CHAPTER 8 ENVIRONMENTAL REVIEW: 52ND STREET BARGE STAGING AREA

8.1 Introduction

The results of the environmental analyses of the 52nd Street Barge Staging Area are presented in the following sections:

8.2 Land Use, Zoning, and Public Policy
8.3 Socioeconomic Conditions
8.4 Community Facilities and Services
8.5 Open Space
8.6 Cultural Resources
8.7 Urban Design, Visual Resources, and Shadows
8.8 Neighborhood Character
8.9 Natural Resources
8.10 Hazardous Materials
8.11 Water Quality
8.12 Waterfront Revitalization Program
8.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
8.14 Traffic, Parking, Transit, and Pedestrians
8.15 Air Quality
8.16 Odor
8.17 Noise

Section 2.2.5 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

8.2 Land Use, Zoning, and Public Policy

8.2.1 Existing Conditions

8.2.1.1 Definition of the Study Area

For the land use, zoning, and public policy analyses, the primary study area is defined as the area within ¼-mile of the site (see Figure 8.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 8.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.2.5 provides information on existing land uses and operations on the site.

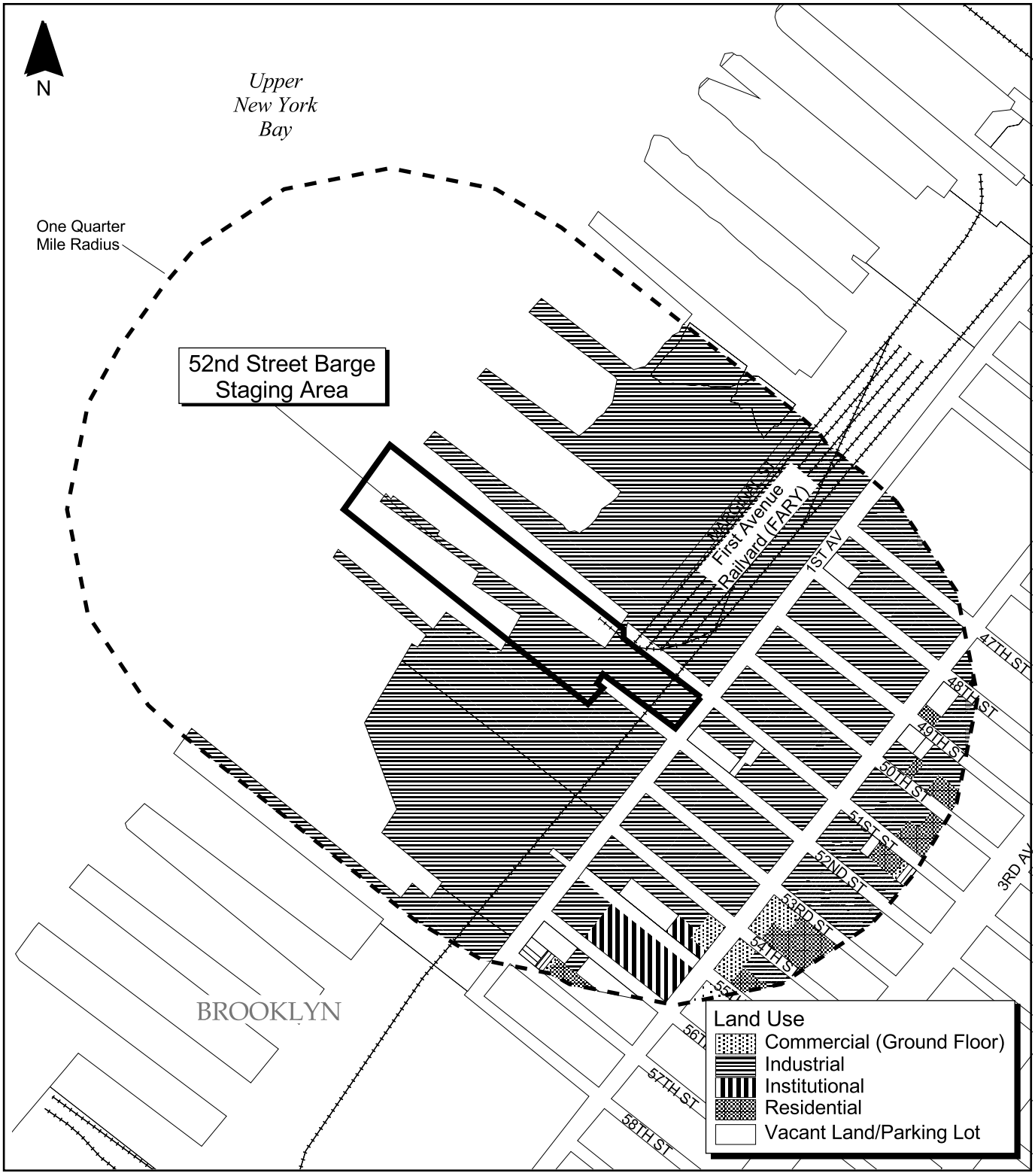
8.2.1.2 Land Use Patterns

8.2.1.2.1 General Context

The site is home to an existing DSNY vehicle maintenance facility, sand/salt storage location and parking lot for employees. Access is provided via First Avenue and both 51st and 52nd Streets; an unused spur railroad track (part of the First Avenue Rail Yard) crosses the site west of First Avenue; and the elevated Gowanus Expressway traverses the area above Third Avenue. It is located within the Sunset Park section of the industrial Brooklyn waterfront, just south of Bush Terminal and north of the Brooklyn Army Terminal (BAT). The waterfront and general area west of Third Avenue are predominantly industrial and generally characterized by large-scale industrial lofts.

8.2.1.2.2 Land Uses in the Primary Study Area

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



Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates predominant land uses by lot in the primary study area.

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Figure 8.2-1 Land Use in the Primary Study Area
52nd Street Barge Staging Area

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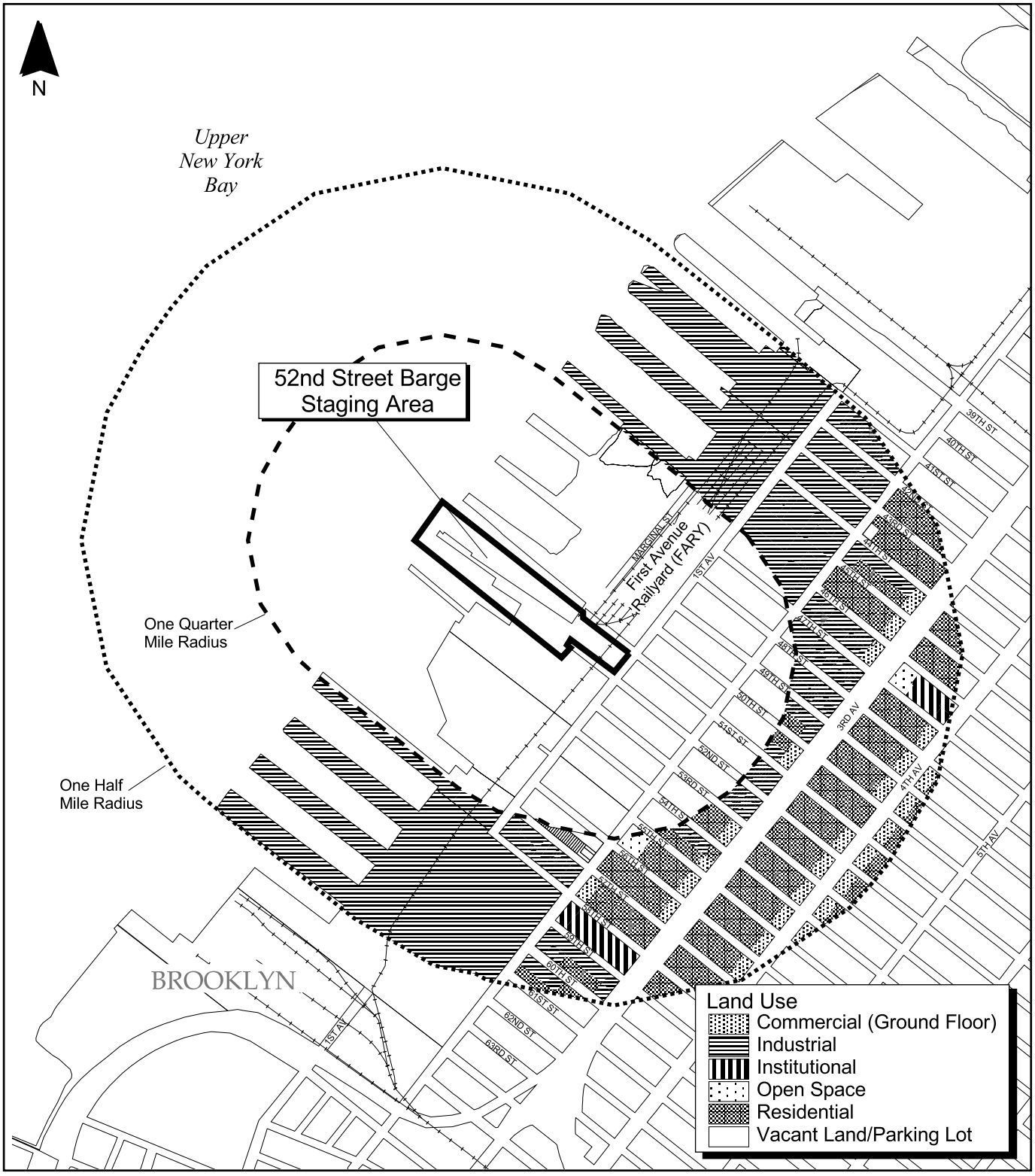

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area.

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Figure 8.2-2 Land Use in the Secondary Study Area

52nd Street Barge Staging Area

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

Residential uses in the primary study area consist of two- and three-story single- and multi-family attached structures east of Second Avenue.

Likewise, community facilities within the primary study area are generally located east and southeast of the site. The Lutheran Medical Center, including its associated mental health clinic, the Augustana Lutheran elder care facility and five-story parking structure, as well as the Martin Luther King Playground, are located on Second Avenue at 55th and 56th Streets.

8.2.1.2.3 Land Uses in the Secondary Study Area

The general land use pattern found in the primary study area continues in the secondary study area. Industrial uses housed in large industrial loft buildings are located on the blocks nearest the waterfront, while a mix of residential, commercial and lighter industrial activities characterize the blocks east of Second Avenue. Rows of single-family attached homes and two- and three-story row houses line most of the blocks, along with isolated storefronts and auto repair shops, between Second and Third Avenues and 42nd and 46th Streets. The blocks also feature street trees, which become more prominent further east.

Third Avenue is dominated by the elevated Gowanus Expressway/BQE/I-287, which physically separates the areas east and west of Third Avenue. Third Avenue is itself a major arterial, functioning as a service road to the expressway above. The area directly below, dividing the expressway structure, is utilized for public metered parking.

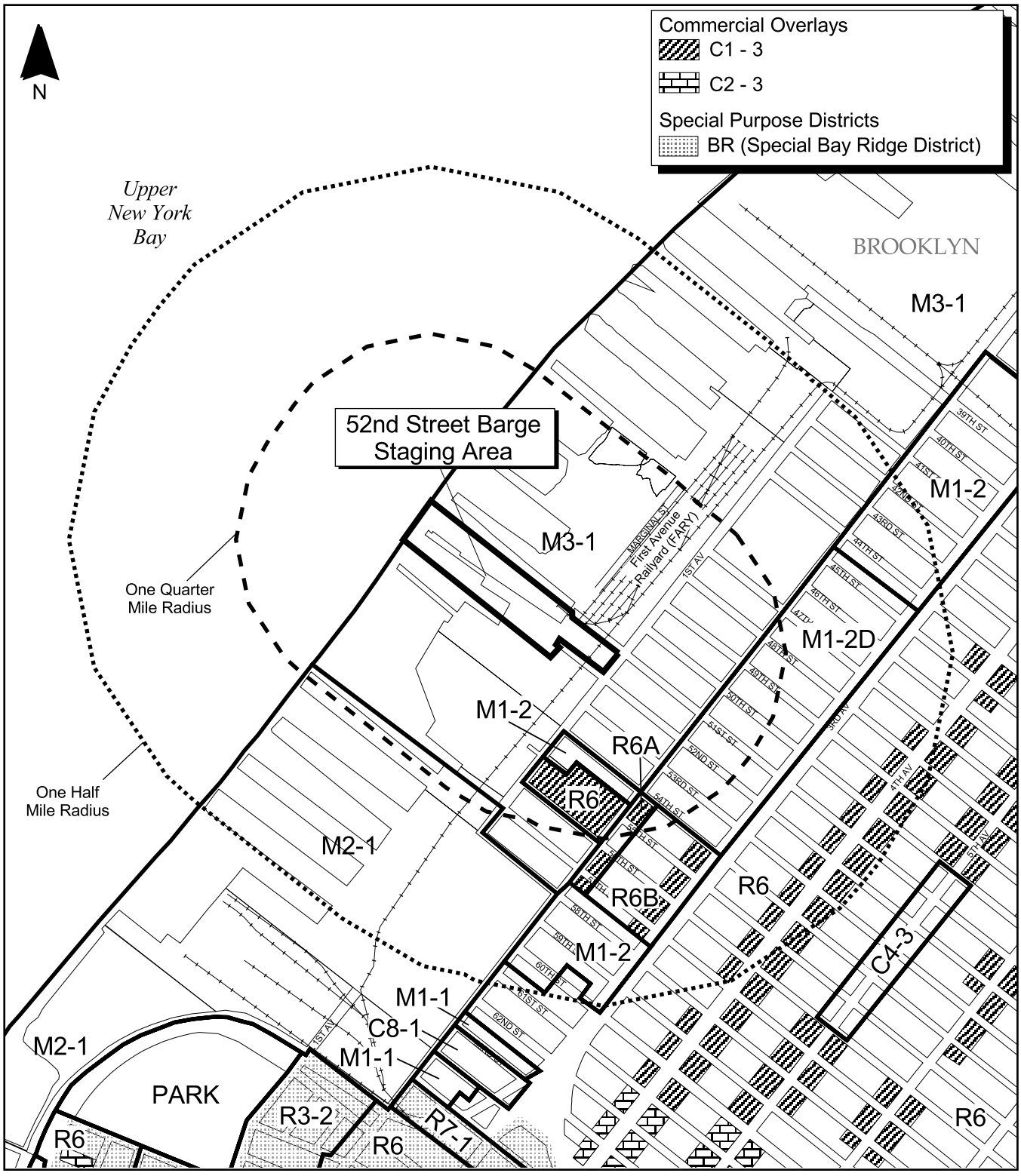
East of Third Avenue, the blocks are solidly residential, with a mix of single- and multi-family structures. Most blocks contain rows of attached brick row houses with driveways, as well as small-scale commercial storefronts at the corners. Isolated auto services (including inspection, repair, painting, etc.) tend to be located midblocks on the avenues, approximately one or two per block.

Fourth Avenue, which carries the area's only subway lines (N and R trains), has local stations at 45th Street and 53rd Street and an express station at 59th Street. As such, it is the primary commercial strip serving the Sunset Park neighborhood. Local commercial businesses, chain restaurants and banks use ground floor space along Fourth Avenue, with apartments in second, third and fourth stories above. Churches and schools, including St. Michael's Church and P.S. 1, are also located along Fourth Avenue.

8.2.1.3 Zoning On and Near the Site

8.2.1.3.1 Zoning Within the Primary Study Area

The site and most of the primary study area lie within a large M3-1 zone, which extends southward from the shoreline to Second Avenue and east from 57th Street, and to the northeast beyond the secondary study area. East of Second Avenue (between 44th and 54th Streets) is a mixed-use M1-2D zoning district and a small M1-2 zoning district on 54th Street west of Second Avenue. Immediately south of this light industrial district is an R6 district that encompasses Lutheran Medical Center. Small portions of R6A and R6B districts – allowing medium contextual residential development – are situated at the southeastern edge of the area, along Second Avenue and to the east. (See Figure 8.2-3 and Table 3.4-1: Zoning District Characteristics.)



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

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Figure 8.2-3 Zoning

52nd Street Barge Staging Area

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8.2.1.3.2 Zoning Within the Secondary Study Area

Most of the secondary study area lies within manufacturing districts M3-1, M2-1, M1-2 and M1-2D. The southwestern half of the secondary study area is zoned M2-1 from the shoreline to Second Avenue and M1-2 to the south. Directly east of the primary study area is zoned M1-2D between Second and Third Avenues, and further northeast is a portion of an M1-2 district – north of 45th Street. Southwest of Third Avenue is a large R6 zoning district with a C1-3 commercial overlay that covers most of the Sunset Park neighborhood. Two medium-density residential districts – R6A and R6B – cover the blocks between 54th and 59th Streets, from Second to Third Avenues.

8.2.1.4 Plans and Policies

The project site lies within the City Coastal Zone, and as such is subject to the WRP. For areas near the site, The Plan for the Brooklyn Waterfront recommends in Reach 14: Brooklyn Upper Bay, the provision of public access on Piers 4 to 7 in Sunset Park in conjunction with plans for their future use; the construction of access ramps to the Gowanus Expressway in the vicinity of 39th Street; and the implementation of proposed rail improvements in Sunset Park to maximize intermodal connection to carfloat operations.

Efforts aimed at preparing a 197-A Plan for Sunset Park have temporarily been put on hold, and no resumption date is known at the time of this analysis, but Brooklyn CD 7 continues to indicate its planning needs within the FY 2004 CDNS. In that report, Brooklyn CD 7 promoted the Hamilton Avenue MTS, particularly if a new garage for BK-7 on the former incinerator site would be part of its capital program.

The CD supports improvements at South Brooklyn Marine Terminal, which will allow for an integration of economic activities and waterfront access, and development of the Bush Terminal Piers Open Space proposed by the NYCEDC (see Section 8.2.2).

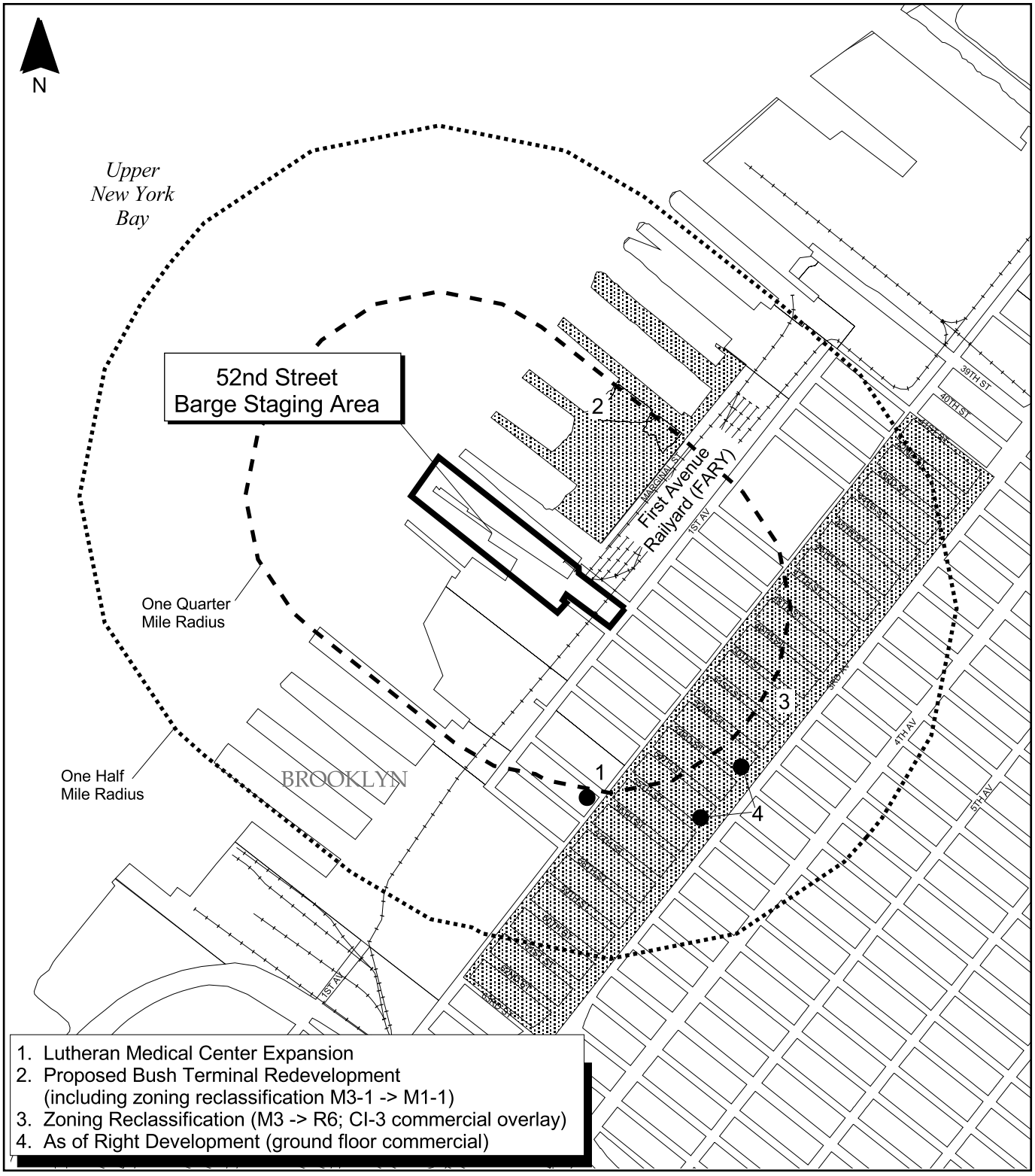
In the 1980s, the state established the Sunset Park In-Place Industrial Park. This complex covers 650 acres in southwest Brooklyn, offers a variety of sizes and types of industrial space, and is part of a New York State EDZ, making firms eligible for special financial incentives and low-cost financing.

The Strategic Plan for the Redevelopment of the Port of New York (1999) outlines a series of targeted investments to develop marine cargo terminals, public access to the waterfront, improved highway and rail access, improved navigation channels and environmental mitigation in the City over the period 1999 to 2020. Within the plan, NYCEDC considered Sunset Park a viable site for three separate, but complementary, development programs: (1) an auto terminal (near-term) at the South Brooklyn Maritime Terminal; (2) a landfill expansion of South Brooklyn Marine Terminal; and (3) a container terminal complex (long-term) over a larger are of Sunset Park, served by major cross-harbor freight improvements. The NYCEDC has since progressed their plan for the redevelopment of Bush Terminal.

8.2.2 Future No-Build Conditions

It is reasonable to anticipate that the Future No-Build Conditions in the primary and secondary study areas will resemble the Existing Conditions generally, except for the following three notable changes. (See Figure 8.2-4)

- **Bush Terminal Piers Open Space.** The NYCEDC proposes to create a 23-acre public open space and recreation facility for active and passive uses on the Bush Terminal Piers, on the Sunset Park waterfront, to serve the unmet demand of the community. The site encompasses five piers (and landfilled area) between 43rd and 51st Street, just north of the DSNY site. The first phase of the project, which would entail necessary site remediation, as well as some infrastructure and open space improvements, would be complete by 2006. The remaining development would then be complete by 2009. The open space would feature a variety of indoor and outdoor facilities (including walkways, natural areas, athletic fields, indoor ice rink, boat-building area, fishing pier, seasonal restaurant booths, environmental education center, community building, historic vessels and banquet hall).



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

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Figure 8.2-4 Planned Development Sites

52nd Street Barge Staging Area

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- **Lutheran Medical Center Expansion and Associated Rezoning.** Lutheran Medical Center proposes to expand and relocate some services to a site on 56th Street between First and Second Avenue, currently a parking lot. The proposed development would consist of a ground floor pharmacy and two floors of medical facility space. Associated with this action would be a rezoning from M3-1 to R6 (with a C1-3 commercial overlay), which would apply to a larger portion of the study area, extending from 41st Street to 63rd Street on First Avenue. The ULURP process for this project has not been initiated at the time of this analysis, but construction is expected to be underway by the Future No-Build year.

- **First Avenue Rail Line.** The third project is the acquisition of an easement between 39th and 56th Streets for the First Avenue rail line, which will be improved and realigned in the area between 37th to 65th Streets. The project was filed through ULURP and approved, and construction on the rail line is expected to be completed in 2005.

8.2.3 Potential Impacts with the 52nd Street Barge Staging Area

8.2.3.1 Land Use and Zoning

The utilization of Pier 52 for a barge staging unit, much like the unit that historically has been operated by DSNY at the same location, would be generally compatible with the existing and proposed water-dependent uses of the Sunset Park waterfront. The barge staging area would not alter established land use patterns, nor would it affect uses inland. It would be in keeping with the industrial presence of the area in general, though its operation would resume near the proposed Bush Terminal Open Space, which will be under development by 2006, just north of the site. Most of the active uses are planned for the upland areas near Marginal Street. A fishing area is proposed at the northern tip of Pier 1 at the end of 51st Street, facing away from the proposed barge staging area (see Section 8.5.3 for discussion of potential impacts to open space.) It would not require or lead to changes in zoning, and it would remain within and surrounded by manufacturing zoning. Therefore, no impacts to land use and zoning would result from the 52nd Street Barge Staging Area.

8.2.3.1 Consistency with Public Plans and Policies

The 52nd Street Barge Staging Area would not be inconsistent with the waterfront plans or CDNS recommendations for the area or with the NYCEDC's plan to develop Bush Terminal Piers as an open space. Its development, however, would be inconsistent with NYCEDC's standing 1999 plans to develop the Sunset Park Container Terminal, which could extend out from the shore to the pierhead, from about 65th Street on the southern end (alongside the BAT) to approximately 50th Street.

Should the site be advanced as part of the Proposed Action, potential inconsistencies with public plans would be resolved by DSNY and appropriate agencies at that time.

8.3 Socioeconomic Conditions

8.3.1 Existing Conditions

8.3.1.1 Definition of the Study Areas

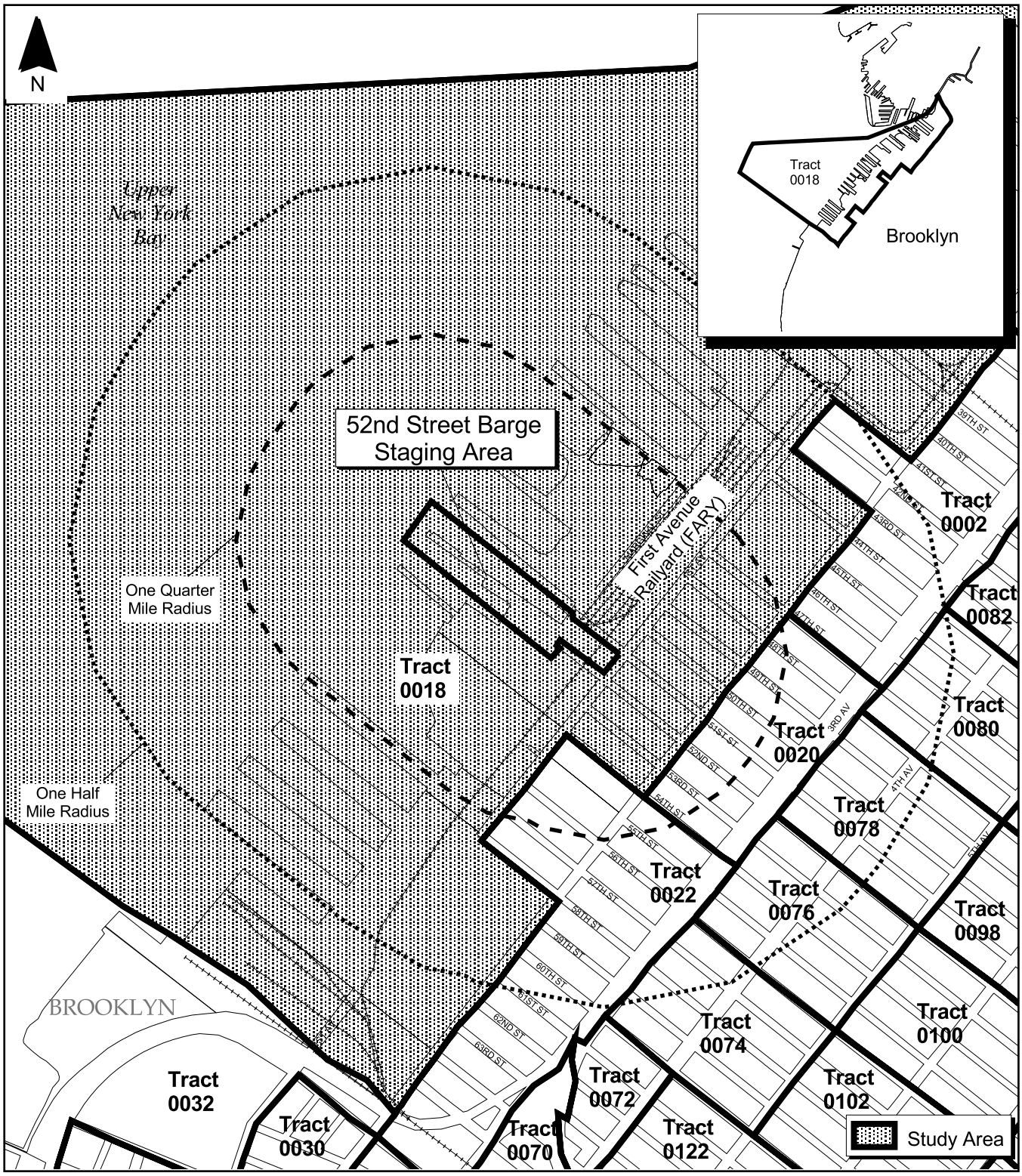
Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site, and (2) a study area related to economic activity that generally covers a larger area ½-mile from the site. (Refer to Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Brooklyn Census Tract 18 (see Figure 8.4-1). Census Tract 18 covers industrial waterfront areas between Gowanus Creek and approximately 65th Street, generally to the west of Second Avenue. For comparison purposes, census data were also gathered at the borough and City levels.

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

8.3.1.2 Demographic Characteristics

8.3.1.2.1 Population

In 2000, the study area population was 1,442 persons, which was an approximate 25% increase over 1990 (see Table 8.3-1). There were a greater number of males (1,287) than females (155) within the study area. Therefore, the age-sex distribution of the study area population was dissimilar to the distribution of population in the borough and the City, where there were slightly more females than males in each area.



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

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Figure 8.3-1 Census Tracts

52nd Street Barge Staging Area

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Table 8.3-1
1990-2000 Population

Year	Study Area	Brooklyn	City
2000	1,442	2,465,326	8,008,278
1990	4	2,300,664	7,322,564
Percent Change	NA	+7.2%	+9.4%

Source: U.S. Census 1990, 2000

The study area had a smaller percentage of children and teens than either the borough or the City in 2000. About 1.2% of the study area population was under the age of 20, as compared to Brooklyn (30%) and the City (27%).

8.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a greater proportion of people (49%) of Hispanic origin (all races) than did Brooklyn (20%) and the City (27%). Of the 51% of non-Hispanic origin, 55% were Black and 80% were White. In Brooklyn and the City, Blacks represented approximately 43% and 33% of the non-Hispanic populations, respectively, while Whites represented 43% and 48% respectively. About 8.4% of the non-Hispanic population was Asian or Pacific Islander compared to 9.3% and 13.4% in the borough and City, respectively.

8.3.1.2.3 Families and Households

There were four families in the study area in 2000. The percentage of these families who had children under the age of 18 years (50%) was similar to families in Brooklyn (51%) or the City (49%). The study area had a lower percentage of married-couple families (50%) than Brooklyn (59%) or the City (62%).

There were more households in the study area in 2000, with an average of 3.00 persons per household, more than Brooklyn and the City, each of which averaged about 2.6 persons per household.

8.3.1.2.4 Employment

The study area had a much lower percentage (less than 1%) of persons age 16 and older in the labor force compared to Brooklyn (55%) and the City (58%). Private wage and salary workers, followed by government workers, were the largest classes of worker in all three areas.

8.3.1.2.5 Housing

As of 2000, there were zero housing units with no vacancy. Approximately 86% of housing units were renter-occupied, a slightly greater percentage than Brooklyn and the City. Both the median rent in the study area ($950) and the median value of housing units ($187,500) were greater than in the larger areas.

8.3.1.2.6 Education

The U.S. Census reports 143 students in the study area enrolled in school. Approximately 31% and 29% of persons three years or older are enrolled in school within Brooklyn and the City, respectively. A similar percentage of residents were enrolled in elementary school, high school and college in the three areas. The study area also had similar levels of educational attainment as the borough and the City. In the study area, about 32% of people aged 32 and older had only a high school diploma and about 12% had a college degree.

8.3.1.2.7 Income and Poverty

In 2000, both median household income ($85,000) and median family income ($33,750) in the study area exceeded the levels of the borough and the City. About 50% of households and 50% of families had incomes greater than $34,999, a much greater proportion than in either of the larger areas.

There were no families with children in the study area who were living below the poverty level in 2000. Additionally, the study area had zero people under the age of 18, or 65 years of age and older, below the poverty level.

8.3.1.3 Economic Conditions

In the 1980s, the state established the Sunset Park In-Place Industrial Park. This complex covers 650 acres in southwest Brooklyn, offers a variety of sizes and types of industrial space, and is part of a New York State EDZ, making firms eligible for special financial incentives and low-cost financing.

Current forecasts indicate that about 43,447 employees worked in Brooklyn CD 7 in 2005, which was about 6% of the borough's total employment.[1]

8.3.2 Future No-Build Conditions

8.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 7 will remain about the same as current conditions.[2]

8.3.2.2 Economic Conditions

Economic conditions in the study area are expected to continue to improve somewhat in localized portions of the study area over the next several years as a result of both private and public projects. Existing available space in the BAT is nearly fully leased to industries such as manufacturing, cellular phone assembly and photographic lighting assembly. The expansion of the Lutheran Medical Center may also facilitate additional employment in the area.

Improvements are planned for industrial and port facilities in Sunset Park, along with other City ports, as part of the NYCEDC's Strategic Plan, and the Bush Terminal Piers Open Space will be the major new development in the area. The Bush Terminal Piers Open Space, however, is not expected to alter employment density. Therefore, economic conditions within the immediate vicinity of the site are expected to resemble Existing Conditions.

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[1] Based on New York Metropolitan Transportation Council, Population and Employment Forecasts, approved 7-17-03.
[2] Ibid.

Regional projections indicate that employment in Brooklyn CD 7 will remain about 6% of the borough total.[3]

8.3.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area is generally compatible with its industrial surroundings and is not expected to have a significant adverse impact on socioeconomic conditions within the study area.

8.3.3.1 Residential Impacts

No direct residential displacement would occur as a result of the 52nd Street Barge Staging Area. The site and its surrounding industrial uses are relatively isolated from most of the Sunset Park residential areas east of the Gowanus Expressway. Those residences nearer the site along Third Avenue are buffered from the site by other established industrial uses, typically housed in massive industrial lofts. The 52nd Street Barge Staging Area entails only over-water activity associated with barge movement, and no indirect impacts or significant impacts to neighborhood character are anticipated.

8.3.3.2 Direct Business and Institutional Impacts

The 52nd Street Barge Staging Area would utilize a vacant pier and adjacent area already under DSNY jurisdiction and previously used for a similar purpose; therefore, no direct displacement of businesses or institutional uses would result.

8.3.3.3 Indirect Business and Institutional Impacts

The 52nd Street Barge Staging Area is expected to be compatible with its surrounding industrial uses, as well as the Bush Terminal Piers Open Space that will be underway. Because the 52nd Street Barge Staging Area may be inconsistent with NYCEDC plans for Sunset Park Container Terminal Development, however, it may result in indirect business impacts, limiting future transload or intermodal opportunities at the site.

[3] Ibid.

Should the site be advanced as part of the Proposed Action, potential inconsistencies with public plans would be resolved at that time.

8.3.3.4 Employment Impacts

The 52nd Street Barge Staging Area is expected to generate approximately 23 jobs associated with the operation and maintenance of the new facility (equipment operators, mechanics, supervisors and laborers), and marine operators (barge personnel). In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending. The 52nd Street Barge Staging Area would be operated around the clock with the last shift entailing maintenance and housekeeping activities. Around-the-clock activity would enhance security in this industrial area.

8.4 Community Facilities

8.4.1 Existing Conditions

8.4.1.1 Definition of the Study Areas

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

8.4.1.2 Summary of Community Facilities and Services

There are four community facilities within the primary study area, all medical facilities or social services program centers. Fifteen others are located within the secondary study area, and five just beyond. The community facilities are listed below in Table 8.4-1 and shown on Figure 8.4-1.

8.4.2 Future No-Build Conditions

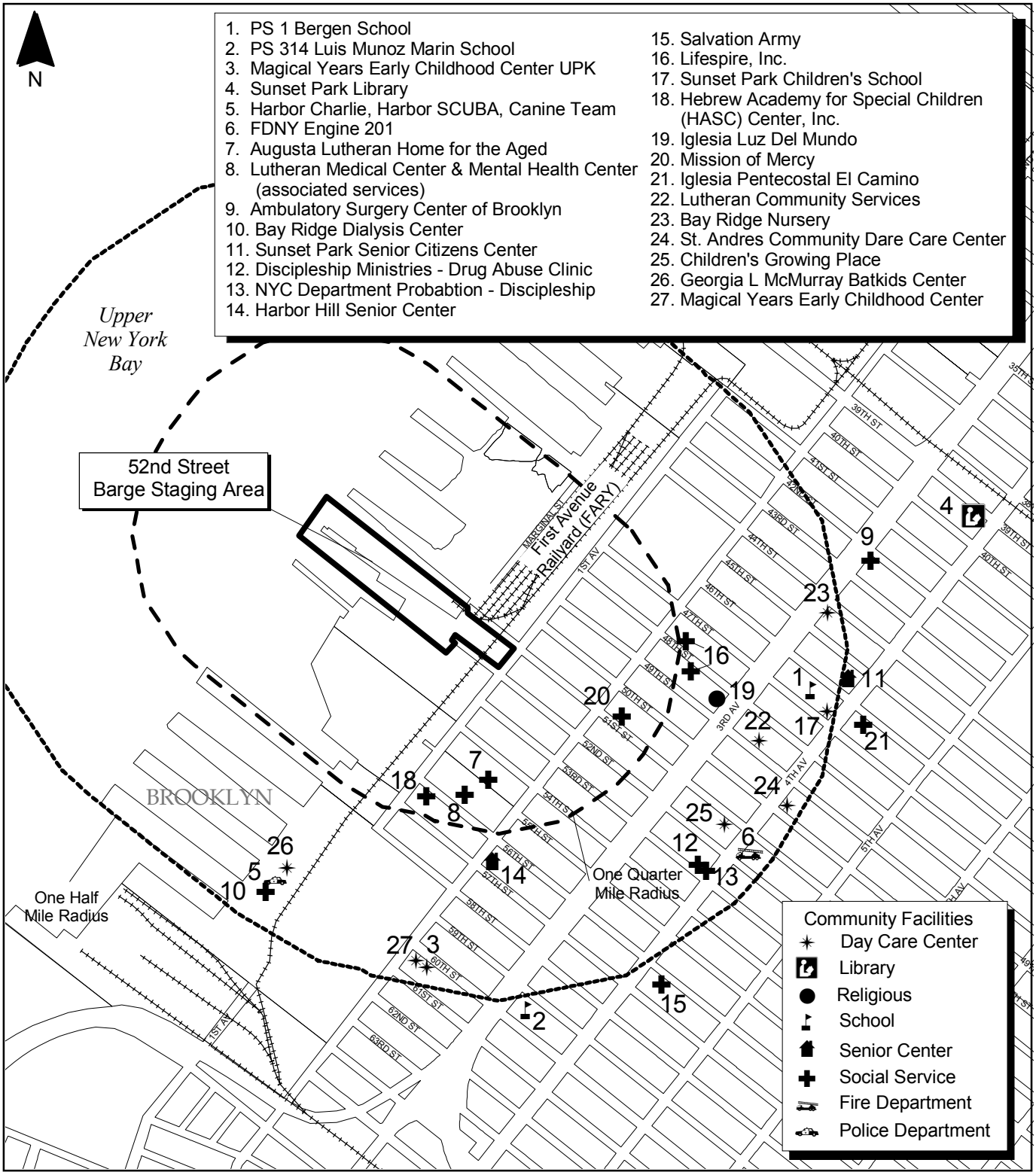
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities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

8.4.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area would create no significant new demand on services or community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the new facility (see Appendix A).

Table 8.4-1
Community Facilities and Services

Name	Address
Within the Primary Study Area	
Health Care Facilities and Social Services	
Augustana Lutheran Center	5434 Second Avenue
Lutheran Medical Center and Mental Health Center and associated services	150 55th Street
HASC Center, Inc.	5601 First Avenue
Mission of Mercy	221-233 51st Street
Within the Secondary Study Area	
Schools	
P.S. 1 Bergen School	309 47th Street
Public Safety and Criminal Justice Facilities	
NYPD Harbor Charlie, Harbor SCUBA, Canine Team	140 58th Street
FDNY First Engine and Ladder Company – Engine 201 and Ladder 114	5113 Fourth Avenue
Health Care Facilities and Social Services	
Bay Ridge Dialysis Center	140 58th Street
Discipleship Ministries—Drug Abuse Clinic	5220 Fourth Avenue
City Department of Probation—Discipleship	5220 Fourth Avenue
Lifespire, Inc.	213 and 254 48th Street
Religious and Cultural Institutions	
Iglesia Luz Del Mundo	4812 Third Avenue
Daycare Facilities	
Lutheran Community Services	339 49th Street
Bay Ridge Nursery	314/322 44th Street
St. Andres Community Day Care Center	4917 Fourth Avenue
Children's Growing Place	362 51st Street
Georgia L. McMurray Batkids Center	140 58th Street
Magical Years Early Childhood Center	230 60th Street
Sunset Park Children's School	4616 Fourth Avenue
Senior Centers	
Harbor Hill Senior Center	5613 2nd Avenue
Outside the Secondary Study Area	
Schools	
P.S. 314 Luis Munoz Marin School	330 59th Street
Health Care Facilities and Social Services	
Ambulatory Surgery Center of Brooklyn	313 43rd Street
Salvation Army	426 56th Street
Religious and Cultural Institution	
Iglesia Pentecostal El Camino	416 46th Street
Senior Centers	
Sunset Park Senior Citizens Center	4520 Fourth Avenue
Public Safety and Criminal Justice Facilities	
FDNY Second Engine and Ladder Company – Engine 241 and Ladder 109	6630 Third Avenue



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

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Figure 8.4-1 Community Facilitites and Services

52nd Street Barge Staging Area

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8.5 Open Space

8.5.1 Existing Conditions

8.5.1.1 Definition of the Study Area

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

8.5.1.2 Summary of Open Space in the Study Area

There are two playgrounds and a community garden within the study area, and one playground just beyond. They are listed in Table 8.5-1 and shown on Figure 8.5-1.

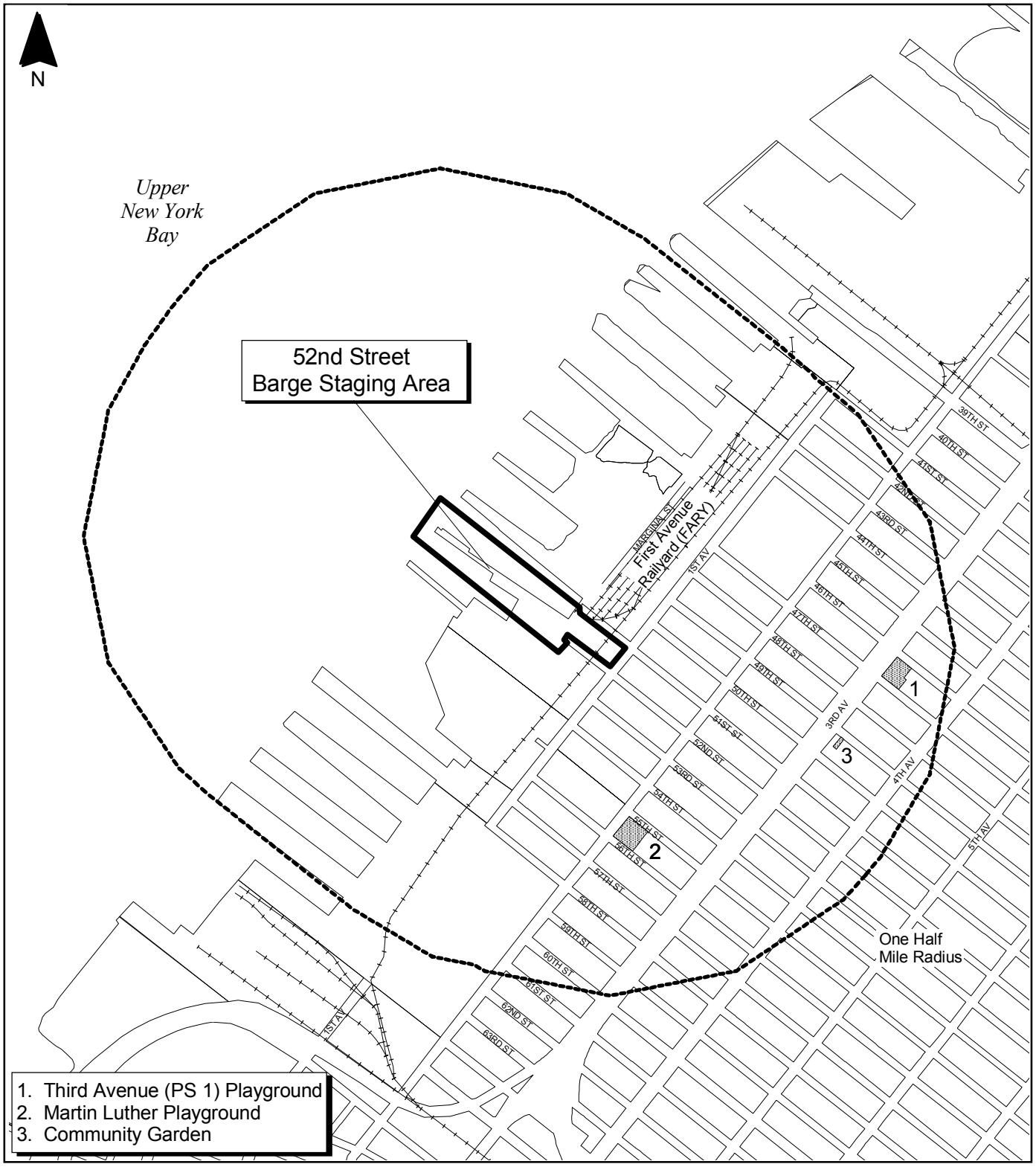
Table 8.5-1
Public Parks and Open Spaces

Name	Address	Acreage
Third Avenue (P.S. 1) Playground	46th Street to 47th Street, east of Third Avenue	1.52
Martin Luther Playground	55th Street to 56th Street, east of Second Avenue	0.913
Community Garden	49th Street, east of Third Avenue	0.1

The study area's open space facilities consist primarily of playgrounds. The nearest, Martin Luther Playground, is also near the Lutheran Medical Center. The residential areas outside the study area, east of the Gowanus Expressway, are generally served by the large Sunset Park located at 47th Street and Seventh Avenue and comprising the equivalent of six City blocks.

8.5.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions, except for the prominent Bush Terminal Piers Open Space project, between 43rd Street and 51st Street west of Marginal Street. Upon its completion in 2009, the proposed park will provide outdoor athletic fields (soccer and softball), a 24-hour indoor ice rink, play areas, game pavilions, mini golf-course, environmental education center,



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

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Figure 8.5-1 Open Space/Parkland

52nd Street Barge Staging Area

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preserved/enhanced wetland areas, tree conservation/bird watching area, fishing piers, boat building, historic vessels and a waterfront promenade. By the Future No-Build year, development will be underway, and it is expected that some open space will be available for public access, though its ensemble of facilities will not yet be fully constructed by the Future No-Build year. Some sidewalk improvements would be made and bicycle routes designated along 43rd and 51st Streets and the segment of Marginal Street between them. The most notable contribution to open space resources within the study area will be the new opportunity for passive recreation afforded the local population of surrounding residential areas (primarily located east of the study area, beyond the Gowanus Expressway) to visit and observe the working maritime waterfront and its predominantly industrial surroundings.

8.5.3 Potential Impacts with the 52nd Street Barge Staging Area

The facility would not directly displace or significantly change demands on nearby parks. The activities planned for the southern portion of Bush Terminal Piers (closest to the 52nd Street Barge Staging Area), such as the indoor rink and soccer field, would be sited near Marginal Street and not facing the DSNY site. Similarly, the fishing area is proposed on the northern side of Pier 1, also away from the DSNY site, and facing north towards the future waterfront park. Primary access to the park would be via 43rd Street, where streetscape improvements are planned, and secondarily, along 51st Street. Therefore, no impacts to the public open spaces would result from the 52nd Street Barge Staging Area.

8.6 Cultural Resources

8.6.1 Existing Conditions

8.6.1.1 Definition of the Study Area

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

8.6.1.2 Development History of the Area

The Sunset Park neighborhood originally developed as a Scandinavian enclave in the 1830s and expanded in the 1840s with a great influx of Irish immigrants. Green-Wood Cemetery, located on a hill in the northern portion of the neighborhood (between 20th and 37th Streets east of Fifth Avenue), was laid out in 1839. It is distinguished as one of the earliest rural cemeteries in the nation and notable for its lushly landscaped site, overlooking the harbor and spectacular Gothic Revival gate at Fifth Avenue (designed by Richard Upjohn & Son, 1861-65), which is a designated City landmark. With the construction of the railroads, particularly the South Brooklyn (freight) Railway, and other transit improvements, waterfront industrial activity intensified and inland residential development flourished. After 1870, densely laid-out brick and brownstone row houses replaced the older wood houses of the neighborhood.[4]

The Sunset Park neighborhood, though, began to decline by the 1930s and 1940s, with the cessation of the Third Avenue elevated line and the construction in 1941 (and later widening) of the Gowanus Expressway. The expressway separated the industrial waterfront from the residential portions of the neighborhood.

The BAT, a military ocean supply facility, located about ¼-mile south of the project site, was completed in 1919. The terminal is situated on the waterfront between 58th to 64th Streets, covering approximately 97 acres. It originally consisted of 19 structures, including the remaining two eight-story warehouses of reinforced concrete, one of which was the largest warehouse in the world. During the Second World War, many of the three million troops and 63 million tons of supplies sent overseas by the New York Port of Embarkation passed through it.

[4] (E. Snyder-Grenier, ENYC 1143.)

The neighborhood continued to suffer the detrimental effects of housing abandonment, migration of the maritime industry to New Jersey and the deactivation of the BAT in the 1970s. Conditions began to improve in the 1970s to the present, however, as the neighborhood experienced a new wave of immigrant and commercial revitalization, including the redevelopment of BAT by the NYCEDC (then, the New York Public Development Corporation)[5] which bought the facility in 1984 and converted it to manufacturing space for many small businesses.[6]

8.6.1.3 Cultural Resources on the Site

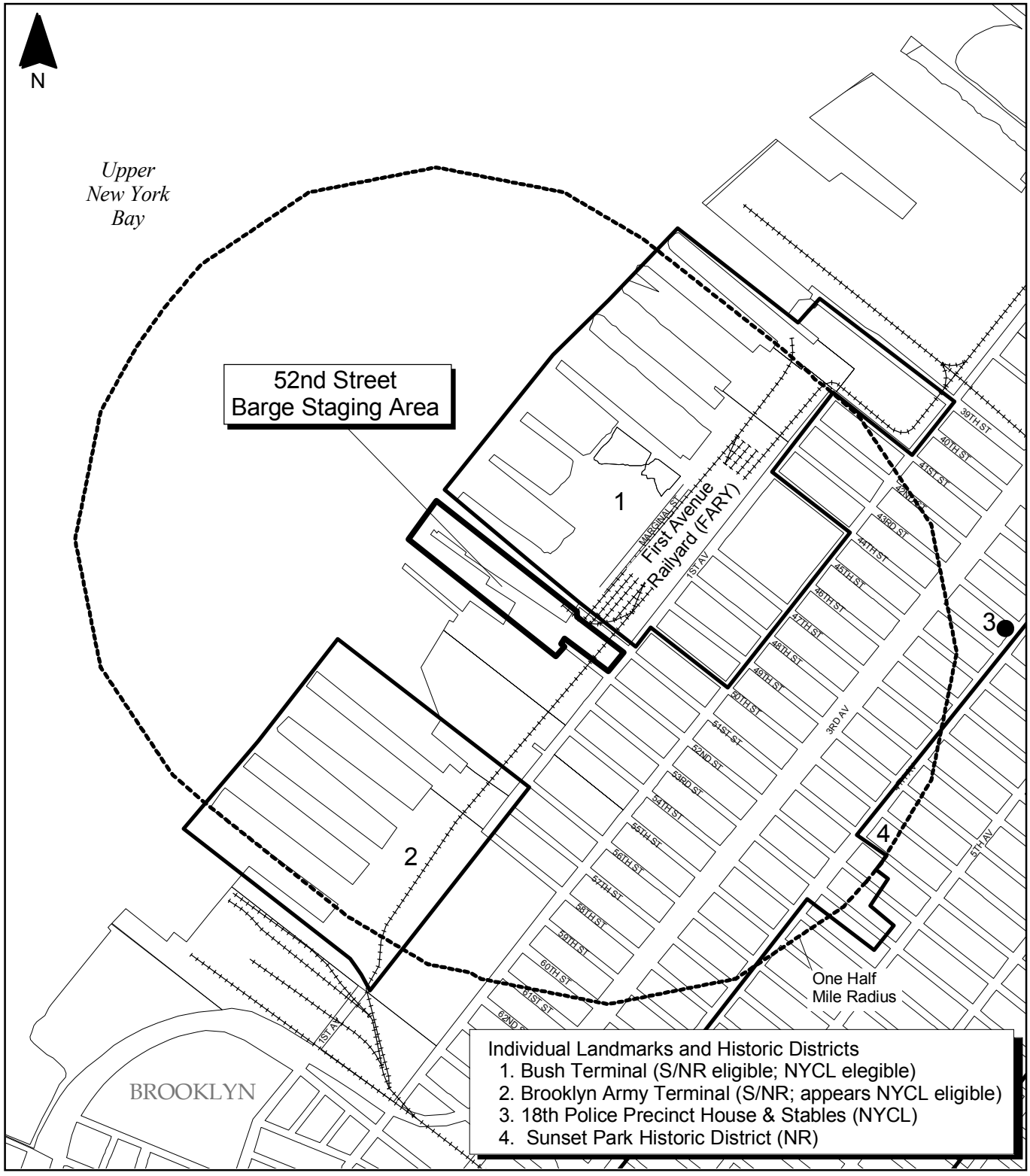
There are no significant elements of architectural or historical significance within the site. The only structures on the site is a DSNY salt dome and a DSNY vehicle maintenance facility.

8.6.1.4 Historic Resources Within the Study Area

There are several historic resources in the study area. (See Figure 8.6-1.) Bush Terminal to the north consists of a collection of red brick buildings that are clustered on either side of 43rd Street, between Marginal Street and First Avenue. Piers 1 to 5 (between 43rd and 51st Streets) were built in the early 1900s to serve the bustling intermodal industrial complex, which was developed by Irving Bush at the turn of the century. This terminal was a major component of one of the busiest waterfronts in the nation for decades.

The SHPO determined that Bush Terminal (not the deteriorated piers) is eligible for listing on the S/NR (documented in the Section 106 consultation for the Brooklyn Waterfront Rail Improvements Project EAS, May 2003). The LPC also agreed that the complex is eligible for City landmark designation, based on this same consultation. Similar buildings in the area, such as the rows of red-brick buildings on 52nd Street, east of First Avenue may also potentially be eligible for listing on the S/NR.

[5] Ibid.
[6] (J. Meany, Jr., ENYC 154.)



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

600 0 600 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 8.6-1 Cultural Resources

52nd Street Barge Staging Area

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The BAT south of the site is listed on the S/NR and appears to be eligible for LPC designation. The property was listed in the NR because it is "associated with events that have made a significant contribution to the broad patterns of our history" and because it "embodies the distinctive characteristics of a type, period or method of construction; or represents the work of a master; or possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction."[7] The terminal is architecturally and historically significant as a monumental example of modern industrial design and advanced engineering technology incorporating the work of a nationally prominent architect and for the role the complex played in the military and transportation history of the United States. The original complex of eight structures (two remain) was designed by Cass Gilbert, architect of the Woolworth Building and other City landmarks.

At the eastern edge of the study area is the expansive Sunset Park Historic District, which is listed on the NR for its uniform 19th-century residential development. It is a large district, roughly bounded by Fourth Avenue, 38th Street, Seventh Avenue and 64th Street.

Just beyond the study area is the former 18th Police Precinct House and Stable (4302 Fourth Avenue), now the Sunset Park School of Music. It is a designated City landmark, as one of several station houses in Brooklyn designed by the NYPD architect, George Ingram, in the late 19th century to resemble a medieval fortress.

Table 8.6-1 lists the Cultural Resources in the study area.

8.6.2 Future No-Build Conditions

There are no additional properties in the study area of potential architectural or archaeological significance known to be slated for review. Except for development of a public open space on the site of the former Bush Terminal Piers, north of the site, anticipated Future No-Build Conditions for the project year are assumed to be the same as Existing Conditions. The proposed 23-acre park is being planned on the piers, and no new construction is planned upland near the historic complex.

[7] Resource Evaluation, prepared by Kathleen A. Howe, SHPO, April 2, 1999 (project reference number 99PRO789).

Table 8.6-1
Cultural Resources in the Study Area

Name	Location	Designation
Bush Terminal Complex	Third Avenue to the waterfront (approximately 32nd Street to 51st Street)	NYCL-eligible and S/NR-eligible
Brooklyn Army Terminal	First Avenue to the waterfront, between 58th and 64th Streets	NYCL-eligible and S/NR
18th Police Precinct House and Stable	4208 Fourth Avenue	NYCL
Sunset Park Historic District	Approximately from Fourth to Seventh Avenues, between 38th and 64th Streets	NR

8.6.3 Potential Impacts with the 52nd Street Barge Staging Area

The SHPO and NYCLPC have determined that there are no resources of historical or archaeological value on the site and rehabilitation of the pier to continue to accommodate barge staging would not likely cause adverse effects to any of the study area's historic structures.

8.7 Urban Design, Visual Resources, and Shadows

8.7.1 Existing Conditions

8.7.1.1 Definition of the Study Area

The study area is the same as employed for neighborhood character study area (see Figure 8.8-1), extending inland from the waterfront to the Gowanus Expressway, bound by 39th Street to the north and Shore Parkway (and 66th Street) to the south.

8.7.1.2 Description of the Site

The site, a pier currently used for parking by DSNY, is surrounded by chain-link fencing and, in some places, concrete barrier blocks or sheets of corrugated metal, which are attached to the fence. The pier area outside the fencing is overgrown with vegetation and strewn with litter. (See Figure 8.7-1.)

8.7.1.3 Urban Design and Visual Resources of the Study Area

The site affords views of the Bush Terminal Piers to the north, which consists of five deteriorated piers and filled interpier areas, notable for forested areas and ground vegetation. To the southeast, the monumental BAT buildings area also visible. The site offers expansive harbor views, but it is not part of an important view corridor that would connect important public places and/or historic resources. The industrial massive loft buildings inland are visible from the site to the east, as are the century-old red-brick loft buildings of Bush Terminal. The Gowanus Expressway, which marks the eastern limit of the study area, is visible from the waterfront site. On-street parking contributes to the industrial aesthetic of the area, as does the common appearance of chain-link property fencing, the lack of street trees or other vegetation and the lack of pedestrian amenities (such as benches and, in some cases, useable sidewalks). First Avenue north of 51st Street is in severe disrepair, with potholes and uneven pavement. Overhead wires also run above several side streets, crossing from one side to the other.

The waterfront south of the site, in the vicinity of the BAT, which has been redeveloped to attract varied light industrial and office uses, and as such, sidewalks and streetscapes, are generally tidier. Also, because the BAT is served by City buses, there are benches and similar amenities. The BAT and surrounding buildings, though clearly industrial in design and imposing in scale, are well maintained and visually attractive. (See Figure 8.7-2.)

Just inland from the site is the DSNY Garage 7/10, located on First Avenue at 51st Street, designed like similar garages elsewhere in the City – one story, with multiple garage bays. The sidewalks and streets surrounding it are neat and clean. The Lutheran Medical Center, including its medical facilities, offices and parking structure, located between First and Second Avenues (55th to 57th Streets), is institutional in appearance, with broad expanses of blank wall and bands of glazing. It is visually congruent with its industrial surroundings, though it does feature some landscaping near entrances along with well-traveled sidewalks.

Martin Luther Playground, located between 55th and 56th Streets, just east of Second Avenue and the Lutheran Medical Center, introduces a large (approximately ½-block) open space, with shade trees, landscaping and benches.

The remainder of the study area is a mix of industrial, residential and commercial uses in the blocks along Third Avenue. Many of the residences are well-maintained two- or three-story single-family homes built nearly adjacent to one another with front yards, driveways, mature trees and landscaping, though most are similarly designed three-story row houses with minimally landscaped, shallow front yards or none at all. Generally they are in good repair and feature attractive facades.

Figure 8.7-1 : Waterfront at 52nd Street.

Figure 8.7-2 : 52nd Street, between waterfront and First Avenue.

Figure 8.7-1 and 8.7-2
Urban Design and Visual Quality
52nd Street Barge Staging Area

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8.7.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions. The Bush Terminals Piers Open Space project will be underway in 2006, and it is expected that some open space will be available for public access. While this will not noticeably change the general, vegetated appearance of much of the Bush Terminal site, it would allow for new vantage points of the 52nd Street Barge Staging Area site and the rest of the working maritime waterfront and its predominantly industrial surroundings. No new or important view corridors will be created, however. The remainder of the study area, through continued development of similar uses (e.g., the expansion of the Lutheran Medical Center) is anticipated to maintain an appearance and provide the same quality of streetscape and pedestrian environs as in Existing Conditions.

8.7.3 Potential Impacts with the 52nd Street Barge Staging Area

Development of the 52nd Street Barge Staging Area would establish a new visual element on the waterfront, in keeping with the general waterfront industrial aesthetic. Barges would be stored and maneuvered in the water surrounding the pier, including near the Bush Terminal Piers Open Space site, but they would not noticeably contribute to or detract from the visual landscape and waterfront views enjoyed from the proposed open space over the industrial maritime context.

The 52nd Street Barge Staging Area would not alter the development pattern of the waterfront area, as it would not alter street patterns or significantly affect the visual density of the built environment overall. Likewise, it would not it affect the context of the BAT, the nearest cultural resource to the site, in any significant or adverse way, since the BAT is designed to accommodate industrial waterfront activity. Therefore, no significant adverse impacts to urban design or visual resources would result from the 52nd Street Barge Staging Area.

8.8 Neighborhood Character

8.8.1 Existing Conditions

8.8.1.1 Definition of the Study Area

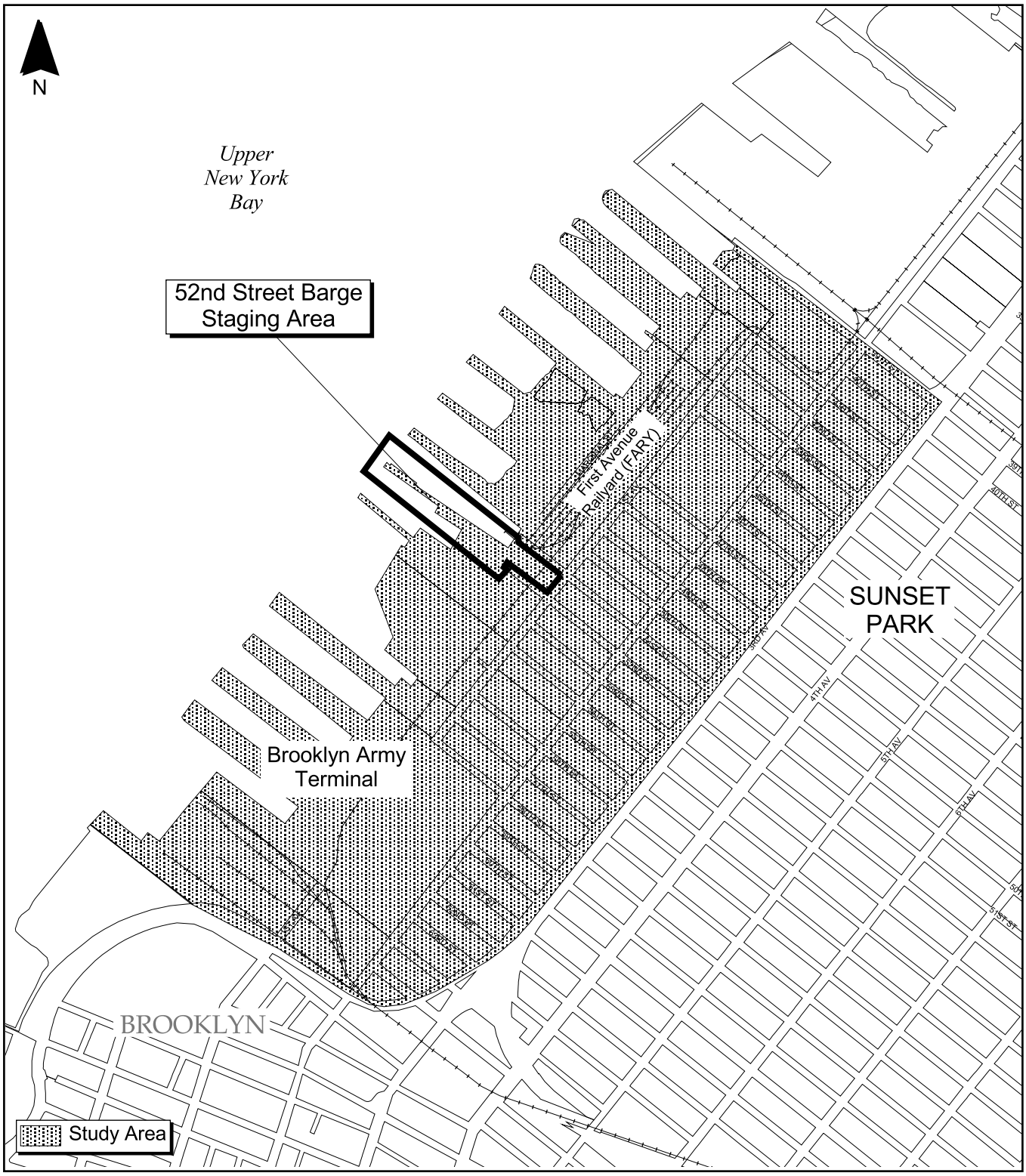
The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area, or physically obstruct pedestrian and vehicular access to it from outlying areas. The neighborhood character study area for the 52nd Street Barge Staging Area is defined by the predominantly industrial land use pattern and associated visual quality.

The site lies on the western shore of Brooklyn, on the Sunset Park waterfront. The study area for neighborhood character extends inland from the waterfront to the Gowanus Expressway and is bound by 39th Street to the north and Shore Parkway (and 66th Street) to the south. (See Figure 8.8-1.)

8.8.1.2 Description of Neighborhood Character

Like many industrial waterfront sites, this site is separated from nearby residential or other sensitive uses by major infrastructure elements, such as the elevated Gowanus Expressway and the First Avenue Rail Yard.

South of the site is the BAT and just beyond that is the narrow 65th Street Rail Yard, which provides barge-to-rail container facilities, alongside the Shore Parkway. The BAT is a large industrial complex that defines the southernmost part of the study area.



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

Figure 8.8-1 Neighborhood Location

52nd Street Barge Staging Area

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The larger Sunset Park neighborhood (beyond the study areas) is a working class neighborhood with an ethnically and economically diverse population of approximately 120,000. A prominent local feature is the elevated Gowanus Expressway, above Third Avenue, that divides the community into its predominantly residential (to the east) and industrial (to the west) sectors. East of Third Avenue, the residential streets extend on an upward slope toward the high point of the community – which is also the highest point in Brooklyn – at about Sixth Avenue. The area's development and streetscapes are sufficiently historic and cohesive such that part of the neighborhood (east of the study area) is included on the NR.

The character of the study area, west of Third Avenue, differs considerably from the areas of Sunset Park to the east. Between Third and Second Avenues, just west of the elevated Gowanus Expressway, land uses are a mixture of residential and industrial. Third Avenue is lined with local retail businesses and walk-up tenement apartments. Second Avenue is primarily industrial, but some residential uses and vacant lots abut industrial uses on the side streets. The area west to First Avenue, within the bounds of the Bush Terminal complex, is solidly industrial, mainly consisting of low-rise warehouses and garages whose activities often spill out into the streets.

8.8.2 Future No-Build Conditions

The Future No-Build Conditions throughout the neighborhood study area are generally anticipated to resemble Existing Conditions. The most prominent development, the Bush Terminals Piers Open Space project, will be underway, and it is expected that some open space will be available for public access. Its ensemble of facilities will not be constructed by the Future No-Build year, however. The most notable change to neighborhood character within the study area will be the new opportunity afforded the local population of surrounding residential areas (east of the study area) to visit the waterfront and observe the predominantly industrial surroundings.

8.8.3 Potential Impacts with the 52nd Street Barge Staging Area

As an active port use on a historically maritime-industrial site, the 52nd Street Barge Staging Area would be consistent with the character of the study area. Although it would introduce a new visual element to the waterfront near the Bush Terminal Open Space, it would not preclude the use or enjoyment of the unique park, as it will not directly affect the park land itself, or indirectly affect access to the park or the quality of the park environs. (See Traffic, Air Quality, Odor and Noise analyses, Sections 8.14, 8.15, 8.16 and 8.17.)

8.9 Natural Resources

8.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise if the 52nd Street Barge Staging Area were developed.

8.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bulkheaded and bounded by Bay Ridge Channel, south of Gowanus Bay. The existing site houses a garage, parking lot, household dump and salt dome just off 52nd Street, and some open land behind the garage. There is a 900-foot-long pier that extends northwest of the property into Bay Ridge Channel. The pier is 40 feet wide at its west end and 56 feet wide at its east end. The concrete pier surface has severely cracked and buckled over time. The study area and the surrounding neighborhood areas are completely developed and, therefore, have very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because the pier will be used as a barge staging facility, a description of aquatic communities is also included.

8.9.1.2 Geology

Based on information derived from a review of the Bedrock and Geologic Maps of New York County by Charles A. Baskerville, 1994, the bedrock lies 75 to 100 feet below surface sediment.[8] Surface sediment collected from the Hamilton Avenue MTS, located north of this site at the mouth of the Gowanus Canal, was mainly composed of fine-grained sediment.[9] Sediment at the 52nd Street Barge Staging Area is expected to be similar to that collected from the Hamilton Avenue MTS.

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

8.9.1.3 Floodplains

The site is within the 100-year coastal floodplain (see Figure 8.9-1). No intertidal wetlands exist on the study area. Bay Ridge Channel, however, is a NYSDEC-designated littoral zone (see Figure 8.9-2). The site is located within the City's WRP boundaries and is a designated SMIA.

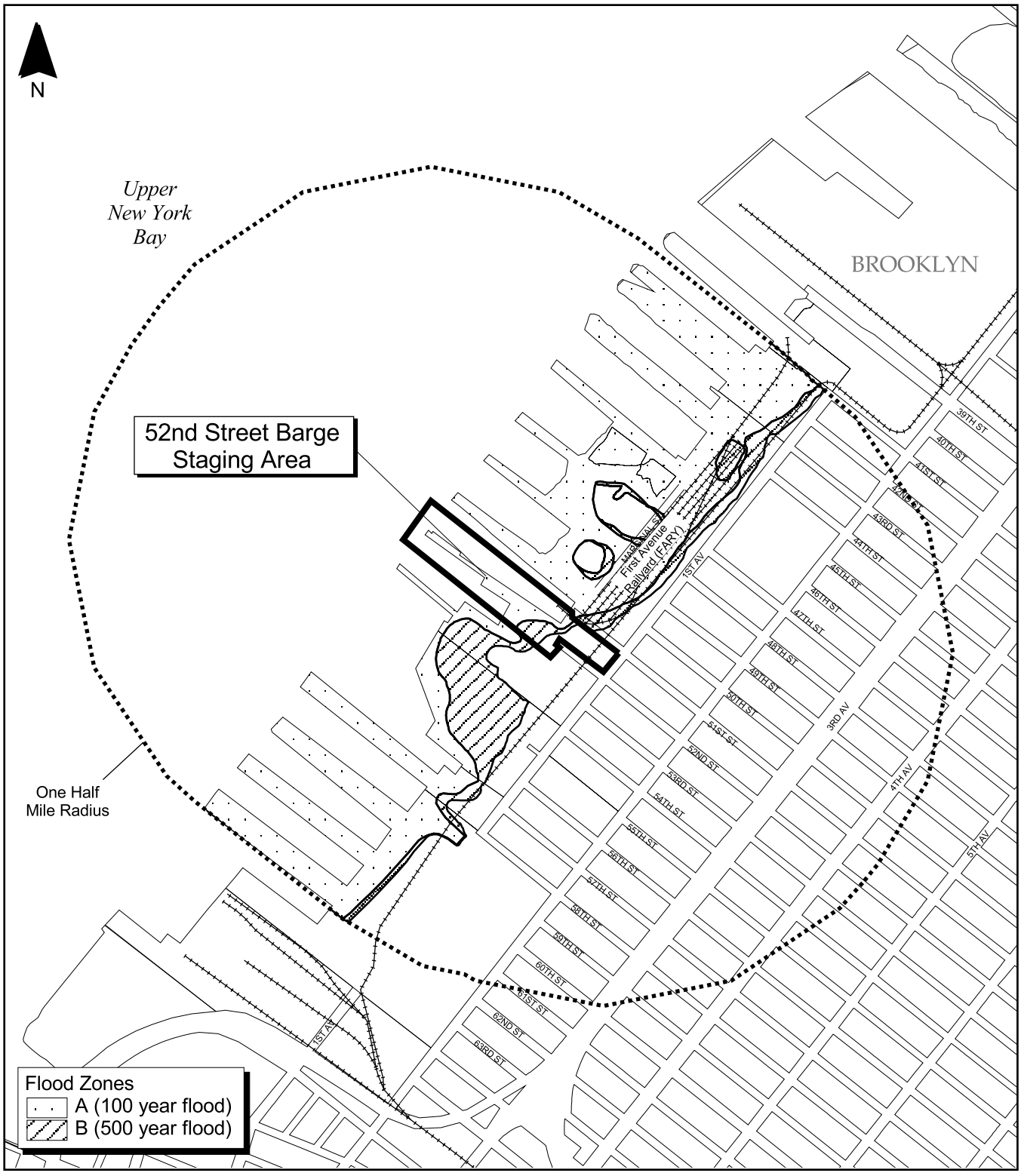
8.9.1.4 Ecosystems

The site is essentially fully developed with the existing pier and buildings. Parking areas and paved roadways comprise the remainder of the site, leaving little terrestrial natural resources to be impacted. A few opportunistic, non-native weed species were identified along the edges and within the cracked portion of the pier. Those species identified include spotted spurge (*Chamaesyce maculate*), English plantain (*Plantago lanceolata*), lamb's quarters (*Chenopodium album*), black nightshade (*Solanum nigrum*), wild carrot (*Daucus carota*), lady's thumb (*Polygonum persicaria*), black medic (*Medicago lupulina*), horseweed (Conyza canadensis) and tree-of-heaven (*Ailanthus altissima*). As property limits were not clearly defined at the time of the survey, the investigation was focused along the pier; however, there were predominantly giant reed (*Phragmites australis*) and tree-of-heaven observed on the landward side of the property.

The aquatic natural resources found at the Hamilton Avenue Converted MTS, which were studied for an entire year in 2003[10], can be used to generally categorize the marine communities that would be found at the 52nd Street Barge Staging Area due to its proximity to the pier (the Hamilton Avenue Converted MTS is located at the mouth of the Gowanus Canal, just north of the 52nd Street Barge Staging Area). The dominant finfish larvae collected at the Hamilton Avenue MTS were winter flounder(*Pleuronectes americanus*), anchovy spp. (*Anchoa* spp.), Atlantic menhaden (*Brevoortia tyrannus*) and goby spp. (*Gobiosoma* spp.). The dominant finfish eggs collected were cunner (*Tautogolabrus adspersus*), bay anchovy (*Anchoa mitchilli*),

[9] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.
[10] Ibid.

tautog (*Tautoga onitis*) and Atlantic



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

800 0 800 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 8.9-1 Floodplains
52nd Street Barge Staging Area

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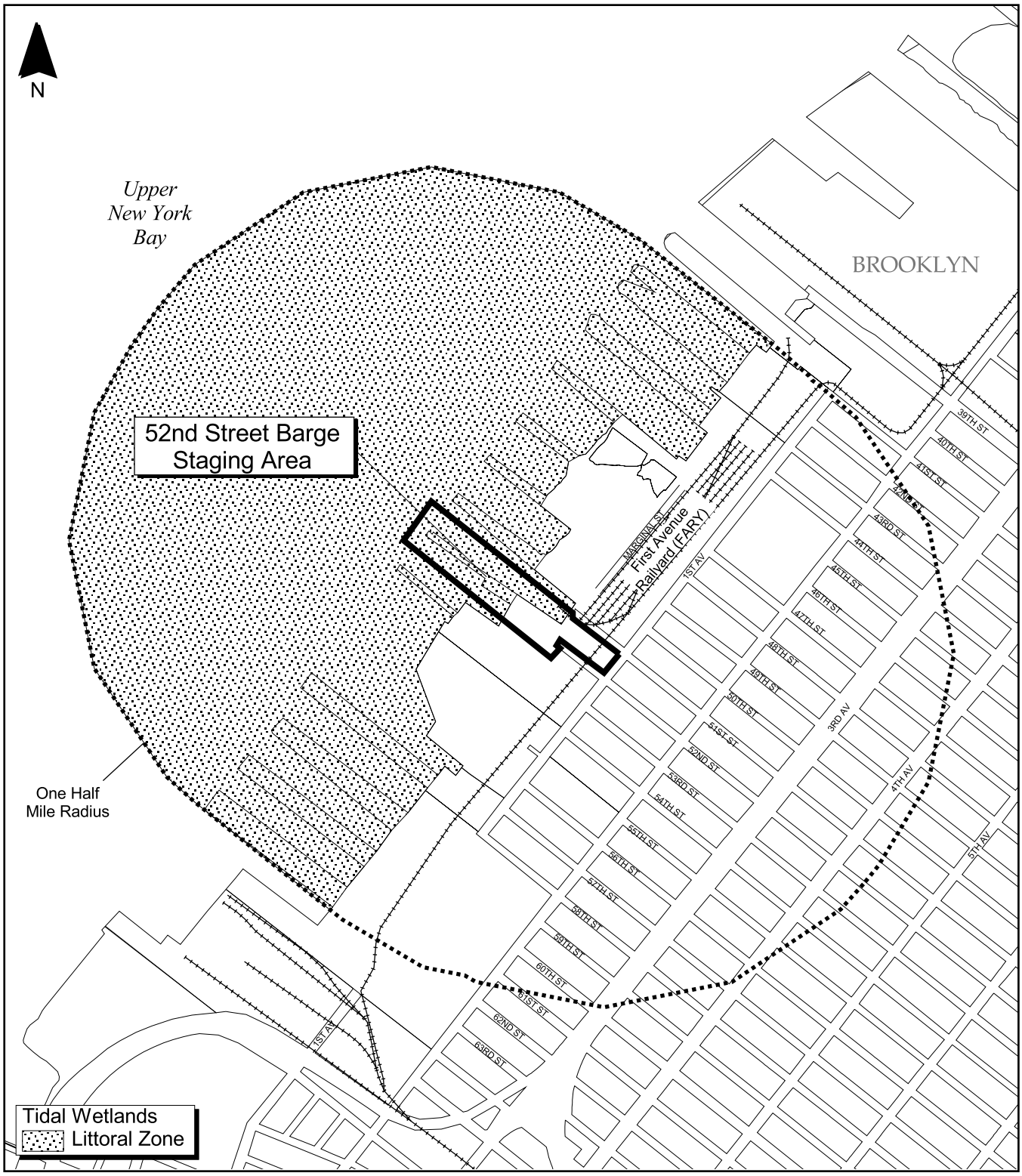

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 8.9-2 Wetlands

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menhaden. The species that have EFH listing (and the life stage collected) include windowpane (*Scophthalmus aquosus*) (eggs and larvae), winter flounder (larvae) and Atlantic herring (*Clupea harengus*) (larvae). The benthic invertebrates that were found at the Hamilton Avenue Converted MTS are similar to those found throughout New York Harbor. The most abundant species collected were worms – *Capitella capitata*, *Streblospio benedicti* and Oligochaetes – all of which are tolerant of polluted areas. The dominant epibenthic colonizers found at the Hamilton Avenue Converted MTS were *Polydora* sp. (worms), *Molgula manhattensis* (sea grapes), *Balanus* sp. (barnacles), and hydrozoa, mud and algal film.

According to the USF&WS, except for occasional transients, there are no federally-listed or proposed endangered or threatened species, or any "critical habitats" present on the site. According to the NYSDEC, there are no records of rare or state-listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the site.

8.9.2 Future No-Build Conditions

If the 52nd Street Barge Staging Area were not developed, the study area would remain as is. The limited aquatic and terrestrial natural resources will remain and the study area will continue to be a stressed urban area with limited ecological productivity.

8.9.3 Potential Impacts with the 52nd Street Barge Staging Area

8.9.3.1 Geology

The geology of the study area would not be impacted as a result of the 52nd Street Barge Staging Area other than by potential dredging activity, which would remove layers of sediments deposited over time..

8.9.3.2 Floodplains

Potential development of the 52nd Street Barge Staging Area would have no effect on the elevation of the site. The potential development does not include any provisions for raising any portions of the site over this level. The facility would be constructed within the 100-year floodplain and within the SMIA. The 52nd Street Barge Staging Area does not "substantially hinder" the area, however, and therefore complies with New York State's CMP as expressed in the City's local WRP.

8.9.3.3 Ecosystems

Construction of the 52nd Street Barge Staging Area would involve complete removal of the existing pier and construction of a new pier with the same dimensions. Assuming normal operations, this procedure should not involve any permanent impacts to the aquatic or terrestrial natural resources. During the removal of the existing pier, the upper organic silts lying beneath the structure would be disturbed to some degree, resulting in re-suspension of the sediments. However, the amount of re-suspended sediments is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term lowered dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Any dredging activities in the area to accommodate barges would result in an immediate, short-term destruction of the benthic invertebrates in the area; however, recolonization of the area by benthic invertebrates could be expected within 6 to 12 months after cessation of dredging activities.[4]

[4] U.S. Army Corps of Engineers, 1999. The New York District's Biological Monitoring Program for the Atlantic Coast of New Jersey, Asbury Park to Manasquan Section Beach Erosion Control Project, Draft – Phase I-II. During Construction and 1st Year Post-Construction Studies.

Given the relatively small size of the project and the existing impacts to the natural resources of the study area, minimal impact is expected from the disturbance of the environment associated with the 52nd Street Barge Staging Area.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. Swift currents may sweep eggs and larvae past the construction site, but the short exposure time should not significantly harm the ichthyoplankton. In addition, larvae will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water, which results in shading that will block sunlight and hinder primary production. Because the proposed pier will match the footprint of the existing pier, the impacts will be no different than existing conditions. Barges, which were staged in higher numbers in the past than they will be in Future Build Conditions, will constantly be moving and therefore will not create any permanent shading. Additionally, with fewer barges staged on site than were in previous years, there will be a gain of unshaded water at this site, allowing more sunlight to penetrate the water for primary production.

Any upland construction would not have significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the 52nd Street Barge Staging Area because the site is already fully developed.

8.10 Hazardous Materials

8.10.1 Existing Conditions

Existing Conditions associated with the presence or suspected presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527-00). The assessment was performed in July and August of 2004. It included a historic land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps. A Freedom of Information Law request was sent to the NYCDEP for records pertaining to hazardous or toxic materials for the study area. A pedestrian reconnaissance of accessible areas within the study area was conducted in July 2004.

8.10.1.1 Definition of Study Area

The study area includes the existing 52nd Street pier structure located at the most western end of 52nd Street and neighboring properties within an approximate 1,000-foot radius. The pier is approximately 900 feet long; its widths at the western and eastern sections are approximately 40 feet and 56 feet, respectively. Located on the pier were electric winches, cleats, water pumps and several (non-permanent) locked trailers and containers. Reportedly these trailers were once utilized as lockers and offices for previous on-site DSNY barge and tug operations. The containers were reportedly utilized for equipment storage (e.g., welding supplies, boat lines, etc.).

8.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater, surface water and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and the implementation of the 52nd Street Barge Staging Area could lead to an increased exposure of people or the environment to those materials.

No significant areas of concern were identified for this project site during the assessment. However, the western end of the pier appears to be collapsing and, therefore, care should be taken to prevent materials from entering the waters to become drift or pollution hazards.

8.10.2 Future No-Build Conditions

The 52nd Street Barge Staging Area would remain the same and there would be no significant recognized areas of concern with regard to hazardous materials; however, natural dilapidation of the pier would continue.

8.10.3 Potential Impacts with the 52nd Street Barge Staging Area

The 52nd Street Barge Staging Area would not result in adverse impacts to the site. Some benefits may be realized because a new pier would replace the existing pier. No testing would be required prior to the demolition of the existing pier. If any areas of concern were identified during the demolition or construction phase, an analysis would be made to determine what, if any, mitigation measures should be applied.

8.11 Water Quality

8.11.1 Existing Conditions

8.11.1.1 Definition of the Study Area

The water quality study area encompasses Upper New York Bay and includes discharges from point sources and CSOs located within ½-mile of the site.

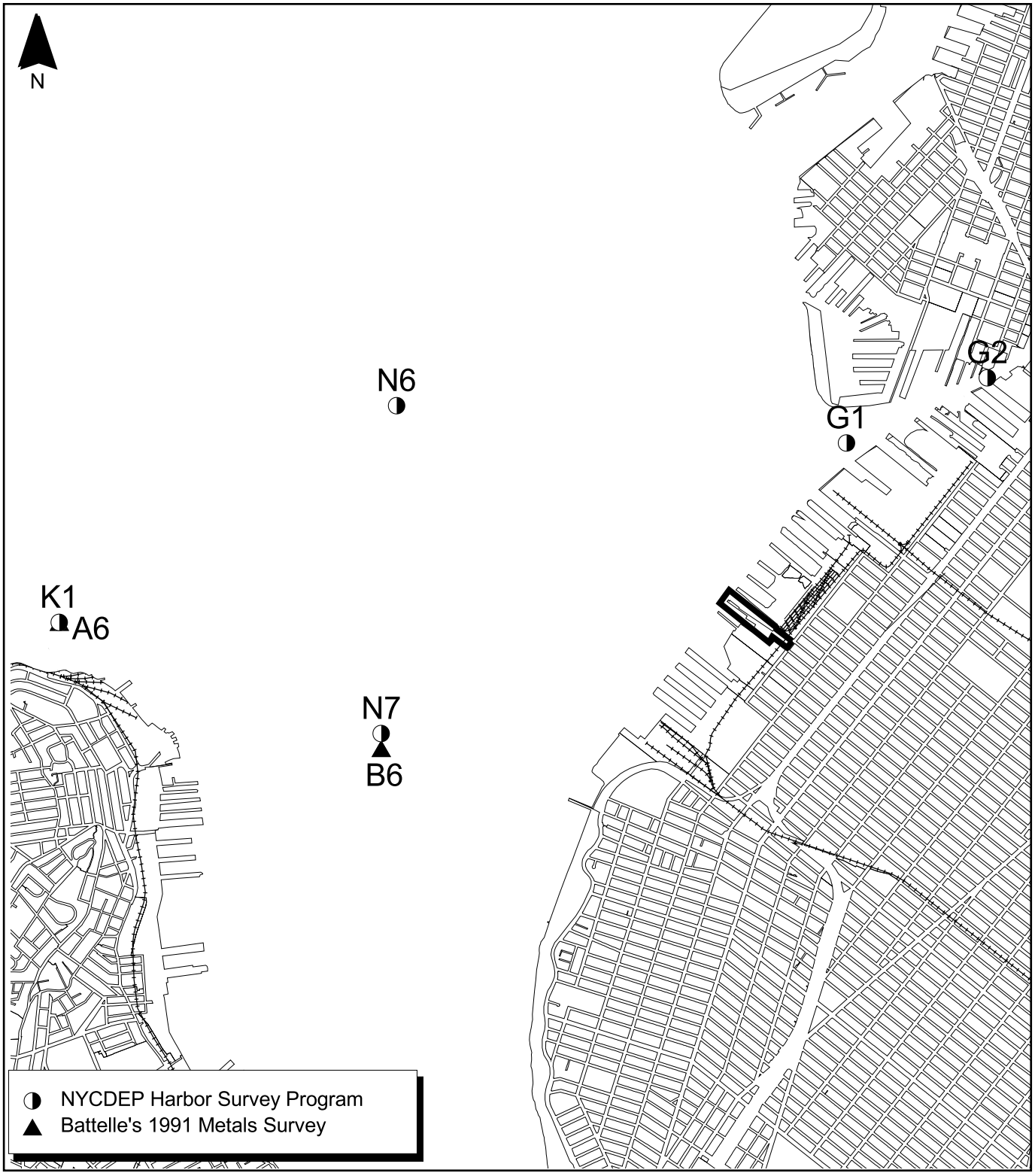
8.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 8.11-1, are generally representative of conditions in the study area:

- NYCDEP Harbor Survey Program – Stations N-6 and N-7 in Upper New York Bay; and
- Battelle's 1991 Metals Survey – B-6 in Upper New York Bay.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 8.11-1. The standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.

As shown in Table 8.11-1, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station B-6 did not conform to the water quality standard for mercury.



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

1000 0 1000 Feet

Figure 8.11-1 Ambient Water Quality Stations

52nd Street Barge Staging Area

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Table 8.11-1
Existing Water Quality Conditions and Standards
52nd Street Barge Staging Area

Average Concentration					
Parameter	**Units**	**N-6[1]**	**N-7[2]**	**B-6[3]**	**NYS Class SD Standard**
Dissolved Oxygen (surface/minimum)	mg/L	7.88[4]/5.36[5]	7.65[4]/5.09[5]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	7.40[4]/5.38[5]	7.43[4]/5.33[5]	-------	3.0
BOD (surface)	mg/L	2.8[6]	2.5[6]	-------	-------
BOD (bottom)	mg/L	2.7[6]	2.7[6]	-------	-------
Total Coliform (surface)	MPN/100 ml	1073[7]	804[7]	-------	-------
Total Coliform (bottom)	MPN/100 ml	278[7]	600[7]	-------	-------
Fecal Coliform (top)	MF	52	50	-------	-------
Fecal Coliform (bottom)	MF	7[8]	7[8]	-------	-------
Total Suspended Solids (surface)	mg/L	8	5	-------	-------
Total Suspended Solids (bottom)	mg/L	9	7	-------	-------
NH_3-N	mg/L	0.312	0.324	-------	-------
(NO_3 + NO_2)	mg/L	0.400	0.354	-------	-------
Total Phosphorous	mg/L	0.130	0.129	-------	-------
Dissolved PO4	mg/L	-------	-------	-------	-------
Chlorophyll-a	µg/L	-------	-------	-------	-------
Arsenic	µg/L	-------	-------	0.78 [9]	120 [9,10]
Cadmium	µg/L	-------	-------	0.06 [9]	21 [9,10]
Chromium	µg/L	-------	-------	-------	-------
Copper	µg/L	-------	-------	1.15 [11]	7.9 [10,11]
Lead	µg/L	-------	-------	0.14 [9]	204 [9,10]
Mercury	µg/L	-------	-------	0.0039 [9]	0.0026 [9,10]
Nickel	µg/L	-------	-------	0.78 [9]	74 [9,10]
Silver	µg/L	-------	-------	0.028 [12]	2.3 [10,12]
Zinc	µg/L	-------	-------	4.85 [9]	95 [9,10]
Cyanide	µg/L	-------	-------	-------	1.0 [9]

Notes:

[1] Average concentrations for 2003 NYCDEP Harbor Survey Station N-6 located in Upper New York Bay.

[2] Average concentrations for 2003 NYCDEP Harbor Survey Station N-7 located in Upper New York Bay.

[3] Average concentrations for 1991 Battelle Ambient Survey Station B-6 located in Upper New York Bay.

[4] Represents average between January and October 2003.

[5] Minimum between June 1, 2003 and September 30, 2003.

[6] Latest available data 1997.

[7] Latest available data 1996.

[8] Latest available data 1999.

[9] Guidance values and data are for dissolved metals.

[10] NYSDEC Guidance Value (NYSDEC TOGS 1.1.1, June 1998, errata sheet January 1999 and addendum April 2000).

[11] Site-specific chronic and acute criteria for dissolved copper in New York/New Jersey Harbor.

[12] Guidance value and data are for acid-soluble metal.

BOD = biochemical oxygen demand

NH_3-N = ammonia

NO_3 = nitrate; NO_2 = nitrite

Notes for Table 8.11-1 (Continued):
PO_4 = phosphate
mg/L = milligrams per liter
MPN/100 ml = most probable number per 100 milliliters
MF = membrane filter
µg/L = micrograms per liter

12.11.1.2 Permitted Discharges

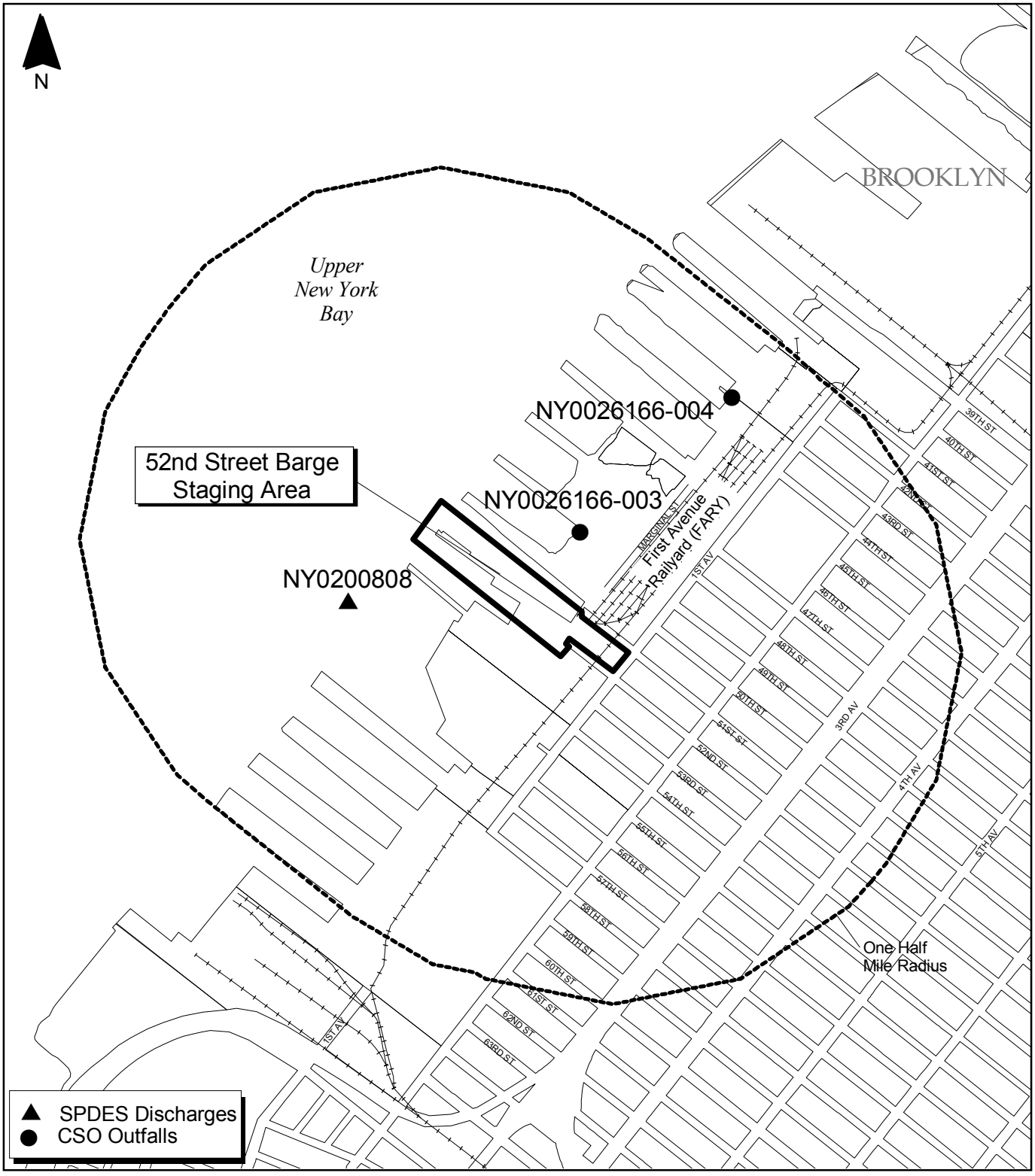
A review of the most recently available NYSDEC and USEPA databases indicated that there are several permitted discharges in the vicinity of the site. Those within a ½-mile radius of the 52nd Street Barge Staging Area are shown in Figure 8.11-2 and listed in Table 8.11-2 The discharges consist of two CSOs and one industrial site, all of which are permitted by the NYSDEC.

Table 8.11-2
Existing Permitted Discharges
52nd Street Barge Staging Area

Combined Sewer Overflows (CSOs)			
Outfall Location/WPCP	**Permit Number**	**County**	**Receiving Water Body**
43rd Street/Owls Head	NY026166-004	Kings	Upper New York Bay
49th Street/Owls Head	NY026266-003	Kings	Upper New York Bay
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Narrows Generating Station	NY0200808	Kings	Upper New York Bay

8.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and/or infiltration. A runoff flow of 0.059 cfs was calculated using the impervious site area **(**0.98 acres**)**, an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 8.11-3, represent the existing loads at the site.



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

600 0 600 Feet

Figure 8.11-2 Permitted Outfalls and CSO Locations 52nd Street Barge Staging Area

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DEPARTMENT OF SANITATION

Table 8.11-3
Estimated Existing Pollutant Loads and Runoff Flows
52nd Street Barge Staging Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100ml	34,000	10,808[(1)]
BOD mg/L	11	3.5
Heavy Metals		
Copper µg/L	35	0.011
Lead µg/L	28	0.009
Zinc µg/L	154	0.049
Total Impervious Area (acre) = 0.98 Average Rainfall Intensity per Storm (inch/hour) = 0.06[(2)]		Runoff Coefficient (C) = 1.00 Runoff Flow (cfs) = 0.059

Notes:
(1) Coliform loads are not shown in lbs/day. Loading comparable to MPN/100 ml.
(2) Based on Central Park Rain Data (1969-2002); The National Climatic Data Center.

8.11.2 Future No-Build Conditions

Water quality would be expected to be the same as Existing Conditions.

8.11.3 Potential Impacts with the 52nd Street Barge Staging Area

The potential impact of the stormwater pollutant loadings on surface water quality was evaluated using the 208 Model. This model was developed under Section 208 of the Clean Water Act to help state and local water quality management agencies integrate water quality activities and goals. The 208 Model was used to predict the incremental changes in BOD, fecal coliform, copper, zinc and lead that resulted from the stormwater loadings.

The 208 Model predicted no significant impact on existing surface water quality due to fecal coliform, BOD, copper, zinc and lead loadings from the 52nd Street Barge Staging Area. (See Table 8.11-4.) Stormwater runoff from the 0.98 acres of the barge staging area would not result in any further violation of water quality standards or guidance values beyond any existing violations.

Therefore the rebuilding of the 52nd Street Barge Staging Area would not affect water quality.

Table 8.11-4
Impervious Area and Estimated Pollutant Loads
52nd Street Barge Staging Area

			Estimated Pollutant Loadings/Incremental Change[1]				
Condition	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	0.98	NA	10,808/NA	3.5/NA	0.011/NA	0.009/NA	0.049/NA
Future Build Conditions	0.98	0	10,808/0	3.5/0	0.011/0	0.009/0	0.049/0

Notes:
(1) Incremental change refers to the difference in pollutant loading between the Existing Conditions and the Future Build Conditions.
(2) Coliform loads are not shown in pounds/day. Loading comparable to MPN/100 ml.
NA = Not Applicable

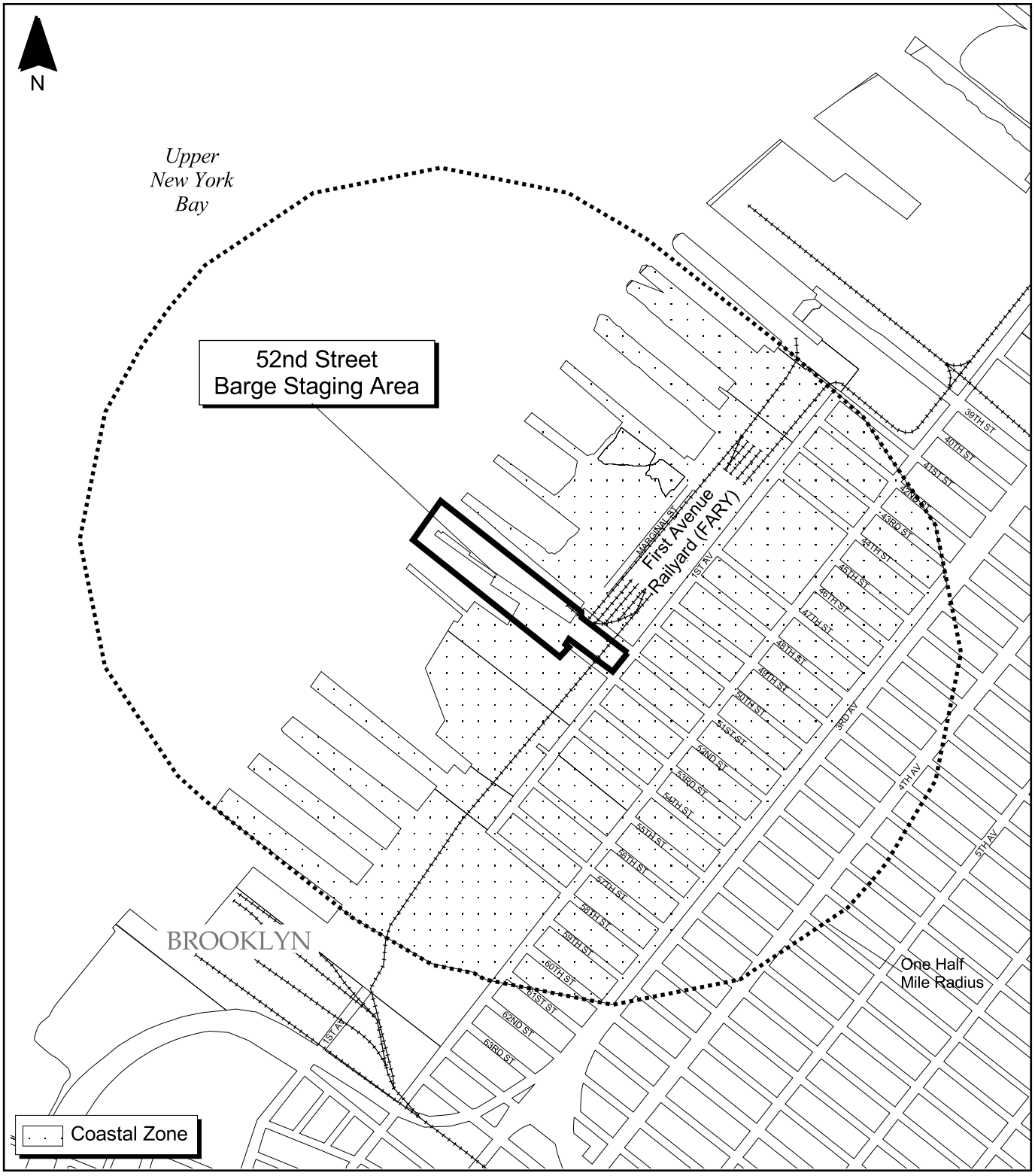
Unimpeded operation of the 52nd Street Barge Staging Area will also require dredging activities to construct the waterfront structures and to improve existing water depths in the immediate vicinity of the site. All dredging activities would be conducted in compliance with applicable federal, state and local regulations, and required permits would be acquired before any such activities commenced. Applicable and appropriate measures (e.g., closed clamshell buckets, silt curtains, etc.) would be implemented during dredging activities to minimize and/or eliminate any short-term impacts to local water quality. Short-term impacts could include an increase in turbidity during active dredging operations; however, dredging would not be expected to result in any significant adverse long-term impacts.

8.12 Waterfront Revitalization Program

8.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of the Upper New York Bay, the 52nd Street Barge Staging Area would be within the City's coastal zone boundary (see Figure 8.12-1). According to "The New Waterfront Revitalization Program," the 52nd Street Barge Staging Area would be classified as a water-dependent, industrial use. The site is located within a designated SMIA and Reach 14/East River and Upper New York Bay as indicated within the "New York City Comprehensive Waterfront Plan" and the "Plan for the Brooklyn Waterfront." The 52nd Street Barge Staging Area is, therefore, subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The 52nd Street Barge Staging Area was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These included subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3 and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14-1. In instances where a component of the 52nd Street Barge Staging Area required clarification or was inconsistent with a specific policy or subpolicy, further discussion is provided below.



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

500 0 500 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 8.12-1 Coastal Zone Boundary

52nd Street Barge Staging Area

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8.12.2 Consistency Assessment

Policy 1: Support and facilitate commercial and residential redevelopment in areas well-suited to such development.

1.3 Encourage redevelopment in the coastal area where public facilities and infrastructure are adequate or will be developed.

The 52nd Street Barge Staging Area would not result in a significant increase in the need for public facilities or changes in infrastructure as the action would involve the replacement-in-kind of a previously existing pier. The 52nd Street Barge Staging Area would serve as a barge maintenance unit (BMU) to service barges and tugboats staged at the pier. No permanent structures would be constructed on the pier. A maximum of eight DSNY personnel would work at the site at one time. The Proposed Action would not have an adverse effect on the capacity of public facilities and infrastructure. The 52nd Street Barge Staging Area would, therefore, be consistent with this subpolicy.

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

2.1 Promote water-dependent and industrial uses in Significant Maritime and Industrial Areas.

The 52nd Street Barge Staging Area would be located within the limits of the NYCDCP-designated Sunset Park SMIA. The replacement of the 52nd Street Barge Staging Area would be an integral component of the City's Long Term Export Program. Under this program, the DSNY is proposing to convert the existing DSNY MTSs into TCB facilities that would allow for the containerization and transfer of DSNY-managed Waste by flat deck barges to intermodal facilities where the containers would be transloaded to either rail or ocean-going vessels for ultimate transport to out-of-City disposal facilities.

The proposed 52nd Street Barge Staging Area would provide a staging area with a maintenance unit for barges transporting containerized DSNY-managed Waste to and from the MTSs or intermodal facilities. In its current condition, the existing pier is unusable due to its deteriorated state. The proposed barge staging area would involve the removal and replacement of the existing pier structure. The proposed demolition and replacement of the existing pier would largely represent the continuation of an existing industrial and water-dependent use. The proposed replacement of the existing structure would be consistent with existing land uses in the immediate vicinity of the site and would not prevent the siting of any additional water-dependent uses. The Proposed Action would serve to maintain this use, while restoring and revitalizing industrial waterfront property. The Proposed Action would be consistent with this subpolicy.

2.3 Provide infrastructure improvements necessary to support working waterfront uses.

The Proposed Action would involve the replacement and revitalization of a previously existing use. Once rehabilitation efforts are complete, the 52nd Street Barge Staging Area would provide a staging area and maintenance unit for barges transporting containerized DSNY-managed Waste to and from the MTSs or intermodal facilities.

The proposed 52nd Street Barge Staging Area would involve the removal of the existing pier and a replacement with a comparable structure. Waterfront development would involve the complete removal of the existing structure. The new structure would be located at the same site as the existing pier and would be of comparable size. The structure would consist of a concrete deck supported by timber piles and substructure elements. The timber fender system would be constructed of 12-inch-by-12-inch timber fender wales mounted to timber piles, with timber chocks and panels and rubber fender units.

Dredging would be required to improve existing water depths at and in the immediate vicinity of the site and in order to allow for the unimpeded operation of barges and tugboats. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any proposed dredging activities.

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

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

Development of the 52nd Street Barge Staging Area would involve the replacement-in-kind of a previously existing waterfront use and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. The proposed structure would have the capacity to accommodate up to 27 barges; however, it is assumed that normal transportation operations would only require approximately 16 barges to be staged at the 52nd Street Barge Staging Area at any one time. There would be no anticipated impact on other uses within the water body as "barge-swapping" activities would be in close proximity to the proposed structure. In addition, barge movements associated with the 52nd Street Barge Staging Area would be comparable to previous activities. Therefore, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

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

The Proposed Action would involve the replacement and reactivation of an existing pier structure. Once development of the 52nd Street Barge Staging Area is complete, the pier would serve as a staging area for barges transporting containerized DSNY-managed Waste to and from the converted MTSs or intermodal facilities. Barges staged at the proposed 52nd Street Barge Staging Area would be loaded with sealed, air- and watertight containers containing

DSNY-managed Waste processed at the converted MTSs. No handling of solid waste would occur at the site.

For the BMU, it is expected that no permanent structures would be constructed on the pier. Two trailers for DSNY personnel use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in storage containers. If applicable, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area and BMU would be done in accordance with applicable federal, state and local regulations. The Proposed Action would be consistent with this subpolicy.

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

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

Based upon a review of SNWAs, as described in "The New Waterfront Revitalization Program," as well as Recognized Ecological Complexes, the 52nd Street Barge Staging Area would not be located within a designated area. SCFWH information maintained by the New York State Department of State indicates that the 52nd Street Barge Staging Area would not be located within an SCFWH.

Development of the 52nd Street Barge Staging Area would involve the demolition of the existing facility and replacement-in-kind with a similarly sized and constructed structure. The proposed replacement of the pier would require dredging within Upper New York Bay to improve existing water depths at and in the immediate vicinity of the site in order to allow for unimpeded barge and tugboat operations. The 52nd Street Barge Staging Area would represent a revitalization of an existing previous industrial use and would not be anticipated to significantly impact natural resources in the vicinity of the site. The 52nd Street Barge Staging Area would, therefore, be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland maps was conducted in order to determine the presence of wetlands within the project site. As noted in Section 8.9, the 52nd Street Barge Staging Area would be located within portions of Upper New York Bay, designated by NYSDEC as a littoral zone, and no freshwater wetlands exist on the site. Development of the 52nd Street Barge Staging Area would involve the demolition of the existing structure and replacement-in-kind with a similarly sized facility. Dredging would be required to improve existing water depths at and in the immediate vicinity of the site to allow for the unimpeded operation of barges and tugboats. Dredging activities associated with the replacement of the existing pier would result in limited, short-term impact to these tidal wetlands.

The proposed 52nd Street Barge Staging Area is not anticipated to have significant impacts on wetland areas in the vicinity due to the previous and ongoing activities at and in the vicinity of the site and previous dredging activities that have historically occurred at the existing pier. Mitigation of potential impacts, if required, would be proposed during the permitting of the 52nd Street Barge Staging Area. This mitigation, if required, would address potential impacts that may occur due to the Proposed Action and would effectively restore these wetlands and their associated value. The 52nd Street Barge Staging Area, therefore, would be consistent with this subpolicy.

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

A review of the NYSDEC NHP database indicates that there are no protected vulnerable plant, fish and wildlife species or rare ecological communities on or in the immediate vicinity of the proposed site.

As part of the 52nd Street Barge Staging Area, the existing pier and its foundation pilings would be removed. Dredging would be necessary to allow for the unimpeded operation of barges and tugboats. As stated in Section 8.9, modifications to the site would pose little, if any, adverse ecological impacts or loss of habitat for rare or endangered species due to previous and ongoing industrial and dredging activities at and in the vicinity of the site. Stormwater runoff from the 52nd Street Barge Staging Area and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The 52nd Street Barge Staging Area would also not introduce hazardous wastes or other pollutants into the environment that could adversely impact fish and wildlife resources within the coastal area.

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

5.1 Manage direct or indirect discharges to waterbodies.

The Proposed Action would involve the removal and reactivation of an existing barge staging area. Once development of the 52nd Street Barge Staging Area is complete, the pier would serve as a staging area and maintenance unit for barges traveling to and from the converted MTSs or intermodal facilities. Barges staged at the 52nd Street Barge Staging Area would either be empty or would be loaded with sealed, air- and watertight containers carrying DSNY-managed Waste processed at the MTSs. No waste handling activities would be associated with the operation and use of the proposed barge staging area. All construction activities associated with the removal and subsequent replacement of the pier would be done in accordance with applicable regulations.

In addition, no permanent structures would be constructed on the pier. Two trailers for DSNY workers' use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in three storage containers. If required, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area would be done in accordance with applicable federal, state and local regulations. The Proposed Action would be consistent with this subpolicy.

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

The Proposed Action would involve the removal of the existing pier structure and subsequent replacement with a new, comparable structure. During the proposed replacement of the existing pier, BMPs would be used to the extent possible during all phases of construction and operation of the 52nd Street Barge Staging Area in order to minimize any nonpoint discharges. During construction, non-structural and, if necessary, structural, measures would be employed to minimize impacts to the surrounding environment. The 52nd Street Barge Staging Area would comply with federal, state and local requirements concerning the management of stormwater runoff and erosion. The Proposed Action would, therefore, be consistent with this subpolicy.

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

Development of the 52nd Street Barge Staging Area would involve a replacement-in-kind of the existing pier structure with a comparable structure. Dredging would be necessary to provide sufficient water depths for unimpeded operations once the proposed barge staging area is operational. Any dredging done as part of construction may result in temporary impacts and would be conducted in a manner to minimize short-term impacts to water quality. In addition, non-structural and, if necessary, structural, measures would be used to minimize potential adverse impacts to tidal wetlands in the vicinity of the site. All dredged materials would be disposed of at a permitted facility in accordance with applicable federal, state and local regulations. Therefore, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

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

The proposed development of the 52nd Street Barge Staging Area would have no impact on the quality or quantity of surface or ground waters. No surface or ground waters in the vicinity of the site constitute a primary or sole source aquifer

or water supply. The 52nd Street Barge Staging Area would be consistent with this subpolicy.

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

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

According to a review of the FEMA National Flood Insurance Program maps, the 52nd Street Barge Staging Area would be located within the 100-year and 500-year floodplains (Zones A and B, respectively). The 52nd Street Barge Staging Area would involve the reconstruction of an existing facility at the same location as the existing pier structure. Replacement of the 52nd Street Barge Staging Area would not affect the potential for flooding or erosion. During construction, appropriate erosion and sediment controls would be employed to prevent significant erosion. In addition, no permanent structures would be constructed on the pier. To the extent practicable, non-structural measures would be used to minimize damage from flooding and erosion during the demolition of the existing pier and subsequent construction of the 52nd Street Barge Staging Area.

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

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

No hazardous waste or other pollutants would be introduced to the environment due to the removal or replacement of the pier structure. The 52nd Street Barge Staging Area would serve as a staging area for barges transporting containerized DSNY-managed Waste to and from the Converted MTSs or intermodal facilities. Waste would be transported on barges in sealed, airtight containers. Barges staged at the 52nd Street Barge Staging Area could be empty or loaded with these sealed containers. No loss of this material would be anticipated.

In addition, no permanent structures would be constructed on the pier. Two trailers for DSNY worker's use would be provided. Equipment (e.g., portable pumps, winch lines, boat lines) would be housed in three storage containers. If applicable, on-site storage of petroleum products and hazardous materials related to the operation of the 52nd Street Barge Staging Area would be done in accordance with applicable federal, state and local regulations. The 52nd Street Barge Staging Area and BMU would be operated in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

7.2 Prevent and remediate discharge of petroleum products.

See response to Subpolicy 7.1.

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

See response to Subpolicy 7.1.

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

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

The Proposed Action would involve the rehabilitation of an existing industrial use. Due to the industrial uses at and in the immediate vicinity of the 52nd Street Barge Staging Area, public access would not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

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

The existing pier would involve the replacement-in-kind of a previously existing use with a comparable structure. The Proposed Action would represent a revitalization of a previously existing waterfront use. According to NYCDCP's "Plan for the Brooklyn Waterfront," development of a public access corridor is recommended for 52nd Street, located immediately adjacent to the proposed 52nd Street Barge Staging Area. The Proposed Action, however, would involve the rehabilitation of an existing industrial use and, due to the industrial activities being proposed at the site, public access would not be compatible. However, development of the 52nd Street Barge Staging Area would not preclude any future development of public access at other locations in the area that have been identified as potential public access sites.

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

The 52nd Street Barge Staging Area would be considered a revitalization of an existing waterfront-industrial use and would not further impair visual access to coastal lands, waters or open space. See also response to Subpolicy 9.1.

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

The 52nd Street Barge Staging Area would represent a removal and replacement of an existing industrial use. The 52nd Street Barge Staging Area would, therefore, not result in any new impact on open space resources within the study area. Furthermore, the development of the 52nd Street Barge Staging Area would not preclude development of waterfront parks north or south of the site. Therefore, the Proposed Action would be consistent with this subpolicy.

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

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

The 52nd Street Barge Staging Area would be a replacement and revitalization of an existing waterfront use and would be compatible with the existing urban design context and visual conditions of this portion of the Upper New York Bay, as noted in Section 8.7. Based on the information presented in that section, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The 52nd Street Barge Staging Area would involve the revitalization of a previously existing use. The replacement-in-kind of the existing structure would pose no additional impact to scenic values associated with natural resources. Therefore, this subpolicy is not applicable.

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

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

The 52nd Street Barge Staging Area would have no effect on any cultural resources on or near the site, as noted in Section 8.6. Based on the information presented in that section, the 52nd Street Barge Staging Area would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the study area. This subpolicy, therefore, is not applicable.

8.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

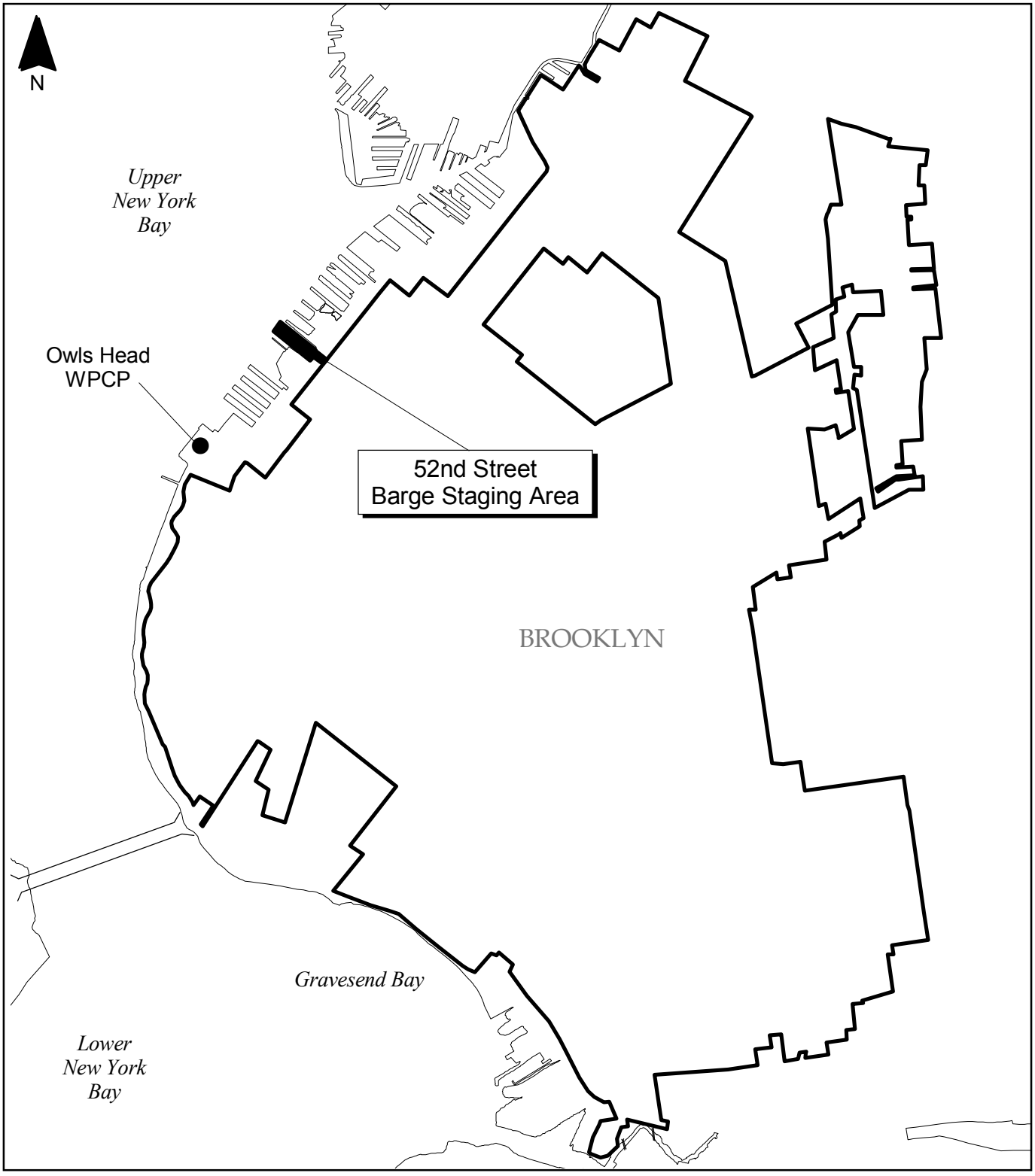
8.13.1 Existing Conditions

8.13.1.1 Water Supply

Potable water is supplied to the vicinity of the existing 52nd Street Barge Staging Area from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 12-inch-diameter water main exists along 52nd Street and the marginal street at the base of the pier along the waterfront, based on a review of NYCDEP water distribution maps. The 12-inch-diameter main is connected to a 20-inch-diameter water supply line that runs along 1st Avenue. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

8.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Owls Head WPCP, which serves the southwestern portion of Brooklyn. The WPCP drainage area is illustrated in Figure 8.13-1. From July 2002 through June 2003, the WPCP treated an average of 95 mgd of wastewater under dry weather flow conditions and an average flow of 104 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 8.13-1). The maximum dry weather flow during this period was 99 mgd in October 2002 and the maximum average flow was 114 mgd during June 2003. Effluent from the plant is discharged to Upper New York Bay and is regulated by NYSDEC under the SPDES. The current SPDES permit limit for flow to the Owls Head WPCP is 120 mgd. As the 52nd Street Barge Staging Area is currently not staffed and no operations take place at the site, no water is used by personnel or process operations.



Site delineations are approximate.

3000 0 3000 Feet

Figure 8.13-1 Existing WPCP Drainage Area

52nd Street Barge Staging Area

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Table 8.13-1
Average Monthly Dry Weather and Average Flows
Owls Head Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flow [(1)] (mgd)
July 2002	90	93
August	94	99
September	97	107
October	99	113
November	96	111
December	96	104
January 2003	93	99
February	91	101
March	94	103
April	95	105
May	94	102
June	98	114
Average Effluent	**95**	**104**

Note:
(1) Average flow includes the sanitary and stormwater flows received by the plant during wet weather.

Based on a review of the I&I maps and information provided by the NYCDEP, Brooklyn Water and Sewer Permits, the area in proximity to the 52nd Street Barge Staging Area is served by a 30-inch-diameter combined sewer line that flows in a northeast direction along 1st Avenue. The 30-inch line is connected to a regulator at the intersection of 1st Avenue and 49th Street. Combined sewage flows southwest from the regulator to the Owls Head WPCP through a 72-inch-diameter interceptor along 1st Avenue and Colonial Avenue. Overflow from the regulator is conveyed west along 49th Street to a CSO outfall in Upper New York Bay. In addition to the sewer lines along 1st Avenue, a 15-inch-diameter combined sewer line also flows from the east along 52nd Street to 1st Avenue and the 30-inch line. A 4-inch force main exists along 51st Street running from the DSNY-owned facilities east of the site to the 30-inch sewer on 1st Avenue.

8.13.1.3 Solid Waste

Commercial and industrial solid wastes generated in the City are collected by private companies. Residential solid waste and solid waste generated by certain City agencies is collected and managed by the DSNY. Based on information provided by the DSNY, the 52nd Street Barge Staging Area is not currently staffed, no operations take place, and no solid waste is generated at the site.

8.13.1.4 Energy

Consolidated Edison of New York supplies electricity to the existing facility. A review of utility maps from Consolidated Edison shows electric lines along 1st Avenue, 52nd Street and the marginal street at the foot of the barge staging area pier. Electricity is supplied to the pier through a connection located on the eastern edge of the marginal street.

Based on a review of relevant Keyspan Energy utility plates, several petroleum lines exist within the vicinity of the 52nd Street Barge Staging Area. Two 5-and-9/16-inch oil lines run in parallel and are located along 1st Avenue south of 52nd Street and along 52nd Street. These oil lines terminate roughly mid-block on 52nd Street west of 1st Avenue. An active 6-inch gas line runs west along 52nd Street from a 12-inch line located on 1st Avenue. At roughly mid-block, the 6-inch line is retired. Two additional retired 6-inch lines are also located along 1st Avenue: (1) on the east side of 1st Avenue to the north of 52nd Street; and (2) on the west side of 1st Avenue to the south of 52nd Street.

The 52nd Street Barge Staging Area currently utilizes a negligible amount of gas and electricity due to the absence of staff and a lack of operations.

8.13.2 Future No-Build Conditions

The 52nd Street Barge Staging Area would continue to be unstaffed and used for barge staging. Potable water use, process and wastewater generation, solid waste generation and energy use would remain at or near levels of zero as with Existing Conditions. Wastewater flows to the Owls Head WPCP would continue to increase and would be projected to be 104.6 mgd by 2006.

8.13.3 Potential Impacts with the 52nd Street Barge Staging Area

8.13.3.1 Water Supply

The 52nd Street Barge Staging Area would have up to 16 employees working three shifts per day. They would require approximately 400 gallons of potable water per day. The combined total usage of 400 gpd of potable water would represent an increase of 400 gpd above current consumption levels.

The 52nd Street Barge Staging Area would have no impact on the existing system's ability to supply water reliably. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

8.13.3.2 Sanitary Sewage

Based on the estimated water usage of 400 gpd for the Southwest Brooklyn Converted MTS, the small quantities of wastewater sent to the Owl's Head WPCP would not significantly impact the sewage flow rate or the ability of the Owl's Head WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 104.6 mgd in 2006, which would be well below the permitted capacity of 120 mgd. In addition, the new wastewater flow due to the proposed action would not result in a significant increase in combined sewer overflows (CSO).

8.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 16 facility employees per day, 125 pounds of solid waste would be generated per week (21 lbs/day) and would represent an incremental increase of approximately 125 pounds per week (21 lbs/day) above current waste generation levels. This volume would be managed at the Hamilton Avenue Converted MTS and would not significantly impact the system.

8.13.3.4 Energy

The 52nd Street Barge Staging Area has the necessary existing utility connections for electric supply in order to operate at its past levels of demand. Future electrical consumption demands are expected to revert to levels previously used by the 52nd Street Barge Staging Area when Fresh Kills Landfill on Staten Island was still operational. These levels of demand could be met by Consolidated Edison, as they were previously at this site, with no adverse affects on either the electrical utilities.

8.14 Traffic, Parking, Transit, and Pedestrians

8.14.1 Introduction

The 52nd Street Barge Staging Area would be a replacement-in-kind of the existing pier that would be used for staging of container barge movements between the Converted MTSs and intermodal transload facilities (barge-to-barge operations). Since this is a barge-to-barge operation, there is no truck traffic associated with this operation, and site-generated traffic resulting from employee trips and other miscellaneous trips would be minimal. Therefore, no off-site impacts are anticipated and no traffic analysis of this site was required.

8.15 Air Quality

8.15.1 Existing Conditions

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the 52nd Street Barge Staging Area.

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 8.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 8.15-1
Representative Ambient Air Quality Data
52nd Street Barge Staging Area

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO(1)	MTA, Flatbush Avenue, Between Tillary Street and Johnson Avenue	8-Hour	3,435 μg/m^3	10,000 μg/m^3
		1-Hour	4,695 μg/m^3	40,000 μg/m^3
NO_2	College Point Post Office	Annual	56 μg/m^3	100 μg/m^3
PM_{10}(2)	P.S. 314	Annual	25 μg/m^3	50 μg/m^3
		24-Hour	55 μg/m^3	150 μg/m^3
SO_2	P.S. 321	3-Hour	152 μg/m^3	1,300 μg/m^3
		24-Hour	94 μg/m^3	365 μg/m^3
		Annual	24 μg/m^3	80 μg/m^3

Note:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1998 calendar year.

8.15.2 Future No-Build Conditions

The primarily commercial/industrial nature of the study area is not expected to change by the No-Build analysis year (2006). As such, no significant changes to air quality levels are anticipated, and Future No Build Conditions are expected to be the same as Existing Conditions for all pollutants except CO. CO concentrations are expected to be reduced by increasingly stringent, federally-mandated vehicular emission controls, although any effects may be offset by increases in regional traffic volumes.

8.15.3 Potential Impacts with the 52nd Street Barge Staging Area

8.15.3.1 On-Site Analysis

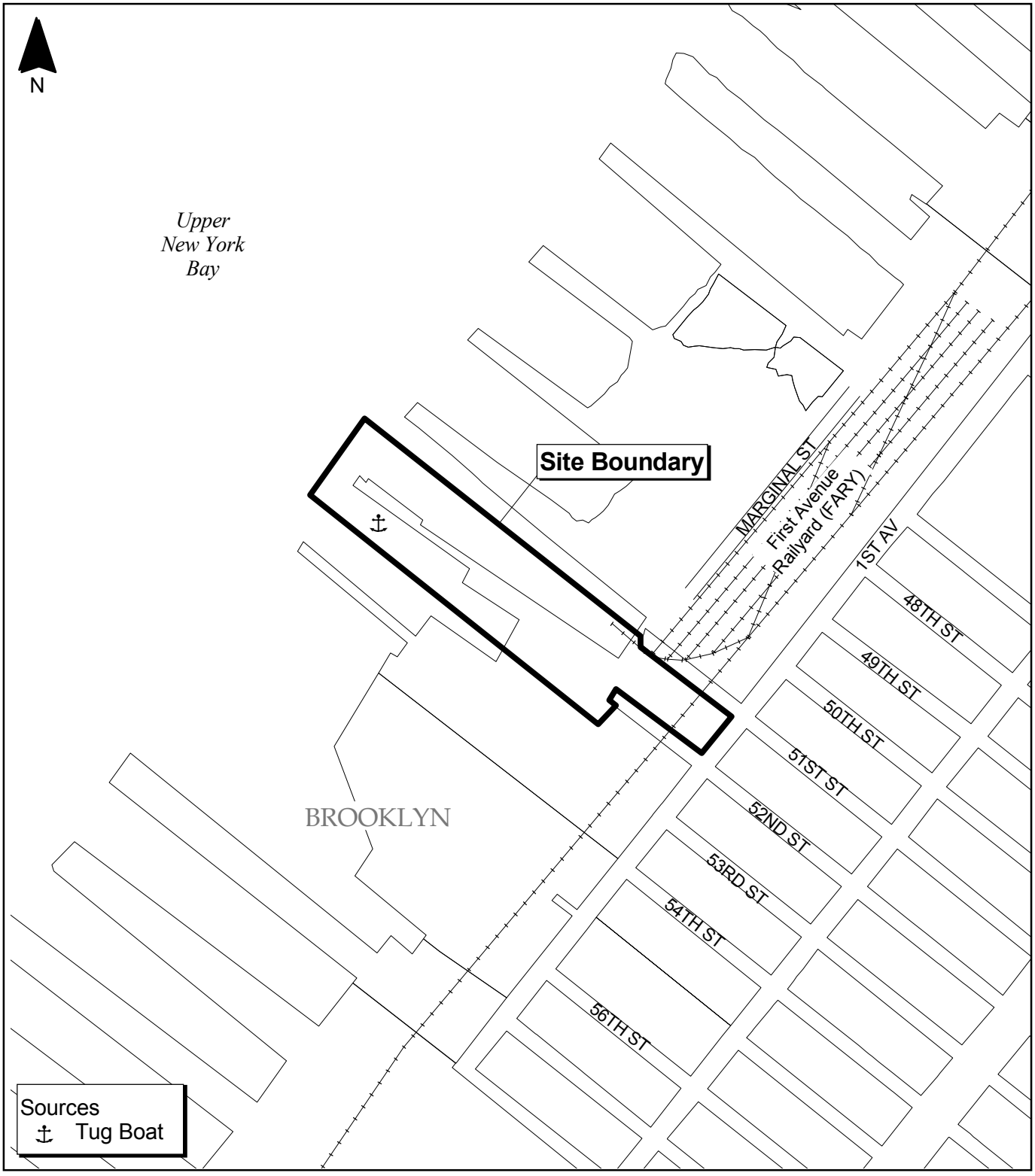
8.15.3.1.1 Sources Considered in the Analysis

The source of emissions and the number of each type of source that is anticipated to be in operation during the peak hour and under the daily average conditions are provided in Table 8.15-2. Figure 8.15-1 shows the locations of these sources within the site.

Table 8.15-2
Emission Sources Considered for On-Site Air Quality Analysis(1)
52nd Street Barge Staging Area

Type of Emission Source(1)	Maximum Number of Sources Operated During a Single Hour(2)	Number of Sources Operated Over 24-hour and Annual Average Periods
Oceangoing Tugboats	1	1

Notes:
(1) Emission factors used and emission rates estimated for each of these sources are included in technical backup provided to the NYCDEP.
(2) This is based on operational capacity of the barge staging area.



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

400 0 400 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 8.15-1 On-Site Air Quality Analysis

52nd Street Barge Staging Area

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8.15.3.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 8.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from 52nd Street Barge Staging Area – generated equipment at any receptor locations considered, which are also presented in Table 8.15-3, are below the STVs. The 52nd Street Barge Staging Area would not, therefore, significantly impact air quality in the area.

8.15.3.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 8.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by USEPA as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the 52nd Street Barge Staging Area are not considered to be significant.

8.15.4.2 Off-Site Analysis

8.15.4.2.1 Pollutants Considered and Analyses Conducted

The 52nd Street Barge Staging Area is a barge-to-barge operation so it would not generate any truck traffic; therefore, no off-site impacts were analyzed.

Table 8.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
52nd Street Barge Staging Area

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[7]	731	2,635	3,366	40,000	NA
	8-hour[7]	80	3.322	3,402	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	6	56	62	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	1	57	58	150	NA
	Annual	0.2	23	23	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	1	NA	NA	NA	5
	Annual Neighborhood Average[6]	0.03	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[7]	185	189	374	1,300	NA
	24-hour[7]	4	87	91	365	NA
	Annual	1	21	22	80	NA

Notes:

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

(3) Background concentrations were obtained from the NYCDEP in April 2003.

(4) NAAQS = National Ambient Air Quality Standard.

(5) Screening threshold value (STV) established by the NYCDEP and NYSDEC.

(6) Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

(7) The standards for these averaging periods allow one exceedance per year, so the use of the overall maximum concentration provides a very conservative comparison with standards.

(8) 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.

Table 8.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
52nd Street Barge Staging Area

		Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
No.	Toxic Air Pollutants	Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs) [2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs) [5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index [6]	Highest Estimated Long-Term (Annual) Pollutant Conc. [4] ($\mu g/m^3$)	Unit Risk Factors [7] ($\mu g/m^3$)	Maximum Cancer Risk [8,9]
Carcinogenic Pollutants										
1	Benzene	4.80E-01	1.30E+03	3.69E-04	1.45E-03	1.30E-01	1.12E-02	1.45E-03	8.30E-06	1.21E-08
2	Formaldehyde	6.07E-01	3.00E+01	2.02E-02	1.84E-03	6.00E-02	3.07E-02	1.84E-03	1.30E-05	2.39E-08
3	1,3 Butadiene	2.01E-02	-	-	6.10E-05	3.60E-03	1.69E-02	6.10E-05	2.80E-04	1.71E-08
4	Acetaldehyde	3.94E-01	4.50E+03	8.76E-05	1.20E-03	4.50E-01	2.66E-03	1.20E-03	2.20E-06	2.63E-09
5	Benzo(a)pyrene	9.67E-05	-	-	2.93E-07	2.00E-03	1.47E-04	2.93E-07	1.70E-03	4.98E-10
Non-Carcinogenic Pollutants [10]										
6	Propylene	1.33E+00	-	-	4.02E-03	3.00E+03	1.34E-06	4.02E-03	NA	NA
7	Acrolein	4.76E-02	1.90E-01	2.50E-01	1.44E-04	2.00E-02	7.21E-03	1.44E-04	NA	NA
8	Toluene	2.10E-01	3.70E+04	5.68E-06	6.38E-04	4.00E+02	1.59E-06	6.38E-04	NA	NA
9	Xylenes	1.47E-01	4.30E+03	3.41E-05	4.44E-04	7.00E+02	6.35E-07	4.44E-04	NA	NA
10	Anthracene	9.62E-04	-	-	2.92E-06	2.00E-02	1.46E-04	2.92E-06	NA	NA
11	Benzo(a)anthracene	8.64E-04	-	-	2.62E-06	2.00E-02	1.31E-04	2.62E-06	NA	NA
12	Chrysene	1.82E-04	-	-	5.50E-07	2.00E-02	2.75E-05	5.50E-07	NA	NA
13	Naphthalene	4.36E-02	7.90E+03	5.52E-06	1.32E-04	3.00E+00	4.41E-05	1.32E-04	NA	NA
14	Pyrene	2.46E-03	-	-	7.45E-06	2.00E-02	3.73E-04	7.45E-06	NA	NA
15	Phenanthrene	1.51E-02	-	-	4.58E-05	2.00E-02	2.29E-03	4.58E-05	NA	NA
16	Dibenz(a,h)anthracene	3.00E-04	-	-	9.09E-07	2.00E-02	4.55E-05	9.09E-07	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**2.71E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**7.19E-02**	**Total Estimated Combined Cancer Risk**		**5.62E-08**
		Acute Non-Cancer Hazard Index Threshold [11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold [11]**		**1.0E+00**	**Cancer Risk Threshold [11]**		**1.0E-06**

Notes to Table 8.15-4:

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

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

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

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

(5) Long-term (annual) guideline concentrations (AGC) established by NYSDEC.

(6) Estimated by dividing the maximum annual concentration of each of the individual pollutants by the AGC value of that pollutant and summing up the resulting values to obtain hazard index for all of the pollutants combined.

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

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

(9) The total incremental cancer risk from all of the pollutants combined was estimated by summing the maximum cancer risk of each of the individual pollutants.

(10) Some of the pollutants included in the group of non-carcinogenic pollutants, such as anthracene, benzo(a)anthracene and chrysene, may also have carcinogenic effects. As these pollutants do not have established unit risk factors, they were evaluated using the hazard index approach for non-carcinogens.

(11) Hazard index and cancer risk thresholds based on NYSDEC "Guidelines for the Control of Toxic Ambient Air Contaminants" dated November 12, 1997. Estimated values below these threshold limits are considered to be insignificant impacts.

NA = Not Applicable

8.16 Odor

The 52nd Street Barge Staging Area would be used for the temporary mooring of barges and storage of marine supplies. The 2001 FEIS odor study included odor samplings from the following types of sources:

- Full barges (containing uncovered, loose, solid waste) moored outdoors;
- Empty barges (with solid waste debris) moored outdoors;
- Process building vents/stacks; and
- Shipping container (containing compacted waste) vent openings.

Samplings of the shipping container vents found no significant odor emissions. Therefore, an odor analysis for this site is not required.

8.17 Noise

The noise analysis addresses on-site sources of noise emissions from the 52nd Street Barge Staging Area-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual and the Current New York City Noise Code. A New York City Zoning Code analysis was not performed for the 52nd Street Barge Staging Area since the only equipment proposed are tugboats, which are seen as transportation facilities and, therefore, were not included in a New York City Zoning Code analysis. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies applied in this analysis. The 52nd Street Barge Staging Area would not generate any truck traffic; therefore, no off-site impacts were analyzed.

8.17.1 Existing Conditions

8.17.1.1 Introduction

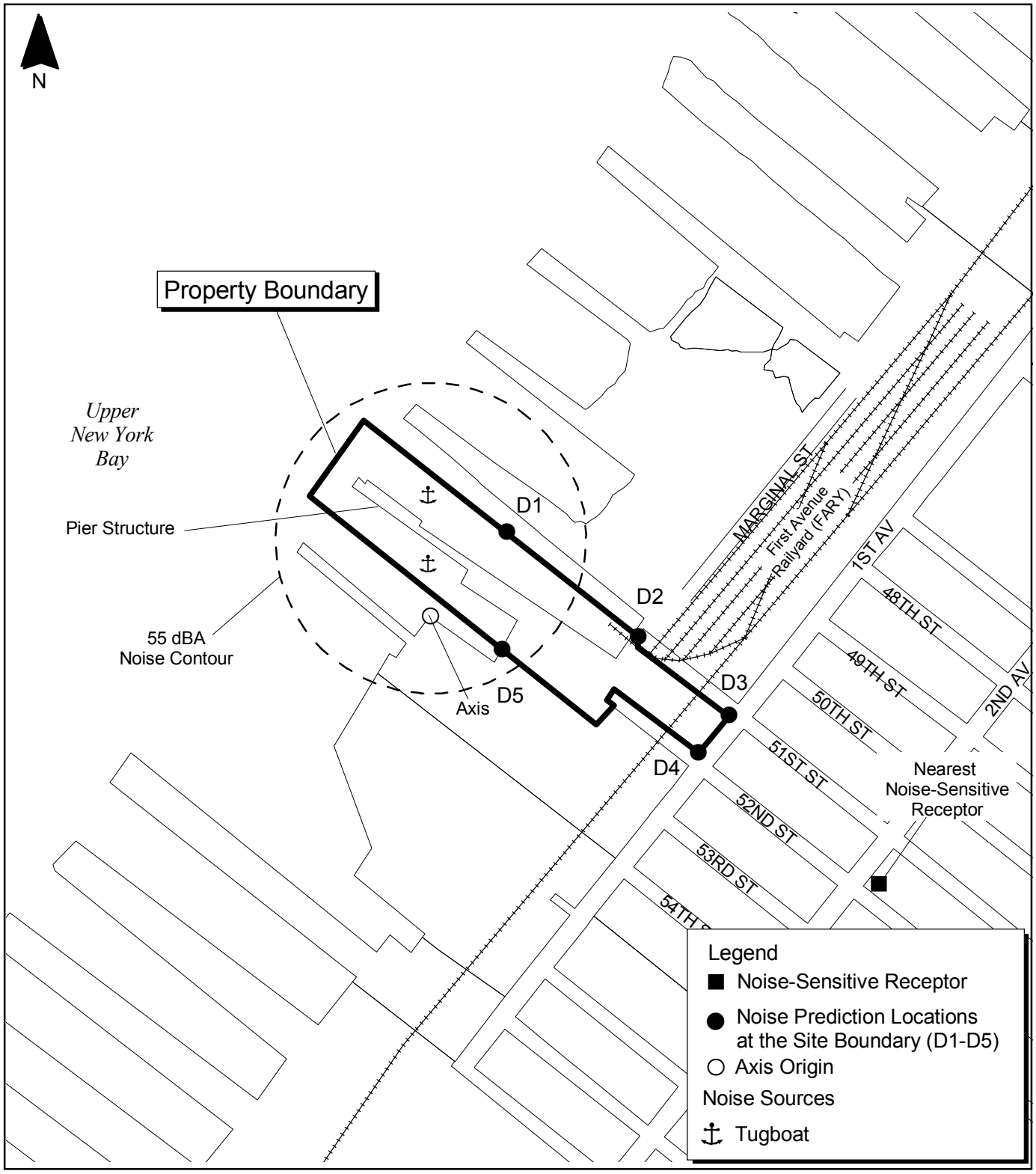
Figure 8.17-1 shows the location of the 52nd Street Barge Staging Area, the surrounding area and the points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building located on the corner of 2nd Avenue and 52nd Street, approximately 263 meters (862 feet) from the site boundary.

8.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the apartment building. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[11] and the statistical metrics of L_5, L_{50} and L_{90}.[12] Table 8.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 1:00 a.m. and 2:00 a.m. and had an $L_{eq(1)}$ of 46.6 dBA on June 4, 2004. Activities and events that contribute to the on-site noise levels are as follows:

- Traffic from the BQE; and
- Other noise sources associated with activities in the surrounding industrial areas.

[11] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[12] Terms L_5, L_{50} and L_{90} are defined in Section 3.19.2.



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

200 0 200 Feet

HDR HydroQual PB URBITRAN EEA Cambridge Environmental Inc

Figure 8.17-1 Noise Sources and Receptors

52nd Street Barge Staging Area

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Table 8.17-1
Existing Hourly (Monitored) Noise Levels On Site[(1)]
52nd Street Barge Staging Area

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_5 (dBA)	L_{min} (dBA)	L_{max} (dBA)
3:00-4:00 p.m.	55.2	48.9	52.2	60.5	46.4	69.4
4:00-5:00 p.m.	58.5	51.4	54.5	64.8	49.3	71.3
5:00-6:00 p.m.	58.5	54.0	56.3	62.8	52.1	74.2
6:00-7:00 p.m.	57.1	52.6	55.6	61.1	48.9	68.9
7:00-8:00 p.m.	56.1	51.5	54.2	59.8	48.6	69.3
8:00-9:00 p.m.	53.8	48.1	51.4	58.9	45.6	66
9:00-10:00 p.m.	52.7	46.9	50.3	57.3	44.8	66.1
10:00-11:00 p.m.	52.6	46.3	49.2	57.8	44.8	67.9
11:00 p.m.-12:00 a.m.	52.5	48.1	50.3	55.1	46.3	71.9
12:00-1:00 a.m.	50	46.8	48.8	53.5	45.2	68.5
1:00-2:00 a.m.	46.6	44.2	45.6	48.5	43.4	62.9
2:00-3:00 a.m.	57.7	45.7	47.3	53.6	44.5	81.4
3:00-4:00 a.m.	55	46.4	48.4	60.3	45	73.1
4:00-5:00 a.m.	57.1	46.6	49.4	59.9	44.7	75.4
5:00-6:00 a.m.	49.8	47.2	48.8	52.2	42.8	62.5
6:00-7:00 a.m.	52.4	49.5	51.1	55.7	48.1	64.8
7:00-8:00 a.m.	53	50.0	51.8	56.6	48.4	68
8:00-9:00 a.m.	57.2	50.6	53.6	62.3	48	73.4
9:00-10:00 a.m.	56.5	52.7	55.0	60.1	50.8	67.7
10:00-11:00 a.m.	50.6	46.7	49.4	54.3	44.7	60.5
11:00 a.m.-12:00 p.m.	66.2	46.5	52.3	70.9	43.8	91.9
12:00-1:00 p.m.	59.5	47.7	52.2	63.7	45	81.5
1:00-2:00 p.m.	54.8	49.2	51.4	58.6	47.3	77.7
2:00-3:00 p.m.	54.3	49.2	51.0	58.1	47.7	71

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

8.17.2 Future No-Build Conditions

8.17.2.1 On-Site Noise Levels

No appreciable changes in on-site noise levels are anticipated by 2006; therefore, Future No-Build Conditions are expected to be the same as Existing Conditions.

8.17.3 Potential Impacts with the 52nd Street Barge Staging Area

8.17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the 52nd Street Barge Staging Area and its reference noise levels used in the CEQR and Current Noise Code analysis are shown in Table 8.17-2. Shown earlier, Figure 8.17-1 indicates the 52nd Street Barge Staging Area layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 8.17-2
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
52nd Street Barge Staging Area

Equipment Name (quantity)(1)	Reference Sound Pressure Noise Level at 50 feet (dBA)
Outdoor	
Oceangoing Tugboat (2)	73

Note:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.

8.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the 52nd Street Barge Staging Area. Noise levels from all sources were combined to determine the location of the 55 dBA contour line. Since the on-site equipment for the 52nd Stret Barge Staging Area consists of only two tugboats, the 55 dBA contour lies within the property boundary. The distance from the 55 dBA contour line to the property boundary is 359 meters (1,178 feet) in the direction of the nearest noise-sensitive receptor, which is 263 meters (862 feet) from the property boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA, (i.e., the point off site where noises generated on-site attenuate to 55 dBA), is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (See Figure 8.17-1); therefore, an on-site noise analysis, including noise monitoring at the nearest noise-sensitive receptor, was not required.

8.17.3.1 Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the 52nd Street Barge Staging Area boundary to determine the total L_{eq} from outdoor sources for comparison to the current Noise Code. This is shown in Table 8.17-3. Based on this analysis, the total L_{eq} does not exceed the current Noise Code Standard of 70 dBA at the property boundary.

8.17.3.2 Combined On-Site and Off-Site Noise Levels

As a result of the on-site screening analysis performed for the 52nd Street Barge Staging Area, an on-site noise analysis was required. An off-site noise analysis was not required, therefore, a combined noise analysis was not performed.

Table 8.17-3
Current Noise Code Analysis
52nd Street Barge Staging Area

Location at Plant Boundary	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	56
D2	48
D3	43
D4	43
D5	54
D6	60