p.m.	68.3	60.9	63.6	73.5	59.0	87.8
4:00-5:00 p.m.	67.6	60.7	65.0	71.9	59.1	81.8
5:00-6:00 p.m.	71.1	60.8	63.9	77.2	59.3	93.4
6:00-7:00 p.m.	70.6	58.6	61.0	74.2	57.5	89.2
7:00-8:00 p.m.	66.7	58.0	61.7	72.5	56.5	80.6
8:00-9:00 p.m.	66.5	58.4	60.8	72.0	56.8	82.0
9:00-10:00 p.m.	67.1	57.9	60.0	73.5	56.6	84.3
10:00-11:00 p.m.	67.2	57.9	61.2	72.8	56.7	84.6
11:00 p.m.-12:00 a.m.	62.9	58.7	60.4	68.0	57.3	79.7
12:00-1:00 a.m.	62.9	58.7	60.3	66.7	57.0	78.5
1:00-2:00 a.m.	64.5	58.0	61.7	69.8	56.7	80.0
2:00-3:00 a.m.	60.4	55.2	57.8	64.9	54.2	77.9
3:00-4:00 a.m.	59.3	54.9	57.0	63.6	53.9	74.9
4:00-5:00 a.m.	64.2	57.6	59.5	70.0	53.6	83.8
5:00-6:00 a.m.	68.0	59.8	63.6	75.6	58.0	81.6
6:00-7:00 a.m.	65.2	58.3	61.3	69.3	56.7	85.4
7:00-8:00 a.m.	65.7	60.9	63.8	70.2	58.2	82.5
8:00-9:00 a.m.	68.0	62.5	64.6	71.3	60.7	86.4
9:00-10:00 a.m.	67.7	62.0	64.6	72.6	60.3	86.2

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest sensitive receptor to identify the quietest background hour.

31.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of the noise from existing traffic and other background noise. A screening analysis was conducted to determine if off-site noise monitoring would be required along the Meserole Street Truck to Rail TS-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis was not required and, therefore, off-site noise monitoring was not conducted.

31.17.2 Future No-Build Conditions

31.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

31.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 31.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) based on the first-level screening.

Table 31.17-2
Off-Site Noise Traffic Volume
Meserole Street Truck to Rail TS

Location	Hour	Existing Traffic Volume [1] (Vehicles/Hour)	Future No-Build Traffic Volume [2] (Vehicles/Hour)
Metropolitan Avenue between Olive Street and Catherine Street	10:00 a.m.	~~763~~543	~~786~~554
~~Grand~~ Metropolitan Avenue between Olive Street and Catherine Street	2:00 a.m.	~~128~~123	~~132~~125
Flushing Avenue between Vandervoort and Knickerbocker Avenue	2:00 a.m.	156	159

Notes:
[1] Existing traffic volumes are based on ATR data.
[2] Future-No-Build traffic volumes are based on CEQR annual traffic growth rates.

31.17.3 Potential Impacts with the TransRiver Marketing Company L.P. Truck to Rail TS

31.17.3.1 On-Site Noise Levels

Proposed equipment assumed to be operating at the TransRiver Marketing Company L.P. Truck to Rail TS and its reference noise levels used in the CEQR analysis are shown in Table 31.17-3. The number and type of equipment assumed for this analysis were based on the TransRiver Marketing Company L.P. Truck to Rail TS's average design capacity. Shown earlier, Figure 31.17-1 indicates the TransRiver Marketing Company L.P. Truck to Rail TS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 31.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Level (L_{eq})
TransRiver Marketing Company L.P. Truck to Rail TS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level [1,2] at 50 feet (dBA)
Indoor	
Wheel Loader (1)	80.6
Reachstacker (1)	76.2
Excavator 300C (2)	81.0
Fork Lift (21)	68.1
Exhaust Fans (12)	40.8
Moving/Idling Collection Vehicles (11)	~~73~~ 79.0
Outdoor	
Onsite Moving/Queuing Collection Vehicle (26)	67
Offsite Moving/Queuing Collection Vehicle (1)	67
Reachstacker (1)	76.2
Shuttle wagon (1)	76.3
Exhaust Fan (12)	40.8

Note:
[1] Instantaneous maximum number of pieces of equipment on site at any given time.
[2] Noise level representative of each piece of equipment

31.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the TransRiver Marketing Company L.P. Truck to Rail TS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 79 meters (260 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 172 meters (566 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 31.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

31.17.3.3 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the TransRiver Marketing Company L.P. Truck to Rail TS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, an off-site noise analysis and off-site noise monitoring was not required. Results of the screening for the hour expected to receive the largest change in noise levels (when the difference between the traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 31.17-4.

31.17.3.4 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the TransRiver Marketing Company L.P. Truck to Rail TS, neither the on- or the off-site noise analyses were required; therefore, a combined noise analysis was not performed.

Table 31.17-4
Off-Site Noise Screening Results
TransRiver Marketing Company L.P. Truck to Rail TS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicles PCEs[1][2]	Future Build PCEs[1][2]	Possible Impact[3]
Metropolitan Avenue between Olive Street and Catherine Street	10:00 a.m.	7,085	~~45~~ 56	0	~~2,115~~ 2632	~~9,200~~ 9717	No
Metropolitan Avenue between Olive Street and Catherine Street	2:00 a.m.	1,888	~~10~~ 12	0	~~470~~ 564	~~2,358~~ 2452	No
~~Grand Avenue between Olive Street and Catherine Street~~	~~2:00 a.m.~~	~~247~~	~~3~~	~~0~~	~~141~~	~~388~~	~~No~~
Flushing Avenue between Vandervoort and Knickerbocker Avenue	2:00 a.m.	254	3	0	141	395	No

Notes:
[1] Total PCEs are rounded to the nearest whole numbers.
[2] Future Build PCEs include TransRiver Marketing Company L.P. Truck to Rail TS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted using a factor of 1.
[3] There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

31.17.4 Potential Impacts with the IESI NY Corporation Truck to Rail TS

All potential on-site and off-site impacts with the IESI NY Corporation Truck to Rail TS would be the same as those described above in Section 31.17.3 for the TransRiver Marketing Company L.P. Truck to Rail TS.

CHAPTER 32 CONSTRUCTION IMPACTS

32.1 Introduction

The DSNY is planning to restore and modify solid waste transfer operations at their Converted MTS facilities. The new operations, which will containerize MSW for barge transport, are planned for the City's Converted MTSs and will require varying degrees of over-water and on-shore construction. Construction and operation of the Converted MTSs in the Proposed Plan will have potential short- and long-term impacts on the surrounding marine environment and ambient natural resources. Since construction of the MTSs will be ~~less than 3 years~~approximately 28 to 30 months in duration, a detailed construction related impact analysis was not required (see Section 32.2 for more detail). In this section, two types of impacts will be discussed: potential short-term or construction impacts, and potential long-term or operational impacts.

32.2 Construction Schedule

Preliminary schedules were prepared by DSNY's design consultant for construction of the Converted MTSs and are presented in Appendix N to this FEIS. Based on the schedules, the estimated overall construction duration for the Converted MTSs in the Proposed Plan is approximately 28 to 30 months from Notice to Proceed. At all four of the proposed Converted MTSs, contractor mobilization and environmental abatement of the existing facility (i.e., asbestos and lead based paint remediation) would occur over approximately one and a half months. The estimated demolition period of the over-water existing MTSs at North Shore and East 91st Street, and the Hamilton Avenue existing MTS is approximately five months, during which time dredging will occur over an approximate three to four month period. Demolition of the existing Southwest Brooklyn MTS is not planned at this time. The estimated construction period of the Converted MTSs at North Shore and East 91st Street is approximately 17 to 18 months. After demolition (now underway) of the existing incinerators on the Hamilton Avenue and Southwest Brooklyn sites is completed while dredging occurs over an approximate three to four month duration, the estimated construction period for these upland Converted MTSs is approximately nine (9) to 12 months.

32.3 Construction Activities and Equipment

32.3.1 Construction Activities

The major categories of construction activity at each of the Converted MTSs include:

1. Construction of pile foundations (driving piles and construction of pilecaps and beams) and structural concrete for the deck, walls, elevated slab and columns;
2. Construction of the structural steel portion of the processing building (framing, roofing, siding an punch walls);
3. Construction of the in water king pile wall at the proposed Southwest Brooklyn Converted MTS.
4. Construction of the heating, ventilation and air conditioning (HVAC), odor control and dust suppression systems, and installation of plumbing, fire protection and electrical systems for the facility;
5. Installation of architectural finishes, including windows and doors on the processing building;
6. Installation of the gantry cranes and lidding equipment; and
7. Construction of the ramp, including driving support piers, pier stems and caps, and construction of the road slab and deck.

At the North Shore site, all construction activities will occur in Flushing Bay with the exception of a small portion of the access ramp that extends toward the western end of 31st Avenue where the existing ramp is located. At the Southwest Brooklyn site, construction activities will occur on land adjacent to the existing MTS structure, which will remain in place, with the exception of construction of the in water king pile wall. At the East 91st Street site, construction activities will occur in the East River, with the exception of the access ramp that begins at the foot of 91st Street and York Avenue, bisects the Asphalt Green park property, and crosses the FDR drive. This ramp will be reconstructed over the existing access ramp footprint, and will likely involve some temporary lane closures of the FDR Drive during certain construction periods. A discussion of the short term effects of construction on Asphalt Green Park is contained in Section 32.4. At the Hamilton Avenue site, construction activities will occur both on land and over water in the Gowanus Canal.

32.3.2 Construction Equipment

Although some construction equipment and materials will be brought to the site by truck, most of the construction equipment and materials will likely arrive on barges to take advantage of the waterfront access available at all sites. The barges will likely be staged near the sites during most of the demolition and construction period. Most demolition debris would also be removed on barges that hold large quantities of material and can be towed to a transfer or disposal location in a more efficient manner than using transfer trailers. The types of equipment that may be present during demolition and construction activities include:

- Tugboats
- Barges
- Boats
- Cranes
- Derricks
- Piledrivers
- Construction vehicles (e.g. bulldozers, wheel loaders)
- Hydraulic excavators
- Rock augers/drills
- Concrete delivery trucks
- Concrete Pumps
- Asphalt paving equipment
- Welding machines
- Mechanical dredging equipment
- Scissor lifts/hoists
- Air Compressors
- Pneumatic hammers
- Pneumatic/electric tools

A more detailed discussion on dredging is included in Section 32.5.4.

32.4 Potential Construction Impacts

Potential areas of construction-related impacts from the Proposed Action include:

- Temporarily impeded access to community facilities, parks and open space;
- Short term effects on neighborhood character and natural resources;
- Potential exposure to contaminated materials;
- Disposal of construction debris;
- Temporary street or lane closures; and
- Potential traffic, air quality, vibration, and noise impacts.

Since most of the construction at several sites would be over water, this chapter provides an in-depth description of the potential impacts during construction to the marine environment (which consists of the benthic and epibenthic communities, adult finfish and ichthyoplankton) evaluated during a year long study in 2003. See Section 32.5 for more detail.

The level of construction activity at each site will vary over the course of the construction period because certain activities, such as pile driving and construction-related traffic, will be greater at specific periods of time. DSNY is in the process of preparing final bid documents for construction of the Converted MTSs that are expected to be issued in early 2006, pending required approvals and permits. The bid documents will require the selected contractor(s) to submit a detailed demolition/construction sequencing schedule for DSNY review. The peak periods of both on-site and off-site construction activity cannot be determined until the detailed construction schedules and the means and methods to be employed by the selected contractor(s) are known.

While there will be periods of time when construction activities will cause temporary impacts in the areas listed above, DSNY is committed to minimizing these potential temporary impacts.

For example, among other things, DSNY will require the selected contractor to construct temporary construction fencing around the site, and provide security to restrict access to the site by only authorized personnel for the duration of construction. DSNY will also require the

contractor to submit: (1) a construction waste management plan that identifies the contractor's plan for management of construction debris generated at the site; and (2) air monitoring and dust minimization measures to minimize the potential for the release of particulates during dust-generating activities. As indicated by the Phase II subsurface investigations conducted at the Southwest Brooklyn and Hamilton Avenue sites and described in the Hazardous Materials sections of this FEIS, the potential for contaminated subsurface materials exists at these sites. Therefore, DSNY will require the contractor to submit Health and Safety Plans for its employees, have appropriate safety professionals on site, and submit a site management plan to address the contractor's procedures for excavation, removal and off-site disposal of any potentially encountered contaminated or hazardous materials in accordance with applicable regulations.

DSNY will also require those contractors who are preparing Maintenance and Protection of Traffic (MPT) plans to assure, to the maximum extent practicable, access to community facilities and services, and parks and open space in the vicinity of the Converted MTSs during construction. These MPT Plans will also be reviewed by appropriate state and City agencies, such as NYSDOT and NYCDOT, when the plans include temporary street or lane closures of state or City roads, and DPR in regard to maintaining access to Asphalt Green and the East River Esplanade parks. Any potential traffic, air quality, noise, and pedestrian access impacts of these street or lane closures will be temporary and localized in nature.

Due to the somewhat specialized nature of the over-water and land side construction of the Converted MTSs, the additional traffic generated from construction vehicles and employees traveling to and from the site cannot be estimated at this time. The duration for demolition of the existing MTSs at East 91st Street and North Shore is approximately five (5) to six (6) months, and construction duration of the Converted MTSs at these locations is approximately 17 to 18 months. The construction duration for the upland Southwest Brooklyn and Hamilton Avenue Converted MTSs is estimated to be approximately nine (9) to 12 months, since it is anticipated that construction of pile foundations, structural concrete, and the structural steel building will require less time at the upland sites. During these periods, the peak periods of activity (with the highest number of construction-related vehicles) is likely to be less than nine (9) to 12 months,

so any potential traffic, air quality and noise impacts associated with this construction would be short term. In addition to meeting requirements for applicable state, city and local permits for construction, DSNY will require the contractor to provide noise mitigation strategies, methods, procedures and technology to minimize potential short term noise impacts.

Neighborhood character and visual quality (including river views) near the Converted MTS sites will vary, depending upon the type and duration of demolition/construction activity, but will likely experience some degree of short term adverse impacts as a result.

At the proposed East 91st Street Converted MTS site, the estimated duration for demolition and reconstruction of the access ramp is approximately 11 months. Given that the existing East 91st Street MTS access ramp is adjacent to Asphalt Green (with ballfields to the south and the Aqua Center to the north, east of York Avenue) and crosses over the East River Esplanade, ramp reconstruction would be expected to have short-term effects on these nearby park facilities, even though it would be in the same footprint as the existing ramp. Temporary construction fencing around the construction areas will alter the visual environment, and potentially affect access to small portions of these park facilities while the existing ramp is being demolished and the new one is being built. The estimated duration for demolition of the existing ramp is approximately five (5) months, and for construction of the new ramp is approximately six (6) months (which includes the portion of the ramp over the FDR and the section of ramp passing between the Aqua Center and the park), making these impacts temporary. The ramp work is scheduled to take place towards the end of construction, so that the new ramp is completed at approximately the same time that the proposed Converted MTS is completed. The existing ramp will be used for construction operations until it is demolished.

DSNY is in the process of evaluating specific measures to mitigate these potential impacts at the proposed East 91st Street Converted MTS site. These measures, which will be required in the construction contract documents, could include:

- Requirements that demolition and reconstruction be completed from within the footprint of the existing ramp and from the western most lane of the FDR.
- Isolation of the work area within temporary construction fences and barriers.

- Traffic control provisions and traffic control staff for the York Avenue Transfer Station Ramp intersection.
- Construction of a temporary steel tunnel to maintain the southwest Aqua Center entrance in service.
- Temporary storage structures to compensate for the existing storage space beneath the ramp.
- Facade protection for the Aqua Center.
- Temporary louver filters for the Aqua Center louvers located adjacent to the ramp.
- Strict enforcement of various dust and sedimentation control requirements.
- Soil vibration control and monitoring systems.
- Design of augured shafts for foundations instead of driven piles.
- Stringent post demolition/reconstruction clean up requirements.
- Temporary relocation of Aqua Center utility services.

DSNY is also considering imposing contractual requirements that the work be completed during specific periods of time. DSNY will coordinate these plans with DPR and consult with Asphalt Green to maximize access to these facilities during the various stages of construction activity.

32.52 Construction Impacts to the Marine Environment

Construction impacts to the marine environment result from both the demolition of existing structures and the fabrication of new facilities. Construction impacts are limited temporally to the span of the activities, typically a few years. On a generic basis, these impacts include, but are not limited to, loss of benthic habitat due to dredging, turbidity and siltation from piling removal or installation, loss of encrusting organism habitat from piling removal, and general disruption of existing communities due to human and mechanical activity. Minor water quality impacts, such as localized anoxia, may result if newly exposed reduced sediments draw down dissolved oxygen on contact. It is important to note that extensive sampling of the sediment indicates that the sediments are not "hazardous", although they contain some low levels of contaminants. A list of the potential impacts at the Converted MTSs is presented in Table 32.25-1. The proposed construction plans call for some activity at each of the ~~eight~~ proposed four Converted MTSs in the Proposed Action, but the extent varies, with some sites being totally rebuilt and other sites having relatively minor alterations.

32.52.1 Benthic Communities

Benthic organisms, being immobile (at least in the adult stages), are subject to impacts of construction activities that have the potential for disruption or even obliteration of the populations in the impact zone. The benthic species found at each of the four proposed Converted MTSs are listed in Table 32.25-2. If benthic species diversity is the accepted indicator for overall "health" of the communities around each proposed Converted MTS, it follows that the proposed Converted MTS zones with the highest diversities are likely to be more greatly impacted than those with lower diversities. While species diversity is an accepted indicator, caution must be used in interpreting the data because certain specific monocultures can also be considered highly valuable systems. Nonetheless, lower diversity benthic communities are usually opportunistic species with high abundances and toleration for more degraded environments. The most abundant species observed at thes proposede Converted MTSs were those species tolerant of degraded environments: *Streblospio benedict, Capitella capitata*, polychaetes and oligochaetes. With these caveats in mind, benthic species diversity will be used in this impact analysis to determine probable impacts to the benthic communities.

Table 32.5-1~~25~~ 1
Potential Impacts to Marine Communities at Converted MTSs

Chemical
Heavy metals released from sediment during dredging
Heavy metals and polycyclic aromatic hydrocarbons (PAHs) introduced to sediment and water from treated lumber used in construction
Suspended particles from marine construction and dredging
Anoxia from release of reduced sediments during dredging
Biological
Disrupted communities
Removal of food sources
Minor loss or replacement (< 0.05 acres) of tidal wetland vegetation
Physical
Channel dredging
Dredged material disposal
Dredging and filling
Habitat degradation

Table 32.52-2
Organisms Collected in Benthic Grabs at ~~Each~~ the Proposed Converted MTSs in the Proposed Action
January – October 2003

Southwest Brooklyn			
Species	**Total Number**	**Species**	**Total Number**
Streblospio benedicti	4,058	*Mya arenaria*	5
Oligochaeta	991	*Pagurus* sp.	5
Haploscoloplos sp.	477	*Hypaniola grayi*	4
Annelida	336	Bivalvia	4
Capitellidae	162	*Eumida sanguinea*	4
Nereis sp.	159	*Gammurus* sp.	3
Gasrtopoda	104	Hesionidae	3
Phyllodocidae	75	Atherinidae	3
Heteromysis formosa	72	*Palaeomonetes vulgaris*	3
Eteone sp.	62	Isopoda	3
Acteocina canaliculata	54	*Paranaitis speciosa*	3
Cirratulidae	51	*Cirratulus* sp.	3
Capitella capitata	45	*Polydora* sp.	2
Ilyanassa sp.	45	*Polydora ligni*	2
Crepidula fornicata	42	*Podarke obscura*	2
Pectinaria gouldii	35	*Edotea triloba*	2
Ampelisca sp.	34	*Sabelleria vulgaris*	2
Erichthonius sp.	34	*Nephtys* sp.	2
Amphipoda	22	*Pagurus longicarpus*	2
Melita nitida	20	*Leucon americanus*	1
Glycera sp.	19	*Corophium* sp.	1
Eulalia viridis	17	*Scolocolepides viridis*	1
Nereis succinea	15	Polychaeta	1
Tellina agilis	15	Caprellidae	1
Elasmopus levis	13	Syllidae	1
Rictaxis punctostriatus	13	Nudibranchia	1
Glycera americana	12	*Lysianopsis alba*	1
Mytillidae	12	*Mytilus edulis*	1
Xanthidae	10	*Lepidonotus* sp.	1
Paranatus sp.	10	*Oxyurustylis smithi*	1
Notoacmea testudinalis	9	*Clymenella* sp.	1
Neomysis americana	8	*Idotea metallica*	1
Ampelisca venili	8	*Microphthalmus aberrans*	1
Crangon septemspinosa	7	*Phyllodoce* sp.	1
Ilyanassa obsoleta	7	*Polinices duplicata*	1
Mulinea lateralis	5	*Sigalionidae* sp.	1
Spionidae	5		
Total			**7,137**

Table 32.5~~2~~-2 (Continued)
Organisms Collected in Benthic Grabs at ~~Each~~ the Proposed Converted MTSs in the Proposed Action
January – October 2003

Hamilton Avenue			
Species	**Total Number**	**Species**	**Total Number**
Capitella capitata	4,746	Nematoda	6
Streblospio benedicti	1,702	*Ilyanassa* sp.	5
Oligochaeta	1,196	*Corophium* sp.	5
Polydora sp.	462	*Nereis succinea*	4
Annelida	210	*Palaeomonetes vulgaris*	4
Nereis sp.	126	*Leucon americanus*	3
Edotea sp.	115	*Ampelisca* sp.	3
Platyhelminthes	54	*Glycera* sp.	3
Haploscoloplos sp.	29	*Mulinea lateralis*	2
Neomysis americana	26	*Mya arenaria*	2
Phyllodocidae	24	Polychaeta	2
Polydora ligni	22	*Balanus* sp.	2
Podarke obscura	22	*Phyllodoce arenae*	2
Crangon septemspinosa	20	*Schistomeringos rudolphi*	2
Spionidae	13	Amphipoda	1
Capitellidae	12	Sabellidae	1
Cirratulidae	10	*Monoculodes edwardsi*	1
Eumida sanguinea	9	*Nephtys* sp.	1
Scolocolepides viridis	7	*Nereis virens*	1
Hesionidae	7	Decapoda	1
Molgula manhattensis	6	*Fabrica sabella*	1
Syllidae	6	*Hippolyte* sp.	1
Total			**8,877**

Table 32.~~52~~-2 (Continued)
Organisms Collected in Benthic Grabs at ~~Each~~ the Proposed Converted MTSs in the Proposed Action
January – October 2003

East 91st Street			
Species	**Total Number**	**Species**	**Total Number**
Streblospio benedicti	16,952	*Ilyanassa obsoleta*	5
Oligochaeta	1,738	*Neomysis americana*	4
Annelida	1,637	*Gammurus* sp.	4
Haploscoloplos sp.	569	Amphithoidae	4
Hypaniola grayi	401	*Tharyx* sp.	4
Eteone sp.	393	*Nereis succinea*	3
Spionidae	324	*Parametopella cypris*	3
Cirratulidae	151	Xanthidae	3
Mulinea lateralis	136	*Acteocina canaliculata*	3
Nereis sp.	79	Caprellidae	3
Polydora sp.	65	Actinaria	3
Pectinaria gouldii	55	Corophidae	3
Phyllodocidae	35	*Sigambra* sp.	2
Capitella capitata	25	Polychaeta	2
Ilyanassa sp.	20	*Tellina agilis*	2
Glycera sp.	19	Nudibranchia	2
Bivalvia	17	*Lysianopsis alba*	2
Corophium sp.	13	Decapoda	2
Amphipoda	13	*Fabrica sabella*	2
Rictaxis punctostriatus	13	*Leucon americanus*	1
Mya arenaria	12	*Polydora ligni*	1
Edotea triloba	10	*Scolocolepides viridis*	1
Anemone	8	*Crepidula fornicata*	1
Sabellidae	8	*Erichthonius* sp.	1
Podarke obscura	7	*Glycera americana*	1
Crangon septemspinosa	6	Isopoda	1
Elasmopus levis	6	*Mytilus edulis*	1
Molgula manhattensis	6	*Idotea balthica*	1
Ampharetidae	6	*Ovatella myosotis*	1
Gasrtopoda	5	*Pinnixa* sp.	1
Ampelisca sp.	5		
Total			**22,801**

Table 32.~~5~~2-2 (Continued)
Organisms Collected in Benthic Grabs at
the Proposed ~~Each~~ Converted MTSs in the Proposed Action
January – October 2003

North Shore			
Species	**Total Number**	**Species**	**Total Number**
Streblospio benedicti	4,751	*Nephtys* sp.	5
Oligochaeta	1,459	Capitellidae	4
Haploscoloplos sp.	1,457	Hesionidae	4
Eteone sp.	192	*Cassura longicirrata*	4
Annelida	150	Gasrtopoda	3
Corophium sp.	83	*Edotea triloba*	3
Mulinea lateralis	68	Nudibranchia	3
Sigambra sp.	59	*Mya arenaria*	2
Nereis sp.	45	*Tellina agilis*	2
Ilyanassa sp.	36	Sabellidae	2
Cirratulidae	29	*Mytilus edulis*	2
Phyllodocidae	25	*Cirratulus cirratus*	2
Neomysis americana	23	*Cossura longocirrata*	2
Pagurus sp.	22	*Molgula* sp.	2
Polydora sp.	19	*Glycera* sp.	1
Capitella capitata	15	*Melita nitida*	1
Bivalvia	15	*Rictaxis punctostriatus*	1
Amphipoda	13	*Molgula manhattensis*	1
Polychaeta	13	*Gammurus* sp.	1
Leucon americanus	12	*Ilyanassa obsoleta*	1
Polydora ligni	12	Caprellidae	1
Pectinaria gouldii	10	Atherinidae	1
Hypaniola grayi	9	Pysnogonidae	1
Ampelisca sp.	8	*Tharyx* sp.	1
Nereis succinea	7	*Paranaitis speciosa*	1
Crangon septemspinosa	7	*Jassa falcata*	1
Anemone	5	*Limulus polyphemus*	1
Spionidae	5	Sipunculid	1
Total			**8,603**

The Shannon-Weaver Index for benthic organisms was computed for all four proposed Converted MTSs.[1] This index is used as a measure of community diversity, but also accounts for numbers of individual organisms. Table 32.~~2~~5-3 lists the stations and their respective indices. In a rank of the indices from the highest to the lowest, a high index indicates a high species diversity.

Table 32.5-~~2~~-3
Shannon-Weaver Index and Rank of Benthic Impact at the Proposed Converted MTSs in the Proposed Action

Converted MTS	Shannon-Weaver Index	Rank
Southwest Brooklyn	1.815	High
Hamilton Avenue	1.509	Medium
North Shore	1.487	Medium
East 91st Street	1.116	~~Medium~~Low
Mean (all MTSs)	**~~1.700~~1.482**	

The ranking of high, medium and low are somewhat arbitrary; however, this ranking can be used as a general grouping of the respective proposed four Converted MTS indices to determine impacts. A Shannon-Weaver Index above 1.8 was given a high rank, an index between 1.~~0~~15 and 1.8 was assigned a medium rank (as the mean was 1.48), and an index below 1.~~0~~15 was given a low rank.

At present, the plan is for the degrees of activity and consequent potential for benthic impacts shown in Table 32.~~2~~5-4. The proposed four Converted MTSs that will have construction of new platforms, causing turbidity and siltation, were assigned a high impact rank. Those with minimal or no construction were assigned a low or no impact rank.

[1] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.

Table 32.52-4
Construction Activity and Potential Impacts

Proposed Converted MTS	Construction Activity	Marine Resource Impacts	Degree of Impact
Southwest Brooklyn	Existing platform to remain, king pile wall to be constructed	~~None~~Turbidity, siltation	(~~none~~moderate)
Hamilton Avenue	Existing platform removed	Minimal	(low)
North Shore	New, larger platform	Turbidity, siltation, tidal wetland disturbance	(high)
East 91st Street	New, larger platform	Turbidity, siltation	(high)

If the two above tables are combined, the matrix shown in Table 32.~~2~~5-5 can be constructed. In order to determine the expected impacts, turbidity and siltation received a high rank, while the removal of platforms with no new construction received a low rank. If two high ranks were compared, the expected impact was high. If a high and medium rank were compared, the expected impact was moderate. If the Shannon-Weaver Index or construction activity had a low rank, the expected impact was ranked as minimal or none.

Table 32.52-5
Degree of Expected Benthic Impacts

Proposed Converted MTS	Degree of Expected Impacts
Southwest Brooklyn	~~None~~Moderate
Hamilton Avenue	Minimal
North Shore	Moderate
East 91st Street	Moderate

The needs of the project require that the old platforms be removed and new ones constructed. Southwest Brooklyn is an exception; the existing platform will remain in place. The construction of new platforms will cause turbidity and siltation, which could smother benthic communities. There will also be some turbidity and siltation as a result of the construction of a king pile wall at Southwest Brooklyn, though it will be far less than what would be expected from the construction of new platforms. Impacts will be greatest to the benthic communities at the proposed Converted MTSs that have the most diverse benthic communities. ~~The above ranking of expected benthic impacts from construction appears logical as West 135th Street and South Bronx had the highest Shannon-Weaver indices and significant construction activities. Conversely, Southwest Brooklyn, Greenpoint and Hamilton Avenue ranked low on impacts. No~~ Moderate impacts are expected at the proposed Southwest Brooklyn, North Shore and East 91st Street Converted MTSs. ~~,~~ There ~~as no~~is no over-water platform construction ~~is~~ slated at Southwest Brooklyn, however, there will be some dredging for navigational purposes and construction of a king pile wall, which will cause some short-term impacts to benthic fauna. Both the North Shore and East 91st Street sites will experience moderate impacts to the benthic communities as they will both have new platforms constructed, resulting in turbidity and siltation. The proposed Hamilton Avenue Converted MTS ranked low on impacts. No new over-water construction is planned at Hamilton Avenue ~~and the benthic community at Greenpoint is not very diverse,~~ so the limited construction should not result in drastic impacts.

32.5~~2~~.2 Epibenthic Communities

Examination of the colonization plates revealed that most of the proposed Converted MTSs had extensive macrofaunal communities within a single growing season. Most growth was observed in the spring and summer months. The most abundant species were those that are tolerant of degraded environments, such as the amphipod *Corophium insidiosum*, the polychaete worm, *Polydora sp.* and the tunicate *Molgula manhattensis*. All species found on the colonization arrays at each proposed Converted MTS are listed in Table 32.2~~5~~-6. Removal of the existing structures will temporarily eliminate these communities and cause a localized loss of food sources for fish species (e.g., tautog) that prey on them. At the Hamilton Avenue Converted MTS, this impact will be the most pronounced compared to the others because substrate for

Table 32.52-6
Epibenthic Organisms Collected ~~at Each~~
at the Proposed Converted MTSs in the Proposed Action
April 2003 – February 2004

Proposed Converted MTS	Epibenthic Organism	
Southwest Brooklyn	Actinaria	*Gammarus oceanicus*
	Ampellisca sp.	Hydrozoa, Mud, & Algal Film
	Ampithoe valida	Isopoda
	Antinoella sarsi	*Jassa falcata*
	Aoridae	*Lepidonotus squamatus*
	Balanus sp.	*Lyonsia* sp.
	Caprella penantis	*Melita nitida*
	Caprella sp.	Melitidae
	Corophium insidiosum	*Microdeutopus* sp.
	Corophium sp.	*Molgula manhattensis*
	Crepidula fornicata	*Mytilus edulis*
	Crepidula plana	*Nereis* sp.
	Elasmopus levis	*Nereis succinea*
	Enrichthonius sp.	*Paracaprella* sp.
	Eumida sanguinea	*Paracaprella tenuis*
Hamilton Avenue	*Ampellisca* sp.	*Molgula manhattensis*
	Balanus sp.	*Mytilus edulis*
	Copepoda	Nereidae
	Corophium insidiosum	*Nereis* sp.
	Corophium sp.	*Nereis succinea*
	Eumida sanguinea	Phyllodocidae
	Gammarus mucronatus	*Pleusymtes glaber*
	Hydrozoa, Mud, & Algal Film	*Polydora* sp.
	Isopoda	*Sabella microphthalma*
	Jassa falcata	*Sabellaria vulgaris*
	Lepidonotus squamatus	Sabellidae
	Lysonia sp.	Stenothoidae
	Melita nitida	Syllidae
	Microdeutopus sp.	

Table 32.25-6 (Continued)
Epibenthic Organisms Collected at ~~Each~~
the Proposed Converted MTSs in the Proposed Action
April 2003 – February 2004

Converted MTS	Epibenthic Organism	
East 91st Street	*Ampellisca* sp.	*Molgula manhettansis*
	Antinoella sarsi	*Mytilus edulis*
	Balanus sp.	*Nereis succinea*
	Brania wellfleetensis	*Paracaprella tenuis*
	Caprella penantis	*Phyllodoce arenae*
	Corophium insidiosum	*Phyllodoce* sp.
	Corophium sp.	*Pleusymtes glaber*
	Elasmopus levis	*Polydora* sp.
	Erichthonius brasiliensis	Polynoidae
	Eumida sanguinea	*Sabella microphthalma*
	Exogone dispar	*Sabellaria vulgaris*
	Hydrozoa, Mud, & Algal Film	Sabellidae
	Jassa falcata	Spionidae
	Lyonsia sp.	Stenothoidae
	Melita nitida	Xanthidae
	Microdeutopus sp.	*Molgula manhettansis*
North Shore	*Ampellisca* sp.	*Microdeutopus* sp.
	Antinoella sarsi	*Molgula manhattensis*
	Balanus sp.	*Nereis succinea*
	Copepoda	*Phyllodoce arenea*
	Corophium insidiosum	Phyllodocidae
	Corophium sp.	*Pleusymtes glaber*
	Elasmopus levis	*Polydora* sp.
	Gammarus mucronatus	*Sabella microphthalma*
	Hydrozoa, Mud, & Algal Film	Spionidae
	Jassa falcata	Stenothoidae
	Melita nitida	

growth will be permanently removed. ~~Greenpoint will also have a loss of macrofauna due to a reduction in platform size.~~ The other Converted MTSs will have as much or more new hard surface available for colonization so this initial habitat loss will not be significant. The epibenthic community is expected to remain at Southwest Brooklyn, as no pier removal ~~or construction~~ is planned at this Converted MTS~~.~~, and the community will colonize the new king pile wall.

It is important to note that colonization was observed during one sampling season and therefore the new structures are expected to be colonized fairly quickly. However, colonization may be delayed if treated lumber is used in construction. Treated lumber prevents marine growth until enough of the treatment has leached out of the lumber to allow a suitable environment for growth. Two widely used treatments for marine construction are creosote and chromated copper arsenate (CCA). Although both are used to deter marine growth, studies have suggested that they do not pose a significant risk to aquatic life.[2] Creosote releases PAHs and CCA releases copper, chromium and arsenic; however, the most leaching occurs with the initial introduction to the water and leaching decreases with time.[3] The leachate from both types of treated lumber is absorbed by the sediment and is either metabolized by microorganisms or becomes biologically unavailable.[4] Because leaching decreases with time, both benthic and epibenthic organisms are expected to recolonize the sediment and reclaim the submerged structures. It must also be noted that many of the benthic and epibenthic organisms found around the proposed Converted MTSs were those tolerant of degraded environments and would generally be the first to be found again.

[2] Sinnott, T.J., 2000. Assessment of the Risks to Aquatic Life from the Use of Pressure Treated Wood in Water. New York State Department of Environmental Conservation.
[3] Ibid.
[4] Ibid.

32.~~2~~.5.3 Adult Finfish

Construction impacts such as turbidity and siltation will be limited spatially to the immediate area of the ~~transfer station~~proposed Converted MTS. These impacts will also be restricted temporally to the time of construction, approximately one to one-and-one-half years. Adult finfish impacts are not expected because motile organisms will avoid construction activities that produce less than optimal environmental conditions. Fish generally display avoidance behavior of areas that have one milligram per liter or more of suspended sediment.[5] Some fish are more tolerant of suspended sediment than others. For example, bottom dwellers, such as flounders, are more tolerant of suspended particles than pelagic species, and clupeids (herring) are most sensitive to suspended sediment as it easily clogs their gills.[6] Table 32.~~2~~4-7 shows the relative sensitivity of the finfish collected at the proposed Converted MTSs to suspended particles in the water column.

The pile-driving activity associated with pier construction may also cause fish to avoid the construction sites. Relative finfish sensitivity to noise is listed in Table 32.~~2~~5-7. Studies on the effects of offshore pile-driving on finfish, which may be more intense than the type used in this project, have indicated that, in general, bottom dwelling fish (flatfish, etc.) are less sensitive to pile-driving than pelagic fish (whose swim bladders are sensitive to pressure changes, which in turn affects the ear).[7] Herring have been documented to show escape responses to pile-driving.[8] Avoidance response of juvenile salmonids to pile-driving activity in harbors has also been documented.[9] Although there were no salmonids at any of the proposed Converted MTSs studied, this study may be extrapolated to suggest that finfish would probably avoid the areas where marine construction is occurring.

[5] Bio/consultant as. Evaluation of the Effect of Sediment Spill from Offshore Wind Farm Construction on Marine Fish.
[6] Ibid.
[7] Bio/consultant as. Evaluation of the Effect of Noise from Offshore Pile-Driving on Marine Fish.
[8] Ibid.
[9] Feist, B.E., Anderson, J.J., and Miyamoto, R., 1992. Potential Impacts of Pile Driving on Juvenile Pink (*Oncorhynchus gorbuscha*) and Chum (*O. keta*) Salmon Behavior and Distribution.

Table 32.25-7
Adult Finfish Sensitivity to Suspended Particles and Noise Associated with Marine Construction[1]

Common Name	Suspended Particles	Noise
Alewife	High	High
American Eel	Moderate	Moderate
American Shad	High	High
Atlantic Butterfish	Moderate	Moderate
Atlantic Croaker	Moderate	Moderate
Atlantic Herring	High	High
Atlantic Menhaden	High	High
Atlantic Silverside	Moderate	Moderate
Atlantic Tomcod	Moderate	Moderate
Bay Anchovy	Moderate	Moderate
Black Sea Bass	Moderate	Moderate
Blueback Herring	High	High
Bluefish	Moderate	Moderate
Cunner	Moderate	Moderate
Gizzard Shad	High	High
Grubby Sculpin	Moderate	Moderate
Hickory Shad	High	High
Hogchoker	Low	Low
Lined Sea Horse	Moderate	Moderate
Little Skate	Low	Low
Naked Goby	Moderate	Low
Northern Pipefish	Moderate	Moderate
Oyster Toadfish	Low	Low
Scup	Moderate	Moderate
Smallmouth Flounder	Low	Low
Smooth Dogfish	Moderate	Low
Spotted Hake	Moderate	Moderate
Striped Bass	Moderate	Moderate
Striped Searobin	Moderate	Moderate
Summer Flounder	Low	Low
Tautog	Moderate	Moderate
Weakfish	Moderate	Moderate
White Perch	Moderate	Moderate
Windowpane	Low	Low
Winter Flounder	Low	Low
Winter Skate	Low	Low

Note for Table 32.~~2~~5-7:

(1) This table uses information from European sources to show a relative sensitivity of the fish collected at the MTSs to activities associated with marine construction. Both studies were conducted in Europe and discuss European species. The families of the fish studied were used to determine a general impact on the local finfish families collected at the proposed Converted MTSs.

Table 32.~~2~~4-8 lists the adult finfish species collected at each proposed Converted MTS. It must be noted that only ~~six~~ two of the four proposed Converted ~~eight~~ MTSs in the Proposed Action were sampled for adult finfish due to physical restraints of two of the sites. The two MTSs that were not sampled for adult finfish were East 91st Street and Hamilton Avenue. The flatfishes (flounders) and clupeids were totaled for each proposed Converted MTS. One ~~Four~~ of the ~~six~~four proposed Converted MTSs that were trawled (~~South Bronx,~~ Southwest Brooklyn~~, West 135th Street and West 59th Street~~) had substantially more flatfish than herrings. The finfish communities at the above-mentioned proposed Converted MTSs indicates that there may possibly be a less drastic community shift at ~~those~~ this Converted MTSs during platform modification than at Converted MTSs with a high clupeid population. North Shore ~~and Greenpoint~~ had more herrings surrounding the site ~~Converted MTS~~, and may experience more finfish avoidance behavior that the other proposed Converted MTSs. General avoidance behavior of the finfish that live near the proposed Converted MTSs was observed during the summer months when the dissolved oxygen levels decreased in the water, resulting in the movement of fish away from the affected areas. A similar response would occur if marine construction released anoxic sediment that absorbed the oxygen from the water, causing a temporary drop in dissolved oxygen levels.

32.~~2~~5.4 Ichthyoplankton

Ichthyoplankton are more sensitive to construction impacts than adult finfish. This is due to high mortality experienced in egg and larval stages. The lethal concentration of suspended sediment for finfish eggs and larvae is generally one milligram per liter of water.[10] For demersal fish eggs (those that lay on the substratum), the impacts are similar to those of the benthic invertebrates. These eggs could be smothered by sediment during construction. Pelagic eggs are free-floating and could be carried or swept through an impact zone, but given the current velocities in most of the proposed Converted MTS areas, are unlikely to stay for any extended period. Table 32.~~2~~5-9 indicates

[10] Bio/consultant as. Evaluation of the Effect of Sediment Spill from Offshore Wind Farm Construction on Marine Fish.

Table 32.25-8
Number of Adult Finfish Collected at
the Proposed ~~Each~~ Converted MTSs in the Proposed Action
January – December 2003

	Species	Total Number	EFH Listed
Southwest Brooklyn	Bay Anchovy	898	
	Weakfish	69	
	Scup	68	*
	Little Skate	39	
	Windowpane	38	*
	Summer Flounder	35	*
	Atlantic Croaker	24	
	Atlantic Herring	20	*
	Atlantic Silverside	18	
	Striped Bass	15	
	Striped Searobin	14	
	Winter Flounder	10	*
	Spotted Hake	9	
	Atlantic Butterfish	8	*
	Atlantic Menhaden	6	
	Atlantic Tomcod	4	
	Bluefish	4	*
	Smooth Dogfish	3	
	Black Sea Bass	2	*
	Northern Pipefish	2	
	Winter Skate	2	
	Alewife	1	
	Grubby Sculpin	1	
	Lined Sea Horse	1	
	Oyster Toadfish	1	
	Smallmouth Flounder	1	
	Total	**1,293**	**8**

Table ~~32.2~~32.5-8 (continued)
Number of Adult Finfish Collected at
the Proposed ~~Each~~ Converted MTSs in the Proposed Action
January – December 2003

	Species	Total Number	EFH Listed
North Shore	Atlantic Silverside	44	
	Atlantic Herring	40	*
	Atlantic Menhaden	21	
	Striped Bass	15	
	Bay Anchovy	2	
	Winter Flounder	2	*
	Grubby Sculpin	1	
	Northern Pipefish	1	
	Total	**126**	**2**

Table ~~32.2~~32.5-9
Life History Characteristics of Finfish Found in the Central Part of the Mid-Atlantic Bight

Scientific Name	Common Name	Spawning Time	Spawning Location	Egg Type	Habitat	
					Summer	Winter
Mustelus canis	Smooth Dogfish	March - May	Estuary / Mid-Atlantic Bight	Live	Estuary	Ocean
Anguilla rostrata	American Eel	March - May	Sargasso Sea	◆	Estuary	Estuary
Conger oceanicus	Conger Eel	June - February	Sargasso Sea	◆	Estuary	◆
Alosa aestivalis	Blueback Herring	March - May	Fresh Water	Pelagic	Estuary	Ocean
Alosa mediocris	Hickory Shad	March - May	Fresh Water	Demersal / Pelagic	◆	◆
Alosa pseudoharengus	Alewife	March - May	Fresh Water	Pelagic	Estuary	Ocean
Alosa sapidissima	American Shad	March - May	Fresh Water	Demersal / Pelagic	Fresh Water / Estuary	Ocean
Brevoortia tyrannus	Atlantic Menhaden	Sept.-Nov. & March - May	Mid and South Atlantic Bight	Pelagic	Estuary	Ocean
Clupea harengus	Atlantic Herring	March - May	Mid-Atlantic Bight	Demersal	◆	◆
Anchoa hepsetus	Striped Anchovy	June - August	Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Estuary / Ocean
Anchoa mitchilli	Bay Anchovy	June - August	Estuary / Mid-Atlantic Bight	Pelagic	Estuary	Ocean
Osmerus mordax	Rainbow Smelt	March - May	Fresh Water	Demersal	Brackish	Estuary
Synodus foetens	Inshore Lizardfish	◆	South Atlantic Bight	◆	◆	Ocean
Microgadus tomcod	Atlantic Tomcod	December - February	Fresh Water	Demersal	Estuary / Fresh Water	Fresh Water
Pollachius virens	Pollock	September - February	Mid-Atlantic Bight	Pelagic	Estuary	Ocean
Urophycis chuss	Red Hake	June - August	Mid-Atlantic Bight	Pelagic	Ocean	Ocean
Urophycis regia	Spotted Hake	June - Nov. & March - May	Mid-Atlantic Bight	Pelagic	Ocean	Ocean
Urophycis tenuis	White Hake	March - May	Mid-Atlantic Bight	Pelagic	Ocean	Ocean

Table ~~32.2~~32.5-9 (Continued)

Life History Characteristics of Finfish Found in the Central Part of the Mid-Atlantic Bight

Scientific Name	Common Name	Spawning Time	Spawning Location	Egg Type	Habitat	
					Summer	Winter
Ophidion marginatum	Striped Cusk-Eel	June - November	Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Ocean
Opsanus tau	Oyster Toadfish	March - August	Estuary	Demersal	Estuary	Estuary
Strongylura marina	Atlantic Needlefish	March - May	Estuary	Demersal	Estuary	◆
Cyprinodon variegatus	Sheepshaed minnow	March - August	Estuary	Demersal	Marsh	Estuary
Fundulus heteroclitus	Mummichog	March - August	Estuary	Demersal	Marsh	Estuary
Fundulus luciae	Spotfin Killifish	March - August	Estuary	Demersal	Marsh	Estuary
Fundulus majalis	Striped Killifish	March - August	Estuary	Demersal	Creeks / Shores	Estuary
Lucania parva	Rainwater Killifish	March - August	Estuary	Demersal	Marsh	Estuary
Gambusia holbrooki	Eastern Mosquitofish	June - August	Fresh Water	Live	Fresh Water / Estuary	Fresh Water / Estuary
Menidia beryllina	Inland Silverside	March - August	Estuary	Demersal	Marsh	Estuary
Menidia menidia	Atlantic Silverside	March - August	Estuary	Demersal	Estuary	Ocean
Apeltes quadracus	Fourspine Stickleback	March - May	Estuary	Demersal	Eelgrass	Estuary
Gasterosteus aculeatus	Threespine Stickleback	March - May	Estuary	Demersal	Marsh	Ocean
Hippocampus erectus	Lined Seahorse	March - August	Estuary / Mid-Atlantic Bight	Live	Estuary	Ocean
Syngnathus fuscus	Northern Pipefish	June - August	Estuary	Live	Estuary	Ocean
Prionotus carolinus	Northern Searobin	June - November	Mid-Atlantic Bight (Estuary◆)	Pelagic	Estuary / Ocean	Ocean
Prionotus evolans	Striped Searobin	June - November	Mid-Atlantic Bight (Estuary◆)	Pelagic	Estuary / Ocean	Ocean
Myoxocephalus aenaeus	Grubby	December - February	Estuary / Mid-Atlantic Bight	Demersal	Estuary / Ocean◆	Estuary / Ocean◆

Table ~~32.2~~32.5-9 (Continued)

Life History Characteristics of Finfish Found in the Central Part of the Mid-Atlantic Bight

Scientific Name	Common Name	Spawning Time	Spawning Location	Egg Type	Habitat	
					Summer	Winter
Morone americana	White Perch	March - May	Fresh Water	Demersal / Pelagic	Estuary / Fresh Water	Estuary
Morone saxatilus	Striped Bass	March - May	Fresh Water	Pelagic	Estuary / Fresh Water	Estuary
Centropristis striata	Black Sea Bass	March - November	Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Ocean
Pomatomus saltatrix	Bluefish	March - August	Mid and South Atlantic Bight	Pelagic	Estuary	Ocean
Caranx hippos	Crevalle Jack	◆	South Atlantic Bight	Pelagic	Estuary	◆
Lutjanus griseus	Gray Snapper	June - August	South Atlantic Bight	Pelagic	◆	◆
Stenotomus chrysops	Scup	March - August	Estuaries, Bays, Cont Shelf	Pelagic	Estuary	Ocean
Bairdiella chrysoura	Silver Perch	June - August	◆	Pelagic	Estuary	◆
Cynoscion regalis	Weakfish	March - August	Estuary / Mid-Atlantic Bight	Pelagic	Estuary	Ocean
Leiostomus xanthurus	Spot	December - February	Southern Mid-Atlantic Bight	Pelagic	Estuary	Ocean
Menticirrhus saxatilis	Northern Kingfish	June - August	Mid-Atlantic Bight	Pelagic	Ocean / Estuary	Ocean
Micropogonias undulatus	Atlantic Croaker	June - November	Southern Mid-Atlantic Bight	Pelagic	Estuary	Estuary
Pogonias cromis	Black Drum	June - August	Mid-Atlantic Night	Pelagic	Estuary	Ocean
Chaetodon ocellatus	Spotfin Butterflyfish	◆	South Atlantic Bight	Pelagic	Estuary	◆
Mugil cephalus	Striped Mullet	December - February	South Atlantic Bight	Pelagic	Estuary / Fresh Water	Ocean
Mugil curema	White Mullet	March - May	South Atlantic Bight	Pelagic	Estuary	Ocean
Sphyraena borealis	Northern Sennet	March - May	South Atlantic Bight	Pelagic	Estuary	◆

Table ~~32.2~~32.5-9 (Continued)
Life History Characteristics of Finfish Found in the Central Part of the Mid-Atlantic Bight

Scientific Name	Common Name	Spawning Time	Spawning Location	Egg Type	Habitat	
					Summer	Winter
Tautoga onitis	Tautog	March - November	Estuary / Mid-Atlantic Bight	Pelagic	Estuary	Estuary
Tautogolabrus adspersus	Cunner	March - November	Mid-Atlantic Bight	Pelagic	Estuary	Estuary /Ocean
Pholis gunnellus	Rock Gunnel	December - February	Estuary / Mid-Atlantic Bight	Demersal	Estuary	Ocean
Astroscopus guttatus	Northern Stargazer	June - August	Estuary / Mid-Atlantic Bight	◆	Estuary / Ocean	◆
Hypsoblennius hentz	Feather Blenny	June - August	Estuary	Demersal	Estuary	Estuary
Ammodytes americanus	American Sand Lance	December - February	◆	Demersal	Estuary	Estuary
Gobionellus boleosoma	Darter Goby	June - August	Estuary	Demersal	Estuary	Estuary
Gobiosoma bosc	Naked Goby	March - August	Estuary	Demersal	Estuary	Estuary
Gobiosoma ginsburgi	Seaboard Goby	June - August	Estuary	Demersal	Estuary / Ocean	◆
Peprilus triacanthus	Butterfish	June - August	Estuary / Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Ocean
Scophthalmus aquosus	Windowpane	March - May & Sept. - November	Estuary / Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Ocean
Eutropus microstomus	Smallmouth Flounder	March - November	Mid-Atlantic Bight	Pelagic	Estuary / Ocean	Ocean
Paralichthys dentatus	Summer Flounder	September - February	Mid-Atlantic Bight	Pelagic	Estuary	Estuary
Pseudopleuronectes americanus	Winter Flounder	December - February	Estuary / Mid-Atlantic Bight	Demersal	Estuary	Estuary /Ocean◆
Trinectes maculatus	Hogchoker	March - November	Estuary	Pelagic	Estuary	Estuary
Sphoeroides maculatus	Northern Puffer	March - August	Estuary	Demersal	Estuary	Ocean

Source : Able, K.W. & Fahay, M.P., 1998 The First Year in the Life of Estuarine Fishes in the Middle Atlantic Bight. Rutgers University Press. New Brunswick, NJ.
◆ = Unknown.

the time of year and egg type of the more abundant species located in the central part of the Mid-Atlantic Bight.[11] This table may be used as an indicator of those species more at risk to impacts from construction.

Larval forms that have motility (i.e., can swim) will behave like the adult finfish and avoid areas where the environmental conditions are unfavorable. As with the eggs, any that are swept through the construction sites by currents would not be exposed to suspended sediments for extended periods of time due to current velocities in the areas.

Currents may play an important factor in reducing impacts to non-motile finfish eggs and larvae. Most of the proposed Converted MTSs have slated construction that would cause siltation; however, any egg or larvae swept into the construction zone should be swept out of the zone fairly quickly due to strong currents experienced at the proposed Converted MTS sites. The ~~two~~ proposed Hamilton Avenue Converted MTSs ~~that~~ is ~~are~~ on a restricted water bodyies with less strong current regimes., ~~Greenpoint and Hamilton Avenue, are places where~~ eEggs and larvae may have a greater residence time and exposure to suspended sediment., ~~H~~however, thiese proposed Converted MTSs hasve a lesser degree of over-water construction planned than most other proposed Converted MTSs, and had among the lowest concentrations of finfish eggs and larvae, so impacts should be minimal.

The finfish eggs and larvae collected at each of the four proposed Converted MTS are presented in Table ~~32.2~~32.5-10. Winter flounder is the only species collected at the proposed Converted MTSs that lays demersal eggs. Because of its recreational importance and declining numbers, winter flounder is of concern to fisheries biologists and regulatory scientists. Winter flounder eggs were only present and collected at the ~~three of the Converted MTSs – South Bronx,~~ proposed East 91st Street Converted MTS site. ~~and West 59th Street.~~ Winter flounder larvae were collected at all ~~eight~~four of the proposed Converted MTS sites. Construction impacts are expected to be negligible to winter flounder or other ichthyoplankton species.

[11] Able, K.W. and Fahay, M.P., 1998. The First Year in the Life of Estuarine Fishes in the Middle Atlantic Bight. Rutgers University Press. New Brunswick, NJ.

Table ~~32.2~~32.5-10
Finfish Larvae Collected ~~At~~
at the Proposed ~~Each~~ Converted MTSs in the Proposed Action
January – September 2003

Southwest Brooklyn	EFH Listed	Hamilton Avenue	EFH Listed
Winter Flounder	*	Winter Flounder	*
Anchovy spp.		Anchovy spp.	
Goby spp.		Atlantic Mehnaden	
Atlantic Menhaden		Goby spp.	
Windowpane	*	Sculpin spp.	
Herring spp.		Tautog	
Sculpin spp.		Windowpane	*
Northern Pipefish		Weakfish	
Weakfish		Herring spp.	
American Sand Lance		Rock Gunnel	
Tautog		Northern Pipefish	
Threespine Stickleback		Alewife	
Fourbeard Rockling		American Sand Lance	
Smallmouth Flounder		Atlantic Herring	*
Labridae		Labridae	
Searobin spp.		Fourbeard Rockling	
Rock Gunnel		Feather Blenny	
Scup	*	Striped Bass	
Cunner		Cunner	
Fourspot Flounder			
Atlantic Butterfish	*		
Striped Searobin			

Table ~~32.2~~32.5-10 (Continued)
Finfish Larvae Collected ~~A~~
at the Proposed ~~Each~~ Converted MTSs in the Proposed Action
January – September 2003

East 91st Street	EFH Listed	North Shore	EFH Listed
Winter Flounder	*	Herring spp.	
Anchovy spp.		Atlantic Menhaden	
Goby spp.		Anchovy spp.	
Atlantic Menhaden		Winter Flounder	*
Herring spp.		Goby spp.	
Sculpin spp.		Atlantic Menhaden	
Fourbeard Rockling		Sculpin spp.	
Northern Pipefish		Tautog	
Weakfish		Cunner	
Windowpane	*	Northern Pipefish	
Rock Gunnel		Rock Gunnel	
Tautog			
Threespine Stickleback			
Summer Flounder	*		

Although impacts are expected to be minimal, regulatory agencies (USACOE and NYSDEC) will regulate the dredging and construction with environmental safeguards such as environmental buckets for the dredge, silt curtains, and environmental windows (discussed further below) to protect spawning times of striped bass and winter flounder.

There are two basic categories of dredging methods:

- **Mechanical Dredging** – Mechanical dredging uses a clamshell-style bucket to scoop up the sediments. Various types of buckets are available. A conventional bucket is an open top bucket whereas an "Environmental" bucket is an overlapping, sealed clamshell-style bucket. Environmental buckets "grab" the sediments and some water, but seal tightly in order not to let the sediments out into the waterway.
- **Hydraulic Dredging** – Hydraulic dredges work like vacuum cleaners to remove bottom sediments and associated water. The major drawback of hydraulic dredging is that it removes excessive amounts of water that must be transported offsite for disposal. Consequently, hydraulic dredging is generally not suitable or utilized unless the dredged material can be released directly into a disposal area.

In general, the environmental safeguards that may be utilized to protect the environment and may be specified by the regulatory agencies are as follows:

- **Environmental Buckets**

  Resuspension of sediments and any associated contaminants is a concern during the dredging operation. Mechanical dredging using an environmental bucket is suitable to minimize this concern. The environmental bucket is an overlapping, sealed clamshell-style bucket that is used to scoop up the sediments. During its descent, a venting system allows water to pass through the bucket, minimizing sediment resuspension. The bucket is lowered to the bottom, making a cut in the sediments. During closing, the sides overlap, effectively sealing all sediment in the bucket. The bucket is then raised to the surface just above the waterline, where it is allowed to drain water from the vents before releasing the sediments into a receiving container, usually a hopper barge.

- **Silt Curtains**

  These are specifically engineered barriers that float above the water surface and extend to the bottom. Silt curtains, where practical, are used to protect against dispersal of sediments during the dredging operation. Silt curtains, however, are not practical in waters impacted with swift current conditions.

- **Environmental Windows**

  Dredging may not be allowed during certain months of the year to protect the biological organisms. This time period, for example, is generally November 15 through April 15 to protect the Stripped Bass and Winter Flounder during their spawning and earlier growth.

Dredging will be necessary at the Converted MTSs to allow barge access during construction and operation of these facilities. DSNY has carefully considered various dredging methods and has selected to employ mechanical dredging using an environmental bucket.

- The environmental bucket will be equipped with sealing gaskets or overlapping sealed design at the jaws, with a signal light in the control station to verify bucket closure and seal.
- The bucket hoist speed will be limited to approximately 2 ft/second.
- The bucket will be lowered to level of barge gunwales prior to release of load.
- Excessive loss of water, sediment or both from the time the bucket breaks the water surface to the time it crosses the barge gunwale will not be permitted. In

other words, the environmental bucket will be kept in good working order throughout the dredging operation.

In addition to utilizing an Environmental Bucket, DSNY proposes to employ the following safeguards to further protect the environment during the dredging operation:

- No barge overflow or return of untreated water will be allowed.
- Silt curtains will be deployed at those locations, where practical.
- Depending upon stipulations of the Joint Permit issued by the USACOE and NYSDEC, dredging operations may be limited from November 15 through April 15 to protect the Striped Bass and Winter Flounder during their spawning and earlier growth.

Further, DSNY seeks to transport the dredged material offsite for a beneficial use such as its use as a cover material at Fresh Kills or other landfill.

32.56 Operational Impacts

While the construction impacts are limited to the duration of the activities, the operational impacts will persist for the duration of the facilities' life span, a time span measured in decades. For the purpose of this FDEIS section, the major operational impact will be the footprint of the structures over water. While the littoral zone covered by the structures will not be devoid of invertebrate and finfish resources, the coverage will block sunlight and hinder primary production. Each of the four proposed Converted MTSs has differing amounts of existing and proposed coverage; the differences are listed in Table 32.56-1.

Table 32.56-1
Existing and Proposed Platform Coverage at the Proposed~~Each~~ Converted MTSs in the Proposed Action

Proposed Converted MTS	Existing Square Feet	Proposed Square Feet	Difference
Southwest Brooklyn	23,855	23,855	0
Hamilton Avenue	~~34,905~~ 29,450	0	~~(34,905)~~ (29,450)
East 91st Street	~~34,717~~ 35,203	~~78,374~~ 77,815	43,657 42,612
North Shore	~~40,747~~ 40,124	~~87,149~~ 86,283	~~46,402~~ 46,159
Total	**128,632**	**187,953**	**59,321**

Inspection of the above table reveals that the ~~Greenpoint,~~ Hamilton Avenue and Southwest Brooklyn proposed Converted MTSs can be eliminated from the long-term impact discussion since they are either remaining in place or ~~are being replaced with facilities that have substantially smaller footprints.~~their over-water footprint is being removed.

It is safe to say that the impacts of large platforms on the harbor estuary ecology are controversial. Studies conducted by EEA in the late 1980s showed similar finfish and benthic communities in the interpier and underpier environments in two large-scale programs on the Hudson and East Rivers, respectively.[11,12,13] Other studies, primarily by Able *et., al.*, have

[11] New York City Public Development Corporation, 1991. East River Landing Aquatic Environmental Study. Final Report. Prepared by EEA, Inc.
[12] New York City Public Development Corporation, 1988. Hudson River Center Aquatic Environmental Study. Draft Interim Report. Prepared by EEA, Inc.
[13] Stoecker, Roy R., J. Collura and P.J. Fallon., 1992. Aquatic Studies at the Hudson River Center Site, pp. 407-427 In: Estuarine Research in the 1980s. The Hudson River Environmental Society Seventh Symposium on Hudson River Ecology (C. Lavett Smith ed.). State University of New York Press. Albany.

shown that caged winter flounder failed to thrive underneath large platforms.[14,15] Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as it provides shelter and surfaces for food to grow. While the field tests appear to be contradictory for finfish, there is no doubt that fish do indeed inhabit at least the interface of platforms, and the benthic invertebrate communities are virtually identical in the underpier and interpier zones.

From a regulatory perspective, there is acceptance that platforms do not necessarily cause the underpier zones to be devoid of life, but they are still considered to be a taking of marine environmental resources and the procedural, if not environmental, equivalent of fill.

32.~~5~~6.1 Benthic Communities

The studies done by EEA and published in the late 1980s and early 1990s were conclusive regarding the benthic organism communities under large platforms in the Hudson and East Rivers. A comparison involving hundreds of grab samples from the inter and underpier zones indicated there was no statistically significant difference in species composition and abundance.[16,17,18] Based largely upon these published studies, it appears unlikely that the reconstruction, or even enlargement, of the present platforms will materially alter the benthic meiofauna communities over the long term. Benthic communities that may have experienced toxicity due to leachate from treated lumber used to build the piers would quickly be rebuilt as the leaching decreases and the pollution tolerant organisms, that had dominated the benthic communities before construction started, would come back. Those communities displaced by

[14] Able, K.W., Manderson, J.P., and Studholme, A.L., 1998. The Distribution of Shallow Water Juvenile Fishes in an Urban Estuary: The Effects of Manmade Structures in the Lower Hudson River. Estuaries. Vol. 21, No. 4B, pp. 731-744.
[15] Duffy-Anderson, J.T. and Able, K.W., 1999. Effects of Municipal Piers on the Growth of Juvenile Fishes in the Hudson River Estuary: A Study Across a Pier Edge. Marine Biology. 133: 409-418.
[16] New York City Public Development Corporation, 1991. East River Landing Aquatic Environmental Study. Final Report. Prepared by EEA, Inc.
[17] New York City Public Development Corporation, 1988. Hudson River Center Aquatic Environmental Study. Draft Interim Report. Prepared by EEA, Inc.
[18] Stoecker, Roy R., J. Collura and P.J. Fallon., 1992. Aquatic Studies at the Hudson River Center Site pp. 407-427 In: Estuarine Research in the 1980s. The Hudson River Environmental Society Seventh Symposium on Hudson River Ecology (C. Lavett Smith ed.). State University of New York Press. Albany.

construction would begin reclaiming the sediment soon after construction was completed.[19,20] The opportunistic species would appear first, followed by longer-lived species.[21,22]

32.~~5~~6.2 Epibenthic Communities

The long-term impact to epibenthic communities will be beneficial. The planned enlargement of the platforms will provide significantly more hard surface for macrofauna and the finfish that use them as a food source. The ~~five~~ two proposed Converted MTSs that will have increased platforms, and therefore increased areas for epibenthic growth once the treated lumber has lost its toxicity, are ~~West 135th Street, West 59th Street,~~ East 91st Street~~, South Bronx~~ and North Shore. Southwest Brooklyn will also have more surface area for epibenthic growth with the addition of the king pile wall. The increase in epibenthic colonizers should lead to an increase in finfish species that feed on these organisms (e.g., cunner and tautog).

32.~~5~~6.3 Adult Finfish

The EEA studies on the East River showed altered finfish communities in the under- and interpier zones. Abundances of fish under South Street Seaport Pier 17, which was used as a model, did show moderately lower numbers under piers and different types of finfish in the two zones.[23] Interpier-underpier studies on the Hudson River also showed slightly different finfish densities for several species beneath piers as opposed to in open water.[24,25] It is possible, even

[19] U.S. Department of the Interior. Minerals Management Service, 2000. Environmental Survey of Potential Sand Resource Sites: Offshore New Jersey. Prepared by Applied Coastal Research and Engineering, Inc., Continental Shelf Associates, Inc., Barry A. Vittor & Associates, Inc., and Aubrey Consulting, Inc.
[20] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project. Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.
[21] U.S. Department of the Interior. Minerals Management Service, 2000. Environmental Survey of Potential Sand Resource Sites: Offshore New Jersey. Prepared by Applied Coastal Research and Engineering, Inc., Continental Shelf Associates, Inc., Barry A. Vittor & Associates, Inc., and Aubrey Consulting, Inc.
[22] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project. Draft. Phase II-III. During Construction and 1st Year Post-Construction Studies.
[23] New York City Public Development Corporation, 1991. East River Landing Aquatic Environmental Study. Final Report. Prepared by EEA, Inc.
[24] New York City Public Development Corporation, 1988. Hudson River Center Aquatic Environmental Study. Draft Interim Report. Prepared by EEA, Inc.
[25] Stoecker, Roy R., J. Collura and P.J. Fallon., 1992. Aquatic Studies at the Hudson River Center Site pp. 407-427 In: Estuarine Research in the 1980s. The Hudson River Environmental Society Seventh Symposium on Hudson River Ecology (C. Lavett Smith ed.). State University of New York Press. Albany.

likely, that construction of larger platforms at the proposed East 91st Street Converted MTS site~~and South Bronx~~, located on the East River, and possibly the proposed North Shore Converted MTS, located in Flushing Bay off the East River, will cause population declines and shifts in finfish species composition underneath these platforms. ~~Interpier underpier studies on the Hudson River also showed slightly different finfish densities for several species beneath piers as opposed to in open water.[26,27] Using this study as a model, there is a possibility of a shift in the finfish communities at the West 59th and West 135th Street Converted MTSs with the expansion of piers.~~ Conversely, the proposed Hamilton Avenue Converted MTSs that have a reduction in pier coverage~~, Greenpoint and Hamilton Avenue,~~ may ~~also~~ see a small shift in local finfish communities. Because finfish for the most part are transient, these shifts cannot be quantified absent a future monitoring program. Regardless, a conservative approach would be to allow for some reduction, measurable or not, in local fish stocks due to construction of the enlarged platforms.

The present plan is to construct ~~120,264~~ 59,321 square feet (approximately ~~2.8~~1.36 acres) of new platforms in the harbor estuary should full build-out be accomplished. Based upon existing data and previous studies, the proposed Converted MTSs which will experience a net gain in pier coverage will be the most likely finfish impact receptors.

32.~~5~~6.4 Ichthyoplankton

Aside from the possible population shifts at the proposed Converted MTSs with increased pier structures, there is little likelihood that the ~~enlarged~~ proposed Converted MTSs would have any significant or even measurable impacts on ichthyoplankton communities.

[26] New York City Public Development Corporation, 1988. Hudson River Center Aquatic Environmental Study. Draft Interim Report. Prepared by EEA, Inc.

[27] Stoecker, Roy R., J. Collura and P.J. Fallon., 1992. Aquatic Studies at the Hudson River Center Site pp. 407-427 In: Estuarine Research in the 1980s. The Hudson River Environmental Society Seventh Symposium on Hudson River Ecology (C. Lavett Smith ed.). State University of New York Press. Albany.

32.67 Overview of Marine Environmental Impacts

Construction, or short-term impacts resulting from the project, will be limited both spatially and temporally. The greatest impacts will be temporary destruction of benthic and epibenthic communities and avoidance by finfish due to suspended particles and food source reduction. While they may not be amenable to avoidance or reduction, these impacts will be limited and will not last beyond one seasonal cycle for invertebrates. Temporary ~~C~~construction impacts on finfish will not be quantifiable. Further discussions of the details of the impacts and their significance are provided in section 9 of Chapters 4 thru 31.

Full build-out of the project will result in an additional ~~2.8~~1.36 acres of new platform in the harbor marine environment. From a regulatory (not environmental review) perspective, this impact may be significant due to the timeframe of the project – decades. If the judgment of the agencies is a finding of significant negative impact, then mitigation programs may need to be devised, assuming that no landside alternative is possible.

CHAPTER 33 PUBLIC HEALTH EVALUATION

33.1 Introduction

The potential impacts of the Proposed Plan Facilities on public health are evaluated in this chapter. The chief public health concerns are (1) potential health effects (including asthma) of air pollutants released by the Proposed Plan Facilities; (2) effects of noise related to the Proposed Plan Facilities; (3) effects of odors related to the Proposed Plan Facilities; and (4) the potential for vermin (such as rats and insects) to infest areas near Proposed Plan Facility sites.

33.2 Air Pollution

33.2.1 Air Pollutants of Concern

Project-related air pollutants of two kinds have been directly assessed in this FDEIS. One set of pollutants, called criteria pollutants, includes compounds for which NAAQS have been established by the USEPA: CO, NO_2, SO_2 and PM. Two overlapping categories of PM are often measured or modeled in environmental health science, namely fine PM ($PM_{2.5}$) and coarse PM (PM_{10}). Much of the PM associated with the Proposed Plan Facilities would be in the form of diesel particulate matter (DPM). Airborne concentrations of the other set of pollutants, termed hazardous air pollutants (HAPs), are not limited nationally. The HAPs evaluated in this FDEIS include benzene, formaldehyde, 1,3-butadience, benzo(a)pyrene and other chemicals emitted from diesel fuel and/or exhaust.

33.2.2 Health Effects of Air Pollutants of Concern

33.2.2.1 Carbon Monoxide

CO is a colorless, odorless gas released during combustion of many substances, including gasoline, diesel fuel and home heating oil. CO is deadly at high concentrations in air; hence, the need for CO detectors in homes where malfunctioning furnaces or boilers may cause a build up of the gas. At lower concentrations, CO causes fatigue and confusion. CO exerts toxicity by binding to the blood's hemoglobin, thereby creating carboxyhemoglobin (COHb) and displacing oxygen. COHb is a very stable molecule and, thus, the body's tissues become starved for oxygen when COHb levels accumulate. For example, a COHb concentration of 65% or more may be lethal, a concentration of 30% may cause severe headache and a concentration of 10% may cause slight headache and fatigue.[1] USEPA's review of CO toxicity at ambient concentrations determined that the most sensitive effects of exposure are on the cardiovascular system in persons with pre-existing heart disease, namely a quicker onset of angina and

[1] Clayton, G. and Clayton, F., editors. *Patty's Industrial Hygiene and Toxicology, fourth edition, Volume II*. John Wiley and Sons: New York, NY. 1994.

electrocardiogram (EKG) changes.[2] The NAAQS for CO (9 ppm for an 8-hour average and 35 ppm for a 1-hour average) are set to keep COHb levels in the blood low enough to reduce the risk of these cardiovascular effects. The City is in attainment for the CO air quality standards.

33.2.2.2 Nitrogen Dioxide

NO_2 is one of several related oxides of nitrogen, collectively termed "NO_X," found in ambient air. USEPA decided to issue a NAAQS only for NO_2, however, as it is found at the highest concentrations. NO_2 is an irritant gas, and it is regulated in air based on its potential effects on respiratory health of children (who might be made more vulnerable to respiratory illnesses) and on pulmonary function in asthmatics and persons with chronic obstructive pulmonary disease.[3] Long-term exposure to NO_2 at much higher concentrations than are found in ambient air has produced emphysema-like changes in laboratory rodents. As of 1996, when the USEPA last reviewed the NAAQS for NO_2, (53 ppb as an annual average), the entire country was in compliance with the standard.[4]

33.2.2.3 Sulfur Dioxide

Analogous to NO_2, SO_2 is one of several oxides of sulfur, collectively termed SO_X, and is the one most present in ambient air. It is created primarily by combustion of fossil fuels and processing of ores. Air quality standards for SO_2 are intended to protect against possible mortality, aggravation of bronchitis, decreased lung function in asthmatics and/or children, and reduced capacity to respond to respiratory infections.[5] The standards are 30 ppb as an annual average and 140 ppb as a 24-hour average. The City is in compliance with the SO_2 NAAQS.

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[2] USEPA (1994). "National Ambient Air Quality Standards for Carbon Monoxide – Final Decision." *Federal Register*: August 1.
[3] USEPA (1995). "National Ambient Air Quality Standards for Nitrogen Dioxide: Proposed Decision." *Federal Register*: October 11.
[4] USEPA (1996). "National Ambient Air Quality Standards for Nitrogen Dioxide: Final Decision." *Federal Register*: October 8.

33.2.2.4 Particulate Matter

33.2.2.4.1 PM_{10} and $PM_{2.5}$

Unlike the other criteria pollutants, which are specific chemical molecules, PM refers to any of thousands of different solid particles or liquid droplets suspended in outdoor air. Various forms of airborne PM differ with respect to (1) size (with diameters ranging from about 0.001 to 100 microns [μm]), shape and surface characteristics; (2) water solubility and pulmonary persistence; (3) chemical composition, pH, and metal content; and (4) biologic and immunologic properties and potencies. Generally, airborne concentrations of PM are expressed as the total mass of all material (often smaller than a specified aerodynamic diameter) per volume of air (in units of micrograms per cubic meter, $\mu g/m^3$). Thus, PM_{10} refers to all particles and aerosols with diameters less than 10 μm, and $PM_{2.5}$ to all particles with diameters less than 2.5 μm.

In practice, $PM_{2.5}$ and PM_{10} are defined as all material collected and weighed using specific types of equipment and under specified conditions.[6] When samples of ambient air are collected and analyzed for purposes of NAAQS compliance, the specific physical, chemical and biological forms of PM are not determined.

Many observational, epidemiologic studies have reported weakly positive statistical associations between rates of mortality or morbidity in populations and moderate concentrations of total $PM_{2.5}$ and PM_{10} measured in ambient air near those populations.[7] These observational studies include cross-sectional studies[8] in which mortality in various metropolitan areas is associated

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[5] USEPA (1988). "Proposed Decision not to Revise the National Ambient Air Quality Standards for Sulfur Oxides (Sulfur Dioxide)." *Federal Register*: April 26; USEPA (1996). "National Ambient Air Quality Standards for Sulfur Oxides (Sulfur Dioxide) – Final Decision." *Federal Register*: May 22.

[6] USEPA (1997). "National Ambient Air Quality Standards (NAAQS) for Particulate Matter; Final Rule." *Federal Register*: July 18.

[7] See Krewski, D., Burnett, R., Goldberg, M., *et al.* (2000). "Reanalysis of the Harvard Six Cities Study and the American Cancer Society study of Particulate Air Pollution and Mortality." Health Effects Institute: Cambridge, MA; and Lipfert, F. and Wyzga, R. (1995). "Air Pollution and Mortality: Issues and Uncertainties." J. Air Waste Manage. Assoc. 45:949-966 for reviews.

[8] Dockery, D., Pope, C., Xy, X., *et al.* (1993). "An Association between Air Pollution and Mortality in Six U.S. Cities." N. Engl. J. Med. 329:1753-1759; Pope, C., Thun, M., Namboodiri, N., *et al.* (1995). "Particulate Air Pollution as a Predictor of Mortality in a Prospective Study of U.S. Adults." Am. J. Respir. Crit. Care Med. 151:669-674; Pope, C., Burnett, R., Thun, M., *et al.* (2002). "Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution." JAMA 287(9):1132-41.

with ambient concentrations of PM in those areas, and time-series studies[9] in which daily mortality within a metropolitan area is associated with concurrent or lagged daily fluctuations in ambient PM concentrations. Similarly, some studies have correlated increased rates of hospital admissions for respiratory conditions, small decreases in lung function in children with or without asthma, and absences from school with changes in PM concentrations.[10] USEPA[11] stated that these statistical associations reflect cause and effect, and has established the PM NAAQS primarily on the basis of the associations.

For purposes of public health assessment, however, it is important to recognize that different forms of PM may pose markedly different risks to health. Airborne PM includes countless naturally occurring materials, such as thousands of species of viruses and bacteria, various molds and pollen fragments (from thousands of species of flowering plants), fragments of innumerable species of insects and bits of different types of sand and soil. Clearly, small concentrations of some forms of natural PM, such as tuberculosis bacillus, can be deadly, while other forms, such as suspended sea salt, are benign.

Pollution-derived PM is also a complicated mixture. Standard characterizations separate such PM into five categories – sulfates, nitrates, organic compounds, elemental carbon and "other."[12] Such characterizations belie substantial, underlying heterogeneity, however. For example, members of the "organic compounds" class of PM number in the thousands and are quite diverse in their structures and expected toxicities. Even members of a category as seemingly simple as the first (sulfates) differ in important features. Thus, most ambient sulfates (such as ammonium sulfate and sodium sulfate) are water-soluble, but a few (such as calcium sulfate) are not. The

[9] Samet, J., Dominici, F., Curriero, F., *et al.* (2000). "Fine Particulate Air Pollution and Mortality in 20 U.S. Cities, 1987-1994." New Engl. J. Med. 343:1742-1749; Dominici, F., McDermott, A., Zeger, S., and Samet, J. (2003). "Airborne Particulate Matter and Mortality: Timescale Effects in Four U.S. Cities." Am. J. Epidemiol. 157(12):1055-1065.

[10] CEPA/FPAC Working Group on Air Quality Objectives and Guidelines. National Ambient Air Quality Objectives for Particulate Matter. Part 1: Science Assessment Document. Environmental Health Directorate, Canada. 1999.

[11] USEPA (1996). Air Quality Criteria for Particulate Matter (Vols. I, II, & III). EPA/600/P-95/001af. Washington, DC: Office of Research and Development. [http://www.epa.gov/ncea/archive/pdfs/ partmatt/vol1/0671v1fm.pdf]; USEPA (1997). "National Ambient Air Quality Standards for Particulate Matter, Final Rule." *Federal Register*: July 18; EPA (2003). Air Quality Criteria for Particulate Matter, Fourth External Review Draft. EPA/600/P-99/002aD June 2003.

[12] USEPA (1996).

solubility or insolubility of aerosols and particles is expected to be an important determinant of toxicity, as it is for airborne fibers.[13] Solubility aside, sulfate salts range widely in their effects on respiratory function and structure.[14]

Most of the PM emitted by the activities related to the Proposed Plan Facilities would be from diesel engine exhaust and, hence, in the form of DPM. This mixture of gases and particles has been unusually well-studied.

33.2.2.4.2 DPM

DPM consists primarily of soot (carbon particles) within which various organic compounds are absorbed.[15] Diesel particles are generally small enough to be counted as $PM_{2.5}$ and are emitted by diesel engines of all kinds, although different engines, loads, specific fuels and other factors result in DPM mixtures with varying chemical constituents. DPM is not a criteria pollutant, so there are no NAAQS for it, nor is it generally considered an HAP. Therefore, DPM impacts have not been quantitatively assessed in this FDEIS except as a component of $PM_{2.5}$.

The toxic effects of diesel engine exhaust – both DPM and the gases and vapors that comprise the bulk of the exhaust – have been evaluated in numerous acute and chronic studies. Laboratory animals are believed to be good models for humans with regard to their responses to DPM,[16] and some 17 chronic studies involving laboratory rats, mice, hamsters, guinea pigs, cats and monkeys have evaluated the respiratory and systemic effects of exposure to DPM.[17] Chronic exposures to large concentrations of DPM (in the presence of diesel engine exhaust gases) cause inflammation, fibrosis and functional changes in the respiratory system, and very large

[13] McConnell, E. (2000). "A Science-Based Paradigm for the Classification of Synthetic Vitreous Fibers." Regul. Toxicol. Pharmacol. 32:14-21.

[14] Amdur, M.O. "Air Pollutants" in Casarett and Doull's Toxicology, 3rd edition, Macmillan Publishing Co.: New York, NY. 1986.

[15] This discussion of DPM is taken, with the permission of the authors, from Green, L. and Armstrong, S. (2003). "Particulate Matter in Ambient Air and Mortality: Toxicologic Perspectives." Regul. Toxicol. Pharmacol. 38:326-335.

[16] International Life Sciences Institute (ILSI) (2000). "ILSI Risk Science Institute Workshop: The Relevance of the Rat Lung Response to Particle Overload for Human Risk Assessment." Inhal. Toxicol. 12(1-2):1-17; USEPA (2002). Health Assessment Document for Diesel Engine Exhaust. EPA/600/8-90/057F.

[17] USEPA (2002); USEPA (2003a). IRIS record for diesel engine exhaust. Available at www.epa.gov/iris/subst/0642.htm.

concentrations cause premature death. The lowest observed adverse effect levels (LOAELs) and no observed adverse effect levels (NOAELs) for these effects are considerably in excess of ambient concentrations. Thus, the experimentally-derived LOAELs for pulmonary changes in rats are in the range of 800 to 3,000 μg DPM/m^3, while the levels at which these effects are not observed – that is, the NOAELs – range from about 100 to 500 μg DPM/m^3.[18] With regard to premature mortality due to lifetime exposure to DPM, the LOAELs are about 6,000 μg DPM/m^3 in rats[19] and 4,000 μg DPM/m^3 in mice[20], although other rodents tested in other laboratories showed no decreased survival even given lifetime exposures of some 7,000 μg DPM/m^3.[21] For purposes of public health assessment, application of typical safety factors to these data from laboratory rodents suggests that current ambient concentrations of diesel engine exhaust in New York State are not harmful. Nonetheless, current and proposed regulations that will substantially reduce the sulfur content of diesel fuel and will substantially control emissions of several pollutants from diesel equipment and vehicles are welcome improvements that will provide additional margins of safety and help to reduce regional haze.

Laboratory rats, though not necessarily other test species, develop lung tumors during lifetime exposures to very high concentrations of DPM. As noted by USEPA[22], the mechanism by which these tumors arise involves "particle overload and consequent persistent inflammation and cell proliferation, [which] supports a nonlinear mode of action for lung cancer in the rat (ILSI, 2000). The nonlinear cancer response is further characterized as occurring at relatively high exposures of diesel exhaust (>3500 μg DPM/m^3), which is far beyond the range of environmental levels. The rat tumor occurrences, thus, are not particularly influential in judging the hazards at

[18] USEPA (2003a). (See footnote 17.)

[19] Nikula, K., Snipes, M., Barr, E., *et al.* (1995). "Comparative Pulmonary Toxicities and Carcinogenicities of Chronically Inhaled Diesel Exhaust and Carbon Black in F344 rats." Fundam. Appl. Toxicol. 25:80-94.

[20] Heinrich, U., Muhle, H., Takenaka, S., *et al.* (1986). "Chronic Effects on the Respiratory Tract of Hamsters, Mice, and Rats After Long-Term Inhalation of High Concentrations of Filtered and Unfiltered Diesel Engine Emissions." J. Appl. Toxicol. 6:383-395.

[21] Mauderly, J., Benson, J., Rice, D., *et al.* (1984). "Life Span Study of Rodents Inhaling Diesel Exhaust: Effects on Body Weight and Survival" in: Guilmette, R., Medinsky, M., editors. Inhalation Toxicology Research Institute Annual Report. ITRI:Albuquerque, NM, pp. 287-291; Mauderly, J., Bice, D., Carpenter, R., *et al.* (1987). Effects of Inhaled Nitrogen Dioxide and Diesel Exhaust on Developing Lung. Health Effects Institute, Report No. 8, Cambridge, MA; Mauderly, J., Banas, D., Griffith, W., *et al.* (1996). "Diesel Exhaust is not a Pulmonary Carcinogen in CD-1 Mice Exposed Under Conditions Carcinogenic to F344 Rats." Fundam. Appl. Toxicol. 30:233-242; Heinrich, U., Muhle, H., Takenaka, S., *et al.* (1986). "Chronic Effects on the Respiratory Tract of Hamsters, Mice, and Rats After Long-Term Inhalation of High Concentrations of Filtered and Unfiltered Diesel Engine Emissions." J. Appl. Toxicol. 6:383-395; all as reviewed in USEPA (2002).

environmental levels of exposure." USEPA also notes that "while the weight of evidence indicates that DE [diesel engine exhaust] has the potential to pose a lung cancer hazard to humans at anticipated levels of environmental exposure, as shown by occupational epidemiology studies, a confident dose-response relationship based on occupational exposure levels is currently lacking." The National Toxicology Program classifies DPM as "reasonably anticipated to be a human carcinogen," but notes that the increased risk of lung cancer seen in epidemiologic studies of workers "cannot always be clearly ascribed to diesel exhaust exposure . . . [and] most studies used inadequate measures of exposure."[23]

Current ambient concentrations of DPM typically average about 1 to 10 μg DPM/m^3. The Proposed Plan Facilities analyzed would add less than 1 μg DPM/m^3, measured as $PM_{2.5}$, on an annual basis (see Section 33.2.3).

33.2.2.5 HAPs

Acetaldehyde, a widely used industrial chemical, is a component of vehicle exhausts and tobacco smoke, and is a metabolite of ethanol. That is, everyone who consumes alcohol generates acetaldehyde. At high concentrations of vapor, acetaldehyde is irritating to the respiratory tract. In animal studies, the most sensitive indicator of acetaldehyde toxicity is damage to the olfactory epithelium (i.e., part of the lining of the nasal passages). At higher exposure levels, animals also lost weight, showed signs of irritation and showed altered activity of certain immune cells in the lungs. USEPA considers acetaldehyde a "B2," or "probable" human carcinogen. No reliable human data indicate that acetaldehyde is carcinogenic, but animals forced to breathe acetaldehyde for at least one year developed nasal and laryngeal tumors. For non-cancer effects, USEPA has derived a concentration of acetaldehyde of 9 μg/m^3 (16 ppb) as a safe, long-term limit for the general population.[24] Recommended occupational limits for the workplace are 14 mg/m^3 (25 ppm) or less, as a ceiling concentration.[25]

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[22] USEPA (2003a).
[23] National Toxicology Program (2002). 10th Report on Carcinogens. U.S. Department of Health and Human Services.
[24] USEPA (2003b). IRIS record for acetaldehyde. Available at www.epa.gov/iris/subst/0290.htm.
[25] American Conference of Governmental Industrial Hygienists (ACGIH). Documentation of the Threshold Limit Values and Biological Exposure Indices, seventh edition and supplement. ACGIH: Cincinnati, OH. 2002; National

Acrolein is a flammable, volatile liquid. It is emitted in vapor form in fuel exhaust and cigarette smoke, and is found in very low levels in some foods and beverages. Because acrolein is chemically reactive, its toxicity in experimental animal studies has usually been exerted at the point of entry, for example, in the nasal passages and respiratory tract if exposure is by inhalation, or in the stomach if exposure is oral. Severity of lesions at these sites depends on the dose of acrolein. At the higher concentrations tested in such studies, acrolein increased the mortality rate of animals. USEPA does not consider acrolein a carcinogen because there is no useful human data on the subject, and cancer studies in animals have been deficient in design and/or conduct. USEPA has derived a concentration of acrolein of 0.02 $\mu g/m^3$ (0.008 ppb) as a safe, long-term limit for the general population.[26] The recommended occupational limit for the workplace is 0.25 mg/m^3 (0.1 ppm) as a ceiling concentration according to one group and an 8-hour average concentration according to another.[27]

Benzene, a volatile organic compound present in fuels and emitted in fuel exhaust, is one of the two known human carcinogens included in the HAPs analysis. Benzene is ubiquitous in outdoor and indoor air, occurs in cigarette smoke and is used in many heavy and light industrial processes. The damaging effects of exposure to high airborne concentrations of benzene have been known for about a century — high exposures cause severe blood diseases, such as aplastic anemia, and can be rapidly fatal. Lower airborne concentrations in workplaces (still much higher than those in outdoor air) have caused many cases of leukemia, principally acute myelogenous leukemia (AML).[28] The maximum allowable concentration of benzene in workplace air is now 1 ppm to guard against cancer risk and the risk of non-cancer blood diseases. There is no demonstrable adverse effect of ppb levels (or less) of benzene in air, such as occurs around the U.S., although cancer remains a theoretical concern.

The gas 1,3-butadiene is manufactured for various uses, including production of styrene-butadiene rubber. It is also present in vehicle exhausts. In long-term animal studies, the most sensitive indicator of 1,3-butadiene toxicity was atrophy of ovaries in female mice exposed

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Institute of Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards. U.S. Department of Health and Human Services. 2003.

[26] USEPA (2003c). IRIS record for acrolein. Available at www.epa.gov/iris/subst/0364.htm.

[27] ACGIH (2002); NIOSH (2003).

by inhalation to 6.25 ppm for up to two years. Testicular atrophy occurred in male mice exposed to even higher concentrations of 1,3-butadiene. In reproductive studies, the most sensitive indicator of 1,3-butadiene toxicity was decreased weight of mouse fetuses in dams exposed by inhalation during pregnancy. USEPA considers 1,3-butadiene to be carcinogenic to humans by inhalation based both on animal studies (in which various tumor types were produced) and on epidemiologic studies of workers in industries producing or using the chemical. The epidemiologic studies have found increased rates of lymphohematopoietic cancers (cancers of the blood and lymph systems).[29] For non-cancer effects, USEPA has derived a concentration of 1,3-butadiene of 2 $\mu g/m^3$ (0.9 ppb) as a safe, long-term limit for the general population, even for a lifetime. Recommended occupational limits in workplaces are 2 ppm (4.4 mg/m^3) or less averaged over eight hours.[30]

The toxicity of formaldehyde is qualitatively similar to that of a related chemical, acetaldehyde (discussed above). An irritating vapor, formaldehyde causes similar irritative symptoms and lesions in the respiratory tract.[31] It is considered by USEPA to be more likely than acetaldehyde to be a human carcinogen ("B1" rather than "B2") on the basis of several epidemiologic studies. Increased incidences of or death from lung, nasopharyngeal and buccal tumors in people with occupational exposure to formaldehyde were observed in some of these studies. Overall, however, USEPA characterizes the human evidence as "limited." Squamous cell carcinomas of the nasal cavities occurred in animals inhaling formaldehyde in several long-term experiments.[32] Recommended limits for formaldehyde exposure in workplaces are 0.3 ppm or less, as a ceiling concentration.[33]

Several of the HAPs evaluated in this FDEIS – benzo(a)pyrene, anthracene, benzo(a)anthracene, chrysene, dibenz(a,h)anthracene, phenanthrene and pyrene – are collectively known as polycyclic aromatic hydrocarbons (PAHs). PAHs are typically produced through combustion, whether of diesel fuel, wood, cigarettes or other organic matter. While no single PAH has been

[28] Graham, J., Green, L., and Roberts, M. In Search of Safety. Harvard University Press: Cambridge, MA. 1988.
[29] USEPA (2003d). IRIS record for 1,3-butadiene. Available at www.epa.gov/iris/subst/0139.htm.
[30] ACGIH (2002); NIOSH (2003).
[31] International Programme on Chemical Safety (IPCS). Environmental Health Criteria 89: Formaldehyde. World Health Organization: Geneva, Switzerland. 1989.
[32] USEPA (2003e). IRIS record for formaldehyde. Available at www.epa.gov/iris/subst/0419.htm.

shown to cause cancer in humans, they are collectively suspect because of their presence in cigarette smoke, soot and other materials known to be carcinogenic to people. In addition, some specific PAHs can cause cancer in laboratory animals. According to USEPA's traditional classification of chemicals in terms of carcinogenicity, benzo(a)pyrene, benzo(a)anthracene, chrysene and dibenz(a,h)anthracene are termed "B2" or "probable" human carcinogens, and anthracene, phenanthrene and pyrene are "D" or "unclassifiable."[34] However, NYSDEC or USEPA have made an estimate of cancer risk for only one of the PAHs evaluated in this FDEIS, that being benzo(a)pyrene.

Naphthalene is an odorous solid chemical used in certain types of mothballs and toilet bowl cleaners, and is emitted in fuel exhaust. Humans exposed to naphthalene vapors have developed headache, nausea, loss of appetite, acute hemolysis and lens opacities.[35] In animal studies, the more serious of these effects have not been observed following vapor exposure. Rather, in laboratory rodents, naphthalene vapors produce inflammation and regeneration in the respiratory epithelium. Unlike similar effects produced by acetaldehyde and formaldehyde, naphthalene's toxicity is probably not due to direct chemical attack on tissues; rather, it appears to require metabolism. There is no information about a risk of cancer in humans from naphthalene exposure, and USEPA states that the carcinogenic potential "cannot be determined" at this time. USEPA has derived a concentration of naphthalene of 3 $\mu g/m^3$ (0.6 ppb) as a safe, long-term limit for the general population.[36] The recommended occupational limit in the workplace is 50 mg/m^3 (10 ppm), averaged over eight hours.[37]

Propylene, a gas, is present in vehicle exhausts. At high concentrations (more than 20,000 ppm), propylene is explosive. Otherwise, propylene has no significant toxicity except as a simple asphyxiant when it is so concentrated that it reduces the amount of oxygen available for inhalation.

[33] ACGIH (2002); NIOSH (2003).
[34] USEPA (2003f). IRIS record for benzo(a)pyrene. Available at www.epa.gov/iris/subst/0136.htm.
[35] ACGIH (2003).
[36] USEPA (2003g). IRIS record for naphthalene. Available at www.epa.gov/iris/subst/0436.htm.
[37] ACGIH (2002); NIOSH (2003).

Toluene is a common solvent used in many industries and found in many consumer products, as well as in fuels and exhaust. Inhalation of large concentrations of toluene vapors is well known to affect the human central nervous system. In the case of people who abusively inhale toluene-containing products and are exposed to thousands of ppm vapor, significant brain damage has occurred. However, at lower levels found in many occupational settings, effects are either subtle (revealed by neuropsychologic testing) or transient (such as headache, dizziness and irritation). Abusive inhalation of toluene vapors has also been linked to birth defects. Toluene is not classified as a carcinogen (known, probable or possible) by USEPA. USEPA has derived a concentration of toluene of 400 $\mu g/m^3$ (105 ppb) as a safe, long-term limit for the general population.[38] Recommended occupational limits in the workplace range from 190 to 375 mg/m^3 (50 to 100 ppm) averaged over eight hours.[39]

Xylene is an aromatic solvent related to benzene and toluene and, like them, is found in fuels, fuel exhausts, and various commercial and industrial products. High concentrations of xylene in air (200 ppm or more) can cause watering eyes, sore throat, headache and mild nausea. In several studies of xylene exposure in rats, neurological effects were found to be the most sensitive indicator of possible toxicity. Rats repeatedly exposed to xylene vapors made fewer spontaneous movements than did unexposed animals, were unable to maintain their footing on rotating rods and performed worse in mazes. Xylene caused developmental toxicity in offspring of rats and rabbits exposed to vapors during pregnancy, but only at concentrations higher than those that cause the neurological effects. Xylene is not considered a carcinogen. USEPA has derived a concentration of xylene of 100 $\mu g/m^3$ (23 ppb) as a safe, long-term limit for the general population.[40] The recommended occupational limit in workplaces is 435 mg/m^3 (100 ppm), averaged over eight hours.[41]

[38] USEPA (2003h). IRIS record for toluene. Available at www.epa.gov/iris/subst/0118.htm.
[39] ACGIH (2002); NIOSH (2003).
[40] USEPA (2003i). IRIS record for xylenes. Available at www.epa.gov/iris/subst/0270.htm.
[41] ACGIH (2002); NIOSH (2003).

33.2.3 Public Health Assessment of Air Pollutants of Concern

In this FEIS, the potential health impacts of the two sets of pollutants – criteria pollutants and HAPs – are assessed differently. In addition to having established NAAQS for the criteria air pollutants, USEPA has set significant impact levels (SILs) for CO, NO_2, SO_2 and PM_{10} For these criteria pollutants, estimated Proposed Plan Facility-related increases in concentrations can be added to the existing (background) concentrations and the total compared to the NAAQS (see table entitled "Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emission" of Chapters 4 through 16). The regulatory program for $PM_{2.5}$ is still under development and SILs have not yet been set. NYCDEP has proposed a draft policy for the assessment of $PM_{2.5}$ impacts; however, and NYSDEC has issued a final policy. In particular, the draft NYSDEC policy is that a "project . . .[with $PM_{2.5}$] air quality impacts equal to or less than two percent of the annual NAAQS standard of 15 $\mu g/m^3$ (0.3 $\mu g/m^3$) and equal to or less than 5 $\mu g/m^3$ on a 24-hour basis, would be considered to have insignificant impacts."[42] Similarly, NYCDEP's interim guidance value indicates that facility-related impacts on the nearest neighborhood no larger than 0.1 $\mu g/m^3$ assessed annually are to be considered insignificant. These all are referred to as interim screening threshold values (STVs) that are to be used as screening thresholds in impact evaluations until USEPA establishes national SILs. For a HAPs analysis, estimated increases are compared to benchmark concentrations established by NYSDEC that protect against cancer and/or non-cancer health risks.

33.2.3.1 Criteria Pollutants

Section 3.17 describes the air quality modeling methodologies used to estimate increases in airborne concentrations of criteria pollutants stemming from on-site activities (e.g., operation of heavy machinery) and off-site activities (e.g., emissions from truck traffic at critical intersections). For on-site analyses, sources of criteria pollutant emissions, such as collection vehicles, front-end loaders and tugboats, were catalogued for each Proposed Plan facility. The emission rates of criteria pollutants from each on-site source were combined in a USEPA-approved computer model with meteorological data (e.g., describing wind speed and wind directions) and maps of local land use to predict the increase in ambient pollutant

[42] Assessing and Mitigating Impacts of Fine Particulate Matter Emissions" undated. NYSDEC's Commissioner's Policy Proposed Draft available at: http://www.dec.state.ny.us/website/dar/drpm25.html.

concentrations at various off-site locations, called receptors. The time scale over which pollutant increments were calculated was dictated by the NAAQS for each pollutant. For example, 1-hour and 8-hour periods were evaluated for CO, while 24-hour and year-long periods were considered for PM_{10}.

The receptors with the greatest estimated pollutant increments due to on-site activities were then identified for each Proposed Plan Facility. Except for $PM_{2.5}$, these maximum increments were added to the existing (background) concentrations of criteria pollutants and the totals were compared to the appropriate NAAQS. The $PM_{2.5}$ increments were compared to the draft NYCDEP and final NYSDEC interim STVs. The summary tables of on-site results for each Proposed Plan Facility analyzed are presented in the table entitled "Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emission" in Chapters 4 through 16, , as applicable.

As the tables demonstrate, in no case do the predicted total concentrations of criteria pollutants from on-site operations at the Proposed Plan Facilities analyzed exceed the NAAQS (for CO, NO_2, SO_2 and PM_{10}), and in no case do the maximum increments for $PM_{2.5}$ exceed the NYCDEP and NYSDEC screening thresholds proposed or established as the interim STVs. In the case of CO, NO_2, SO_2 and PM_{10}, the total worst-case pollutant concentrations due to on-site activities are well below all health-based limits. Because the USEPA establishes these limits with an ample margin of safety, no adverse effects are expected from on-site emissions of CO, NO_2, SO_2 and PM_{10}. In the case of $PM_{2.5}$, the increments are deemed acceptably small, according to the draft or final policies of NYCDEP and NYSDEC.

Similar analyses were performed for traffic-generated criteria pollutants at critical intersections, focusing on CO, PM_{10} and $PM_{2.5}$. The summary tables of off-site results for each Proposed Plan Facility analyzed are presented in the table entitled, "Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersections" in Chapters 4 through 16, as applicable. Air quality impacts were evaluated for at least two intersections near each Proposed Plan Facility analyzed. In all instances, the anticipated total concentrations of CO and PM_{10} (traffic plus background) at these intersections are less than the applicable NAAQS. For all the Proposed Plan Facilities analyzed, then, no adverse health consequences are expected from traffic-related CO or PM_{10} emissions, because the expected concentrations are below the health-based limits.

For the $PM_{2.5}$ analyses, the incremental concentrations contributed by traffic related to the Proposed Plan Facilities were modeled, but not added to existing background levels. Rather, the increments were compared to the STVs described above. At all critical intersections, incremental concentrations of $PM_{2.5}$ are less than or equal to the STV values. In addition, the $PM_{2.5}$ contributions at these same intersections from the on-site operations of the Proposed Plan Facilities analyzed were evaluated. On-site operations from the Proposed Plan Facilities analyzed are not expected to cause exceedances of $PM_{2.5}$ STVs at any intersection. Furthermore, the combined $PM_{2.5}$ impacts at critical intersections from traffic and Proposed Plan Facility operations analyzed also do not exceed the STVs.

33.2.3.2 HAPs

The method used to estimate increases in airborne concentrations of HAPs is similar to that used to assess the impacts of on-site operations on off-site concentrations of criteria pollutants, except that emissions rates of the various HAPs from the different types of equipment were evaluated. In addition, only two time periods were used, a 1-hour average and an annual average. Then, where toxicologic benchmarks have been established by NYSDEC, they were compared to the predicted increases in HAPs concentrations over the 1-hour and annual averaging periods. NYSDEC's method of developing these benchmark concentrations ensures that the most health-protective values are selected from the range of possibilities, including the USEPA reference concentrations noted in the HAPs discussions above, and takes into account the carcinogenic and non-carcinogenic effects discussed in Section 33.2.2.5 above.[43] Note that cancer risk is calculated for both known and probable human carcinogens. The NYSDEC toxicity benchmarks are presented in Table 33.2-1.

[43] New York State Department of Environmental Conservation. (2000). DAR-1 AGC/SGC Tables. Division of Air Resources, Bureau of Stationary Sources.

Table 33.2-1
NYSDEC Toxicity Benchmarks For HAPs

HAP	NYSDEC Short-Term (1-hr) Guideline Concentration ($\mu g/m^3$)	NYSDEC Long-Term (Annual) Guideline Concentration ($\mu g/m^3$)	NYSDEC Unit Cancer Risk ($m^3/\mu g$)
Known or probable carcinogens			
Acetaldehyde	4,500	0.450	2.2×10^{-6}
Benzene	1,300	0.130	8.3×10^{-6}
Benzo(a)pyrene	NA	0.002	1.7×10^{-3}
1,3-Butadiene	NA	0.0036	2.8×10^{-4}
Formaldehyde	30	0.060	1.3×10^{-5}
Non-carcinogens			
Propylene	NA	3000	NA
Acrolein	0.19	0.020	NA
Anthracene	NA	0.020	NA
Benzo(a)anthracene	NA	0.020	NA
Chrysene	NA	0.020	NA
Dibenz(a,h)anthracene	NA	0.020	NA
Naphthalene	7,900	3.0	NA
Phenanthrene	NA	0.020	NA
Pyrene	NA	0.020	NA
Toluene	37,000	400	NA
Xylene	4,300	700	NA

Notes:

NA = Not applicable.

At all Proposed Plan Facilities analyzed, all 1-hour increments of HAPs are substantially below corresponding NYSDEC SGCs; similarly, all annual-average increments are substantially below AGCs. More importantly, in using the hazard index approach to sum the impacts of all HAPs, this study finds that the total hazard index at each Proposed Plan Facility is acceptable (less than 1.0) for non-cancer effects over both short-term and annual periods. (The site-specific HAPs results are presented in the table entitled "Highest Estimated Concentrations for the Criteria Pollutants from On-Site Emissions" in Chapters 4 through 16, as applicable.) In addition, the total (multi-pollutant) increase in estimated cancer risk (which assumes 70 years of continuous exposure) from exposure to carcinogenic HAPs is below the allowable limit at each Proposed Plan Facility. This HAPs analysis indicates, thus, that emissions of the chemicals studied from the on-site operations at all Proposed Plan Facilities analyzed are very unlikely to adversely affect health.

33.3 Public Health Evaluation of Noise

The major health concern posed by noise is hearing impairment, which can develop, usually over many years, following either continuous loud noise or brief exposures to extremely loud noise. (There are other causes of hearing impairment and loss, of course, such as injury, congenital defect and age.) Loudness of noise is measured in units called A-weighted decibels, or dBA, and the noise analysis methodology described in Section 3.19 quantifies facility-related noise in this unit. Long-term exposure to noise averaging 70 dBA or less is not thought to pose a risk of hearing impairment.[44]

Other health conditions that have been researched in relation to noise exposure include hypertension, heart disease, exacerbation of mental disorders and impairment of performance on cognitive tasks, such as reading and problem solving. Other adverse effects of noise include sleep disturbance, annoyance and inhibition of spoken communication. Production of such effects by noise is highly dependent on the individual and in some cases is not well understood. Adaptation to noise, even loud noise, can often occur. An international group of reviewers assessed as "sufficient" the evidence of a connection between noise and hearing impairment, hypertension, ischemic heart disease, annoyance and sleep disturbance.[45] The reviewers concluded that risk of hearing impairment, hypertension and ischemic heart disease was increased at average noise levels of 70 dBA or more.

The chief criterion by which noise impacts were assessed near the Proposed Plan Facility sites analyzed was whether on-site operations at peak levels were likely to increase the total noise at nearby receptors to: (1) a noise level greater than 65 dBA during daytime hours; (2) if the Future No-Build Condition noise level is equal to or greater than 62 dBA $L_{eq(1)}$ or if the analysis period is during the nighttime, the threshold for significant impacts from the proposed project will be an increase of by 3 dBA or more during what is otherwise the quietest hour of the day or night. This procedure determines the greatest (i.e., most noticeable) impact on noise levels At one Proposed Plan Facility, Hamilton Avenue Converted MTS, no receptors were located within or

[44] Berglund, B., Lindvall, T., and Schwela, D., editors. Guidelines for Community Noise. World Health Organization: Geneva, Switzerland. 1999.

near the 55 dBA contour of facility related noise, so no further assessment was required. At ~~two~~ three of the Proposed Plan Facilities, Southwest Brooklyn Converted MTS, ~~and~~ East 91st Street Converted MTS, and North Shore Converted MTS an on-site noise analysis was performed and the total noise or the incremental noise was estimated to ~~exceed~~ be below the ~~3 dBA~~ noise criteria described above ~~limit, so mitigation measures would be required~~. At three of the Proposed Plan Facilities, Southwest Brooklyn Converted MTS, Hamilton Avenue Converted MTS, and North Shore Converted MTS, ~~none of the Proposed Plan Facilities was~~ the average noise level, including the contribution from on-site operations, is ~~likely to~~ not predicted to exceed Zoning Code Performance Standards at the facility boundary. At the East 91st Street Converted MTS, the average noise level, including the contribution from on-site operations, is likely to exceed Zoning Code Performance Standards at the facility boundary. However, background noise levels are between 4.9 dB and 42.8 dB higher than the required standard. At these levels, the theoretical exceedance at the boundary cannot be perceived and, therefore, no impact is predicted. At ~~three~~ three of the Proposed Plan Facilities, Southwest Brooklyn Converted MTS, East 91st Street Converted MTS, and North Shore Converted MTS, ~~Proposed Plan Facilities – Southwest Brooklyn Converted MTS, North Shore Converted MTS and Hamilton Avenue Converted MTS –~~ the average noise level, including the contribution from on-site operations, is ~~was not likely to~~ not predicted to exceed the 70 dBA at the facility boundary. At Hamilton Avenue Converted MTS, the average noise level, including the contribution from on-site operations, is predicted to exceed the 70 dBA at the facility boundary. However, 24-hour background noise levels monitored at the site boundary are at levels between 81.0 dBA and 86.0 dBA. At these levels, the theoretical exceedance of the noise standard cannot be perceived at the property boundary and, therefore no impact is predicted. ~~At one Proposed Plan Facility, East 91st Street Converted MTS, the average noise level, including the contribution from on-site operations, would likely exceed 70 dBA at the facility boundary, so mitigations measures would be required.~~ With mitigation measures in place, on-site operations would contribute only minor increases in overall noise levels. Therefore, no adverse health impact from on-site noise from the Proposed Plan Facilities is anticipated.

[45] Passchier-Vermeer, W. and Passchier, W. (2000). "Noise Exposure and Public Health." Environ. Health Perspect. 108 (Suppl. 1):123-131.

The potential for adverse levels of noise due to facility-related traffic through critical intersections was also assessed for each Proposed Plan Facility analyzed. The potential for off-site noise impacts from deliveries of commercial waste to the Converted MTSs exists at certain hours and Converted MTSs between 8:00 p.m. and 8:00 a.m. The impacts are avoided by restricting the deliveries of commercial waste past specific sensitive receptors along the delivery routes during certain hours at the Converted MTSs. The limitations on specific hours, locations and Converted MTSs required to prevent the potential for off-site noise impacts of collection vehicles delivering waste to these facilities are included in the summary tables for the Commercial Waste Management Study in Appendix D to this FDEIS. For the remaining Proposed Plan Facilities analyzed, off-site noise from the DSNY and other agency collection vehicles would not cause an increase in noise levels above 3dBA, with some delivery restrictions. The delivery restrictions of DSNY collection vehicles for the Proposed Plan Facilities are provided in the noise sections of the site specific chapters. Therefore, no adverse health impacts from off-site noise is anticipated.

33.4 Public Health Evaluation of Odors

Non-living organic matter, such as food waste, is subject to bacterial degradation, especially if wet and/or exposed to air. This decay inevitably produces odors. While the potential for odorous emissions from the Proposed Plan Facilities are evaluated here primarily because of the nuisance and annoyance odors can cause, it is also the case that some odors, when sufficiently intense, can adversely affect health. The quality of an odor can be so obnoxious as to cause nausea, for instance. However, at sufficient concentrations, odorous chemicals can also irritate nerve endings in the respiratory tract, mouth or eyes and cause changes in breathing patterns, sneezing, swelling of nasal membranes, tearing of the eyes and other effects.[46] In most people, these effects disappear fairly soon after the odor dissipates, but in sensitive persons, such as those with asthma, the effects may be longer lasting. Of course, chemicals may adversely affect health independent of their odorous and irritating properties.

Transfer stations, such as the Proposed Plan Facilities, must incorporate design and operational features that would reduce both the potential for odors to develop and the potential for those odors to reach neighboring properties. Maintaining negative air pressure within the facility to prevent escape of odors, installing odor neutralizing systems to treat indoor air before it is exhausted from the waste processing building through vents, and practicing good housekeeping are three such features; these and other features are discussed in Section 3.18. In addition, the potential for noxious odors to reach receptors near each Proposed Plan Facility analyzed was examined in Section 16 of Chapters 4 through 16. For each Proposed Plan Facility analyzed, the analysis suggested that emissions would not pose a risk of detectable, let alone obnoxious, odors at the property boundary or nearby receptors. This being the case, the likelihood of chemical irritative effects is also small, and no adverse odor impacts are expected.

[46] Schiffman, S., Walker, J., Dalton, D., *et al.* (2000). "Potential Health Effects of Odor from Animal Operations, Wastewater Treatment, and Recycling of Byproducts." J. Agromed. 7(1):7-81.

33.5 Vermin Control Measures

Procedures to control vermin, such as rats and insects, would be or, in the case of existing facilities, are incorporated into the operating permit of each Proposed Plan Facility. Licensed exterminators would service each Converted MTS monthly. Exterminating logs kept at the Converted MTSs would provide documentation of their activities. The exterminators would evaluate potential pest and vector problems and apply bait and/or spray throughout the refuse handling area, the tipping floor, the lunch and locker rooms and administrative areas. Standing water in barges not being used would be treated with larvicide and pesticide spray when necessary. During normal operations, exterminating jobs are undertaken as part of a preventive maintenance cycle. Should additional emergency service be needed, additional visits by the exterminators would be made within two to three days. An inspection would then be conducted at the location to determine if baiting and spraying are required. If droppings were present in an area or areas, those areas would be baited. The NYSDEC and DSNY issue operating permits to the existing Proposed Plan Facilities that require procedures to control vermin at these sites. The effectiveness of these procedures is evaluated during facility inspections.

33.6 Public Health Concerns of Host Communities

33.6.1 Introduction

Asthma, especially among children, is a significant medical problem. Parents and public health officials have expressed concern that new industrial facilities might cause or exacerbate asthma either directly, due to emissions from industrial operations, for example, or indirectly, due to increases in vehicular traffic and emissions.

33.6.2 Traffic and Respiratory Health

A search of the scientific literature has not identified studies of the effects of municipal solid waste transfer stations on public health. However, during the last decade, scientists have been studying possible links between respiratory diseases or symptoms, such as cough, asthma and bronchitis, and levels of traffic nearby. Because the Proposed Plan Facilities would require that all solid waste be brought to them by truck, this "traffic literature" is relevant to the public health analysis.

The studies of traffic and respiratory health pertain to children[47] and occasionally to adults.[48] They were performed mostly outside the U.S.,[49] although two studies were performed recently in this country.[50] All of these studies are cross-sectional in design; that is, the respiratory health of the subjects and the levels of traffic nearby were assessed at the same time. Traffic studies that examine diesel traffic in particular are most relevant to this evaluation because the collection vehicles that would transport solid waste to the Proposed Plan Facilities are diesel-powered, as is the equipment used in waste processing operations, such as front-end loaders and tugboats. About half of the studies identified quantified diesel traffic in some manner.[51] In most cases, the health endpoints, such as asthma or allergic rhinitis, were investigated by asking either children or their parents to complete questionnaires that inquired about symptoms or diagnoses of

[47] Brunekreef, B., Janssen, N., de Hartog, J., *et al.* (1997). "Air Pollution from Truck Traffic and Lung Function in Children Living near Motorways." Epidemiol. 8:298-303; Buckeridge, D., Glazier, R., Harvey, B., *et al.* (2002). "Effect of Motor Vehicle Emissions on Respiratory Health in an Urban Area." Environ. Health Perspect. 110(3):293-300; Ciccone, G., Forastiere, F., Agabiti, N., *et al.* (1998). "Road Traffic and Adverse Respiratory Effects in Children." Occup. Environ. Med. 55:771-778; Duhme, G., Weiland, S., Keil, U., *et al.* (1996). "The Association between Self-Reported Symptoms of Asthma and Allergic Rhinitis and Self-Reported Traffic Density on Street of Residence in Adolescents." Epidemiol. 7:578-582; Edwards, J., Walters, S., and Griffiths, R. (1994). "Hospital Admissions for Asthma in Preschool Children: Relationship to Major Roads in Birmingham, United Kingdom." Arch. Environ. Health 49(4):223-227; English, P., Neutra, R., Scalf, R., *et al.* (1999). "Examining Associations between Childhood Asthma and Traffic Flow Using a Geographic Information System." Environ. Health Perspect. 107(9):761-767; Kramer, U., Koch, T., Ranft, U., *et al.* (2000). "Traffic-Related Air Pollution is Associated with Atopy in Children Living in Urban Areas." Epidemiol. 11:64-70; Lee, Y-L., Shaw, C-K., Su, H-J., *et al.* (2003). "Climate, Traffic-Related Air Pollutants and Allergic Rhinitis Prevalence in Middle-School Children in Taiwan." Eur. Respir. J. 21:964-970; Lin, S., Munsie, J., Hwang, S-A., *et al.* (2002). "Childhood Asthma Hospitalization and Residential Traffic Exposure to State Route Traffic." Environ. Res. Sect. A. 88:73-81; Livingstone, A., Shaddick, G., Grundy, C., and Elliott, P. (1996). "Do People Living near Inner City Main Roads have More Asthma Needing Treatment? Case-Control Study." BMJ 312:676-677; Nicolai, T., Carr, D., Weiland, S., *et al.* (2003). "Urban Traffic and Pollutant Exposure Related to Respiratory Outcomes and Atopy in a Large Sample of Children." Eur. Respir. J. 21:956-963; Oosterlee, A., Drijver, M., Lebret, E., and Brunekreef, B. (1996). "Chronic Respiratory Symptoms in Children and Adults Living along Streets with High Traffic Density." Occup. Environ. Med. 53:241-247; van Vliet, P., Knape, M., de Hartog, J., *et al.* (1997). "Motor Vehicle Exhaust and Chronic Respiratory Symptoms in Children Living near Freeways." Environ. Res. 74:122-132; Venn, A., Lewis, S., Cooper, M., *et al.* (2000). "Local Road Activity and the Prevalence, Severity, and Persistence of Wheeze in School Children: Combined Cross Sectional and Longitudinal Study." Occup. Environ. Med. 57(3):152-158; Venn, A., Lewis, S., Cooper, M., *et al.* (2001). "Living near a Main Road and the Risk of Wheezing Illness in Children." Am. J. Respir. Crit. Care Med. 164:2177-2180; Waldron, G., Pottle, B., and Dod, J. (1995). "Asthma and the Motorways – One District's Experience." J. Pub. Health Med. 17(1):85-89; Weiland, S., Mundt, K., Ruckmann, A., and Keil, U. (1994). "Self-Reported Wheezing and Allergic Rhinitis in Children and Traffic Density on Street of Residence." Ann. Epidemiol. 4:243-247; Wilkinson, P., Elliott, P., Grundy, C., *et al.* (1999). "Case-Control Study of Hospital Admission with Asthma in Children Aged 5-14 Years: Relation with Road Traffic in Northwest London." Thorax 54:1070-1074; Wjst, M., Reitmeir, P., Dold, S., *et al.* (1993). "Road Traffic and Adverse Effects on Respiratory Health in Children." BMJ 307:596-600.

[48] Buckeridge *et al.* (2002); Livingstone *et al.* (1996); Oosterlee *et al.* (1996).

[49] All articles initially cited except English *et al.* (1999) and Lin *et al.* (2002).

[50] English *et al.* (1999) and Lin *et al.* (2002).

[51] Brunekreef *et al.* (1997); Buckeridge *et al.* (2002); Ciccone *et al.* (1998); Duhme *et al.* (1996); Lin *et al.* (2002); Nicolai *et al.* (2003); Oosterlee *et al.* (1996); van Vliet *et al.* (1997); Weiland *et al.* (1994).

respiratory illness that occurred either in the last year or at any time. Some investigations used medical databases containing information on hospital visits for asthma[52] or prescriptions for asthma medication,[53] or had children undergo pulmonary function tests or tests for skin sensitivities (an indicator of allergy).[54]

Various methods of gauging traffic flow were used, and while some distinguished between truck and car traffic or focused on car traffic, others did not distinguish between these kinds of vehicles.[55] Regardless, when children were studied, traffic flow was estimated near either the child's school or home. In some studies, children were asked to rate the level of truck traffic near their homes, while in others, investigators used traffic counts made by cities and towns on specific roads, maps of traffic flows, or distances from home or school to highways or to the nearest busy street. In half a dozen investigations, air pollutants were either measured in air near schools and homes and then correlated to traffic flows, or estimated using information on local traffic. Indoor concentrations of air pollutants were determined in only a few studies.[56]

Most traffic studies found associations between some indicator of traffic near a child's home or school and some indicator of respiratory disease; a few found no evidence of an association.[57] Studies that found positive associations, however, were not necessarily consistent, and increases in the risk of wheeze, rhinitis, asthma, etc. were usually fairly small. The apparent effect of nearby traffic on health was frequently stronger in girls than boys.[58]

Studies of particular interest are those conducted in the United States and those in which truck traffic was quantified in some manner. Lin and colleagues (2002) studied white children aged 0 to 14 in Erie County, NY (excluding Buffalo) who were hospitalized for asthma between January 1990 and December 1993. Characteristics of traffic on state routes near the homes of these children were compared to such characteristics for children who were hospitalized during the same period for gastrointestinal illnesses, falls or other non-traffic-related accidents. The characteristics considered included: (1) distance from the child's home to a major state route;

[52] Edwards *et al.* (1994); English *et al.* (1999); Lin *et al.* (2002).
[53] Livingstone *et al.* (1996).
[54] Brunekreef *et al.* (1997); Wjst *et al.* (1993).
[55] Edwards *et al.* (1994); English *et al.* (1999); Kramer *et al.* (2000); Lee *et al.* (2003); Livingstone *et al.* (1996); Venn *et al.* (2000, 2001); Waldron *et al.* (1995); Wilkinson *et al.* (1999).
[56] Brunekreef *et al.* (1997); Kramer *et al.* (2000); van Vliet *et al.* (1997).
[57] Livingstone *et al.* (1996); Waldron *et al.* (1995); Wilkinson *et al.* (1999).

(2) vehicle miles traveled on major state routes within 200 meters or 500 meters of the home; or (3) the proportion of heavy trucks passing within 200 meters or 500 meters of the home on a major state route. In comparisons between the two groups of children, age, sex, poverty level and lower education (the last two determined at the census-tract level) were controlled. Distance of the home from the nearest major state route did not significantly differ for children hospitalized for asthma or for other reasons, nor did traffic density on routes within 500 meters of home. However, the odds ratio (OR)[59] for an asthma hospitalization was statistically significantly increased by the presence of heavy trucks passing within 200 meters of home (OR = 1.43), and for high overall traffic density within 200 meters of home (OR = 1.93).

Children 14 years of age or younger in San Diego County, California, were studied by English *et al.* (1999). Children admitted to hospitals for asthma were compared to other children hospitalized for reasons other than respiratory disease or cancer. Information on traffic flow on virtually all county roads was collected by the county itself and seems to have included only cars. The distance from each child's home to each street within a 550-meter radius was determined, as were the number of cars per day on each of those streets. In contrast to expectations, children hospitalized for asthma were less likely than other children to live nearer to streets with the highest traffic flows or to have higher traffic flows nearby. No difference was found between groups of children for the average traffic volume on all streets within 550 meters of home, nor for the traffic volume on the busiest nearby street. However, among children hospitalized for asthma, children with two or more hospital admissions tended to have higher traffic volumes at the nearest street than did children with only one admission. This tendency was much stronger for girls than boys.

Several other investigations, but not all, found statistically significantly increased ORs for asthma (measured, for example, as current asthma, asthma ever, doctor-diagnosed asthma or hospital admissions for asthma) and various measures of traffic near homes or schools. For example, Nicolai *et al.* (2003) found an OR of 1.8 for asthma among children exposed to the

[58] Brunekreef *et al.* (1997); Kramer *et al.* (2000); Oosterlee *et al.* (1996); van Vliet *et al.* (1997); Venn *et al.* (2001).
[59] The odds ratio (OR) compares the chance of having the disease of interest in a group with an exposure of interest to the chance of having the disease in a group without the exposure. If the odds are the same, meaning there is no effect of exposure on disease, then the OR is 1.0. An OR greater than 1.0 indicates an increased risk of disease, given exposure. An OR of 1.5, for example, indicates a 50% increase in risk.

highest of three categories (i.e., tertile) of car traffic counts and an OR of 1.8 for those exposed to the highest tertile of soot concentration. Buckeridge *et al.* (2002) measured an OR of 1.2 for respiratory hospital admissions per $\log_{10}$ vs. order of magnitude increase in modeled $PM_{2.5}$ concentrations. Wheezing was often assessed separately from asthma. For example, ORs for wheezing of about 5 were found for girls but not boys living near busy streets compared to children living along quiet streets, according to Oosterlee *et al.* (1996). Nicolai *et al.* found an odds ratio of 1.7 for wheezing among children exposed to the highest tertile of car traffic counts. An OR for wheezing of 15 was found by Kramer *et al.* (2000) in association with an increase in outdoor, urban NO_2 of 10 $\mu g/m^3$.

Overall, most studies of traffic and children's respiratory health find some associations between traffic characteristics (such as distance to roads, traffic volumes or truck traffic volumes) and respiratory morbidity measures (such as allergic rhinitis, wheezing or cough), although results can vary a good deal from study to study. However, some weaknesses in the literature must be mentioned.

First, an association, even if statistically significant, does not necessarily indicate cause and effect, particularly in a cross-sectional study. There may be factors, called confounders, that are both associated with residence or schooling near heavy (truck) traffic and that cause or aggravate disease. For example, it is possible that people living near busy streets or highways keep windows closed more than do people who live in quieter neighborhoods. Concentrations of indoor pollutants and agents that may contribute to respiratory illness, such as pet allergens or cigarette smoke, might therefore be higher in homes near heavily trafficked streets. Some of the traffic studies cited in this discussion (particularly those that studied hospitalization rates) were not able to gather information on personal exposure to indoor pollutants. There is also a general concern that differences in socioeconomic status, which likely varies with distance of residence to heavily traveled streets and is associated with health, may not have been adequately controlled.

Second, studies in which information on the exposure of interest and/or the health endpoints of interest are gathered in questionnaires can be vulnerable to bias. If people living near busy streets are already concerned about a potential effect of air pollution on health, they may unconsciously overestimate the level of traffic or severity of illness.

Third, most studies did not distinguish between truck traffic and car traffic. We cannot determine from these studies if associations between car traffic and illness would be relevant to concerns about truck traffic, given differences in the pollutants emitted.

Finally, as most studies were performed outside of the U.S., relevance to the U.S. situation depends on essential similarity between the types of fuels and engines used and pollutants emitted in these parts of the world.

33.6.3 Asthma Causes and Triggers

Asthma is a chronic, inflammatory disease of the small airways characterized by episodic and reversible restriction of breathing passages. Symptoms include difficulty in breathing (which may range from mild to life-threatening), wheezing and coughing. Asthmatic episodes may be triggered by specific substances, environmental conditions and stress, as is discussed below.

The prevalence of asthma and the amount of poorly controlled asthma requiring hospitalization among children has risen significantly in recent decades.[60] In the U.S., approximately five million children (7% of children under age 18) have asthma, and New York is thought to be the state with the second-largest number of affected children.[61] The rate of asthma is increasing most rapidly in children under age five.[62] Asthma exacerbations resulting in hospitalizations appear to be particularly frequent and severe among minority, inner-city children.[63] In the City in

[60] Crater, S. and Platts-Mills, T. (1998). Searching for the Cause of the Increase in Asthma. Curr. Opin. Pediatr. 10:594-599.

[61] Centers for Disease Control (CDC) (1998). Forecasted State-Specific Estimates of Self-Reported Asthma Prevalence – United States, 1998. MMWR 47(47):1022-1025 and Centers for Disease Control (CDC) (1999). Asthma: A Public Health Response. Available at http://www.cdc.gov/nceh/programs/asthma/default.htm.

[62] President's Task Force on Environmental Health Risks and Safety Risks to Children (PTF). (1998). Asthma and the Environment: A Strategy to Protect Children.

[63] Lobach, K. (1996). Providing a "Medical Home." City Health Information: Childhood Asthma. New York City Department of Health.

particular, several groups of researchers have analyzed the distribution and factors affecting asthma hospitalizations and mortality.[64] Asthma prevalence in the City correlates strongly with socioeconomic status, and several factors link asthma with poverty. Factors that related to asthma risk in low-income areas were the number of occupants per apartment (related to bacterial and viral exposures), water leaks (related to fungal exposures), moist basements (related to fungal exposures), deteriorating building materials (related to fungal and mite exposures) and house dust exposure (containing insect parts, animal dander and rodent excreta). Recent statistics on childhood and adult asthma prevalence in the City boroughs are given in Section 33.6.4 below.

The dramatic increase in asthma among children has spurred scientists and clinicians to search for causes and risk factors for the disease, as well as therapies and interventions. The reasons for the rise in the prevalence and severity of asthma are not understood. Suspected factors include changing patterns of childhood illnesses, changing diet, increasing rates of obesity, changing exercise patterns, changing housing, increased vaccinations against childhood respiratory disease, increased survival of very low birth weight babies and increased exposure to indoor-air allergens. Current hypotheses tend to focus on three areas: (1) increases in individual sensitivity (possibly due to reduced respiratory infections); (2) increases in exposure to allergens (due to changes in ambient air pollution and/or indoor air quality); and (3) increases in airway inflammation of sensitized individuals (due to factors such as viral infections). No single factor is likely to explain the increased rates of asthma, however, and various factors would dominate in specific areas, homes and individuals.

In theory, one can distinguish between "causes" and "triggers" of asthma. Causes would be those factors that make a person susceptible to asthmatic attacks in the first place, while triggers would be those factors that elicit asthmatic symptoms at a particular time. Triggers are more easily studied, but may not be the underlying causes of the disease. For example, although a genetic predisposition to allergies is an important risk factor for developing asthma, there may have been no real increase in the number of genetically susceptible children, but rather a growth

[64] Carr, W., Zeitel, L., and Weiss, K. (1992). Variations in Asthma Hospitalization and Deaths in New York City. *Am J Public Health* 82:59-65. de Palo, V.A., Mayo, P.H., Friedman, P., and Rosen, M.J. (1994). Demographic Influences on Asthma Hospital Admission Rates in New York City. *Chest 106*:447-451.Claudio, L., Tulton, L.,

in the prevalence of factors that promote asthma development or trigger an attack. For a child suffering from asthma, however, identification and elimination of triggering factors is of greatest practical importance.

Allergens in the indoor environment are definitely important triggers of asthma in the United States. Organic materials that cause the immune system to overreact, such as cockroach antigen, dust mite antigens, molds, pet and rodent dander and urine, are the principal triggers of asthma attacks in children. Some of these antigens are probably more common in poor quality housing, which could explain, in part, why poor children suffer high rates of asthma. Other indoor pollutants, such as tobacco smoke and natural gas combustion products, can also exacerbate asthma symptoms. "Improvements" in housing, such as increased insulation and reduced ventilation to save on energy costs, and increased amounts of wall-to-wall carpeting and stuffed furniture, may have had the unintended effects of promoting the growth of dust mites and molds, and of concentrating antigens, irritants and PM indoors.[65] These changes in housing over recent decades could help explain the widespread increases in asthma rates. In addition, the effect of indoor pollutants may be increased by the growing amount of time that children spend indoors, which increases a child's exposure to antigens, and by lack of exercise, which might increase the respiratory system's sensitivity to allergens.[66]

Some aspects of outdoor pollution are capable of triggering asthma attacks, such as pollens. Some researchers have suggested that outdoor air pollution *per se* is not likely to contribute significantly to the asthma epidemic, however, because air pollution has decreased on the whole while asthma rates have increased.[67] It is nonetheless possible that specific pollutants, such as ozone or diesel exhaust, enhance the effects of other factors, such as allergens, even if the pollutants themselves are not triggers of asthma. In addition, weather conditions, and cold air in particular, can elicit asthmatic symptoms independent of air pollution.

Doucette, J., and Landrigan, P. (1999). "Socioeconomic Factors and Asthma Hospitalization Rates in New York City." Journal of Asthma. 36(4):343-350.

[65] Bielory, L. and Deener, A. (1998). Seasonal Variation in the Effects of Major Indoor and Outdoor Environmental Variables on Asthma: Review Article. J. Asthma 35(1):7-48.

[66] Crater, S. and Platts-Mills, T. (1998). Searching for the Cause of the Increase in Asthma. Curr. Opin. Pediatr. 10:594-599.

An additional hypothesis described by Cookson and Moffatt (1997) suggests a link between the increase in asthma and the decline of respiratory infections in modern society, which could shift the balance of the immune system in favor of factors that predispose persons to asthma and allergy.[68] Infectious disease has been dramatically reduced in our society by the use of antibiotics and immunization programs.

Experimentally, exposure to diesel exhaust particles increased airways resistance in mice,[69] while other studies of mice and humans showed that diesel exhaust particles can enhance responses to allergens.[70] Experiments in which non-asthmatic adults were exposed for an hour to diesel engine exhaust (containing particles and gases) found increased airways resistance[71] and some cellular indicators of inflammatory response;[72] however, these subjects did not experience asthma.

Causes, triggers and prevention of childhood asthma in the City are the subjects of active research.[73] For example, researchers are investigating the possible influence of prenatal exposure to antigenic materials; collecting air pollution measurements in areas of the City with high rates of asthma; testing infants and children for respiratory symptoms; measuring pollutant levels in urine as an indicator of exposure to diesel exhaust; and cleaning, repairing, and addressing pest infestations in apartments of families with asthmatic children. It is hoped that this research would not only help identify the most significant factors leading to asthma but also identify effective prevention measures.

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[67] Ibid.

[68] Cookson, W.O.C.M. and Moffatt, M.F. (1997). Asthma: An Epidemic in the Absence of Infection? Science 275: 41-42.

[69] Sagai, M., Furuyama, A., Ichinose, T. (1996). "Biological Effects of Diesel Exhaust Particles (DEP) III." "Pathogenesis of Asthma Like Symptoms in Mice." Free Radio Biol. Med. 21:199-201 (abstract).

[70] Diaz-Sanchez, D. (1997). "The Role of Diesel Exhaust Particles and their Associated Polyaromatic Hydrocarbons in the Induction of Allergic Airway Disease." Allergy 52:52-56; Takano, II, Yoshikawa, T., Ichinose, T., Miyabara, Y., Imaoka, K., Sagai, M. (1997). "Diesel Exhaust Particles Enhance Antigen-Induced Airway Inflammation and Local Cytokine Expression in Mice." Am. J Respir. Crit. Care Med. 156:36-42.

[71] Rudell, B., Ledin, M.C., Hammarsurom, U., Stjenberg, N., Lundback, G., Sandstrom, T. (1996). "Effects on Symptoms and Lung Function in Humans Experimentally Exposed to Diesel Exhaust." Occup. Environ. Med. 53:6480652 (Abstract).

[72] Salvi, S., Bloomberg, A., Rudell, B., Kelly, F., Sandstrom, T., Holgate, S.T., Frew, A. (1999). "Acute Inflammatory Response in the Airways and Peripheral Blood after Short-Term Exposures to Diesel Exhaust in Healthy Human Volunteers." Am. J Respir. Crit. Care Med. 159:702-709 (Abstract).

[73] Gergen, P., Mitchell, H., Lynn, H., *et al.* (2002). "Understanding the Seasonal Pattern of Childhood Asthma: Results from the National Cooperative Inner-City Asthma Study (NCICAS)." J. Pediatr 141(5):631-636; Kinney, P., Northridge, M., Chew, G., *et al.* (2002). "On the Front Lines: An Environmental Asthma Intervention in New York City." Amer. J. Pub. Health 92(1):24-26; Miller, R., Chew, G., Bell, C., *et al.* (2001). "Prenatal Exposure, Maternal Sensitization, and Sensitization In Utero to Indoor Air Allergens in an Inner-City Cohort." Am. J. Respir. Crit. Care Med. 164:995-2001; Northridge, M., Yankura, J., Kinney, P., *et al.* (1999). "Diesel Exhaust Exposure among Adolescents in Harlem: A Community-Driven Study." Amer. J. Pub. Health 89(7):998-1002; Perera, F., Illman, S., Kinney, P., *et al.* (2002). "The Challenge of Preventing Environmentally Related Disease in Young Children: Community-Based research in New York City." Environ. Health Perspect. 110(2):197-204.

City officials are well aware of the epidemic of childhood asthma in the City's many boroughs and communities. As reported by the New York City Department of Health and Mental Hygiene (DOHMH) on its web site (www.nyc.gov/html/doh), asthma is a common disease among the City's children and adults. Asthma is a leading cause of missed school among school among children and is the most common cause of hospitalization for children 14 years and younger. Among adults, asthma causes missed work, emergency department visits, and limitation of activity. In the past two decades, the number of people with asthma has increased, although some improvements, such as fewer hospitalizations, have occurred in recent years. Although it is not yet known how to prevent asthma, it is known that asthma can be controlled both by avoiding exposure to triggers and by taking anti-inflammatory medicines. With good control, almost all people with asthma can lead normal, active lives.

Under the direction of the NYCDOH, the City began an aggressive Childhood Asthma Initiative NYCCAI) in 1997. NYCCAI is a public health effort to reduce asthma morbidity among children 0 to 18 years of age. Expected outcomes of the NYCCAI include reductions in hospitalizations, emergency department visits and school absences due to asthma and, relatedly, improvements in management of childhood asthma among families. NYCCAI is building on existing research education and clinical efforts, resulting in a coordinated and comprehensive effort to understand, treat and prevent asthma in New York City.

NYCCAI is currently working to:

- Improve family management of asthma
- Promote state-of-the-art medical diagnosis and treatment
- Reduce exposure to asthma triggers in both homes and communities
- Increase coordination among families, schools, daycares, medical providers, pharmacists, community-based organizations, housing agencies, managed care organizations, and others
- Monitor and track the number of children with asthma. [74]

[74] New York City Department of Health and Mental Hygiene (May 2003). Asthma Facts, Second Edition. Available at http://www.nyc.gov/html/doh/pdf/asthma/facts.pdf.

Clearly, asthma among children is a major public and personal health problem in the City. Yet the causes of asthma and its increase over the last two decades are not known, and the triggers for exacerbation are only partly understood. The potential relationship between vehicular exhaust resulting from increased truck traffic and asthma, especially in communities with high rates of asthma, requires further study.

33.6.4 Asthma Morbidity and Mortality in Host Communities

The DOHMH provided preliminary, recent statistics on asthma for the City.[75] Information is collected on the fraction of children and adults with asthma (prevalence), discharges from hospitals after asthma-related illness (morbidity) and deaths from asthma (mortality). The numbers of children with asthma are determined from school health examination forms, usually submitted when children are four or five years old, while numbers of adults with asthma are determined from a telephone survey.

A summary of asthma prevalence among children 4 to 5 years old in areas potentially affected by the Proposed Plan Facilities is provided in Table 33.6-1. The Hunts Point-Mott Haven and Williamsburg-Bushwick neighborhoods show child asthma prevalence considerably above the City average.

A summary of asthma prevalence data for adults in areas potentially affected by the Proposed Plan Facilities is provided in Table 33.6-2. Adults are markedly less likely than children to have an asthma diagnosis. Adult asthma is considerably more prevalent in the South Bronx and Brooklyn Downtown-Heights-Slope neighborhoods than in the City overall.

[75] Personal communications from Dan Kass, DOHMH, to Sarah Armstrong, Cambridge Environmental, Inc., 2003.

Table 33.6-1
Asthma Prevalence Among Children 4 to 5 Years Old

New York City Area	Percent with Asthma in 1999
All of New York City	9.1
Bronx	15.5
Hunts Point-Mott Haven neighborhood	17.1
Brooklyn	8.8
Greenpoint neighborhood	8.9
Williamsburg-Bushwick neighborhood	15.5
Downtown-Heights-Slope neighborhood	9.3
Bensonhurst-Bay Ridge neighborhood	5.2
Sunset Park neighborhood	8.9
Manhattan	11.9
Upper East Side neighborhood	6.4
Queens	5.6
Flushing-Clearview neighborhood	2.6
Long Island City-Astoria neighborhood	5.2
West Queens neighborhood	5.7

Table 33.6-2
Asthma Prevalence Among Adults

New York City Area	Percent with Asthma in 2002
All of New York City	4.4
Bronx	6.2
South Bronx, including the Hunts Point-Mott Haven neighborhood	7.1
Brooklyn	3.7
Greenpoint neighborhood	3.1
Williamsburg-Bushwick neighborhood	6.1
Downtown-Heights-Slope neighborhood	8.0
Bensonhurst-Bay Ridge neighborhood	3.3
Sunset Park neighborhood	5.6
Manhattan	4.5
Upper East Side neighborhood	2.7
Queens	3.7
Flushing-Clearview neighborhood	2.3
Long Island City-Astoria-West Queens neighborhood	4.2

Rates of asthma hospitalization among children aged 0 to 14 dropped markedly between 1997 and 2000 in all the neighborhoods that are potentially affected by the Proposed Plan Facilities. In these neighborhoods, decreases in hospitalization rates ranged from 22% to 56%. The rate decreased the most in the Hunts Point-Mott Haven area, in which DOHMH began a major childhood asthma initiative in 1998. The hospitalization rates for specific zip code areas in 2000 are provided in Table 33.6-3. Hospitalization rates in three zip codes, in the Hunts Point-Mott Haven neighborhood (19454 and 10474) and in the Williamsburg-Bushwick neighborhood (11237), are higher than for the City as a whole.

Asthma mortality data for 2000 are not available by neighborhood. By borough, mortality rates from asthma (deaths per 100,000 people) for people of all ages were 4.9 in the Bronx, 2.9 in Manhattan, 2.2 in Brooklyn and 1.6 in Queens. During the 1990s, asthma mortality rates decreased by about 25% in both sexes in the City. Rates of death from asthma increased with age, being highest among people aged 65 or older.

Table 33.6-3
Hospitalization Rates for Selected Zip Codes

New York City Area or Zip Code	Asthma Hospitalization Rate, Per 1,000 Children Ages 0-14, in 2000
New York City	6.1
10128	2.5
10454	11.2
10474	9.0
11101	6.7
11214	1.1
11215	2.3
11222	2.3
11232	2.7
11237	12.8
11354	4.9
11378	2.7

33.7 Conclusions

This chapter presented a review of scientific information regarding the toxicity of various air pollutants and epidemiologic studies relating traffic to respiratory health, as well as the predicted impacts of the Proposed Plan Facilities' operations and associated traffic on air quality, noise and odor. Recent information on rates of asthma in neighborhoods that may be affected by the Proposed Plan Facilities was also presented. None of the air quality, noise or odor impacts predicted in this FDEIS are believed to be of public health significance. Regarding existing, permitted facilities in the Proposed Plan not analyzed in this FDEIS, it is assumed that these facilities underwent appropriate environmental review and were determined not to create significant impacts on public health. If one of the Alternative Facilities is selected as a Proposed Plan Facility, a supplemental Public Health analysis will address its air quality, odor and noise impacts.

CHAPTER 34 EVALUATION OF THE PROPOSED ~~PLAN~~ACTION

34.1 Potential Impacts of the Proposed ~~Plan~~Action

The Proposed ~~Plan~~ Action would meet the City's long-term waste export needs through a system that utilizes existing waste transfer sites (public and private), including four of the City's Converted MTSs, the Staten Island Transfer Station and sites to be identified as part of future procurements. (See Chapter 1 for a full description of the Proposed ~~Plan~~ Action and its components.)

The Proposed Action, in summary, is to:

- Improve DSNY's Curbside Recycling Program through the award of a 20-year ~~processing~~ contract ~~and~~ for the development of a new ~~in-City~~ Recyclables ~~processing~~ Processing facility at the South Brooklyn Marine Terminal in Brooklyn ~~as well as a~~ and the development of a ~~Manhattan~~ Recyclables Acceptance Facility ~~–~~at the Gansevoort Street peninsula in Manhattan.

- Implement the City's Long Term Export Program through: the development of four Converted MTSs at the Hamilton Avenue (Brooklyn), Southwest Brooklyn (Brooklyn), East 91st Street (Manhattan) and North Shore (Queens) existing MTSs; the award of up to five contracts with private transfer stations for barge or rail export of DSNY-managed Waste for disposal; and~~, enter into~~ the execution of an intergovernmental agreement to dispose of a portion of Manhattan's DSNY-managed Waste at ~~a WTE~~ the Essex County Resource Recovery F~~f~~acility in Newark, New Jersey.

- Provide ~~the capacity~~ for the barge export of containerized putrescible C~~c~~ommercial ~~w~~Waste from the four Converted MTSs, and ~~the City at one existing Manhattan~~ from the West 59th Street MTS site in Manhattan through the solicitation of proposals from private waste management companies for the use of this MTS site for this purpose~~as well as the four Converted MTSs~~.

Any impacts that would result at in-City sites (designated in the Proposed ~~Plan~~Action) where new construction would likely occur are capable of being mitigated. The remaining potential in-City sites, which could be selected pursuant to a future procurement, either had no impacts or the impacts found would be mitigable. A summary of the impact assessment is provided in Tables 34.1-1 and 34.1-2.

Table 34.1-1
Summary of Air Quality, Traffic, Odor and Noise Analyses for Proposed Action Facilities and Contracts
(New Table)

	Air Quality									Traffic	Odor	Noise	
	On-Site						Off-Site						
	CO	NO_2	PM_{10}	$PM_{2.5}$	SO_2	HC	CO	PM_{10}	$PM_{2.5}$			On-Site	Off-Site
Hamilton Avenue Converted MTS, Brooklyn(1)	X	X	X	X	X	X	X	X	X	X^M	X	S	X^M
Southwest Brooklyn Converted MTS, Brooklyn(1)	X	X	X	X	X	X	X	X	X	X^M	X	X	X^M
East 91st Street Converted MTS, Manhattan(1)	X	X	X	X	X	X	X	X	X	X^M	X	X	X^M
North Shore Converted MTS, Queens(1)	X	X	X	X	X	X	X	X	X	X^M	X	X^M	X^M
Harlem River Yard Truck to Rail TS, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
East 132nd Street Transfer Station, Bronx	PA	PA	PA	PA	PA	PA	S	X	X	X^M	PA	X	S
485 Scott Avenue, Brooklyn	PA	PA	PA	PA	PA	PA	PA	PA	PA	S	PA	PA	PA
72 Scott Avenue-598 Scholes Street, Brooklyn	X	X	X	X^M	X	X	S	X	X	X^M	X	X	S
30-58 Review Avenue, Queens	X	X	X	X^M	X	X	S	X	X	X	X	S	S
Essex County Resource Recovery Facility, New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Staten Island Transfer Station, Staten Island	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
~~**Harlem River Yard Barge to Rail TS, Bronx**~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~X~~	~~X~~	~~N/A~~
Oak Point Rail Yard, Bronx	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	X^M	N/A	N/A	S
Maspeth Rail Yard, Queens	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	S	N/A	N/A	S
30th Street Pier at the SBMT, Brooklyn	N/A	N/A	N/A	N/A	N/A	N/A	S	N/A	S	S	N/A	N/A	S
Gansevoort Recyclables Acceptance Facility, Manhattan	N/A	N/A	N/A	N/A	N/A	N/A	S	X	X	S	N/A	N/A	S

Notes:

(1) Restrictions on deliveries of Commercial Waste during certain hours and at certain locations along routes to this facility are required between 8:00 p.m. and 8:00 a.m. to mitigate the potential for off-site noise impacts.

X = Analysis found no significant impact.

X^M = Analyzed with a mitigated impact.

S = Below screening threshold for analysis.

N/A = Analysis not applicable to this site.

PA = Analysis in this FEIS not required based on prior environmental review.

~~U = Unmitigatible impact.~~

Table 34.1-2
Summary of Impact Analyses
Proposed Action Facilities and Contracts
(New Table)

Site/Facility Option	Land Use, Zoning, and Public Policy	Socioeconomic Conditions	Community Facilities and Services	Open Space	Cultural Resources	Urban Design , Visual Resources, and Shadows	Neighborhood Character	Natural Resources	Hazardous Materials	Water Quality	Waterfront Revitalization	Infrastructure, Solid Waste and Sanitation Services, and Energy
Hamilton Avenue Converted MTS, Brooklyn	N	N	N	N	N	N	N	N	N	N	N	N
Southwest Brooklyn Converted MTS, Brooklyn	N	N	N	N	N	N	N	N	N	N	N	N
East 91st Street Converted MTS, Manhattan	N	N	N	N	N	N	N	N	N	N	N	N
North Shore Converted MTS, Queens	N	N	N	N	N	N	N	N	N	N	N	N
Harlem River Yard Truck to Rail TS, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
East 132nd Street Transfer Station, Bronx	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
485 Scott Avenue, Brooklyn	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
72 Scott Avenue-598 Scholes Street, Brooklyn	N	N	N	N	N	N	N	N	N	N/A	N	N
30-58 Review Avenue, Queens	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
Essex County RRF, New Jersey	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Staten Island Transfer Station, Staten Island	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA	PA
~~**Harlem River Yard Barge to Rail TS, Bronx**~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~	~~N/A~~
Oak Point Rail Yard, Bronx	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Maspeth Rail Yard, Queens	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30th Street Pier at the SBMT, Brooklyn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A	N	N/A	N/A
Gansevoort Recyclables Acceptance Facility,	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
N indicates no adverse impact.
~~MI indicates a significant mitigated environmental impact.~~
N/A indicates not analyzed.
PA = Analysis in this FEIS not required based on prior environmental review.

The Proposed ~~Plan~~ Action results in a ~~r~~Recycling, ~~waste~~ Long Term ~~e~~Export and ~~c~~Commercial ~~w~~Waste management system in which the "burden" of processing facilities is more equitably distributed among the City's boroughs. Operations at the sites/facilities named in the Proposed ~~Plan~~ Action would serve distinct wastesheds and are generally located some distance from each other (more than two miles away).[1] The sites/facilities are geographically distributed throughout the boroughs ~~to the maximum extent possible~~, located along the waterfront in industrial zones. Furthermore, by utilizing existing facilities and sites (in heavily industrial areas), the ~~Plan~~ Proposed Action substantially minimizes or eliminates any potential impacts to neighborhood character.

The Proposed ~~Plan's~~ Action's reliance on marine and rail export differs from the Interim Export's truck-dependent export activities. Whereas waste is collected and transferred to long-haul trucks or hauled directly to disposal via collection trucks under Interim Export (except for rail export from ~~one~~ two sites in the Bronx), the Proposed ~~Plan~~ Action would utilize the City's rail and marine export potential. This would reduce the number of trucks from what is currently required to provide waste collection and transfer services and result in an approximate 2.8 million mile reduction in vehicle miles traveled. ~~As a result, traffic and air quality conditions on City streets would likely improve overall within the City with the implementation of the Proposed Plan.~~

[1] The Alternative sites considered in northeastern Brooklyn/western Queens, along Newtown Creek, may be within ½-mile of each other. Given the heavily industrial environs and analytical findings of no significant impacts at either the Review Avenue, Scott Avenue/Scholes Street or Scott Avenue sites, no cumulative impact would be expected.

CHAPTER 35 UNAVOIDABLE ADVERSE IMPACTS

Unavoidable adverse impacts are defined as those that meet either of the following two criteria:

- There are no reasonably practicable mitigation measures to eliminate the impact; or
- There are no reasonable alternatives to the proposed project that would meet the purpose and need of the action, eliminate the impact, and not cause other or similar significant adverse impacts.

Site-specific analyses predict that any impacts identified are capable of being mitigated. Therefore, there are no unavoidable adverse impacts associated with the development of any facility option or with the implementation of the Proposed Plan Facilities overall.

CHAPTER 36 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

There are several resources, both natural and man-made, that would be expended through Plan implementation. These resources include the land that makes up the proposed facility sites; building materials used in construction of the facilities; energy in the form of gas and electricity consumed during the construction and operation of each facility; the fossil fuels used in tugs, trains and trucks transporting waste or construction materials; and the human effort required to develop, construct and operate the facilities and means of waste transport. All of these resources are considered irretrievably committed because their reuse for some other purpose, once exploited for the project, would be highly unlikely.

Development of the Harlem River Yard Site, East 132nd Street Site, Scott Avenue TS, Review Avenue TS, or Scott Avenue/Scholes Street TS, or use of any existing MTSs as part of Plan implementation, would not be new commitments of land to industrial use because those facilities would exist without Plan implementation. While all other sites proposed for development would be Plan-induced commitments, such as the Converted MTSs, they would also be re-activation of industrial uses in areas zoned for heavy industry.

Generally, the soil, shoreline and natural waterways in the areas of the proposed new facilities and the MTSs could be described as having been, in effect, already committed to industrial use as a result of prior industrial activities. The redevelopment and use of abandoned, derelict or underutilized infrastructure, therefore, could be considered the reclamation of the "working waterfront," a man-made resource of economic importance to the City. It is within this planning and development context that the proposed developments could be considered improvements of their respective sites and waterfront areas, particularly as they utilize and often upgrade the existing rail and water transport infrastructure.

CHAPTER 37 GROWTH-INDUCING ASPECTS OF THE ~~PLAN~~SWMP

The Proposed ~~Plan~~ Action~~facilities~~ would replace ~~some publicly inaccessible waterfront areas~~ four existing MTSs with Converted MTSs, ~~and~~ potentially modify some portions of existing private transfer station~~s sites~~ in the City to enable truck-to-rail/barge export ~~transfer~~ from these facilities, would develop a Recyclables Acceptance Facility in Manhattan for barge transport of Recyclables to processing facility, and would develop a Recyclables Processing facility at the South Brooklyn Marine Terminal to receive and process barge-delivered Recyclables from other acceptance facilities in the City. With the exception of the Recyclables Acceptance Facility in Manhattan, which is subject to further environmental review as the design is developed, ~~T~~these new facilities would: (1) not involve substantial new land uses at the designated sites; (2) be compatible with existing surrounding land uses; (3) not introduce new residents to or significantly increase employment in the surrounding areas; and (4) not require that any new support uses be located nearby (although DSNY or other private waste-related facilities already exist near some sites).

These Proposed ~~Plan~~ Action facilities located on under-utilized or unused sites may require infrastructure improvements (e.g., sewer connections, etc.), but these upgrades would not necessarily encourage off-site development. Development of some facilities may require dredging on site. Waterfront Revitalization Program consistency review concludes that while no ~~Proposed Plan~~ facility would specifically require the siting of any additional water-dependent uses, certain ~~Proposed Plan~~ facilities would not necessarily preclude the siting of these uses either. For example, the four Converted MTS facilities ~~in the Proposed Plan~~ could increase the demand for barge repair and maintenance facilities at sites that are appropriately zoned for this activity, but whether the locations of these facilities are near the proposed sites or are within the City cannot be foreseen at this time.

The Proposed ~~Plan facilities~~ Action would be compatible with existing public plans and policies for planned improvements in the City's freight rail infrastructure and/or in waterfront infrastructure related to barging of containerized freight. These infrastructure improvements may occur in Staten Island, the Bronx, Brooklyn and Queens, where these improvements are consistent with current and planned land uses. Specifically, the NYCEDC and/or the Port Authority of New York and New Jersey is planning or implementing: (1) ~~track upgrades in the~~

~~Harlem River Yard in the Bronx to enable Canadian Pacific Railroad to serve freight customers in the City from the Hudson North Line; (2)~~ upgrades on the Metro-North and CSX-owned Hudson North lines to facilitate freight traffic into the Bronx; (~~3~~2) upgrade of the Staten Island Railroad (SIRR) and connections to SIRR from New Jersey freight rail lines to facilitate freight traffic on and off Staten Island; and (3~~4~~) upgrades of intermodal terminal capacity at Howland Hook or in the immediate vicinity.

These ~~NYCEDC's~~ plans would potentially facilitate the operation of Plan-related rail facilities in the Bronx, Queens and Staten Island. However, these are being pursued independently by the NYCEDC and other parties ~~as a consequence of the acquisition of Conrail by CSX and the CSX's agreement. These improvements include providing trackage rights to the Canadian Pacific Railroad into the Harlem River Yard, mitigating height restrictions on Metro-North's Hudson River North Line and increasing the number of freight train movements into and out of the Harlem River Yard.~~

~~Additionally, to operate the Staten Island Transfer Station in a rail transfer mode, off-site rail improvements are underway to extend the Travis Branch of the SIRR from its current terminus at the NRG generating plant on Staten Island through the Visy Paper plant and across a vacant parcel of Consolidated Edison-owned land abutting the Staten Island Transfer Station site. These improvements are in addition to the previously initiated NYCEDC improvements to the SIRR and are compatible with the planned expansion of the Visy Paper plant, which would abut the proposed rail extension. These improvements were evaluated in the 2000 SWMP FEIS and are fully permitted.~~

~~It is also possible that~~ The intra-harbor barging of containerized waste from ~~truck-to-barge transfer facilities~~the four Converted MTSs~~, which could be developed in the future in the Bronx, Brooklyn and Queens,~~ would utilize intermodal facilities in the harbor to transfer these containers to oceangoing barges or to rail cars. This activity would be compatible with the City's overall plan for port development.

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Chapter 34

Chapter 35

Chapter 36

Chapter 37

TECHNICAL APPENDIX DOCUMENTATION (AVAILABLE ON COMPACT DISK)

Traffic and Transportation

Henningson, Durham & Richardson Architecture & Engineering, P.C. Urbitran and Parsons Brinkerhoff prepared the following files for all applicable sites and submitted them to the NYCDOT for review in early 2004.

- Electronic and printed copies of Highway Capacity Software Output files;
- Spreadsheets showing temporal distribution of traffic and calculations to determine peak hours, future baseline and future build conditions; and
- Maps depicting routes and temporal distribution of Department Collection vehicles

Air Quality

Henningson, Durham & Richardson Architecture & Engineering, P.C. and Parsons Brinkerhoff prepared the following files for all applicable sites and submitted them to the NYCDEP for review between January 2004 and October 2004

On-Site Air Quality Analysis

- Methodology
- Emission calculations spreadsheets;
- Site maps with source coordinates; and
- ISCST3 input and output air quality files.

Mobile Air Quality Analysis

- Electronic copies of Highway Capacity Software Output files;
- Electronic copies of CAL3QHC files for CO and PM_{10};
- CAL3QHCR output files for PM_{10};
- Electronic copy of Part 5 file; and
- Emissions calculations spreadsheets.
- Electronic copy of Mobile 6.2 file

Odor

Henningson, Durham & Richardson Architecture & Engineering, P.C. prepared the following files for all applicable sites and submitted them to the NYCDEP for review between January 2004 and October 2004.

- Electronic copies of ISCST3 input and output air quality files; and
- Emission calculation spreadsheets and site maps with source coordinates.

Noise

Henningson, Durham & Richardson Architecture & Engineering, P.C. and Parsons Brinkerhoff prepared the following files for all applicable sites and submitted them to the NYCDEP for review between November 1999 and February 2000:

- Noise Impact Calculation Spreadsheets; and
- C++ input/output files used to calculate the 55 dBA contour.
- TNM noise model input/output

Hazardous Materials

1. New York City Land Use Maps (NYC Department of Planning, 1988).

2. Sanborn Fire Insurance atlases dated 1908, 1951, 1979, and 1989.

3. Sanborn Fire Insurance atlases dated 1906, 1951, and 1990.

4. Sanborn Fire Insurance atlases dated 1915, 1935, 1951, 1979, and 1989.

5. South Bronx Marine Transfer Station (MTS) Solid Waste Management Facility permit renewal report dated October 1995. This report was prepared by the City of New York Department of Sanitation for New York State Department of Environmental Conservation (NYSDEC) in accordance with the provisions of 6 NYCRR Part 360.

6. Southwest Brooklyn Marine Transfer Station (MTS) Solid Waste Management Facility permit renewal report dated October 1995. This report was prepared by the City of New York Department of Sanitation for New York State Department of Environmental Conservation (NYSDEC) in accordance with the provisions of 6 NYCRR Part 360.

7. Toxics Targeting, Inc., Computerized Environmental Report, Farragut Street, Bronx, New York. February 17, 1999.

8. Toxics Targeting, Inc., Computerized Environmental Report, Shore Parkway at Bay 41st Street, Brooklyn, New York. February 18, 1999.

9. Toxics Targeting, Inc., Computerized Environmental Report, North Henry and Kingsland Avenue, Brooklyn, New York. February 19, 1999.

10. Toxics Targeting, Inc., Computerized Environmental Report, Bear & Hallock Streets, Brooklyn, New York. February 22, 1999.

11. Toxics Targeting, Inc., Computerized Environmental Report, 31st Avenue/122nd Street, Queens, New York. February 22, 1999.

12. Toxics Targeting, Inc., Computerized Environmental Report, 65th Street & Upper New York Bay, Brooklyn, New York. March 4, 1999.

13. Toxics Targeting, Inc., Computerized Environmental Report, 38-50 Review Avenue, Queens, New York. March 19, 1999.

14. Toxics Targeting, Inc., Computerized Environmental Report, Fresh Kills landfill, Staten Island, New York. March 22, 1999.

15. Toxics Targeting, Inc., Computerized Environmental Report, Hamilton Avenue Marine Transfer Station, Brooklyn, New York. July 22, 999.

16. United State Geological Survey topographic quadrangle maps.

CHAPTER 39 LIST OF PREPARERS

39.1 Introduction

Henningson, Durham & Richardson Architecture & Engineering, P.C. in association with HDR Engineering, Inc. (HDR) as consultant to the DSNY provided overall management, quality control and document production responsibility for the preparation of this FEIS and provided certain of the technical and engineering analyses contained in various sections of this FEIS, as described below. HDR was assisted in this effort by the following subconsultants:

- Parsons Brinckerhoff Quade & Douglas, Inc. (PB)
- HydroQual, Inc. (HydroQual)
- EEA, Inc. (EEA)
- Urbitran Inc. (Urbitran)
- Cambridge Environmental, Inc. (Cambridge Environmental)

39.2 Prime and Subconsultant Responsibilities

The following summarizes the contributions of the prime consultant and subconsultants in the categories of environmental review presented in this FEIS.

The DSNY's design consultant, Greeley and Hansen LLC and its subconsultant team prepared the detailed designs of the eight Converted MTSs. Owners of private transfer stations (vendors) who submitted proposals in response to the DSNY's 2003 RFPs for waste export alternatives hired other consultants to prepare designs for the facilities evaluated in this FEIS. HDR evaluated the potential impacts of: (1) off-site Air Quality and Noise emissions, and Traffic and Transportation (where required) for the facilities located in Brooklyn and Queens; and (2) on-site Air Quality, Odor and Noise for facilities located in Manhattan, Brooklyn and Queens; and (3) on-site Odor in the Bronx. HDR conducted engineering reviews of the vendor-proposed options evaluated in these chapters to establish a consistent basis for analyzing all of the alternative sites/facilities considered.

PB evaluated the potential impacts of off-site Air Quality and Noise emissions, and Traffic and Transportation (where required) for the facilities located in Bronx and Manhattan; and (2) on-site Air quality and Noise for facilities located in the Bronx; and (3) on-site Noise for one facility in Manhattan. PB also conducted environmental reviews for the facilities analyzed in all boroughs in the areas of Land Use, Zoning and Public Policy, Socioeconomic Conditions, Community Facilities and Services, Open Space, Cultural Resources, Urban Design, Visual Resources, and Shadows, and Neighborhood Character.

Urbitran conducted Traffic and Transportation analyses for the facilities located in Manhattan.

HydroQual conducted environmental reviews for the facilities analyzed in all boroughs in the areas of Infrastructure, Solid Waste and Sanitation Services and Energy, Water Quality and the Waterfront Revitalization Program. HydroQual was also responsible for the assembly and final production of all graphic figures in this FEIS.

EEA conducted environmental reviews for facilities analyzed in all boroughs in the areas of Natural Resources (including Endangered Species and Habitats) and Hazardous Materials.

Cambridge Environmental provided the discussion of Public Health issues in Chapter 33.

39.3 Preparers

The following personnel contributed to the preparation of this FEIS.

39.3.1 HDR

- Daniel A. Harkins, MBA, B.A., Vice President, served as Project Manager for the FEIS effort. Mr. Harkins has 25 years of experience in the management of solid waste planning projects and solid waste facility development including procurement and permitting.
- Joyce M. Mariani, P.E., M.S. (Environmental Engineering), B.S. (Civil Engineering), Vice President, served as Assistant Project Manager for the FEIS effort with primary

responsibility for directing technical analyses in the areas of air quality, odor, noise and traffic. Ms. Mariani has 13 years of experience in solid waste/environmental review, permitting and analysis.

- Elena Barnett EIT, M.S. (Environmental Engineering), Project Engineer, served as Deputy Assistant Project Manager for the FEIS effort with assistant responsibility for directing technical analyses in the areas of air quality, odor, noise and traffic. Ms. Barnett has 7 years of experience in solid waste/environmental review, permitting and analysis.

- Lorraine Anderson, B.S. (Mathematics), Editor, served as Technical Editor for sections of the FEIS document. Ms. Anderson has 18 years of experience in technical writing and editing.

- Timothy Casey QEP, B.S. (Biology), Senior Environmental Scientist, served as a consultant to noise analysis team. Mr. Casey has 15 years of experience in noise monitoring and modeling.

- Grey Noemi Castillo EIT, M.S. (Environmental Engineering), Project Engineer, served as Task Leader for the noise analysis. Ms. Castillo has 4 years of experience in environmental analysis and site assessment work.

- Alan Cohen, Ph.D. (Industrial Engineering and Management Sciences), M.S., B.S., Vice President, served as Team Leader for the economic analysis. Dr. Cohen has 33 years of experience in systems analysis and economic modeling.

- Elo Comfort, EIT B.S (Civil Engineering), Project Engineer, served as task leader for the traffic analysis and a technical resource for facility operations. Mr. Comfort has 4 years experience in environmental analysis and civil site design work.

- Erik Grimm EIT, M.S. (Environmental Engineering), Project engineer, performed modeling for the off site air quality analysis. Mr. Grimm has 1 year of experience with air quality modeling.

- Bruce Howie, P.E., M.S. (Chemical Engineering), Senior Project Engineer, served as Task Leader for the off-site air quality analysis and a technical resource on the facilty designs. Mr. Howie has 7 years of experience in air quality analysis work and 5 years of experience in solid waste facility design/operation work.

- Edward Liebsch, M.S. (Meteorology), B.A. (Earth Sciences), Senior Air Quality Scientist, served as Team Leader for air quality analyses. Mr. Liebsch has 24 years of experience in air quality analysis and permitting.

- Stephanie C. Nakai, B.A. (Geology), Hydrogeologist, served on the noise analysis team. Ms. Nakai has 2 years of experience in environmental analysis and site assessment work.

- Mike Parsons, EIT, B.S. (Civil & Environmental Engineering), Environmental Engineer, served as a consultant to noise analysis team. Mr. Parsons has 5 years of experience in noise modeling and monitoring.

- Beth Regan, CIH, B.A. (Biology), Environmental Scientist, served as technical resource for Noise Analysis. Ms. Regan has 4 years experience in stationary and mobile noise source monitoring and modeling.

- Geneen Robbins, Project Assistant, served as document control and production manager for the FEIS. Ms. Robbins has 13 years of experience in administrative assistance.

- Bonnie Shulman, B.S. (Hotel, Restaurant, and Travel Administration), Editor, served as Technical Editor for sections of the FEIS document. Ms. Shulman has 23 years of experience in technical writing and editing.

- Udomlug Siriphonlai EIT, M.S. (Chemical Engineering), Project Engineer, served as Task Leader for the stationary air quality analysis. Ms. Siriphonlai has 4 years of experience in solid waste, environmental analysis and site assessment work.

- Thomas Young, B.S., Environmental Scientist, served as Associate Scientist for the FEIS effort. Mr. Young has 3 years of experience in water and wetland resources and field technologies.

- Scott Zilka, B.S. (Meteorology), Senior Environmental Scientist, served as a technical resource for air quality analyses. Mr. Zilka has 11 years of experience in mobile and stationary air quality analysis.

39.3.2 PB

- C.G. Balachandran, Ph.D., M.P., B.S., Lead Noise and Acoustic Specialist, served as PB Team Leader for noise analysis. Mr. Balachandran has 39 years of experience in noise, vibration, and architectural acoustics.

- James R. Brown, B.S., Vice President, served as PB Principal-in-Charge for the FEIS effort. Mr. Brown has 30 years of experience in managing projects in the environmental and planning fields.

- Helen Ginzburg, M.S., Senior Air Quality Scientist, conducted mobile and stationary air quality analyses. Ms. Ginzburg has 22 years of experience in air quality studies, mathematical modeling, and environmental impact statement preparation.

- Cade Hobbick, AICP, M.U.P, B.A., Senior Planner and certified Project Manager, has 8 years experience in planning and environmental analysis and served as PB Deputy Project Manager in the FEIS effort. Mr. Hobbick conducted and led land use and related studies.

- Sandor Juhasz, B.S., Senior Environmental Engineer, conducted field noise monitoring and equipment noise measurements, and performed stationary source noise analysis. Mr. Juhasz has five years noise experience in PB.

- Vadim Kogan, Ph.D., M.S., Senior Environmental Engineer, conducted stationary air quality analyses for the FEIS effort. Mr. Kogan has 30 years of technical experience in the air quality field.

- Sam Less, AICP, M.S., B.A., Senior Project Manager, assisted the PB Project Manager, providing QC for planning and environmental tasks. Mr. Less has over 20 years of experience in the field of environmental analysis.

- Jules Loweff, M.C.R.P., B.A., Supervising Planner, provided GIS support for the FEIS effort. Mr. Loweff has more than 19 years of experience with geographic information systems for urban applications, regional economic development and planning environmental studies.

- Arthur Morrone, M.S., B.S., Lead Meteorologist/Environmental Scientist, assisted in noise analysis. Mr. Morrone has 20 years of experience in traffic noise impact assessment and abatement.

- Stamatia Petsios, B.S., Lead Air Quality Engineer, conducted mobile air quality analysis. Ms. Petsios has 20 years of experience in the air quality analysis of mobile sources for diverse transportation projects.

- Esther R. Schwalb, M.S., B.A., certified Project Manager, served as PB Project Manager for the FEIS effort. Ms. Schwalb has 22 years of experience in preparing environmental impact statements for public programs and private development projects.

- Luc Senh, M.S., B.E., Lead Transportation Engineer, served as PB Deputy Team Leader for traffic analysis. Mr. Senh has 14 years of experience in transportation engineering planning.

- Joseph N. Setteducato, P.E., M.S., B.S.C.E., Senior Traffic Engineering Manager, served as PB Team Leader for traffic analysis. Mr. Setteducato has 30 years of experience in the planning and analysis of transportation facilities

- Joel Soden, P.E., D.E.E., M.S., B.S., Senior Supervising Air Quality Engineer, served as PB Team Leader for mobile and stationary air quality analysis. Mr. Soden has 30 years of experience in air quality analysis.

39.3.3 HydroQual

- J John P. Cariou, served as a GIS/CAD Analyst and was involved in the preparation of maps and figures. Mr. Cariou has 10 years of experience in Geographical Information Systems (GIS) and computer aided drafting (CAD).

- Charles L. Dujardin, M.E. (Environmental Engineering), B.Ch.E. (Chemical Engineering), served as the Water Quality Project Director and was involved in addressing water quality issues. Mr. Dujardin has 32 years of experience of water quality studies and mathematical modeling, primarily within the New York/New Jersey metropolitan region.

- Brian S. George, M.P.S. (Environmental and Resources Engineering, Mapping Sciences), B.S. (Environmental Studies, Information and Technology) served as a GIS Analyst and was involved in the preparation of maps and figures. Mr. George has 8 years of experience in GIS and programming.

- Kevin D. Keane, M.S. (Plant Pathology), B.A. (Biology), served as the overall HydroQual Project Leader and was involved in addressing Waterfront Revitalization and Infrastructure and Energy issues. Mr. Keane has 20 years of experience in environmental licensing and permitting and environmental impact assessment.

- Eileen T. La Rosa, B.S. (Wildlife Biology), served as the Waterfront Revitalization Analyst and was involved in addressing waterfront policies. Ms. La Rosa has 6 years of experience in natural resources and environmental permitting.

- Eileen F. Lucier, B.S. (Environmental Engineering), served as a Water Quality Analyst and was involved in water quality modeling and addressing water quality issues. Ms. Lucier has 6 year of experience in environmental science and water quality.

- Virginia A. Michelin, B.S. (Environmental Planning and Design), served as the Project Manager and was involved in the preparation of maps and figures and coordinated GIS activities as well as coordinating the day-to-day activities. Ms. Michelin has 9 years of experience in environmental planning and GIS development.

- Maureen C. Migliorini, M.S. (Environmental Engineering), B.S. (Biology), served as Water Quality Task Leader and was involved in addressing water quality issues. Ms. Migliorini has 24 years of experience in water quality studies, mathematical modeling, wastewater treatment, site investigations and remediation.

- Melissa E. Morrone, B.S. (Environmental Engineering), served as an Infrastructure and Energy Analyst and was involved in addressing infrastructure issues, specifically water/wastewater, solid waste, and power requirements. Ms. Morrone has 4 years experience in environmental engineering.

- Philip W. Simmons, B.A. (Environmental Studies), served as the Infrastructure, Solid Waste and Sanitation Services, and Energy Existing Conditions task leader and was involved in addressing infrastructure issues, specifically waste/wastewater, solid waste, and energy requirements. Mr. Simmons has 13 years of experiences in environmental operations, permitting and solid waste management.

39.3.4 EEA

- Robert Clifford, Jr., REP, B.S., M.S., Senior Environmental Scientist, served as Senior Investigator for the FEIS effort. Mr. Clifford has 15 years of experience in assessment and remedial evaluation, regulatory compliance audits, permitting of air, water, and wetland discharges and environmental management systems.

- Richard Fasciani, B.A., Environmental Scientist, served as Investigator for the FEIS effort. Mr. Fasciani has 6 years of experience.

- Leland Hairr, B.S., M.S., Ph.D., Principal, served as QA/QC Reviewer for the FEIS effort. Dr. Hairr has more than 25 years of experience in the fields of hazardous materials, air pollution, and environmental noise.

- Anthony Lucchese, B.S., M.S. (Pending), Senior Environmental Scientist, served as Investigator for the FEIS effort. Mr. Lucchese has 12 years of experience.

- Todd McArthur, B.S., M.S., Senior Environmental Scientist, served as Investigator for the FEIS effort. Mr. McArthur has 10 years of experience.

- Michelle Nannen, M.S., Marine Ecologist, served as Environmental Scientist for the FEIS effort. Ms. Nannen has 3 years of experience in marine and environmental investigations.

- Laura Schwanof, R.L.A., B.S., Environmental Scientist, served as Environmental Scientist for the FEIS effort. Ms. Schwanof has 18 years of experience related to natural resources inventory, environmental planning and design.

- Allen Serper, P.E., B.S., M.S., Principal, served as Principal Engineer for the FEIS effort. Mr. Serper has more than 30 years of experience in solid waste management studies (i.e., economic, technical and environmental assessments of landfills and resource recovery/combustion disposal facilities).

- Jeffrey Shelkey, B.S., Senior Environmental Scientist, served as Project Manager for the FEIS effort. Mr. Shelkey has 18 years of experience in technical and program management of remedial action cleanups, site closures and corrective actions at active and inactive hazardous waste sites.

- Neal Stark, A.S., B.A., M.A.L.S., Environmental Scientist, served as Senior Scientist for the FEIS effort. Mr. Stark has 15 years of experience.

- Roy Stoecker, B.S., M.S. Ph.D, Principal, served as Principal Scientist for the FEIS effort. Dr. Stoecker has more than 25 years of experience in the fields of wetlands and marine ecology, water quality, and environmental health.

39.3.5 Urbitran

- Shakil Ahmed, NICET III, M.S., N.E.D, B.A., Supervised the traffic analysis technical work for transfer stations. He has 15 years of experience in traffic analysis.

- Charles Benson III, A.I.C.P., B.S., Mr. Benson has had 8 years in various project management roles on transportation planning projects. He provided general oversight for transfer station trip generation and access analyses.

- David Cuff, M.U.P., B.A., Mr. Cuff was responsible for the alternative fuels analysis. He has 6 years of experience preparing environmental assessments and analysis of transit operations.

- Elizabeth Johnston, B.A., prepared the enforcement section of the commercial waste study. Ms. Johnston, has 2 years of experience preparing environmental assessments.

- Robert Michel, A.I.C.P., M.C.P., M.A., B.A., served as project team leader on the Urbitran tasks. Mr. Michel has had over 18 years of experience in preparing planning, environmental and transportation studies.

- H. Joon Park, P.E., Ph.D., M.S., served as primary traffic engineer on MTS studies, including preparation of truck trip generation estimates and highway capacity analyses. Mr. Park has approximately 5 years of experience with Urbitran.

39.3.6 Cambridge Environmental

- Sarah R. Armstrong, M.S. (Biology), M.S. (Health Policy and Management), D.A.B.T., Senior Scientist, served as task manager and primary writer for the public health analysis. Ms. Armstrong has 14 years of experience in environmental toxicology and risk assessment.

- Laura C. Green, Ph.D. (Food Science and Technology), D.A.B.T., President and Senior Scientist, served as a contributor and technical reviewer for the public health analysis. Dr. Green has more than 20 years of experience in toxicology, risk assessment, and risk communication.

CHAPTER 40 – RESPONSIVENESS SUMMARY (NEW CHAPTER)

40.1 Introduction

Both the Draft New SWMP and the DEIS were issued on October 22, 2004. Pursuant to CEQR/SEQRA procedures, DSNY established a public comment period extending from October 22, 2004 to January 24, 2005, a total of 94 days. During the public comment period, between December 1 and December 20, 2004, DSNY held 8 public hearings at which oral testimony was received in each of the potential project areas where long term export facilities were proposed. Additional written comments were accepted by mail, email and fax until the close of the comment period. This section presents responses to all the public comments received. It is organized as follows:

- Section 40.2 provides an index of comments received, both orally during the public hearings, or written, by source, organization and/or individual. The index refers the reader to the numbered comment where a response is provided. Because numerous comments were received on the same issue, the comments stated in this section condense and distill the submitted comments, while stating the essence of the commentator's question. A verbatim compendium of all the comments received in the form of transcripts of testimony at the pubic hearings and written comments submitted is provided in Appendix G to this FEIS.

- Section 40.3 contains comments and responses, organized into the following major categories:

  → Section 40.3.1 lists general comments organized by the following topics: Facility Capacity and Design, Alternatives Analysis, Waste Reduction and Recycling, Enhanced Public Participation, Borough Self-sufficiency, Public Health, Odor, Air Quality, Traffic, SWMP Process and Objectives, and Costs.

  → Section 40.3.2 list site-specific comments and is organized by borough and by site within each borough.

  → Section 40.3.3 provides comments by Involved Agencies, inclusive of: (i) comments from NYSDEC, NYCDOT, and NYCDPR; and (ii) comments received by the City Planning Commission during the ULURP application review process.

  → Section 40.3.4 contains comments from the Commercial Waste Management Study and includes: (i) a subsection containing an undated report from OWN that followed publication of this Study in March of 2004 and a subsection containing DSNY's response to that report; and (ii) comments received during the DEIS public comment period.

- → Section 40.3.5, Transfer Transport and Disposal Plan, is a report prepared in response to a request from NYSDEC during its review of the draft Part 360 Permits to provide information on the intermodal transfer, barge and/or rail transport, and disposal requirements for handling containerized waste from the Converted MTSs. This report also addresses comments on this topic received during the public comment process.
- → Section 40.3.6 describes the enhanced public participation program that DSNY conducted during the public comment process. This program was implemented in all the potential project areas where public hearings were conducted. The information in this section is supplemented with examples of materials used in conducting this outreach program.

40.2 Comment Index

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
Staten Island	Councilman Oddo		1. The Staten Island TS should only accept waste from Staten Island. 2. Trucks should utilize major roads instead of local streets to get to the TS	360 361
	Councilman McMahon		1. Borough-based self sufficiency is critical. 2. Completion of the rail connection. 3. The Staten Island transfer station must only take waste from Staten Island. 4. Where will the waste go?	45 362 360 70
	Barbara Warren	OWN, Zero Waste	1. Why should waste be handled by private companies, if costs have risen? 2. Analysis of costs and terms of the contracts is needed. 3. Plan needs to address alternatives 4. Support the 70% recycling goal. 5. Create industries that use waste. 6. Need new composting facilities. 7. Manhattan needs a more adequate waste infrastructure. 8. The 59th Street MTS should allow containerization. 9. There are no concrete plans for reducing capacity of private waste TSs 10. SWMP is vague and needs more detail on Zero Waste. 11. Why don't the MTSs have compacting	102 103 8 9 10 11 44 305 2* 71 3

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			capability? 12. The Staten Island transfer station should not be operated by a private entity. 13. State-of-the-art waste processing systems should be included in the SI TS.	 363 364
	John Arntzen	ACTA Maritime Development Corporation	1. Support of the marine system	72
	Helen Bialer	Staten Island Citizens for Clean Air	1. SWMP failed to address alternatives.	8
	Joe Valentin		1. SWMP needs to address better ways to recycle and add materials.	12
	Nick Dmytryszyn		1. Borough-based self sufficiency is critical. 2. Plan must clearly state that Fresh Kills won't reopen. 3. Trucks should use the streets of Travis, and utilize internal landfill roads.	45 73 361
Greenpoint, Brooklyn	Alison Hirsh	Assemblyman Vito Lopez	1. SWMP is a step forward towards borough self sufficiency. 2. Unacceptable to have both sites remain open. 3. SWMP does not discuss closure of the commercial waste sites. 4. DEIS says that the 2 sites will process waste that Greenpoint MTS is processing, but MTS has not operated in five years. 5. If either of the 2 sites are chosen there would need to be mitigation measures.	45 131 79 131 132

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			6. Would like a community advisory board.	133
	Joseph Lentol	State Assemblyman	1. Opposed to opening of any private transfer stations in CB1. Should be in other areas. 2. Needs an environmental review that looks at cumulative impacts.	134 81
	Diana Reina	City Council member	1. Concentrations of waste transfer stations in Williamsburg, Greenpoint and the South Bronx are discriminatory. 2. The EIS must account for true impacts, not just geographic proximity. 3. Need continued community involvement.	134 81 133
	Ana Zak	State Senator Martin Dilan	1. Will not support the plan unless there is reduction of waste in the community. 2. Unfair to have two transfer stations in the community when others could open.	134 131, 134
	Judd Schechtman	Borough President Marty Markowitz	1. Brooklyn has been shouldering the burden of waste for years. 2. Requires certainty that Manhattan's MTSs open, and that there is a decline in receipt of Manhattan's waste. 3. Need commercial haulers to utilize the MTSs, then a phased shut-down of land-based stations. 4. City should enforce regulations at the existing facilities, and ensure that DSNY's facilities also operate under stringent standards. 5. One marine or rail facility, not two would be acceptable.	135 135 136 83 131

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
	Ray Kairys	Chairman of OUTRAGE	1. Community is overburdened by land-based transfer stations, resulting in traffic, air, odor and noise pollution.	134
			2. SWMP must permanently reduce commercial and residential waste processed in the community. Any expansion of capacity must have an offset.	79, 131
			3. Manhattan must handle its own waste.	45
			4. Open the Brooklyn MTSs before any of the alternatives to reduce waste in the neighborhood as quickly as possible.	136
			5. Opposed to the opening of two private facilities in Williamsburg/Greenpoint.	131
			6. Need dedicated ingress and egress from highways.	132
			7. Traffic impacts from Kosciusko Bridge must be considered.	137
			8. Wants a community advisory group.	133
	Deborah Masters	Chair or CB1 Environmental Committee	1. CB1 handles 45% of waste, which results in health concerns to the community.	138
			2. There are many questions which need to be answered to make the process work.	139
			3. The community wants to be involved in the decision-making process.	133
			4. Health issues are a concern.	140
			5. The permit applications must include an analysis of $PM_{2.5}$ and H_2S.	140
			6. Any facility must be equipped with the best particulate controls.	141

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			7. Issues related to trucking are the major concern: emissions, vehicle speed and accidents, etc.	132
			8. Impact of major local projects was not considered in the DEIS.	132
			9. DSNY trucks must stagger deliveries.	142
			10. Questions regarding dredging of Newtown Creek.	143
			11. If BFI is chosen, what is the plan to minimize congestion in Harlem River Rail Yards?	144
			12. What are the alternative plans in case of breakdowns?	145
			13. Recommendations for house-keeping of the facility.	146
	Sister Veronica Hammond		1. The high number of trucks is a real problem in the neighborhood.	132
			2. Its an injustice that Manhattan sends its waste elsewhere.	135
			3. There should be no more than one transfer station in this neighborhood.	131
			4. The traffic on Metropolitan Avenue is a problem.	132
	Delia Lopez		1. Odors are a problem in the neighborhood.	147
	Shannon Stone	Waste Prevention Coalition	1. Need aggressive advancement of waste prevention, reuse and recycling.	8
			2. There are no details on how to achieve the 70% recycling goal.	9
			3. Draft SWMP omits the waste prevention	14

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			coordinators programs. 4. The title of Chapter 2 of the SWMP omits the word "reuse". 5. A waste characterization study should be conducted every five years. 6. SWMP needs much more education on waste prevention, reuse and recycling programs. 7. In favor of annual HHW collection days, but recommend additional items for collection. 8. Reuse is more cost effective than landfilling.	 15 16 17 18 12
	Guido Cianciotta		1. There are too many transfer stations in the neighborhood. All of the MTSs should be opened, to ease the burden. 2. The traffic on Metropolitan Ave. is too heavy. 3. The heavy traffic, opening two TSs and two garages in one area is too much.	45 132 131
	Theresa Cianciotta	Concerned Citizens of Whithers Street and the area block association	1. Concern with air quality, traffic, noise and rats from all of the additional trucking. The new garage on Varick will bring even more trucks into the area. 2. The commercial trucks aren't properly covered and don't stay on truck routes. 3. We don't want 2 transfer stations.	132, 131 132 131
	Rebecca White	North Brooklyn Greens	1. We want our fair share; not all of the waste. Existing stations must be closed. 2. The number one goal is a permanent reduction in waste handling capacity. 3. An MTS should be sited in lower Manhattan.	131 134 135

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			4. Trucks need to avoid residential streets. 5. DEIS is erroneous to say there are no negative health impacts. 6. Waste prevention is key. 7. Need to reduce emissions of waste vehicles.	132 138 12 10*
	Laura Hoffmann	Barge Park Pals	1. Need a net reduction of solid waste handling in the community. 2. City must choose only one facility for the area. 3. If the BFI facility is chosen, DSNY must ensure it is state-of-the-art. 4. Manhattan must have its own MTS. 5. The Greenpoint MTS must not open. 6. Community involvement is needed for disposition of the Greenpoint MTS site. 7. Communities affected by the SWMP facilities should receive amenities. 8. The EIS must consider the Cross Harbor project impacts. 9. The Williamsburg/Greenpoint rezoning may affect the SWMP. 10. Truck traffic must stay off residential streets.	134 131 148 45 149 149 80 137 137 132
	Carlotta Giglio		1. Truck traffic on Metropolitan is unbearable. 2. The traffic noise affects the school on (or near) Metropolitan 3. The truck rumbling has caused cracks in some area homes.	132 150 132
	Alison Cordero	St. Nicholas	1. Need a reduction in waste facilities in the	134, 131

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
		Church	neighborhood. 2. Need a fair share of facilities. 3. Clean fill transfer stations need to be addressed. 4. We have nonconforming uses which are affected by the private transfer stations. 5. Wants one facility, not two. 6. Community needs mitigation and compensation. 7. Use of green trucks at the new garage facility. 8. Need a community advisory board. 9. Continue with waste prevention.	 45 4* 151 151 80 82 133 12
	Dr. Edward Fishkin	Medical Director of Woodhull Hospital	1. Concerned with the truck traffic, and its affect on asthma rates. 2. Need fair share of facility distribution.	152 45
	Carina Sciangola		1. Take the trucks off the street and barge the waste. 2. Need better odor controls, monitoring and enforcement.	132 141, 132
	Dominick Sciangola		1. Need a reduction in the number of transfer stations, and a cap on capacity. 2. More enforcement of existing laws. 3. Must reduce truck traffic.	131, 134 2* 132
	David Yassky	City Council member	1. This CD needs relief from waste transfer; offsets for any new facility. 2. All MTSs must open.	134 135
	Evelyn Cruz	Congresswoman Valezquez	1. Must permanently reduce land-based facilities, and address their closure.	131

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			2. Must have borough self-sufficiency.	45
			3. The waste transfer stations and clustering of other facilities is damaging the environment and health.	134
			4. Must have a tonnage offset.	131
			5. Commercial waste should be handled at all MTSs.	5*
			6. DSNY must evaluate the private land-based transfer stations and regulations.	79
			7. Enforcement needs to be stepped up.	83
The Bronx	Paula Laura Kaplan	Bronx Borough President Adolfo Carrion	1. Approval of several key aspects of the Plan.	45, 110, 5*
			2. DEIS inadequately analyzes HRY and 132nd Street site.	111
			3. Need a comparative assessment between the two sites.	112
			4. DEIS failed to analyze $PM_{2.5}$ at 132nd Street	113
			5. Barge-to-rail would contradict the fair share objectives of the plan.	114
			6. The plan fails to identify disposal sites.	70
			7. How will the 70% recycling rate be achieved?	9
			8. Waste reduction is inadequately addressed.	12
			9. The DEIS undervalues the correlation between diesel fumes and asthma.	49
			10. The DEIS fails to analyze the impact on the redevelopment in Port Morris.	115
			11. The impacts to Randalls Island must be addressed.	116
			12. While not part of the proposed plan, the	117

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			DEIS makes statements about the South Bronx MTS impacts which are not true. 13. The DEIS states that the existing MTS would remain standing, which contradicts the Hunts Point Vision Plan.	 117
	George Torres	Council member Jose Serrano	1. The plan is vague. 2. Both facilities should not be receiving waste, only one. 3. Is the development of an intermodal facility at HRY a reality?	118 118 119
	Marion Feinberg	Carlos Alicea	1. Exporting waste will impose environmental burdens on other communities. 2. It is disingenuous to say there is no permit expansion, since a permit expansion just took place. 3. Need to implement more reuse and recycling programs. 4. The plan includes a South Bronx staging area, so waste from other boroughs will come to the Bronx. 5. Manhattan waste will go to the incinerator in Newark, and this is an unhealthy strategy to dispose of waste. 6. The 20-year plan will guarantee a lot of money to private corporations, and specifically to Waste Management. 7. Poor and nonwhite depressed communities will bear the environmental impacts. 8. There is no cohesive plan for zero waste.	84 120 8 114 84, 85 84 37 71

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			9. Cannot support a plan that gives waste control to Waste Management	121
			10. The plan claims to be fair but locations of facilities are all in areas of low-income.	37
			11. When the East 91st Street MTS doesn't get built, where will the waste go?	45
			12. It is not fair that the waste goes to landfills also sited in poor communities.	37
			13. There is an odor problem at the Waste Management facility.	121
			14. There is insufficient rail capacity out of HRY and the City. Waste will back up.	121
	Harry J. Bubbins		1. A capacity expansion was allowed, and a full EIS was not done.	111, 120
			2. If CB1 is to get all of the waste, there needs to be mitigation and benefits to the community.	80, 122
			3. There should be a local neighborhood advisory council.	122
			4. There should be a barge option in addition to rail.	127
			5. The two proposed facilities occupy much of the waterfront; access is needed where space is not utilized.	123
			6. City should look at initiatives to pressure companies to reduce packaging; reduce waste generated.	19
			7. Biodiesel should be looked at to reduce emissions.	82

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
	Silkia Martinez		1. All of these facilities are put in low-income communities. 2. The facility will affect the asthma rates. 3. The Hunts Point community has 15 stations and doesn't need any more.	37 49 124
	Marta Rodriguez	Sustainable South Bronx	1. In favor of the MTS or the alternatives if private land-based transfer facilities close. 2. How can there be no impacts from all these facilities?	124 113
	Elena Conte	Sustainable South Bronx	1. Need to aggressively pursue zero waste. 2. Need to reduce the putrescible waste capacity in the Bronx to 4,000 tpd, by closing land-based stations. 3. Need to strictly adhere to borough self-sufficiency. 4. Willing to accept fair share of waste if operation of facilities is improved. 5. Host community benefits are needed for areas accepting the facility. 6. Opening a new facility needs to be done at the same time as closure of land-based facilities. 7. City should develop a community advisory group. 8. Only one company should get Bronx waste. 9. The proposed intermodal facility in the Harlem River Yard needs to be discussed. This facility violates borough self-sufficiency, and is unacceptable.	12 124 124 125 122 124 86 118 119, 114

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			10. How can it be that the intermodal facility is not subject to environmental review?	114
			11. The DEIS refers to previous studies but doesn't provide an analysis of current impacts.	111
			12. None of the historical studies have examined off-site impacts; it needs a full analysis.	111
			13. New truck traffic on Bruckner and Barry is not analyzed. Changing the traffic signal will not mitigate the problem.	112
			14. Need more controls on existing facilities.	121
			15. The environmental impacts of transfer station siting and operational regulations need to be assessed as part of the SWMP.	79
	Sharon Josln		1. We are suffering from the current conditions in the South Bronx.	124
			2. NYC needs to be more creative in waste management.	87
			3. The quality of life needs to be considered.	123
	Timothy J. W. Logan	Consumer Policy Institute of Consumers Union.	1. Only the MTSs are discussed in the SWMP.	87
			2. Diversion strategies are needed.	8,9
			3. Zero waste was dismissed.	12
			4. There is no detail on how to get to the 70% and 35% diversion rates.	9
	Timothy Logan for Yolanda Gonzalez	Bronx SWAB	1. Support of waste export by barge or rail.	72
			2. Need a comparative environmental analysis of the two sites.	112
			3. Concern with HRY as an intermodal site,	114

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			taking waste from other boroughs. 4. Supports the transfer station in Manhattan. 5. Supports the composing projects and recycling goals but wants details. 6. City should develop borough-based recycling industrial parks. 7. Need greater attention on food waste composting. 8. SWMP needs to address commercial waste prevention and recycling. 9. Increased transfer station revenues need to be dedicated to commercial prevention and recycling programs. 10. SWMP needs to investigate commercial waste franchising. 11. City should pursue local EPR legislation. 12. City support for expansion of the State's bottle bill is needed. 13. Plastic packaging needs to be addressed. 14. Anaerobic digestion should be pursued, not types of incineration.	 126 71 20 11 9 88 5* 21 12 12 87
Review Avenue, Queens	Jerel Klue	Council member Eric Gioia	1. SWMP will add more traffic to already crowded streets. 2. We don't want facilities to affect the waterfront.	352 354
	Joe Conley	Chairperson of Queens CB2	1. Truck traffic is already a big problem. 2. The Plan will affect revitalization of the area.	352 354
	Joseph Ruzalski	United 40s	1. Plan will cause traffic problems on Review	353

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
		Civic Association and CB5	Avenue, Greenpoint Avenue; too much congestion, too many projects.	
	Dorothy Morehead	Chair of Environmental Committee of CB2	1. Problems with trucks, resulting in LIC having worst air pollution in the City. 2. Truckers don't stay on truck routes, and travel on regular streets. 3. The siting is disastrous; should transport by rail.	352, 355 355 353
	Don McCallian	Member of United 40s	1. Truck traffic is currently horrendous; 48th Street, 43rd Street, 39th Street and Review Ave. cannot take more traffic.	352
	Gertrude McDonald		1. Streets cannot withstand heavy trucking. 2. Is the City paying attention to our problems?	352 356
Hamilton Avenue	Fred Xuereb		1. Manhattan facilities won't be built, resulting in trucks coming to Brooklyn. 2. There are trains in Bay Ridge Yards now, with waste protruding from the cars. 3. Why does Sunset Park get all of the barge facilities, when other areas, like the Arthur Kill could be utilized? 4. The DEP or EPA should be involved with assurances on idling trucks.	154 155 158 171
	Nancy Walby	Brooklyn SWAB	1. The Plan for moving waste by barge or rail from enclosed facilities is a good one. 2. How can the community be assured that Hugo Neu's operation will be clean? 3. Concern with truck queuing on Hamilton	72 159 162

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			Avenue. 4. Concern with enforcement of air, noise and traffic pollution. 5. SWMP is not aggressive enough in plans for composting and recycling.	 162 8
	Felecia Campasano	Board President of Bay Ridge Towers	1. What type of waste will be in the containers; how many trains and barges? 2. What happens if it is snowing or icy? 3. What guarantee is there that the containers will be sealed?	155 155 155
	David Rizutto	Property manager of the Towers of Bay Ridge	1. How can there be no need for an environmental study for an intermodal yard? 2. Where does the waste that is currently on the rails under the building come from? 3. How frequently will the barges take the containers away?	156 155 155
	Antonia Smith		1. How will waste at 65th Street be transferred? 2. How can we be assured the containers will be enclosed? 3. How many trucks and trains will be moving in the area? 4. Have surveys been performed of the building structure to ensure that the train traffic won't damage the buildings? 5. How can be we sure that there won't be noise or odor impacts? 6. We are concerned with an increase in rodents.	155 155 155 156 156 155
	Nicole Tai	Chair of Sanitation	1. How much money will be put into fixing the streets?	162

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
		committee for CB7	2. How can we be assured that trucks won't be using alternate routes?	162
			3. Locating four facilities in the neighborhood is an overburden. Has the EIS addressed the cumulative impacts of all four?	164
			4. We did not receive the SWMP or any of the appendices to the DEIS.	165
			5. Is there potential for the 52nd Street barge staging area to be a source of traffic?	157
			6. Will the 65th Street intermodal yard be a source of traffic?	155
			7. If the Manhattan facilities don't open, will all the trucks go to Brooklyn?	154
			8. When will the Hugo Neu facility open?	159
			9. More is needed on waste prevention, recycling and reuse.	12
			10. There is no mention of many facilities that accept recyclables.	12
			11. There is no mention of the cost of waste prevention initiatives. No legislation.	9, 17
	Gloria Flora Nicolich		1. The Sunset Park area has become a dumping ground, home to all types of detrimental facilities.	164
			2. The community does not want the facility because it will bring traffic, vermin, and pollution to the area.	159
	Edward Wade		1. There is concern that the Hamilton Ave. facility will have more trucks than East 91st Street, so will be open longer.	163

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			2. The SWMP says that Manhattan recyclables will be trucked to Brooklyn.	160
			3. Hamilton Avenue will be crowded with trucks from every Borough.	163
			4. No other CD is getting four facilities, only CD7.	164
			5. Why are there to be two truck weighing stations at the 30th Street pier, if there are no trucks?	160
			6. Concerning 52nd Street, why build a 500-ft long, 60-ft wide pier, to tie up a barge?	157
			7. The 65th street rail yard has no cranes, so how can the containers get off the barge?	155
			8. The containers from Hamilton Ave. will be trucked to 65th Street, creating a lot of traffic.	160
	Timothy Logan	OWN, NYC Zero Waste Campaign, Consumer Policy Institute	1. The DEIS fails to examine siting regulations and phasing out of truck-based facilities.	79
			2. The findings of no significant adverse impacts did not take into account the Gowanus redecking or the plan for closure of land-based transfer stations.	166
			3. There are conflicting numbers for truck trips for the Hugo Neu site.	160
			4. Only about one-third of Brooklyn should be going to Hugo Neu by truck…the rest should be barged.	160
			5. SWMP needs more on reuse, recycling and composting.	8, 12
			6. SWMP fails to address zero waste.	12

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			7. Manhattan needs to deal with its own waste. 8. 70% diversion goal provides no detail. 9. More discussion is needed on composting. 10. Commercial waste and C&D streams need to be addressed in terms of diversion. 11. Commercial waste franchising should be investigated. 12. City should pursue local EPR legislation. 13. SWMP should support the State's bottle bill. 14. Policy is needed to address plastics. 15. Alternative technologies should not include combustion; anaerobic digestion should be pursued.	45 9 13 9 5* 21 12 12 87
	Dyhalma Anaya	Youth organizer at UPROS	1. Open the barge-fed MTS, and close the transfer station on 50th Street.	166
	Irene Shen	UPROS	1. Concerned with the truck traffic in the neighborhood. 2. Need to close land-based stations, and open the Manhattan facilities.	154 154
	Jeremy Laufer	District Manager of CB7	1. Under this SWMP, waste will go from Manhattan to Brooklyn, but not the other way around. 2. No other CD is asked to host four facilities. 3. Never received notification of ULURP certification. 4. Need an EIS for the 52nd Street staging area and the 65th Street Intermodal yard. 5. Need to address the cumulative impact of all these facilities in the neighborhood.	47 164 165 156 164

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			6. The land-based facility in the area is too close to people's homes.	2*
			7. The 25 trucks coming to Hugo Neu seems too low a number.	160
			8. The replacement of the drawbridge will occur at the same time as the MTS will come on line. What will the impact be?	166
	Chaplain Viviania Hernandez		1. Plans for Sunset Park indicate no barges and cleaner air. This conflicts with the SWMP.	167
			2. Not fair to have four facilities in Sunset Park.	164
			3. Each borough must recycle its own recyclables.	47
			4. Community Development revitalization project, 197A is in direct opposition to the SWMP.	167
			5. There will be construction impacts during park development which are not taken into account.	167
			6. The area has deteriorated roadbeds and antiquated infrastructure.	162
			7. Traffic congestion already results in air pollution.	162
	Judd Schechtman	Borough President Marty Markowitz	1. Hugo Neu facility will burden the area.	164
			2. CDs 6 and 7 already handle more than their fair share of waste.	164
			3. Brooklyn will get more facilities than any other borough.	168
			4. Require assurances that any planned facilities operate under the strictest environmental	168

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			standards. 5. The plan must be undertaken in its entirety; Manhattan facilities must open. 6. Must guarantee offset in the total amount of waste handled. Close 50th Street and 577 Court Street facilities. 7. Reduce truck traffic; use marine facilities. 8. Gansevoort Street facility must open. 9. Must coax the commercial haulers to utilize the Converted MTSs. 10. Best practices must be utilized to eliminate fugitive debris at the MTS. 11. Would like the Hugo Neu facility totally enclosed and preferably containerized. 12. What will happen to the 20% of material considered residue at Hugo Neu? 13. Don't want floatables in the harbor. 14. Need effective regulation of private facilities. 15. Need a citizen enforcement system. 16. Want host community compensation.	 154 166 162 154 5* 170 159 161 159 2* 162 168
	Leonard Silver		1. Why can't the facilities be sited in areas where there are no residents?	164
North Shore	Robert LoPinto	Chair, CB7 Environmental committee and Queens SWAB	1. More emphasis on waste prevention is needed. 2. The CD already has a number of facilities, including the MTS and a garage for another CD.	12 345

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			3. Where will the waste go? 4. There may be concern about the height of the building from the Port Authority's perspective. 5. Traffic is a major issue; mitigation is needed.	70 346 347
	Victor Ross	Transportation Chair for CB7	1. Congestion is heavy at Linden Place. 2. College Point Boulevard should be avoided. 3. Recent traffic studies should be reviewed as there have been many changes.	347 348 349
	Crystal Feng		1. Will the truck routes be the same as they previously were?	350
Southwest Brooklyn	Domenic M. Recchia	NYC Council member	1. The facility will handle much more traffic than claimed. 2. The amount of commercial waste is underestimated. 3. Request that a new traffic analysis be added. 4. City needs a better system for commercial waste. 5. Need means of increasing recycling, and developing new technologies. 6. Concern with impacts on the marine life and the marina. Cannot have a negative effect on the marina's business.	173 174 173 3* 12, 87 175
	Bill Colton	Assembly member	1. The goals are basically a positive step. 2. Need more creative ways to deal with waste. 3. Concerns with traffic; are the projections realistic? 4. Traffic patterns vary considerably by season.	72 87 173 173

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			Need greater assurance on traffic patterns. 5. Concern with impact of dredging upon water quality and upon marine life. 6. What will be done with the dredged material? Further study is needed. 7. Concern with impacts on the marina during construction and operation. 8. Impacts on the amusement park. 9. Concerned with odors, traffic and noise if volume of waste is greater than anticipated. 10. Concern that the MTS will receive additional volume of waste. 11. Where will the commercial waste be coming from, and what incentives will the private carters be receiving? 12. Concern with private trucks traveling on residential streets. 13. Need assurances that quality of life in the area will not be affected.	 176 177 178 179 180 181 174 182 182
	Adeline Michaels	Chair or Concerned Citizens of Bensonhurst	1. Glad that the incinerator is being taken down, but how can another be built upstate? 2. Should promote innovative technologies. 3. Close incinerators in Nassau Co. and Newark, and find new technologies.	85 87 87
	Bryan Thomas Gagliano		1. Plans for the MTS encroach onto Bay 41st Street and onto the marina property. 2. Requested that City protect the marina's seawall form tugboat and barge traffic. 3. Concern with other impacts to the marina	183 178 178

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			users.	
	Marisol Ponte-Greenberg		1. Concerned with air quality. 2. If the project is environmentally-friendly, why did Bay Ridge reject it?	184 184
	Peter Gaudiuso		1. Concerned with the increase in traffic especially from Bay Parkway to Caesar's Bay. 2. Will every single truck be checked by an authority? 3. Was the odor study undertaken during the heat of the summer? How can we be assured there will be no odors? 4. How will runoff from the site be handled? 5. Concern with noise and how containers will be handled.	173 6 185 186 187
	Stanley Lave		1. It's a bad idea to build a waste processing facility in a residential area.	188
	Judd Schechtman	Borough President Marty Markowitz.	1. Brooklyn is taking on too many burdens. 2. Must have assurances that the facilities will operate with least community impact. 3. If Brooklyn takes more than its fair share, it must be compensated. 4. Support won't be given if Manhattan sites don't get built. 5. Should work with the community to minimize impacts. 6. Enforcement needs to be enhanced. 7. Needs guarantee that DSNY follows its own regulations.	189 189 80 45 189 83 83

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			8. Borough self-sufficiency is critical.	45
	Mark Treyger		1. The incinerator operated without a permit. 2. Traffic impacts will not be insignificant. 3. Noise will be a problem as trucks hit the potholes at night. 4. If there are any odor problems, the facility will be forced to close. 5. Truck idling will be a problem in terms of emissions and noise. 6. Need to ensure that marina will not be affected.	188 173 182 185 190 175
	Sidney Schatzman		1. Traffic will be a problem. There are bottlenecks at Nelly Bly, Kohls, and the problem will be unbearable. 2. Wants a study monitoring traffic 24 hours/day for 2 to 4 weeks.	173 173
East 91st Street	Liz Krueger	New York State Senator	1. Where will vehicles be diverted to avoid queuing? 2. What alternative sites were examined as an alternative to East 91st Street? 3. The residential character and presence of Asphalt Green make 91st Street an inappropriate location. 4. The DEIS fails to examine the impact of the maximum operational capacity. 5. The facility would receive 469 vehicles, not the 130 projected, which would result in more than 3.5 minutes turn-around time.	238 206 206 1 207

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			6. There will be queuing of trucks, idling, and this will create traffic congestion, noise, and a health risk to public health. 7. The plan was chosen long before the impact statement was ever undertaken. 8. City should support the bottle bill, promote recycling and decrease the waste stream	207 12 12
	Assemblyman Jonathan Bing	Holmes Towers-Stanley Isaacs Housing	1. Residents of Holmes and Isaacs Development will be negatively impacted. Location of the MTS will be a danger to the health and safety of residents. 2. Hundreds of truck trips per day will impact the neighborhood. 3. If the site is reactivated, the rats, noise and odors will be worse than before due to the increase capacity of the converted facility. 4. There will be a decrease in air quality and an increased risk of asthma.	208 207 209 49
	Assemblyman Scott Stringer	West side and Clinton community	1. The MTS shouldn't be sited in a residential neighborhood; it should be in a commercially-zoned area. 2. Should not put 12,000 children using Asphalt Green at risk. 3. There is far less traffic in the neighborhood today, since the MTS closed. 4. Come up with a real master plan for the entire City, working with community groups.	206 49 209 74
	Assembly member Peter Grannis		1. DEIS claims there will be no significant adverse impact on the community.	206

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			2. The 4 MTSs dropped from the plan were dropped because they were in residential communities, yet this is a residential community too.	210
			3. Failure to address waste reduction strategies.	8, 12
			4. Expand usage of garbage grinders.	13
			5. Trucks will be lining up on York Ave., and won't be accommodated on the ramp, adding to traffic issues.	207
			6. The ramp to the facility should not be covered.	216
	Eve Moskowitz	City Council	1. The MTS is a bad idea for many reasons.	206
			2. Need to find a collective solution to waste disposal	74
			3. The DEIS doesn't take into account the real picture.	207
	Jessica Lappin	Speaker Gifford Miller	1. Opposed to the East 91st Street site	206
			2. Favors use of marine system for waste removal.	72
			3. Zoning should matter; MTS can't open in a residential area.	206
			4. New MTS will take 2 to 4 times what it used to take; how can that have no impact?	209, 1
			5. Truck traffic will significantly impact York avenue.	207
			6. DEIS fails to address the negative impact of the MTS on local parks.	211
			7. More sensible alternatives exist for Manhattan's waste.	212

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
	Micah Kellner	Congresswoman Carolyn Maloney, 14th Congressional District	1. This is the only MTS planned for a residential neighborhood. 2. The DEIS contains significant flaws that reflect deference to political concerns. 3. The DEIS does not reflect the true impacts on air quality, traffic patterns, pediatric health, open space and public health. 4. The rates of asthma are among the highest in the U.S. 5. Neighborhood was very different when the facility was first built. 6. DSNY's siting rules do not permit a private transfer station within 400-ft of a park. 7. No justification is given for why this site is suitable. 8. The DEIS doesn't consider an analysis of the facility at full capacity. 9. The DEIS fails to address the impacts of demolition of the existing facility, particularly on Asphalt Green. 10. The DEIS fails to analyze odor impacts on recreational facilities. 11. The DEIS inadequately describes the dimensions and appearance of the new MTS, and its impact. 12. Having an MTS in each borough results in impacts to this residential community.	206 213 206 214 209 211 206 1, 209 215 211 216 46
	Rick Muller	Manhattan Borough	1. Opposed to this facility in densely residential neighborhood.	206, 211

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
		President C. Virginia Fields	2. The DEIS analyzes for less than half of the capacity. 3. Access to the facility cuts through Asphalt Green, and this is not adequately addressed. 4. DEIS needs to analyze air quality and noise of commercial vehicles. 5. Disclose why East 91st Street was selected, but not West 135th Street. 6. Manhattan SWAB identified 4 additional sites in Manhattan which were not suitable; these sites should be evaluated as well as the four sites in the CWMS.	215 216 217 210 218
	Jackie Ludorf	CB8 Chair of the Environmental and Sanitation Committee	1. DEIS analysis is at a lesser capacity than the intended design. 2. Inadequate analysis of alternatives. 3. DEIS lacks a comprehensive cost/benefit analysis. 4. What are the details of the traffic analyses performed? 5. What is the impact to delivery trucks? 6. No mention of odors from trucks. 7. While businesses that generate waste are located in CB8, the people come from all over the City. 8. Noise will be an issue. 9. Will diesel trucks be transporting waste from other areas?	215 210, 211 104 219 211 220 221 222 221
	Philip Opher		1. Clarify the definition of a buffer zone in the siting rules.	211, 223

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			2. Which zoning resolution will be utilized?	224
			3. Public testimony from the Scoping hearings was not distributed to the public.	40
			4. Responses to comments in the Scoping document showed lack of understanding.	40
			5. Facility will impact on ambulances.	225
			6. Garbage is transferred better today, than in the plan.	75
	Marjorie Flanagin Maclachlan		1. Comments were dismissed from the last hearing, and the DEIS misrepresents the true impacts.	215
			2. Site was improperly chosen.	206, 218
			3. Asthma from diesel, rats, cockroaches and allergens is an issue. No one should have to deal with these issues.	206, 214
			4. The plan pits trash trucks against school children.	207
			5. This plan threatens the parks and waterfront.	211
	Elaine Friedman		1. Environmental fairness does not mandate that a MTS be located in a densely populated area.	46
			2. The purported sophisticated odor control system will not mitigate health consequences.	57, 206
			3. What will it be like with many, many trucks on streets?	207
	Greg Costello		1. Siting is within 400 feet of a park or residence.	211
			2. Trucks should go to New Jersey.	229

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			3. Site was chosen for political reasons.	213
	Council Member Gale Brewer	West side of Manhattan	1. Would like commercial trucks to use alternative fuels. 2. Doesn't want all commercial or residential waste in one place.	10* 226
	Tony Ard	President of Gracie Point Community Council	1. The City's planning has pitted one neighborhood against another. 2. Studies have been done at Columbia University identifying alternatives that are less destructive.	74 212
	Carol Tweedy	Executive Director of Asphalt Green	1. How can the facility be sited in Asphalt Green? It is a City asset. 2. Need an analysis of economic impacts at Asphalt Green. 3. The facility conflicts with siting rules. 4. DEIS fails to analyze traffic on Saturdays, odors on Asphalt Green. 5. Ramp construction will interfere with the fields.	206 211 211 211 211
	Richard G. Leland	Attorney for Gracie Point Community Council	1. The DEIS, if submitted by a private developer would not have been accepted as complete. 2. DEIS lacks information on where waste will go. 3. There is no evidence that the Plan makes economic sense. 4. Underestimation of the true impacts and capacity of the facility. 5. DSNY believes it is exempt from full and	74 70 104 215 41

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			proper compliance with CEQRA.	
	Dr. E. Arthur Livingston		1. The DEIS was not objective; DSNY "cooked the books". 2. The MTS will destroy the area.	41 209
	Kathryn R. Edmunds		1. The study area for this project is three times more populous as the next most populated study area. 2. Much of the data in the DEIS is given as a percentage, instead of as an actual number of people affected. 3. The area is far too populated to accommodate the proposed MTS.	227 228 227
	Kendall Christiansen	Insinkerator	1. DEIS and SWMP failed to address food waste diversion. 2. Food waste should be handled separately. 3. SWMP doesn't even propose looking at what other cities are doing.	13 13 13
	Evan Firestone		1. DEIS understates the affected community. 2. No other borough is affected by Manhattan's current disposal of waste. 3. Real life data shows that there will be impacts. 4. How can the ramp be widened? 5. The facility will create gridlock on the entire Upper East Side. 6. Commercial waste was not adequately studied. 7. There are alternative waterfront sites in Manhattan.	227 229 209 230 219 3* 218

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
	Neal Flomenbaum		1. The MTS will create serious adverse health impacts. 2. The DEIS is seriously flawed. 3. The MTS is a new facility, not a converted MTS. 4. New MTS poses greater damage to health than a nuclear reactor.	214, 206 213 209, 211 214
	Benjamin Miller	Columbia University School of Engineering Center	1. The plan will be a significant environmental and economic benefit. 2. DEIS fails to address zoning for disposing of waste; City should not be dependent on private landfill market. 3. Landfill will be the most expensive alternative; the City should acquire capacity within the State. 4. Waste-to-energy is preferable.	231 76 76, 77 77
	Charles Emma		1. Randalls Island would be suitable for an MTS.	218
	Richard Marlin	President of 535 East 86th Street	1. The MTS will create problems worse than there were previously.	209
	Dr. Clifford Bluestein		1. The MTS will create major health risks.	214
	Mary Fliegir	Trustee of the Gil N. Brewer School	1. The MTS will create problems for our special needs children.	232
	Alice Konorezov		1. There were terrible odors when the MTS was previously opened. 2. How will trucks get to the facility given the tremendous congestion that exists?	209 207

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
			3. Increased traffic on the river is a hazard.	233
	Heleen Brody	Vice President of 180 East End Tenants Association	1. DSNY is ignoring its own siting rules. 2. Analyzed the MTS at only a portion of its capacity. 3. An analysis of odors on the parks was not undertaken. 4. Does <u>not</u> advocate sending Manhattan's waste to other boroughs.	211 215 211 226
	Timothy Logan	Consumers Union, New York City Zero Waste Campaign, and Organization of Waterfront Neighborhoods	1. Disapproval of the plan without alternative sites is unconscionable. 2. Best available control technologies should be utilized at all MTSs, including routing of trucks. 3. There should be planned closure of truck-based facilities in conjunction with reopening of the MTSs. 4. Community mitigation programs need to be included in the Plan. 5. Zero waste should be embraced.	234 78 79 80 12
	Dr. Marjorie Clarke	Manhattan SWAB and Waste Prevention Coalition of New York City	1. Consider an alternate vision for the ramp. 2. Evaluate the feasibility of a number of small sites for recyclables and waste. 3. Stagger shifts to avoid queuing. 4. As new trucks are purchased, they should use alternative fuels. 5. The EIS should delineate cumulative emissions in all parts of New York from the no action alternative. 6. Strive for zero waste.	235 81 78 82 90 12

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
	Elizabeth Dobell	Board of the Carl Schurz Park Association	1. Opposed to the facility because it will affect Carl Schurz Park.	211
	Laurie Edelstein		1. Every other MTS is in an M-3 zone except for East 91st Street. 2. New zoning in the area. 3. Comments from the last hearing on West Nile virus and mosquitoes were not addressed. 4. Ramp traverses a part of the park for babies.	209 224 50 230
	Shannon Stone	Co-chair of New York City Sierra Club's Solid Waste Committee and recording secretary of NYC Waste Prevention Coalition.	1. Cost of landfilling will continue to rise; we need to look at means of reducing the garbage problem. 2. DSNY should phase out its diesel trucks with cleaner fueled vehicles.	12 82
	T. Gorman Reilly	President of Civitas Citizens, Inc.	1. Commends DSNY on its comprehensive and responsible plan, and commitment to long-range planning. 2. There does not appear to be any practical Manhattan alternative, but the facility should not be built until certain issues are addressed.	72 235
	Judy Schenidier		Ceded her time.	---
	Dr. Roy Geronemus	Clinical Professor at	1. The SWMP will create a public health crisis, especially for geriatric adults and very young	49, 206

Index of Oral Comments at DEIS Hearings				
Hearing Location	**Speaker/Author**	**Representing**	**Summary of Issues**	**See Comment Number**
		New York University Medical Center	children. 2. This site may have made sense decades ago, but not now, because there will be detrimental effects from diesel exhaust, vermin, and neutralizing agents. 3. Would like a review of Workers' Compensation Claims amongst Sanitation workers in NYC. 4. Environmental justice issues apply here as well as the other areas of the City.	 51 52 36
	Barry Schneider	Member of CB8	1. The DEIS had a preconceived conclusion.	74
	Mort Gerard	Board member of 445 East 86th Street	1. The proposed action will have a significant impact on a community service (Asphalt Green), will impact on cultural resources.	206
	Babette Bandler		1. Can't have a conclusion that there is no impact. 2. There will be traffic impacts with the waste vehicles and all of the bus traffic.	209 207
	Andrew Racine	Professor of Pediatrics	1. Concern with the health of the children in the area and diesel emissions 2. Pulmonary physiology of children is different from adults. This is not taken into account in the DEIS.	51 53

Note:

*See Comment number in Section 40.3.4.3 for this item.

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
General	Fazio, Christine A.	Bar Association of the City of New York	1. The Proposed Action needs to place higher priority of reducing and reusing waste. 2. Failed to provide a comparative economic analysis or other solid waste management approaches. 3. Does not provide adequate alternatives for management of commercial waste. 4. Include a project-wide analysis of impacts on the environment (specifically air pollution from diesel and barge exhaust), and alternatives that reduce air emissions. 5. Include alternatives that increase recycling rates, etc. 6. Rethink amending Local law 19. 7. Energy recovered from WTE should be available to the planning unit. 8. Need details on costs of proposed plan. 9. SWMP should consider self-sufficiency. 10. Need details on Hugo Neu contract. 11. Consider ramifications over a 20-year period. 12. Need project-wide air impacts.	87 104, 105 89 90 12 22 77 106 76 24 23 58
	Christiansen, Kendall	In SinkErator	Refer to oral comments.	---
	Biggs, Jeanette, also: Cheng, Lug-Ting; Cotto, Liana; Davis, Sherisse; Garcia, Josefina; Igbal, Farah; Kairys, Elise,		1. Support the SWMP; it will improve the quality of life in all five boroughs.	72

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	L., Mark (not legible); Manniello, Angelo; Phillips, Christopher; Ramsay, Camieka; Shiller, Eugene; Tis, Danielle; Zilber, Gregory			
	Byron, Joan	Pratt Institute Center for Community & Environmental Development	1. Plan lacks substance on achieving the 70% recycling goal. 2. Applaud fair share, but oppose the HRY barge-to-rail facility. 3. Plan does not address recycling of commercial waste and C&D. 4. DSNY should adopt Zero waste goals.	9 48 27 12
	Konheim, Carolyn	Konheim & Ketcham	1. There is no assessment of cumulative traffic impacts from all facilities. 2. Analysis year omits consideration of approved development which follows shortly after the year 2006. 3. The traffic analysis method looks at each intersection in isolation. 4. An analysis of turnaround time and queuing potential is missing. 5. The mitigation proposed can worsen conditions on adjacent roads. 6. There is no analysis of the commercial impacts. 7. There is no discussion of the change in the flow of paper. 8. The reallocation of recyclables should be examined.	62 166 63 64 63 64 28 28

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			9. Means to reduce needless commercial transfer stations is vague.	2*
			10. No discussion of separately collected paper that is recycled.	29
			11. Needs to be a discussion on how to attract commercial waste to the MTSs.	5*
			12.Need to discuss commercial traffic to the MTSs.	8*
			13. Waste generation factors needed for reliable projections are missing.	93
			14. The economic impact analysis is missing.	104
			15. There is no analysis of the hidden social costs of transport.	107
			16. There is no discussion of the alternative potential of the proposed sites.	108
			17. Need a discussion on garbage disposals.	109
	Lassalle, Yvonne		1. SWMP and DEIS fail to address all waste.	89
			2. Documents at repositories were incomplete.	43
			3. Need a complete assessment for sites not under DSNY control.	143
			4. DEIS fails to discuss existing impacts of the system.	7*
			5. No time frame given for mitigating burdens.	7*
			6. Need detail on intermodal infrastructure.	97
			7. Details needed rail yard required for Review Avenue.	359
			8. Discuss feasibility of ocean-going barges.	153
			9. Assess the adequacy of intermodal transport capacity.	97
			10. Need details on costs provided.	104
			11. Describe composting if Spring Creek doesn't get permitted.	34

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			12. Clarify relationship between recommendations in the CWMS and the SWMP/DEIS.	98
			13. Clarify compliance with DEC's EJ policy.	39
			14. Evaluate the impacts of making Manhattan's interim plan final.	90
			15. Certain traffic impacts weren't assessed.	99
			16.Should have used data on actual operations.	100
			17. Should provide methodology on truck counts.	68
			18.CWMS comments to address.	1*
			19. Information needed by CD.	68
			20. No. of trucks differs between the permit application and DEIS.	243
			21. Need the truck distribution.	69
			22. Need to evaluate "upset conditions".	1
			23. Need data and methodologies in a technical appendix.	101
	Roistacher, Robert E.		1. DSNY should consider using the Amtrak right-of-way for a truck-to-rail facility on the west side of Manhattan.	91
	Somesfalean, Jov Theodore		1. Waste should not be incinerated; it causes high cancer rates.	85
	Underwood, Joanna D. President	INFORM	1. SWMP needs a monitoring baseline for truck emissions.	60
			2. Commitment to natural gas trucks is vital.	61
			3. Fuel security is crucial.	61
			4. SWMP should set the pace for commercial haulers.	10*
			5. Single-stream waste collection should be explored.	35
	Warren, Barbara Project Director	Consumer Policy Institute	1. SWMP does not address the overburdened communities.	2*

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
		of Consumers Union	2. Does not advance zero waste.	12
			3. The commercial waste study was deficient yet forms the basis for reform.	3
			4. SWMP is vague, with no clear details, and violates State requirements.	71, 87
			5. The section on new and emerging technologies is irrelevant.	87
			6. Composting not adequately addressed.	30
			7. Key elements that should be in the plan.	87
			8. Criteria that should be met by the plan.	87
			9. Preference should be given to waste prevention programs.	85
			10. City should use the MTSs for the movement of recyclables and compostables.	6
			11. Plan should improve the commercial waste system.	89
			12. Plan should advance plans to address Manhattan's waste.	90
			13. SWMP did not comply with SWMA.	87
			14. DEIS did not analyze the impacts of making the interim plan permanent.	90
			15. Lacks clear steps concerning West 59th Street.	305
			16. Must address inequities, such as in the South Bronx.	129
			17. Need detailed milestones.	5*
			18. Inadequate analysis for parts of the plan.	119
			19. Nonroad equipment should be retrofitted.	82
			20. Need a thorough cost analysis.	102
			21. Plan failed to develop long term landfill capacity.	76
			22. Need disclosure on the outlines of the private contracts.	103

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			23. Need to analyze all available options. 24. Need to plan for a system to divert loads with recyclables. 25. Need to address fill material. 26. Need to examine the "Reaching for Zero" report.	8 12 31 10
General and Site Specific	Wipper, Janette and Kearney, Gavin	New York Lawyers for the Public Interest	1. The Environmental Review must include a detailed review of the system proposed by the SWMP. 2. The Environmental Review must evaluate cumulative impacts 3. The EIS must analyze the existing network of commercial waste transfer stations. 4. The EIS must incorporate the siting regulations and the operational regulations included in the SWMP. 5. The EIS must incorporate an analysis of new commercial waste initiatives. 6. Hamilton Ave. MTS is much larger than the other facilities. 7. More extensive mitigation strategies are needed for the Hugo Neu facility. 8. Are the 52nd Street staging area and the 65th Street intermodal yard part of the SWMP? 9. The DEIS did not assess the commercial transfer stations located next to residences. 10. The FEIS should consider the impacts of the proposed facilities in conjunction with the existing ones. 11. The FEIS must consider the impacts of all the proposed actions in the South Bronx. 12. Comments from report entitled: "Analysis of the	90 90 7* 7* 7* 163 160 156 351 138 119 1*

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			Department of Sanitation of New York Commercial Waste Study"	
West 59th Street MTS	Bradley, Michael	Riverside South Planning Corporation	1. Zoning error on area north of the West 59th Street MTS. 2. Area north of site is mapped parkland, and use of area is illegal. 3. Any measures to resolve the safety conditions on the bike path must be disclosed in the DEIS. 4. Any actions affect the West 59th Street or Gansevoort properties must be consistent with the Hudson River Park Act. 5. Alternative sites must be examined for the recycling facility at Gansevoort Peninsula.	307 308 309, 306 310 332
Bronx	Acosta, Joseph; also Munoz, Justin Pagan, Brian Richardson, Davon Rodriguez, Luis		1. Manhattan needs to have a facility 2. South Bronx needs to have shoreline access. 3. Trucks should be converted to bio-diesel 4. Pass legislation to require businesses to accept consumer packaging.	45 123 82 19
	Conte, Elena		1. Should aggressively pursue Zero Waste. 2. C&D stream needs to address waste prevention. 3. Should discuss eco-industrial parks. 4. Should provide more detail on composting or organic food waste stream. 5. Should look at innovative technologies. 6. Should support the expansion of the Bottle Bill. 7. The Manhattan facilities must open. 8. Must eliminate excess permit capacity in the Bronx. 9. SWMP should discuss economic flow control of commercial waste.	10 4*, 9 9, 10 11 87 87 45 124 5*

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			10. Workers at the facilities need to be protected.	4
			11. Should be host community benefits.	80
			12. Need a community advisory group.	86
			13. The intermodal facility is inconsistent with borough self-sufficiency.	114
			14. The intermodal facility needs to be assessed.	127
			15. Updated analyses are needed, especially off-site impacts.	128
			16. The HRY site should not rely on DEC analyses.	128
			17. The 132nd Street site is deemed exempt from review with no basis.	128
			18. Siting and operational regulations must be part of the review.	79
			19. Use of alternative fuels.	10*
			20. Permit applications must include analysis of $PM_{2.5}$ and H_2S	130
			21. Dust migration, odor and vermin controls are needed.	130
			22. Must be hazardous materials detection, on-site record keeping, and an on-site decontamination system.	78
			23. There must be transport controls.	5
			24. Other local projects must be included.	128
			25. Unnecessary system-wide redundancy should be reduced.	89
			26. Staggered deliveries are needed.	78
	Dimino, Resa	Bronx SWAB	1. Fair share must be upheld.	45
			2. Opposed to use of HRY for other borough's waste.	114
			3. DEIS does not provide backup on the HRY site.	114

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			4. Should utilize barges instead of rail. 5. There is no discussion on means of coaxing commercial waste through the MTSs. 6. The DEIS on 132nd Street is insufficient. 7. No programs are mentioned to meet the 70% diversion goal. 8. Need specific goals for alternative fuels. 9. No discussion on alternative fuels for private commercial carters. 10. Confusion on EJ Policy. 11. No milestones or targets for alternative technologies.	127 5* 128 9 82 10* 38 87
General	Hart, Carol L	Lemon Man Entertainment, Inc.	1. Plan ignored Zero Waste initiatives. 2. Plan did not discuss alternative technologies. 3. More public education is needed (recycling coordinators) 4. Recycling information should be in other languages. 5. Need regular pick-up of electronics.	12 87 14, 17 85 21
Hamilton Ave. MTS	Ramirez, Santana	Block Watcher	1. The transfer station on Thames Street is a health problem due to odors and rats.	172
Southwest Brooklyn MTS	Abeido, Lorraine		1. The MTS will affect the quality of life in the neighborhood.	188
	Ayvazyan, Svetlana; also Barone, Ruth; Blanck, Naomi;	Waterview Towers and Contello Towers	1. What are the O&M requirements and enforcement measures that will minimize impacts, and what restrictions will be placed on air emissions? 2. What is the state-of-the-art odor control equipment?	185 185

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Butler, Lucille Butler, Ruth; Brown, Loretta; Celentano, Richard and Sandra; Clemente, Robert Coppola, Marie; Cowen, Esther; D'Onofrio, Catherine; Dubin, Milton; Geffen, Howard; Hager, Bernard; Hager, Pearl; Henry, Alice A.; Kraut, Jeanette; Lipscher, Allan; Impeduglia, Alfred; Mensowitz, Mollie; Mortman, David and Dorothy; Moran, Thomas J.; Mulvey, Patricia; Nemet, Leslie C.; Rabinowitz, Phyllis; Ritchings, Diane K.; Royzman, Velya; Sannasardo, Phyllis; Schleifer, Henry and Mildred;		3. Will Gravesend Bay accept seepage from the misplaced dumping of waste? 4. What will be the long range health effects on the community?	191 49

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Sendyk, Ida E. Ventiera, Lorraine; Vinokurov, Lyubov, and Apt. 15D, 2652 Cropsey Avenue.			
	Cohen, Mitchel	Brooklyn Greens/Green Party of NY, and coordinator of No Spray Coalition	1. There are discrepancies in truck traffic along Cropsey Avenue and Shore Parkway. (4 different sets of data) 2. The DEIS fails to consider the senior citizen and nursing homes on Cropsey Avenue. 3. The DEIS fails to anticipate increases in vermin populations. 4. The impacts of dredging of toxic materials have not been addressed. 5. The DEIS fails to address the increase in toxic burden. 6. The DEIS fails to address the deleterious effects on the fish, and its resultant effect on humans. 7. The DEIS needs to focus on waste reduction, recycling and reuse.	192 192 193 177 194 176 12
	Grubman, Vicki	Wake Up (…and smell the garbage)	1. Request for an extension of comment period. 2. The DEIS does not address the impacts of the MTS on quality of life and health of neighborhood. 3. The dredging will have adverse impacts on humans and wildlife. 4. DEIS needs to more realistically look at traffic impacts. 5. The DEIS must measure the cumulative health impacts from air pollution.	42 188 176 192 184

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			6. Must analyze impacts from leakages, runoff, discharges, etc.	184
			7. Odors of the trucks must be addressed.	186
			8. Must analyze the cumulative effect of noises.	185
			9. Must examine the health hazard of vermin and insects.	187
			10. Must look at the impacts of chemical usage.	193
			11. Must address the erosion of the community.	194
			12. DEIS does not adequately explore other sites in industrial areas.	195
			13. DSNY has not tried to reduce the waste stream.	8
	Hershkowitz, William		1. Request for an extension of the comment period.	42
			2. There are inconsistencies in the discussion on dredging, the seawall, etc.	175, 176
			3. The DEIS did not discuss the impacts of the recycling facility, the types of materials brought there, and many other details.	196
			4. The exit from the Belt Parkway at Bay Parkway is dangerous.	192
			5. There will be impacts, as there were with the previous MTS.	188
	La Monaca, Guy	Brooklyn CB 11	1. Disputes the time frame for the "no-build" analysis. Future impacts should be based upon 20 years beyond completion.	197
			2. ATR counts were undertaken in February, but winter may have significantly lower traffic than in the summer. Pedestrian activity is also greater in the summer.	198
			3. The traffic approach diagrams should be turned.	199

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			4. Questions concerning Section 5.14.2.4. 5. Should use NYMTC's demand modeling tool. 6. There is no weekend traffic data shown.	200 198 201
	Lipstein, Arleen		1. Opposed to reopening of SW Brooklyn	205
	Magali, Nino		1. The facility will result in odor, noise and traffic problems. 2. How can we be assured this won't pollute the water? 3. What is the possibility of a child being injured by a truck?	182, 184 186 179
	New, Michael	Sephardic Nursing and Rehabilitation Center	1. Request for a comment period extension.	42
	Ortner, Ruth, also Breyman, Mark Cleaver, Marion, Greenberg, Allan; Hershkowitz, William Mergold, Yuri		1. Request for a comment period extension.	42
	Reznik, Sylvia		1. There will be impacts on public health from the facility	205
	Sanoff, Ira and Willner, Andrew	Natural Resources Protective Association and NY/NJ Baykeeper	1. Dredging will impact the fish and the people who consume them. 2. Toxins will deleteriously affect area biota. 3. The effects of constructing the breakwater should be evaluated in conjunction with others planned in the area. 4. Containers must be secured to the barges. 5. What mitigation is proposed for environmental	176 176 202 203 204

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			impacts?	
	Stella, Rochelle		1. The area generates a small % of commercial waste. 2. How will this not pollute the water	174 186
	Tomasuto, Phyllis		1. Two schools are located across the street from the MTS.	179
Review Ave.	Giordano, Gary	District Manager, CB5	1. Concerns with truck traffic in and around Queens CD5, due to 3 transfer stations. 2. Concerns with the truck-to truck-to-rail facility. 3. Need a spill mitigation plan for Newtown Creek, and look at water traffic issues.	352 357 358
	Amato, Gus; Bennington, Brian; Branco, Dennis; Branco, Loleta; Branco, Vanessa M; Conway, Francis; Daly, Margaret; Fondulis, Domina; Hampl, Marie; Lalsa, A.N; Lewis, William; McCarthy, Jan; McDonald, Gertrude; McEvoy, Mary; McGovern, Mary; McNamara, Catherine; Otono, Pamela; Renda, Charles;	United Forties Civic Association	1. Newtown Creek is extremely contaminated, resulting in neighborhood odors and pollution. 2. The Review Avenue facility along with other projects will bring too much heavy traffic to the area, resulting in noise, odors and pollution.	355 355

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Skarmoutsos, Thea; Trovato, Alfie; Vanklukooris, R.			
East 91st MTS	Ard, Anthony	Gracie Point Community Council	1. The use of the East 91st Street facility is conjecture. 2. Facility should not be placed in a residential neighborhood. 3. DEIS was written to justify the plan, not evaluate it.	70 206 74
	Baker, Pat		1. This is not a good site for the MTS	206
	Bauer, Ilene		1. Previous MTS operated poorly. 2. Should not be in a residential area.	209 206
	Belina, Peter		1. The trucks coming to the facility will pose a danger to the children at Asphalt Green.	206, 211
	Blachere, Nathalie and Maki, Robert		1. The MTS may affect Carl Shurz Park and Asphalt Green. 2. Alternative location at the cement plant north of northern end of 1st Avenue.	211 218
	Bleustein, Clifford		1. Diesel exhaust will affect asthma rates. 2. Conclusions drawn from PM analysis are flawed; the effects from diesel exhaust at the MTS and surrounding area has not been assessed. 3. The $PM_{2.5}$ analysis is based on false assumptions; the contribution from the facility needs to be added to the background and a cumulative PM analysis needs to be done. 4. There are too many trucks not to have queuing.	214, 49 51 237 238
	Borrell, Wendy		1. Facility is sited in a densely populated area. 2. Tonnages vary at each presentation.	206, 227 215
	Brand, Susan		1. Asphalt Green will not be a safe and healthy place if	206

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			the MTS gets built.	
	Bulua, Stan		1. The impacts are underestimated because the throughput is less than capacity. 2. There is no analysis of why the site was chosen. 3. DEIS did not address impacts to the residential area and parks.	215 210 209
	Bulua, Gail		1. The facility should not be sited in a residential area. 2. MTS siting does not meet current zoning laws.	209 209
	Chadwick, Knox		1. Don't build the facility.	206
	Chase, Norman and Joan		1. The facility should not be sited in a residential area. 2. There is already too much traffic. 3. Should examine alternative method and alternative sites.	206, 209 207 87, 218
	Clarke, Maggie		Refer to oral testimony.	---
	Adams, Joan; Angelo, Casey; Angelo, Lauren; Arkin, Hadara; Atkind, David; Auerbach, Jacqueline; Baker, Patricia; Bandler, Babette; Bartlett, Scott; Baum, Deborah H.; Blasi, Roberta D.; Blau, Joan; Bleustein, Clifford; Bleustein, Sheri; Braverman, Ellen J.		1. The facility should not be sited in a residential area. 2. It falsely assumes that one third of the capacity will be used. 3. The DEIS should look for other waterfront sites. 4. Mitigation is inadequate, impractical and unenforceable. 5. Site would not be acceptable if it were a private transfer station.	209 215 218 236 223

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Bryers, Gabrielle; Bulua, Ariel; Bulua, Gail; Bulua, Scott J. Burrell, Wendy; Carmen, Jake; Carrier, Jesse; Celli, Robert; Chadwick, Donald Chang, Tom; Charrow, Charles; Chou, Katherine J. Christie, Sandra; Cohen, Michael A.; Cordova, Bette; Cosio, Nick; Costello, Annie; Costello, Greg; Curtis, James A.; Cutler, Judith; Davis, Peggy E.; Davis, Terri; Da Costa, Maria Delano, Laura; Desilets, Dolores M. Donovan, Christine; Edelstein, David; Edelstein, Gary; Edelstein, Laurie;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Elkies, Bernard; Elkies, Rhoda H.; Ellis, Mark; Ellis, Peggy A.; Emma, Charles; Fassberg, Marilyn; Feinberg, Barbara; Finkelstein, Seymour; Flaster, Amelia; Flaster, Norman; Fleischer, Eva; Fleischer, Norman; Flieger, Mary K.; Floud, Sharon; Forzano, Sal; Friedland, Lawrence; Friedlander, Jean D.; Friedman, Ed; Friedman, Emily; Gaffaney, Erin; Gaffaney, Kristine; Gaffaney, Lauren; Gaffaney, Lawrence; Galen, Eve; Galen, Timur F.; Gerard, Mort; Genereux, Linda; Geronemus, Gail; Geronemmus, Roy;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Giampaolo, Eileen K.; Giampaolo, Joseph; Gordon, Jodi; Grace, N. Terrell; Graup, Leona Gray, Erik L.; Greenberg, L.S.; Grieco, Audrey M.; Griesman, Todd; Guarnera, Thomas A. Hager, Robert; Hamblett, Brooks; Haroules, B. Harrison, Jane; Harrison, Robert S. Heilbrunn, Lili; Heilbrunn, M.; Helleis, Jacqueline; Hoffman, Carol S. Hoffman, Jack; Holzhen, Lucia; Holzhen, Thomas Huntington, Linda; Huyer, Scott; Ildars, P.M.; Ingber, Hannah; Japha, Joan; Jenkins, C.C.; Johnstone, Douglas S.;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Kahara, T.; Kallman, Joan; Kaplan, Joyce; Kaplan, Howard; Kaplan, Laird A.; Karp, Julie A.; Kassar, Janet A. Katcher, Michael; Konorezov, A.; Krassner, Marshall M. Kronish, Naomi; Kronish, Paul Kroschmitz, Jacqueline Lai, Kathy; Lader, Craig; Lader, Melissa; Lane, Carol; Lane, Mark; Laussugo, Suzanne; Lemon, Dorothy B. Lesser, Gerson; Levy, Edward; Linder, Lindy; Lipitz – Mehrberg, R. Litman, Joseph; Livingston, E. Arthur; MacLachlan, M.F. Magid, Caryn L.; Magid, James I.;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Magnani, Louis A.; Malina, Evelyn Margolas, S.; Marlin, Caroline; Marlin, Richard; McGuire, Kevin; Mead, Catherine Mead, Robert; Miller, Elinor; Mishel, Maury; Muskin, Marlene; Neal, Katherine; Negrin, Leon; Nowak, Henry; Onghera, Peter; Opher, Philip; Osman, Jenny; Owen, Jane; Owen, Randy; Panzica, David J.; Passick, Terri; Pazzaglini, Emily; Pazzaglini, Matthew; Perchick, Wendy; Perez, Daniel; Peters, Debbie; Phillips, John; Pitman, Jennifer; Plimack, Monica;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Quigley, M.J.; Ratner, Carol; Ratner, Jennifer; Rich, Judith P. Richner, Sandra; Rodman, Leroy E. Rodriguez, Jonathan; Roth, Annette; Roth, Carolyn; Roth, Ernie; Rothenberg, Sheldon; Rubenfeld, S. Rubin, Stephanie; Russo, Leslie; Salton, Edith; Savino, Laura; Scheckman, Elliot M. Schneider, Barry; Schneider, Judith E.; Schumaci, Louis; Selton, Gregg; Seltzer, Harold Seltzer, Matt; Senk, Susan; Seplow, Barbara R. Seplow, Kenneth F.; Shah, Linda; Sholinsky, Stephen; Silverstein, Al;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Sippel, Collin; Sise, John S.; Smyser, Hugh; Staiger, Laura A.; Stickney, Patricia; Strober, Deborah; Strober, Renee D. Szediga, Susan M.; Tenca, Doria; Torre, A. Trapp, Amy; Wasserberg, Louise; Wasserman, Carol; Wax, Lynnie; Weinberger, A.; Weinberger, Hazel I. Weinberger, Molly; Weinberger, Peter; Weinberger, Sydelle; Weinfeld, Steven; Weinfeld, Tammy; Weinstein, Jerome; Weir, Rosalie C.; White, Susanne Wilcox, Kristen; Wise, Mary-Elizabeth; Witten, R.; Yasuda, Rumi; Young, Louisa;			

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Zanghellini, R.; Zazosi, Tammy; Zimmer, Samantha; Zimmer, Virginia			
	Curtis, James		1. The facility should not be sited in a residential area, near a historic landmark, or next to a park.	206
	Curtis Jr., James and Rachel		1. The MTS will have severe environmental impacts.	206
	DeCosse, Sheila		1. The MTS should not be near a park.	211
	Duff, Patricia		1. Opposed to the MTS because of severe traffic. 2. The diesel emissions will pose a health risk. 3. Vermin and extermination poisons will pose a health threat. 4. Noise will be a problem. 5. The large volume of sanitation trucks will pose a danger.	207 214 209 207 207
	Edmunds, Kathryn R.		1. This study area is 3x more densely populated than any other study area. 2. Pier 42 should be looked at as an alternative site. 3. East 91st Street includes an EJ community, so outreach should be the same as for other areas. 4. PCEs for sanitation trucks were inappropriate. 5. There were differences in evaluating sites. 6. No buses were counted on 1st, 2nd or York Avenues. 7. Pedestrian counts seem inadequately estimated. 8. Commercial trucks are heavier, so studies need to be adjusted. 9. No information provided on trucks for recycling facility.	227 218 242 65 66 243 243 66 67

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			10. Public health study should be redone. 11. Pollutant risk factors. 12. EJ Problem with the how stakeholders were defined. 13. Tri-fold fliers were deceptive.	55 56 38 38
	Eldelstein, Laurie		1. The facility should be located in an industrial zone.	206
	Emma, Charles King		1. Randall and Wards Islands should be considered. 2. Examine the characteristics of each waste component.	218 25
	Feinberg, Barbara		1. Concerned that the facility will degrade air quality.	206
	Flieger, Scott		1. Site is not good for an MTS	206
	Fields, C. Virginia	Manhattan Borough President	Refer to Oral testimony	---
	Firestone, Evan		Refer to Oral testimony.	---
	Fleischer, Eva		1. Hearing date was not convenient. 2. Site is not good for an MTS.	239 206
	Friedland, Lawrence		1. No justification for this project is provided.	206
	Friedman, Elaine R.		1. The MTS should not be sited near a park. 2. Should not be in a residential neighborhood.	211 206
	Friedman, Grant Ethan		1. Should not be in a residential area.	206
	Friedman, Halle Kate		1. Should not be sited near a park.	211
	Geronemus, Roy	NYU School of Medicine	1. Health concern over placing the facility in a densely populated area.	206, 51
	Geronemus, Roy	Laser &Skin Surgery Center of NY	Refer to Oral testimony.	---
	Glaser, Herb	Glaser's Bake	1. Increased truck traffic will affect deliveries to local	214, 211

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
		Shop	businesses and the customers. 2. Should not be sited in a residential neighborhood.	 206
	Grannis, Pete Assemblymember	Assembly, State of New York	1. What criteria were used to select the 4 MTS sites selected? 2. DEIS fails to address plans to reduce the amount of waste disposed. 3. The Plan is to handle vastly more garbage than the figures listed as average peak day deliveries. 4. The DEIS fails to include a cost benefit analysis. 5. There needs to be a commercial buffer between the MTS and residents. 6. Concern with risks so near the parks. 7. Need added focus on truck emissions. 8. The vehicular and pedestrian traffic studies are insufficient. 9. Need strict enforcement guidelines so bus stops are not blocked. 10. Odors cannot be mitigated by keeping trucks clean. 11. Noise will not be mitigated by limiting the number of trucks at night. 12. Could result in economic losses to Asphalt Green and businesses. 13. Impacts on Carl Schurz Park and Stanley Isaacs/ John Holmes Houses were not addressed.	206, 210 8 209 104 209 211 230 207 219 220 222 211 208, 211
	Grieco, Audrey M.		1. This is not a good site for the MTS	206
	Hall, Betsy		1. The MTS should not be sited in a residential area or near the park.	206
	Hamamoto, David	Brearley School	1. Diesel exhaust will pose a health threat. 2. Rats and vermin are already a problem in the	211, 214 209

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			neighborhood. 3. Noise will be a problem. 4. Trucks will pose a problem to traffic and pedestrian safety.	 222 207
	Havens-Hasty, Nancy; Letaconnoux, Calleen King	Havens Advisors	1. The MTS should not be sited in a densely populated area, or near a park. 2. Queuing trucks will pose a danger. 3. The intersection is already congested. 4. Expand recycling and explore other technologies.	206, 211 207 207 226
	Heilbrunn, Martin and Lila	East 79th Street Neighborhood Association	1. This is not a good site for the facility.	206
	Kaplan, Howard		1. Should not be sited in this neighborhood.	206
	Kennedy, Donna	The Gillen Brewer School	Refer to Oral comments.	---
	Koeppel, Noel		1. Should not be sited in this neighborhood.	206
	Lefer, Jay		1. Should not be sited in a residential area.	206
	Leland, Richard G.	Kramer Levin Naftalis & Frankel	1. The DEIS is vague. 2. No information provided on where waste will go. 3. The DEIS analyzes artificially low throughput. 4. Alternatives are not analyzed. 5. The DEIS manipulates data. 6. Site is not appropriate. 7. The DEIS fails to discuss impacts to businesses. 8. Ramp will impact on open space. 9. No description of how the facility will look. 10. DSNY's siting regulations would not allow the facility. 11. No discussion on land grant impacts.	213 70 1, 215 218 213 206 211 275 216 211 275 216

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			12. Odor analysis did not take into account sensitive receptors. 13. Noise analysis is flawed. 14. Permit does not mention permit limitations. 15. Construction impacts need to include impacts on humans.	 222 215 251
	Lesser, Gerson; Peters, Debbie		1. Should not be sited in a residential area. 2. Analyses must be at full capacity. 3. Other alternatives must be analyzed. 4. DEIS lacks a description of the facility, its dimensions, etc. 5. Would not meet DSNY's siting rules. 6. Mitigation is inadequate.	209 215 218 216 209 236
	Lesser, Eve		1. Should not be located in a densely populated area. 2. A private company would not site the facility at East 91st Street for liability and logistical concerns. 3. Alternative Manhattan sites were not examined.	209 303 218
	Levine, Allen		1. The MTS will affect the area's quality of life.	211, 206
	Linder, Lindy		1. The facility will not operate at half its capacity. 2. The Facility should not be sited in a residential area. 3. Other alternatives must be explored.	215 206 212
	Maloney, Carolyn B.	House of Representatives, Congress of the United States	Refer to oral testimony	---
	McCandless, Deborah and Stephen		1. The facility will not operate at half its capacity. 2. Should not be placed in a residential area.	215 206
	McGuire, Kevin P.		1. This is not the site for the facility.	206
	Miller, Benjamin	Earth	Refer to oral testimony, also	---

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
		Engineering Center, Columbia University	1. Use multiple sites to barge recyclables. 2. Advantages of a franchise system for commercial waste.	81 5*
	Miller, Gifford	Speaker, Council of the City of New York	Refer to oral testimony	---
	Mischel, Maria		1. Opposed to the public outreach efforts. 2. Graphics omit major features of the community. 3. Why is the facility sized for a much bigger facility? 4. Should not place the MTS in a residential neighborhood. 5. Why is east 91st Street facility part of the plan, but the West 135th Street is not?	239 240 215 206 210
	Morin, George		1. NYC needs a state-of-the-art processing and recycling system. 2. MTS should not be sited in a residential neighborhood or near a park. 3. Put the facility adjacent to the west-side railyards.	28 211 218
	Plimack, Monica		1. Opposed to the facility in this neighborhood.	206
	Racine M.D., Andrew		See comments from oral testimony.	---
	Rose, Daniel;		1. Previous MTS had a negative impact.	209
	Roth, Seymour M.		1. DSNY is not being honest with the operation of the MTS. 2. Alternative sites and costs not examined. 3. Whose property will the facility be on? 4. Noise will be objectionable. 5. Odors will be objectionable.	247 218, 70 248 222 220

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			6. Rats will be a health issue. 7. Design is questionable. 8. There is an EJ community involved.	50, 209 2 242
	Salton, Edith		1. Neighborhood is densely populated.	206
	Seltzer, Adele		1. Hearing is at an inconvenient time. 2. Facility shouldn't be in a densely populated area.	239 206
	Senk, Susan		1. Site is not appropriate.	206
	Schmidt, Gordon M.		1. Site is not appropriate.	206
	Schneider, M. Barry		1. Site is not appropriate. 2. Should not be near a park.	206 211
	Schneider, Judith E.		1. MTS should not be sited near a park. 2. Should not be in a residential area. 3. Will worsen truck traffic.	211 206 207
	Shragan, Barbara		1. Should not be sited in a densely populated area.	206
	Smyser, Hugh		1. Should not be sited in a densely populated area. 2. Discussion of planned specifications. 3. Noise, air quality, odors and vermin will be problems. 4. The facility will add to congestion. 5. The facility will severely impact Asphalt Green. 6. The plan is lacking in specifics. 7. No consideration of alternatives. 8. The process is to ram the plan through despite opposition.	206, 211 207 214 207 211 213 229, 208 239
	Staiger, Laura		1. Should not be sited in a densely populated area.	206
	Stone, Shannon	NYC Waste Prevention Coalition and NYC Group of	1. Should strive for Zero Waste in 20 years. 2. Phase out diesel trucks with cleaner-fueled vehicles.	12 82

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
		Sierra Club's Solid Waste Committee		
	Sweet, Melite		1. The facility should not be sited in a densely populated area; will create too many environmental impacts.	206
	Toby, Judith		1. There were environmental problems when the facility was previously open. 2. Would you let your children or grandchildren play within 20 feet of a garbage dump?	209 241
	Todrys, Karol		1. The facility should not be sited in a densely populated residential area	206
	Tripp, James T.B., Cruz, Ramon, Darrell, Andy	Environmental Defense	1. Support of the major goals of SWMP. 2. City needs to take additional measures to minimize impacts at 91st Street in terms of truck operation, ramp issues, queuing. 3. There should be tonnage caps. 4. There must be detailed monitoring, data collection assessment and reporting. 5. Commercial waste system problems must be addressed. 6. The DEIS should evaluate other Manhattan sites and provide information on why the Manhattan sites were chosen. 7. New SWMP doesn't improve the handling of two-thirds of Manhattan's waste.	72 235 235, 1 246 3*, 2* 218 94
	Tweedy, Carol Executive Director	Asphalt Green	Refer to oral testimony.	---
	Warren, Charles S. and	Manhattan	Refer to oral testimony.	---

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Ludorf, Jacqueline	Community Board 8		
	Wasserman, Jack		1. Significant impacts will be created from DSNY vehicle traffic, noise and pollution. 2. Need an analysis of other reasonably cost-efficient sites.	207 210
	Wong, Winnie		1. The facility should not be sited near Asphalt Green.	211
	Zabar, Eli		1. Having DSNY vehicles use 91st Street will put traffic at a complete standstill.	207
	Ferrandino & Associates, Inc. with Vanasse Hangen Brustlin Inc.	Gracie Point Community Council	Numerous comments on the East 91st Street site	207, 209, 210, 211, 213, 214, 215, 216, 222, 227 and 249 through 302
	Budnick, Noah	Transportation Alternatives	1. If the 59th Street MTS is in the Final SWMP, must ensure safety of greenway users.	306
(also Gansevoort Recyclables Acceptance Facility)	Doswell, John, Frederick, Pam	Manhattan CB4	1. Analysis for 59th St. and Gansevoort requires a later build year. 2. Need a noise analysis 3. What were the alternatives to Gansevoort? 4. Other locations need to be examined. 5. Gansevoort site must have an environmental review. 6. The current analysis is premature. 7. Gansevoort site will be parkland only. 8. Noise analysis needed farther east. 9. There is a mischaracterization of the area.	321 322 339 340 341 321 341 342 313

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			10. The area is highly residential.	315
			11. Significant residential information is missing.	315, 319
			12. Additions to future no-build land use	319
			13. Socioeconomic conditions need revision.	318
			14. There are Open Space contradictions.	310, 323
			15. There may be a negative impact on visual resources.	316
			16. Design should involve the public.	324
			17. The neighborhood is not industrial	315
			18. What will be the effects of dredging?	325
			19. There will be impacts on pedestrian traffic.	319
			20. Further traffic analysis is needed.	326
			21. The EIS must consider increase use of bikeway/walkway.	327
			22. Questions concerning private hauler use of the facility.	326, 2*, 10*
			23. What is the contingency if exhaust fans break down?	57
			24. The odor receptor is incorrect.	328
			25. The combined noise analysis must be done.	329
			26. Commercial and residential waste may not have the same odor impacts.	330
			27. The traffic analysis is speculative.	331
(also Gansevoort Recyclables Acceptance Facility)	Doyle, Noreen Executive V.P.	Hudson River Park Trust	1. The Hudson River Park Act imposes restrictions which should be in the FEIS.	310
			2. Existing conditions sections should be modified.	310
			3. Comments for a supplemental.	310
			4. DEIS should acknowledge that the bulkhead is eligible for the State and National Registers of	310

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			Historic Places. 5. Comments on operational hours. 6. Hudson River Park Act would need to be amended to permit the recycling facility at Gansevoort. 7. List Hudson River Trust as an involved agency.	 310 333 311
	Community Board 7		1. W. 59th Street site was not evaluated for its intended use. 2. The underlying policy decisions need to be described. 3. Recycling section of SWMP needs more discussion. 4. What if East 91st St is not approved and Hudson River Park Act doesn't get changed? 5. Section 22 needs to reflect current and near-future neighborhood character. 6. Need to know the loading activity. 7. DEIS should detail what was shown by the studies undertaken. 8. DEIS "neighborhood character" section is incorrect. 9. Include data on District 7's collection and relay trucks, recycling trucks etc. 10. Population statements are wrong. 11. Waterfront Revitalization Program incorrectly identifies several sub-policies as inapplicable. 12. DEIS failed to include a number of detailed items. 13. DEIS should analyze sanitary sewage and stormwater impacts.	313 96 12 314 315 316 317 317 317 318 338 319 320
Gansevoort Recyclables Acceptance	Glick, Deborah J. Assemblymember	Assembly, State of New York	1. The recycling acceptance facility will foul Hudson River Park, and will destroy the park's recreational value due to truck exhaust.	334

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
Facility			2. Children's playground will be adversely affected, and odors in the neighborhood will be a problem.	334
			3. The facility will create traffic problems.	334
			4. There is concern that the number of trucks will grow.	335
			5. There is no information on the proposed financing of the park, and who would get the income from commercial contractors?	312
			6. What would be the learning value of the facility?	336
			7. Explore other sites for recyclables or use more than one site so that Gansevoort will not get all of the burden.	337
			8. Should look explore waste reduction measures.	8
65th Street Rail Yard	Eaton, Craig A.	Brooklyn, CB10	1. Opposed to expansion of 65th Street Railyard.	156
Visy Paper	Domonoske, Daniel	Potential Industries, Inc.	1. DEIS does not evaluate the impacts of trucking paper over the Verrazano bridge to Visy.	32
Manhattan	Romero, Christine Datz, (Chair)	Manhattan Citizens' Solid Waste Advisory Board	1. SWMP is deficient on waste prevention and recycling.	8
			2. Materials that never entered the waste stream should not be included in reduction totals.	12
			3. Phase out trucking for Manhattan waste.	94
			4. Manhattan should have additional transfer sites to decentralize waste handling, particularly below 59th Street.	94
			5. Trucking waste to Newark should stop.	94
			6. Operational and design issues at East 91st Street and Gansevoort must be addressed.	235
			7. Phase out queuing of trucks.	235

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
			8. Encourage clean fuels. 9. Work with the community to develop a creative ramp design at 91st Street. 10. Define the timetable for the Gansevoort facility. 11. Examine efficiency of trucking some recyclables to Hugo Neu in the Bronx. 12. Evaluate the cumulative emissions from alternate trucking schemes, and add TEQ to pollutants evaluated. 13. Plan for the 59th Street MTS to optimize its use and minimize impacts. 14. Excess capacity at 91st Street should be used for some portion of commercial waste, but needs more study.	124 235 333 33 59 305 235
Brooklyn	Diamondstone, Ken	Brooklyn Solid Waste Advisory Board	1. The Plan should identify goals and objectives for the entire 20-year period. 2. Pilot programs are needed. 3. Need concrete proposals to advance Zero Waste goals. 4. Plan is lacking on new initiatives. 5. Plan is lacking relief for EJ areas. 6. What was the rationale for paper going from Brooklyn to the Visy facility? 7.Would like an independent planning task force to advise on a 20-year SWMP.	86 76 12 12, 19, 20 2* 32 95
Greenpoint, Brooklyn	Markowitz, Marty	Office of the Brooklyn Borough President	Refer to oral testimony.	---

Index of Written Comments on DEIS and Draft New SWMP				
Location of Comment	**Written Comment by:**	**Representing**	**Summary of Issues**	**See Comment Number**
	Paris-Mendez, Zaida	Outrage	1. Trucks create noise and pollution; need to reduce traffic.	132
	Shute, Benjamin		1. Reduce truck traffic in Greenpoint and Williamsburg. 2. Increase composting and recycling by educating the public	132 17
	Vevers, Stephanie		1. Reduce the truck traffic in Greenpoint and Williamsburg	132
Involved Agencies	Moore, Michelle	New York State Department of Environmental Conservation	See Section 40.3.3.1 for comments and responses from Involved Agencies.	
		New York City Department of Transportation	See Section 40.3.3.3 for comments and responses.	
		New York City Department of Parks and Recreation	See Section 40.3.3.4 for comments and responses.	

Note:
*See Comment number in Section 40.3.4.3 for this item.

40.3 Comments and Responses

40.3.1 General Comments

40.3.1.1 Facility Capacity and Design

1. Comment: Several comments expressed concern that the DSNY intended to process 4,290 tpd at each of the Converted MTSs and was being inconsistent in its presentation of the capacity it intends to permit at these facilities.

Response: The F~~D~~EIS and the Draft New SWMP explain that each of the Converted MTSs will handle the respective wasteshed historically served by the existing facilities and limited quantities of Commercial Waste, acceptance of which the environmental review in the ~~D~~FEIS shows would not cause any potentially significant unmitigatable adverse impacts. The proposal to process commercial waste at the Converted MTSs responds to the requirements of Local Law 74 of 2000, which directed that DSNY evaluate this issue as a potential means to reduce impacts from the presence of multiple transfer stations in certain neighborhoods of the City.

To dispel confusion on the issue of the permitted capacity that DSNY seeks in the Part 360 permit application pending before NYSDEC, the following presents the anticipated throughputs under various operating conditions and describes DSNY's proposal on the permit limits both on a weekly and on a daily basis for all the Converted MTSs. NYSDEC, as the permit issuing authority, will make the final determination on permit issuance and limits.

This describes the capacity requirements and the DSNY proposed permit limits for each of the four Converted MTSs designated in the Proposed Action, as described in the Draft New SWMP and supporting F~~D~~EIS. These facilities are:

- The North Shore Converted MTS;
- The Hamilton Avenue MTS;
- The Southwest Brooklyn, and
- The East 91st Street MTS.

Table 40.3-1 provides information on the waste flows for DSNY-managed Waste that DSNY would expect to process at each of these facilities under various scenarios that are typical of DSNY operations. Additionally, the maximum daily volumes of Commercial Waste that would be delivered by private carters to each facility, consistent with the analysis of off-site impacts in the ~~D~~FEIS, is listed in the table. Finally, the on- and off-site impact analyses for traffic, air quality, odor and noise as evaluated in the ~~D~~FEIS are listed. The table notes following Table 40.3-1 provide additional information on the sources, underlying assumptions and application of the data in the table.

Table 40.3-2 presents the permit limits that DSNY has proposed to NYSDEC, which is in the process of reviewing a Part 360 Solid Waste Facility Permit Application for each of these facilities. When NYSDEC deems the application complete, it will hold public hearings on each of the applications. If NYSDEC's permit review and hearings process results in a permit issuance, permit conditions will apply to the operation of each facility and the waste types and volumes that can be processed under stipulated conditions. The table notes following Table 40.3-2 provide additional information on the proposed application of these Permit Limits.

Table 40.3-3 presents the Permit Limits that DSNY has proposed to NYSDEC to address a circumstance when there is a disruption in an element of the overall DSNY waste management system or when a public emergency requires that DSNY, acting on the basis of protecting the public health, must use the maximum design capacity at all facilities to remove accumulated refuse from the streets as quickly as possible. The classic example of this Emergency Condition is refuse collections after an extended snow emergency, when refuse has accumulated on the streets. The table notes following Table 40.3-3 provide additional information on the proposed application of these Permit Limits.

Table 40.3-1
Converted MTSs
DSNY and Commercial Waste Anticipated Capacity Requirements
and
Capacities Evaluated in the New SWMP DEIS

Converted MTS Location	DSNY-Managed Waste			Potential Commercial Waste (Noise Constrained) (tpd)[4]	Maximum Daily Waste Evaluated in DEIS for Off-Site Impacts (tpd)[5]
	DSNY Average (tpd)[1]	Average Peak Day (tpd)[2]	DSNY Holiday Week Peak (tpd)[3]		
Hamilton Avenue	1,900	2,280	2,850	1,274	~~**4,100**~~ **3,522**
Southwest Brooklyn	950	1,140	1,425	718	~~**3,451**~~ **2,106**[~~6~~]
East 91st Street	720	864	1,080	780	~~**2,892**~~ **1,873**
North Shore	2,200	2,640	3,300	1,000	~~**3,991**~~ **3,672**

Table Notes:
tpd = tons per day

1. The DSNY average ton per day (tpd) values are based upon an analysis of the historical volumes of DSNY-managed Waste generated annually averaged over 302 days per year in the respective MTS wastesheds.
2. The Average Peak Day (tpd) in column 2 is approximately 20% higher than the Average Day and reflects the daily and seasonal variability in DSNY's weekly collections as well as the potential growth waste generated over time, as a function of future population growth.
3. DSNY experiences a holiday week collection peak day, column 3, when a scheduled holiday reduces six days of collection activity to five days. Post-holiday day peak day collections can be approximately 50% above the annual average day.
4. Column 4 is the quantity of Commercial Waste that could be processed during the 8:00 p.m. to 8:00 a.m. time period without causing off-site noise impacts and was presented in the Summary Report in Volume III of the Commercial Waste Management Study, and also reevaluated in the FEIS. This 8:00 PM to 8:00 PM time period is the period when commercial carters collect waste in the City and DSNY collection operations are at their lowest volume. Local Law 74 of 2000 directed that DSNY evaluate the potential to process commercial waste at the MTSs. The arrangements under which processing of commercial waste would occur will be the subject of discussion between DSNY and the City Council during the adoption of the New SWMP.

Table Notes for Table 40.3-1 (Continued):

5. The Maximum Daily Tonnage Evaluated in the FEIS for Off-Site Impacts, Column 5, is the sum of data derived from the following sources and methods: (i) a calculated value from a sample of available, historical 1998 data for the Average Peak Day for DSNY-managed Waste in the Converted MTS wastesheds plus a 20% contingency allowance that reflects variations in the waste stream and a margin of conservatism in the analysis of the potential for significant adverse *off-site* impacts related to traffic, air quality, and noise (essentially DSNY collection vehicle traffic to and from the Converted MTS); and (ii) the Commercial Waste Tonnage identified in column 4. Note that the historical 1998 data for the Average Peak Day for DSNY-managed Waste evaluated in the FEIS exceeds the value listed in Column 2 for the Average Peak Day.

~~6.This total is restricted for off-site noise analyses to 3,341 tpd, but was analyzed for all other off-site impacts at 3,451 tpd.~~

Table 40.3-2
Converted MTSs
DSNY-Proposed Weekly and Daily Permit Limits

Proposed Permit Limit	Weekly Limit – tpd times 6 days per week Tons per Week[(1)]	Maximum Peak Day (tpd)[(2)]
Hamilton Avenue	21,324	~~4,100~~ 3,522
Southwest Brooklyn	11,148	~~2,143~~ 2,106
East 91st Street	9,864	1,860
North Shore	21,840	~~3,991~~ 3,672

Table Notes:

tpd = tons per day

1. The Weekly Limit (column 1) proposed is the sum of: (i) the DSNY Average TPD amount shown in Column 1 of Table 40.3-1 multiplied by 6 days per week and increased by a 20% contingency factor to allow for seasonal variability, growth in waste generation and system redundancy; and (ii) the Maximum Commercial Waste in Column 4 of Table 40.3-1 multiplied by 6 days per week. This limit would not be exceeded in any calendar week, except for an Emergency Condition.

2. The Maximum Peak Day TPD limit (column 2) is proposed as the level sufficient to enable DSNY to process holiday-week peak day tonnage which, based on DSNY historical data, is often 150% of average TPD throughput. This limit is calculated as the lesser of: (i) the sum of the 150% of Average TPD for DSNY-managed Waste plus the Commercial Waste from column 4 of Table 40.3-1; or (ii) in the case of Hamilton Avenue, Southwest Brooklyn and North Shore, the maximum capacity evaluated in the FEIS (from Column 5 of Table 40.3-1) for off-site impacts and shown to have no significant adverse impacts.

Table 40.3-3
Converted MTSs
DSNY-Proposed Emergency Permit Limits

Proposed Permit Limit	Upset Condition Limit (Time Limited tpd)[(1)]	Emergency Condition limit (Time Limited tpd)
Hamilton Avenue	4,290	5,280
Southwest Brooklyn	4,290	5,280
East 91st Street	4,290	5,280
North Shore	4,290	5,280

Table Notes:
tpd = tons per day

1. The Upset Condition Limit would be defined as an infrequent, short-term event causing a reduction in the processing capacity of an element of the DSNY waste management system, such as a fire or equipment outages, requiring a temporary re-allocation over a period of few days duration, during which the tonnage normally processed by the affected element of the system is diverted to other unaffected elements of the system. The proposed Upset Condition Limit is the capacity of the Converted MTSs as documented in the Basis of Design discussion in the permit application, which is 4,290 tpd for all the Converted MTSs. The FEIS evaluated the potential for significant adverse impacts *on-site* related to air quality, odor and noise, assuming the facility were operated at its design capacity. The analysis evaluated emissions from all on-site sources, including equipment trucks inside the processing building and tugs servicing barges that would result from operating the facility at its design capacity.

   The basis of design for the proposed MTS considered hourly and daily peak arrival rates for DSNY collection vehicles and tons of DSNY-managed Waste. The hourly throughput rate was established to ensure that the MTS could process anticipated peak hour deliveries of DSNY-managed Waste. This peak arrival rate for DSNY collection vehicles occurs during the second shift, typically for one hour between the hours of 8:00 a.m. to 12:00 p.m. Given on-floor storage capacity, the number of tipping bays and on-site truck queuing space on the ramps, this arrival can be accommodated without any off-site queuing. Daily capacity is a function of the number of operating shifts and shift hours during the day.

   The MTS would operate for three shifts to accommodate anticipated deliveries of DSNY-managed Waste over a 24-hour period. Given these parameters for receiving and containerizing DSNY-managed Waste, there is also the potential for deliveries of Commercial Waste to the MTSs during nighttime periods between 8:00 p.m. and 8:00 a.m. when deliveries of DSNY-managed Waste are substantially less than the facility's available capacity.

Table Notes for Table 40.3-3 (Continued):

Hourly throughput and daily design capacity are based on the following assumptions:

- The MTS would process 10 containers per hour using three loading slots with the fourth maintained in a spare mode.
- The loader level would be kept as clear of waste as possible during processing hours by loading all waste received into containers as soon as possible and keeping stockpiles at a minimum.
- Each container would be loaded with approximately 20 to 22 tons of waste.
- Each barge would be loaded with 48 containers of waste.
- Barge switches would not interrupt waste processing operations.
- Employees would effectively work 6.5 hours out of an 8-hour shift due to shift changes and break time during the shift, resulting in 19.5 operating hours per 24-hour day.

Using these parameters, hourly throughput approximates 220 tons and the average design capacity is 4,290 tpd (220 tons per hour x 19.5 hours per day) for the four Converted MTSs.

Because a Converted MTS could operate at its design capacity of 4,290 tpd, the FEIS evaluated the on-site impacts associated with operating at this 4,290 tpd level to determine the potential for adverse impacts. The analysis accounts for air, odor and noise emissions related to all on-site indoor and outdoor equipment, including DSNY collection vehicles inside the building and queuing on the ramps to the processing building, and tugs and cranes servicing barges at the facility. These on-site air quality, noise and odor analyses found no unmitigable significant potentially adverse impacts. This result eliminated the need for further more refined analyses of on-site impacts at lower waste throughputs.

2. The Emergency Condition Limit would be defined as a rare, public emergency event affecting the entire or a large part of the waste management system. An emergency event would allow DSNY, acting on the basis of protecting the public health, to use of the maximum design capacity at all facilities to remove accumulated refuse from the streets as quickly as possible. The classic example of this Emergency Condition is refuse collections after an extended snow emergency, when refuse has accumulated on the streets. The maximum design capacity at the four Converted MTSs is 5,280 tpd as documented in the Basis of Design discussion in the permit application, assuming the facility is staffed for an emergency to operate with three full shifts and no break time, i.e., 24 hours a day.

   Because neither of these conditions is typical of how the Converted MTSs would normally operate, CEQR does not require impact analyses that evaluate an abnormal event scenario.

2. **Comment:** The design of the MTS seems lacking in durability and reliability in terms of the containerization process and its operation will have serious impacts on the surrounding community. It appears that the containers can be easily damaged, the lidding operation is dangerous to the work crew, and the wheeled transfer platforms are susceptible to malfunction. During icy, rainy, or snowy conditions, it appears that there may be service interruptions or a high risk of injury to operating staff.

Response: The design features of the facility that insure reliability in operations and minimize the potential for impacts on neighboring communities include the following:

- The Converted MTS is designed to receive and process up to 36 collection vehicles an hour, more than anticipated in the peak hour. Trucks queuing outside the old MTS buildings were a frequent source of complaints. Accordingly, the new tipping floor for the Converted MTS is designed with a large maneuvering area and six tipping bays to unload six trucks at a time.

- The tipping floor is 12 feet above the loading floor, which accelerates the unloading process by eliminating potential interference between collection vehicles and mobile waste processing equipment. Truck turnaround time is also improved through the use of automated scales in contrast to the manual weigh-in – weigh-out system at the old MTSs. Finally, should the arrival rate ever exceed the 36 trucks per hour design criteria, the ramp is structurally strong enough to hold queuing trucks. Although the peak arrival rate occurs during only one hour a day, the need to accommodate this peak rate, maintain the efficiency of DSNY collection operations and avoid on-street queuing problems were all important considerations in the design of the building.

- The loading floor is designed to process 220 tons per hour into containers, using three of four processing lines with one held in reserve as a spare. The floor can also provide approximately 760 tons of on-floor storage in the event of a delivery surge or a delay in barge arrival. These design criteria enable the facility to manage maximum expected arrival rates without excessive queuing or turning away trucks. The fourth processing line provides redundancy in the event of mechanical problems affecting one of the other processing lines.

- Container loading and lidding operations occur on the level below the loading floor and are within the enclosed building to prevent the escape of litter and odors to the outside environment. The through-the-floor loading system is a simple, fast, gravity-based process to assure a high degree of reliability.

- The building's ventilation system is designed to maintain negative pressure in the building at all times, even when doors are open with the capability to provide 12 air changes per hour, compared to the code standard of 6. It is also equipped with an odor neutralizing system that treats air as it is exhausted from the building to remove 90% to 99% of the odors from the building's exhaust air. The neutralizing system uses a natural neutralizing agent that is made from a plant compound.

Additionally, the facility will have the following state-of-the-art environmental controls:

- An advanced odor control system; and
- A ventilation system exceeding building code standards that maintains negative pressure to prevent the escape of odors to the outside under all conditions.

The components of the containerization process, including the containers, lids, shuttle cars, lidding hoists and gantry cranes, are all designed for extreme continuous duty in harsh marine environments.

The containers are specifically designed to handle municipal solid waste (MSW). Their strength is much greater than standard traditional cargo containers found at most marine terminals. These high strength environmental containers meet the American Railroad Association (ARA) and the American Bureau of Shipping (ABS) standards, and are industry standard equipment in many intermodal transfer operations.

The container lid is designed for high strength, water tightness and odor control. The lid design also incorporates a twist lock latch system currently used in the industry to fasten containers to transport trailers and rail cars. This new lid and latch system eliminates the need for workers to manually remove and reattach the lids. In this design the lids will be mechanically removed and reattached to the containers by an electric hoist attached to a spreader mechanism and locking device that will automatically position itself and automatically lock itself to the lid.

The entire process, including shuttle car operations, lidding/unlidding operations, container filling, and barge loading/unloading, will be controlled automatically or manually by operations staff located in safe controlled environments.

The shuttle cars designed for this process are simple, rugged and reliable. Their design is based on similar cars used in the paper and steel mill industries to automatically move large heavy materials. They are battery powered remotely and automatically-controlled vehicles designed to handle the rigors of constant heavy use in all weathers and environments. Use of the shuttle cars for container movement is a safety improvement for the operating staff.

The MTSs are designed with considerable flexibility and redundancy to allow for mechanical failure, proper maintenance operations, and other process-related interruptions that may occur, such as inclement weather. Each equipment system has been carefully designed for the harsh marine environment it will be exposed to. Components have been specified to be of extreme duty construction, supplied by manufacturers who have experience building this specific equipment.

3. **Comment:** Why are none of the new MTSs planned to have compacting capability?

Response: Compaction of waste is part of the process operation at all of the new MTSs. Waste material will be compacted by tamper/excavators as each container is loaded to its capacity. In addition, the loading floor and the operation of the wheel loaders have been designed for pre-crushing and compaction of the waste before it is pushed into the containers.

4. **Comment:** The safety and well-being of any neighborhood includes that of the workers at the MTSs and private transfer station sites, who deserve prevailing wages, uncompromised safety protocols and other basic rights.

Response: DSNY is highly committed to worker safety. The safety and well being of the DSNY and private employees who would staff the Converted MTSs and container loading piers, respectively, are protected by applicable law and by collective bargaining

and employee agreements. The safety of the employees of private transfer stations is protected by employee agreements and by applicable law.

5. **Comment:** All methods used for long-range transport must have hard/fixed type covers to control odors and spillage. In terms of rail transport, full rail cars must not be permitted to sit at any location longer than 6 hours.

Response: All containers used at the Converted MTSs will be sealed and leakproof as required under 6 NYCRR Part 360, Subpart 360-11 and conform to ARA and ABS standards. All waste will be loaded into these containers within 24 hours of its receipt. Containerized waste will be removed from the Converted MTSs by barge as soon as the barge is full. In the case of truck-to-rail facilities, the containers will be removed from the site when the rail cars are full, or within seven (7) days, whichever comes first, in accordance with Subpart 360-11. There are no provisions in the current regulations governing solid waste facilities that require rail cars to be moved from a location after 6 hours.

6. **Comment:** The MTS facilities should allow flexibility for the City to use them for the movement of recyclables and compostables.

Response: The Draft New SWMP describes the facilities and services that exist or are elements of the Proposed Action for Recycling and also provides extensive information on DSNY's composting activities. The intended purpose of the Converted MTSs is not to process these materials. DSNY has other dedicated other facilities for this purpose.

40.3.1.2 Alternatives Analysis

7. **Comment:** A number of comments stated that the DEIS is inadequate in assessing alternatives to the Proposed Action. Many indicated that the only sites evaluated were the existing MTS sites, and the only alternative examined for handling the City's waste was long-term export.

Response: Chapter 1, Section 1.3 of the FEIS incorporates revisions that clarify the Alternatives considered in formulating the Proposed Action for Long Term Export. The following is a summary explanation.

In July 2001, Mayor Michael Bloomberg completed an evaluation of the Long Term Export Program and directed DSNY to evaluate waste containerization and export from the City's eight existing Marine Transfer Stations (MTSs). The Long Term Export Program was an element of the City Council and State approved 2000 SWMP Modification supported by an October 2000 FEIS that analyzed long term export options at some 20 different sites with 25 different facility options across the City. (The 2000 SWMP Modification and supporting FEIS are available from DSNY on request.) The Mayor's decision to pursue containerization at the MTSs was made after a determination that insurmountable problems prevented the implementation of the Linden EBUF project. The Linden project, a key component of the 2000 SWMP Modification, would have received waste from five existing MTSs, three in Manhattan, Hamilton Avenue and North Shore. The Alternatives evaluated in the 2000 SWMP FEIS were not acceptable substitutes for Long Term Export from the three Manhattan and the North Shore MTS wastesheds, which comprised four of the five MTSs wastesheds that the Linden Project would have served.

In July 2002, the Mayor announced that the City would move in a new direction by redeveloping all eight of the MTSs as facilities capable of containerizing waste for intermodal transport by barge or rail to out-of-City disposal facilities (Converted MTSs). Since that announcement, DSNY has worked diligently with NYCEDC, the Law Department and other City agencies to implement the Mayor's policy directive.

In the course of this work, DSNY has considered Alternatives. DSNY has proposed to implement four Converted MTS projects, not eight. Other Long Term Export options have been identified to serve the West 135th and West 59th Street wastesheds in Manhattan, and the wastesheds formerly served by the South Bronx and Greenpoint MTSs. These options are now part of the Proposed Action, because DSNY believes they

can be implemented more quickly, are more cost effective than developing Alternative Converted MTSs for those wastesheds and also avoid adding new in-City waste transfer capacity, particularly in the Bronx and Brooklyn where there is a relative concentration of private waste transfer stations.

Additionally, DSNY included an investigation of alternative rail or barge export sites in Manhattan in the Scope of the CWMS. Three of the four sites investigated, West 140th Street (between the North River Water Pollution Control Plant on the Hudson River and the Henry Hudson Parkway), West 30th Street and Pier 42 on the East River were found to be infeasible. The reasons for that finding are reported in the CWMS, Volume V, Manhattan Siting Study that is included as Appendix I in this FEIS. Finally, during the re-procurement of Interim Export contracts for DSNY-managed Waste from Manhattan awarded in November 2004, DSNY established that the LIPCo/Covanta waste-to-energy facility in Rahway, New Jersey, had insufficient capacity to serve as a primary disposal facility. This facility was awarded an Interim Export contract for backup capacity in the amount of 125 tpd, substantially less than is generated in any of Manhattan's three wastesheds.

40.3.1.3 Waste Reduction and Recycling

8. **Comment:** The City's Solid Waste Management Plan has failed to address alternatives to export for disposal. This is in violation of the State's Solid Waste Management Act. In 2000, DSNY's SWMP focused on long term export due to critical time constraints, but they promised that the next plan would be more comprehensive. The Plan needs to more adequately address the alternatives to long-term export, focusing on waste reduction, re-use, recycling and composting. It will be more difficult to institute these types of programs once the long-term export facilities are built. The contracts should be written in a way to encourage and reward recycling. By way of contrast, the 1992 Comprehensive Waste Management plan offered 86 ambitious waste prevention and recycling initiatives. The 1995 update had 47 milestones, some of these goals were accomplished and most were delayed or forgotten. The New SWMP lists 22 reduction milestones, of which only

4 are new concepts (electronics recycling, paper-bagged yard waste, an annual electronic newsletter, and revisions to LL19), and only one of which reduces tonnage. This is not progress.

Response: Waste reduction, reuse and recycling are important components of the proposed New SWMP. The number of recycling and waste reduction alternatives to disposal in successive SWMPs has not decreased because of the city's diminished commitment to such alternatives. The number of alternatives has been reduced because over the period of time discussed many have been adopted as programs and many others have proven themselves to be incapable of practical implementation. The change reflected in the City's various SWMPs over time and is informed by the results of the conduct of numerous SWMP-related pilots, initiatives and studies that have focused on the feasibility of alternatives.

9. **Comment:** A number of speakers supported the 70% recycling goal to be met by the year 2015; but thought that the SWMP should include the supporting details as to how to achieve this goal. Costs should be provided, along with plans for improvement of the existing system. There is a lack of information on how the City intends to establish the infrastructure necessary for greater reuse, composting and recycling. Assuming that construction and demolition waste and fill material constitute a large share of the 70%, the SWMP must address these types of transfer facilities and recycling of the commercial waste stream.

Response: The statement is correct that recycling of construction and demolition waste and clean fill material is essential to achieving the 70% city-wide recycling target proposed. The Draft New SWMPs' 70% overall recycling can be achieved over time through Existing Programs and New Initiatives. The citywide recycling average, based upon NYSDEC's own accounting system for recycling is currently in excess of 62%. Therefore, DSNY believes the gain of eight additional percentage points over the time period discussed in the Draft New SWMP is a reasonable goal.

10. **Comment:** The City should consider the merits of investing dollars within New York City to create industries that use our waste materials to manufacture new products instead

of sending dollars out of the City to export waste. Specifically, borough-based eco-industrial parks could be developed. An analysis of the benefits and costs of choosing an economic development path are completely absent from the SWMP.

Response: The private sector is already an active participant in the recycling industry, where the economics are justified. The City actively seeks opportunities to foster economic development that would utilize waste materials as a resource. A notable success has been the Visy/Pratt Industries paper manufacturing plant on Staten Island, which was financed with City assistance and which currently recycles waste paper under contracts with DSNY. Additionally, the City will soon be entering into a 20-year contract with Hugo Neu to recycle the City's metal, glass and plastic and a portion of the City's paper stream. A recent publication issued by DSNY, *Processing and Marketing Recyclables in New York City*, available on the DSNY's website at: http://www.nyc.gov/html/dos/html/recywprpts.html#1 provides useful information on the economics of recycling in NYC.

11. **Comment:** How long will the City talk about studying composting at Hunts Point without developing any new facilities? The Riker's Island Project was supposed to be the test facility with commercial scale facilities to follow. Greater attention is needed in the SWMP on composting of food waste.

Response: With the recent increase in the regulated commercial carting fees for wet waste, including food market waste, economic incentives exist for the Hunts Point Market Cooperative to consider composting as a less expensive disposal alternative. Rikers Island was the test facility for a particular type of compost technology (in-vessel composting), but is not one of the technologies proposed for use at Hunts Point.

12. **Comment:** The City should adopt the Zero Waste initiatives and the SWMP should examine better ways to recycle and prevent waste, since waste prevention, was key to reducing costs. The City should be more aggressive in its programs: target food and yard waste for composting, recycle textiles and more types of plastics, and support of State-level efforts like expanding the "bottle bill". Commercial and institutional recycling should be improved through the establishment of recycling programs at major

transportation hubs and parks and stadiums, increasing the number of collection and distribution sites for special recyclable collections such as hazardous material or new compost, and an analysis of programs which currently recycle waste, but were not discussed. The DEIS needs to study the impacts of increased recycling and how it would reduce truck traffic and the need for disposal sites. There needs to be an organized system for diverting loads from the MTS that contain large quantities of recyclables.

Response: Waste reduction, reuse, and recycling will continue to be central to waste management under the New SWMP, which contains several initiatives to expand what is already by far the largest mandatory recycling program in the nation. As the cost of waste disposal increases, the economics of recycling and waste reuse improves, in addition to the environmental benefits of resource conservation. DSNY actively follows recycling markets to determine whether designation of additional items for recycling makes sense.

With the recommencement this year of weekly collection for Curbside Recyclables in all boroughs, the City has made a significant financial commitment to building a Recycling Program that is and will remain an important element of its waste management strategy. That commitment is reinforced by related commitments in the Draft New SWMP to several important actions and initiatives. As discussed in the Draft New SWMP, the following commitments are major steps toward attaining substantially higher waste diversion rates. The commitments to significantly higher waste diversion goals are ambitious goals that reflect a comprehensive, experienced and realistic assessment of what the City can attempt to achieve.

<u>Significantly Increased, Percentage Based Waste Diversion Goals</u>

The Draft New SWMP sets a 70% diversion goal for the combined Commercial and DSNY-managed Waste streams to be achieved by 2015. In the near term, the City should meet a 25% diversion goal for the curbside and containerized waste generated by residents and institutions, and a 35% diversion goal for the total DSNY-managed Waste stream by 2007.

South Brooklyn Marine Terminal Materials Processing Facility

As noted in the Draft New SWMP, DSNY with NYCEDC proposes to develop a Materials Processing Facility at the South Brooklyn Marine Terminal in Brooklyn through a public-private partnership involving a 20-year service agreement with a private recyclables processor, Hugo Nue Corp (HNC). This is an important element of the foundation for increased diversion rates for curbside and containerized waste through DSNY's Curbside Recycling Program. The long-term commitment to a Materials Processing Facility will facilitate the development of state-of-the-art processing infrastructure in the City, which in turn will generate the consistent streams of materials necessary to foster reliable secondary materials markets and enable the diversion of Curbside materials that are now discarded.

As noted in the Draft New SWMP, the major advantages of this commitment to develop a Materials Processing Facility are:

- Commits the City to maintain its Curbside MGP Program over the next 20-years.
- Creates a relationship in which the processor has economic incentives to expand product markets and thereby increase the net recovery rate for MGP. Historically, DSNY has had considerable difficulty in establishing stable and cost-effective relationships with the contractors that have processed its Curbside MGP, in part due to the practice of contracting for a five-year term with a short-notice cancellation clause. This created economic uncertainty for the contractor and discouraged investments in facility upgrades to improve recovery rates. The 20-year term of the service agreement removes these disincentives and will create a relationship in which the processor has economic incentives to expand product markets and thereby increase the net recovery rate for MGP processed.
- Enhances the opportunity to produce and market new products by recovering materials that are now marginal. The City's Curbside MGP collections have high proportions by weight of glass, particularly mixed-color, broken glass, a material which does not have economic markets. Better technology to be used in the proposed materials processing facility, in addition to aggressive research and development – both afforded by a long-term contract – is expected to improve the sorting of glass and help address this situation.

- Secures competitive price terms for the City and stabilizes costs over the long term.

The long-term contract is expected to lower the City's cost for processing MGP recycling to approximately $48 per ton, compared to $51 per ton under current contracts, and $59 less per ton than the $107 that the City was facing before the program was suspended two years ago. Note: This does not include the City's proposed contribution to site improvements for this project.

Waste Composition Study

DSNY is currently performing a four-season Citywide Waste Composition Sort (WCS),[1] involving the sorting of both residential refuse and recyclable streams. This study, an update of the WCS first undertaken in 1989-1990, will provide essential data to solid waste planners, especially in the recycling field. The 2004 Spring Sorts found that 21% of the MGP stream consisted of non-designated materials. Much of that figure consisted of materials that potentially could be designated for recycling some time in the future, depending upon markets and advances in sorting technology. Nevertheless, one of the major goals of the Recycling Program over this 20-year SWMP planning period must be to reduce this rate as much as possible. This can be accomplished through the sustained public education and enforcement efforts described later in this section.

The WCS data will inform the City's ambitious diversion goals, as well as the choice of programs necessary to reach these goals over the course of this new SWMP planning period. For example, 12.2% of the non-designated material category consists of refuse thrown into the recycling bin, the next largest category (6.5%) consists of plastic containers that are not currently designated for recycling collection. DSNY currently asks residents to separate #1 and #2 plastics in the form of narrow-neck bottles; previous vendors relied largely on manual sorting of plastics and it was easier for sorters to recognize a shape than read a number on the bottom of a container. However, HNC has expressed interest in testing more sophisticated sorting technologies that may facilitate

[1] Among the requirements of a SWMP are to "characterize the solid waste stream to be managed in the planning period." (New York State Environmental Conservation Law, Section 27-0107, Subsection 1.b.i.).

the addition of other plastic types (#3 to #7) in the future. This move would increase diversion and reduce the non-designated material rates.

Regarding yard waste, the Spring Sorts took place in May and June 2004 and therefore will likely reflect a higher percentage of yard waste, including leaves, grass and prunings, than will probably be found in the other three seasonal sorts that followed. What is noteworthy, however, is that the percentage of yard waste in the total spring waste stream (7.7%) is substantially higher than in the Spring Sort, conducted as part of the 1989-1990 Study (4.1%).

The organic fraction of the waste stream will play an important role in meeting the diversion goals of this SWMP. To keep yard waste out of the waste stream, DSNY is restoring funding to its backyard composting and "Leave in on the Lawn" education programs and its subsidized compost bin promotional programs. In addition, DSNY will continue to promote its compost facility to residential landscapers.

Appliances and electronics, a category not assessed in 1990, comprised a very small fraction of the overall waste stream in the 2004 Spring Sorts – 0.92%. Nevertheless, electronics are a growing and potentially toxic fraction of the City's waste stream. To deal with this issue, DSNY is undertaking the electronics-recycling initiative described in Section 2.4.5 of the Draft New SWMP.

Finally the Draft New SWMP outlines a series of ongoing waste prevention, market research and public education initiatives that are necessary elements of a strategy to increase waste diversion rates.

13. **Comment:** The DEIS and SWMP fail to address proven methods for diverting food waste, such as the use of garbage grinders. The SWMP should examine effective programs in other cities, for handling food waste.

Response: Residential garbage grinders became lawful in New York City recently and are just beginning to reduce curbside organic waste from households. However, such grinders neither prevent waste nor pollution, and just change its form and require

handling by the City's wastewater treatment plants rather than its solid waste management system. NYCDEP studied the long-range effects on the City's wastewater system of the use of garbage grinders in households and agreed to absorb the potential diversion of household food waste through the permissible installation of garbage grinders in City households. NYCDEP did not approve the use of garbage grinders for commercial users and has not agreed to absorb the increased demands on the City's wastewater system from the installation of garbage grinders for commercial establishments. DSNY is proposing a pilot program to compost commercial food waste from the Hunts Point Market in the Bronx.

14. **Comment:** The draft SWMP did not discuss the waste prevention coordinators program. We recommend that the program be reestablished and expanded so that there is one waste prevention coordinator in every community district, whose responsibility will be to increase waste prevention in the residential sector.

Response: The Waste Prevention Coordinators Program results are described in public reports (see DSNY web page). Reports highlighting their various program efforts over the one year of funding made available by the Council have been widely circulated within the waste prevention community. As each ton of waste prevented cost an average cost per ton of $750, this program proved to be prohibitively expensive and is not proposed to be replicated in a city-wide publicly-funded program

15. **Comment:** Chapter two of the SWMP should be entitled "Waste prevention, reuse and recycling". The omission of the term "reuse" coveys a lack of understanding about the waste management hierarchy. The development of a community reuse complex should be included in this section.

Response: Duly noted, refer to content of programming. No community reuse complex is proposed at this time, but could be considered in the future.

16. **Comment:** The SWMP fails to discuss the need for the conduct of a waste characterization study every five years.

Response: The current study is expected to cost as much as $5 million, and the results, which build on a similar study conducted in 1989 – 1990, will be useful as a basis for making programming decisions and data comparisons for as many as twenty years. Unless circumstances change rapidly, DSNY sees no need to conduct a waste characterization study every five years.

17. **Comment:** More marketing research on achieving greater public education is needed. The general public needs to be better educated about waste prevention, recycling and reuse. Reuse should be particularly stressed in children's educational programs.

Response: The New SWMP would continue DSNY's outreach and education efforts about waste prevention, reuse and recycling. These include outreach to schools. DSNY is in the process of conducting further market research as noted in the Draft New SWMP. Market research, conducted in the past (see report on DSNY web page) indicated that most New Yorkers, a diverse, dynamic and extremely mobile population, are in fact very aware of the requirements of recycling in NYC. The reasons why many New Yorkers do not fully recycle has a great deal more to do with lack of convenience and personal motivation; much more difficult challenges to overcome than mere lack of knowledge.

18. **Comment:** It is good that DSNY is instituting an annual household hazardous waste collection day, but it is recommended that additional items be added for collection. Electronic waste should be included in pick-ups.

Response: Electronic waste represents a very small (less than 1%), but potentially toxic fraction of the waste stream. DSNY is exploring the possibility of including these items in its collection programs, as well. See Draft New SWMP section 2.4.5.

19. **Comment:** The City should enact legislation which would pressure companies to reduce packaging and waste. Businesses should be encouraged to generate less waste, and should be responsible for the waste they create.

Response: The suggested approach is unfortunately not feasible at the municipal level. The City cannot act in isolation from the federal and state government on this type of legislation without creating an incentive for City manufacturers to relocate.

20. **Comment:** The City should develop additional recycling capacity in each borough through borough-based recycling industrial parks.

Response: To evaluate this goal and for a basic understanding of the economics of recycling in NYC the author of this comment is referred to DSNY's recent publication, *Processing and Marketing Recyclables in New York City*, available on the DSNY's website at: http://www.nyc.gov/html/dos/html/recywprpts.html#1. The report also provides a discussion of the current economic constraints that govern the processing and marketing of recyclables. See also response to Comment #15, above.

21. **Comment:** The Plan states that the City supports Federal legislation to establish producer responsibility for electronic waste. The City should be pursuing local EPR legislation. In addition there should be means of picking up electronic waste on a regular basis.

Response: Department of Sanitation continues to pay close attention to the emerging issue of electronic waste, which is less than 1% of the household waste stream. The Draft New SWMP clearly expresses the City's preference that manufacturers deal with electronic waste themselves. The City is willing to work with the manufacturers and distributors of electronics in the absence of regulation to assist in the proper disposal of electronics, but not to bear the full financial burden of operating separate electronic waste collection and disposal programs, which would be prohibitively expensive. Collection costs are the greatest share of recycling program, primarily due to the fact that less than 50% of what was formerly waste is targeted at each household in a recycling program. The collection costs associated with targeting less than 1% of household waste, for separate collection is not practicable. See also response to Comment #12, above.

22. **Comment:** Future improvements to the City's recycling rate are put into question by the City's plan to modify Local Law 19. This is a major undertaking. Local Law 19 should only be amended if it will improve the City's recycling program.

Response: The proposal to modify LL 19 is separate from the success of the City's recycling program and the proposal to achieve even higher diversion rates in the future. As explained in the draft New SWMP, Local Law 19's tonnage mandate is based upon an inaccurate refuse tonnage assumption. Unachievable mandates can have the effect of undermining support for the recycling program. Rather than mandates, the Draft New

SWMP proposes achievable goals that can be strived for over a reasonable period of time. The goals suggested in the Draft New SWMP are both ambitious and within the City's reach.

23. **Comment:** The Draft New SWMP should include a discussion on the greatest cost component of recycling, i.e., collection. Means of reducing costs should be examined, such as the use of dual bin trucks, or other alternatives.

Response: DSNY has tested out a number of alternative vehicles over the last 15 years and currently uses the suggested dual bin vehicle in over 21 of the city's 59 community districts to collect recyclables.

24. **Comment:** There are no details provided on the Hugo Neu contract, specifically if the contract is flexible enough to adapt to the changing technologies and characteristics of the City's waste generation. Will there be adequate incentives for Hugo Neu to maintain and upgrade its facilities, if the City's economic circumstances change?

Response: Details of the contract are still subject to negotiation. However, the types of incentives suggested will be included in the structure of the 20 year agreement. For more information, see the Response to Comment #12.

25. **Comment:** Each of the components of the waste stream (residential and commercial) should be examined for (1) the amount generated, and its rate of change over time; (2) the frequency of collection; (3) its destination; (4) its salability and time/value changes; (5) effect of volume changes on buildings, and equipment requirements, and (6) impacts of commercial waste. Then the most optimal recycling system can be determined.

Response: The City's public and private recycling efforts are robust, as evidenced by the 62% diversion rate for the City reported by the Department of Environmental Conservation. The Draft New SWMP Proposed Action for recycling reflects the results of considerable analysis and practical experience in implementing and operating a recycling program in the City for 15 years. DSNY's recent publication, Processing and Marketing Recyclables in New York City is available on the DSNY website at: http://www.nyc.gov/html/dos/html/recywprpts.html#1.

26. **Comment:** There needs to be more emphasis in providing recycling information in foreign languages. Fliers in languages other than English or Spanish aren't always available. There seems to be a lack of information in Chinese, Korean, and Arabic. Television spots on foreign language channels should also be implemented.

Response: The comment is duly noted. The Department of Sanitation makes publications available in multiple languages to target foreign language audiences as appropriate. For more information, please refer to a series of DSNY publications posted on the Department's website, that provide some missing background on the Department's public education efforts to date and market research about what New Yorkers know and don't know about recycling: http://www.nyc.gov/html/dos/html/recywprpts.html

27. **Comment:** The SWMP does not adequately address waste prevention and diversion in the commercial and construction sectors, given the huge volume of redevelopment and new construction anticipated. This increased quantity of waste will impose an unacceptable burden on the City's EJ communities, absent a more comprehensive plan for commercial waste diversion. The Plan's proposal to increase transfer station fees should be linked to the expansion of commercial waste prevention and recycling, dedicating the revenue stream from those fees to the development of those programs.

Response: Because economics drive waste prevention in the commercial sector, unlike the government sector, as disposal costs rise in the New York metropolitan area more and more waste prevention and recycling will necessarily occur, without direct government intervention in the form of regulation and its enforcement. Construction and Demolition processing facilities currently recycle approximately 50% of the waste they receive with some such facilities in the metropolitan area recycling over 80%. Clean fill transfer stations typically recycle nearly all of the waste they receive.

28. **Comment:** The DEIS does not evaluate the change in paper flow, from 10 current locations, to four facilities (Gansevoort and the three Hugo Neu facilities) used in the future, even though paper is the second largest component of municipal waste. This reallocation of recyclables needs to be examined in the same manner as the other facilities are examined. The environmental review of the Visy plant was based on

material arriving by barge from Manhattan and by truck from Staten Island. But DSNY amended the Visy agreement in 2003 to re-designate paper from seven western Brooklyn districts to be trucked to Staten Island.

Response: See response to Comment #32 below.

29. **Comment:** The discussion of the existing system notes that about 27% of putrescible waste is recycled. However, there is no discussion of the huge amount of separately collected paper that is recycled.

Response: As the Draft New SWMP incorporates by reference the 1992 SWMP and subsequent modifications and updates, much information that describes the evolutions of the City's paper recycling program has not been repeated. It is true that the City's revenue producing paper recycling program is particularly successful, in part due to the fact that a degree of cost and processing stability has been achieved through long-term contracting.

30. **Comment:** The City rejected composting claiming that it was studied extensively in an earlier report, but in that previous report only one method was studied – static pile composting. Composting by other means needs to be evaluated.

Response: More than one method of composting has been studied by the City. Please see the reports published by DSNY that contain extensive discussions and analysis of a number of alternative composting technologies at: http://www.nyc.gov/html/dos/html/recywprpts.html

31. **Comment:** What will be done with the large amounts of fill material that are currently recycled at Fresh Kills as landfill cover and road building material?

Response: Some of the generators of this material are already reducing the amount produced by changing their operating procedures, in anticipation of the eventual discontinuation of these programs. For the time being alternatives methods for recycling and/or disposal of this material are being explored.

32. **Comment:** The DEIS states that the potential traffic, off-site air and off-site noise impacts associated with the changes in delivery of Curbside Recyclables by DSNY collection vehicles from current destinations to new facilities are evaluated in this DEIS. However, these impacts are not evaluated. The Agreement between the City and Visy directs DSNY to deliver 34,000 tpy of waste paper to Visy from 7 Brooklyn districts. DSNY delivers those Districts to Visy. However, DSNY does not yet deliver the entire 66,000 tpy over and above that amount which is also mentioned in the Amendment. Not only is there no analysis of the 66,000 tpy, but there was never an analysis of the traffic, air and noise impacts of diverting the initial 34,000 tpy of Brooklyn mixed paper that is being trucked by DSNY over the Verrazano Bridge to Visy. DSNY must evaluate the impacts of the 100,000 tons per year of Brooklyn-based mixed paper while keeping in mind the stated goal of reducing truck traffic and congestion. One may want to compare delivery costs and revenues generated for DSNY taking this material to Visy as opposed to the Brooklyn facilities.

Response: The DEIS and this FEIS evaluates sending only MGP from the Brooklyn Community Districts that would deliver by truck to Hugo Neu at the SBMT. Any delivery of paper to the proposed processing facility at SBMT that may make occur in the future would be subject to environmental review when and if that decision is made. The current delivery of 34,000 tpy of Brooklyn mixed paper to Visy is an Existing Condition and, as such is not subject to environmental review in the New SWMP DEIS/FEIS.

33. **Comment:** DSNY should use its transportation model to determine if it would be more efficient for the recyclables in certain districts of Manhattan to be driven directly to the Hugo Neu facility located in the Bronx. The EIS should evaluate potential additional marine and rail sites in Manhattan, and should consider the creation of a number of smaller facilities for Manhattan recyclables.

Response: DSNY has already used the transportation model for this effort and the results are reflected in the SWMP. The DEIS evaluates the Proposed Action and reasonable alternatives. The proposed development of the Gansevoort Recyclables Acceptance facility will be subject to supplemental environmental review, including any required consideration of reasonable alternative.

34. **Comment:** The SWMP failed to disclose that the Spring Creek composting facility may never be permitted, due to the ruling in August 2004 that found that the project would likely constitute an illegal alienation of parkland. The SWMP and DEIS should accurately describe how composting will be managed should the site not be available for the above-noted reasons.

Response: DSNY expects that the Spring Creek leaf and yard waste composting facility will be permitted eventually to accept leaves from Brooklyn and Queens, as proposed. In FY'05, leaves from these Boroughs were delivered mainly to DSNY's composting facility at Fresh Kills on Staten Island. The comment refers to a ruling in a permit proceeding that the joint DSNY-Parks Department effort to use a portion of unconstructed parkland on former landfill for leaf composting to generate compost for park improvements must be adjudicated to determine whether it is a lawful park use. The proceeding is still pending and no final ruling has been issued. If it is not permitted, the city will need to re-evaluate the feasibility of continuing to seek to expand its program to collect leaf and yard waste for composting at appropriate locations in the City to generate a useful soil amendment.

35. **Comment:** DSNY trucks typically make 10 trips down most neighborhood streets each week: six to pick up refuse on different sides of the streets, two to pick up MGP, and two to pick up paper. By using more efficient single-stream or co-collection approaches, such as used in San Francisco and Chicago, truck traffic and emissions could be dramatically reduced. It could also reduce collection costs by tens of millions of dollars and help make recycling cost-effective. A good chance to consider either single-stream or co-collection might be in conjunction with the planning now being done for the waterfront facility in Brooklyn.

Response: The comment correctly assumes that collecting solid waste and recyclables together would reduce truck traffic, air emissions and collection costs. However, co-collection would require the siting and construction of special materials recovery facilities known as "dirty MRFs" to separate recyclables from regular household refuse, as Chicago has done. Such facilities do not exist in the City and would constitute a change to the SWMP that is well beyond the current Proposed Action. In addition, such

an approach can lead to reduced value of the recyclables due to contamination by refuse and correspondingly diminished revenues, and this must be taken into consideration in evaluating cost and emissions savings with such an approach.

Many areas of the City (particularly outside Manhattan) receive refuse collection only twice per week and have their recyclables collected with a single dual bin collection vehicle once per week (21 out of the City's 59 community districts); for a maximum of six collection vehicle trips down the block in that neighborhood per week.

There is currently no processing facility in the City set up to handle a mixed stream of MGP and paper. There have been conversations with Hugo Neu about designing their new MRF to have the flexibility to handle a single collection stream, should the City choose to do so. Municipalities are moving away, not toward single stream collection (with the notable exception of San Francisco) due to the loss of value to the mixed paper stream, an important source of revenue for NYC's recycling program.

40.3.1.4 Enhanced Public Participation

36. **Comment:** Environmental justice issues apply to the East 91st Street community because the parks are used by low-income groups as well.

Response: DSNY considers fairness and equity to be essential aspects to the Proposed Plan, including the proposal for East 91st Street. The East 91st Street site was approved for a marine transfer station over 60 years ago and this was reaffirmed by the City Council in 2000. The DEIS shows that use of the proposed Converted MTS will not result in any significant adverse impacts with the mitigation proposed. The Environmental Justice and Permitting Policy (EJ Policy) promulgated by NYSDEC (see NYSDEC's website http://www.dec.state.ny.us/website/ej/ejpolicy.html) applies in an environmental review process where NYSDEC is the lead agency. DSNY is the lead agency for this FEIS and, although technically not subject to the EJ Policy, DSNY determined that an enhanced public outreach program in the Draft New SWMP DEIS Scoping and Public Hearing processes would be beneficial. DSNY has followed this program in all the communities affected by the Proposed Action for Long Term Export,

including the East 91st Street community. Accordingly, DSNY conducted ten DEIS Scoping Meetings and eight DEIS Public Hearings. These meetings were preceded by extensive public notices, mailed invitations to thousands of stakeholders and placement of the DEIS and draft permit applications in accessible public repositories in each project area. During the meetings DSNY provided extensive public information materials and multilingual translation services. Section 40.3.3.1, item #18 of this Chapter provides a more extensive description of DSNY's enhanced public outreach program. In addition to the DEIS Scoping and Public Hearing process, DSNY supported enhanced outreach for the four Community Board Hearings during January 2005 on the ULURP applications for the Converted MTS Program.

It should be noted that NYSDEC's EJ Policy establishes specific demographic criteria related to the percentage of low income and minority persons residing in the community to determine whether an area qualifies as a Potential Environmental Justice Area. Based on these criteria, the East 91st Street community did not technically qualify, but was deemed an EJ community for this purpose nonetheless.

37. **Comment:** The SWMP claims to be fair by having each borough handle its own waste, but all of the facilities are located in low-income communities of color. Additionally, the communities that will be receiving the waste are also poor, non-white and depressed communities.

Response: The criteria used in selecting the sites that are subject of the Proposed Action for Long Term Export included: historical and recent use as an MTS site; and for those sites that DSNY would contract with private companies for export, access to barge or rail transport, appropriate manufacturing use zoning and the potential to avoid significant adverse impacts. The demographic and socioeconomic characteristics of the surrounding area for each of the long term export facilities is provided in the DEIS and this FEIS. All are not in low-income communities of color.

38. **Comment:** One comment stated that contacting the community district managers is not the only way to identify stakeholders and other interested parties and is not "fair" across all community districts. The involvement of district managers varies. Some districts are quite large and have sub populations, and not every district manager is going to be interested in the well-being of district residents who live on the edge of the district or who don't fit the profile of the majority of residents. Moreover, there can be a language barrier. Since stakeholders include those who have attended the meetings, a significant proportion of flyers are sent to those who are already aware of some of the issues. Additionally, the drawing on the flyer for East 91st Street appears to be reversed compared to the one shown at the Scoping hearing, and it is difficult to assess what has changed. It is inconsistent with EJ Policy to send deceptive fliers.

Response: See Section 40.3.3.1, item #18 of this Chapter for a more extensive description of DSNY's enhanced public outreach program.

39. **Comment:** DSNY needs to clarify what aspects of its SWMP will comply with DEC Commissioner Policy 29: Environmental Justice and Permitting Policy". Permit applicants are required to submit a formal public participation strategy, and DEC has not approved an EJ participation plan for any of DSNY's actions. Therefore the SWMP and DEIS comment period must remain open until DSNY complies with CP-29. DSNY must explain in the SWMP how it plans to comply with the requirements of CP-29, and which actions are subject to the policy.

Response: See the Response to Comment #36 and Section 40.3.6 of this Chapter.

40. **Comment:** DSNY has handled the public testimony from the Scoping Hearings poorly. The testimonies were put onto a CD but were not distributed to the public with the Final Scoping Document. Most of the comments in the Comments and Responses section were rejected or were completely misunderstood.

Response: CEQR does not require that the lead agency publish a response to each comment received during the Scoping process, only that it consider comments received in publishing a final Scope. However, in the Final Scoping Document, DSNY did summarize comments received and provide a response to those summarized comments in

the Final Scoping Document. The comment and response section along with the rest of the Final Scoping Document were placed in two conveniently located public repositories in each project area. Copies were available on request and the Final Scoping Document also appeared on the DSNY Web site.

41. **Comment:** DSNY seems to believe that as a government agency it is somehow exempt from full and proper compliance with CEQR. The analyses contained in the document did not represent the real situation.

Response: The DEIS and this FEIS analyzed potential impacts based upon information available for each facility in accordance with methodologies reviewed by City agencies (NYCDEP, NYCDOT) that followed the 2001 CEQR Technical Manual.

42. **Comment:** Several people requested an extension of the comment period beyond January 24, 2005, claiming that they learned about the project too late to comment due to unpublicized notices and hearings.

Response: The comment period on the DEIS opened when the DEIS was published on October 22, 2004 and closed on January 24, 2005, a period of 94 days. This period exceeds the 30 days required under CEQR for Public Comment. During this period, DSNY also held eight public hearings in the affected communities and conducted an extensive public outreach program. Those requesting an extension were advised that additional public processes would be conducted by the State NYSDE as part of its permit review and public hearing processes to be conducted in connection with each of the permit applications for the four Converted MTSs.

43. **Comment:** Several people complained that the information contained in the public repositories was not complete. Key documents were missing, including the FEIS for the 2000 SWMP, as were other documents referenced in the DEIS and SWMP. Additionally, the repositories only held the permit application for the nearest MTS and not for all of them, but having all of them was critical to analyzing the plan in its entirety. Why would DSNY want to limit access to critical information regarding this plan? The DEIS failed to meet the requirements of 6 NYCRR Part 617, which states that referenced documents must be made available for inspection by the public at the same places where the agency

makes available copies of the EIS. Once these documents are made available, DSNY must issue a new public comment period.

Response: DSNY's extensive public outreach and multiple public repositories evidence no attempt to limit public access to New SWMP information and Converted MTS permit applications. As required, the draft permit applications for the Converted MTSs were located in accessible public repositories for the affected communities where the respective facilities are proposed to be located, along with copies of the New Draft SWMP and DEIS. After documents were placed in repositories, DSNY checked on the status of documents in the public repositories and confirmed that they were available. To assist the affected communities, a toll free hotline was also established and featured in mailings to stakeholders. Through the hotline, DSNY sought to provide a forum to respond to questions regarding, among other things, the availability of public documents. Since their issuance, the 2000 SWMP Modification and FEIS have been and continue to be available to anyone upon request. Further, the DEIS and this FEIS refers to the 2000 SWMP Modification FEIS to explain the history of its planning efforts in analyzing reasonable alternatives; to support the continuation of existing DSNY programs and to provide context for the Proposed Action. A review of the multi-volume 2000 FEIS is not necessary to understand the analysis of potential impacts of the Proposed Action.

40.3.1.5 Borough Self-sufficiency

44. **Comment:** The SWMP for Manhattan proposes the construction of only one marine transfer station, and that is the smallest of any of the converted MTSs. The largest amount of residential and institutional waste will continue to be trucked on congested streets to the incinerator in New Jersey. Manhattan needs more adequate waste infrastructure, and needs to handle its own waste, like the other boroughs.

Response: The Proposed Action in Manhattan also includes the potential redevelopment of the West 59th Street MTS site as a facility that would export Commercial Waste from Manhattan and the development of a Recyclables Acceptance Facility at the Gansevoort peninsula for receiving Curbside Recyclables collected in Manhattan and transferring them by barge to the proposed Materials Processing Facility at the SBMT in Brooklyn.

45. **Comment:** The idea of borough-based self-sufficiency is critical in the New SWMP, and a positive step. Each borough must handle its own waste in order to comply with the City Charter's Fair Share provision. A number of speakers stated that would support the SWMP as long as all of the MTSs and the private marine and rail-based alternatives open, for both residential and commercial waste, to ease the burdens to other areas.

Response: Comment noted; the concept applies to DSNY-managed waste and to commercial waste accepted at any Converted MTS.

46. **Comment:** While we are glad that the Mayor has taken on the task of devising a solid waste management plan for the entire City, in striving for fairness by having an MTS in each borough, he is being unfair to the Manhattan community where the MTS is sited, which is located in a residential area.

Response: The East 91st Street Converted MTS in Manhattan is located in an (M 1-4) zone adjacent to the FDR Drive. Approximately 140,000 cars drive by this site every day. The site has been used as a solid waste facility for over 50 years and while DSNY is currently not operating the facility, it continues to hold a permit to operate a transfer station at this site. The existing permit issued by NYSDEC allows it to process 4,800 tons per day. The past problem with DSNY collection vehicles queuing on York Avenue will be eliminated through a combination of the facility's design features and the limitations that DSNY proposes for the facility's permitted capacity at this facility. Accident records were researched for the intersection of York Avenue and 91st Street at the MTS entrance. When the MTS operated previously, this intersection was not a high accident location. The annual average number of reportable accidents was just over 4 per year for the years 1997, 1998 and 1999 and none involved DSNY vehicles. During that period only one accident involved a pedestrian. In the year immediately after closure (2000), there were 8 reportable accidents, 2 of which involved pedestrians. In the future, DSNY enforcement personnel will manage truck and pedestrian traffic at the entrance on York Avenue at 91st Street to ensure that it continues to operate safely. See Section 40.3.1.1 for a description on the design features of the Converted MTS that represent significant improvements over the existing facility.

47. **Comment:** The SWMP indicates that waste and recyclables will move from Manhattan to Brooklyn, but none will go from Brooklyn to Manhattan. This is not fair. Each borough should be responsible for handling its own recyclables.

Response: The statement that Manhattan recyclables will be delivered by truck to Brooklyn is in error and has been corrected in this FEIS. The proposed Materials Processing Facility at the South Brooklyn Marine Terminal would receive delivery of Recyclables by barge from other boroughs, thereby eliminating the potential for any local traffic impacts. It would be economically infeasible to provide each borough with a processing facility for its own Recyclables.

48. **Comment:** A barge-to-rail facility at the Harlem River Yards would undermine the fair share principle, since the Bronx would be handling waste from other boroughs.

Response: DSNY does not contemplate using this facility and it is not part of the Proposed Action.

40.3.1.6 Public Health and Safety

49. **Comment:** A number of speakers in various neighborhoods throughout the City were concerned with the increased diesel emissions from truck traffic and its resultant increased risk of asthma, lung cancer and heart disease in the neighborhood, especially as it would affect children, the elderly, pregnant women and their unborn children. What would the long-range health effects be from operation of an MTS in the neighborhood?

Response: As detailed in Chapter 33 (Public Health Evaluation) of the FEIS, reactivating the prior MTS use at the four MTS sites (which will use the more environmentally protective converted MTS design and modern clean diesel technology) is not expected to harm the public health. Although New York City air quality is currently out of compliance with the National Ambient Air Quality Standards for $PM_{2.5}$, the relatively small amounts of particulate air emissions from the proposed MTSs can fairly be called insignificant, which is what the air quality analysis for the MTSs reasonably concluded. The City's air quality is expected to improve as new federal requirements for ultra low sulfur diesel fuel and diesel engines phase starting in 2006. The primary pollutants

associated with the MTSs are those emitted by diesel engines, and the results of scientific studies of diesel engine exhaust in sensitive laboratory animals are summarized in Section 33.2.2.4.2 of the FEIS. Diesel emissions contribute to ambient concentrations of criteria pollutants, such as NOx and particulate matter (PM_{10} and $PM_{2.5}$), and hazardous air pollutants (such as benzo(a)pyrene and formaldehyde), and health-based benchmarks are used in this FEIS to assess these constituents. Ambient standards for criteria pollutants (NAAQS) take into account research on potentially sensitive groups, such as children. The analyses of potential project emissions suggest that changes to air quality will be quite small, and, as such, are not anticipated to harm public health.

Regarding fine particulate matter more generally, concentrations of $PM_{2.5}$ in ambient air in NYC are currently small (both in absolute terms and relative to comparable cities in Europe and elsewhere), and are some 30% lower than estimates from the 1970's and 1980's (see, for example, http://www.epa.gov/airtrends/pm.html). National regulations will soon further reduce airborne concentrations of diesel particulate matter (DPM), due to reductions in the sulfur content of diesel fuel, engine redesigns, and pollution control devices, such as catalytic converters. Levels of DPM in New York are smaller than DPM levels in comparable European cities, given the heavy reliance on diesel-powered cars in Europe. Moreover, although PM concentrations have *decreased* over the past three or four decades in New York and throughout the U.S., asthma rates have *increased* during this same time period. Thus, although working to further decrease particulate pollution can be a worthwhile effort, there is neither evidence nor reason to suggest that so doing will decrease asthma incidence *per se*.

Asthma was addressed in detail in the DEIS and in this FEIS. Overall, it is noted that while asthma among children is a major public and personal health problem, its causes are complex and only incompletely understood or controllable. As noted in a recent review (Kaiser, 2004)[2], for example:

[2] Kaiser HB. Risk factors in allergy/asthma. *Allergy Asthma Proc*. 2004 Jan-Feb; 25(1):7-10.

> Family history is the strongest risk factor for the development of allergies/asthma. . . . Environmental issues and lifestyle changes are becoming increasingly more important as significant risk factors but the evidence can be confusing, controversial, and even contradictory. There is overwhelming evidence that sensitization to indoor allergens is a major risk factor for the development of clinical atopic disease in genetically susceptible individuals.

Researchers with the Inner City Asthma Study (Gruchalla *et al.*, 2005)[3] have investigated the relationships among indoor allergens and asthma among almost 1,000 children aged 5 to 11 years old with moderate to severe asthma. These researchers found:

> . . . cockroach sensitivity to be highest in the Bronx, New York, and Dallas (81.2%, 78.7%, and 78.5%, respectively), while dust mite sensitivity was highest in Dallas and Seattle (83.7% and 78.0%, respectively). A majority of homes in Chicago, New York, and the Bronx had cockroach allergen levels greater than 2 U/g: cockroach allergen levels were highest in high-rise apartments, whereas dust mite allergen levels were highest in detached homes. Children who were both sensitive and exposed to cockroach allergen had significantly more asthma symptom days, more caretaker interrupted sleep, and more school days missed than children who were not sensitive or exposed. . . . Cockroach allergen appears to have a greater effect on asthma morbidity than dust mite or pet allergen in these children.

With regard to outdoor air, summertime increases in ozone can also exacerbate asthma, at least for a subset of patients. Ozone formation in NYC air will not be measurably affected by the proposed facilities or the trucks and other equipment associated therewith.

The very small increases in particulate matter (PM) from diesel engine exhaust from trucks and other equipment associated with the proposed facilities are not expected to exacerbate asthma. Experimental evidence from human volunteers indicates that people with asthma show little or no response during voluntary exposure to *much* higher levels of airborne particulate matter (PM) than are characteristic of the outdoor environment in New York or elsewhere in the U.S. Studies in a number of laboratories (Avol, *et al.*,

[3] Gruchalla RS, Pongracic J, Plaut M, Evans R, Visness CM, Walter M, Crain EF, Kattan M, Morgan WJ, Steinbach S, Stout J, Malindzak G, Smartt E, Mitchell H. Inner City Asthma Study: Relationships among sensitivity, allergen exposure, and asthma morbidity. *J Allergy Clin Immunol.* 2005 Mar; 115(3):478-85.

1990; Hanley *et al.*, 1992; and Koenig *et al.*, 1989)[4] have compared the pulmonary response of asthmatics to that of non-asthmatic subjects in chamber studies, where volunteers are exposed to measured, controlled concentrations of various airborne substances. Although asthmatics were more sensitive to high concentrations of *highly acidic* aerosols (such as aerosols of sulfuric acid) than non-asthmatic subjects, neither asthmatics nor non-asthmatic subjects exhibited decrements in pulmonary function after exposure to mildly acidic airborne particulate matter (the vast majority of ambient particles are either neutral or only mildly acidic). The concentrations used in these experiments ranged from 100 to 1,000 $\mu g/m^3$ — *much* higher concentrations than those present in outdoor air in New York City.

With regard to lung cancer or heart disease, the weight of reliable scientific evidence indicates that emissions from the proposed facilities, including from trucks and other equipment, will not exacerbate these important problems. Lung cancer is, of course, overwhelming caused by cigarette smoking, and smoking is an important cause of heart disease as well. Fortunately, rates of smoking among adults and adolescents have fallen in recent years, and New York City's Smoke-Free Air Act will hopefully accelerate this health-protective trend.

Data from some observational (as opposed to controlled, randomized, or experimental) epidemiologic studies suggest that tiny increases in particulate matter, or any other "criteria pollutant," in ambient air correlate with increases in rates of death or serious disease. It is therefore *statistically* possible to "predict" that any increase in ambient concentrations of any air pollutant will increase rates of death or disease, or, by the same logic and with the same data, that any decrease in any air pollutant will decrease rates of death or disease (see, for example, http://www.epa.gov/air/clearskies/benefits.html). But, for

[4] Avol, E.L., Linn, W.S., Shamoo, D.A., Anderson, K.R., Peng, R_C, and Hackney, J.D. (1990). Respiratory responses of young asthmatic volunteers in controlled exposures to sulfuric acid aerosol. *Am Rev Respir Dis 142*:343-348. Hanley, Q.S., Koenig, J.Q., Larson, T.V., Anderson, T.L., Van Belle, G., Rebolledo, V., Covert, D.S., and Pierson, W.E. (1992). Response of young asthmatic patients to inhaled sulfuric acid. *Am Rev Respir Dis 145*:326-331. Koenig, J.Q., Covert, D.S., and Pierson, W.E. (1989). Effects on inhalation of acidic compounds on pulmonary function in allergic adolescent subjects. *Environ Health Perspect 79*:173-178.

several reasons, such predictions rest on very uncertain grounds, and may yield unreliable results. As noted above, these predictions are clearly incorrect for asthma, the incidence of which has been increasing in the U.S. and throughout the "developed world" for the past three or four decades, at the same time that concentrations of air pollutants have been decreasing. With regard to other diseases and causes of death in the U.S., the above-noted observed correlations (i) are very weak, (ii) are *not* found in all relevant and highly sophisticated studies (see, for example, Sullivan *et al*., 2005)[5], (iii) suffer from residual confounding by genuine causes of disease and death (see, for example, Moolgavkar, in press, 2005)[6], (iv) imply, illogically, that ambient air gases and particles are somehow vastly more toxic than the same gases and particles present in cigarette smoke (see, for example, Gamble and Nicolich, 2000)[7], and (v) are not supported by abundant clinical and toxicologic evidence and experience indicating a lack of harm to health due to vanishingly small concentrations of ordinary air pollutants (Green and Armstrong, 2003)[8].

50. **Comment:** The DEIS does not assess the impacts of vectors in the vicinities of the MTSs, and the transfer stations are likely to create and exacerbate vermin problems in surrounding areas. The insecticides used to control the vermin will also create a hazard. The MTS will also increase the mosquito population, and hence exposure to the West Nile Virus. These issues must be addressed.

Response: Although poorly managed putrescible waste can attract rats and insects, proper design and maintenance of modern solid waste transfer stations help ensure that vermin do not become a significant problem. We know of no evidence that modern transfer stations increase infestation rates in neighboring residences. Certain pests, such as mosquitoes that do or may carry West Nile virus, are typically present in New York City (and elsewhere) during the summer and early autumn, regardless of the presence or

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[5] Sullivan J, Sheppard L, Schreuder A, Ishikawa N, Siscovick D, Kaufman J. Relation between short-term fine-particulate matter exposure and onset of myocardial infarction. *Epidemiology*. 2005 Jan; 16(1):41-8.
[6] Moolgavkar SH. 2005 (in press). A Review and Critique of the EPA's Rationale for a Fine Particle Standard. *Reg. Tox. Pharm.*
[7] Gamble JF, Nicolich MJ. Comparison of ambient PM risk with risks estimated from PM components of smoking and occupational exposures. *J Air Waste Manag Assoc*. 2000 Aug; 50(8):1514-31.
[8] Green LC, Armstrong SR. 2003. Particulate matter in ambient air and mortality: toxicologic perspectives. *Reg Toxicol Pharmacol* 38:326-35.

absence of transfer facilities: the public health effects of this problem — and of the treatment of this problem by spraying of residential neighborhoods in New York City (NYC) with pyrethroid pesticides — have been studied by scientists from the New York City Department of Health and Mental Hygiene and elsewhere (Karpati *et al.*, 2004)[9]. In particular, Karpati and colleagues investigated whether the widespread use of pyrethroid pesticides NYC (during the summer of 2000) was associated with increased rates of hospital emergency department visits for asthma or for chronic obstructive pulmonary disease. They found that it was not.

51. **Comment:** Diesel exhaust will be increased, and will affect pulmonary diseases including asthma and emphysema as well as the potential for miscarriage. These emissions are of particular concern because this particulate matter can lodge deep in the lungs, and may stay there for a long period of time. Children are particularly vulnerable to the effects of these pollutants. The Department of Public Health at Columbia University has published extensively on the impact of diesel emissions. Within diesel exhaust are particles that make the immune system more susceptible to inhale allergens like pollen and mold. The impact of allergens from vermin has been demonstrated in studies at Johns Hopkins Medical Center. These studies must be taken into account in the EIS. The conclusion in the DEIS states that "for the purposes of public health assessment, application of typical safety factors to these data from laboratory rodents suggest that current ambient concentrations of diesel engine exhaust in New York State are not harmful**."** This does not, however address the exhaust levels within New York City.

Response: The approach to evaluating the health impacts of diesel emissions is reviewed above. The possibility that diesel exhaust exacerbates the effect of allergens and triggers asthma was mentioned in section 33.6.3 of the Public Health Evaluation, as was the evidence linking *indoor* vermin allergens to asthma. It is true that very high concentrations of some chemicals within diesel exhaust can trigger immune system

[9] Karpati AM, Perrin MC, Matte T, Leighton J, Schwartz J, Barr RG. Pesticide spraying for West Nile virus control and emergency department asthma visits in New York City, 2000. *Environ Health Perspect.* 2004 Aug;112(11):1183-7.

responses, but there is not evidence that current levels of these chemicals in ambient air in NYC exacerbate the disease or other pulmonary conditions. There is not reliable evidence that ambient concentrations of diesel engine exhaust cause miscarriage. Current ambient concentrations of diesel engine exhaust in New York *City* were included in our analysis of such concentrations within the State as a whole.

52. **Comment:** One speaker wanted to review the Worker's Compensation claims of DSNY workers, as it relates to increased levels of emphysema, asthma and other lung diseases.
Response: An epidemiologic study of this nature is not within the scope of the CEQR process or this EIS. It would be a large, complex, expensive, multi-year effort requiring the invasion of privacy of DSNY workers, and would not necessarily shed light on risks to the public.

53. **Comment:** Several speakers were particularly concerned with the health of the children who live and visit the area near the MTS. The physiology of infants and children is different than adults. They are shorter, and the concentration of toxicants emitted from trucks is greater closer to the ground. The DEIS used a height of 1.8 meters for receptors, but this doesn't take into account people in strollers or little ones walking around. In addition, children breathe faster, and entrain greater quantities of pollutants per body surface area than adults. They also spend more time outdoors, so their exposure to these pollutants is higher. As children they are still growing lungs; between birth and ten years of age, they are adding air sacks, so any damage that is created to developing lungs has a permanent effect on lung function. The DEIS does not discuss the physiology of children, and their exposure to these pollutants. A recent article from the *New England Journal of Medicine* relates to this issue, where an 8 year prospective study of over 1,700 school-aged children was undertaken. These children had measurements of their lung function conducted and correlated with ambient exposures to ozone, acid vapor nitrogen dioxide and particulate matter. The authors concluded that the levels of air pollution had chronic, adverse effects on lung development in children from 10 to 18 years of age. The concentrations of PM_{10} for the 91st Street site were well within this range of concentrations studied in the article.

Response: NAAQS are set by the USEPA to protect sensitive persons, whether they are children or adults. For some pollutants, such as NO_2 and SO_2, the NAAQS are based on adverse pulmonary responses of children since they appear to be particularly sensitive to these pollutants. Evaluations of air impacts in light of NAAQS, then, do indeed incorporate children's responses. Furthermore, the NAAQS established for different averaging times (for example, 1 hour and 8 hours for CO) assume that the sensitive individuals may be outside for the full period. With regard to the receptor height, truck emissions were modeled as coming from *greater* than a 1.8m height, so receptors below 1.8m would encounter smaller pollutant concentrations than receptors at 1.8m. The Gauderman work is discussed below in Comment #54.

54. Comment: The reliance of thresholds is an inadequate method for capturing the effect of air quality deterioration on the public health. The Gauderman study indicates a linear rather than a threshold effect of exposure to air pollution. The effects from the MTSs will place thousands of children for years to come at increased risk of permanent lung damage, and none of these effects are addressed in the current DEIS.

Response: The threshold approach to assessing the health impacts of virtually all non-carcinogenic chemicals is well established in regulatory policy and health risk assessment. The Gauderman *et al*. (2004)[10] study is an observational study of air pollution in Southern California, which has a very different mixture of pollutants than those prevalent in NYC. Half of the air pollutants measured by Gauderman *et al*. were not measured or analyzed in the DEIS or this FEIS. The others, NO_2, PM_{10}, and $PM_{2.5}$, were evaluated by comparing predicted project-related increments and background concentrations (except for $PM_{2.5}$) to the concentrations allowed by U.S. EPA and defined by NAAQS or to incremental concentrations allowed or proposed by New York City or New York State agencies. As described above, current NAAQS for some pollutants of concern are based on effects in children. The NAAQS, which are regularly reviewed,

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[10] Gauderman WJ, Avol E, Gilliland F, Vora H, Thomas D, Berhane K, McConnell R, Kuenzli N, Lurmann F, Rappaport E, Margolis H, Bates D, Peters J. The effect of air pollution on lung development from 10 to 18 years of age. N Engl J Med. 2004 Sep 9; 351(11):1057-67.

consider data like that in Gauderman *et al*. and, conceivably, may be altered in the future if the weight of the evidence suggests that children or other human populations are insufficiently protected by current standards or that effect thresholds are not apparent. In the meantime, it was felt that a review of literature on traffic's potential effects on health, in addition to analyses of specific air pollutants (which are addressed by existing regulations), is relevant to neighborhood concerns.

55. **Comment:** The Public Health chapter acknowledges that the EPA says that diesel exhaust has the potential to pose a lung caner hazard at anticipated levels of exposure, but the authors of this chapter have disregarded this in the conclusion that the impacts are not of public health significance. At least one of the authors of the chapter has published elsewhere that there is a statistically significant association between mortality and acute exposure to an increase in concentration of $PM_{10.5}$ (sic) in New York City. While an association does not mean cause and effect it is often used as the basis for further investigation, and for justifying issuing protective guidelines, air quality standards and warnings. The CEQR Technical Manual guidelines on Public Health state "Other actions, which might not exceed the preceding thresholds, but might nonetheless result in significant public health concerns, including projects such as….the NYC Comprehensive Solid Waste Management Plan. For some of these actions, there might be published, peer-reviewed scientific literature suggesting an association between an exposure potentially caused by the action and potential health impacts". This indicates that "association" of exposure and health impact is sufficient.

Response: The Public Health chapter indeed acknowledges USEPA's statement that "diesel exhaust has the potential to pose a lung cancer hazard to humans at anticipated levels of environmental exposure." Since neither USEPA nor New York State has published a cancer slope factor for diesel exhaust, however, the potential increase in cancer risk posed by the proposed project's releases of exhaust cannot be evaluated with any confidence. Thus, the cancer hazard of diesel exhaust is not dismissed, but cannot be assessed in a meaningful way for public health impact. (Some components of diesel exhaust, such as benzo(a)pyrene, were included in the HAPs cancer risk assessments.

The potential increases in cancer risk were within commonly accepted limits.) The ultimate conclusions of the Public Health Evaluation are based on the qualitative and quantitative evaluation of health risks.

The potential health impacts of acute or chronic exposure to $PM_{2.5}$ and PM_{10} are considered by USEPA when establishing the NAAQS. Thus, comparison of predicted project-related impacts to the NAAQS, SILs, or STVs (as applicable) is appropriately health protective. It is not within the scope of this FEIS to modify NAAQS based on a review of the literature, particularly since the literature on PM health effects is extremely large and complex; even USEPA's recent evaluation of the recent PM literature took years to complete.

56. **Comment:** (A9) Some of the chapters on the various facility sites acknowledge "some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens" Just because the EPA has not set an acceptably safe level for a pollutant is not justification for ignoring any and all negative effects from that pollutant.

Response: The goal of the public health evaluation is not simply to list or acknowledge the various health hazards that may be posed by the proposed project (such as release of potential carcinogens), but to gauge whether a hazard will be present at levels sufficient to significantly affect public health. That assessment relies heavily on numerical expressions of the hazard's potency. Since accepted cancer slope factors for anthracene and related chemicals do not exist, the potential impact of these chemicals on cancer risk was not quantitatively evaluated. The non-carcinogenic effects of anthracene and the other chemicals mentioned were quantitatively evaluated, however, so it is not accurate to state that any and all negative effects were ignored.

40.3.1.7 Odor

57. **Comment:** The purported sophisticated odor control system will not mitigate serious health consequences from pollution, filth and vermin associated with transfer station operations. What are the contingency plans when negative air pressure exhaust fans break down?

Response: The facilities and equipment are carefully designed and strict procedures will be implemented to minimize problems that may arise as a result of managing solid waste. The environmental controls are considerably more advanced than is the case with the existing MTS design. The primary source of MTS-related air pollution will be the operation of fuel-fired equipment inside the MTS building and trucks queuing on the on-site ramp. New stationary equipment and non-road vehicle engines will be purchased new for the facilities and, therefore, these emissions sources will meet the latest EPA emissions standards applicable to new engines. Adequate truck unloading space inside the building will be provided, thus minimizing on-site queuing time on the ramp and vehicle emissions. Emission of odors and dust will be strictly controlled using a ventilation system that will maintain the MTS at "negative pressure" such that odors, dust and litter will not tend to migrate out of open doors. Odors will be neutralized before the facility air is exhausted from the roof vents. The facility will also be equipped with a dust suppression misting system which will cause dust to settle to the floor to be processed with the waste, washed and/or swept away. Routine cleaning of the entire facility will be performed and daily cleaning of the MTS process area floor will be required as a condition of the MTS's operating permit. For vermin control, licensed exterminators will routinely service the MTS as part of a preventative maintenance cycle, which will include applying spray and placing traps. Any emergency complaints would prompt additional attention as appropriate. NYSDEC and City regulators will periodically inspect the facilities for compliance with applicable rules and permits, as appropriate.

The ventilation system was designed so that the waste tipping and loading areas will have three separate supply and exhaust systems, each sized for up to 12 air changes per hour, the design criterion for the MTSs. These systems provide redundancy for ventilation

equipment failure and maintenance. In the event of a power failure, each of the MTSs will be equipped with an emergency generator to supply power, including to the ventilation and negative air pressure exhaust system.

40.3.1.8 Air Quality

58. **Comment:** The DEIS should contain an analysis of the impacts on a regional basis for particulate matter. It omits any analysis of the impacts of the Proposed Action's nitrogen oxides and VOC emission contributions to ozone pollution in the region, yet claims it is not significant. The region is a non-attainment area for the one-hour and eight-hour ozone standard. As such, it should include a cumulative analysis of air quality effects.

Response: On a regional basis, emissions and impacts of particulate matter, NOx, and VOC will not change significantly due to the Proposed Action. A credible regional emissions analysis to compare waste export alternatives is not feasible at this time. The equipment and routes to be used to transport and dispose of NYC solid waste once it leaves the city are undefined. DSNY cannot predict the associated emissions outside the City. More importantly, the pollutants of primary regional concern, particularly $PM_{2.5}$ and ozone, are strongly affected by precursor pollutant emissions far upwind (outside to the City and State), making it difficult to establish a "domain" over which to conduct such an analysis. However, looking broadly at cumulative regional emissions, it is apparent that such emissions from several large source categories, including power plants, on-road engines, non-road engines, and many types of industrial sources, will continue to decrease dramatically in the next few years due to existing and proposed federal rules. Therefore, one can say with confidence that the City's air quality, to the extent it is impacted by these cumulative upwind regional emissions, will continue to improve in the coming years.

Currently, waste is being exported from the City via semi-truck transfer trailers. DSNY has estimated that the shift from truck-based transfer to barge/rail based for DSNY-managed Waste will reduce waste transfer vehicle traffic by approximately 2.8 million miles per year. (See the response to Comment #42 in Section 40.3.3.1 for more detail on this estimate.) The noise, emissions, and congestion caused by this mode

of waste export would be eliminated by the Proposed Action to move this waste out of the City predominantly by barges or rail. While barge tugboats and locomotives also produce air pollutant emissions, these emissions are less proximate to businesses, residences, and the commuting public, and therefore, the Proposed Action is expected to lessen public exposure to air pollution within the region.

Furthermore, the region's ozone and particulate matter non-attainment issues are largely a function of industrial and power plant emissions occurring far upwind, with a lesser contribution from local transportation-related emissions sources. The EPA has already proposed rules to drastically reduce upwind ozone and particulate matter precursor pollutant (mainly nitrogen oxides and sulfur dioxide) emissions from power plants and from non-road vehicles, and has in place much more stringent on-road emissions standards for diesel trucks, which go into effect in 2007. With or without the Proposed Action, the cumulative effects of these current and pending rules on a regional basis will far outweigh the regional differences in emissions between the current waste export program and the Proposed Action.

59. **Comment:** With the objective of minimizing truck traffic and emissions, the EIS should evaluate truck emissions in all parts of the City from the "no action" alternative, the Proposed Alternative, and an additional scheme whereby truck queuing and idling is minimized and truck route mileage is minimized via changes in operations and optimized locations of garages and waste transfer points. Additionally, dioxin TEQ should be added to the criteria pollutants evaluated since governmental agencies such as the USEPA have determined in past studies that automotive sources produce this carcinogenic substance.

Response: The Proposed Action would certainly minimize truck traffic and associated emissions by essentially eliminating the current export of city waste via transfer trailer. The Proposed Action would minimize truck idling at transfer stations by constructing transfer stations that are designed to have sufficient internal dumping and handling capacity to minimize queues. The transfer stations are designed to contain truck queues within the facility properties.

Dioxin TEQ (total equivalents of 2,3,7,8 tetra chloro dibenzo-p-dioxin, or TCDD) was not analyzed in this study. As stated by EPA, reliable emissions data applicable to US automotive fleets and fuels are not available (see publication EPA-454/R-97-003, "Locating and Estimating Air Emissions from Sources of Dioxins and Furans", Office of Air Quality Planning and Standards, Office of Air and Radiation, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, May 1997). However, the Proposed Action would eliminate much automotive (transfer trailer truck) travel within and outside the city, thus minimizing any dioxin that may be emitted by diesel trucks transporting solid waste.

60. **Comment:** The New SWMP should develop an overall strategy for monitoring and tracking emissions from the vehicles which are integral to the solid waste program. While the long-term export program reduces the number of miles traveled by DSNY vehicles, and potentially reduces the journeys of some commercial vehicles, there will still be substantial vehicle miles traveled overall. Many currently operating transfer stations experience queuing trucks, with attendant idling emissions, odors, and noise. The proposed program will therefore continue to have truck operations producing significant emissions, including emissions outside the City. Emissions both inside and outside of the City should be quantified as a baseline emissions inventory within the FEIS. At a minimum, it should contain a list of DSNY vehicles with make, model and certification level for regulated pollutants of each vehicle. This can be updated annually, and would allow interested parties to compare the fleet's emissions with emissions from the cleanest refuse trucks available. Estimated costs for CNG and diesel vehicles can also be presented.

Response: DSNY replaces its waste collection vehicles on a seven-year cycle, meaning the average age of DSNY waste collection vehicles at any time is approximately 3.5 years old. Consequently, DSNY operates one of the cleanest large fleets of refuse trucks in the nation/state/region. EPA emissions standards applicable to the diesel engines powering DSNY vehicles are already accessible to the public, as they are published in the Code of Federal Regulations at 40 CFR 86. Therefore, for any given future year, comparisons can be made between the emissions standards applicable for

model years represented in DSNY's fleet to the latest model year EPA emissions standards published at 40 CFR 86. Under these circumstances, the suggested tracking program is an expensive and unnecessary bookkeeping exercise.

As noted in Volume VI of the Commercial Waste Management Study, Waste Vehicle Technology Assessment, included as an Appendix to this FEIS, DSNY has developed and implemented one of the most innovative programs in the country to test new clean fuel technologies for use in its fleet.

61. **Comment:** We are pleased that the SWMP recommendations are consistent with DSNY's commitment to using CNG as a vehicle fuel, which is cleaner and reduces the nation's reliance on foreign oil. However, there needs to be commitment for additional purchases, since CNG trucks only account for one percent of the fleet. In May, 2002, DSNY released a report on particulate matter reductions being achieved with various diesel retrofit technologies. The data at the time showed little NO_X reduction and some fuel economy penalty. No newer data has been released, even though DSNY has expanded its testing program. We believe that DSNY should provide ongoing public reporting on the findings of vehicle testing, but should continue to purchase natural gas vehicles since they are the cleanest and generally quieter commercially-available refuse trucks. Areas with the greatest sensitivity to truck noise should be given priority in utilizing quieter CNG vehicles. DSNY should fully take advantage of the capacity of the new CNG fueling station in Woodside, Greenpoint and Canarsie. These facilities could accommodate up to 200 CNG refuse trucks with no additional infrastructure costs. Government incentives should make expanding the CNG fleet affordable. A discussion of these incentives such as Congestion Mitigation and Air Quality funds should be presented in the FEIS.

Response: Volume VI of the Commercial Waste Management Study, Waste Vehicle Technology Assessment, published in March 2004, reports on the results of numerous test programs that DSNY has and continues to conduct to evaluate the applicability of Clean Fuel technology to its Fleet Operations. As reflected in a prior Response to comment #60, DSNY's fleet of waste collection vehicles is replaced on a 7-year cycle.

Shortly after implementation of the proposed SWMP projects, EPA's new 2007 emissions standards would come into effect for new diesel vehicle engines. The 2007 emissions standards would reduce NOx emissions by more than an order of magnitude below the currently applicable 2004 standards, and 20 times below the 1998 NOx standards. The PM emission standard in 2007 will be an order of magnitude below the standard applicable to DSNY's current fleet. Because a sizeable portion of the DSNY's fleet will be replaced each year, emissions from the entire fleet will drop dramatically each year until the entire fleet is turned over in only 7 years. While experimentation with alternative fuels (e.g., CNG) and technologies is advantageous from an energy dependence standpoint, any air emissions concerns will be greatly minimized as a result of new EPA emissions standards already in place that will become effective in the near future. Moreover, with clean diesel technology and other treatment devices such as filters, truck emissions can be comparable to CNG truck emissions, whereas CNG trucks cost $200,000 compared to $130,000 for a DSNY clean diesel collection truck.

40.3.1.9 Traffic

62. **Comment:** The traffic analyses are shown for each facility independently, and are based on a half-mile radius around each facility. The DEIS does not show the overlay of trips from all facilities and their interactive effects (as was done in the 1991 SWMP/DEIS). This small study area also excludes consideration of traffic being generated by major development just outside a half-mile area.

Response: This statement is incorrect. Traffic study areas were not based upon a half-mile radius around each facility. Rather, intersections were selected for analysis based on convergence points of DSNY collection vehicles traveling to and from the facility, field surveys of intersection operating conditions, input from the New York City Department of Transportation (NYCDOT) on selected intersections, and any potential additional intersections of concern near a facility site. If multiple intersections were projected to be traversed along a congested corridor, several intersections were selected along that corridor for analysis – typically those that have lower (poorer) operating Levels of Service (LOS), based on the average delay at an intersection. The Future No-Build

estimates were obtained from available environmental review documents/traffic studies, and included additional traffic from any planned developments along access/egress routes that would: (i) be implemented by the 2006 Build Year; and (ii) travel through the selected intersections during the same periods analyzed (based on consultation with the New York City Department of City Planning). The traffic analysis properly shows the difference between the No-Build condition, under which DSNY collection vehicles would continue to utilize certain intersections on the way to transfer facilities in and outside the City as at present, and the Build Condition, which would return DSNY vehicles to the four proposed MTS sites, in addition to utilizing four or five private transfer stations in the City.

63. **Comment:** The traffic analysis method that examines each intersection in isolation does not accurately disclose real world operations of a traffic network in which a significant delay from added traffic on a major congested road can cause miles of spillback delay. Many impacts remain unmitigated, with the token efforts to reduce their severity (increasing green time) worsening conditions on adjacent roads.

Response: The 2001 CEQR Technical Manual notes that the key to evaluating urban area traffic conditions is the analysis of its intersections, since the capacity of an urban street is typically controlled by the capacity of its intersections with other streets. As part of the intersection analysis, field studies and traffic counts were obtained to identify current operating conditions. Potential traffic impacts at intersections analyzed in the DEIS and this FEIS were mitigated through signal timing changes, which are among the preferred low-cost, readily implementable mitigation measures identified in the CEQR Technical Manual. The goal of signal timing changes is to shift additional green time from approaches that do not have adequate capacity to approaches or intersections that have clearly sufficient capacity. In addition, NYCDOT reviews all applications submitted for signal timing and/or phasing modifications with consideration given to traffic conditions at nearby intersections prior to implementing changes.

64. **Comment:** There needs to be an analysis of the turnaround time of deliveries at each facility and the queuing potential at the entrances. Additionally, there is no evaluation of the principal initiative to reduce the adverse impacts of commercial transfer stations by utilizing the Converted MTSs for commercial waste. This change would add hundreds of trucks, with enough trucks in the 8 to 9a.m. peak hour to push the facility peaks from 9-10 a.m. back to 8-9 a.m.

Response: The suggested analyses have already been done. For the DEIS and this FEIS, a facility spreadsheet model was developed using conservative assumptions to estimate the travel time of arriving DSNY collection vehicles through the Converted MTSs based on: (1) historical delivery patterns; and (2) operating assumptions such as the amount of time to weigh in, travel up the ramp into the processing building, unload in the processing building, weigh out, and exit the facility. This model was used for the DEIS and this FEIS to predict the number of collection vehicles that might queue on the facility entrance ramp at a given hour. In addition, the facility peak hour is not 8:00 a.m. to 9:00 a.m. It begins after 9:30 - 10:00 a.m. at various facilities. Commercial waste deliveries have no effect on the peak hour, since these arrive during the 8:00 p.m. to 8:00 a.m. period, when DSNY deliveries are at their lowest levels.

In addition, a CEQR-level analysis of potentially significant adverse impacts related to processing Commercial Waste at the Converted MTSs in the Commercial Waste Management Study (CWMS)– Volume III is included as Appendix I to this FEIS. Each Chapter in this FEIS that reviews a Converted MTS has a section summarizing that more detailed CEQR level analysis in the CWMS – Volume III. On-site operations were analyzed assuming 24-hour operation. For example, for the noise analysis, it is assumed that the facility is operating all of its equipment during the quietest background hour, which, given the amount of commercial waste that actually might be processed during this period, is conservative. Off-site traffic, air quality and noise analysis locations were analyzed for potential impacts from DSNY collection vehicles plus commercial waste hauling vehicles. Restrictions will be imposed on some DSNY collection vehicle relays and commercial waste deliveries to certain Converted MTSs during specified hours to mitigate the potential for significant adverse on-site impacts at boundary points or nearby

sensitive receptors, and/or off-site noise impacts at certain sensitive receptors along access/egress routes to the facility. In addition, deliveries of commercial waste to the Converted MTSs will be restricted to the hours of 8:00 p.m. and 8:00 a.m., which does not coincide with the facility peak hour analyzed for the Converted MTSs.

65. **Comment:** The traffic studies were not accurately conducted. While true that the CEQR Technical Manual classifies waste collection vehicles as 1.5 PCEs, this is not appropriate for traffic studies relating to an on-going flow of traffic to and from a site. The CEQR technical manual is merely a set of guidelines. A truck weighing approximately 23 tons cannot be considered a "light truck." The 1.5 factor may perhaps be applied when there is an occasional garbage truck within a stream of cars, or perhaps when empty. According to the USDOT Federal Highway Administration guidelines, a heavy vehicle is equated to 2 Passenger Car Equivalent (PCE). This would change many of the impacts in the analyses.

Response: The traffic analyses were properly prepared in accordance with the 2001 CEQR Technical Manual that specifically designates a PCE ratio of 1.5 for waste collection vehicles, while a PCE of 2.0 is appropriately designated for the longer, larger waste transfer trailer vehicles with an allowable gross vehicle weight of 80,000 pounds (40 tons).

66. **Comment:** While the Federal Highway Capacity Manual was used to evaluate truck traffic, several consultants were used for the traffic studies, and their analyses were not consistent across all the sites evaluated in the DEIS. For example, the evaluation at West. 135th Street treats a DSNY truck as a heavy vehicle. However, for East 91st Street, (and other sites) a DSNY vehicle is not considered to be a heavy vehicle. Additionally trucks owned by commercial waste haulers are heavier and have a greater capacity than DSNY vehicles. Trucks owned by Waste Management indicate that their tonnage is 15 tons empty, and 30 tons full. Therefore traffic studies (and noise and air) need to be adjusted for when the analysis is for DSNY-managed waste versus commercial waste.

Response: There are two ways of evaluating future conditions that are used in the FEIS. Both methods were reviewed and approved by the NYCDOT. In the first method, new

truck trips generated by a facility are entered into the model as Passenger Car Equivalents (PCEs). In the analysis, the percentage of trucks is left unchanged from the No-Build to Build conditions since the change in percent heavy vehicles due to the addition of DSNY collection vehicles is represented as an increase in PCEs (by adding DSNY collection vehicles as a PCE of 1.5, which is the value specified in the 2001 CEQR Technical Manual for waste collection vehicles). Method 1 conservatively estimates the number of new trips generated by a facility because the heavy vehicle percentage between Future No-Build and Future Build Condition decreases because the software program does not recognize that the new truck trips are counted as PCEs.

In the second method, new truck trips generated by a facility are added to Future No-Build volumes on a one for one basis (no PCE factors are used for trucks). The truck percentage is then adjusted (increased) assuming that all new truck trips are heavy vehicles. Under this method, the Highway Capacity Software (HCS) automatically assigns a default PCE value of 2.0 for heavy vehicle trips. By conservatively estimating the number of new trips generated by trucks, Method 2 also conservatively estimates the number of new trips generated by a facility. Although the methods for including new trips differ, both methods conservatively estimate the number of new trips generated by trucks for each facility and NYCDOT approved both methods of analysis. The off-site noise analyses were based on use of PCE noise conversion factors from the 2001 CEQR Technical Manual for heavy trucks (47 PCEs).

67. **Comment:** The DEIS states that a new traffic study would not need to be conducted if one of the sites evaluated is used instead for recyclables. While the number of trucks may be fewer, we don't know that since we don't have information on the number of trucks or their size.

Response: The comment refers to use of the existing West 59th Street MTS for receiving Recyclables. This facility currently receives paper, which is accounted for as an Existing Condition. The use of this facility to receive more or different Recyclables, e.g., MGP, is not an element of the Proposed Action. The Proposed Action designates two sites for recycling, Gansevoort and SBMT, that are completely unrelated to the Proposed Converted MTSs. The DEIS and this FEIS evaluated collection vehicle deliveries to both

Gansevoort and SBMT. As discussed in the response to Comment #99 in Section 40.3.1.10, there are no overlapping effects in traffic patterns to the proposed Converted MTSs and either of the proposed Recycling facilities (Gansevoort and SBMT).

68. **Comment:** The DEIS should present a detailed description of the methodology used to collect the actual truck counts at the commercial waste transfer stations, including when they took place. Additionally, the DEIS should present the total volume of waste traffic for each intersection evaluated in the traffic analyses, and indicate the truck type (DSNY, private collection or waste export). The CWMS reports traffic volumes based upon the number of vehicles, rather than PCE ratios, which are used to assess impacts in the DEIS. What are the PCE totals for the intersections evaluated, and what percentage of that can be attributed to waste management trucks? The DEIS should be updated to provide basic information regarding the collection of traffic impact information and provide the data and methodologies used to arrive at its conclusions as an Appendix. Additionally, information should be included on the volume of waste managed and delivered to various sites by Community District.

Response: See Response to Comment #64 pertaining to the level of analysis presented in the Commercial Waste Management Study for acceptance of commercial waste at the Converted MTSs. The DEIS and this FEIS includes several figures for each facility analyzed, one of which presents the net additional number of DSNY collection vehicles analyzed during the am, facility and pm peak hours. Since any commercial waste deliveries to a Converted MTS would be restricted to between 8:00 p.m. and 8:00 a.m. when background traffic volumes are lower and intersection LOS is higher (better), no additional traffic analyses were conducted for commercial waste deliveries to the Converted MTSs.

The traffic analyses of commercial waste transfer stations located in geographical proximity were not CEQR-level analyses and the methodology and analyses are presented in the Commercial Waste Management Study (CWMS)–Volume I in Appendix I to this FEIS. In addition the Technical Backup for the DEIS and this FEIS, available request, includes supporting detail from which the relative proportions of waste collection vehicles and heavy trucks can be calculated.

69. **Comment:** The DEIS needs to include the hourly distribution and type of truck accessing the facility. There needs to be an explanation as to how DSNY determined the temporal distribution of the commercial waste trucks that would access DSNY's facilities.

Response: Figures that present the hourly deliveries of DSNY-managed waste throughout the day are included in the DEIS and this FEIS and are based on historical delivery patterns. The methodology used to determine the potential temporal distribution of the commercial waste deliveries to the Converted MTSs is included in the Commercial Waste Management Study (CWMS) – Volume III in Appendix I in this FEIS.

40.3.1.10 SWMP Process and Objectives

70. **Comment:** Neither the SWMP or the DEIS provide information as to what will happen to the containerized waste once it leaves the MTS. Failure to address that element is a classic example of segmentation which is prohibited under CEQRA/SEQRA.

Response: DSNY is in the process of negotiating contracts for transport and disposal services to support the Long Term Export Program and has not made final decisions on the intermodal and disposal facilities that will used. Federal law establishes the Surface Transportation Board as the authority with regulatory oversight over railroads in the United States. The role of the Surface Transportation Board preempts state and local environmental review and permitting of railroad-owned facilities. Other types of out-of-state facilities, such as intermodal facilities and disposal facilities that may be used for the Long Term Export Program are subject to environmental review and permitting under the laws of their respective host jurisdictions. Facilities in New York State that are lawfully permitted and will be used for their intended purpose without modification as part of a Proposed Action are not subject to environmental review. The DEIS and this FEIS reviews several in-City intermodal facilities and one, Steel Style, in New York State as facilities that may potentially be used by the Long Term Export program, although none have been designated as an element of the Proposed Action. The DEIS, and this FEIS notes that, in case where the environmental review of these facilities is incomplete, a supplemental environmental review will be prepared, if that facility is selected as a part of the Long Term Export Program.

Section 40.3.5 of this chapter contains a Transfer, Transport and Disposal Plan that describes the intermodal transfer and transport facilities and services that may be employed to support the Converted MTSs.

71. **Comment:** The SWMP is vague and lacking in detail, especially on new programs, like Zero Waste, as well as the means to achieve Zero Waste. Sound alternatives to export should be discussed, as should the long term export costs.

Response: Section 40.3.1.3, Comment #12 addresses DSNY's commitment to waste reduction and reuse, including a discussion of the concept of "zero waste".

72. **Comment:** A number of individuals and groups supported the use of a marine and/or rail system to transport waste, which would take trucks and cars off the streets, and were in support of the key components of the SWMP. Transport of waste by barge can cut the truck traffic to half of the nearly eight million truck miles of traffic per year for solid waste transport on City streets, and can improve the quality of life in all five boroughs.

Response: Comment noted.

73. **Comment:** The SWMP should clearly state that the Fresh Kills Landfill is not a part of this new SWMP, and will not reopen.

Response: The information provided in Attachment X of the SWMP on the Fresh Kills Closure Construction and End Use clearly indicates that it is permanently closed to the acceptance of waste, undergoing closure construction and the subject of a planning effort that will define the phased reuse of the site through the development of a Master Plan.

74. **Comment:** The SWMP proposed facilities were chosen long before the DEIS was undertaken. The DEIS was tailored to justify a preconceived conclusion, and would not be accepted as being complete if submitted by a private developer. The SWMP pitted one neighborhood against another. A "real master plan" for the City should be developed as a collaborative effort with local community groups and leaders.

Response: The Draft New SWMP proposes an equitable distribution of Long Term Export and Recycling facilities among the City' five boroughs. It seeks to minimize the transport of DSNY-managed Waste generated in one borough to another for transfer. It avoids adding transfer capacity in communities, the South Bronx and Brooklyn CD #1 that have the highest relative concentrations of private transfer stations in the City. The SWMP was developed through consultation with affected communities and, as evidenced by the affirmative votes on the Converted MTS ULURP applications of three of the four affected community boards, has broad community support.

The DEIS and this FEIS were prepared to support a City-wide plan for a twenty year planning period. It is not comparable to an EIS prepared by a developer to support the construction of a single project. In July of 2002, Mayor Michael Bloomberg completed a review of the Long Term Export Program. That program, authorized under the 2000 SWMP Modification, had been unanimously adopted by the City Council in November of 2000. It was supported by an FEIS issued in October of 2000 that provide an environmental review of long term export options at some 20 different sites with 25 different facility options across the City. (The October 2004 DEIS and this FEIS, in analytical content and format, parallels the 2000 FEIS.) The Mayor's decision to pursue containerization at the MTSs was based on problems encountered in implementing the Linden EBUF project, which unfortunately could not be overcome, as well as recognition that the Alternatives evaluated in the 2000 SWMP FEIS were not acceptable substitutes for Long Term Export from the Manhattan MTS and North Shore MTS wastesheds, which comprised four of the five MTSs wastesheds that the Linden Project would have served.

The Mayor announced that the City would move in a new direction by redeveloping all eight of MTSs as facilities capable of containerizing waste for intermodal transport by barge or rail to out-of-City disposal facilities. Since that announcement, DSNY has worked diligently with NYCEDC and other City agencies to implement the Mayor's policy directive.

In the course of this work, other Alternatives were considered. DSNY is proposing to implement four Converted MTS projects, not eight. As alternatives to developing Converted MTSs to serving the West 135th and West 59th Street wastesheds in Manhattan and the wastesheds formerly served by the South Bronx and Greenpoint MTSs, other Long Term Export options were found. These options are now part of the Proposed Action, because they can be implemented more quickly, and are more cost effective than developing Alternative Converted MTSs for those wastesheds. Additionally they avoid adding new in-City waste transfer capacity, particularly in the Bronx and Brooklyn. DSNY also investigated alternative rail or barge export sites in Manhattan in the Scope of the Commercial Waste Management Study (CWMS). Three of the four sites investigated, West 140th Street (between the North River Water Pollution Control Plant on the Hudson River and the Henry Hudson Parkway), West 30th Street and Pier 42 on the East River were found to be infeasible. The fourth site, the Gansevoort peninsula is proposed as the site of an Acceptance Facility for Manhattan Recyclables. Section 1.3 of the FEIS provides additional discussion of the history of Alternatives considered to the Proposed Action.

75. **Comment:** One speaker thought that the Converted transfer stations will be inferior to the way garbage is transferred today. It is better to have hundreds of independent facilities.

Response: The development process and expense, the siting issues, lack of economies of scale and the additional truck traffic all argue against this approach.

76. **Comment:** The SWMP fails to address the need for the City to acquire long term landfill or other disposal capacity, which without, the City will be forever dependent on the private landfill market, and its constant escalation in price. Some landfill capacity will always be needed, so the City must control its cost. It would be prudent to develop or acquire capacity within New York; there should be greater consideration to self-sufficiency on a State-wide, if not a City-wide basis.

Response: DSNY has previously investigated the possibility of acquiring out-of-City New York State disposal capacity by issuing an RFEI on February 17, 2004 to solicit

expressions of interest from private and public entities, willing to sell such disposal capacity to the City. That initiative did not produce any promising results. In principal, DSNY remains interested in this idea. As a practical matter, it is unlikely that a party with permitted disposal capacity capable of accepting significant volumes of DSNY Waste would be interested in selling that asset to the City. It is more likely that DSNY would be offered a potential site that requires substantive permit approvals. That scenario would expose the City to significant risks that are beyond its control and is not particularly attractive.

The Long Term Export Program will in effect acquire out-of-City disposal capacity through the vehicle of a 20-year Contract with waste management companies and the Port Authority. DSNY has progressed far enough in its Long Term Export procurements to be confident that it can secure disposal capacity guarantees from private companies for 20 years. The Long Term Contracts will allow DSNY to "lock-in" large volumes of capacity at a time when the remote disposal capacity market is highly competitive. It will fund the contract for this capacity from its expense budget rather than making large up front investments with capital funds to acquire disposal capacity assets.

77. **Comment:** A few speakers though that landfilling of the waste would be the most expensive disposal option, and also the most damaging to the environment and to public health. Waste-to-energy should be considered because it reduces greenhouse gases, and a facility could be developed within the City. The only discussion on waste-to-energy is the Essex County Incinerator; however, this facility is inconsistent with the State's policy that recovered energy be available to the planning unit (NYC) or to the state.

Response: Past efforts to develop waste-to-energy facilities have demonstrated the extreme difficulties of siting such a facility in the City, and DSNY has no plans to do so.

78. **Comment:** Best Available Control Technologies should be used for all of the MTSs to make them accepted within the neighborhoods. GPS systems should be used on trucks to avoid queuing, or deliveries can be staggered. The Converted MTS should utilize an odor capture and control system, not an odor neutralizing system, and a vector and

vermin control system. There must be no standing water which would attract vermin. There should be a hazardous materials detection, segregation and disposal system. Every site must maintain a record keeping system. There should be on-site decontamination at the point of exit from the facility to remove all residues from vehicles leaving the facility. Truck deliveries should be staggered to minimize air quality impacts.

Response: The odor neutralizing systems is an odor control system that achieves better than 90% odor removal efficiencies. The MTSs are also equipped with dust suppression systems to keep dust out of the exhaust air and ventilation systems with sufficient capacity to maintain the building under negative pressure to prevent the escape of odors and litter to the outside environment. "Best Available Control Technology" as used in the context of air pollution regulation is equipment used to control release of criteria pollutants from "major sources" such as power plants. The Converted MTSs are classified as "minor sources". The emission control systems designed for the MTSs are the appropriate level of control for these facilities and are protective of public health.

The d**r**aft Part 360 Permit application, undergoing review by NYSDEC, extensively documents the measures and equipment that will employed at the MTSs to detect and segregate hazardous materials, control vermin through the periodic application of pest control measures, and clean the facility on a daily basis. The tipping floor, from which collection vehicles dumps their loads, is elevated 10 feet above the processing floor. Consequently, there is a very little accumulation of waste on the tipping floor and it is periodically swept with mechanical equipment. The additional ramp and truck queuing capacity at the Converted MTSs will eliminate the problem of on-street truck queuing and is more than sufficient to handle the peak anticipated truck rate at each facility. See the response to Comment #2 in section 40.3.1.1 for additional information about design features of the Converted MTSs.

79. **Comment:** The SWMP needs to include the planned closure of truck-based facilities in conjunction with the reopening of the Converted MTSs. This is not currently addressed in the document. The DEIS needs to examine the impacts of private land-based facilities

as thoroughly as the impacts of the Converted MTSs, and include the impacts of the transfer station siting regulations and operational regulations.

Response: DSNY is committed to reducing permitted putrescible capacity in the communities with the greatest number of transfer stations once the Converted MTSs open. DSNY will work with the industry, the Council and community groups to achieve this reduction in capacity. If DSNY is unable to obtain the cooperation of the industry, DSNY will work with the Council on legislation that will clarify DSNY's authority to reduce permitted capacity at transfer stations.

80. **Comment:** Communities need to be compensated for accepting more than their fair share of waste. Community mitigation programs need to be included, as well as amenities which would benefit the local community where a facility is sited. These might include tree plantings and open space improvements. The City should include this as a requirement for all transfer stations with which it enters into a contract.

Response: The reactivation of the four proposed MTS sites will not generate significant adverse impacts to the community. The three to five private transfer stations under consideration for long-term contracts already exist, and are located in suitable M-3 areas. DSNY does not believe that the DEIS or FEIS analysis supports a need for community mitigation programs for the Proposed Action.

81. **Comment:** DSNY should evaluate the feasibility and environmental impacts of a number of small sites for barging recyclables and waste rather than asking communities to accept truck traffic from several districts many miles away. Truck miles and emissions would be minimized, and smaller facilities would be easier to site.

Response: There is no evidence that smaller facilities are easier to site than larger facilities. The Proposed Action for Recycling includes development of a Materials Processing Facility at the SBMT in Brooklyn and a Recyclables Acceptance Facility at the Gansevoort peninsula for Manhattan. These new facilities would be integrated with existing Recyclable Acceptance facilities in the South Bronx and Long Island City, Queens, and the Visy Paper plant on Staten Island. These facilities in aggregate create a

system in which post-collection shipment of Recyclable materials between boroughs would be by barge.

82. **Comment:** As new DSNY trucks are purchased, alternatively fueled trucks, such as those that utilize biodiesel or natural gas should be considered to reduce pollution from truck emissions. Diesel trucks should be phased out. Non-road equipment within the transfer facilities should also be retrofitted to reduce diesel emissions.

Response: The Waste Vehicle Technology Assessment, Volume VI of the CWMS, published in March of 2004 and included as Appendix I in this FEIS extensively discusses DSNY's noteworthy efforts in reducing emissions from its collection fleet, including: use of low sulfur fuel in all its collection vehicles; fleet replacement on a seven year cycle that results on engine performance upgrades; testing of clean diesel technology; and the planned use of diesel particulate filters.

83. **Comment:** The City needs to vigorously enforce siting and operational regulations at existing facilities, with escalating fines for each violation. The City's new marine facilities also need to follow these stringent standards, and any transfer station that continually disobeys operational health and safety regulations must be fined or closed. This should also apply to other violations as well, such as violation of truck routes.

Response: The Enforcement Effectiveness Study in Appendix K of Volume I of the Commercial Waste Management Study included in Appendix I to this FEIS reports on activity of the Permit and Inspection Unit (PIU), DSNY's enforcement arm that conducts regular inspections of transfer stations for compliance with regulations.

84. **Comment:** Exporting waste will impose environmental burdens in communities where the landfills are located. These communities are most likely poor and minority communities. This is also true for the community in New Jersey where Manhattan waste will be incinerated. Exporting waste is not good for the environment; it is only beneficial to the waste industry, especially to Waste Management.

Response: The City sees no practicable alternative but to export its non-recycled waste. Waste exported by DSNY is disposed of at permitted facilities operating in compliance with local, state and federal law.

85. **Comment:** A few people thought that no waste should be incinerated. Incineration produces some of the most dangerous chemicals on earth, and causes cancer. New York City should not send its waste to an incinerator.

Response: All waste-to-energy facilities in the United States are stringently regulated, use Best Available Control Technology for emission control; and meet air emissions standards that are established as protective of public health.

86. **Comment:** The City needs to commit to a plan that includes establishment of a community advisory group, and a timeline of milestones to develop and implement the redistribution of waste capacity throughout the City. It should plan a phase-in for new technologies, and other environmentally-beneficial initiatives.

Response: DSNY is willing to work with Community Advisory Groups on addressing issues of concern related to Converted MTS construction and operation. See Response to Comment #79 on the issue of reducing private transfer stations in the City.

87. **Comment:** A number of people were critical of the alternatives included in the SWMP. The Solid Waste Management Act (SWMA) places high priority on reducing and reusing waste prior before disposal. The City needs to be more creative with how waste is handled in New York City. The MTS system is said to be a "key component" of the SWMP, but in fact, it is the only program discussed in detail. The City needs a world-class state-of-the-art processing and recycling system that will serve as a model for the world, instead of putting off dealing with the waste by sending it elsewhere. The SWMP should have an overall vision of where the solid waste system should be, and should encompass economic and environmental sustainability as well as social responsibility and equity. The cost increase for interim export of 91% is clearly unsustainable, and solid waste infrastructure must be maintained in municipal hands. Alternatives other than versions of incineration must be explored, and capital resources

should be used to explore and implement technologies such as anaerobic digestion, gasification, and newer means of handling recyclables.

Response: Please refer in the Draft New SWMP to the following sections: Chapter 2, Waste Prevention and Recycling; Attachment III, Waste Characterization Activities; Attachment VI, Recycling; and Appendices A, B, C, and D, all of which describe various aspects of the City's Waste Prevention and Recycling activities and Appendix F (Report on New and Emerging Solid Waste Management Technologies). Also refer to the Section 40.3.1.3 in this Chapter for responses to related comments on recycling.

88. **Comment:** The SWMP states that the transfer station fees will be increased. These revenues should be dedicated to commercial waste prevention and recycling programs.

Response: The transfer station permit fees collected by DSNY are applied in DSNY's budget to support the operations of the Permit and Inspection Unit (PIU). The PIU's principle function is to the regular inspection of private transfer stations for compliance with DSNY rules. The existing transfer station fees are not sufficient to cover the cost of PIU operations, particularly in light of PIU's new responsibilities to inspect for compliance with DSNY's new operational rules. The increase in fees is to help cover the cost of PIU operations.

89. **Comment:** A number of speakers were critical of how the SWMP handled the issue of commercial waste. State law requires that all waste, both residential and commercial, within a planning unit be managed in the SWMP. The New SWMP recognizes the problems associated with the current system for managing solid waste, but includes very few commitments for improving commercial waste management. The SWMP does not provide adequate alternatives for the management of the commercial waste stream, fails to create enough alternative capacity, and fails to provide milestones for its goals, or to prepare for the phasing out of unnecessary private transfer stations.

Response: See the Response to Comment #79.

90. **Comment:** The DEIS fails to analyze the cumulative impacts of the City's entire solid waste management system, including residential and commercial waste. SEQRA requires

that the EIS consider the impacts of the proposed actions in conjunction with the impacts of the current system for handling commercial waste. This should include those future actions that the SWMP envisions, such as moving commercial waste through the West 59th Street MTS and moving recyclables through the facility at Gansevoort. The cumulative analysis should include air pollution impacts from diesel truck and barge exhaust so that alternatives can be developed to reduce increases in air emissions. The DEIS should also analyze the cumulative emissions in all parts of New York from the no action alternative, which is continuing the interim plan on a permanent basis, and compare it to an alternative where truck queuing and idling is minimized at the MTSs. Any environmental review of existing programs related to the 1992 SWMP is too old to be "incorporated by reference" into the SWMP.

Response: The DEIS and this FEIS properly analyzes the impacts associated with the adoption of the New SWMP, which would modify certain aspects of the City's waste management system, and compares such impacts to existing conditions that the New SWMP in part is intended to address. Moreover, an analysis of the combined effects of the existing private transfer stations located in relative proximity in four study areas in the City that is reported in the 2004 Commercial Waste Management Study, included as Appendix I to this FEIS. CEQR requires cumulative impacts to be analyzed when two or more individual effects on the environment, when taken together, are significant or compound or increase other environmental effects. Elements of the Proposed Action for Long Term Export and Recycling include siting of four Converted MTSs (two in Brooklyn, one in Manhattan and one in Queens) and two recycling facilities (one in Brooklyn and one in Manhattan). Each of these facilities serves a discrete wasteshed. The waste flows to these facilities would have no overlapping effects with other facilities that are elements of the Proposed Action.

The Proposed Action for the Bronx wasteshed would involve contacting with either or both of two existing facilities that are permitted and operate at substantially greater capacity than the total of DSNY-managed waste in the Bronx. The DEIS and this FEIS evaluate the off-site impacts (traffic, air quality, and noise) of DSNY waste deliveries to East 132nd Street, assuming that facility received all of DSNY-managed Waste in the

Bronx, and found no potentially significant unmitigatable impacts. A 2003 EAS for expansion of the Harlem River Yard Truck to Rail Transfer Station analyzes an increment of additional collection vehicles that is greater than the increment of sending all DSNY-managed Waste in the Bronx to that site, and also found no potentially significant unmitigable impacts. If DSNY contracted with each facility to receive a portion of the Bronx waste, the waste flows to these facilities would not converge at points that would cause combined effects at a level of significance. A similar situation, involving two facilities, exists in Brooklyn and supports the same conclusion.

Existing businesses that may contribute to air quality, odor, noise and traffic within a given Study Area are included in the analyses for each facility, as applicable, as described in Chapter 3.0 of the DEIS and this FEIS. In essence, existing conditions are identified through collection of current traffic data, ambient noise levels, and air monitoring stations located throughout the City for use in the analyses. Future No-Build conditions are estimated conservatively using NYSDOT-approved growth factors and traffic projections for planned developments for the traffic and off-site air and noise analyses. The interim export actions have been the subject of separate environmental reviews, and are included in the DEIS and this FEIS as Existing Conditions and is accounted for in the Future No-Build Conditions analyses.

As noted in Section 1.2, Purpose and Need, DSNY intends to continue an array of Existing Programs (programs authorized under the existing SWMP), including New Initiatives to improve their effectiveness. These Existing Programs do not require environmental review.

91. **Comment:** One person had suggested the creation of a truck-to-rail facility within the Amtrak right of way, which DSNY had said was "inconsistent" with development plans in the area between West 30th Street and West 38th Street, on the basis that other facilities proposed are also inconsistent with existing plans. It was suggested that innovative architecture could be used by building a facility in part of the area now proposed as underground automobile garage under the proposed raised pedestrian way to be built on a

platform over the Amtrak rails between 10th and 11th Avenues, between 34th and 41st Street.

Response: A transfer station is not compatible with other development plans for this area.

92. **Comment:** A number of people were critical of the environmental review for the SWMP facilities. For all of the MTS sites, the DEIS fails to provide an adequate analysis of the impacts of the MTS site use on the surrounding areas and community facilities, which service vulnerable populations. It is not sufficient to say that the site will be reactivated for a previous use, and therefore will not present any significant adverse impacts. The DEIS must look at what issues previously existed when the MTS was operational, and determine whether these problems are likely to re-emerge with the reactivation of the site. Where are the assumptions and data backing up the determination that no significant, unmitigatible adverse traffic, air quality, odor or noise impacts were found?

Response: Chapter 3, Methodology, in the DEIS and this FEIS describes the methods and assumptions used to conduct all required CEQR analyses, including, but not limited to, reviews of potentially significant impacts in the areas of: Land Use, Zoning and Public Policy; Socioeconomic Conditions; Community Facilities and Services, Open Space; Cultural Resources and Neighborhood Character. As indicated in Chapter 3, additional technical backup documentation is available upon request. All of the required CEQR evaluations were performed for all of the Converted MTS sites, and the results are reported in the site-specific chapters.

Problems related to the operations of the existing MTSs are addressed in the proposed design and plan of operation for the Converted MTSs. Please refer to the response to Comment #2 in Section 40.3.1.1 for a review of the design features of these proposed facilities that represent improvements over the existing facilities and which avoid causing potentially significant adverse impacts.

93. **Comment:** The SWMP and DEIS is lacking basic information, such as the quantification of waste and recyclables generated by individuals, household, type of business or even by borough, and there is no explanation of the relationship to demographic characteristics.

The SWMP is not based on the latest NYMTC forecasts, which are much higher than reported in the document. Additionally, borough residential waste quantities are not provided, and with differing population growth rates, the reader cannot understand the effectiveness and equity of the facility locations.

Response: These subjects are addressed in the Draft New SWMP, Attachment 1, DSNY-managed Waste Quantification and Projections for the Plan Period and Attachment III, Waste Characterization Activities and in Volume II, Commercial Waste Generation and Projections. The latest NYMTC data that was available at the time was used in the employment-based waste forecast of Commercial Waste Generation.

94. **Comment:** A number of people commented on the overall lack of infrastructure to handle waste within the Borough of Manhattan. The Plan's intent is to maximize the use of barge and rail for export of solid waste and recyclables. The current Manhattan system moves all of the Borough's materials out by truck, creating unacceptable air pollution and traffic congestion, and must be phased out. The SWMP does not improve the handling of DSNY-managed solid waste from two-thirds of Manhattan. However, there should be additional capacity south of 59th Street. Additional transfer sites should be developed with the objective of decentralizing waste handling, enabling communities to take more responsibility for their waste. For example a rail site at 30th Street was evaluated and rejected because it did not conform to zoning. This should not bar it from the siting of a station.

Response: As reported in the Manhattan Siting Study, Volume V of the CWMS, included as Appendix I in this FEIS, Manhattan has a very limited potential for siting transfer stations. The Proposed Action included development of a Converted MTS at the East 91st Street MTS site, development of the West 59th Street MTS site for export of commercial waste and development of a Recyclables Acceptance facility at the Gansevoort peninsula. The West 30th Street site was found infeasible as a transfer station site based on technical and engineering considerations as documented in the above referenced report.

95. **Comment:** One commenter urged the creation of an independent planning task force to plan and implement a new SWMP.

Response: See the Response to Comment #74.

96. **Comment:** The SWMP and DEIS do not consider other ways to dispose of garbage other than those described in the SWMP. The goals of the SWMP, to more equitably distribute the burden of solid waste disposal and to make less of an environmental impact are admirable, but the public should have a voice in policy decision. Were rail transport, waste-to-energy in NYC, and other alternatives considered? If so, why were they dismissed?

Response: Please see the response to NYSDEC Comment #18 in Section 40.3.3.1 for an extensive description of DSNY's enhanced public participation program. See comment #77 above on consideration of waste-to-energy technology. Rail and or barge transport is a fundamental premise of the Proposed Action.

97. **Comment:** The SWMP and DEIS must discuss the capacity of the existing intermodal waste export infrastructure required to implement the SWMP, and identify alternative export capacity should there be a lack of rail and/or barge service. The DEIS, SWMP and permit applications must fully document the adequacy of intermodal capacity.

Response: Section 40.3.5 of this Chapter provides a Transfer, Transport and Disposal Plan (TTDP) describing the intermodal facilities and the rail transport facilities that is available to support the operation of the Converted MTS program. The TTDP will also be included as an Appendix in each of the Converted MTS Part 360 permit Applications.

98. **Comment:** Selected findings and recommendations of the CWMS were used as the basis for a number of conclusions in the DEIS. Other important aspects such as the evaluation of regional disposal capacity or the burdens generated by the concentration of private sector waste facilities are not addressed within the DEIS. The relationship between the recommendations and findings of the CWMS and the DEIS need to be clarified, since the CWMS was not subject to SEQRA review, and its findings challenged.

Response: The DEIS and this FEIS addresses the Proposed Actions in the Draft New SWMP. The CWMS is included as Appendix I to this FEIS. The Volume IV report in the CWMS on Landfill Disposal Capacity Potentially Available to the City was developed as information that confirms the direction of the Long Term Export Program. The Volume I report on Private Transfer Station Evaluations has resulted in DSNY regulatory initiatives that are being implemented independently of the Proposed Action in the Draft New SWMP. See the response to Comment #79 on the question of transfer station concentrations in certain communities.

99. Comment: There will likely be an overlap between interim and long-term waste export contracts during the implementation of the SWMP that may result in traffic impacts not previously assessed. The initial interim waste export contracts did not look at cumulative impacts that might arise from the recycling facilities proposed in the SWMP, conversion of the 59th Street MTS, or the decision to rely on truck-based export for the vast majority of commercial waste.

Response: Long term contracts will not overlap with interim export contracts in the same wasteshed. Once service commences under a Long Term Export contract, DSNY will terminate the Interim Export contract in that wasteshed. Truck deliveries of Curbside Recyclables to Recyclables Acceptance Facilities in the Bronx and Long Island City are accounted for as an Existing Condition. Truck deliveries of Curbside Recyclables to the Gansevoort Recyclables Acceptance Facility do not overlap to any significant degree with the routes taken by DSNY collection vehicles delivering DSNY-managed Waste from Manhattan to Long Term Export destinations. As noted in the response to Comment #160 in Section 40.3.2.2.2. Hamilton Avenue, truck deliveries of Curbside Recyclables from Brooklyn Community Districts 9, 14, and 15 to the SBMT Materials Processing Facility would cause no overlapping impacts with deliveries of DSNY-managed Waste to the Hamilton Avenue Converted MTS. Under the Proposed Action, each of the three to five private transfer stations that are proposed to receive DSNY waste would also be required to export waste from their commercial customers by barge or rail, thus reducing outbound commercial transfer trailer traffic.

100. **Comment:** The environmental assessment for interim export of waste from Manhattan was modeled using the hypothetical quantity and temporal distribution of trucks leaving Manhattan for New Jersey. The DEIS should evaluate the impacts based on DSNY's actual operations, proposed actions and current traffic conditions. The traffic patterns around the bridges and tunnels have changed considerably since the environmental review for interim export. For example, no eastbound commercial traffic has been allowed to enter the Holland Tunnel since August 2004.

Response: The Interim Export EAS used actual data on existing operations as the baseline conditions. Future conditions were projected using DSNY data and were based on real numbers. The quantity of waste and trucks analyzed was not hypothetical, but typical peak weekday DSNY volumes. The temporal distribution was based on current DSNY truck patterns, modified for changes in disposal destinations and operations. When commercial traffic restrictions were enacted, it could have had the potential to lighten traffic around the Holland Tunnel while increasing it at other river crossings. DSNY vehicles, however, continued to use the Holland Tunnel. To the extent that these patterns affected traffic at the DEIS/FEIS study locations, they would have been captured in the updated counts. To the extent they do not impact DEIS/FEIS study locations, they are not relevant.

The DEIS and this FEIS looked at past temporal distributions of trips at the 91st Street MTS as a predictor of future trip patterns. Interim Export assessments did not factor in the projections of DSNY truck traffic to the East 91st Street facility. Projected future DSNY truck numbers, by route, were compared to existing DSNY truck numbers, by route, to determine increases or decreases by specific roadway segment. As use of the MTS represents an end to truck export, there were projected decreases in DSNY trucks on links near river crossing portals. Therefore no analysis was needed or performed at intersections most likely to be affected by changes in rules governing use of bridges or tunnels. The greatest net increase in DSNY trucks would be on links near the MTSs which were proposed to be opened. The links with the greatest projected increases were the focus of the analysis.

101. **Comment:** The DEIS should include a technical appendix containing the data and methodologies used to determine the impacts of the proposed action.

Response: As noted in Chapter 3 of the DEIS and this FEIS, a copy of the technical backup for the analyses in the DEIS and this FEIS is available upon request in *.pdf format on compact disk.

40.3.1.11 Project Cost

102. **Comment**: If disposal costs have risen 91 percent since the City started exporting its waste, why does the City intend to give almost 10,000 tpd of waste to these same companies that have increased their fees? This is an unsustainable situation.

Response: Interim Export costs have not increased 91%. Over the period of Interim Export contract awards, 1997-2004, the average annual rate of increase has been in the range of 3.5% to 4%. The City requires out-of-City disposal facilities to dispose of its waste. DSNY is negotiating with companies that have responded to five RFPs for Long Term Export services. No decisions have been made on contract awards. A significant contributor to cost increases for Interim Export is the increase in truck travel distance to the disposal facilities as disposal sites nearer to the City are used up. In shifting to barge/rail export from a truck based export system, DSNY expects those costs to stabilize.

103. **Comment:** In 2000, the City prepared a generic analysis of costs; we are asking for this same analysis now, as well as clarification concerning the long term contracts for disposal. Will they be "put or pay" contracts that will require the delivery of a certain amount of waste and prevent the City from expanding composting and recycling?

Response: The contacts that DSNY is negotiating will not have "put or pay" provisions. DSNY is in the midst of several competitive procurements with multiple companies that will determine the costs of Long Term Export when final contracts are negotiated. The City's procurement rules preclude revealing information that could compromise this competitive process. However, during the City Council's hearing on this matter, DSNY presented information clearly demonstrating the Proposed Action to be a fiscally prudent

alternative for the City's solid waste management needs.

104. **Comment:** The SWMP fails to adequately provide a comparative economic analysis of the present plan, the Proposed Action, and other alternative waste management approaches. The DEIS lacks a comprehensive cost/benefit analysis; there are no projections for the whole project, no construction costs, operating costs, or discussion on who will work at these facilities. Without concrete information about the method of transporting and disposal of the containers, the costs associated with the plan cannot be known, and it can't be determined if it is preferable to, and more cost effective than, the current plan. The overall estimated costs of only two variations are provided (revamping four MTSs and the conversion of all 8 MTSs), and the analysis does not describe the underlying calculations or assumptions. The cost analysis needs to look at the possible inclusion of commercial waste and recycling as well.

Response: See the response to Comment #103, above.

105. **Comment:** The Plan also needs to consider the economic impacts of the MTS for commercial waste at 59th Street, the barge staging area and any incentives used to encourage private carters' usage of the site, in addition to the surplus capacity at the other MTSs.

Response: The use of the existing West 59th Street MTS site for commercial waste will be the subject of a procurement to be initiated by DSNY. Please review the responses to comments in Section 40.3.2.3.2 of this chapter for further information on this issue.

106. **Comment:** The SWMP states that the cost of the proposed action will be about $100 per ton, but doesn't address whether these costs will decrease over the 20-year planning period. It is not clear if the numbers account for potential increases in exporting costs, etc.

Response: See response to Comment #102 and #103, above.

107. **Comment:** The SWMP/DEIS contains none of the analysis that was in the 1992 report of the hidden social costs of transport (traffic delay, accidents, energy usage, air and noise impacts)

Response: See response to Comment #103, above.

108. **Comment:** There should be an analysis of the alternative uses and economic development potential of the proposed MTS sites.

Response: These sites have marine transfer stations that have active permits to process 4,800 tpd of waste. When the New SWMP is approved by the City Council, Long Term Export contracts have been executed, and the permits required to implement the Long Term Export Program have been approved, DSNY will work with interested parties on alternative uses for those MTS sites that are not included in the Plan.

109. **Comment:** There should be a consideration of the cost-effectiveness of promoting increased use of garbage disposals to redirect some of the largest component of the waste stream to sewage.

Response: In 1997, residential garbage grinders became lawful in the City. This issue is within the purview of NYCDEP and is not the subject of the New SWMP. See the response to Comment #13 in Section 40.3.1.3 for more on this issue.

40.3.2 Comments and Responses

40.3.2.1 Bronx

110. **Comment:** The SWMP is a step in the right direction in that it recognizes that the Bronx MTS should not be reopened.

Response: Comment noted.

111. **Comment:** A number of comments stated that the Harlem River Yard and the East 132nd Street sites are preferred locations for handling Bronx waste, but that the DEIS inadequately analyzes these properties. The full environmental impact of these sites is

not provided because they received negative declarations in previous reviews. A facility handling thousands of tons of waste cannot result in no impacts. References are made to previous studies, but there is no analysis of existing impacts on the community, in particular, off-site impacts.

Response: Both the East 132nd Street Transfer Station and the Harlem River Yard Transfer Station currently accept DSNY-managed Waste under Interim Export contracts, and those actions were subject to environmental review for acceptance of up to 1,500 tpd and 1,800 tpd of DSNY-managed Waste respectively. In addition, as discussed in the DEIS and this FEIS, both facilities have permits to process 2999 tpd and 4000 tpd of waste, respectively. These permits were issued based on prior environmental reviews.

At the East 132nd Street Transfer Station, the acceptance of DSNY-managed Waste for export by rail would require the addition of an outdoor lidding operation that would require a minor permit modification from NYSDEC. Accordingly, the potential for on-site impacts related to operating at or below the facility's currently permitted capacity does not require environmental review in this FEIS.

The Proposed Action for the East 132nd Street Transfer Station may involve a change in the quantity of Bronx DSNY-managed Waste from the current average of 1,033 tpd under Interim Export to up to 2,337 tpd, an increment of 1,304 tpd. A contingency factor of 20% was added to this amount for a total of 1,565 tpd to provide a margin of conservatism in the analysis. The DEIS and this FEIS evaluates potential off-site impacts associated with the DSNY collection vehicles that would deliver the increment (1,565 tpd) of DSNY-managed Waste to the facility. The results of this evaluation are reported in Section 12.14 of the DEIS and this FEIS. Additionally, the DEIS and this FEIS assumes that the facility would export all waste received via rail by draying containers between the facility and the Oak Point Yard. This element of the Proposed Action would involve a permit modification and is evaluated in the DEIS and this FEIS. The potential off-site analyses impacts associated with this draying activity are presented in the Oak Point Railyard Section 12.14.3 of the DEIS and this FEIS.

The Harlem River Yard facility is an existing fully permitted 4,000 tpd truck to rail transfer station where no proposed modifications are required. Therefore, no further review of potential on-site impacts associated with processing a lesser quantity of DSNY-managed Waste is required.

The Proposed Action for the Harlem River Yard Transfer Station may involve a change in the quantity of Bronx DSNY-Managed Waste from the current average peak day of 1,381 tpd under Interim Export to up to 2,337 tpd, an increment of 956 tpd. A contingency factor of 20% was added to this increment for a total of 1,147 tpd to provide a margin of conservatism in the analysis. The August 2003 EAS prepared to support the expansion of Harlem River Yard from 3,000 to 4,000 tpd analyzed an additional 117 one-way truck trips (equivalent to 1,170 tpd of waste) per day of potential traffic to the site. The intersections analyzed for traffic (Bruckner Boulevard and Lincoln Avenue, St. Ann's Avenue and Willis Avenue) and for mobile air quality (Lincoln Avenue and Bruckner Boulevard), and noise sensitive receptors along routes (Crack is Wack Playground, Randall's Island and Pulaski Park) are those that would be evaluated for DSNY collection vehicles traveling to and from the Harlem River Yard Transfer Station. Therefore the DEIS and this FEIS does not re-evaluate the potential off-site impacts associated with the increment of DSNY collection vehicles that would deliver DSNY-managed Waste to the facility since the August 2003 EAS provided that analysis and the permit capacity increase was approved by NYSDEC.

112. **Comment:** A number of comments requested a comparative assessment so that the two sites could be compared and a decision could be made on that basis. The DEIS doesn't provide any new information on the HRY site, and the proposed Oak Point intermodal site is also not subject to review. The new truck traffic on Bruckner and down Barry Street is not analyzed. Changing one traffic signal will not mitigate the environmental impact of receiving the entire borough's waste.

Response: See response to Comment #111 for the Harlem River Yard site. The Oak Point Railyard is analyzed for off-site impacts in the DEIS and this FEIS. The site description for the Oak Point Railyard is in Section 2.2.9.3, and results of the off-site

traffic, air quality and noise analyses are presented in Sections 12.14, 12.15 and 12.17, respectively, of the DEIS and this FEIS. The volume of dray trips between the East 132nd Street Transfer Station and the Oak Point Rail Yard is expected to average 8 one-way trips per hour (16 trip ends, or 32 passenger car equivalents [PCEs]), which falls below the traffic analysis screening threshold of 50 PCEs. In addition, the off-site noise analysis showed no potential for doubling of PCEs from these additional trips at the sensitive receptor along the dray route at East 138th Street between Bruckner Boulevard and Walnut Street. Therefore, no traffic or off-site noise analyses were required. Two links that meet the 2001 CEQR Technical Manual screening thresholds were analyzed for off-site air quality impacts (Bruckner Boulevard and East 138th Street, and Locust Avenue and East 138th Street) were analyzed, and there were no unmitigable adverse air quality impacts identified.

113. **Comment:** A number of speakers addressed analyses that they thought were missing from the DEIS. A $PM_{2.5}$ analysis was not undertaken at 132nd Street. Given the high level of asthma in the South Bronx, the highest monitoring standards should be applied. It is just not the case that there are no impacts.

Response: See Response to Comment #111. On-site analyses of the East 132nd Street Transfer Station is not required because it is a fully permitted facility. The addition of the outdoor lidding operation does not add emissions-generating equipment to the facility. Off-site analyses were evaluated for the increment of additional DSNY-managed Waste that could potentially be received at this facility under long term export. See Response to Comment #112. An off-site $PM_{2.5}$ analysis conducted at Bruckner Boulevard and East 138th Street, and Locust Avenue and East 138th Street resulted in no umitigatible significant adverse impacts. The off-site air quality analysis included the additional DSNY-managed Waste collection vehicles plus dray trips associated with transporting containers between the East 132nd Street Transfer Station and the Oak Point Railyard.

114. **Comment:** A number of people agreed with the fair share objectives of the SWMP, but thought that bringing containers of waste from other boroughs to HRY would contradict these objectives. This facility has not been subject to environmental review. There is no

back-up information provided, no discussion of visual impacts to Randalls Island or the odor impacts from containers moving through the site. What is the contingency plan for this site?

Response: A barge to rail intermodal facility at the Harlem River Yard site was evaluated in the DEIS and this FEIS as an Alternative. The 2000 SWMP Modification FEIS had evaluated a much larger Enclosed Barge Unloading Facility (EBUF) at the same location. The 2000 FEIS evaluated odors from the potential processing of an average of 5,000 tpd and a peak of 7,500 tpd of waste in an enclosed processing building and resulted in no significant adverse environmental impacts on Randall's Island. Because the 2000 FEIS did not analyze on-site $PM_{2.5}$ impacts, the DEIS and this FEIS presents the results of this analysis. Because it is a barge to rail facility, no off-site environmental review is warranted. Note that development of Harlem River Yard barge to rail intermodal facility is not an element of the Proposed Action.

115. **Comment:** The DEIS fails to analyze the impact on the proposed mixed use residential and industrial districts adjacent to the Harlem River Yard. It inaccurately states that development related to rezoning in Port Morris is projected to occur by 2014 at the earliest, while this is the year for full build-out. Vigilant regulation of waste operations in HRY is essential, but the DEIS denies impacts beyond the property borders.

Response: NYCDCP's Port Morris Rezoning EAS considers 2014 the build year for that project. The DEIS and this FEIS reflects this fact.

116. **Comment:** Randall's Island is undergoing a major overhaul to become a public recreational area. Impacts to Randall's Island must be addressed.

Response: Under existing conditions, DSNY delivers its Bronx waste to the Harlem River Yard as well as Waste Services at East 132nd Street. Randall's Island was analyzed as a noise-sensitive receptor for the Harlem River Yard Barge to Rail Intermodal Facility and for the minor modification of adding an outdoor lidding station to the East 132nd Street Transfer Station (see Sections 9.17 and 12.17 of the DEIS and this FEIS), and no impacts were predicted. An on-site analysis of the Harlem River Yard Truck to Rail Transfer Station was not required since it is a fully permitted 4,000 tpd transfer station.

117. **Comment:** While the South Bronx MTS is not being proposed, the DEIS states that the South Bronx Converted MTS would be compatible with its industrial surroundings and not have a significant adverse impact on residents. This ignores the truck traffic, accompanying diesel fumes, and garbage odors. Since the old MTS closed, the rodent population in the area has decreased markedly, and the area has improved. The MTS would not be compatible with a major food center, so the facility should not remain as DSNY property. This contradicts the Hunts Point Vision Plan. These changes should be made to the FEIS.

Response: The possible waste transfer use of the South Bronx MTS is referenced in the Hunts Point Vision Plan, but this is not part of the Proposed Action. However, it was analyzed as a reasonable alternative. The disposition of this site, once a Final SWMP is adopted, will be considered by the City.

118. **Comment:** Several comments reflected concern over the vagueness of the SWMP. In addition to not stating where the waste will be disposed, there is no discussion on the rules for selecting a contractor. Will there be an RFP to determine which of the two sites will receive the waste? It seems that only one facility should receive the waste, not both of them.

Response: Please review the Transfer, Transport and Disposal Plan (TTDP) contained in Section 40.3.5 of this FEIS for a discussion of the intermodal transfer and transport facilities that may be used for the movement of containerized waste from the Converted MTSs to out-of-City disposal facilities. DSNY waste from these two facilities currently goes to landfills in Virginia and Ohio. In general, potential disposal locations include landfills in South Carolina, Ohio and Virginia, in addition to the Essex County Resource Recovery facility in Newark NJ. DSNY issued four RFPs in December of 2003 to procure the transfer, transport and disposal services, as appropriate, for long-term export from the wastesheds defined in the Draft New SWMP. These documents define the procedures for and requirements on the selection of contractors.

119. **Comment:** Specific details for developing an intermodal facility in the Bronx should be provided. Since the South Bronx already contains a disproportionate share of the City's

waste facilities, the DEIS should consider the impact of the proposed actions in conjunction with the facilities already in existence in the area. All available mitigative strategies for reducing impacts should be considered, including an analysis of the proposed operational and siting regulations, or other regulations which might serve to mitigate traffic or air impacts.

Response: The Proposed Action does not include development of a new intermodal facility in the Bronx. For Bronx facilities evaluated in the DEIS and this FEIS, Existing Conditions, Future No-Build Conditions and Future Build Conditions were analyzed, as applicable. Existing Conditions account for all current operations in the area and include background traffic, air quality and noise along routes to and from the facilities. These background volumes are escalated and added to any new planned developments in the Study Area that will be constructed by 2006 to represent the Future No-Build Conditions. The increment of DSNY-managed Waste that is analyzed is added to the Future No-Build Conditions and, therefore, takes into account the impact of the Proposed Action in conjunction with existing facilities utilized for interim export, in accordance with the CEQR Technical Manual. Also, see the response to Comment #114.

120. Comment: One comment stated that the DEIS misrepresented the facts concerning the Bronx facilities, stating that it is unfair to state that there is no permit expansion, when in fact, there just was a permit expansion within the past year.

Response: Statements in the DEIS regarding proposed capacity expansions at private transfer stations in the Bronx or the lack of need for same apply as of the time the DEIS was published. Section 2.2.8.2 of the DEIS correctly describes the capacity of the Harlem River Yard Truck to Rail Transfer Station as 4,000 tpd and notes that the August 2003 EAS prepared to support the 1,000 tpd expansion was approved.

121. Comment: Several comments indicated that Waste Management will have control over a significant portion of the waste in New York City, but there are problems with odors and insufficient rail capacity at the Harlem River Yards. This facility should have better environmental controls before receiving a contract for DSNY waste. Additionally, the

company has a history of abuse and discrimination within the Bronx, exposing workers to dangerous working conditions and paying lower salaries than in other communities.

Response: DSNY intends to have diversity among the contractors providing long term export services. The Harlem River Yard Transfer Station uses an odor control system that introduces a misting agent containing a deodorant around the exhaust fans of the processing building, and, at times, applies deodorant near the openings (i.e. doorways). DSNY is not aware of any current odor problems at the Harlem River Yard Transfer Station. If there are complaints, they should be brought to the attention of DSNY's Permit and Inspection Unit.

122. **Comment:** There should be host community benefits for CD1 since all of the Bronx waste will be sent there. A local neighborhood advisory council should be established to monitor operation of the facilities.

Response: DSNY is willing to work with a local advisory council on matters related to its waste export activity and enforcement activities in the Bronx CD1. A community benefit fund was created by Waste Management in connection with receiving approvals for the Harlem River Yard facility currently used for interim export.

123. **Comment:** The Waste Management and Allied properties take up much of the waterfront area. DSNY should pressure these companies to provide community access and resources to the waterfront in space that is not utilized for the facility. The area needs more waterfront access and parks.

Response: This matter is beyond the scope of DSNY's authority.

124. **Comment:** The most important issues for the Bronx are borough self-sufficiency, closure of the land-based stations and the reduction of excess permitted waste capacity in Bronx CD1. There are a total of 15 transfer stations in the Hunts Point area, and these facilities have degraded the area. The total putrescible capacity must be reduced. New facilities should not open until there is a plan for closing the land-based transfer stations in the neighborhood.

Response: The Long Term Export Proposed Action for DSNY-managed Bronx Waste involves neither any expansion of waste transfer capacity in the Bronx above existing permitted levels, nor the transfer of DSNY-managed Waste generated in other boroughs through Bronx transfer stations. The Recycling Proposed Action—development of a Recyclables Acceptance Facility at the Gansevoort peninsula in Manhattan—would result in a reduction DSNY Recyclables now trucked into the Bronx. DSNY is committed to reducing permitted putrescible capacity in the communities with the greatest number of transfer stations once the Converted MTSs open. DSNY will work with the industry, the City Council and community groups to achieve this reduction in capacity. As part of this effort DSNY will work with the Council on legislation that will clarify DSNY's authority to reduce permitted capacity at transfer stations.

125. **Comment:** The South Bronx is willing to accept the waste that the borough creates if standards of operation are dramatically improved to ensure safety and well being of surrounding neighborhoods, including the workers at the facilities.

Response: The issue of enforcement of worker safety regulations is appropriately addressed through the state and federal agencies that have enforcement responsibility in this area, such as the federal Occupational Health and Safety Administration.

126. **Comment:** Several speakers voiced support for the export of Manhattan's commercial waste from the proposed West 59th Street Station to reduce the impact of commercial waste transfer in the Bronx.

Response: Comment noted.

127. **Comment:** There should be a barge option in addition to a rail option for the Bronx. The exclusive reliance on rail for export will be problematic. Any industrial user will attest to the undependable nature of the rail system for moving goods, particularly along the East of Hudson lines.

Response: The existing rail infrastructure in the Bronx is more than adequate for export of Bronx Waste. A barge option is not required. Although presented in the DEIS as an Alternative, development of a Converted South Bronx MTS would entail a significant

capital expenditure of City funds and would add more waste transfer capacity in the Bronx, which many Bronx CD1 residents oppose.

128. **Comment:** The depth of the analyses provided in the DEIS is insufficient. References are made to previous studies in 1994, 1997 and 2000, but there are no updated analyses of the impacts that the existing system has on the community. Significant local projects such as the South Bronx Greenway are not addressed. The analysis in the DEIS for the 132nd Street facility depends on an old analysis that is not included with the document. It does not address the infrastructure needs at Oak Point to support increasing export by rail, and does not discuss the impacts of the dray route traveling through residential areas. There also needs to be a contingency plan if there are problems with the rail line.

Response: See response to Comment #111 for an explanation of the level of environmental review that is required for both transfer stations.

Oak Point is an existing permitted facility owned by CSX. When Waste Management owned the East 132nd Street Transfer Station, containers were drayed to Oak Point for export by rail. Although some track improvements at Oak Point may be required, these are not subject to environmental review or permitting. The traffic, air quality, and impacts of draying containers from East 132nd Street to Oak Point were evaluated in the DEIS and this FEIS and no potentially unmitigable significant adverse impacts were found. The permit issued by NYSDEC for export by rail from East 132nd Street has a contingency plan to address interruptions in rail service. These are anticipated to be infrequent and can be addressed by exporting by transfer trailer over a few days until rail service would be restored.

The proposed Bronx River Greenway will be an 8-mile bicycle/pedestrian waterfront linear park beginning in the south near Lafayette Avenue in Hunts Point. At its southern terminus, it is approximately 1 3/4 miles from the evaluated East 132nd Street site and slightly further from the Harlem River Yard site; therefore, is far outside the study areas (1/2 mile radius) for both sites. It is approximately 1 mile northeast of the South Bronx

MTS site, and is described in the Open Space analysis: Section 19.5.2 (Future No-Build Conditions).

129. **Comment:** Waste facilities not regulated by DSNY were not included in the DEIS for the South Bronx. For example, the sludge processing plant and the sludge dewatering facility are not included.

Response: The New York City Department of Environmental Protection (NYCDEP) owns and operates the water pollution control plants in the City – including the Hunts Point Water Pollution Control Plant. The New York Organic Fertilizer Company (NYOFCo) sludge pelletization facility located in Oak Point is privately owned and operated. DSNY does not regulate these types of facilities; they are subject to regulations by NYSDEC and others. These are not solid waste facilities. Biosolids management is discussed in Attachment V of the Draft New SWMP.

130. **Comment:** The DEIS concludes that by changing the traffic signals at 138th Street and Bruckner Boulevard, the impact of transporting the waste from the entire borough of the Bronx will be mitigated. Many more controls are needed. There needs to be an analysis of the impacts of $PM_{2.5}$ and H_2S. The facility must demonstrate impacts below 1 ppb for H_2S, one-hour average maximum impact at sensitive thresholds, and 10 ppb/ hour ambient air. For $PM_{2.5}$, the analysis must include all vehicular emissions, and have a maximum annual impact of 0.3 $\mu g/m^3$, or a maximum 24-hour impact of 5 $\mu g/m^3$. Alternative particulate/dust migration controls must be installed.

Response: As discussed in the DEIS and this FEIS, the East 132nd Street Transfer Station is an existing, permitted facility, capable of processing 2,999 tpd of putrescible waste, which is greater than the amount generated in the Bronx wasteshed. The facility will require a minor permit modification to add an outdoor container lidding operation a short distance away from the processing building where the containers will be loaded. This container lidding operation will not add emissions-generating equipment. In addition, CEQR generally refers to odor analyses and thresholds pertaining to hydrogen sulfide (H_2S) which is applicable to City Water Pollution Control Plants, but not solid waste operations. The methodology for analyzing odors from the transfer stations, when

applicable, is described in Section 3.18 of the DEIS and this FEIS. No additional on-site air quality or odor analysis is required.

40.3.2.2 Brooklyn

40.3.2.2.1 Greenpoint, Brooklyn

131. Comment: A number of speakers stated that it would be unacceptable for both of the Greenpoint alternatives (Scott Avenue and Scott/Scholes) to remain open for processing waste, especially if a capacity expansion is required; the impact on the community would be too great. Some people were confused about the status of the Greenpoint MTS, and its relationship to the two alternatives. They were willing to handle their fair share of waste, but did not want additional capacity to be made available. They wanted any capacity expansion to be accompanied by an offset of throughput in the same community district. They were willing to accept one alternative, but not two.

Response: The Proposed Action to contract for export from more than one existing transfer station facility in Brooklyn CD 1 would have the benefits of: (i) transporting all DSNY waste from the former Greenpoint- Brooklyn wasteshed by rail or barge; and (ii) per the requirements of DSNY's RFP for export services, transporting all waste processed at either facility by barge or rail. Furthermore, DSNY may contract with more than one facility because this would: (i) maintain a competitive market for export of DSNY waste; (ii) provide the potential redundancy in the export facilities serving the former Greenpoint-Brooklyn CD1 wasteshed; and (iii) require the companies that enter into contracts with DSNY to export all waste received at their respective facilities by barge or rail, and thereby increase the quantity of waste exported by means of rail or barge and decrease transfer trailer truck trips from Brooklyn CD 1.

The Greenpoint Converted MTS is an Alternative that was evaluated, but is not an element of the Proposed Action. After the New SWMP has been approved and export contracts with one or more private transfer stations in Brooklyn have been implemented, including completion of any required supplemental environmental reviews and issuance of required permits, DSNY will consider reuse alternatives for the Greenpoint MTS site.

132. **Comment:** A number of speakers commented on the high volume of traffic in the neighborhood, which has created a major problem, especially on Metropolitan Avenue. There were complaints of the existing conditions of the roads, which have been worsened by heavy truck traffic. If either of the two proposed facilities are chosen, there would need to be clear mitigation measures, such as designated off ramps or truck routes, so that trucks could go straight to the sites without impacting on the residential streets. Suggestions were made for possibly widening the ramps or providing new exits or entrances to the East Williamsburg Industrial Park, to minimize impacts to the community. It was requested that an additional traffic survey be undertaken. Waste vehicle regulations should be strengthened, so that trucks are kept covered, and don't deviate from designated truck routes.

Response: As noted in the Draft New SWMP, DSNY is committed to reducing the impacts on those communities that are along truck routes leading to transfer stations by evaluating alternate routing options. DSNY will work with the New York City Department of Transportation (NYCDOT) and community advisory groups on the conduct of a traffic analysis to study the feasibility of redirecting truck routes leading to transfer stations with the objective of minimizing traffic-related impacts in residential areas to the extent possible.

133. **Comment:** Several speakers urged DSNY to create a Community Advisory Board so that they could work with the community board, elected officials, etc. on local concerns such as truck routes and closure of other existing transfer stations in the neighborhood. The SWMP includes an advisory group to study traffic on Metropolitan Avenue, and similarly they would like a group to effectively monitor implementation of the new SWMP. There requested continued community involvement, through the construction phase and into operations.

Response: Brooklyn Community Board #7 and #11 raised this issue in the ULURP application review process. DSNY has indicated in its written responses that it will work with community advisory groups. DSNY has agreed that DSNY representatives will attend periodic meetings and will address issues raised by the community.

134. **Comment:** Several speakers stated that they were opposed to the opening of any private marine or rail-based transfer station in Community District 1. They wanted a reduction of land-based facilities in CD#1, especially since CD#1 houses other burdens, like the Newtown Creek wastewater treatment plant. They wanted the new facilities to open in other areas of the City. The SWMP must address the concentration of waste transfer stations in Williamsburg, and Greenpoint as well as in the South Bronx. The concentration of these facilities has created negative environmental impacts.

Response: DSNY is committed to reducing permitted putrescible capacity in the communities with the greatest concentration of transfer stations including Brooklyn CD#1, once the New SWMP has been approved and the Converted MTSs are under construction. DSNY will work with the industry, the Council and community groups to achieve this reduction in capacity. As part of its efforts, DSNY will work with the Council on legislation that will clarify DSNY's authority to reduce permitted capacity at transfer stations.

135. **Comment:** Several speakers spoke about how Brooklyn has been shouldering the burden of the City's waste transfer stations for years, and the Greenpoint/Williamsburg area has been the most significantly impacted, handling over 40 percent of the City's waste. They wanted reassurance that Manhattan transfer stations (West 59th Street and East 91st Street) would open, and that Manhattan waste does not come to Brooklyn.

Response: DSNY has proposed developing a Converted MTS at the existing East 91st Street MTS Site. The next steps in implementing this Proposed Action are approval of DSNY's Uniform Land Use Review Applications for the four Converted MTSs and City Council adoption of the New SWMP. DSNY has met with waste companies and haulers to discuss their use of the West 59th Street MTS as a transfer point for Manhattan commercial waste. These discussions will continue later this month and DSNY expects to issue a procurement in the near future to solicit proposals from the waste industry.

136. **Comment:** Several speakers wanted the excess capacity at the MTSs in Brooklyn to be utilized for commercial waste, so that no new land-based facilities would be needed. They wanted the City to utilize various incentives to coax the private haulers to utilize

these facilities. They wanted the MTSs to be opened first, prior to the opening of any private alternatives, to reduce commercial waste processed in CD1.

Response: The Proposed Action provides for containerization and transfer of limited quantities of Commercial Waste from the Converted MTSs at Southwest Brooklyn and Hamilton Avenue. Converting the Greenpoint MTS to containerize Commercial Waste for export would involve a substantial capital investment and, all other things being equal would actually increase the total waste transfer capacity in Brooklyn CD 1. DSNY believes that its proposal to contract with existing already permitted private transfer stations in Brooklyn CD 1 for export of DSNY-managed Waste and requirement that all waste, including commercial waste received at these facilities be exported by barge or rail would better serve the community.

137. Comment: There was concern that neighborhood projects were not accounted for in the DEIS analyses. For example, the rezoning of Greenpoint/ Williamsburg will result in population and traffic impacts. There will be additional impacts from the Kosciusko Bridge Project and the Cross Harbor Project, which proposes the construction of a new bridge over Newtown Creek, and indicates there will be major truck impacts in the community.

Response: The impact analysis considers other projects and proposals within the project study area (properties within 1/2 mile of the site) that would be completed or in effect by the DSNY build year of 2006. These future No- Action Projects are listed in Section 20.2.2 and shown on Figure 20.2-4. The Kosciusko Bridge is located outside the study area about 1 mile southeast of the site and the proposed rezoning of Greenpoint Williamsburg will affect the western side of the peninsula, away from the industrial Newtown Creek vicinity. At its closest, the proposed mixed use (industrial/residential area) west of McGinnis Boulevard, is about 2000 feet away from the Greenpoint MTS. The build years for the Cross-Harbor Project (as described in the Cross-Harbor Freight Movement DEIS, April 2004) identifies 2010 and 2025 as its analysis years, (beyond the DSNY build year of 2006); therefore, the Cross-Harbor Freight Movement EIS must take into consideration DSNY's plans, as appropriate.

138. **Comment:** Brooklyn CD1 handles about 45% of the City's waste, has 16 transfer stations, two DSNY garages, and this overburden on the community results in serious health concerns. How can the DEIS say that there are no negative health concerns from all of these facilities? The EIS needs to examine existing toxin levels, odors, asthma rates, and the number of trucks on neighborhood streets. The EIS also needs to look for ways to mitigate the impacts of the solid waste system including redistribution of transfer stations, as envisioned in the SWMP.

Response: The air quality, traffic and public health analyses in the EIS take into account the existing conditions, which are already affected by the garages and transfer stations mentioned by the commenter and their associated emissions and traffic. Background air quality monitoring data is obtained from those monitoring stations nearest to the study area, as required under CEQR and provided by the NYCDEP which are: (1) MTA at Flatbush Avenue between Tillary Street and Johnson Avenue for CO; (2) the College Point Post Office for NO_2; and (3) Greenpoint (for PM_{10} and SO_2). Despite these multiple facilities, air quality is not markedly different in this area of Brooklyn than in other parts of New York City. The estimated emissions from the proposed facility are added to background for comparison to NAAQs. For the traffic analysis, traffic counts were obtained in the study area in February of 2003 that represent Existing Conditions for the analysis. Existing background traffic data was escalated for background growth using NYCDOT-approved escalation factors, and traffic from any known future developments in the Study Area, determined in consultation with NYCDCP, was added to determine future conditions without the project. DSNY collection vehicles were added to the Future No-Build Conditions to determine potential impacts considering the projected Future Build Conditions.

139. **Comment:** Several speakers had questions concerning the reduction of waste in this community. How would the City be able to bring about the closure of privately-owned businesses? What businesses would the transfer stations be replaced with? What is the timetable for facility closures?

Response: See response to Comment #134

140. **Comment:** A number of people spoke about how health issues are important, in this neighborhood where asthma rates are increasing. They wanted an analysis of the impacts of $PM_{2.5}$ and H_2S separate from what NYS DEC requires in the air permits. The $PM_{2.5}$ analysis must include all vehicular emissions, on-site equipment and truck idling.

Response: The air quality analysis conducted for the DEIS and this FEIS already includes a complete analysis of $PM_{2.5}$ impacts, accounting for emissions from waste collection vehicles moving and idling on-site, on-site equipment, including truck and other engine emissions exhausted through building roof vents, and tugboats. Also, off-site $PM_{2.5}$ impacts were analyzed for waste collection vehicle emissions near affected intersections. With respect to H_2S, the 2000 Solid Waste Management Plan Modification EIS included results from H_2S monitoring performed near older MTS facilities. This monitoring showed that H_2S concentrations were negligible in comparison to thresholds set to protect human health. Because the new MTS facilities would utilize state-of-art emissions controls and operating procedures, any H_2S emissions would be even lower than for the older MTS facilities.

141. **Comment:** Speakers were concerned with the operation of private waste transfer stations, and wanted putrescible, C&D and clean fill transfer stations to be required to install particulate matter and dust control systems. They wanted the facilities to be enclosed, with particulate matter filtered through a baghouse or other device, and activated carbon filtration used to filter out odors. Odor neutralizing systems, unless they remove hazardous substances should not be used, since they may add to breathing problems. Community monitoring of particulate matter should be undertaken.

Response: DSNY is revising its Transfer Station rules to require changes to private putrescible, non-putrescible (C&D), and fill material transfer stations in the City. The goal of these design and operational changes is to improve conditions at and near the private transfer stations. Some of DSNY's requirements include odor neutralizing systems and negative air pressure to prevent the escape of untreated air from putrescible waste transfer stations, and use of dust suppression systems and air emission limits for C&D and fill material transfer stations.

142. **Comment:** Speakers were concerned with the queuing of trucks in the community and requested that DSNY stagger deliveries of waste to alleviate queuing. They also thought it would alleviate workplace accidents, help to keep the facility clean, and minimize air quality impacts. A staggered schedule would be the largest contribution to a smoothly operating facility.

Response: DSNY evaluation of proposals from private companies for Long Term Export services from Brooklyn CD 1 included an assessment of the adequacy of the proposer's plans to limit off-street queuing. DSNY will require that contracts with the selected companies include provisions to ensure compliance with this requirement.

143. **Comment:** Questions were raised about the dredging of Newtown Creek. Would Waste Management need to dredge for their barging operation, how long would that take, and how do the NYSDEC and USACE feel about dredging? Would there be health implications from airborne bacteria and VOCs from dredging? Where would this dredged material be stored? What are the impacts of dredging?

Response: Any required dredging to provide a bulkhead with sufficient water depth to moor barges at any proposed waste barging facility on Newtown Creek would be the subject of an Article 15/25 permit Application to NYSDEC and a Section 10/404 Permit application to the USACE. The permit applications would be required to include information on the results of sampling and testing of the materials to be dredged and on the proposed arrangements on disposition of these materials. NYSDEC and the USACE would review these applications in terms of compliance with applicable regulations.

144. **Comment:** If the BFI site (Scott/Scholes) is selected, and utilizes CSX Rail Transport, how would DSNY minimize congestion in the Harlem River Rail Yards?

Response: Rail service to the site would be provided by New York & Atlantic (NYA) Railroad, the shortline rail freight carrier that services the Bushwick line, passing by the site. NYA would turn over cars to CSX at the Fresh Pond Yard in Queens. CSX would move cars to the Oak Point in the Bronx, where the train would reverse direction to leave the Bronx on the Hudson North line. The train would be dispatched through the Harlem

River Yard using the Oak Point Connector but would not be delayed by train assembly in Harlem River Yard.

145. **Comment:** What is the contingency transportation plan for each alternative? Where can waste be stored in case there is a train strike, or other problem with the movement of waste? A better contingency plan is needed.

Response: The contingency plan for the Converted MTSs is described in the Part 360 Permit. Additionally, Section 40.3.5 of this FEIS contains a Transfer, Transport and Disposal Plan that describes the intermodal and rail facilities in the New York harbor region that would support export operations from these facilities, as well as, barge export operations for those private transfer stations included in the Proposed Action that elect to use this option. Those private transfer stations included in the Proposed Action that use a rail export option would rely upon existing rail facilities in the Bronx Brooklyn and Queens that have the capacity to provide the required service. Short term disruptions in service can be managed by the redundancy in the overall system and short term storage of containerized waste until service recommences.

146. **Comment:** There is concern that any waste transfer facility be well maintained. The floor should be washed, and there should be an automated on-site decontamination system to remove dust, residue and odors from trucks. A log must be kept confirming each truck goes through the system. The facility should operate its own street cleaner to clean up any debris within a 10-block radius of the plant, twice per day.

Response: All of these requirements, but for street sweeping, which is a DSNY activity, are addressed in the draft Part 360 Permit application submitted by DSNY to NYSDEC, which is available for review in the Public Repositories located in the Sunset Park Library, and the New Utrecht Public Library as well as the CB7 and CB11 offices.

147. **Comment:** A number of people raised issues with the private waste transfer stations in the community, particularly with respect to odors. A resident on White Street complains that they can't even open their windows because of odors. Additional waste will only

exacerbate the problem. More effective odor controls should be utilized. Misters are not acceptable; carbon filtration would be more reliable.

Response: The private transfer stations in the Bronx, Brooklyn and Queens that are proposed to handle DSNY-managed waste will be required to have odor neutralizing systems and negative air pressure to prevent the escape of untreated air. This type of odor control system is included in the Staten Island Transfer Station that will be completed in 2005, and is in use at large transfer stations located in Puente Hills, California (a 4000 tpd facility) and Brevard County, Florida (a 1500 tpd facility). Odors from waste hauling vehicles operating/idling on the access ramps and within the processing building are included in the DEIS and this FEIS analysis.

148. Comment: There was concern expressed about the current operation of the Scott/Scholes site. Speakers requested that the facility be improved, and DSNY must ensure that the facility is state-of-the-art.

Response: The proposal by Allied for export from this site proposes a major redesign of the existing separated facilities into a functionally integrated complex. The proposed facility is subject to both NYSDEC Part 360 regulations that govern a solid waste management facility and DSNY permitting rules and regulations.

149. Comment: Some speakers wanted assurances that the existing Greenpoint MTS not be put into operation or be expanded. It is near the largest sewage treatment facility in the City, and the surrounding community could not handle both facilities. DSNY should work with the community to address what will replace the existing facility.

Response: See Response to Comment #131.

150. Comment: The noise from all the traffic in the community affects the children in the schools near the truck routes. Some schools have children in trailers in the front of schoolyards, so they are even closer to the traffic than what was analyzed. These impacts should be examined in the FEIS.

Response: The school referred to is presumed to be PS 132, located at 320 Manhattan Avenue in Greenpoint. DSNY collection vehicles would not travel along Manhattan

Avenue to and from the Greenpoint MTS site, therefore, no off-site traffic, air quality or noise analyses were conducted.

151. **Comment:** This area is an old industrial area, with much nonconforming zoning, specifically on Grattan Street, Thames Street, Seigal Street, and White Street, where impacts from the private facilities are terrible.

Response: Land Uses (including nonconforming uses) were considered in the environmental analyses conducted as part of the EIS. The streets listed (Thames, Grattan, Seigal, and White Streets) are at the edge of (or beyond) the 1/2 mile land use study areas evaluated for the Scott/Scholes and Meserole St. sites (which are currently active waste transfer facilities). (The Greenpoint MTS is approximately two miles to the northwest.) The various EIS studies determined that on-site operations of these potential transfer facilities and projected traffic conditions related to facility truck activity were found to have no significant adverse environmental impacts and would be compatible with the active industrial land uses that exist in the vicinity today.

152. **Comment:** A number of speakers raised the issue of asthma, and the high level of diesel emissions. Asthma rates in this neighborhood are significantly higher than elsewhere in the City, with one out of four children in the neighborhood having asthma. It's the number one reason children go to the emergency room. Almost 25 percent of the asthma deaths in the United States occur in Brooklyn. The diesel particulate emissions are a very powerful trigger for asthmatics; this neighborhood should not have to put up with this level of emissions. Truck traffic needs to decrease.

Response: Asthma among children is indeed an urgent public health problem, in Greenpoint as well as other areas of the City, but the information cited by the commenter regarding the Greenpoint area is at odds with asthma data provided by the New York City Department of Health and Mental Hygiene and presented in the Public Health Evaluation. Those data indicate that asthma among children and adults in the Greenpoint neighborhood is somewhat less frequent than in the City as a whole. It is certainly not the case that "almost 25 percent of the asthma deaths in the United States occur in Brooklyn." The Public Health Evaluation examines the role of diesel engine exhaust as

one of many factors that may cause asthma attacks. The expected increases in particulate matter (PM) due to the project and traffic, do not exceed the acceptable levels set or proposed by the City or State of New York. New national regulations regarding diesel fuel and diesel engines will, it is expected, reduce particulate and gaseous emissions in the future.

153. **Comment:** The SWMP states that waste from Scott Avenue will transfer garbage containers to ocean going barges at Red Hook. Ocean going barges require significantly more tonnage than would be supplied by this facility. How would this be feasible?

Response: Use of Red Hood to receive containerized waste is not contemplated as part of the Proposed Action.

40.3.2.2.2 Hamilton Avenue Converted MTS

154. **Comment:** A number of people were concerned about what would happen if all of the facilities in the SWMP did not get implemented. Specifically, there was concern about where Manhattan's waste would go if the East 91st Street MTS were not implemented and questions about if it would be trucked to Brooklyn or go to New Jersey? A number of people were willing to support the Brooklyn facilities, but only if the Manhattan facilities opened and if there was a reduction in truck-based facilities.

Response: If a New SWMP were not adopted by the City Council and approved by NYSDEC, DSNY would remain dependent on Interim Export. Interim Export contracts are awarded for a three-year term with two 1-year renewal options and are rebid as required. It has been DSNY's practice under Interim Export to not send waste generated in one borough to another borough for transfer to disposal facilities. Five putrescible waste transfer stations in Brooklyn — Waste Management at 485 Scott Avenue, Waste Management at 123 Varick Street, IESI at 110 50th Street, IESI at 577 Court Street, and BFI Waste Services at 598-636 Scholes — receive Brooklyn Waste as the result of an Interim Export contract rebid in November of 2003, while DSNY delivers some Brooklyn waste directly to three other facilities in New Jersey. Manhattan's Interim Export contract was rebid in November 2004. Under it, Manhattan Waste is delivered in

DSNY collection vehicles to facilities in New Jersey. While DSNY does not have blanket legal authority to close existing permitted transfer stations unless substantial violations of DSNY Rules are committed, it is seeking to clarify its authority to limit permitted capacity in specific communities in which transfer stations are relatively concentrated.. The issue of how to mitigate the impacts of waste transfer operations in neighborhoods of the City where such facilities are relatively concentrated will be tackled by DSNY after the SWMP is approved and the Converted MTSs are under construction. DSNY will work with the industry, neighborhood advisory councils and the City Council in this effort.

155. Comment: A number of speakers commented on the 65th Street Intermodal facility and requested more details concerning the use of the site. There were complaints that, at the present time, trains with waste protruding from the containers line up on 5th Avenue and 65th Street. Questions included: whose waste is it, where does it come from, and will this practice be continued under the plan? What types of waste will be in the containers at the site? How many trains and barges will be needed in a day? Is there any potential for the site to be a source of truck traffic? What happens if the trains are not moving due to bad weather conditions? How long will the trains be sitting under the apartment building that straddles the site? What assurances will be provided that all waste will be in sealed containers? How would the containers be moved off the barges given that there are no cranes at the site?

Response: At the Community Board #7 Hearing on the Hamilton Avenue Converted MTS ULURP application, DSNY made a commitment to not use the 65th Street railyard for intermodal transfer/transport operations to support the Long Term Export Program. See Section 40.3.3.2 of this Chapter for DSNY's formal response to Community Board #7 on this issue.

156. Comment: Why is there no need to undertake an environmental study for the 65th Street Intermodal Yard or for the 52nd Street Barge staging area? Both of these facilities are support facilities, but it is not clear if they are part of the proposed action or alternative actions. The intermodal yard sits right near the waterway adjacent to residential housing

and could be a source of environmental impacts. What is the impact of all of the rail traffic on the structural stability of the Bay Ridge Coop building? How can the community be assured that there will not be odors or loud noises in the nighttime? There is concern with the transport of propane and other chemicals on these rail lines. Mitigation strategies should be identified in the final EIS.

Response: Regarding the 65th Street Intermodal Yard, see response to Comment #155). Regarding the 52nd Street Barge Staging Area, based on the Draft New SWMP and the procurement in progress for transport and disposal services to support the MTS Containerization Program, DSNY does not currently anticipate a need to use this facility. Should that change, Article 15/25 and Section 10/404 permits for a replacement-in-kind of the existing pier would be required and any additional environmental review required to support that permitting action would result in a supplemental environmental review.

157. Comment: Several speakers wanted to know the details about the 52nd Street barge staging area, and if it would generate any truck traffic. They wanted to know why the pier is 500 feet long and 60 feet wide, and asked if the reason was so that trucks could turn around.

Response: See response to Comment # 156. Use of the 52nd Street barge staging area is not contemplated.

158. Comment: Why does the Sunset Park area get all of the barges when, for instance, Arthur Kill could be handling some?

Response: See Response to Comment #155 and #156.

159. Comment: A number of people commented on the planned Hugo Neu facility, saying that this firm's other facilities in the City are not well maintained, so dirt and vermin will be issues. Specific questions included: What assurances can be made that the operation in Brooklyn will be clean? How will this maintenance be enforced? When will the facility be open? Comments made were that the facility should be fully enclosed and the barges covered, preferably the Waste should be containerized, and floatables needed to be controlled.

Response: The environmental review of the Hugo Neu facility is specifically limited because the details of its design are not complete. The processing of recyclables at this facility is subject to a Part 360 registration procedure by NYSDEC. This facility will also require Article 15/25 permits from NYSDEC and Section 10/404 permits from the USACE for in-water construction. The permitting actions will be subject to a supplemental environmental review.

160. Comment: There were questions about the conflicting number of trucks going to the Hugo Neu facility and the impacts resulting from this traffic. Commenters were not sure if Manhattan recyclables will be trucked to Hugo Neu, or if only specific CDs in Brooklyn would truck their waste to the facility. Why is a truck weighing station required? It was suggested that two-thirds of Brooklyn recyclables be delivered by barge. Although the community was told that only 25 trucks would be coming to the facility, that number seems too low. The EIS should propose more extensive mitigation strategies for traffic at the Hugo Neu facility.

Response: Manhattan recyclables will not be trucked to the Hugo Neu facility. Only Brooklyn Community Districts 9, 14, and 15 will deliver recyclables to the facility via collection trucks. Manhattan Recyclables will continue to be delivered to the facilities that currently process them until a Manhattan Recyclables Acceptance facility is developed. It is estimated that 25 collection vehicles would deliver Recyclables to the proposed Hugo Neu facility at the SBMT from the districts in Brooklyn. Because the trip generation was sufficiently low during peak facility hours, no further traffic analysis was warranted. All recyclable materials received from collection facilities in Manhattan, Brooklyn and the Bronx will be via barge. Thus there would not be any additional collection vehicles from accepting materials from other areas of the City.

161. Comment: What will happen with the 20 percent of materials going to Hugo Neu, that can't be recycled and would be considered residue?

Response: It is DSNY's expectation that the terms of the 20-year agreement with Hugo Neu for development of the Material Processing facility at SBMT will provide incentives to the company to significantly reduce the historic rates for process residuals that must be

disposed of. It is the company's responsibility to dispose of any materials that cannot be recovered.

162. **Comment:** There was concern about truck traffic along Hamilton Avenue, the elevated highway, and Third Avenue because even though the footprint for the Hamilton Avenue Converted MTS facility is small, the facility services a large wasteshed so numerous trucks are anticipated. Specific questions and comments included: What are the plans for trucks queuing on Hamilton Avenue? Queuing will result in air, noise and traffic problems. How can the community be reassured that trucks will not deviate from designated truck routes? Because truck traffic is such a concern, water-based transport must be used wherever possible.

Response: No collection vehicles will queue on Hamilton Avenue. The Hamilton Avenue Converted MTS is designed with the following features:

- Six tipping bays;
- On-floor waste storage capacity of 634 tons;
- An automated scale system that can complete a weigh-in/weigh-out transaction in 30 seconds; and
- Queuing space to accommodate 10 trucks on the ramp.

Taken together, these features provide the facility with the capability to process 36 collection vehicles per hour with an average truck turnaround time of 10 minutes per vehicle. The maximum peak hour truck arrival rate at the Hamilton Avenue Converted MTS is anticipated to be 29 vehicles per hour on the average peak day. Given the truck turnaround time and the on-ramp queuing space, there will be no on-street queuing of collection vehicles. Under normal operating conditions, no DSNY collection vehicles will use the elevated highway to access the MTS. DSNY will reduce the number of waste related vehicles on City streets by exporting waste via barge, thus eliminating the use of transfer trailers to move waste generated in this area out of the City.

163. **Comment:** A number of people were concerned with the size of the Hamilton Avenue Converted MTS compared to other planned MTSs, the fact that it will service 10 CDs in Brooklyn, and its hours of operation. How will DSNY be able to restrict the number of commercial waste trucks coming to the facility during a certain hour? The facility will

end up taking commercial waste trucks from every borough and all of the impacts must be assessed and mitigated.

Response: One of the basic policies underpinning the Draft New SWMP is to develop all four of the Converted MTSs to serve the same wastesheds as the facilities they replace. Each of the MTSs, assuming they containerize commercial waste, would operate 24 hours per day. The restriction limiting commercial carter access to the 8:00 p.m. to 8:00 a.m. period is consistent with the collection practices of commercial carters who pick up during nighttime hours. DSNY is proposing maximum hourly limits for commercial carter vehicles tipping at the Converted MTS. The arrangements for implementing this program will include means of enforcing this limitation.

164. Comment: There was concern that the four facilities proposed for Community District 7the Hamilton Avenue Converted MTS, Hugo Neu recycling facility, 65th Street Intermodal Yard, and 52nd Street Barge Staging area represented an overburden to the community. Specific questions and comments included: Has the DEIS addressed the cumulative impacts from all of these facilities located in one neighborhood? No other communities are getting four facilities and, in addition, we are housing DSNY's garage for CD7 and CD10l. Other areas of Brooklyn should be taking some of these facilities, such as the Navy Yard or Bushwick, where the areas aren't residential.

Response: See Responses to Comment #155 and #156.

165. Comment: A few people claimed that they could not review the documents because they did not receive the entire SWMP or the appendices. They complained that they did not receive a copy of the ULURP application.

Response: In addition to being available on request and on the DSNY web site, the entire SWMP and Appendices were made available for public review in hard copy form at two public repositories in each affected community, including in the Brooklyn Community Board #7 Office at 4201 4th Avenue, and the Sunset Park Library at 5108 4th Avenue at 51st Street. ULURP hearing notices were issued by the affected Community Boards; DSNY also sent out notices of the ULURP hearings at the

community board level to stakeholders and published display ads in local newspapers to advertise those hearings.

166. **Comment:** The DEIS neglected to discuss a number of neighborhood projects, such as the Gowanus redecking project, cruise ship terminal in Red Hook and reconstruction of the drawbridge at Hamilton Avenue in 2008; and the decade of reconstruction of the Gowanus Expressway. How will the trucks get to the facility during the construction phase for the drawbridge? The EIS failed to develop a plan for the closure of land-based transfer stations, such as the ones on 50th Street and Court Street. There need to be guarantees with respect to tonnage offsets within the community.

Response: The DEIS and this FEIS accounts for developments within the study area that could potentially have overlapping effects upon the community**.** The Gowanus redecking will start in 2007, one year after the 2006 build year, so it is not considered as a background condition in the No-Build scenario. The Red Hook Cruise Ship Terminal is more than 1.5 miles away, which is outside of the project study area radius. The reconstruction of Hamilton Avenue drawbridge will begin in 2008, which is after the 2006 build year. Whatever long-term or even interim alternative is selected for reconstruction of the Gowanus Expressway, it will not be constructed by 2006. Regarding tonnage offsets for the Hamilton Avenue Converted MTS, it is replacing an existing facility with a permit to process 4,800 tpd that is still in effect. Regarding closure of other private transfer stations in Community Board #7, see the response to Comment # 154.

167. **Comment:** The proposed community development project 197A to revitalize the Sunset Park waterfront does not envision garbage barges on the water. The MTS conflicts with the plan. While the waterfront park is being constructed there will be even more traffic in the area, and all of this traffic was not analyzed in the EIS.

Response: According to the DCP, no 197A plan for Sunset Park/CB7 has been adopted by the City planning Commission and the City Council; no draft of such a plan has been submitted to the DCP for review as of February 2005. DCP notes that Community Board 7 has been working for several years on a plan to guide development of the CB7

waterfront; DCP does not have information, however, about the Community Board's plans for park development on the waterfront. As stated in section 4.12 of the FEIS, the Sunset Park waterfront is designated as a Significant Maritime and Industrial Area.

168. **Comment:** Brooklyn will be the centerpiece for the City's waste system, with more facilities than any other borough. Residents need certainty that any facilities will operate with the highest degree of environmental controls. The community should receive host community benefits, especially for taking the burden of the recycling facility.

Response: The Proposed Action for Long Term Export in the Draft New SWMP would containerize all DSNY-managed Waste generated in Brooklyn at Long Term export facilities in Brooklyn. No DSNY-managed Waste generated outside of Brooklyn would be processed in Brooklyn for export. All Recyclables processed at Hugo Neu, except those from Brooklyn CDs 9, 14 and 15, would be delivered by barge, thereby eliminating any significant adverse local truck traffic impacts. The Hugo Neu facility will generate in-City employment, making local jobs available to City residents, a benefit which would otherwise be realized in New Jersey.

The Hamilton Avenue Converted MTS design includes the following state-of-the-art environmental controls:

- An advanced odor control system;
- A ventilation system exceeding building code standards that maintains negative pressure to prevent the escape of odors to the outside under all conditions; and
- A tipping floor capable of accommodating six trucks, an automated scale system and a ramp with increased structural support – all with the objective of eliminating on-street truck queuing.

Separate from the Proposed Action, the Draft New SWMP identifies several regulatory measures that DSNY is proposing to adopt in its Rules applicable to the operations of private transfer stations that would represent upgrades in the environmental design and operation of these facilities.

169. **Comment:** Water-based transport must be utilized wherever possible to reduce truck traffic for any of the planned facilities.

Response: The Draft New SWMP is premised on barge and/or rail export of DSNY-managed Waste. Furthermore, the RFP procurements to solicit proposals for Transfer Transport and Disposal Services for the Bronx, Queens and Brooklyn wastesheds formerly served by the Bronx and Greenpoint MTS require that those private facilities awarded Long Term Export contracts export waste by barge or rail, including all commercial waste processed.

170. **Comment:** Several people commented on the impacts on the waterways, both from dredging and from facility operation. A representative comment is: "Best practices must be utilized in dredging, such as clam shell buckets and silk curtains, and during containerization, to ensure there will be no fugitive debris at the facility."

Response: Chapter 32 of the DEIS has been revised to include a more detailed discussion on dredging procedures that will be implemented at the proposed Converted MTS sites. Each proposed Converted MTS Natural Resources section analyze these potential impacts. In addition, the detailed management of demolition and construction activity at the Converted MTS sites is addressed in applications for Article 15/25 Joint Permits to be submitted to NYSDEC and the USACE. These permit applications are the subject of permit hearings to be conducted by NYSDEC. The impacts from facility operation are discussed in Chapter 4.11 of the DEIS and this FEIS. Refer to response to Comment #176 for additional details on dredging methods.

171. **Comment:** The USEPA or NYCDEP should get involved in monitoring idling vehicles. They should enforce the three-minute idling regulation.

Response: DSNY's Permit and Inspection Unit (PIU) does enforce the three-minute idling restriction. As a practical matter it is a difficult restriction to enforce, however, because trucks queued at a facility move periodically as loads are processed and because drivers of queued trucks will shut off the engines when a PIU inspector appears.

172. **Comment:** The privately-owned facility on Thames Street between Porter and Knickerbocker Avenue is creating a health hazard. The facility is less than 25-feet from a residence where the windows must be kept closed in the summertime due to odors coming from the facility.

Response: DSNY has referred this matter to the DSNY Permitting and Inspection Unit, who will coordinate with NYCDEP and any other City agencies sharing enforcement responsibility for this matter.

40.3.2.2.3 Southwest Brooklyn Converted MTS

173. **Comment:** The DEIS severely underestimates the traffic that will be traveling to the facility. A new traffic analysis should be undertaken that includes a realistic worst-case scenario and explores creative mitigation options. Traffic patterns vary considerably throughout the year; a study on Bay Parkway and Shore Road undertaken in December would show different traffic patterns than if it was undertaken in February. We need to know how traffic will affect the neighborhood. The existing traffic on Bay Parkway near Caesar's Bay is intolerable.

Response: CEQR identifies specific times of the year and days during the week when typical conditions at study intersections can be observed and counted. Generally, holiday weeks and periods are excluded from acceptable counting days, as are Mondays and Fridays during the week. CEQR specifically states that "It is usually preferable to rely on typical day counts rather than seasonally adjusted counts." Traffic counts were collected on typical days for this project.

The goal of the environmental review is to evaluate whether or not the Proposed Action will cause unmitigable significant environmental impacts, not to change existing conditions that are viewed as a problem. The DEIS and this FEIS found that the addition of this facility would not cause significant adverse impacts in the study area. Also see responses to Comments #192 and #198 below.

174. **Comment:** Because the previous MTS only handled residential waste, adding commercial waste will represent a huge increase in the amount of waste handled, especially since there is only a small amount of commercial waste generated in the area. The DEIS claims that only 828 tpd of commercial waste will be delivered, but this is an unrealistic amount, and where will this commercial waste be coming from? How will the City coax the private carters to utilize the facility?

Response: The Proposed Action to process Commercial Waste at the Converted MTSs responds to the requirements for the Commercial Waste Management Study (CWMS) required to be completed by Local Law 74 of 2000. This issue was evaluated in Volume III of the CWMS published in March 2004, and in the New SWMP DEIS and FEIS. The CWMS is included as Appendix I in this FEIS. Based on revisions to the DEIS analyses, and reported in this FEIS, 718 tpd of Commercial Waste, the equivalent of approximately 66 truckloads (conservatively assuming 11 tons per truckload, which is less than what many commercial waste hauling vehicles actually transport), can be processed without causing potential significant adverse impacts at the Southwest Brooklyn Converted MTS by limiting waste deliveries by commercial carters to between the hours of 8:00 p.m. to 8:00 a.m. with specific limits on the number of commercial waste hauling vehicles in the early morning hours.

The Part 360 permit limits that DSNY has proposed to NYSDEC would stipulate 718 tpd as the maximum quantity of Commercial Waste that could be received at the Southwest Brooklyn Converted MTS. (See the discussion of the permit limits Proposed by DSNY in Section 40.3.1.1 Facility Capacity and Design, Comment #1.) Based on processing the Maximum Peak Day limit proposed by DSNY to NYSDEC, Commercial Waste would represent approximately 34% of the total waste processed, with the balance being DSNY-managed Waste from the three Community Districts that constitute the Southwest Brooklyn MTS wasteshed.

175. **Comment:** The community is very concerned with the environmental impact on the marine environment, especially on the marina adjacent to the MTS. It is critical that

neither the marina nor the marine habitat are negatively impacted by the project. What type of seawall is to be constructed? Will water be able to pass through it?

Response: The DEIS includes a Fish Habitat Study conducted over a 12-month period that evaluated marine life at the site of the Southwest Brooklyn MTS. The conclusions of that study were that this MTS supported one of the more biologically productive marine communities. This site is situated on the north shore of Gravesend Bay at the mouth of the estuary and is influenced by Atlantic Ocean water more than the other MTSs.

The Converted MTS will have the same footprint over water and remain in the same location. There will be, however, some minor construction around the existing facility and local dredging, resulting in minor impacts to the marine environment. The existing fender system at SW Brooklyn will be removed and replaced with a new fender system designed for the mooring loads of the deck barges. The existing fender system is a partially submerged timber structure approximately 330 feet long that is comprised of vertical timber piles, timber wales, and timber face sheeting. Construction impacts such as turbidity and siltation will be limited spatially to the immediate area of the transfer station and temporally to the duration of the construction program, approximately 30 months.

Benthic organisms, being immobile (at least in the adult stages), are subject to impacts of construction activities that have the potential to result in temporary disruption. Local dredging of approximately 4,280 cubic yards of material could smother and physically remove the local benthic population. However, benthic communities reestablish themselves quickly after a disturbance. The epibenthic community will experience a temporary negative impact with the removal of the existing fendering system, but will colonize the new fendering system after construction, thereby reversing the impact. Adult finfish impacts are not expected because motile organisms will avoid construction activities that produce less than optimal environmental conditions.

While the construction impacts are limited to the duration of the activities, the operational impacts will persist for the duration of the facility's life span, a time span measured in

decades. Since the existing MTS will remain and there is no new construction over water at this site, there is no difference in impacts between Existing Condition and Build Action. The benthic, epibenthic, and finfish communities are not expected to be significantly altered from their existing state as platform coverage over water will remain the same. In fact, the epibenthic community will colonize the new king pile wall.

The greatest impacts will be temporary destruction of benthic and epibenthic communities and short term avoidance by finfish due to suspended particles and food source reduction. While not amenable to avoidance or reduction, these impacts will be limited and will not last beyond one seasonal cycle for invertebrates. Construction impacts on finfish will not be quantifiable. These impacts, however, are not deemed significant because the benthic communities will reestablish themselves within 6 to 12 months after the construction is completed. Finfish are expected to return after construction is completed also, and once the benthic food sources have returned to the area of disturbance, finfish will begin to feed in the area and establish a more permanent residence.

Also, see responses to comments # 176, #177 and #178 below.

176. Comment: How will dredging (both initial dredging and routine maintenance dredging) affect the water quality surrounding the MTS, and how will it affect the marine environment? To what extent will dredging be necessary? Many people consume the local fish and it may contain higher levels of mercury, arsenic, PCBs and other chemicals. The best available and most environmentally protective dredging method should be used (vacuum dredging). Due to the content of the silt as well as the currents, a closed clamshell dredge will not be sufficient to ensure safety. These waters are well known for both recreational and commercial fishing, and it is well established that toxins from silt can bioaccumulate in finfish, as well as in the people who consume them. In addition, there are harbor seals that frequent the area behind Toys-R-Us which are attracted to the herring present in the water, and Dreier Offerman Park is a major Atlantic flyway for bird migration. Many of these birds also consume these fish. Dispersal of

dredging contaminants to the waters around Dreier Offerman would be impossible to avoid, so protective dredging measures need to be implemented to minimize impacts.

Response: Resumed use of this MTS site would require some dredging to provide sufficient water depths for the use of flat-top barges and tugboats. The volume of dredged materials would be approximately 4,280 cubic yards. DSNY has submitted a draft application for Article 15/25 permits that is now undergoing review by NYSDEC. The application specifically addresses issues related to impacts on marine resources arising from facility construction, including dredging. As NYSDEC proceeds with review of the application, including a local public hearing, it will determine the appropriate mitigative measures to minimize impacts on marine life and the local community.

DSNY has carefully considered various dredging methods, including the vacuum (hydraulic) option, for this site. The basic premise for selecting a dredging method was that it must provide environmental safeguards as necessary and comply with all applicable environmental regulations, without incurring unnecessary expenses for dredging. The mechanical clamshell dredging method using an environmental bucket was selected for this site, and the vacuum dredging method was rejected for the following reasons:

A. Vacuum (Hydraulic) dredging is preferred when dealing with "Hazardous" sediments. DSNY has conducted sediment sampling and testing at this location to characterize the sediments. The testing included Toxicity Characteristic Leaching Procedure (TCLP) as specified by the federal Resource Conservation and Recovery Act (RCRA) regulations, and the New York State regulations for Identification of Hazardous Waste (6 NYCRR Part 371). None of the sediment samples failed these tests, indicating that the sediments at this location are not "Hazardous" as defined by the applicable federal or state regulations.

B. For any dredging operation, re-entrainment of contaminated sediments and its impact on the surrounding biota is a reasonable concern. DSNY has taken this concern into consideration, and will employ the following safeguards to minimize such impacts:

a. Dredging operations will be conducted using an environmental clamshell bucket. The environmental bucket is constructed with sealing gaskets or an overlapping sealed design at the jaws.

- The bucket will be equipped with a signal light in the control station to verify bucket closure and seal.
- Bucket hoist speed will be limited to approximately 2 ft/second.
- The bucket will be lowered to the level of barge gunwales prior to release of load.

b. No barge overflow will be allowed

c. Excessive loss of water, sediment or both from the time the bucket breaks the water surface to the time it crosses the barge gunwale will not be permitted. In other words, the environmental bucket will be kept in good working order throughout the dredging operation.

d. As appropriate, dredging operations may be restricted during spawning seasons that may be identified in the permits issued for the Proposed Action.

C. Neither NYSDEC nor the US Army Corps of Engineers (USACE) has required or recommended the Vacuum (Hydraulic) method in the DSNY maintenance dredge permits for this or other MTS sites. These permits require the use of a mechanical clamshell dredge with an environmental bucket. In other words, NYSDEC and USACE have found that the mechanical clamshell dredging with an environmental bucket provides appropriate environmental safeguards, including protection against potential re-entrainment of sediments in the water column and its impact on the surrounding biota.

177. **Comment:** Where will the dredged material be disposed, given that it may be contaminated with hazardous substances? Additional study is needed.

Response: The Article 15/25 Joint Application referenced in the Response to Comment #176 above identifies several options for disposition of dredge spoils that comply with applicable law and regulations. Specific locations have not been identified at this time. Dredged materials will be analyzed in accordance with applicable regulations and requirements prior to their disposition. Based upon the results of these analyses and in conjunction with discussions with involved agencies, DSNY will manage the materials in accordance with applicable rules and regulations governing the disposal and/or beneficial reuse of dredged material. Initial analysis of sediment samples at the Southwest

Brooklyn site conducted by DSNY indicates that these materials are not a characteristic hazardous waste under federal and state guidelines and regulations. Additional information with regard to these alternatives will be provided within the Joint Application.

178. **Comment:** There were numerous concerns about the impacts on the marina. There is concern that the wake from the barges and tugboats used at the MTS may affect the structure and integrity of the marina. It was requested than an analysis of the impacts to the marina during both the construction and operational phases of the MTS be undertaken. In addition, we would like the City to protect the marina's seawall from barge and tug traffic. If it cannot be protected, the marina will be adversely impacted.

Response: The Southwest Brooklyn MTS is located immediately adjacent to the existing Marine Basin Marina seawall. Based on an engineering review, in order to protect the stability of the existing seawall during construction, maintenance, dredging and facility operations, a "king pile" bulkhead wall and rock apron will need to be provided. The rock apron will be installed between the "king pile" bulkhead wall and the existing seawall. It will consist of 250-pound armor stone with an under layer consisting of 10- to 50-pound stone (provided as a filter between the seabed and the armor stone). The rock apron will be designed to remain stable under the wave action of wind-generated waves with a 50-year significant wave height of 5.9 feet, and it will mitigate the effects of erosion and eliminate the risk of undermining the existing seawall due to wave action of wind generated waves and prop-wash from tugboats maneuvering barges.

An existing "red" buoy marks the approach channel to the facility approximately 150-feet west of the Marina's seawall and 300-feet south of the existing DSNY property's bulkhead wall. All tugboats must approach to the west of the buoy; otherwise, they will run aground. A wall that extends past the buoy is not required to protect the marina from tug movements at the Converted MTS.

179. **Comment:** We would like an analysis of the impacts of the facility on the amusement park adjacent to the MTS, which gets heavy usage during the summer. Were impacts on the two schools across the street taken into account? We are concerned with the traffic impacts on neighborhood children.

Response: Under City Environmental Quality Review (CEQR) procedures, reasonable worst case peak hour traffic conditions must be evaluated in an EIS. The DEIS and this FEIS establish reasonable worst case conditions at intersections where project generated traffic would be most concentrated or most likely to have an impact on traffic flow through the intersection. Traffic counts are not typically obtained during summer months unless high seasonal traffic is anticipated in that area, since typical background traffic volumes are generally lower during the summer months when schools are closed. The Nelly Bly Amusement area is not expected to generate high seasonal traffic in the area of the MTS. Nelly Bly does not open until 11:00 AM daily, which is after DSNY's estimated peak hour arrival rate at the Southwest Brooklyn Converted MTS. A screening analysis performed to determine the study intersections took into account the volume and routing of the project generated traffic. Also, see Responses to Comments #173 above, and #192 below.

The intersection at 26th Avenue and Shore Road was modeled for the DEIS and this FEIS. All intersections within a 1,000 feet of this intersection (including the intersections at Bay 41st and 25th Avenue that straddle the amusement park) were lined with receptors. There were no unmitigable adverse significant impacts found at these intersections. In addition, the impacts of facility operations were added to the off-site impacts to determine whether there would be cumulative impacts. No significant unmitigatible adverse impacts were found. Cropsey Avenue between 26th Avenue and Bay Parkway (which the schools fall within) was analyzed for off-site traffic and air impacts. No significant unmitigatible adverse impacts were found.

180. **Comment:** What will happen when the incoming volume of waste exceeds the facility's capacity. This will create significant odor, noise and traffic problems.

Response: DSNY will not deliver waste in excess of the facility's processing capacity. As noted in the Response to Comment #174, the DEIS and this FEIS evaluate the potential for significant adverse air quality, traffic, odor and noise impacts. The maximum daily permitted capacity proposed by DSNY, except for rare public emergency

situations, is 2,143 tpd. Also see response to Comment 2 in Section 40.3.1.1 for a discussion of design features intended to minimize the potential for impacts.

181. **Comment:** Since the Southwest Brooklyn facility is anticipated to receive less waste than other MTSs, there is concern that more and more waste will be transferred to the Southwest Brooklyn site to "equalize" the amounts of waste sent to each of the sites from other areas.

Response: See Response to Comments # 174 and #180.

182. **Comment:** Commercial waste vehicles are not under the same type of regulation as the City-owned collection vehicles. There is concern in terms of noise and pollution. Will they be traveling down residential streets during the nighttime hours, and how can you assure the community that the quality of life will not be affected? Currently the noise from trucks rumbling down Cropsey Avenue at night is intolerable, and commercial vehicles may make this worse. What routes will these commercial vehicles be taking, and how will they be regulated?

Response: Both DSNY and Commercial vehicles are required to travel along New York City Department of Transportation designated trucks routes to and from their destination. These vehicles may leave designated truck routes only to access their destination (in this instance, the Converted MTS) in the most direct manor possible. DSNY's Permit and Inspection Unit enforces these regulations. Also see Response to Comment # 174.

183. **Comment:** The plans for the Southwest Brooklyn MTS, as submitted to the CB, showed encroachments onto Bay 41st Street and onto the marina property.

Response: The construction of the Southwest Brooklyn Converted MTS occurs entirely within the boundaries of City-owned property dedicated to DSNY use.

184. **Comment:** The Bensonhurst area has poor air quality, many residents have asthma, and any new facilities will make matters worse. The DEIS must analyze the cumulative health effects that the air pollution from the idling vehicles and tug boats will have on a population already exposed to poor air quality.

Response: The DEIS and this FEIS did in fact analyze the effects of tug boat and idling vehicle emissions, as well as truck traffic and facility vents. The DEIS and this FEIS also analyzed the health effects of pollutants from the Converted MTSs. See the General Section 40.3.1.6, which details responses to public health comments.

185. Comment: What types of "state-of-the art" equipment will be utilized to minimize odor emissions from the facility? How will odors attributed to the trucks be minimized, and what restrictions will be placed on air emissions coming from stationary equipment and non-road vehicles. How will the NYCDEP or NYSDEC ensure that regulations are being met under various weather conditions and that no odors will impact the neighborhood?

Response: The facilities will be designed with ventilation systems to maintain the facility at "negative pressure" such that odors will not migrate out of open doors. The ventilation system will include a mist system to apply odor neutralizing chemicals to air as it passes through the ductwork before it is exhausted to the open atmosphere through facility roof vents. Rapid roll-up access doors will be kept closed when waste collection vehicles and/or containers are not entering/exiting the building. There will be a requirement that all waste processing areas be cleaned daily to ensure that all waste is processed within 24 hours and that the floors are washed to eliminate buildup of waste residue. Truck odors will be minimized by keeping the trucks as clean as practical, and by allowing adequate unloading space inside the building, thus minimizing on-site queuing time outside of the buildings. Stationary equipment and non-road vehicle engines will be purchased new for the facilities, and therefore, these emissions sources will meet the latest EPA emissions standards applicable to new engines. NYSDEC, NYCDEP and other City regulators will periodically inspect the facilities for compliance with applicable rules and permits, as appropriate. Because residential garbage cans and dumpsters, residential garbage collection vehicles, and other sources emit odors that are often detectable in close proximity to residences, a goal of zero odor is not feasible. However, based on dispersion modeling of the proposed MTS facility design and operation, predicted odor impacts in the surrounding neighborhood are less than detection thresholds.

186. **Comment:** A number of comments addressed concerns about local waterways. The coastal ecosystem has been on the road to recovery. How will the runoff from the site, possible leakages, discharges, and accidental garbage spills be managed and treated before entering the waterway?

Response: DSNY has devoted a great deal of attention during the facility design process to ensuring that the facility's environmental control system prevents waste processing operations from affecting the outside environment, including the escape of litter into the adjacent waterbody. A comparison of the Converted MTS with the existing MTS facility highlights these design features, for example:

- The Converted MTS will be located upland on the old incinerator site, not over water like the existing MTS.
- The Converted MTS will process waste into lidded, sealed containers in contrast to the use of open hopper barges in the existing MTSs.
- Waste processing operations in the Converted MTS will be entirely enclosed within the building in contrast to the old MTS, which is open at the entrance to the barge slip.
- The Converted MTS will be equipped with a ventilation system capable of 12 air changes per hour, twice the applicable code standard, to maintain negative air pressure in the building and thereby prevent the escape of odors and litter to the outside environment. The existing MTSs do not have this type of ventilation system.
- The Converted MTS is equipped with an odor neutralizing system that neutralizes odors from exhaust air as it leaves the building.

187. **Comment:** Given that the MTS will be operating 24 hours per day and that there are residences nearby, how will the noise from movement of containers to the barges be mitigated?

188. **Response:** The on-site noise analysis assessed noise levels from the gantry crane including the movement of the containers on to the barges. The number of: (1) relayed DSNY collection vehicles delivering waste to the facility will be restricted during the 2:00 a.m. to 3:00 a.m. period to mitigate the potential for on-site noise impacts at two off-site noise sensitive receptors during this period; and (2) commercial waste vehicles delivering waste to the facility will be restricted during certain hours to mitigate estimated off-site noise impacts at receptors along the routes to these facilities between

8:00 p.m. and 8:00 a.m.

189. **Comment:** When the incinerator operated at the site, it operated without a permit, and there were plenty of negative impacts. How can the residents be assured that similar impacts won't arise with the MTS? The City should not be building a waste facility in a residential area or near a recreational area, such as Coney Island.

Response: Unlike an incinerator or other waste disposal facility, the MTS is designed to facilitate the movement of waste out of the neighborhood as reliably and quickly as possible. The existing MTS operated for over fifty years at this site. It was and continues to be permitted to operate. The DEIS and this FEIS is a comprehensive assessment of the potential for significant adverse unmitigatible impacts from construction and operation of the Converted MTS: none were found.

190. **Comment:** It appears that Brooklyn will be the centerpiece of the City's SWMP, so there need to be assurances that the facilities will operate with the highest levels of environmental controls and have the least impact on the affected communities. DSNY needs to work with the community to ensure that impacts to the community are minimized. There should not be any floatables or debris in the vicinity of the MTS, and truck emissions need to be minimized.

Response: See Responses to Comments #175, 180 and 186.

191. **Comment:** There is concern that trucks will idle along Shore Parkway, affecting air quality and noise. How will this be addressed?

Response: The DEIS and this FEIS evaluated the potential for significant adverse noise and air quality impacts on the truck routes and approach roads that waste hauling vehicles would take to and from the facility and found none. Collection vehicles bringing waste to the facility will not idle off site.

192. **Comment:** Gravesend Bay is already polluted with sewage; will it also be further degraded by the accidental dumping of garbage into the water?

Response: See Response to Comment #186.

193. **Comment:** Truck traffic was a major concern of the residents. There are numerous discrepancies in the DEIS in truck traffic along Cropsey Avenue and along Shore Parkway. Four different sets of figures (average trucks/hour, total tonnage, etc.) are used, and these numbers are different from what was presented during the DEIS presentation. There will be major disruptions to Bay Parkway, Cropsey Avenue and Shore Parkway. The traffic analysis must take into account existing problems and conditions. The DEIS failed to consider the impacts of the traffic on the large number of senior citizen homes, nursing homes and other facilities along Cropsey Avenue.

Response: Under City Environmental Quality Review (CEQR) procedures, reasonable worst case peak hour traffic conditions must be evaluated in an EIS. Three peak time periods were analyzed in the DEIS and this FEIS, the AM peak hour (7:45 a.m. to 8:45 a.m.) and PM peak hour (5:00 p.m. and 6:00 p.m.) when background traffic volumes are highest, and the facility peak hour (10:00 a.m. and 11:00 a.m.) when facility-generated traffic volumes are the highest. The facility peak hour occurs during the late morning hours after the AM peak hour. The analysis in the New SWMP DEIS and this FEIS of the potential for project induced significant traffic impacts used a conservative assumption for the facility peak hour by: (1) using the average peak daily DSNY collection vehicle arrival profiles – that is, the typical highest day of each week (i.e. every Tuesday) when collection vehicle delivery profiles are between approximately 15% and 20% higher than the average day; and (2) increasing the average peak day hourly DSNY collection vehicle volumes by 20% above the DSNY-reported collection truck delivery profile to account for potential fluctuations. By using the facility peak day as a basis for analysis and adding a 20% contingency factor for collection vehicle traffic, the DEIS and this FEIS overstates the volumes of facility traffic that will occur on both average and peak days and, therefore, constitutes a reasonable worst case scenario. The trip generation data used in the DEIS and this FEIS for this facility was derived from a sample of peak days during Fiscal Year 1998, when DSNY-managed loads and tons were relatively high compared to the historical averages that are used in the permit application. This, combined with the 20% contingency factor applied to the average peak day, means that the traffic data used in the DEIS and this FEIS is comparable to the holiday week peak tons and loads based on historical data for the Southwest Brooklyn MTS wasteshed. The

DEIS and this FEIS traffic analysis under these reasonably conservative conditions found that the development of the Converted MTS would not cause any potentially significant adverse traffic impacts.

194. **Comment:** The DEIS failed to anticipate increases in rodent and mosquito populations and the effects of increased pesticide use on the neighborhood. What vector control measures will be used and what will their impact be?

Response: The barges serving the Converted MTSs will be flat-deck barges. This avoids the problems associated with vector control in the old hopper barges, which could have standing water and a layer of refuse in the bottom of empty barges that when full, attracted vermin. Additionally, the MTS facility will be serviced by licensed DSNY pest technicians on a periodic basis, approximately every 45 days or on a more frequent basis, as necessary. The technicians will implement and maintain a pest control program, involving the application of spray and the placement of traps. These design measures in the new facility and operational practices will prevent conditions that can support the growth of vectors.

195. **Comment:** The DEIS failed to examine the increase in toxic burden in the area (from the bus depot, Belt Parkway, pesticide use, and from oil refineries in New Jersey). The cumulative effects from all of these projects will have a severe socioeconomic impact on the community as a whole, and the project will further degrade the area.

Response: Under the NYSDEC air toxics assessment policy, the health risk associated with any project is to be evaluated on an incremental, not a cumulative basis. For permitting of facilities, the acceptable limit from NYSDEC policy with respect to carcinogenic air emissions is either a 1/1,000,000 or 1/100,000 inhalation risk of cancer, with the latter value applying if a project facility has applied "Best Available Control Technology. To evaluate health risk (e.g., cancer risk) on a cumulative basis, one would need to assess the total impact of all causes of cancer. In that case, the total risk would be very large (because of the cumulative risk posed by factors such as diet, cigarette smoke, etc.,) in comparison to the relatively small risk of the project. The NYSDEC policy, similar to that used in many other states and derived from federal policy, assesses

potential health impacts of air toxics emissions from a project only on an incremental basis.

196. **Comment:** The DEIS has not adequately explored other industrial sites where an MTS could be located without affecting a densely populated area, such as Bensonhurst/Bath Beach/ Gravesend Bay.

Response: See response in Section 40.3.1.2, Alternatives, Comment #7 and additional discussion of Alternatives in Section 1.3 of this FEIS.

197. **Comment:** As to the recycling operation at the SBMT, very few details about the materials to be recycled were provided. What are the sources of the recyclable materials, and what will the impacts on traffic, noise, and air pollution be? What will be the hours of operation, and what health and safety protocols will be utilized?

Response: See responses in Section 40.3.2.2 (Hamilton Avenue) on Proposed Action for Recycling at the SBMT.

198. **Comment:** The Notice of Completion maintains that the DEIS will comply with SEQRA, so both long and short-term impacts must be examined. For the "no-build" alternative, the Year 2006 would qualify for the short term analysis. However, the Future "No-Build" condition must analyze to a forecasted future year, associated with the life cycle of the facility. This time frame would be the estimated time of completion plus 20 years (ETC+20). The Demographic Characteristics and Economic Conditions and Potential Impact analysis should be undertaken for this time period. NYMTC has developed new Socio-economic data (SED) and forecasts to the year 2030 based upon updated information. The 2025 SED was not approved due to the uncertainties related to the 9-11 disaster and recovery. All future impacts under the "no-build" scenario must be undertaken at ETC+20. NYMTC's demand modeling tools should be used to forecast traffic.

Response: CEQR requires an evaluation of impacts considering Existing Conditions and comparing No-Build Conditions for the specified Build year with Build Conditions for that year. It does not require an evaluation of impacts over a 20-year time horizon, which cannot be done with any degree of accuracy. The referenced ETC+20 is an analysis that

the New York State Department of Transportation (NYSDOT) requires for design under their Design Procedures Manual and that is typically analyzed for New York State transportation projects that follow the NYSDOT's Environmental Procedures Manual under SEQRA, but not for CEQR projects. In accordance with CEQR protocols, the analyses presented in the DEIS and this FEIS do account for the cumulative effect of additional projects in the area. For example, Existing Conditions reflect current (late 2003/2004) traffic volumes. The project Build Year is 2006. Build Year conditions are estimated by applying an NYCDOT-approved traffic annual growth factor of 1%. Additionally, through consultation with DCP and other agencies, it was determined that no new projects are in development in the study area that would be complete by the Build Year and add traffic to the future background volumes. This information was then used to re-evaluate traffic levels of service at intersections affected by the project in 2006 under a Future No-Build scenario. The Future No-Build scenario estimates what levels of service would be in 2006, accounting for anticipated growth without the Converted MTS. The effect of the Converted MTS is then evaluated by adding its traffic as an increment to the forecasted No-Build scenario, and assessing whether it has any significant adverse unmitigatible impacts. These results are reported in the DEIS and this FEIS and were found to have no unmitigatible significant adverse impacts.

199. **Comment:** In the DEIS, under existing traffic operations, there is no mention if and when vehicle classification counts were conducted. Since the area has pronounced summer recreational activities, winter traffic may be significantly lower than traffic in other seasons. This must be taken into account before the analysis is conducted. In addition, this seasonality would affect pedestrian activity.

Response: In accordance with the 2001 CEQR Technical Manual, traffic counts are not typically obtained during summer months unless **high** seasonal traffic is anticipated in that area. Generally, traffic volumes are higher during months when school is in session as opposed to summer months when school-related traffic is not a factor. In addition, NYSDOT generally classifies roadways in the vicinity of the Southwest Brooklyn Converted MTS site as FC30 (low seasonal variation).

Pedestrian counts were taken in the field at the time of the traffic counts. These pedestrian counts were incorporated in the traffic analyses of intersections in the area. At the intersection of Bay Parkway and Shore Road southbound Exit 5 from Shore Parkway, there is a protected signal phase for pedestrian crossing only. This phase provides a time solely dedicated for safe pedestrian movements at this intersection. The traffic analyses take the signal phase into account. Also see Response to Comment #173 above.

200. **Comment:** All figures showing traffic volumes depict ambiguous traffic approach diagrams. The traffic approach diagrams should be turned so that the traffic flow coincides with the street grid.

Response: Traffic figures were updated for the FEIS to clarify approach directions while maintaining readability.

201. **Comment:** In Section 5.14.2.4, Sentence 2, "However, DSNY and other agency collection vehicles pass through the traffic study area on truck routes from Queens CDs 11 and 13 to the commercial vendor, IESI, located at 110 50th Street in Brooklyn". We cannot relate the meaning of this sentence to the context of the DEIS, section 5.

Response: This statement indicates that there are existing DSNY generated trips that are currently traveling through study intersections in the study area. Because these trips are already within the study area under Existing Conditions, they are excluded from the net increase of traffic trips generated by the Southwest Brooklyn Converted MTS in the future. Further information on the calculation of net project generated trips can be found in Section 3.16, which describes the methodology used for traffic analysis.

202. **Comment:** In Section 5.14.4.1, the statement beginning with "The need for Saturday analysis was considered…" is too vague, as there is no weekend traffic data shown. Weekend traffic has different characteristics than weekday traffic, as trips are made for different purposes. The shopping area at the southern end of Bay Parkway generates traffic trips; new establishments have located there. The amusement park and other seasonal activities within the primary and secondary study area generate many trips during summer weekends. Traffic must be adjusted for seasonal variations.

Response: Section 15.14.4.1 describes weekend traffic volumes in terms of both background volumes and project generated volumes. Table 5.14-3 illustrates the differences between weekday and weekend background and project generated volumes. Also see Response to Comment #173, above.

203. **Comment:** The effects of constructing a 300-foot steel sheet pile and rock breakwater should be evaluated in conjunction with other rock structures planned for the area. Currently, there is severe shoaling within Gravesend Bay as a result of a groin constructed on the ocean side of the Coney Island peninsula. There are plans for the construction of five t-groins off the nearby community of Sea Gate as well as tentative plans in the Harbor Deepening Project (DEC No. 2-6500-00053/00001) for the creation of rock reefs within Gravesend Bay. The continued destruction of bottom habitat needs to be addressed in terms of the cumulative effects of all these projects.

Response: See Response to Comment #178.

204. **Comment:** The DEIS notes that containers will be transported via flat bottom barges, but does not indicate if or how the containers will be secured to those barges. Containers can and do fall off ships and into the water, where they remain submerged, and can be hit by unsuspecting boaters. This impact can result in a huge quantity of floatable debris reaching local shorelines.

Response: All barges will be fitted with "cell guides," structural steel frame compartments that will extend to the height of the middle of the topmost container on the barge. The cell guide will serve to secure the containers.

205. **Comment:** Exactly what mitigation is proposed for environmental impacts to the waterways and when will such mitigation occur? Page 5-62 (Waterfront Revitalization Program) states that “mitigation for potential impacts would be proposed during the environmental review and permitting, if required.” At least ten acres of wetlands should be replenished for every acre of bottom habitat destroyed. There should be solid time frames and substantial penalties for delays.

Response: DSNY has submitted a draft application for Article 15/25 permits that is now undergoing review by NYSDEC. The application specifically addresses issues related to potential effects on marine resources arising from facility construction including effects upon designated littoral zone. As NYSDEC proceeds with review of the application, including a local public hearing, DSNY in coordination with NYSDEC and other involved agencies will determine the appropriate measures to address potential effects from the development of the proposed facility.

206. **Comment:** The Southwest Brooklyn MTS should not be reopened. The community does not want additional cases of cancer or leukemia.

Response: Please see responses to Public Health comments in Section 40.3.1.6.

40.3.2.3 Manhattan

40.3.2.3.1 East 91st Street Converted MTS

206. **Comment:** Numerous speakers were opposed to the reopening of the East 91st Street MTS, and were concerned with what sites were examined as alternatives to the site. They wanted to know why this site, located in a residential area, and adjacent to Asphalt Green was determined to be the preferred Manhattan site, given that it is the only MTS planned for a heavily residential neighborhood. They thought that the facility should be sited in a commercial area, not a residential one, as it will have significant adverse impacts on local air quality, traffic, pediatric health, open space and public health within the community.

Response: The zoning of the site, M-1-4, allows for the proposed waste transfer use and, for over 50 years, the site was used as a marine transfer station (MTS). The MTS site use was included in the 2001 SWMP Modification approved by the City Council and DSNY continues to hold a New York State Department of Environmental Conservation (NYSDEC) permit to handle 4,800 tons per day (tpd) of waste at the existing facility. Site conditions, including proximity (of the existing MTS and the Converted MTS) to residential buildings and parks used by residents were thoroughly considered in the DEIS and this FEIS analysis of potentially adverse impacts. No potential significant

unmitigatable adverse impacts were identified. Access into the facility will be gated and guarded. DSNY enforcement personnel will manage and direct truck traffic at the entrance on York Avenue at 91st Street to protect pedestrians. Waste processing operations occur on the east side of the FDR Drive over the East River and are completely isolated from pedestrian and non-DSNY vehicular traffic. The past problem with DSNY collection vehicles queuing on York Avenue will be eliminated through a combination of the facility's design features and the limitations that DSNY proposes for the facility's permitted capacity at this facility. Accident records were researched for the intersection of York Avenue and 91st Street at the MTS entrance. When the MTS operated previously, this intersection was not a high accident location. The annual average number of reportable accidents was just over 4 per year for the years 1997, 1998 and 1999, and none involved DSNY collection vehicles. During that period, only one accident involved a pedestrian. In the year immediately after closure (2000), there were 8 reportable accidents, 2 of which involved pedestrians. In the future, DSNY enforcement personnel will manage truck and pedestrian traffic at the entrance on York Avenue at 91st Street to ensure that it continues to operate safely.

The response to Comment # 2 in Section 40.3.1.1, Facility Capacity and Design, provides additional information on the design features of the facility that are improvements on the existing MTS design and which avoid the potential for significant adverse impacts on the community, as documented in this FEIS.

207. Comment: Several speakers stated that the 91st Street Converted MTS would receive far more vehicles than the 130 projected, which would result in each truck requiring more than 3.5 minutes turn around time. As these trucks will take longer to unload, there will be queuing of trucks on the east-west streets as well as on York Avenue, which will create problems which will have no adequate mitigation. There was concern that the additional truck trips would make York Avenue impassable and potentially unsafe, and would increase noise, odors and air pollution. The corner of East 91st Street is already extremely congested, and additional waste vehicles will bring this block to a complete standstill.

Response: As noted in the response to the preceding Comment #206, traffic conditions have been fully evaluated. The DEIS and this FEIS reasonably and conservatively used

the historical and higher than current expected average peak weekly deliveries (i.e. Tuesday of each week) when deliveries of waste are 15-20% higher than the average during the week. A 20% contingency was then added to the average peak day value. To add further conservatism to the analysis, approximately nine (9) tons per truck load was assumed as compared to the expected load of 10 to 11 tons, thereby increasing truck volumes. These assumptions result in 130 peak day loads for DSNY collection vehicles (since CEQR requires examination of trips in and out, this translates to 260 truck trips), and 28 peak hour loads (56 truck trips) for DSNY-managed Waste. By comparison, DSNY's expected average tpd from the East 91st Street wasteshed is approximately 720 tons, which translates into 75 loads per day (150 truck trips) with a peak hour of 21 loads (42 truck trips).

The DEIS and this FEIS analysis is actually based on the assumption that the East 91st Street Converted MTS would generate a total 259 net inbound waste hauling vehicles per average peak day, which includes both DSNY and commercial vehicles.

Traffic operations and potential impacts were projected in accordance with City environmental review guidelines and nationally accepted methodologies. The 2*001 CEQR Technical Manual* guidelines were used to determine study intersections and, in accordance with these guidelines, the Highway Capacity Manual methodologies were used to assess traffic operations. Based on that analysis, it was projected that the level of service (LOS) under the 2006 build conditions would be the same as under the 2003 existing condition (with a nominal increment in delays) at the intersections along York Avenue, and at the lane groups at all study intersections with the exception of the eastbound approach at the intersection of York Avenue and East 86th Street. The analysis of travel time and delay runs also projected that the overall build run speed (estimated for air quality analysis) along the northbound York Avenue between East 82nd Street and East 92nd Street would not reduce significantly. The overall run speed was projected to reduce:

- From 23.0 mph under the 2003 existing condition to 22.8 mph under the 2006 build condition during the AM peak hours
- From 23.9 mph under the 2003 existing condition to 23.6 mph under the 2003

build condition during the Facility peak hour
- From 19.0 mph under the 2003 existing condition to 17.9 mph under the 2006 build condition during the PM peak hours

Similarly the overall build run speed along the southbound York Avenue between 92nd Street and 82nd Street was projected to reduce:

- From 20.3 mph under the 2003 existing condition to 19.8 mph under the 2006 build condition during the AM peak hours
- From 20.2 mph under the 2003 existing condition to 20.0 mph under the 2006 build condition during the Facility peak hour
- From 21.0 mph under the 2003 existing condition to 20.8 mph under the 2006 build condition during the PM peak hours

Therefore, based on the LOS and speed run analyses, it is projected that the proposed MTS would not have significant adverse traffic impact at the study intersections.

The response to Comment # 2 in Section 40.3.1.1, Facility Capacity and Design provides additional information on the design and operational features that will avoid collection vehicles queuing on local streets.

208. **Comment:** There was concern that the residents of the Holmes and Isaacs Development, between First Avenue and the East River, and from 92nd to 96th Streets, would be directly and negatively impacted by the MTS. Specifically, they thought that the facility would impact community facilities and services, pedestrian traffic, open space, health and aesthetic values of the community. The waste vehicles on York Avenue will pose a safety hazard to pedestrians.

Response: See the responses to Comments #206 and #207.

209. **Comment:** Several speakers noted that when the MTS was previously open, there were rats, noise, and odors, especially in the summer months. At that time, the neighborhood was primarily manufacturing, but now it is residential, with no commercial buffer. There is concern that these previous impacts will return at an increased rate due to the increased capacity of the proposed Converted MTS. Rats and other vermin are already a problem in the neighborhood, and children are frequently exposed to exterminating poisons when

playing in the parks. The old facility received about 900 tpd of residential waste, but now it will receive two to four times what it used to, and operate around the clock. It was stated that this is not a simple retrofitting of a facility but the construction of a totally new, much larger facility. How can this increase create no environmental impact?

Response: See Response to Comment #206. The response to Comment #2 in Section 40.3.1.1, Facility Capacity and Design, provides additional information on the design features of the facility that are improvements on the existing MTS design, and which avoid the potential for significant adverse impacts on the community, as documented in this FEIS.

The facility will not receive 3,600 tpd of waste. Please refer to the response to Comment #1 in Section 40.3.1.1, Facility Design and Operations, for information on the capacity that DSNY has proposed to permit at this site.

210. **Comment:** The original Solid Waste Management Plan, as described in the Draft Scoping document was to have 8 MTSs, but four were eliminated. However the East 91st Street site is located in a residential community. What are the financial, environmental, technical or legal data which support this choice of site over other sites in Manhattan, particularly over the West 135th Street site? The CWMS provides clear screening criteria for eliminating four Manhattan sites which were examined for private waste transfer stations. Yet for the same reasons that these sites were eliminated from consideration, inexplicably, the East 91st Street site, which shares the same attributes, remains as an alternative.

Response: Please see the response to Comment #7 in Section 40.3.1.2, Alternatives Analysis, for a discussion on the Alternatives that were considered in formulating the Draft New SWMP.

211. **Comment:** A number of speakers commented that the DEIS fails to address the negative impacts of the MTS on local parks such as Carl Schurz and particularly Asphalt Green. DSNY's own siting rules would not permit a private transfer station within 400 feet of a park, so how could this facility be located adjacent to two parks? They were concerned

with the fact that the document fails to analyze traffic on a Saturday, which is the biggest traffic day for Asphalt Green, and wanted DSNY to provide the traffic count data to support the statement that Saturday traffic levels are lower than weekday traffic. They claimed that there is no analysis of the impact of odors on the park, or mitigation, except for "prison-like" walls on the ramp. There was concern that the facility would have other impacts on the park, such as casting a shadow for up to five hours a day on the recreational area, and the impacts from truck exhaust. There was a general concern that the facility would impact on the economic viability of Asphalt Green, especially during construction, which might result in closing of the Park's entrance. There were comments made that when the MTS had been previously open, parents withdrew their children from the day camps located within the park. The facility would have an economic impact on other neighborhood businesses as well, by hindering deliveries and reducing customers.

Response: See Response to Comment # 206. Approximately 140,000 cars drive by this site every day on the FDR Drive and over 20,000 vehicles pass through the York Avenue and East 91st Street intersection each day under existing conditions. There are 50,000 tpd of solid waste generated in the City, and multiple facilities are needed to handle this waste. The regulations for private transfer stations take into account this fact, and to ensure that all waste in the City is not directed to one or two communities, the regulations allow already permitted facilities less than four hundred feet from sensitive receptors to operate. Additionally, the facility will have the following state-of-the-art environmental controls:

- An advanced odor control system;
- A ventilation system exceeding building code standards that maintains negative pressure to prevent the escape of untreated odors to the outside under all conditions; and
- a tipping floor capable of accommodating six trucks, an automated scale system and a ramp with increased structural support – all with the objective of eliminating on-street truck queuing.

The estimated time for demolition and construction of the Converted MTSs in the Proposed Action is 30 to 32 months, which is considered short term. Under CEQR, short-term construction impacts are not considered significant, and do not require a detailed analysis. In addition, at the time the DEIS was prepared, the design of the Converted MTSs was still in

progress. Additional available information on construction related to the Converted MTSs and mitigation measures for potential temporary impacts on Asphalt Green is included in Chapter 32.0 of this FEIS.

The combination of reduced weekend traffic volumes and the lower volume of DSNY-managed Waste collection vehicles that would arrive at the Converted MTSs on a Saturday (Sunday they will be closed except for emergencies) did not warrant a weekend traffic analysis. In fact, based on historical higher tonnages, Saturday volumes of DSNY-managed Waste collection vehicles for the East 91st Street Converted MTS are approximately 64% of the conservative average peak daily totals plus 20% contingency used for the weekday analysis in the DEIS and this FEIS. Background traffic volumes Northbound and southbound on York Avenue are 14,433 average vehicles per day during the weekend versus 20,674 vehicles per day during the week, which is approximately 70% of the weekday traffic. The DEIS presents results of the odor analysis at the property boundary and at the nearest sensitive receptor for the Converted MTSs, with no unmitigable significant adverse odor impacts identified. Odor results at the additional sensitive receptors included in the noise analysis are presented in the FEIS, and are lower than that predicted at the property boundary. Other applicable CEQR analyses, including air quality, shadows, were completed and are presented in Section 6.0 of the DEIS and this FEIS.

212. **Comment:** A speaker noted that there are more appropriate and sensible alternatives to deal with Manhattan's waste. Reference was made to studies which have been undertaken at Columbia University which identify alternatives that are less destructive and less disruptive.

Response: Please review the Chapter 2, Waste Prevention and Recycling, and Attachment VI, Recycling, of the Draft New SWMP and the comments and responses in Section 40.3.1.3 Waste Reduction and Recycling that describe the City's extensive support of and experience with recycling and waste prevention programs.

213. **Comment:** A number of people claimed that the DEIS contains significant flaws characterized by inadequate studies, false statements and harmful conclusions, and

reflects heavy deference to political rather than policy concerns. The Plan is lacking in specifics, and details presented to the public have varied and been inconsistent. The DEIS does not support its conclusions of no significant impacts. Underlying assumptions are not documented and in many cases analysis methodologies are changed to provide the desired conclusion.

Response: This statement is incorrect. The DEIS and this FEIS was prepared in accordance with the Methodologies developed in accordance with the 2001 CEQR Technical Manual, and in consultation with NYCDEP, NYCDOT and other City agencies. As with any environmental review, certain analyses will be prepared based on the most conservative assumptions, and then refined, if the most conservative analysis shows unreasonable results, applying methods that are reasonable and prudent. For example, the first level of an off-site air quality analysis assumes that the peak hour number of project-generated traffic occurs 24 hours per day. If results are below standards, no further analysis is required, though predicted emissions from that traffic would be higher than actually experienced. If results of the initial rough screening are above standards, a more refined Tier II analysis is completed using actual projected hourly volumes. As noted in the DEIS and this FEIS, Technical Backup for the analyses is available on request in a compact disk format from DSNY.

214. **Comment:** A number of speakers were concerned that the rates of asthma and other respiratory ailments are among the highest in the United States within a few blocks of the MTS. It was felt that the facility and diesel emissions from increased traffic would have a significant impact on the health and safety of the people in this vicinity, with new cases and exacerbations of asthma, chronic obstructive pulmonary disease. They were concerned that the facility's venting system would also increase the area's emissions. Additionally, they believed that the new facility will attract pests such as insects, rats and rodents, which can be powerful allergens, triggering asthma symptoms. Since garbage can be moist, it provides a fertile breeding ground for mold, which can also trigger allergies and asthma.

Response: Section 40.3.1.6, Public Health, in this Chapter addresses comments on public health and supplements the information contained in Chapter 33, Public Health of

the FEIS. The off-site air quality analysis presents emissions from the additional DSNY collection vehicles at congested intersections near the Converted MTS. The on-site air quality analysis in the DEIS and this FEIS includes all mobile and stationary on-site emissions-generating equipment, including emissions from the processing building that will exit the processing building through the facility exhaust fans. DSNY collection vehicles all use emissions much cleaner than was the case when the existing MTS operated. The draft Part 360 Solid Waste Facility Permit Application submitted by DSNY to NYSDEC and available for public review at the Community Board #8 Office, 550 Park Avenue and the 96th Street Public Library, 112 East 96th Street, describes the operational measures, including, among others, daily cleaning of the processing floor and periodic application of pest control measures by licensed technicians that will be followed to eliminate disease-bearing vectors.

215. **Comment:** A number of speakers commented on the capacity of the facility, and their belief that the environmental impacts are underestimated. SEQR mandates analyses be performed at full capacity, 4,290 tpd, yet this DEIS only considers the impact of 1,700 to 1,800 tpd of waste. Moreover, the facility is being permitted to receive up to 5,280 tons per day, a five-fold increase over its previous operation. Why was the analysis not done on the full capacity, and why is such a large facility necessary, if this is only designed to handle local waste? Please explain the tonnage numbers which vary from the Part 360 application.

Response: The CEQR Technical Manual states that an analysis of impacts should consider a reasonable worst case condition. For traffic analyses, this condition is represented through evaluating: (1) potential impacts during peak hour traffic volumes - in this case, an am peak period; a facility peak period when the majority of DSNY collection vehicles are expected at the facility, even though background traffic levels are lower than the am peak period; and a pm peak period to determine the potential for the highest impact; (2) the average peak day deliveries of DNSY-managed Waste (the peak day that occurs each week – i.e. Tuesday) based on historical tonnage data that is higher than the current tonnage managed and would be experienced on average no more than 40 to 45 times per year; (3) an average weight per DSNY truck of 9 tons at the East 91st Street Converted MTS, when DSNY collection vehicles now average about 11 tons per truck, resulting in a greater number of estimated DSNY collection vehicles; and (4) an

additional conservative 20% contingency factor to allow for daily and seasonal variability in DSNY's weekly collections as well as the potential growth in waste generated over time, as a function of future population growth.

The DEIS and this FEIS evaluated the potential for significant adverse on-site air quality, odor, and noise impacts with the facility operating at its nominal design capacity of 4,290 tpd, found no impacts and, therefore no further analysis was required. See Response to Comment #213 for an explanation of modeling approaches and use of conservative assumptions. The results of the on-site air, noise and odor emissions reported for these analyses accounted for the facility's waste processing equipment, collection trucks within the building and on the ramp, and tugs servicing barges. The DEIS and this FEIS evaluated the potential for significant adverse off-site (collection vehicles traveling to/from the facility) air quality, odor, noise and traffic impacts, assuming it was operating at an equivalent peak day capacity of 2,892 tpd and found no unmitigable significant adverse impacts. The response to Comment # 1 in Section 40.3.1.1, Facility Capacity and Design states that DSNY is seeking a Maximum Peak Day Permit Limit of 1,860 tpd, which is only 64% of the throughput assumed in the off-site impact analyses. Comment # 1 in Section 40.3.1.1, presents a complete discussion of the permit limits that DSNY is proposing for all the Converted MTSs. It should be noted that, of the four proposed Converted MTSs, the East 91st Street Converted MTS has the lowest proposed tonnage limits.

216. **Comment:** Several individuals commented that the DEIS provides only vague descriptions of the dimension and appearance of the new MTS. Given that it will be twice the height of the old facility, what will the visual impacts be? Drawings and illustrations are needed within the document to get an idea of the actual visual impact will be on users of Asphalt Green and nearby residences. How will the noise barriers or covering of the ramp affect the visual impact?

Response: The visual impacts of the East 91st Street Converted MTS were assessed based on: (1) the design drawings which provided the height of the proposed Converted MTS in relation to the borough datum; (2) the presence of a potential visual/noise barrier along the ramp at the height of the louvered screen that is now part of the design along

the southern side of the ramp; and (3) aerial photos with the proposed facility superimposed on the existing facility footprint. The DEIS presented the information available at the time of publication. Subsequently, additional design documents and renderings have been prepared for the Converted MTSs and are included in Chapter 2, Site Descriptions, of this FEIS.

217. **Comment:** Since commercial waste vehicles emit more pollution than the DSNY vehicles, the EIS must examine air quality and noise impacts from these commercial vehicles on the surrounding neighborhood.

Response: The DEIS and this FEIS analysis assumed a City metro area-specific mix of ages for diesel powered waste collection vehicles, which would include commercial waste hauling vehicles. Because DSNY's fleet of waste collection vehicles is newer than the average for the City area, the DEIS and this FEIS air quality analysis is already quite conservative in this respect, because DSNY's newer diesel engines are subject to lower emissions standards than the existing metro area fleet average. Additionally, the on-site and off-site air quality analyses were revised for this FEIS using the most current approved New York State Department of Transportation (NYSDOT) Mobile 6.2 emission factors, which accounts for the even lower emissions produced by DSNY's newer fleet. Also, it should be emphasized that new diesel powered vehicles purchased today are subject to emissions standards far lower than engines manufactured 20 years ago, and that starting in 2007, new diesel engine emission standards for particulate matter and nitrogen oxides will drop by at least an order of magnitude from today's emissions standards and commercial diesel trucks will begin to use ultra low sulfur diesel fuel. Thus, fleet-wide diesel engine emissions are dropping and will continue to drop even more dramatically with time. In terms of noise, for the Proposed Action Facilities, the noise levels emitted from the trucks used in the DEIS and this FEIS analysis were compared to the noise levels that would be emitted from a mixture of DSNY and Commercial Waste hauling vehicles. The resultant noise level was higher for the projected combination of DSNY and Commercial Waste hauling vehicles for the Hamilton Avenue Converted MTS, Southwest Brooklyn Converted MTS and North

Shore Converted MTS, so the modified noise level was used and is presented in this FEIS for these three facilities.

218. **Comment:** A number of people commented on the lack of sites examined for a Manhattan facility. There needs to be a better explanation of which sites were examined, which were found suitable, and what criteria were used to select the 91st Street site. In addition there are 300 properties in Manhattan alone which are City-owned or City-leased waterfront properties, and these were not reviewed. Several sites were suggested including an industrial site at the cement plant north of the northern end of 1st Avenue, the rail yard on the West side of Manhattan, Pier 42, and Randall and Wards Island. There should be reasonable minimum criteria for identifying multiple possible locations, along with a discussion of the problems and constraints for each site.

Response: Please refer to the response to Comment #7 in Section 40.3.1.2, Alternatives Analysis for a discussion on the Alternatives that were considered in formulating the Draft new SWMP. The 300 sites referred to are found in an inventory of City-owned or leased waterfront site in Manhattan. This inventory contains sites that are mostly in beneficial use already. For example, Battery Park, Castle Clinton and piers that are part of South Street Seaport and the Hudson River Park are listed, along with many tiny parcels that cannot be combined. DSNY's Real Estate Unit has reviewed the list of these sites.

219. **Comment:** There were questions concerning the traffic model, which used 2003 data. Did the model consider the construction of the Second Avenue Subway? Did it take into account the articulated buses? The streets from 87th to 91st Street are very narrow, and there is no practical way to have garbage trucks go down 90th Street without causing gridlock. Traffic through the neighborhood already takes too long, and the additional DSNY trucks will only make it worse. In addition, strict enforcement guidelines are needed to ensure that queuing trucks do not block access to available bus stops.

Response: An analysis of the traffic operations with and without the proposed Converted MTS was performed for York Avenue using the federally accepted Highway

Capacity Manual and data collected in February 2003. These are nationally recognized methodologies and are used universally in City impact assessments in accordance with the requirements of the City's *2001 CEQR Technical Manual*. The purpose of the analysis was to assess if placing a Converted MTS at this location would cause an unmitigable significant adverse impact on traffic operations. The traffic analysis presented in the DEIS and this FEIS included projects that would be implemented by the 2006 Build Year, as discussed below:

- The Second Avenue Subway will not be completed and in operation by the project's 2006 build year. Therefore, following the *2001 CEQR Technical Manual* guidelines, the Second Avenue Subway was not included in the 2006 no-build condition analysis.

- All the buses (including regular and articulated MTA buses) were counted as part of the vehicle classification counts. Level of service analysis took into account all the buses counted at the study intersections.

- As per NYCDOT Title 34 of the Rules of the City of New York, truck trips to and from the site are restricted to travel along local truck routes directly to the site of the intersection closest to the site if the streets adjacent to the site are not designated truck routes. Practically, this means that trucks should use First and Second Avenues to the maximum extent possible, only turning onto cross streets which are non-truck routes at the closest point, typically East 90th, East 91st or East 92nd Streets. Therefore other cross streets should not experience truck traffic except as part of normal collection operations.

- Traffic operations and potential impacts were projected in accordance with New York City Environmental review guidelines and nationally accepted methodologies. The *2001 CEQR Technical Manual* guidelines were used to determine study intersections and, in accordance with these guidelines, the Highway Capacity Manual methodologies were used to assess traffic operations and determine Level of Service (LOS) for each study intersection.

Based on the LOS and Travel time and delay analyses, the analysis showed that any potential for significant impacts from the MTS could easily be mitigated by minor adjustments to signal timing. Signal timing changes at two intersections on York Avenue are the only mitigation required.

220. Comment: Odors were not adequately addressed. There is no mention in the DEIS of the potential for odor impacts from Sanitation trucks which are not kept neat and clean.

No matter how good the technology, the trucks will leak and produce odors. Moreover, there will be a large quantity of solid waste sitting on the loading floor of the facility, and this decaying waste along with the diesel exhaust will pose a hazard to workers on the loading floor.

Response: The DEIS and this FEIS address potential odor impacts from trucks. Some trucks will be more odorous than others. The level of odor emissions from a given DSNY collection vehicle will depend on the state of cleanliness of exposed surfaces, and also on the particular load of waste being transported in the vehicle. To develop input into the DEIS and FEIS odor analysis, a representative group of DSNY collection vehicles was sampled in an enclosed, indoor environment, including some of the most odorous DSNY collection vehicles available. The measured composite odor emissions were included in the on site odor analysis. Regarding the exposure to solid waste-related emissions and diesel exhaust by workers in the Converted MTS facilities, this is an indoor air quality issue regulated by OSHA. However, the Converted MTSs are being designed to allow for up to 12 air changes per hour in the processing building which far exceeds the minimum of six required under the Building Code, thus resulting in an exchange of fresh air into the processing building on a more frequent basis. A copy of the DSNY collection vehicles odor sampling and analysis report is included in Appendix J to this FEIS.

221. **Comment:** While there have been discussions of fair share, in terms of commercial waste, the restaurants and businesses in CD#8 are used by people from all over the City and world, it is not just generated by the residents of CD#8, so having commercial waste go to the MTS would not be fair. Where will the residential and commercial waste be coming from? Will it be transported from lower Manhattan?

Response: The portion of Manhattan waste that may be disposed of at the East 91st Street Converted MTS, 780 tpd, is approximately 26% of the total 2,970 tpd of estimated commercial waste generated in Manhattan. The residential waste that would be disposed of at the East 91st Street Converted MTS is generated in the former East 91st Street wasteshed, comprised of Community Districts #5, #6, #8, and #11.

222. **Comment:** A number of speakers stated that the area is one of the quietest

neighborhoods in the City, and the MTS, with its heavy equipment will create more noise, especially at night. Limitations on the number of trucks transporting commercial waste would not provide any comfort. The mere suggestion of the mitigation measures, such as replacement windows, guarantees there will be much greater noise than indicated in the DEIS. The noise will be a serious threat to the auditory health of those who live and work in the neighborhood, and will make it difficult for students to concentrate.

Response: The on-site noise analysis presented in the DEIS and this FEIS included all noise generating equipment (indoor and outdoor) operating on site, including waste hauling vehicles moving and queuing on the ramp. Under the CEQR Technical Manual, the noise analysis is a worst-case analysis, in that it assumes all equipment is operating on site during the period of time when the background noise levels are quietest, when, in fact, this might not be the case. The off-site noise analysis also evaluated the potential 24-hour delivery of waste to the Converted MTS site (DSNY-managed Waste during the day and commercial waste between 8:00 p.m. and 8:00 a.m.) and, as a result, determined that restrictions on deliveries would be required during certain hours to mitigate potential significant adverse impacts at specific receptors along the routes. The typical kinds of physical mitigation measures, such as sound insulating barriers on equipment or facilities, noise barriers and replacement windows are not required or proposed in this case.

223. Comment: DSNY's siting rules are being changed by measuring the distance from the building, not from the property line, to determine the distance allowed for siting a waste transfer facility. Yet, the East 91st Street Converted MTS is only one-foot between the boundary and the park, how does the siting of this facility comply with the siting rules?

Response: See response to Comment #211 above. The existing MTS is located in a manufacturing zone (M 1-4) adjacent to the FDR Drive. Approximately 140,000 cars drive by this site every day. The site has been used as a solid waste facility for over 50 years and while DSNY is currently not operating the facility, it continues to hold a permit to operate a transfer station at this site. The existing permit issued by NYSDEC allows it to process 4,800 tons per day. There are 50,000 tpd of solid waste generated in the City, and multiple facilities are needed to handle this waste. The regulations for private transfer stations take into account this fact, and to ensure that all waste in the City

is not directed to one or two communities, the regulations allow already permitted facilities less than four hundred feet from sensitive receptors to operate.

224. **Comment:** I do not understand which zoning resolution is going to be utilized, May 2004, or the regulations of the build year, 2006? I am confused about the zoning in the vicinity of the MTS.

Response: As indicated in Chapter 3 of the DEIS and this FEIS, zoning on the site and in the primary and secondary study areas are characterized, then assessed to determine whether the Proposed Action would be compatible with and/or could affect these conditions. No changes to the zoning resolution, as applicable to the site/action, are anticipated, and therefore, it is assumed that the zoning regulations in place at the time of the FEIS will be the same as those in place during the proposed build year.

225. **Comment:** The area surrounding the MTS has seven major hospitals and therefore many ambulances on local streets. What is the impact of the waste vehicles on these ambulances which will be trying to quickly get to the hospitals?

Response: Since the proposed East 91st Street Converted MTS (based on traffic analysis) is not projected to have significant adverse traffic impacts in the peak hours, the effect on traffic operations during the majority of the day with off-peak operations would be even less. Therefore, the MTS operation would be also be unlikely to have any significant adverse impacts on emergency vehicles, including ambulances. Refer to FDNY correspondence in Appendix A of the FEIS. In addition, DSNY's driver operational regulations require that its drivers immediately move to the right side of the road to allow passage of emergency vehicles. The facility design and operation will preclude the queuing of DSNY or commercial vehicles on public streets.

226. **Comment:** Several speakers indicated that they didn't want all of the residential or commercial waste in Manhattan to be delivered to one location. They were willing to take their district's fair share, but not all of the waste. They supported expanded recycling, exploring other technologies, and using barge and rail transportation. They did not advocate sending Manhattan' garbage to other boroughs, but did not want a facility sited in a residential neighborhood.

Response: DSNY believes that building the converted MTS at the same East 91st St. location where an MTS has operated for over 50 years and that was approved by the City Council in the 2000 SWMP Modification is reasonable and fair. See Responses to Comments #206, #212, #221 and #223.

227. Comment: The population of the study area for the East 91st Street facility is three times as densely populated as the next most populated study area in the DEIS. The CEQR Technical Manual guidelines advise that EISs consider the "number of people potentially affected" when assessing the significance of potential impacts. This would include the influx of people coming into the neighborhood daily to use schools, parks and facilities such as Asphalt Green, as well as additional census tracts that will be affected by increased traffic. Additionally, it is illogical to study the economic impacts of the MTS up to a half-mile radius of the site, but only study the effects on population within a quarter-mile of the site. There are seven additional census tracts within a half-mile of the site which includes 52,796 more people., so the grand total of people affected within a half-mile radius is 113,263, almost 100,000 more than proposed in the DEIS. Recently completed buildings on First Avenue at 90th and 91st Streets have added several thousand more people, and the neighborhood will continue to grow.

Response: While the population of the study area for the proposed East 91st Street Converted MTS is greater than that of the other study areas in the DEIS and this FEIS, impact analyses were conducted in study areas that encompassed the most sensitive land uses (i.e. residences or parks) or streets most likely to be affected by the project-related changes. No significant adverse impacts were ultimately identified after all relevant analyses conducted in accordance with the CEQR Technical Manual.

228. Comment: The data in the DEIS are given as percentages, whether pertaining to poverty rates or to asthma prevalence. When the population is disproportionately large, as in the East 91st Street study area, it is essential to consider the actual number of people affected. Focusing on percentages masks the real disparity and actual numbers.

Response: As shown on Table 6.3-1 on p 6-13, the 2000 census reported 13,417 people living in the two census tracts (50% or more) within 1/4 mile of the 91st Street MTS.

Further demographic data for all sites is provided in Appendix B of the DEIS and this FEIS. As noted, the analysis shows that the facilities would not cause any unmitigatible significant adverse impacts.

229. **Comment:** One speaker noted that Manhattan's residential waste stream is trucked directly to New Jersey. Therefore, they felt that no other borough or community is directly affected by Manhattan's disposal needs, so the fair share argument is incorrect. Another speaker requested that the impacts from the continuation of the present system of trucking waste to facilities in New Jersey be examined to determine its impacts.

Response: The Essex County Resource Recovery Facility that is proposed as the facility to receive waste from the former West 135th Street and West 59th Street MTS wastesheds does not have sufficient capacity available to dispose of waste from the East 91st Street wasteshed. The continuation of the Interim Export contracts has been addressed in environmental reviews to support those contracts which found no significant impacts from each round of contracting. The Long Term Export Program is predicated on policy objectives that seek to shift waste transport from a largely truck-based system to a rail/barge based system and to secure disposal capacity with long-term contracts. The Proposed Action would also alleviate impacts associated with the transfer and long-haul trucking of commercial waste from areas such as East Williamsburg in Brooklyn.

230. **Comment:** A number of speakers were concerned with the ramp leading to the facility. How can the ramp that goes through Asphalt Green be widened? The Aquatic Center is on one side, and the field is on the other, therefore there is no practical way of widening the ramp. Would children share the field with the new ramp? The portion of the park that the ramp will go through is designed for use by small children, so the impacts from idling trucks and emissions will be greater than indicated.

Response: The design of the Converted MTS does not involve widening the existing ramp. It will be rebuilt to provide the structural support to queue collection vehicles. The impacts of trucks idling on the ramp have been evaluated on a conservative basis, depending on the analysis, assuming up to 19 vehicles would be queuing/moving on the

ramp. Based on the "Transportation and Traffic Engineering Handbook, Second Edition" chapter on queuing analysis, actual peak hour deliveries are not anticipated to cause a queue longer than a single truck.

231. **Comment:** Some speakers spoke in favor of the East 91st Street MTS, claiming that it will bring a significant environmental and economic benefit to the City by reducing the number of truck miles traveled, thereby reducing pollution.

Response: Transferring waste at the East 91st Street MTS site from the four community districts that historically sent waste to this location will end the current practice of delivering waste from this wasteshed by collection truck to facilities in New Jersey reducing transportation and labor costs and reducing vehicle miles traveled.

232. **Comment:** The large number of waste vehicles will impact the "walkability" factor of the neighborhood. This will impact some of the special needs children of the neighborhood, who find the situation already challenging.

Response: The traffic analysis accounted for pedestrians crossing at intersections and found no potentially significant unmitigatable adverse impacts. It is standard practice to include pedestrian movements, counted at intersections analyzed for traffic, in using the federally approved Highway Capacity Software (HCS). In addition, accident analyses were conducted for the study areas evaluated in accordance with the 2001 CEQR Technical Manual procedures. See Response to Comment #206 regarding the DSNY's on-site pedestrian safety attendant.

233. **Comment:** Several people were concerned with the increased traffic on the river which might create a hazard to navigation. What would happen if a tanker blocked the river, what would happen to the containerized units? Is there a contingency plan should such a situation arise?

Response: The East 91st Street site would only need to process one or two barges per day. The Harbor Operations Steering Committee (consisting of the Coast Guard, Port Authority and Harbor Operators) was briefed on the Converted MTS program in April 2004, and saw no impact from the barge operations on harbor navigation. If a

tanker or other ship is blocking the river downstream from the 91st Street MTS, barges already at the MTS would be prevented from moving downriver, so they would need to remain at one of the three berths located at the MTS. Waste processing operations could continue so long as empty containers are available, either containers stored on the pier or containers from a barge. If empty barges could not reach the station, waste processing would stop when the supply of empty containers is exhausted, and collection vehicles would be re-directed. Full barges would remain at the MTS until the blockage is cleared.

234. **Comment:** Several people wanted to stop the trucking of waste to a waste-to-energy facility in New Jersey, since the emissions from the facility would affect New York City, and it is located in a low-income community of color.

Response: The Essex County Resource Recovery Facility is a lawfully permitted facility, regulated by the New Jersey Department of Environmental Protection. It is equipped with state-of-the-art emissions control technology and must operate in compliance with federal and state air quality regulations.

235. **Comment:** Some speakers thought that the East 91st Street MTS could be redesigned to become an amenity to the community. There could be natural landscaping and concealment of the ramp. With thoughtful design and the latest environmental technology, the MTS could be accepted by the neighborhood. It was suggested that DSNY work with the local community to come up with a ramp design that is aesthetically acceptable and also addresses their concerns. In addition, the facility should be outfitted with the best available emission controls. To minimize impacts, limits should be set on the tonnage that private carter trucks can carry. DSNY's promise of no queuing must be enforced. The logistical details that assure efficient and safe movement of trucks onto and off the ramp and in and out of the facility must be provided. There should be a policeman as well as DSNY employee to keep order at the site, and staggered work shifts for collection or use of GPS systems should be employed to eliminate potential queuing. There must be protection of the neighborhood from noise, odors and toxic emissions. An educational center and viewing facility could also be incorporated into the design. Use of the facility should be subject to daily average and

annual tonnage caps. Permit conditions should specify an enforceable average daily tonnage for both residential and commercial waste as well as peak day use limits. The facility should be closed after a prescribed hour to reduce impacts to the local residential community. Commercial carter use should be linked to compliance with state-of-the-art emission, odor control and noise standards. In addition there should be funding to the Gracie Point Community to monitor what is going on at the facility, and compliance with regulations. DSNY must commit to change the way that the MTSs had previously operated, even if it means confronting established work practices and difficult personnel issues. These new facilities must set a benchmark for the rest of the City's transfer stations.

Response: DSNY presented concepts for enhancing the MTS design, including a proposal to provide pedestrian recreational access to the waterfront at the Community Board #8 Hearing on the ULURP application, which were not endorsed by the Community Board. Because there is no means of pedestrian access to the facility, an educational center and viewing facility is precluded. The DEIS and this FEIS reports that there are no unmitigable significant adverse impacts on the community and new USEPA mandated engine performance and low sulfur fuel standards that will become effective by 2007 will significantly reduce particulate emissions from new collection vehicles. DSNY is willing to work with the Community Board on addressing issues that arise during operation of the facility. The remaining comments have been addressed in the above responses.

236. **Comment:** Any mitigation measures discussed in the DEIS are either inadequate, impractical or unenforceable.

Response: DSNY disagrees with this statement. The proposed mitigation measures: traffic signal changes and limit on commercial waste deliveries at night, are both practical and easily enforceable and are adequate to fully mitigate potentially significant adverse impacts. DSNY is committed to ensure that mitigation measures are implemented and compliance as necessary is monitored.

237. **Comment:** Several people disputed the air quality analyses. The DEIS states that the

Proposed Plan facilities analyzed would add less than 1 µg DPM/m^3, as measured by $PM_{2.5}$, on an annual basis. They believe that this is based upon several false assumptions:

- The maximum number of sources analyzed is not based upon the analyzed truck arrival rates. Therefore the trucks that arrive and are queuing are not accounted for.

- The analysis of the air quality of trucks outside of the 91st Street MTS was limited to 6. Based upon the analysis "the 3-hour value should be no less than one-third of the peak 1-hours value (18)" So the analysis should be of at least 18 trucks. Queuing of trucks on the street, which will occur, was ignored.

- "For the $PM_{2.5}$ analyses, the incremental concentrations contributed by traffic related to the Proposed Plan Facilities were modeled, but not added to existing background levels". This distorts the impact of particulate matter. The annual average last year for NYC was 14µg/m^3. Any additional particulate matter will put NYC into a level above the USEPA regulation of 15µg/m^3. The MTS will place NYC in violation of the USEPA regulations.

- The cumulative effect of particulates is what should be looked at.

Response: Specific responses to bulleted items are noted below:

- The number of trucks queuing at any one time is not the same as the number of trucks arriving in an hour. The numbers of queuing trucks were set specific to each averaging period and represent reasonable values. For example, on an annual basis, the analysis assumes there would be an average of three trucks in the inbound queue and one truck at the outbound queue.

- The conservative assumption of six (6) trucks in queue for a 3-hour impact period (needed for SO_2 impact analysis) is appropriate based on expected truck arrival rates. The proposed transfer stations are designed to allow for maximum queuing of trucks on-site so that no street queuing will be needed. Also, DSNY policy will be to not allow queuing of trucks on streets outside of the DSNY property.

- The air quality analysis did in fact assume that the NYC area would become "non-attainment" with respect to $PM_{2.5}$, and as expected, USEPA did make this determination in December 2004, after publication of the DEIS. In non-attainment areas, federal rules require that "major" emitters of air pollutants demonstrate that their incremental impacts (not their impacts plus the existing concentrations) are below established significance thresholds. Rules relating to new source impacts in non-attainment areas do not actually apply to the proposed DSNY facilities, because their emissions are much too low (i.e., they are not "major"). For example, a "major" new source must have the potential to emit at least 100 tons per year of $PM_{2.5}$. By comparison, the East 91st St. MTS would emit only about one ton per year of $PM_{2.5}$. However, for the air quality analysis

for the DEIS and this FEIS, the $PM_{2.5}$ incremental impacts were analyzed nonetheless, with respect to conservatively low interim significance thresholds developed by the NYCDEP. The NYCDEP's thresholds were used because the USEPA has not yet developed $PM_{2.5}$ significance thresholds. The finding of the DEIS and this FEIS air quality analysis is that the impacts of the proposed transfer station emissions (total from point sources, tugs, and waste hauling trucks) will not exceed the NYCDEP's interim significance thresholds for $PM_{2.5}$.

- Combined off-site and on-site air quality analysis results for the Converted MTSs are presented in the FEIS in Section 6.15.

238. **Comment:** Several individuals commented on the number of trucks arriving at the facility. Over a one-hour period at 9am, 56 trucks are arriving, and speakers were concerned with queuing on local streets. Recently DSNY committed to sending any extra trucks to a garage. Where will this garage be located, and how will the trucks get there and return?

Response: Regarding the hourly truck arrival, please refer to Comment #207. Each of the four Collection Districts that would send waste to the East 91st Street Converted MTS has a garage located in the following locations:

- Manhattan CD #5 540 East 74th Street
- Manhattan CD #6 606 West 30th Street
- Manhattan CD #8 423 West 215th Street
- Manhattan CD #11 343 East 99th Street

During the next five years, it is expected that the E. 74th Street garage will be rebuilt and will house both CD #6 and #8. CD #5's garage will move to 606 West 30th Street, and CD #11 will move to 110 East 131st Street.

239. **Comment:** Several people complained that the hearing was scheduled at an inconvenient time, during the week of Christmas, when the community is very busy. They felt that there was a concerted effort to manipulate the process, and not let the community voice its concerns.

Response: Community Board #8 requested the specific date for hearing. In addition, DSNY conducted extensive public notice and outreach about the hearing which was well attended.

240. **Comment:** Several individuals complained that the facts in the handouts were misleading. The architectural drawing on the back cover failed to identify that the ramp to the facility divides Asphalt Green. The bus stop across the street from the facility entrance is missing, etc.

Response: DSNY had no intention to mislead: it intended to provide a graphic that depicts the effect of the MTS on the surrounding environment.

241. **Comment:** Would you let your children or grandchildren play within 20 feet of a garbage dump:

Response: Re-establishing the MTS use at the site at which it operated for over 50 years and that was reaffirmed for this use by the City Council in 2000, with significantly enhanced environmental controls and clean diesel technology, has been shown by the DEIS and this FEIS to result in no unmitigable significant adverse impacts.

242. **Comment:** There is an EJ community within the East 91st Street primary study area, which is of a size equal to that of other EJ communities at other proposed sites. Therefore outreach to this population should be conducted as aggressively, thoroughly and promptly as for other neighborhoods.

Response: The East 91st Street project area does not meet the numerical criteria established by NYSDEC in its Environmental Policy Guidance for an Environmental Justice community. However, DSNY has conducted the same public outreach program as conducted in project areas that meet such EJ criteria. See Section 40.3.1.4, Enhanced Public Participation for further discussion on this topic.

243. **Comment:** No buses appear to have been counted on 1st, 2nd, or York Avenues or on East 86th Street except for 6 buses turning right off of East 86th and onto East End Avenue. These 6 buses are the 3% heavy vehicles for that intersection and are presumably school buses. Therefore it appears that MTA buses are not considered to be a bus. Perhaps buses are considered part of the heavy vehicle percents, but then what PCEs are used for an articulated bus versus a standard bus making stops after almost every

intersection. Also, no intersections were evaluated north of the site. The PCE issue is important because LOS at many intersections may fall below the acceptable threshold.

Response: Buses were a significant part of the count program and data collected. Two types of classification counts were performed:

- Three-way classification counts included autos, trucks, and buses
- Six-way classification counts for air quality analysis included autos, SUVs, taxis, light trucks, heavy trucks, and buses.

Classification counts showed large numbers of buses at each of the study intersections during the analysis peak hours. For example, during the AM peak hour, the data presented showed approximately:

- 180 buses at the intersection of 1st Avenue/86th Street (about 55 buses on eastbound 86th Street, 55 buses on westbound 86th Street, and 70 buses on northbound 1st Avenue).
- 160 buses at the intersection of 2nd Avenue/86th Street (about 35 buses on eastbound 86th Street, 45 buses on westbound 86th Street, and 80 buses on northbound 2nd Avenue).
- 135 buses at the intersection of York Avenue/86th Street (about 40 buses on eastbound 86th Street, 20 buses on westbound 86th Street, 15 buses on northbound York Avenue, and 60 buses on southbound York Avenue).

For the level of service analysis performed at intersections, buses were considered as heavy vehicles. If there was a bus stop within 250 feet upstream or down stream of the study intersection, then the number of buses stopping at bus stops was also used in the HCS analysis to account the affect of bus blockages on travel lane.

HCS uses a factor of 2.0 to convert the heavy vehicles into PCEs. The CEQR Technical Manual also suggests using a PCE factor of 2.0 for buses and trucks with 3 or more axles, waste transfer vehicles, and large school buses.

Since no site generated traffic was assigned on York Avenue north of 92nd Street, no intersection north of 92nd Street was selected for level of service analysis.

244. Comment: Counts of pedestrians and bicycles seem inadequately estimated for some

neighborhoods. It seems odd that the number of people on Lexington and East 86th Street, the major subway entrance for most of the study area's commuting population, is considered to be 500 people, while a less traveled intersection such as East 85th and York, has 350 people in the morning hour.

Response: For the proposed East 91st Street Converted MTS analysis, pedestrian and bicycle counts were not performed at the study intersections. However, during the data collection efforts, pedestrian activities were observed at the study intersections as is standard practice. The pedestrian numbers cited above were used in level of service analysis to determine the impact of pedestrians on turning vehicles. The Highway Capacity Manual suggests using the following default values for pedestrian flows:

- 400 pedestrians per hour for Central Business District (CBD)
- 50 pedestrians per hour for other area.

However, based on our field observation, the more realistic estimated pedestrian numbers were used in level of service analysis.

245. Comment: The number and temporal distribution of trucks in the permit application for the conversion of the 91st Street MTS issued in November 2004 is significantly different than the number of trucks and their temporal distribution used in the October 2004 DEIS. Why is this the case?

Response: There are several reasons that the number and temporal distributions of trucks shown in the figures for the permit application and DEIS and this FEIS differ, while both are correct for their intended use. The DEIS and this FEIS figure 6.14-9_only depicts the number and temporal distribution of DSNY-managed collection vehicles analyzed, and includes a 20% contingency factor on the expected number of DSNY collection vehicles making deliveries. The DEIS and this FEIS also depicts both incoming and outgoing vehicles as well as the total number of trips generated (incoming plus outgoing) for each hour. Finally, in the DEIS and this FEIS figure the x-axis, which shows the time of day, begins at hour 0:00 (midnight). However, the DEIS and this FEIS also incorporated analysis done for the Commercial Waste Management Study showing the potential numbers of commercial waste vehicles that the facility could accommodate without causing significant adverse impacts.

The permit application figure depicts both DSNY collection vehicles without the 20% contingency, and potential commercial deliveries to the facility, without the contingencies analyzed in the DEIS and this FEIS. The permit application figure depicts only incoming vehicles to the facility. Finally, in the permit application figure the x-axis, which shows the time of day, begins at hour 8:00 (8 a.m.).

246. Comment: The SWMP must establish detailed monitoring, data collection, assessment, reporting and enforcement procedures that provide assurance that truck operation and facility performance standards will be met once the facility becomes operational. Funds should be provided for a technical expert to review and assess data for compliance with permit conditions and standards.

Response: DSNY will develop detailed procedures on truck operation and facility performance standards that will be required to be met once the facility is in operation. DSNY has technical experts on staff that will assess compliance with permit conditions and standards.

247. Comment: The community was asked to consider the environmental impacts for the 91st Street site, for a single daytime shift operation, but DSNY is really planning for a round-the-clock operation handling commercial waste. This change is not being honest with the community.

Response: The DEIS and this FEIS analysis shows both the impacts from handling only DSNY-managed waste, and the impacts from handling limited amounts of commercial waste at times when there is capacity as required by the City Council. For the on-site noise, air quality and odor analyses, facility operations were modeled at design capacity using the conservative approach as a starting point (See Response to Comment #209). When no unmitigable significant adverse environmental impacts were identified, a more refined analysis was not completed. While the DEIS and this FEIS supports use of the facility at design capacity, please refer to the response to Comment #1 in Section 40.3.1.1, Facility Capacity and Design, for information on the capacity that DSNY has proposed to permit at this site.

248. **Comment:** The facility's footprint extends beyond the City' property line. Who owns the property being taken for the facility?

Response: The property proposed to be taken for the facility is owned by the State of New York. DSNY is preparing an application and detailed map for a riverbed grant that will be filed with the New York State Office of General Services.

249. **Comment:** In several chapters of the document, different assumptions and methodologies are used, which suggest that if one approach to the analysis resulted in the "wrong" answer, modifications were made to the analysis to achieve the desired outcome. For example, values for vehicle noise were arbitrarily changed in the noise analysis from the widely accepted Federal standard to a replacement input derived from allegedly measuring DSNY-specific vehicle noise. Special methods can be used to reduce truck noise when it is desirable to do so, and it is no surprise that DSNY found the predicted noise levels higher than the "measured" levels. While the normal modeling resulted in noise impacts, using the "measured" levels resulted in no noise impacts. Just as DSNY trucks are allegedly cleaner, they are purportedly quieter too. This ignores the fact that the Proposed Action, which is supposed to be studied in this DEIS, includes commercial waste, carried by non-DSNY vehicles.

Response: The noise analysis properly took into account actual noise measurements in assessing potential noise impacts. A noise simulation was conducted for DSNY collection vehicles because the Traffic Noise Model (TNM) used in CEQR analyses generally overpredicts the potential for off-site impacts. The CEQR Technical Manual also notes that, while calculated values using the TNM model can be used directly, it is preferable to verify the accuracy of the model for the particular condition being analyzed. Based on these measurements, adjustment factors can be developed to account for site-specific differences between measured and model-predicted values. In consultation with NYCDEP, since: (1) noise measurements were obtained during appropriate times at sensitive receptors along routes that DSNY collection vehicles would travel to and from the Converted MTS site; and (2) these measurements take into account actual background noise levels, these noise values were used for the impact assessment. A copy of the

DSNY collection vehicles noise simulation report is included in Appendix K to this FEIS. The allowable commercial waste hauling vehicles to the Converted MTSs was based on second level screening results that identified the sensitive receptor locations where there is the potential to double PCEs. Normally, TNM analyses are conducted at these locations and often result in a finding of no potential impacts. Therefore, the method used to determine the potential allowable commercial waste deliveries to the Converted MTSs was conservative.

250. **Comment:** Development of enclosed barge unloading facilities (EBUFs) is an essential component of the Solid Waste Management Plan, yet locations for these facilities have not been determined. Deferring the review of the environmental impacts of these facilities is segmentation, and violates CEQR and SEQR.

Response: This is incorrect. Enclosed Barge Unloading Facilities are not required to implement the Proposed Action. Waste containers can be transloaded at conventional terminals in the harbor without special facilities or equipment.

251. **Comment:** The discussion of construction impacts is totally deficient, as it only addresses impacts to benthic organisms and finfish in the river, ignoring significant adverse human impacts of traffic, noise, dust and rodents caused by the complete demolition of the existing MTS and construction of a new facility. Demolition and construction of a new ramp over FDR Drive will have significant adverse impacts upon traffic on the Drive, which is not addressed in the DEIS. Nor are the impacts to Asphalt Green arising from the demolition and reconstruction of the ramp to the facility.

Response: The estimated time for demolition and construction of the Converted MTSs in the Proposed Action is approximately 28 to 30 months, considered temporary under CEQR and therefore, not significant. DSNY will nonetheless utilize good engineering practices throughout the construction phase to ensure that any potential impacts are minimized to the maximum extent practicable.

Please refer to Chapter 32 of the FEIS, which has been revised to provide a more extensive discussion of potential temporary construction impacts for the Converted MTSs

that are elements of the Proposed Action, including measures that will be employed to minimize their effects. Construction activities related to modification of privately owned and operated transfer stations evaluated in the DEIS and this FEIS are currently unavailable, but are also expected to be temporary in nature.

252. **Comment:** The DEIS found significant adverse noise impacts at sensitive receptors caused by the delivery of commercial waste between the hours of 8:00 p.m. and 8:00 a.m. (page 6-154). The DEIS offers no mechanism to assure the neighborhood that the limits to commercial waste would be enforced. Won't trucks just idle on residential streets while waiting to get into the MTS?

Response: The arrangements that DSNY would enter into with private carters for delivering waste to a Converted MTS would include a dump ticket procedure that includes contractual recourse against the carter for failure to follow the agreed upon procedure. For example, the contract could stipulate that a carter who arrives before or after his appointed hour on a given night would forfeit his dumping privileges for that evening. Clearly, in time, such a stipulation could cause carters to adhere to schedules set.

253. **Comment:** The waste proposed to be sent to the East 91st Street MTS currently travels through Manhattan to sites in New Jersey. The DEIS does not consider any alternatives to the MTS "conversion" for this wasteshed, including the most obvious one, transfer to rail at the HRY transfer Station in the Bronx. It is located in an industrially-zoned area, would transfer solid waste by rail, and capacity exists to accept the East 91st Street wasteshed. There is no reason not to use this facility.

Response: An important premise of the Draft New SWMP is reliance upon the existing MTS wastesheds to identify facilities to receive waste that does not shift waste transfer operations to another wasteshed. The existing MTS wastesheds served the Bronx Brooklyn, Manhattan and Queens for over 50 years and reflect an equitable allocation of essential waste management functions among communities in the City. Please review the response to Comment #7 in Section 40.3.1.2 for an explanation of the Alternatives to the Proposed Action that DSNY considered, as well as section 1.3 of the FEIS for additional

discussion on the Alternatives considered.

254. **Comment:** Page 1-1, section 1.1, paragraph 2, line 7: It is incorrect to describe the demolition of the existing, unused Marine Transfer Station at East 91st Street and construction of a larger, entirely new facility as being "converted". This is an entirely new facility that is being proposed.

Response: The term "Converted" refers to Mayor's decision to convert the existing MTSs to waste containerization facilities. DSNY has been very clear that the Converted MTSs are new facilities that replace the existing facilities.

255. **Comment:** Page 1-5, section 1.3.2, paragraph 2, line 2: Scoping comments, dated July 9, 2004, noted that the Project is not properly defined. The Purpose and Need does not support the construction of a new MTS at East 91st Street. The Purpose and Need states that the new Proposed Action for Long Term export in the SWMP includes "an expedited timeframe, a lower cost, and reduced reliance on complex MTS conversions". The DEIS does not contain any data or analysis that forms a basis for the conclusion that construction of a new MTS at East 91st Street meets any of these criteria.

Response: The existing SWMP, as modified in November 2000, acknowledged that Interim Export was a temporary measure of "independent utility" that enabled the City to phase down delivery of waste to Fresh Kills landfill and achieve its closure and provided a means to replace waste disposal capacity until a long-term waste infrastructure could be implemented. Interim Export was never intended to be a permanent solution for the City's waste disposal needs. The Mayor has cited the necessity of transitioning to a Long-Term program that relies on export by barge or rail, to the greatest degree practical, as a fundamental policy objective of the SWMP. Chapter 3 of the Draft New SWMP clearly states the reasons for and advantages of the Proposed Action. The Purpose and Need Section of this FEIS clearly refers to these as the basis for the Proposed Action. The Proposed Action would require the construction of four converted MTSs rather than eight as previously contemplated.

CEQR does not require that a Proposed Action be supported by a detailed economic

analysis. DSNY is in the midst of several competitive procurements with multiple companies that will determine the costs of Long Term Export when final contracts are negotiated. DSNY is sensitive to the need to protect specific cost information that could compromise this competitive process. DSNY has made the case for the Proposed Action on economic grounds and presented that information, including the range of projected costs, at a recent City Council hearing devoted to a discussion of this issue.

256. **Comment:** Page 1-9, section 1.3.2, paragraph 8, line 13: Considerations which guided the formation of the Long Term Export Program included "developing a long-term solution that is equitable". Transferring a third of Manhattan's residential waste and commercial waste from throughout the City through a single facility in a densely populated residential neighborhood is simply not equitable.

Response: See Response to Comment #253 in this section.

257. **Comment:** Page 1-20, section 1.4.4, paragraph 1, line 6: There is no analysis of using the East 91st Street MTS for recyclables, or support for the statement that there would be a lower number of DSNY collection vehicles for recyclables. Moreover, the analysis of waste volume assumes that the City will maintain a recycling program. We have already seen the City's recycling program interrupted due to economic considerations. The analysis of facility waste volume should consider the "worst case" scenario, which would include recyclables in the waste stream.

Response: No Curbside Recyclables will be delivered to the East 91st Street Converted MTS. The Converted MTSs are not proposed as facilities that will receive or process Recyclables. The Draft New SWMP describes the facilities that DSNY will use to support the Curbside Recycling Program, including two that are elements of the Proposed Action. Please see the response to Comment #12 in Section 40.3.1.3, Waste Prevention and Recycling for additional information on this matter.

258. **Comment:** Page 1-22, section 1.5.1, paragraph 2, line 7: If truck traffic is an overriding concern, why has no analysis of vehicle miles traveled been performed? The current

proposed action does not reduce VMT in Manhattan, nor would it eliminate any VMT of long haul tractor trailers.

Response: Analytical methodologies presented in Chapter 3.0 of the DEIS and this FEIS were based on CEQR requirements and consultation with NYCDEP, NYCDOT and other City agencies that require site specific analyses (including traffic) for facilities analyzed. Under the current Interim Export contracts, DSNY collection vehicles travel from collection districts in Manhattan directly to out of City disposal locations. Under the Proposed Action, DSNY collection vehicles would travel from Manhattan CDs 5, 6, 8 and 11 to the nearby East 91st Street Converted MTS, thus reducing the number of VMTs traveled in Manhattan. Furthermore, the Draft New SWMP is a City-wide plan and, on a City-wide basis, DSNY estimates in will reduce VMT annually by 2.8 million miles. See table 40.3-4 in response to Comment #42 in Section 40.3.3.1.7 for the derivation of this estimate.

259. **Comment:** Page 1-22, section 1.5.2, paragraph 1, line 9: The DEIS provides no justification for DSNY to begin managing commercial waste. The DEIS proposes to "encourage private carters to deliver commercial waste during the 8:00 p.m. to 8:00 a.m. time period". This new nighttime industrial activity will greatly increase noise exposure in a residential area. This Proposed Action has significant impacts that are not adequately justified and are not adequately studied. To merely say that the action would "facilitate the City's transition" to rail- and barge-based export system is not sufficient justification.

Response: The Proposed Action is the result of planning efforts set forth in detail in the City's 2000 SWMP Modification and the recommendations of the Commercial Waste Management Study issued in March 2004 (CWMS). The Study was conducted in compliance with Local Law 74 (LL74) enacted in 2000 in tandem with the City Council's adoption of the 2000 SWMP Modification. LL74, among other things, required DSNY to evaluate the issue of using the MTSs to transfer Commercial Waste. A CEQR-level analysis of potentially significant adverse impacts related to processing Commercial Waste at the Converted MTSs is included in the CWMS, Volume III, is included as Appendix I to this FEIS, and was also included in the Draft New SWMP.

Each Chapter in the DEIS and this FEIS that reviews a Converted MTS has a section summarizing that more detailed CEQR level analysis in the CWMS – Volume III (see Section X.18 of each Converted MTS chapter). On-site operations were analyzed assuming 24-hour operation. For example, for the noise analysis, it is assumed that the facility is operating all of its equipment during the quietest background hour, which, given the amount of commercial waste that might be processed during this period, is conservative. Neighborhood character is assessed based upon, among other things, a compilation of all of the on and off-site analyses in the DEIS and this FEIS, which analyze the acceptance of commercial waste at certain levels between 8:00 p.m. and 8:00 a.m. As discussed in this FEIS, a restriction on the number of Commercial Waste vehicles delivering waste to the Southwest Brooklyn, Hamilton Avenue, East 91st Street and North Shore Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along the routes to these facilities between 8:00 p.m. and 8:00 a.m. The limits on commercial waste can be found on Table 40.3-1of the Response to Comment # 1. See also Response to Comment #252.

260. **Comment:** Page 2-8, section 2.1.2.1, paragraph 5, line 3: The statement "this environmental review concludes that varying quantities of commercial waste that can also be processed at each of the converted MTSs without significant adverse impacts" is totally unsupported by this document.

Response: See Response to Comment #259.

261. **Comment:** Page 2-32, section 2.2.3.1, paragraph 3, line 4: The DEIS acknowledges that the East 91st Street MTS site is located in a "high-density residential" neighborhood, but doesn't address the extraordinary incompatibility of a large industrial facility with noise, odors, and truck traffic.

Response: The zoning of the site allows for the proposed waste transfer use and for over 50 years the site was used as a marine transfer station. The City Council reaffirmed the MTS use at this site in 2000. DSNY continues to hold a New York State Department of Environmental Conservation (NYSDEC) permit to handle 4,800 tons per day (tpd) of waste at the existing facility. Site conditions, including proximity to residential buildings and parks used by residents, were thoroughly considered in the DEIS and this FEIS

analysis of potentially adverse impacts. No potential significant unmitigatable adverse impacts were identified. Access into the facility will be gated and guarded. DSNY enforcement personnel will manage and direct truck traffic at the entrance on York Avenue at 91st Street to protect pedestrians. Waste processing operations occur on the other side of the FDR Drive over the East River and are completely isolated from pedestrian and non-DSNY vehicular traffic. Unlike the Plan approved in 2000, the past occurrence of DSNY collection vehicles queuing on York Avenue will be eliminated through a combination of the facility's design features and the limitations that DSNY proposes for the facility's permitted capacity at this facility. Accident records were researched for the intersection of York Avenue and 91st Street at the MTS entrance. When the MTS operated previously, this intersection was not a high accident location. The annual average number of reportable accidents was just over 4 per year for the years 1997, 1998 and 1999 and none involved DSNY vehicles. During that period only one accident involved a pedestrian. In the year immediately after closure (2000), there were 8 reportable accidents, two of which involved pedestrians. In the future, DSNY enforcement personnel will manage truck and pedestrian traffic at the entrance on York Avenue at 91st Street to ensure that it continues to operate safely.

The design features of the facility that minimize the potential for impacts include the following:

- The Converted MTS is designed to receive and process up to 36 collection vehicles an hour, well more than is anticipated in the peak hour. Trucks queuing outside the old MTS buildings were a frequent source of complaints. Accordingly, the new tipping floor for the Converted MTS is designed with a large maneuvering area and six tipping bays to unload six trucks at a time. The anticipated peak hourly arrival rate for DSNY trucks at this facility is 21. Over a 24 hour period, an average of 147 DSNY and commercial carter collection vehicles would be able to use the facility.
- The tipping floor is 12 feet above the loading floor which accelerates the unloading process by eliminating potential interference between collection vehicles and waste processing equipment. Truck turnaround time is also improved through the use of automated scales in contrast to the manual weigh-in – weigh-out system at the old MTSs. Finally, should the arrival rate ever exceed the 36 trucks per hour design criteria, the ramp is structurally strong enough to hold 19 queuing trucks. Although the peak arrival rate occurs during only one

hour a day, the need to accommodate this peak rate, maintain the efficiency of DSNY collection operations and avoid on-street queuing problems were all important considerations in the design of the building.

- The loading floor is designed to process up to 220 tons per hour into containers, using three of four processing lines with one held in reserve as a spare. The floor can also provide approximately 760 tons of on-floor storage in the event of a delivery surge or a delay in barge arrival. These design criteria enable the facility to manage maximum expected arrival rates, without excessive queuing or turning away trucks. The fourth processing line provides redundancy in the event of mechanical problems affecting one of the other processing lines.
- Container loading and lidding operations occur on the level below the loading floor and are within the enclosed building to prevent the escape of litter and odors to the outside environment. The through-the-floor loading system is a simple, fast, gravity-based process to assure a high degree of reliability.
- The building's ventilation system is designed to maintain negative pressure in the building at all times, even when doors are open with the capability to provide 12 air changes per hour (acph), compared to the code standard of 6 acph. It is also equipped with an odor neutralizing system that treats air as it is exhausted from the building to remove 90% to 99% of the odors from the building's exhaust air. The odor control system uses a natural neutralizing agent that is made from a plant compound.

262. **Comment:** Page 2-34, section 2.2.3.1, paragraph 2, line 1: Although the DEIS states that "No archeologically significant resources exist on the site" there is no data to support this conclusion. Excavation of footings for the enlargement of the ramp and new building may reveal unanticipated resources, but the DEIS does not study the potential for the existence of such resources or describe a methodology for dealing with these issues during construction, as is standard CEQR methodology.

Response: Consultation with LPC and the SHPO conclude that there is no potential for impact to archaeological resources. The design of the Converted MTS does not involve widening the existing ramp. It will be rebuilt to provide the structural support to queue collection vehicles.

263. **Comment:** Page 2-34, section 2.2.3.2, paragraph 1, line 8: In the Proposed Action, the ramp which crosses Asphalt Green and FDR Drive will be demolished and replaced. The short term and long term impacts of this action are not sufficiently described, such as

construction impacts, and increased shading on public parkland due to the wider ramp and noise barriers. The noise barriers are not described.

Response: See Response to Comment #251. The DEIS and this FEIS presents an analysis of shadows (see Section 6.7) of the proposed East 91st Street Converted MTS on neighboring areas. The shadows analysis includes what was once described as noise barriers, but is now the currently designed louvered screens that will be constructed along the southern side of the ramp. The FEIS is corrected to note that, although the purpose of the screen on the ramp is primarily visual, it also makes a contribution to noise mitigation.

264. Comment: Table 3.16-1: This table shows 130 net loads of DSNY collection vehicles for this facility for an average peak day. Does this correspond to a typical Monday or Tuesday when tonnage is 10 to 15 percent higher than the remaining days of the week? At two trips per load (entering and exiting) the daily number of vehicle trips is 260. There is no data provided in this section or in the site specific analysis for the East 91st Street Converted MTS documenting how the number of trips generated by this facility was determined. The section preceding trip generation presented generalized discussions of existing and future DSNY operations but there is no documentation of how these assumptions factored into the calculation of the number of 130 loads for the East 91st Street Converted MTS. A footnote on the entry for this facility in Table 3.16-1 indicates that the total number of loads from DSNY collection vehicles is the same for the converted MTSs and the existing MTSs. The column giving the number of loads for the facility is headed, "Total Number of New Loads…" These are not consistent, creating a potential conflict in the analysis.

Response: DSNY collection vehicle deliveries analyzed in the DEIS and this FEIS were based on historical average peak daily totals of DSNY-managed Waste (i.e. Tuesday of every week), which are: (1) higher than current estimated tonnages; (2) the highest number of DSNY collection vehicles expected on average each week, and (3) include a 20% contingency to allow for daily and seasonal variability in DSNY's weekly collections as well as the potential growth waste generated over time, as a function of future population growth. The referenced footnote in Table 3.16-1 pertains to the numbers used in the analysis of the Converted MTSs and Existing MTS presented in the

DEIS and this FEIS, assuming the wastesheds for these facilities would be the same. The Existing MTSs, as analyzed, are not included in the Proposed Action. As noted in the DEIS and this FEIS, technical backup containing supporting documentation (including trip generation estimates) is available upon request.

265. **Comment:** Page 3-81, section 3.17.4.3, paragraph 7, line 9: The DEIS provided no justification for the assumption that there would be a 50 percent reduction in emission factor for speeds of 5 mph and does not describe the operational controls that will assure that speeds will be maintained at 5 mph or less.

Response: The 50% reduction refers to fugitive PM_{10} emissions estimated according to the USEPA's publication AP-42, Section 13.2.1, dated December 2003. The emissions equation from AP-42 was developed based on emission measurements for traffic speeds ranging from 10 to 55 mph. At lower vehicle speeds (e.g., 5 mph), there is serious doubt as to whether there is any significant fugitive dust emitted, since the re-suspension of fugitive dust on paved roads likely requires some threshold vehicle speed before the vehicle wake is moving fast enough to "sweep" dust from the surface. USEPA experts responsible for developing this section of AP-42 have stated that, for vehicle speeds of 5 mph, an assumption of 50% of the emissions produced at speeds in the 10-55 mph range would yield conservative (high) estimates of emissions. This has more recently been supported by studies at large facilities with truck traffic moving at speeds up to 10 mph, which have shown measured PM_{10} emissions several times lower than yielded by the AP-42 equation (Reference: Midwest Research Institute, "Emission Tests of Paved Road Traffic at Minnesota Corn Processors, Marshall, Minnesota, Facility", MRI Project No. 310212.1.001, July 6, 2001). Additional operational controls on speed are not required at the Converted MTSs due to the relatively short distances of on-site travel and the location of the scales, which will effectively limit on-site vehicle speeds.

266. **Comment:** Page 3-85, section 3.17.4.5, paragraph 2, line 1: There is a discrepancy in assumptions of the number of shift operations. For the purposes of the air quality analysis, the operating assumption is two shifts per day. Pages 2-9 and 6-87 describe a

three-shift operation. The traffic and noise analyses assume three shifts per day. The assumptions must be consistent and the incorrect analysis redone.

Response: The on-site air quality and noise analyses use two different methodologies and models that evaluate impacts over different periods of time, both of which are appropriate. The on-site air quality analysis estimates emissions for specific pollutants with both short term (24 hour, 8 hour, 3 hour and 1 hour averages) and long term (annual average) standards for two scenarios: acceptance of DSNY-managed Waste only and acceptance of DSNY-managed Waste plus commercial waste. For purposes of modeling pollutants with annual average standards for the DSNY-managed Waste scenario, the facility was assumed to operate on a two-shift basis, which is reasonable for estimating emissions on an annual basis under this scenario. For pollutants with 24 hour, 8 hour, 3 hour and 1 hour average standards, all equipment is assumed to be operating during that period. For the DSNY-managed Waste plus commercial waste scenario (results of which are presented in Appendix D of the DEIS and this FEIS), the annual average standards were modeled using a three-shift operation. The on-site noise analysis is an L_{eq} (1 hour) or L_{max} (instantaneous) analysis, depending on the standard, so it assumes that all of the equipment is operating during these periods. For CEQR analysis, the facility is assumed to be operating during the hour when the background noise levels are quietest. Off-site traffic, mobile noise and mobile air quality analyses evaluate the potential for 24 hour deliveries of waste to the Converted MTSs.

267. Comment: Page 6-6, section 6.2.1.3.1: Scoping comments dated July 9, 2004, asked that the background and history of the current zoning for the site and adjoining properties be provided and the existing underlying and overlay zones applicable to the site be summarized. The DEIS does not summarize provisions of the M1-4 zoning district. The Proposed Action is not consistent with the regulations governing a M1-4 district. There is no analysis of how the facility will meet performance standards necessary for this type of use in an M1-4 district, as required by the NYC Zoning Resolution.

Response: Table 3.4-1 of the DEIS and this FEIS provides information from the City Zoning Resolution summarizing the characteristics of the types of zoning districts that are found at the sites analyzed, including M1-4 zoning districts. As described in Section

3.19.3.2, and presented in the noise section of each applicable Chapter, the DEIS and this FEIS provides an analysis of the Converted MTSs for conformance with the New York City Zoning Regulation maximum permitted sound pressure levels. New York City Zoning Resolution requirements for odors and air quality are general and CEQR analyses conducted for odor and air quality presented in the DEIS and this FEIS demonstrate the requisite compliance.

268. **Comment:** Page 6-8, section 6.2.2, paragraph 1: The DEIS does not describe in detail the residential development initiatives within the primary and secondary study areas.

Response: The information describing buildings was obtained from the NYCDCP. This level of detail is adequate for the analyses, particularly as the developments will be located on First Avenue, approximately two blocks (nearly ¼ mile) west of the site. No additional information has been provided as a comment to this FEIS.

269. **Comment:** Page 6-10, section 6.2.3.1, paragraph 1, line 6: There is a discrepancy that has significant adverse impacts. Under Potential Impacts, this section indicates that "the ramped entrance to the site would remain unchanged" while Page 2-34 states that the ramp which crosses Asphalt Green and FDR Drive will be demolished and replaced with a wider, steeper structure.

Response: The text has been revised to clarify the point that the new ramp will be constructed with the same footprint as the old ramp, thus resulting in no taking of land or changes in access between the northern and southern portions of the site

270. **Comment:** Page 6-10, section 6.2.3.1, paragraph 2: The Proposed Action will re-introduce a disruptive land use which is no longer suitable or compatible with the residential/institutional neighborhood character, resulting in undesirable land use impacts. There is no data to support a conclusion of land use compatibility with surrounding high density residential development, community facilities, parks and open space.

Response: Many of the residential and institutional uses surrounding the site were developed while the former MTS at East 91st Street was in operation, including such sensitive uses as the waterfront esplanade adjacent to the existing MTS and the Asphalt green complex, which is located on the grounds of the former Municipal Asphalt Plant. Continuation of the long-standing MTS use at the site was approved by the City Council

in 2000. Technical analyses predict no significant adverse impacts would result from the East 91st street Converted MTS, and no changes in land use patterns would be attributable to the reactivation of this site for a similar operation.

271. **Comment:** Page 6-10, section 6.2.3.2: The DEIS does not demonstrate how the East 91st Street facility would be consistent with applicable policies and plans, including the Comprehensive Manhattan Waterfront Plan (CMWP), and recommendations of the Plan for Reach 1, which notes that the East River water is "an important fish migration route". The DEIS should contain substantive examination of local and regional land use plans for consistency with the Proposed Action and Alternatives.

Response: Refer to Section 6.2.1.4 for a summary of CMWP policies and recommendations for Reach 1 as they relate to the site; no policies preclude or recommend against the East 91st street Converted MTS. No impacts to natural resources were predicted (See Section 6.9.3 of the FEIS).

272. **Comment:** Page 6-11, section 6.3.1.1, paragraph 1, line 4, and Page 6-12, Figure 6.3-1: The Study Area is mischaracterized by eliminating portions of four additional Census Tracts: 144.01, 154, 156.01, and 156.02. This affects the analysis of socioeconomic conditions and environmental justice issues. The significant growth in residents of Hispanic origin and the potential impact on that population should be addressed.

Response: Refer to Chapter 3, Methodology for the number of people "affected". The Environmental Justice assessment was undertaken as a discrete task, separate from analysis of socioeconomic impacts, as described in Section 40.3.1.4, Enhanced Public Participation. As no technical analyses predict impacts, it is reasonable to conclude that none of the residents would endure adverse effects, regardless of socioeconomic characteristics.

273. **Comment:** Page 6-18, section 6.3.3: In our July 9, 2004 scoping comments, we noted that the reopening of the East 91st Street MTS has the potential to adversely affect neighborhood character, and thus will likely have a significant negative impact on property values in the area. As such, we asked that DSNY provide an overview of the

current residential real estate market, including a detailed discussion of the impacts on property values and resultant reduction to the tax base. We also asked that a qualitative assessment of impacts on surrounding uses, including commercial uses be provided, based upon an analysis of increase or decrease in property values. Those comments were not responded to in the final scope and these analyses are not included in the DEIS.

Response: The SWMP Modification approved by the City Council in 2000 included the continued use of this site as an MTS. Under the Proposed action, the facility will have a more environmentally protective design than is the case with the existing facility. The *"Douglas Elliman Manhattan Market Report 1994-2003, Ten Year Trend Analysis"* prepared by Miller Samuel, Inc. presents, among other things, a summary of the trends in the Manhattan housing market, apartment inventories and price per square foot from 1994 through 2003. Borough-wide, condominium and co-operative apartment sale prices were generally flat from 1994 through 1997, then began an upward trend from 1998 through 2003. For the area bounded by East 90th Street on the north, East 79th Street on the south along East End Avenue (including Gracie Square and Gracie Terrace), from 1994 and 1997 the average price per square foot for co-ops remained relatively flat, increased dramatically in 1998 (55% from 1997), and again in 2000 and 2003 (though not at a slower pace—22% and 16% respectively). In Yorkville (the area bounded by E. 86th St., E 96th St., York and Lexington Avenues) the average price per square foot for co-ops increased each year from 1995 through 2003.

The East 91st Street MTS closed in October 2000. The market data suggests that proximity to the MTS while it was fully operational, had no adverse effect on property values. Based on the methodology described in Chapter 3 of the DEIS and this FEIS, the study found that re-opening the East 91st Street MTS would have no significant adverse impacts to neighborhood character.

274. **Comment:** Page 6-20, section 6.4.3, The DEIS does not substantiate the assertion that community facilities and services will not be impacted; no method of assessment of emergency service response times is provided.

Response: Technical analyses predict no significant adverse impacts to the environs,

including traffic conditions, and so the East 91st Street Converted MTS would not affect emergency response times. Refer to FDNY correspondence in Appendix A.

275. **Comment:** Page 6-27, section 6.5.3, paragraph 1, Line 4: The analysis of open space impacts relies on the odor analysis to conclude that there are no significant open space impacts. However, the odor analysis did not assess any receptors outside but only examined impacts to nearby residences. There will be odor impacts to parks and recreational facilities which are not honestly presented.

Response: The DEIS presents results of the odor analysis at the property boundary and at the nearest sensitive receptor for the Converted MTSs, with no unmitigable significant adverse odor impacts identified. Odor results at the additional sensitive receptors included in the noise analysis are presented in the FEIS, and are lower than that predicted at the property boundary.

276. **Comment:** Page 6-27, section 6.5.3: The DEIS does not assess either direct or indirect impacts upon Asphalt Green, Carl Schurz Park and the East River Esplanade, caused by noise and air pollutant emissions and odors. The new MTS structure, the larger ramp the queuing of trucks, and the operations of the MTS will reduce the aesthetic value and as a result, intensity of use of these valuable open spaces and parklands. The conflicts between school buses dropping off children and queued trucks, and the challenge for pedestrians to navigate around large odor emitting trucks will interfere with public access to this significant recreational facility.

Response: The text in the DEIS has been revised in this FEIS to note the new ramp will be constructed in the same footprint as the existing ramp.

Traffic patterns at the York Avenue and East 91st Street entrance were observed during typical midweek days between 7:00 a.m. and 7:00 p.m. Bus activities were observed on a typical weekday in the summer of 2004, and on a typical weekday in the spring of 2005. On the summer weekday, no more than four school buses were observed during any given hour dropping off/picking up children at Asphalt Green and typically there were only 1 to 2 school buses. The average layover time of a school bus waiting to pick up students was observed to be 54 minutes.

On the spring weekday, six occurrences of school buses picking up children were observed in the morning between 7:00 a.m. and 9:00 a.m. on York Avenue at four different locations between 88th and 91st Streets. Two of these pickups were on the northbound side, and four were on the southbound side. The dwell time for each occurrence was less than one minute. Between 10:00 a.m. and 2:00 p.m., one school bus was observed dropping off children on York Avenue at the northeast corner of 91st Street. The bus stood there for about one hour, then picked up the children. Between 2:00 p.m. and 4:00 p.m., five occurrences of school buses dropping off children were observed on York Avenue between 88th and 91st Streets. Two of these pickups were on the northbound side, and three were on the southbound side. The dwell time for each occurrence was less than 30 seconds. None of the school bus activity described above caused any unusual conflicts with the rest of the traffic stream.

On a typical weekday during the summer of 2004, the peak number of City buses was 63 in a given hour, of which, approximately 50 percent were articulated buses. Background volumes were counted over the same period. Overall, the existing number of buses and background traffic volumes observed were lower than those analyzed in the DEIS and this FEIS, which would indicate that the traffic analyses presented in the DEIS and this FEIS are conservative.

277. **Comment:** Page 6-32, section 6.6.3: The DEIS does not assess potential impacts on historic resources resulting from incompatible visual, audible and atmospheric elements, including construction-related impacts, which have the potential to affect neighborhood character. While the DEIS includes discussion of the Landmarks and Historic Districts, etc, it does not identify whether any properties in the study area are eligible for listing.

Response: No "eligible" properties were identified via secondary sources (refer to Appendix A), field surveys, LPC or SHPO correspondence (See Appendix A), or as part of public comment on the DEIS. SHPO and LPC concur that no impacts to historic (architectural) resources would result.

278. **Comment:** Page 6-33, section 6.7.1.3: The DEIS does not describe the exterior or the interior layout of the proposed facility, nor does it describe the proposed ramp walls. The larger facility and ramp has the potential to affect neighborhood character. Without a detailed design, including streetscape elements, the DEIS cannot properly and adequately analyze the operations of the facility of the impacts on visual resources, shadows, traffic, air, noise and odor.

Response: The text in Section 6.7, Urban Design, Visual Resources, and Shadows has been revised and additional illustrations have been provided in Chapter 2.0 of the FEIS to clearly present current design information for the Converted MTS.

279. **Comment:** Page 6-46, section 6.8.1.2, paragraph 1, line 1: The DEIS accurately describes the existing neighborhood character as being pleasant, well-maintained and conducive to pedestrians, yet on Page 6-48 the study concludes that the MTS "is not expected to result in significant impacts on neighborhood character" even though the "reintroduction of trucks into the neighborhood would be noticeable" and that the "MTS potentially could result in impacts to neighborhood character due to potential odor conditions". How can this not create significant adverse impacts to neighborhood character?

Response: Please refer to the responses to Comments #269 through #278, above.

280. **Comment:** Page 6-46, section 6.8.3: The DEIS states that "unlike other sites studied, this site is within fairly close proximity to both residential and open space resources, which are the two major factors contributing to the neighborhood character of the area" . The DEIS acknowledges that the site is high-density residential, but does not conclude that this is a poor location for a large solid waste transfer station. The DEIS acknowledges that the MTS facility encompasses "most of the Asphalt Green Recreational Center" which is a City-owned park and a City-wide resource serving many people outside the Gracie Point Community. It is also a historic resource. Gracie Mansion is also adjacent to the site but the impacts are trivialized. The conclusion that the impacts are not significant has no supporting basis.

Response: Please refer to the responses to Comments #269 through #278, above.

281. **Comment:** Page 6-58, section 6.10.1, paragraph 2, line 6: An Environmental Site Assessment is not properly performed according to ASTM E-1527 and DSNY's own stated methodology for assessing impacts relating to Hazardous Materials without a site visit. Claiming inability to access a facility owned by DSNY to conduct a site visit is inexcusable. The assertion of no adverse impacts is completely without support, because an Environmental Site Assessment was not performed to any reasonable standard of care.

Response: The Phase I inspectors initially were denied entry due to a locked gate, but the site visit was rescheduled and the site investigation was conducted on April 25, 2003. The statement has been corrected in section 6.10.1 of the FEIS.

282. **Comment:** Page 6-59, section 6.10.3, paragraph 1, line 1: There is no discussion of how receipt of oil or hazardous, explosive, infectious, or radioactive material would be handled at the facility. DSNY has no control over what materials are thrown into the trash, and the risk to the neighborhood could be significant. There needs to be a detailed plan for the management of hazardous materials at the facility and evacuation procedures in the event of a fire, explosion or toxic substance release.

Response: The d**r**aft Part 360 Permit application, undergoing review by NYSDEC, extensively documents the measures and equipment that will employed at the MTSs to inspect incoming loads of waste, detect and segregate hazardous and unacceptable materials, control vermin through the periodic application of pest control measures, and clean the facility on a daily basis. See the response to Comment #2 in section 40.3.1.1 for additional information about design features of the Converted MTSs.

283. **Comment:** Page 6-60, figure 6.10-1: This figure is incorrect. The Toxics Targeting Environmental Report identifies 33 toxic sites within 1,000 feet of the MTS site, including several active hazardous spills.

Response: The figure is correct. The site specific radius map indicates only those sites which may create a significant impact to redevelopment or reuse through on-site or off-site pathways. None of these sites were identified at the East 91st street Converted MTS site. The hazardous materials methodology in Chapter 3.0 of this FEIS has been revised

to include this explanation.

284. **Comment:** The MTS redevelopment is subject to review under the 10 policies of the City's Waterfront Revitalization Program. Policy 1 supports commercial and residential development, but the MTS is incompatible with residential development. Policy 2 supports water-dependent and industrial uses in NYC's coastal areas that are well suited to their continued operation, and this site is not well suited since it is surrounded by parks and residential areas. The MTS development does not appear to support Policy 3, which promotes boating, nor does it appear to support Policy 8, to provide public access to and along the City's coastal waters. The DEIS does not address impacts to the adjacent Commuter Ferry. It does not support Policy 9, to protect scenic resources, nor Policy 10, to protect, preserve, and enhance resources significant to the historical, archaeological and cultural legacy of the NYC coastal area. The DEIS should discuss enforcement measures of this program, and how DSNY can be required to abide with these policies.

Response:

Responses to each of the policy-related comments are noted below.

1. *Policy 1 supports commercial and residential development in areas well suited to such development, and the Upper East Side is ideal for that. However, an MTS is incompatible with residential development.*

The East 91st Street Converted MTS would be an expansion of an existing site and would not preclude the development of commercial or residential development in the area. In addition, the proposed facility would replace an existing over-water facility and would not occupy a significant amount of upland space.

2. *Policy 2 supports water-dependent and industrial uses in New York City's coastal area that are well suited to their continued operation. This site would not be considered well suited for industrial uses as it is surrounded by parks and residential areas.*

The proposed action would involve the revitalization of an existing water-dependent, industrial use at the site. Although parks and residential areas surround the site, the Proposed East 91st Street Converted MTS represents a reactivation of industrial use,

around which the adjacent waterfront esplanade, Asphalt Green complex, and nearby residential towers developed. Development of a ferry terminal at East 90th Street and the waterfront promenade in the area near the site has already occurred as per the recommendation of the Comprehensive Manhattan Waterfront Plan. As demonstrated in the FEIS, the proposed action would not cause unmitigable significant adverse impacts to the surrounding environs, including commercial and residential uses; therefore the site is well suited to this continued water-dependent industrial use.

3. The MTS redevelopment does not appear to support Policy 3, which promotes boating and water transportation.

The "Plan for the Manhattan Waterfront" recommends renovating the existing 90th Street Pier, located south of the existing MTS, for commuter service. Development of a ferry terminal at East 90th Street and the waterfront promenade in the area near the site has already occurred as per the recommendation of the Comprehensive Manhattan Waterfront Plan. The proposed MTS is consistent with the "Plan for the Manhattan Waterfront" which specifically states that the MTS should be taken into account when siting the ferry landing at this location. Development of the Converted MTS would not preclude the development of additional boating and water transportation uses along the East River.

a. The MTS redevelopment does not support Policy 8 to provide public access to and along New York City's coastal waters. The DEIS does not address potential impacts to the adjacent Commuter Ferry.

As stated in the DEIS and this FEIS, public access would generally not be compatible with the East 91st Street Converted MTS. However, there are numerous points of public access located north and south of the proposed MTS, specifically along the East River Esplanade.

Text has been incorporated under Policy 3 of the Waterfront Revitalization Program section to clarify the point that the proposed MTS is consistent with the "Plan for the Manhattan Waterfront," which specifically states that the MTS should be taken into account when siting the ferry landing at this location.

4. *The redevelopment does not support Policy 9 to protect scenic resources that contribute to visual quality.*

Existing views of the water are obstructed to some extent by the existing facility. The proposed MTS would resemble the existing MTS in terms of its building typology, massing and position and elevated access. The larger scale and overall appearance of the proposed facility would not likely contribute to a substantial change of views toward the waterfront from inland areas. Therefore, the new facility and reactivation of the former ramp would result in no significant impact to the visual quality of the area, and the urban design of the area would remain virtually unchanged.

5. *The MTS does not support Policy 10 to protect, preserve, and enhance resources significant to the historical, archaeological and cultural legacy of the New York City's coastal waters.*

As stated in the DEIS and this FEIS, the SHPO and LPC concur that there would be no impacts to archaeological or historic architectural resources; therefore, the proposed MTS would be consistent with this Policy. Although the access ramp leading to the MTS is currently located near the Municipal Asphalt Plant, which is listed as a City landmark on the National Register, the proposed replacement ramp would be located within the same footprint and would, therefore, not pose any impacts to this resource.

Given that DSNY's proposed use of the site for a Converted MTS is not inconsistent with the above-referenced Policies, enforcement measures are not necessary.

285. **Comment:** Page 6-95, section 6.14.2.3.1, line 1: The worksheets for the intersection level of service analyses should be provided so that the geometry, signal phasing and timing, and other parameters used in the analysis can be reviewed.

Response: As indicated in Chapter 3.0 of the DEIS and this FEIS, Technical Backup for the analyses is available upon request. This technical backup includes supporting documentation such as spreadsheets, trip generation figures, Highway Capacity Software (HCS) input/output files, intersection geometries, and signal timing and phasing used in the traffic analysis.

286. **Comment:** Page 6-99, section 6.14.2.6, line 2: This sentence suggests that the high level of pedestrian activity at the analysis locations is not expected to affect the capacity analysis significantly. A high volume of pedestrians will interfere with turning vehicles or will require a pedestrian phase. Either of these could have a substantial impact on traffic operations. The level of service analyses should be reviewed to verify that pedestrian volumes and pedestrian signal phasing are properly factored in the analysis. Please address.

Response: The pedestrian volumes at the study intersections do indeed affect level of service and capacity of turning vehicles. Accordingly, pedestrian volumes and pedestrian phasing were properly factored in the capacity analysis. However, it should be noted that the proposed 91st Street MTS is not projected to increase any pedestrian volumes.

In addition there will be a DSNY employee who will monitor pedestrian activity. See Response to Comment #206 for more information on the proposed employee and their responsibilities.

287. **Comment:** Pages 6-108-113, Figures 6.14-13 through 6.14-15: The morning peak hour volume exiting the site is 39 and the entering volume is 45 for a total 84. The entering and exiting volumes for the peak hour are 28 each, for a total of 56. Why is the facility peak hour volume lower than the morning commuter peak hour volume? The text in the last paragraph on page 6-105 indicates that 56 is the peak hourly volume of traffic. Why is the morning commuter peak hour trip generation higher? Moreover, what are the volumes at peak capacity? There is no documentation of how the net trips were calculated for each analysis hour from the 130 daily truck loads reported in Trip Generation, Section 3.16.4. There is no documentation of how the following factors were incorporated in the calculation of hourly volumes: (1) truck volumes should be increased by 50% to obtain Paces; (2) volumes were increased by 20% to account for daily and seasonal variation; (3) There will be 40 trips by employees for each shift change. Please reconcile, and provide assumptions and calculation work sheets.

Response: The facility peak hour is the hour where the highest number of DSNY collection vehicles will arrive at the facility. All 56 trips projected to be generated during

the facility peak hour are trucks. During the a.m. background peak hour, 41 of the 84 projected trips are trucks. The remaining 43 trips are employee automobile trips. To be conservative, employee automobile trips were added to the truck trips during the a.m. background peak hour. Both the a.m. and facility peak hours were analyzed to determine the impact of the proposed East 91st Street Converted MTS at the study intersections.

The calculation of hourly volumes is based on historical data. See Response to Comment #245 for more information on how these hourly volumes were estimated.

As part of the level of service analysis, the truck trips were increased by 50 percent to obtain PCEs (Passenger Car Equivalent).

288. **Comment:** Page 6-116, section 6.14.4.2, paragraph 1, line 3: The proposed mitigation for the York Avenue/ East 91st Street intersection is a one second increase in the green time for the northbound left turn. Could there be an additional increase in northbound left turn green time to restore delay and level of service to the levels for existing conditions without significantly negatively impacting other moves? Delay at that intersection is expected to increase to 97.3 seconds in the Build Condition from the existing delay of 41.6 seconds for a decline in level of service from D to F. Since traffic impacts were studied with an unrealistically low number of net loads based on DSNY-managed waste only, impacts of maximum permitted capacity of 5,280 tpd can only increase the amount of reduction of LOS for the intersections studied. In our analysis significant impacts would have been found at the highest peak hour for permitted capacity. Our projections show two movements that decline from LOS C to LOS D.

Response: The Future No-Build condition is used as a baseline to determine the Build Condition that includes any projected impacts of the Proposed Action. The projected delay for the northbound de-facto left turn is 86.9 seconds per vehicle under the 2006 Future No-build condition during the PM peak hour. Following the 2001 *CEQR Technical Manual* guidelines, the signal timing adjustment described above was proposed to mitigate projected Future Build Conditions back to what they would be if the proposed action were not in place (No-Build Condition).

The proposed East 91st Street Converted MTS is not projected to generate any truck trips during the p.m. peak analysis hour. All projected vehicle trips during this peak hour are employee auto trips.

289. **Comment:** The DEIS traffic analysis is deficient because the traffic impacts to East 96th Street were not evaluated. Trucks leaving the MTS and heading north will significantly add to the existing congestion. The analysis is further flowed in that it deals in average vehicle counts, whereas the reality is that trucks come in groups. The MTS will create a dense clump of garbage trucks queuing at signalized intersections on York Avenue, jockeying for position with school buses. Additionally, congestion on the side streets must be addressed.

Response: There are projected to be seven and 13 trucks leaving the proposed East 91st Street Converted MTS and heading north during the a.m. peak and facility peak hours, respectively. These trucks are projected to proceed northbound on First Avenue at 96th Street. Therefore, the intersections along 96th Street were not selected for level of service analysis because of the relatively small number of trips to be added to the northbound through volumes.

The HCS methodology considers the worst 15 minutes peak within the peak hour analyzed. Thus, the level of service for the peak 15 minute volume (also referred to as peak flow rate) is analyzed and this peak hour factor was incorporated in the level of service analysis for all the turning movements.

290. **Comment:** The DEIS does not address the cumulative impacts of the project on air quality. The results of the off-site analysis imply that only the site-generated traffic was used to evaluate traffic emissions at the off-site intersections. The NAAQS demonstration should be based upon the total traffic volumes at each intersection under Future Build Conditions. This analysis should be conducted for both CO and PM.

Response: For pollutants not currently meeting the NAAQS, an incremental analysis (not cumulative) was performed in accordance with federal air quality impact analysis guidance. The purpose of an incremental analysis in this context is to demonstrate whether the incremental facility impacts would be insignificant, and therefore, by

definition, not worthy of mitigation. Any "significant" incremental impacts, in a NAAQS nonattainment context, would be grounds for requiring mitigation measures. For pollutants that are not in a nonattainment status with respect to NAAQS, a cumulative analysis of total concentrations (existing plus action-related) was performed for the DEIS and this FEIS, in accordance with appropriate guidance. Cumulative analyses, for the "attainment" pollutants, were conducted for both on-site (facility) air quality impacts and for off-site (intersection) air quality impacts.

291. **Comment:** Page 6-120, figure 6.15-1: Insufficient analysis is provided to determine the number of queuing collection vehicles expected at any time, and the real impacts of noise, odor and diesel exhaust. DSNY must address the issue of truck queuing in the neighborhood, and how the City's anti-idling law will be enforced. How will arriving trucks be accommodated, to prevent queuing on York Avenue? During the Public Hearing, it was stated that on-street queuing will not be allowed, without any indication as to how this will be enforced. It was also stated that if necessary, collection vehicles will be diverted to the garage, and a DSNY employee will be stationed at the ramp entrance to ensure pedestrian safety. Diverting trucks elsewhere will increase traffic. What garage will they go to, and what are the environmental impacts of storing waste in the garage? The commercial vehicles won't have a garage to go to, so won't they idle nearby? This management technique must be explained and impacts analyzed. What are the risks to pedestrian safety which require that an employee be stationed at the ramp entrance full time to ameliorate? Will this address significant safety impacts?

Response: The historical peak hour arrival rate assumed in the DEIS and this FEIS, which includes a 20% contingency factor, is significantly higher than the expected peak hour arrival rate, based on current East 91st Street wasteshed volumes. Depending upon the analysis, the DEIS and this FEIS assumes space for up to 19 queuing/moving vehicles on the ramp. The City's idling law only applies if a truck is idling (not moving) for more than 3 minutes. The likelihood of a delay of this duration on the ramp is insignificant. Garages for the collection vehicles serving the CDs in the East 91st Street wasteshed are located at 540 E. 74th St. (CD#5), 606 West 30th St. (CD#6), 423 W. 215th St. (CD#8) and 343 East 99th St. (CD#11). DSNY's operating procedure for many years has been to send

some collection vehicles to the garage with full loads, and then relay those collection vehicles to unload during non-priority times. Commercial vehicles would arrive during the 8:00 p.m. to 8:00 a.m. period, the non-peak period. Based upon the total number of DSNY and Commercial vehicles that are expected at this time, there will be no queue. Please see the response to Comment #206, regarding historical data on accidents at the location of the East 91st Street ramp. A DSNY employee will be stationed at the foot of the ramp as an extra safety measure, and to allay neighborhood concerns about safety.

292. **Comment:** Page 6-129, section 6.16.1, paragraph 1, line: The DEIS does not include the worst-case receptor locations. The locations for sensitive receptors in the odor analysis should be the same as those used in the noise analysis. Page 6-132 five sensate receptor locations are identified that are closer to the site than the one apartment building on 90th Street, east of York. City Zoning Regulations require that odors not be detectable at any point along or beyond lot lines. Please address.

Response: See Responses to Comments #267 and #275 .

293. **Comment:** Page 6-129, table 6.16-1: The information presented here is inconsistent with the number of moving and queuing collection vehicles identified in the air quality analysis (page 6-119). Which is correct?

Response: Both are correct. The noise analysis is an "instantaneous" model that includes the maximum number of collection vehicles that could be present on the ramp within a given hour, with assigned utilization factors to represent the average amount of time over that hour that the collection vehicle would be in that position on the ramp. For the annual average pollutants, the air quality analysis model includes the average number of idling and moving collection vehicles that would travel along the ramp to and from the facility over the period analyzed (i.e. 24-hours).

294. **Comment:** Page 6-131, table 6.16-2: Please provide copies of the modeling assumptions and modeling runs. By DSNY's own numbers, the collection vehicles emit 3.2 OU/sec and 19 are queued on the ramp, yet only 0.31 OU are modeled immediately adjacent to the ramp. Hundreds of comments were made about the odors at the MTS

when it previously operated, but the modeling predicts that odors will not be detected at the site boundary? Additionally, DSNY-owned trucks were measured, not commercial trucks. Address these inconsistencies.

Response: As indicated in the DEIS and this FEIS, technical backup (including air quality model input and output files) are available upon request. With respect to the per truck emission rate of 3.2 odor units (OU) per second, this is a relatively low emission rate, and not likely to be detected unless one is very near the point of emission (e.g., standing on a sidewalk when a garbage truck is at the curb). Once the emissions are dispersed over even a few meters, odor concentrations will drop off very rapidly. A common means of simple estimation of the initial concentration near an object, such as a building or in this case, a truck, is to use a "box model" approach. The projected area on a vertical plane through the object, together with wind speed, can be used to perform a simple box model calculation. For example, assuming a truck is approximately 10 feet high by 27 feet long, this would give a vertical cross-sectional area of 270 square feet (10 x 27). At a very low wind speed of only 1.0 meter/second, each 3.2 odor units/second of emissions would be diluted within a volume of approximately 270 square feet, or 24 cubic meters of air, (24 square meters x 1.0 meters/sec), immediately downwind of the truck. As the plume continues downwind, further horizontal and vertical dispersion due to turbulence would rapidly reduce concentrations even further. The initial "box model" concentration in this case would be only 0.13 odor units. This example demonstrates that, by putting multiple trucks in close proximity, concentrations could approach the 0.31 OU level in the very near vicinity of the trucks, with decreasing concentrations farther downwind.

295. **Comment:** Page 6-142, table 6.17-6, footnote (5): How is it that the closest East 90th Street apartment building is assumed to only be in use during daytime hours? The occupants are noise-sensitive receptors at night, too.

Response: The reference to footnote 5 for the East 90th Street apartment building in Table 6.17-6 is incorrect and is corrected in the FEIS.

296. **Comment:** Page 6-147, section 6.17.3.5, paragraph 3, line 3: The DEIS utilizes noise monitoring data collected during a site-specific DSNY collection vehicle simulation to demonstrate compliance with the CEQR threshold. These data are used to replace the FHWA TMN model which demonstrated values over-predicted the CEQR threshold. The CEQR Manual requires the use of the TNM. Results of this modeling must be provided. FHA's TNM model has the added capability of modeling sound levels accounting for complex terrain and buildings. It is not clear that noise monitoring for vehicle simulations is more valid than the use of TNM. Additionally, the DEIS appears to utilize two different assumptions for calculating the reduction in sound levels due to distance In Section 3.19.5.1, the On-Site Source Screening Analysis uses a -6 dBA drop-off rate, which is typically used for hard ground from point sources. In section 3.19.7.1.1, the CEQR and Part 360 Noise Code Analysis uses a -4.5 dBA drop-off rate. The urban environment is typically hard ground. The mobile source drop-off rate should be revised. Similarly, this difference in drop-off is a conflict in Section 3.19.1.7.2 in the Current Noise Code. Please address.

Response: As indicated in the DEIS and this FEIS, technical backup (including Traffic Noise Model (TNM) input and output files) are available upon request. A noise simulation was conducted for DSNY collection vehicles and illustrates that the Traffic Noise Model (TNM) used in CEQR analyses generally overpredicts the potential for off-site impacts when additional background noise sources are present at the modeled location. CEQR also notes that, while calculated values using the TNM model can be used directly, it is preferable to verify the accuracy of the model for the particular condition being analyzed. Based on these measurements, adjustment factors can be developed to account for site-specific differences between measured and model-predicted values. In consultation with NYCDEP, since noise measurements were obtained during appropriate times at sensitive receptors along routes that DSNY collection vehicles would travel to and from the Converted MTS site, and these measurements take into account actual background noise levels, these noise values were used for the impact assessment. A truck noise simulation letter report that provides information on the noise simulations that were conducted was prepared and is included in Appendix K to the FEIS.

A -6 dBA drop-off rate was used for all on-site sources to generate the 55 dBA contours around the proposed facilities. Since the configuration of the on-site trucks queuing on the ramp more closely represents a line source than individual point sources, the drop off rate for on-site trucks was adjusted to a -4.5 dBA, which is more appropriate and more conservative than a -6 dBA drop-off rate.

297. **Comment:** The DEIS ignores potential impacts of vibration from trucks on the ramp, or the impact of dropping containers in the MTS. The FTA has vibration criteria that can be used to determine potential impacts. A vibration impact analysis must be performed using the sensitive receptors as defined for noise.

Response: Impact or impulsive noise levels are defined by the City Performance Standards as those noise levels that are of short-duration (i.e. two seconds or less in duration as defined under the current proposed NYC Noise Code) and are not required to be included in the noise analysis for compliance with Performance Standards. For the Converted MTSs, based on spectral noise level measurements of container loading operations at a similar type of facility in the City, and operational estimates for container lidding operations within the processing building, these noise levels are considered impact noise levels and not included in the noise analysis for conformance with Performance Standards.

Typical equipment-induced vibration levels at the Converted MTSs are below the threshold of human perception for vibration at a distance of 50 feet. Therefore, equipment-induced vibrations at these facilities are not expected to be perceived as problematic by nearby residents or other vibration-sensitive receptors if they exist nearby a DSNY facility. A summary of the vibration analysis determination is included as Appendix L to this FEIS.

298. **Comment:** Page 6-153, section 6.18.3.2, paragraph 2: The DEIS provides no reasonable justification for DSNY to begin managing commercial waste. This will greatly increase noise in a residential area.

Response: See response to Comment #259.

299. **Comment:** Page 34-1, line 1: The statement "Any impacts that would result at in-City sites (designated in the Proposed Plan) where new construction would likely occur are capable of being mitigated" is refuted by the analysis of noise and odor impacts. Please address.

Response: As stated in this FEIS and presented in the analyses therein, there are no unmitigatible significant adverse environmental impacts, including noise and odor. Therefore, the statement is correct.

300. **Comment:** Page 34-2, paragraph 1, line 3: The statement "Furthermore, by utilizing existing facilities and sites (in heavily industrial areas) the Plan substantially minimizes or eliminates any potential impacts to neighborhood character" does not apply to the East 91st Street site, which is in a densely populated area, and the impact to neighborhood character and open space will be very significant and unmitigatible. Please reconcile.

Response: See response to comment #261, #279, #280 and #299.

301. **Comment:** Page 34-2, paragraph 2, line 4: There is no analysis in the DEIS which supports the statement that "This would reduce the number of trucks from what is currently required to provide waste collection and transfer services" for the wasteshed in Manhattan. Please provide this analysis.

Response: See response to comment #258.

302. **Comment:** Page 34-2, paragraph 2, line 6: The DEIS states that "traffic and air quality conditions on City streets would likely improve overall within the City with the implementation of the Proposed Plan" The DEIS contains no evidence that the East 91st Street MTS would serve to improve traffic and air quality conditions on City streets. Please provide this evidence.

Response: Since the adoption of the 2000 SWMP Plan Modification, approved by NYSDEC in 2001, the City has been committed to a transition from a truck-based system of waste export to a rail-based system. In July of 2002 Mayor Bloomberg reaffirmed the Administration's commitment to this objective. The Draft New SWMP cites several critical factors in support of this objective. See Section 3.3.1 of the Draft New SWMP and Response to #258.

303. **Comment:** No commercial waste company would site a transfer station at East 91st Street due to the potential risks involved, or the congestion in the area. A private firm would be interested in siting a facility where they can quickly get their trucks into and out of a facility, not a highly congested area. Moreover, there is only once access to the street; what would happen if a truck breaks down on the sole access ramp during peak rush hour?

Response: Commercial carters do not service the City's residences. The reliability and cost of service is affected by the proximity of the location where waste is tipped to the centroid of the wasteshed served. For more than 50 years the City's MTSs were important factors in maintaining the efficiency and productivity of DSNY's workforce.

304. **Comment:** The DEIS does not discuss the fact that DSNY will seek a land grant from New York State to enable DSNY to extend the new MTS an additional 40 feet into the East River. There is no discussion in the DEIS regarding the potential impacts to the East River arising from this land grant.

Response: Development of the East 91st Street Converted MTS would require the acquisition of a River Bed Easement or Grant from the New York State Office of General Services (OGS). At the time that the DEIS was published, DSNY was initially looking to pursue an easement, which was discussed within the DEIS. Based upon design consideration which emerged after the DEIS was published, as well as further investigation of obtaining an easement versus a grant, DSNY decided to pursue a River Bed Grant. The description of the proposed grant is included in the new site plan drawing, Figure 2.2.3-4 in Section 2.2.3 of the FEIS. The land grant itself has no impact upon the East River; the impacts of the Converted MTS, inclusive of the area that would encompass the proposed grant, were discussed in relevant sections of the FEIS. Additionally, the OGS was listed as an Interested Agency in the Executive Summary and on page 1-28 of the DEIS.

40.3.2.3.2 West 59th Street MTS

305. **Comment:** One speaker voiced support for the use of the 59th Street MTS by commercial carters during the nighttime hours, but thought that the facility should containerize the waste. The Plan fails to identify clear steps as to how and when the 59th Street MTS will be brought on line for commercial waste. The plan for the usage of this facility should optimize its use and minimize negative impacts.

Response: The West 59th Street MTS site is proposed to be made available for the transfer of commercial waste, either as the facility currently exists or in another form to be determined. Once the details of this proposal have been further defined, a supplemental environmental review would occur. The facility is currently permitted for the transfer of putrescible waste without containers and is utilized for the transfer of waste paper for recycling. As an Alternative to the Proposed Action of sending waste from this facility's historic wasteshed to the Essex County Resource Recovery facility, the DEIS and this FEIS analyzes the impacts from constructing a Converted MTS to containerize waste at this site, using a design similar to that proposed for the four MTS sites in the Proposed Action, that could accept DSNY waste and a certain amount of commercial waste. DSNY will likely issue an RFP to define the specifics of a plan for developing a Commercial Waste export facility at the site of the West 59th Street MTS. DSNY may issue a Request for Expressions of Interest (RFEI) prior to this procurement. Section 4.3.2.1 of the Draft New SWMP provides a summary description of the approach DSNY would take. DSNY will perform a supplemental environmental review once it has a specific proposal for this site. Note that the DEIS and this FEIS evaluates a West 59th Street Converted MTS for use as a long term export facility for DSNY-managed Waste, and includes analysis from the Commercial Waste Management Study concerning potential transfer of some commercial waste as well; however, this Alternative is not part of the Proposed Action in the Draft New SWMP (see Section 3.3). Accordingly, an environmental review of this site as a commercial waste export facility will be required.

306. **Comment:** If the West 59th Street facility is part of the final SWMP, DSNY must work with the State Department of Transportation, Hudson River Park Trust and other appropriate government agencies and community groups to make an access plan that puts the safety of Greenway users ahead of the movement of traffic entering and exiting the transfer station, and create and enforce policies to ensure that the Greenway path is not

blocked by vehicles. The fly-over ramp and tunnel to the transfer station should be carefully studied and analyzed as alternatives.

Response: DSNY will coordinate with involved agencies as the concept for reuse of this site is better defined. In addition, these issues will be assessed in a future environmental review referenced in the response to Comment #305.

307. **Comment:** The Draft Scoping Document identified the zoning in the area north of the West 59th Street MTS as M2-3. The DEIS identifies the zoning as R-10, and shows this on Figure 22.2-3. This area is in fact mapped parkland, which has no zone.

Response: Figure 22.2-3, Zoning, and Section 22.2.1.3.1 have been revised to reflect the extent of mapped parkland.

308. **Comment:** The chapter discussing the existing West 59th Street MTS states that both the south and north sides of the pier are used for barge tie-ups. The water north of the pier is parkland, so any use of this area for tie-up or any other use is an illegal alienation of parkland. In addition, the small boating uses of Riverside Park South Phase IV will conflict with barge tie-up on the north side. Therefore the environmental review for the "no action" alternative must study how the existing West 59th Street MTS will operate legally with only the south side of the pier for barge tie-up.

Response: DSNY is aware of these potential constraints at this MTS and would so inform the potential respondents to the procurement for this site. The Hudson River Park Act allows for continuation of current DSNY operations at this pier. The supplemental environmental review to be performed for the proposed commercial waste transfer use will analyze potential impacts on parkland of the proposal, and further discussions between Hudson River Park Trust and DSNY are expected once the proposal is better defined.

309. **Comment:** Chapter 22.5.3 and Chapter 35 conclude that additional truck traffic to and from the West 59th Street MTS "could potentially worsen the safety conditions on the bike path" and then go on to state that "appropriate measures developed in coordination

with the NYCDPR would likely resolve this conflict." Such measures must be disclosed in the FEIS for public comment and their potential effects analyzed.

Response: See response to Comment #305 and #306.

310. Comment: Any action affecting the West 59th Street MTS or the Gansevoort Peninsula must be determined by the Hudson River Park Trust to be consistent with the Hudson River Park Act or the act amended (Chapter 1.7.2.1). The Existing conditions section of the DEIS should be amended to include mention that the 59th Street Transfer Station is located within the Hudson River Park. It should also acknowledge the fact that the waters surrounding Pier 99 are legally part of the Hudson River Park Estuarine Sanctuary. The supplemental environmental review described on page 4-4 of the DEIS should mention the Act and its restrictions, and describe how any physical or operational changes required to accommodate the new facility would be consistent with the Act. The supplemental review for West 59th Street should include an analysis of any potential expansion of the existing operations at the site, including a description of any increase in traffic or expansion of use in either the surrounding water of the plant area located to the east of the pier. Any new road configurations should be assessed with respect to their possible effects on users of Hudson River Park. The review should also detail the plans created between DSNY and the Department of Parks and Recreation to resolve conflicts and safety issues created on the bikeway by increased trucking. Additionally, the Trust and the NYSDOT should be involved in such planning. Moreover, DSNY should consider the fact that the operational hours identified on page 4-2 of the DEIS of 8:00 a.m. to 8:00 p.m. are the hours during which Hudson River Park and the bikeway are most heavily used. To the extent possible, operations should be planned to avoid or minimize weekend use as well as use during weekday afternoons and early evenings. The DEIS should acknowledge that the entire bulkhead within Hudson River Park including that bordering Pier 99 is eligible for the State and National Registers of Historic Places, and that any construction on it is subject to the terms of a Programmatic Agreement executed by the USACE, the Advisory Council on Historic Preservation, the NYSHPO and the Hudson River Park Trust. The natural resources assessment should analyze any potential changes to the

Hudson River habitat resulting from any expansion of operations or construction at the pier including those related to emissions from tug boats.

Response: Comments noted. The DEIS has been revised and this FEIS indicates that the site is located with the boundaries of the Hudson River Park (see Sections 22.2.1.4, Plans and Policies, and 22.5.1.2, Open Space of this FEIS.) The estuarine sanctuary status is already acknowledged in the DEIS and this FEIS in Section 22.5.1.2. The LPC and SHPO have reviewed the site and concur that there would be no impact to archaeological or architectural resources. However, Section 22.6.1.3, Cultural Resources on the Site, and Section 22.6.2 (Future No-Build Conditions) has been revised to indicate that the bulkhead in the vicinity of the site may be eligible for listing on the State and National Registers. Additional consultation with the SHPO, LPC, and the Hudson River Park Trust may be appropriate as development of this site as a waste export facility proceeds.

311. **Comment:** Given that both the West 59th Street and Gansevoort facilities lie within Hudson River Park, the Trust requests that it be listed as an involved agency, as it must hold hearings and perform other functions.

Response: DSNY agrees that the Trust would be listed as an involved agency in connection with the supplemental environmental review of the proposed commercial waste export facility at the West 59th Street MTS site and the Gansevoort former MTS site proposed for a recyclables acceptance facility.

312. **Comment:** How will the plan finance Hudson River Park's operating costs and capital improvements? No dollar amounts were given. Who would receive the income if commercial contractors utilize the facility at night? The park should be completed with existing funds.

Response: Comment noted. Issues regarding the Hudson River Park will be raised during the negotiations DSNY is conducting with commercial waste industry representatives regarding the proposed use of the site. The development of more definitive plans as to future facility use and cost and financing issues will be better defined in the future.

313. **Comment:** The use of the West 59th Street MTS evaluated by the DEIS is not the use contemplated by the SWMP. While the DEIS found no unmitigatible adverse impacts, that finding is moot because it was evaluated for a different usage. As a commercial waste transfer station it will involve a different type of waste, increase the volume of traffic, require a larger or a non-containerized facility, alter the mix of trucks and hours of operation, decrease the ability of the city to manage facility operation, and continue the use of truck export of residential garbage from Manhattan CDs 1, 2, 3, 4, 7, 9, 10 and 12. The DEIS does not study the impacts of keeping paper recycling at West 59th Street until Gansevoort is available. The risk is too great that by the time a supplemental review is conducted, no meaningful options for the transfer of Manhattan's commercial waste will remain.

Response: Comments noted. As indicated in the response to Comment #305, a supplemental environmental review will be required to evaluate a proposed action to reuse this site for export of Commercial Waste when the procurement processes that DSNY will initiate define what that reuse plan would be.

314. **Comment:** The DEIS should provide information on the impacts caused by a different use at 59th Street, should East 91st Street MTS not get approved, or the Hudson River Park Act does not get amended.

Response: Comment Noted. See responses to Comments #305 and #313.

315. **Comment:** Section 22 of the DEIS does not reflect the current and near-future neighborhood character of the area and needs to be updated. The DEIS must estimate the future impact on the future character of the neighborhood, which is defined by Riverside South, the new Hudson River Park, Riverside Park South, rezoning between Amsterdam Avenue and West End Avenue to permit more than 1,000 new residential units, westward expansion of John Jay College, and other changes. While the area may have been industrial in the past, it will not be in the future, when it will be predominantly residential. The Artkraft Strauss sign factory referred to is in fact vacant and soon to be redeveloped. The Foundry, a residential building at 505 West 54th Street is not listed, and the Nicole at 400 West 55th Street is just outside the half mile radius, but is across the

street from Alvin Ailey. In addition the study zone should be widened to a ¾ mile radius to asses the potential impact of truck traffic. Additionally, in the land use section the document erroneously states that a 197-a Plan is in development for South Hell's Kitchen. No such plan is being developed, although there are massive rezonings in the ULURP process that must be included.

Response: See response to Comments #305 and #313.

316. Comment: Con Ed's use of Pier 98 for fuel transfer operations is cited as a mitigating factor because it will screen the visual impact of the new loading activity at West 59th Street. This statement should be changed since we don't know what the loading activity will look like, and what would happen when the lease for this Pier has expired? It may have a negative impact. The visual impacts need to be studied in greater detail.

Response: See response to Comments #305 and #313.

317. Comment: The DEIS for West 59th Street contemplates not just the continued, but expanded transfer activity at the site. The details of what exactly was shown by the studies undertaken should be shown. It acknowledges that the safety conditions on the bike path could be worsened, but doesn't state how this problem could be corrected. Additionally, in the neighborhood character section, it states that "no destination in the immediate area…would attract anyone but workers" is simply untrue when the immediate area includes two popular parks. The DEIS must be amended to reflect the fact that there will be more trucks and more sanitation activity in a newly populated, greened place. Data is needed on the number of vehicles that are intended to utilize the West 59th Street MTS site. The DEIS should include data on District 7's collection and relay trucks, recycling trucks, and snow operations.

Response: See response to Comments #305 and #313.

318. Comment: Page 22-20 of the DEIS indicates that regional projections indicate that the population of Manhattan CDs 4 and 7 will remain about the same as current conditions. This is incorrect. New developments for the area will substantially increase the

residential population. The DEIS needs to be amended to reflect these new numbers and address the implications of this growth.

Response: The NYMTC population projections (which were calculated by the consortium of metropolitan planning/transportation agencies to account for births, deaths, and in- and out-migration) are referenced in the DEIS and this FEIS to provide a general view of conditions throughout the community boards. The NYMTC-projected total net change for the two Community Districts is an increase of about 3,500 people (about 1.20 percent) between 2003 and 2006. Section 22.3.2.2 has been revised to reflect this information and to refer to the planned developments in the vicinity of the site. The planned developments were considered in all analyses, both as potential sensitive receptors and as potential generators of transit and traffic; no impacts were found to result assuming these planned developments as part of the Future No-Build Condition.

319. Comment: The DEIS for West 59th Street needs to include the following, including the impacts on traffic during the morning rush hour:

- Riverside South mitigations on West End Avenue that have changed the traffic flow from West 59th to West 70th Streets.
- Analyses of the implications of the anticipated connection of Riverside Boulevard and Route 9A at West 59th Street.
- Condition of increased traffic in and around Columbus Circle resulting from the new Time Warner building.
- Use of West 59th Street west of 11th Avenue as a commercial bus layover and a staging area for vehicles that serve the cruise ship lines to the south.
- The potential for vermin and sea gull infestations in the parklands.
- A study of asthma rates in Amsterdam Houses and Amsterdam Addition, and include this development in the EJ Plan
- Add to the secondary study area: Lincoln Square Neighborhood Center, 250 West 65th Street, Mabel Barrett Fitzgerald Day Care Center, and 243 West 64th Street.
- Clinton Cove Park is actually between Piers 94 and 97 and includes development of Pier 97.
- The Future No-Build conditions need to include the Encore Senior Residence at 755-765 10th Avenue, Clinton Green (CURA sites 8 and 9C0, and Flats/Old School at 552 and 554 West 53rd Street.

Response: See response to Comments #305 and #313.

320. **Comment:** Section 22.13.1.2. should analyze the MTS sanitary sewage and stormwater impacts on North River WPCP with data that include the new Hudson Yards rezoning.

Response: The Hudson Yards proposed rezoning is not included in the DEIS or FEIS Future No-Build analysis because it would not take effect until after 2007. Planning and environmental review for the proposed rezoning efforts must consider all existing uses nearby, including the West 59th Street site. See response to Comments #305 and #313.

321. **Comment:** The build years for West 59th Street and Gansevoort will be later than those for the other planned facilities. Therefore, these two facilities must be analyzed with a later build year and should be studied anticipating additions to parkland and residential growth in the areas, particularly given the anticipated rezonings of the far west side that will encourage development at greater densities. The effects on traffic are also likely to be considerably different at this later date.

Response: See response to Comments # 305 and #313.

322. **Comment:** There is concern with noise impacts at these two sites, since many large trucks will be traveling down residential streets at night. The DEIS only considers this to be an impact if the PCEs are doubled. Residents however, will experience an impact at a lower threshold, since one heavy noisy truck bouncing over uneven streets at 3 a.m. will be more of a nuisance than 47 light cars humming by. A noise analysis of off-site noise impacts is therefore required.

Response: See response to Comments #305 and #313.

323. **Comment:** The DEIS appears to contradict itself in recognizing that Pier 99 is between two major park areas, but characterizes the surrounding area as "largely industrial." This is misleading. Table 22.5-1 must include Hudson River Park.

Response: See response to Comments #305 and #313. Existing land uses surrounding the site consist of large transportation, utility and industrial uses (in addition to vacant lots), though much of the vacant area over water is mapped parkland. As noted in Section 22.2, major land uses in the immediate area include the elevated Miller Highway,

the Con Edison generating plant, which comprises an entire block inland, a large parking lot, and the Con Edison operations on Pier 98, which is used for barge delivery of fuel oil. The parkland, as mapped, and adjacent greenway is described within the revised Section 22.5.

324. **Comment:** In developing the design for the West 59th street facility, DSNY should consider design that is not only efficient and environmentally responsible, but one that promotes public interest and involvement.

Response: Comment noted. See response to Comments # 305 and #313.

325. **Comment:** The EIS states that the impacts from dredging will be temporary, but it will probably have to be done repeatedly. How often will dredging be necessary, and what will be the effect on natural resources?

Response: See response to Comments #305 and #313.

326. **Comment:** How will queuing be provided for on site? How will staggering truck arrivals be implemented and enforced with commercial operators? How will the truck routes affect traffic going down 9th Avenue, and how will this problem be addressed? Will enforcement be stepped up, to keep trucks on their designated routes?

Response: See response to Comments #305 and #313.

327. **Comment:** The EIS predicts no change in pedestrian and cyclist conditions. However, the study must consider the increased use of the bikeway/walkway related to the pending completion of the neighborhood parks. Additionally, a Saturday traffic analysis must be completed because pedestrian and cyclist traffic will increase on Saturdays. The analysis should be done to assess the true impacts of the facility on park users and the surrounding community.

Response: See response to Comments #305 and #313.

328. **Comment:** Why are the nearest sensitive receptors for odor at 11th Avenue and 61st Street? Noise, odor must be studied in the park abutting the facility and at the nearest

major development sites. Although the odor methodology is described, nowhere does the EIS state what the assumed odor output would be both with and without partial commercial use, or how those figures were arrived at.

Response: See response to Comments #305 and #313.

329. Comment: Section 22.17.3.6 states that a combined on-site and off-site noise analysis was not required because no sensitive receptor was found. However there was indeed a sensitive receptor found, so it must be performed. Given the odd reference to Figure 4.17.1, perhaps this was a misprint? Is it also an error that the quietest hour is the afternoon rush hour? This seems impossible. How would the analysis be affected if it was repeated during the nighttime?

Response: See response to Comments #305 and #313.

330. Comment: Given the differing odor levels sampled at municipal and commercial waste facilities, a more sensitive odor analysis should be performed for this option rather than assume that both types of waste have the same odor impact. Moreover, the air quality analysis for commercial vehicles cannot assume that they use the same fuel as municipal vehicles, nor that the fleet is of the same age.

Response: See response to Comments #305 and #313.

331. Comment: The traffic analysis for West 59th Street is speculative. None of the details are known concerning where the commercial waste would come from, how it would reach the facility, how much would arrive, and at what times. A worst case analysis should be undertaken.

Response: See response to Comments #305 and #313.

40.3.2.3.3 Gansevoort Recyclables Acceptance Facility

332. Comment: The DEIS identifies only one alternative to the new Manhattan Recyclables acceptance facility at the Gansevoort Peninsula. Other sites should be considered as alternatives, including Pier 76 on the Hudson River. The NYPD tow pound that currently

occupies Pier 76 is scheduled to move to a new facility that received site selection approval by the City Council on January 19, 2005.

Response: In the Draft New SWMP, the Gansevoort Recyclables Acceptance facility is the Proposed Action. Refer to Section 1.4.4 of this FEIS for a discussion of the Alternatives considered to this element of the Proposed Action.

333. **Comment:** Regarding the recycling facility at Pier 52 on the Gansevoort Peninsula, it is vital that if a recycling facility were to be located on this site then the surrounding park area be protected. We believe that DSNY's planning efforts have been a good faith attempt to do this, but the Hudson River Park Act would still have to be amended to permit a recycling facility, and the Trust will need to continue to work closely to successfully address issues related to traffic, natural resources, noise, odors, open space and other environmental concerns. A timetable for design of the facility must be developed as well as for the environmental review for the site.

Response: As noted in Section 2.3.2.2 of the DEIS and this FEIS, NYCEDC is in the process of developing a design for this facility. As the design is developed, it will be reviewed with the Hudson River Park Trust and Manhattan Community Board #2. When NYCEDC is prepared to move forward with the project, the design and operation of this facility will be subject to environmental review. The environmental review will necessarily define the proposed construction and operation of the facility, including the type and source of materials proposed to be accepted and the assumed number of trucks that would deliver materials to the facility; determine the range and permits and approvals required to be obtained; and perform analyses required to determine whether there are potential significant adverse impacts related to traffic, natural resources, noise, odors, open space and other environmental concerns.

334. **Comment:** A number of people commented that the proposed recyclables acceptance facility at the Gansevoort Peninsula will create noise and odor impacts within the park from a potential 190 truck trips each day. The trucks will create a safety hazard to joggers, cyclists and skaters and create traffic flow problems. Odors will be a problem with park users because the materials will be uncontainerized within the barges, and

would be aggravated by the tugboats burning the most polluting diesel fuel. The strong winds will also carry the odors of waste into the West Village and the new Gansevoort Market Historic District, which is a thriving cultural and commercial center.

Response: See response to Comment #333.

335. Comment: The City has not been open about the number of trucks that will be using the Gansevoort facility. It will include materials not only from residents, but from City, state and federal agencies, and the amount of material will continue to grow. Even more waste will be delivered if commercial recyclables are delivered to the site.

Response: See response to Comment #333.

336. Comment: It has been indicated that the recycling transfer station would be of educational value, but it is unclear what the learning value would actually be. Materials won't be separated and processed at the site.

Response: The scope of the recycling educational activities planned for this site would be substantially broader than the transfer of Recyclables going on within the building.

337. Comment: The City should explore moving the recyclables facility away from one of the few green space sections of Hudson River Park or use more than one site for recyclable materials so that not all of the burden would be placed on Gansevoort.

Response: See response to Comments #332 and #333.

338. Comment: The "Waterfront Revitalization Program" identifies several sub-policies as inapplicable, which is incorrect. Sub-policy 8.1: "Preserve, protect and maintain existing physical, visual and recreational access to the waterfront" has a response "access would not be compatible with the principal use of the site, therefore this sub-policy is not applicable." Public use certainly could be compatible with the use of the site (see public access proposed for Pier 52 facility). Sub-policy 9.1: "Protect scenic values associated with natural resources" has a response that the facility would pose no impact to scenic values associated with natural resources. It would have a very real impact to the views of the Hudson River.

Response: Once a facility design and its relationship to barges, bikeways, the esplanade and street access are defined and proposed by NYCEDC, it will be the subject of discussions with the Trust and other interested parties and an environmental review will be conducted on the proposed facility to evaluate and disclose potential impacts to scenic values and other natural resources issues articulated in the policies of the Waterfront Revitalization Program. See response to Comments #332 and #333.

339. Comment: What other sites were examined for a Manhattan acceptance facility for recyclables? The DEIS needs to study other locations for such a facility, including Pier 76. A single site for transferring recyclables in each borough would produce excessive mileage, waste fuel and create pollution. The City could save considerable mileage by using three or four simple well-placed rail transfer sidings in each borough, which would have the added advantage of providing connections for exporting recyclables to a broader range of markets.

Response: The recyclable materials collected require processing before they can be marketed. The Hugo Neu facility in Brooklyn is proposed to process and market this material. It is accessible by barge or truck, not rail. The proposed Gansevoort site and Manhattan alternatives considered were evaluated as facilities that would accept materials that have been collected by truck and transfer them for barge transport to Hugo Neu. See response to Comment #332.

340. Comment: NYCEDC has not presented any concrete proposal for financially supporting the Hudson River Park development, so it is unclear what benefit the SWMP has to the park or the community, especially given that DSNY has stated that accommodating the recycling facility would not accelerate the removal of DSNY uses on the pier, hence accelerating park construction.

Response: Concrete economic proposals are not typically addressed in the environmental review of proposed facilities; no proposal is available. Decreased truck congestion and a point of destination for Hudson River Park visitors interested to take in the exhibits in the

recycling education center that is central to this proposal are among the general benefits that would accrue from this project. See response to Comments #332 and #333.

341. **Comment:** The text throughout the document refers to a future environmental review of the facility at Gansevoort, yet the footnote states that a full environmental review will not be conducted. A waste management facility in the middle or parkland is likely to have environmental impacts, so this must be analyzed, especially the effect of trucks on users of the park and bikeway/walkway. The Peninsula will be developed entirely as parkland with no industrial uses on it, and this must be acknowledged in the EIS.
Response: See responses to Comments #332, #333 and #338.

342. **Comment:** Noise analyses were only done on Route 9A and West 14th Streets between Washington Street and Route 9A. These analyses must be done farther east on the residential streets most likely to be affected by the truck traffic.
Response: See responses to Comments #332 and #333.

343. **Comment:** There are a number of errors with the figures for the Gansevoort facility. The plan needs to be corrected to show the bikeway and esplanade and the existing highway curve, which would make adding an exit lane for trucks to leave the highway impossible. There are a number of issues with the current plan that would dramatically affect traffic flows, accessibility to the facility, and create hazards to park users. How many trucks per hour were anticipated with the two-lane ramps shown on the figure?
Response: See responses to Comments #332, #333 and #338.

344. **Comment:** What are the specific details for the Gansevoort facility? What is the layout and footprint of the facility? How much space will be taken up by the barges? Will the barges be smaller than the ones are the MTSs? Will there always be 2 barges on site?
Response: See responses to Comments #332, #333 and #338.

40.3.2.4 Queens

40.3.2.4.1 North Shore Converted MTS

345. **Comment:** Community District 7 already has a number of borough-wide Sanitation facilities, such as the MTS and the garage for another CD's Sanitation vehicles. Placing all of these facilities in this CD must end.

Response: DSNY has been working with the Department of City Administrative Services and the Office of the Queens Borough President to relocate the existing CD 11 garage that is currently located in CD 7. To date, no site has been found that is appropriate for a garage. DSNY is continuing to search and will seriously examine any sites that are proposed or become available.

346. **Comment:** The MTS is sited right across from LaGuardia Airport, and there are concerns about what height the Port Authority will allow. If the height of the MTS will have an impact on the airport, it must be redesigned.

Response: DSNY is currently working with the Federal Aviation Administration and will work with the Port Authority of New York and New Jersey to define and resolve issues associated with the height of the Converted MTS. DSNY has submitted Form 7460-1 to the Federal Aviation Administration (FAA) and the FAA has issued a "Determination of Presumed Hazard."

DSNY's design team has been in consultation with aviation industry experts who have reviewed the FAA's initial determination and believe that our proposed building does not pose a significant impact on airport operations and that ultimately we will receive a favorable ruling from the FAA on this. Consequently, DSNY will coordinate these activities with the Port Authority of New York and New Jersey.

347. **Comment:** Since the MTS was last open, the Whitestone/College Point area has changed drastically. There is much more traffic. There are changes being made to the Whitestone Expressway and to the Grand Central exit at Linden Place, and there is increased traffic at 20th Avenue. At times, that exit is backed up almost to the Linden Place exit. On Friday nights the traffic is still heavy because of traffic generated by the movie theater. The MTS may bring 10 to 15 DSNY trucks at the peak hour, and serious

problems will result at Linden Place. There are only so many trucks that can make a left under the expressway and make another left onto the service road to get to 31st Avenue. People sit at this intersection sometimes for 2 to 3 light changes. The situation needs to improve, not get worse. This will create a total standstill at this intersection, block traffic through the Corporate Park, and affect DSNY's schedule. An alternative route should be considered.

Response: When work on the DEIS began, the New York City Department of Transportation (NYCDOT) was consulted to determine if there were any known problem areas from a traffic standpoint in the vicinity of the North Shore Converted MTS. NYCDOT indicated there were existing congestion problems at Linden Place and requested an alternate route be found for DSNY collection vehicles. DSNY altered routes for five of six CDs that were originally routed through the intersection of the Whitestone Expressway Service Roads and Linden Place. Only Queens CD 9 will continue to be routed through this intersection. CD 9 is not expected to generate more than four truck trips to the North Shore Converted MTS in any given hour.

348. **Comment:** College Point Boulevard should be avoided as a DSNY truck route. The Department of City Planning has pinpointed portions of it as part of the expansion of downtown Flushing. Any DSNY trucks on College Point Boulevard in downtown Flushing will be detrimental to the development of the area and hazardous to pedestrians

Response: College Point Boulevard is a NYCDOT designated truck route that provides access to and from both the Long Island Expressway and Van Wyck Expressway, both of which are vital to the collection network for DSNY in this area. In order to avoid existing congestion identified at the Linden Place exit and its surrounding area, DSNY must route collection vehicles along College Point Boulevard in order to access the major expressways in the area. The traffic analysis indicated that the North Shore Converted MTS would cause no significant adverse impacts at intersections along College Point Boulevard between the MTS and entrances to the two major expressways.

349. **Comment:** Please review current traffic studies because the area has changed quite a bit in recent years. 20th Avenue will be widened, and Linden Place will be next. DOT is

considering computerized signals at all College Point Corporate Park arterials. There is a lot of traffic, including CD 11's sanitation trucks traveling through Northern Boulevard.

Response: CEQR guidelines state that traffic data used for traffic analysis must be collected within the past three years. Existing traffic counts were performed at study intersections in November of 2002. Additionally, study intersections did not include intersections at Linden Place because these locations screened out of further analysis due to low volumes of project related traffic flowing through these areas. 20th Avenue is not expected to be used as a major route for DSNY collection vehicles to access the North Shore Converted MTS.

350. Comment: Will the truck routes for the Converted MTS be the same as they were when the MTS was previously open?

Response: DSNY collection vehicle routes to and from the Converted MTS will generally be the same as when the MTS was previously operated except for the route changes noted in the response to #347 above. Generally, collection vehicles will make their way to major expressways along local truck routes in their local collection districts to travel towards the North Shore Converted MTS. Once near the Converted MTS, the collection vehicles will exit the expressways and use local truck routes to make their way to the Converted MTS. Collection vehicles will follow a return path to their respective CDs similar to the ones use to access the MTS.

351. Comment: Southeast Queens hosts a cluster of land-based commercial waste transfer stations located adjacent to residences. The DEIS did not assess these transfer stations, nor any other proposed commercial waste facilities and initiatives. To the extent that the CWMS was used to assess the existing stations, the assessment is flawed since the CWMS analyzed theoretical stations instead of real ones. The trucks used to haul waste, which is not generated locally, to these commercial transfer stations, creates adverse impacts that were not assessed or mitigated in the CWMS or DEIS.

Response: Although an assessment of transfer stations in Queens CD 12 was done as part of the CWMS, none of these facilities are part of the Proposed Action for Long Term Export and, therefore, were not re-evaluated in the DEIS and this FEIS. However,

subsequent to the issuance of the CWMS, DSNY proposed major revisions in its Rules governing transfer station operation that require design and operational modifications to reduce odors and emissions, as well as improve control of stormwater runoff.

40.3.2.4.2 Greenpoint Review Avenue

352. **Comment:** A number of comments state that the neighborhood is a great place to live, but traffic problems are a major concern in the area. The streets are overwhelmed by cars and trucks and are more crowded than they have ever been. Please closely analyze the effects of more car and truck traffic before enacting the final plan. Truck traffic on 48th Street, which Sanitation and other waste vehicles use, is a particular problem at night. 43rd Street, 48th Street, 39th Street and Review Avenue cannot handle any additional traffic. The three transfer stations in such close proximity to one another (Review Ave, 485 Scott and 72 Scott Ave.) have created a major truck traffic problem.
Response: Five of the six Queens CDs that would be assigned to the Review Avenue Transfer Station under the Draft New SWMP are currently making deliveries to this facility under Interim Export contracts. Under the Draft New SWMP, this facility would export all waste received by barge or rail, including any commercial waste received. Export by rail would involve draying waste by truck in sealed containers from the facility to the Maspeth rail yard.

In addition to this initiative, the Draft New SWMP notes that the majority (68%) of the Commercial Waste transfer stations in the City are located in areas zoned for the heaviest industry (M3 zones) and therefore well buffered from any conforming residential use. However, trucks traveling to and from the transfer stations use designated truck routes that pass through residential areas. Metropolitan Avenue in Greenpoint, Brooklyn is an example of such a thoroughfare.

The CWMS (Appendix I) analyzed 58 key intersections in areas leading up to transfer stations and determined that the percentage of waste hauling vehicles was no more than 7% of the total number of vehicles traveling through any of the intersections. While the

number of waste hauling trucks is technically small in comparison with all vehicles, DSNY will work with the New York City Department of Transportation (NYCDOT) to conduct a traffic analysis to study the feasibility of redirecting truck routes leading to transfer stations with the objective of minimizing traffic-related impacts in residential areas to the extent possible. Based on the data gathered in the CWMS (Appendix I), DSNY will select potentially sensitive truck routes. Community advisory committees will then be formed in each of the respective areas identified. These groups will review and approve the truck routes selected or recommend others to be analyzed. The community advisory committees will also review the methodology employed by the analysis and evaluate the alternative routes to ensure that the redistribution of truck routes is equitable. DSNY will also work with the City Council and industry representatives to formulate this study.

353. **Comment:** There will be too many waste vehicles coming from many districts, traveling down Review Avenue and causing traffic jams. There are children and schools on Grand Avenue, an MTA project, and now with a rail station, it will create too much havoc. The traffic is excessive and the trucks always queue, resulting in odor and noise impacts. We urge DSNY to transport waste by rail.

Response: The use of the Review Avenue Transfer Station as either a truck-to-barge or truck-to-rail transfer station for export of DSNY-managed Waste at a capacity of 1,200 tpd was evaluated in the 2000 SWMP FEIS and found to have no potentially significant unmitigatible adverse impacts. The proposed on-site transfer operations at this facility are the same in the Draft New SWMP as previously proposed and, therefore, no further analysis of on-site impacts is required. However, rail export would entail draying (trucking) containers between the facility and the Maspeth Rail Yard on Rust Street. This transport option was not considered in the 2000 FEIS and is evaluated in the DEIS and this FEIS. The analysis showed no potentially significant unmitigatable adverse impacts. Also, see Response to Comment #352.

354. **Comment:** Several people were concerned with the waterfront area, recapturing wasted industrial land along the waterfront and revitalizing it so that in the future it can become a

recreational area for the neighborhood. The barges conveying waste may adversely affect this revitalization effort. We are concerned that Newtown Creek may become further degraded, and that growth for new development will be hindered.

Response: The Review Avenue Facility is currently an active transfer station located within the Newtown Creek Significant Maritime Industrial Area (SMIA). The goal of the SMIA is to protect and facilitate working waterfront uses and to accommodate future growth of these uses, including water-dependent activities. The existing facility and the proposed future use of barge operations with sealed containers at this site are consistent with the SMIA goals. The continued operation of this facility would not preclude future development at other locations along the waterfront.

355. Comment: Long Island City has one of the worst air pollution problems in the City according to data from the new air monitors. All of the truck emissions have caused this area to be called "asthma alley." This will be exacerbated by all of the traffic resulting from the Plan. Currently, trucks don't stay on the truck routes due to the traffic jams and go onto undesignated routes. The Cross Harbor Tunnel project will result in thousands of trucks entering and leaving the area every day. What assurances will be made that trucks will stay on designated routes and not invade residential neighborhoods?

Response: DSNY workers have standing orders to follow certain routes to their destinations, which include, as required by NYCDOT Title 34 regulations, following NYCDOT designated truck routes until they must exit that route to directly access a facility or a collection route. If DSNY workers violate these route requirements, they are subject to discipline. DSNY's Permit and Inspection Unit would continue to be responsible for policing private carters in addition to concurrent NYPD efforts to enforce truck route restrictions.

356. Comment: The streets are not designed to handle the heavy traffic flows, and this frequently results in the rupture of underground pipes, which the homeowner is then

responsible for. The City needs to address these problems, before moving forward with selected facilities.

Response: The streets are designed in accordance with NYCDOT specifications, which take into account the expected usage. Also, see Response to Comment #355.

357. Comment: There is a serious concern with the possible plan for a truck-to truck-to-rail transfer plan. Under the plan, the LIRR tracks along Rust Street at and adjacent to Maspeth Avenue would be a location where trucks would load containers onto rail cars for export. This would mean even more trucks going into and out of the congested West Maspeth Industrial Area. The congestion and air pollution will be serious, and must be evaluated in the EIS.

Response: As noted in the Response to Comment #353, the traffic, air quality and noise impacts of draying containers from the Review Avenue Transfer Station to the Maspeth Rail Yard were evaluated in the DEIS and this FEIS and found to have no potentially significant adverse impacts.

358. Comment: The following issues require study within the EIS: spill mitigation plans at Newtown Creek, waterfront traffic as it may affect the planned Greenpoint/Williamsburg waterfront sports facility, and water traffic as it affects the proposed 2012 Olympic venues.

Response: The Williamsburg waterfront sports facilities proposed as part of the 2012 Olympics plan are not included in the DEIS and this FEIS Future No-Build analysis because they would not be operational by 2007. Planning and environmental review for these proposed waterfront sports venues (including associated water traffic) must consider all existing uses nearby, including the Review Avenue Transfer Station.

Solid waste transfer stations must have a Part 360 permit from the New York State Department of Environmental Conservation (NYSDEC). As part of these permits, the general operations of the facility are discussed in detail, including the handling of spills. Therefore, spill mitigation is part of the operation of the facility not the environmental review process.

359. **Comment:** The SWMP mentions that a new off-site intermodal railyard may be required for the Review Avenue Transfer Station, but there are no details on this facility or what its impact would be. Please provide these details.

Response: The railyard in question is not new; Maspeth Rail Yard on Rust Street exists and no permitting actions are required for its proposed use as an intermodal transfer point for truck to rail transfer of containerized waste drayed from the Review Avenue Transfer Station. The Maspeth Rail Yard site is described in Chapter 2, Section 2.2.12.4, of the DEIS and this FEIS. Chapter 15 of the DEIS and this FEIS, summarizing the results of the environmental review, reports that there were no potentially significant adverse impacts associated with the use of the Maspeth Rail Yard.

40.3.2.5 Staten Island

360. **Comment:** Since the Staten Island transfer station will be the first long-term export facility on line, there is a concern that it accepts only Staten Island waste. Any permit, even if under the name of a private entity, should state that it may only receive Staten Island waste.

Response: The Part 360 permit for DSNY's Staten Island Transfer Station does state that only DSNY-managed Waste from Richmond County can be accepted at this facility. A private vendor would operate under the same permit conditions.

361. **Comment:** We would like the trucks to use the streets of Travis to get back to their destination after using the transfer station instead of narrow Victory Boulevard, and to utilize internal roads within the landfill to access the garage. Highways should be used instead of local roads wherever feasible.

Response: The 2000 FEIS for the 2000 SWMP Modification evaluated the traffic impacts of waste hauling vehicles entering and leaving DSNY's Staten Island Transfer Station and found no potentially significant adverse impacts would result. Notwithstanding, DSNY continues to agree that DSNY collection vehicles entering and leaving the facility will use internal landfill roads and Route 440 where feasible.

362. **Comment:** What is the status of the rail line, and when will Staten Island waste be hauled out by rail?

Response: The Port Authority of New York and New Jersey has awarded a contract for the Chemical Coast connector, and construction is anticipated to be complete in early 2006. The NYCEDC is responsible for the construction of the Travis Branch Extension that will interconnect the rail line with the facility. NYCEDC's current schedule calls for completion of construction in 2006.

363. **Comment:** It would be a mistake for a private entity to operate the Staten Island Transfer Station. The facility should be operated by the City.

Response: Operation of the facility by DSNY personnel is under consideration but a final decision has not been made.

364. **Comment:** The Staten Island transfer station should accommodate state-of-the-art composting tunnels or other high tech options for processing waste.

Response: The transfer station will containerize waste for transfer to rail using well accepted technology. A summary of DSNY's recent evaluation of alternative processing and waste conversion technology for the City can be found in the Draft New SWMP and in other DSNY composting reports located on the DSNY Web site. A DSNY facility for composting yard waste is adjacent to the Staten Island Transfer Station.

40.3.3 Involved Agency Comments

40.3.3.1 NYSDEC Comments on the DEIS For the New York City Comprehensive SWMP

These comments are provided consistent with the notice, DEIS Hearing and Extension of Comment Period, dated November 16, 2004. The comments are specific to NYSDEC regulatory authority and are intended to provide clarity in the assessment of various environmental impacts that may result from the Proposed Action.

40.3.3.1.1 General

1. **Comment:** The DEIS relies heavily on studies and reports prepared earlier that are not significantly summarized, including documents such as the Commercial Waste Study, Manhattan Transfer Siting Report, as well as the 2001 CEQR Technical Manual (see references on page 11 of the final scoping document and throughout the DEIS text). The reference to documents generated outside of the DEIS provides some difficulty in reviewing the appropriate sections for adequacy.

Response: Note that Appendix E of the Draft New SWMP, which the DEIS was prepared to support, includes the entire Commercial Waste Management Study (CWMS) as an appendix in compact disk format. That appendix includes an executive summary of each volume of the study, including the one referenced above. A copy of the CWMS Executive Summary in compact disk format is also included in Appendix I of this FEIS.

2. **Comment:** The DEIS provides reference to and cursory information on the use of private transfer stations for the management of residential waste in boroughs where there is not a converted marine transfer station. The discussion regarding the potential impacts for the use of these facilities is underdeveloped. The DEIS relies heavily on previous and future decisions by the DEC as part of the environmental review of permit applications. The DEIS should fully discuss any likely impacts that result from use of commercial waste management facilities.

Response: Five private transfer stations located in the Bronx, Queens and Brooklyn are designated in the Draft New SWMP as potential long-term export facilities. Four of these are existing facilities currently being used by DSNY for Interim Export. The fifth, Scott-Meserole, which is now the site of several contiguous facilities, would require substantial modification, so was subject to detailed environmental review in the DEIS and this FEIS.

For the four remaining facilities, the DEIS and this FEIS evaluated the potential for significant adverse impacts associated with any proposed expansion or other potentially significant physical modifications to each facility or its operation. These analyses

considered the incremental effects associated with the proposed change and is consistent with CEQR requirements. These evaluations included the following:

- For Review Avenue in Queens (with a proposed expansion of existing permitted capacity of 242 tpd (from 958 tpd to 1200 tpd), the off-site traffic, air quality and noise impacts, as applicable, associated with processing the potential maximum increment of DSNY-managed Waste during Long Term Export for Queens Community Districts 1 through 6 above the average peak daily tons delivered during current Interim Export operations, and the draying of waste containers from the facility to the Maspeth Railyard;

- For Harlem River Yard in the Bronx (permitted for processing 4,000 tpd), the traffic impacts associated with processing potential maximum increment of DSNY-managed Waste during Long Term Export above the average peak daily tons delivered during current Interim Export operations;

- For East 132nd Street in the Bronx (permitted for processing 2,999 tpd), the draying of waste containers from the facility to the Maspeth Railyard at a volume equivalent to the facility's maximum processing capacity and the traffic impacts associated with processing potential maximum increment of DSNY-managed Waste during Long Term Export above the average peak daily tons delivered during current Interim Export operations; and

- For 485 Scott Avenue in Brooklyn, no incremental changes were evaluated, because (i) the volume of DSNY collection vehicle traffic is consistent with levels handled in Interim Export Operations and (ii) the barge-out option was evaluated in the 2000 SWMP FEIS.

Agency review of applications that may be submitted for permit modifications may result in a determination that additional environmental review is required.

3. **Comment:** The DEIS should consider the likely consequences and probable impacts that develop from the use of the existing 59th Street Marine Transfer Station (MTS) and the use of the converted MTS during non peaking hours.

Response: At the present time there is no specific proposal in hand that would be the basis for such an evaluation. As indicated in the Draft New SWMP, DSNY intends to undertake a process of information gathering that would then proceed to a procurement of proposals for using this site for the export of commercial waste. When a decision is made to select a proposal for development of this site for commercial waste, an environmental review will be initiated.

4. **Comment:** The DEIS should discuss the impacts of NYC municipal garbage containing significant quantities of household hazardous waste and its potential impacts on remote landfills and emissions at Waste to Energy (WTE) plants.

Response: Based on the Waste Composition Sorting Program that is now in progress, DSNY does not have any evidence that household hazardous waste (HHW) is present at detectable levels in its Waste picked up at curbside and in Waste that has been containerized. In addition, DSNY plans to release a Request for Proposals (RFP) for a Household Hazardous/Special Waste Collection Program Vendor. Finally, unless specifically permitted otherwise, applicable regulations for remote disposal locations that receive DSNY-managed Waste (i.e., landfills, waste-to-energy facilities) prohibit the acceptance of hazardous wastes. Those disposal facilities are required to have plans in place for screening and managing the receipt of waste and for removal of any inadvertently accepted hazardous waste.

5. **Comment:** NYC proposes a solid waste management plan totally dependant on out-of-city facilities. Absent from the discussion is detailed analysis of potential impacts resulting from unanticipated facility closures and transportation problems.

Response: The DEIS and this FEIS is a review of the Draft New SWMP. The type of information referenced in this comment is available in the Part 360 Solid Waste Facility Permit Applications that have been filed with NYSDEC. Based on comments from NYSDEC during review of these applications, it is DSNY's understanding that the Contingency Plans, as submitted and revised, and other relevant information on this issue comply with NYSDEC regulations. In addition, at NYSDEC's request DSNY has prepared a Transfer Transport and Disposal Plan (TTDP) incorporated as Appendix I to the Part 360 Permit Applications. The TTDP provides a more complete description of how the contracts that DSNY is in the process of negotiating for intermodal transfer, barge and/or rail transport and disposal will provide the resources and assurances to address these types of contingencies with specific reference to terminal and rail facilities with available capacity to serve DSNY's needs. The TTDP is included in the FEIS as Section 40.3.5, of this chapter.

6. **Comment:** The DEIS Plan fails to explore any in-city disposal alternatives including WTE, yet disposal at three out of City WTE plants is proposed. The discussion should explain why no in-City disposal alternatives are presented and why the City continues transporting waste to out-of-City WTE facilities, while not considering WTE plant construction within its borders.

Response: Please refer to the response to comment #7 in Section 40.3.1.2, Alternatives Analysis, that discusses Alternatives considered during Plan development. Also refer to Section 1.3 of this FEIS for more information on the scope of Alternatives considered.

7. **Comment:** The DEIS omits traffic, noise, and air pollution impacts along out of city waste routes.

Response: The Converted MTSs will reduce the number of outbound out-of-City transfer trailer trips that occur, thus reducing this mode of transport on out-of-City truck routes. The out-of-City routes that will serve the Converted MTSs and that will be used to transport waste by rail or barge are existing routes, are located outside of New York State, and can be used for the purpose of moving freight (containerized waste) in compliance with applicable law. Any significant modifications to these routes by their owners/operators would be subject to environmental review in accordance with the laws and regulations applicable to the host jurisdictions, except where federal law preempts local and state jurisdiction, as is the case with railroads. Accordingly, there is no requirement in SEQRA or CEQR to evaluate impacts associated with the use of this existing out-of-state infrastructure.

8. **Comment:** Provide an analysis of waste route construction impacts, both in-city and out of city.

Response: The in-City routes that will be used to support waste transport are the harbor or active rail freight lines. Any in-City construction that is required will be addressed in permit applications where necessary, including any requirements for supplemental environmental review. See Response to Comment #7 regarding out-of-City routes.

9. **Comment:** The DEIS omits significant discussion on the disposal of large amounts of

dredge waste. Details of dredge disposal and a list of destination facilities for this material should be included in the discussion.

Response: The Joint Application for Article 15/25 Permits for the Converted MTSs that was submitted to NYSDEC addresses this matter. No environmental review in the DEIS or FEIS for the Draft New SWMP is required. If NYSDEC deems that the management of dredge spoils, as described in the permit application, requires additional review, a supplemental environmental review will be prepared.

10. **Comment:** The DEIS emphasizes sorting and pro-manufacturing activity without any discussion of possible in-city reuse or manufacturing alternatives. The discussion should include why the City has been unable to attract additional recycled content goods manufacturers and any probable impacts.

Response: The Visy Plant on Staten Island, which has been in operation since 1997, is the result of a major City-State development program to create a manufacturing facility within the City to process recycled paper from the City Curbside Program into finished product. Currently, Visy Paper receives and processes approximately 180,000 tons per year of DSNY's recycled paper. The Draft New SWMP provides an extensive discussion of the Proposed Action for recycling—the development of a Materials Processing Facility at the South Brooklyn Marine Terminal that will process the MGP collected by the Curbside Program. Among the reasons mentioned for developing this facility is the potential to increase the net recovery rate for materials collected by the Curbside Program and to improve the beneficiation of these MGP materials. If this potential is realized, it could also stimulate the growth of reuse industries within the City that would rely of this supply of beneficiated materials.

11. **Comment:** Section 1-2 Purpose and Need - Page 1-3: The last sentence states "These Existing Programs and New Initiatives approved pursuant to the Existing SWMP are therefore not part of the Proposed Action that is subject to environmental review in this DEIS." What specific existing programs and new initiatives are being referred to? If the statement is referring to biosolids, medical waste, dredge spoils and Fresh Kills construction and closure, please provide an updated reference for discussion of these issues.

Response: The definition of the terms, Existing Programs and New Initiatives, appears on page 1-2 of the Draft New SWMP. Page 1-3 lists twelve Attachments to the Draft New SWMP with brief descriptions of the information contained in Attachments V, VI, VII, IX and X where these Existing Programs and New Initiatives are described.

12. **Comment:** Section 2.1.2 General Information, Plan Policies and Key Assumptions - Proposed Plan Long Term Export Facilities - Page 2-6: Please clarify *who* were the independent utilities that approved the environmental reviews for the demolition. Also, please describe the environmental remedial program for each of the individual MTS facilities such as page 3-23 for Southwest Brooklyn.

Response: "Independent utility" is a term used in environmental law review to indicate that a proposed action has value in and of itself and does not commit the decision-maker to a course of other actions Therefore, environmental review of the individual action as part of a larger action is not necessary or necessarily appropriate. This finding, pertaining to the demolition of the Greenpoint and Hamilton Avenue incinerators, was made by the DSNY in connection with the proposed demolition project.

13. **Comment:** All solid waste facilities must be designed to be in compliance with the requirements of Part 360-1.7(a)(2)(ii), which prohibits siting on flood plains unless specific provisions are made as explained therein. Please correct throughout the document.

Response: As documented in the Part 360 Permit Applications and the Joint Application for the Article 15/25 Permits for the Converted MTSs submitted to NYSDEC, these facilities are designed in compliance with Part 360-1.7(a)(2)(ii) by incorporating "provisions…to prevent the encroachment of flood waters upon those facilities." The Converted MTSs are designed to elevate the pier level of the over-water facilities, which is the lowest level where waste processing occurs, six inches above the level of the 100-year flood plain. The upland Converted MTSs are also designed so that the bulkhead or pier level is above the 100-year flood plain

40.3.3.1.2 Rail/Barge Issues

14. **Comment:** The DEIS discussion relies primarily on barge transport with a lesser

emphasis on rail. Inherent in a barge system is the loss of waterfront access; however, rail provides greater flexibility and would require improvements that may attract other industry and possibly trigger additional upgrades to the rail system. Provide an analysis exploring whether the City would be better served by either a barge /or rail-focused system. The DEIS should provide a comparison of the negative environmental impact of the additional rail/barge traffic versus the reduction of vehicle traffic.

Response: The four Converted MTSs that are elements of the Proposed Action for Long Term Export have no rail access and are designed to load barges with containerized waste that will then be transported to intermodal terminals in the New York harbor region. As described in the TTDP (see response to Comment #5, above), the available terminal facilities in the New York Harbor region provide options for both barge or rail transport to disposal destinations.

Four of the five private transfer stations in the Bronx, Queens and Brooklyn that are designated in the Draft New SWMP have rail access, either on-site (Harlem River Yard in the Bronx and Scott-Scholes Street in Brooklyn) or by draying containers to rail yards in the project service area. The traffic and off-site air quality impacts of draying containers to the railyards that would serve the East 132nd Street facility in the Bronx and the Review Avenue facility in Queens have been evaluated in the DEIS and this FEIS and found to have no potentially significant unmitigatable adverse impacts. Scott Avenue in Brooklyn is an existing facility that would transport containers by barge and would use the same terminal facilities that are available to the Converted MTSs.

The point of the Proposed waste management system as advanced in the Draft New SWMP is to provide the City with the flexibility to use both barge and rail while, at the same time, balancing other important considerations so that the Proposed waste management system in the Draft New SWMP is both equitable and efficient.

Since the adoption of the 2000 Plan Modification, which was approved by NYSDEC, the City has been committed to a transition from a truck-based system of waste export to a rail-based system. In July of 2000 Mayor Bloomberg reaffirmed the Administration's

commitment to this objective. The Draft New SWMP cites several critical factors in support of this objective. See Section 3.3.1 of the Draft New SWMP. Finally the Proposed Action is comprised of a set of discrete facilities without overlapping impacts and therefore no cumulative analysis of impacts is required.

15. **Comment:** The DEIS should incorporate a discussion regarding the feasibility and need of improving the rail infrastructure in NYC and along potential out-of-City waste routes, and include an analysis of the additional track and yard capacity that may be required.

Response: The Final Scoping Document for the DEIS, which was developed in consultation with NYSDEC, clearly states that the one objective of the Draft New SWMP is to develop a Long Term Export program. If the City's rail infrastructure is improved incidental to accomplishing that objective (as may be the case), that is a benefit of implementing the SWMP, not the primary objective of the SWMP. Note that the TTDP referred to in the response to Comment #5 addresses the facility requirements for supporting barge/rail export from the Converted MTSs.

16. **Comment:** The DEIS should include a detailed discussion of the rail and barge systems, currently and proposed, and how the proposed SWMP changes are viable within these systems. Included in this assessment should be the possibility of using float barges from 65th Street or New York Cross Harbor and the possible container unloading facilities in the New York City Harbor.

Response: See Response to Comment #5. DSNY does not intend to use the 65th Street railyard in Brooklyn or the related float bridge facility for any form of containerized waste transfer or transport operation that is part of the Long Term Export Program.

40.3.3.1.3 Environmental Justice (Chapter 1)

17. **Comment:** The environmental justice section contains no assessment of the potential burden the proposed action(s) may have on identified environmental justice communities. Mapping neighborhood facilities as noted in the scoping document and coupling that with the statement "As such, they are not intended to depict the type or extent of any

environmental burden in the EJ community," does not assess any potential impacts or provide an evaluation of the burden to those neighborhoods.

Response: Section 1.9, Proposed Outreach Process - Environmental Justice, of the Final Scoping Document for the DEIS was developed through extensive consultation with NYSDEC with the intent of applying NYSDEC's Environmental Justice and Permitting Guidance of March 2003 to the development of the DEIS and this FEIS. Although the Guidance applies only to NYSDEC acting in the role of lead agency, DSNY, as lead agency for the DEIS and this FEIS, determined that implementation of the policy would have benefits in enhancing public participation. The referenced section of the Scoping Document includes the statement: "The project area maps also identify facilities in the project area that would be included in the environmental burden analysis in the event that significant impacts from the project are found." The intent of the statement is clear: a burden analysis will be performed if there is an impact and the analysis will include the assessment of related facilities that may contribute a similar burden. The analyses in the DEIS and this FEIS have determined that there are no potentially unmitigable significant adverse impacts associated with the Proposed Action. Accordingly, no burden analysis is required.

18. Comment: The DEIS provides a discussion of how DSNY will conduct Enhanced Outreach, utilizing the DEIS hearing process. The DEIS further suggests the existing outreach complies with DEC's policy on Environmental Justice and Permitting. The DEIS, however, does not provide in draft the required Enhanced Public Outreach Plan, nor does it provide a schedule for such compliance.

Response: Section 1.9.2 of the Final Scoping Document presents the proposed enhanced public outreach program. In a November 8, 2004 transmittal to NYSDEC, DSNY provided an Interim Implementation Report describing the enhanced public outreach activities that were undertaken during the Scoping process and described the activities that would be undertaken during the DEIS hearing phase. After publication of the DEIS in October 2004, DSNY has implemented additional enhanced public outreach activities consistent with program as proposed. By email on December 26, 2004, DSNY provided NYSDEC with additional materials on its enhanced public outreach program, including

notice of DSNY's intention to mail out notices to stakeholders on the Community Board ULURP hearings on the four Converted ULURP actions scheduled during January. These notices specifically responded to NYSDEC's desire that stakeholders be provided with information on the permit hearing process. This topic was addressed during the Community Board ULURP meetings. A report on the results of DSNY's enhanced public outreach process during the ULURP hearings was transmitted to DSNY in March. When the FEIS is published with a responsiveness summary Chapter 40 addressing the numerous public comments received as a result of DSNY's enhanced public outreach activities on the Draft New SWMP, this chapter will also summarize the extent of DSNY's enhanced public outreach activities though publication of the FEIS and certify that DSNY has complied with its enhanced public outreach plan. Additionally, Section 40.3.6 of this Chapter provides an interim implementation report on the enhanced public participation program.

The following summarizes relevant statistics on implementation of the enhanced public outreach program during the DEIS Scoping, DEIS Hearing and ULURP Hearings Phases.

Pre-Scoping Outreach Meetings at Potentially Affected Communities: - 9

A. Meetings with eight district managers or their representatives, plus a meeting with the Hunt's Point Economic Development Corporation.

B. Repository Locations for New SWMP Project Materials: 22 - *(two locations in each district – 11 districts, in total)*

C. Toll Free Hotline Inquiries: 26 - (*Hotline calls received starting June 2, 2004 through February 9, 2005*)

D. Follow-up Inquiries Logged and Addressed during Scoping/DEIS Comment & Interim Periods: 60 -*(Scoping Meetings, DEIS Hearings, Community Board ULURP Hearings)*

DEIS Scoping Meetings - 10

A. Outreach Activity

- 2,200 stakeholder invitational color tri-fold mailings and project updates.
- 12 main-stream and community based newspaper notices, plus the City Record notice.

B. Meeting Services

- Consecutive and/or simultaneous Spanish interpreters' service available at 8 of 10 meetings.
- List of public information materials available at Scoping meetings:

  - 3 Large Table Top Display Boards_that summarized the Proposed Action, typical EIS topics, and the public involvement process.

C. Meeting Handouts/Fact sheets***:**

- Welcome Sheet
- Opening Statement for Public Scoping Meeting
- PowerPoint Presentation
- Fact sheet #1 – City Environmental Quality Review (CEQR) FAQs
- Fact sheet #2 – CEQR Process Flowchart for the New SWMP EIS
- Fact sheet #3 – Proposed Action
- Comment Sheet

  *****<*Translated into other languages for comprehension by non-English speaking stakeholders*>

DEIS Hearings - 8

A. Pre-Meeting_Outreach Activity

- 3,000 stakeholder invitational color tri-fold mailings with project updates and targeted Spanish translated invitational color tri-fold mailings *(~100*) with project updates.
- 3 main-stream and community based newspaper notices, plus City Record and ENB notices

B. Meeting Services

- Consecutive and/or simultaneous Spanish interpreters' service available at 5 of 8 hearings
- List of public information materials available at DEIS hearings

  - 2 Large Table Top Display Boards_that summarized the proposed action/

impacts & mitigation measures and the public involvement process

C. Meeting Handouts/Fact sheets*****:

- Welcome Sheet
- Opening Statement for DEIS Hearings
- PowerPoint Presentation
- Fact sheet #1 – DSNY Public Involvement
- Fact sheet #2 – Proposed Action / Impacts & Mitigation
- Fact sheet #3 – State Permit Review Process
- Comment Sheet

*****<*Translated into other languages for comprehension by non-English speaking stakeholders*>

Community Board ULURP Hearings - 4

A. Pre-Meeting Outreach Activity

- 1,300 stakeholder invitational tri-fold mailings with project updates
- List of public information materials available at ULURP hearings

B. Meeting Handouts/Fact sheets:

- Fact sheet #1 – DSNY Public Involvement
- Fact sheet #3 – State Permit Review Process

19. **Comment:** Examples of public outreach documents should be added to the appendix as attachments.

Response: These materials are included as Appendix H to this FEIS.

20. **Comment:** Reference to joint hearings with the DEC should be removed. The reference to DEC's commitment to issue Notices of Complete Applications should be deleted from the discussion.

Response: Comment noted. The change is in the FEIS.

40.3.3.1.4 Overview of Study Methodologies for Site-Specific Analyses (Chapter 3)

21. **Comment:** Table 3.16-1 (p. 3-48) is the "Average Peak Day Facility Load Allocation," how is the average peak day defined? Peak generally refers to a maximum. How is an average computed?

Response: Average peak day is defined as the peak day that occurs once a week, typically on a Tuesday, when then number of loads delivered to an MTS is typically higher than the other days of the week. It is an average peak day because load allocations were developed based on the average number of loads delivered on the peak day of the week over the entire Fiscal Year (1997 or 1998, depending on the facility)..

22. **Comment:** On p. 3-71, in the second sentence, the phrase "… comparison with the $PM_{2.5}$ NAAQS is not feasible (*emphasis added*)" should be changed to "... is not attempted" as a more accurate representation.

Response: We concur with this comment.

23. **Comment:** The document is sometimes confusing with regard to the differing requirements of NYSDEC as contrasted with those of NYC DEP. For instance, on p. 3-71 the PM_{10} emissions of 15 tons/year is a state threshold, and not a City DEP requirement, but that is not clearly stated. Elsewhere distinctions between city and state thresholds could be better made. The discussion should clarify the separate city and state requirements.

Response: We agree this could be clarified. To do so, on page 3-71, the second bullet will be edited to include the introductory phrase, "Per NYSDEC and NYCDEP policy, results…". The third bullet on this page will be edited to include the introductory phrase, "Per NYSDEC policy, if primary…" The fourth bullet on this page will be edited to include the introductory phrase "Per NYCDEP policy, the potential incremental….". The fifth bullet in this list, which is on Page 3-72, will be preceded by the introductory phrase, "Per NYCDEP policy the maximum incremental….".

24. **Comment:** Because some aspects of the analysis were begun prior to the general availability of Mobile6.2 in February 2004, Mobile5b was used for some portions of the

analysis. In some cases, Mobile6.2 was also apparently used (see p. 3-81). While there are representations made that the most current state and city approved input parameters were used ..." (p. 3-89), this is contradicted elsewhere by reference to the NYCDEP's Report #34 (Jan. 1982). See p. 3-91 & 3-92. When Mobile6.2 was used, was it consistently applied? The technical backup for the site specific analyses should be included in the appendix.

Response: The initial roadway air quality analysis of all prospective waste transfer station sites utilized MOBILE5b emission factors, because agencies had not yet developed the necessary inputs for the recently released MOBILE6.2 model. As the SWMP was completed, the Proposed Action sites were identified. As the inputs needed to run MOBILE6.2 became available from agencies, the Proposed Action sites were analyzed using MOBILE6.2 emission factors. If Alternative sites were to be substituted for these sites in the future, these sites can be evaluated using MOBILE6.2 emission factors in a supplemental environmental review. For the Proposed Plan Sites Mobile6.2 with the current input parameters was used. The DEIS and this FEIS notes that the Technical Backup for the analysis is available upon request. (See page 3-1.) A copy of the Technical Backup was sent to NYSDEC prior to the publication of the FEIS.

25. **Comment:** The waste handling (transfer) operations are modeled using AP-42 § 13.2.4 Aggregate Handling and Storage Piles, but the DEIS appears to be in error on two counts. This AP-42 method (i.e. § 13.2.4) was not revised on 12/0.3 nor does it contain a correction factor C (see p. 3-83 of the DEIS). The discussion should be revised to correct the errors.

Response: We agree with this comment and will make the correction, as appropriate.

26. **Comment:** Load factors and activity data are not provided to verify the tugboat emission factors presented in Table 3.17-5.

Response: The load factors and activity data are in the Technical Backup that was sent to NYSDEC prior to the publication of the FEIS.

27. **Comment:** For PM_{10} road dust calculations, the latest AP-42 Chapter 13 2.1 (12/0.3) guidance was not used. The DEIS discussion does not estimate $PM_{2.5}$ road dust.

Response: The DEIS and this FEIS did use the latest version of AP-42, Chapter 13.2.1. The date of that version (12.03) will be added to the text where this reference is provided.

The NYSDEC's policy on $PM_{2.5}$ analysis does not apply to the proposed action or to facilities included in the proposed action, but $PM_{2.5}$ analysis was undertaken nevertheless. The DEIS and this FEIS does include $PM_{2.5}$ road dust emissions in the impact analysis at off-site microscale (roadside) receptors, but not at neighborhood-scale receptors for the off-site analysis, per NYCDEP guidance. The on-site analysis does not include $PM_{2.5}$ from road dust in the impact analysis, due to the very low on-site vehicle speeds. The primary source of on-site $PM_{2.5}$ emissions is expected to be vehicle exhaust, and these emissions were included in the $PM_{2.5}$ analysis.

40.3.3.1.5 Descriptions of Facility Sites

59th Street MTS

28. **Comment:** The 59th Street MTS is mentioned as a possible commercial waste transfer point. Describe improvements that would be required for the facility to accommodate the commercial waste sector. Describe the impacts that are expected to occur if this facility is used in this manner.

Response: See Response to Comment #3.

29. **Comment:** Describe the Hudson River Greenway trail at the point of intersection with the 59th Street MTS. Is the trail diverted in a manner that is safe and does not detract significantly from the trail's aesthetics?

Response: This segment of the Hudson River Greenway (Route 9A bikeway) is particularly narrow and surrounded by active industrial operations and transportation

facilities, resulting in a generally low-quality visual environment. In the vicinity of the West 59th Street MTS, the path is adjacent to the elevated Miller Highway columns to the east and the Consolidated Edison pier (at 58th Street) and the existing MTS to the west along the water. There is a stop sign on the path at the West 59th St. intersection and a sharp westward turn as one travels north toward 60th Street, where the waterfront opens up to view and the southernmost portion of Riverside Park South is under construction. (See Sections 22.2: Land Use and 22.5: Open Space.) As noted in the response to Comment #3, any Commercial Waste export facility that might be developed at the site as a result of the investigation and procurement processes that DSNY initiates in the future would be subject to environmental review at a later date. When there is a specific proposal for development of this site, DSNY will consult and coordinate with NYCDPR and the Hudson River Park Trust on the interface between the bike path and the proposed facility.

South Brooklyn Marine Terminal (SBMT)

30. **Comment:** It is expected that *85%* of the inbound recyclables to the South Brooklyn Marine Terminal (SBMT) will be delivered by barge. Where will the material originate and where will it be loaded onto barges? The DEIS discussion should include a description of the recycling support facilities. Provide the names of destination points for processed recyclables.

Response: The facilities that will supply Recyclables by barge to the Materials Processing Facility at the SBMT are described in Chapter 2, Table 2-3.1 of the SWMP and include: (i) the existing Hugo Neu Recyclables Acceptance facilities in the Bronx and Long Island City; and (ii) the proposed Gansevoort Recyclables Acceptance Facility in Manhattan, all of which are or would be capable of shipping materials by barge. These Acceptance Facilities would receive Curbside Program collections from the respective boroughs in which they are located, except the Long Island City and Bronx facility, which currently receive materials from northern Brooklyn and northern Manhattan, respectively.

The destination of processed recyclables from the Materials Processing Facility at the SBMT will depend upon the marketing arrangements made by the operator after the facility is constructed and in operation.

31. **Comment:** Were any alternatives to the SBMT available with both barge and rail capability? Is the SBMT rail-accessible? Discuss the potential for shipping recyclables from the SBMT via rail.

Response: The answer to both questions is no, and there is no potential for shipping recyclables from the SBMT via rail.

32. **Comment:** On p. 17-4 the section entitled "Environmental Review: Manhattan Curbside Recyclables to 30th Street Pier at South Brooklyn Marine Terminal," states that borings taken close to the SBMT show that the area contains 10-25 feet of fill material. Is an investigation planned to determine if contamination is present at the proposed SBMT site?

Response: Yes an investigation is planned. As the plans for this facility are developed, a more detailed supplemental environmental review will be prepared, and a Phase II subsurface site investigation may be required.

33. **Comment:** Please clarify whether all materials from the proposed Gansevoort recyclables transfer facility will be sent to the SBMT. If not, provide a list of destination facilities.

Response: Yes, all of the Recyclables delivered to the Gansevoort Acceptance facility would be shipped to the Materials Processing Facility at the SBMT by barge.

34. **Comment:** The 30th Street Pier, Brooklyn is included in the list of SWMP Facilities and potential contractors as a recyclables processing facility. The footnote states "As a recycling facility, it is not subject to regulation as a solid waste facility." Please correct this statement to reflect that it is regulated under NYSDEC regulation 6 NYCRR Part 360. Correction should be made to page 2-116 for the Gansevoort facility and in Table 2.5-1.

Response: Correction noted. The statement was intended to mean that these facilities are authorized by registration pursuant to Part 360 regulations.

Review Avenue and 485 Scott Avenue

35. **Comment:** It is unclear whether the proposed either or both the Review Avenue and 485 Scott Avenue transfer station will be a truck-to-barge or truck-to-truck-rail facilities. Different parts of the document state different scenarios. Please correct.

Response: Both options at either facility are possible, depending on the outcome of a procurement and contract negotiation that that is now in progress.

36. **Comment:** If both scenarios are options, individual environmental reviews should be done for both possibilities. Section 2.1.2.2 Capacities of Private Transfer Stations. Table 2.1-3 Private Transfer Station Capacities. Please explain why the analysis for 485 Scott Ave. capacity analyzed for on-site impacts is "deferred" while Review Avenue is not.

Response: Chapters 13 and 15 of the DEIS and this FEIS contain a summary of the permitted capacities and environmental reviews of the Scott Avenue and Review Avenue Transfer Stations, respectively. Those explanations provide the basis for the level of analysis presented in the DEIS and this FEIS. Where there is more than one potential option at a given facility, the environmental reviews of all options are presented in the Site/Facility Chapter of the DEIS and this FEIS to avoid repeating redundant information. The analysis of Scott Avenue was deferred because there was insufficient design information on the barge loadout available at the time the DEIS was published. When available, the design details will be subject to review by NYSDEC in an application for a permit modification. If NYSDEC were to determine that these changes merit additional review, a supplemental environmental review would be undertaken.

East 132nd Street Transfer Station

37. **Comment:** Section 2.2.9 East 132nd Street Transfer Station - Page 2-70: Please explain why there is no direct rail connection to this facility.

Response: The lease between Waste Management and the developer of the Harlem River Yard complex prohibits the developer from providing rail access to the Yard to a competing waste transfer station.

Hamilton Avenue MTS

38. **Comment**: Section 4.10.2 Delineation of Area of Concern - Page 4-53: In this section it states that the November 2003 work plan is NYSDEC approved. NYSDEC has not approved the work plan. Please correct.

Response: This is correct. Comments provided by NYSDEC on the draft work plan were incorporated into the final work plan. On May 28, 2003, a Draft Site Investigation Work Plan for the Hamilton Avenue Site was submitted to the NYSDEC for review. On September 9, 2003, NYSDEC provided comments on the draft submittal. All comments were addressed, and on October 23, 2003, a Final Site Investigation Work Plan and Response to Comments letter was submitted to the NYSDEC. These corrections are made in the FEIS.

39. **Comment:** Section 4.10.3 Potential Impacts with Hamilton Avenue Converted MTS - Page 4-54:

Please contact NYSDEC for guidance for disposal or reuse of urban fill and the necessary cover layer over exposed urban fill areas at least 90 days before implementation of plan regarding these materials. This applies to potential demolition/construction plans for all of possible facilities.

Response: Comment noted.

40.3.3.1.6 Construction Impacts (Chapter 32 and various sections)

40. **Comment:** The DEIS limits its discussion to short term construction impacts and long term operational impacts. It also refers to proposed construction at eight converted MTSs. The discussion should be augmented to reveal impacts to the local community and any probable impacts from staging of equipment and machinery, road diversions and

closures, both upland and to the waterway. The discussion should be revised to focus on those facilities determined to be included under the proposed action.

Response: Please refer to Chapter 32 of the FEIS, which has been revised to provide a more extensive discussion of potential construction impacts for the four Converted MTSs that are elements of the Proposed Action, including measures that will be employed to minimize their effects.

41. **Comment:** Section 32.2 Construction Impacts Page 32-2: Please discuss potential construction impacts such as construction traffic, noise, vibration and disruption of services impacts. Also discuss if the construction will impact the use of any off-site properties.

Response: See response to comment #40.

40.3.3.1.7. Evaluation of the Proposed Plan (Chapter 34)

42. **Comment**: The DEIS discussion states "… as a result, traffic and air quality conditions on City streets would likely improve overall within the City with the implementation of the Proposed Plan." The statement is unsupported by environmental analysis and discussion within the DEIS. The discussion further omits a comparative analysis to derive at this conclusion, particularly with the exclusion of commercial waste truck traffic analysis.

Response: The DEIS and this FEIS demonstrates that there are no potential unmitigatable significant adverse environmental impacts from the Proposed Action. The statement that traffic and air quality conditions on City streets would likely improve overall within the City with the implementation of the Proposed Plan is supported by the Proposed Plan's objective of exporting waste out of the City by barge or rail, which reduces the outbound truck/transfer trailer traffic (and resultant noise and air quality) that would otherwise exist on the City streets. DSNY has estimated that the shift from truck-based transfer to barge/rail based for DSNY-managed Waste will reduce waste transfer vehicle traffic by approximately 2.8 million miles per year. This reduction has obvious benefits in terms of reduced congestion and air quality. This reduction is documented in

the following Table 40.3-4, which shows the reduction in transfer trailer vehicle miles traveled within the City to and from the private transfer stations now used for Interim Export that will occur by shifting to a rail/barge based system.

A credible regional emissions analysis to compare waste export alternatives is not feasible at this time. The equipment and routes to be used to transport and dispose of NYC solid waste once it leaves the city are undefined. DSNY cannot predict the associated emissions outside the City. More importantly, the pollutants of primary regional concern, particularly $PM_{2.5}$ and ozone, are strongly affected by precursor pollutant emissions far upwind (outside to the City and State), making it difficult to establish a "domain" over which to conduct such an analysis.

However, looking broadly at cumulative regional emissions, it is apparent that such emissions from several large source categories, including power plants, on-road engines, non-road engines, and many types of industrial sources, will continue to decrease dramatically in the next few years due to existing and proposed federal rules. Therefore, one can say with confidence that the City's air quality, to the extent it is impacted by these cumulative upwind regional emissions, will continue to improve in the coming years.

40.3.3.1.8 Unavoidable and Adverse Impacts (Chapter 35)

43. **Comment:** The discussion concludes that "site specific analysis predicts that any impacts identified are capable of being mitigated." The DEIS should provide a comprehensive comparative chart of unavoidable impacts and corresponding mitigation to allow an adequate assessment of this statement.

Response: The Executive Summary in the DEIS and this FEIS presents the overall findings of the DEIS and FEIS analyses (see Section 4.0, Tables ES-3 and ES-4) and a summary of those potential impacts identified and the mitigation applied to those potential impacts. As noted, no unavoidable impacts were identified.

Table 40.3-4
Private Vendor Round Trip Transfer Stations
Tractor Trailer Mileage to Portal of Egress

Facility	Average Tons per Day	Departing Tractor Trailers	Returning Tractor Trailers	Mileage to NYC Limits	Daily Mileage
Waste Services 920 E 132 St Bronx, NY	743	37.2	37.2	4.73	352
Waste Management 215 Varick St Brooklyn, NY	1,363	68.2	68.2	21.03	2,868
Waste Management 485 Scott Avenue Brooklyn	1,012	50.6	50.6	21.62	2,188
IESI of NY 577 Court Street Brooklyn, NY	365	18.3	18.3	15.83	579
IESI of NY 110 50th Street Brooklyn, NY	953	47.7	47.7	13.86	1,322
Waste Management 38-50 Review Ave Queens, NY	953	47.7	47.7	8.43	804
Tully Environmental 127-30 34th Ave Corona, NY	876	43.8	43.8	11.14	976
BFI Waste Services 598-636 Scholes St Brooklyn, NY	81	4.1	4.1	21.31	175
TOTAL	**6,346**	**317.6**			**9,264**
				YEARLY TOTAL	**2,797,728**

40.3.3.1.9 Irreversible and Irretrievable Commitment of Resources (Chapter 36)

44. **Comment:** As stated the in the DEIS, "…the soil, shoreline and natural waterway … already committed to industrial use as a result of prior industrial activities ...." implies the waterways are abandoned and non-productive, when in fact the littoral zones, tidal wetlands and open water and habitat existing at the shoreline structures, are beneficial and protected for their natural resources benefits. The loss of marine resources habitat and open water should be further detailed and discussed.

Response: The comment "already committed to industrial use as a result of prior industrial activities" was a comment that referred to the land, its zoning, and the City's Waterfront Revitalization Program. The waterways, themselves are not abandoned and unproductive. The year-long field assessment indicated that the waters were rich in benthic, epibenthic, adult, larval, and juvenile finfish. The loss of marine habitat and communities due to construction and dredging will only be temporary. The benthic and epibenthic communities will reestablish themselves with the following year's recruitment and the adult finfish will return after the environmental disturbance has stopped. The operational impact of the Converted MTSs that are elements of the Proposed Action is small, the increase in the over-water shaded area is only 1.36 acres. It should be noted that, as discussed in the DEIS and this FEIS, construction of additional platforms does not cause a cessation of biological activity underneath and there is not an irreversible and irretrievable commitment of natural resources. The impacts, if any, of new platforms will be difficult to quantify.

40.3.3.1.10 Alternatives

45. **Comment:** Although a component of each facility site assessment description provides alternatives, identifying alternatives to the proposed plan and each MTS should be developed for the benefit of public disclosure and impact assessment.

Response: A discussion on Alternatives is provided in Section 40.3.1.2 of this Chapter, and Section 1.3 of this FEIS provides additional discussion of the scope of Alternatives considered.

40.3.3.2 City Planning Commission

The following correspondence in this section is the responses by DSNY to questions raised during Community Board Hearings on the pending ULURP applications for the Converted MTSs.

hand insert of ULURP letters

40.3.3.3 New York City Department of Transportation

1. **Comment:** There are several bridges and highways scheduled for reconstruction in the New York City area, including the Bruckner/Sheridan Expressway, the Willis Avenue Bridge and the Kosciusko Bridge. The proposed reconstruction of the Willis Avenue Bridge may be worth mentioning since it is located immediately adjacent to the Harlem River Yards. Similarly, the proposed reconstruction o the Bruckner/Sheridan Expressway may affect the East 132nd Street Transfer Station. Recently, NYSDOT requested NYCDOT to implement the westbound Bruckner Expressway interim ramp over the Eastern Boulevard Bridge. The proposed reconstruction of the Kosciusko Bridge (although the preferred alternative has not been selected) will result in potential modifications to the local street network which may affect the proposed Scott Avenue Transfer Station.

Response: Comment noted. In consultation with the NYCDOT, traffic data was collected and analyses conducted in the Bronx considering the construction activities in the study areas, including the Willis Avenue Bridge construction and the Sheridan/Bruckner Expressway. Since reconstruction of the Kosciusko Bridge is not scheduled to begin until 2009 (two to three years after the 2006 Build Year analyzed in the DEIS and this FEIS), and the preferred alternative is not yet chosen, it is not included in the analysis.

2. **Comment:** NYCEDC in conjunction with NYCDOT is examining geometric improvements to Food Center Drive that should be evaluated in relation to the South Bronx Converted MTS.

Response: The South Bronx Converted MTS is not part of the Proposed Action. If this facility were selected as part of the New SWMP and the new geometric improvements to Food Center Drive implemented, they will be assessed in accordance with CEQR as required.

3. **Comment:** The left-turn from southbound Bruckner Boulevard onto Longwood Avenue was not implemented by NYCDOT. Please have the consultant make the necessary adjustments to the traffic analysis conducted for the South Bronx Converted MTS.

Response: Page 19-89 of the DEIS and this FEIS acknowledges the NYCDOT's change to the July 21, 2004 Updated Truck Routes in Hunts Point that no longer de-designated the segment of Tiffany Street from Bruckner Boulevard to Longwood Avenue, after the analysis was completed. The South Bronx Converted MTS is not part of the Proposed Action. If this facility were selected as part of the Draft New SWMP, these changes would be evaluated in a supplemental environmental review, as required.

4. **Comment:** Bush Terminal Open Space is scheduled for completion by 2006 and its northern boundary is the southern boundary of the South Brooklyn Marine Terminal. Please have the consultant include the project in the no build for the South Brooklyn Marine Terminal although it was included in the 52nd Street Barging Staging Area.

Response: The 52nd Street Barge Staging Area is not part of the Proposed Action, but was originally contemplated as a barge staging area. Therefore, no off-site analyses were required. No detailed traffic analysis was necessary for the South Brooklyn Marine Terminal since the trip generation during the peak hours was 21 PCEs, which is below the 50 PCE screening threshold for a traffic analysis.

5. **Comment:** Please have the consultant provide the ATRs, turning movement counts, physical inventories and official signal timing for all analyzed intersections. The proposed mitigation measures will be reviewed upon receipt of the requested information.

Response: Comment noted. ATR counts, turning movement counts, physical inventories, and official signal timing for all analyzed intersections with mitigation were provided to NYCDOT for final approval of mitigation measures.

6. **Comment:** Please have the consultant include the following proposed projects in the no-build condition for the North Shore converted MTS (see attached):

- Tully Environmental, Inc. has recently issued an EAS for expansion of its Queens facility;

- Crystal Windows and Doors Systems, Inc. located at 31-10 Whitestone Expressway.
- NYC DOT network improvement: Linden Place widening and U-Turn

Response: Please see the following regarding the addition of projects to the North Shore Converted MTS analysis:

- The projected traffic generated from the proposed Tully Environmental, Inc. facility expansion will not travel through intersections analyzed for the North Shore Converted MTS and therefore, is not included in the analysis.
- The Crystal Windows and Doors Systems, Inc project build year is 2007, which is beyond the build year of 2006 analyzed in the DEIS and this FEIS, and was therefore, not included in the analysis. Additionally, the Crystal Windows and Door system pm peak analysis hour does not coincide with the North Shore Converted MTS pm peak analysis hour, and the am peak analysis hours partially overlap. Finally, the growth factor used in the DEIS and this FEIS to escalate existing volumes to future no-build volumes would account for relatively low number of projected new trips in the study area.
- The NYCDOT widening and U-Turn improvements at Linden Place do not directly affect the study area intersections for the North Shore Converted MTS. After consultation with NYCDOT, to minimize the potential for impacts from DSNY collection vehicles at Linden Place, only one of the Collection Districts would be accessing the North Shore Converted MTS through the Linden Place exit, which equates to four or five trucks during the facility peak hour of 10:00 a.m. to 11:00 a.m. Traffic volumes at study area intersections analyzed are not expected to change as a result of the Linden Place improvements.

7. **Comment:** Please provide detailed existing and proposed schematics for the intersection control device and parking modification recommended for College Point Avenue at 31st Avenue in the North Shore Converted MTS build with Mitigation condition.

Response: There are no proposed changes to the signal control devices and parking for mitigation purposes at the intersection of College Point Boulevard and 31st Avenue.

8. **Comment:** Please have the consultant provide the No build assignment maps for the soft sites identified at the following Converted MTS:

- Southwest Brooklyn;
- Hamilton Avenue;
- East 91st Street;
- West 59th Street, and
- East 132nd Street.

Response: There are no soft sites that affect traffic at the study intersections for the Southwest Brooklyn Converted MTS or East132nd Street Transfer Station. The consultant has provided NYCDOT with soft site no-build maps for the Hamilton Avenue, East 91st Street, and West 59th Street Converted MTSs.

9. **Comment:** Please have the consultant confirm the status of the American Stevedoring project and its scheduling relationship to the Solid Waste Management project.

Response: The American Stevedoring project is a privately undertaken project and is not directly related to the Draft New SWMP.

10. **Comment:** Please have the consultant present the traffic analysis for the Review Avenue Truck to Rail Transfer Station. The justification presented for not conducting the analysis is not acceptable since the CEQR screening of 50 vehicles per hour is related to the project-generated trips and no on intersection vehicular thresholds.

Response: The project-generated PCEs are 54, slightly above the 50 PCE screening threshold. A traffic analysis has been completed for the Review Avenue Transfer Station site and will be provided to the NYCDOT, and included in the FEIS. There are no umitigatable significant adverse traffic impacts from this facility.

11. **Comment:** Please have the consultant provide additional information regarding the "safety conditions on the bike path…" with regard to the West 59th Street Converted MTS. If the bike path is physically located within parkland, then the reference is correct, if it is located on a city street the consultant should reference NYCDOT and NYC Department of City Planning. If the responsible agency includes NYCDOT, please provide detailed drawings for the existing condition and the proposed improvement.

Response: This segment of the Hudson River Greenway (Route 9A bikeway) is particularly narrow and surrounded by active industrial operations and transportation facilities, resulting in a generally low-quality visual environment. In the vicinity of the West 59th Street MTS, the path is adjacent to the elevated Miller Highway columns to the east and the Consolidated Edison pier (at 58th Street) and the existing MTS to the west along the water. There is a stop sign on the path at the West 59th St. intersection

and a sharp westward turn as one travels north toward 60th Street, where the waterfront opens up to view and the southernmost portion of Riverside Park South is under construction. (See Sections 22.2: Land Use and 22.5: Open Space.) Any Commercial Waste export facility that might be developed at the site as a result of the investigation and procurement processes that DSNY initiates in the future would be subject to environmental review at a later date. When DSNY receives specific proposals for development of this site, DSNY will consult with NYCDOT, and NYCDPR, as applicable, on the interface between the bike path and the proposed facility.

12. **Comment:** Please have the consultant provide a Signal Warrant Analysis for the intersections of Metropolitan Avenue at Scott Avenue. If the proposed signalization is not feasible, the consultant should present the traffic analysis for the rerouting of trucks to the alternate route.

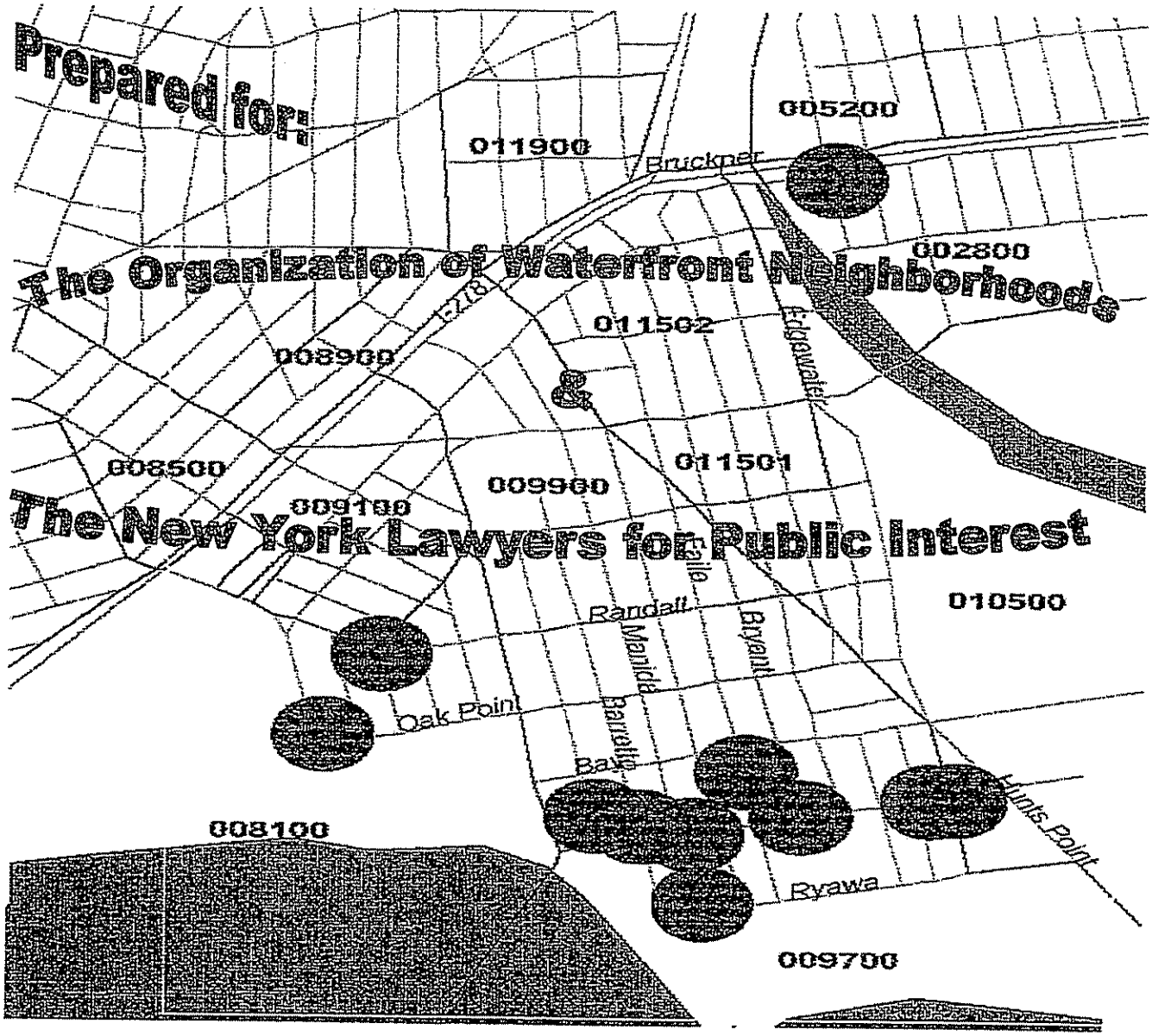
Response: This intersection pertains to the Meserole Street Truck to Rail Transfer Station that is not part of the Proposed Action. If it is selected as part of the New SWMP, a Signal Warrant Analysis or the analysis of an alternate route will be included in a supplemental environmental review, as required.

40.3.4 Comments on Commercial Waste Study

40.3.4.1 Analysis of Department of Sanitation Commercial Waste Management Study by Organization of Waterfront Neighborhoods (OWN) and New York Lawyers for the Public Interest (NYPI)

The report that follows in this section was prepared by the Organization of Waterfront Neighborhoods (OWN) after the release of the Commercial Waste Management Study (Study) in March of 2005. It critiques the methodology and findings in Volume I of the Study, Private Transfer Evaluations: Four Study Areas with Transfer Stations in Geographical Proximity. Section 40.3.4.2 provides a response to the OWN critique.

Analysis of the Department of Sanitation of New York Commercial Waste Study



Prepared by:

ARC Engineering & Construction, P.C. (Enviro-Sciences Engineering)/
Allegiance Resources Corporation in consultation with
EA Engineering, Science, and Technology, Inc.

Analysis of the Department of Sanitation of New York Commercial Waste Study

Prepared for:

The Organization of Waterfront Neighborhoods
&
The New York Lawyers for Public Interest

Prepared by:

ARC Engineering & Construction, P.C. (Enviro-Sciences Engineering)/
Allegiance Resources Corporation in consultation with
EA Engineering, Science, and Technology, Inc.

TABLE OF CONTENTS

		Page
I.	BACKGROUND AND APPROACH	1
II.	EXECUTIVE SUMMARY	4
	I. DSNY's Methodology inappropriately understated the Adverse Impacts associated with the Clustering of Transfer Stations	4
	No Study Zones	
	i. DSNY created "No Study Zones" around each Transfer Station, which eliminated the analysis of Aggregate Impacts from Clustering of Transfer Stations as required by Local Law 74	5
	ii. DSNY'S decision to create several "No Study Areas" to limit its Analysis to only "Overlapping Effects," rather than examining the Aggregate or Cumulative Impacts of Clustering, conflicts with the CEQR Technical Manual and Planning and Engineering Criteria	5
	iii. The Study Area for Air Quality Analysis deliberately excluded the Areas of Greatest Impact	6
	Arbitrary and Overly Narrow Study Areas	
	iv. The DSNY-defined Study Areas are too small and are inconsistent with the CEQR Technical Manual	6
	Incorrect Impact Criteria	
	v. The analysis of the Environmental Impacts of Transfer Stations incorrectly omitted numerous Impacts	7
	vi. The analysis of the Environmental Impacts of Transfer Stations did not analyze worst-case conditions as required by the CEQR	7
	vii. The analysis of the Environmental Impacts of Transfer Stations incorrectly omitted actual impacts of the Transfer Stations and failed to demonstrate that its "Prototypical Stations" reflect real-world Impacts	8
	viii. DSNY's claimed credit for hypothetical future Modifications at Transfer Stations in its analysis in Violation of CEQR TM	8
	ix. DSNY incorrectly assumed that Transfer Stations would be Replaced by equally or more Burdensome Uses	9
	II. DSNY's limited analysis demonstrates that Significant and Adverse Impacts exist as a result of the Clustering of Transfer Stations in each of the four DSNY Study Areas	9
	x. The Air Quality Impacts of PM 2.5 found in the CW Study are Significant and Adverse	9
	xi. The Air Quality Impacts of the NAAQS Pollutants are Severe and should have been deemed Significant and Adverse	10
	III. Significant flaws with DSNY's Review of Critical Environmental Impacts such as Air Quality, Neighborhood Character and Odors	11
	xii. The DSNY Study Areas excluded the majority of Residences from its Air Analysis	11
	xiii. DSNY failed to account for Cumulative Sources, artificially reducing levels of Background Pollution	11
	xiv. The analysis of the Odor Impacts of Transfer Stations was Incomplete, and did not fully account for Odor Impacts	12
	xv. An analysis of the Health Impacts of the Clustering of Transfer Stations, as required by Local Law 74, was not performed	12
	xvi. DSNY's analysis of Neighborhood Character excluded the majority of Residential Areas And Community Facilities	12

TABLE OF CONTENTS

		Page
III.	**DETAILED EVALUATION OF THE CW STUDY**	14
	Section 1: Evaluation of the CW Study Methodologies	14
	i. The Basic Methodology used by DSNY inappropriately minimized the study of Environmental Impacts	14
	ii. DSNY failed to study the Aggregate Impacts of Transfer Stations	18
	iii. DSNY defined an overly-small study in Violation of the CEQR Technical Manual	21
	iv. DSNY's analysis of the Environmental Impacts of Transfer Stations omitted numerous Impacts	24
	Section II: Review of Key Impact Analyses in the CW Study	26
	A. Air Quality	26
	i. The DSNY Study Area excluded the areas of greatest Air Quality Impact	27
	ii. The CW Study failed to account for Cumulative Sources, artificially reducing levels of Background Pollution	32
	iii. DSNY did not analyze worst-case conditions as required by the CEQR Technical Manual	34
	iv. The CW Study failed to study the Actual Impacts of the Transfer Stations and failed to demonstrate that "Prototypical Stations" adequately reflect Actual Impacts	36
	v. Under DSNY's Insufficient Analysis, the Air Quality Impacts of PM 2.5 are Significant and Adverse	38
	vi. The Air Quality Impacts of the NAAQS Pollutants are Severe and should have been judged Significant and Adverse	42
	B. The study of Neighborhood Character excluded the majority of Residential Areas and Community Facilities	47
	C. The analysis of Odor Impacts was incomplete and did not fully account for Odor Impacts	48
	D. DSNY did not analyze Health Impacts	51
	CONCLUSIONS AND RECOMMENDATIONS	53
	ATTACHMENTS	
	1 DSNY's Four Study Areas (Maps CD)	

I. BACKGROUND AND APPROACH

This Report sets forth the findings of a focused review of the New York City Department of Sanitation (DSNY) Commercial Waste Management Study (hereinafter, the "CW Study"), issued April 12, 2004. The CW Study was undertaken to implement Local Law 74. As set forth in an April 12, 2004 transmittal letter from DSNY Commissioner Doherty to City Council Speaker Gifford E. Miller and Councilman Michael E. McMahon, Chair of the Committee on Sanitation and Solid Waste Management, the goals of the CW Study were to:

(1) assess potential environmental and public health impacts on communities in which a number of privately-owned, solid waste transfer stations (hereinafter, "Transfer Stations") are located.

(2) provide a foundation for the Department's efforts to develop a new Comprehensive Solid Waste Management Plan (SWMP) for the next 20 years. The findings of the Study will also help inform the Department's new transfer station siting regulations.

The CW Study was performed by a team of consultants hired and overseen by DSNY. The primary consultant was Henningson, Durham & Richardson Architecture and Engineering, P.C., a firm frequently used by DSNY.

This review was commissioned by the New York Lawyers for the Public Interest (NYLPI) and the Organization of Waterfront Neighborhoods (OWN). OWN is a citywide coalition of community-based groups from low-income communities and communities of color, formed in 1996 to address environmental and health concerns associated with the City's handling and disposal of solid waste. Many of the communities represented by

OWN have been inundated with Transfer Stations for the last decade. As such, OWN has consistently urged the City Council and the Administration to adopt an environmentally sound, fiscally responsible, and equitable solid waste management strategy for the City of New York.

The purpose of this review is to analyze key areas of DSNY's analysis of the impacts of Transfer Stations contained in Volume I of the CW Study, and identify and assess any deficiencies in its analysis. There are two major components to this review: (1) an evaluation of the environmental study methodologies used in the CW Study; and (2) an evaluation of certain impact analyses carried out in the CW Study.

The primary foundation for the review and analysis contained in this Report are the guidelines and requirements set out in the New York City Environmental Quality Review Technical Manual, (CEQR TM), October 2001. The New York City Environmental Quality Review (CEQR) process is the City's process for implementing the New York State Environmental Quality Review Act (SEQRA). SEQRA requires that all state and local governments assess environmental effects of all discretionary actions. As set forth in the CEQR TM: "New York is a diverse and complex city with a rich and, in some cases, fragile environment. Both to protect the environment and to ensure a predictable and efficient process for participants in the CEQR process, the City developed the CEQR Technical Manual." See, Forward, CEQR TM.

Thus, the CEQR TM is New York City's official guidance manual for City agencies, project sponsors, and the public regarding the procedures and substance of the City's Environmental Quality Review process. It must be noted that DSNY has indicated that the CW Study will inform the Solid Waste Management Plan - Environmental Impact Statement (SWMP EIS) and, the SWMP EIS must comply with the CEQR TM.

II. EXECUTIVE SUMMARY

DSNY's analysis of Transfer Stations, as set forth in Volume I of the CW Study, is fundamentally flawed. Volume I analysis relied on methodologies that conflict with the CEQR TM, and regulatory standards. Volume I analysis is also internally inconsistent with the analysis of the conversion of Marine Transfer Stations contained in Volume III of the CW Study.

Specifically, the methodologies used by DSNY were designed to limit analysis and undercount the severity of impacts from the clustering of Transfer Stations in the four areas studied by DSNY (hereinafter, "Study Areas"). Consequently, the DSNY conclusion in Volume I of the CW Study that there are no significant and adverse impacts from the clustering of Transfer Stations in the four Study Areas is wrong. Moreover, even DSNY's limited analysis leads to the conclusion that there are clearly significant and adverse impacts from the clustering of Transfer Stations in each of the four Study Areas.

Below is a summary of the major findings of this report, which are fully discussed in Section III – Detailed Evaluation of the CW Study.

I. DSNY's Methodology inappropriately understated the Adverse Impacts associated with the Clustering of Transfer Stations

DSNY's methodology inappropriately understated impacts by: 1) creating "no study zones" around each transfer station rather than assessing the aggregate effects of

clustering, 2) using arbitrary and overly narrow Study Areas to exclude sensitive receptors, 3) applying incorrect impact criteria to exclude negative impacts, 4) taking credit for hypothetical future modifications at the Transfer Stations, and 5) assuming that if Transfer Stations were replaced, they would be replaced by equally or more burdensome uses.

No Study Zones

i. **DSNY created "No Study Zones" around each Transfer Station, which eliminated the analysis of the Aggregate Impacts from Clustering of Transfer Stations as required by Local Law 74**

DSNY failed to study the aggregate impacts of the Transfer Stations as required by Local Law 74. DSNY arbitrarily created a "no study zone" around each transfer station, which eliminated the first 100 meters from its analysis of the impacts of Transfer Stations, as well as aggregate impacts of clustered Transfer Stations. Instead, DSNY only analyzed impacts in a narrow band distance away from each Transfer Station that it deemed to be "overlapping." This understates the impacts of clustering because it excluded the severe impacts immediately adjacent to each of the Transfer Stations and the total cumulative contribution of all the Transfer Stations in each of the Study Areas.

ii. **DSNY's decision to create several "No Study Areas" to limit its Analysis to only "Overlapping Effects," rather than examining the Aggregate or Cumulative Impacts of Clustering, conflicts with the CEQR Technical Manual and Planning and Engineering Criteria**

DSNY's decision to create several "no Study Areas" to limit its analysis to "overlapping effects," rather than examining aggregate or cumulative impacts of clustering,

conflicts with the CEQR TM and planning and engineering criteria. The CEQR TM defines cumulative impacts as "two or more effects on the environment that, when taken together, are significant". There is no basis in the CEQR TM or in planning or engineering criteria that supports the subtraction of impacts – as was done by DSNY in creating its "no Study Areas" and "overlapping effects" theory – in analyzing the impacts of individual or multiple facilities.

iii. The Study Areas for Air Quality Analysis deliberately excluded the Areas of Greatest Impact

DSNY deliberately excluded the areas immediately adjacent to the Transfer Stations from its assessment of impacts. This exclusion removes the areas of highest air quality impact for its study. This ignores the clear requirements under the CEQR TM and all regulatory and engineering standards to begin all air quality analyses at the areas immediately adjacent to the project being analyzed.

Arbitrary and Overly Narrow Study Areas

iv. The DSNY-defined Study Areas are too small and are inconsistent with the CEQR Technical Manual

The areas used by DSNY (hereinafter, the "DSNY Study Areas") to study impacts were drawn arbitrarily small in violation of the CEQR TM. The consequence of the narrow DSNY Study Areas is that they exclude the majority of residences and community facilities from its study of impacts. Thus, the CW Study did not analyze the impact on these critical

community receptors and leads to a gross understatement of the impacts of clustering of Transfer Stations.

Incorrect Impact Criteria

v. The analysis of the Environmental Impacts of Transfer Stations incorrectly omitted numerous Impacts

DSNY arbitrarily and in clear conflict with the CEQR TM excluded numerous impacts from its analysis of the Transfer Stations. Among the impacts DSNY excluded from its study are the impacts to land use, community facilities, and socioeconomic impacts.

vi. The analysis of the Environmental Impacts of Transfer Stations did not analyze worst-case conditions as required by the CEQR

DSNY's study was not based on examining the worst-case operating conditions of the Transfer Stations as required by the CEQR TM. First, DSNY inappropriately used averaging techniques. Second, DSNY failed to demonstrate that the estimate of emissions of on-site equipment represent worst-case conditions. Third, DSNY failed to account for fugitive dust that migrates through the numerous openings at Transfer Stations.

vii. The analysis of the Environmental Impacts of Transfer Stations incorrectly omitted actual impacts of the Transfer Stations and failed to demonstrate that its "Prototypical Stations" reflect real-world Impacts

Rather than use actual conditions and data from Transfer Stations in its study, DSNY created "prototypical stations" – despite the fact that DSNY permits each of these facilities. Moreover, the CW Study does not demonstrate that these prototypical stations accurately represent the true impacts of each of the Transfer Stations operating in the DSNY Study Areas.

viii. DSNY's claimed credit for hypothetical future Modifications at Transfer Stations in its analysis in Violation of CEQR TM

The CEQR TM requires an analysis of the impacts of the "project" as it exists or is proposed. DSNY's methodology for analysis assumed a reduction of impacts will take place through future hypothetical modifications at Transfer Stations. This approach diminishes the true level of impacts in clear contravention of the CEQR TM guidance. Moreover, even if such operational or design modifications are called for, there is no mention in the study as to whether DOS would have the legal authority to impose such changes on the Transfer Stations. DSNY's draft scope for the forthcoming solid waste management plan explicitly states that DSNY believes it has the authority only to implement "some" of the changes recommended in the CW Study.

ix. DSNY incorrectly assumed that Transfer Stations would be Replaced by equally or more Burdensome Uses

In DSNY, where impact criteria were exceeded, even after the implementation of hypothetical reduction measures noted above, DSNY analyzed the impact based on speculative uses on the site of the Transfer Stations. The presumed purpose of this analysis was to compare the impacts on the neighborhood if the properties on which the Transfer Stations are located were replaced by another use.

Under the CEQR TM, there must be a demonstration that the replacement uses chosen for the analysis can be reasonably expected on each of the Transfer Station properties and in each of the DSNY Study Areas, based on such factors as land use and market conditions. Instead, DSNY simply made the assumption that the Transfer Stations would be replaced by truck intensive uses such as printing plants and laboratories without any justification that such uses could reasonably be located in each of the DSNY Study Areas.

II. DSNY's limited analysis demonstrates that Significant and Adverse Impacts exist as a result of the Clustering of Transfer Stations in each of the four DSNY Study Areas

x. The Air Quality Impacts of PM 2.5 found in the CW Study are Significant and Adverse

Even under the limited air quality analysis performed by DSNY, the PM 2.5 impacts – fine air particles that have recently been regulated - exceed the regulatory

thresholds established by both New York State and New York City environmental agencies - New York State Department of Environmental Conservation (NYSDEC) and New York City Department of Environmental Protection (NYCDEP).

Exposure to PM 2.5 is associated with numerous adverse health effects including heart and lung disease. Moreover, each of the neighborhoods that house the Transfer Stations studied by DSNY had levels that are at, or greater than the health standard for PM 2.5 established by the United States Environmental Protection Agency. DSNY chose to ignore the impacts of PM 2.5 with respect to the Transfer Stations, yet it applied the regulatory standards in its analysis of the conversion of Marine Transfer Stations.

xi. The Air Quality Impacts of the NAAQS Pollutants are Severe and should have been deemed Significant and Adverse

The impacts of the National Air Quality Standards (NAAQS) air pollutants from the Transfer Stations were extremely high. NAAQS air pollutants are six of the most commonly occurring air pollutants. In some cases, the impacts from Transfer Stations ranged from 26% to 88% of background conditions. These impacts exceed the thresholds for significant impact established under the Federal Clean Air Act.

Separately, DSNY did not analyze the impacts of any toxic air pollutants from the Transfer Stations even though it acknowledged that diesel equipment used for Transfer Station operations emit 15 toxic compounds – including six cancer causing compounds.

DSNY did analyze the impacts of such in its analysis of the conversion of Marine Transfer Stations in Volume III of the CW Study.

III. Significant flaws with DSNY's Review of Critical Environmental Impacts such as Air Quality, Neighborhood Character and Odors

xii. The DSNY Study Areas excluded the majority of Residences from its Air Analysis

In eliminating the first 100 meters from its analysis of the impacts of NAAQS air pollutants, the CW Study failed to analyze the impacts on residences and other sensitive receptors within that radius. Separately, because the DSNY Study Areas were drawn narrowly, the CW Study excluded the majority of the residential areas adjacent to the DSNY Study Areas. Moreover, communities were not contacted to identify residences and community facilities that should be included in the analysis of environmental impacts.

xiii. DSNY failed to account for Cumulative Sources, artificially reducing levels of Background Pollution

The effect of DSNY's failure to include all receptors impacted by the clustering of the Transfer Stations is compounded by the effect of its failure to correctly account for *existing* local sources. By failing to include any local sources of pollution in its study, the CW Study artificially reduced the level of background pollution. The consequence of this is that their assessment of the severity of the impacts of the Transfer Stations was artificially reduced.

xiv. The analysis of the Odor Impacts of Transfer Stations was Incomplete and did not fully account for Odor Impacts

The odor analysis suffers from many of the basis deficiencies of the air quality analysis. The methods used to study the impacts were incomplete and did not fully account for odor impacts.

xv. An analysis of the Health Impacts of the Clustering of Transfer Stations, as required by Local Law 74, was not performed

DSNY failed to conduct a health analysis of the clustering of Transfer Stations in the four DSNY Study Areas as required under Local Law 74. Instead, DSNY simply referred to the air quality and odor analyses found elsewhere in the CW Study. An authentic health analysis should, at a minimum, have included the development of a health profile of populations surrounding the Transfer Stations with a particular focus on subpopulations vulnerable to the air pollution and should have analyzed the health impacts from the exposure to PM 2.5 and toxic air pollutants exposure.

xvi. DSNY's analysis of Neighborhood Character excluded the majority of Residential Areas and Community Facilities

The CW Study's exclusion of the majority of residential areas and community facilities adjacent to each of the DSNY Study Areas resulted in the failure to examine the impact of the clustering of Transfer Stations on neighborhood character. DSNY's analysis of neighborhood character impacts for Transfer Stations is in sharp contrast to the manner

that DSNY analyzed the neighborhood character in its analysis of the conversion of Marine Transfer Stations where DSNY followed the CEQR TM and used an appropriately sized Study Area that included residences and community facilities adjacent to the Marine Transfer Stations.

III. DETAILED EVALUATION OF THE CW STUDY

Section 1: Evaluation of the CW Study Methodologies

The conclusions and results of any technical study are only as valid as the methods used and assumptions relied upon to conduct the analyses. As set forth in detail below, the study methodologies and assumptions utilized by DSNY in the analysis of Transfer Stations contained in Volume I of the CW Study are significantly flawed, resulting in an inadequate and deficient analysis that understated the magnitude and severity of the environmental impacts of New York City's Transfer Stations. Most notable is DSNY's failure to comply with the requirements of CEQR TM in its analysis of impacts from the clustering of Transfer Stations. Consequently, the DSNY conclusion in the CW Study that there are no significant and adverse impacts from the clustering of Transfer Stations is wrong. Moreover, the failure to abide by requirements of the CEQR TM in the CW Study prevents the use of the results of Volume I of the CW Study in Solid Waste Management Plan (SWMP) Environmental Impact Statement (EIS) and Transfer Station siting regulations because such actions must strictly comply with CEQR and the CEQR TM.

i. The Basic Methodology used by DSNY inappropriately minimized the study of Environmental Impacts

The basic methodology for the conduct of the environmental analyses in the CW Study, entitled *Study Area Environmental Analyses* and described in Section 4.0, Volume I – Private Transfer Station Evaluations is:

(1) Evaluate current conditions in each of the Study Areas;

(2) Evaluate conditions as if the Transfer Stations were not situated in the Study Areas; and

(3) Evaluate conditions without the Transfer Stations, but with "assumed other industrial uses" occupying the same sites . . . assuming the Transfer Stations were replaced by as-of-right general light industrial land uses, e.g., printing plants, laboratories. This land use replacement scenario assumed that the Transfer Station land uses would be occupied by other M-zone land uses typical of current conditions in the Study Areas.

See, Pg. 21, Volume I, CW Study.

The CW Study states that three steps were used in applying the above evaluation methodology. As set forth below, each step was substantially flawed and produced inadequate and inaccurate results.

Step 1

If the evaluation of current conditions, inclusive of the combined effects of multiple Transfer Stations in the Study Areas (i.e., areas of potential overlapping effects) met a set of specified criteria, then the potential effects of the Transfer Stations on the surrounding community were not evaluated any further. See, Pg. 22, Volume I, CW Study for a detailed description of these criteria; the criteria applied for analyzing air quality impacts are discussed below.

This approach is improper for two primary reasons. First, as discussed below in subsection ii, this method fails to include the areas of greatest impacts and, therefore, does not allow for a true evaluation of actual conditions. Second, as discussed more fully in

Section II, the criteria selected by DSNY are unduly restrictive and do not allow for a determination as to whether significant and adverse environmental impacts exist as a result of the clustering of Transfer Stations in the four Study Areas.

Step 2

If the evaluation of current conditions exceeded these specified criteria, then measures to reduce air quality, odor and noise effects were examined to determine whether existing impacts could be reduced through design or operational changes at the Transfer Stations.

This approach is simply inappropriate for an assessment of environmental impacts. The CEQR TM requires an analysis of the actual or projected impacts of the "project" under review. By assuming a reduction of impacts will take place through future hypothetical modifications at Transfer Stations, DSNY has diminished the true level of impacts in clear contravention of the CEQR TM guidance. Moreover, even if such operational or design modifications are called for, there is no mention in the CW Study as to whether DOS would have the legal authority to impose such changes on the Transfer Stations. DSNY's draft scope for the forthcoming solid waste management plan explicitly states that DSNY believes it has the authority only to implement "some" of the changes recommended in the CW Study.

Step 3

If the evaluation of current conditions for traffic, off-site air quality and off-site noise levels still exceeded the applicable criteria even after the implementation of suggested reduction measures, a replacement trip generation ("RTG") analysis was performed. This analysis assumed that the Transfer Stations would be replaced by as-of-right general light industrial land uses such as printing plants and laboratories (i.e., other M-zone land uses typical of current conditions). The effects of these replacement land uses were calculated using trip generation rates published by the Institute of Transportation Engineers (ITE). See, Pg. 23, Summary of reduction measure and replacement scenario analyses, CW Study, Vol. I.

To assess the accuracy of the RTG analysis used in the CW Study, one needs to determine whether DSNY used valid replacement land uses. The CEQR TM states that in order to examine the future conditions without the proposed project (i.e., an assessment of "no action conditions"), one must "compile a list of all the proposals that can reasonably be expected to be completed given market conditions, existing trends, and other constraints and incentives (including zoning and public policy), ...by the build year." See, Pg. 3A-10, CEQR TM.

Therefore, pursuant to the CEQR TM, there must be a demonstration that the replacement uses chosen for the analysis meet this "reasonably expected" test. The CW Study does not make such a demonstration. Instead, it simply makes the assumption --

without justification – that the areas are zoned for manufacturing and that, therefore, future uses will be manufacturing ones.[1] Moreover, the CW Study erroneously assumes that replacement use would be as truck intensive as Transfer Stations.

ii. DSNY failed to study the Aggregate Impacts of Transfer Stations

Local Law 74 requires, in part, that DSNY undertake a study of the "effectiveness of the criteria applied by the department to the siting of putrescible and non-putrescible Transfer Stations, including the **aggregate effect** of the geographic proximity of Transfer Stations to each other. . ." (emphasis added). DSNY's interpretation of the term "aggregate effect" is critical to the validity of the findings and conclusions contained in the CW Study. Regrettably, DSNY construed this term narrowly to avoid the inclusion of the most severe impacts from the clustering of Transfer Stations, resulting in a flawed analysis that contributes to the erroneous conclusion that there are no significant and adverse impacts from the cluster of Transfer Stations.

The common definition of the word "aggregate" is the sum total. Thus, pursuant to requirements of Local Law 74, DSNY should have studied the *sum effects* of the "geographic proximity of Transfer Stations to each other." Instead, DSNY inappropriately limited the scope of its study to "potential areas of **overlapping effects** from multiple Transfer Stations in the Study Areas." See, Final Scope of Work for the Commercial Waste Management Study, dated July 31, 2003. DSNY did not address or analyze the impacts from each of the individual Transfer Stations, rather DSNY created a "no study

[1] As discussed further in the neighborhood character discussion in Section II, this assumption of exclusively manufacturing uses is also flawed because this is based on drawing the Study Area too narrowly and on excluding all residential areas from the Study Area.

zone" around each transfer station and only studied impacts at the periphery of each transfer station that it considered to overlap with those of other Transfer Stations.

In addition, contrary to DSNY's claim that it applied "reasonable criteria adapted from the CEQR and planning and engineering criteria," See, Pg. ES-10, CW Study. DSNY's methodology conflicts with the CEQR TM and planning and engineering criteria. The CEQR TM's guidance regarding cumulative impact analysis is analogous to the requirement of Local Law 74 to assess the aggregate effects of the Transfer Stations. DSNY implies that the terms "overlapping" and "cumulative" are equivalent by using such interchangeably in the CW Study. See, Pg. ES-10, CW Study. The CEQR TM defines cumulative impacts as "two or more effects on the environment that, when taken together are significant." See, Pgs. 2-7, 2-8, CEQR TM. The CEQR TM makes clear that the term, "cumulative impacts" refers to the sum of all impacts. See, Pgs. 1-6, 2-7, 2-8, 3Q-16, 3Q-25, 3Q-26, and 3Q-36, CEQR TM. Nothing in the CEQR TM, or in other planning or engineering criteria supports the *subtraction* of impacts – as was done by DSNY in creating its "overlapping effects" theory – when analyzing the impacts of individual or multiple facilities.

DSNY's decision to limit its study to only "overlapping effects" excludes the most severe impacts of the clustering of Transfer Stations. This allows them to falsely conclude that the "overall results of the Study Area analyses show that the geographical proximity of the existing Transfer Stations in these Study Areas does not cause adverse combined or cumulative effects..... " See, Pg. 10, CW Study, Executive Summary (ES).

The most dramatic consequence of DSNY limiting its evaluation to only overlapping impacts is found in the air quality impact analyses of NAAQS Pollutants[2]. In the conduct of air impact of the NAAQS Pollutants, the CW Study states that all "receptors within 100 meters of any individual Transfer Station within each Study Area were eliminated from the model input so that results would be representative of the collective contributions of all Transfer Stations within the Study Area rather than those of an individual transfer station." See, Pg. 13, Appendix C, Volume I, CW Study. Similarly, when analyzing the on-site and off-site impacts of PM 2.5[3], DSNY eliminated receptors within 15 meters of the Transfer Stations. In creating this "no study zone" the CW Study disregarded the receptors receiving the severest impacts. See, 40 CFR Part 51, App.W.

The appropriate method, pursuant to the CEQR TM, of assessing the aggregate impacts is to plot the radii of the impacts from each facility in each of the four Study Areas and determine the impact upon all of the receptors. In performing the analysis in this way, the actual impacts of each facility on receptors would be analyzed, and the impacts on receptors from individual Transfer Stations *and* from the cumulative impact of Transfer Stations would be included. This stands in sharp contrast to DSNY's contention that the impacts closest to each transfer should be ignored. A more detailed discussion of the consequences of DSNY's flawed methodology in its analysis of air quality impacts is presented in Section 2.A below.

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[2] NAAQS Pollutants are the most commonly occurring air pollutants and USEPA has established standards know as National Ambient Air Quality Standards. These standards regulate the following pollutants: carbon monoxide (CO), nitrogen dioxide (CO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and Lead (Pb).

[3] PM 2.5 refers to particulate matter less than 2.5 microns in size. It is the subject of recent USEPA and New York State regulation because of its impacts on health, including asthma, and heart illness. NYC has levels of PM 2.5 that exceed USEPA health-based thresholds and the communities within DSNY Study Areas have some of the highest levels of PM 2.5 detected in NYC. See http://www.dec.state.ny.us/website/dar/baqs/pm25datasum.pdf

iii. DSNY defined an overly-small study in Violation of the CEQR Technical Manual

The DSNY identified four areas – the Study Areas - where Transfer Stations are in relatively close geographical proximity to each other, i.e. where Transfer Stations are clustered. The four Study Areas selected by DSNY are as follows: (1) Port Morris, The Bronx; (2) Hunts Points, The Bronx; (3) Jamaica, Queens, and (4) Greenpoint-Williamsburg, Brooklyn. These four areas contain 43 of the 69 Transfer Stations operating in New York City. See, Attachment 1 of this Report for a listing of the DSNY Study Areas by census tract.

In selecting these areas, the DSNY apparently merged the delineation of Study Areas for purposes of analyzing environmental impacts, as set forth in the CEQR TM, with the simple identification of the areas where the clustered Transfer Stations are located. Under the CEQR TM, a Study Area for analyzing environmental impacts is determined by two basic factors: 1) the type of action being reviewed and 2) the type of impact being analyzed. The CEQR TM sets forth two types of actions that relate to localized impact: site-specific actions and regulatory changes affecting small areas. See, Pg. 2-1, CEQR TM. Site-specific actions are those that occur at one specific location. The second type of action relates to changes in regulatory controls for a "site or small group of specific sites . . . such as the (re)zoning of a block or several blocks)" Id.

Evaluating impacts to the area in which the Transfer Stations are clustered is directly analogous to analyzing the impacts of rezoning to a group of sites in a particular

area. The purpose in both cases is to evaluate the environmental impacts of a particular use at multiple local properties. This approach is particularly appropriate here, where the purpose of the CW Study was to examine the environmental impacts of the use of multiple sites for waste processing. For this type of analysis, the DSNY Study Areas should have been only the beginning point in determining the appropriate Study Area.

The second basic factor in determining a Study Area is the specific type of impact being evaluated. The CEQR TM provides:

> For each technical area in which an impact may occur, whether land use, traffic and transportation, or natural resources, a Study Area must be defined for analysis. This is the geographic area likely to be affected by the proposed action for a given technical area, or the area in which impacts of that type could occur. Appropriate Study Areas differ depending on the type of impact being analyzed.

See, Pg. 2-5, CEQR TM.

Accordingly, DSNY should have identified specific and distinct Study Areas for each and every type of environmental impact analyzed. One approach for defining the Study Areas would be to draw radii of impacts from the area where the Transfer Stations are located, in the same way that the impact of a change of use at multiple local sites in a localized regulatory action would be analyzed under the CEQR TM. DSNY, however, simply selected a single Study Area for each of the four neighborhoods studied – the DSNY Study Areas - and analyzed each of the identified impacts based on that single Study Area. This approach conflicts with both the CEQR TM and the basic environmental and engineering principles that underlie the CEQR TM. Specifically, the analysis of

environmental impacts should be based on the projected distance of the impact from the project. DSNY's Study Areas bear no relation to the impacts it analyzes and, therefore, its analysis excluded the impacts to numerous receptors, including schools, homes and parks. Consequently, the overall finding of the CW Study that there are no significant and adverse impacts is unsupported and wrong.

Even if DSNY's analysis was based on equating the study of each of the Transfer Stations in each of the DSNY Study Areas as individual projects, its approach still conflicts with the CEQR TM. The CEQR TM instructs that DSNY should have identified Study Areas for each of the Transfer Stations within each of the DSNY Study Areas based on the radius of each impact analyzed. For example, the CEQR TM provides that the consideration of the Study Area for air quality analysis should begin at 1000 feet and for consideration of land use and socio-economic impacts the analysis should begin at ¼- to ½-mile. In other words, if DSNY analyzed each of the Transfer Stations as an individual action, it should have drawn radii of impacts for each Transfer Station and analyzed the impacts within each radii.

This is precisely the approach that DSNY applied in analyzing the conversion of Marine Transfer Stations. For example, in its analysis of the impacts to land use, zoning, community facilities, open space, and historic resources, the Study Areas were "delineated in a conventional manner according to a radial distance measured from the boundaries of each site." See, Pg. 3-3, Volume 3, Chapter 3, CW Study. For land use, zoning and public policy, and community facilities, a primary Study Area of ¼-mile radius and secondary

Study Area between ¼ and ½ miles were established. Open space, parklands and historic resources were analyzed based on a ½-mile radius Study Area. A ¼-mile radius was used to study socioeconomic impacts. See, Pg. 3-11, Volume III, Chapter 3, CW Study.

Finally, DSNY should have defined two Study Areas for each type of impact: a primary Study Area to analyze *direct* impacts and a secondary Study Area to analyze *indirect* impacts from the clustering of Transfer Stations.. As discussed more fully in Section 2 (below), the major consequence of DSNY selecting a single, small Study Area is that its analysis failed to consider the impacts on numerous receptors, i.e., uses immediately adjacent to the DSNY Study Areas.

iv. DSNY's analysis of the Environmental Impacts of Transfer Stations omitted numerous Impacts.

While the CW Study stated that a range of environmental impacts were examined, it failed to evaluate a number of potentially critical environmental impacts. DSNY limited the analysis of impacts to certain impacts without any justification, contrary to the requirements of the CEQR TM which prescribes that all potentially significant adverse impacts be analyzed. See, Pg. 2-8, CEQR TM. It is interesting to note that in the analysis of the conversion of Marine Transfer Stations in Volume III of the CW Study, DSNY followed the CEQR TM process and analyzed numerous impacts that were not analyzed for the clustering of Transfer Stations in Volume I.

On-Site Impacts

In Volume I, DSNY looked at air quality, odor, noise, neighborhood character, public health and water quality impacts resulting from the presence of the Transfer Stations within each Study Area. Notwithstanding the flaws in the analysis of these included impacts, the CW Study, *at a minimum*, should have also included an analysis of socio-economic, community facility and land use impacts. Key to the examination of the effects of Transfer Station clustering is whether they lead to, or have led to, a pattern of land uses that negatively impact the Study Area. Indeed, the clustering of the Transfer Stations in the first place demonstrates a land use pattern that needs to be analyzed as to its socio-economic and land use impacts because a key aspect of such analysis is whether a pattern of land uses would result in a negative socio-economic consequence, such as indirect displacement. As required by the CEQR TM, DSNY should have analyzed whether the land use pattern of the clustering of Transfer Stations has resulted in indirect displacement of residents, or businesses. See, Pg. 3B-2, CEQR TM. Such analysis is particularly relevant in the case of the clustering of Transfer Stations because of anecdotal evidence of the displacement of commercial establishments in communities in the DSNY Study Areas due to the presence of Transfer Stations.

Off-site Impacts

The CW Study looked at traffic, off-site air quality and off-site noise at "key intersections along major corridors/locations leading to and from the Study Areas." See,

Pg. 21, CW Study. Again, the scope of this evaluation was too narrow. To fully understand potential off-site impacts, socio-economic and community facility impacts should also have been included. Moreover, the CW Study should have looked at the impacts of the truck traffic associated with the Transfer Stations upon residents and commercial establishments. This is one area where DSNY artificially reduced the impact of truck traffic by assuming that Transfer Stations would be replaced by uses that would have equal or worse levels of truck traffic. See, Appendix H, Volume I, CW Study.

Section 2: Review of Key Impact Analyses in the CW Study

This Section consists of a review of three critical environmental impacts analyzed by DSNY: air quality, neighborhood character and odors. These impacts were identified by the OWN member organizations based in the areas where Transfer Stations are clustered, as being of particular concern and importance.

A. Air Quality

In the CW Study, DSNY analyzed air quality in two areas: (1) the impact of on-site emissions from the Transfer Stations and (2) off-site impacts resulting from the trucks going to and from Transfer Stations.

On-Site Analysis

i. The DSNY Study Area excluded the areas of greatest Air Quality Impact

As noted in Section 1, DSNY's study of impacts removed the area of greatest impact from the environmental analysis. Specifically, DSNY eliminated the first 100 meters from its analysis of the impacts of NAAQS pollutants and the first 15 meters from its analysis of PM 2.5 impacts. See, Pg, 13, Appendix C, Volume I, CW Study. DSNY's use of the 100-meter "No Study Zone" is based on a flawed concept. It is a basic principle of engineering, incorporated into federal and New York State regulatory requirements and the CEQR TM, that the area *closest* to an emission source represents one of the areas of *greatest air pollution impact*. This is because, typically, building downwash effects, coupled with fugitive source emissions,[4] result in the greatest impact in these locations. Therefore, it is always critical that air modeling is performed from the property fence line outwards with no region(s) excluded from the analysis.

This is particularly the case with Transfer Stations because the buildings tend to be one-story facilities with vents at a very short height. In eliminating the first 100 meters from its analysis, the CW Study failed to analyze the impacts on residences and community facilities within that radius. See, for example, the Hunts Point Land Use map contained in the enclosed Maps CD, the residential units that are located within the 100 meters of

[4] Downwash is essentially when air pollution gets trapped in close proximity to the facility from which it is being emitted because the height of the air pollution is too short in comparison to adjacent structures. Fugitive emissions are essentially pollution that does not get emitted from a defined point such as a stack. In the case of the Transfer Station, fugitive emissions are emitted from opened doors, and in the case of some facilities, from the processing of waste in an unenclosed area.

Transfer Stations in the Hunts Point Map. Table 1 contains some of the residences and community facilities that were excluded from DSNY's Study Areas and consequently its analysis of impacts:

Table 1 – Receptors Excluded From the Commercial Waste Study

Study Area	Excluded Receptors		
JAMAICA	Residences	• All residences east of 171st Street, between Hillside Avenue and Hollis Avenue • The majority of residences in Hillcrest north of Hillside Avenue • The majority of residences in Jamaica Hills north of Highland Avenue and west of • Upland Avenue and the majority of residences southwest of York College	
	Community Facilities	• PS 95 Eastward School, • The Mary Louis Academy, • PS 82 - The Hammond School, • PS 35 – Nathaniel Woodhull School • Thomas A. Edison Vocational and Technical High School • Jamaica Day School of St. Demetrios • Jamaica Assess/Recreational Center	• AIDS Center/Queens County #2 • Queens Village Health Center • United House of Prayer • Faith Tabernacle Baptist Church • South Jamaica Senior Center • Jamaica Day Nursery • Queens Gateway To Health Center
BROOKLYN GREENPOINT WILLIAMSBURG	Residences	• Most residences west of McGuiness Boulevard in Greenpoint • Residences south and east of the Brooklyn DSNY Study Area in Ridgewood • Residences south and west of Brooklyn DSNY Study Area in Williamsburg	
	Community Facilities	• St. John Lutheran School • PS 18 Edward Bush School • IS 49 – W. J. Gaynor Intermediate School • PS. 132 – The Conselyea • PS 196 – The Ten Eyeck School • PS. 147 Issac Remsen ES • Fennel Day Care Center • PS 145 Andrew Jackson School • Bushwick United Head Start • Junior High School 162 Willoughby • St. Aloysius School • Ridgewood Dialysis Center • St. Cyril & Methodikus School • Builders for Family & Youth • Mercy Home for Children • SS Anthony & Alphonsus School	• PS 34, St. Stanislaus Kostka School • PS 110 Monitor School, • Junior High School 1126 J. Ericsson JHS • Automotive High School • St. Vincent De Paul School • Northside Senior Citizen Center • Heart Share Human Services of New York • PS 84 Jose De Diego School • JHS 50 J.D. Wells JHS • Los Sures Senior Center • El Puente Academy for Peace and Justice • PS 19 Roberto Clemente School • Nuestros Ninos Child Development School
THE BRONX PORT MORRIS & HUNTS POINT	Residences	• All residences to the east, north and west of the Port Morris and Hunts Point Study Areas were excluded including East Side Settlement House, Powers Family Residences, UCC EHRLICH Residence	
	Community Facilities	• Cardinal Hayes High School • PS 1 The Courtland School • Alfred E. Smith High School • Immaculate Conception School • JHS 149 E. D Clark JHS • Dominican Sisters Family Life • PS 49 Willis Ave. School	• PS 30 Wilton School • South Bronx High School Program • PS 754 School for Career Development • PS 161 Ponce DeLeon School • St. Anselm's School • Hunts Point Multi Services Center • United Bronx Day Program, Bronx Regional High School

The CEQR TM provides that:

> For actions that would result in potentially significant odors, including, but not limited to, **solid waste management facilities** . . . the Study Area should include at least a 1,000-foot radius. . . . For actions that would create 'non-point' sources, such as fugitive dust, the effects on the nearest locations to which the public has general access are typically considered. . . . Generally, a preliminary analysis is performed for the locations chosen using the above criteria. If significant impacts are predicted at all or most of the chosen locations, it may be appropriate to expand the Study Area so that more distant locations are included where potential significant impacts may also occur.

See, Pg. 3Q-16, CEQR TM. (Emphasis added).

DSNY failed to apply these CEQR TM requirements when it created the DSNY Study Areas. DSNY should have begun with a 1000-foot radius around each Transfer Station and expanded the radius based upon common impacts from multiple facilities, and upon the significance of the impacts on the receptors. Given the numerous receptors that are located immediately adjacent to the DSNY Study Areas, a 1,000 *meter* radius is a reasonable Study Area to fully study the impacts of the Transfer Stations. Examination of the enclosed Maps CD shows that the numerous receptors that would be included within a 1,000 meter radius.

The net effect of eliminating the first 100/15 meters from DSNY's analysis and the small DSNY Study Areas is that the CW Study failed to analyze numerous receptors impacted by the clustering of Transfer Stations. The CEQR TM provides that:

> Numerous receptors [be] analyzed at each of the locations to be studied in the assessment of stationary sources. These are located where the maximum total pollutant concentrations or incremental pollutant concentrations resulting from the action are likely to occur and where people are likely to have continuous access. . . . Examples of reasonable receptor sites include . . . air intakes to sensitive interior uses, such as residences, hospitals, nursing homes, schools, and community facilities.
>
> See, Pgs.16 –17, CEQR TM.

The identification and analysis of sensitive receptors is the heart of CEQR. Only by including all receptors potentially impacted and analyzing all impacts on such receptors can a project's impacts be legitimately examined. In an absolute rejection of this critical CEQR requirement, the DSNY Study Areas excluded the majority of residences and community facilities impacted by the Transfer Stations from its analysis.

In sharp contrast to the narrow process DSNY used to analyze the impact of the clustering of Transfer Stations, its air quality analysis of the conversion of Marine Transfer Stations followed the methodologies set forth in the CEQR TM. For example, its air quality Study Area consisted of a radius of 500 meters from the site property line in all directions with an examination of receptors at 50-meter increments; discrete elevated receptors (i.e., window, balconies, or air intakes); and sensitive land uses such as playgrounds, schools and residential areas. See, Pgs. 3-55, Chapter 3, Volume III, CW Study.

ii. The CW Study failed to account for Cumulative Sources, artificially reducing levels of Background Pollution

The effect of the failure of DSNY to include all receptors impacted by the clustering of Transfer Stations is compounded by the effect of its failure to correctly account *existing* local sources. By so doing, the CW Study artificially reduced the background levels for each of the pollutants analyzed in the study. The CW Study indicates that it did not include any other sources of emissions in the air quality analysis because it limited the review to only "major sources." See, Pg. 30, Volume I, CW Study.

"Major sources" are facilities that emit large quantities of pollution, at least 10 tons of pollutants per year. Even if we assume that no "major sources" impact the DSNY Study Areas, DSNY still failed to include the emissions from medium and small facilities. Including other local sources in the analysis of background conditions is critical to accurately assessing the air quality in the local Study Areas. By failing to do so, the CW Study underestimates the levels of air pollution in each of the DSNY Study Areas and minimizes the severity of the air quality impacts from Transfer Stations in the DSNY Study Areas.

Contrary to DSNY's overly simplistic approach, the CEQR TM prescribes that emissions from large, mid-size and small facilities beginning at minimum radius of 1,000 feet be included in the air quality analysis. The CEQR TM refers to such analysis as a cumulative impact analysis. See, Pgs. 3Q-36, 3Q-37, CEQR TM.

A recently completed Environmental Impact Study by the New York City Department of Environmental Protection (NYCDEP) – the lead agency for interpreting the CEQR TM - provides an illustration of how sources of pollution in proximity to a project should be analyzed and included in background local air quality conditions. In that matter, NYCDEP noted:

Based on NYCDEP and the CEQR Technical Manual guidance for the inclusion of potential sources to include in such types of cumulative impact analyses, the inventory for the cumulative impact analysis was prepared as follows:

- Primary Study Area Sources – These sources include all NYCDEP permitted combustion sources with heat inputs greater than 2.8 million Btu/hr that were located within a radius of 1000 feet [of the facility] ...
- Secondary Study Area Sources – These sources were defined as the areas between 1000 feet and two kilometer (km) from [the facility]. ... All permitted sources with heat inputs greater than 50 million Btu/hr that were located within these areas were included...
- Tertiary Study Area Sources – The tertiary study area was defined as the combined area between two km and 10 km from [the facility]. . . . Within this study area, current and proposed **"major"** combustion-related facilities as proposed non-major electrical generating facilities were considered. . . .

See. Final Supplemental Environmental Impact Statement, Newtown Creek Water Pollution Control Plant Track 3 Upgrade, June 6, 2003. [Emphasis added][5]

[5] DSNY is specifically aware of this Environmental Impact Statement, as evidenced by its cite to such study in Volume III of the Commercial Waste Study See Pg. 3-65, Chapter 3, Volume III, CW Study.

Essentially, this EIS included all the air emissions from all facilities including smaller facilities (2.8 million Btu/hr) within 1,000 feet of the project, mid-size facilities (50 million Btu/hr) between 1,000 feet and two kilometers and major facilities at a radius between two km and 10 km. In other words, the methodology examines all sources in the immediate area of the project being analyzed and only limits the type of source to larger sources as distance increases. This is done because only the emissions of larger facilities located at a significant distance from the area being studied are likely to migrate and impact the immediate area of the project being analyzed. DSNY's failure to comply with the CEQR TM essentially removed the effect of degraded air quality due to the numerous other polluting facilities located in and adjacent to each of the DSNY Study Areas from the air quality analysis. Lastly, in addition to ignoring existing sources of pollution in its analysis, the DSNY failed to account for the air impact of planned future development as required by CEQR TM.[6] See, Pg. 3Q-24 CEQR TM.

iii. DSNY did not analyze worst-case conditions as required by the CEQR Technical Manual

The CEQR Technical Manual requires that the analysis of air quality impacts from a project be based upon the worst-case conditions of the project's operations. See, Pg. 3Q-33, CEQR TM. DSNY failed to use the worst-case conditions in its analysis. This failure can be seen in three distinct aspects of the analysis..

[6] It should be noted that DSNY did include planned future development in its analysis of the conversion of Marine Transfer Stations. See pg. 3-32, Chapter 3, Volume III, CW Study.

First, DSNY analysis inappropriately used averaging techniques and assumptions to estimate air quality impacts instead of worst-case conditions. There are several areas in the CW Study where this is evident:

- "Assumptions were made for each category (of prototypical Transfer Stations) when determining the types and quantities of equipment that were ***typically*** used in the operations." See, Pg. 7, Volume I, CW Study (emphasis added).
- "An ***average*** number of idling waste hauling vehicles in front of the Transfer Stations were included in the analysis based on observations of stations in the Study Areas." Id. (emphasis added).
- "Long-term estimates were based on annual ***average*** activity levels for each prototypical transfer station. For 24-hour and annual average estimates, hourly distributions or period average estimates of emissions were developed to represent more realistic emission levels. Assumptions on the number of hours that each piece of equipment was in operation were based on observations and on the operating permits of Transfer Stations assigned to each prototype category." Id. (emphasis added).

Second, the CW Study failed to set forth whether the emissions estimates from on-site equipment represent worst-case conditions. See, Table 3.2-1, Pg. 7, Appendix C, Volume I, CW Study. Specifically, the CW Study does not demonstrate that the following factors were applied to its analysis:

- maximum number of vehicles on sites
- vehicles operating with diesel
- simultaneous operation of on-site equipment
- simultaneous operation of each transfer station in each TS clustered area.

Lastly, DSNY assumed that all fugitive dust created by the processing of solid waste within processing buildings was vented from stacks. This assumption is flawed because it is well known – particularly to residents living adjacent to Transfer Stations - that all Transfer Station operations have fugitive dust emissions from processing buildings when doors or other entryways are opened during loading and unloading operations.

iv. The CW Study failed to study the Actual Impacts of the Transfer Stations and failed to demonstrate that "Prototypical Stations" adequately reflect Actual Impacts

Rather than analyze the actual impacts from the 43 Transfer Stations in the four Study Areas, "prototypical Transfer Stations" were created by DSNY to analyze environmental impacts. The CW Study failed to demonstrate that such use accurately reflects the actual impacts of the actual Transfer Stations in the DSNY Study Areas.

While the CEQR TM does allow for the use of "prototypical" sources, it does so only where a facility does not yet exist. Under such circumstances, the CEQR TM requires the analysis of "prototypical worst-case scenarios." See, Pg., 3Q-16, CEQR TM. Not only did the CW Study fail to demonstrate the validity of using prototypical stations, it failed to show that its analysis of "prototypical stations" was based on worst-case scenarios for such stations. As discussed earlier, there is good reason to believe that it is not.

In order to assess worst-case conditions, the CW Study analysis should have included the following scenarios:

- the maximum number of equipment on site
- all equipment operating simultaneously and at highest emission levels
- each transfer station in each TS Clustered Area operating simultaneously at peak conditions, and
- the maximum number of trucks idling for the maximum idling period

There is no evidence in the CW Study that the prototypical stations were based on such factors.

Given that there are only 43 sites under review and all of them are permitted by DSNY, it is unclear why DSNY did not simply use all available information from existing permits and augment any necessary information rather than resorting to a "prototypical" facility. Indeed, use of real data for conducting an analysis is preferred under CEQR.

Utilizing actual information is particularly important in evaluating impacts from Transfer Stations because the majority of Transfer Stations are retrofitted from other uses and do not employ best practices for design or operation. For this same reason, it is nearly impossible to estimate or model the impacts of Transfer Stations in the Study Areas because the impact of each transfer station is driven by facility-specific factors such as the

type and size of the structure, the presence and effectiveness of ventilation systems, proximity to adjacent properties and roads, and the size and number of equipment on-site.

v. Under DSNY's Insufficient Analysis, the Air Quality Impacts of PM 2.5 are Significant and Adverse

PM 2.5 is one the most important public health issues in the United States, New York City and, in particular, for each of the neighborhoods in the DSNY Study Areas that have clustering of Transfer Stations. USEPA describes its negative effects as follows:

> When breathed, particles can accumulate in the respiratory system and are associated with numerous health effects. . . .Fine particles [PM 2.5] are most closely associated with such health effects as increased hospital admissions and emergency room visits for heart and lung disease, increased respiratory disease and symptoms such as asthma, decreased lung function, and even premature death.

See, http://www.epa.gov/oar/oaqps/pm25/general.html.

USEPA Region 2 and New York State Department of Environmental Conservation have recommended, based on three years of monitoring data, that the counties of New York City be designated as "non-attainment".

See, http://www.epa.gov/pmdesignations/regions/region2t.htm.

The designation of non-attainment means that the level of PM 2.5 is above the health-based standard. "By law, non-attainment areas are subject to a number of requirements to reduce particles and the pollutants that form them."

See, http://www.epa.gov/pmdesignations/documents/120/factsheet.htm.

DSNY's analysis – despite all of its limitations - demonstrates that the impact of clustering of Transfer Stations is clearly significant and adverse. Even under the limited air quality analysis performed by DSNY, the PM 2.5 impacts exceed the regulatory thresholds established by NYSDEC and NYCDEP.[7] See, Tables 2 and 3 below.

Table 2
Summary of Air Quality Analysis
PM 2.5 Annual Neighborhood Average

Study Area	Annual Average Monitored Concentration	Annual Neighborhood Concentration	NYSDEP Significance Impact Threshold Level (3)
Brooklyn	16.3	0.88	0.1 ug/m3
Jamaica	13.1	0.29	0.1 ug/m3
Hunts Point	18	1.05	0.1 ug/m3
Port Morris	18	0.22	0.1 ug/m3

(1) NAAQS for PM 2.5 is 15 ug/m3
(2) All information in this table is taken from Table 5.2.2-5 which is found in Pg. 37, Volume I, CW Study.

[7] DEC thresholds for PM 2.5 impacts are set forth in "CP-33/ Assessing and Mitigating Impacts of Fine Particulate Matter Emissions," dated 12/29/03 These thresholds a 0.3 ug/m_3 for the highest annual concentration at any receptor and 5 ug/m_3 for receptor having the highest 24-hour impact; NYCDEP has adopted the DEC thresholds and has required an additional threshold of 1 ug/m_3 and applied such in conduct of environmental impact statements – See New Final Supplemental Environmental Impact Statement, Newtown Creek Water Pollution Control Plant Track 3 Upgrade, June 6, 2003

Table 3
Summary of Air Quality Analysis
PM 2.5 24-Hour Average

Study Area	24-hr Monitored Concentration	24-hour Concentration	NYSDEC/NYSDEP Significance Impact Threshold
Brooklyn Study Area	41.7 ug/m3	11.2 ug/m3	5 ug/m3
Jamaica Study Area	38.6 ug/m3	5.7 ug/m3	5 ug/m3
Hunts Point Study Area	41.1 ug/m3	12 ug/m3	5 ug/m3
Port Morris Study Area	41.1 ug/m3	4.8 ug/m3	5 ug/m3

(1) NAAQS for PM 2.5 is 65 ug/m3

(2) All information in this table is taken from Table 5.2.2-6 which is found in Pg. 37, Volume I, CW Study.

It must be noted that these tables – which contain information exclusively obtained from the CW Study - significantly undercount PM 2.5 impacts because DSNY separated PM 10 from PM 2.5 impacts with a reasonable basis for doing so as required by the NYSDEC[8].

As demonstrated in Tables 2 and 3, the PM 2.5 values in two of the DSNY Study Areas – all the Study Areas exceed the annual neighborhood average impact threshold and all except the Study Areas in Port Morris, the Bronx, exceed the 24-hour threshold with Port Morris marginally below the 24-hour threshold. It should be noted that DSNY did

[8] "The Department staff shall require that applicants for a permit hereunder quantify emissions of PM10 from a proposed project and ***assume that all measured or estimated PM10 emissions are PM2.5.*** Where an applicant demonstrates that a reasonably accurate measure of the PM2.5 fraction of a source's particulate matter emissions is available, Department staff may, in its reasonable discretion, assess potential impacts using the PM2.5 fraction. **"See CP-33/Assessing and Mitigating Impacts of Fine Particulate Matter Emissions, 12/29/03 (hereinafter, the "DEC PM 2.5 Policy")**

not present any analysis of the highest annual PM 2.5 impact in the CW Study. This is a major concern because each of the DSNY Study Areas exceed the USEPA PM 2.5 health standard and, therefore, identifying the highest annual PM 2.5 impact is critical to identifying health consequences from the Transfer Stations.

The exceedances of the PM 2.5 thresholds are bases for concluding that the impacts from the clustering of Transfer Stations in the DSNY Study Areas are significant and adverse. It must be noted that DSNY ignored the DEC and DEP PM 2.5 thresholds when analyzing the Transfer Stations, but correctly applied these thresholds when analyzing the impacts of the conversion of Marine Transfer Stations. See, Attachment 4, "On- and Off-Site Air Quality Analysis Results DSNY-Managed Waste Plus Commercial Waste Collection Vehicles," Volume III, CW Study. Moreover, DSNY also acknowledges the applicability of the PM 2.5 standard in the Draft SWMP EIS Scope. See, Pg. 76, Draft SWMP EIS Scope.

Quite simply the impacts of PM 2.5 from the clustering of Transfer Stations in the neighborhoods studied in DSNY Study Areas are significant and adverse. Given the health consequences of the exposure to PM 2.5[9] - especially because the background levels of PM 2.5 exceed the USEPA health based standards – DSNY's decision to ignore the impacts is indefensible.

vi. The Air Quality Impacts of the NAAQS Pollutants are Severe and should have been judged Significant and Adverse.

As mentioned above, the CW Study concludes that the air quality impacts of the clustered Transfer Stations are not significant and adverse. As is the case with PM 2.5 impacts, Table 4 shows that the air quality impacts of NAAQS pollutants from the Transfer Stations -- even with the limited approach used by DSNY -- are also significant and adverse. Table 4 below sets forth the impact of each NAAQS pollutant analyzed in the CW Study. The Column entitled "Percent of Impact Range" shows a range of impact – the higher end of the range compares the impact of the Transfer Stations against the background conditions without including the existing contribution to the background from Transfer Stations.

Table 4 Summary of Air Quality Analysis
Criteria Pollutants
Hunts Point, Bronx CDs #2 and #9 Study Area

Pollutant	Time Period	Percent of Impact Range (1)	Percent of NAAQS	SILs as a Percentage of NAAQS
Carbon Monoxide (CO)	1-hr	25% to 34%	3.20%	5.00%
	8-hr	20% to 26%	6.75%	5.00%
Nitrogen Dioxide (NO2)	Annual	21% to 26%	18.00%	1.00%
Particulate Matter (PM 10)	24-hr	47% to 88%	44.00%	3.33%
	Annual	23% to 29%	14.00%	2.00%
Sulfur Dioxide (SO2)	3-hr	19% to 24%	4.00%	1.92%
	24-hr	7% to 8%	2.47%	1.37%
	Annual	3 to 4 %	1.25%	1.25%

(1) The range of impact was established by using the ratio of highest estimated pollutant concentration to maximum contribution from on-site emission sources, as set forth in Tables 5.2.2-1 through 5.2.2-4, Volume I of CWS Study, and by using the ratio of maximum contribution from on-site emission sources to the background pollutant concentration.

A more appropriate standard for assessing whether the air quality impacts are significant and adverse is the Significant Impact Levels (SILs) established pursuant to the Clean Air Act to assess the significance of impacts of a facility's proposed air permit.[10] To provide some comparison of the impacts, the last column of the table, entitled "SILs as a Percentage of NAAQS," shows the percentage of impact that is deemed significant under the federal Clean Air Act.[11]

[10] See USEPA New Source Review Workshop Manual - Prevention of Significant Deterioration and Nonattainment Area Permitting. USEPA, OAQPS. October 1990

As can be seen from Table 4, the impacts from the Transfer Stations – as calculated by DSNY - are many times higher than the percentage that is deemed significant under the Clean Air Act. For example, the impact of PM 10 under the 24-hour standard could be as high as 88%, as compared to the SILs impact percentage of 3.3 %, which is deemed significant under the Clean Air Act. Despite the magnitude of the impacts calculated by DSNY, it concluded none of the impacts are significant and adverse.

DSNY arrived at this conclusion by evaluating whether the results of its analysis caused background pollution levels to exceed federal air quality standards (i.e., the NAAQS). DSNY examined whether there would be an exceedance of the standard for each pollutant analyzed, rather than assess the significance of the incremental impact from the Transfer Stations. See, Pgs. 33 – 36, Volume I, CW Study.

While CEQR TM does allow for such comparison, such comparison is inconsistent with the overall methodology of the CEQR TM, the federal Clean Air Act and basic engineering methods which prescribe that impacts be assessed based on the magnitude of impact from the project being analyzed. Merely examining whether the standards would be exceeded ignores the magnitude of the incremental impact of project being analyzed.

Under DSNY's approach, a project could impact 99% of an air quality standard and not be deemed significant and adverse, but another project seeking a permit shortly thereafter whose impacts are 2 % of the standard would be deemed significant and adverse. The proper approach would have been to assess the magnitude of the incremental impact of

Transfer Stations, in and adjacent to the DSNY Study Areas, on background pollution levels. If DSNY had used this approach, it would have concluded that the impacts were clearly significant and adverse.

In addition to drawing incorrect conclusions in its analysis of PM 2.5 and NAAQS pollutants, DSNY chose not to analyze the impacts of any of the toxic air pollutants associated with Transfer Station operations.[12] Again, this is in contrast with DSNY's air quality analysis of the conversion of Maine Transfer Stations, which analyzed the impacts of 15 toxic compounds identified as emissions from diesel equipment. See, Pg. 3-44, Chapter 3, Volume III, CW Study.

These 15 toxic compounds include six toxic compounds that are carcinogenic. DSNY appropriately analyzed the impact of each of these compounds from the conversion of the Marine Transfer Stations to determine whether they exceeded the regulatory thresholds. Id. Despite the use of numerous diesel equipment at land-based Transfer Stations, DSNY simply ignored the emissions and the impacts of toxic compounds in its analysis of the impacts of clustering.

[12] Toxic air pollutants are a category of pollutants that are generally referred to as non-criteria pollutants. Toxic air pollutants are regulated by the NYSDEC by examining the incremental impact of toxic air pollutants from sources of such pollutants. These incremental impact standards are set forth in the NYSDEC *Guidelines for the Control of Toxic Ambient Air Contaminants*.

Off-Site Air Quality Analysis

The CW Study analysis of off-site air quality impacts is also highly flawed, particularly with respect to the analysis of PM 2.5 impacts. As noted earlier, the CW Study excludes *all* receptors within 15 meters of the curb at the intersections analyzed for the analysis of PM 2.5 impacts. DSNY's approach conflicts with the CEQR TM and excludes the areas of significant and adverse impacts.

The CEQR TM states that "receptors should be placed at mid-sidewalk, generally 6 to 7 ½ feet from the curb-line of the sidewalk (for wider sidewalks, no more that 7 ½ feet from the curb)." See, Pgs. 3Q-14, 3Q-15, CEQR TM. The purpose of doing so is to locate receptors "where the maximum total pollutant concentrations with the action or incremental pollutant concentrations resulting from the action are likely to occur and where people are likely to have continuous access. This usually means that receptors are located near those approaches of the intersection where traffic is likely to be the greatest or the most congested . . . [such as] sidewalks near roadways; edge of right-of-way for roadways without sidewalks, if publicly accessible; property lines of all residences, hospitals, schools, playgrounds, and the entrances and air intakes to all other buildings." See, Pg. 3Q-14, CEQR TM. Contrary to the explicit direction of the CEQR TM, DSNY's "no study zone" of the first 15 meters excludes receptors such as sidewalks, property lines of residences, and playgrounds.

B. The study of Neighborhood Character excluded the majority of Residential Areas and Community Facilities

Neighborhood character impact essentially is an evaluation of how impacts on such issues as use, socio-economics, traffic and noise collectively impact the neighborhood as a whole. See, Pg. 3H-1, CEQR TM. Contrary to the manner prescribed by the CEQR TM, DSNY did not establish a specific Study Area for neighborhood character. DSNY simply created a single area for the environmental impacts that were analyzed. Moreover, the DSNY Study Areas are significantly smaller than prescribed by the CEQR TM.

The CEQR TM advises that the Study Area for assessing neighborhood character impacts should minimally begin at 400 feet, and should be expanded to ¼ and ½ mile for larger projects. See, Pg. 3A-7, CEQR TM. Given the intended purpose of CW Study to study the impact of the clustering of Transfer Stations in each of the DSNY Study Areas, DSNY should have used a radius of at least ¼ mile for all primary impacts and ½ mile for secondary impacts. The consequence of the narrow DSNY Study Areas is that a legitimate analysis of neighborhood character was not performed because the very factors for conducting such analysis - residential areas and community facilities - were excluded from the DSNY's analysis.

DSNY's analysis of neighborhood character impacts for land-based Transfer Stations is in sharp contrast to DSNY's analysis of neighborhood character impacts for the conversion of Marine Transfer Stations. In analyzing neighborhood character impacts for conversion of Marine Transfer Stations, DSNY followed the directive of the CEQR TM.

DSNY assessed the neighborhood character impacts based on an appropriately-defined Study Area and environmental impacts that affect neighborhood character, such as land use, traffic, socioeconomic and open space impacts, generally based on a ¼- to ½-mile radius Study Area. See, Pg. 3-19, Chapter 3, Volume III, CW Study.

Indeed, to truly evaluate neighborhood character impacts, it is critical that one begin to identify a much larger Study Area based on community observations of the impacts from Transfer Stations. For example, the Study Area should include the following: roads used by Transfer Station trucks, including non-truck routes within the communities, significant areas of residences, and community facilities (e.g., hospitals, schools, child care facilities, and even small commercial facilities).

C. The analysis of Odor Impacts was incomplete and did not fully account for Odor Impacts

The odor analysis suffers from many of the basic deficiencies noted for the air quality analysis and did not fully account for odor impacts. DSNY limited the analysis of odor impacts from the clustering of Transfer Stations in each of the DSNY Study Areas to those that it deemed to be "overlapping." See, Pg. 45, Volume I, CW Study. It further limited the analysis to only those "overlapping" impacts that were near unidentified "sensitive receptors." In other words rather that analyze all of the odors from all of the Transfer Stations in each of the neighborhoods, DSNY examined only odors at locations that it deemed to be impacted from more than one transfer facility. This approach

essentially excludes the worst odor impacts, those immediately adjacent to Transfer Stations.

As noted above in the air quality discussion, this approach conflicts with the CEQR TM. DSNY should have examined the total odor emissions from each of the Transfer Stations in each of the DSNY Study Areas and assessed their collective impact at all sensitive receptors. As also noted above, because of the narrow Study Area, DSNY failed to account for impacts at numerous residences and community facilities in each of the DSNY Study Areas. In contrast to its limited odor analysis of the Transfer Stations, in its analysis of the odor impacts due to the conversion of Marine Transfer Stations, DSNY appropriately assessed odor impacts at 50-meter intervals for a total radius of 500 meters around the site boundary in all directions.

Separate from DSNY flawed "overlapping" approach, the methodology for conducting estimated odor impacts suffers from numerous flaws. Rather than study the actual odors from the Transfer Stations, it created "odor emission factors" based on four putrescible Transfer Stations. See, Pg.2, Appendix E, Volume I, CW Study. Given the wide variation of Transfer Station design and operation, this approach fails to account for the worst-case odor conditions as required by the CEQR TM.

DSNY also derived a novel "odor per unit mass stored" as the basis for estimating emissions from any transfer station. See, Pg. 6, Appendix E, Volume I, CW Study. This approach is not based on any industry or regulatory approach. Moreover, it does not

account for wide variations of odors due to the varying constituents and age of the putrescible waste, and the varying designs and operations of each of the Transfer Stations. DSNY also failed to account for any fugitive odors - it assumed that all odors were vented from the exhaust vents despite the fact that fugitive odors are a major issue at Transfer Stations due to their numerous openings.

In assessing odor impacts from the Transfer Stations, DSNY did not distinguish between odors from Transfer Stations and odors from other facilities. See, Pg. 46, Volume I, CW Study. In other words, it assumed that all odors in the neighborhoods surrounding Transfer Stations are equal in its detection and impact on residents. This is a critically important issue because residents in and adjacent to the DSNY Study Areas consistently detect the unique odors associated with Transfer Stations in their neighborhoods.

There was no accounting for the unique combination of odors from putrescible waste and various masking agents used in Transfer Stations. This is in sharp contrast to the approach DSNY used to analyze odor impacts from the Marine Transfer Stations. In analyzing the odor impacts from Marine Transfer Stations, DSNY examined odor concentration, odor intensity (i.e., relative strength of an odor) and odor persistence - the three key factors that would uniquely identify putrescible waste odors. See, Pgs. 3- 71, 3-72, Chapter 3, Volume III, CW Study.

DSNY also analyzed hydrogen sulfide (H_2S) emissions from Marine Transfer Stations, but failed to do so for the Transfer Stations. See, Pgs. 3-72, 3-73, Chapter 3, Volume III, CW Study. Hydrogen sulfide is the one odorous compound for which New

York State and New York City have issued regulatory standards. While DSNY appropriately compared the H_2S impacts from Marine Transfer Stations against these regulatory standards, it ignored it in its analysis of the impacts of Transfer Stations.

D. DSNY did not analyze Health Impacts

DSNY failed to conduct any form of health analysis. Its purported health analysis consisted of nothing more than referring to its air quality and odor analyses. See, Appendix I, Public Health Evaluation, Volume I, CW Study. As noted above, even with the major flaws in the CW Study with respect to the air quality analysis, the air quality impacts are significant and adverse. Based on the impacts of PM 2.5 alone, DSNY should have specifically analyzed the asthma and related respiratory and heart consequences of such impacts. As DSNY acknowledges, certain communities have a much higher susceptibility to asthma and respiratory illness. See, Pg. 16, Appendix I, Public Health Evaluation, Volume I, CW Study.

Based on this acknowledgement, the fact that each of the communities in and adjacent to the DSNY Study Areas consist of residents whose asthma rates are among the highest in New York City, and the documented asthma and respiratory risk due to exposure to PM 2.5, DSNY should have performed a detailed health impact analysis to assess the health risks to community residents from the exposure to PM 2.5. Such health analysis should have included a health survey in each of the communities to establish a health profile and should have specifically identified subpopulations that suffer from asthma,

upper respiratory illness, and/or are otherwise susceptible to exposure to PM 2.5. Based on such a health profile, DSNY should have assessed the specific health risks associated with the PM 2.5 impacts from the Transfer Stations. In addition, DSNY should have assessed whether the masking agents used for odors have any public health impact, including triggering of asthma events.

Another major omission is DSNY's failure to assess the health consequences of exposure to air toxins. As noted above, even though DSNY acknowledged that there are 15 air toxins associated with the diesel engines used for Transfer Station operations, including six carcinogenic compounds, DSNY did not analyze the impacts of these compounds in the communities that are in and surround the DSNY Study Areas. Lastly, DSNY failed to examine the public health concerns associated with vermin that are commonly associated with Transfer Stations, particularly putrescible Transfer Stations.

CONCLUSIONS AND RECOMMENDATIONS

As discussed in this Report, DSNY's analysis of the impacts of Transfer Stations is severely flawed and does not support DSNY's conclusions that the clustering of Transfer Stations does not have significant and adverse impacts. Despite the severe limitations in the manner in which DSNY studied the environmental impacts of the clustering of Transfer Stations, DSNY's analysis shows significant and adverse impacts from this clustering.

Given the serious flaws in the CW Study, particularly its numerous conflicts with the CEQR TM, the CW Study cannot be used as a basis for the SWMP, the Environmental Impact Statement of the SWMP, or the Transfer Station Siting Regulations. If the CW Study is to serve DSNY's stated goal of being a "foundation for the Department's efforts to develop a new comprehensive Solid Waste Management Plan (SWMP) for the next 20 years," as proclaimed by Commissioner Doherty in his April 12, 2004 transmittal letter for the DSNY Study, a more comprehensive analysis must be performed.

In order to comprehensively identify the deficiencies, it is recommended that, based on the deficiencies identified in this report, the following additional analyses must be done:

(1) Review Underlying Basis of DSNY's Review of Clustering

Perform an analysis of the "geographic proximity" or clustering of Transfer Stations that assesses the full range of "aggregate impacts" and is consistent with

the requirements of a full Environmental Impact Assessment as detailed in the CEQR Technical Manual including:

- Develop alternative Study Areas for each impact issue analyzed in the CW Study

- Identify impact issues not analyzed in the CW Study and develop Study Areas and methodologies for such analyses based on the requirements of the CEQR Technical Manual

- Identify all sensitive receptors – examining receptors included and excluded (excluded receptors would include community facilities, parks, etc.)

- Evaluate "prototypical" waste stations to determine whether they accurately represent actual land based facilities in operation in New York City

  - Review field surveys of Transfer Stations

  - Evaluate design and operational assumptions

  - Evaluate permits for each of the Transfer Stations

- Check data on input used in analysis to verify that emissions/impacts estimates are correct, e.g., emission estimates of number of vehicles on-site

- Assess "replacement scenario" to determine whether replacement use assumptions are based on existing and proposed land use plans (as opposed to presuming replacement with similarly impactful industrial uses). Also examine the extent to which areas were rezoned for the purpose of Transfer Station sitings.

(2) Review operational improvements analysis

- Identify deficiencies

- Prepare recommendations for best design and operation practices based on regulatory and industry standards; and on authority of DSNY.

(3) Review Proposed Transfer Station Siting Regulations

- Determine whether current proposed regulations adequately protect all sensitive receptors (not only those listed in the regulations) from adverse impacts of individual and clustered Transfer Stations.

- Develop model siting regulations based on:

  - Regulations in place nationally and internationally

- Existing literature and understanding of the potential harms of Transfer Station systems and of potential mechanisms for minimizing harms and ensuring equitable distribution of impacts.

- Analysis of DSNY authority over the siting of Transfer Stations

(4) **Evaluate Volume II: Commercial Waste Generation and Projections, and compare projected waste to current capacity and projected capacity under the Marine Transfer Stations plan.**

(5) **Evaluate Volume V: Manhattan Transfer Station Siting Report and determine whether the conclusions regarding the feasibility of additional Transfer Stations in Manhattan are valid.**

- Evaluate whether potential Marine Transfer Station sites exist in Manhattan, in addition to the existing Marine Transfer Station sites at West 59th Street, East 91st Street, and West 135th Street, for the processing of DSNY-managed and commercial waste.

- Evaluate whether the Volume V assessments of barriers to creating four additional Marine Transfer Stations, and the conclusions drawn from these assessments, are valid.

(6) **Evaluate Volume III to determine whether the analysis and conclusions regarding the conversion of existing Marine Transfer Stations are accurate.**

ATTACHMENT 1 – DSNY's Four Study Areas (Maps CD)

Hunts Point, Bronx CD - #2 and 9 Study Area - The area is comprised of 11 census tracts in the Hunts Point Neighborhood and covers most of Bronx CD #2 -- it includes the Hunts Point peninsula with portions of the East River and Bronx waterfronts, and extends inland several blocs north of the Bruckner Expressway. The census tracts are: 011900, 008900, 0111502, 08500, 009100, 08300, 011501, 00900, 008100, 009700, 010500.

Port Morris, Bronx CD - #1 Study Area - The area studied is comprised of 13 census tracts in the Port Morris area and covers the southwestern portion of Bronx CD -- #1, which is roughly about 1/3 of the districts overall area -- extends along the Harlem River and East River waterfronts from near the 145th Street Bridge at the northwest to about East 149th Street at the southeast, and inland several blocks east of the Major Deegan Expressway and north of the Bruckner. The census tracts are: 004900, 004700, 005301, 002300, 001700, 002500, 02702, 02701, 001500, 001100, 08100, 03100, 008300.

Brooklyn Study Area - 17 census tracts in the northeastern portion of Brooklyn Community District #1 - census tracts 050300, 049500, 048100, 051300, 048300, 045300, 057900, 058900, 059300, 047300, 051500, 047700, 046500, 049700, 050100.

Jamaica Study Area - 12 census tracts the over the northern portion of Queens CD - #12 and a portion of CD - #8 to the north. It straddles the LIRR corridor north of John F. Kennedy International Airport and west of the Jamaica Station. The census tracts are: 045800; 045400; 044602; 046000; 044601; 044200; 024400; 041000; 044000; 024600; 024800, 041400.

40.3.4.2 DSNY Response to Organization of Waterfront Neighborhoods (OWN) Comments on Commercial Waste Study

40.3.4.2.1 Introduction

This document responds to the comment document in the preceding section prepared for the Organization of Waterfront Neighborhoods and the New York Lawyers for Public Interest by ARC Engineering et al and EA Engineering (undated), that addressed Volume I of the six volume, March 2004, Commercial Waste Management Study (CWMS) prepared by Henningson Durham & Richardson Architecture & Engineering P.C. (HDR) and its subconsultants (the HDR Team) for the New York City (City) Department of Sanitation (DSNY). The subject document will be referred to herein as the "OWN comments" and the commenting organizations will be collectively referred to as "OWN."

The CWMS was prepared under DSNY's direction in response to Local Law 74 of 2000 (LL74), which required a study of the environmental and public health effects of the relatively high numbers of commercial waste transfer stations in some areas of the City. Many of the specific comment responses below necessarily address certain of the mischaracterizations of the CWMS purpose, and are not intended to constitute a complete response to all of OWN's comments. The responses below focus on the OWN comments as they relate the CWMS analysis and its findings.

40.3.4.2.2 General Responses to OWN Comments

The vast majority the OWN comments reflect significant misconceptions and/or mischaracterizations by the commenters about the purpose of the CWMS. The following are summary statements of an OWN comment, followed by the response:

1. **Comment:** The OWN document extensively (approximately 100 times) cites City Environmental Quality Review (CEQR) requirements as if they apply to the CWMS, and critiques the study for being in "violation" of these requirements.

Response: The OWN document improperly evaluates the CWMS as if it were a permitting exercise or an environmental review for a proposed "project" or action. The OWN comments use the word "project" in quotes several times, implying that the commenters understand that the CWMS is not, in fact, a proposed project. The OWN comments inappropriately critique the CWMS for not applying methods and criteria that are applicable to single-facility or "project" actions, thus concluding that the CWMS was a seriously flawed study.

CEQR requirements do not apply to the CWMS since the CWMS does not evaluate an action subject to CEQR such as the siting of a new project in the City or a programmatic action – rather, it evaluates existing privately owned and operated transfer stations. Since this was a unique study, when feasible CEQR methodologies were used as a means to analyze the potential effects of these existing transfer stations (for example, a 3 dBA increase for noise was used as a threshold for perceived impacts when the study area analyses modeled existing facilities, and then the contribution of multiple facilities on a sensitive receptor in relation to the background monitored levels at that receptor since that is a recognizable threshold), but to cite any inconsistencies with CEQR as "violations" is inappropriate.

Once the CWMS is placed in its proper context, as a study rather than an environmental review of a new project or action, most of the OWN comments are not applicable. The analytical approach used for the CWMS was a reasonable attempt to quantify the cumulative, overlapping impacts on neighborhoods and sensitive receptors from the effects of multiple transfer stations in a geographic area. The CWMS Scope, issued for public comment, described this approach and the comments received on the Scope were favorable.

2. **Comment:** The OWN comments state that DSNY claimed credit for future modifications at Transfer Stations in the analysis and that DSNY believes it has the authority to implement "some" of the changes recommended in the CWMS.

Response: Credit for future facility modifications were not claimed for the analysis. The methodologies for noise analysis indicated that, if significant effects were identified at a receptor as a result of the detailed stationary noise modeling, attenuation measures would be modeled. Since no significant effects were identified, these mitigation measures were not applied. If areas of overlap were identified for potential effects from odors under the conservative assumption that none of the facilities had odor control measures, the study applied reductions due to the known presence of odor control systems at certain facilities. If facility modifications were approved and underway at the time of the study, the modifications were included in the analysis, as appropriate, as in one instance, where an extensive environmental review with extensive community involvement had been conducted. It should be noted that DSNY has proposed changes to its transfer station rules that contain operational and design changes that, when implemented, will improve conditions at and around the transfer stations.

3. **Comment:** The OWN comments indicate that no analysis was presented for potential land use, community facilities and socioeconomic effects and that the neighborhood character analysis excluded the majority of residential areas and community facilities.

Response: As noted, the CWMS was undertaken to comply with Local Law 74 and to assist in the development of the new comprehensive SWMP. The study scope was expanded during the publicly-reviewed scoping process and the topics considered in the final study reflect this. The environmental studies conducted, however are not required under CEQR, and consequently do not specifically represent every topic considered in a CEQR environmental review. For example, the neighborhood character component of the CWMS was performed according to the accepted final scope of work for the CWMS, based on general land use, population characteristics, urban design/visual quality, parks and other community facilities prevalent in the study areas. The neighborhood character evaluation served two purposes: it informed the technical studies (air, odor, traffic, and noise), and it provided the opportunity to characterize any adverse effects which the air, odor, noise and traffic analyses demonstrated were due to the Transfer Stations' cumulative presence and operations. Because these technical analyses found no adverse effects that could be attributed to the combined effects of Transfer Stations, no adverse effects to neighborhood character were identified as well.

40.3.4.2.2 Specific Comments and Responses

4. **OWN Comment:** On pages 17-18, in a critique of the replacement trip generation (RTG) component of the CWMS, OWN makes the comment that the CWMS "simply makes the assumption - - without justification - - that the areas are zones manufacturing and that, therefore, future uses will be manufacturing ones."

Response: The assumption that, absent transfer stations, the future land use of the Study Area sites would be manufacturing is reasonable. The analysis cannot assume a non-industrial land use different from what the City has mandated for a manufacturing zoned parcel, especially since many other adjacent businesses depend on that zoning.

5. **OWN Comment:** On the bottom of page 18, OWN says that the DSNY did not analyze the impacts of each individual transfer station especially at "receptors" immediately adjacent to individual stations.

Response: DSNY agrees with this statement. LL74 directs that the CWMS evaluate the effects of multiple transfer stations concentrated in a geographic area . Putting receptors on or near fence lines and reporting these results would do nothing to inform the public and city officials regarding the "aggregate" effects of the facility groupings, and how these groupings affect the neighborhood. Rather, such receptors would reflect effects that are either totally or almost entirely caused by the one facility on whose fence line the receptor is placed. Such analysis is appropriate for individual facility permitting actions and individual facility environmental analyses, and for enforcement of permitting and zoning standards, but is not helpful in evaluating aggregate effects of facilities in geographic proximity on a neighborhood scale.

6. **OWN Comment*:*** On page 22-23, in critiquing the size of the Study Areas defined for the CWMS, OWN says that the "analysis of environmental impacts should be based on the projected distance of the impacts from the project."

Response: The Study Areas are, in fact, large enough so that the areas encompassed the locations of highest combined effects due to multiple facilities for on and off site noise, air quality, odor and traffic so that the predicted parameters (noise levels, pollutant concentrations) were clearly decreasing to well below the peak predicted levels at the edges of the Study Areas.

7. **OWN Comment:** The paragraph beginning on page 27 and continuing on page 28 of OWN's comments critiques the use of a 100-meter setback (the setback is responded to under Comment #5 above) for the air quality analysis of aggregate effects of the transfer station groupings. This paragraph then refers to Table 1, which is a listing of residential areas and community facilities supposedly excluded from the air quality analysis.

Response: This OWN comment implies that the listed facilities in "Table 1" are within the 100-meter setback and were thus excluded from the air quality modeling analysis. This is misleading because while the listed residential areas and community facilities are not within the air quality modeling domains selected for analysis, the vast majority of these are in fact well beyond 100 meters from the facilities studied, and are in fact outside the Study Areas modeled.

For example, Thomas A. Edison Vocational and Technical High School is listed by OWN as a community facility excluded from the Jamaica Study Area air quality analysis. A review of City maps confirms that this school is in fact outside the Jamaica Study Area, is over two (2) miles northwest of the nearest commercial waste transfer station in this study area, and is across a major freeway (Van Wyck Expressway) from the Jamaica Study Area. Such potential receptor locations are rightly excluded from analysis, especially because they are well outside the modeled area, which was large enough to easily encompass areas of maximum aggregate effect from the subject Study Area facilities.

8. **OWN Comment:** On page 31 of OWN's comments, a critique is made of the size of the air quality modeling domain (Study Area) for the CWMS, with a comparison to the modeling domain sizes used in the MTS EIS analyses. OWN says that that MTS analyses were completed in accordance with CEQR criteria, which are acceptable to OWN. OWN cites the MTS analyses as using a grid that extended at least 500 meters in all directions beyond facility fence lines.

Response: The air quality modeling grids used for the CWMS extend approximately 500 meters beyond (North, South, East and West) the transfer station facility locations that bounded the group of transfer stations in each Study Area. Therefore, OWN's critique is unfounded.

9. **OWN Comment:** On the bottom of page 34 of OWN's comments, they state that CEQR requires a "worst-case" analysis of the "project's operations," which DSNY's CWMS did not accomplish.

Response: The CWMS did include a reasonable worst-case analysis of air quality impacts for annual averages even though a worst-case analysis is more appropriate for permitting and environmental reviews for proposed projects, while the CWMS is not a "project" (i.e., it does not deal with a single facility or a proposed action), it is not a permitting action, and it is not subject to CEQR review.

The goal of the CWMS was to estimate potential effects of the relative concentration of existing commercial waste transfer stations in the Study Areas, rather than to permit new ones. Based on information obtained from the private transfer station operators and DSNY, average and peak facility operations were estimated for each type (putrescible, non-putrescible and fill material) of facility. Average operations were assumed over 16 hours for putrescible transfer stations, 12 hours for non-putrescible transfer stations and 10 hours for fill material transfer stations. Peak hour operations were assumed to be 24 hours per day for putrescible waste and non-putrescible waste transfer stations and were assumed to be 12 hours per day for fill material transfer stations since operations do not occur 24 hours per day at this type of transfer station. Therefore, a worst-case analysis was used to evaluate existing conditions for air quality analyses, particularly on a short-term basis.

10. **OWN Comment:** Beginning on page 42, OWN contends that "air quality impacts of the NAAQS pollutants are severe and should have been judged significant and adverse." They state on page 43 that "A more appropriate standard for assessing whether air quality impacts are significant and adverse is the Significant Impact Levels (SILs) established

pursuant to the Clean Air Act to assess the significance of impacts of a facility's proposed air permit."

Response: The statement that air quality impacts exceeding federal SILs are "significant and adverse" is an incorrect interpretation of the meaning of the SILs. The federal SILs are used to determine when impacts are insignificant, not adverse. Impacts above the SILs do not necessarily represent adverse impacts, but rather, indicate that such impacts above the SILs should be added to background (existing) concentrations to determine total pollutant concentrations. The total concentrations are then compared to the NAAQS to determine whether a proposed individual source could contribute to exceedance of the NAAQS. As noted in the preceding sentence, the federal SILs are also not applied to groups of facilities, but rather, to one facility at a time.

The dispersion modeling analysis shows, for pollutants other than $PM_{2.5}$, that background concentrations plus modeled impacts are below NAAQS. For 24-hour $PM_{2.5}$, the analysis shows that background plus modeled concentration do not exceed the NAAQS. For annual $PM_{2.5}$, some existing monitored concentrations already exceed the NAAQS, and EPA recently designated the New York City area as "nonattainment" with respect to $PM_{2.5}$ as a result. The analysis accurately presents the estimated (modeled) portion of existing $PM_{2.5}$ levels that are due to operation of each group of commercial waste transfer stations.

For areas where monitors indicate that NAAQS are being exceeded, it is appropriate to consider which emissions sources should be further regulated to bring the area into compliance. The analysis shows that commercial waste transfer stations collectively are a relatively small (< 10%) contribution to the total monitored concentrations in each Study Area, and that even complete elimination of such emissions would not bring about attainment of the annual $PM_{2.5}$ NAAQS in these areas. Also, as noted in the CWMS, EPA's national programs to apply more stringent emission limits to existing and new power plants, new on-road and non-road engines, and its mandated reductions in sulfur content used in the transportation sector, will continue to bring about further reductions in $PM_{2.5}$ levels in the future, beyond the reductions in the City's $PM_{2.5}$ levels that have occurred in the past two decades.

11. **OWN Comment:** On page 45, OWN critiques the CWMS for not evaluating effects of "air toxic" pollutants, which are being evaluated in the MTS EIS.

Response: The evaluation of air toxics in New York is generally performed in accordance with NYSDEC policy; it is not mandated by rule or law. The NYSDEC policy defining procedures for air toxics review stipulates that these procedures are applicable to a facility seeking a Permit to Construct or a Certificate to Operate. These procedures do not apply to groups of facilities or their aggregate effects, which was the subject of the CWMS.

Also, it is important to understand that air toxics, by necessity, are evaluated on an incremental risk basis. This is the case in New York and in many other states that have air toxics policies or air toxics rules. In other words, no attempt is made in the NYSDEC policy to evaluate "background" risk from emission sources other than the one seeking the permit, or from other "risk" factors that might constitute a portion of an exposed individual's risk of, for example, lung cancer. The "background" cancer risk, that attributable to other sources, and especially to indoor air pollutants, cigarette smoke, etc, is likely to be many orders of magnitude higher than the "one-in-a million" target risk limit for an individual source seeking a permit under the NYSDEC policy.

12. **OWN Comments:** On pages 48 and following, OWN critiques the CWMS for its approach to odor impact analysis, complaining about the "overlapping" effects approach, the basis for odor emission factors, which was sampling conducted at four putrescible waste facilities, and the "novel" type of emission factor, on a mass per tons stored basis.

Response: The evaluation of odor effects from the groups of facilities analyzed was consistent with LL74, which mandated that the study consider the aggregate, overlapping effects of the groups of facilities, rather than individual facility effects.

The basis for the emission factors, including multiple samples at each of four facilities, is considered to be quite sound, and also fairly conservative, in that the highest emission factor obtained for any sample was used for estimating emission rates for model input. Using the highest emission factor likely caused overestimation of the number of times per

year when a particular receptor would perceive a given level of odor. In addition, it was conservatively assumed that no odor control system was in operation, when in fact odor control is mandated.

With respect to the "novel" type of emission factor, expressed on a mass per tons stored basis, there is no industry standard or acceptable regulatory approach in establishing units for odor emission factors for solid waste processing operations. The HDR Team evaluated the sampling data with two potential sets of units for emission factors, those being a mass per ton processed, and a mass per ton stored basis. Because the waste movements (unloading, transfer) at the commercial waste facilities tend to be more in a batch than a continuous mode, the mass per waste stored basis seemed more reasonable for these facilities. However, in terms of modeling results, either type of emission factor basis would provide similar results.

13. **OWN Comments:** On page 51, OWN says that the CWMS failed to truly evaluate health impacts, and simply made reference to the air quality and odor analyses. OWN makes the statement that the study should have documented the asthma and respiratory illness rates in the Study Area communities and should have assessed the respiratory health risks due to $PM_{2.5}$ emissions from the transfer stations.

Response: Since risks to health are a function of amounts of exposure, health risk assessments properly compare amounts of exposure from a specific source to health-based standards or guidelines: when such amounts of exposure range from very small to insignificant, risks to health are expected to be proportionately small or insignificant. This was found to be the case for airborne impacts due to the $PM_{2.5}$ emissions from the transfer stations analyzed.

In general, fine particulate matter concentrations of $PM_{2.5}$ in ambient air are somewhat smaller now than they were when systematic monitoring began (in 1999), and perhaps 30% lower than estimates from the 1970's and 1980's (see, for example, http://www.epa.gov/airtrends/pm.html). Thus, although PM concentrations have decreased over the past several decades (in the City and in the U.S. as a whole), reported

asthma rates have increased during this same time period. National regulations are continuing to further reduce airborne concentrations of diesel particulate matter (DPM), due to reductions in the sulfur content of diesel fuel, engine redesigns, and pollution control devices, such as catalytic converters. More generally, DPM levels in New York are smaller than DPM levels in comparable European cities, given the heavy reliance on diesel-powered cars in Europe. The weight of scientific and clinical evidence on asthma and other respiratory illnesses fails to support the hypothesis that $PM_{2.5}$ emissions from the transfer stations at issue would aggravate or otherwise exacerbate these illnesses.

40.3.4.3 Other Comments and Responses on Commercial Waste

1. **Comment:** One commenter had numerous questions concerning the Commercial Waste Management Study (CWMS), which was referred to in some of the analyses in the DEIS. Specifically, they wanted to know why the 7 AM to 6 PM time period was the most appropriate time for evaluating local traffic impacts. They believed that the impacts of the private waste transfer stations should have been based on their permitted capacity. They questioned how the "worst-case" intersections were chosen, since one intersection did not have a single waste truck pass through it. Additionally, the off-site noise impacts utilized a "noise impact spread sheet" which was developed for the FEIS for the 2000 plan. This spreadsheet should be included in the DEIS. The CWMS lacked information to determine if the intersections evaluated were the most conservative choices.

Response: Chapter 3 of the DEIS and this FEIS presents the methodologies used for evaluating potential impacts. For traffic, a.m., facility and p.m. peak traffic was analyzed to represent the reasonable worst case time periods – when either background traffic or project-generated traffic volumes are highest. These time periods varied depending on a particular site, but generally, the facility peak hour occurred after the a.m. peak hour when background traffic volumes were higher.

A CEQR-level analysis of potentially significant adverse impacts related to processing Commercial Waste at the Converted MTSs is included in the Commercial Waste Management Study (CWMS)– Volume III, which was prepared in response to the

mandates in LL74, is included as Appendix I to this FEIS, and was also included in the Draft New SWMP. The analysis of potential noise impacts in that analysis is updated and refined in this FEIS.

CEQR requirements did not apply to the evaluation of existing commercial waste transfer stations located in geographic proximity (Volume I of the CWMS). The CWMS did not evaluate an action subject to CEQR such as the siting of a new project in the City or a programmatic action – rather, it evaluated existing privately owned and operated transfer stations. Where appropriate, CEQR methodologies were used as a means to analyze the potential effects of these existing transfer stations, for example, a 3 dBA increase for noise was used as a threshold for evaluating perceived noise impacts in the study area analyses of the contribution of multiple facilities at a sensitive receptor in relation to the background monitored levels at that receptor, because a 3 dBA increase is a recognizable threshold.

2. **Comment:** The substandard conditions at commercial transfer stations and their concentration in certain communities is not adequately addressed, and there are no concrete plans for reducing capacity in communities overburdened by them. The new Siting Regulations may prevent further degradation in specific areas of the Bronx and Brooklyn, but will not ameliorate existing burdens. The City needs to develop a strategy to strengthen operational and siting rules that would result in the closure of or a diminished number of land based facilities, including a timeline for achieving this goal. How will the City enforce its regulations, including the usage of designated truck routes by private haulers?

Response: Following recommendations in the Commercial Waste Management Study, DSNY has promulgated new operating rules for private transfer stations that include stricter requirements for odor and dust control and facility maintenance. DSNY is committed to reducing permitted putrescible capacity in the communities with the greatest number of transfer stations once the Converted MTSs open. DSNY will work with the industry, the Council and community groups to achieve this reduction in capacity. If DSNY is unable to obtain the cooperation of the industry, DSNY will work

with the Council on legislation that will clarify DSNY's authority to reduce permitted capacity at transfer stations. DSNY has proposed revisions in its Siting Rules that impose more stringent requirements on the siting of new transfer stations. DSNY's Permit and Inspection Unit and the Police Department are responsible for enforcing tuck limits on designated truck routes. If a truck route does not provide direct access to a destination, trucks are permitted to use local streets to reach their destination.

3. **Comment:** The Converted MTSs are designed to process commercial waste without an adequate study of the resultant impacts. Referring to the CWMS is not sufficient to analyze the impacts. Commercial haulers will not be subject to DSNY regulations for emissions, odors, or noise, therefore impacts will be greater. The City needs to develop a better system to handle commercial waste that won't place such heavy burdens on residential neighborhoods, and needs to be more specific about the use of the MTSs for commercial waste.

Response: A CEQR-level analysis of potentially significant adverse impacts related to processing Commercial Waste at the Converted MTSs is included in the Commercial Waste Management Study (CWMS)– Volume III, which was prepared in response to the mandates in LL74, is included as Appendix I to this FEIS, and was also included in the Draft New SWMP. The analysis of potential noise impacts in that analysis is updated and refined in this FEIS.

Each Chapter in the DEIS and this FEIS that reviews a Converted MTS has a section summarizing that more detailed CEQR level analysis in the CWMS – Volume III (see Section X.18 of each Converted MTS chapter). On-site operations were analyzed assuming 24-hour operation. For example, for the noise analysis, it is assumed that the facility is operating all of its equipment during the quietest background hour, which, given the amount of commercial waste that might actually be processed during this period, is conservative. Neighborhood character is assessed based upon, among other things, a compilation of all of the on and off-site analyses in the DEIS and this FEIS, which analyze the acceptance of commercial waste at certain levels between 8:00 p.m. and 8:00 a.m. As discussed in the DEIS and this FEIS, a restriction on the number of

Commercial Waste vehicles delivering waste to the Southwest Brooklyn, Hamilton Avenue, East 91st Street and North Shore Converted MTSs during certain hours will mitigate estimated off-site noise impacts at receptors along the routes to these facilities between 8:00 p.m. and 8:00 a.m.

The DEIS and this FEIS analysis assumed a City metro area-specific mix of ages for diesel powered waste collection vehicles, which would include commercial waste hauling vehicles. Because DSNY's fleet of waste collection vehicles is newer than the average for the City area, the DEIS and this FEIS air quality analysis is already quite conservative, because newer diesel engines are subject to lower emissions standards than the existing fleet average. Additionally, the on-site and off-site air quality analyses were revised for this FEIS using the most current approved New York State Department of Transportation (NYSDOT) Mobile 6.2 emission factors, which accounts for the even lower emissions produced by DSNY's newer fleet. Also, it should be emphasized that new diesel powered vehicles purchased today are subject to emissions standards far lower than engines manufactured 20 years ago, and that starting in 2007, new diesel engine emission standards for particulate matter and nitrogen oxides will drop by at least an order of magnitude from today's emissions standards. Thus, fleet-wide diesel engine emissions are dropping and will continue to drop even more dramatically with time.

Also see the response to Comment #1.

4. **Comment:** (J5) The clean fill transfer stations are not really addressed in the SWMP, but they are some of the worst run transfer stations in the City. They are very dusty, and residents in the vicinity of these facilities cannot open their windows. Additionally there is no mention of waste prevention in the Construction and Demolition waste stream. C&D could be recycled, reused and/or re-sold.

Response: Volume II of the CWMS, Commercial Waste Generation and Projections, evaluated the quantities of non-putrescible waste processed at the 47 facilities permitted to process non-putrescible waste, 22 of which are clean fill facilities. (See Appendix I of this FEIS for the Volume II of the CWMS.) Over the period of 2000 to 2003, the volume

of clean fill material processed at these facilities ranged between 20,000 tpd to 27,000 tpd. The bulk of non-putrescible waste was clean fill, ranging from approximately 54% to 69% of the total. Clean fill is projected to increase by approximately 39% over the period of the New SWMP, 2004-2024. These facilities provide an essential service the City's construction industry. Most of the material processed at these facilities is recycled as aggregate or fill used on new construction projects. DSNY has proposed measures as modifications to its transfer station Rules that address control of dust at fill material transfer stations. Specifically, all fill material transfer stations will be required to have paved entrance and exit areas, and to have a method of cleaning dirt from vehicle tires before exiting a facility.

5. **Comment:** A number of speakers thought that commercial waste should be processed at all the MTSs in order to have one comprehensive waste management system, under the City's control. The commercial carters should be coaxed by franchise, financial incentives, or other means to use the Converted MTSs as well as the West 59th Street facility. There must be a meaningful discussion in the SWMP of economic flow control, how it would operate, what the tip fees might be, and what incentives and disincentives DSNY would use to ensure the redistribution of commercial waste, including milestones to achieve closure. Franchising, in particular, would have the added benefit of reducing truck miles, by not having multiple trucks from multiple firms traveling down the same block. It should also discuss the lack of incentive for integrated waste management companies to forego favorable disposal costs at their own facilities.

Response: The issue of what incentives or mandates may be required to attract commercial carters to use the MTSs will be addressed during City Council adoption of the New SWMP.

6. **Comment:** Will every single commercial waste vehicle be checked to make sure that there is no asbestos, lead, or other contaminated material in the truck, prior to taking the waste to a transfer site?

Response: Given the resources required, it is not practical to check every single commercial waste vehicle. However, DSNY's PIU does conduct periodic inspections

and transfer stations are at risk of serious permit violations if they accept hazardous materials.

7. **Comment:** The FEIS must incorporate an analysis of the impacts of the current network of commercial waste transfer stations included in the draft SWMP. This must include the impacts of the massive volume of truck traffic impacting on the South Bronx and Brooklyn CD1. More information is needed on the methodology and analyses used to evaluate commercial waste impacts. The EIS needs to include a timetable to close existing inadequate facilities or to bring them into conformance with regulatory requirements. The existing commercial waste system as well as the proposed changes to the system should be fully analyzed. In addition, an analysis of the new commercial waste initiatives must be incorporated into the FEIS, as well as the siting regulations and the operational regulations included in the SWMP.

Response: This analysis was reported in the Commercial Waste Management Study, Volume I, which is included as Appendix I to this FEIS.

8. **Comment:** There are so many uncertainties surrounding the issue of commercial waste processing at the MTSs that it seems reasonable to assume that more commercial waste could end up at the Converted MTSs than predicted. Other parts of the plan may fail or "Upset conditions" might occur more than expected, resulting in more commercial waste being sent to the MTSs. Due to all these uncertainties, the environmental assessment should assume worst case scenario in terms of the amount of commercial waste processed.

Response: The arrangements that DSNY would enter into with private carters for delivering waste to a Converted MTS would include contractual recourse against the carter for failure to follow the agreed upon procedure. For example, the contract could stipulate that a carter who arrives before or after his appointed hour on a given night would forfeit his dumping privileges and fee for that evening. Clearly, in time, such a stipulation could cause carters to adhere to schedules set.

9. **Comment:** Although the DEIS provides the maximum tonnage of commercial waste that could be processed at each MTS without significant adverse noise impacts, there is no explanation of how these maximum tonnages were determined. Additionally, how can DSNY ensure that these caps will not be exceeded? The DEIS figure for the maximum allowable number of commercial waste vehicles is for a 12-hour period. Some hours are more vulnerable to adverse noise impacts, and this was not taken into consideration.

Response: See response to Comment #1, #3 and #7 above.

10. **Comment:** The New SWMP should encourage commercial waste haulers to consider exploring CNG-fueled or other alternative-fueled vehicles. The SWMP should include specifics on how that might be achieved. Most private waste haulers are reluctant to implement new fuel and emission reduction programs in the absence of requirements to do so. DSNY's CNG refuse truck initiatives can help show commercial haulers which technologies may work best on New York City's streets. The New SWMP should outline specific incentives for commercial carters to adopt CNG vehicle programs and ensure infrastructure that supports the implementation of CNG vehicles in order to achieve emission reduction goals. DSNY should review the regulatory powers of BIC to assess mechanisms that would improve emissions performance of the commercial fleets. The New SWMP should also consider methods of supporting the development of CNG infrastructure, in addition to a purchase commitment.

Response: The CWMS included as Appendix I to this FEIS, includes in Section 2.2 of Volume VI, Waste Vehicle Technology Assessment a discussion of the advantages and disadvantages of CNG as a fuel source for waste collection vehicles. Cost and the fueling infrastructure requirements are significant barriers to the use of this technology. Furthermore new regulations requiring use of low sulfur fuel diesel trucks and the production of substantially cleaner engines by 2007 will significantly reduce particulate emissions from these vehicles. See also Response to Comment #61 in Section 40.3.1.8.

40.3.5 Transfer, Transport and Disposal Plan

This interim report was prepared as a supplement to the New York State Department of Conservation (NYSDEC) Part 360 Solid Waste Permit. Its purpose is to show that the available capacity at intermodal terminals in the New York Harbor region and the capacity of rail and/or ocean barge transport that serve these facilities are sufficient to transfer and transport containerized waste from the City's Converted MTSs as proposed in the City's Draft New Solid Waste Management Plan (Draft New SWMP). This report includes conservative estimates of the equipment requirements for the transfer, transport and disposal system. Finally, it describes the available disposal capacities in various states based on proposals received by the New York City Department of Sanitation (DSNY) in response to its Request for Proposals to Transport and Dispose of Containerized Waste from One or More Marine Transfer Stations (MTS Containerization RFP) issued in December 2003.

The City's Draft New SWMP proposes to develop four Converted MTSs— two in Brooklyn, one in Manhattan and one in Queens—that on a daily[11] average basis would containerize a total of approximately 5,770 tons per day (tpd) of DSNY-managed Waste. Depending upon the arrangements that may be decided upon between DSNY and the City Council during the Draft New SWMP adoption process, the Converted MTSs could also containerize a total of up to 3,880 tpd of Commercial Waste delivered by private carters operating in the City.

In response to the MTS Containerization RFP, DSNY received proposals from proposers in February of 2004 and has since short-listed four of these proposers for contract negotiations. These proposers are:

- TransRiver (American Ref-Fuel);
- Onyx Waste Services;
- IESI Corporation; and
- Waste Management, Inc.

[11] Calculated on a 302-day per year basis (six operating days per week excluding holidays).

The proposals offered a variety of transfer, transport and disposal scenarios, and identified the MTSs that would be served, the intermodal facilities that would be used, the mode of transport (rail or coastal barge), and the disposal facilities that would dispose of the waste. DSNY is currently in negotiations with the short-listed proposers with the objective of entering into 20-year Transport and Disposal Contracts with one or more of them. Accordingly, the specific elements of the waste transport and disposal system have not yet been finalized. The final arrangements could involve various combinations of the facilities described herein. When contracts are finalized, a final Transfer, Transport and Disposal Plan (TTDP) will be developed.

This report is based on the responses to the MTS Containerization RFP, information gathered during the ongoing negotiation process and independent investigations.

40.3.5.1 System Requirements

Table 40.3-5[12] shows the assumed average daily system throughput of the four Converted MTSs, inclusive of both DSNY-managed and Commercial Waste. The DSNY-managed Waste is estimated to average a total of approximately 5,770 tpd for the four Converted MTSs. There is also a total of approximately 3,900 tpd of capacity potentially available at these four Converted MTSs for use by commercial carters. All system requirement estimates provided within this report are based on average daily throughputs. Factors, such as contingencies or spare factors have been included in the analyses to account for peak throughput events. To establish system requirements for the number of railcars, barges and containers, this TTDP assumes that the Commercial Waste would be integrated into the MTS waste system over a four year period, as shown below in Tables 40.3-6 and 40.3-7. This four-year period is referred to as Phases 1 through 4, corresponding to the years 2007 through 2010.

[12] Adapted from the 2004 Draft Solid Waste Management Plan (Draft New SWMP), Table 3.4-1, Converted MTS Average Throughputs.

Table 40.3-5
Converted MTS Average Throughputs[(1)]

Converted MTS Location	(1) DSNY Average (tpd)	(2) Commercial Waste (tpd)	(3) Total (Sum of Columns 1 and 2) (tpd)
Hamilton Avenue	1,900	1,274	3,174
Southwest Brooklyn	950	828	1,778
East 91st Street	720	780	1,500
North Shore	2,200	1,000	3,200
Totals	5,770	3,882	9,652

Note:

(1) Column 1 is the average tons per day (tpd) derived from historical data for DSNY-managed Waste generated in the specific MTS wastesheds that DSNY has designated in the Draft New SWMP for each of the four Converted MTSs. Column 2 is the quantity of Commercial Waste that could be processed during the 8:00 p.m. to 8:00 a.m. time period, based on the analysis presented in the Draft New SWMP FEIS. Column 3 presents the total capacity that can be used at each facility between 8:00 a.m. and 8:00 p.m. for processing DSNY-managed Waste and between 8:00 p.m. and 8:00 a.m. for processing DSNY-managed Waste and Commercial Waste.

Table 40.3-6

Phasing of Commercial Waste into Converted MTS System Waste Stream

Average Daily Tonnage

Waste Type	Phase 1	Phase 2	Phase 3	Phase 4
	tpd	tpd	tpd	tpd
DSNY-Managed Waste Tonnage (Average)	5,770	5,770	5,770	5,770
Commercial Waste Tonnage (Average)	0	1,294	2,588	3,882
Total	**5,770**	**7,064**	**8,358**	**9,652**

Table 40.3-7

Phasing of Commercial Waste into the Converted MTS System

Daily Containers Requirements

Waste Type	Phase 1	Phase 2	Phase 3	Phase 4
	Cont/day	Cont/day	Cont/day	Cont/day
DSNY-Managed Waste Containers (Average)	263	263	263	263
Commercial Waste Containers (Average)	0	59	118	177
Total	**263**	**322**	**381**	**440**

Note:

(1) Container requirements are calculated assuming the net payload of waste per container is 22 tons.

40.3.5.2 Harbor Barge and Container Requirements for In-City Harbor Container Transfer

Containers of waste would be moved by barge from the four Converted MTSs to waterfront intermodal facilities located in the region of New York Harbor. To calculate the number of barges and containers required for in-City harbor barge transport during the first four years of operations, the following assumptions were used.

- Containers from each of the four Converted MTSs would be towed to the intermodal terminal in the New York Harbor region that is the greatest distance by barge from that Converted MTS (to conservatively estimate barge requirements);
- Each harbor barge would transport 48 containers, with a net payload of 1,056 tons[13];
- The round-trip cycle time[14], inclusive of barge handling at both the departing and receiving locations would be a maximum of 10 hours[15];
- Except during barge-switching operations, there would be two barges moored at each Converted MTS at all times; and
- The spare factor for barges would be 20 percent.

Tables 40.3-8 through 40.3-11 provide estimates of the number of barges required for in-City harbor barge transport from the four Converted MTSs to the intermodal terminal(s) during each of the four phases of the program. Over this period, the number of barges required would grow from 16 to 25, including spares.

Assuming 48 containers per barge, between 768 and 1,200 containers, inclusive of spares, would be required, taking into account the cycle time between the intermodal facility and the disposal facility(ies). Note that these containers are a subset of the system-wide containers that would be required.

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[13] According to the MTS Containerization RFP, harbor barge dimensions would be 150 feet in length and 46 feet wide.

[14] Cycle time includes an allowance for the time required to load/unload full/empty containers at the end-of-route terminals

[15] Only intermodal facilities in New York Harbor were considered for this analysis.

Table 40.3-8
In-City Harbor Barge Requirements Phase 1

MTS	Tonnage (tpd)	(Full) Barges[(1)]	(Empty) Barges	(Full & Empty) Barges	Spares	Total Barges (Rounded)
Hamilton Avenue	1,900	1.8	1.8	3.6	0.7	5
Southwest Brooklyn	950	0.9	0.9	1.8	0.4	3
East 91st Street	720	0.7	0.7	1.4	0.3	3
North Shore	2,200	2.1	2.1	4.2	0.8	5
Totals	**5,770**					**16**

Table Note:

(1) Because the barge requirement calculations are shown on an average ton per day basis, fractional units of barges are shown in these tables. This is done only to explain the calculation, as all barges moved within the harbor would carry 48 containers.

Table 40.3-9
In-City Harbor Barge Requirements Phase 2

MTS	Tonnage (tpd)	(Full) Barges[1]	(Empty) Barges	(Full & Empty) Barges	Spares	Total Barges (Rounded)
Hamilton Avenue	2,325	2.2	2.2	4.4	0.9	6
Southwest Brooklyn	1,226	1.2	1.2	2.3	0.5	3
East 91st Street	980	0.9	0.9	1.9	0.4	3
North Shore	2,533	2.4	2.4	4.8	1.0	6
Totals	**7,064**					**18**

Table Note:

(1) Because the barge requirement calculations are shown on an average ton per day basis, fractional units of barges are shown in these tables. This is done only to explain the calculation, as all barges moved within the harbor would carry 48 containers.

Table 40.3-10
In-City Harbor Barge Requirements Phase 3

MTS	Tonnage (tpd)	(Full) Barges[1]	(Empty) Barges	(Full & Empty) Barges	Spares	Total Barges (Rounded)
Hamilton Avenue	2,749	2.6	2.6	5.2	1.0	7
Southwest Brooklyn	1,502	1.4	1.4	2.8	0.6	4
East 91st Street	1,240	1.2	1.2	2.3	0.5	3
North Shore	2,867	2.7	2.7	5.4	1.1	7
Totals	**8,358**					**21**

Table Note:

(1) Because the barge requirement calculations are shown on an average ton per day basis, fractional units of barges are shown in these tables. This is done only to explain the calculation, as all barges moved within the harbor would carry 48 containers.

Table 40.3-11
In-City Harbor Barge Requirements Phase 4

MTS	Tonnage (tpd)	(Full) Barges[1]	(Empty) Barges	(Full & Empty) Barges	Spares	Total Barges (Rounded)
Hamilton Avenue	3,174	3.0	3.0	6.0	1.2	8
Southwest Brooklyn	1,778	1.7	1.7	3.4	0.7	5
East 91st Street	1,500	1.4	1.4	2.8	0.6	4
North Shore	3,200	3.0	3.0	6.1	1.2	8
Totals	**9,652**					**25**

Table Note:

(1) Because the barge requirement calculations are shown on an average ton per day basis, fractional units of barges are shown in these tables. This is done only to explain the calculation, as all barges moved within the harbor would carry 48 containers.

40.3.5.3 System Railcar and Container Requirements for Long-Haul Transport

The estimate of the maximum system railcar and container requirements for long-haul transport to out-of-City disposal facilities during the first four years of operations is based on the following assumptions:

Containerized waste from the four Converted MTSs would be transloaded onto railcars at intermodal terminals and transported to the proposed disposal location that is the greatest distance by rail from the City.

- Containers on rail cars would be moved in merchandise trains departing the City daily[16;]
- Each railcar would hold four containers;
- The net payload of waste per container is 22 tons;
- The round-trip cycle time from the City to the disposal location would be 18 days[17];
- The spare factor for railcars would be 20 percent;
- The number of spare containers would be the number of spare railcars multiplied by four; and
- The four Converted MTSs would operate 302 days per year.

Table 40.3-12 presents the estimated maximum number of railcars and containers required for long-haul rail transport to the furthest proposed disposal location for the first four years of operations.

Table 40.3-12
Maximum Amount of Railcars and Containers Required for System

Phase	Tons Per Day	Total Railcars Required (Including Spares)	Total Containers Required (Including Spares)
Phase 1	5,770	1,426	5,704
Phase 2	7,064	1,750	7,000
Phase 3	8,358	2,052	8,208
Phase 4	9,652	2,376	9,504

[16] Given the high volumes of containers, it is possible that the railroad companies may decide to handle this operation in a manner that is more efficient than sending a separate merchandise train each day; however, for this study it was assumed that the containers would join three merchandise trains per day in order to calculate a conservative estimate of the number of railcars and containers required.
[17] This round-trip cycle time assumes that the disposal facilities will be able to offload the arriving containers on a continuous basis, thereby avoiding queuing of railcars. Cycle time includes both transit and loading and unloading of containers. This cycle time is an average cycle time based on proposed origins and destinations and assumes merchandise, not unit trains.

40.3.5.4 Ocean-going Barge and Container Requirements for Long-Haul Coastal Transport

Based on the proposals received from the MTS Containerization RFP, as well as an investigation into potential barge-to-ocean-going barge facilities in the New York harbor region, the maximum throughput of waste from the four Converted MTSs that would be transported by ocean-going barge is 263 one-way containers, or all the DSNY-managed Waste. The estimate of maximum system ocean-going barges and container requirements for this long-haul transport during the first four years of operations is based on the following assumptions:

- Waste would be transloaded onto ocean-going barge at intermodal terminals and transported to the proposed disposal location that is the greatest distance by ocean-going barge from the City.
- Containers would be transported by ocean-going barges departing the City six days per week;
- Each ocean-going barge would hold 320 containers;
- The dimensions of the ocean-going barge would be approximately 86 feet wide by 350 feet long;
- The round-trip cycle time from the City to the disposal location would be 4 days[18];
- One ocean-going barge would be required as a spare;
- 320 containers, i.e., sufficient to fill one ocean barge, would be required as spares;
- Barge operations at the intermodal facility would occur on three shifts; and
- The four Converted MTSs would operate 302 days per year.

Table 40.3-13 presents the estimated maximum number of ocean-going barges and containers required for long-haul coastal transport to the furthest proposed disposal location.

[18] This round-trip cycle time includes the transit time and container loading/unloading time.

Table 40.3-13
Maximum Amount of Ocean-going Barges and Containers Required for System

Phase	Tonnage (tpd)	Number of containers per day	Ocean-going Barges Required (Including Spares)	Number of Containers Required
Phase 1	5,770	263	5	1,369
Phase 2	7,064	322	6	1,604
Phase 3	8,358	380	6	1,840
Phase 4	9,652	434	7	2,075

40.3.5.5 Rail Capacity in Northern New Jersey

The majority[19] of the barge-to-rail solutions being described within this report would involve rail transport from locations in northern New Jersey. As can be seen in Attachment A, the northern New Jersey rail network is a very complex collection of lines and terminals. Adding to the complexity is the multiplicity of rail operators working within the territory. There are four major (Class 1) freight railroads operating in the territory. Additionally there are passenger operators and regional and short-line freight railroads.

The four Class 1 freight railroads operating in northern New Jersey are CPR (Canadian Pacific Railway), CSX Transportation, CR (Conrail) and NS (Norfolk Southern Railroad). CPR has a relatively limited role in the area, consisting of operating into and out of a CPR facility at Oak Island Yard. The relationship between CSX, CR and NS is more complicated and deserves some explanation. In 1999 CSX and NS purchased and split up Conrail. While in most markets the two acquiring railroads simply divided the assets, in three specific markets the rail infrastructure was so complex that a different solution set was reached. Northern New Jersey is one of those complex areas. The resultant territory is now referred to as the North Jersey Shared Assets.
Within the shared asset area in northern New Jersey, CSX and NS maintain separate routes into the terminal areas, as well as retaining certain yard facilities (NS routes and terminals are shown

[19] Steel Style Shipyard would not involve rail transport through northern New Jersey, as it is located on the Hudson River Line.

in green on the map in Attachment A, CSX routes and terminals are shown in red). Other routes and facilities (shown in blue on the map in Attachment A) are maintained and operated by the residual Conrail for the benefit of both of its parents (CSX and NS).

The rail network in northern New Jersey supports three major traffic flows. To understand how the DSNY containerized waste from Converted MTS facilities will flow within the network, it is prudent to describe the current traffic flows. Section 3.1 below describes how the different traffic flows impact various components of the network, and more importantly how the combined traffic and flows helps to identify potential capacity constraints.

It should be noted that the Class 1 railroads and PANYNJ have identified a series of infrastructure improvements that, when complete, will mitigate the majority of these capacity constrain locations. The combination of these infrastructure improvements and close coordination with the Class 1 railroads will ensure that there is adequate capacity to move the proposed containerized waste from the Converted MTSs.

40.3.5.5.1 Potential Congestion Due to High Traffic Volumes

Factors that affect the rail system's capacity to transport the containerized waste from the four Converted MTSs are the several other rail traffic flows in northern New Jersey, with their differing service and physical plant requirements. Each of these individual traffic flows is further complicated by the fact that some are more tightly scheduled than others. These rail traffic flows are discussed below.

40.3.5.5.2 Intermodal Traffic (Domestic and International)

There is a concentration of intermodal facilities in northern New Jersey, as shown in Attachment A. These include:

- CSX at North Bergen;
- NYSW (New York Susquehanna and Western) at North Bergen;
- NS at Croxton;
- NS at E-Port Yard;

- CSX at Kearney; and
- Facilities along the Chemical Coast Secondary in Newark and Elizabeth, including Port Newark Yard, Portside Yard, Port Newark Container Terminal (PNCT) and Express Rail.

The outbound intermodal rail traffic tends to move away from New Jersey in the evening and over night, and inbound intermodal traffic arrives from mid morning through early evening. Of particular interest in regards to the movement of containerized waste from the four Converted MTSs from barge to rail, is the fact that the Port Authority of New York and New Jersey (PANYNJ)-supported facilities in Newark and Elizabeth (i.e., Maher, APM/Maersk and PNCT) as well as the New York Container Terminal on Staten Island all utilize the Chemical Coast Secondary and Oak Island Yard to access and egress the region.

40.3.5.5.3 Automotive Traffic

Automotive traffic into North Jersey has historically included transporting finished automotive vehicles to Doremus Avenue Auto Unloading Facilities, auto parts to the Metuchen Auto Plant, and used automotive vehicles from NYSW. The Metuchen Auto Plant is scheduled to close. With its closure, all major automotive traffic will be confined to yards and support facilities at Oak Island Yard, which serves Doremus Avenue, and North Bergen. Inbound automotive traffic tends to move into the region in the evening so cars can be placed for morning unloading while the used automotives from NYSW move in the afternoon.

40.3.5.5.4 Merchandise Traffic

Merchandise traffic is the designation given to all general freight. This traffic moves in slightly different patterns than do intermodal traffic and automotive traffic. Schedules for inbound and outbound long-haul merchandise trains as well as local freight trains are designed around operating "windows" and customer needs, so these trains tend to operate throughout the day and night as opposed to the more restrictive intermodal and automotive networks.

The merchandise traffic must be brought into yards, such as Oak Island, and re-classified for movement by various local trains to either serving yards or directly to the consignee. Therefore, while intermodal and automotive traffic have extreme impact on specific locations, merchandise

traffic tends to impact major yard structures such as Oak Island Yard because of the need to classify these railcars and then build them into local delivery trains. The return of the empty containers on local trains has similar impacts on yards and facilities. Merchandise traffic generally affects the entire rail system evenly. Unlike intermodal and automotive, which are time sensitive and operate during certain windows, merchandise traffic tends to occupy the available additional line capacity. Because of the high volume of merchandise traffic and the numerous "windows" required to move this traffic, merchandise traffic generally affects the entire rail system evenly.

40.3.5.5.6 Chemical Traffic

There is significant chemical traffic (i.e. acids, gas, petroleum products, etc.) throughout the northern New Jersey area, with a strong concentration in Newark and Bayonne and additional heavy use all along the aptly named Chemical Coast Secondary.

40.3.5.5.7 Warehouse Traffic

Northern New Jersey enjoys a strong base of rail-served warehouses. This traffic is delivered to and picked up from consignee locations by a number of scheduled local trains. These local trains add additional layers of congestion on the already busy northern New Jersey rail system.

40.3.5.5.8 Other Traffic

Various other rail-served customers for commodities such as foodstuffs, paper, lumber and other manufactured goods exist along many of the rail lines in the region. These traffic flows overlap and utilize many of the same facilities and, therefore, place multiple stresses on the system. The rail movement of the containerized waste from the Converted MTS, whether it moves in merchandise traffic or dedicated unit trains, would be considered part of the merchandise network.

40.3.5.5.9 Critical Components of the Rail System

Some of the most critical pieces of the general rail system that may impact the movement of intermodal and/or merchandise trains with waste from the four Converted MTSs are:

- The Chemical Coast Secondary between Oak Island Yard and Bayway Yard;
- The Oak Island Yard Complex; and
- The CSX River Line.

As described below in Section 4, proposed infrastructure improvements carried in the current PANYNJ capital plan will help to relieve the congestion at the locations described herein. While primarily designed to support the port intermodal traffic, these improvements will favorably impact the movement of waste from the four Converted MTSs as well.

In recognition of the congested areas cited above, inclusion of the proposed tonnages of waste from the four Converted MTSs on these lines and yards will require close coordination with the four Class 1 railroads (i.e., CP, CSX, NS and Conrail). As mentioned above, with this close coordination, the rail infrastructure will be adequate to support the proposed tonnages.

40.3.5.6 Intermodal Terminal and Disposal Facility Components

This section defines the total potential operational and storage capacities of the intermodal terminals investigated, and reviews those facilities and disposal facility locations that are potentially available to the City.

40.3.5.6.1 Potential Intermodal Terminal Total Operational Capacity

Phone interviews with intermodal terminal operators and site visits to the intermodal terminals referenced in this section identified the capacity potentially available to serve the four Converted MTSs. The facilities investigated include:

- All PANYNJ-owned marine container terminals;

- Intermodal facilities that were offered by proposers in their response to the MTS Containerization RFP,
- Intermodal facilities that have been identified during the MTS Containerization RFP negotiation process; and
- Marine terminals or railyard facilities, identified by New York and New Jersey rail and/or port experts that could potentially serve the needs of DSNY.

Two potential transport modes are possible for shipping waste from the four Converted MTSs from an intermodal terminal to the disposal location: rail and ocean-going barge. The harbor barge-to-ocean-going barge operation would occur at a single intermodal terminal. The harbor barge-to-rail operations would occur at either a single intermodal terminal with on-dock rail or at two different terminals in reasonable proximity to each other, one providing harbor barge loading and unloading service and the other providing railcar loading and unloading service with a short dray in between.

The intermodal facilities listed below are grouped into the three following categories:

- Marine terminals: facilities that have the capability to service harbor barges and/or ocean-going barges;
- Port-Serving On-Dock Rail facilities: railyard facilities that are adjacent to and dedicated to marine intermodal terminals and have the capability to load and unload railcars;
- Near-Port Rail facilities: railyard facilities that have the capability to load and unload railcars, are within one mile of the New York Harbor region, but are not necessarily dedicated to a marine terminal.

The evaluation of potential intermodal capacity assumed that in Phase 1 DSNY would allocate all of the DSNY-managed Waste containers from the four Converted MTS to one terminal, or allocate containers from two of the four Converted MTSs to each of two terminals. Based on this assumption and the system requirements presented above in Section 2.0, it is assumed that either 263 containers (5,770 tons) per day would be transported to one intermodal terminal, or 132 containers (2,885 tons) per day would be transported to each of two intermodal terminals. These assumptions do not purport to predict the result of the DSNY negotiations. DSNY could contract separately for each of the four Converted MTSs or award a single contract for all. These

assumptions are simply being used as a screening tool to focus the analysis on intermodal terminals with large capacity. As described below, there is sufficient intermodal capacity available to handle all Phases of tonnages as shown in Table 40.3-6.

40.3.5.6.2 Survey Methodology

The phone interview format included the questions listed in Attachment B. To assess the amount of intermodal capacity available, facility operators were asked if their facilities would have the capacity to handle either 2,885 tpd (approximately 132 one-way containers) or 5,770 tpd (approximately 263 one-way containers) for a period of twenty years starting in late 2007. Information that was compiled from facilities that would not have this available capacity was recorded and filed, but is not presented in this TTDP.

40.3.5.6.3 Intermodal Capacity

The intermodal terminal investigation determined that there is a sufficient intermodal capacity to handle approximately 1,582 containers per day by rail and approximately 1,185 containers per day by barge, as shown in Table 40.3-14 below. This potential intermodal capacity exceeds DSNY's Phase 4 requirements (440 containers per day) by approximately a factor of three.

Table 40.3-14
Intermodal Facility Capacity Potentially Available to DSNY

Marine Terminals	Port-Serving On-Dock Railyards	Near-Port Railyards	Location	Status	Estimated Available Capacity (Barge to Rail) Daily One-way Container Throughput[1][2]	Estimated Available Capacity (Barge to Ocean-Going Barge) Daily One-way Container Throughput[1][2]
Maher Terminals[3]	Express Rail	------	Elizabeth, NJ	Planned improvements include expanding Express Rail and Corbin Street to support increasing intermodal traffic	132	132
Port Newark Container Terminal[3]	Port Newark Container Terminal Intermodal Yard	------	Port Newark, NJ	Improvements planned include construction of an additional two tracks at the PNCT intermodal facility	132	
ASI at Port Newark	N/A	------	Port Newark, NJ	Currently, this facility is a landside receiving and delivering satellite terminal for Red Hook		263
New York Container Terminal (Formerly Howland Hook)[3]	New York Container Terminal (Formerly Port Ivory)	------	Staten Island, NY	Improvements planned include the construction of an intermodal yard at Port Ivory which will provide direct access to the Chemical Coast Secondary.	263	263
APM/Maersk Terminal[3]	Express Rail	------	Elizabeth, NJ	Planned improvements include expanding Express Rail and Corbin Street to support increasing intermodal traffic	132	132
Newark Rail Terminal	Newark Rail Terminal	------	Newark, NJ	Potential new facility on former oil terminal site.	263	263
Duraport	Duraport	------	Port Newark, NJ	Currently active marine and rail facility. Both marine and rail require modifications for proposed operation	132	132
New Jersey Rail Carriers	New Jersey Rail Carriers	------	South Kearney, NJ	Currently active railyard with remnants of former marine facilities. Planned improvements include increasing number of tracks and potentially marine facilities	132	

Table 40.3-14
Intermodal Facility Capacity Potentially Available to DSNY
(Continued)

Marine Terminals	Port-Serving On-Dock Railyards	Near-Port Railyards	Location	Status	Estimated Available Capacity (Barge to Rail) Daily One-way Container Throughput[(1)(2)]	Estimated Available Capacity (Barge to Ocean-Going Barge) Daily One-way Container Throughput[(1)(2)]
Steel Style Shipyard	Steel Style Shipyard	------	Newburgh, NY	Piers need repair, dredging and rail improvements necessary. Site would be subject to environmental review	132	
------	------	EPIC Industries - at Brill's Yard	Newark, NJ	Two tracks in single-ended railyard. Planned improvements include making railyard double-ended and leasing additional track space to expand capacity	132	
------	------	Greenville Yard	Jersey City, NJ	Ten track railyard currently capable of serving DSNY needs. Have had negotiations with marine terminals, but no final deal has been made	132	
Total Daily One-way Container Throughput					**1,582**	**1,185**
Total Throughput (Tons per day)					**34,804**	**26,070**

Table Notes

(1) The analysis assumes that DSNY would either send all of its DSNY-managed Waste to one facility or divide the waste to be barged to two facilities. Therefore, assuming 22 tons per container, the two potential throughputs are 132 daily one-way containers, which is equivalent to approximately 2,885 tpd and 263 daily one-way containers, which is equivalent to approximately 5,770 tpd.

(2) If a facility is shown to have both barge-to-rail and barge-to ocean-going barge available capacity, this should be interpreted to mean that the facility could do either barge-to-rail OR barge-to ocean-going barge, (i.e., these are mutually exclusive).

(3) PNCT, Maher, APM/Maesrk and NYCT Terminal are heavily dependent on the build-out of Corbin Street to relieve the pressure of building trains on the Chemical Coast Secondary.

40.3.5.6.4 Intermodal Terminal Storage Capacity

The MTS Containerization RFP requires proposers to provide a sufficient number of containers to handle the volume of waste in the system offered in its proposal, taking into account cycle time, maintenance, peak event and transport contingencies. The investigation of potential container storage capacity at intermodal terminals indicated that all facilities listed in Table 40.3-15 have sufficient capacity to store the empty containers for a two-day buffer-period in the event of disruptions in transport service. The facility operators that were contacted for this assessment indicated that DSNY's operation would require storage of approximately one or two days of empty containers. This amounts to storage of between approximately 132 and 263 containers for half the DSNY-managed waste (approximately 2,885 tons per day) and between 263 and 526 containers for the entire DSNY-managed waste stream from the four Converted MTS (approximately 5,770 tons per day).

40.3.5.6.5 Marine Terminal Capacity

The information presented below appears by marine terminal facility. In addition to being based on interviews with marine terminal operators and site visits, it is based also on reviewed PANYNJ reports, including the Comprehensive Port Improvement Plans. Attachment C to this report provides a map that locates these facilities, as well as the Port-Serving On-Dock Rail facilities and Near-Port rail facilities discussed below.

40.3.5.6.5.1 Maher Terminal

The Maher Terminal is a 445-acre site located in Port Newark/Elizabeth in northern New Jersey. The berth length at Maher Terminal is approximately 8,900 feet with more than nine effective berths. The berth depths average between 35 to 50 feet. This facility has more than 20 container cranes that operate the barge and container-ship loading and unloading process. The terminal facilities at Maher Terminal have undergone a $200 million upgrade program recently with the objective of increasing its current capacity from 300,000 lifts per year to 750,000 lifts per year by 2010. The upgrade consolidated Maher's Fleet Street and Tripoli Street Terminals into one

contiguous facility with on-dock rail provided by Express Rail. Maher operators indicated that approximately 1,000 feet of berth space would be available for DSNY harbor barges, and that the marine facilities at this site could handle a daily throughput of 132 containers from two of the four Converted MTSs for either barge-to-ocean-going barge transport or barge-to-rail transport, which is discussed below in Section 4.1.5.1.

40.3.5.6.5.2 Port Newark Container Terminal (PNCT)

The PNCT is a 176-acre site located in the Port Newark/Elizabeth area of northern New Jersey with a total wharf length of 4,400 feet. The PNCT operator indicated that two adjacent underutilized berth spaces (Berths 51 and 53) with a total length of 600 feet and a 33 foot draft would be available to handle the barges from DSNY. These berth spaces are underutilized because they are of insufficient length to berth large container ships, but would be sufficient for berthing the harbor barges that were specified in the MTS Containerization RFP.

PANYNJ has planned site improvements for the marine facilities at PNCT. According to the terminal operator, PANYNJ funding is in place for these improvements, but the schedule has not yet been finalized by PANYNJ. The terminal operator expects these improvements to occur within the next one to two years (2005 - 2006). Currently, PNCT handles approximately 440,000 container moves per year. The PANYNJ site improvements would increase this capacity by more than 25%, to approximately 550,000 to 560,000 container moves per year. The terminal operators at PNCT indicated that the marine facilities at this site would have the available capacity to handle the container throughput from two of the four Converted MTSs, i.e., 132 containers per day for barge-to-rail transport.

40.3.5.6.5.3 ASI at Port Newark

The ASI Newark Terminal is a 20-acre container/barge handling facility located in Port Newark/Elizabeth in northern New Jersey. The ASI Newark Terminal[20] has approximately 1,200 feet of berth space with two available berths for handling containers. ASI uses two mobile

[20] ASI's Red Hook terminal in Brooklyn has only a three-year lease with PANYNJ, so was not considered in this analysis.

harbor cranes to handle containers off the barges. The berth depth at ASI Port Newark is approximately 27 feet. The terminal operators at ASI Port Newark indicated that this facility could handle the daily throughput of 263 containers from all four Converted MTSs for barge-to-ocean-going barge transport.

*40.3.5.6.5.*4 New York Container Terminal (NYCT)

NYCT is a 187-acre site located on the northwest corner of Staten Island bordering Kill van Kull and Arthur Kill. NYCT, formerly Howland Hook, has approximately 3,000 feet of berth, and it would be able to dedicate approximately 300 to 400 feet of existing berth space to handling the barges of containerized waste from the four Converted MTSs. NYCT's operator indicated that barge-to-barge container transfer would occur with a container moved between a harbor barge and ocean-going barge moored in parallel. NYCT would be capable of operating at a sustained rate of 30 container moves per hour (accounting for breaks and barge moves) over a 20-hour workday. Therefore, NYCT would be capable of handling the 263 one-way containers per day from all four Converted MTSs for either harbor barge-to-ocean-going barge transport or barge-to-rail transport, which is discussed below in Section 4.1.5.3.

40.3.5.6.5.5 APM/Maersk Terminal

The APM/Maersk Terminal is a 266-acre site located in Port Newark/Elizabeth in northern New Jersey. The berth length at APM/Maersk is approximately 6,000 feet with just under six effective berths. The berth depth averages between 35 and 50 feet. This facility has nine container cranes that operate the barge and container ship loading and unloading process. The terminal operators at APM/Maersk Terminal indicated that this facility could handle a daily throughput of 132 containers from two of the four Converted MTSs for either barge-to-ocean-going barge transport or barge-to-rail transport, which is discussed below in Section 4.1.5.1.

40.3.5.6.5.6 Newark Rail Terminal

Newark Rail Terminal is a 40-acre site located in Newark, New Jersey. The potential developers of this site indicated that there are plans to develop this site into a barge-to-rail or barge-to-ocean-going barge intermodal facility. The proposed barge dock would provide moorings for six 150-foot long harbor barges. The barge dock would be a high-level concrete platform structure measuring 635 feet by 120 feet. The off-loading and loading of containers would be accomplished through the use of two straddle-type container cranes. These two cranes would be able to off-load six barges, or approximately 6,300 tons, in about five hours.

Additionally, the facility would be capable of mooring two additional barges tied-up to mooring dolphins outboard of the proposed barge dock and bulkhead. In addition to the pier and bulkhead modifications, this site would require dredging to handle barges. The proposed water depth is 15 feet, which would require the dredging of approximately 80,000 cubic yards.

Based on the information from interviews with the potential site developers, this site could handle a daily throughput of 263 containers from all four Converted MTSs for either barge-to-ocean-going barge transport or barge-to-rail transport, as discussed below in Section 4.1.5.4.

40.3.5.6.5.7 Duraport

The Duraport Terminal is a 50-acre site located on the Kill van Kull in the southeastern Bayonne area. The terminal facilities at Duraport are currently used for barge-to-barge operations. The wharf would require rehabilitation in order to serve the needs of DSNY. The terminal operators at Duraport indicated that this facility could handle a daily throughput of 132 containers from two of the four Converted MTSs for either barge-to-ocean-going barge transport or barge-to rail transport, as discussed below in Section 4.1.5.5.

40.3.5.6.5.8 New Jersey Rail Carriers

New Jersey Rail Carriers are located on a 15-acre site on the Kearney Peninsula on Newark Bay. This site was formerly Columbia Coastal, which was a marine terminal with some rail capabilities. The current marine facility would not be adequate to handle the unloading and

loading of barges as it was designed to unload petroleum products from barge and/or ship. The marine facilities would require significant repair and modification to handle barges. If these repairs were made, it is feasible that the marine terminal at New Jersey Rail Carriers could handle approximately 132 containers per day of DSNY-managed waste from two of the four Converted MTS for barge-to rail transport.

40.3.5.6.5.9 Steel Style Shipyard

Steel Style Shipyard is a 35-acre site located on the west side of the Hudson River in Newburgh, New York, approximately 25 miles north of New York Harbor. This site was formerly known as New York Trap Rock and PC Freight. The potential selection of this site by DSNY would be subject to environmental review for the necessary permit applications.

Currently, there are two piers at the site approximately 700 feet long and 70 feet wide. Some repairs to these piers would be required in order to operate a barge handling facility. The depth at the piers is approximately eight feet, so dredging would be required in order to berth harbor barges. The terminal operator at Steel Style Shipyard indicated that this facility would have the capability to handle approximately 132 containers per day of DSNY-managed waste from two of the Converted MTSs for barge-to-rail transport.

40.3.5.6.6 Port-Serving On-Dock Railyard Capacity

40.3.5.6.6.1 Express Rail (Serving Maher Terminal and APM/Maersk Terminal)

Express Rail is a 33-acre site in Elizabeth, New Jersey that is used jointly by Maher Terminal and APM/Maersk Terminal. All containers lifted off a barge would move directly into the Express Rail facility onto railcars via straddle carriers.

Both domestic and international containers move through Express Rail for distribution to the North American rail network. Railcars move from Express Rail to the Corbin Street and/or Oak Island Yard to be assembled into outbound trains to final destination and disposal. Rail

movement to and from Express Rail currently uses one of the two Chemical Coast Secondary tracks parallel to Corbin Street for train assembly. This affects through train operations on the Chemical Coast Secondary.

The long term plan is to increase terminal throughput from Maher and APM/Maersk by building a railyard with six 7,200-foot tracks along Corbin Street Yard to assemble complete trains. According to the terminal operators at Maher Terminal and APM/Maersk Terminal, the planned improvements at Express Rail would make it feasible for this facility to support the rail movement of the 263 containers per day from the four Converted MTSs.

40.3.5.6.6.2 Port Newark Container Terminal Intermodal Yard

The Port Newark Container Terminal Intermodal Yard is a three-acre site located adjacent to Corbin Street in Port Newark, New Jersey. The site currently consists of two tracks that have the ability to handle up to 53 cars. Current operations are designed for one train per day on site. At this time the site is fully subscribed; however, it is planned that two additional tracks will be built on site. According to the operators of Port Newark Container Terminal, these two tracks could potentially support the movement of approximately 132 containers of DSNY-managed Waste from two of the four Converted MTSs.

The marine facilities and the rail facilities are not adjacent to each other. A short dray is required to move containers between the Port Newark Container Terminal and the Port Newark Container Terminal Intermodal Yard, however, a truck flyover is planned that will connect PNCT with the PNCT Intermodal Yard.

40.3.5.6.6.3 NYCT (formerly Port Ivory*)*

The railyard at NYCT, formerly Port Ivory, is a 39-acre railyard integrated with the adjacent NYCT port terminal. Phase I of this railyard is in construction and is designed to potentially handle both international containers and DSNY containers with a five track layout, each approximately 1,500 feet long. Three of these tracks could be dedicated to DSNY. Later phases of construction would increase the track layout to eleven.

Containers delivered by harbor barge to NYCT would be loaded by rubber-tired gantry cranes (RBTGs) into drop frame platform cars on the dock, three to a car, and towed by tractor to the adjacent railyard for loading onto railcars. Reach stackers would be available as back up to the cranes. The port terminal, in combination with the three tracks in the railyard, has the capability to handle 300 one-way DSNY-container moves a day. Construction of six additional tracks would provide the capacity to move the additional DSNY containers indicated in Phase 4 of the combined DSNY and Commercial Waste program.

The NYCT railyard is adjacent to and integrated with Arlington Yard, part of the Staten Island Railroad (SIRR), owned by the New York City Economic Development Corporation. With the completion in late 2005 of the Chemical Coast Connector, SIRR will interconnect with the Chemical Coast Secondary in New Jersey on which CSX and NS, Class 1 railroads, operate. Arlington Yard is undergoing a major upgrade and expansion that will provide the capacity to support unit train movements from SIRR onto the Chemical Coast Secondary.

40.3.5.6.6.4 Newark Rail Terminal

As described above in the Marine Terminals section, DSNY has received a proposal to develop this 40-acre site in Newark, New Jersey into a barge-to-rail or barge-to-ocean-going-barge intermodal facility. Potential site developers have identified a multiple use site design that would have at least two 2,000-foot-long loading tracks on site and 8,000 feet of storage tracks. In addition, the proposed site may include a 5,000-foot-long lead track that would extend to Oak Point Yard. This potential extension track to Oak Point could dramatically improve the transit times, flexibility and reliability when moving cars to and from Oak Point because Brills Yard, which is very congested, currently lies between the Newark Rail Terminal and Oak Point. The extension track would eliminate the need to move through Brills Yard.

The proposed area for loading the containers on to the railcars would be comprised of two parallel railroad sidings, each with a capacity of 25 railcars. Containers would be loaded on to the railcars through the use of rail-guided, straddle-type container cranes. Each siding would be equipped with two cranes. According to the potential developers of this site, if built, the facility would be capable of handling all 263 one-way containers per day of DSNY-managed waste from the four Converted MTSs.

40.3.5.6.6.5 Duraport Railyard

As described above, Duraport Railyard is a 50 acre site located on the Kill van Kull in the southeastern Bayonne area. It is served and supported by Bayonne Yard. Currently, there are limited rail facilities on the Duraport site; however, there is a long storage track between East 5th and 2nd Streets that reaches the site. It appears that one or perhaps two more rail storage and/or staging tracks could be built to handle increased volumes of railcars out of Duraport. Additional rail intermodal tracks would also have to be built on the Duraport site. Railcars could then be loaded on site and cuts of cars assembled between East 2nd and 5th streets before moving the cars to Bayonne Yard. From Bayonne Yard, the cars would probably move to Oak Island and then to final destination for unloading and disposal. The operator at Duraport Railyard indicated that this facility would have the capability to handle approximately 132 containers per day of DSNY-managed waste from two of the Converted MTSs for barge-to-rail transport.

40.3.5.6.6.6 New Jersey Rail Carriers

New Jersey Rail Carriers is a 15-acre site located in South Kearney on Newark Bay. This site was formerly a marine/rail oil terminal. Currently, the site has a warehouse, a small two-track single-ended railyard, and the remnants of a marine barge facility. Each of the two tracks is about 1,300 feet long. The operators of this site have plans to build up to five additional tracks as rail traffic increases.

This site is currently being used for the movement of outbound loaded containers on railcars. The site is served by Norfolk Southern directly via Croxton Yard, though it could potentially be served by CSX via Kearney Yard. With upgrades to the rail facilities, this site could potentially handle the 132 one-way containers per day from two of the four Converted MTSs.

40.3.5.6.6.7 Steel Style Shipyard

Steel Style Shipyard is a 35-acre site located on the west side of the Hudson River in Newburgh, New York, approximately 25 miles north of New York Harbor. The potential selection of this site by DSNY would be subject to environmental review for the necessary permit applications.

The existing Steel Style facility has two short rail spurs that are located on the northern portion of the property. The CSX River Line is a single track railroad (on a double track right-of-way) as it passes the site. Just south of Steel Style, there is a double-ended passing siding on the location of the second main track. The industrial lead to Steel Style comes off the north end of the passing siding and runs north by the main gate of Steel Style to the small two-track facility on the north end of Steel Style.

At this time, it is assumed that containers would not be able to be unloaded directly from barge to railcar and that there would be a short dray to move containers between the two modes. However, to accommodate the loading and unloading of railcars by either a sideloader or gantry crane, it would be necessary to configure at least two long tracks in the facility.

According to the terminal operator, if both rail and marine improvements were made, there would be sufficient capacity to move about 132 one-way containers per day of DSNY-managed Waste by rail to and from Steel Style Shipyard to the CSX River Line for movement to the final destination.

40.3.5.6.7 Near-Port Rail Facilities

40.3.5.6.7.1 Epic Industries at Brills Yard

Epic Industries leases a 6-acre site from Conrail that is located between Brills Yard and the New Jersey Turnpike in Newark, New Jersey. This site, which has two tracks in a small single-ended railyard, is currently used to move outbound loaded containers on railcars. The operators of this site indicated that they have recently been expanding their railyard and have plans to make it

double ended, which would improve their ability to increase the amount of cars that are loaded daily. In addition, the operators of Epic Industries are considering leasing additional space for additional track.

While this site does not have any waterfront access, it is within close proximity to Newark Bay. Therefore, with upgrades to the on site rail facility, it is feasible that containers could be drayed to this site from one of the near-by marine facilities mentioned above. The operators indicated that there would be sufficient capacity to move about 132 one-way containers per day of DSNY-managed Waste by rail.

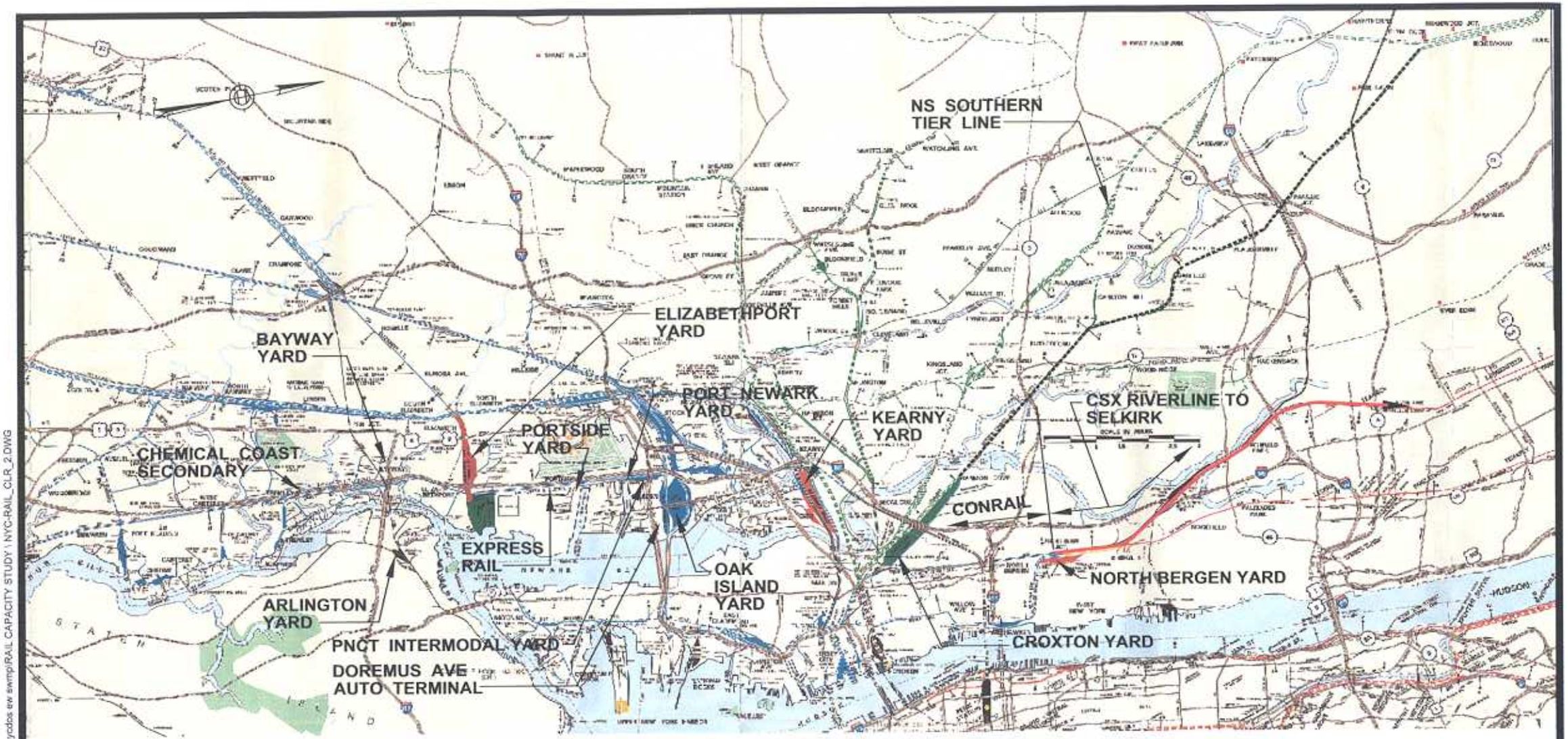
40.3.5.6.7.2 Greenville Yard

Greenville Yard is a 27-acre site located in Jersey City, New Jersey. The New York Cross Harbor Railroad (NYCHRR) in Jersey City operates Greenville Yard, which was formerly the yard and car float facility for the Pennsylvania Railroad. Currently, NYCHRR performs both car float business from 51st Street in Brooklyn and loading and unloading of railcars at Greenville Yard in Jersey City.

According to terminal operators, this ten-track railyard would be capable of transporting approximately 132 containers per day of DSNY-managed waste from two of the four Converted MTSs. Merchandise and/or unit trains would depart from Greenville to Oak Island Yard (CSX) and then to the general railroad system of North America.

40.3.5.7 Potential Disposal Capacity

The City's disposal capacity requirements were set forth in Section 9.5.6 of the MTS Containerization RFP that required proposers to make disposal capacity guarantees to DSNY in their proposals. In effect, proposers are required to maintain five years of capacity going forward for the term of the contract. Based on the information provided by respondents and DSNY's own surveys, there is approximately 37,700 tpd of barge or rail accessible disposal capacity potentially available to the City in New York State, Georgia, North Carolina, Ohio, Pennsylvania and Virginia.



RAIL CAPACITY IN NORTHERN NEW JERSEY

LEGEND

- CONRAIL (CSX / NS)
- NS
- CSXT

HDR
SEVEN WINTHROP SQUARE
BOSTON MA. 02110-1202
(617) 357-7700

ATTACHMENT A

TRANSFER TRANSPORT AND DISPOSAL PLAN

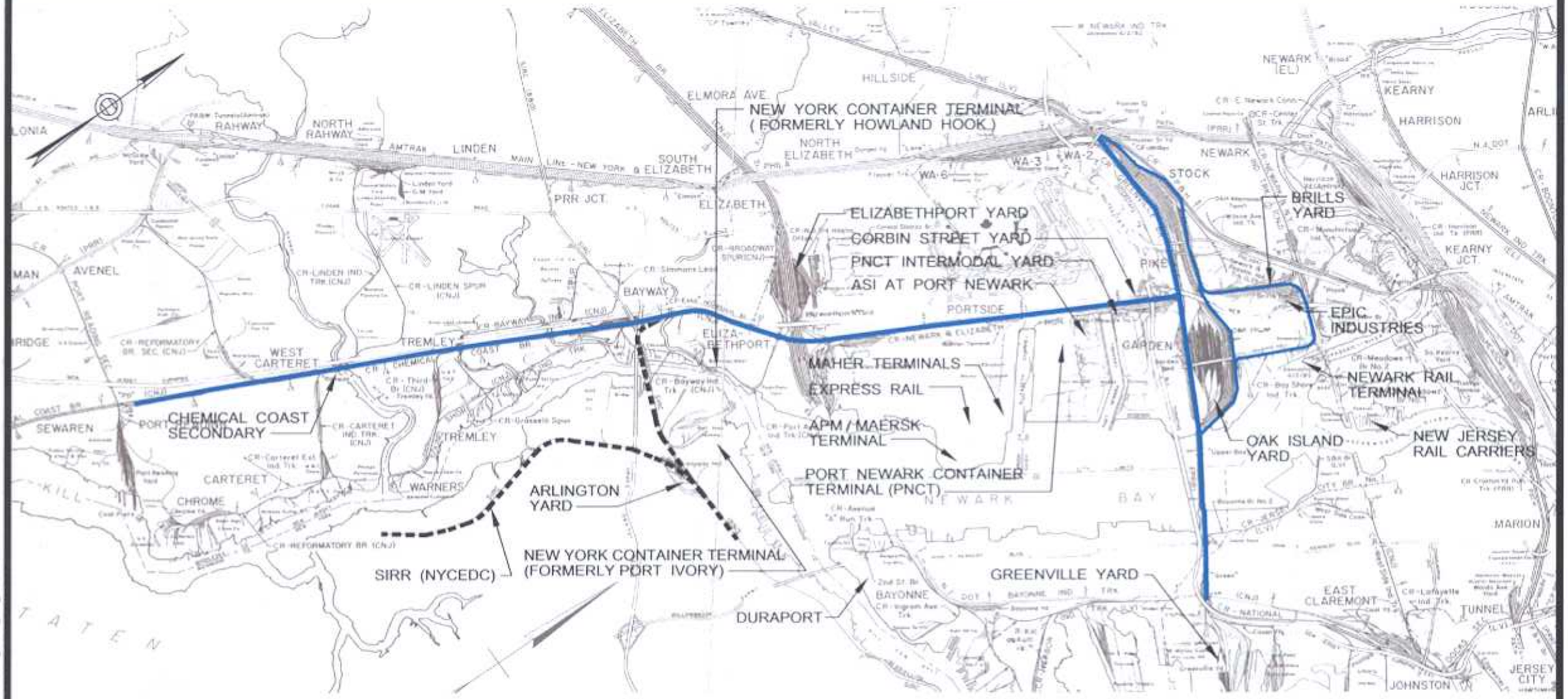
DATE: FEB 2005

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Attachment B: Interview Questions for Terminal Operators

Questions for Terminal Operators:

1. Given that DSNY intends to send containerized waste by barge to be transloaded onto either ocean-going barge or rail, is there any scenario under which the facility you operate could envision serving the needs of DSNY?
2. What, if any constraints, affect the ability of the facility you operate to service container barges? How many container barges could be docked at one time?
3. What is a reasonable assumption to use regarding the turnaround cycle time for unloading full and loading empty containers onto the barges described above?
4. What would be the operating procedure for moving containers from dockside to the railhead? What types of railcars and container handling equipment would the facility you operate anticipate using?
5. What is the maximum number of DSNY containers per day that the facility could envision handling in the time frame of 2007 (for Barge-to-Rail and/or Barge-to-Ocean-Going Barge? How much track capacity could be dedicated for DSNY containers? Would this increase, and if so by how much, in subsequent years?
6. What are reasonable operating assumptions relative to the dispatch and receipt of railcars with containerized waste from your facility?
7. What are reasonable assumptions relative to the dispatch and receipt of ocean-going barges with containerized waste from your facility?
8. How could your facility increase the number of railcars handled daily?
9. If improvements are planned at your facility, how will these improvements impact the throughput at your facility?
10. How much storage capacity for containers would be available at your facility?



INTERMODAL TERMINAL COMPONENTS

LEGEND

- CONRAIL (CSX / NS)
- SIRR (STATEN ISLAND RAILROAD)

0 1 2 3

Scale in Miles

HDR
SEVEN WINTHROP SQUARE
BOSTON MA. 02110-1202
(617) 357-7700

ATTACHMENT C

TRANSFER TRANSPORT AND DISPOSAL PLAN

DATE: FEB 2005

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40.3.6 Enhanced Environmental Justice Public Participation Plan and Interim Implementation Report

The New York State Department of Environmental Conservation (NYSDEC) issued policy guidance on Environmental Justice and Permitting in March 2003 (EJ Policy). The EJ Policy applies to certain NYSDEC permitting actions and environmental reviews for which NYSDEC is the lead agency. The Draft and Final Scoping Documents issued in May and October 2004, respectively, described DSNY's proposed plan for implementing an Enhanced Public Participation program, consistent with NYSDEC's EJ Policy. DSNY implemented the Enhanced Public Participation program during the public processes for the environmental review of the Draft New SWMP, including both the public scoping meetings for the supporting DEIS, the public hearings on the DEIS and the preparation of this FEIS. Public hearings held in connection with the City's Uniform Land Use Review Procedures (ULURP) were also used as opportunities to convey information on the NYSDEC permit process.

Among other things, the Draft New SWMP proposes and the DEIS and this FEIS evaluates, as elements of the Proposed Action for Long Term Export, the construction and operation of the four Converted Marine Transfer Stations, the barge and/or rail export of DSNY-managed Waste from private transfer stations that would serve wasteshed in the Bronx, Brooklyn and Queens that were formerly served by the existing South Bronx and Greenpoint MTSs. The Converted MTSs require Solid Waste Management Facility Permits under 6NYCRR Part 360, Article 15/25 permits and State Facility Air Permits. Draft applications for these permits have been filed with NYSDEC. Consequently, the Enhanced Public Participation program will continue to be conducted in connection with the permit review process, including any public hearings that NYSDEC holds in connection with the permit applications, once these are deemed complete by NYSDEC.

This Plan describes DSNY's implementation activities to date, including:

- The completion of the public Scoping process;
- The publication and distribution of the Final Scoping Document;
- The public hearings on the DEIS and ULURP applications; and
- The publication of the FEIS.

The Enhanced Public Participation program was implemented in the communities identified in the project area maps, published in the Draft and Final Scoping Documents. The project area maps were prepared using the USEPA database (prescribed in the EJ Policy), to identify the census block groups with populations that meet the EJ Policy criteria (EJ community). The project area maps also identified facilities in the project area that would likely be included in an environmental burden analysis, if such an analysis were required based on a finding that the Proposed Action would cause potentially significant unmitigatable adverse impacts[21]. The maps provided information about the environmental review analyses that would be performed and were published in the Draft and Final Scoping Document. The project areas, in which an Enhanced Public Participation program was conducted, included all the communities that would host one of the four Converted MTSs or the private transfer stations that were elements of the Proposed Action for Long Term Export, whether or not they met the EJ Policy criteria for an EJ community.

40.3.6.1 Enhanced Public Participation Program

DSNY, as lead agency for the environmental review of the Draft New SWMP, is implementing this Enhanced Public Participation program to provide meaningful opportunities for citizens to be informed about and involved in the environmental review and the facility permitting elements of the Proposed Action (including Alternatives to the Proposed Action). The program includes enhanced outreach, document and information dissemination and community meetings accessible to each EJ project area. The proposed Enhanced Public Participation program was drafted using a combination of best practices, identified by the DSNY team, and the suggested activities detailed in the NYSDEC publication, "Tips for Preparing a Public Participation Plan." This Enhanced Public Participation program describes activities completed through the publication of the FEIS. A final report will be submitted to NYSDEC on completion of the permit public hearing phase. This will include a written certification by DSNY that it has complied with the Enhanced Public Participation program, as proposed in the Final Scoping Document and as updated in the DEIS and thereafter.

[21] The FEIS does not report any such findings.

40.3.6.1.1 Advance Planning

During the Public Scoping process and prior to the publication of the Draft New SWMP, DSNY identified nine of ten potential project areas, eight Converted MTS sites and alternative facility locations that met EJ criteria. The Draft Scoping Document included a description of the Enhanced Public Participation program. DSNY elected to implement the Enhanced Public Participation program in all ten project areas, beginning with Public Scoping Meetings in locations in each of the EJ project areas. In the initial stage of implementing the Enhanced Public Participation program, DSNY identified stakeholders, met with community district managers, coordinated logistics and support for each meeting, and prepared reader-friendly outreach materials. All activities were conducted in accordance with the CEQR schedule.

.40.3.6.1.2 Identification of Stakeholders

Stakeholder lists were developed through online review and consultation with the District Managers of each of the ten Community Districts in which potential export facilities were located. The lists included, but were not limited to, community-based organizations, civic groups, religious groups, neighborhood housing agencies, and schools. The stakeholder lists were continuously updated through phone requests, attendee lists from public information meetings/hearings, and other sources.

40.3.6.1.3 Meetings with Community District Managers

The DSNY team requested one-on-one meetings with the District Manager of each Community Board in a potential project area. These meetings introduced the potential project; described the Enhanced Public Participation program; and verified previously gathered information about the neighborhood, including area demographics, stakeholder contact information, special needs, and preferred meeting locations. Eight of 10 district managers or their representatives were able to meet with the DSNY team (refer to attached Thank You letters in Appendix H). Two Community Board contacts were unable to meet with DSNY. As a result, web searches were conducted to gather stakeholder and demographic information for those Community Districts.

The DSNY team also met with representatives of the Hunt's Point Economic Development Corporation and held a joint meeting with the district managers of Manhattan Community Boards #4 and #7.

40.3.6.1.4 Outreach Materials Prepared

Public information materials consisted of trifold flyers mailed to stakeholders in advance of the Public Scoping Meetings, a Welcome handout and fact sheets, Comment sheets and large display boards. Materials were tailored to each EJ community and project. The flyers, handouts and displays encouraged public participation, described the facility permitting activities, the design and operation of the proposed facilities, including the Converted MTSs; answered frequently asked questions (FAQs); and presented other pertinent information on the permitting process, including the location of the Public Document Repositories in each EJ project area. The Public Scoping trifold mailers are provided in Appendix H. Samples of Scoping outreach materials for the North Shore Converted MTS are also provided in Appendix H .

A Welcome handout and fact sheets provided at each of the Public Scoping Meetings, summarized information presented on the display boards. Comment sheets were available for completion at the meeting, or for submission to DSNY by mail or fax on or before July 11, 2004. Copies of the Draft Scoping Document were also available for review at the meeting and online, as well as in the two Public Document Repositories located in each EJ project area.

40.3.6.1.5 Meeting Logistics and Support

Meeting venues were selected based on various criteria including familiarity and access, proximity to the proposed site, and availability. The following meeting logistics and support were provided for each location:

- Necessary permits and/or authorizations for meeting venues;
- A public-friendly layout for sign-in, display units, and a brief power-point presentation;
- Audio/visual equipment, including amplifiers, speakers, microphones, projector, screen and laptop computer;

- Speaker registration cards, attendee sign-in sheets, and comment sheets;
- A stenographer to record public comments;
- Simultaneous or consecutive interpreters where requested by the community or local representatives (it should be noted that a Spanish interpreter was available at 8 of 10 meeting venues, although not always utilized).
- Public outreach staff stationed at display boards, provided handouts, and answered questions on outreach materials or the outreach process.

40.3.6.1.6 Information Dissemination Program

40.3.6.1.6.1 Notices of Public Scoping

Notices of Public Scoping were published in the Environmental Notice Bulletin and the City Record on May 17, 2004, 30 days prior to the first Scoping Meeting which was scheduled on June 16, 2004. Subsequent notices were also published in these publications. A sample of the Notices of Public Scoping is provided in Appendix H .

40.3.6.1.6.2 Newspaper Display Advertisements

Based upon the formal Notice of Public Scoping, similar versions of Public Display advertisements were prepared for publication in local newspapers. Two newspapers per site initially were selected through consultation with each Community District Manager, with revisions made to avoid duplication. Two weeks prior to the scoping meetings, easy-to-read, site-specific or borough-specific display ads were placed in twelve community-based newspapers; and full display ads were placed in Spanish, Korean and Chinese Newspapers. Samples of newspaper notices, including those that appeared in Korean, Mandarin and Spanish, are included in Appendix H .

40.3.6.1.6.3 Document Repositories

Two accessible document repositories were established in each of the ten EJ project areas. The repositories were selected through consultation with the Community Boards, as well as review of project area maps. All project-related material, including draft and final permit applications for the MTSs, Scoping Documents, the DEIS, Public Notices or permit–related Notices, is available

for review by the public at these sites. Locations for documents include one public library; and the Community Board office for each community district in which a Proposed Action project is located. In addition, documents are available upon request from DSNY and for review at community liaison offices within pertinent state and federal agencies; borough halls; and legislative offices. A list of the public document repositories is included in Appendix H .

40.3.6.1.6.4 Public-Friendly Mailings and Flyers

Written information on potential projects and related permit review processes was prepared in an easy-to-read format, and translated, as appropriate, in advance of the Scoping Meeting. A site-specific tri-fold mailing was sent to approximately 2,200 stakeholders, and extra copies mailed to repositories and Community Board offices. The flyers were mailed two weeks in advance of each meeting to maximize attendance. See Appendix H for a sample of the flyers.

40.3.6.1.6.5 Toll Free Hotline

A toll-free hotline was established in May 2004 (1-888-NYC-SWMP), to receive comments and answer questions related to the project. The hotline phone number is available on the DSNY web site and was provided on all DSNY outreach and meeting/hearing materials and in public notices/display ads. Messages received via hotline are documented, substantive comments considered by DSNY, and Frequently Asked Questions (FAQs) answered. The hotline also receives requests for translation/interpretation services; special needs of residents within a particular project area; and additions to the stakeholder lists. The hotline voice message and operator offer information in English and Spanish.

40.3.6.1.7 Scoping meetings

40.3.6.1.7.1 Meeting Schedule

Public Scoping meetings were held between Wednesday, June 16th and Thursday, July 1st, 2004. Preferred venues identified by the Community District Managers were contacted, and where a site was unavailable on the dates requested, other nearby and easily accessible locations were selected. The Scoping Meeting schedule is provided below:

Table 40.3-16
Public Scoping Meeting Locations

Project Area	Date	Location
West 135th Street MTS	June 16, 2004	I.S.195 (Roberto Clemente School) 625 W.133rd Street, New York NY
Southwest Brooklyn MTS	June 17, 2004	I.S. 227 (Edward B. Shallow School) 6500 16th Avenue, Brooklyn, NY
West 59th Street MTS	June 21, 2004	West Side Y.M.C.A. 5 West 63rd Street, New York, NY
South Bronx MTS	June 22, 2004	P.S. 48 (Joseph Drake School) 1290 Spofford Avenue, Bronx, NY
South Bronx MTS Alternatives	June 23, 2004	Alfred E. Smith High School 333 East 151st Street, Bronx, NY
Hamilton Avenue MTS	June 24, 2004	Brooklyn 7 Community District Office 4201 4th Avenue, Brooklyn, NY
East 91st Street MTS	June 28, 2004	New York Blood Center (Auditorium) 310 E. 67th Street, New York, NY
North Shore MTS	June 29, 2004	Union Plaza Health Care Facility 33-23 Union Street, Flushing, NY
Greenpoint MTS Alternative	June 30, 2004	Sunnyside Senior Center 43-31 39th Street, Sunnyside, NY
Greenpoint MTS	July 1, 2004	Swinging Sixties Senior Center 211 Ainslie Street, Brooklyn, NY

40.3.6.1.7.2 Meeting Format

Each meeting began with an informal "open session" with display stations at the perimeter of each room or in an adjacent hallway, depending on the facility. The open sessions included an area for attendee sign-in and speaker registration for those attendees who wished to give testimony; a comment area; and a series of displays on the Proposed Action, EIS Topics, and Public Involvement Process. The displays remained available for review during the formal portion of the public meeting; and take-home summary handouts were also provided.

The formal portion of the public meeting took place in an auditorium style-set up. The meetings commenced with an opening statement and brief Power Point presentation made by Assistant Commissioner Szarpanski. The presentation described the Proposed Action for each site and included information about the wastesheds to be handled by the proposed facilities, renderings of the proposed Converted MTS buildings and access ramps and diagrams that depicted how waste would be containerized and loaded onto barges. A stenographer recorded the opening statement and Power Point presentation, as well as all of the comments made by meeting participants following the presentation. Copies of Assistant Commissioner Szarpanski's opening statements and presentations were made available at the end of each meeting, and a sample is provided in Appendix H .

40.3.6.1.7.3 Follow up Information Dissemination and Translation Services

DSNY representatives and outreach staff were available to respond to questions at the close of each public scoping meeting. Several attendees requested specific information, including hard copies of the Draft Scoping Document; meeting transcripts, attendee sheets, and outreach activities, among other information. DSNY representatives followed up on each request to provide further information by phone or email.

In response to requests for interpretation in Spanish, these services were provided at eight out of ten meetings. After experimenting with alternating Spanish and English translation, simultaneous Spanish translation services (with United Nations style headsets) were subsequently provided at the Scoping Meetings, but were very sparsely used. To ensure that translation services are available where they are needed and that the attending public is aware of their availability in advance of the public hearings, the public outreach flyers that were distributed prior to the DEIS public hearing phase, emphasized the availability of such services upon prior request.

40.3.6.1.7.4 Final Scoping Document Publication

The Final Scoping Document was published in October 2004. The Final Scoping Document contained a more than 30-page summary of Comments & Responses that addressed all of the substantive comments received during the public Scoping process. Appendix B of the Final

Scoping Document contained transcripts of the 10 Scoping Meetings and a compendium of written comments received that was also published and made available on request. The Final Scoping Document and Appendix B were placed in the public document repositories and appear on the DSNY web site at www.nyc.gov/sanitation.

40.3.6.1.8 DEIS Publication Phase

40.3.6.1.8.1 Public Notices, Newspaper Display Advertisements, and Trifold Mailings

As with Scoping, a Public Notice announcing the issuance and availability of the DEIS was published in the Environmental Notice Bulletin and the City Record. During the Scoping period, Scoping Meeting attendees routinely indicated that they had not seen the multiple newspaper display advertisements placed in the EJ project area newspapers. Because of feedback that newspaper adds were an ineffective way of reaching the EJ Communities than anticipated, , display advertisements for the DEIS and Part 360 permit hearings were published in two mainstream newspapers in the EJ project areas, the New York Post and El Diario (Spanish publication), and in the Staten Island Advance, two weeks prior to those Public Hearings.

Stakeholder lists were updated with the addresses of individuals who attended the Public Scoping meetings or submitted comments; trifold mailings were sent to over 3,000 stakeholders. To keep all EJ Communities informed, Public Notice flyers that provide a schedule of all of the eight DEIS Public Hearings were mailed to all stakeholders of MTS and alternatives sites that are not proposed in the New SWMP (West 59th Street, West 135th Street, and South Bronx). In addition, the Public Notice flyer was translated into Spanish and sent to Spanish-speaking stakeholders identified by active community liaisons or groups.

40.3.6.1.8.2 Public Hearing Schedule

Outreach documents continued to be distributed widely through various mailings and at the DEIS Public Hearings held within the EJ project areas for the Proposed Action facilities. Stakeholders were informed of the Hearings at least two weeks in advance.

DEIS Hearings were scheduled between Wednesday, December 1st and Monday, December 20th, 2004. Preferred venues identified by the Community District Managers were contacted, taking into account sites utilized during the Scoping process. Note that while not an EJ project area, a DEIS Public Hearing was held in Staten Island to take comments from all Staten Island communities on the New SWMP and the DEIS; the Staten Island Transfer Station previously received all required approvals and permits and is under construction. The DEIS Hearing schedule is provided below:

Table 40.3-17
DEIS Hearing Locations

Project Area	Date	Location
Staten Island	December 1, 2004	Staten Island Community Board 2 460 Brielle Avenue, Staten Island, NY
Greenpoint/Williamsburg , Brooklyn (private facilities)	December 2, 2004	Swinging Sixties Senior Center 211 Ainslie Street, Brooklyn, NY
Port Morris area, Bronx (private facilities)	December 6, 2004	Alfred E. Smith High School 333 East 151st Street, Bronx, NY
Queens (Greenpoint MTS area) (private facility)	December 8, 2004	Sunnyside Senior Center 43-31 39th Street, Sunnyside, NY
Hamilton Avenue MTS	December 13, 2004	Brooklyn 7 Community District Office 4201 4th Avenue, Brooklyn, NY
North Shore MTS	December 14, 2004	Union Plaza Health Care Facility 33-23 Union Street, Flushing, NY
Southwest Brooklyn MTS	December 15, 2004	I.S. 281 Joseph B. Cavallaro School 8787 24 Avenue, Brooklyn, NY
East 91st Street MTS	December 20, 2004	New York Blood Center 310 East 67th Street, New York, NY

40.3.6.1.8.3 Meeting Format and Meeting Materials

The DEIS Public Hearing format was similar to the format used for the Scoping Meetings. DSNY provided a short opening statement and Power Point presentation. Display boards, handouts and comment sheets were made available. To inform the public about the NYSDEC permit review process, the Power Point presentations and handouts contained information about the NYSDEC permit applications (solid waste management facility, air and marine resources) for the Converted MTSs. (See Appendix H). The new slides provided specific information about the permit review process and details on how and when, as part of DSNY's DEIS public comment period, to submit comments on the State environmental permit applications. Fact sheet handouts expanded on the information provided during the Power Point presentation and provided specific information about the public document repository, including the location, contact person, and days/hours opened for each potentially affected community. A sample of the fact sheet handouts for the North Shore Converted MTSs is in Appendix H.

A stenographer was present to record all of the proceedings, outreach materials were translated into other languages for comprehension by non-English speaking stakeholders, and simultaneous Spanish interpreter services was provided, when requested. Copies of the DEIS and New SWMP documents were made available to the public at each of the hearing venues for their review.

40.3.6.1.8.4 Follow up Information Dissemination

DSNY representatives and outreach staff were available to respond to questions at the close of each public hearing. Transcripts of the hearings and the responses to comments/questions received during the Hearing process and public comment period have been incorporated into the FEIS. The New SWMP hotline was in operation throughout the extended DEIS comment period and will remain in operation through the end of the NYSDEC permit review process.

40.3.6.1.8.5 Informational Meetings During the Extended DEIS Comment Period

During the four Public Hearings held by Community Boards on the Converted MTSs, DSNY made a presentation on the Uniform Land Use Review Procedure (ULURP) applications. DSNY's presentation included information about the NYSDEC permit review process and the availability and contents of the State environmental permit applications on file for each of the Converted MTSs. Handouts describing the permit review process that were distributed at the DEIS Public Hearings were also made available to the Informational Meeting attendees. The DSNY presentation was followed by a question and answer session. Attendees had an opportunity to ask questions about the NYSDEC permit review process and DSNY's State environmental permit applications for the Converted MTSs.

Public notices and display ads about the informational meetings held in mid-January 2005 listed in the following table were placed in local newspapers during the last week of December 2004. In addition, DSNY mailed out flyers to community stakeholders during the last week of December 2004. The flyers provided information about the DSNY permit applications, the NYSDEC permit review process, the public document repository and included an invitation to the Community Board Informational Meeting/ULURP Hearing. Samples of the invitational/project update flyers, fact sheet handouts, and public notices/display ads are attached in Appendix H.

Table 40.3-18
Informational Meeting/ULURP Hearing Locations

Project Area	Date	Location
Hamilton Avenue MTS	January 13, 2005	Brooklyn 7 Community District Office 4201 4th Avenue, Brooklyn, NY
North Shore MTS	January 10, 2005	Union Plaza Health Care Facility 33-23 Union Street, Flushing, NY
Southwest Brooklyn MTS	January 13, 2005	I.S. 281 Joseph B. Cavallaro School 8787 24 Avenue, Brooklyn, NY
East 91st Street MTS	January 12, 2005	Hunter College School of Social Work 129 East 79th Street, New York, NY

Stakeholder lists continued to be updated throughout the DEIS public comment period (through January 2005) to include those who provided comments or attended the DEIS Public Hearings and the Permit Review Process Informational Meetings/ULURP Hearings (October 22, 2004 through January 24, 2005).

40.3.6.1.9. Permit Hearing Phase

DSNY will continue to implement its public participation plan through the end of NYSDEC's permit review process. Another mass mailing is anticipated to provide project updates and inform community stakeholders about the upcoming NYSDEC permit hearings. These mailings will be sent at least two weeks prior to the scheduled permit hearing dates. Project stakeholders may continue to view the DSNY web page for project updates and use the "New SWMP" toll free hotline to ask any project or permit related questions.

CHAPTER 40 – REPONSIVENESS SUMMARY (NEW CHAPTER) **1**

40.1 INTRODUCTION 1
40.2 COMMENT INDEX 3
40.3 COMMENTS AND RESPONSES 76
40.3.1 General Comments 76
40.3.2 Comments and Responses 148
40.3.3 Involved Agency Comments 277
40.3.4 Comments on Commercial Waste Study 322
40.3.5 Transfer, Transport and Disposal Plan 400
40.3.6 Enhanced Environmental Justice Public Participation Plan and Interim Implementation Report 432

Table 40.3-1 ..... 78Converted MTSs 78
DSNY and Commercial Waste Anticipated Capacity Requirements 78
and 78
Capacities Evaluated in the New SWMP DEIS 78
Table 40.3-2 79
Converted MTSs 79
DSNY-Proposed Weekly and Daily Permit Limits 79
Table 40.3-3 80
Converted MTSs 80
DSNY-Proposed Emergency Permit Limits 80
Table 40.3-5 402
Converted MTS Average Throughputs(1) 402
Table 40.3-6 403
Phasing of Commercial Waste into Converted MTS System Waste Stream 403
Average Daily Tonnage 403
Table 40.3-7 403
Phasing of Commercial Waste into the Converted MTS System 403
Daily Containers Requirements 403
Table 40.3-8 405
In-City Harbor Barge Requirements Phase 1 405

Table 40.3-9 405
In-City Harbor Barge Requirements Phase 2 405
Table 40.3-10 406
In-City Harbor Barge Requirements Phase 3 406
Table 40.3-11 406
In-City Harbor Barge Requirements Phase 4 406
Table 40.3-12 407
Maximum Amount of Railcars and Containers Required for System 407
Table 40.3-13 409
Maximum Amount of Ocean-going Barges and Containers Required for System 409
Table 40.3-16 438
Public Scoping Meeting Locations 438
Table 40.3-17 441
DEIS Hearing Locations 441
Table 40.3-18 443
Informational Meeting/ULURP Hearing Locations 443