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.

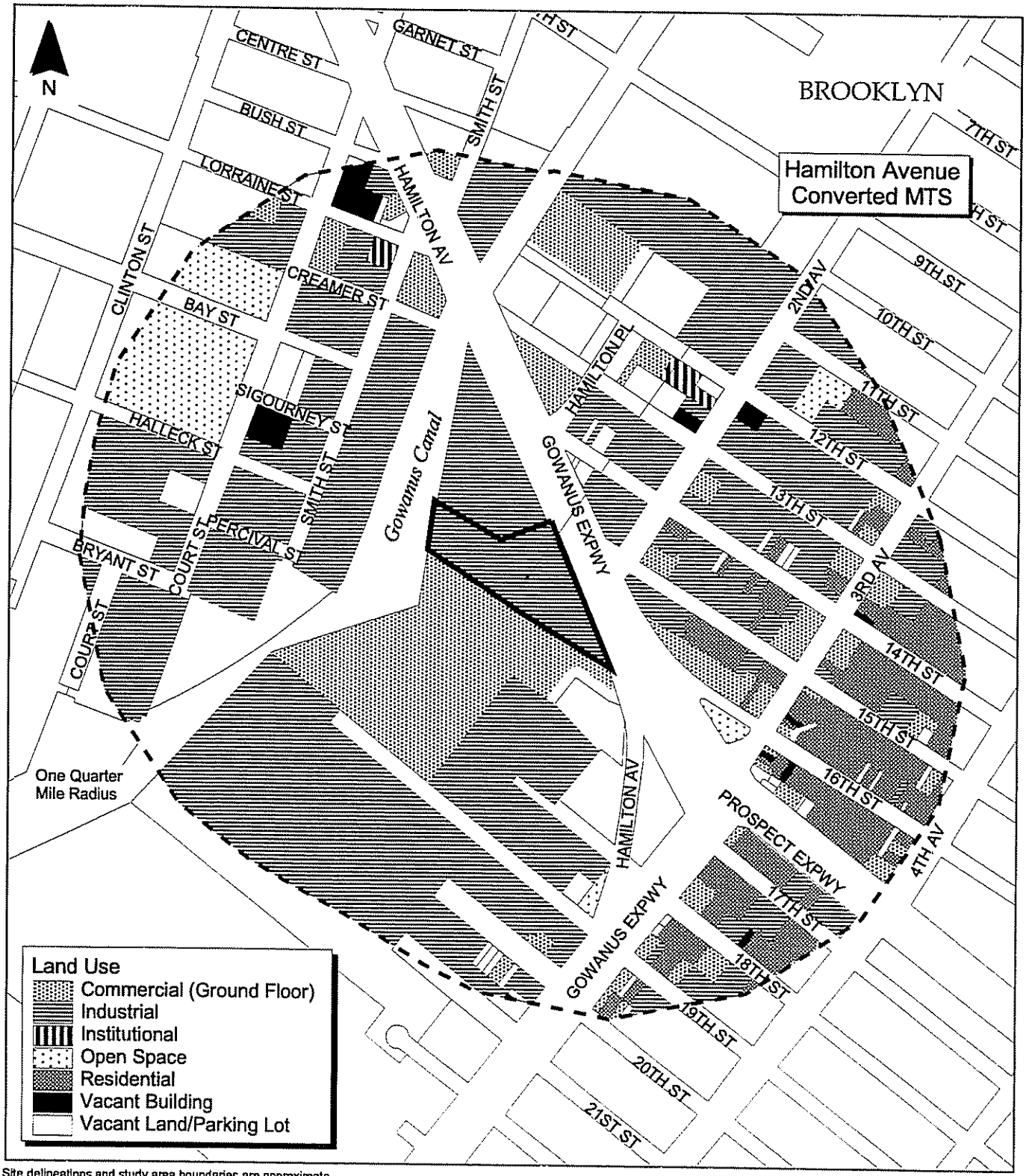
4.2.1.2 Land Uses Patterns

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.

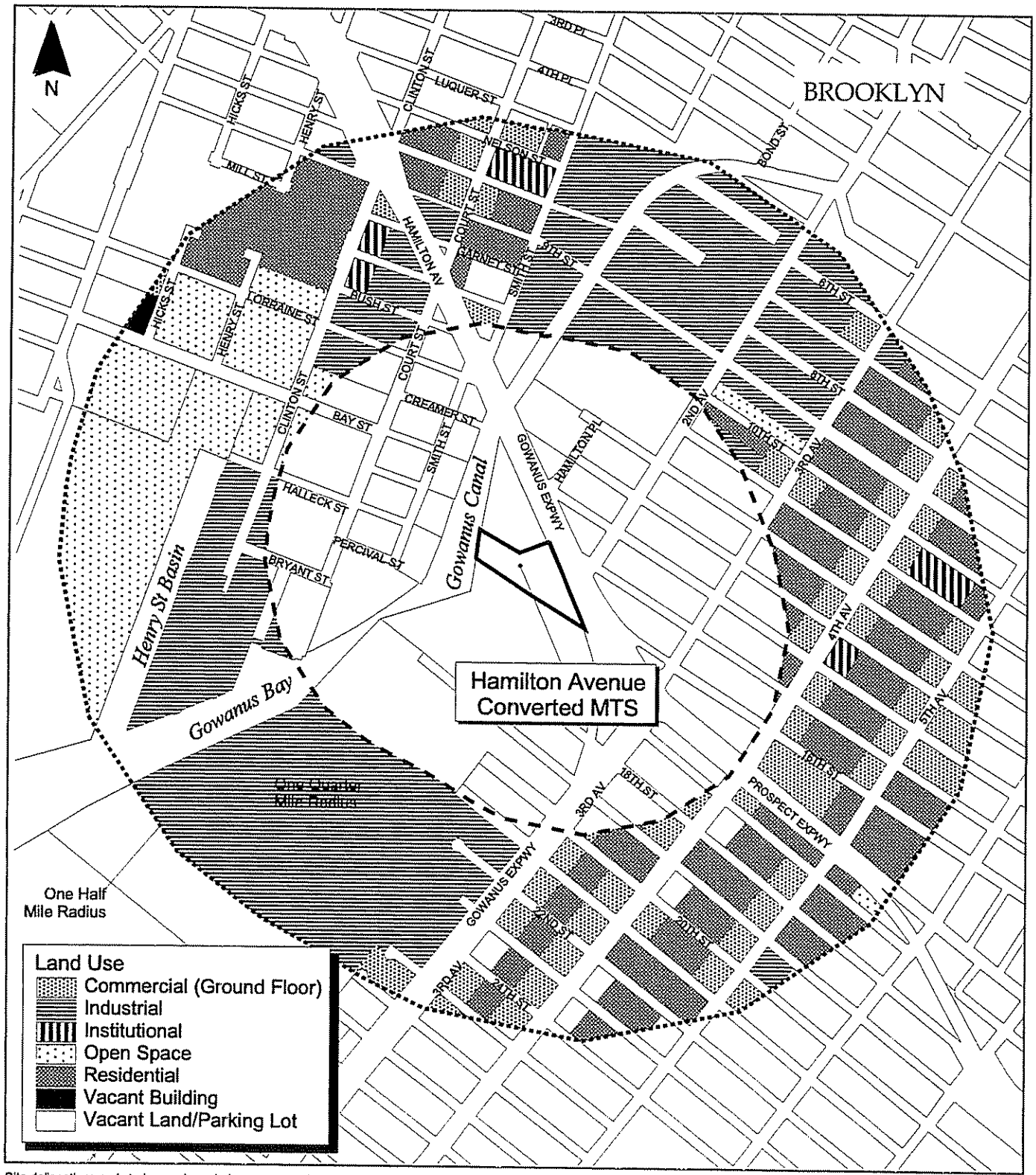
4.2.1.2.2 Land Uses in the Primary Study Area

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
Hamilton Avenue Converted MTS
CITY OF NEW YORK
DEPARTMENT OF SANITATION



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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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.

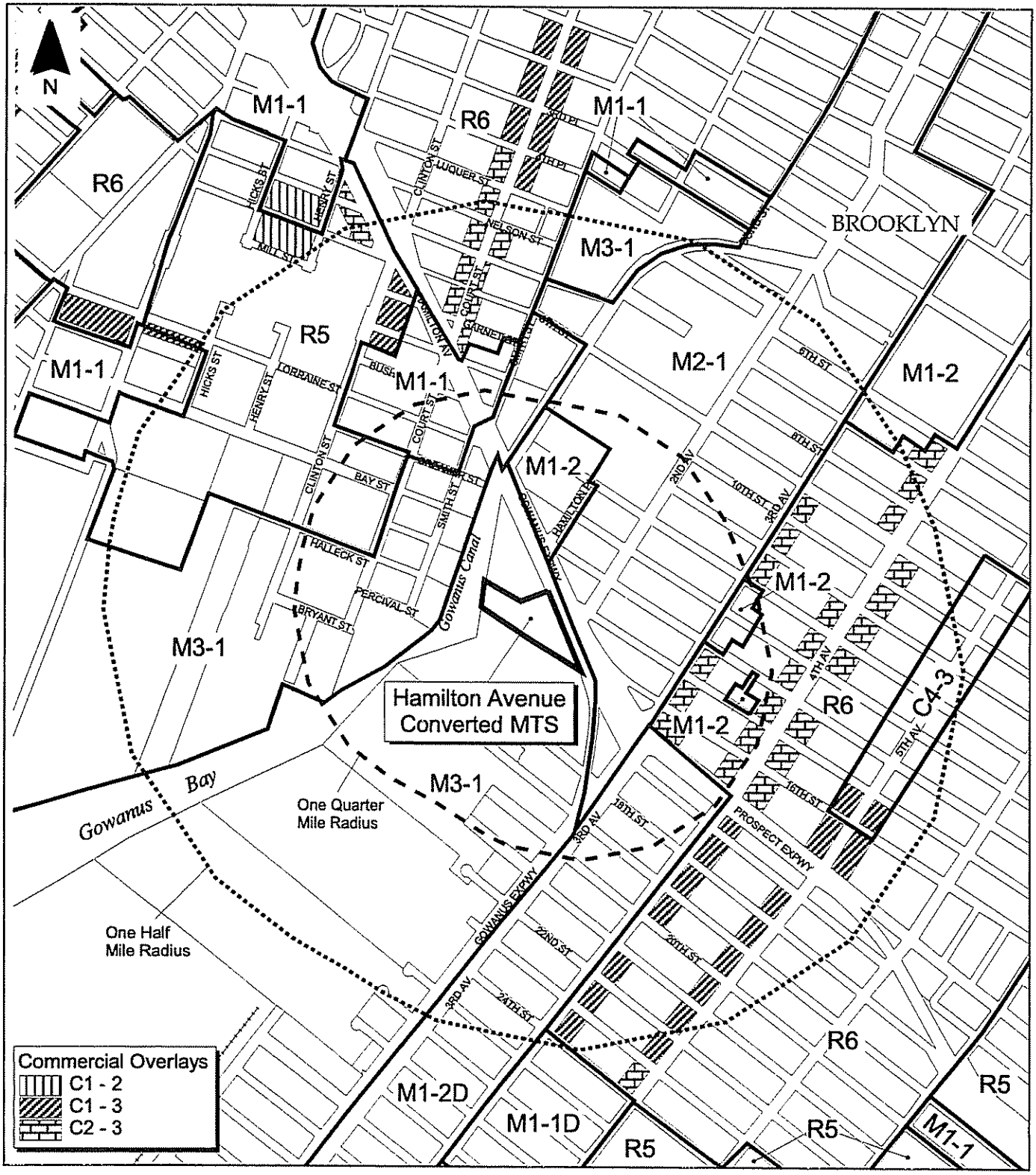
4.2.1.2.3 Land Uses in the Secondary Study Area

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

500 0 500 Feet

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

Figure 4.2-3 Zoning

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT of SANITATION

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].)

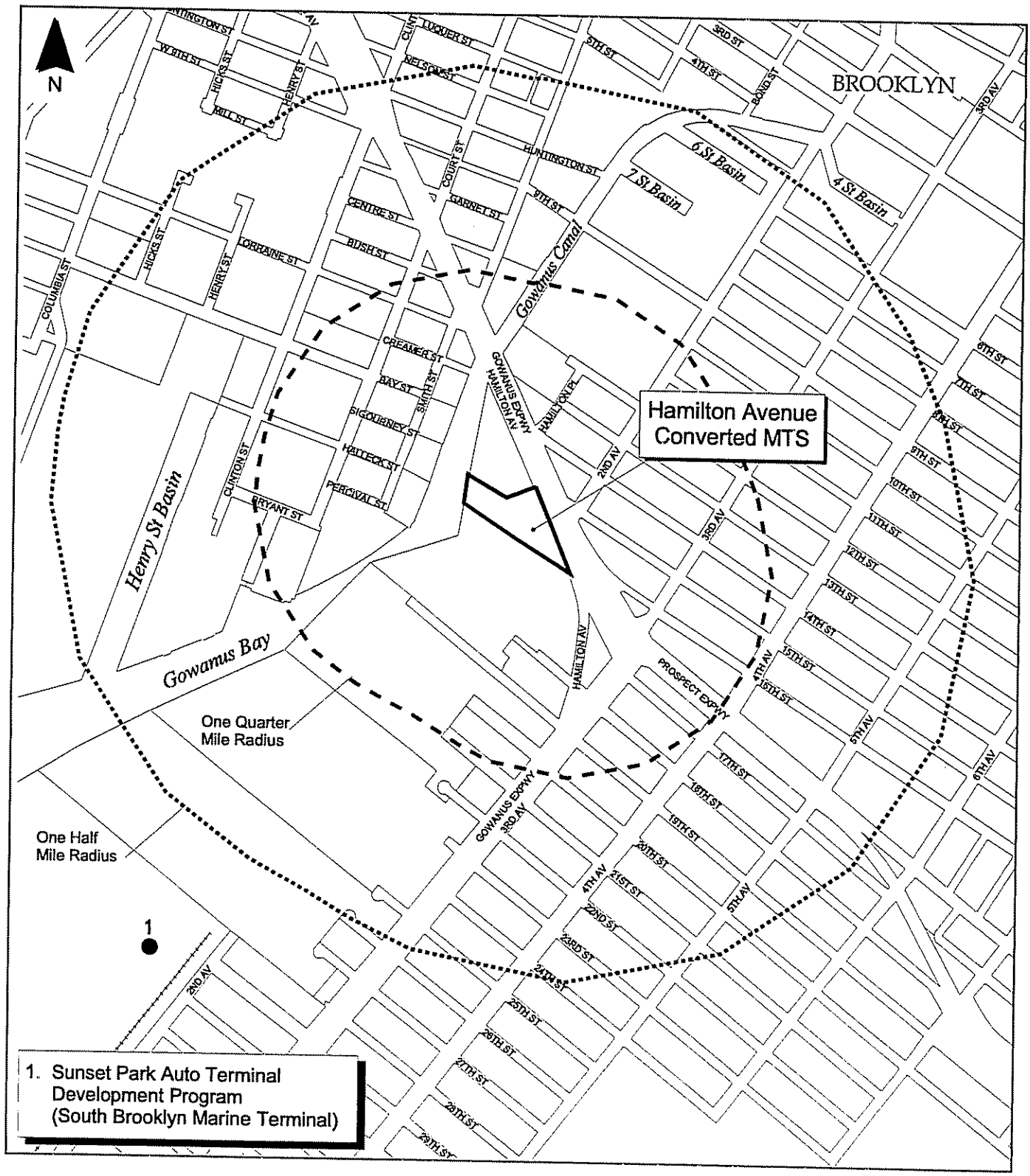
NYCEDC plans for development of the Sunset Park waterfront (29th Street to about 65th Street) south of the secondary study area are described in its Strategic Plan. This development would potentially include a new auto terminal at the South Brooklyn Marine Terminal (SBMT) and a 90-acre container port.

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

500 0 500 Feet

HDR
HydroQual
URBITRAN
DR
EEA
Cambridge Environmental Inc

Figure 4.2-4 Planned Development Sites

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.

---

[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

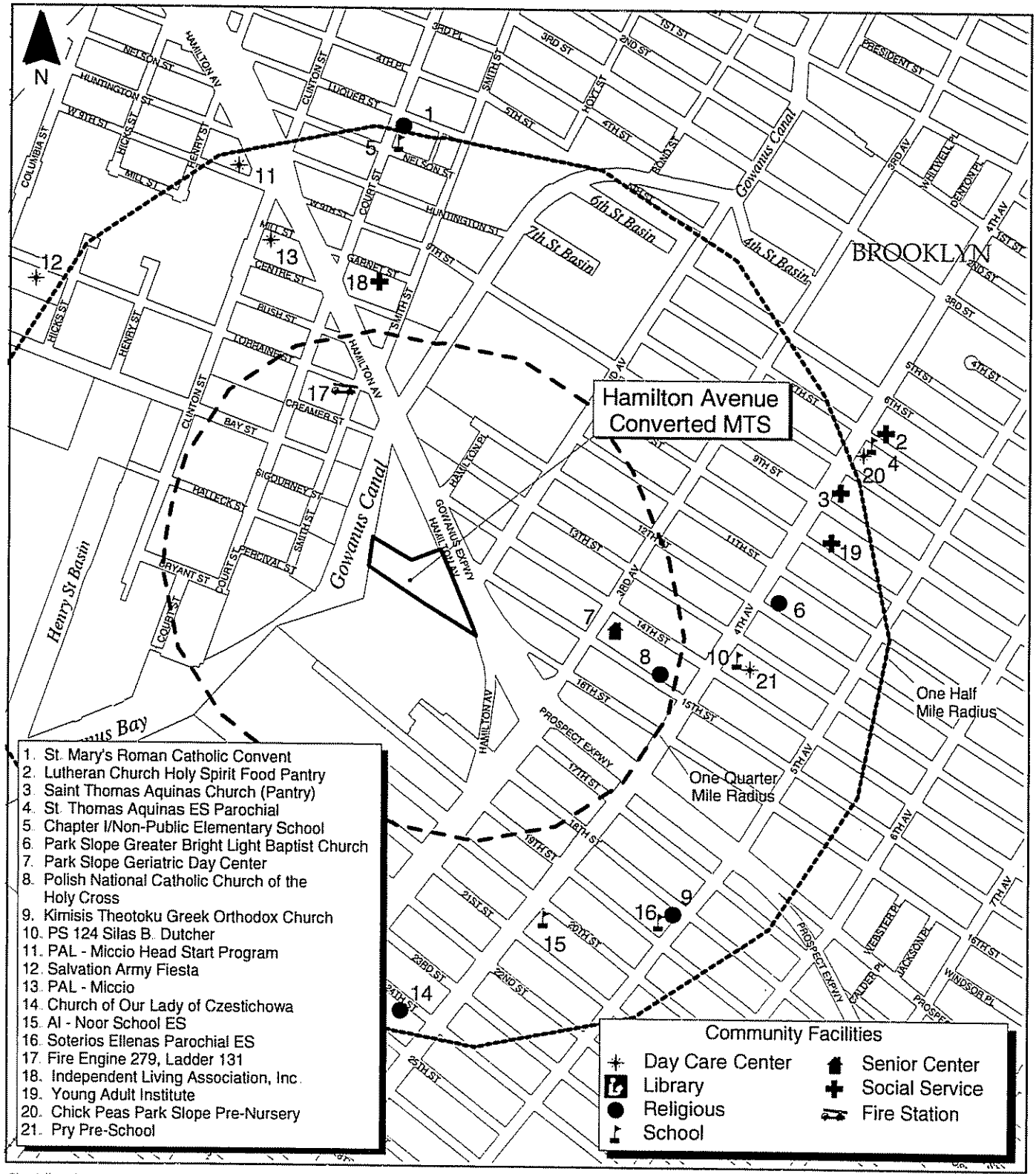
The Hamilton Avenue Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the Hamilton 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.

500 0 500 Feet

Figure 4.4-1 Community Facilities and Services

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

4.5 Open Space

4.5.1 Existing Conditions

4.5.1.1 Definition of the Study Area

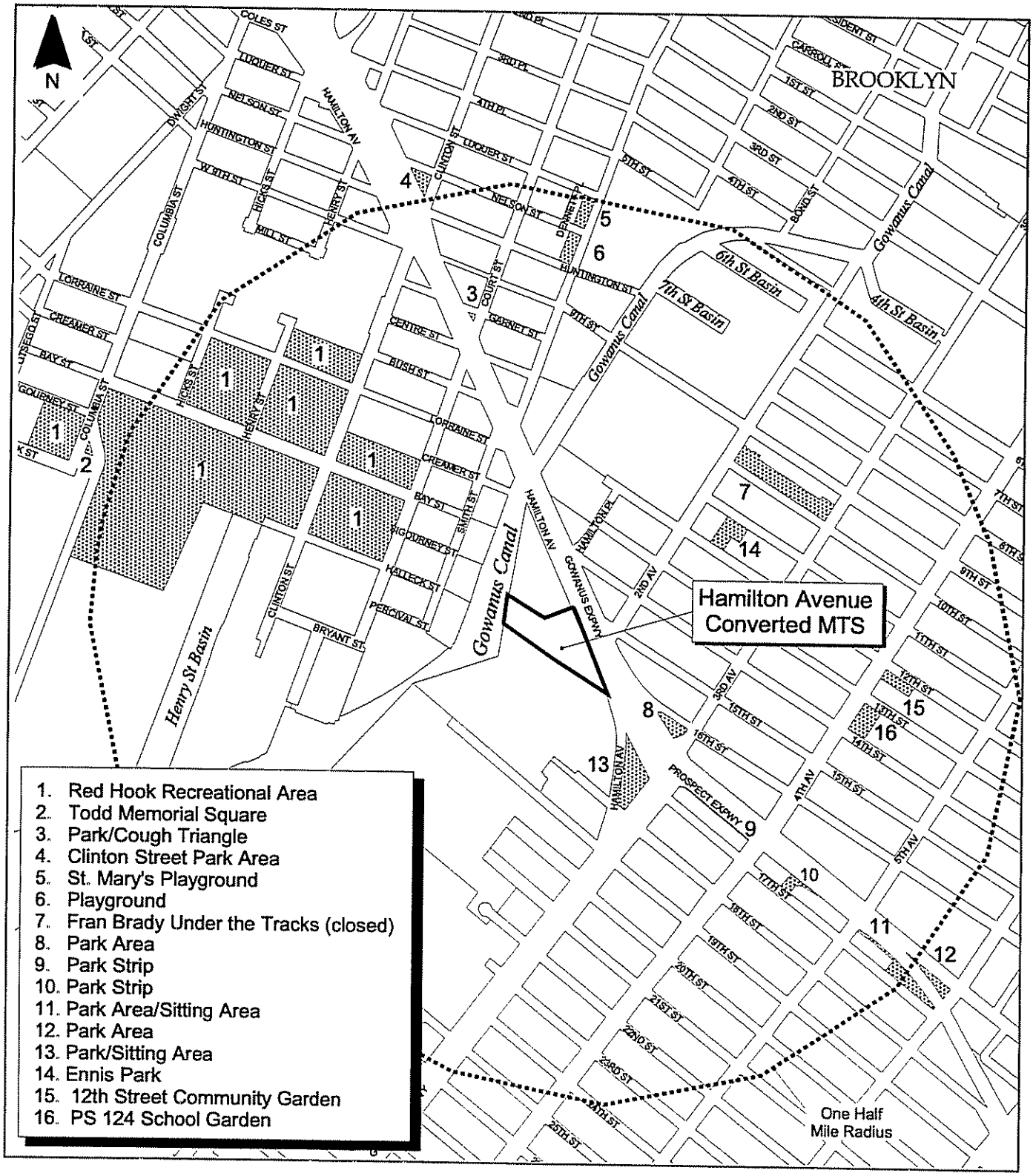
The study area for open space is the area within ½-mile of the site.

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

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HYDROQUAL DD

Figure 4.5-1 Open Space/Parkland
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

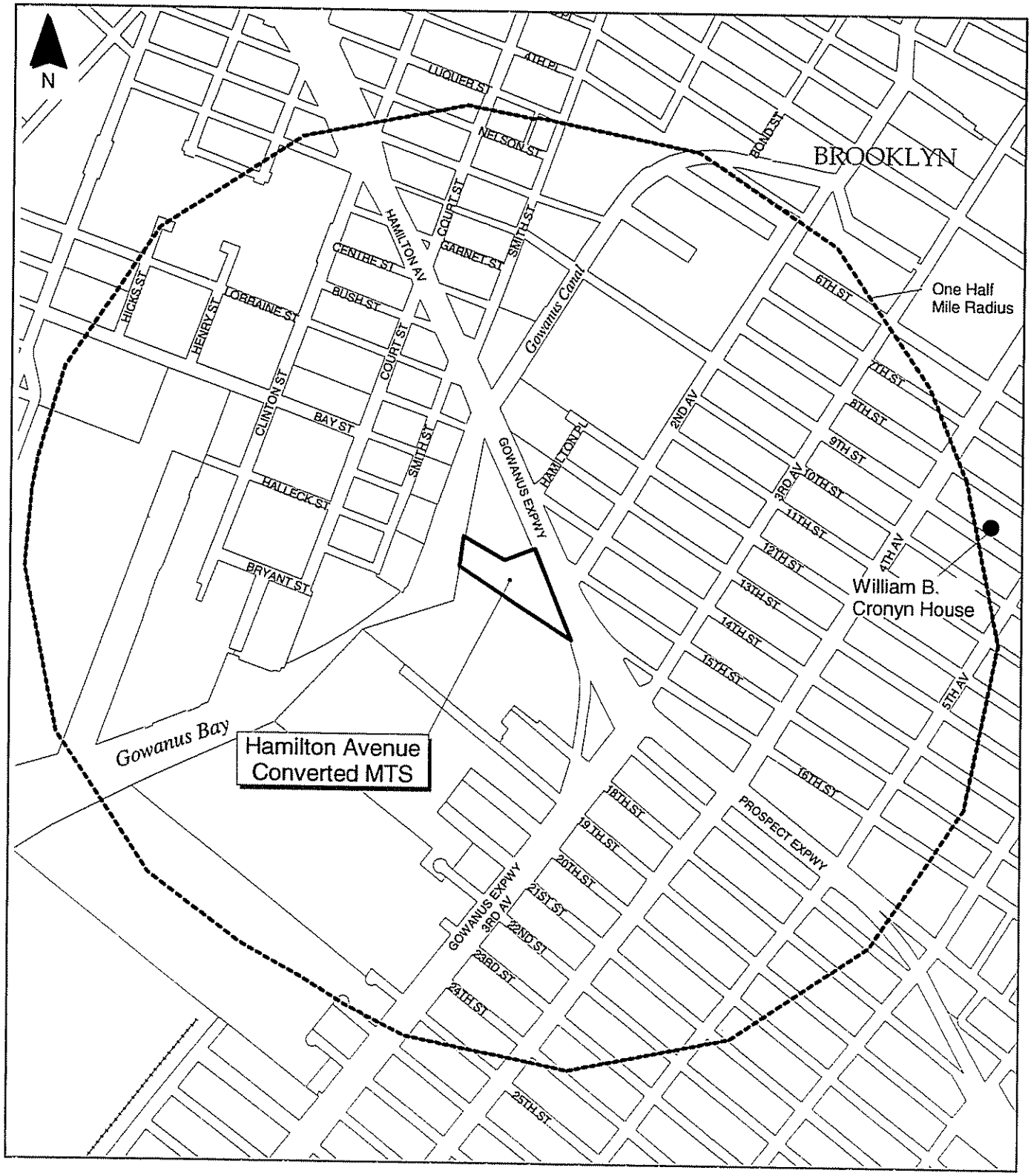
There are no state-, national- or City-designated landmarks or historic districts within ½-mile of the site, although the City-landmarked William B. Cronyn House at 271 9th Street is just outside the study area (see Figure 4.6-1).

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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

This page intentionally left blank.

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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

This page intentionally left blank.

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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

This page intentionally left blank.

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

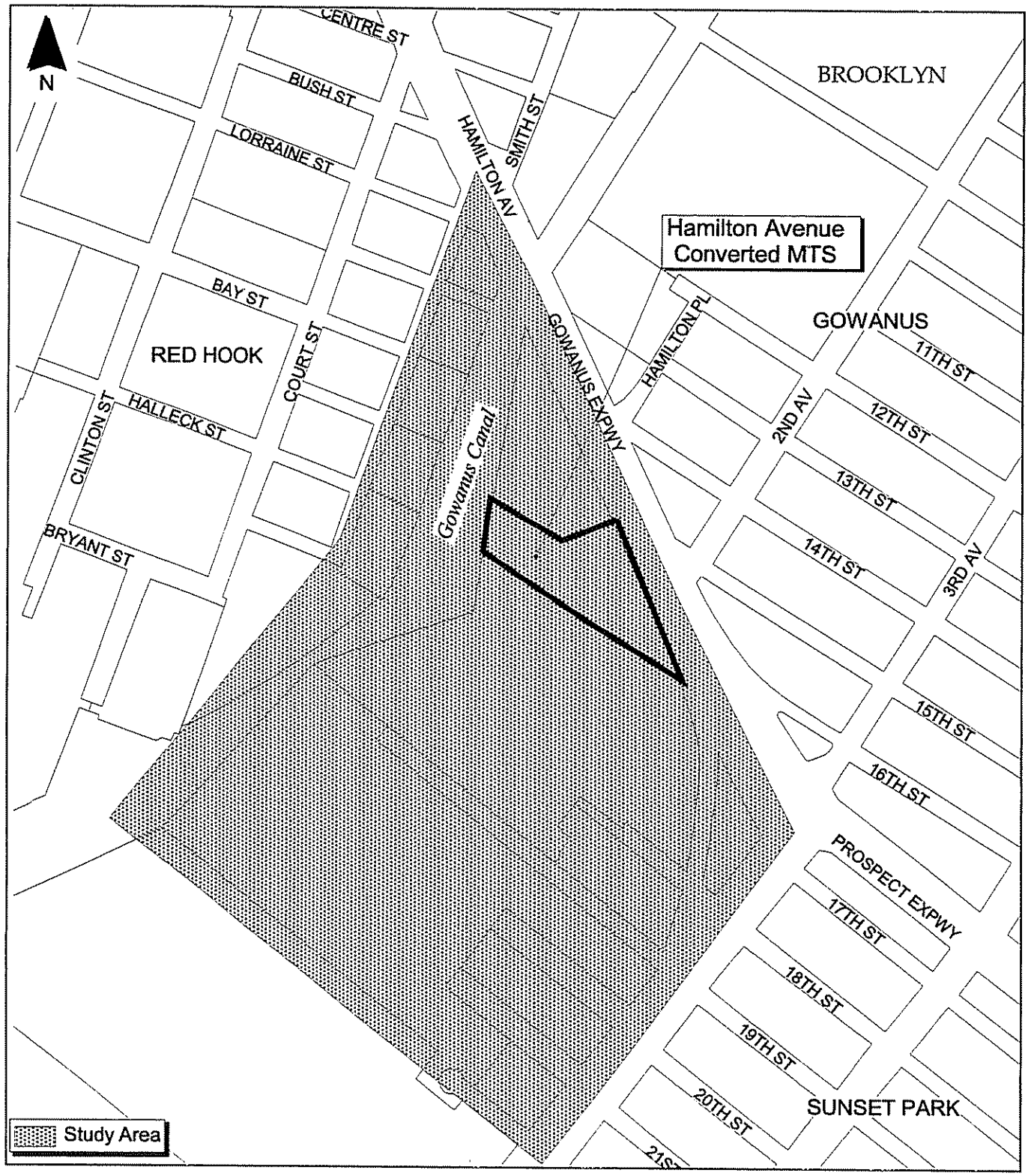
4.8.1.1 Definition of the Study Area

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

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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).

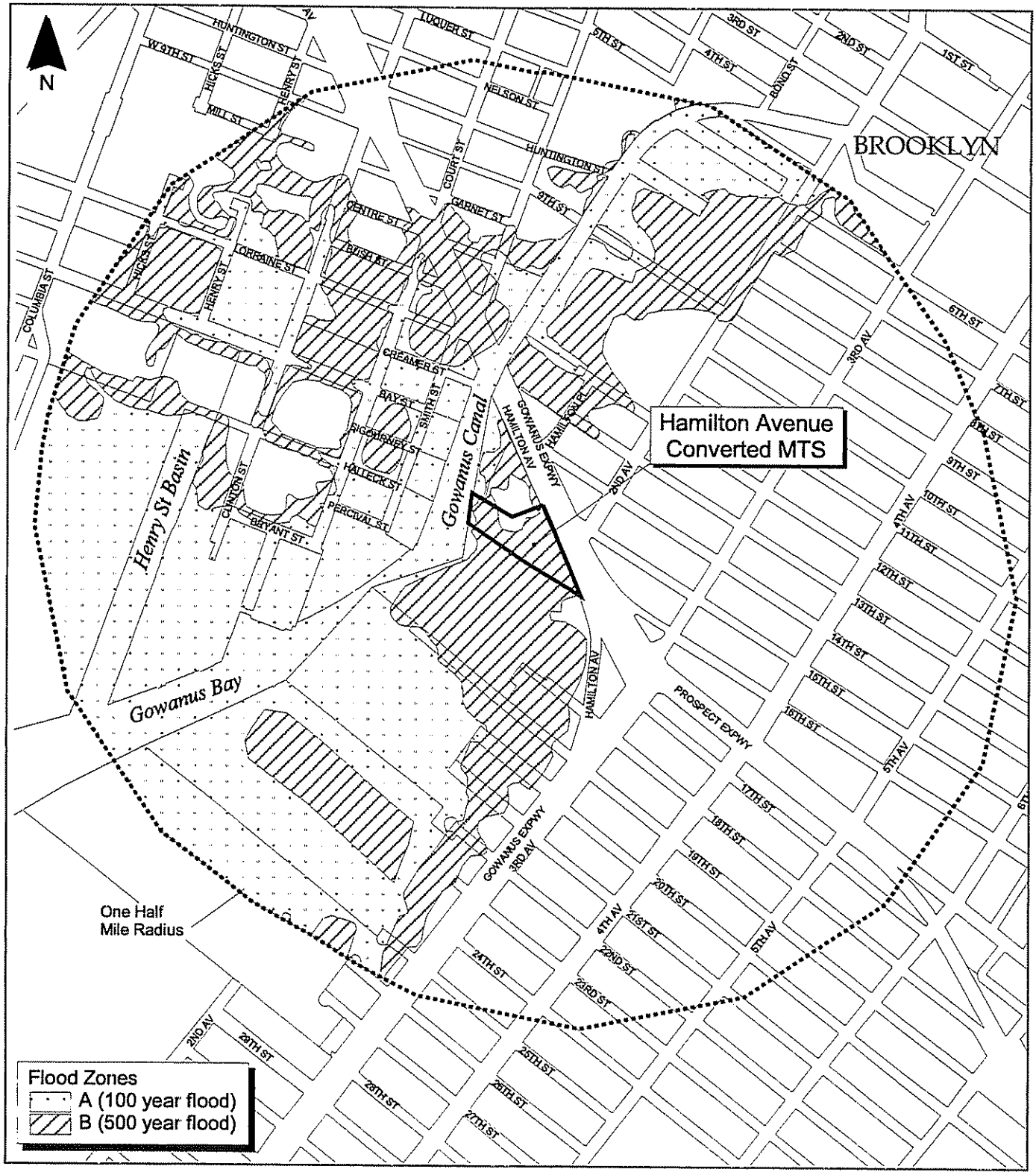
4.9.1.3 Floodplains

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

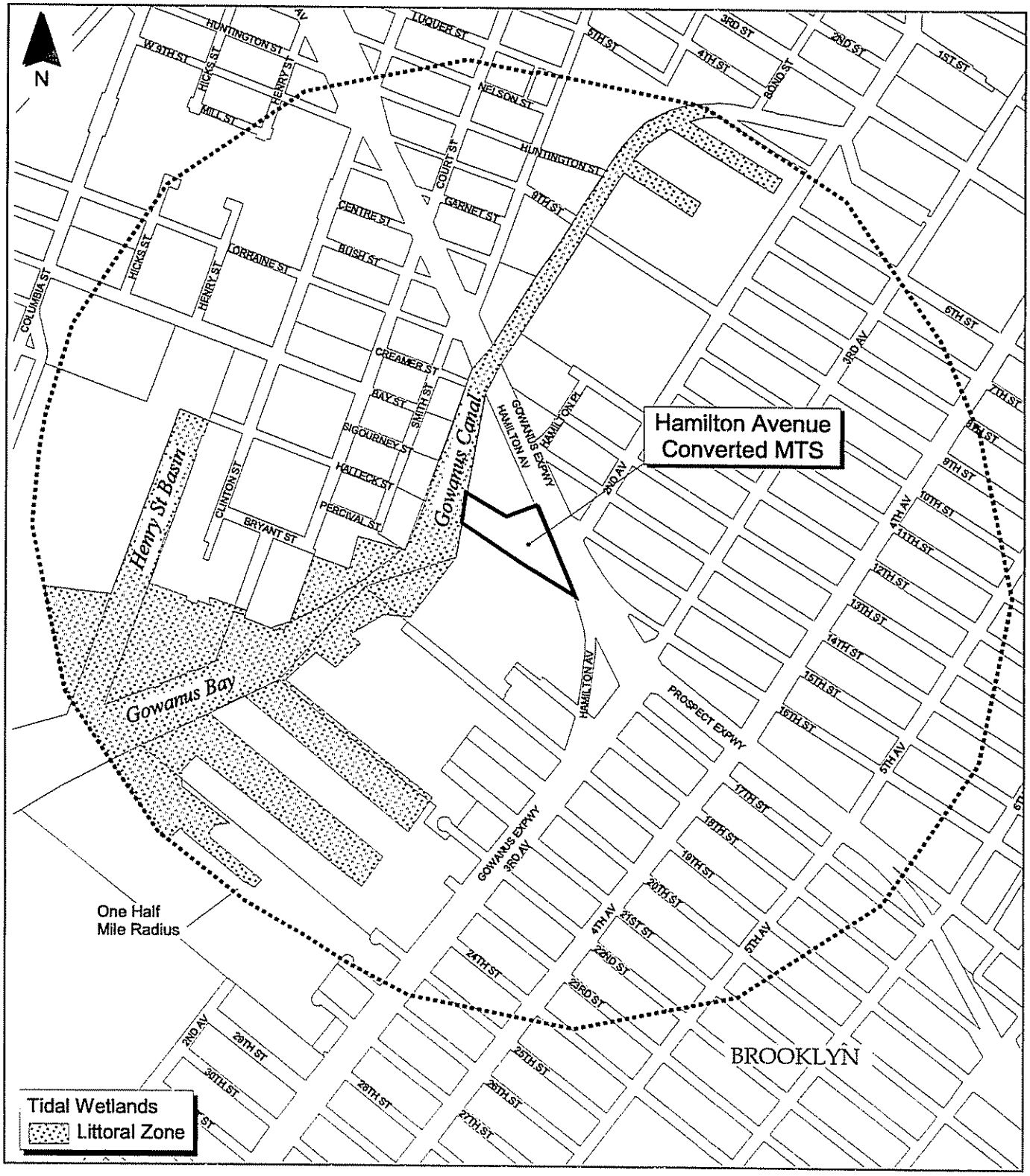
HDR
URBITRAN
EEA Cambridge Environmental Inc
Hydroscience
PB

Figure 4.9-1 Floodplains

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT of SANITATION



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 4.9-2 Wetlands

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

---

[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

---

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

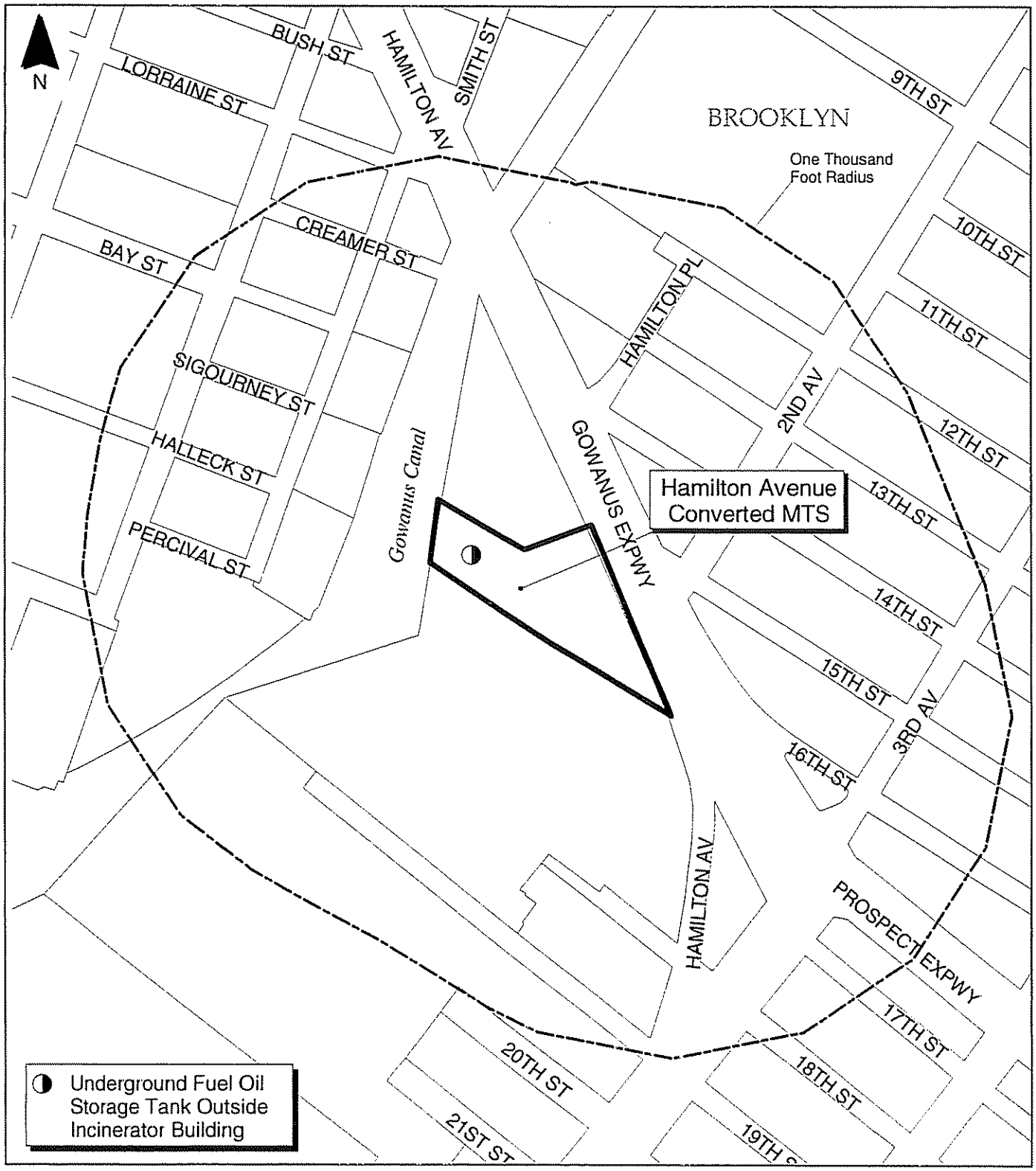
4.10.1 Existing Conditions

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

HDR URBITRAN EEA Cambridge Environmental Inc PB

Figure 4.10-1 Hazardous Materials Sites

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.

---

[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.

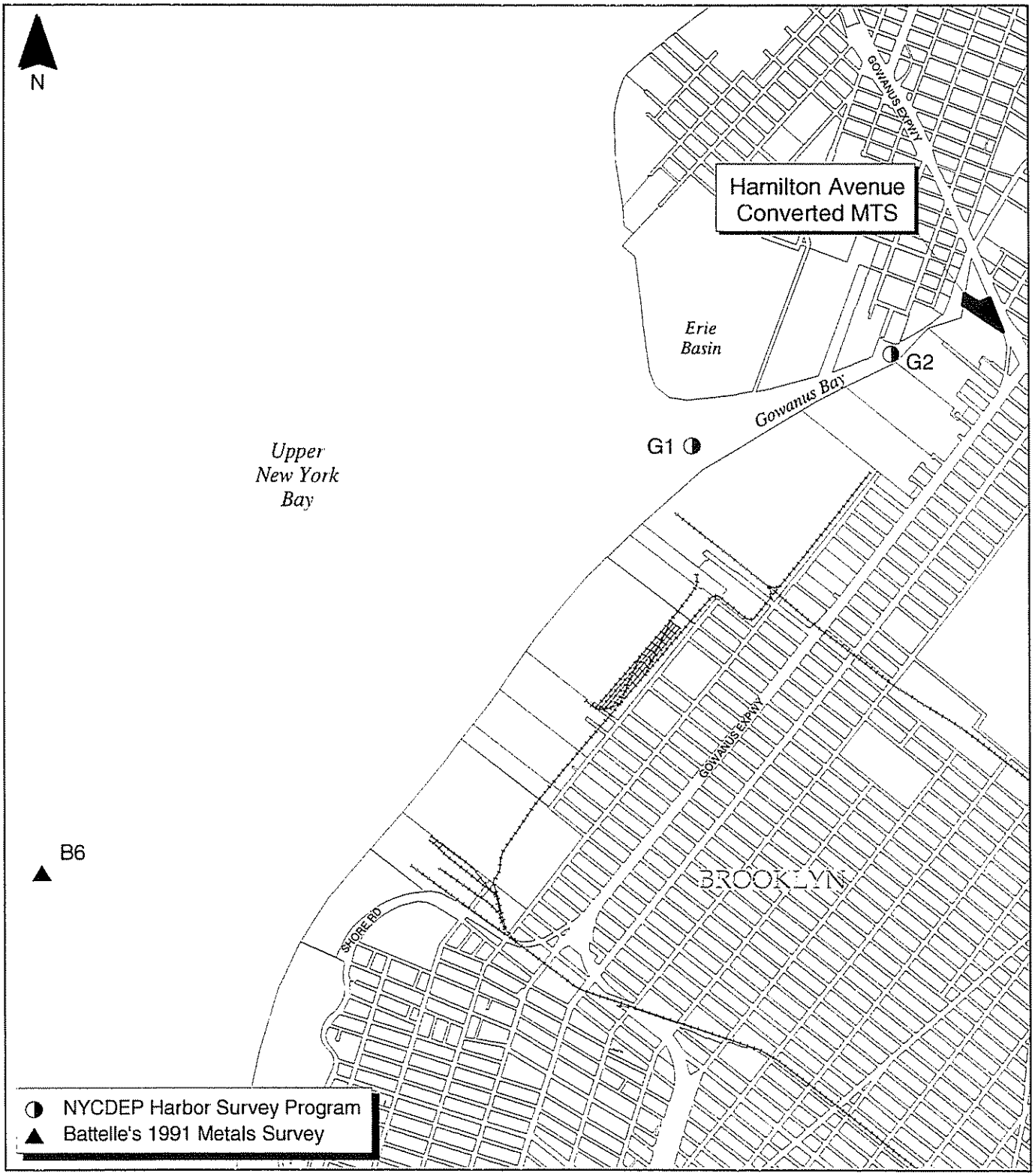
4.11.1.2 Water Quality

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

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

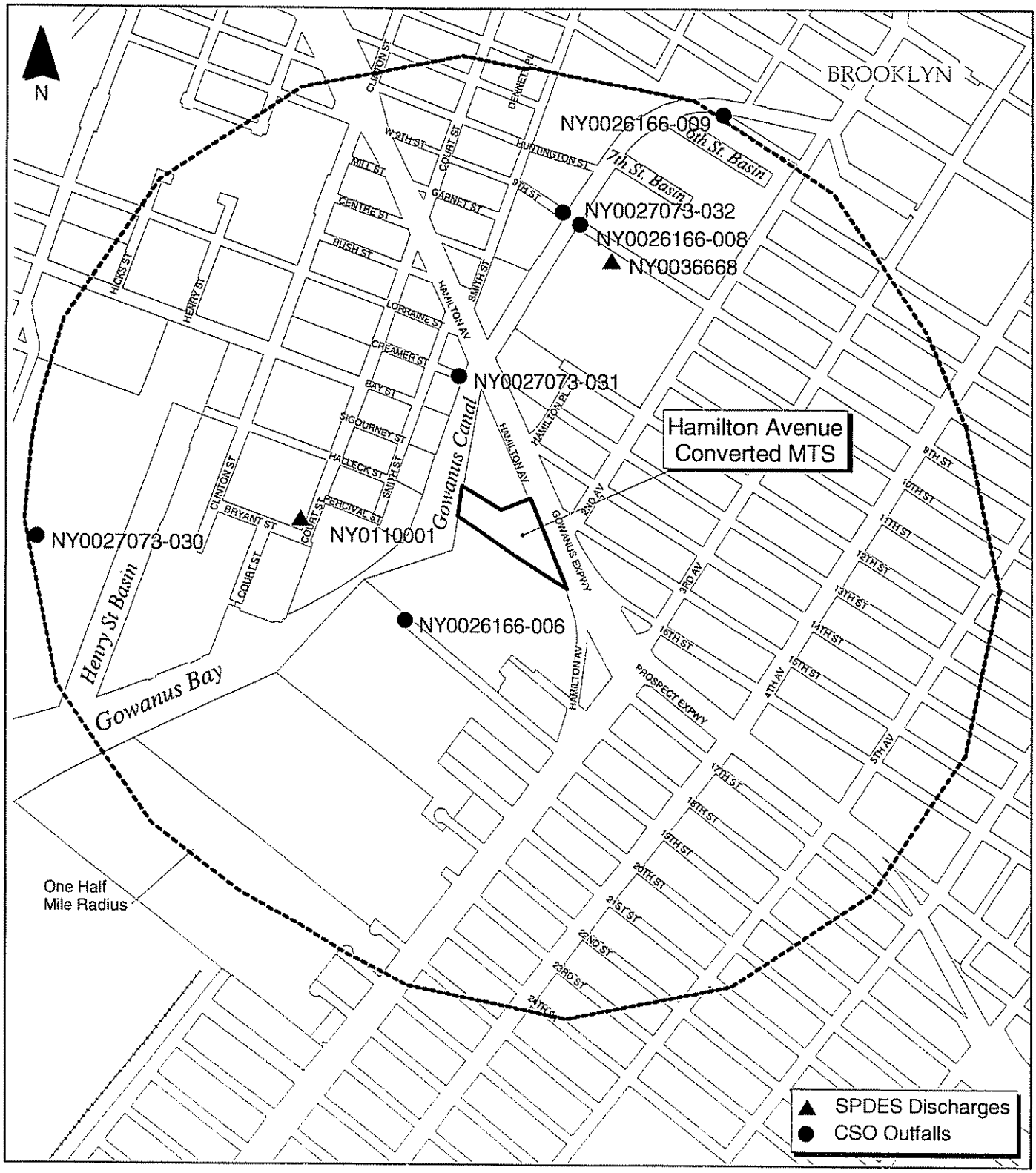
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the Hamilton Avenue Converted MTS site are shown in Figure 4.11-2 and listed in Table 4.11-2. These discharges consist 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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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

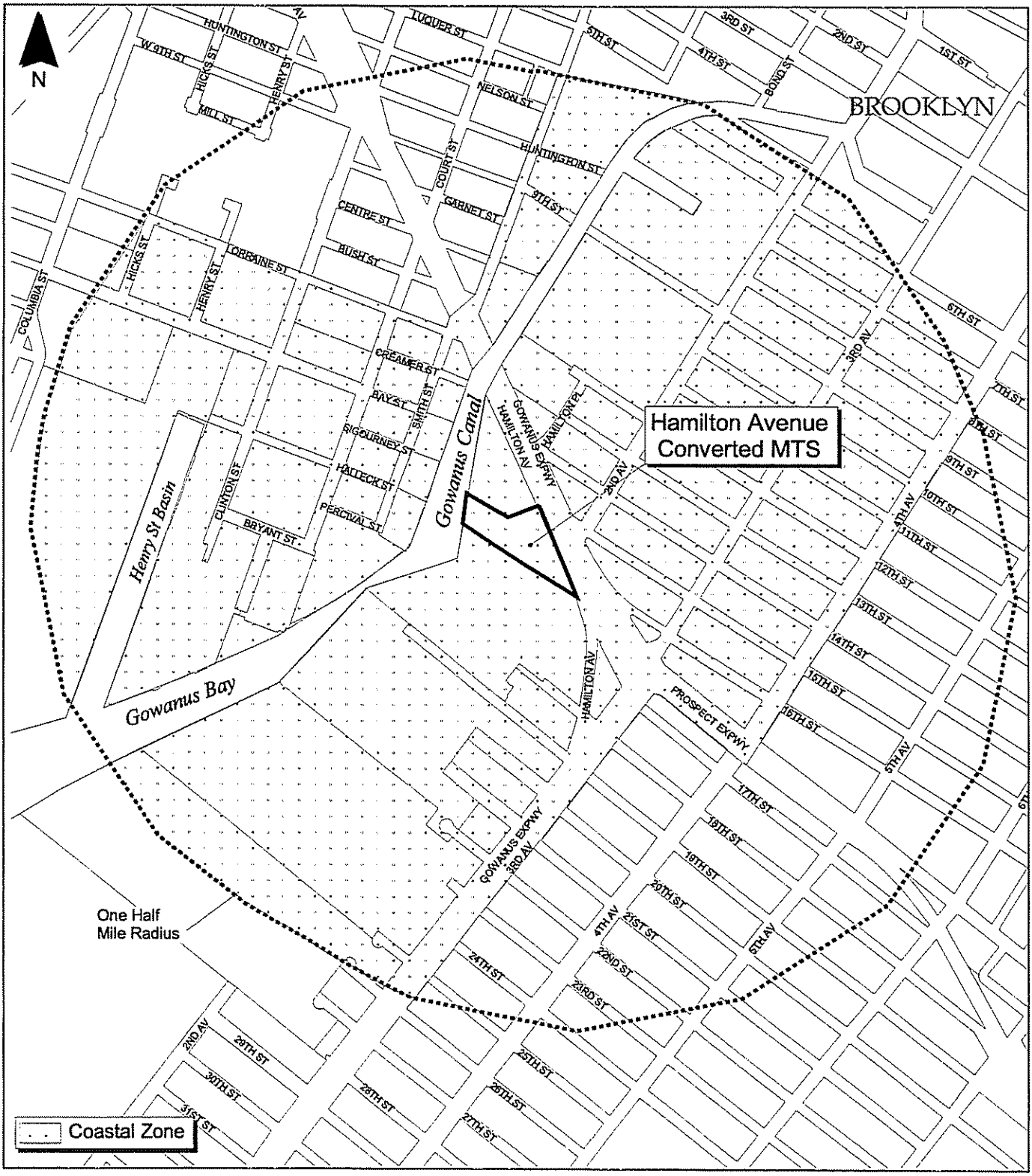
applicable federal, state and local regulations and required permits would be acquired before any such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate 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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

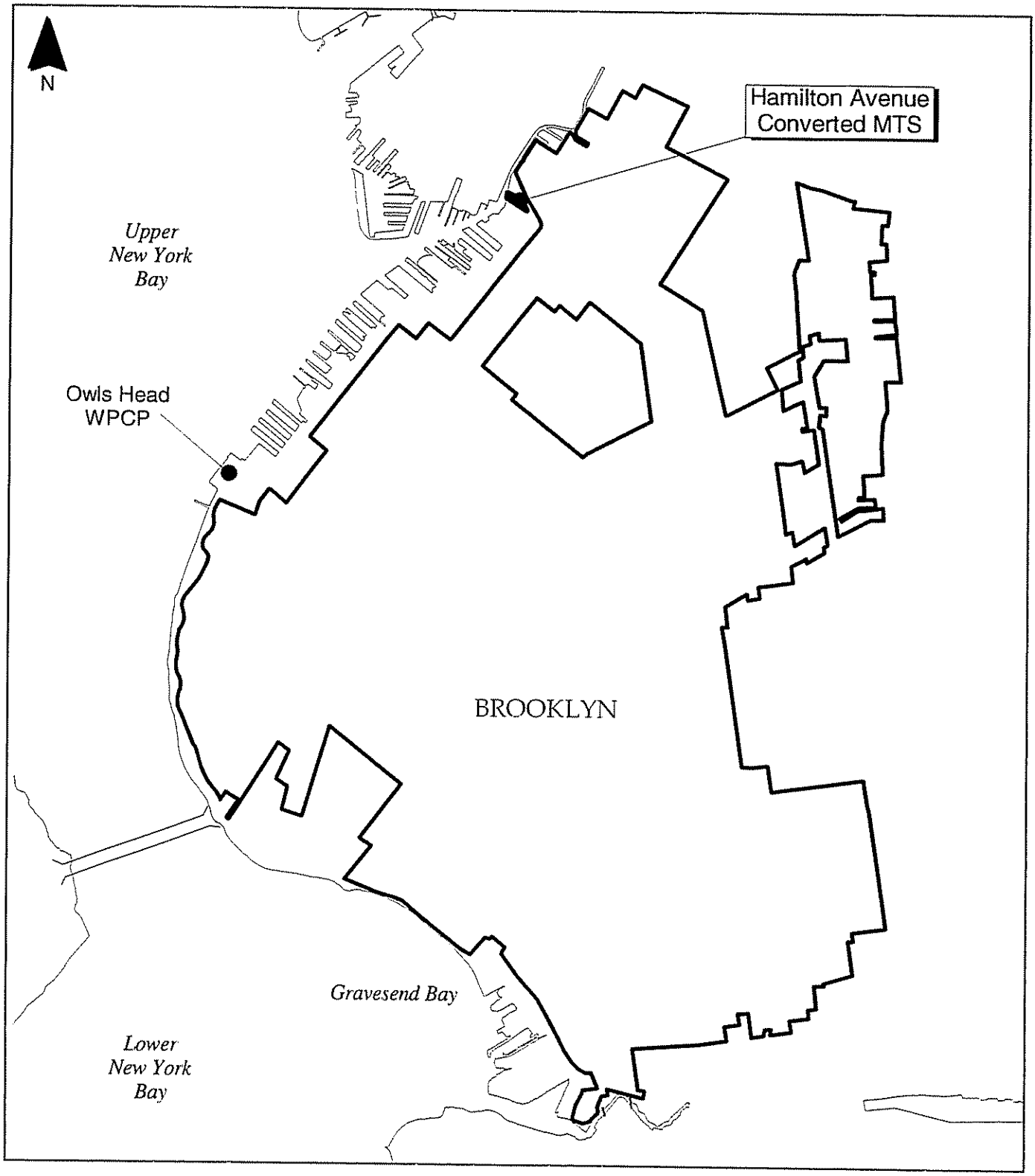
4.13.1 Existing Conditions

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

3000 0 3000 Feet

HDR Hydroqual URBITRAN DD EEA Cambridge Environmental Inc

Figure 4.13-1 Existing WPCP Drainage Area

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

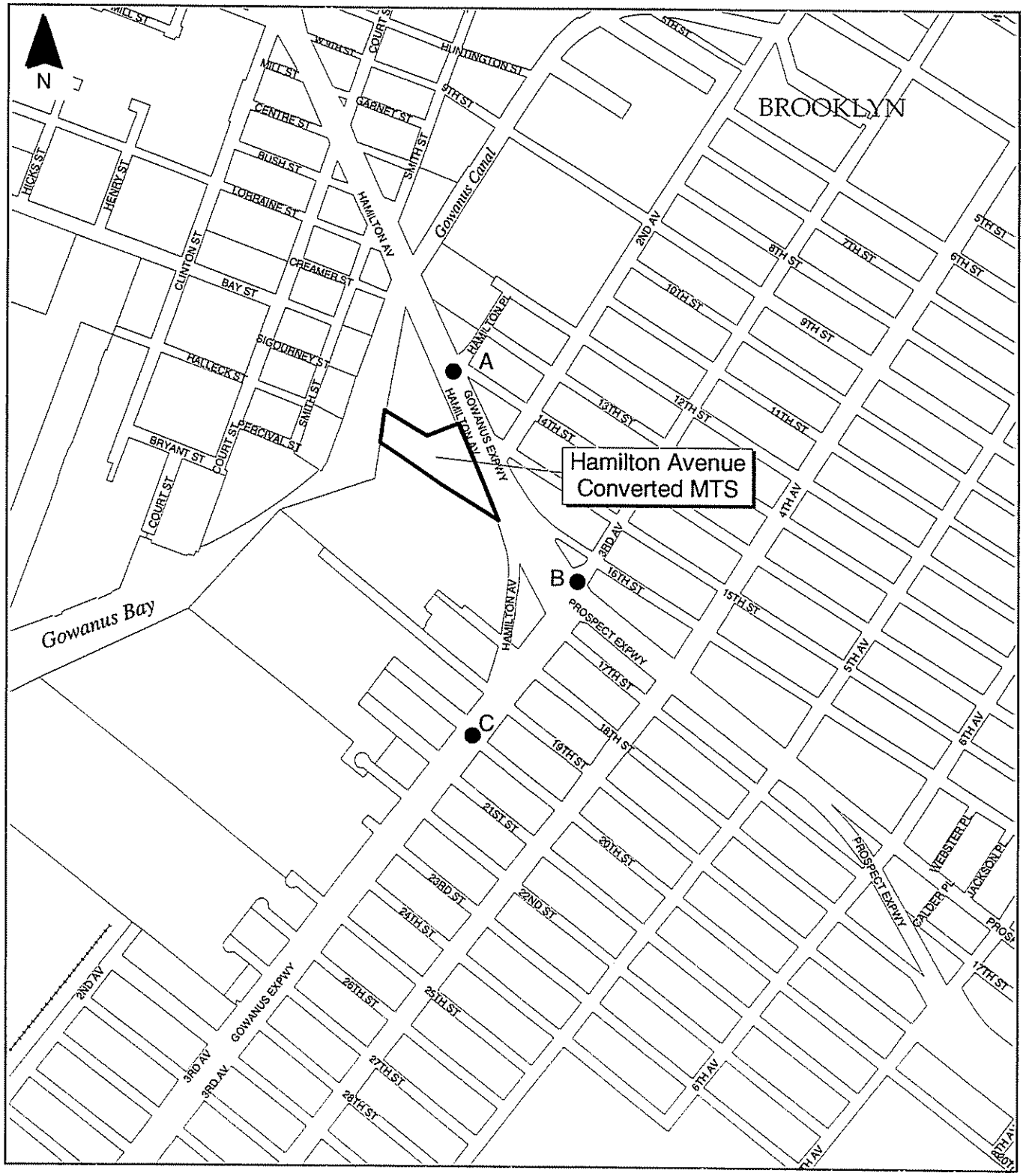
4.14.2.1 Definition of Study Area

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).



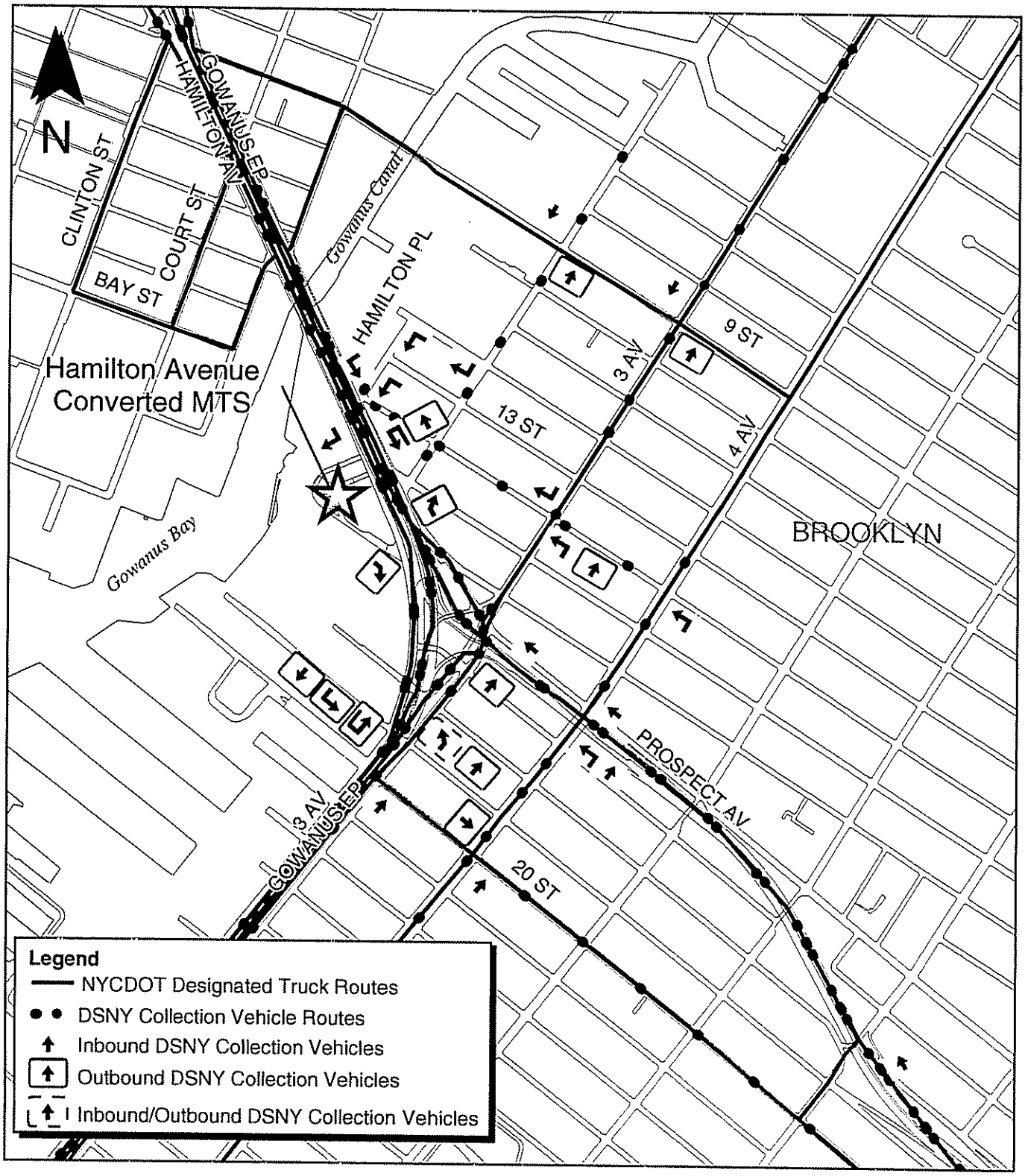
Site delineations are approximate
Base Map Source: New York City Department of City Planning

Figure 4.14-1 Traffic Analysis Study Area
Hamilton Avenue Converted MTS
CITY OF NEW YORK
DEPARTMENT OF SANITATION

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

500 0 500 Feet

HDR URBITRAN EEA HydroQual PB Cambridge Environmental Inc

Figure 4.14-2 DSNY Collection Vehicle Routes
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

(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.

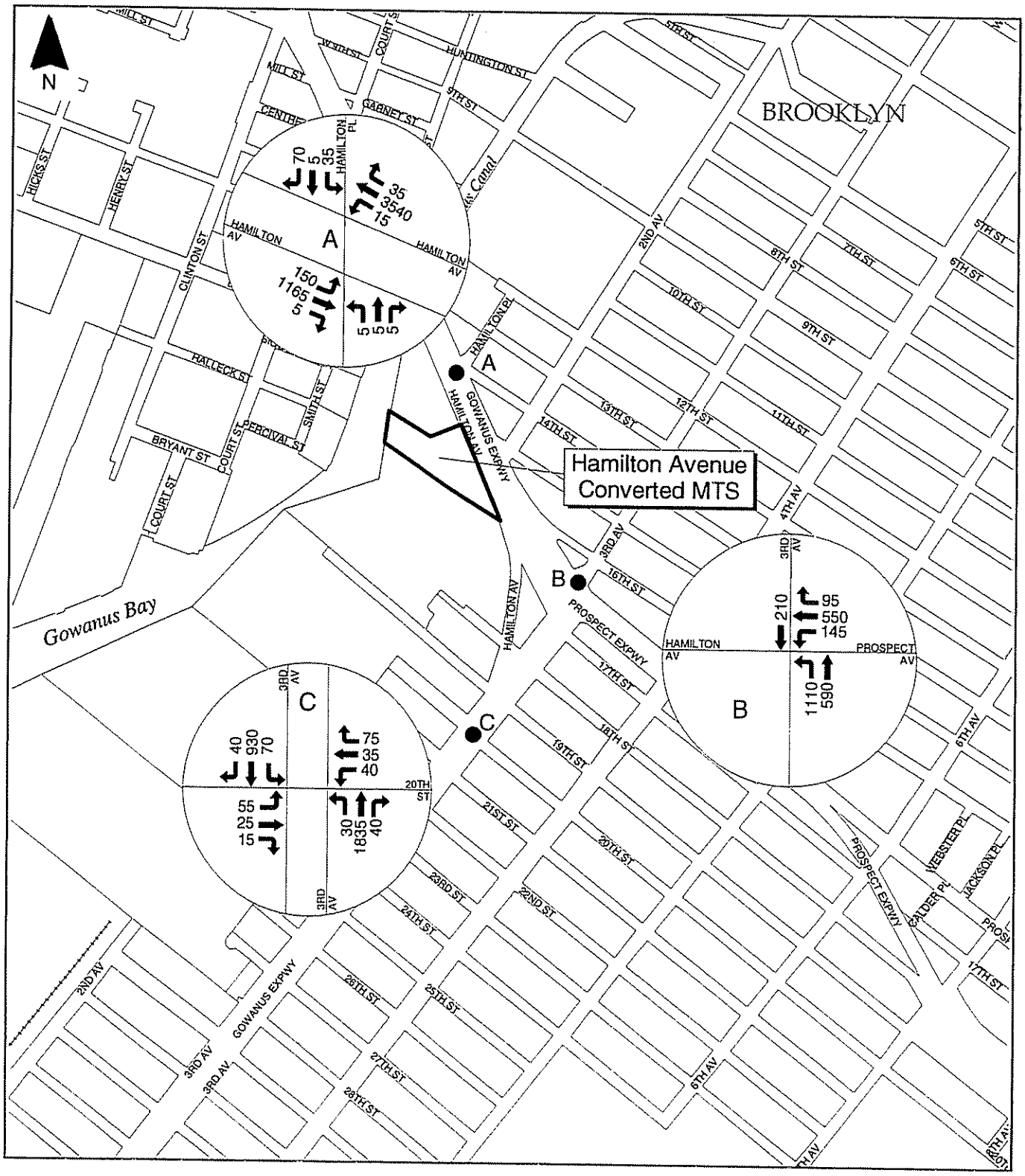
4.14.2.3 Existing Traffic Operations

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

500 0 500 Feet

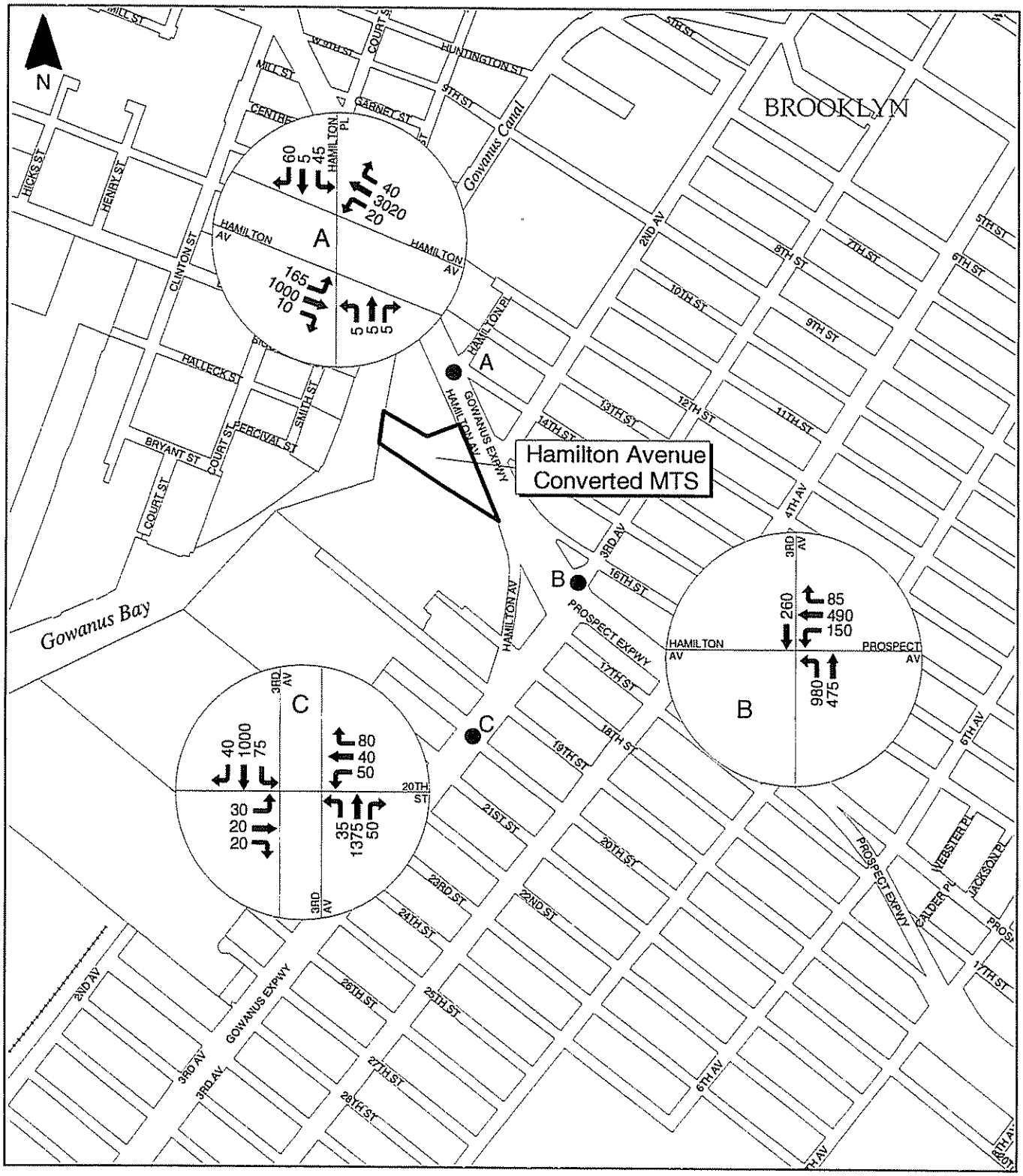
HDR URBITRAN EEA Cambridge Environmental Inc

Figure 4.14-3 Existing Traffic Volumes - AM Peak

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

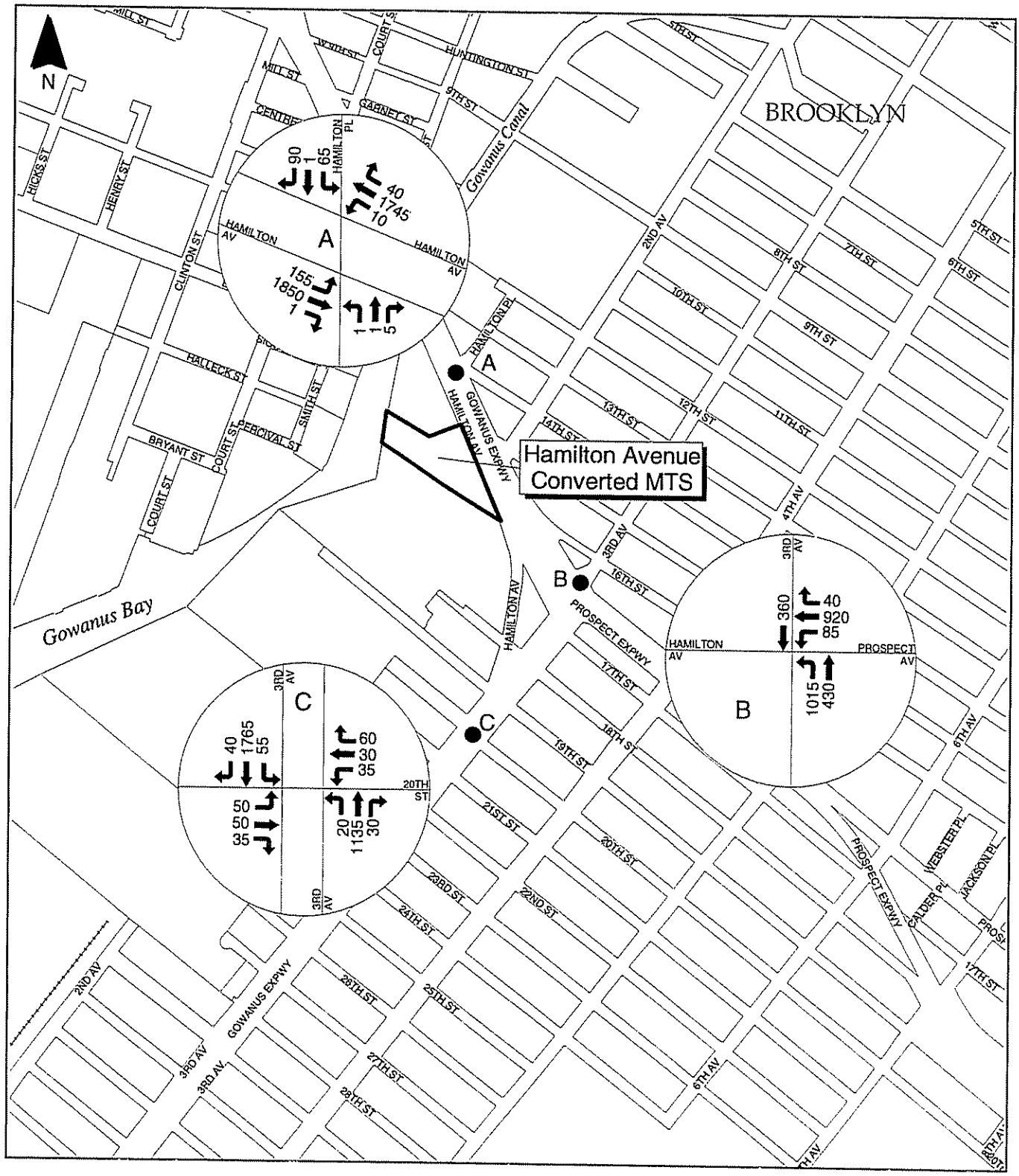


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 4.14-4 Existing Traffic Volumes Facility Peak Hamilton Avenue 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 HydroQual PB

Figure 4.14-5 Existing Traffic Volumes - PM Peak

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.

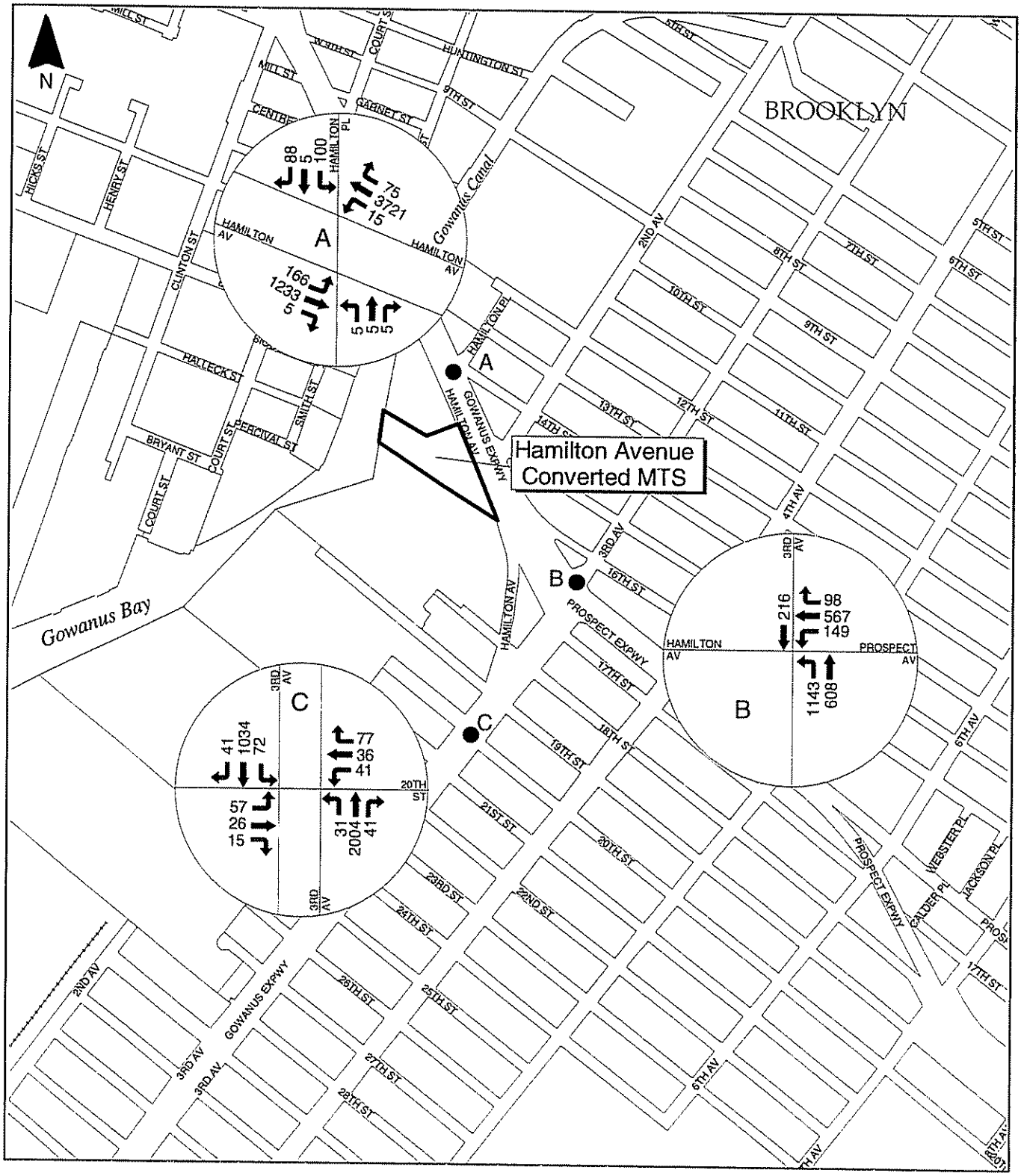
4.14.3 Future No-Build Conditions

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:

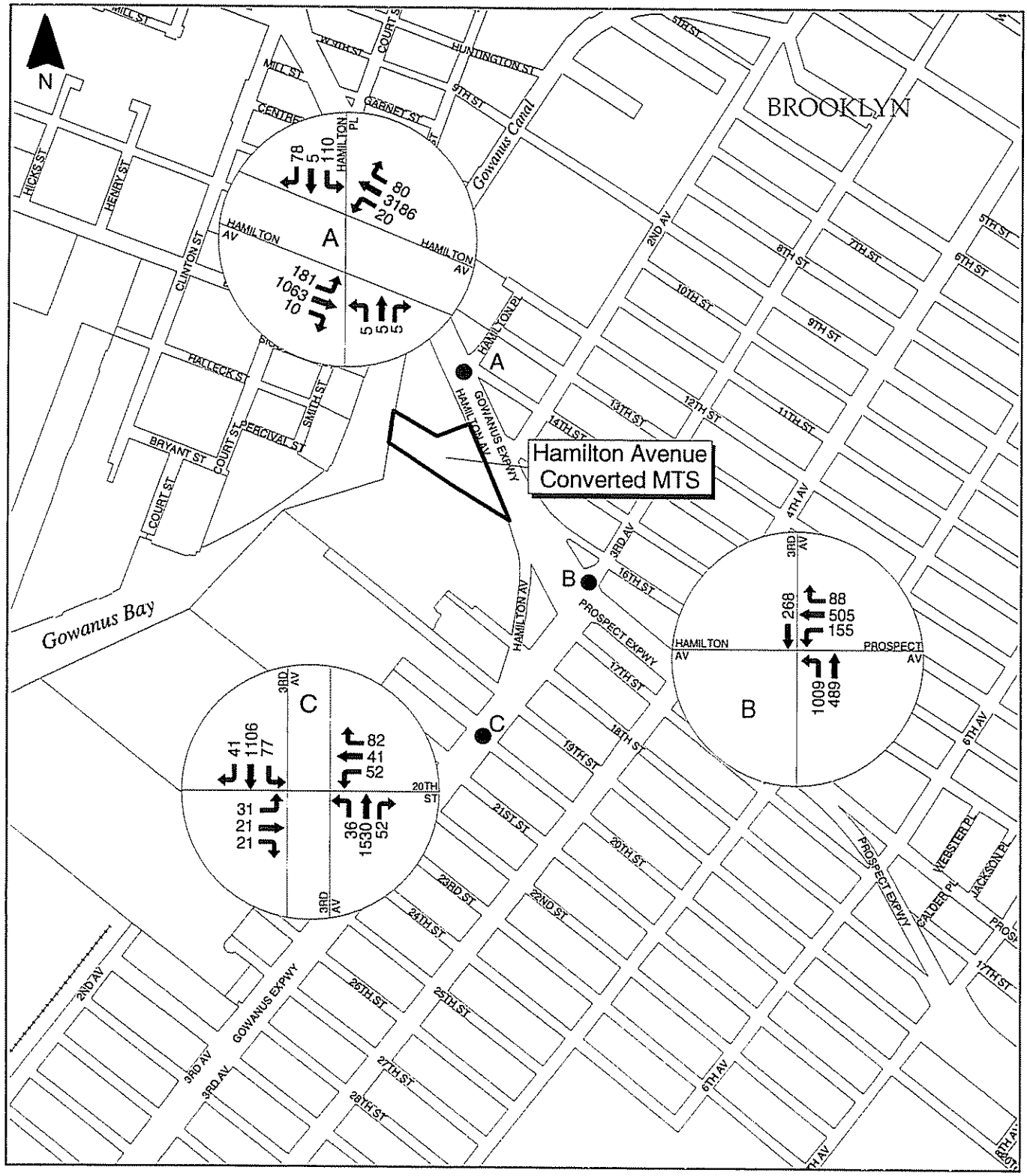


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 4.14-6 Future No-Build Traffic Volumes AM Peak Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



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

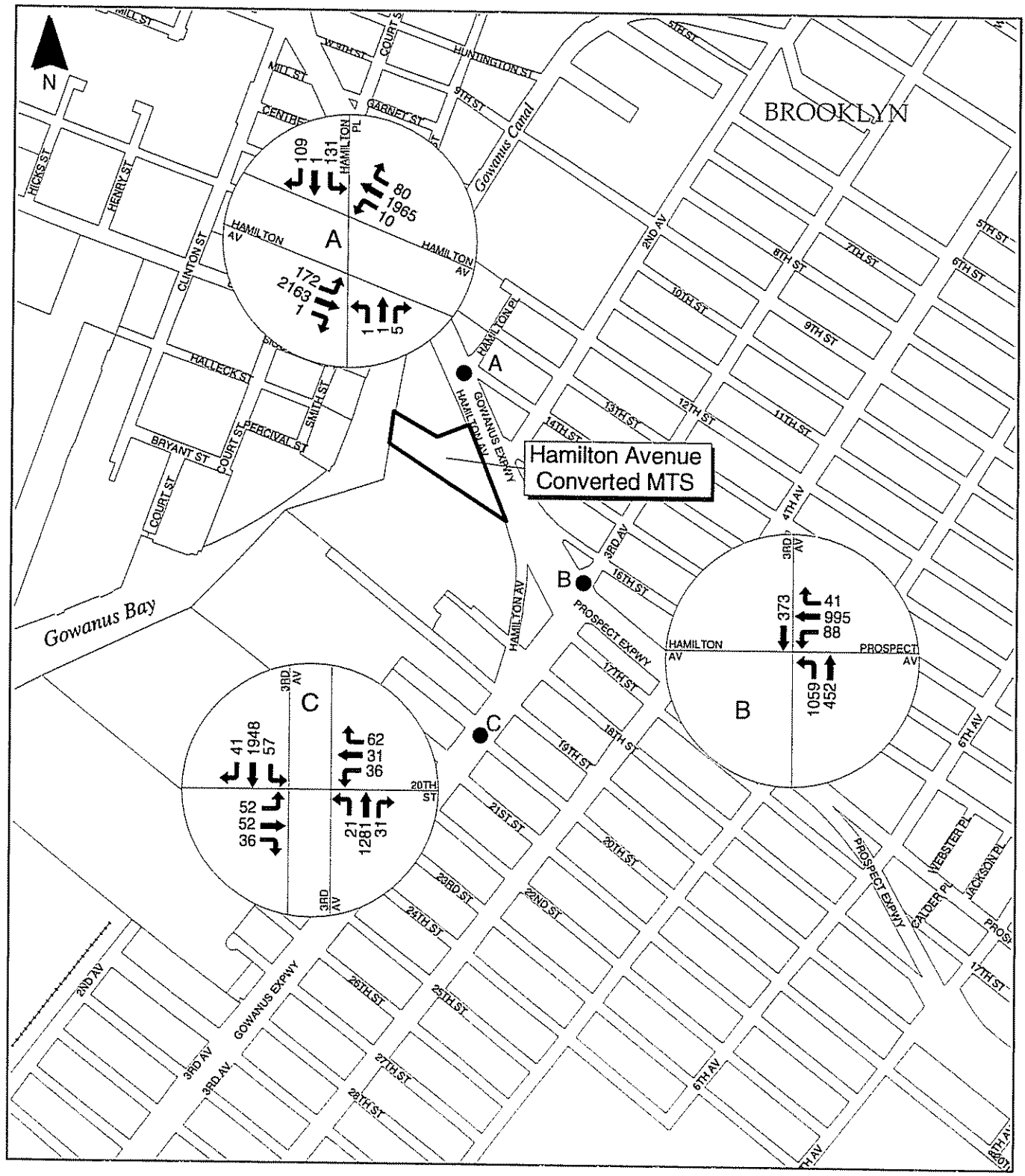
500 0 500 Feet

HDR Hydroqual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.14-7 Future No-Build Traffic Volumes Facility Peak Hamilton Avenue 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 4.14-8 Future No-Build Traffic Volumes PM Peak Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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

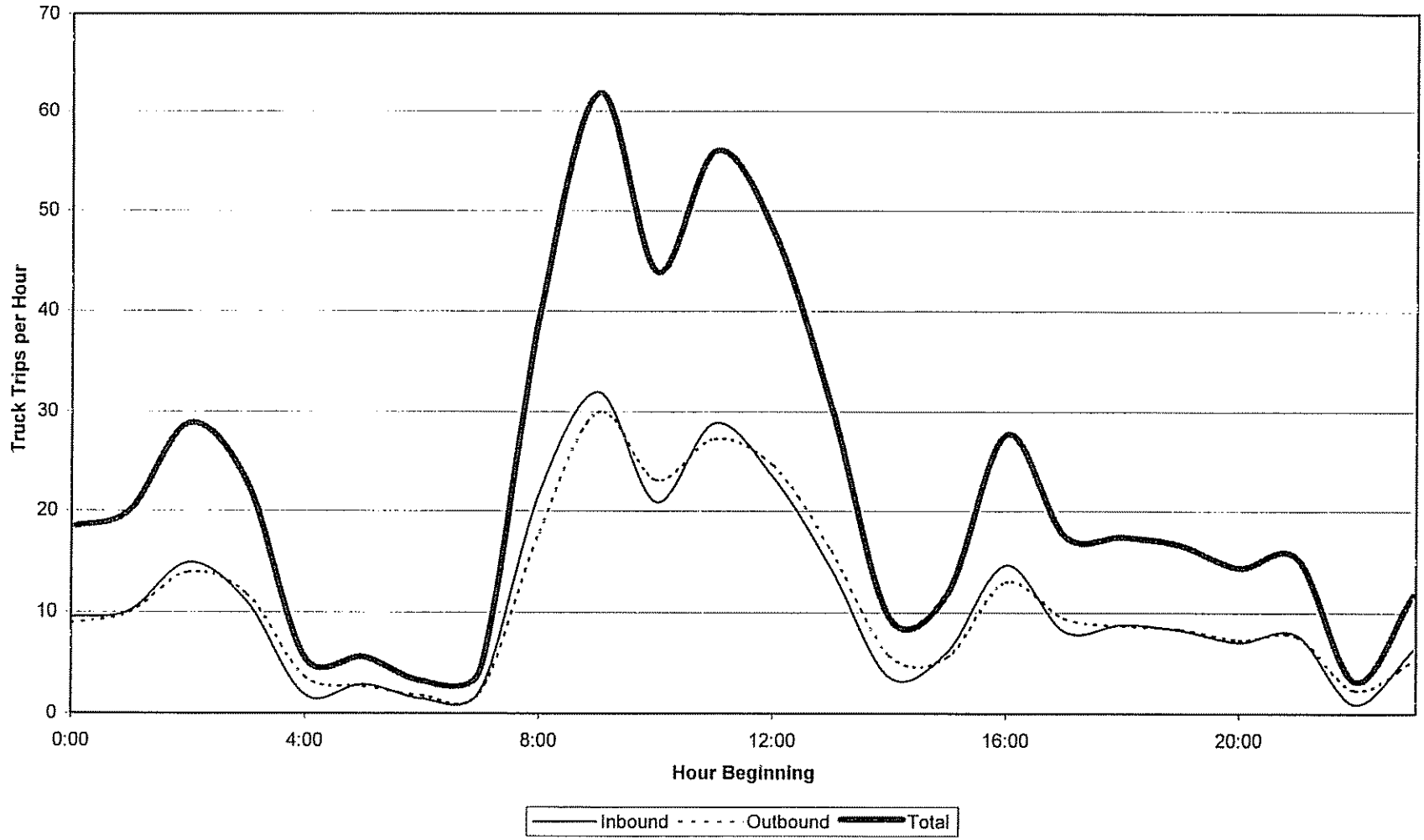
or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the Hamilton Avenue Converted MTS are shown in Figure 4.14-2.

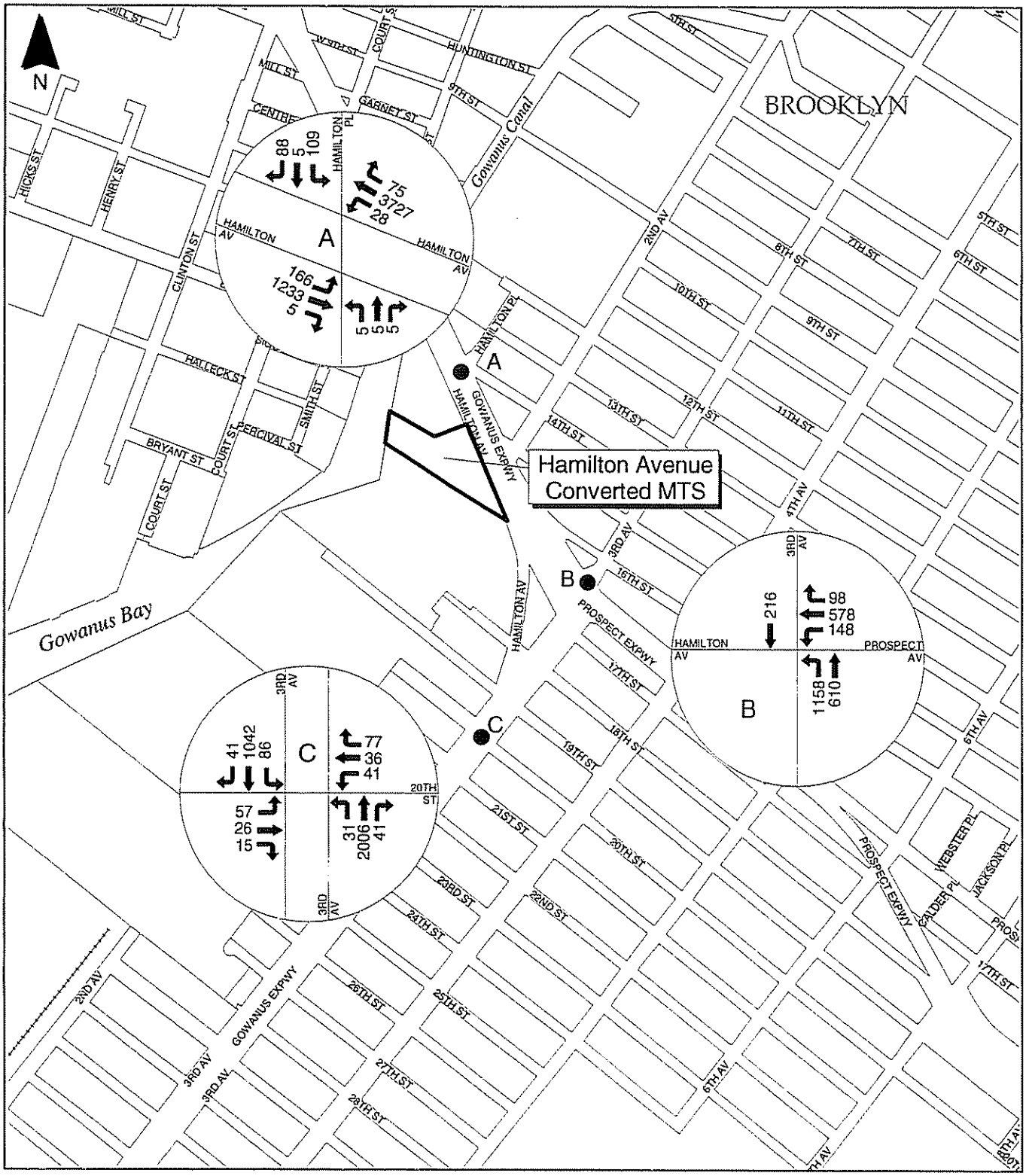
Figure 4.14-9 presents the average peak day temporal distribution of collection vehicles for the Hamilton Avenue Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles 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

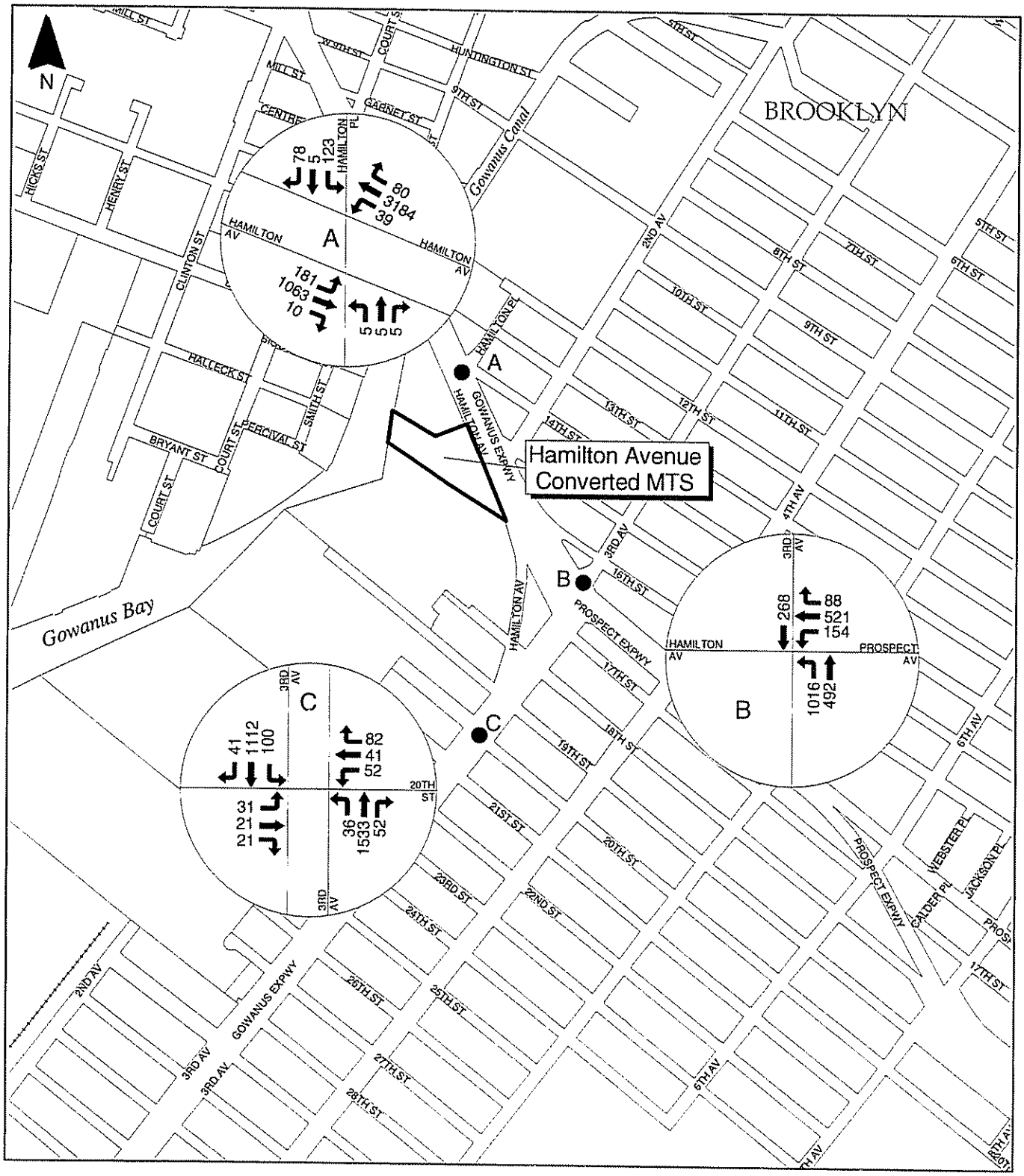
500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.14-10 2006 Future Build Traffic Volumes
AM Peak
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



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

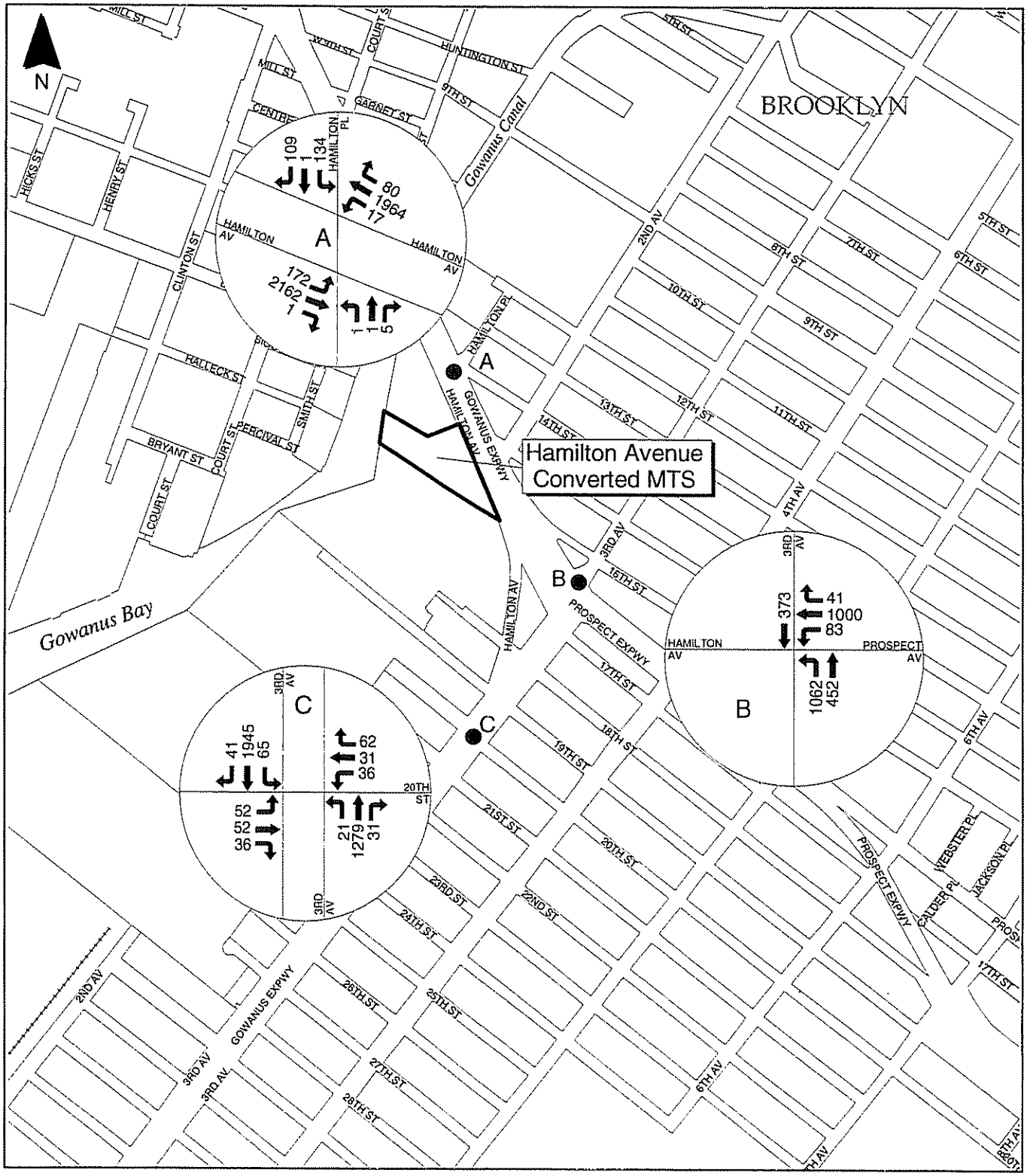
500 0 500 Feet

HDR
URBITRAN
EEA Cambridge Environmental Inc
Hydroqual
PB

Figure 4.14-11 2006 Future Build Traffic Volumes Facility Peak Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

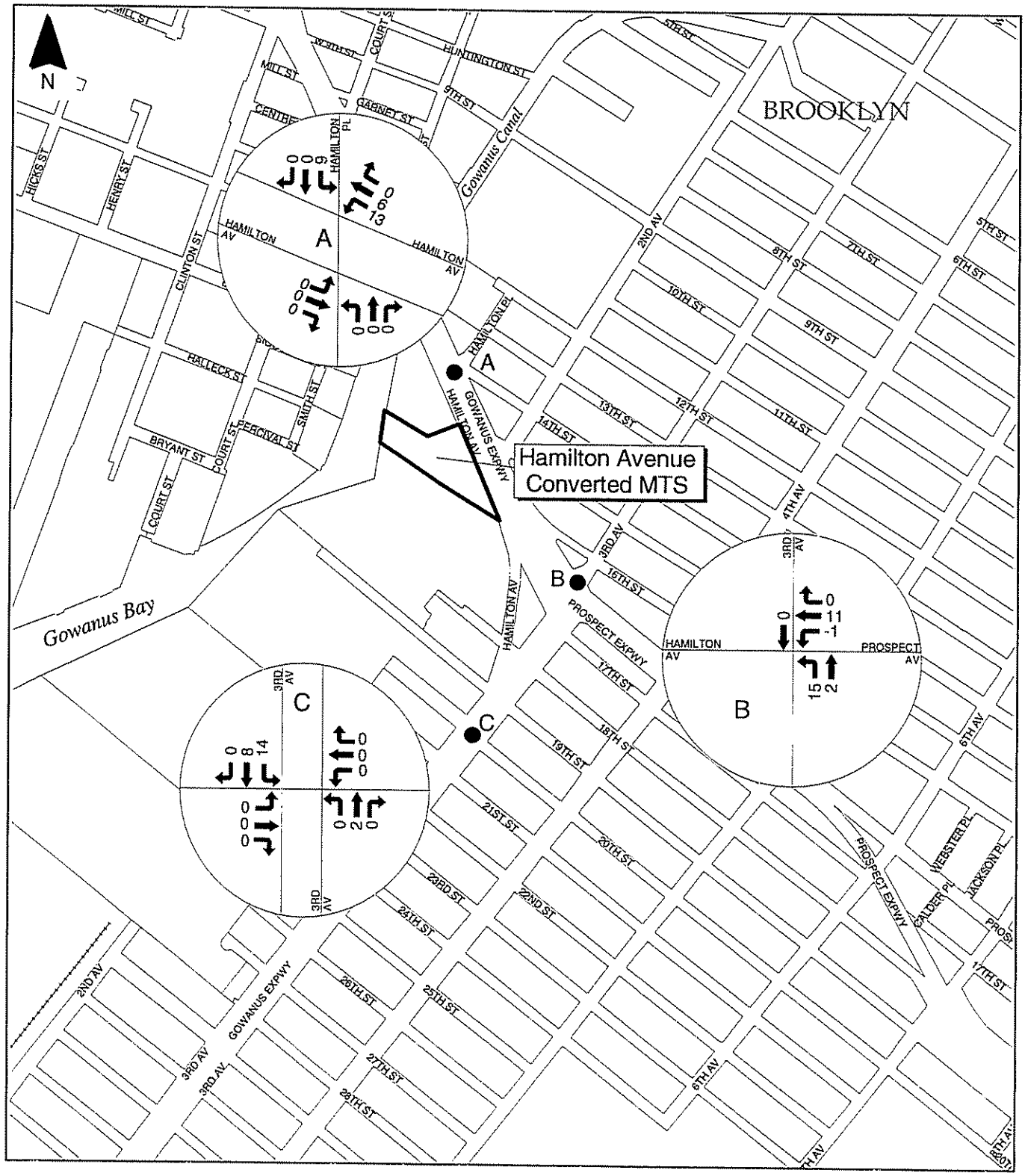


Site delineations are approximate
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 4.14-12 2006 Future Build Traffic Volumes
PM Peak
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



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

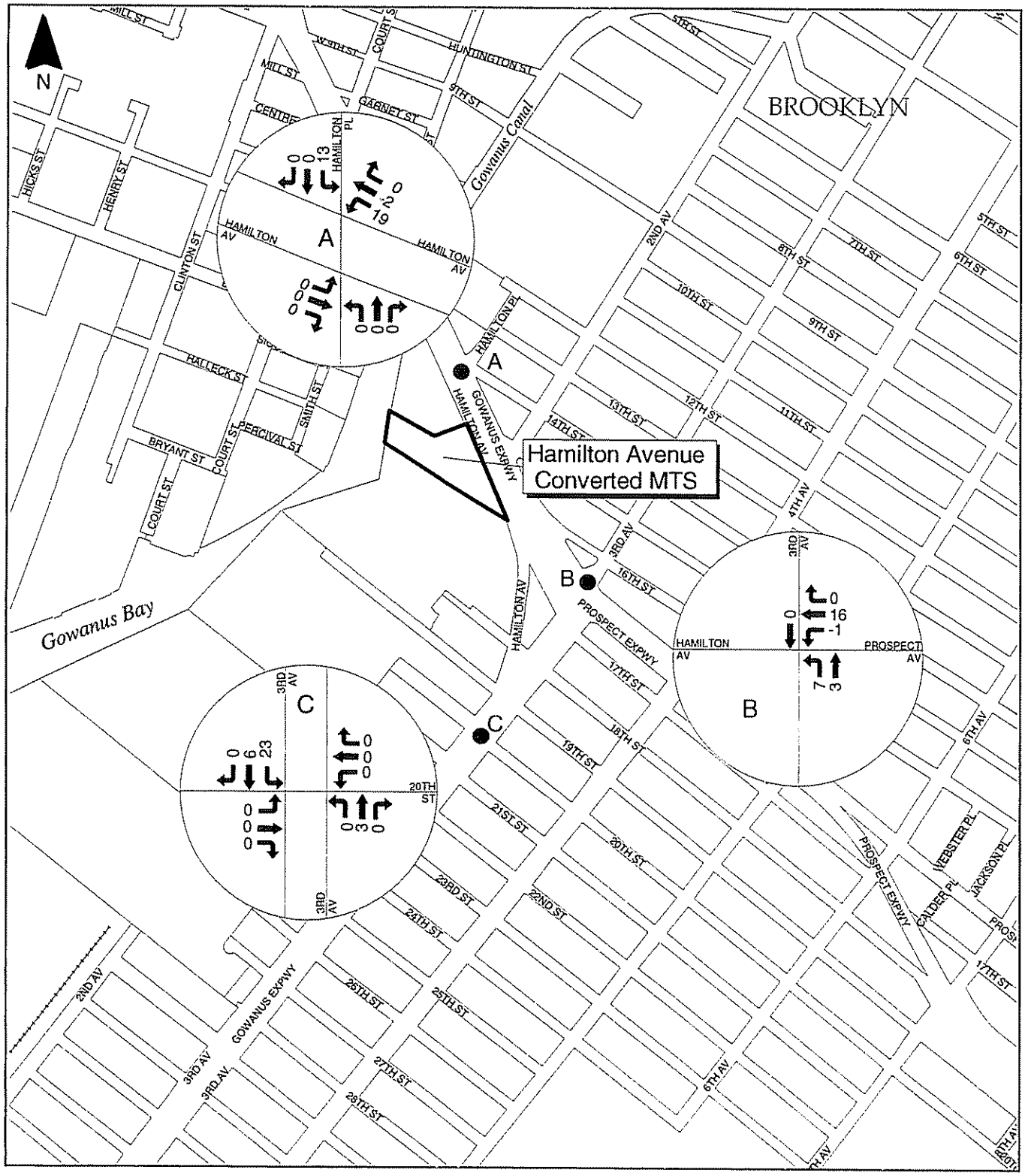
500 0 500 Feet

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

Figure 4.14-13 2006 Net Traffic - AM Peak
Hamilton Avenue 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

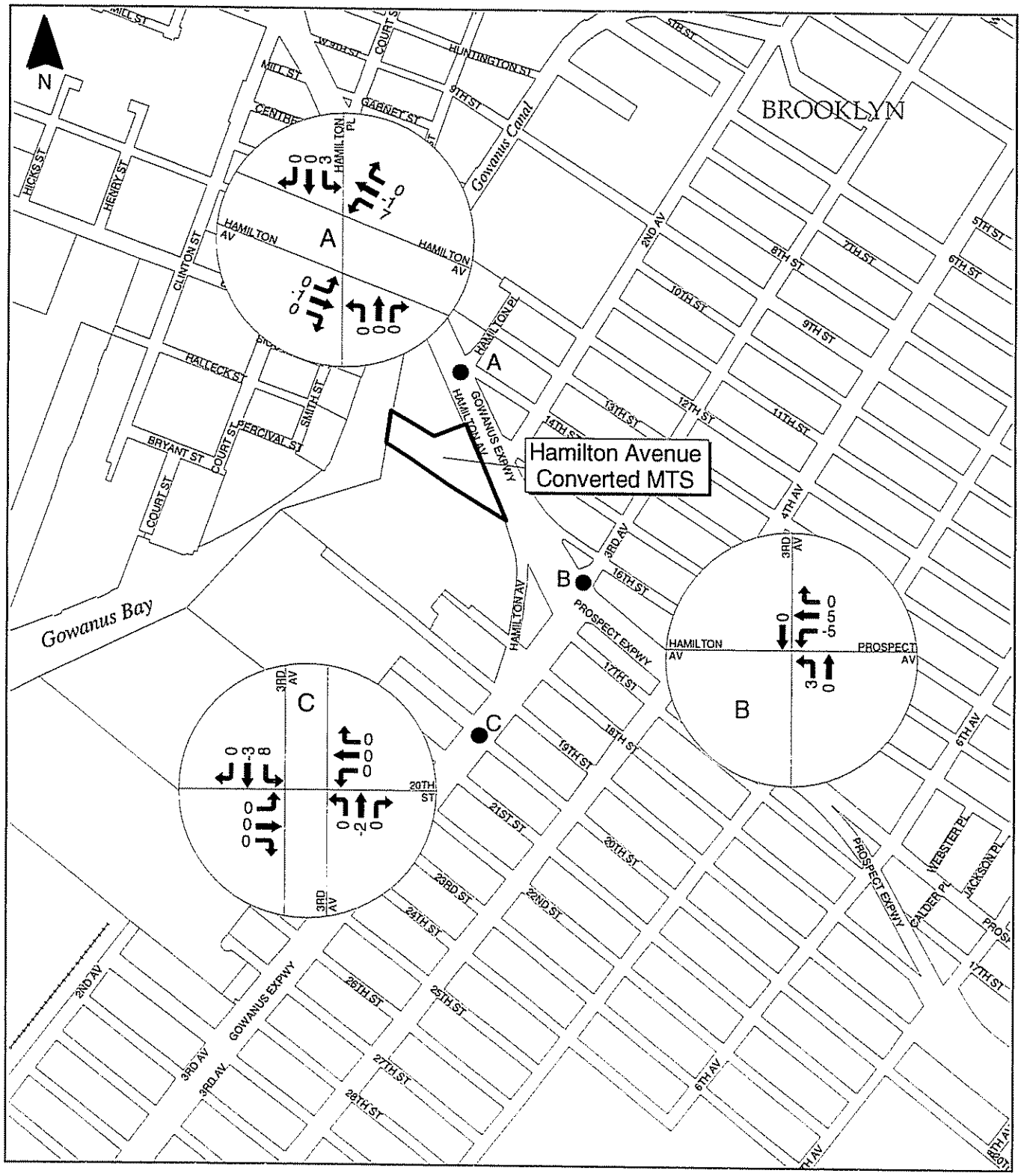
HDR | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 4.14-14 2006 Net Traffic - Facility Peak

Hamilton Avenue 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 | HydroQual | URBITRAN | PB | EEA Cambridge Environmental Inc

Figure 4.14-15 2006 Net Traffic - PM Peak
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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

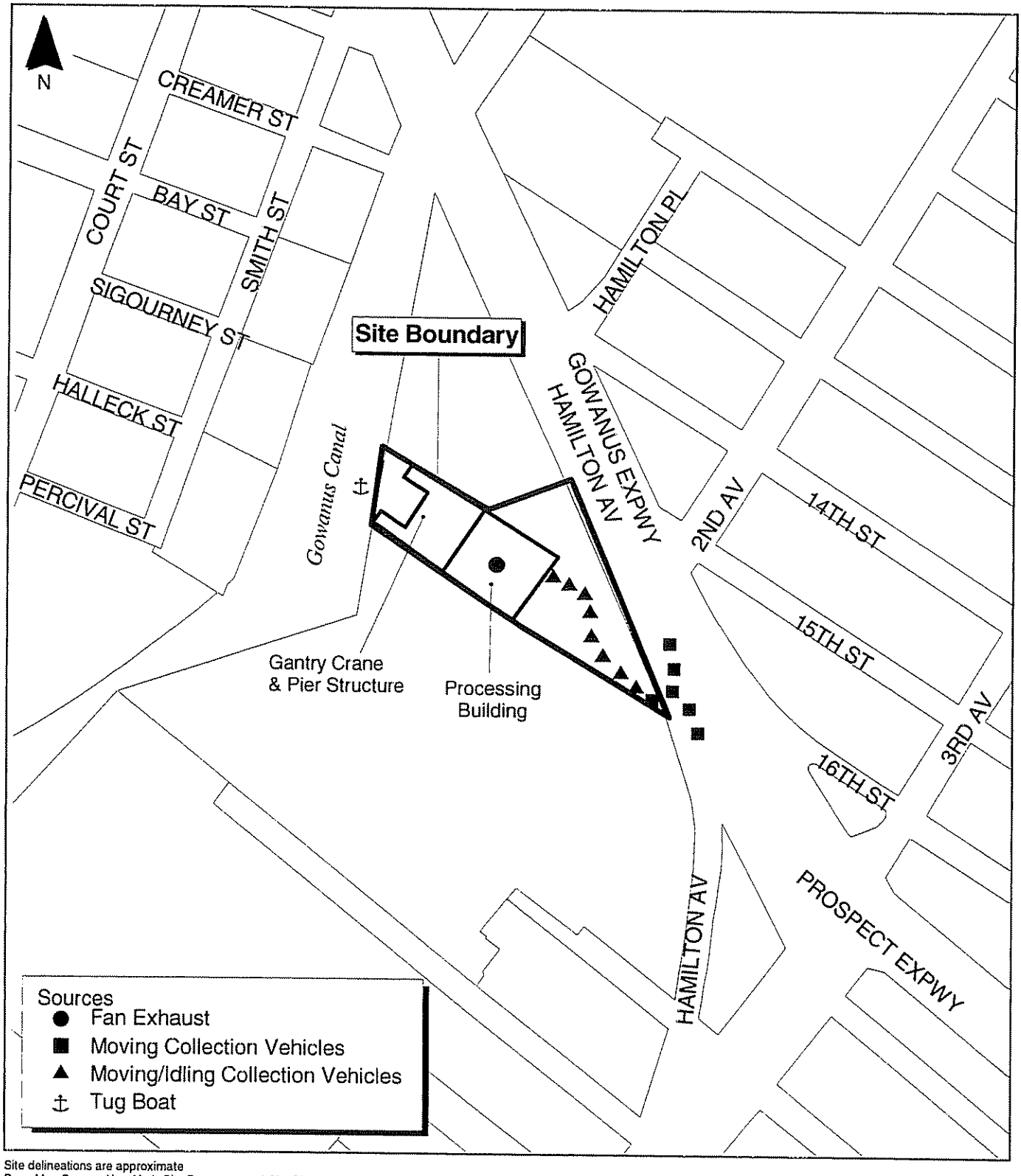
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweeper	1	1
Moving/Queuing Collection Vehicles	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

100 0 100 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.15-1 On-Site Air Quality Analysis

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.

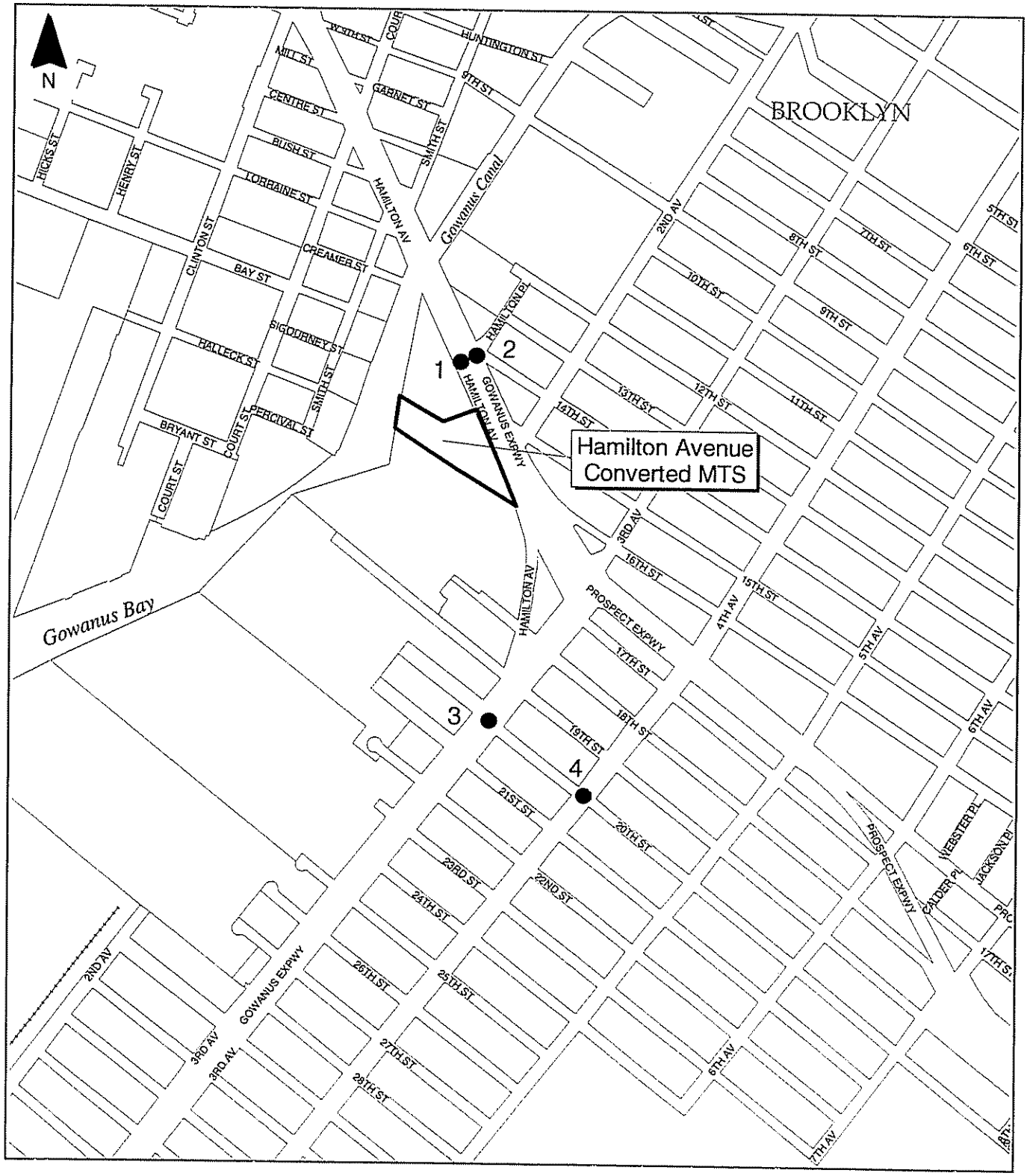
(8) The maximum cancer risk of each of the individual pollutants was estimated by multiplying the estimated annual concentration of each pollutant by its unit risk factor.

(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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.

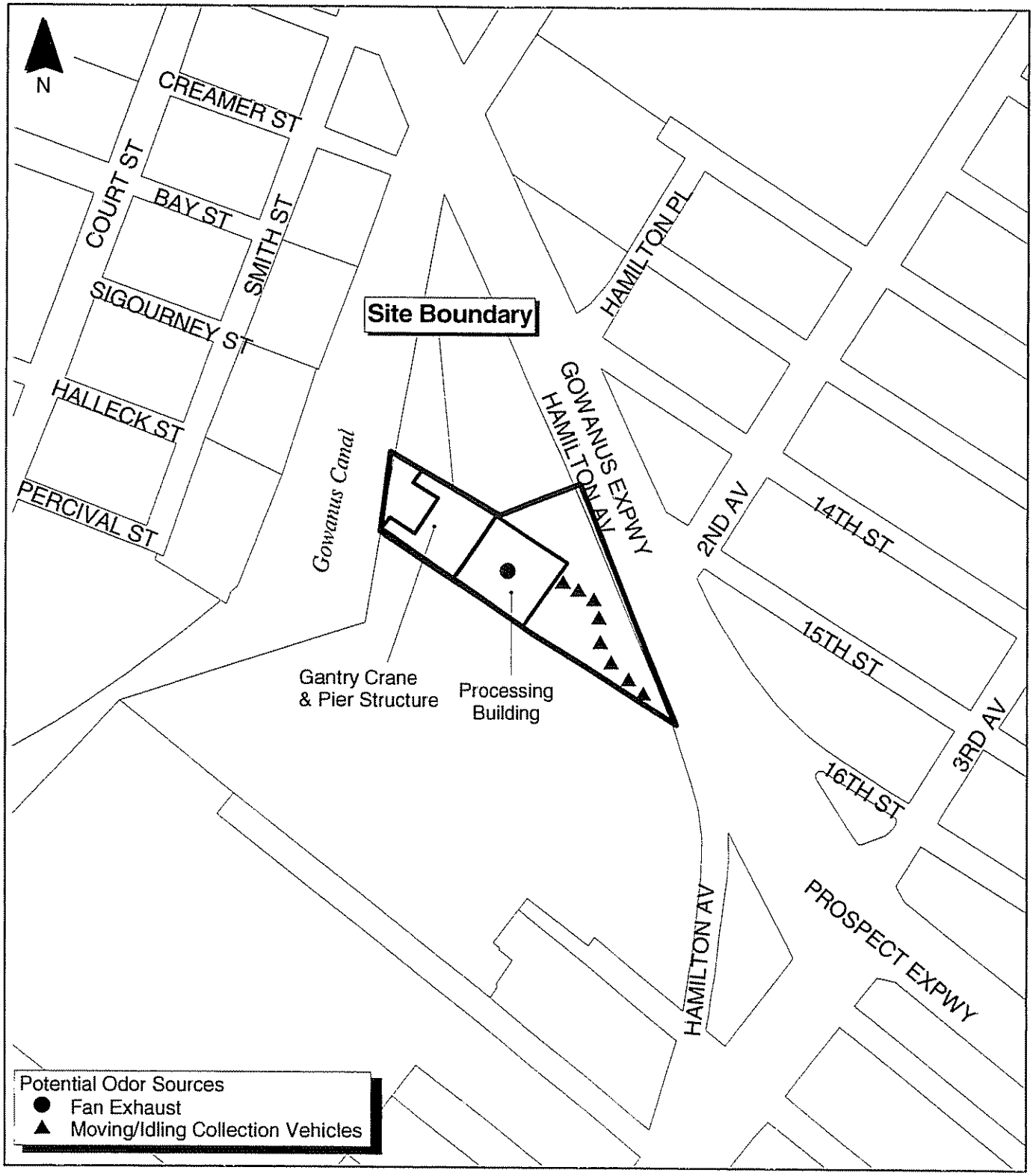
4.16.3 Potential Impacts with the South Bronx Converted MTS

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

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 4.16-1 Potential Odor Sources

Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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 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

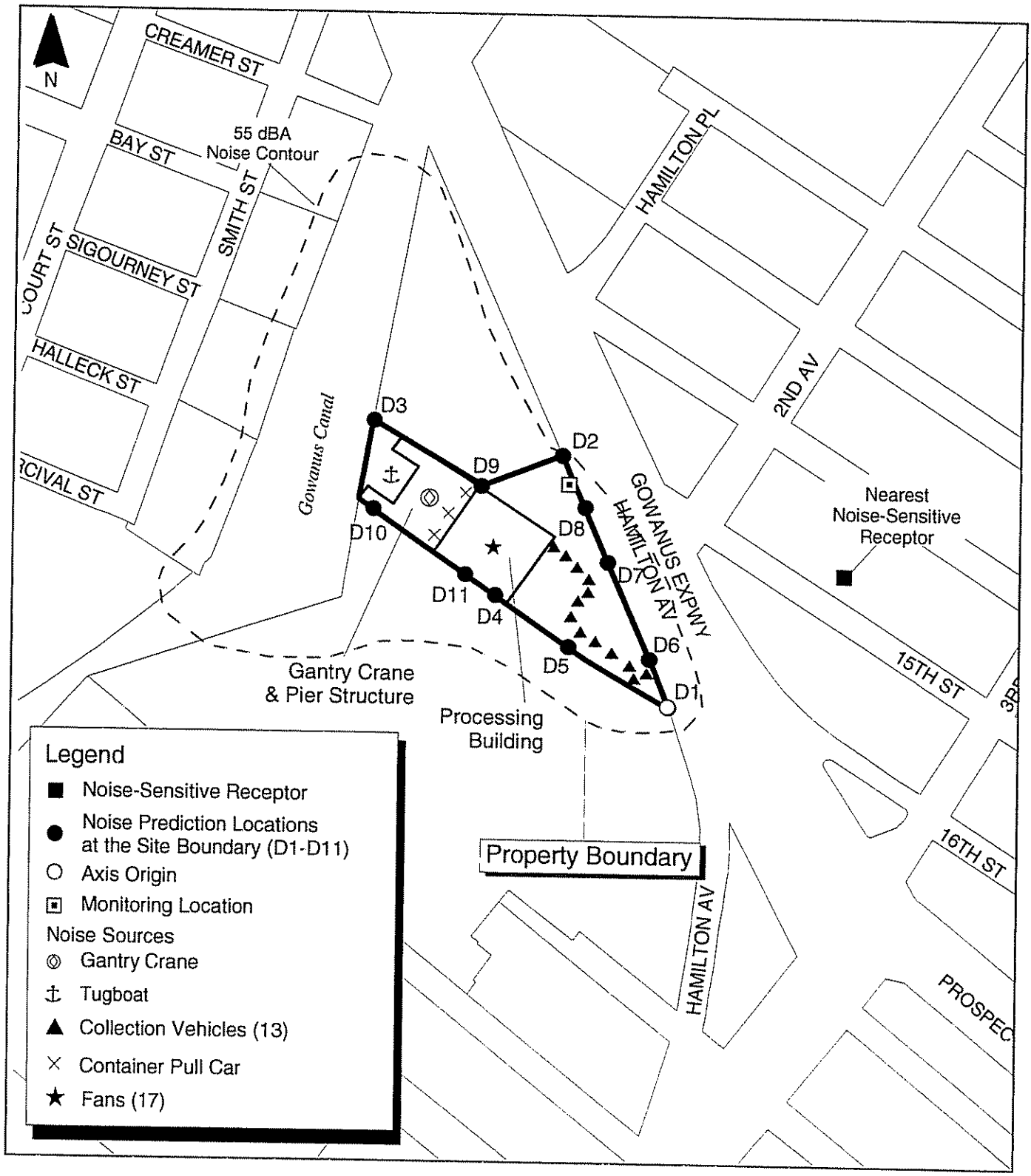
Figure 4.17-1 shows the location of the Hamilton Avenue Converted MTS, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is a row of apartment buildings on 15th Street between 2nd Avenue and 3rd Avenue, 136 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

CITY OF NEW YORK
DEPARTMENT OF SANITATION

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

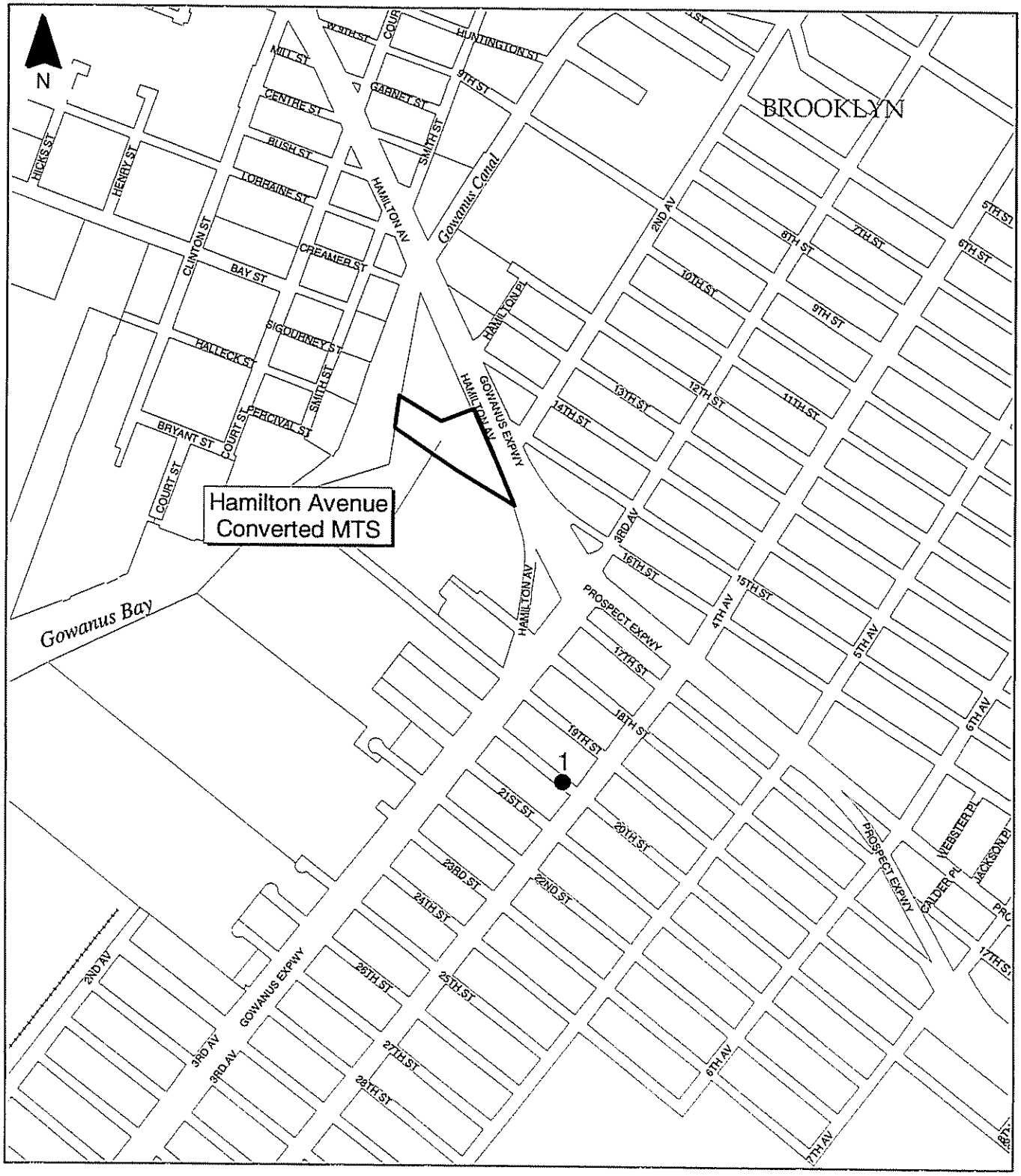
Note:
(1) Total PCEs are rounded to the nearest whole number.
(2) Future Build PCEs include Hamilton Avenue Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted to PCEs using a factor 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

HDR URBITRAN EEA HydroQual PB Cambridge Environmental Inc

Figure 4.17-2 Mobile Noise Analysis
Intersections Analyzed
Hamilton Avenue Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION

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.