CHAPTER 10 ENVIRONMENTAL REVIEW: EAST 91ST STREET CONVERTED MTS

10.1 Introduction

The results of the environmental analyses of the East 91st Street Converted MTS are presented in the following sections:

10.2 Land Use, Zoning and Public Policy
10.3 Socioeconomic Conditions
10.4 Community Facilities
10.5 Open Space and Parklands
10.6 Cultural Resources
10.7 Urban Design and Visual Quality
10.8 Neighborhood Character
10.9 Traffic and Transportation
10.10 Air Quality
10.11 Odor
10.12 Noise
10.13 Infrastructure and Energy
10.14 Natural Resources
10.15 Water Quality
10.16 Waterfront Revitalization Program
10.17 Hazardous Materials

Section 2.8 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

10.2 Land Use, Zoning, and Public Policy

10.2.1 Existing Conditions

10.2.1.1 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 (Figure 10.2-1). The secondary study area is defined as the area between ¼ mile and ½ mile of the site (Figure 10.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.8 provides information on existing land uses and operations on the site.

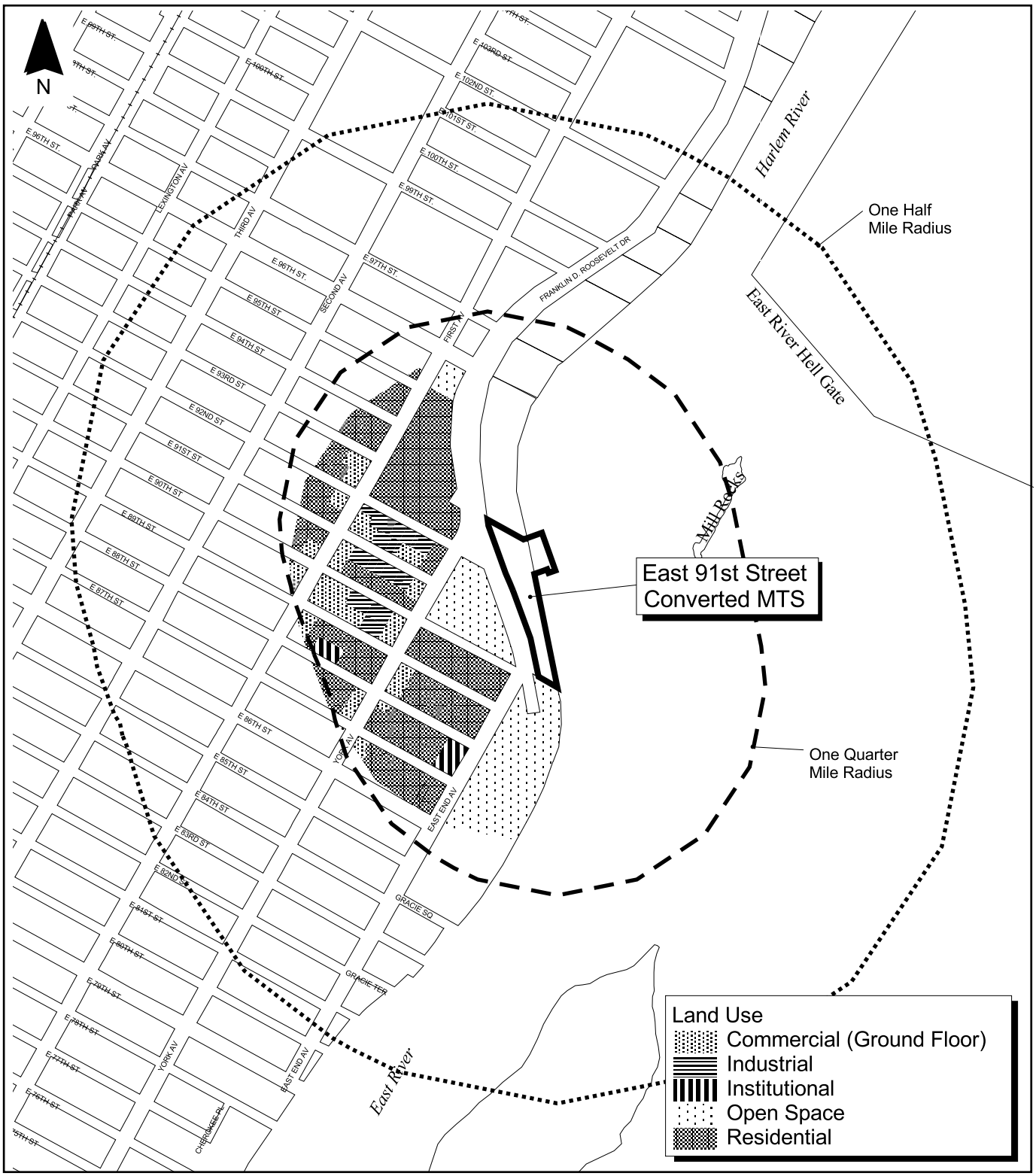
10.2.1.2 Land Use Patterns

10.2.1.2.1 General Context

Set in the larger context of Manhattan's Upper East Side and East River waterfront, the site is surrounded primarily by parks and recreational areas, dense residential developments, and transportation infrastructure.

10.2.1.2.2 Land Uses in the Primary Study Area

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



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

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Figure 10.2-1 Land Use in the Primary Study Area

East 91st Street Converted MTS

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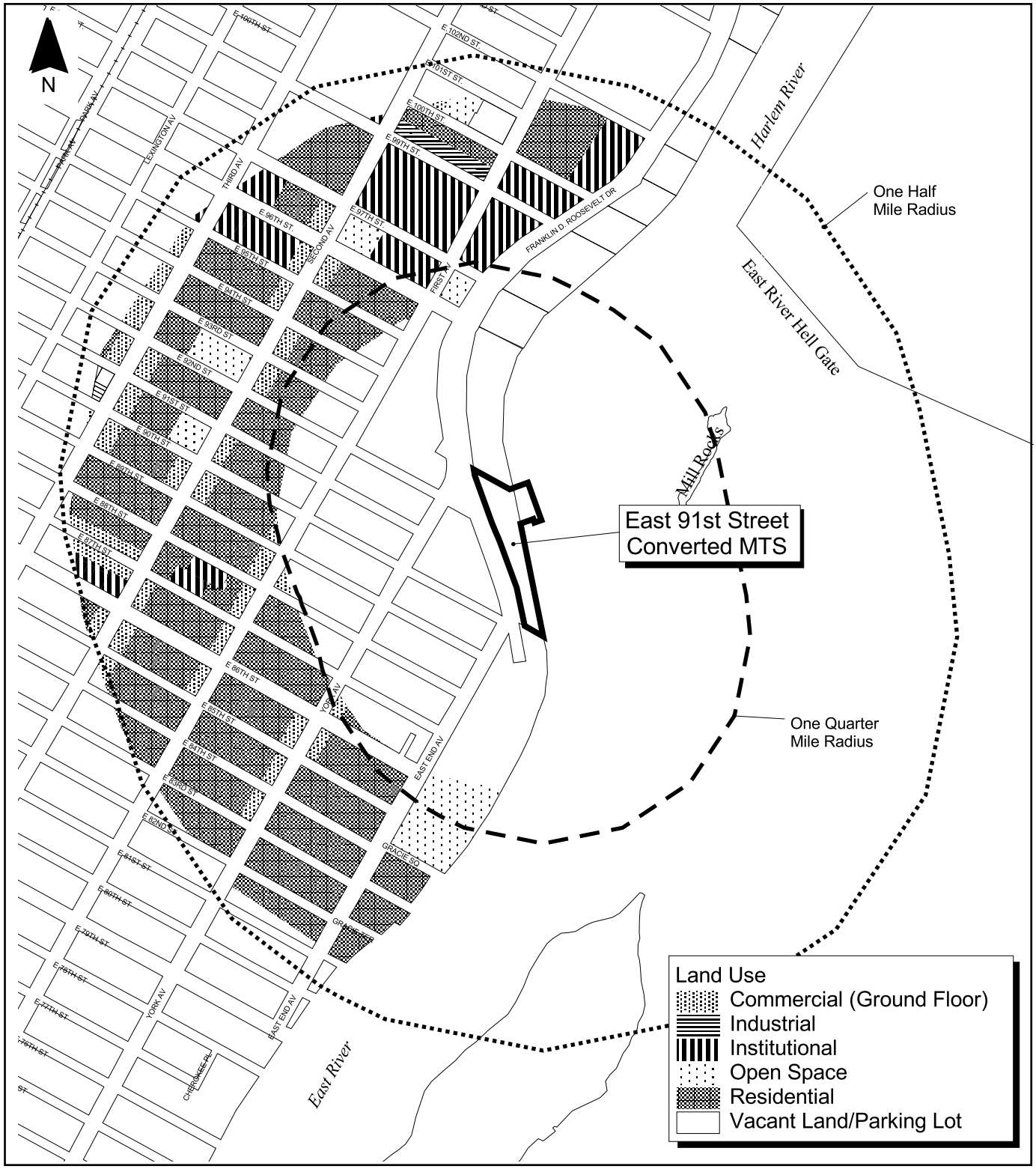

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 10.2-2 Land Use in the Secondary Study Area
East 91st Street Converted MTS

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Asphalt Green, another major open space within the primary study area stretches between 90th and 92nd Streets east of York Avenue. It is a sports and training complex, featuring indoor and outdoor facilities, including a soccer field, basketball courts, running track, aquatic center and fitness center. Access to the existing MTS site is provided by an unmapped drive that crosses through the Asphalt Green complex from the intersection of East 91st Street and York Avenue. The landmark Municipal Asphalt Plant, which now houses a gymnasium, is also part of the complex. (See Section 10.6 for additional discussion of cultural resources in the study area.)

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

10.2.1.2.3 Land Uses in the Secondary Study Area

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

10.2.1.3 Current Zoning on and near the Site

10.2.1.3.1 Zoning within the Primary Study Area

The site is located within an M2-2 zoning district, which extends along the waterfront from the site northward beyond the primary and secondary study areas. A small M1-4 district is located just to the west of the site, limited to and encompassing most of the Asphalt Green complex and the unmapped drive that bisects it and leads into the site. An area covering the interiors of three blocks south of East 92nd Street between York and First Avenues, where warehouses and auto-related uses are located west of the site, are zoned C8-4. The remainder of the study area is zoned for high-density residential development with the exception of a strip of C2-8 zoning lining First Avenue. (See Figure 10.2-3 and Table 3.4-1: Zoning District Characteristics.)

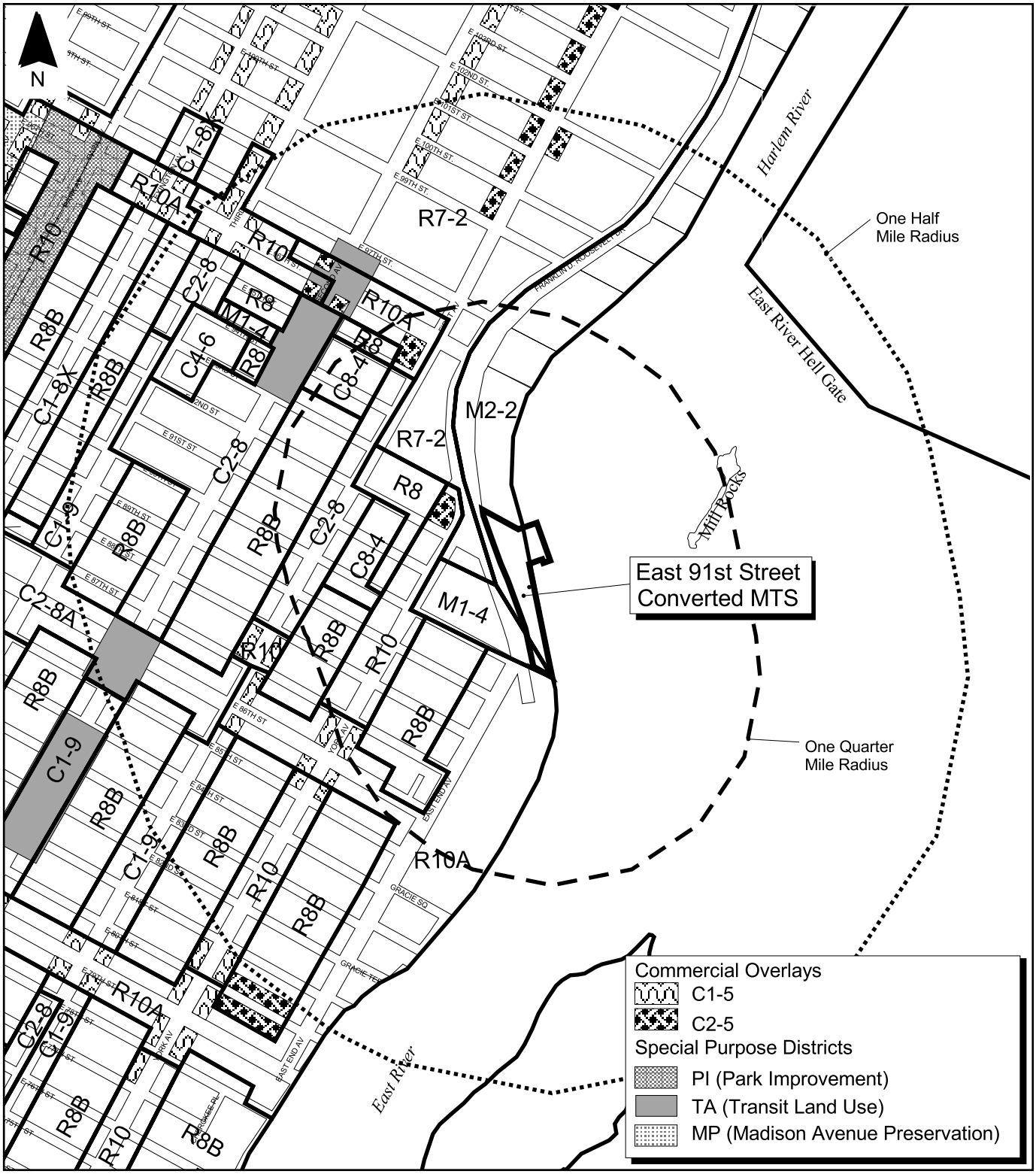
10.2.1.3.2 Zoning within the Secondary Study Area

As in the primary study area, the shoreline areas north of the site are zoned for industrial uses (M2-2), and the area west of the FDR Drive is zoned primarily for high-density residential development. Commercial zoning applies to the avenues and 86th Street, and a Transit Land Use Special Purpose District cover several blocks of Second Avenue around East 86th Street and East 95th Street in the secondary study area to allow for the proposed Second Avenue subway, in preliminary design stages at the time of this writing.

10.2.1.4 Current Plans and Policies

Neither the FY 2002/2003 Community District Needs Statement for Manhattan Community District 8, in which the site is located, or that for District 11, in which a portion of the secondary study area is located, make reference to recommended or anticipated physical development affecting the site or primary or secondary study areas.

The Plan for Reach 1 makes several recommendations pertinent to the site. As part of planning for the public waterfront, it recommends that the esplanade throughout the reach be developed to accommodate both bicycles and pedestrians safely and that waterfront access from inland areas.



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

Figure 10.2-3 Zoning

East 91st Street Converted MTS

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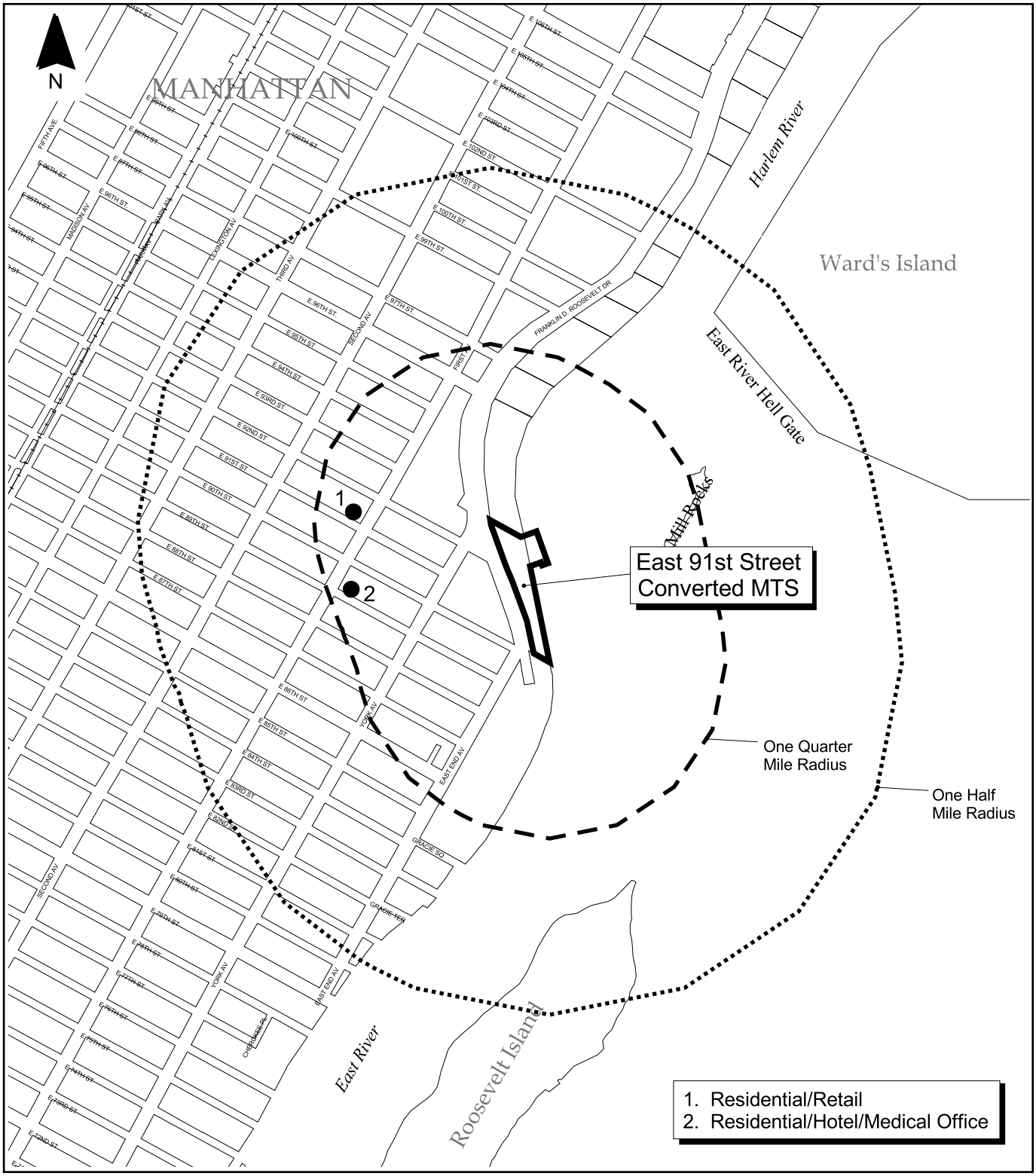
should be enhanced. The plan also recommends that where public funds are invested in waterfront municipal facilities, allocations should be included for esplanade construction, and, for waterfront uses that may block access to or along the waterfront, public access should be incorporated into site plans. Specifically, RFPs for the development or use of city-owned waterfront property should require esplanades or waterfront parks and maintenance agreements to ensure their upkeep.

The plan also recommends that the fireboat pier at East 90th Street should be renovated for use as an environmental education center and that a new pedestrian bridge should be constructed from Asphalt Green to the pier. As part of its working waterfront recommendations, the Plan for Reach 1 speaks to the commuter ferry service which, subsequent to the preparation of the Plan, is currently provided at East 90th Street. It also specifically notes that locating a ferry landing at this location was to take into account the adjacent marine transfer station at 91st Street.

10.2.2 Future No-Build Conditions

An apartment tower is being constructed on the eastern end of the block bounded East 90th Street, East 91st Street, Third Avenue and Lexington Avenue, which is only partly within the secondary study area west of the site. Two other multi-use residential towers will be completed within the study, one at 389 East 89th Street and one, which will include a hotel, at East 91st Street and 1st Avenue (Figure 10.2-4). In addition, a feasibility study is currently underway for a potential new school to be located at 340-342 East 92nd Street. Otherwise, DCP has no information of new development planned to occur within the study area, and notes that most new development in the broad vicinity occurs in the East 60s streets, south of the site and outside the secondary study area. The population in the area is considered very stable, and DCP expects it to remain so.

The site would remain DSNY property and the inactive existing MTS would remain.



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

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Figure 10.2-4 Planned Development Sites

East 91st Street Converted MTS

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10.2.3 Potential Impacts with the East 91st Street Converted MTS

10.2.3.1 Land Use and Zoning

The East 91st Street Converted MTS entails replacing of the existing MTS with a new facility that includes containerization functions, and it would represent a slight physical upgrading of the site. The East 91st Street Converted MTS operation would be designed to containerize waste and prepare containers for transfer to barge for disposal outside the City. The existing MTS, which extends over the water, would be demolished and the new one would be built in approximately the same place, still hugging the shore and extending to the pier-head line. The entrance to the site would remain unchanged.

The reactivation of waste transfer activities on the site would have no effect on land uses nearby. (See Section 10.8 for a discussion of potential impacts to Neighborhood Character.) Neither the reactivation of waste transfer activities on the site nor the volume of truck traffic would encourage similar types of land uses or discourage other types of land use such as those already present in the study areas. Therefore no significant adverse impacts to land use or zoning in the built-out study area would result.

10.2.3.2 Consistency with Public Plans and Policies

There are no recommendations or objectives stated in relevant plans and policies that specifically relate to the site or the study area. The East 91st Street Converted MTS would be consistent with the applicable 197-a Plan (the CMWP). Development of a ferry terminal at East 90th Street and the waterfront promenade in the area near the site has already occurred.

10.3 Socioeconomic Conditions

10.3.1 Existing Conditions

10.3.1.1 Definition of the Study Area

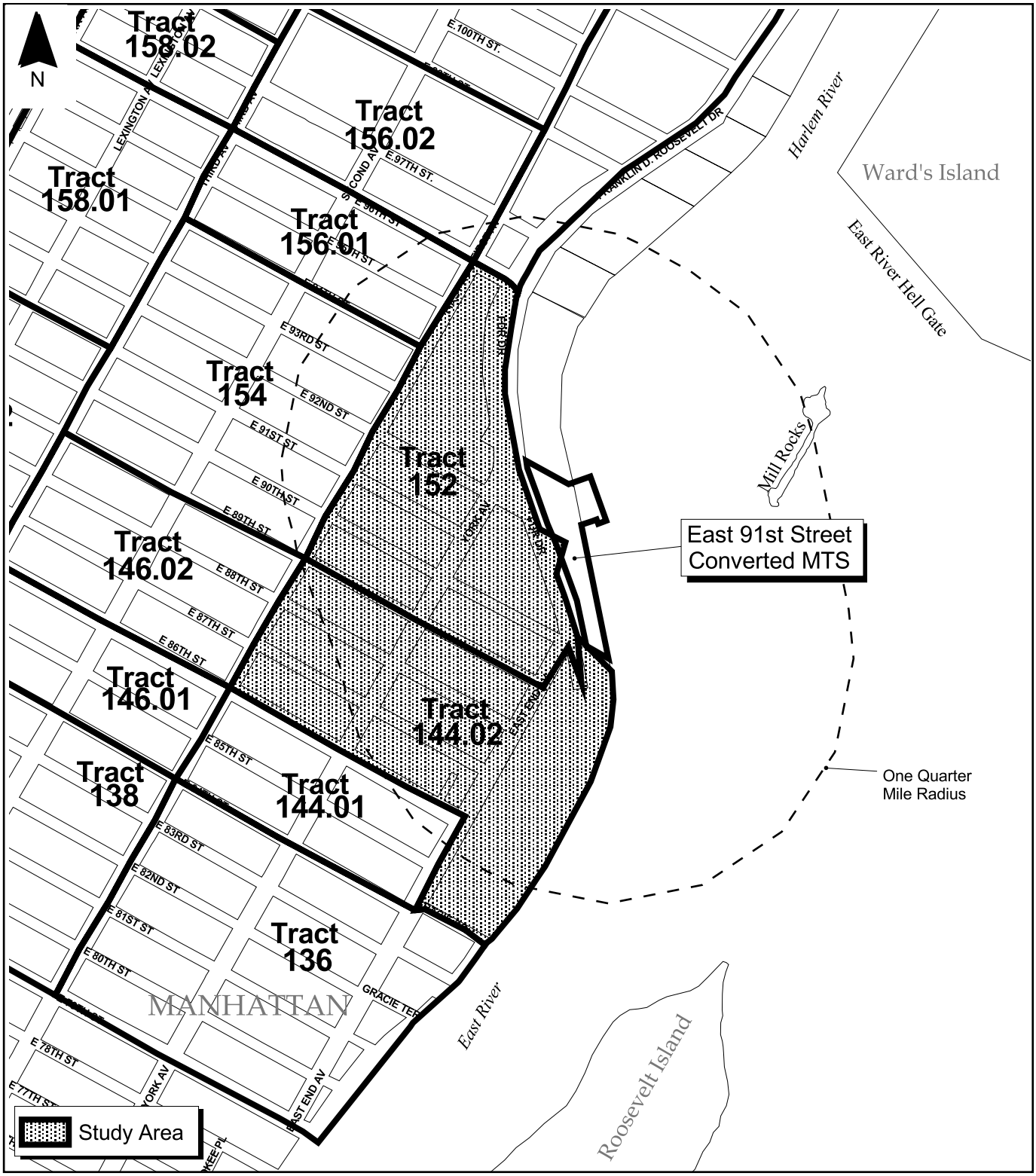
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼ mile of the site, and (2) a study area related to economic activity that generally covers a larger area that extends ½ mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) The demographic study area is comprised of Census Tracts 152 and 144.02 (Figure 10.3-1). Census Tract 152 covers East River waterfront areas to the east of 1st Avenue between East 89th Street and East 96th Street. Census Tract 144.02 covers the six blocks directly south of tract 152 and the area stretching east of East End Avenue between East 90th Street and East 84th Street. For comparison purposes, census data were gathered at the Borough and City levels. The study area for the assessment of potential impacts on economic conditions extends as far north as East 102nd Street, as far south as East 81st Street and as far west as 3rd Avenue.

Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

10.3.1.2 Demographic Characteristics

10.3.1.2.1 Population

The total 2000 study area population was 13,417 persons (Table 10.3-1). In terms of population growth from 1990 to 2000, the study area experienced a greater rate of increase in residents (7 percent) than did the Borough (3 percent) during the same period, but its population did not grow as rapidly as the City's (9 percent) as a whole.



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

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Figure 10.3-1 Census Tracts

East 91st Street Converted MTS

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Table 10.3-1
1980-1990 Population

	Study Area	Manhattan	City
2000	13,417	1,537,195	8,008,278
1990	12,601	1,487,536	7,322,564
Percent Change	+6.5%	+3.3%	+9.4%

Source: U.S. Census 1990, 2000

The age-sex distribution was slightly different from the population distribution of the Borough and the City, with an even greater proportion of females to males. The study area contained a slightly smaller percentage of children and teenagers than the Borough, but a considerably smaller percentage of children and teens than the City; 16 percent of the study area population was under the age of 20, compared to 19 percent for the Borough and 27 percent for the City.

10.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a smaller proportion (12 percent) of people of Hispanic origin (all races) than did Manhattan or the City (both at 27 percent). Of the 88 percent not of Hispanic origin in the study area, 84 percent were White and 7 percent were Black. In Manhattan and the City, Blacks represented approximately 21 percent and 33 percent of the non-Hispanic populations, respectively, while Whites represented 63 percent and 48 percent, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate than in the Borough and in the City during the same period. People of Hispanic origin increased by 30 percent in the study area compared with 10 percent in the Borough and 24 percent in the City. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

10.3.1.2.3 Families and Households

There were 2,980 families in the study area in 2000 and approximately the same percentage of these families (42 percent) had children under the age of 18, as did families in Manhattan (43 percent). In the City, the percentage of families with children was somewhat higher (49 percent). There was a larger percentage of married-couple families in the study area than in the Borough or the City, and 39 percent of these families had children, the same percentage as in Manhattan but a somewhat lower percentage than found within the City (48 percent).

Twenty-four percent of the families in the study area were headed by a female householder, a smaller percentage than in the Borough (30 percent) or the City (also 30 percent). Fifty-one percent of the female householder families in the study area had children under the age of 18, similar to percentages in the Borough (53 percent) and the City (55 percent).

There were 7,487 households in the study area in 2000, with an average household size of 1.8 persons per household, which was smaller than the number in Manhattan (2.0 persons per household) and the City (2.6 persons per household). From 1990 to 2000, the number of households in the study area increased by 4 percent, compared with a 3 percent increase in the Borough and a 7 percent increase in the City.

10.3.1.2.4 Employment

Seventy-two percent of persons age 16 and older participated in the labor force in 2000, compared to 64 percent in Manhattan and 58 percent in the City. The majority of employed in all three areas were engaged as private wage and salary workers.

Nine percent of employed persons 16 and over were government workers, compared to Manhattan (10 percent) and the City (16 percent). Moreover, 9 percent of the study area's working population were self-employed, the same proportion as in Manhattan and a somewhat higher proportion than in the City (6 percent).

From 1990 to 2000, the number of persons in the labor force increased at a faster rate in the study area (4 percent) than in the Borough (less than 1 percent) or in the City (1 percent). Among employed persons, those engaged in government jobs increased by 8 percent in the study area, compared with a 15 percent decrease in the Borough and a 10 percent decrease in the City.

Current estimates indicate that about 147,892 employees worked in Manhattan Community District 8 in 2002, which was about 7 percent of the borough's total employment.[1]

10.3.1.2.5 Housing

In 2000, most housing units in the 2-census tract study area were built before 1969, the majority of housing units in both Manhattan and the City were slightly older, built before 1959. As of 2000, there were 7,961 housing units in the study area with a vacancy rate of about 6 percent, lower than the Borough (8 percent) but about the same as the City. About three-quarters of housing units were renter-occupied, which was about the same as in the Borough and greater than the City (66 percent). Median monthly rent ($781) was about the same as in the Borough, but higher than in the City ($705).

The majority of study area householders moved into their units between 1990 and 2000 (65 percent), slightly greater than the percentages in the Borough and City (61 percent).

From 1990 to 2000, a total of 176 housing units were added in the study area, representing a 2 percent increase, the same as in the Borough, and a somewhat lower proportional increase than in the City (7 percent).

10.3.1.2.6 Education

Consistent with the lower percentage of children in the study area than in the Borough or the City, there was a lower rate of school enrollment (19 percent) than in either the Borough (24 percent) or the City (29 percent). Of those people enrolled in school, 48 percent were

[1] New York Metropolitan Transportation Council, Employment Interim Projections data set, approved 7-17-03.

attending elementary or high school and about 37 percent were attending college or beyond. The study area witnessed a 19 percent increase in the number of persons enrolled in school from 1990 to 2000, with the largest increase in enrollments occurring at the pre-primary school level.

The study area had higher educational attainment levels than either the Borough or the City. Compared to the larger areas, a larger percentage of the study area population age 25 and over had a college degree or some college education. Compared to Manhattan, the study area had a slightly lower percentage of people with only high school diplomas. In 2000, 69 percent of the residents over 25 had a college education or beyond.

From 1990 to 2000, the study area witnessed rising levels of educational attainment. The number of college graduates increased 21 percent, and the same trend was evident in the Borough and the City. Meanwhile, numbers of people with less than a college education declined in the study area.

10.3.1.2.7 Income and Poverty

In 2000, both median household income ($51,150) and median family income ($60,606) were higher than in Manhattan and the City. Compared to the larger two areas, a lower percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes above $50,000 and about 32 percent above $100,000. Only 23 percent of households in the study area had incomes below $25,000, compared with 30 percent in the Borough and 35 percent in the City.

The study area had a lower percentage of families living below the poverty level (11 percent) than in Manhattan (18 percent) or the City (19 percent). A significant percentage of these families below the poverty level (45 percent) had children under the age of 18, though lower than Manhattan (48 percent) or the City (55 percent).

A lower percentage of persons in the study area under the age of 18 were living below the poverty level in 2000 (18 percent) than in Manhattan (32 percent) and the City (30 percent). The 2000 Census also reported that 11 percent of persons 65 and older were living below the poverty level in the study area compared to 19 percent in Manhattan and 18 percent in the City.

From 1990 to 2000, the percentage of people living below the poverty level in the study area increased by 35 percent, as compared with a minimal change in the Borough and a 21 percent increase in the City.[2]

10.3.1.3 Economic Conditions

The portion of the Upper East Side within approximately ½ mile of the site contains dense residential development, schools and other institutional uses. Ground-floor commercial establishments serving the neighborhood line 1st and 2nd Avenues, and several specialized commercial enterprises, such as wine shops, gourmet groceries, and some restaurants can be found on the side streets. Automobile related uses, such as gas stations, repair, rental, and garages are present along 1st Avenue and some side streets as well. The residents of the area are not necessarily employed within the same area and, likewise, the employees staffing the commercial and institutional establishments in the neighborhood do not necessarily reside there.

10.3.2 Future No-Build Conditions

10.3.2.1 Demographic Characteristics

Regional projections indicate that the population of census tracts 152 and 144.02 will remain the same as current estimates.[3]

10.3.2.2 Economic Conditions

No notable changes to economic conditions are predicted for the area by 2006, although a new hotel will be in operation at East 91st Street and First Avenue.

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[2] Census 2000 may capture greater numbers of persons and families living below the poverty level than earlier census counts due to Service Based Enumeration (SBE). The SBE operation was designed for Census 2000 to improve the count of individuals who might not be included through standard enumeration methods, and was conducted in service locations, such as shelters and soup kitchens, and at targeted outdoor locations.

[3] New York Metropolitan Transportation Council, Employment Interim Projections data set, approved 7-17-03.

Regional projections indicate that employment in Manhattan Community District 8 will increase to 150,006, about a 1.4 percent increase in employment between 2002 and 2006.[4]

10.3.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS represents the reactivation of solid waste transfer operations with added containerization functions at the site. Therefore, it would not result in socioeconomic changes in the study area. No significant direct or indirect impacts are anticipated related to socioeconomic conditions.

10.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the East 91st Street Converted MTS, and land use and neighborhood character analyses predict no adverse impacts (see Sections 10.2.3 and 18.8.3, respectively).

10.3.3.2 Direct Business and Institutional Impacts

The East 91st Street Converted MTS would not result in the direct displacement of businesses or institutional uses.

10.3.3.3 Indirect Business and Institutional Impacts

The East 91st Street Converted MTS would not result in indirect impacts to study area businesses or institutions. Of the few businesses located on nearby side streets that will once again serve as DSNY and other agency collection vehicle access routes (East 90th and 91st Streets between York and 1st Avenues), patronage would not likely be affected by the reactivation of solid waste transfer operations at the East 91st Street MTS. Since no adverse impacts to neighborhood character are predicted (see Section 10.8.3) and these businesses (in particular, Ely's grocery and the Vinegar Factory Restaurant) are entirely enclosed and rely primarily on

[4] New York Metropolitan Transportation Council, Employment Interim Projections data set, approved 7-17-03.

pedestrian traffic, they would not be particularly sensitive to any associated increases in truck traffic on the street. The remainder of smaller businesses, located as they are on heavily traveled avenues, would similarly not likely be affected. The Asphalt Green recreation complex was constructed around the once active existing MTS entrance drive and ramp. The complex (building and field) is surrounded by protective fencing and landscaping to physically and visually buffer itself from the existing MTS ramp that bisects the property. Given this design and the fact that no windows open onto the entrance drive, reactivation of the MTS would have minimal effects on the recreation center's function. Therefore, no indirect business and institutional impacts are predicted.

10.3.3.4 Employment Impacts

The East 91st Street Converted MTS is expected to generate a total of approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers, and clerical personnel. In addition to the direct positive employment impacts (likely beyond the study area), the new workers would generate a minor amount of indirect economic benefits in the study area through local spending.

10.4 Community Facilities and Services

10.4.1 Existing Conditions

10.4.1.1 Definition of the Study Area

The primary study area is defined as the area within ¼ mile of the site. The secondary study area is defined as the area between ¼ mile and ½ mile of the site.

10.4.1.2 Summary of Community Facilities and Services

There are 10 community facilities in the primary study area and 25 in the secondary study area. These facilities and others serving the site but located outside the secondary study area are listed below in Table 10.4-1 and shown on Figure 10.4-1.

10.4.2 Future No-Build Conditions

There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities and services and their capacity or adequacy of delivery.

10.4.3 Potential Impacts with the East 91st Street Converted MTS

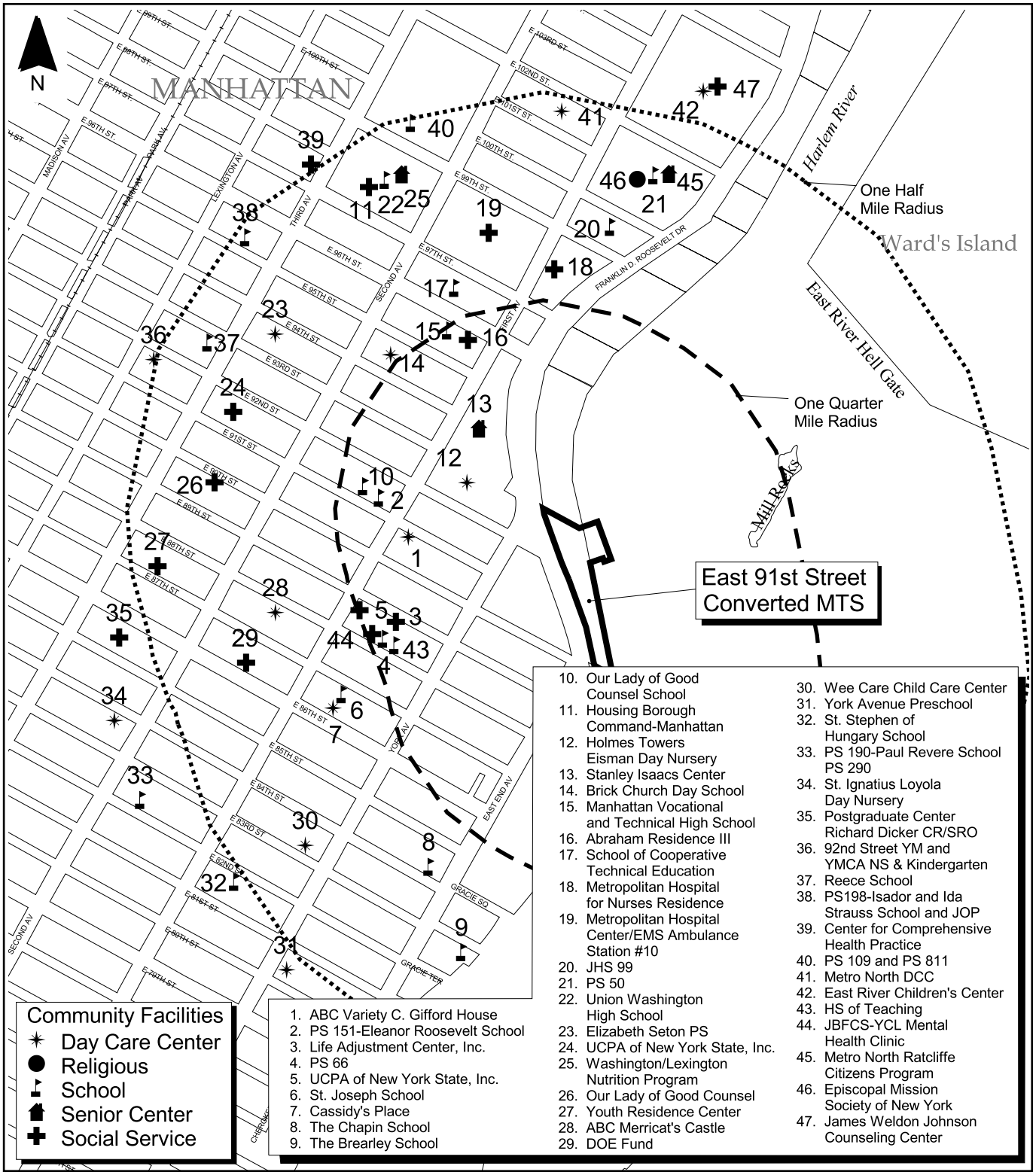
The East 91st Street Converted MTS would not create any significant new demand on services and community facilities and would not displace facilities or disrupt services. The New York City Fire Department states that it would have no problem supporting the reactivation of the site (see Appendix A). No significant adverse impacts to service delivery are expected.

Table 10.4-1
Community Facilities and Services

Name	Address
Within Primary Study Area	
Day Care Centers	
ABC Variety C. Gifford House	404 E. 91st Street
Holmes Towers Eisman Day Nursery	1794 1st Ave.
Schools	
PS 151-Eleanor Roosevelt School	1763 1st Ave.
PS 66	421 E. 88th Street
Our Lady of Good Counsel School	323 E. 91st Street
HS of Teaching	421 E. 88th Street
Senior Center	
Stanley Isaacs Center	415 E. 93rd Street
Social Services	
Life Adjustment Center, Inc	426 E. 89th Street
UCPA of New York State, Inc	400 E. 89th Street
JBFCS-YCL Mental Health Clinic	421 E. 88th Street
Within Secondary Study Area	
Day Care Centers	
Cassidy's Place	419 E. 86th Street
Brick Church Day School	62 E. 92nd Street
Elizabeth Seton PS	1675 3rd Ave.
ABC Merricat's Castle	316 E. 88th Street
Wee Care Child Care Center	451 E. 83rd Street
Religious	
Episcopal Mission Society of New York	1956 1st Ave.
Schools	
St. Joseph School	420 E. 87th Street
The Chapin School	100 East End Ave.
The Brearley School	610 E. 83rd Street
Manhattan Vocational and Technical High School	320 E. 96th Street
School of Cooperative Technical Education	327 E. 96th Street
JHS 99	410 E. 100th Street
PS 50	433 E. 100th Street
Union Washington High School	1893 2nd Ave.
Reece School	180 E. 93rd Street
Senior Centers	
Metro North Ratcliffe Citizens Program	1960 1st Ave.
Washington/Lexington Nutrition Program	1775 3rd Ave.

Table 10.4-1 (continued)
Community Facilities and Services

Name	Address
Social Services	
Abraham Residence III	336-338 E. 96th Street
Metropolitan Hospital for Nurses Residence	1892 1st Ave.
Metropolitan Hospital Center/EMS Ambulance Station #10	1901 1st Ave.
UCPA of New York State, Inc.	1619-1623 3rd Ave.
Our Lady of Good Counsel	230 E. 90th Street
Youth Residence Center	217 E. 87th Street
DOE Fund	331 E. 86th Street
Housing Borough Command-Manhattan	216 E. 99th Street
Outside Secondary Study Area	
Day Care Centers	
York Avenue Preschool	1520 York Ave.
St. Ignatius Loyola Day Nursery	240 E. 84th Street
92nd Street YM and YMCA NS & Kindergarten	1395 Lexington Ave.
Metro North DCC	304 E. 102nd Street
East River Children's Center	416 E. 105th Street
Schools	
St. Stephen of Hungary School	408 E. 82nd Street
PS 190-Paul Revere School; PS 290	311 E. 82nd Street
PS 198-Isador and Ida Strauss School and JOP	1700 3rd Ave.
PS 109 and PS 811	215 E. 99th Street
Social Services	
Postgraduate Center Richard Dicker CR/SRO	220 E. 86th Street
Center for Comprehensive Health Practice	163 E. 97th Street
James Weldon Johnson Counseling Center	2201 1st Ave.



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
Note: Fire stations, police stations and hospitals outside the secondary study area may not be shown on the figure

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Figure 10.4-1 Community Facilities and Services

East 91st Street Converted MTS

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10.5 Open Space and Parklands

10.5.1 Existing Conditions

10.5.1.1 Definition of the Study Area

The study area for open space and parklands is defined as being the area within a ½-mile radius of the site.

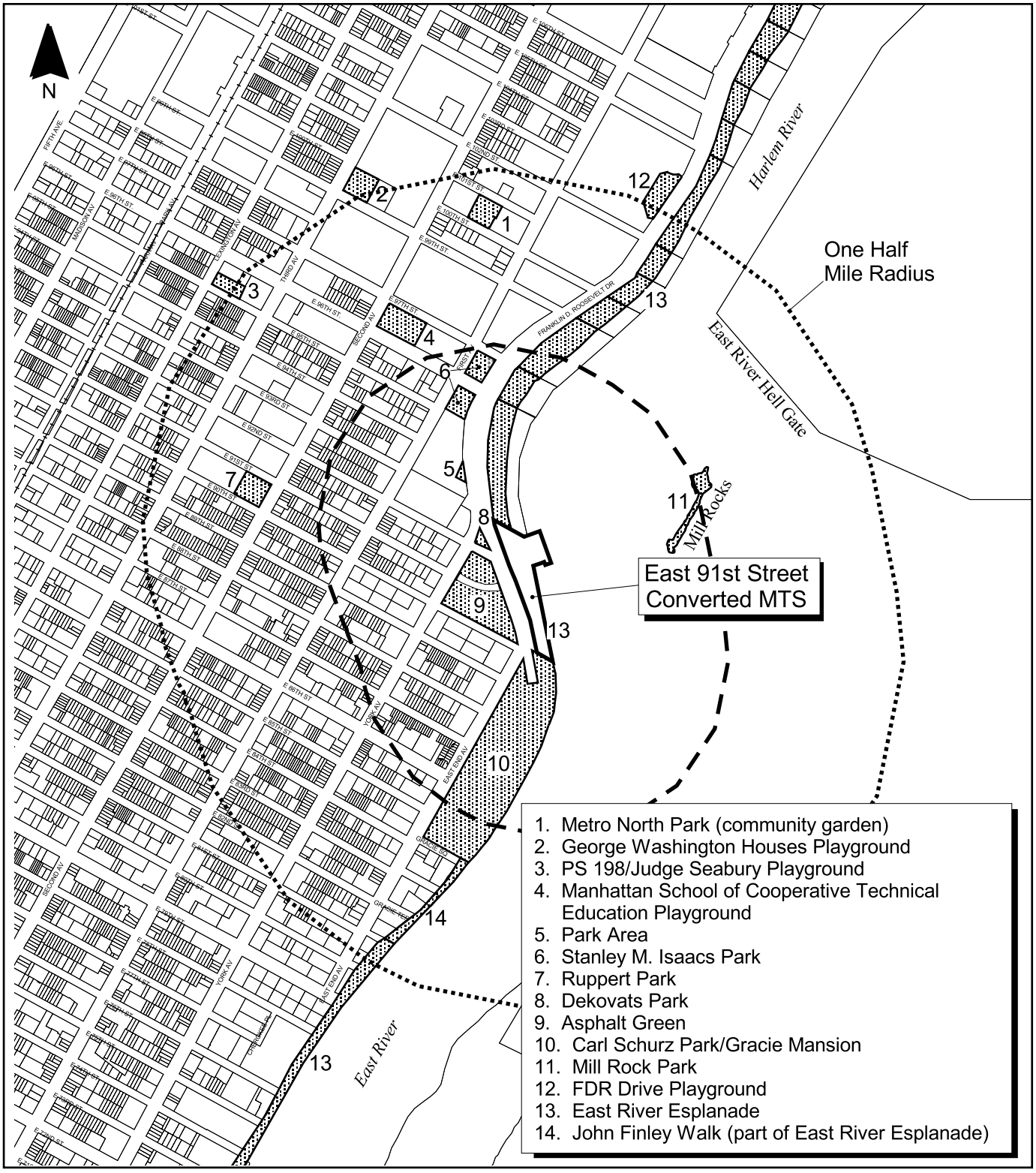
10.5.1.2 Summary of Open Space and Parklands in the Study Area

There are 11 public parks and open spaces within the study area, and 3 just outside to the north. They are listed in Table 10.5-1 and shown on Figure 10.5-1.

Of particular interest are the Asphalt Green complex about 100 feet west of the site and bisected by the drive entering the existing MTS; and Carl Schurz Park, which is located just 200 feet south of the site along the FDR Drive, and includes a public promenade on the waterfront at its northernmost tip nearest the site. Also, located just 100 feet north of the site is Dekovats Park.

10.5.2 Future No-Build Conditions

DPR has no new long-term development plans or notable development projects associated with the open spaces in the study area, except for possible enhancements of Asphalt Green and the new irrigation and fencing to be installed at Ruppert Park several blocks west of the site that will be completed within the next few years. The site will remain DSNY property and the existing MTS will remain, though inactive.



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

500 0 500 Feet

Figure 10.5-1 Open Space/Parkland

East 91st Street Converted MTS

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Table 10.5-1
Public Parks and Open Spaces

Name	Location	Acreage
Metro-North Park (community garden)	East 100th Street and East 101st Street, between First Avenue and Second Avenue	0.9
George Washington Houses Playground	Northeast corner of East 99th Street and Third Avenue	0.95
PS 198/Judge Seabury Playground	Northeast corner of East 95th Street and Lexington Avenue	0.79
Manhattan School of Cooperative Technical Education Playground	East 96th Street, East 97th Street and Second Avenue	1.47
Portion of Harlem River Park	FDR Drive and 94th Street	0.25
Stanley M. Isaacs Park	Between FDR Drive and First Drive, East 95th Street and East 97th Street	1.23
Ruppert Park	East 90th Street, East 91st Street, and Second Avenue	1.0
DeKovats Park	FDR Drive and East 92nd Street	0.05
Asphalt Green	FDR Drive, York Avenue, East 90th and East 92nd Streets	2.52
Carl Schurz Park/Gracie Mansion	East End Avenue, Gracie Square and FDR Drive	14.94
Mill Rock Park	Island in East River at approximately East 95th Street	8.64
FDR Drive Playground	FDR Drive and 103rd Street	1.05
East River Esplanade	Along FDR Drive (and Carl Schurz Park), East 63rd Street to East 126 Street	--
John Finley Walk	Part of East River Esplanade, between East 81st Street and Gracie Square	--

10.5.3 Potential Impacts with the East 91st Street Converted MTS

The site is within close proximity to several open space resources, and its operation places trucks on a drive that bisects the Asphalt Green complex and passes over the East River Esplanade. The proposed East 91st Street converted MTS, therefore, potentially could result in impacts to open space, due to potential odor conditions. In these two particularly sensitive locations, the presence of DSNY trucks may be detectable if they are not kept clean at all times, and if liquid residue spills onto the drive and ramp nearby.

10.6 Cultural Resources

10.6.1 Existing Conditions

10.6.1.1 Definition of the Study Area

The cultural resources study area is defined as that area within ½ mile of the site.

10.6.1.2 Development History of the Area

The study area is located in Yorkville, a historic neighborhood on the Upper East Side of Manhattan. It was once a rural village centered at 86th Street and 3rd Avenue between the farmlands of Harlem to the north and the urban settlement of New Amsterdam to the south. By 1850, Yorkville was a predominantly German community about a mile and half from the northern edge of the city. The hamlet could be reached from the city by a regularly scheduled stagecoach that ran to 3rd Avenue and 86th Street. It was also home to Hazzard's roadhouse, the first stop for coaches carrying passengers from the Hell Gate Ferry at the eastern terminus of 86th Street.

By the turn of the 20th century, Yorkville's population was more diverse, with the largest ethnic groups being Irish, Germans, Hungarians, Jews, Czechs, Slovaks, and Italians, each living in distinct enclaves. The center of the neighborhood remained 86th Street, which featured local commercial establishments.

Following the Civil War, squatters' shacks in the community were replaced by two-story houses for the wealthy, who moved to new luxury mansions and then apartment buildings on Madison, 5th, and Park Avenues in the late 19th and early 20th centuries. Many of these surviving buildings (some of which have become museums and other institutions) are now included in the Upper East Side Historic District, a locally and nationally recognized district. Many brownstones and tenements became or were replaced by multi-family dwellings with ground floor shops. The 3rd Avenue elevated line began service in 1878 followed by the 2nd Avenue line the next year.

Tenement buildings, many of which still stand today, lined many of the easternmost streets and avenues. In fact, several on Second Avenue are historically notable and considered eligible for listing in the State Register of Historic Places.

Gracie Mansion, originally the country home of Archibald Gracie, a successful Scottish businessman, is located at 88th Street and East End Avenue overlooking the East River. After several owners, additions and renovations, the 18th century house became the Mayor's official residence in 1942. The park in which Gracie Mansion is situated is named for Carl Schurz (1829-1906), a reformer, avid conservationist, editor of the New York Evening Post and The Nation, and the neighborhood's most famous 19th century resident.

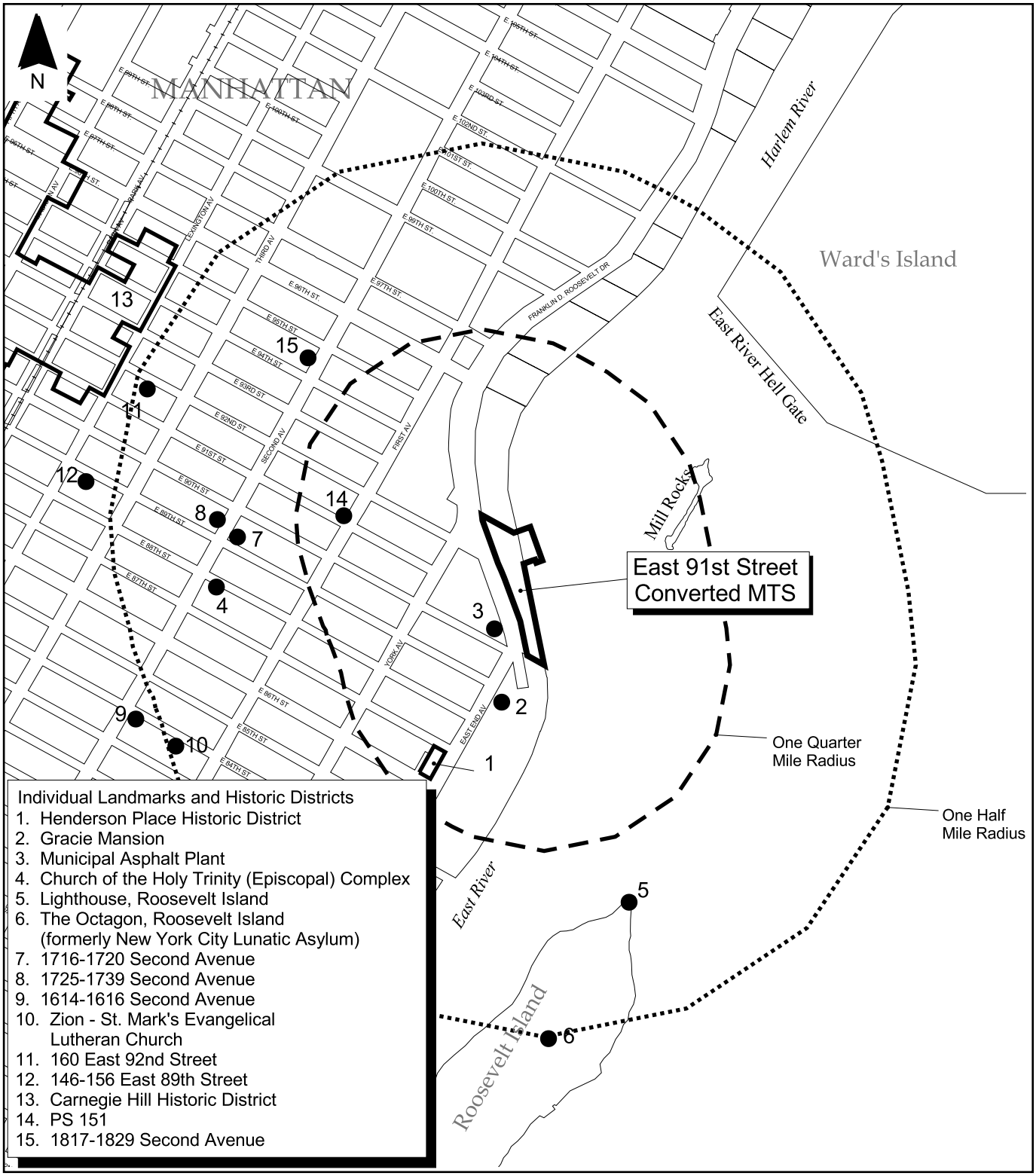
After World War II, the 3rd Avenue elevated line was dismantled and when many brownstones and tenements were demolished and replaced with high-rise apartment buildings, their eastern European residents moved to the suburbs. Gentrification in the years following continued to change the character of the neighborhood. Today, for example, the Rhinelander Mansion, once the home of the most influential family in Yorkville is now home to Ralph Lauren's Polo enterprise.

10.6.1.3 Cultural Resources on the Site

There are no elements of architectural or archaeological significance within the site.

10.6.1.4 Cultural Resources within the Study Area

One historic district and several other historic properties are located within the study area, representing different stages of the neighborhood's development over the last 200 years (Figure 10.6-1). These properties are listed in Table 10.6-1.



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

500 0 500 Feet

Figure 10.6-1 Cultural Resources

East 91st Street Converted MTS

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Table 10.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Henderson Plan Historic District	East End Avenue between East 86 and East 87th Streets	NYCL, NR
Gracie Mansion	East End Avenue at East 88th Street	NYCL, NR, SR
Municipal Asphalt Plant (now Asphalt Green Recreation Center)	FDR Drive at East 90th Street	NYCL, NR, SR
Church of the Holy Trinity Complex	316-322 East 88th Street	NR,SR
Lighthouse	Roosevelt Island	NYCL, NR,SR
The Octagon (Formerly the New York City Lunatic Asylum)	Roosevelt Island	NYCL, NR, SR
	1716-1720 Second Avenue	(Individually eligible to the SR)
	1725-1739 Second Avenue	(Individually eligible to the SR)
	1614-1616 Second Avenue	(Individually eligible to the SR)
	1817-1829 Second Avenue	(Individually eligible to the SR)
Zion-St. Mark's Evangelical Lutheran Church	339-341 East 84th Street	NR, SR
	160 E. 92nd Street	LPC
	146-156 East 89th Street	NYCL, SR, NR
Carnegie Hill Historic District		NYCL, Eligible to SR
P.S. 151	1763 1st Avenue	Individually eligible to the SR

Notes:
SR= New York State Register of Historic Places
NR= National Register of Historic Places
NYCL= New York City Landmark

10.6.2 Future No-Build Conditions

Several individual tenement buildings on Second Avenue and PS 151 on First Avenue have been determined to be eligible for listing on the *State Register of Historic Places*. Except for these properties, there is no reason to anticipate the designation of other resources in this area in the near future. Even with their potential designation, anticipated Future No-Build conditions are assumed to be the same as Existing Conditions.

10.6.3 Potential Impacts with the East 91st Street Converted MTS

Based upon its review, SHPO has stated that the East 91st Street Converted MTS would have no impact upon cultural resources in, or be eligible for inclusion in, *State and National Registers of Historic Places*. The LPC has stated that the site contains no architectural or archeological significance (see Appendix A). The East 91st Street Converted MTS would not result in adverse impacts to cultural resources and no mitigation measures would be warranted.

10.7 Urban Design and Visual Quality

10.7.1 Existing Conditions

10.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (Figure 10.8-1). The site is separated from nearby residential uses by the FDR Highway and Carl Schurz Park, which itself obstructs some street-level views to the waterfront. It appears, however, that upper floors of apartment towers on East 91st Street and York Avenue likely have views of the site, as do outdoor areas of the Asphalt Green complex that borders both sides of the existing MTS entrance drive, and the East River Esplanade that runs along the river, beneath the MTS entrance ramp and adjacent to the facility itself. Due to the site's location on the waterfront, view corridors from points of waterfront access are the areas of primary concern in assessing potential impacts to urban design and visual quality.

10.7.1.2 Description of the Site

An existing inactive MTS is on the site. When it was operating, full DSNY trucks drove into the existing MTS (a 56-foot-tall prefabricated steel building), unloaded within the building, and drove out of the building and off the property. The facility is accessed via a drive that bisects the Asphalt Green Complex to the west. The drive is elevated to cross above the FDR Drive and the East River Esplanade, entering an elevated platform over the water. There is no land portion of the site (see Figures 10.7-1 and 10.7-2).

10.7.1.3 Urban Design and Visual Quality of the Study Area

The East River Esplanade provides an attractive waterfront edge to the Carl Schurz Park. It features benches, decorative fencing and lighting, and it is wide enough to comfortably accommodate runners, walkers, and cyclists (Figure 10.7-3). Open views of the waterfront, Randall Island, Astoria (Queens), and Wards Island are as attractive as the views of the nearby landscaped Carl Schurz Park. Traffic is unseen, as the FDR runs beneath the esplanade in the

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Figure 10.7-1 : View of East 91st Street MTS from adjacent East River Esplanade.

Figure 10.7-2 : View of East 91st Street entrance ramp on York Avenue, bisecting the Asphalt Green Complex.

Figure 10.7-1 and 10.7-2
Urban Design and Visual Quality
East 91st Street Converted MTS

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area of park. The esplanade, which is elevated over the FDR Drive near the park, descends to the elevation of the FDR running alongside the FDR north of the park, where a ferry terminal is located at East 91st Street (Figure 10.7-4). Alongside the existing MTS, the esplanade is traversed by the elevated access ramp to the MTS. Trees are planted in the esplanade near the existing MTS, softening the appearance of the structure's surface.

Views toward the west from the esplanade are of the 20-30 story apartment towers located in the neighborhood below East 96th Street, including the George Washington Houses complex (Figures 10.7-5 and 10.7-6). Further inland near these residences are the busy 1st and 2nd Avenues, which are lined with commercial and automotive uses. East End Avenue, which does not appear as trafficked and is lined almost exclusively with tall residential complexes, features attractive views of Carl Schurz Park from the street.

10.7.2 Future No-Build Conditions

There are no plans for the site or surrounding environs that would lead to changes in urban design or visual quality conditions. The new developments at 389 East 89th Street and East 91st Street and First Avenue (see Section10.2.2) would not alter the general visual quality or design of the study area. The anticipated Future No-Build Conditions, therefore, are fundamentally the same as Existing Conditions.

10.7.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS would resemble the existing MTS it would replace in terms of its building typology, massing and position, elevated access, as well as adjacency to the esplanade.

The nearly 30-foot increase in height over the existing MTS is not expected to affect inland views toward the waterfront. Street-level views from inland areas are largely buffered by Carl Schurz Park and views from nearer the waterfront, such as from the promenade, are already obstructed to some extent by the existing facility. The overall size of the new facility is also not likely to contribute to a substantial change of views toward the waterfront from upper-story residential uses along East End Avenue.

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Figure 10.7-3 : View of East River Esplanade, facing south from approximately East 88th Street (FDR Drive visible beneath the esplanade).

Figure 10.7-4 : Ferry Terminal at East 90th Street.

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Figure 10.7-5 : View south toward East 91st Street MTS from East River Esplanade at approximatly East 92nd Street. The MTS is visible to the left and a portion of the Asphalt Green Complex is visible to the right, with high-rise residences on York Avenue visible in the distance.

Figure 10.7-6 : View south toward East 91st Street MTS from East River Esplanade at East 96th Street.

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It is assumed that the landscaping of the walkway near the existing MTS would be retained or replaced, and the esplanade and water area below the entrance around the facility would be properly maintained when the new facility is constructed and operating. The appearance of the new structure would resemble that of the existing one, with the barges located on the northern side, which is less visible from the park and buffered from inland street-level views. Therefore, the new facility and reactivation of the former ramp would result in no impact to visual quality of the area, and the urban design of the area would remain virtually unchanged.

10.8 Neighborhood Character

10.8.1 Existing Conditions

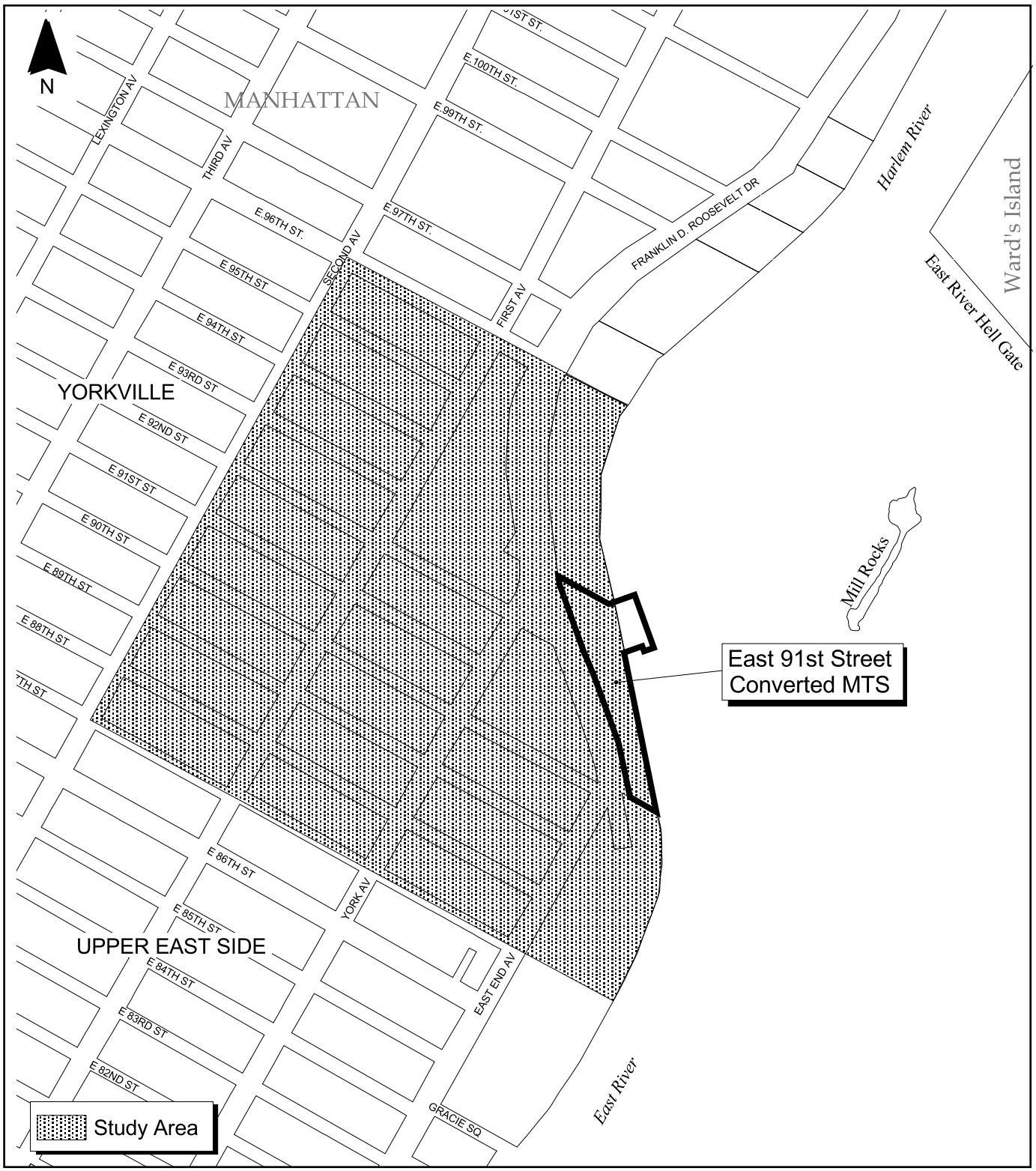
10.8.1.1 Definition of the Study Area

Unlike the other sites studied, this site is within fairly close proximity to both residential and open space resources, which are the two major factors contributing to the neighborhood character of the area. It is, however, somewhat separated from inland residential neighborhoods by the FDR Drive. Though the site is approximately 100 feet from the Asphalt Green complex and 200 feet from Carl Schurz Park, where Gracie Mansion is located, these park areas separate the residential areas from the site. The points of public access nearest the site are the East River Esplanade that runs outboard of the FDR Drive, and Asphalt Green. These two open space areasand Carl Schurz Park are included in the neighborhood character study area, which is defined by East 96th Street to the north; East 87th Street to the south; Second Avenue to the west and the East River shore to the east (Figure 10-8.1).

10.8.1.2 Description of Neighborhood Character

The visual quality of the area is pleasant, with well-maintained apartment blocks lining the streets, sidewalk trees, and well appointed parks and recreational facilities. As with much of the Upper East Side, this area is conducive to pedestrians, though the nearest "convenience" stores (groceries, delis, etc.) tend to be located further west, along York Avenue and the busier First and Second Avenues, rather than East End Avenue. Lacking such commercial activity and given the 12-block length of East End Avenue, which is almost exclusively residential in the study area and not a major through street, the streets in that portion of the study area nearest the site are relatively quiet.

A few small warehouses and auto-related uses are intermingled with the residential uses in the interiors of three blocks south of East 92nd Street between York and First Avenues. Their presence, however, does not detract from the otherwise solidly residential nature of the area, either in appearance or in relatively limited activity, given that streets running through residential areas in Manhattan generally have more through traffic than many residential areas in other boroughs.



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

500 0 500 Feet

Figure 10.8-1 Neighborhood Location

East 91st Street Converted MTS

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Carl Schurz Park buffers the residential areas from the activity and visual presence of the FDR Drive, and in the study area the park extends over the highway, where a promenade provides access to the waterfront along the perimeter of the park and runs adjacent to the existing MTS.

The Asphalt Green complex is another major non-residential component, adding to the character and image of the neighborhood. Featuring several acres of outdoor sporting areas, as well as indoor pool and training facilities, the complex is an Upper East Side destination.

10.8.2 Future No-Build Conditions

There are no known plans for development on the site, the neighborhood parks, or the overall study area, except for the construction of two multi-use/residential towers at 389 East 89th Street and 91st Street and First Avenue, both of which are fairly typical of the neighborhood. Therefore, it is reasonable to assume that Future No-Build Conditions will resemble Existing Conditions. The site will remain DSNY property and the existing MTS will remain standing.

10.8.3 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS is not expected to result in significant impacts on neighborhood character because it would be a reactivation of waste transfer facilities on a site formerly used for that purpose; although compared to Future No-Build Conditions, the re-introduction of trucks into the neighborhood would be noticeable. DSNY and other collection agency vehicles would utilize York Avenue south of East 91st Street, also a busy thoroughfare that accesses the FDR, in addition to East 90th Street and East 91st Street, and 1st and 2nd Avenues north of East 91st Street; however, no unmitigatible traffic impacts are predicted. (See Section 10.9 for a discussion of potential traffic impacts.) Likewise, there are no significant adverse air quality, odor or noise impacts predicted. (See Sections 10.10, 10.11 and 10.12, respectively, for discussions of potential air quality and noise impacts.)

The proposed East 91st Street Converted MTS potentially could result in impacts to neighborhood character, however, due to potential odor conditions. The site is unique among sites analyzed in that in addition to its proximity to dense residential uses, its operation places

trucks on a drive that bisects an open space and passes over a completed waterfront esplanade. In these two particularly sensitive locations, the presence of DSNY trucks may be detectable if they are not kept clean at all times, and if liquid residue spills onto the drive and ramp nearby.

10.9 Traffic and Transportation

10.9.1 Introduction

The East 91st Street Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.10 for a discussion of CEQR analysis thresholds.)

10.9.2 Existing Conditions

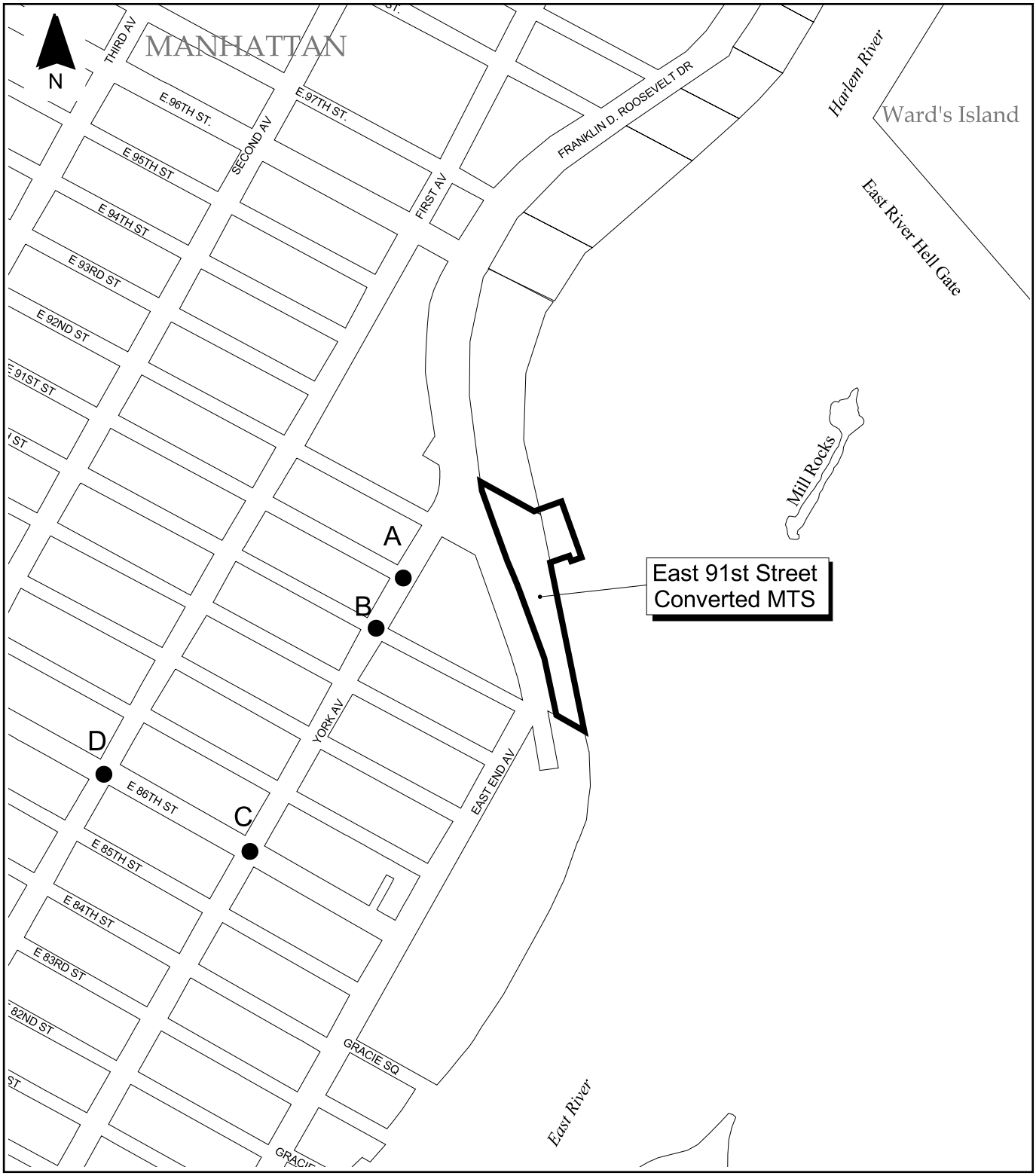
10.9.2.1 Definition of Study Area

The traffic analysis study area is relatively limited, existing entirely within the Upper East Side (Yorkville) neighborhood of Manhattan, and is focused primarily along the York Avenue and East 86th Street corridors. This study area is predominantly residential with ground floor commercial uses. There are no CEQR defined areas of concern located within the study area. Figure 10.9-1 shows the locations of the intersections selected for analysis (locations A through D). Intersections analyzed were selected using the procedures defined in Section 3.10.2.

All collection vehicles must access the site from York Avenue and East 91st Street. Northbound and eastbound collection vehicles would approach from the south via East 86th Street and York Avenue and turn east onto East 91st Street. Southbound collection vehicles would approach the site on Second Avenue and turn east onto East 90th Street to York Avenue.

10.9.2.2 Surface Network

One major highway, the Franklin D. Roosevelt (FDR) Drive, services the study area. First Avenue, Second Avenue and East 86th Street are local truck routes that provide access to and from the site. A map showing all major truck routes and local truck routes in Manhattan is provided in Section 3.10.2.1 (Figure 3.10-4).



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

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Figure 10.9-1 Traffic Analysis Study Area

East 91st Street Converted MTS

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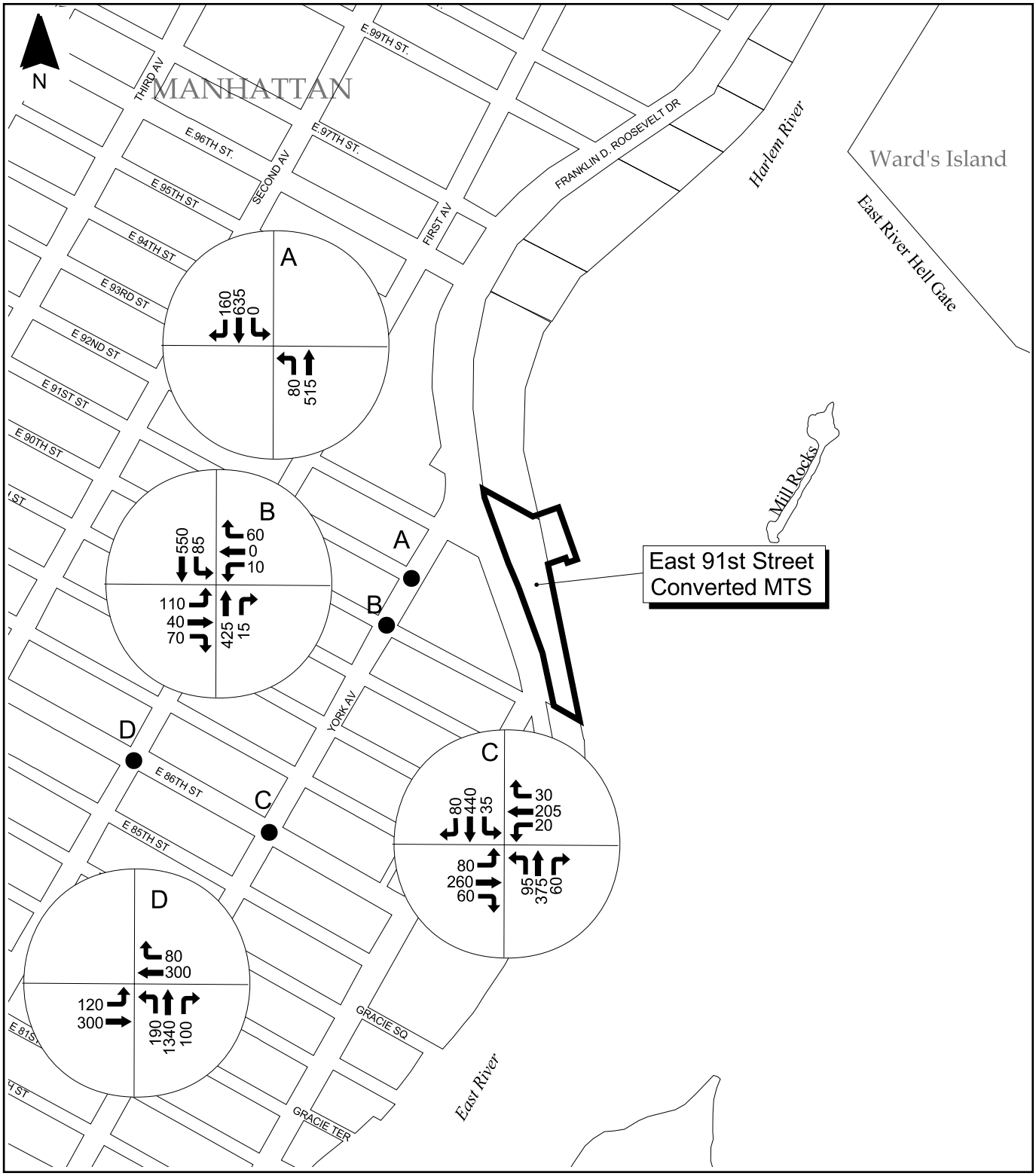
10.9.2.3 Existing Traffic Operations

The four intersections listed below were identified for analysis because they are the most likely to be impacted from an increase in DSNY and other agency collection vehicle traffic to the East 91st Street Converted MTS. All of them are on major arterials and/or collect vehicle routes. Diagrams of these intersections are included in Technical Backup submitted to NYCDOT.

- York Avenue and East 91st Street – Signalized Intersection (Figure 10.9-1 – location A);
- York Avenue and East 90th Street – Signalized Intersection (Figure 10.9-1 – location B);
- York Avenue and East 86th Street – Signalized Intersection (Figure 10.9-1 – location C); and
- First Avenue and East 86th Street – Signalized Intersection (Figure 10.9-1 – location D).

First Avenue is a principal arterial that provides northbound access from lower Manhattan (East Village/Lower East Side) to East Harlem. York Avenue and East 86th Street are minor arterials that provide access for local and commercial traffic. Both East 90th Street and East 91st Streets are local streets.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.10.6 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 11 and February 13, 2003, while ATR counts were conducted between February 10 and February 14, 2003. Figures 10.9-2, 10.9-3, and 10.9-4 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 9:00 a.m. and 10:00 a.m., and the PM peak between 3:45 p.m. and 4:45 p.m. Table 10.9-1 presents the v/c ratio, delay, and LOS for the four intersections during the AM, Facility, and PM peaks.



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

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HDR PB HydroQual EEA

Figure 10.9-2 Existing Traffic Volumes - AM Peak

East 91st Street Converted MTS

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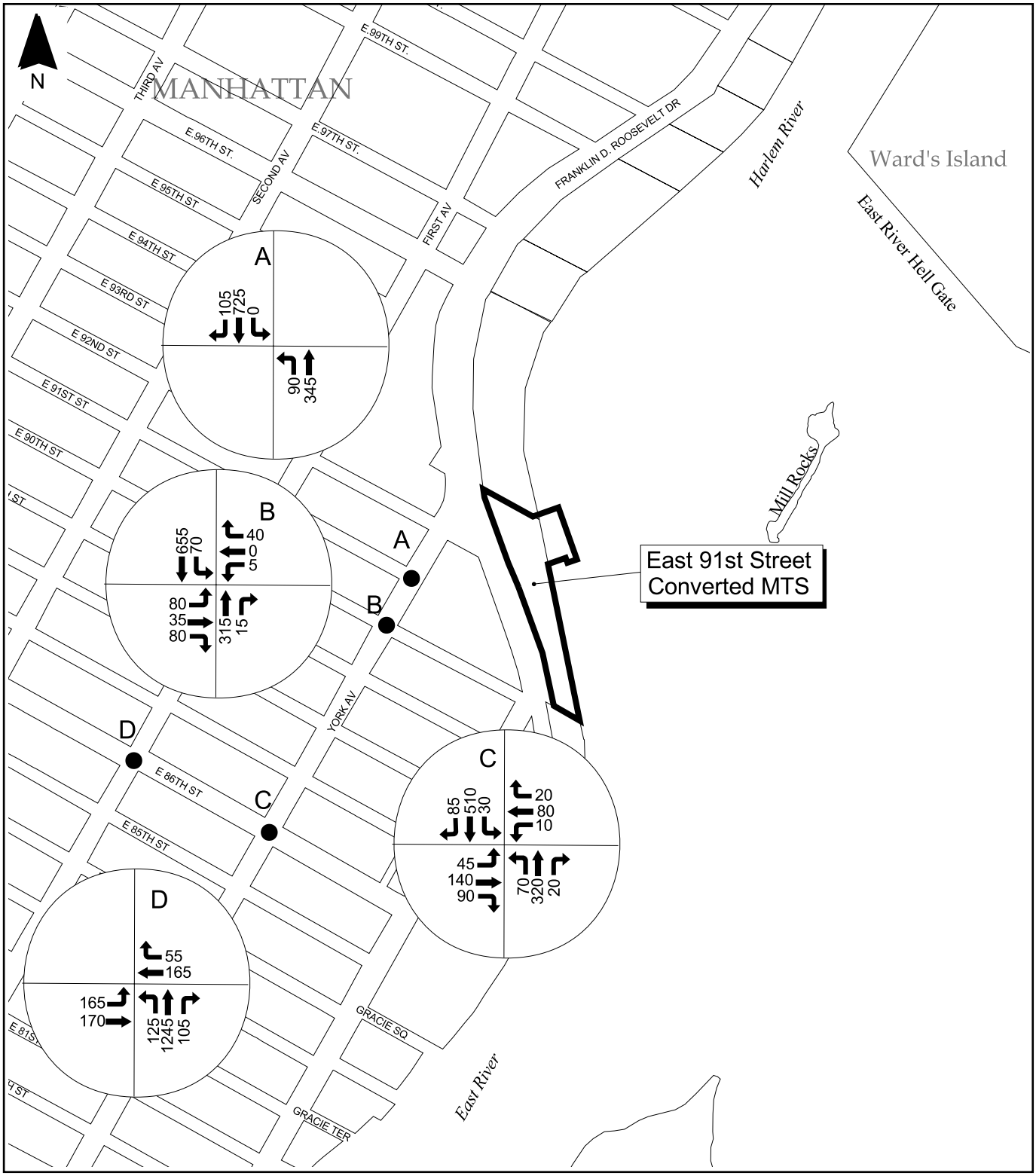

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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HDR PB HydroQual EEA

Figure 10.9-3 Existing Traffic Volumes
Facility Peak
East 91st Street Converted MTS

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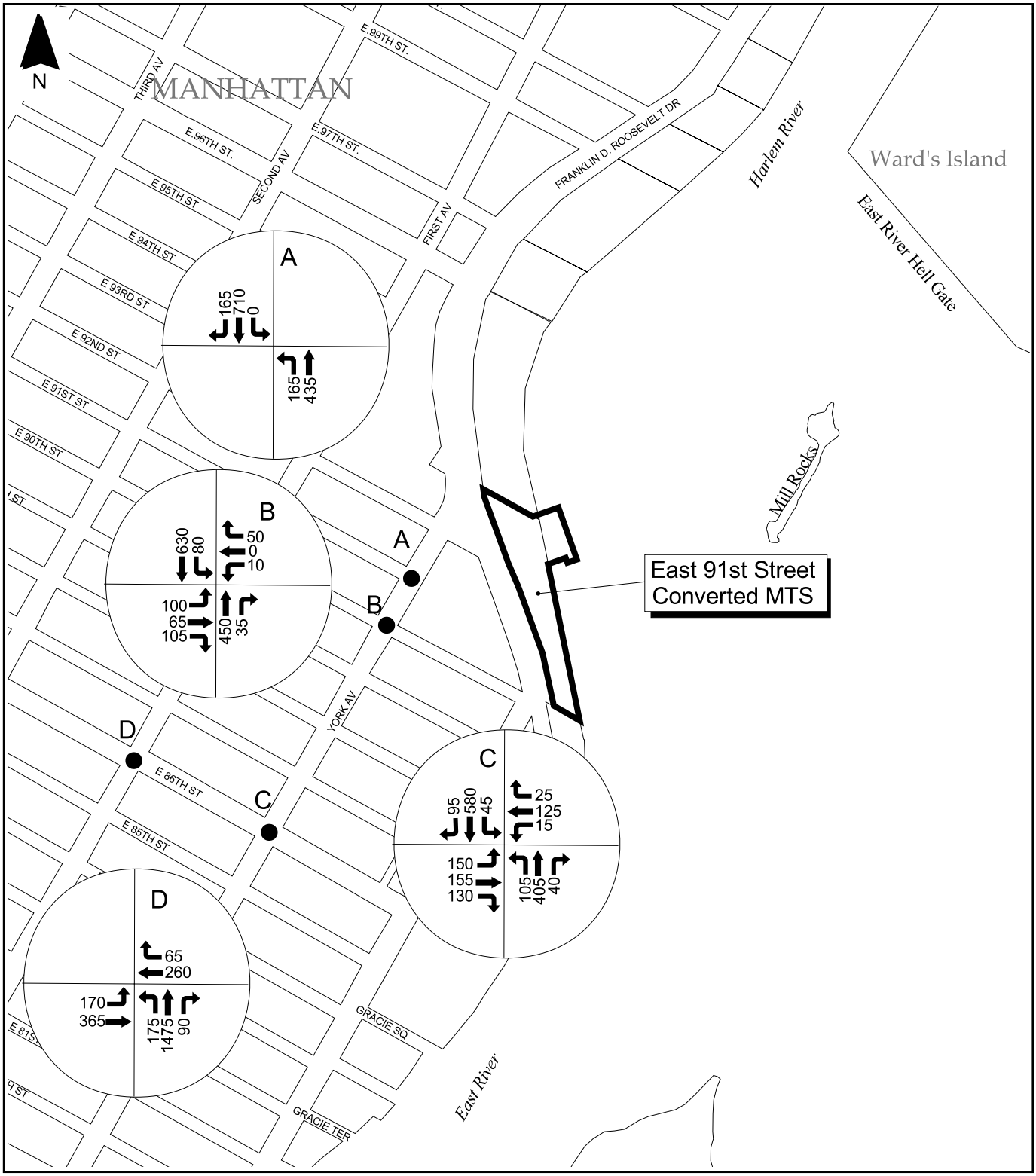

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 10.9-4 Existing Traffic Volumes - PM Peak

East 91st Street Converted MTS

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Table 10.9-1
HCM Analysis[(1)] – Existing Conditions
East 91st Street Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.63	25.0	C	-	20.3	C	0.77	30.5	C
WB LTR	0.37	20.1	C	0.15	17.5	B	0.25	18.6	B
NB LTR	0.66	15.5	B	0.50	12.5	B	0.71	16.8	B
SB LTR	0.46	11.4	B	0.40	10.8	B	0.46	11.4	B
OVERALL		17.0	B		13.6	B		18.4	B
East 90th Street & York Avenue (signalized)									
EB LTR	0.65	42.0	D	0.54	38.2	D	0.76	39.2	D
WB LR	0.29	33.2	C	0.20	31.2	C	0.32	26.5	C
NB TR	0.29	6.1	A	0.23	5.8	A	0.36	5.9	A
SB LT	0.54	8.5	A	0.54	8.4	A	0.63	8.8	A
OVERALL		15.1	B		13.5	B		14.2	B
East 91st Street & York Avenue (signalized)									
NB LT	0.40	6.9	A	-	-	-	-	-	-
NB DFL	-	-	-	0.44	11.9	B	0.88	41.6	D
NB T	-	-	-	0.20	5.6	A	0.29	5.4	A
SB TR	0.40	6.7	A	0.37	6.5	A	0.44	6.2	A
OVERALL		6.8	A		6.6	A		9.9	A
East 86th Street & 1st Avenue (signalized)									
EB LT	0.65	26.5	C	-	-	-	0.76	30.2	C
EB DFL	-	-	-	0.62	30.8	C	-	-	-
EB T	-	-	-	0.45	23.1	C	-	-	-
WB TR	0.28	19.2	B	0.22	18.7	B	0.22	18.7	B
NB LT	0.59	13.1	B	0.80	17.0	B	0.68	14.3	B
NB R	0.25	10.9	B	0.27	11.2	B	0.19	10.2	B
OVERALL		16.4	B		18.3	B		17.8	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

Existing truck traffic through most of the intersections was moderate. The percentages of trucks increased steadily during the morning hours, remaining between 10 percent and 11 percent during mid-day hours, then decreasing to 8 percent or lower during the PM peak hours.

10.9.2.3.1 LOS at Signalized Intersections

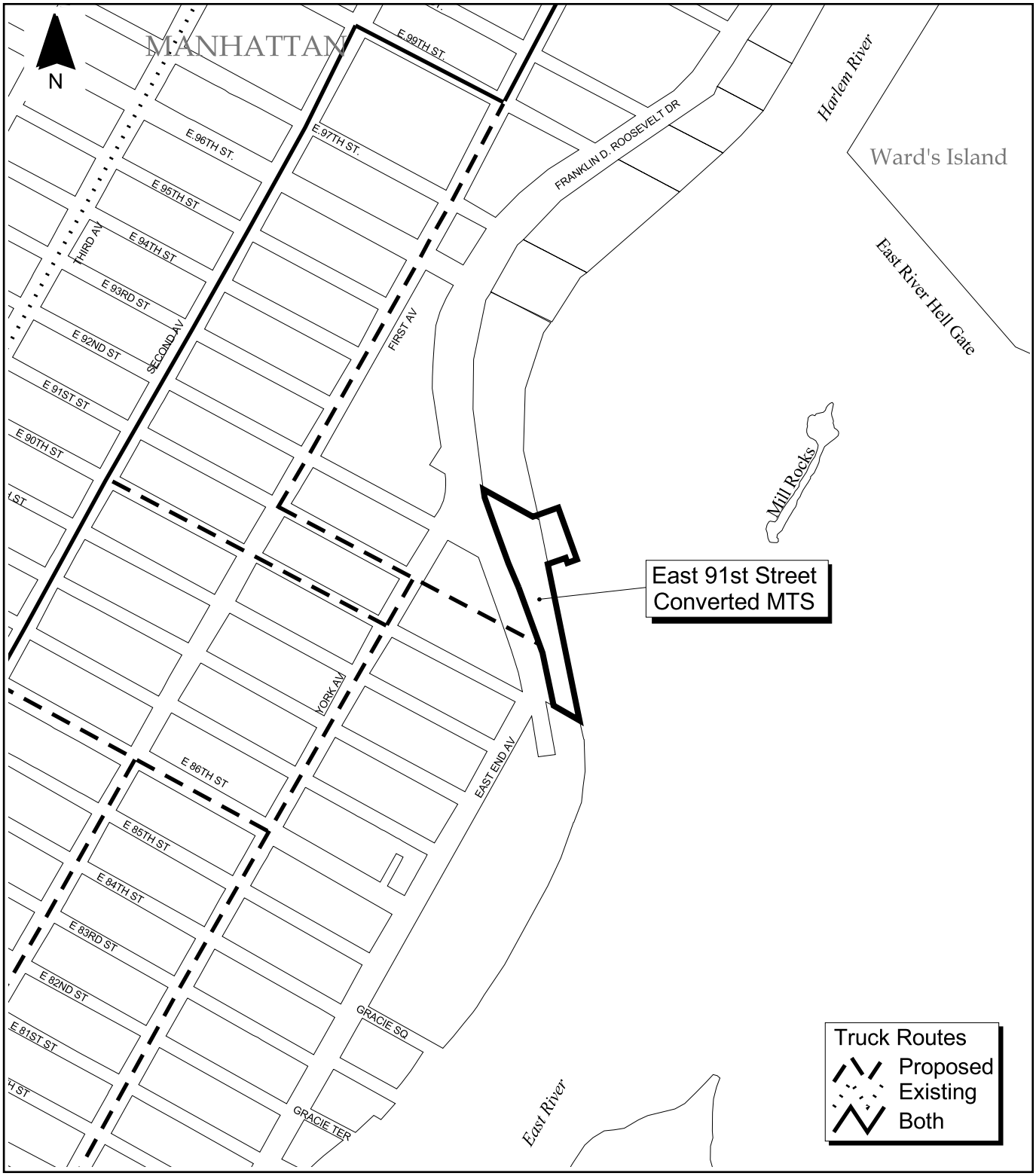
Table 10.9-1 shows that the signalized intersections generally operated at an overall LOS of B or C with the following exceptions. The lane group with the least favorable LOS was the eastbound approach at the intersection of York Avenue and East 90th Street. During the AM, Facility, and PM peak hours, this approach operated at LOS D with delays of 42.0, 38.2, and 39.2 seconds, respectively. During the PM peak hour, the northbound (defacto) left movement at the intersection of York Avenue and East 91st Street operated at LOS D with 41.6 seconds of delay.

10.9.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

10.9.2.4 Existing DSNY-Related Traffic

The existing DSNY-related traffic in the vicinity of the East 91st Street Converted MTS is generated by DSNY and related facilities in the general area, most notably the DSNY Manhattan District 11 Garage (East 99th Street between First and Second Avenues). Within the study area, DSNY-related traffic is primarily routed along Second Avenue and Third Avenue. The existing routes to the commercial vendors (located in New Jersey) are presented in Figure 10.9-5.



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

Figure 10.9-5 Existing and Proposed Sanitation Truck Routes East 91st Street Converted MTS

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10.9.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The 86th Street subway station (for the number 4, 5, and 6 lines) and the 96th Street subway station (for the number 6 line) are located approximately ½-mile southwest and ½-mile northwest of the East 91st Street Converted MTS, respectively.

Three MTA bus lines, M15, M31, and M86, provide service along First Avenue, Second Avenue, York Avenue, and East 86th Street, respectively. There are bus stops at every study intersection except York Avenue and East 90th Street and scheduled stops occur at various times during the day.

10.9.2.6 Pedestrian Activity

Pedestrian activity is generally moderate to high within the study area. Striped crosswalks and pedestrian signals are provided at all study intersections. Despite the higher level pedestrian activity, it is not expected to affect the capacity analysis significantly.

10.9.3 Future No-Build Conditions

10.9.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 0.5% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. In addition, additional traffic generated by proposed developments in the study expected to be completed by the Future No-Build year (2006) was also included. The following is a listing of the approved or in-process developments that are expected to generate significant volumes of traffic through the study area and, thus, were specifically accounted for as part of this analysis:

- 389 East 89th Street (residential and retail);
- 181 East 90th Street (residential and retail); and
- First Avenue/East 91st Street (residential, hotel, and medical office building).

Figures 10.9-6, 10.9-7 and 10.9-8 depict the Future No-Build traffic volumes for the AM, Facility and PM peaks at the intersections analyzed. Table 10.9-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, Figure 10.9-6 Future No-Build Traffic Volumes AM Peak intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their existing condition LOS, with the following exceptions:

- During the PM peak hour, the delay of the eastbound approach at the intersection of York Avenue and East 90th Street increased from 39.2 to 45.9 seconds (LOS D in both cases).
- During the PM peak hour, the delay of the northbound (defacto) left movement at the intersection of York Avenue and East 91st Street increased from 41.6 to 86.9 seconds (LOS D to LOS F).

10.9.3.2 Public Transportation

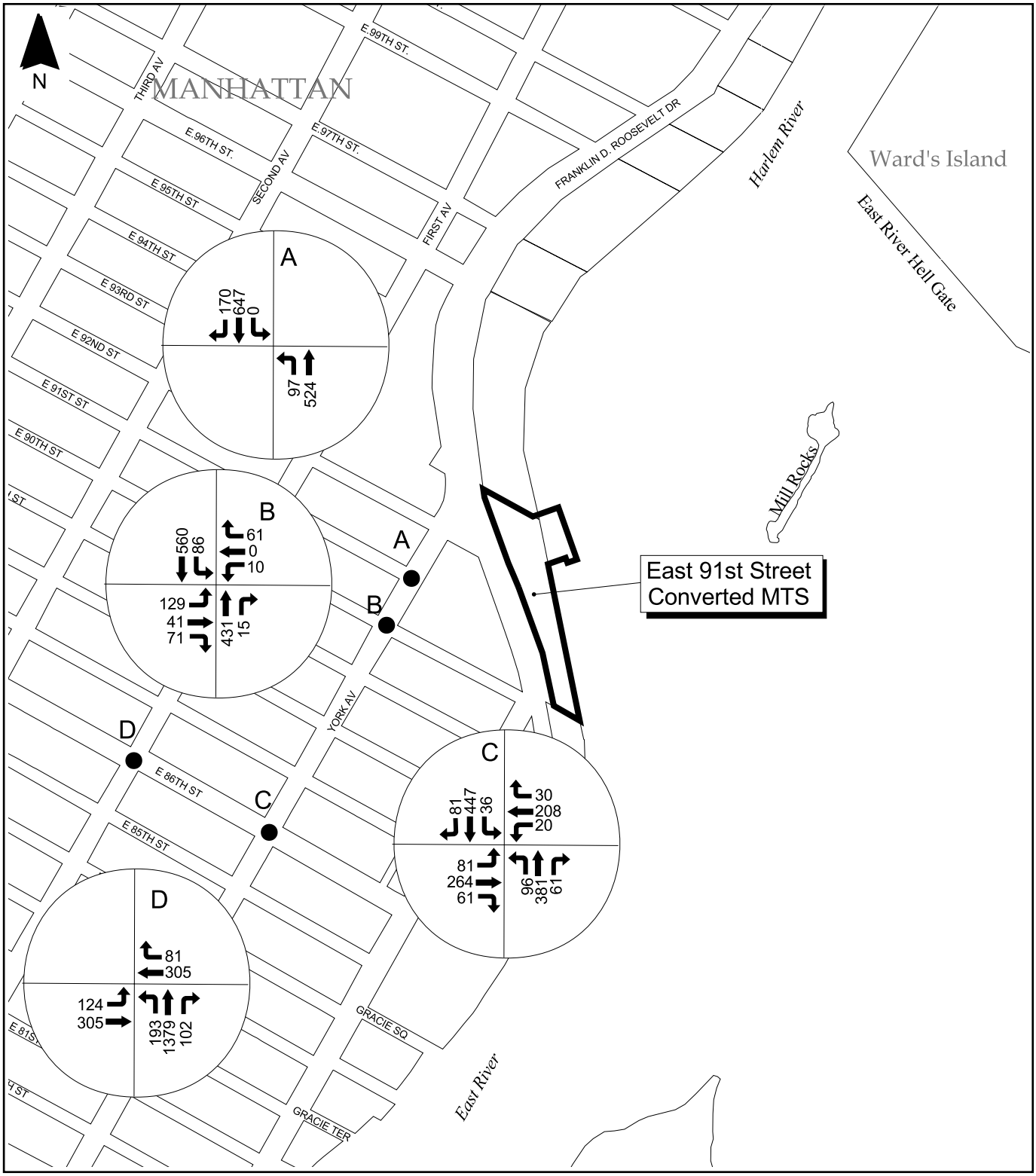
Future No-Build Conditions are expected to remain the same as Existing Conditions.

10.9.3.3 Pedestrian Activity

Future No-Build Conditions are expected to remain the same as Existing Conditions.

10.9.4 Potential Impacts with the East 91st Street Converted MTS

The East 91st Street Converted MTS would receive waste from four CDs in Manhattan—Manhattan Districts MN05, MN06, MN08, and MN11. Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours.



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

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Figure 10.9-6 Future No-Build Traffic Volumes
AM Peak
East 91st Street Converted MTS

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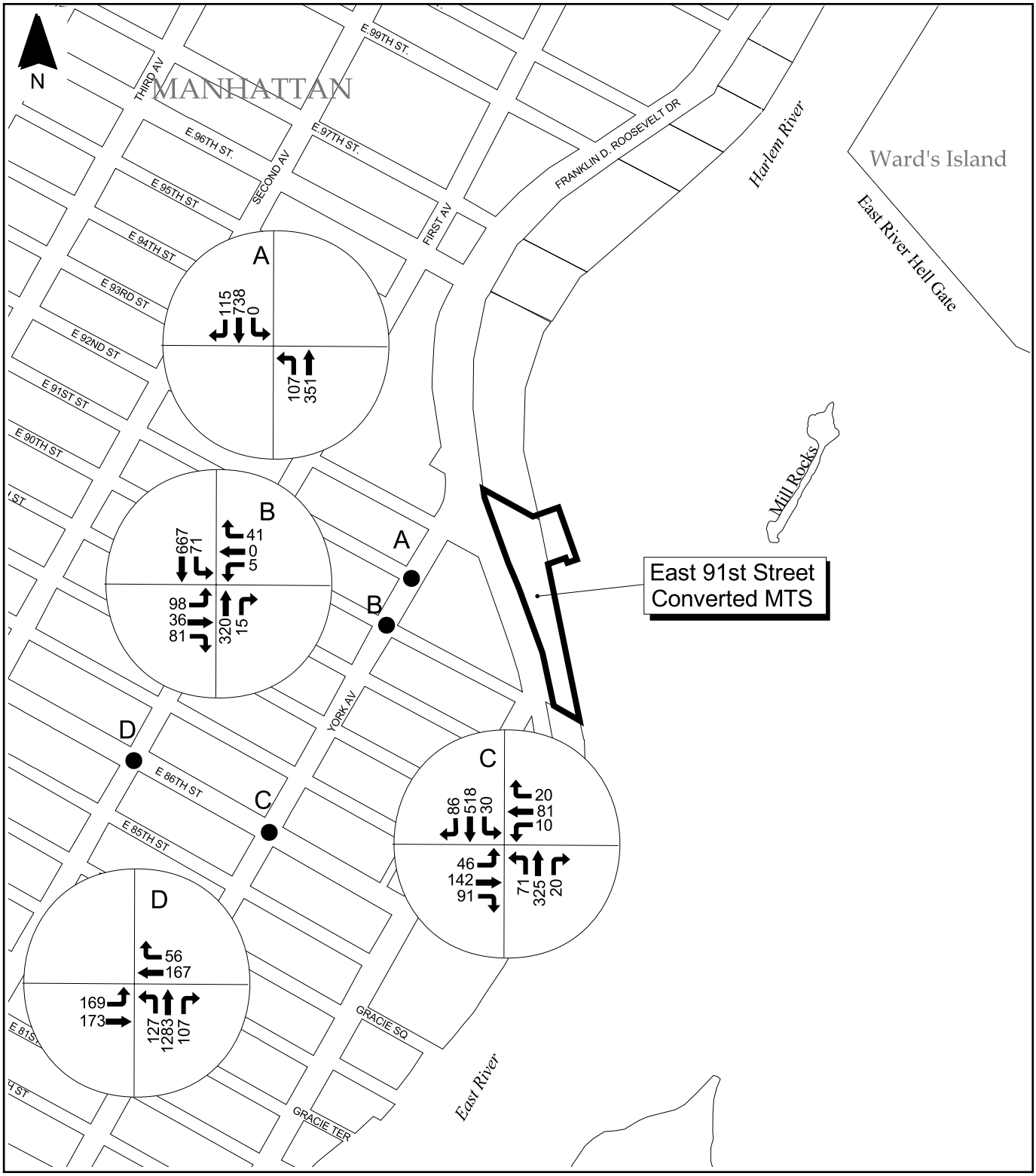

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 10.9-7 Future No-Build Traffic Volumes
Facility Peak
East 91st Street Converted MTS

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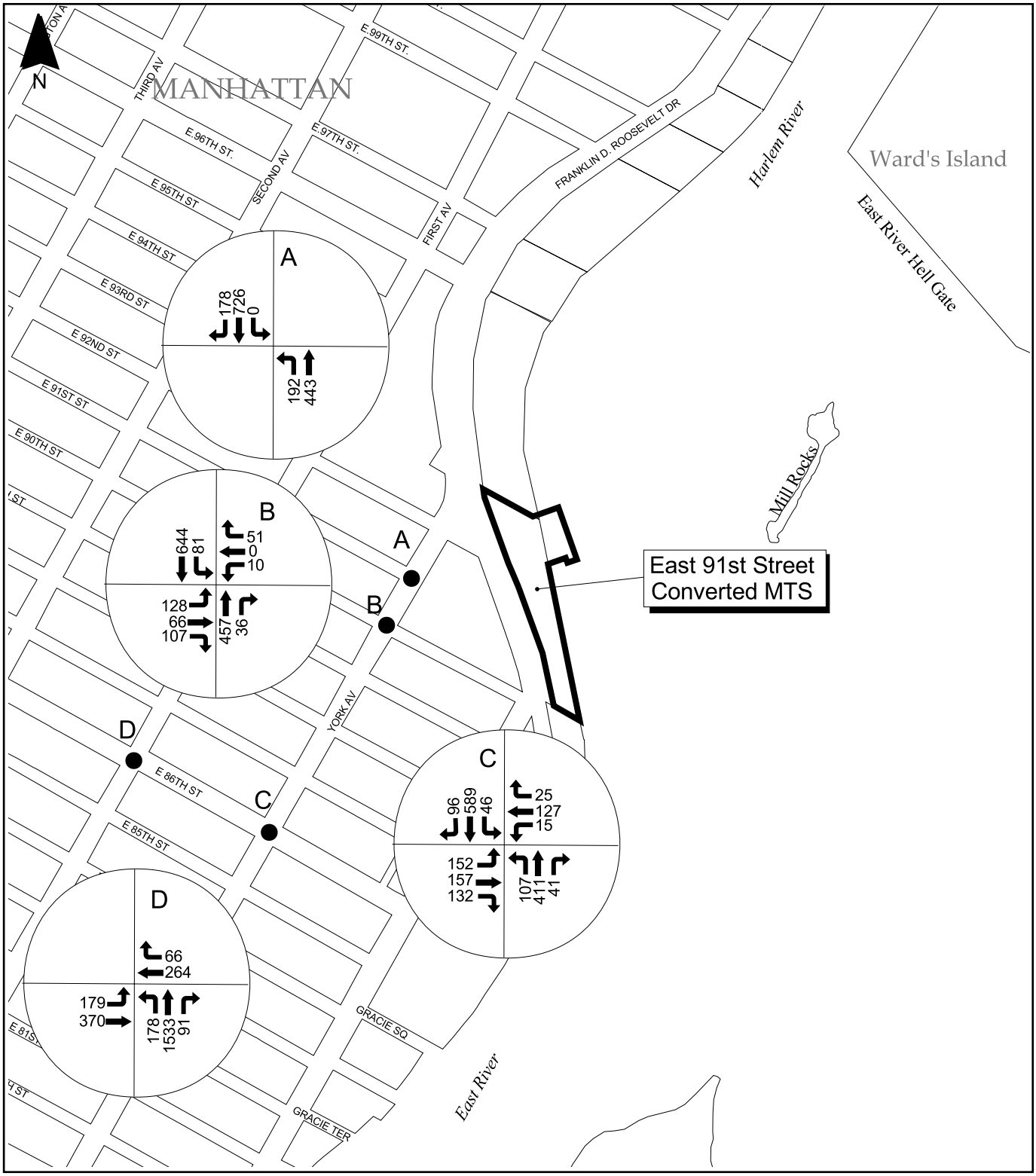

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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HDR PB HydroQual EEA

Figure 10.9-8 Future No-Build Traffic Volumes
PM Peak
East 91st Street Converted MTS

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Table 10.9-2
HCM Analysis[(1)] – No Build Conditions
East 91st Street Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.64	25.3	C	0.39	20.4	C	0.78	31.0	C
WB LTR	0.38	20.1	C	0.15	17.5	B	0.26	18.7	B
NB LTR	0.67	15.8	B	0.51	12.6	B	0.72	17.3	B
SB LTR	0.47	11.5	B	0.41	10.8	B	0.47	11.4	B
OVERALL		17.2	B		13.7	B		18.7	B
East 90th Street & York Avenue (signalized)									
EB LTR	0.70	44.6	D	0.59	39.8	D	0.85	45.9	D
WB LR	0.30	33.2	C	0.20	31.3	C	0.33	26.6	C
NB TR	0.30	6.2	A	0.24	5.8	A	0.37	5.9	A
SB LT	0.55	8.6	A	0.56	8.6	A	0.65	9.0	A
OVERALL		16.0	B		14.2	B		16.0	B
East 91st Street & York Avenue (signalized)									
NB-DFL	0.54	21.8	C	0.54	15.1	B	1.07	86.9	F
NB-T	0.35	6.5	A	0.20	5.6	A	0.30	5.4	A
SB-TR	0.42	6.8	A	0.38	6.5	A	0.46	6.3	A
OVERALL		7.7	A		7.0	A		16.1	B
East 86th Street & 1st Avenue (signalized)									
EB LT	0.67	27.0	C	-	-	-	0.79	31.5	C
EB DFL	-	-	-	0.64	31.7	C	-	-	-
EB T	-	-	-	0.46	23.3	C	-	-	-
WB TR	0.28	19.3	B	0.22	18.8	B	0.22	18.7	B
NB LT	0.61	13.3	B	0.83	17.8	B	0.71	14.7	B
NB R	0.25	10.9	B	0.27	11.2	B	0.19	10.3	B
OVERALL		16.6	B		18.9	B		18.3	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

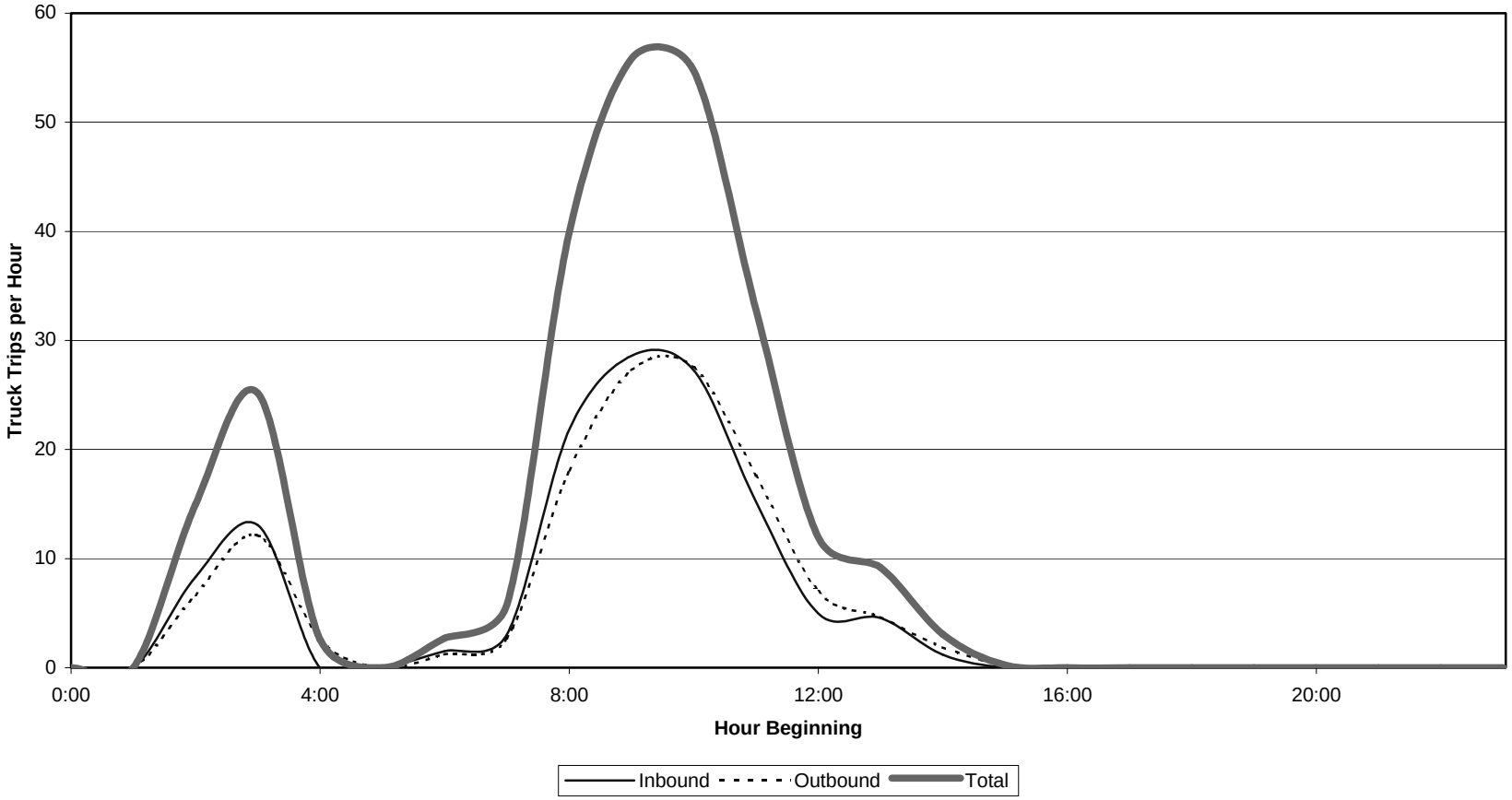
10.9.4.1 2006 Build Traffic Conditions

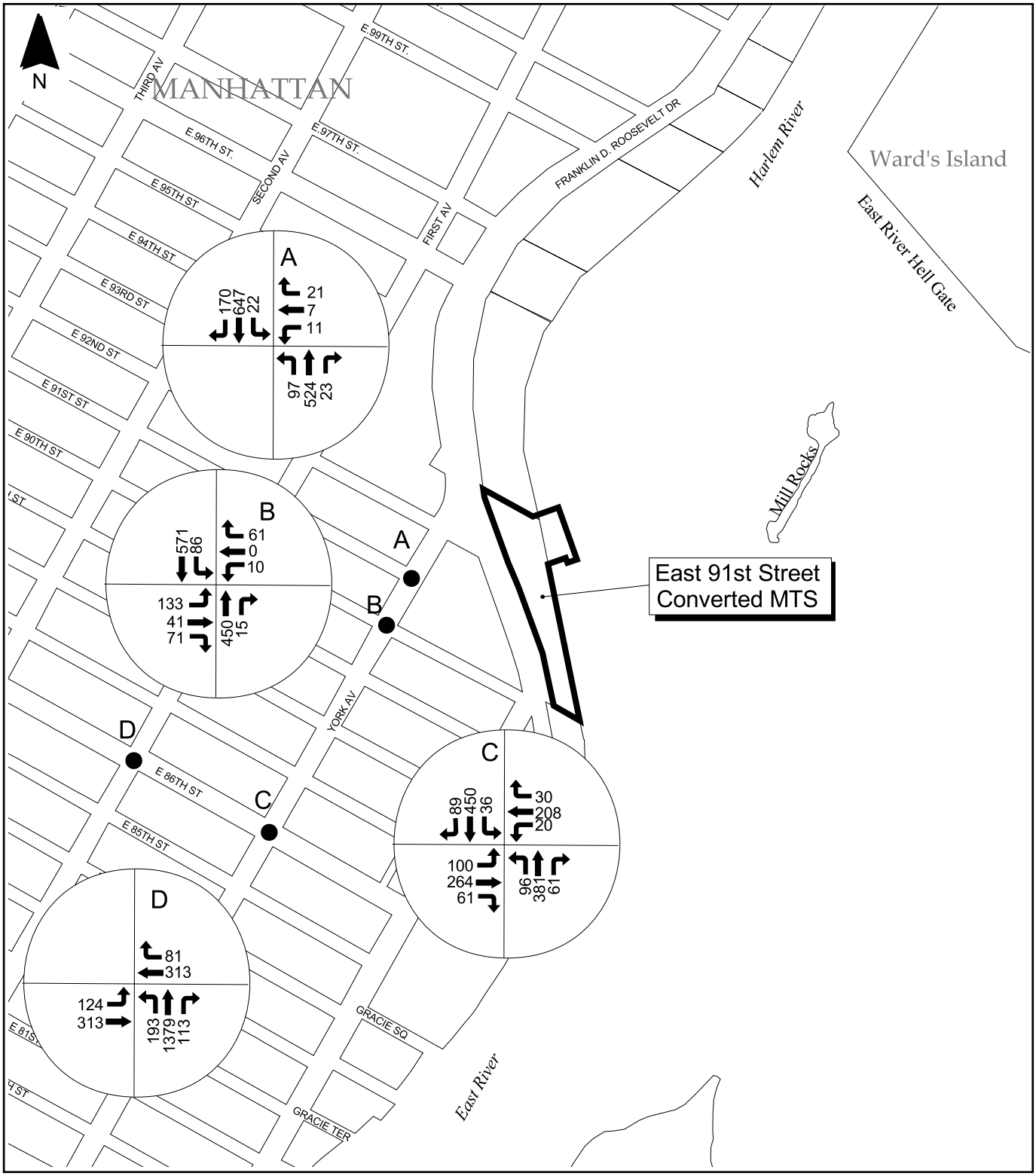
The 2006 Future Build Conditions assume that the East 91st Street Converted MTS would generate 259 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes. The proposed collection vehicle truck routes for the East 91st Street Converted MTS are shown in Figure 10.9-5.

Figure 10.9-9 presents the average peak day temporal distribution of collection vehicles for the East 91st Street Converted MTS. Section 3.10.3.1 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority, and relay). As shown, the number of collection vehicles generated by the East 91st Street Converted MTS is expected to vary from approximately 0 to 15 truck trips per hour in the late evening/early morning, 5 to 56 truck trips per hour in the mid-morning/early afternoon, and 0 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (56) occurs at approximately 9:00 a.m.

Figures 10.9-10, 10.9-11, and 10.9-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 9.9-13, 9.9-14, and 9.9-15 show the intersections analyzed with only the net increase in site generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the East 91st Street Converted MTS. These projected net increases were routed through the intersections for the AM, Facility, and PM peak hours. The highest net increase in trucks in the ingress or egress direction was 28. The highest net increase at any one intersection was 56 trucks. Both of these net increases occurred at the intersection of York Avenue and East 91st Street.

Figure 10.9-9
Truck Trips per Hour
East 91st Street Converted MTS





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

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Figure 10.9-10 2006 Build Traffic Volumes
AM Peak
East 91st Street Converted MTS

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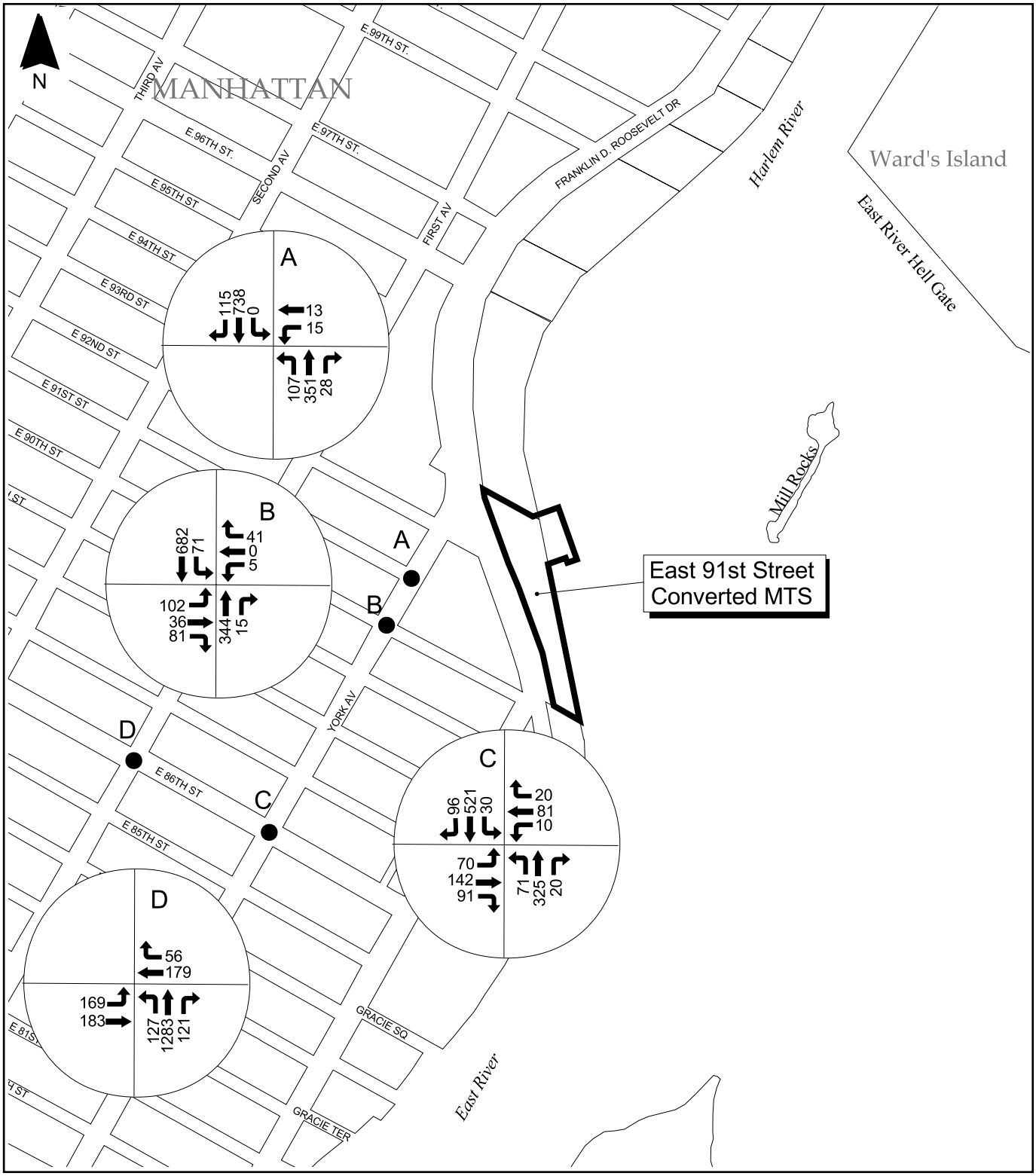

Site delineations and study area boudaries are approximate.
Base Map Source: New York City Department of City Planning

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HDR PB HydroQual EEA

Figure 10.9-11 2006 Build Traffic Volumes
Facility Peak
East 91st Street Converted MTS

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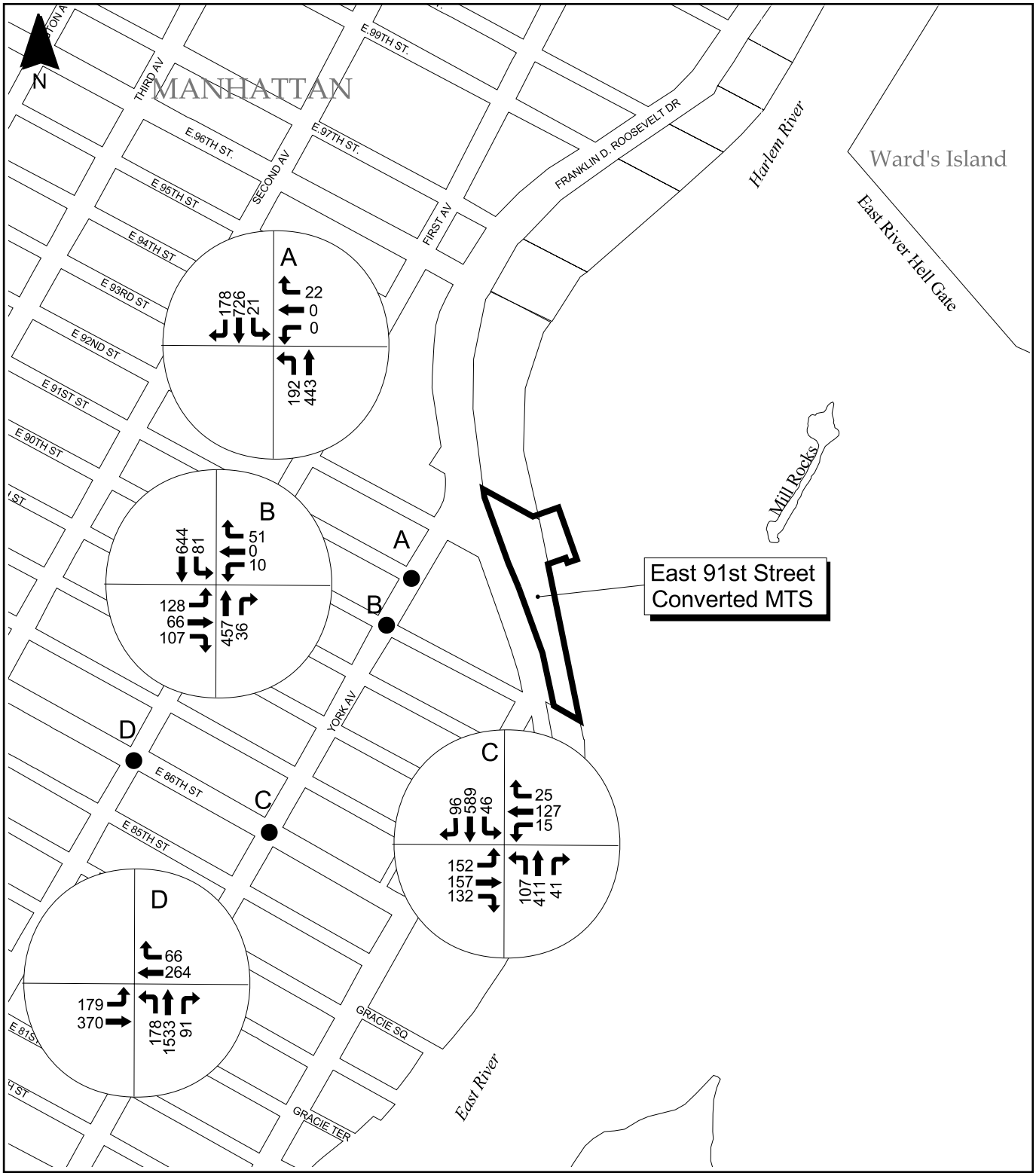

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 10.9-12 2006 Build Traffic Volumes
PM Peak
East 91st Street Converted MTS

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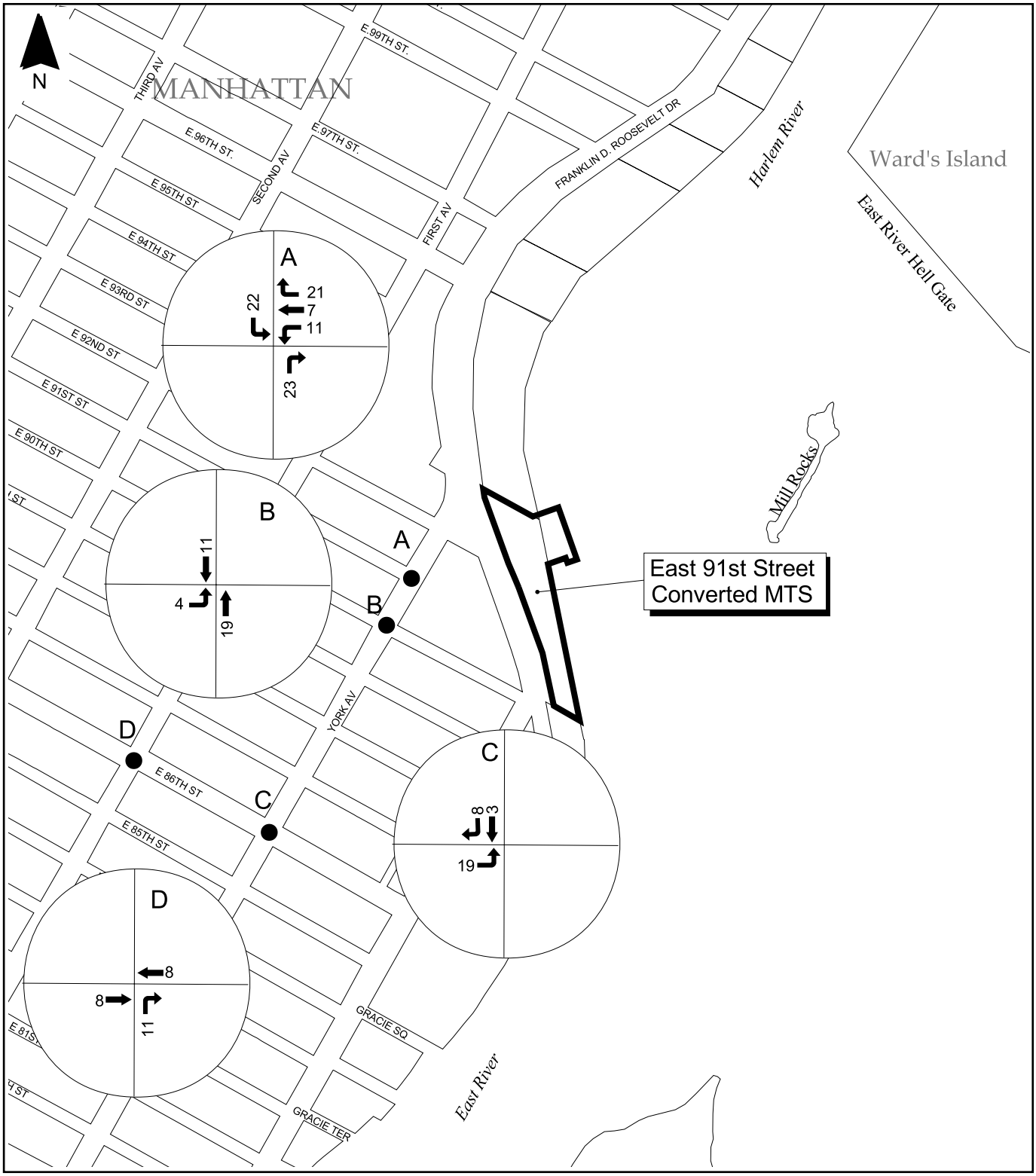

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 10.9-13 2006 Net Traffic - AM Peak

East 91st Street Converted MTS

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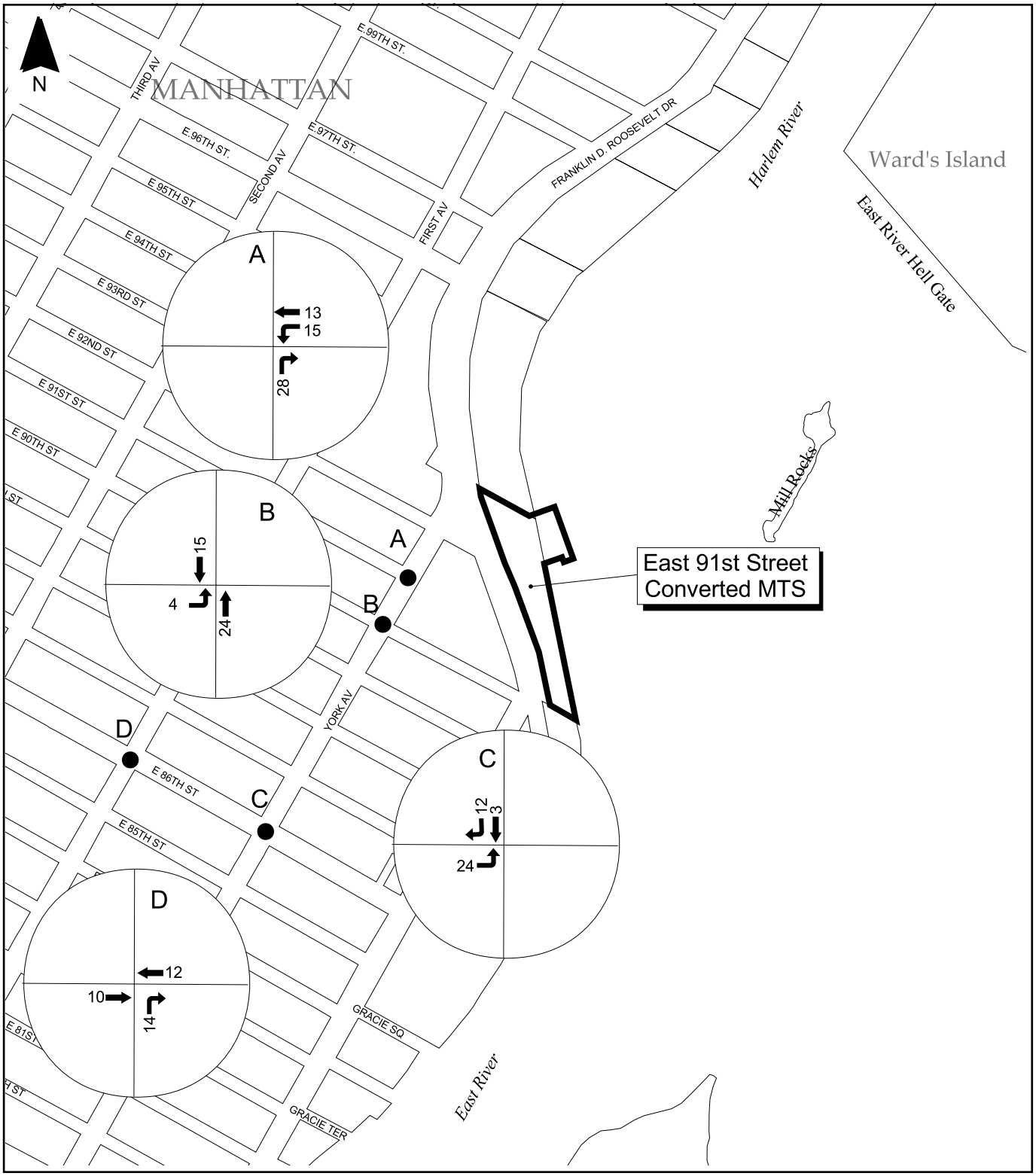

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

500 0 500 Feet

Figure 10.9-14 2006 Net Traffic - Facility Peak

East 91st Street Converted MTS

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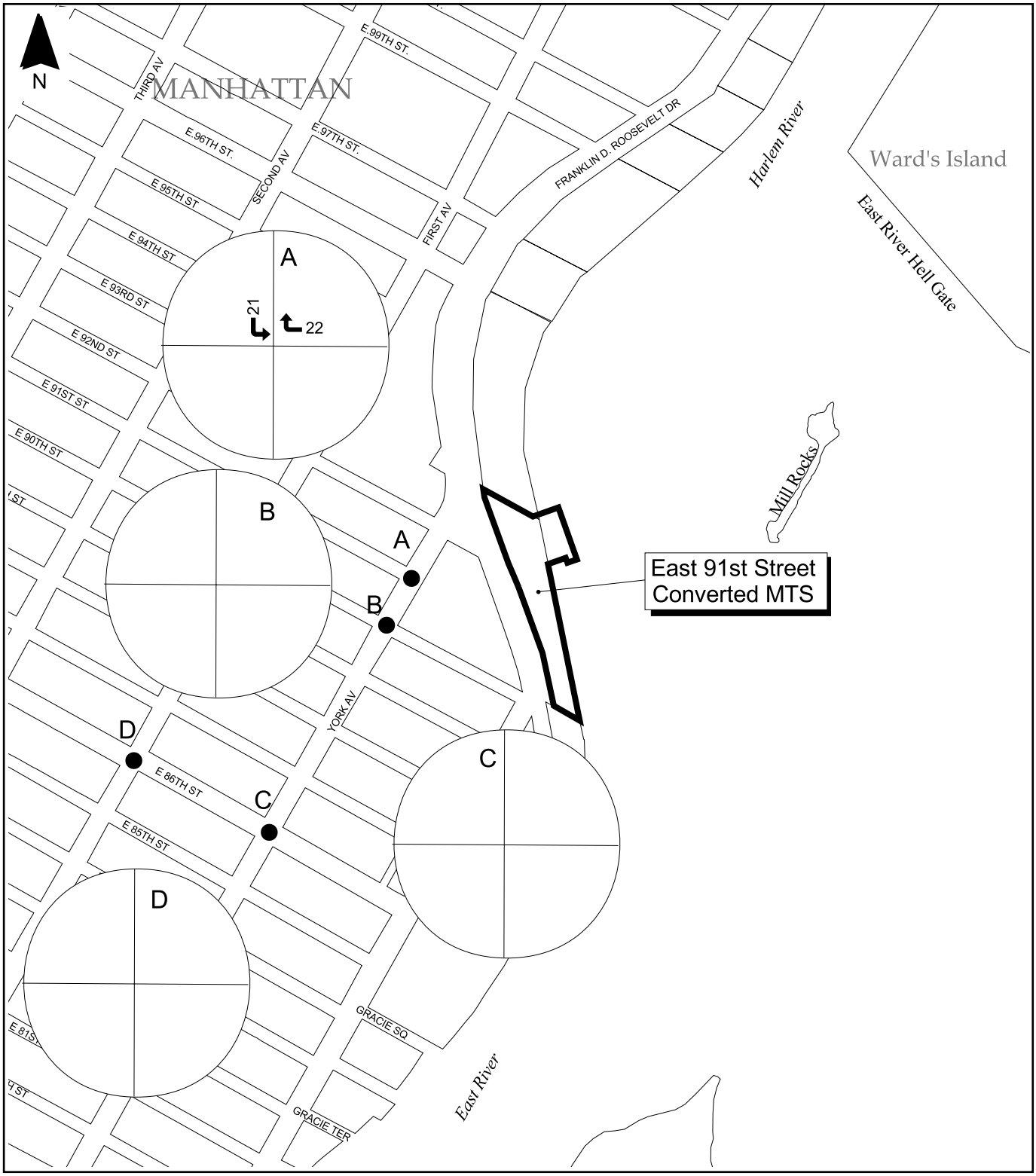

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 10.9-15 2006 Net Traffic - PM Peak

East 91st Street Converted MTS

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The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 82 percent of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 70 percent of weekday traffic volumes. Table 10.9-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the East 91st Street Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the worst overall case conditions.

Table 10.9-3
Weekday and Weekend Traffic
East 91st Street Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic NB and BS on York Avenue (1)**	
Average Peak Day Trucks/ Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
129	99	20,674	14,433

Note:
(1) NB and SB traffic data collected from ATR counts taken on York Avenue between 90th Street and 91st Street from September 11 to 17, 2003.

Table 10.9-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM Peak times associated with the East 91st Street Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The one intersection that may experience potentially significant impacts is discussed in Section 10.9.4.2 and summarized in Table 10.9-5.

10.9.4.2 Impacts and Mitigation

One of the four intersections may experience impacts great enough to be considered significant during only one of the peak times analyzed; however, 2001 CEQR Technical Manual Guideline requires mitigation for significant impacts regardless of the duration, as discussed in Section 3.10.1. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 10.9-5.

Table 10.9-4
HCM Analysis[(1)] – Future Build Conditions
East 91st Street Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (9:00 a.m. – 10:00 a.m.)			PM Peak Hour (4:00 p.m. – 5:00 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
East 86th Street & York Avenue (signalized)									
EB LTR	0.73	28.4	C	0.47	21.8	C	0.78	31.0	C
WB LTR	0.38	20.2	C	0.15	17.5	B	0.26	18.7	B
NB LTR	0.68	16.0	B	0.51	12.7	B	0.72	17.3	B
SB LTR	0.49	11.7	B	0.43	11.0	B	0.47	11.4	B
OVERALL		18.1	B		14.2	B		18.7	B
East 90th Street & York Avenue (signalized)									
EB LTR	0.72	45.4	D	0.61	40.4	D	0.85	45.9	D
WB LR	0.30	33.3	C	0.20	31.3	C	0.33	26.6	C
NB TR	0.31	6.3	A	0.26	6.0	A	0.37	5.9	A
SB LT	0.57	8.9	A	0.58	8.8	A	0.65	9.0	A
OVERALL		16.2	B		14.3	B		16.0	B
East 91st Street & York Avenue (signalized)									
WB LTR	0.16	31.2	C	0.13	30.6	C	0.09	23.3	C
NB DFL	0.56	22.6	C	0.54	15.1	B	1.10	97.3	F
NB TR	0.38	6.7	A	0.23	5.8	A	0.30	5.4	A
SB LTR	0.47	7.3	A	0.38	6.5	A	0.51	6.7	A
OVERALL		8.8	A		7.8	A		17.6	B
East 86th Street & 1st Avenue (signalized)									
EB LT	0.69	27.7	C	-	-	-	0.79	31.5	C
EB DFL	-	-	-	0.66	32.5	C	-	-	-
EB T	-	-	-	0.50	24.2	C	-	-	-
WB TR	0.29	19.4	B	0.24	18.9	B	0.22	18.7	B
NB LT	0.61	13.3	B	0.83	17.8	B	0.71	14.7	B
NB R	0.29	11.4	B	0.33	11.9	B	0.19	10.3	B
OVERALL		16.8	B		19.0	B		18.3	B

Notes:
(1) HCM output is included in technical backup submitted to the NYCDOT.
DefL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound

Table 10.9-5
HCM Analysis(1) – 2006 Mitigated Future Build Conditions
East 91st Street 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
East 91st Street & York Avenue (signalized) – PM Peak									
WB-LTR	-	-	-	0.09	23.3	C	0.09	24.0	C
NB-DFL	1.07	86.9	F	1.10	97.3	F	1.07	86.1	F
NB-TR	0.30	5.4	A	0.30	5.4	A	0.29	4.9	A
SB-LTR	0.46	6.3	A	0.51	6.7	A	0.50	6.1	A
OVERALL		16.1	B		17.6	B		15.7	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

York Avenue/East 91st Street – During the PM peak hour, a potential impact was identified on the northbound (defacto) left movement when the delay increased from 86.9 seconds to 97.3 seconds (LOS F in both cases). An increase in green time of one second for the northbound and southbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would detract one second from the westbound approach green time, but would reduce the delay for the northbound (defacto) left movement from 97.3 seconds to 86.1 seconds. The delay of both the northbound and southbound approaches would decrease by less than one second. The westbound approach delay would increase by less than one second. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Overall, the mitigation measure suggested would greatly enhance the intersection performance by reducing delays to LOSs similar to those under the Future No-Build Condition.

10.9.4.3 Public Transportation

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

10.9.4.4 Pedestrian Activity

Future Build Conditions are expected to remain the same as Future No-Build Conditions.

10.10 Air Quality

10.10.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the East 91st Street Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersections listed in Section 10.10.4.2.

10.10.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest the study area are shown in Table 10.10-1. These data were compiled by NYSDEC for 2002, 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 10.10-1
Representative Ambient Air Quality Data
East 91st Street Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO	PS 59	8-Hour	2,635 µg/m^3	10,000 µg/m^3
		1-Hour	3,781 µg/m^3	40,000 µg/m^3
NO_2	PS 59	Annual	77 µg/m^3	100 µg/m^3
PM_{10}	PS 59	Annual	34 µg/m^3	50 µg/m^3
		24-Hour	88 µg/m^3	150 µg/m^3
SO_2	PS 59	3-Hour	265 µg/m^3	1300 µg/m^3
		24-Hour	139 µg/m^3	365 µg/m^3
		Annual	34 µg/m^3	80 µg/m^3

Note:
Source: NYCDEP April 18, 2003.

10.10.3 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.

10.10.4 Potential Impacts of the East 91st Street Converted MTS

10.10.4.1 On-Site Analysis

10.10.4.1.1 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 10.10-2. Figure 10.10-1 shows the locations of these sources within the site.

10.10.4.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 10.10-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from East 91st Street Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 10.10-3, are below the STVs. The East 91st Street Converted MTS would not, therefore, significantly impact air quality in the area.

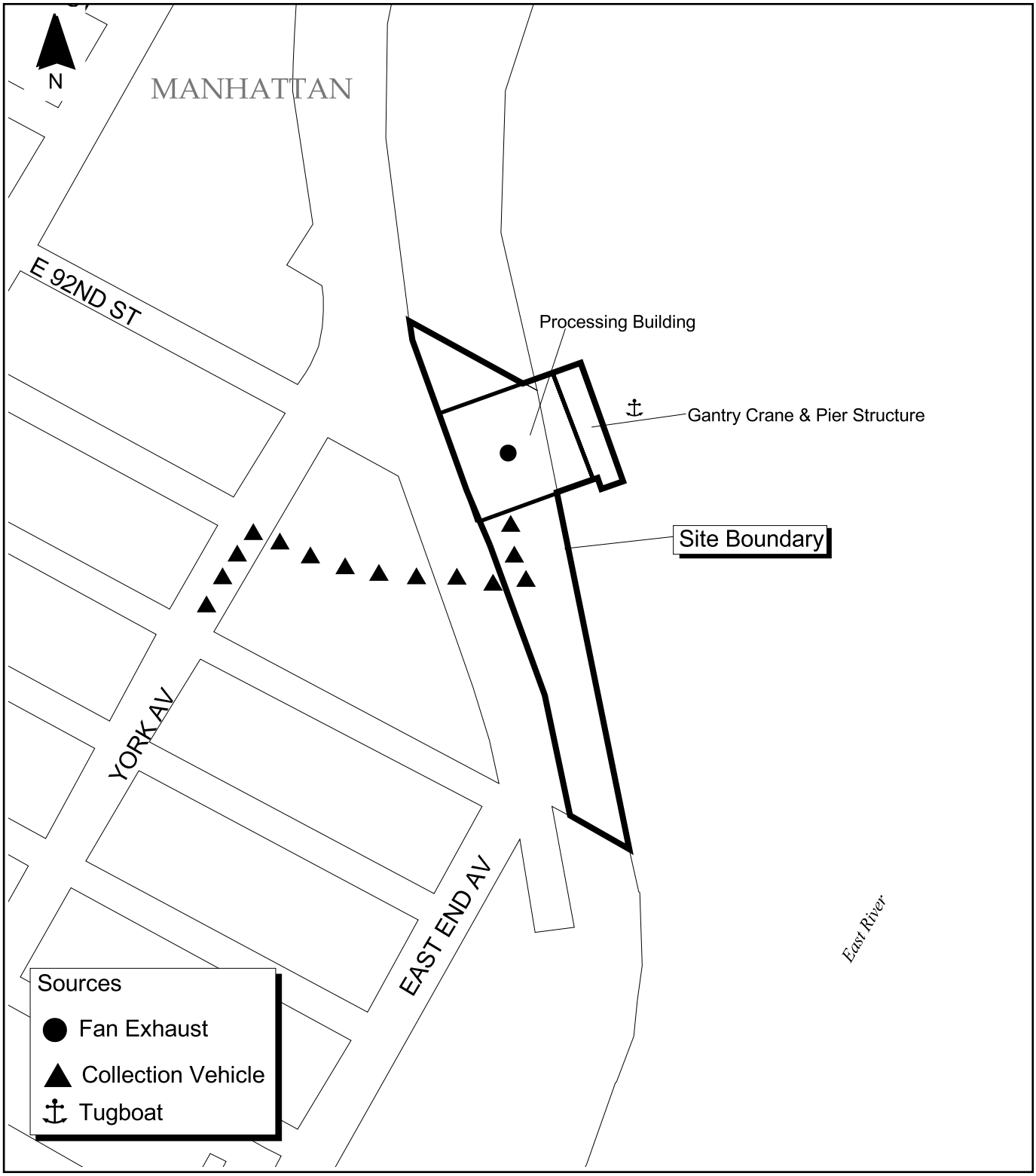
Table 10.10-2
Emission Sources Considered for On-site Air Quality Analysis [(1)]
East 91st Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Hour	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	3
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles[(2)]	46	18
Queuing Collection Vehicles[(2)]	18 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

(1) Emission factors used and emission rates estimated for each of these sources are included in Technical Backup provided to the NYCDEP.

(2) 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 (18), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is simply a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp..



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

200 0 200 Feet

Figure 10.10-1 On-Site Air Quality Analysis

East 91st Street Converted MTS

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Table 10.10-3
Highest Estimated Concentrations of the Criteria Pollutants from On-site Emissions
East 91st Street Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-site Emission Sources[1]	Background Pollutant Concentrations[2]	Highest Estimated On-site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	2,222	3,781	6,003	40,000	NA
	8-hour[6]	333	2,635	2,968	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	3	77	80	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	21	88	109	150	NA
	Annual	3	34	37	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2	-	-	NA	5
	Annual Neighborhood Average	0.022[5]	-	-	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	49	265	314	1,300	NA
	24-hour[6]	7	139	146	365	NA
	Annual	1	34	35	80	NA

Notes:

(1) The highest estimated pollutant concentrations found at any of the off-site receptor locations.

(2) Background concentrations were obtained from the NYCDEP on April 14, 2003.

(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 in this provides a very conservative comparison with standards.

(7) The 24-hour PM_{10} NAAQS is based on a 99th percentile concentration, which means that the high, 4th high concentration is appropriate for comparison with the standard. Therefore, the use of the overall highest concentration in this comparison is quite conservative.

NA = Not Applicable

10.10.4.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 10.10-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the East 91st Street Converted MTS are not considered to be significant.

10.10.4.2 Off-Site Analysis

10.10.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by facility's collection vehicles were identified using *CEQR Technical Manual Guidelines* that are outlined in Section 3.11.5. Following these guidelines, the following detailed mobile source analyses were conducted for the applicable (i.e., worst-cast) time periods:

- An analysis of the intersections of York Avenue and 91st Street to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO de minimus value or a violation of the 8-hour NAAQS;
- An analysis of the intersections of York Avenue and 86th Street, and York Avenue and 91st Street to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 24-hour and annual $PM_{2.5}$ STVs; and
- An analysis for the intersections of York Avenue and 86th Street, and York Avenue and 91st Street Avenue to determine whether East 91st Street Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM10 NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 10.10-2.

Table 10.10-4
East 91st Street Converted MTS
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutant from On-site Emissions

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	7.21E-01	1.30E+03	5.54E-04	3.68E-03	1.30E-01	2.83E-02	3.68E-03	8.30E-06	3.05E-08
2	Formaldehyde	9.12E-01	3.00E+01	3.04E-02	4.65E-03	6.00E-02	7.75E-02	4.65E-03	1.30E-05	6.05E-08
3	1,3 Butadiene	3.02E-02	-	-	1.54E-04	3.60E-03	4.28E-02	1.54E-04	2.80E-04	4.32E-08
4	Acetaldehyde	5.93E-01	4.50E+03	1.32E-04	3.02E-03	4.50E-01	6.72E-03	3.02E-03	2.20E-06	6.65E-09
5	Benzo(a)pyrene	1.45E-04	-	-	7.41E-07	2.00E-03	3.71E-04	7.41E-07	1.70E-03	1.26E-09
6	Propylene	1.99E+00	-	-	1.02E-02	3.00E+03	3.39E-06	1.02E-02	NA	NA
Non-Carcinogenic Pollutants [10]										
7	Acrolein	7.15E-02	1.90E-01	3.76E-01	3.65E-04	2.00E-02	1.82E-02	3.65E-04	NA	NA
8	Toluene	3.16E-01	3.70E+04	8.54E-06	1.61E-03	4.00E+02	4.03E-06	1.61E-03	NA	NA
9	Xylenes	2.20E-01	4.30E+03	5.12E-05	1.12E-03	7.00E+02	1.61E-06	1.12E-03	NA	NA
10	Anthracene	1.44E-03	-	-	7.37E-06	2.00E-02	3.69E-04	7.37E-06	NA	NA
11	Benzo(a)anthracene	1.30E-03	-	-	6.62E-06	2.00E-02	3.31E-04	6.62E-06	NA	NA
12	Chrysene	2.73E-04	-	-	1.39E-06	2.00E-02	6.96E-05	1.39E-06	NA	NA
13	Naphthalene	6.55E-02	7.90E+03	8.29E-06	3.34E-04	3.00E+00	1.11E-04	3.34E-04	NA	NA
14	Pyrene	3.69E-03	-	-	1.88E-05	2.00E-02	9.42E-04	1.88E-05	NA	NA
15	Phenanthrene	2.27E-02	-	-	1.16E-04	2.00E-02	5.80E-03	1.16E-04	NA	NA
16	Dibenz(a,h)anthracene	4.51E-04	-	-	2.30E-06	2.00E-02	1.15E-04	2.30E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**4.07E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**1.82E-01**	**Total Estimated Combined Cancer Risk**		**1.42E-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 10.10-4:

(1) Estimated by multiplying the total 1-hr HCs concentration by the ratio of the emission factor for that pollutant to the emission factor of the total hydrocarbons.

(2) Short-term (1-hr) guideline concentrations (SGC) established by NYSDEC

(3) Estimated by dividing the maximum 1-hr concentrations of each pollutant by the SGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

(4) Estimated by multiplying the total annual HCs concentration by ratio of the emission factor for that pollutant to the emission factor of the total hydrocarbons.

(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.

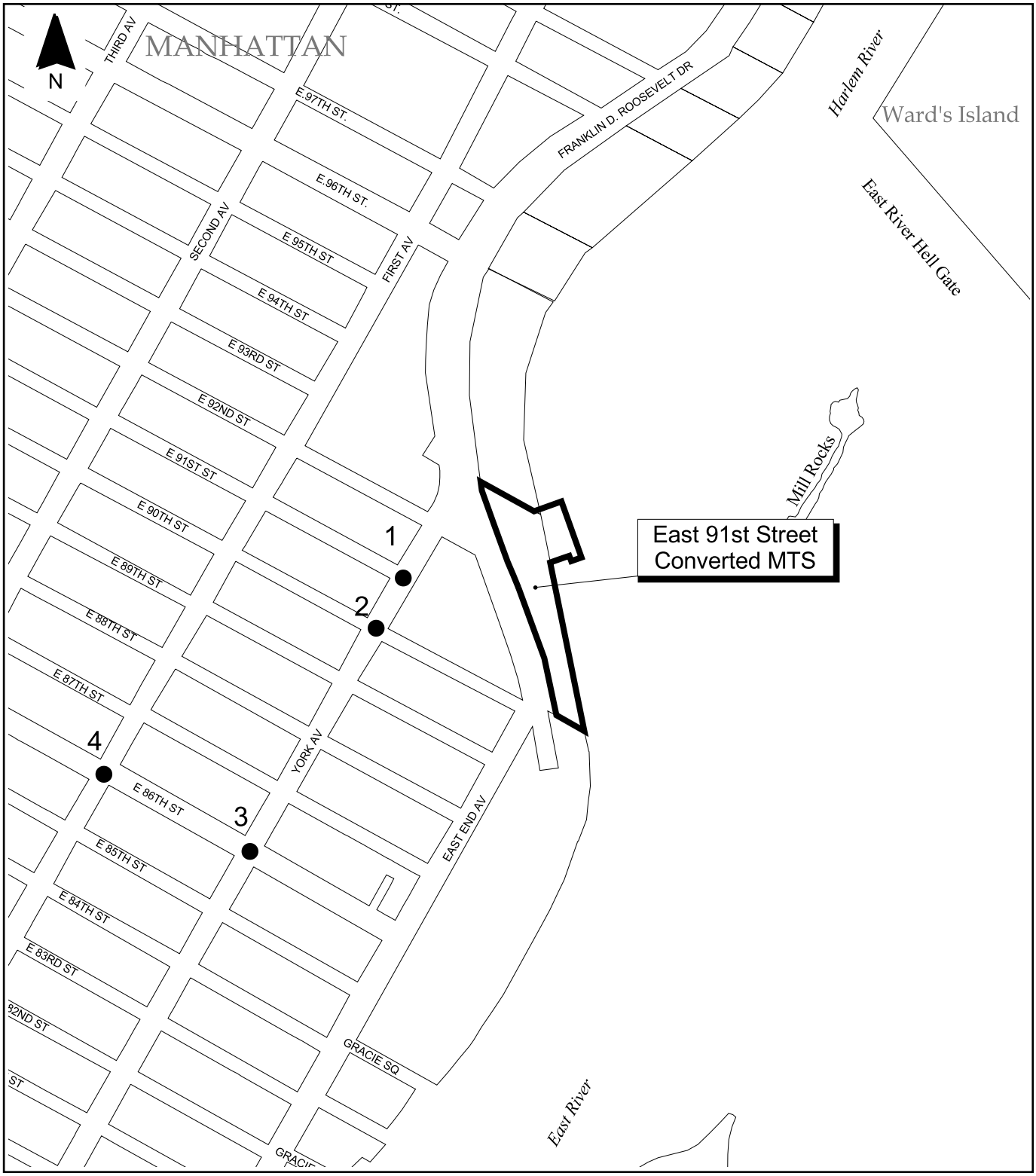
(7) Unit risk factors established by USEPA and other governmental agencies for the inhalation of carcinogenic air pollutants.

(8) The maximum cancer risk of each of the individual pollutant 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.



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

500 0 500 Feet

Figure 10.10-2 Off-Site Air Quality Intersections Studied East 91st Street Converted MTS

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10.10.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 10.10-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$), and/or de minimus impact values (for CO). The off-site operations of the East 91st Street Converted MTS are not, therefore, considered to be significant.

Table 10.10-5
Maximum Estimated Pollutant Concentrations Near Selected Roadway Intersection
E 91st Street Converted MTS

Air Quality Receptor Site	CO	PM_{10}		24-hr $PM_{2.5}$ Impacts			Max Annual Neighborhood $PM_{2.5}$ Impacts		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources [2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources [3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources [2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources [4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
York Ave and 86th Street									
Existing Conditions		76	32						
Future No Build Conditions		77	32						
Future Build Conditions	N/A [5]	77	32						
Future Build Incremental				0.31	0.92	1.23	0.01	0.07	0.08
York Ave & 91st Street									
Existing Conditions	4	86	35						
Future No Build Conditions	4	87	35						
Future Build Conditions	4	89	36						
Future Build Incremental				1.03	0.59	1.62	0.08	0.09	0.17

Notes:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility AM, and PM peak traffic conditions plus background concentration (8-hr CO=2.3ppm; 24-hr PM_{10} = 46 $\mu g/m^3$; Annual PM_{10}=21$\mu g/m^3$).

(2) The maximum estimated concentrations of on-site emissions near the intersection considered.

(3) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced (or future build) traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No Build and Future Build scenarios at any receptor 3 meters from the edge of the roadways using AM, midday or PM peak traffic condtions.

(4) The $PM_{2.5}$ concentrations are the maximum modeled incremental $PM_{2.5}$ impacts (due to project-induced (or future build) traffic only) estimated by taking the difference between the maximum $PM_{2.5}$ concentrations for the Future No Build and Future Build scenarios at any receptor 15 meters from the edge of the roadways using AM, midday or PM peak traffic conditions.

(5) Incremental 1-hour vehicular trips were below CEQR CO air quality screening thresholds.

ppm = Parts per million

$\mu g/m^3$ = Microgram per cubic meter

10.11 Odor

10.11.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the apartment building located on 90th Street east of York Avenue, approximately 360 feet from the site boundary. .

10.11.2 Future No-Build Conditions

No additional odor-producing sources are currently anticipated in the vicinity of the East 91st Street Converted MTS. Thus, Existing Conditions are assumed to be representative of Future No-Build Conditions.

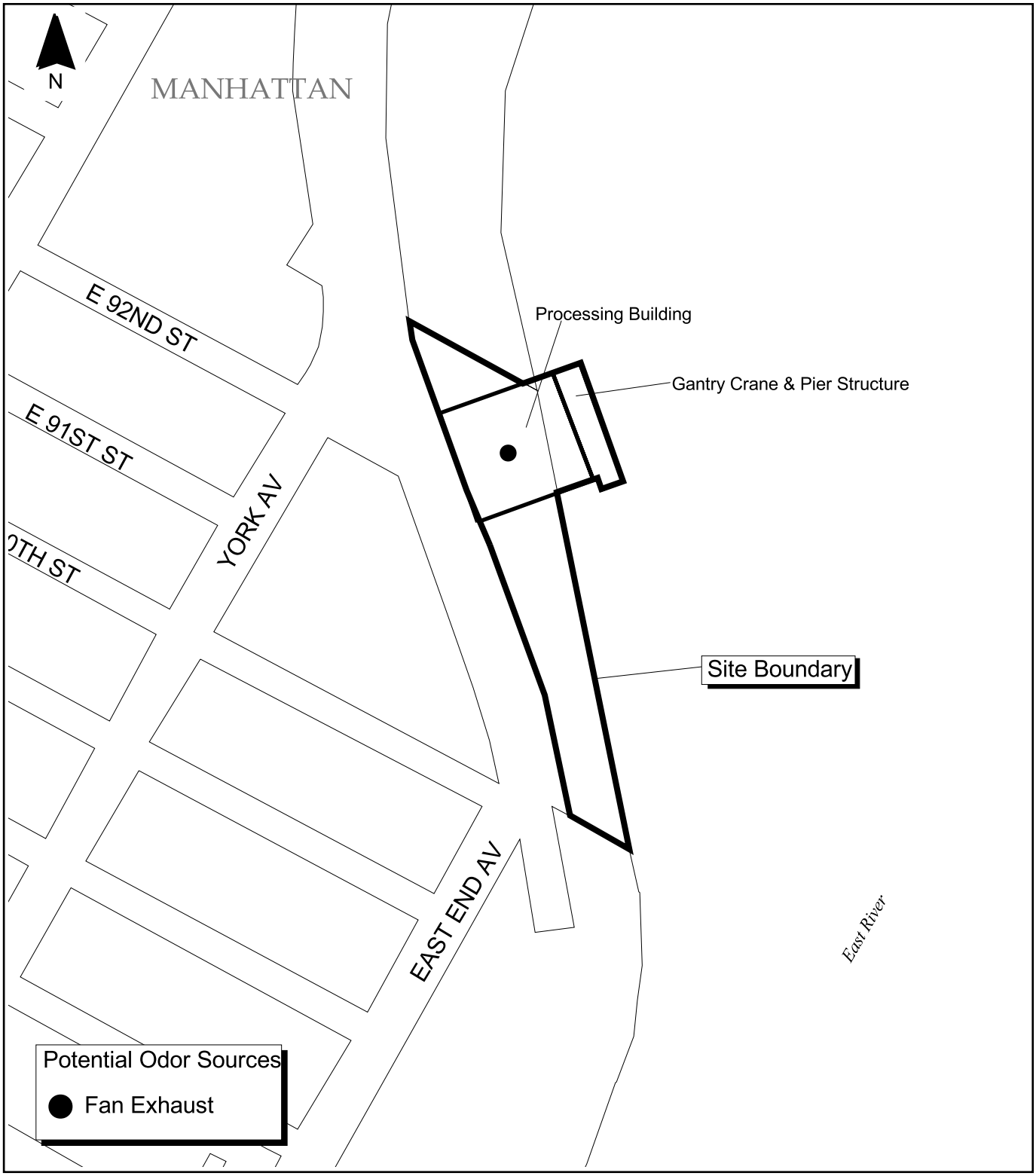
10.11.3 Potential Impacts with the East 91st Street Converted MTS

10.11.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and type of odor sources that would be associated with waste processing operations at peak design capacity at the East 91st Street Converted MTS are provided in Table 10.11-1. Figure 10.11-1 shows the locations of these sources within the site.

Table 10.11-1
Odor Sources Included in Odor Analysis
East 91st Street Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1



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

200 0 200 Feet

Figure 10.11-1 Potential Odor Sources

East 91st Street Converted MTS

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An odor control system (e.g., scrubber, neutralizing agent misting system injected into the exhaust duct work system, etc.) would be included in the design to control odorous emissions from the processing building. Odor control systems can remove between 90 percent and 99 percent of odorous compounds. For purposes of modeling odor dispersion, a 90 percent reduction of odorous emissions was conservatively assumed for the East 91st Street Converted MTS.

10.11.3.2 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 10.11-2. The predicted odor unit values at sensitive receptor locations are compared to an odor unit of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted odor unit associated with the East 91st Street Converted MTS at any nearby sensitive receptor is less than 1, so odors from the East 91st Street Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 10.11-2
Highest Predicted Odor Concentration(s) from On-site Sources
East 91st Street Converted MTS

Parameter	**Resulting Odor Unit[(1)]**
Estimated Detectable Concentration	1.0
Highest Result	0.26
Type of Receptor	Fence Line Receptor
Location of Receptor [(2)]	Site Boundary
Closest Sensitive Receptor Result	0.040
Type Of Receptor	Apartment Building
Distance To Receptor[(3)]	360 Feet

Notes:
(1) D/T ratio is dimensionless.
(2) Measured from the site boundary.
(3) Measured from the site property line.

10.12 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from East 91st Street Converted MTS-related solid waste management activities. It is based on Section R of the 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 New York City Noise Codenly. Section 3.14 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

10.12.1 Existing Conditions

10.12.1.1 Introduction

Figure 10.12-1 shows the location of the East 91st Street Converted MTS and the surrounding area. The nearest noise-sensitive receptor is an apartment building on 90th Street east of York Avenue, approximately 110 meters (360 feet) from the East 91st Street Converted MTS property line. Additional residential areas exist immediately north, south and west of this building.

10.12.1.2 On-site Noise Sources

Existing on-site noise sources 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}, L_{min}, L_{max},[5] and the statistical metrics of L_{10}, L_{50}, and L_{90}.[6] Table 10.12-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 5 p.m. and 6 p.m. and had an L_{eq}(h) of 65.4 dBA on January 15, 2003. Activities and events that contribute to the on-site noise levels are as follows:

Traffic from the FDR Highway;
Ferry boats loading and unloading passengers;
Other marine activity.

[5] Terms L_{eq}, L_{min}, L_{max} are defined in Section 3.14.2.
[6] Terms L_{10}, L_{50}, and L_{90} are defined in Section 3.14.2.

Table 10.12-1
Existing Hourly (Monitored) Noise Levels On-Site[(1)]
East 91st Street Converted MTS

Time of Measurement	L_{eq} (h) (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
2:00-3:00 p.m.	73.4	70.9	73.0	74.6	66.7	90.9
3:00-4:00 p.m.	72.3	67.3	72.3	74.3	60.2	82.7
4:00-5:00 p.m.	71.9	66.0	71.5	73.7	58.6	86.0
5:00-6:00 p.m.	65.4	62.2	64.7	67.6	58.8	76.8
6:00-7:00 p.m.	67.1	61.9	66.5	69.6	58.2	78.1
7:00-8:00 p.m.	69.7	66.3	68.6	70.5	59.2	88.7
8:00-9:00 p.m.	70.8	62.9	68.1	72.6	56.6	89.6
9:00-10:00 p.m.	73.1	71.0	73.1	74.7	65.8	85.2
10:00-11:00 p.m.	73.3	71.1	73.2	74.9	64.3	83.6
11:00-12:00 a.m.	73.1	70.5	73.0	74.8	61.8	83.0
12:00-1:00 a.m.	72.2	68.7	72.0	74.4	58.4	82.0
1:00-2:00 a.m.	70.0	64.4	69.5	72.7	54.1	77.6
2:00-3:00 a.m.	68.8	60.5	67.7	72.0	49.5	81.2
3:00-4:00 a.m.	68.7	59.7	67.4	71.9	50.2	81.1
4:00-5:00 a.m.	70.2	63.7	69.4	73.0	52.2	80.1
5:00-6:00 a.m.	72.8	69.0	72.6	75.0	58.2	80.6
6:00-7:00 a.m.	74.1	72.2	74.0	75.6	66.6	81.1
7:00-8:00 a.m.	72.3	67.4	72.2	74.6	61.9	79.7
8:00-9:00 a.m.	66.1	61.5	64.0	67.3	58.5	85.5
9:00-10:00 a.m.	71.9	68.6	71.7	73.8	60.5	81.2
10:00-11:00 a.m.	72.0	68.9	71.8	73.8	60.6	81.2
11:00-12:00 p.m.	72.0	68.5	71.9	73.9	56.8	84.8
12:00-1:00 p.m.	72.6	69.5	72.2	74.1	61.5	88.1
1:00-2:00 p.m.	71.2	64.8	71.1	73.7	59.7	79.4

Note:
(1) The 24-hour background noise levels were measured at the site boundary nearest to the closest sensitive receptor to identify the quietest background hour.

10.12.1.3 Off-site Noise Sources

Existing off-site noise sources consist of the existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the 91st Street Converted MTS-related truck routes due to an increase in traffic caused by the DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.14.5.2, off-site noise monitoring was required, and was therefore conducted. Table 10.12-2 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 second level screening.

Table 10.12-2
Existing Noise Levels at the Nearest Noise-Sensitive Receptor
East 91st Street Converted MTS

Roadway ID	Existing Noise Levels During Quietest Hour (dBA)[(1),(2)]
91st Street between 1st Avenue and York Avenue	60.9
90th Street between 1st Avenue & York Avenue	57.1
York Avenue between 90th Street and 91st Street	60.3

Notes:
(1) A one hour noise level reading was measured at the closest sensitive receptor during the hour expected to experience the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest).
(2) The Existing noise levels were measured on May 21, 2003 between 2:00 a.m. and 4:00 a.m.

10.12.2 Future No-Build Conditions

10.12.2.1 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.

10.12.2.2 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 CEQR Manual. Table 10.12-3 below 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.

Table 10.12-3
Off-site Noise Traffic Volume
East 91st Street Converted MTS

Location	Hour	Existing Traffic Volume	Future No Build Traffic Volume
York Avenue between East 90th & East 91st Streets	3:00 a.m.	78	79
York Avenue between East 90th & East 91st Streets	10:00 a.m.	1084	1100
East 90th Street between 1st Avenue & York Avenue	3:00 a.m.	24	24
East 90th Street between 1st Avenue & York Avenue	9:00 a.m.	182	185
East 91st Street between 1st Avenue & York Avenue	2:00 a.m.	33	33
East 91st Street between 1st Avenue & York Avenue	9:00 a.m.	228	231

10.12.3 Potential Impacts with the East 91st Street Converted MTS

10.12.3.1 On-site Noise Levels

Equipment assumed to be operating at the East 91st Street Converted MTS and its reference noise levels, which were used in the CEQR and Noise Code analysis, are shown in Table 10.12-4. Spectral noise levels used in the Performance Standards analysis are shown in Table 10.12-5. The number and type of equipment assumed for this analysis was based on the facility's peak design capacity.

Table 10.12-4
Equipment Modeled in the Noise Analysis and Reference Noise Levels
East 91st Street Converted MTS

Equipment Name (quantity)	Reference Noise Level (1) at 50 feet (dBA)
Indoor	
Wheel Loaders (2)	81
Tamping Crane (1)	81
Bridge Crane (1)	70
Mini-Sweeper (1)	76
Moving/Queuing Collection Vehicles (7)	73
Outdoor	
Moving/Queuing Collection Vehicles (19)	67
Container Car Pullers (3)	45
Gantry Cranes (1)	78
Oceangoing Tugboats (1)	73

Note:
See Section 3.14.7 for sources.

Table 10.12-5
Equipment Modeled in the Noise Analysis and Spectral Noise Levels
East 91st Street Converted MTS

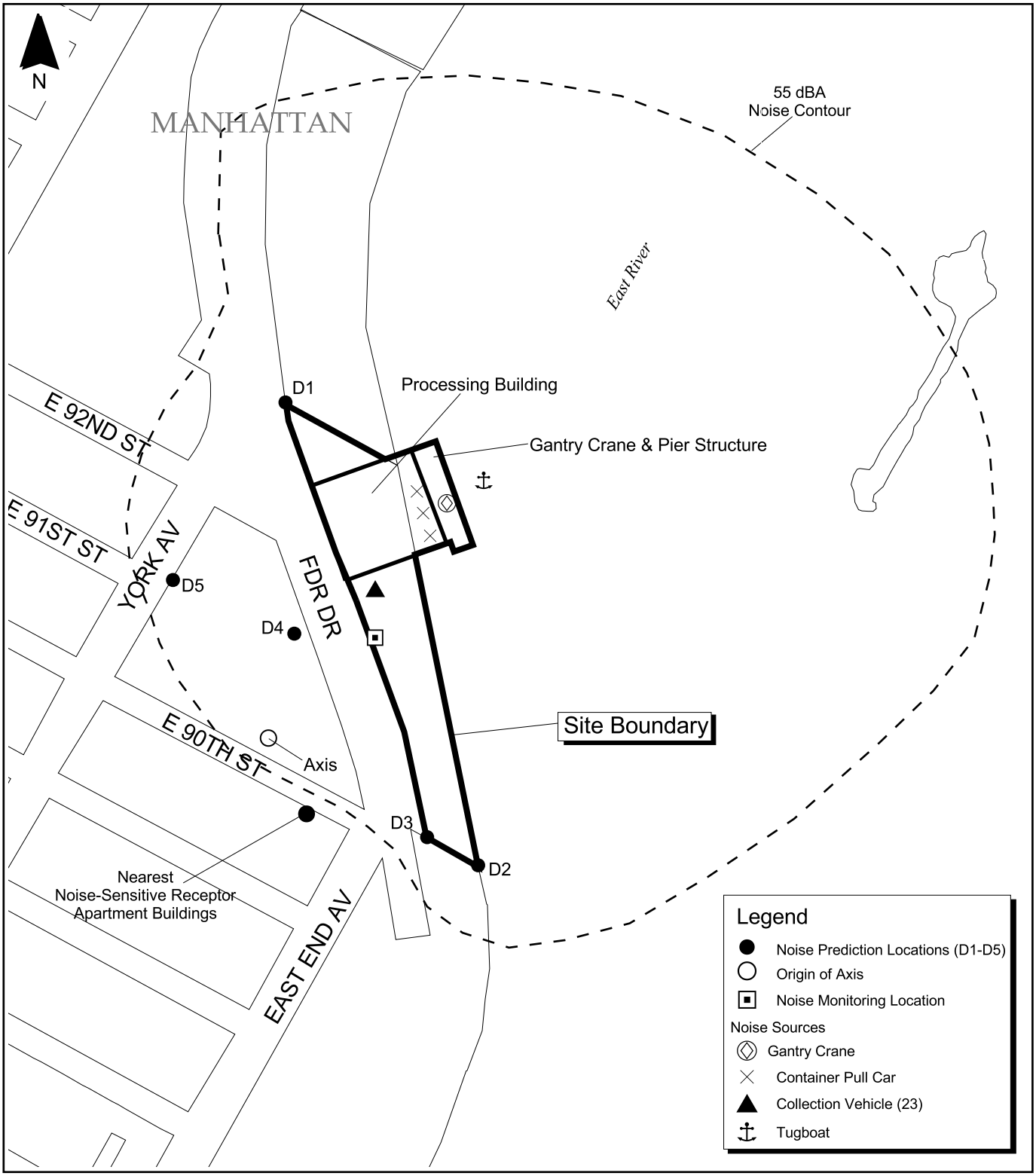
Equipment	Reference Noise Level at 50 feet (dB)							
	Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
Indoor								
Wheel Loaders (2)	78	77	75	76	77	74	68	60
Tamping Crane (1)	95	90	85	85	81	78	73	64
Bridge Crane (1)	77	78	77	71	74	71	69	57
Mini-Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Car Pullers (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1)	79	82	82	79	78	73	64	56
Oceangoing Tugboats (1)	97	85	79	75	72	66	59	52

Figure 10.12-1 shows the East 91st Street Converted MTS layout, locations of the points along its boundary where overall noise predictions were calculated, and the predicted 55 dBA contour line.

10.12.3.1.1 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the 91st Street Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 418 meters (1,370 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 110 meters (360 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 3.14.5.1 discusses this concept in greater detail. The results of the screening analysis show that receptors are located within the 55 dBA contour line, therefore, an on-site noise analysis, including noise monitoring at the nearest noise sensitive receptor was required to determine if there would be an impact.

Noise monitoring was conducted at the receptor during the quietest hour based on monitoring data provided in Table 10.12-1 above. Table 10.12-6 below identifies the existing background noise level during the quietest hour. The table shows the distance from the East 91st Street Converted MTS to the receptor, East 91st Street Converted MTS-related noise levels at the receptor, the monitored existing background noise level, and the predicted noise levels with both facility noise and background noise combined. The difference between this combined noise level and the existing noise level at the receptor represents the predicted incremental change in noise level from the East 91st Street Converted MTS. Because this incremental change is not greater than the CEQR threshold of 3 dBA at the nearest noise sensitive receptor, there is no predicted impact that would be caused by the 91st Street Converted MTS on-site operations.



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

200 0 200 Feet

Figure 10.12-1 Noise Sources and Receptors

East 91st Street Converted MTS

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Table 10.12-6
Existing and Predicted Noise Levels at the Nearest Noise-Sensitive Receptor
East 91st Street Converted MTS

Receptor ID	Distance from Facility (meters/feet)	Existing Noise Levels During Quietest Hour (dBA)[1][2]	Predicted Facility Noise Level at Sensitive Receptor (dBA)[3]	Combined Facility and Background Noise Level at the Sensitive Receptor (dBA)	Increase over Existing Noise Levels (dBA)	Impact[4] (yes or no)
Apartment Building	1110/360	64.5	60.0	65.8	1.3	No

Notes:

(1) Twenty-minute noise level readings measured at the closest sensitive receptor during the quietest hour determined from the 24-hour noise level readings.

(2) Existing noise levels measured on January 30, 2003 at 5:00 p.m.

(3) Predicted noise level calculations at sensitive receptor include on-site and off-site shielding from structures.

(4) According to CEQR, an increase of 3 dBA at daytime is considered an impact. The impact analysis compares the loudest noise emissions from daily operations at the facility with the quietest background noise levels that occur during facility operation. The quietest hour of background noise levels occurred during the nighttime hours for the sensitive receptor park; therefore, only nighttime impact criteria are discussed in this analysis for this sensitive receptor.

10.12.3.1.2 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points along the East 91st Street 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, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (see Table 10.12-7 below). Based on this analysis, no exceedances to the Performance Standards are predicted in the direction of a noise sensitive receptor.

Table 10.12-7
Spectral Noise Analysis
East 91st Street Converted MTS

Manufacturing District Regulation (M1)	Frequency Range							
	63	125	250	500	1K	2K	4K	8K
	80	76	68	60	54	48	41	41
Total Lp dB: D1	75.5	65.6	60.2	56.2	53.3	47.3	37.2	29.0
Total Lp dB: D2	68.9	59.0	55.4	51.7	49.4	42.9	30.2	17.8
Total Lp dB: D3	69.5	59.7	56.1	52.5	50.2	43.8	31.4	19.4
Total Lp dB: D4	68.4	59.4	55.4	51.7	49.5	43.6	32.5	22.6
Total Lp dB: D5	63.5	55.4	50.0	45.9	42.9	36.7	25.2	14.5

10.12.3.1.3 Noise Code Analysis

Overall noise predictions were calculated at the locations of the points along the facility boundary to determine the Total L_{eq} from all indoor and outdoor sources. This is shown in Table 10.12-8 below. Based on this analysis, the Total Leq does not exceed the Noise Code Standard of 70 dBA.

Table 10.12-8
Noise Code Analysis
East 91st Street Converted MTS

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	59.1
D2	57.9
D3	58.9
D4	65.0
D5	64.8

10.12.3.2 Off-site Noise Analysis

A screening analysis was conducted to determine if a detailed analysis including noise monitoring would be required along the truck routes serving the East 91st Street Converted MTS. As a result of this screening, which is described in Section 3.14.5.2, an off-site noise analysis was required. Screening results 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 10.12-9 below.

Table 10.12-9
Off-site Noise Screening Results
East 91st Street Converted MTS

Location	Hour	FutureNo-Build PCEs(1)	Collection Vehicles	Employee Vehicles	Future Build PCEs(1)(2)	Possible Impact(3)
York Avenue between East 90th & East 91st Streets	3:00 a.m.	170	19	0	893	Yes
York Avenue between East 90th & East 91st Streets	10:00 a.m.	2722	42	0	1974	No
East 90th Street between 1st Avenue & York Avenue	3:00 a.m.	116	7	0	329	Yes
East 90th Street between 1st Avenue & York Avenue	9:00 a.m.	448	14	0	658	Yes
East 91st Street between 1st Avenue & York Avenue	2:00 a.m.	137	4	0	188	Yes
East 91st Street between 1st Avenue & York Avenue	9:00 a.m.	1363	14	0	658	No

Notes:
(1) Total PCEs are rounded to the nearest whole number.
(2) Future Build PCEs include East 91st Street Converted MTS-related collection vehicles ad employee vehicles.
(3) There is a possible impact if the Future build PCEs are double the Future No-Build PCEs.

Because the screening results presented above showed that the PCEs would double on a roadway due to DSNY and other agency collection vehicles coming to or going from the East 91st Street Converted MTS, a detailed off-site noise analysis was performed at that roadway using TNM for the hour expected to receive the largest change in noise levels (when the difference between traffic

noise levels and background noise levels is greatest) during the daytime (if any) and nighttime. TNM results for locations/hours that resulted in an impact are presented in Table 10.12-10 below. Figure 10.12-2 depicts the locations for which a TNM analysis was performed. The table shows existing background noise levels monitored at the nearest sensitive receptor at the roadway, TNM predicted noise levels for the existing traffic, TNM predicted Future No-Build noise levels for 2006 for the roadway, the number of East 91st Street Converted MTS-related collection vehicles and employee vehicles, TNM predicted Future Build noise levels for 2006 as a result of the East 91st Street Converted MTS-related collection vehicles and employee vehicles, and the incremental change caused by these trucks, which is calculated by obtaining the difference between this TNM Future Build noise level and the TNM predicted Future No-Build noise level. Because this incremental change is greater than the CEQR threshold of 3 dBA at the nearest sensitive receptor an impact at these roadways would be caused by the East 91st Street Converted MTS-related collection and employee vehicles.

Table 10.12-10
Off-site Noise Analysis TNM Results
91st Street Converted MTS

Location	Hour	Existing Background Noise Level(1) (Measured)	TNM Predicted Noise Level for Existing Traffic	TNM Future No-Build Noise Level	Collection Vehicles	Employee Vehicles	TNM Future Build Noise Level	Impact (Noise Level Difference)
York Avenue between East 90th & East 91st Streets	3:00 a.m.	60.3	65.6	58.9	19	0	58.9	Yes (6.7)
East 90th Street between 1st Avenue & York Avenue	3:00 a.m.	57.1	62.3	57.5	7	0	57.5	Yes (4.8)
East 90th Street between 1st Avenue & York Avenue	9:00 a.m.	64.4	67.7	65.4	14	0	65.4	No (2.3)
East 91st Street between 1st Avenue & York Avenue	2:00 a.m.	60.9	63.8	61.1	4	0	61.1	No (2.7)

Note:
(1) Existing noise level and traffic count used for input into TNM was recorded on May 14, 2003 and May 15, 2003.

To determine if these TNM predicted impacts were accurate, site-specific truck simulations were conducted with DSNY Collection Vehicles, as described in Section 3.14.7, for each roadway and hour that the 1st stage screening analysis resulted in a possible impact. 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. Table 10.12-11 below contains the results of the site-specific DSNY Collection Vehicle simulations, which shows that only the 3 am to 4 am hour at the York Avenue between 90th Street and 91st Street location would have an impact as a result of the 91st Street Converted MTS. For comparison purposes, Table 10.12-12 contains the results for the hour resulting in an impact based on the truck simulations and the TNM results for this hour for the same traffic conditions and background noise levels estimated from recordings during the simulations. As can be seen, TNM also predicts an impact during for these hours, however TNM over predicted the incremental change caused by the East 91st Street Converted MTS-related collection vehicles for the roadways analyzed. The higher incremental change predicted by TNM, as discussed further in Section 3.14.7.2, can also be attributed to the default assigned noise level for each type of vehicle, which appears to be greater than the actual noise levels that would be emitted by the East 91st Street Converted MTS-related collection vehicles.

Since both TNM and the site-specific truck simulations predict an impact at a receptor during the 3:00 am to 4:00 am hour for the York Avenue between 90th Street and 91st Street location, adjustments were made to the distribution of trucks. Only the number of trucks that can be routed through this location without causing an impact will be allowed. The remaining collection vehicles will be routed through this location during the 2:00 am to 3:00 am hour without causing an impact. This location was reanalyzed during these hours with the adjustments using the site-specific truck acoustic energy per hour as described in Section 3.14.7.2 to confirm that off-site noise impacts would not be caused by the collection vehicles at this location. Therefore, there is no predicted impact that would be caused by the 91st Street Converted MTS collection vehicles en route to and from the facility.

Table 10.12-11
Off-site Noise Analysis Truck Simulation
East 91st Street Converted MTS

Location	Hour	Existing Background Noise Level (Estimated)(1)	Collection Vehicles	Truck Simulation(2) Noise Level for Existing Traffic plus Collection Vehicles	Impact (Noise Level Difference)
York Avenue between 90th Street and 91 st Street	2:00 a.m.	63.9	12	65.7	No (1.8)
York Avenue between 90th Street and 91st Street	3:00 a.m.	62.9	19	66.5	Yes (3.6)
90th Street between 1st Street and York Avenue	2:00 a.m.	64.9	5	65.8	No (0.9)
90th Street between 1st Street and York Avenue	3:00 a.m.	64.5	7	65.4	No (0.9)

Note:

(1) Existing background noise levels were estimated from noise monitoring performed during the simulations.

(2) Simulations performed on August 12, 2003.

Table 10.12-12
East 91st Street Converted MTS
Off-site Noise Analysis Truck Simulation Results

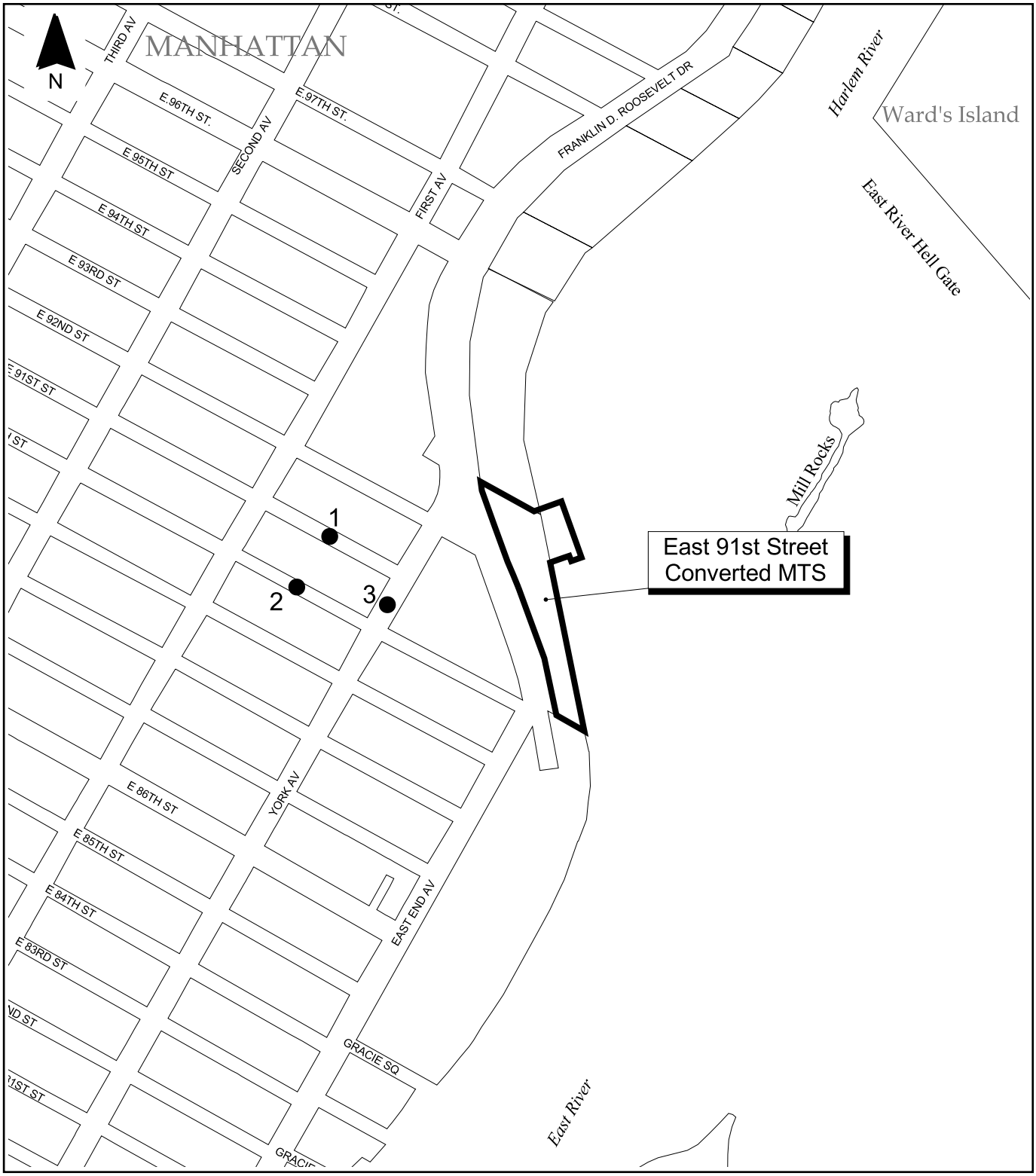
Location	Hour	Existing Background Noise Level [1] (Measured)	Collection Vehicles	Truck Simulation Noise Level for Existing Traffic plus Collection Vehicles	Simulation Impact (Noise Level Difference)	TNM Predicted Noise Level for Existing Traffic	TNM Predicted Noise Level for Existing Traffic plus Collection Vehicles	TNM Impact (Noise Level Difference)	Noise Level Difference between TNM and Truck Simulation[2]
York Avenue between East 90th & East 91st Street	3:00 a.m.	62.9	19	66.5	Yes (3.6)	59.3	66.2	Yes (6.9)	3.3

Notes:
[1] Existing noise level and traffic count used for input into TNM was recorded on August 12, 2003.
[2] The difference between simulation Impact and TNM Impact demonstrates that TNM over-predicts results.

Table 10.12-13
Off-site Noise Analysis using Truck Simulation Data and Adjusted Collection Vehicles
York Avenue between 90th Street and 91 st Street
East 91st Street Converted MTS

Hour	Existing Background Noise Level (Estimated)[1]	Adjusted Collection Vehicles	Calculated[2] Noise Level for Existing Traffic plus Adjusted Collection Vehicles	Impact (Noise Level Difference)
2:00 a.m.	63.9	17	66.3	No (2.4)
3:00 a.m.	62.9	14	65.8	No (2.9)

Note:
[1] Existing background noise levels were estimated from noise monitoring performed during the simulations.
[2] Noise Levels for Existing traffic plus adjusted collection vehicles were calculated utilizing the per truck acoustic energy determined from the truck simulation data for this location.



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

500 0 500 Feet

Figure 10.12-2 Mobile Noise Analysis
Intersections Analyzed
East 91st Street Converted MTS

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10.13 Infrastructure & Energy

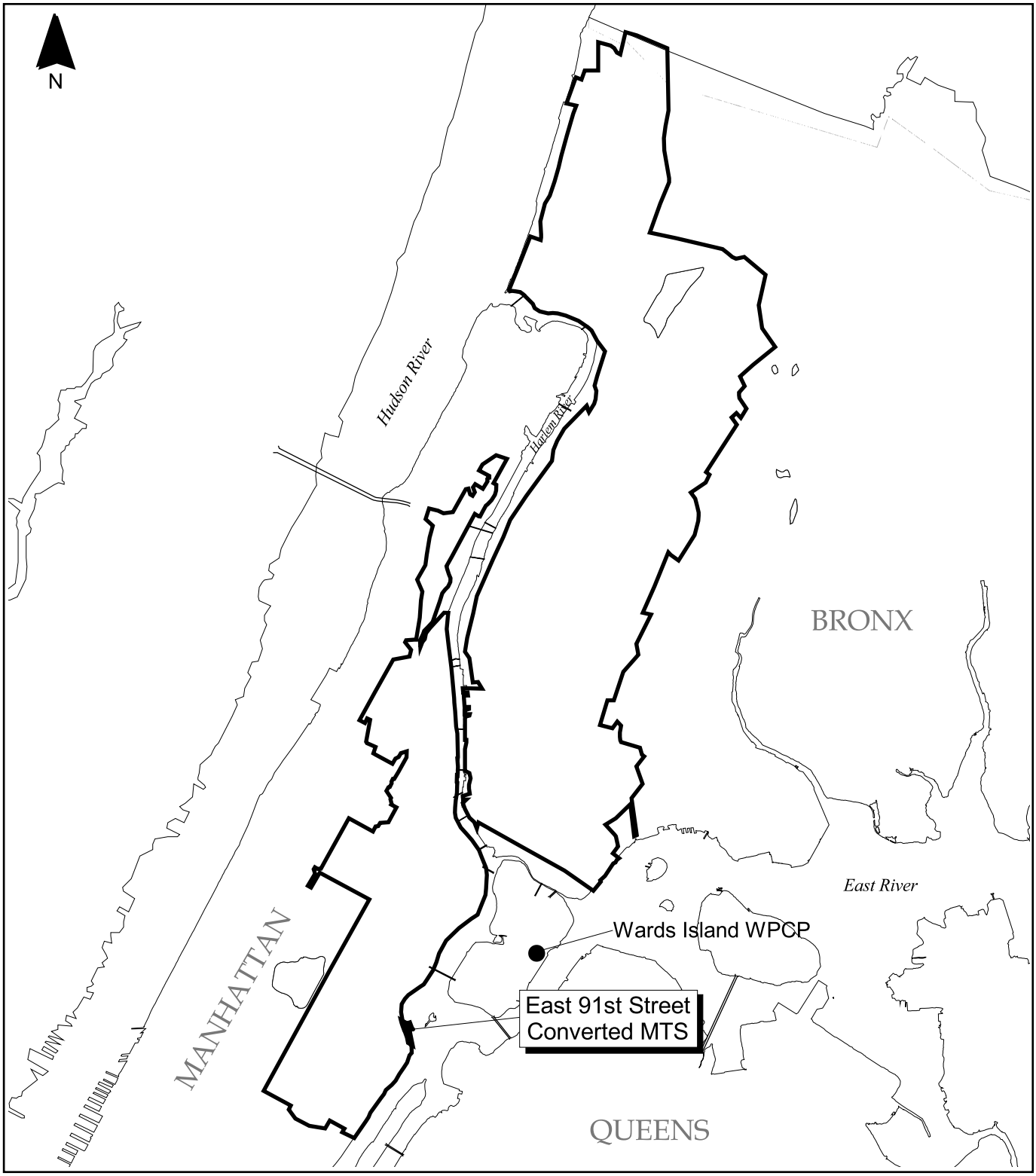
10.13.1 Existing Conditions

10.13.1.1 Water Supply

Water is supplied to the East 91st Street MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. An off-site 6-inch-diameter line at East 91st Street provides potable water for both consumption and sanitary requirements. Water pressure throughout the City system is generally maitnained at about 20 pounds per square inch (psi), which is the minimum pressure acceptable for uninterrupted service (CEQR Technical Manual, 2001). To ensure that adequate pressure is provided on-site, the potable and fire water systems are curently supplemented with a pump.

10.13.1.2 Sanitary Sewage and Storm Water

A review of NYCDEP I&I maps shows that the site is served by the Wards Island WPCP, which serves the eastern section of Manhattan generally bordered by 70th Street, 190th Street and Amsterdam Avenue/Central Park. Wards Island WPCP also serves portions of western Bronx. The WPCP drainage area is illustrated in Figure 10.13-1. From July 2001 through June 2002, the Wards Island WPCP treated an average of 175 million gallons per day (mgd) of wastewater during dry weather flow (see Table 10.13-1). The maximum dry weather flow during this period was 204 mgd during August 2001. Effluent from the plant is discharged into the East River and is regulated by the NYSDEC under the State Pollutant Discharge Elimination System (SPDES). The current SPDES permit limit for flow to the Wards Island WPCP is 275 mgd. It is estimated that on-site employee water usage is about 75 gpd. This estimate is based on the current security staff of three security employees (one guard per shift, three shifts per day) using 25 gallons per person, per day (CEQR Technical Manual, 2001). No other potable water is used as the facility is not currently accepting waste, and no operational personnel are assigned to the site.



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

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Figure 10.13-1 Existing WPCP Drainage Area

East 91st Street Conversion MTS

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A 12-inch diameter sewer on East 91st Street serves the site. This sewer is connected to a 5.25 foot by 4.25 foot interceptor line (combined sanitary and storm water system) that runs north along York Avenue where waste is directed to the Wards Island WPCP. Storm water runoff from the existing MTS parking area and ramp are routed to catch basins that discharge to the combined sewer system.

Table 10.13-1
Average Monthly Dry Weather Flows
Wards Island Water Pollution Control Plant
Fiscal Year 2002

Month	Dry Weather Flow (mgd)
July 2001	187
August	204
September	189
October	180
November	170
December	173
January 2002	169
February	164
March	165
April	163
May	161
June	170
Average Effluent	**175**

10.13.1.3 Solid Waste

Based on solid waste generation information from the CEQR Technical Manual, it was estimated that each employee at the existing MTS produces approximately 9 pounds of solid waste per week for a facility total of 27 pounds per week (approximately 4 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

10.13.1.4 Energy

Electricity to the facility is provided by Consolidated Edison of New York. A review of applicable utility plans shows electric lines along York Avenue and East 91st Street with the existing MTS service connected to the Consolidated Edison system at the intersection of York Avenue and East 91st Street. As the facility is currently not operating, the East 91st Street MTS utilizes a negligible amount of energy due to the low staffing levels thatprovide only security at the site.

10.13.2 Future No-Build Conditions

The existing East 91st Street MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near Existing Conditions levels for security employees.

10.13.3 Potential Impacts with the East 91st Street Modified MTS

10.13.3.1 Water Supply

The East 91st Street Converted MTS would have a total of up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 180 gpd for truck and tipping floor washdown and dust control. The combined total usage of 1,680 gpd of potable water would represent an increase of 1,605 gpd above current consumption levels.

The East 91st Street Converted MTS would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

10.13.3.2 Sanitary Sewage

Based on the estimated water usage of 1,680 gpd for the East 91st Street Converted MTS, the small quantities of wastewater sent to the Wards Island WPCP would not significantly impact the sewage flow rate or the ability of the Wards Island WPCP to meet its SPDES permit limits. The Wards Island facility treated an average of 175 mgd in fiscal year 2002 and has a design operating capacity of 250 mgd.

10.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the East 91st Street Converted MTS and would not significantly impact the system.

The East 91st Street Converted MTS would be in compliance with DSNY's siting regulations for solid waste transfer stations. Subsequent to adoption of the City's Final Solid Waste Management Plan, the East 91st Street Converted MTS, if incorporated in the Plan, would be subject to permitting as a solid waste management facility by NYSDEC and DSNY.

10.13.3.4 Energy

The East 91st Street Converted MTS would require an additional 1.11E+10 BTU/year of electricity to operate the facility. Natural gas heating would be used with an estimated demand of 1.37E+08 BTU/year.

Consolidated Edison has been notified of the power requirements of the East 91st Street Converted MTS and has stated that all demands generated by the facility could be met without an impact on the power requirements of the surrounding community and without the need for additional power generation capacity.

Consolidated Edison was also notified of the natural gas requirements of the East 91st Street Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts.

10.14 Natural Resources

10.14.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Manhattan. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts from the implementation of the East 91st Street Converted MTS.

10.14.1.1 Definition of Study Area

The study area includes the project site and the waterfront section that is bulkheaded and bounded by the Harlem River to the north and the East River to the south and east (Figure 2.8-1). The upland sections of the study area and the surrounding neighborhood are completely developed and, therefore, have very limited terrestrial natural resources. Because the Future Build Conditions would include construction of a new MTS and dredging of bottom sediments, a description of aquatic communities is included.

10.14.1.2 Geology

Based on information derived from a review of the Bedrock and Engineering Geologic Maps of New York City by Charles A. Baskerville, 1994, the geology of this section of Manhattan, including the study area, is Lower Cambrian Manhattan Schist. This bedrock consists of layered, gray, medium- to coarse-grained schist and gneiss.[7] Surface sediment collected from the site in 2003 indicates the sediment to be dark brown to dark grey-brown silty clay with sand and trace gravel, and approximately 40,000 mg/Kg total organic carbon. Sediment was found to be somewhat degraded due to contaminants in the sample material.

[7] Baskerville, C.A, 1994. "Bedrock and Engineering Geologic Maps of New York County and parts of Kings and Queens Counties, New York and parts of Bergen and Hudson Counties, New Jersey.

10.14.1.3 Floodplains

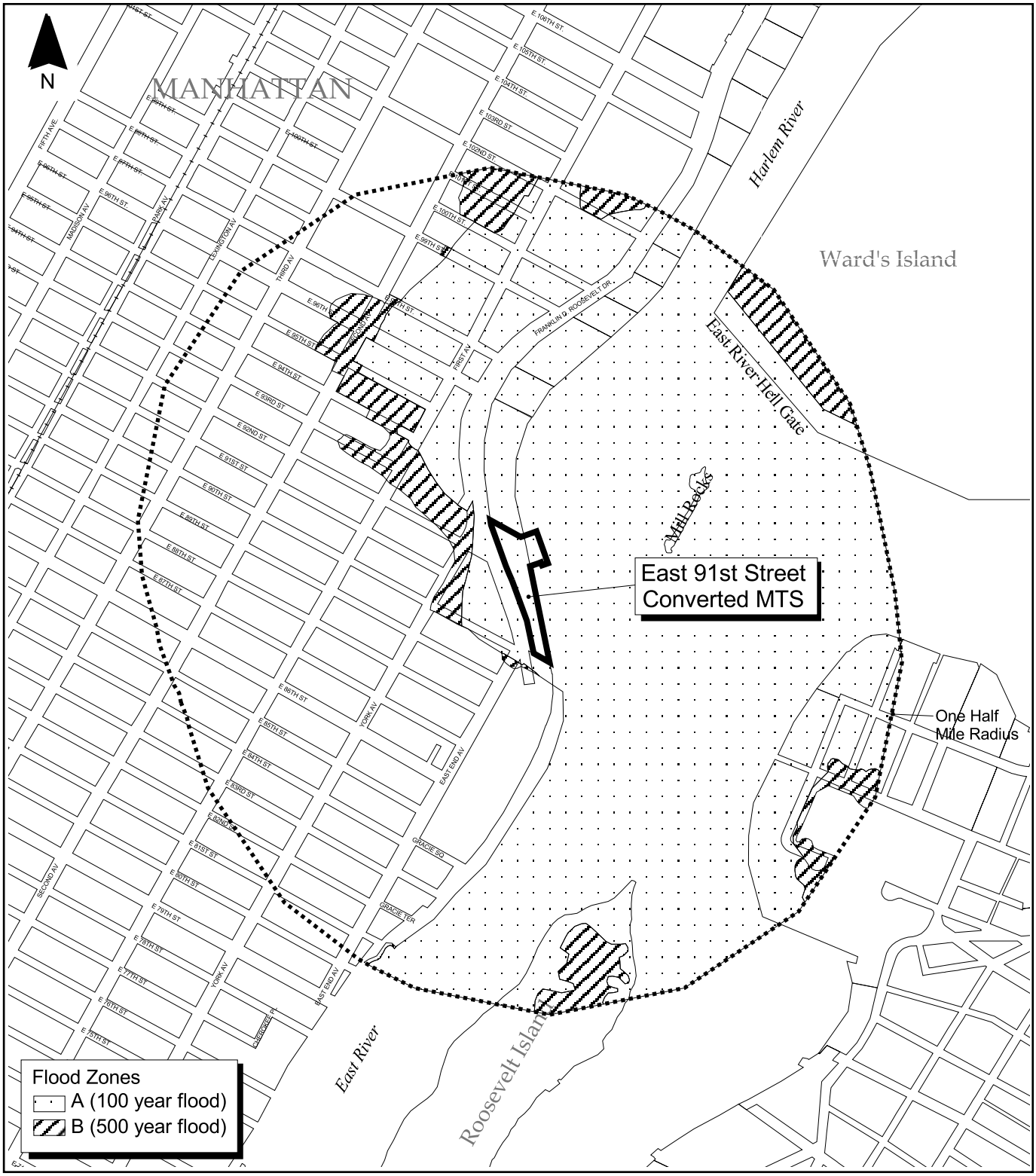
The study area is within the 100-year coastal floodplain (Figure 10.14-1). There are no wetlands other than the East River, which is a NYSDEC designated littoral zone, located on the study area (Figure 10.14-2).

10.14.1.4 Ecosystems

The existing MTS is located on a platform above the East River and connected to Manhattan on the west side of the structure. The waters surrounding the study area are dominated by the East River and aquatic resources are typical of the eastern sections of the East River. The terrestrial ecology of the upland portion of the study area is limited because the site is mostly developed and covered by structures and hard surfaces. The portions not developed have been altered by clearing and leveling and have no substantial ground cover other than opportunistic weeds.

A field program that commenced in January 2003 and will conclude in December 2003 was designed to fully characterize the marine biological resources of the study area. The program includes monthly sampling for fish eggs and larvae, and quarterly sampling for benthic organisms and sessile colonizing organisms. Results of the program through the second quarter samplings are included in this Draft MTS Environmental Evaluation. Results of the annual program will be included in the Final MTS Environmental Review.

While the study was not complete at the time of this writing, a number of larval species have been collected, including winter flounder (*Pseudopleuronectes americanus*) and summer flounder (*Paralichthys dentatus*), two EFH listed species, as well as herring (*Clupeidae*), sculpin (*Myoxocephalus sp.*) and rock gunnel (*Pholis gunnellus*). Eggs of winter flounder (*Pseudopleuronectes americanus*) and fourbeard rockling (*Enchelopus cimbrius*) have also been collected at the site. The results of infaunal benthic invertebrate studies have not been fully analyzed, but visual observations during sample collection indicate polychaete worms and mollusks. Preliminary results indicate the presence of the Polychaete worms (*Streblospio*



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

500 0 500 Feet

Figure 10.14-1 Floodplains

East 91st Street Converted MTS

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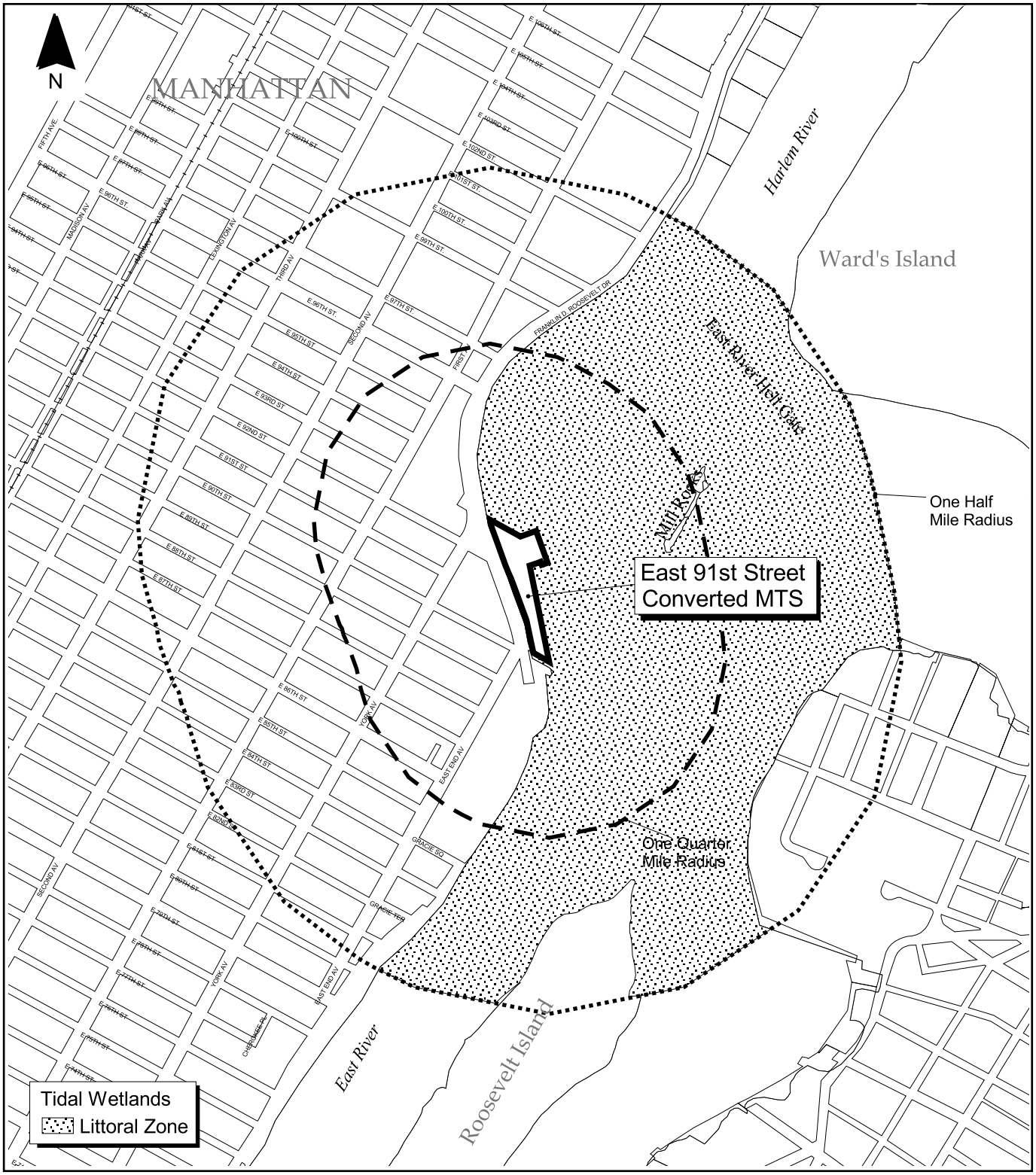

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

Figure 10.14-2 Wetlands

East 91st Street Converted MTS

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benedicti, Haloscolopos robustus, Capitellidae, Hapaniola grayi and Etone sp.). The mollusk *Nassarius obsoletus* was found in the samples as well. This study is ongoing and as more species are collected, they will be added to this list.

The NYSDEC Natural Heritage Report on Rare Species and Ecological Communities reports the peregrine falcon (*Falco peregrinus*), a federally listed endangered species, to be found near the site on Wards Island and the Hell Gate Railroad Bridge.[8]

10.14.2 Future No-Build Conditions

The study area would remain as is. The absence of terrestrial natural resources would remain, and the upland portion of the study area would continue to be an ecologically unproductive and stressed urban area. Reasonably diverse and abundant aquatic natural resources would prevail in the waters in and around the study area.

10.14.3 Potential Impacts with the East 91st Street Converted MTS

10.14.3.1 Geology

The geology of the study area would not be changed as a result of the East 91st Street Converted MTS, other than for the removal of dredge spoil to accommodate the barges and tugboats. The dredging activity would remove layers of sediment deposited over time and further alter the submarine geological features of the study area, but would not result in any significant impact.

10.14.3.2 Floodplains

The East 91st Street Converted MTS would have no affect on the elevation of the site. It would be constructed within the 100-year floodplain, and it would not include any provisions for raising any portions of the site over this level.

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[8] Natural Heritage Report on Rare Species and Ecological Communities. Prepared by NY Natural Heritage Program, NYSDEC, Albany, NY, 2002.

10.14.3.3 Ecosystems

The East 91st Street Converted MTS would be a pile-supported structure and would result in a net gain of 0.15 acre over the water. During the demolition of the existing MTS, the upper organic silts lying beneath the structure that was above water would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable against the normal background fluctuations. Construction would involve installing piles for the foundation supports and dredging to accommodate barges. The benthic and finfish community would be temporarily disrupted during this phase of the project. It can be anticipated that the benthic invertebrates would recolonize the area within 6 months to 12 months and that finfish would return to the area immediately following completion of the construction.

A slight increase in the amount of shading over the aquatic environment would occur as a result of the new facility. Experts have differing opinions regarding the effects of shading. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[9] Another study conducted on the Hudson River reported that there we no significant differences in benthic population biomass under or between piers, but benthos were smaller and numerically more abundant underneath piers than alongside or between them. Also, juvenile winter flounder (*Pseudopleuronectes americanus*) were reported to have depressed feeding on the benthos beneath piers as compared to feeding activity along side and between piers.[10] However, because the increase in shading over water is very small, there are not expected to be significant deleterious results.

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[9] Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for NYC Public Development Corp. by EEA, Inc.

[10] Duffy-Anderson, J.T. & Able, K.W. 2001. "An Assessment of the Feeding Success of Young-of-the-Year Winter Flounder (*Pseudopleuronectes americanus*) Near a Municipal Pier in the Hudson River Estuary, U.S.A." *Estuaries*. Vol. 24, No. 3, p. 430-440.

The East 91st Street Converted MTS would not have any significant impact on the few areas of vegetation present on the site. Vegetation observed on the site were invasive weed species that were not rare, endangered, or particularly important from an ecological perspective.

The peregrine falcon (*Falco peregrinus*), a federally listed endangered species, is known to occupy areas close to the site (Wards Island and the Hell Gate Railroad Bridge), however, there are no sources showing the peregrine falcon to nest on the existing MTS. Use of this site is probably limited to flyovers during hunting and migration, therefore, no significant impacts would be expected.

10.15 Water Quality

10.15.1 Existing Conditions

10.15.1.1 Definition of Study Area

The water quality study area encompassed the Harlem River and the East River, and included discharges from CSOs located within 1/2 mile of the site.

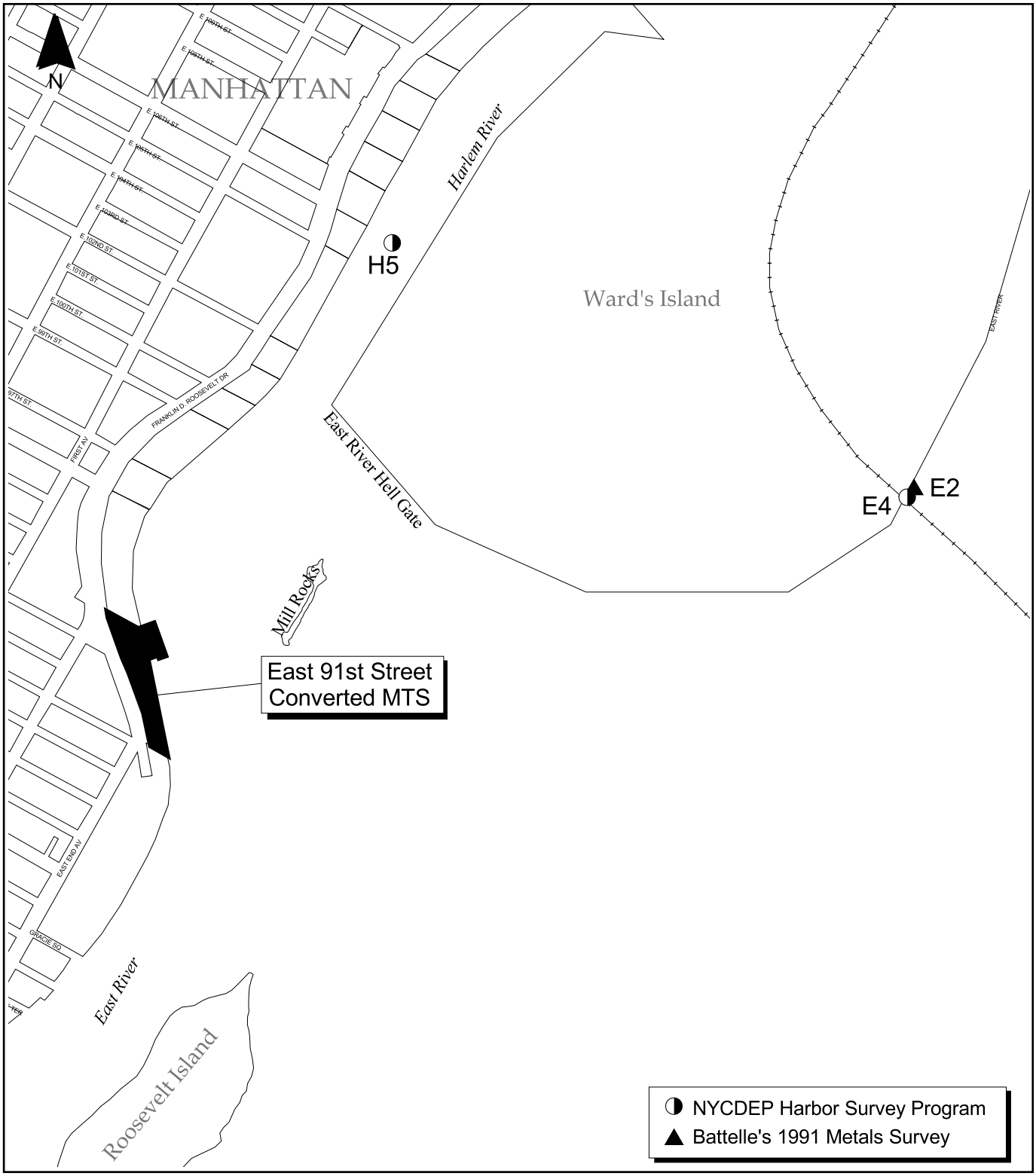
10.15.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 10.15-1, are generally representative of water quality conditions in the study area:

- NYCDEP Harbor Survey Program – Stations E-4 at Hell Gate in the East River and H-5 at 106th Street in the Harlem River; and
- Battelle's 1991 Metals Survey – Station E-2 at Hell Gate.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 10.15-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class I," which indicates waters suitable for secondary contact recreation (i.e., fishing and boating).

As shown in Table 10.15-1, on average, NYSDEC standards and guidance values are met. For Harbor Survey Station E4, however, the minimum surface and bottom dissolved oxygen between June 1, 2002, and September 30, 2002, did not meet the water quality standard for dissolved oxygen. For Harbor Survey Station H5, the minimum surface and bottom dissolved oxygen between June 1, 1999, and September 30, 1999, did not meet the water quality standard for dissolved oxygen. In addition, the mercury concentration for Battelle Station E-2 did not confirm to the water quality standard for mercury.



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

500 0 500 Feet

Figure 10.15-1 Ambient Water Quality Stations

East 91st Street Converted MTS

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Table 10.15-1
Existing Water Quality Conditions and Standards
East 91st Street Converted MTS Study Area

Average Concentration					
Parameter	**Units**	**E4[1]**	**H5[2]**	**E2[3]**	**NYS Class I Standards**
Dissolved Oxygen (surface/minimum)	mg/L	6.3[4]/3.3[5]	6.4[6]/3.9[7]	-------	4
Dissolved Oxygen (bottom/minimum)	mg/L	5.0[4]/2.9[5]	6.1[6]/3.7[7]	-------	4
BOD (surface)	mg/L	3.0[8]	2.8[8]	-------	-------
BOD (bottom)	mg/L	3.0[8]	3.1[8]	-------	-------
Total Coliform (surface)	MPN / 100 mL	877[9]	497[9]	-------	10000
Total Coliform (bottom)	MPN / 100 mL	694[9]	690[9]	-------	10000
Fecal Coliform (top)	MF	100	57	-------	2000
Fecal Coliform (bottom)	MF	36[10]	57	-------	2000
Total Suspended Solids (surface)	mg/L	21	10	-------	-------
Total Suspended Solids (bottom)	mg/L	22	13	-------	-------
NH3-N	mg/L	0.461	0.398	-------	-------
(NO3 + NO2)	mg/L	0.421	0.424	-------	-------
Total Phosphorous	mg/L	0.391[11]	0.446[11]	-------	-------
Dissolved PO4	µg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	3.6	3.4	-------	-------
Arsenic	µg/L	-------	-------	-------	36 [12, 13]
Cadmium	µg/L	-------	-------	0.139[12]	7.7 [12, 13]
Chromium	µg/L	-------	-------	-------	50 [12, 13]
Copper	µg/L	-------	-------	4.495[14]	5.6 [13, 14]
Lead	µg/L	-------	-------	1.51[12]	8 [12, 13]
Mercury	µg/L	-------	-------	0.008404[12]	0.0026 [12, 13]
Nickel	µg/L	-------	-------	2.1[12]	8.2 [10, 11]
Silver	µg/L	-------	-------	0.0542[12]	-----
Zinc	µg/L	-------	-------	9.28[12]	66 [12, 13]
Cyanide	µg/L	-------	-------	-------	1.0 [13]

Notes:

[1] Average concentrations for 2002 NYCDEP Harbor Survey site E-4, located at Hell Gate in the East River.
[2] Average concentrations for 1999 NYCDEP Harbor Survey site H5, located at 106th Street in the Harlem River.
[3] Average concentrations for 1991 Battelle Ambient Survey site E-2, located at Hell Gate in the East River.
[4] Represents average between January and December 2002.
[5] Minimum between June 1, 2002 and September 30, 2002.
[6] Represents average between March and December 1999.
[7] Minimum between June 1, 1999 and September 30, 1999.
[8] Latest available data 1997.
[9] Latest available data 1996.
[10] Latest available data 1999.
[11] Latest available data 1998.
[12] Guidance values and data are for dissolved metals.
[13] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata January 1999 and addendum April 2000).
[14] Site specific chronic and acute criteria for dissolved copper in NY/NJ Harbor.

10.15.1.3 Permitted Discharges

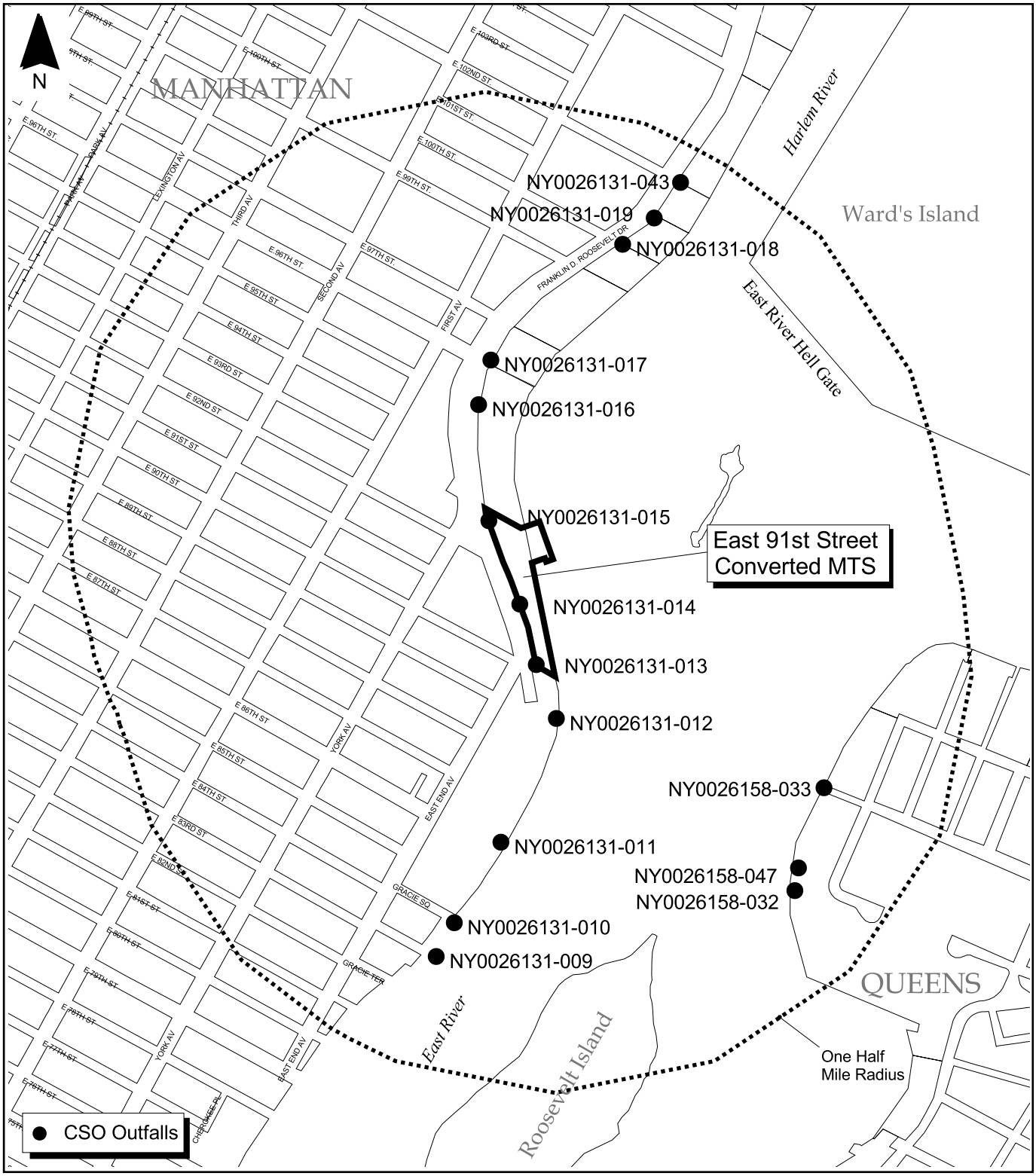
A review of the most recently available NYSDEC and USEPA databases indicated that there are fifteen permitted discharges in the vicinity of the site. The existing discharges within a 1/2 mile radius are shown in Figure 10.15-2 and listed in Table 10.15-2. These discharges are all permitted by the NYSDEC.

Table 10.15-2
Existing Permitted Discharges
East 91st Street Converted MTS Study Area

Combined Sewer Overflow (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
East 83rd Street/Ward's Island	NY0026131-009	New York	East River
Gracie Square/Ward's Island	NY0026131-010	New York	East River
Carl Schurz Park/Ward's Island	NY0026131-011	New York	East River
Carl Schurz Park/Ward's Island	NY0026131-012	New York	East River
East 90th Street/Ward's Island	NY0026131-013	New York	East River
East 91st Street/Ward's Island	NY0026131-014	New York	East River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-015	New York	Harlem River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-016	New York	Harlem River
East 96th Street/Ward's Island	NY0026131-017	New York	Harlem River
East 100th Street/Ward's Island	NY0026131-018	New York	East River
Franklin D. Roosevelt Drive/Ward's Island	NY0026131-019	New York	East River
East 102nd Street/Ward's Island	NY0026131-043	New York	Harlem River
Terminus of Astoria Boulevard/Bowery Bay	NY0026158-047	Queens	East River
Terminus of 27th Avenue/Bowery Bay	NY0026158-033	Queens	East River
100 feet south of Astoria Boulevard/Bowery Bay	NY0026158-032	Queens	East River

10.15.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, an estimate of existing stormwater pollutant loadings was calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% infiltration and/or storage. A runoff flow of 0.073 cfs was calculated using the impervious site area (1.22 acres), an average rainfall intensity of 0.06 inches/hour, and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 10.15-3, represent the existing loads at the site.



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

Figure 10.15-2 Permitted Outfalls and CSO Locations East 91st Street Converted MTS

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Table 10.15-3
Estimated Existing Pollutant Loads and Runoff Flows
East 91st Street Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 mL	34,000	13,399 (1)
BOD mg/L	11	4
Heavy Metals		
Copper μg/L	35	0.014
Lead μg/L	28	0.011
Zinc μg/L	154	0.061
Total Impervious Area (acre) = 1.22		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0.06 (2)		Runoff Volume (cfs) = 0.073

Notes:
(1) Coliform loads are not shown in lbs/day. Values shown are input to the 208 Model, with output results comparable to MPN/100 mL.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

10.15.2 Future No-Build Conditions

Water quality would be expected to remain the same or improve. Water quality improvements would be due to the NYCDEP CSO Abatement Program, which will reduce untreated discharges to receiving waterways, nitrogen removal activities, which will reduce nitrogen loads from City WPCPs, and other programs. Stormwater loads from the existing site would not be expected to change, so no significant water quality impacts would be expected.

10.15.3 Potential Impacts with the East 91st Street Converted MTS

All solid waste processing at the East 91st Street Converted MTS would occur within structures on the site. All process wastewater from waste handling operations in the facility, such as washdown water, would be routed to an on-site pretreatment system (e.g., oil/water separation). After treatment, the process wastewater would be discharged to the municipal sewer system and, ultimately, to the Ward's Island WPCP, where it would be treated prior to discharge to the East River and, therefore, would not adversely affect water quality.

Stormwater loads and impervious area, shown in Table 10.15-4 would be expected to increase above Existing Conditions. According to the 208 Model, however, the increased loads would have no significant impact on water quality in the adjacent surface waters.

Table 10.15-4
Impervious Area and Estimated Pollutant Loads
East 91st Street Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Conditions	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	1.22	0	13,399/NA	4/NA	0.014/NA	0.011/NA	0.061/NA
Future Build Condition	1.78	0.56	19,595/6,196	6/2	0.020/0.006	0.016/0.005	0.089/0.028

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.
(2) Coliform loads are not shown in lbs/day. Values shown are input to the 208 Model, with output results comparable to MPN/100 ml.

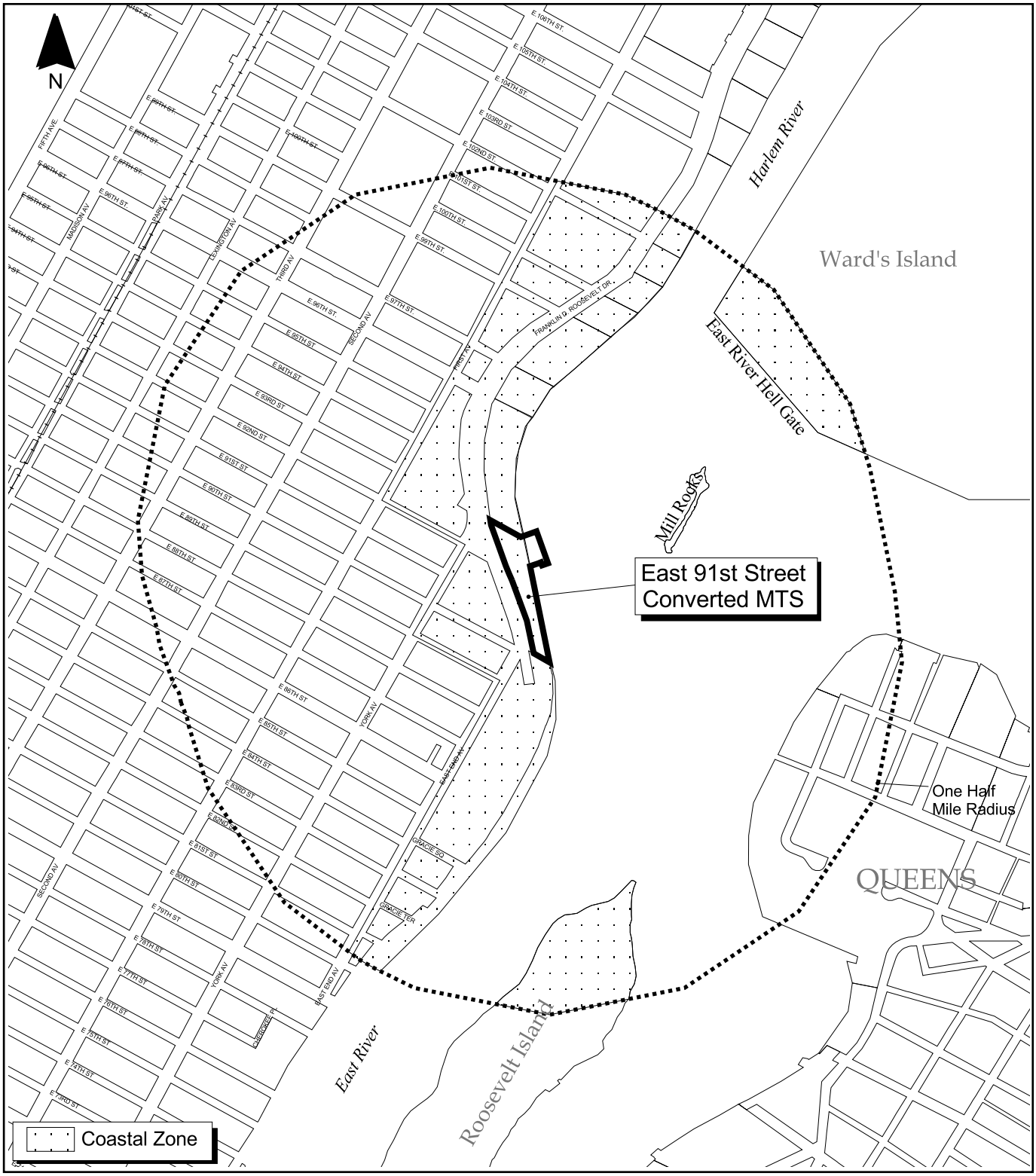
Unimpeded operation of the East 91st Street Converted MTS may also require dredging to refurbish the waterfront structures and improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state, and local regulations and required permits would be acquired before such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during any and all dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not result in any significant long-term impacts.

10.16 Waterfront Revitalization Program

10.16.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the East River, the East 91st Street Converted MTS would be within New York City's coastal zone boundary (Figure 10.16-1). According to "The New Waterfront Revitalization Program," the East 91st Street Converted MTS would be classified as a water-dependent, industrial use. It would be located within Reach 1/The East Side as indicated within the "New York City Comprehensive Waterfront Plan-Reclaiming the City's Edge" and the "Plan for the Manhattan Waterfront." It is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic, and energy resources.

The East 91st Street Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.1, 3.1, 4.4, 6.2, 6.3, and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.18.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the East 91st Street Converted MTS. A description of waste handling operations that would occur at the East 91st Street Converted MTS is provided in Section 2.8.



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

Figure 10.16-1 Coastal Zone Boundary
East 91st Street Converted MTS

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10.16.2 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 East 91st Street Converted MTS. As part of the East 91st Street Converted MTS, connections from the new facility to existing utilities in the vicinity (e.g., sewer and electrical connections, etc.) would be established.

Policy 2: Support water-dependent and industrial uses in New York City's coastal areas that are well suited to their continued operation.

2.1 Encourage working waterfront uses at appropriate sites outside the Significant Maritime and Industrial Areas.

The East 91st Street Converted MTS would not be located within a SMIA. Its development would involve the removal of the existing MTS and construction of a new MTS built primarily over-water on pile-supported platforms. The East 91st Street Converted MTS would involve the conversion of the existing MTS from a truck-to-barge waste transfer station into a TCB MTS transfer station that would transport DSNY-managed waste by marine transport to remote out-of-City disposal facilities. The demolition and redevelopment of the East 91st Street Converted MTS site, as described in Section 2.8.2, would largely represent the continuation of an existing industrial and water-dependent use. The East 91st Street Converted MTS would serve to maintain this use, while restoring and revitalizing existing industrial waterfront property. The redevelopment and expansion in size of the existing structure would be consistent with the previous industrial land use at the site. Although the East 91st Street Converted MTS

would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an expansion of an existing water-dependent use and would be compatible with existing uses. The East 91st Street C*onverted MTS would be consistent with this subpolicy.*

2.3 Provide infrastructure improvements necessary to support working waterfront uses.

The East 91st Street Converted MTS would involve the demolition of the existing MTS. The existing vehicle access ramp, which crosses over the Franklin D. Roosevelt (FDR) Drive, would be screened and remain in its present alignment, however it would be extended to accommodate the design of the East 91st Street Converted MTS. Waterfront construction would involve three primary components: (1) the enclosed processing building, which includes the tipping floor, loading floor, and the pier level; (2) the outdoor gantry crane system; and (3) a rehabilitated bulkhead and fendering system.

The East 91st Street Converted MTS would require dredging to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once it became operational. All dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

Policy 3: Promote use of New York City's waterways for commercial and recreational boating and water-dependent transportation centers.

3.2 Minimize conflicts between recreational, commercial, and ocean-going freight vessels.

The East 91st Street Converted MTS would be located within the East River and would be expanded from its existing footprint. Once operational, it would allow for the containerization of solid waste by a TCB system and marine transport to out-of-City disposal sites. Due to the high currents at the site location, barge maneuvering would require the use of tugboats rather than DSNY personnel. These operations would be comparable to those previously conducted at the site, which did not result in conflicts with recreational, commercial or ocean-going freight. The use of tugboats and the day-to-day operation of the East 91st Street Converted MTS would not, therefore, interfere with any maritime industrial, commercial or recreational vessel activities in the area.

3.3 Minimize impact of commercial and recreational boating activities on the aquatic environment and surrounding land and water uses.

The existing MTS managed solid waste through a truck-to-barge system where loose waste was placed in open barges. The East 91st Street Converted MTS would be a TCB MTS where waste would be transferred into containers that would be sealed and placed into modified hopper barges that would transport DSNY-managed waste to remote out-of-City disposal facilities. All containers would be loaded and sealed inside an enclosed processing building before being placed on the barges, thereby minimizing any impacts to the aquatic environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would also be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environments. All process wastewaters would be treated on-site prior to being discharged to the municipal sewer system. In addition, on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with all applicable federal, state and local regulations.

Policy 4: Protect and restore the quality and function of ecological systems within the New York coastal area.

4.1 Protect and restore the ecological quality and component habitats and resources within the Special Natural Waterfront Areas, Recognized Ecological Complexes, and Significant Coastal Fish and Wildlife Habitats.

Based upon a review of SNWAs, Recognized Ecological Complexes and Significant Coastal Fish and Wildlife Habitat information, the site would not be located within any designated areas. Although the East 91st Street Converted MTS would involve the removal and replacement of existing pilings and pier structures, it would represent an expansion of a previous use and would not be anticipated to result in any long-term effects to natural resources in the vicinity of the site. As discussed in Section 10.14.2, disturbances to surficial sediments due to construction of the East 91st Street Converted MTS and/or potential dredging would have short-term and minimal effects on the benthic community found in the immediate vicinity of the site.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and National Wetland Inventory (NWI) maps was conducted. As discussed in Section 10.14.1, the site contains no freshwater wetlands. A majority of the East 91st Street Converted MTS would be within the East River, however, which is identified as a littoral zone, a state-designated wetland. The demolition of the existing MTS and subsequent development of the East 91st Street Converted MTS would result in limited, short-term impacts to these tidal wetlands.

Impacts to littoral zones would be minimal due to previous waterfront uses at and in the immediate vicinity of the site, and permitted dredging activities that have historically occurred at the site. Dredging would be required to provide adequate

draft for staged barges and navigational depths for tugboat maneuvering. Potential impacts due to dredging would be minimal and of limited duration. All dredging would be done in compliance with applicable federal, state and local regulations. Mitigation for potential impacts, if required, would be proposed during the environmental review and permitting of the East 91st Street Converted MTS.

4.3 Protect vulnerable plant, fish and wildlife species, and rare ecological communities. Design and develop land and water uses to maximize their integration or compatibility with the identified ecological community.

There are no known vulnerable fish or plant species found within the vicinity of the site. A review of the NYSDEC Natural Heritage Report on Rare Species and Ecological Communities reports the Peregrine Falcon (*Falco peregrinus*) as a known species found in the area and as being classified as a federally endangered species. As noted in Section 10.14.3, the East 91st Street Converted MTS would not impact these species or their habitats.

The East 91st Street Converted MTS would involve the demolition of an existing MTS. The East 91st Street Converted MTS would remain as an over-water facility. Waterfront development would include an enclosed processing building, which includes the tipping floor, loading floor and pier level; an outside gantry crane system; and a fender and bulkhead system. Development would involve dredging, however, potential impacts to plant, fish and wildlife species would be minimized and all dredging would be conducted in compliance with applicable federal, state and local regulations and required permits would be acquired prior to any dredging activities.

In addition, all handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact

surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer systems. Stormwater runoff from the East 91st Street Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The East 91st Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 5: Protect and improve water quality in the New York City coastal area.

5.1 Manage direct or indirect discharges to waterbodies

The East 91st Street Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the processing floor would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor wash down waters, etc.) would be conveyed to an on-site disposal treatment system, which would include an oil-water separator, and then discharged to the municipal sewer system. In addition, the slope of the tipping floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the East 91st Street Converted MTS would be managed in accordance with applicable regulations.

5.2 Protect the quality of New York City's waters by managing activities that generate nonpoint source pollution.

During the development and operation of the East 91st Street Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The East 91st Street Converted MTS would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the processing building; limiting the risk of an introduction of hazardous wastes or other pollutants into the environment. In addition, litter control methods would be implemented at the facility to minimize or eliminate the potential for litter to enter surface waters.

5.3 Protect water quality when excavating or placing fill in navigable waters and in or near marshes, estuaries, tidal marshes, and wetlands.

The majority of the demolition and removal of the existing MTS structure and foundations and construction of the East 91st Street Converted MTS would occur within the East River. During removal of the existing pile-supported MTS, disturbances to the upper organic silts may occur, resulting in resuspension of the sediments. The alignment of the existing vehicle access ramp would be salvaged and would remain; however, it would be extended over the East River to accommodate the new design. Dredging would be necessary to provide sufficient depths for barges and tugboats. Potential impacts due to dredging would be localized, however, and of short duration. All dredging would be in accordance with applicable federal, state and local regulations and removed materials would be disposed of at a permitted facility.

5.4 Protect the quality and quantity of groundwater, streams, and the sources of water for wetlands.

The East 91st Street Converted MTS would result in no adverse impact to the quality or quantity of surface or groundwater at or in the immediate vicinity of its site. Applicable and appropriate measures would be implemented at the East 91st Street Converted MTS in accordance with federal, state and local regulations. The East 91st Street Converted MTS would be consistent with this subpolicy.

Policy 6: Minimize loss of life, structures and natural resources caused by flooding and erosion.

6.1 Minimize losses from flooding and erosion by employing non-structural and structural management measures appropriate to the condition and use of the property to be protected and the surrounding area.

According to review of the FEMA National Flood Insurance Program maps, the entire East 91st Street Converted MTS site is located within the 100-year floodplain boundary (Zone A). The East 91st Street Converted MTS would be located at the site of the existing MTS, but have an expanded footprint. The existing MTS would be demolished to an elevation below the waterline to accommodate the expanded function, size and configuration of the East 91st Street Converted MTS. The redevelopment of the site would not affect the potential for flooding or erosion. All demolition and redevelopment activities would comply with applicable building code requirements and to the extent practicable, non-structural or structural measures would be implemented to minimize damage from flooding or erosion.

Policy 7: Minimize environmental degradation from solid waste and hazardous substances.

7.1 Manage solid waste material, hazardous wastes, toxic pollutants, and substances hazardous to the environment to protect public health, control pollution and prevent degradation of coastal ecosystems.

The East 91st Street Converted MTS would involve the management and processing of solid waste through a TCB system and marine transport to out-of-City disposal sites. Waste would be transported in airtight, waterproof, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding waterbody. Sufficient container and barge capacity would be available to meet the requirements of the collection area. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the East 91st Street Converted MTS. Litter control methods would be implemented at the facility to minimize or eliminate the potential for

litter entering surface waters. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. The East 91st Street Converted MTS would not result in adverse impacts and would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

On-site storage of petroleum or hazardous materials related to the operation of the East 91st Street Converted MTS would be minimal and all storage would be in accordance with applicable federal, state and local regulations. Spill prevention and control plans would be used to prevent any hazardous materials from entering the environment.

7.2 Prevent and remediate discharge of petroleum products.

See response to Subpolicy 7.1.

7.3 Transport solid waste and hazardous substances and site solid and hazardous waste facilities in a manner that minimizes potential degradation of coastal resources.

See response to Subpolicy 7.1.

Policy 8: Provide public access to and along New York City's coastal waters.

8.1 Preserve, protect and maintain existing physical, visual and recreational access to the waterfront.

The East 91st Street Converted MTS would be a stand-alone, water-dependent facility on the East River. It would generally be located at the site of the existing MTS. Public access would generally not be compatible with the East 91st Street

Converted MTS, however, its conversion would not impact existing, nor preclude any future development of public access. Several parks are located within the study area that would allow for continued physical, visual and recreational access to the waterfront.

8.2 Incorporate public access into new public and private development where compatible with proposed land use and coastal location.

Public access would not be compatible with the principal use of the site due to the industrial activities. As discussed in Section 10.5.1, there are several parks providing public access and recreation facilities that are located in the immediate vicinity of the East 91st Street Converted MTS. The East 91st Street Converted MTS would not preclude future development of public access at other locations along the East River.

8.3 Provide visual access to coastal lands, waters and open space where physically practical.

The East 91st Street Converted MTS would be an expansion of an existing water-dependent facility. It would remain compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. As discussed in Section 10.7.3, the East 91st Street Converted MTS would be consistent with this subpolicy. See also response to Subpolicy 9.1.

8.4 Preserve and develop waterfront open space and recreation on publicly owned land at suitable locations.

Located south of the East 91st Street Converted MTS is Carl Schurz Park, which is physically separated from the site by the FDR Drive. Expansion and redevelopment of the existing MTS would cause no new impacts to these areas and, therefore, the East 91st Street Converted MTS would be consistent with this subpolicy.

Policy 9: Protect scenic resources that contribute to the visual quality of the New York City coastal area.

9.1 Protect and improve visual quality associated with New York City's urban context and the historic and working waterfront.

The East 91st Street Converted MTS would be expanded from its existing footprint; however, it would not result in a significant impact to visual quality as noted in Section 10.7.3. It would involve the redevelopment of an existing water-dependent facility. Based upon the information discussed in Section 10.7.3, the East 91st Street Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The East 91st Street Converted MTS would be an expansion of an existing MTS facility and would pose no new impacts to scenic values associated with natural resources. The East 91st Street Converted MTS would, therefore, be consistent with this subpolicy.

Policy 10: Protect, preserve and enhance resources significant to the historical, archaeological and cultural legacy of the New York City coastal area.

10.1 Retain and preserve designated historic resources and enhance resources significant to the coastal culture of New York City.

According to the "Plan for the Manhattan Waterfront," the Municipal Asphalt Plant (Asphalt Green Recreational Center), listed as a city landmark on the National Register of Historical Places, is located adjacent to the existing MTS ramp; however, as noted in Section 10.6.3, the East 91st Street Converted MTS would have no impacts on this resource. Therefore, the East 91st Street Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources have been identified on the site, therefore, the East 91st Street Converted MTS would have no impact on such resources.

10.17 HAZARDOUS MATERIALS

10.17.1 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 CEQR Manual (October 2001) and is consistent with the requirements for a Phase I ESA established by the American Society for Testing and Materials (ASTM E-1527). The assessment was performed in February 2003 and included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of *Sanborn* fire insurance maps for the study area, if available, and a Freedom-of-Information Law request to the New York City Fire Department for underground storage tank 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 attempted; however, access to the transfer station tipping deck and interior areas were not possible because of a padlocked gate at the end of the ramp on York Avenue. Therefore, site conditions are assumed based on historical and regulatory agency list reviews (CEQR Manual, Section 323.). During the site boundaries reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers, and unusual stains and odors. Topographic maps, visual observations, and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

10.17.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (Figure 10.17-1).

10.17.1.2 Delineation of Area of Concern

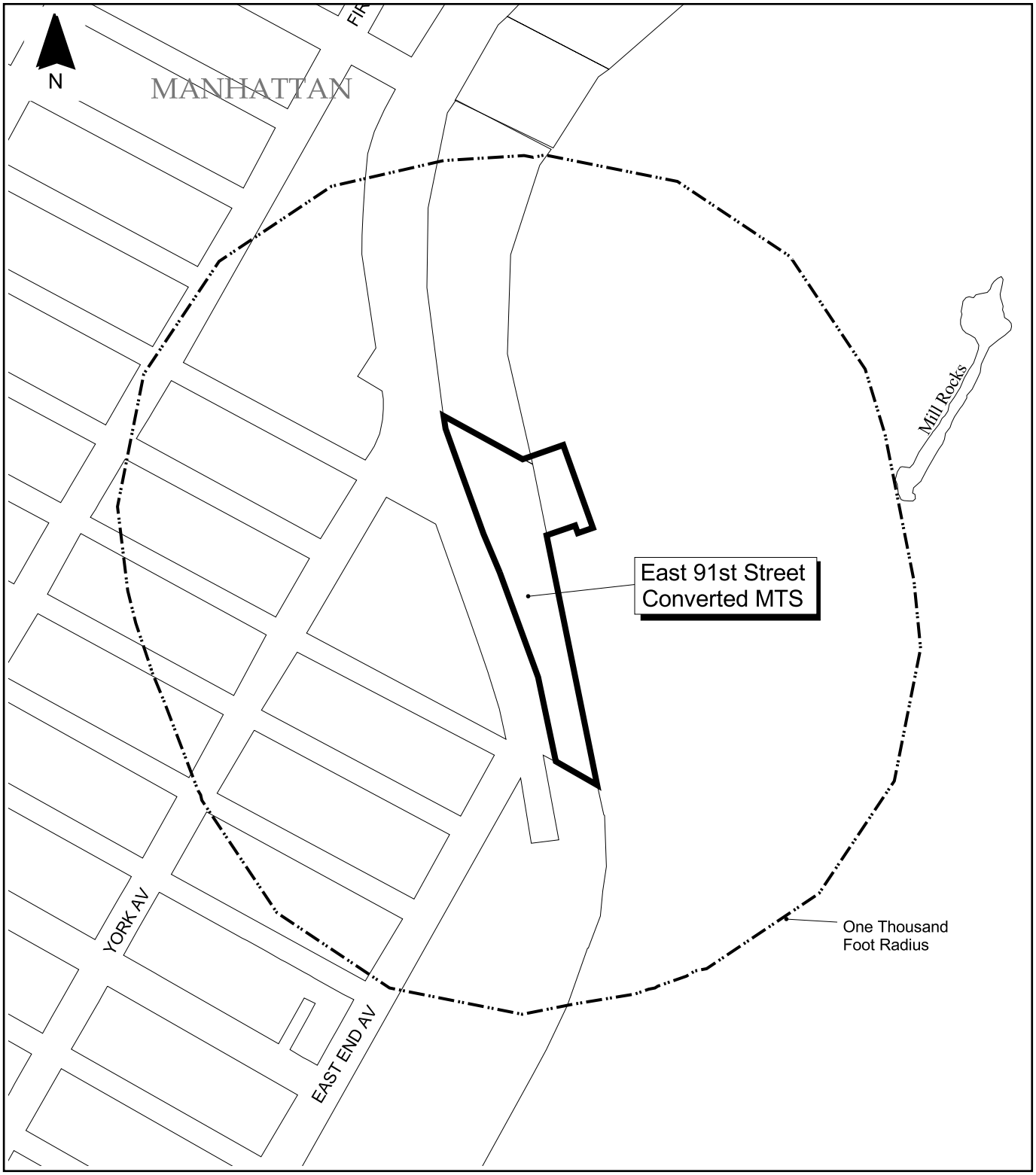
Areas of concern are defined as parts of the ground, groundwater, surface water, or structures within the study area where the presence or likely presence of hazardous materials exists and implementation of the East 91st Street Converted MTS could lead to an increased exposure of people or the environment to those materials. No specific areas of concern were identified at this site during the assessment.

10.17.2 Future No-Build Conditions

The existing MTS would remain standing and the site would remain as is. There would be no areas of significant concern with regard to hazardous materials.

10.17.3 Potential Impacts with the East 91st Street Converted MTS

Based on the information that could be obtained during this assessment, construction or implementation of the East 91st Street Converted MTS would not result in adverse impacts. No additional testing would be required other than an asbestos inspection prior to building demolition or modification. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.



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

Figure 10.17-1 Hazardous Materials Sites

East 91st Street Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION