CHAPTER 20 ENVIRONMENTAL REVIEW: GREENPOINT CONVERTED MTS

20.1 Introduction

The results of the environmental analyses of the Greenpoint Converted MTS are presented in the following sections:

20.2 Land Use, Zoning, and Public Policy
20.3 Socioeconomic Conditions
20.4 Community Facilities and Services
20.5 Open Space
20.6 Cultural Resources
20.7 Urban Design, Visual Resources, and Shadows
20.8 Neighborhood Character
20.9 Natural Resources
20.10 Hazardous Materials
20.11 Water Quality
20.12 Waterfront Revitalization Program
20.13 Infrastructure, Solid Waste and Sanitation Services, and Energy
20.14 Traffic, Parking, Transit, and Pedestrians
20.15 Air Quality
20.16 Odor
20.17 Noise
20.18 Commercial Waste to the Greenpoint Converted MTS

Section 2.4.2 provides a summary description of the site and important characteristics of the facility design. A detailed discussion of the methodologies that were applied in conducting each analysis is provided in Chapter 3. Supplemental information on the site or the study area is provided in the following sections when appropriate to the analysis.

20.2 Land Use, Zoning, and Public Policy

20.2.1 Existing Conditions

20.2.1.1 Definition of the Study Areas

The primary study area for the land use, zoning, and public policy analyses is defined as the area within ¼-mile of the site (see Figure 20.2-1). The secondary study area is defined as the area between ¼-mile and ½-mile of the site (see Figure 20.2-2). Section 3.4 describes the methodology employed in these analyses and Section 2.4.2 provides information on existing land uses and operations on the site.

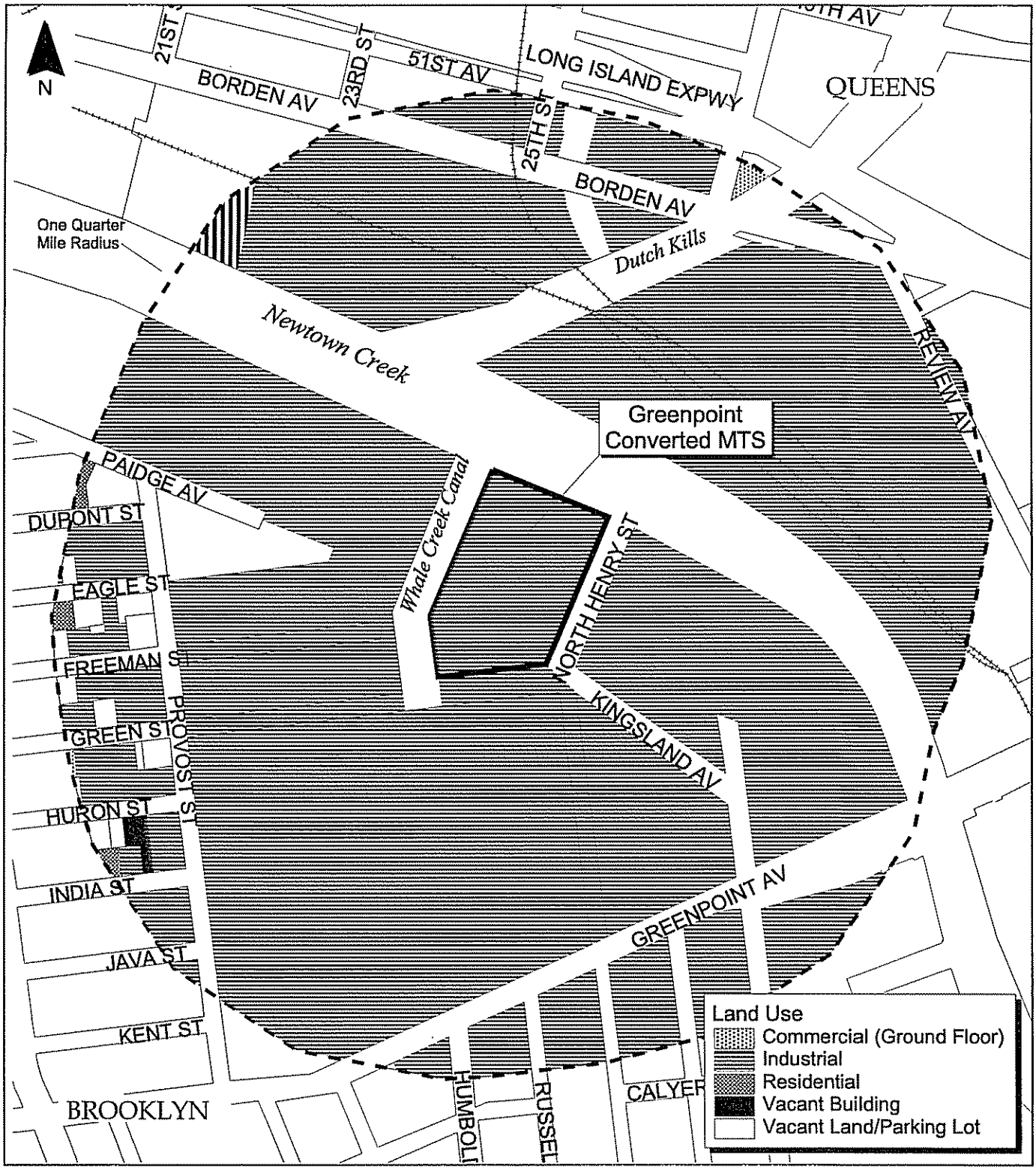
20.2.1.2 Land Use Patterns

20.2.1.2.1 General Context

The site is located on the heavily industrial Newtown Creek waterfront in Greenpoint, Brooklyn. It is surrounded by large-lot, primarily truck-dependent, heavy industrial uses on both the Queens and Brooklyn sides of the creek. These uses include various municipal facilities, petroleum (outdoor loading) facilities and warehousing.

20.2.1.2.2 Land Uses in the Primary Study Area

The primary study area is comprised almost exclusively of heavy industrial uses concentrated along Newtown Creek and dominated by the Newtown Creek WPCP. The WPCP, which occupies a large area immediately south of the site, is currently being expanded to the east and to the north (west of Whale Creek Canal), across from the site. A NYCDOT asphalt production facility and private recycling center for construction debris and fill are located east of the site on Kingsland Avenue. The Queens side of Newtown Creek is also characterized by industrial uses such as The Exhibit Company and numerous warehouses fronting on Borden and Review Avenues across from the site.



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

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Figure 20.2-1 Land Use in the Primary Study Area

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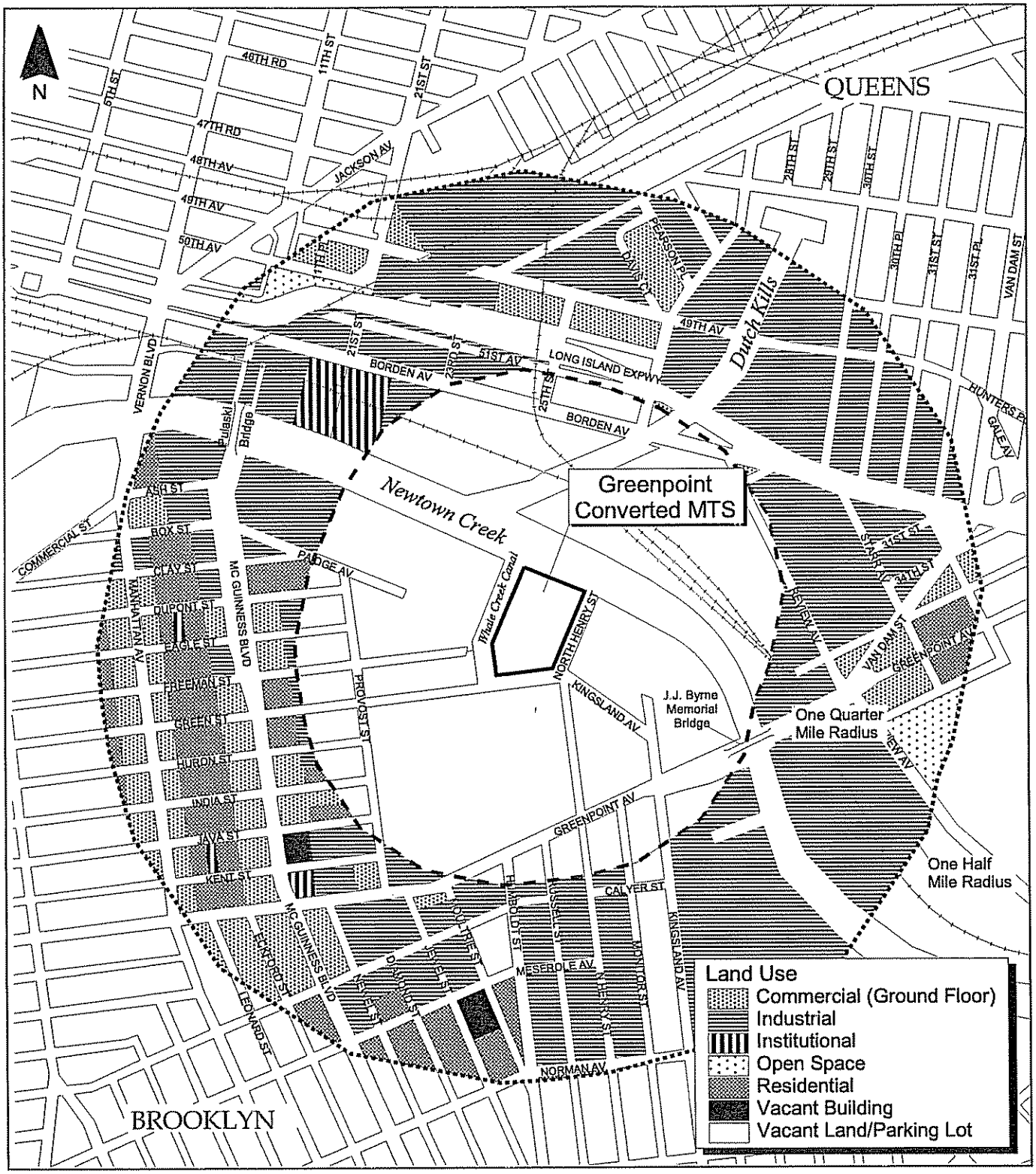

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning
This figure illustrates generalized land uses in the secondary study area.

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Figure 20.2-2 Land Use in the Secondary Study Area

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In addition to the uses bordering the site, the blocks south of the site along the west side of Provost Street are almost exclusively warehouses. Most of these are active, though there are some vacant warehouse buildings and vacant lots scattered throughout. Southeast of the site beyond a private recycling center and WPCP sites are Metro Fuel Oil Depot petroleum outdoor-loading facilities.

20.2.1.2.3 Land Uses in the Secondary Study Area

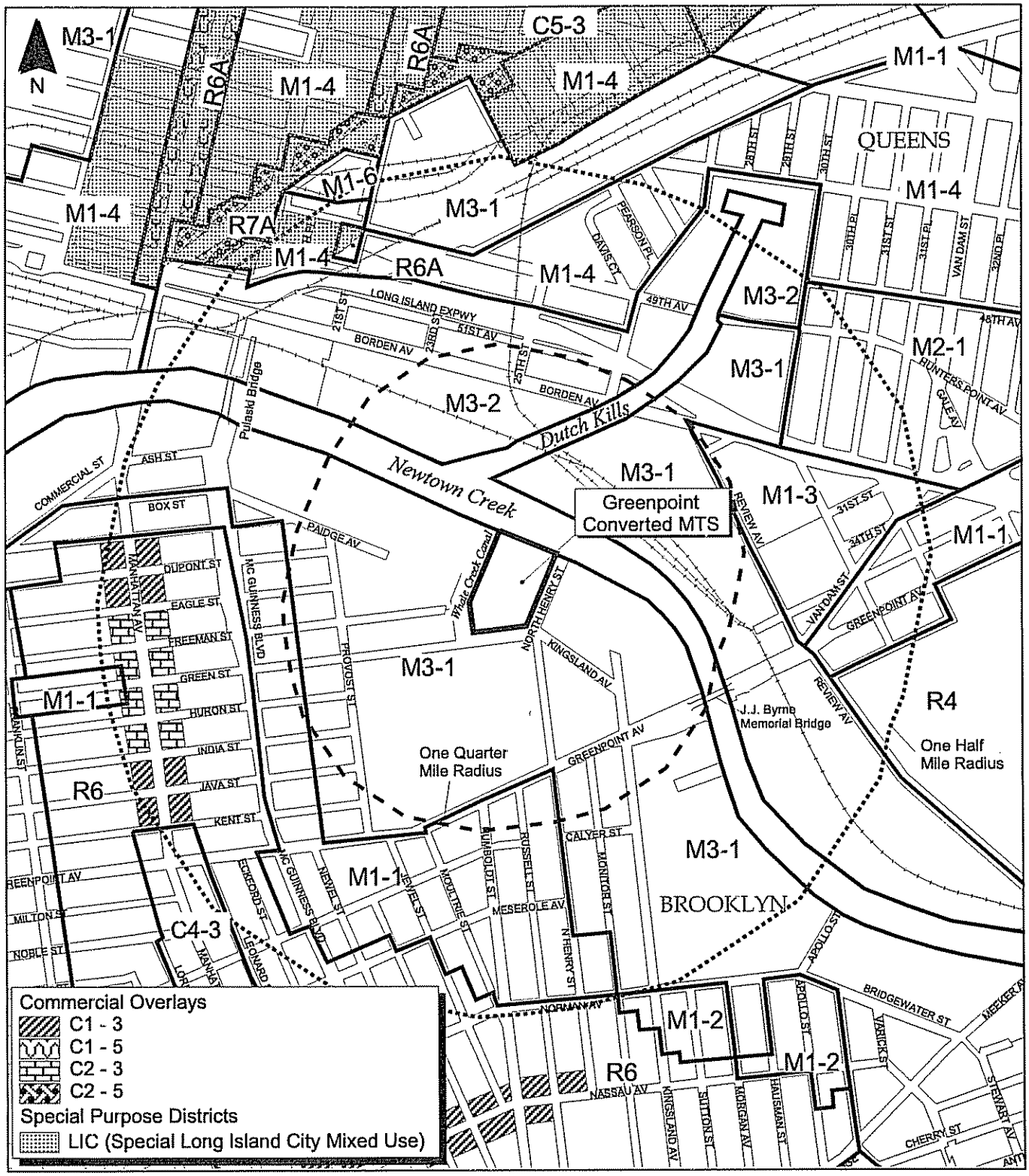
Within the secondary study area, heavy industrial uses are concentrated along both sides of Newtown Creek and Dutch Kills, and in about half of the study area in Brooklyn, particularly south of Greenpoint Avenue. West of the site in the secondary study area is a residential area comprised mostly of three- to four-story apartment buildings, whose ground-floor commercial uses line McGuinness Boulevard and Manhattan Avenue. In this area, an apartment building recently converted from industrial uses stands west of Provost Street on Dupont Street. South of Meserole Avenue in the southern portion of the study area, residential uses are interspersed with active warehouses.

The portion of the secondary study area that lies north of the site in Queens is comprised almost entirely of industrial uses and warehouses with the exceptions of the Salvation Army Veterans Residence northwest of the site at 21st Street and Borden Avenue, and some commercial uses north of the site along 49th Avenue and east of the site along Greenpoint Avenue.

20.2.1.3 Current Zoning On and Near the Site

20.2.1.3.1 Zoning Within the Primary Study Area

The site and the entire primary study area lie within manufacturing zoning districts. In Brooklyn, an M3-1 district extends along the southern side of Newtown Creek. In Queens, an M3-2 zoning district defines the area west of the Dutch Kills and an M3-1 defines the area to its east. (See Figure 20.2-3 and Table 3.4-1: Zoning District Characteristics.)



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

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Figure 20.2-3 Zoning

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20.2.1.3.2 Zoning Within the Secondary Study Area

The secondary study area in Brooklyn is zoned M3-1 along the creek, and M1-1 inland, serving as a buffer between the heavier industrial district and residentially zoned (R6) district to the west and south. Nearly all of the secondary study area in Queens is zoned for manufacturing (M1-1, M1-3, M1-4, M2-1, M3-1 and M3-2), except for part of a block in the northwestern section, which is zoned R6A. The Long Island City Mixed Use District (overlay zone), intended to spur new mixed-use development, includes the R6A block and extends northward to cover a large area outside the secondary study area.

20.2.1.4 Plans and Policies

The FY 2004 CDNS for Brooklyn CD 1 contains only one recommendation that applies to the site and study area. It states explicitly that the community is opposed to any reopening of the Greenpoint Incinerator and recommends that it be demolished as soon as possible. Otherwise, the community expresses its concern over hosting new large-scale waterfront facilities, such as power plants, and its general dissatisfaction with hosting a large number of private waste transfer stations. Also, the Community District Board requests that DSNY garages for District 3 be relocated to District 3 and that the construction of new garages for Districts 1 and 4 proceed.

The CDNS for Queens CD 2 states the community's concerns over air quality and the effects of waste transfer stations on air quality, but does not make reference to recommended or anticipated physical development affecting the site or primary or secondary study areas.

The Greenpoint 197-a Plan has been prepared for an area in Brooklyn approximating the 11222 zip code district, which extends to Newtown Creek to the north, the East River to the west and far enough south to include McCarren Park and east to include the Keyspan site on Newtown Creek east of the Brooklyn-Queens Expressway (BQE). The plan overall supports redevelopment of the waterfront, but it notes a necessary balance between existing necessary uses, such as DSNY facilities, and the desire to have a waterfront that is accessible and enjoyable to the public. To this end, the plan notes those artistic and community open space elements that

are planned to be incorporated in the Newtown Creek WPCP upgrade. (See Future No-Build Conditions, Section 20.2.2, for details regarding the WPCP design features likely to be complete by 2006.) Regarding the DSNY site, the plan refers to the community's concern with dismantling the incinerator in a way that is environmentally sensitive. Although several areas of rezoning are proposed, Newtown Creek is planned to remain M3, thus suitable for heavy industry and municipal uses.

Reach 13, Newtown Creek, is a tidal inlet of the East River, stretching eastward to include English Kills. The plan for Reach 13 states that there are many economic opportunities in this vicinity given its proximity to rail lines and deep water access. The area is identified as an SMIA and continues to be an important location for manufacturing, wholesale, distribution and municipal uses. The plan recommends maintenance of these activities and enhancements to accommodate water-dependent uses. It also calls for coordinated efforts to resolve existing environmental problems and to safeguard against new ones.

One recommendation of the plan is to develop environmentally sound designs and clear performance standards for municipal uses in Newtown Creek, including coordinating municipal agencies with the public and encouraging the consideration of such site development mitigation strategies as the use of landscape buffers, odor control measures and truck routing guidelines.

The plan for Reach 13 makes the point that the reach is not an appropriate location for the development of public access to the waterfront. Public access does not exist, and the best views of the creek are from sidewalks on the Pulaski Bridge and the J.J. Byrne Memorial Bridge, which are used by pedestrians and cyclists. The plan suggests that communities in neighboring reaches provide better opportunities for public access to the waterfront. (See Section 20.12 for a review of consistency with the WRP.)

20.2.2 Future No-Build Conditions

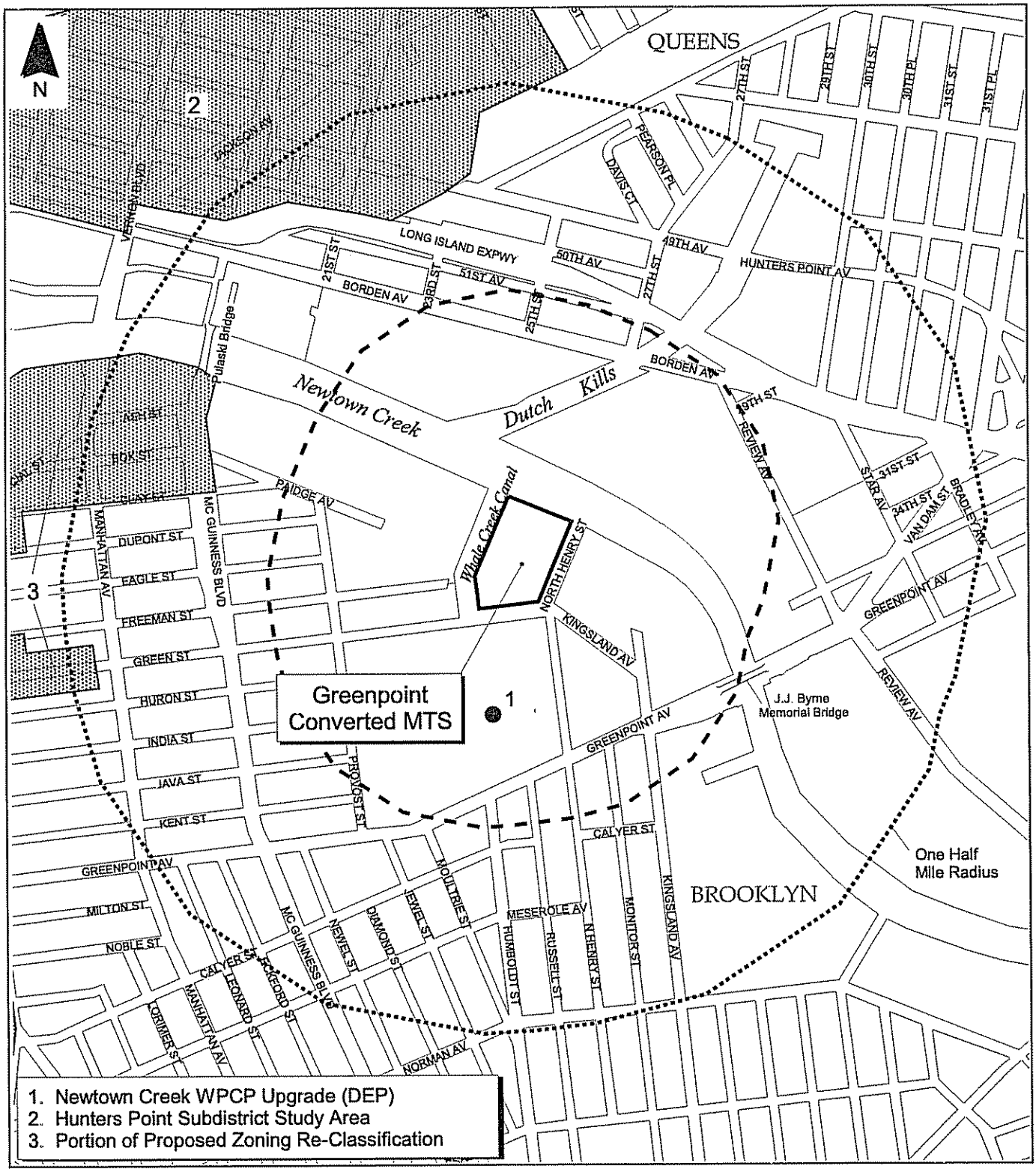
It is reasonable to anticipate that Future No-Build Conditions in the primary and secondary study areas generally will resemble the Existing Conditions. The site will remain DSNY property and the existing, inactive MTS will remain, as will the associated DSNY parking. The DSNY auxiliary field force will continue to use some interior spaces of the defunct incinerator until the incinerator is demolished prior to 2006.

Planned developments near the site generally will maintain existing development intensity and reinforce the existing land use pattern. Figure 20.2-4 shows the planned development sites. The Newtown Creek WPCP, southeast of the site, is in the midst of major expansion/rehabilitation on the adjacent block between Kingsland Avenue and Greenpoint Avenue. The WPCP support building, under construction west of the Whale Creek, and the adjacent landscaped nature walk along the water, are scheduled for completion in 2004. The redeveloped WPCP will also feature a pool and park for children and a series of 10 public art projects to be installed along the 10-block-long chain-link fence surrounding the facility.

20.2.3 Potential Impacts with the Greenpoint Converted MTS

20.2.3.1 Land Use and Zoning

The Greenpoint Converted MTS would entail replacement of the existing MTS with a similar, new facility that would include containerization functions. The new facility would be constructed further inland from the location of the incinerator, thus somewhat decreasing the density of the site and its waterfront. The Greenpoint Converted MTS, which would be situated in relative isolation amid an increasingly industrial context, would not affect the use of the site, nor would it likely affect the surrounding land uses or zoning patterns.



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

Figure 20.2-4 Planned Development Sites

Greenpoint Converted MTS

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20.2.3.2 Consistency with Public Plans and Policies

The Greenpoint Converted MTS would be consistent with the stated objectives of the pertinent plans and policies affecting the site and environs, primarily because development of the facility would maintain the waterfront industrial uses and zoning and incorporate environmentally sound design, as recommended in the Reach 13 plan. The Greenpoint Incinerator already will have already been demolished.

20.3 Socioeconomic Conditions

20.3.1 Existing Conditions

20.3.1.1 Definition of the Study Areas

Two study areas were used for the analysis of socioeconomic conditions: (1) a demographic study area based roughly on census tracts within ¼-mile of the site; and (2) a study area related to economic activity that generally covers a larger area that extends ½-mile from the site. (See Section 3.5 for a more detailed description of study area delineation.) In this case, the demographic study area is comprised of Census Tract 579 in Brooklyn (see Figure 20.3-1), which has a northeastern boundary of Newtown Creek and is bounded on the west, south and east roughly by McGuiness Boulevard, Calyer Street and Greenpoint Avenue. For comparison purposes, census data were also gathered at the borough and City levels.

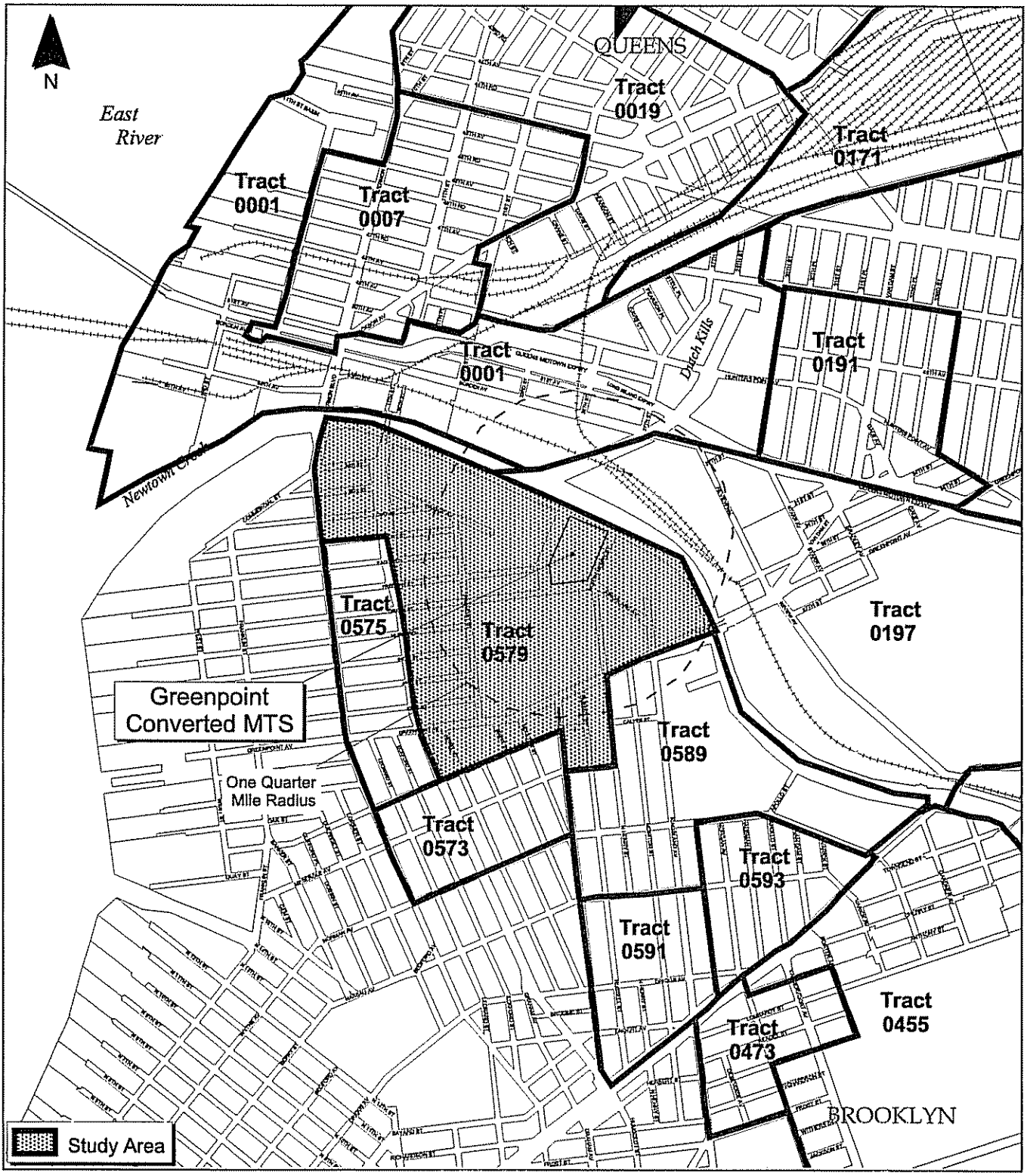
Detailed socioeconomic information referred to in the text but not presented in table form may be found in Appendix B.

20.3.1.2 Demographic Characteristics

20.3.1.2.1 Population

In 2000, the study area population consisted of 1,440 persons (see Table 20.3-1). In terms of total population growth from 1990 to 2000, the study area experienced a greater percentage increase (12%) than did the borough (7%) and the City (9%) during the same period.

The age-sex distribution for the area was slightly different from the population distribution of the borough and the City, with a slightly greater proportion of males to females. The study area contained relatively the same percentage of children and teenagers as the borough or City; approximately 28% of the study area population was under the age of 20, compared to 30% for the borough and 27% for the City.



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

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Figure 20.3-1 Census Tracts

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Table 20.3-1
1990-2000 Population

	Study Area	Brooklyn	City
2000	1,440	2,465,326	8,008,278
1990	1,288	2,300,664	7,322,564
Percent Change	+11.8%	+7.2%	+9.4%

Source: U.S. Census, 1990, 2000

20.3.1.2.2 Racial and Ethnic Characteristics

The 2000 study area population had a far greater proportion (59%) of people of Hispanic origin (all races) than did Brooklyn (20%) or the City (27%). Of the 41% not of Hispanic origin, 6% were Black, 74% were White and 12% were Asian. In Brooklyn and the City, Blacks represented approximately 43% and 33% of the non-Hispanic populations, respectively, while Whites represented 43% and 48%, respectively, and Asians represented 9% and 13%, respectively.

From 1990 to 2000, the number of study area residents of Hispanic origin increased by a greater rate (18%) than in the borough (9%) but a smaller rate than in the City (24%) during the same period. Because the 2000 Census introduced the option for respondents to identify themselves as two or more races, racial categories are not directly comparable with 1990.

20.3.1.2.3 Families and Households

There were 325 families in the study area in 2000 and the percentage of these families that had children under the age of 18 (47%) was slightly smaller than those families in Brooklyn with children under 18 (51%) and in the City (49%). There was roughly the same percentage of married-couple families in the study area (61%) as in the borough (59%) or the City (62%), and 55% of these families in the study area had children, more than those of Brooklyn (50%) and the City (48%).

Twenty-nine percent of families in the study area were headed by a female householder, similar to the borough (33%) and the City (30%). Forty percent of the female householder families in the study area had children under the age of 18, a percentage noticeably lower than the percentage in the borough and the City, which were equal (55%).

There were 543 households in the study area in 2000. The average number of persons per household in 1990 was nearly the same for the study area (2.7 persons), Brooklyn (2.8 persons) and the City (2.6 persons).

From 1990 to 2000, the number of households in the study area increased by 21%, compared with a 6% increase in the borough and a 7% increase in the City.

20.3.1.2.4 Employment

In 2000, the labor force and employment rate for the three areas (study area, borough, City) was approximately the same. Within the study area, 59% of persons aged 16 and older participated in the labor force in 2000, compared to 55% in Brooklyn and 58% in the City. The majority of these people in all three areas were employed as private wage and salary workers.

In the study area, 13% of employed persons 16 years of age and older were government workers, slightly less than the proportion in Brooklyn (19%) and the City (16%). Four percent of the study area's working population was self-employed, about the same proportion as in Brooklyn (5%) and the City (6%).

From 1990 to 2000, the number of employed persons within the three areas remained steady. However, among employed persons, while the study area showed an increase in government workers, the borough and City decreased. Those engaged in government jobs increased by 6% in the study area, compared to a 14% decrease in the Borough and a 10% decrease in the City.

Current forecasts indicate that about 13,550 employees worked in Brooklyn CD 1 and Queens CD 2 in 2005.[1]

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

20.3.1.2.5 Housing

Most housing units (80%) in the study area were constructed before 1960, which is more than in Brooklyn and the City (73% and 67%, respectively). As of 2000, there were 521 housing units in the study area with a vacancy rate of about 7%, slightly higher than the borough (5%) and the City (6%). Like the borough and the City, there were more renters than owners. Nearly all of the housing units were renter-occupied (88%), considerably greater than the borough (69%) and the City (66%).

Although the 2000 median value of housing units in the study area ($233,900) was similar to those of Brooklyn ($224,100) and the City ($211,900), the change in value from 1990 to 2000 was much different. The median housing unit in the study area increased in value by 450%, compared to a 15% increase in the borough and a 13% increase in the City. Additionally, while the value of the housing units in the study area was higher than those of Brooklyn and the City, the median gross rents ($585) were lower than those in the borough ($672) and the City ($705).

The turnover in the study area (42%) from 1995 until 2000 was roughly equal to that of the borough and the City (both 43%).

From 1990 to 2000, a total of 12 housing units were added in the study area, representing a 2% increase, lower than the borough and the City (both 7%).

20.3.1.2.6 Education

In 2000, the school enrollment for the three areas was roughly the same, with the study area at 30%, the borough at 31% and the City at 29%. Of those enrolled in school within the study area, 67% were enrolled in elementary school or high school and 19% were enrolled in college or beyond. In Brooklyn, 64% were enrolled in elementary or high school and 24% in college or beyond, while 62% of the City's enrolled population was in elementary or high school and 27% in college or beyond.

The study area witnessed a 12% increase in the number of persons enrolled in school from 1990 to 2000 (141 more people), with the largest increase in enrollments occurring at the pre-primary school level (1,325%, or from 4 people to 57). Brooklyn and the City also experienced tremendous growth in the pre-primary school age group (145% and 150%, respectively).

A markedly smaller proportion (29%) of the study area population aged 25 and over had a college degree or some college education compared to Brooklyn (42%) and the City (48%). Compared to the borough and the City, a larger portion of the study area population (aged 25 and older) did not graduate from high school. A higher percentage of people in the study area (21%) had some high school education but lacked a diploma versus 18% in the borough and 16% in the City. Additionally, the study area had twice the proportion of people over the age of 25 with less than a 9th-grade education (27%) as the borough (13%) and the City (12%).

Despite the lower educational levels, from 1990 to 2000 the study area witnessed slightly rising levels of educational attainment. The number of college graduates in the study area increased 8%, although the trend in the borough and the City was much greater (41% and 29%, respectively).

20.3.1.2.7 Income and Poverty

In 2000, both median household income ($23,445) and median family income ($25,594) were lower than in Brooklyn ($32,135 and $36,188, respectively) and the City ($38,293 and $41,887, respectively). Compared to the larger two areas, a greater percentage of study area households were concentrated at the lowest income levels, with the majority of annual household incomes (55%) below $25,000. About 30% of the area households had annual incomes less than $10,000, compared with 19% in Brooklyn and 16% in the City. Only 21% of households in the study area had incomes of $50,000 and above, compared with 33% in the borough and 40% in the City.

A similar percentage of persons under the age of 18 were living below the poverty level in the study area (32%), the borough (34%) and the City (30%) in 2000. The 2000 Census also reported that a greater percentage of the population aged 65 and older were living below the poverty level in the study area (44% percent) compared to Brooklyn (22% percent) and the City (18%).

From 1990 to 2000, the percentage of people living below the poverty level in the study area decreased by 8%, compared to an increase in Brooklyn of 19% and in the City of 20%.

20.3.1 3 Economic Conditions

The study area contains a range of industrial uses concentrated along Newtown Creek, from warehouse and distribution facilities to oil loading facilities and private waste transfer operations. In Brooklyn, DSNY-owned property used as a storage yard and the NYCDEP Newtown Creek WPCP occupy large areas adjacent to the site, with an NYCDOT asphalt production facility nearby. Further southeast, are the outdoor-loading facilities of the Metro Fuel Oil Depot. The Queens side of Newtown Creek has similar industries, with Case Paper Manufacturers, the Exhibit Company and other warehouses fronting on Borden Avenue and Review Avenue.

Further beyond the surrounding industrial uses are ground-floor stores on the north-south avenues west of the site, along McGuinness Boulevard and Manhattan Avenue. Small-scale commercial establishments line the south side of Greenpoint Avenue south of the site. Further to the south along Meserole Avenue is a mix of residential uses and warehouses.

20.3.2 Future No-Build Conditions

20.3.2.1 Demographic Characteristics

Regional projections indicate that the population of Brooklyn CD 1 and Queens CD 2 will remain about the same as current conditions.[2]

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

20.3.2.2 Economic Conditions

The study area contains stable industrial areas that are not expected to see significant new business development by the Future No-Build year. South of the site, the NYCDEP plans to expand and double the capacity of the WPCP, adding approximately 14 new government sector jobs as a result of the plant upgrade.

Regional projections indicate that employment in Brooklyn CD 1 and Queens CD 2 will remain about the same as current conditions.[3]

The near-term economic health of industrial areas such as Greenpoint may be supported by established City programs available through IDA. Programs such as the Industrial Incentive Program and the Small Industry Incentive Program provide business tax incentives for capital renovation and expansion projects. However, no significant changes are expected through 2006.

20.3.3 Potential Impacts with the Greenpoint Converted MTS

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

20.3.3.1 Residential Impacts

No direct displacement of residential uses would occur as a result of the Greenpoint Converted MTS, and land use and neighborhood character analyses predict no adverse impacts.

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

20.3.3.2 Direct Business and Institutional Impacts

The Greenpoint Converted MTS would not result in direct displacement of businesses or institutional uses nearby.

20.3.3.3 Indirect Business and Institutional Impacts

The businesses adjacent to and near the Greenpoint Converted MTS are industrial uses that would not be affected by reactivating MTS operations and added containerization activities.

20.3.3.4 Employment Impacts

The Greenpoint Converted MTS is expected to generate approximately 85 jobs, including supervisors, equipment operators, mechanics, laborers and clerical personnel. In addition to the direct positive employment impacts, the new workers would generate a minor amount of indirect economic benefits through local spending.

20.4 Community Facilities and Services

20.4.1 Existing Conditions

20.4.1.1 Definition of the Study Areas

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

20.4.1.2 Summary of Community Facilities and Services

Consistent with its industrial character, the primary study area contains no community facilities. Nine community facilities are located within the secondary study area and nine are outside the secondary study area. Community facilities serving or located within or near the study area are listed in Table 20.4-1 and shown in Figure 20.4-1.

20.4.2 Future No-Build Conditions

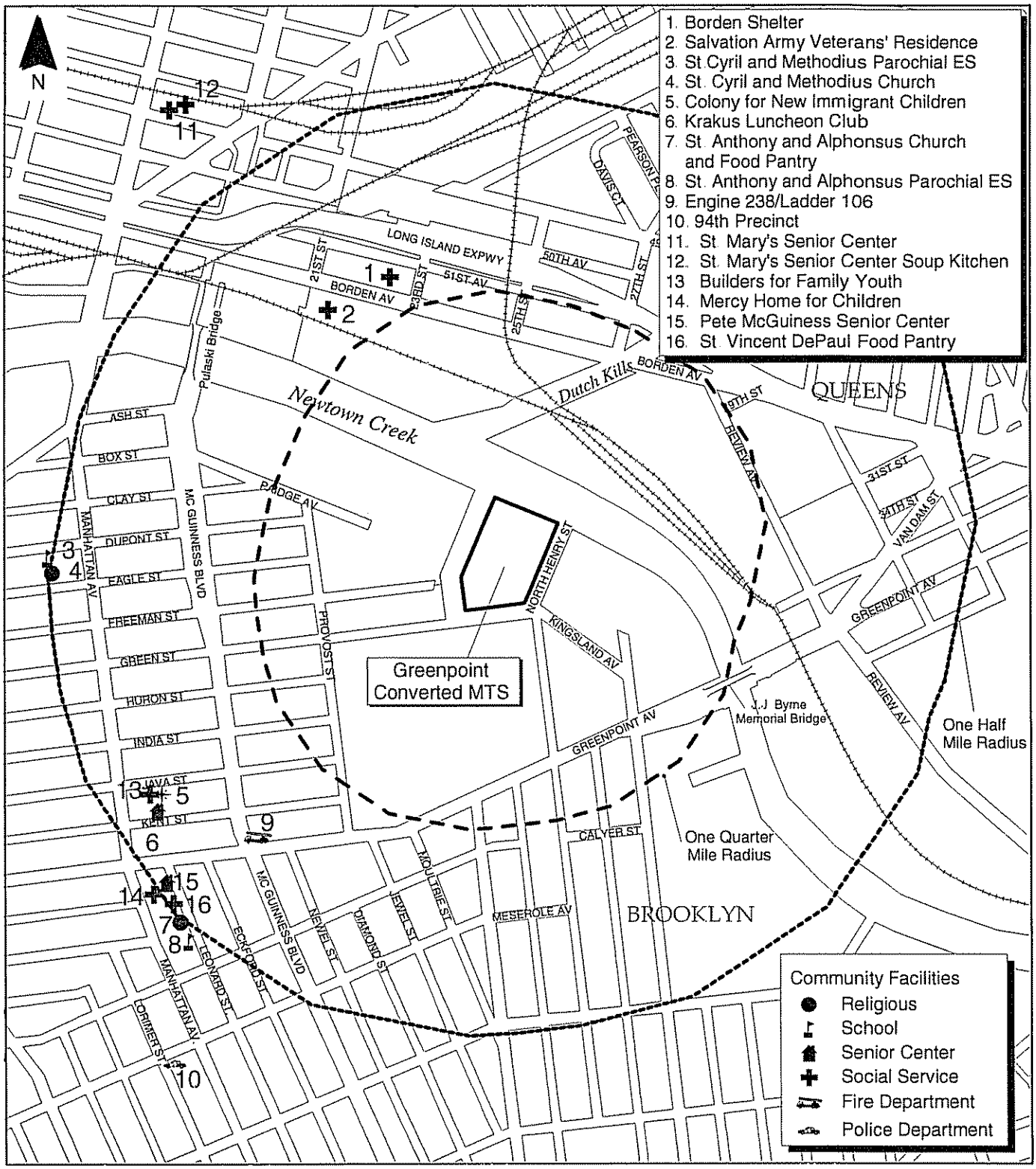
There are no known changes planned for the community facilities and services within the primary and secondary study areas by the Future No-Build year. Therefore, anticipated Future No-Build Conditions are expected to be fundamentally the same as Existing Conditions regarding availability of facilities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

20.4.3 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would create no significant new demand on services and community facilities and would not displace facilities or disrupt services. No significant adverse impacts to service delivery are expected. The FDNY states that it would have no problem supporting the Greenpoint Converted MTS (see Appendix A).

Table 20.4-1
Community Facilities and Services

Name	Address
Within the Secondary Study Area	
Senior Centers	
Krakus Luncheon Club	177 Kent Street
Pete McGuinness Senior	715 Leonard
Day Care Centers	
Colony for New Immigrant Child	176 Java Street
Religious and Cultural Institutions	
St. Cyril and Methodius Church	96 Dupont Street
Health Care Facilities and Social Services	
Borden Shelter	21-10 Borden Avenue
Salvation Army Veteran's Residence	21-20 Borden Avenue
Builders for Family and Youth	174 Java Street
St. Vincent DePaul Food Pantry	715 Leonard
Fire	
1st Engine Company – Engine 238 and 1st Ladder Company – Ladder 106	205 Greenpoint Avenue
Outside the Secondary Study Area	
Schools	
St. Anthony and Alphonsus Parochial ES	725 Leonard Street
St. Cyril and Methodius School	96 Dupont Street
Senior Centers	
St. Mary's Senior Center	10-15 49th Avenue
Religious and Cultural Institutions	
St. Anthony and Alphonsus Church (food pantry)	725 Leonard Street
Health Care Facilities and Social Services	
St. Mary's Senior Center Soup Kitchen	10-15 49th Avenue
Mercy Home for Children	878 Manhattan Avenue
Fire	
2nd Engine Company – Engine 259 and 2nd Ladder Company – Ladder 128	33-51 Greenpoint Avenue
Police	
94th Police Precinct	100 Meserole Avenue
108th Police Precinct	5-47 50th Avenue



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

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Figure 20.4-1 Community Facilitites and Services

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20.5 Open Space

20.5.1 Existing Conditions

20.5.1.1 Definition of the Study Area

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

20.5.1.2 Summary of Open Space in the Study Area

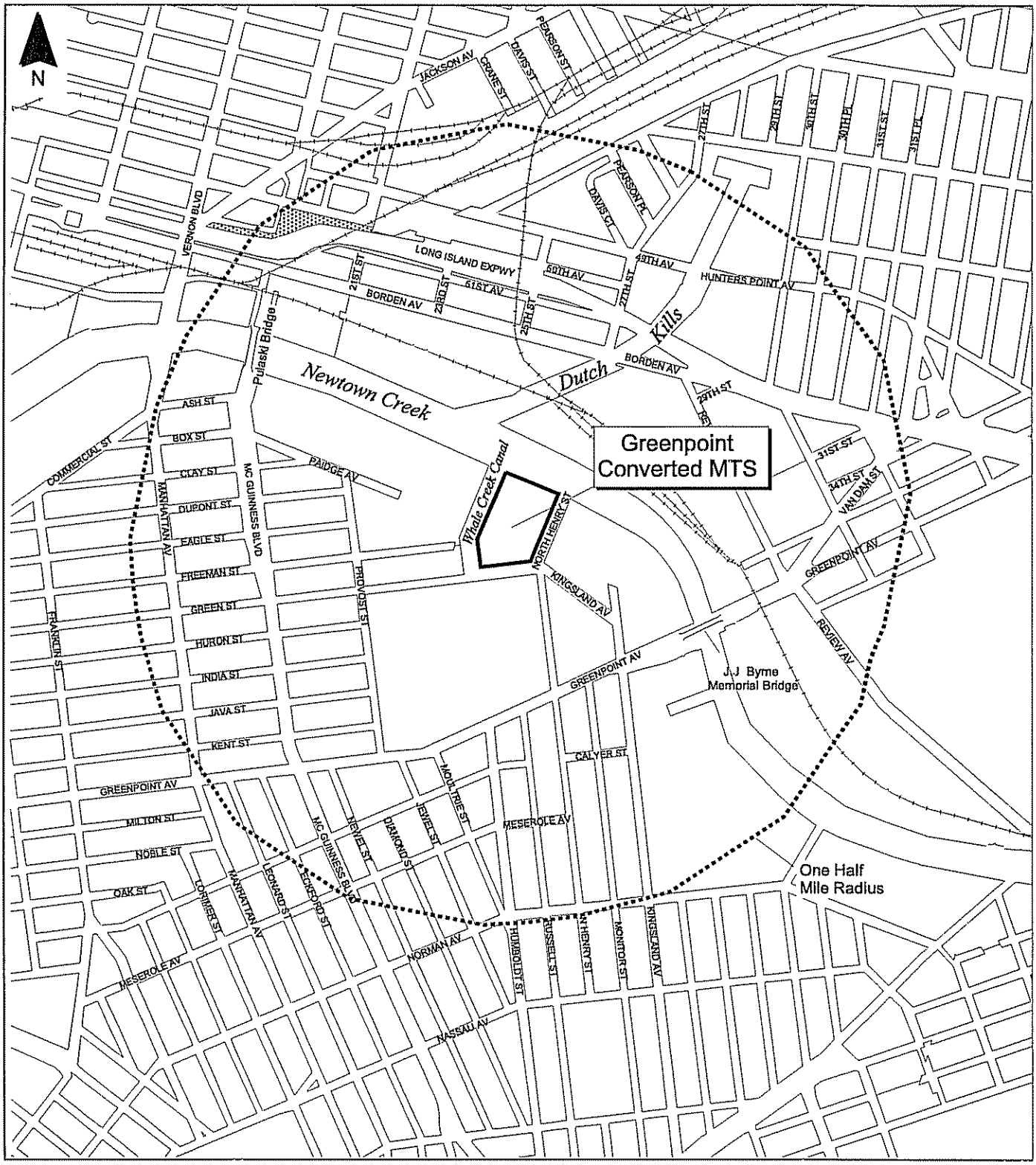
Currently the only designated open space in the study area is an undeveloped park area northwest of the site situated adjacent to the north side of the Long Island Expressway (LIE) (see Figure 20.5-1). Though mapped parkland, it is not suitable for use by visitors, nor is it landscaped to provide visual relief in this heavily trafficked area.

20.5.2 Future No-Build Conditions

The nature walk and children's pool and park that are planned as part of the Newtown Creek WPCP support building construction west of Whale Creek Canal would be completed during the final stages of WPCP construction in 2004. There are no DPR plans for new open space resources in the study area or improvements by the Future No-Build year.

20.5.3 Potential Impacts with the Greenpoint Converted MTS

No impacts to either the existing park area along the northern edge of the LIE or the planned open space features of the WPCP would result from the Greenpoint Converted MTS. Newtown Creek and the LIE buffer the existing park area from the site.



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

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Figure 20.5-1 Open Space/Parkland
Greenpoint Converted MTS

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The landscaped walkway has been designed under the assumption that the existing Greenpoint MTS would remain in operation throughout the construction period. Because the Greenpoint Converted MTS would be a similar use to the former one and in the same approximate location, it would not present any notable new challenges to be assumed in the design and use of the publicly accessible area. However, views of the Greenpoint Converted MTS from the future nature walk west of Whale Creek Canal would include the barge loading area where gantry cranes would load containerized waste onto barges moored in the canal, not unlike other industrial views on both sides of the creek.

20.6 Cultural Resources

20.6.1 Existing Conditions

20.6.1.1 Definition of the Study Area

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

20.6.1.2 Development History of the Area

The 946-acre triangular parcel of land that is now known as Greenpoint was bought by Dutch settlers in 1638 from the Keshaechqueren Indians and named for a grassy expanse that extended into the East River. In the early 19th century, Greenpoint was sparsely populated by Dutch Huguenot descendents and by 1850 it had become an industrial center. Greenpoint was the site of "the five black arts: printing, pottery, petroleum and gas refining, glassmaking, and iron making."[4] Shipbuilding industries also developed along the East River, supporting the Brooklyn Navy Yard to the south. Consequently, area streets were named for people, places and items important to local industries. Major industrial firms of the time were located here, such as the Continental Iron Works, which built the ironclad ship the Monitor used in the Civil War, and the Astral Oil Works, which was opened by Charles Pratt and merged with the Standard Oil Company in 1874. The Astral Apartments on Franklin Street, built by Pratt in 1886 to provide workers with decent housing, are now landmarked by the City as significant examples of model tenements.

The history of Newtown Creek, which forms the boundary separating Brooklyn from Queens, is an important part of the study area's history. It was the route to Maspeth taken by European colonists in 1642. The British spent the winter near the creek during the Revolutionary War, and in the early 1800s it was a major channel for commercial vessels and small boats.

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[4] Jackson, Kenneth T., Editor, Encyclopedia of New York City. Yale University Press, New Haven (The New York Historical Society, New York), 1995, p.506.

The first oil and coal oil refineries opened along its banks around 1860. Long Island City and Sunnyside were home to waterside industrial uses such as oil refineries and factories for varnish, ceramic pipe and barrel-making in the mid- to late-1800s. Due to the practice of dumping sludge and acids into the creek, the creek was, by 1900, already well known for its foul odors and pollution, with water corroding the paint on ships and leaving noxious deposits on the shore.

The state and City tried to improve Newtown Creek, and the channel was constantly dredged and widened by the federal government. Ship building, manufacturing and warehousing gradually diminished during the first half of the 20th century, with the active factory life of Greenpoint largely ending after World War II. After World War II, the creek was no longer important for marine traffic, with waterborne transport being replaced by trucks and airplanes, but many industries continued to be located along the creek.

20.6.1.3 Cultural Resources on the Site

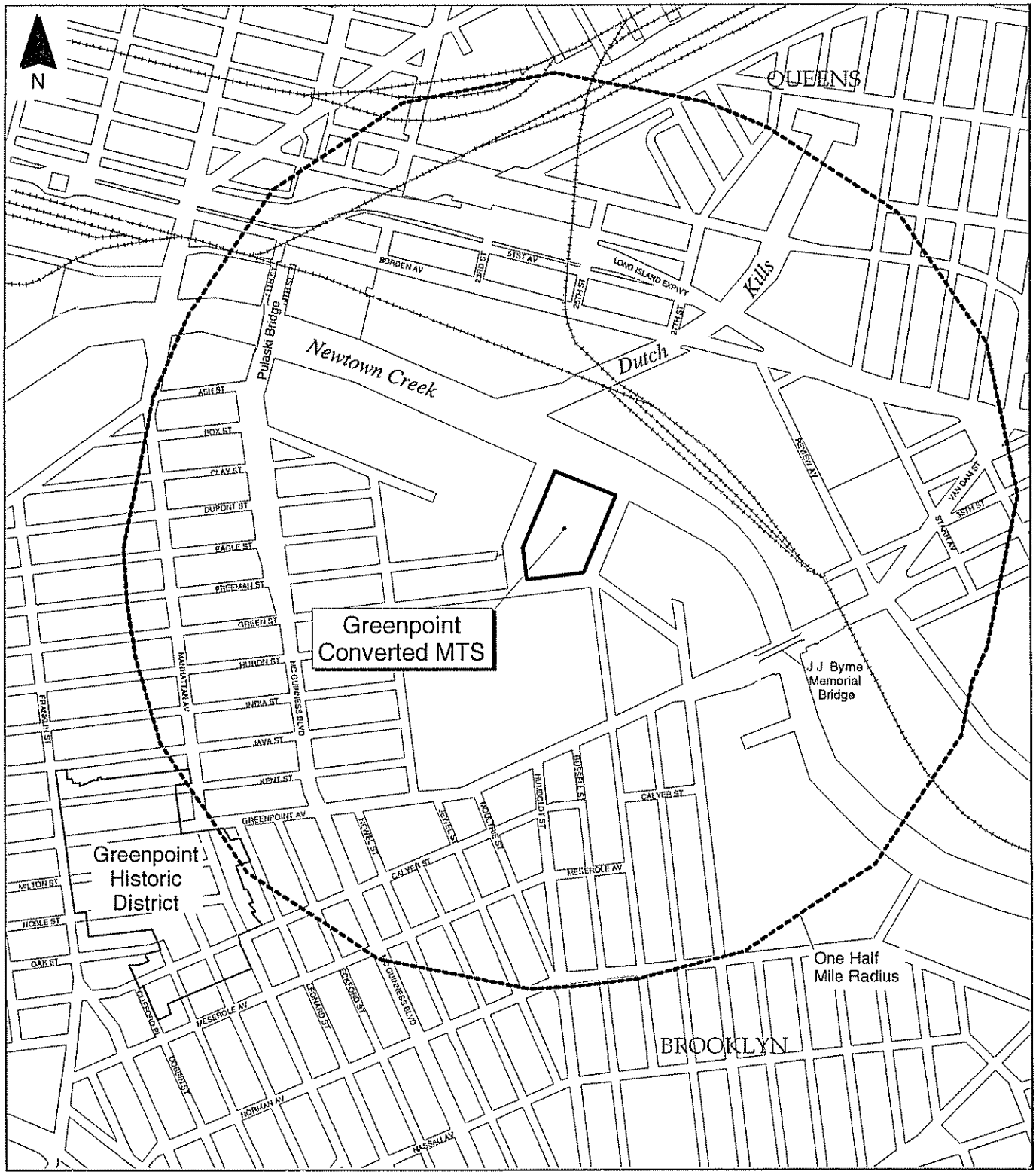
There are no elements of architectural or archaeological significance within the site.

20.6.1.4 Historic Resources Within the Study Area

A small portion of the Greenpoint Historic District lies at the study area's southwestern edge (see Figure 20.6-1). This City-designated district is listed on the State and National Registers of Historic Places and it contains a wide variety of buildings and types dating to the 1860s and 1870s.

20.6.2 Future No-Build Conditions

There are no additional elements of potential architectural or archaeological significance slated for review. Therefore, anticipated Future No-Build Conditions are assumed to be the same as Existing Conditions.



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

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Figure 20.6-1 Cultural Resources

Greenpoint Converted MTS

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20.6.3 Potential Impacts with the Greenpoint Converted MTS

As there are no existing or anticipated architecturally or archaeologically significant resources on the site or the study area, the Greenpoint Converted MTS would have no effect on any cultural resources. SHPO has concluded that the project would have no impact upon cultural resources in, or eligible for inclusion on, the State and National Registers of Historic Places. The LPC has stated that the site contains no architectural or archaeological significance (see Appendix A).

20.7 Urban Design, Visual Resources, and Shadows

20.7.1 Existing Conditions

20.7.1.1 Definition of the Study Area

The urban design and visual quality study area is the same as the neighborhood character study area (see Figure 20.8-1). The site has been developed in a manner consistent with adjacent properties and the overall study area. It is a non-sensitive industrial area, in terms of urban design and visual quality assessment. There are no sensitive-view corridors or publicly accessible open areas or points of waterfront access areas that would reasonably be expected to experience visual-quality impacts from the proposed development.

20.7.1.2 Description of the Site

The existing MTS and non-operational incinerator comprise most of the on-site development. The five-story main building of the incinerator blocks much of the existing MTS and Newtown Creek waterfront from inland views (see Figure 20.7-1). A fenced-in parking area is located south of the incinerator and the remainder of the site is paved. There is no formal landscaping on the site, although tall grass and a few small trees are present along the edges of Whale Creek Canal and the slip along North Henry Street, as described in Section 20.9.1.4.

20.7.1.3 Urban Design and Visual Resources of the Study Area

20.7.3.1 Visual Quality and Urban Design

The visual quality of the study area is characterized by the wide streets and industrial uses that surround the site, dominated by the Newtown Creek WPCP located to the south and west of the site and an auto scrap yard across Newtown Creek (in Queens) to the north (see Figure 20.7-1 and Figure 20.7-2).

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Figure 20.7-1 : View toward site from Green Street.

Figure 20.7-2: Newtown Creek WPCP, looking west along Green Street.

Figure 20.7-1 and 20.7-2
Urban Design and Visual Quality
Greenpoint Converted MTS

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The only publicly accessible views of the existing MTS are from North Henry Street and Kingsland Avenue, neither of which are through-streets used by the general public. Rather, these streets serve primarily as access roads to the site and the surrounding industrial uses. A portion of North Henry Street north of Greenpoint Avenue and a segment of Kingsland Avenue at Green Street and Greenpoint Avenue have been demapped as part of the WPCP expansion, thus further insulating the site from the community (see Figure 20.7-3).

The area around the site is almost entirely paved. In fact, because there are many truck-dependent uses in the area, the wide streets and sidewalks, where they exist, tend to be used for truck parking. There is little or no pedestrian activity.

20.7.2 Future No-Build Conditions

The only plans for the surrounding environs that would lead to changes in urban design or visual quality conditions by the Future No-Build year are those related to the expansion of the Newtown Creek WPCP and removal of the Greenpoint Incinerator. This multi-site WPCP development would intensify the industrial character of the area but not change the visual conditions significantly. It would, however, further isolate the site from view. The planned nature walk, children's pool and park and art installations along the WPCP site perimeter are to be completed around 2004, introducing a new recreational opportunity to the study area. Otherwise, the anticipated Future No-Build Conditions are fundamentally the same as Existing Conditions.

20.7.3 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would replace the existing MTS with a similar, new containerization facility on a widened platform. It would be located further inland, where the incinerator, which will have been demolished, stood, and an administration building and parking lot would be built south of it. The Greenpoint Converted MTS would be more visible from North Henry Street and Kingsland Avenue than the existing MTS because it would be larger and no incinerator would block it from view. The container storage area near the northern edge of the platform may be visible from North Henry Street as well. Views from the proposed walkway

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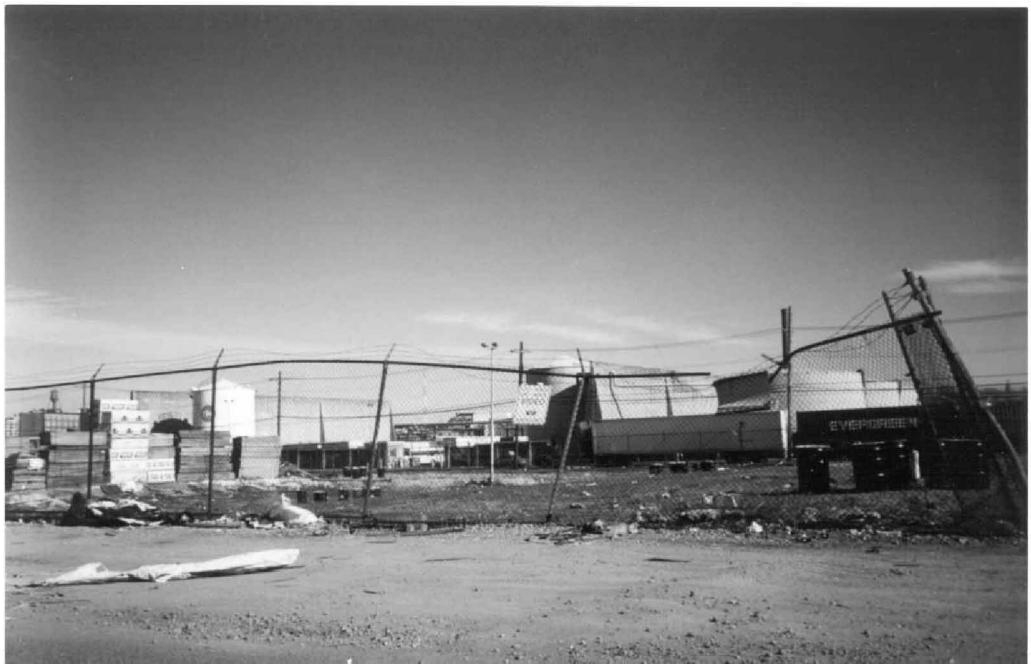

Figure 20.7-3 : Newtown Creek Water Pollution Control Plant construction area.

Figure 20.7-3
Urban Design and Visual Quality
Greenpoint Converted MTS

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across the canal would be of industrial operations, including containerization barge loading activities. The development, however, would be in keeping with the established industrial urban design and visual character of the area, and so no significant adverse impacts to urban design or visual quality would result.

20.7.3.2 Shadows

According to the 2001 CEQR Technical Manual, an impact area should be drawn around the site to encompass the maximum project shadow in order to determine if any sensitive resources nearby might be affected, and consequently, if a full shadow impact assessment were warranted. (This shadow impact area is calculated by multiplying the height of the proposed structure by 4.3 to estimate its longest possible shadow.)

With the expected completion of a public nature walk on the west side of Whale Creek Canal, across from the site (less than 200 feet away), a full shadow impact assessment was prepared. There are no expected physical changes to the project site or vicinity that might create new shadows on these resources in the Future No-Build Condition. Therefore, the shadow assessment considered only the consequences of the Greenpoint Converted MTS development.

The proposed 100-foot-tall Greenpoint Converted MTS facility would result in minimal shadows across the new nature walk (for 10 minutes each in March and June (7:30 to 7:40 a.m. and 7:00 to 7:10 a.m., respectively). Due to the short presence of the project shadow on resources during these times, significant impacts are not anticipated.

For the December 21st analysis period, project shadows are anticipated to fall over the new nature walk for 30 minutes, between 8:50 a.m. and 9:20 a.m. During this period, sunrise would occur at 7:16 a.m. and sunset would occur at 4:32 p.m. (see Figure 20.7-4.) At its time of greatest penetration, shadows are projected to cover approximately 150 feet of the greater than 500-foot long walkway. The affected features of the walk are anticipated to include benches for sitting and manmade landscape areas. While these features would be affected by the reduction in sunlight, 30 minutes per day along a short stretch of the walk is not considered a significant impact.

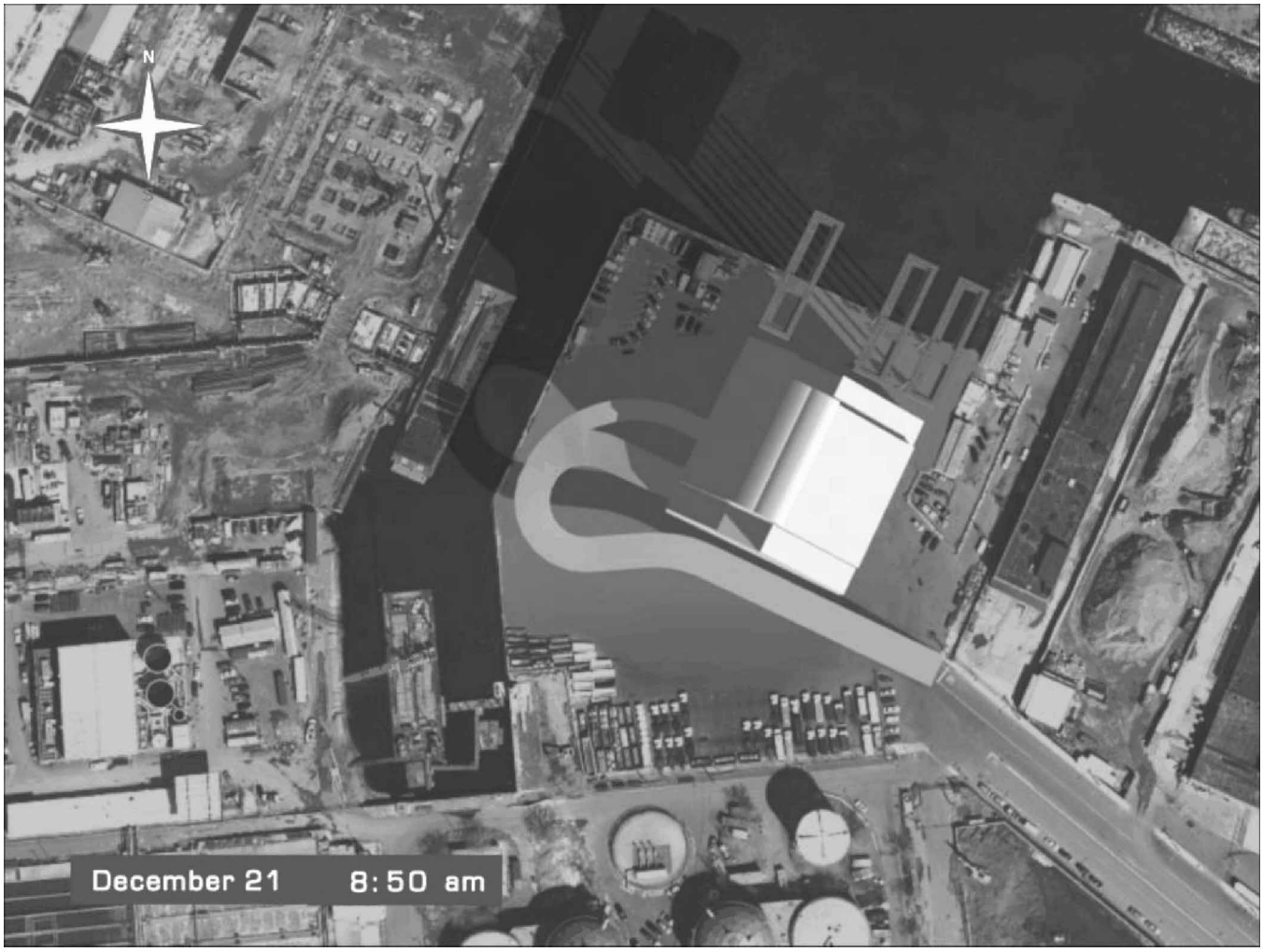

Figure 20.7-4 Shadow Diagram

Greenpoint Converted MTS

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20.8 Neighborhood Character

20.8.1 Existing Conditions

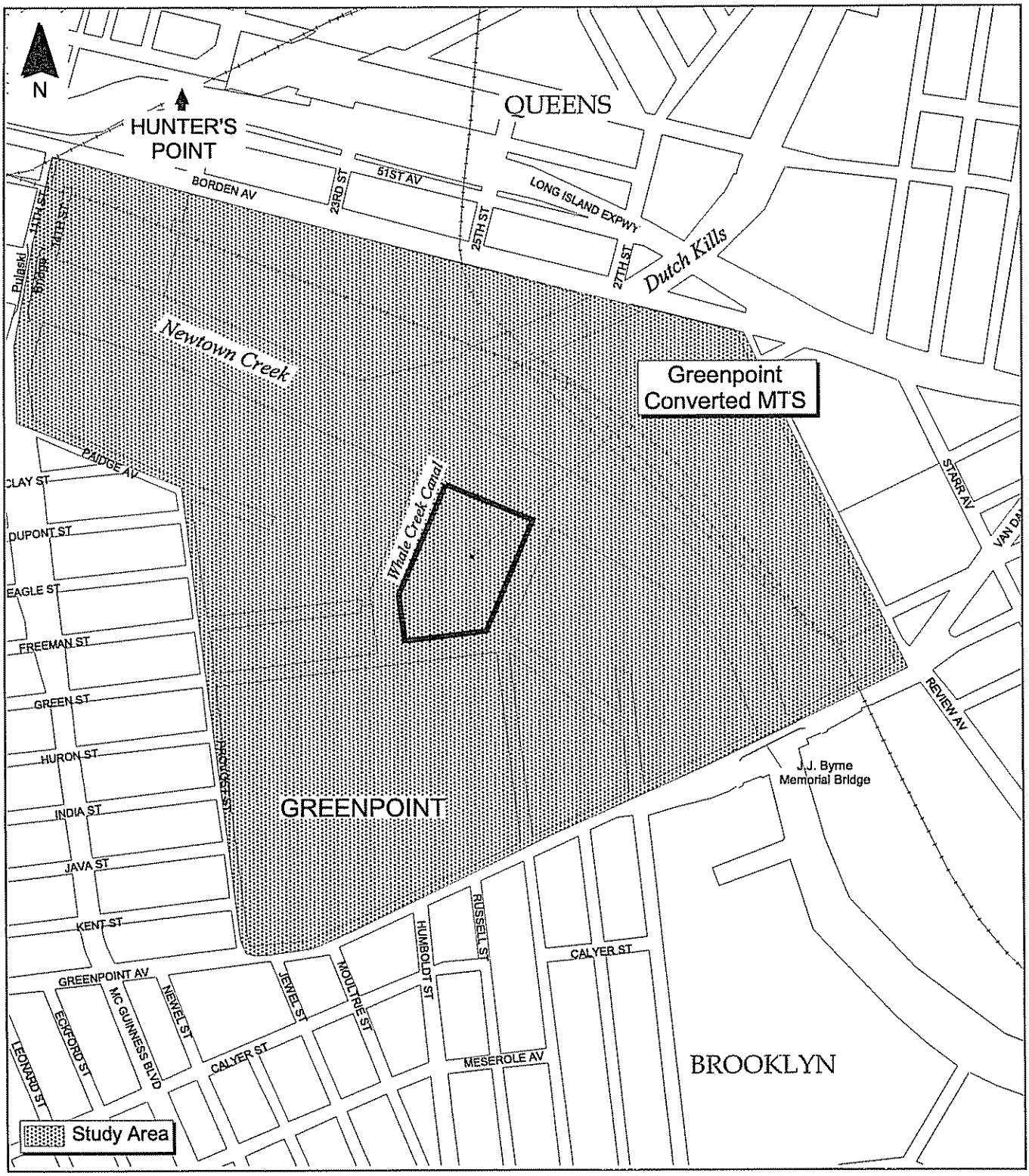
20.8.1.1 Definition of the Study Area

The neighborhood character study area is defined by predominantly industrial land use and visual quality, which are the two major factors contributing to the neighborhood character of the site and surrounding properties. The study area is defined by physical landscape elements that distinctly mark the edge of a specific neighborhood character, visually insulate the site and study area or physically obstruct pedestrian and vehicular access to it from outlying areas.

With these criteria, the study area is bounded by McGuinness Boulevard and the Pulaski Bridge, Paidge Avenue and Provost Street to the west; Greenpoint Avenue and the J. J. Byrne Memorial Bridge to the south and east and Borden Avenue to the north (see Figure 20.8-1). It includes a portion of the industrial waterfront in Sunnyside, Queens, north of the site across Newtown Creek. Although the creek clearly is a physical barrier limiting access to the site from the north, this portion of the Queens waterfront is included in the study area because it mirrors the industrial character of the study area south of the creek and is visually connected with it. While the land uses and visual quality along most of the Newtown Creek waterfront beyond the study area are similar to that within the study area, Greenpoint Avenue and McGuinness Boulevard — the major arterial roadways that cross the creek — effectively define the eastern and western ends of the study area.

20.8.1.2 Description of Neighborhood Character

The study area, which encompasses a working waterfront, is characterized by large-scale, municipal facilities and water-dependent industrial uses on large lots. It contains no residential uses, although there are some mid-block residential uses just beyond, west of Provost Street on the Brooklyn side. Consistent with a heavily industrial area, there are no sensitive visual resources or unique features, and the streets are generally not well suited to pedestrian activity.



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

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Figure 20.8-1 Neighborhood Location
Greenpoint Converted MTS

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The Newtown Creek WPCP to the south of the site comprises a large portion of the study area. In addition, there are fuel storage facilities along the waterfront and entire blocks under construction for the Newtown Creek WPCP expansion. Similarly, the northern portion of the study area in Queens is comprised of industrial activities and related unbuilt spaces.

20.8.2 Future No-Build Conditions

The expansion of the Newtown Creek WPCP would contribute to the industrial character of the area and will change the street pattern in the immediate area. Designs for the WPCP expansion include a nature walk, a pool and park for children adjacent to it and the incorporation of public art installations along the perimeter of the WPCP site. However, there are no other known plans for development on the site or in the study area that would potentially lead to changes in neighborhood character. This portion of industrial waterfront would be more isolated in 2006 than currently by the expansive WPCP facility. The incinerator will be demolished, but the site will remain DSNY property and Future No-Build Conditions are otherwise expected to be the same as Existing Conditions.

20.8.3 Potential Impacts with the Greenpoint Converted MTS

No change to the industrial neighborhood character would be expected because the Greenpoint Converted MTS would be a reactivation of waste-handling operations on a site that, except for the demolition of the incinerator, would remain otherwise unchanged. Technical analyses predict no unmitigatible impacts associated with traffic, air, odor or noise would result. Moreover, the area will be more industrial and isolated, making it less likely that the site would be observable from much of its surroundings in the neighborhood character study area. Therefore, no impacts to neighborhood character are predicted.

20.9 Natural Resources

20.9.1 Existing Conditions

Existing Conditions include stressed aquatic and terrestrial communities that are typical of this area of Brooklyn. Conditions associated with the presence of natural resources, including water resources and endangered species and habitats, were investigated within the defined study area to identify potential impacts that might arise from the Greenpoint Converted MTS.

20.9.1.1 Definition of Study Area

The study area includes the site and the waterfront section that is bulkheaded and bounded by Newtown Creek to the north and Whale Creek Canal to the west (see Figure 2.4-1). The existing MTS, incinerator and associated parking areas occupy the entire upland portion of the site. This part of the study area and the surrounding neighborhood areas are completely developed and, therefore, have very limited terrestrial natural resources. Such resources that do exist are discussed in following sections. Because Future Build Conditions would include dredging of bottom sediments and construction of a new MTS, a description of aquatic communities is included.

20.9.1.2 Geology

Based on borings conducted for the *MTS Conversion Conceptual Design Report* (2003), the geology of the site consists of bedrock, located at depths ranging from 59 to 79 feet below grade, overlain with multiple layers of sediment. The first layer, the surficial stratum, ranged in thickness from 25 to 36 feet and consisted of loosely packed, silty sand with miscellaneous aggregate including deleterious materials. A compressed organic silt layer, approximately 4 feet in thickness, was located beneath the surficial stratum, which was in turn underlain with an approximately 8-foot-thick layer of dense, silty sand. A stiff layer of varied clay and silt ranging in thickness from 18 to 30 feet was encountered beneath the fill, organic silt, and silty sand. Lastly, a 4- to 12-foot-thick layer of medium dense silty sand overlaid the bedrock, which consisted of a hard, slightly weathered, gray, fine-grained gneiss.

Surface sediment collected from the site in 2003 indicates the sediment make-up to be 95.2% silt and clay, 4.8% sand and 0.1% gravel.[5] There were approximately 155,916 mg/kg TOC in the sediment. The sediment was found to be somewhat degraded due to contaminants in the sample material. The metal with the highest concentration in the sediment was lead, with 288.33 mg/kg. Barium and chromium also had high concentrations at this location, with 128.83 mg/kg and 117.33 mg/kg, respectively.

20.9.1.3 Floodplains

The site is constructed within the 100-year coastal floodplain (see Figure 20.9-1). No intertidal wetlands exist in the study area. Newtown Creek and Whale Creek, which are NYSDEC-designated littoral zones, are part of the study area (see Figure 20.9-2).

20.9.1.4 Ecosystems

The site is essentially fully developed with the existing MTS and incinerator buildings. Parking areas and paved roadways comprise the remainder of the site, leaving little terrestrial natural resources to be impacted. A few opportunistic species of Japanese knotweed (*Polygonum cuspidatum*), eastern cottonwood (*Populus deltoides*) and tree-of-heaven (*Ailanthus altissima*) were observed on the far side of the barge basin bordering the adjacent property on the east side of the study area and to the south along the fence line between the incinerator and the adjacent oil storage facility. The vegetative cover was too sparse in these areas to be mapped.

A field program that took place in 2003 was designed to fully characterize the marine biological resources of the study area. The program included monthly sampling for adult finfish, finfish eggs and larvae, and water quality; and quarterly sampling for benthic organisms and sessile colonizing organisms. Results of the program are presented in the following paragraphs.

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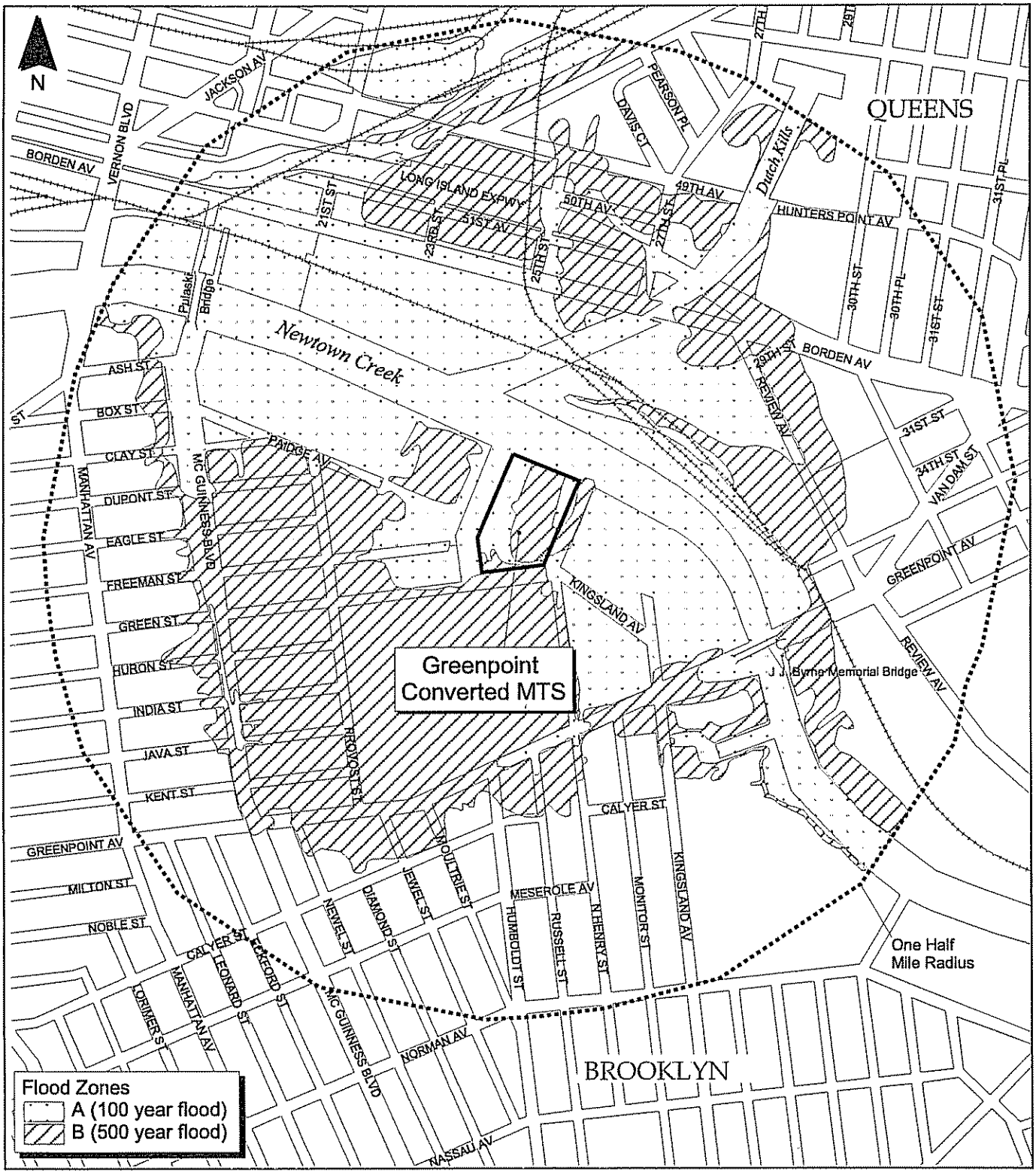
[5] New York City Department of Sanitation, March 2004. Marine Biological Studies of the Marine Transfer Stations Operated by the New York City Department of Sanitation. Prepared by EEA, Inc.



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

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Figure 20.9-1 Floodplains

Greenpoint Converted MTS

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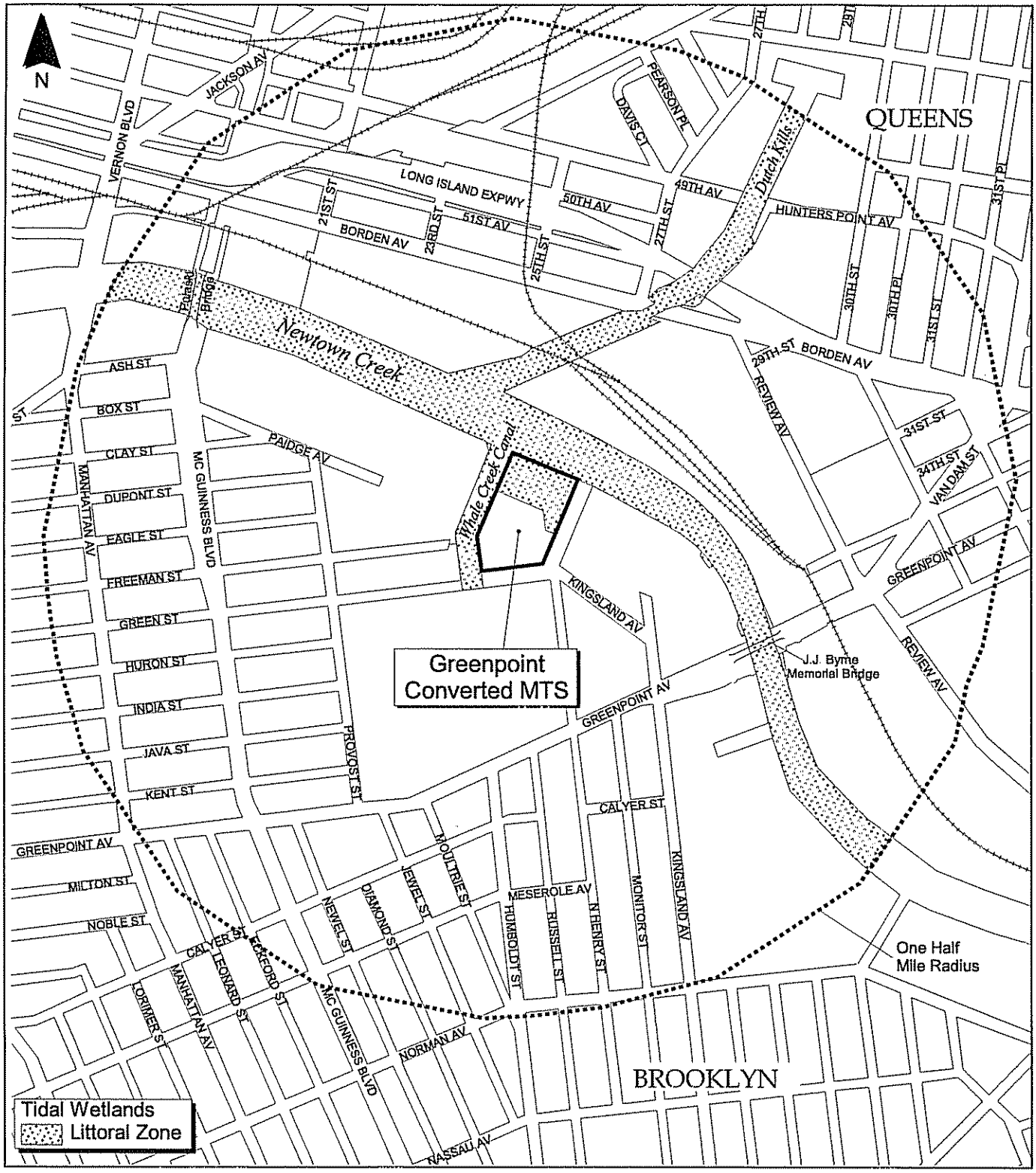

Site delineations and study area boundaries are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.9-2 Wetlands

Greenpoint Converted MTS

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The sediment and water surrounding the Greenpoint Converted MTS are highly contaminated. Visible oil slicks and floating debris were seen in the water, water quality was poor and the sediment held the highest metal concentrations of the eight MTSs studied. There are two major stressors on the environment surrounding this facility. One, it is located directly across from a scrap metal facility that loads shredded metal pieces to barge for transport. Metal dust and pieces are constantly falling into the water, leading to increased metal concentrations in the sediment. And two, the facility is located along Newtown Creek, a narrow, organically enriched waterway that is not strongly influenced by currents. These two stressors surely influenced the marine communities described below.

Ninety-eight (98) adult finfish, representing 16 species, were collected at the Greenpoint Converted MTS in 2003.[6] The most abundant finfish collected was the striped bass (*Morone saxatilis*). Four species that have EFH listing were collected at the Greenpoint Converted MTS: Atlantic herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), winter flounder (*Pleuronectes americanus*) and summer flounder (*Paralichthys dentatus*). Bay anchovy (*Anchoa mitchilli*) eggs and larvae were most abundant at this facility. There were winter flounder and windowpane (*Scophthalmus aquosus*) larvae, both of which are EFH-listed, but no EFH-listed eggs were recovered. A Jaccard's Index[7] also revealed that the Greenpoint Converted MTS had the fewest finfish larvae and egg species in common with the other MTSs studied in 2003.

The most abundant megainvertebrate collected at the Greenpoint Converted MTS was the sea grape (*Molgula manhattensis*). This organism attaches to hard substrate and was most often collected from debris that was removed from the seabed during trawling events. Sevenspine bay shrimp (*Crangon septemspinosa*) was also collected in high numbers. The highest total number and abundance of benthic invertebrates was collected from the Greenpoint Converted MTS. The most abundant species collected was *Streblospio benedicti*, a polychaete worm tolerant of degraded environmental conditions. Abundances of this species were 80,000 individuals per

[6] Ibid.

[7] A Jaccard's Index is a statistical test that shows the similarity of organisms present at compared MTSs. It shows the proportion of the number of species observed in either of two MTSs that occurred in both MTSs The index ranges from zero to one. An index of zero means that the MTSs are completely dissimilar and have no species in common. An index of one means the MTSs have all the same species.

square meter. The dominant epibenthic colonizers were *Corophium insidiosum* (amphipods), *Molgula manhattensis* (sea grape) and *Polydora* sp. (polychaete worms), and hydrozoans, mud and algal film, all organisms tolerant of degraded environments.

The highest number of adult finfish was collected in front of the MTS structure and the highest number of megainvertebrates was collected to the west, both locations closest to the scrap metal facility. Large pieces of debris were encountered monthly during trawling events, especially in front and to the west of the MTS. Several tires, pilings, bumpers, car parts, and an engine block were also encountered. Often within the garbage, finfish and megainvertebrates were encountered. A mini reef-effect was occurring where these animals were using the trash as protective environments and many of the items had encrusting organisms that would provide food for finfish and megainvertebrates. The structure was apparently attractive enough to some organisms that they endured the stressed environmental conditions.

NYSDEC Breeding Bird Atlas records list the common nighthawk (*Chordeiles minor*) as a species suspected of breeding in the area surrounding the study area. The state legal status of this wild bird is Protected-Special Concern, which includes those species that are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York, and that are federally-protected wild birds. The peregrine falcon (*Falco peregrinus*), a federally listed endangered species, was not listed as present for this site in the recent response from the USF&WS.

20.9.2 Future No-Build Conditions

If the Greenpoint Converted MTS were not to be constructed, the study area would remain as it is except for the demolition and removal of the incinerator. The limited aquatic and terrestrial natural resources would remain, and the study area would continue to be an ecologically unproductive and stressed urban area.

20.9.3 Potential Impacts with the Greenpoint Converted MTS

20.9.3.1 Geology

The geology of the study area would not be changed other than by the removal of dredge material to accommodate the barges and tugboats. The dredging activity would remove layers of sediments deposited over time and further alter the submarine ecological features of the study area, but would not result in any significant impact.

20.9.3.2 Floodplains

Potential development of the Greenpoint Converted MTS would have no effect on the elevation of the site. The facility would be constructed within the 100-year floodplain, and would not include any provisions for raising any portions of the site over this level.

20.9.3.3 Ecosystems

Construction of the Greenpoint Converted MTS would involve removal of the existing MTS and construction of a new, upland facility. The existing platform will be replaced by a smaller platform. This would result in 21,647 square feet of unshaded marine environment that was previously shaded by the existing MTS. Assuming normal operations, this procedure should not involve any measurable impacts to the aquatic or terrestrial natural resources. During the demolition of the existing MTS, the upper organic silts lying beneath the structure that was above water would be disturbed to some degree, resulting in re-suspension of the sediment. However, the amount of re-suspended sediment is expected to be low, and the impacts, if any, highly localized. Turbidity and short-term, lowered, dissolved oxygen are possible, but not measurable, against the normal background fluctuations. Any dredging activities in the area to accommodate barges would result in an immediate, short-term destruction of the benthic invertebrates in the area; however, recolonization of the area by benthic invertebrates could be expected within 6 to 12 months after cessation of dredging activities.[8] Given the relatively small

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

size of the project, the low benthic diversity, and the existing impacts to the natural resources of the study area, minimal impact is expected from the disturbance of the environment associated with the Greenpoint Converted MTS. The removal of the existing platform will also remove the existing epibenthic community; however, the new platform will give some surface area, though decreased, for epibenthic communities to colonize the site.

The pile-driving and dredging activity during the construction will cause adult finfish to avoid the site. Fish in the herring family are most sensitive to the suspended sediment and noise from construction; flatfish (flounders) are least sensitive. Herring catch was higher at the Greenpoint Converted MTS than flounder catch, so it can be assumed that this site will experience avoidance by this species. Finfish eggs and larvae are more sensitive to suspended sediment and those that settle to the harbor floor may be smothered by sediment. The number of finfish eggs and larvae were lower at the Greenpoint Converted MTS than at the other MTSs studied. The lower ichthyoplankton numbers, along with the lesser degree of marine construction (fabrication of a small pier), will minimize impacts to ichthyoplankton. Additionally, larvae exposed to degraded environmental conditions will be able to swim away from the impacted environments.

Operational impacts will last the entire lifespan of the facility. The major impact is the footprint of the pier over water. The proposed plan for the Greenpoint Converted MTS is for a decrease of 21,647 square feet of pier. This will result in decreased shading that will allow more sunlight for primary production in the area. The smaller platform, however, will not adversely impact the ichthyoplankton, benthic, epibenthic or adult finfish communities. A field study conducted on the Hudson River reported no statistical difference in benthic populations in interpier and underpier areas in New York Harbor waters.[9] Epibenthic communities, however, will have a smaller surface area to colonize, but the decrease should not be significant, and finfish should return to the area with the return of food sources.

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9 Hudson River Center Site Aquatic Environmental Study Final Report, 1988. Prepared for New York City Public Development Corp by EEA, Inc.

Experts have differing opinions regarding the effects of shading on finfish. Studies conducted by EEA in the late 1980s showed similar finfish communities in the interpier and underpier environments in a large-scale program on the East River. There were, however, slight differences in the dominant finfish in the populations. Studies by Able *et al.* showed caged juvenile winter flounder (*Pseudopleuronectes americanus*) to have depressed feeding on the benthos beneath piers as compared to feeding activity alongside and between piers.[10]

Able's studies are controversial, however, because the fish were caged, and this may impact the results of the study. Some fish are even known to associate with submerged structures, as they provide shelter and surfaces for food to grow. While the field tests appear to be contradictory, there is no doubt that finfish inhabit at least the interface of platforms. However, because the decrease in shading over water is very small, there are not expected to be significant community changes. There is a possibility of a slight shift in the finfish community with the decrease in over-water pier coverage; however, because finfish are transient, this shift may be hard to measure.

Construction of the new upland facility would not have any significant impact on the few areas of vegetation present on the site. Existing on-site buildings and paved parking areas have precluded any opportunity for natural resources to establish themselves and, as such, native species of vegetation have probably been absent from the site since its original construction. Vegetation observed on the site was opportunistic weeds and plants, none of which were rare, endangered or particularly important from an ecological perspective. No significant terrestrial impacts would result from the Greenpoint Converted MTS because the site is already fully developed and the creek is heavily contaminated. The construction of a smaller platform will eliminate some shading of the marine environment in this area, lending to more primary production capabilities in the water column.

According to the Atlas of Breeding Birds in New York State, the common nighthawk nests on flat-roofed structures in cities and towns and feeds upon insects during flight. The Greenpoint Converted MTS is not likely to directly impact any potential nesting habitat or prey species that the nighthawk depends upon.[11]

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

[11] Andrle, R.F. & Carroll, J.R., eds., 1988. "The Atlas of Breeding Birds in New York State." Cornell University Press, Ithaca.

20.10 Hazardous Materials

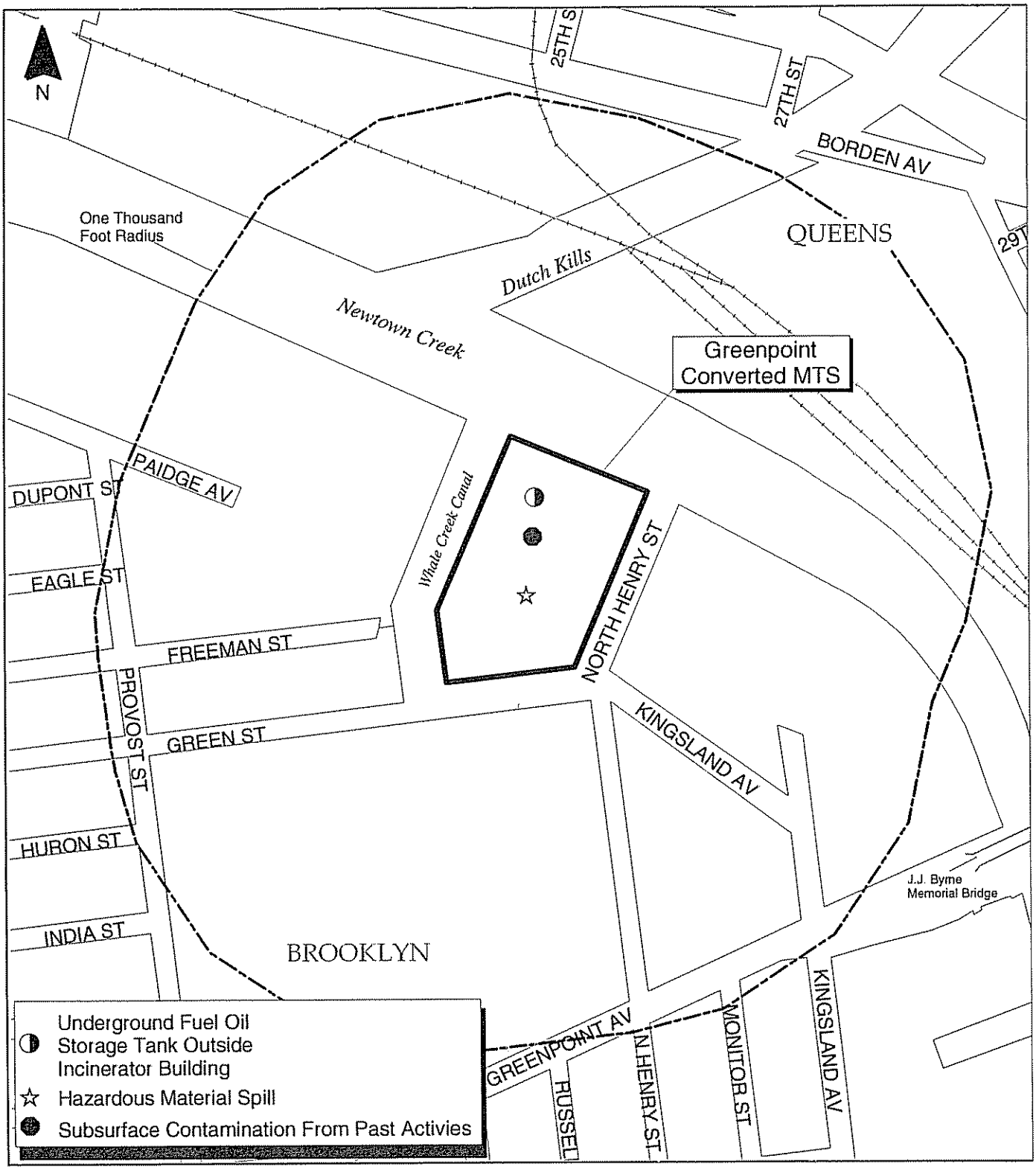
20.10.1 Existing Conditions

Existing Conditions associated with the presence of hazardous materials in soil, groundwater and building components/equipment were investigated within the defined study area. The Hazardous Materials Assessment was performed in accordance with the guidelines for a preliminary assessment presented in the 2001 CEQR Technical Manual and is consistent with the requirements for a Phase I ESA established by the ASTM (ASTM E-1527). The assessment was performed in April 1999 and updated in February 2003. It included a historical land use review, regulatory agency database review, reconnaissance of the study area and surrounding area, and surface and subsurface drainage evaluation.

The historical land use review included an assessment of Sanborn fire insurance maps for the study area, if available, and a Freedom of Information Law request to the FDNY for UST records. Standard federal and state environmental databases were assessed for records of sites within the study area that had evidence of hazardous waste activity or spills. A written request to NYCDEP was made to solicit records pertaining to hazardous or toxic materials activities within the study area. A pedestrian reconnaissance of accessible interior and exterior areas within the study area was conducted, most recently in February 2003. During the reconnaissance, visual evidence was sought of hazardous materials handling or storage, including the presence of tanks, drums, transformers and unusual stains and odors. Topographic maps, visual observations and readily available geologic information sources were reviewed if off-site potential sources of contamination were identified.

20.10.1.1 Definition of Study Area

The study area includes the site and neighboring properties within a 1,000-foot radius (see Figure 20.10-1).



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

300 0 300 Feet

HDR HydroQual URBITRAN PB EEA Cambridge Environmental Inc

Figure 20.10-1 Hazardous Materials Sites

Greenpoint Converted MTS

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20.10.1.2 Delineation of Area of Concern

Areas of concern are defined as parts of the soil, groundwater and building components/equipment within the study area where the presence or likely presence of hazardous materials exists and implementation of the Greenpoint Converted MTS could lead to an increased exposure of people or the environment to those hazardous materials. The areas of concern within the study area include:

- Residual contamination of the subsurface soils and groundwater may exist. Portions of the site were occupied by manufacturing facilities and an oil storage terminal. In addition, the site was filled with soils and ash that may have contained hazardous materials.
- The site is adjacent to the former Mobil Oil Brooklyn Terminal, which is listed on the NPL for cleanup under Superfund. The site was assigned an NFRAP designation by the USEPA. An NFRAP designation means that USEPA has completed its preliminary assessment and determined that no further steps are to be taken to list this site on the NPL.
- The incinerator building may contain ACMs and lead-based paints.
- A 5,000 gallon underground oil tank is located adjacent to the incinerator building. On February 22, 2001, the underground tank failed tightness testing. NYSDEC information indicated there was a minimal potential for hazard; however, the spill report is still administratively "active."

A field program to investigate the potential impacts to the soil and groundwater from the historic use of the property as an incinerator and MTS was completed in November 2003 in accordance with a NYSDEC-approved work plan.[12] The field investigation included:

- Performing a ground-penetrating radar and magnetometer survey over accessible areas of the site.
- Collection of one subsurface soil sample for analysis from 11 boring locations.
- Collection of one surface soil sample from one of the boring locations.
- Collection and analysis of one groundwater sample from two boring locations.

[12] New York City Department of Sanitation, October 2003. Final Phase II Site Investigation Work Plan, Greenpoint Marine Transfer Station, Brooklyn, New York.

- Collection and analysis of one groundwater sample from three permanent monitoring wells.
- Laboratory analysis of the soil samples for asbestos, VOCs, SVOCs, pesticides/PCBs and RCRA metals.
- Laboratory analysis of the groundwater samples for VOCs, SVOCs, pesticides/PCBs and RCRA metals.
- Resampling and analysis of soils for total and TCLP lead in all locations where total lead concentrations exceeded NSYDEC TAGM guidelines.
- Determination of the direction of the groundwater gradient by land survey measurements and measurement to the top of the groundwater surface.
- Comparison of the analytical results obtained from the soil and groundwater sampling program with NYSDEC TAGM guidelines.
- Preparation and submittal of a detailed site investigation report.[13]

Low level soil and groundwater contamination was detected throughout many areas of the site. Additional soil sampling and analysis was required to determine if the soil samples that were above the TAGM guidance values exhibited characteristics to be classified as a hazardous waste. No soil samples exhibited hazardous waste characteristics. Soil and groundwater contamination discovered in this area is consistent with the current and former land uses as an incinerator and MTS, and surrounding land uses by petroleum bulk storage facilities and petroleum pipelines.

20.10.2 Future No-Build Conditions

The site would remain as is except for the demotion of the incinerator. Any asbestos-containing building materials and lead based paints found in the incinerator building would be removed prior to demolition in a manner that is consistent with City building codes and practices. Any subsurface contamination existing in the soils and groundwater would remain. An active groundwater recovery and treatment system is operational on adjacent parcels. Exposure to contaminated soils is minimal because most of the site is paved or built over

20.10.3 Potential Impacts with the Greenpoint Converted MTS

[13] New York City Department of Sanitation. July 2004. Phase II Site Investigation, Greenpoint Marine Transfer Station, Brooklyn, New York. Prepared by EEA, Inc.

Low level soil and groundwater contamination is present at the existing MTS; however, this contamination should not prevent development of the site. If the Greenpoint Converted MTS were implemented, any residual contaminated soil would require appropriate disposal in a manner that is consistent with the level of contamination found during the demolition/construction phase. The necessary and appropriate health and safety measures would be used during construction to mitigate and minimize any exposure risk to workers or the general public.

20.11 Water Quality

20.11.1 Existing Conditions

20.11.1.1 Definition of the Study Area

The water quality study area encompasses the East River, Newtown Creek and Whale Creek Canal, and also includes discharges from point sources and CSOs within ½-mile of the site.

20.11.1.2 Water Quality

The water quality data for the following monitoring stations, shown in Figure 20.11-1, are generally representative of water quality in the study area:

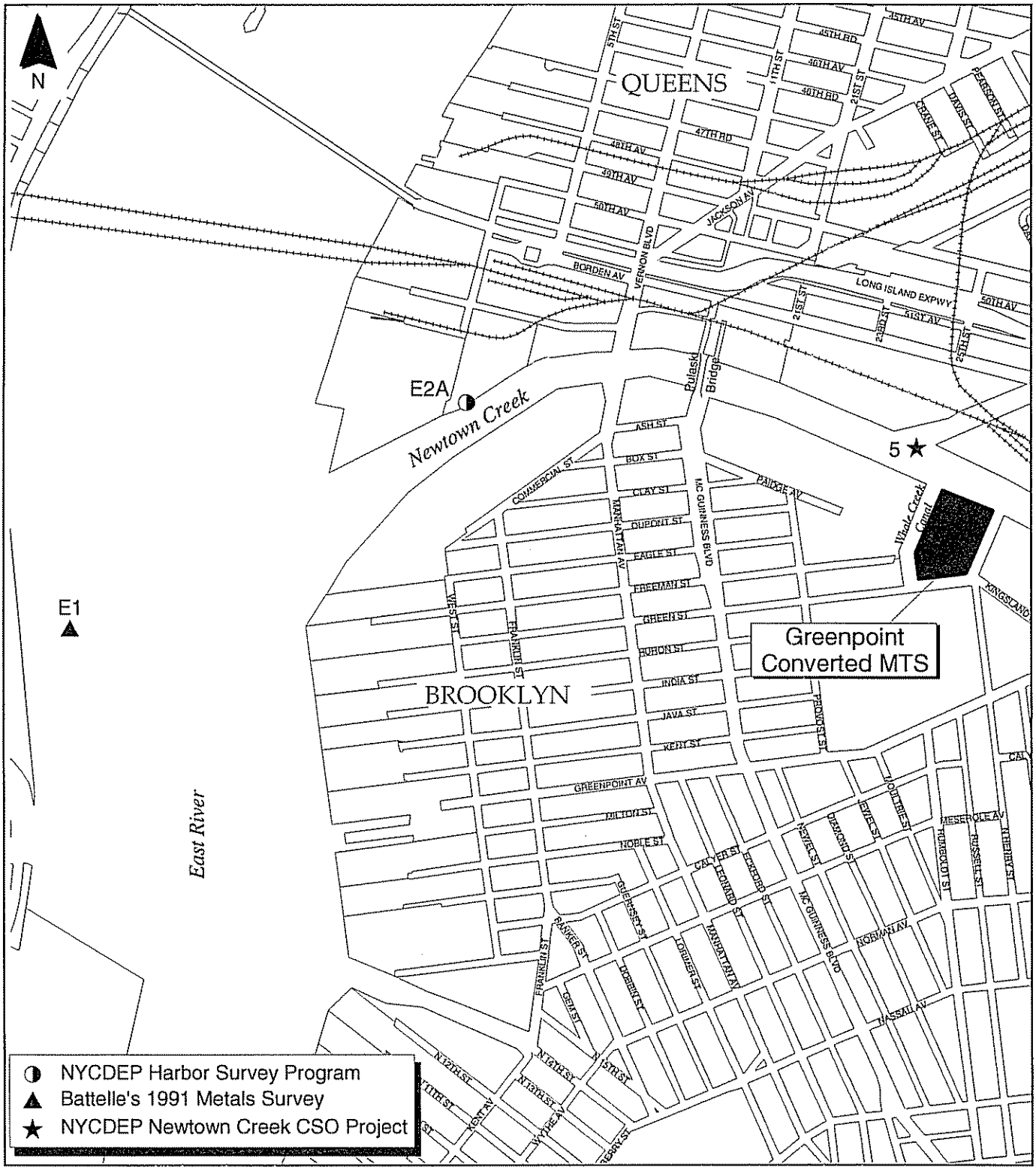
- NYCDEP Harbor Survey Program – Station E-2A at Newtown Creek; and
- Battelle's 1991 Metals Survey – Station E-1 in the lower East River.

These data, along with NYSDEC's water quality standards and guidance values, are presented in Table 20.11-1. These standards and guidance values for the waters in the vicinity of the site correspond to "Class SD," which indicates fish survival only.

As shown in Table 20.11-1, the data indicate that, on average, NYSDEC standards and guidance values are met. The mercury concentration for Battelle Station E-1 did not conform to the water quality standard for mercury.

20.11.1.3 Permitted Discharges

A review of the most recently available NYSDEC and USEPA databases indicated that there are sixteen permitted discharges in the vicinity of the site. Those within a ½-mile radius are shown in Figure 20.11-2 and listed in Table 20.11-2. These discharges consist of 11 CSOs and five industrial sites, all of which are permitted by the NYSDEC.



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

500 0 500 Feet

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Figure 20.11-1 Ambient Water Quality Stations

Greenpoint Converted MTS

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Table 20.11-1
Existing Water Quality Conditions and Standards
Greenpoint Converted MTS Study Area

Average Concentration				
Parameter	Units	Station E-2A[1]	Station E-1[2]	NYS Class SD Standards
Dissolved Oxygen (surface/minimum)	mg/L	7.1 [3] / 3.3 [4]	-------	3.0
Dissolved Oxygen (bottom/minimum)	mg/L	6.7 [3] / 3.4 [4]	-------	3.0
BOD (surface)	mg/L	2.4 [5]	-------	-------
BOD (bottom)	mg/L	2.4 [5]	-------	-------
Total Coliform (surface)	MPN / 100 ml	2,579 [6]	-------	-------
Total Coliform (bottom)	MPN / 100 ml	1,982 [6]	-------	-------
Fecal Coliform (top)	MF	384	-------	-------
Fecal Coliform (bottom)	MF	35	-------	-------
Total Suspended Solids (surface)	mg/L	10	-------	-------
Total Suspended Solids (bottom)	mg/L	19	-------	-------
NH_3-N	mg/L	0.429	-------	-------
(NO_3 + NO_2)	mg/L	0.363	-------	-------
Total Phosphorous	mg/L	0.433 [7]	-------	-------
Dissolved PO_4	mg/L	-------	-------	-------
Chlorophyll-a	µg/L	11.4	-------	-------
Arsenic	µg/L	-------	-------	120 [8,9]
Cadmium	µg/L	-------	0.06 [8]	21 [8,9]
Chromium	µg/L	-------	-------	-------
Copper	µg/L	-------	1.93 [10]	7.9 [9,10]
Lead	µg/L	-------	0.27 [8]	204 [8,9]
Mercury	µg/L	-------	0.0048 [8]	0.0026 [8,9]
Nickel	µg/L	-------	1.60 [8]	74 [8,9]
Silver	µg/L	-------	0.0566 [11]	2.3 [8,11]
Zinc	µg/L	-------	7.40 [8]	95 [8,9]
Cyanide	µg/L	-------	-----	1.0 [9]

Notes:

[1] Average concentrations for 1999 NYCDEP Harbor Survey site E-2A located at Newtown Creek.

[2] Average concentrations for 1991 Battelle Ambient Survey site E-1, located at the lower East River.

[3] Represents average between March and December 1999.

[4] Minimum between June 1, 1999 and September 30, 1999.

[5] Latest available data 1997.

[6] Latest available data 1996.

[7] Latest available data 1998.

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

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

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

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

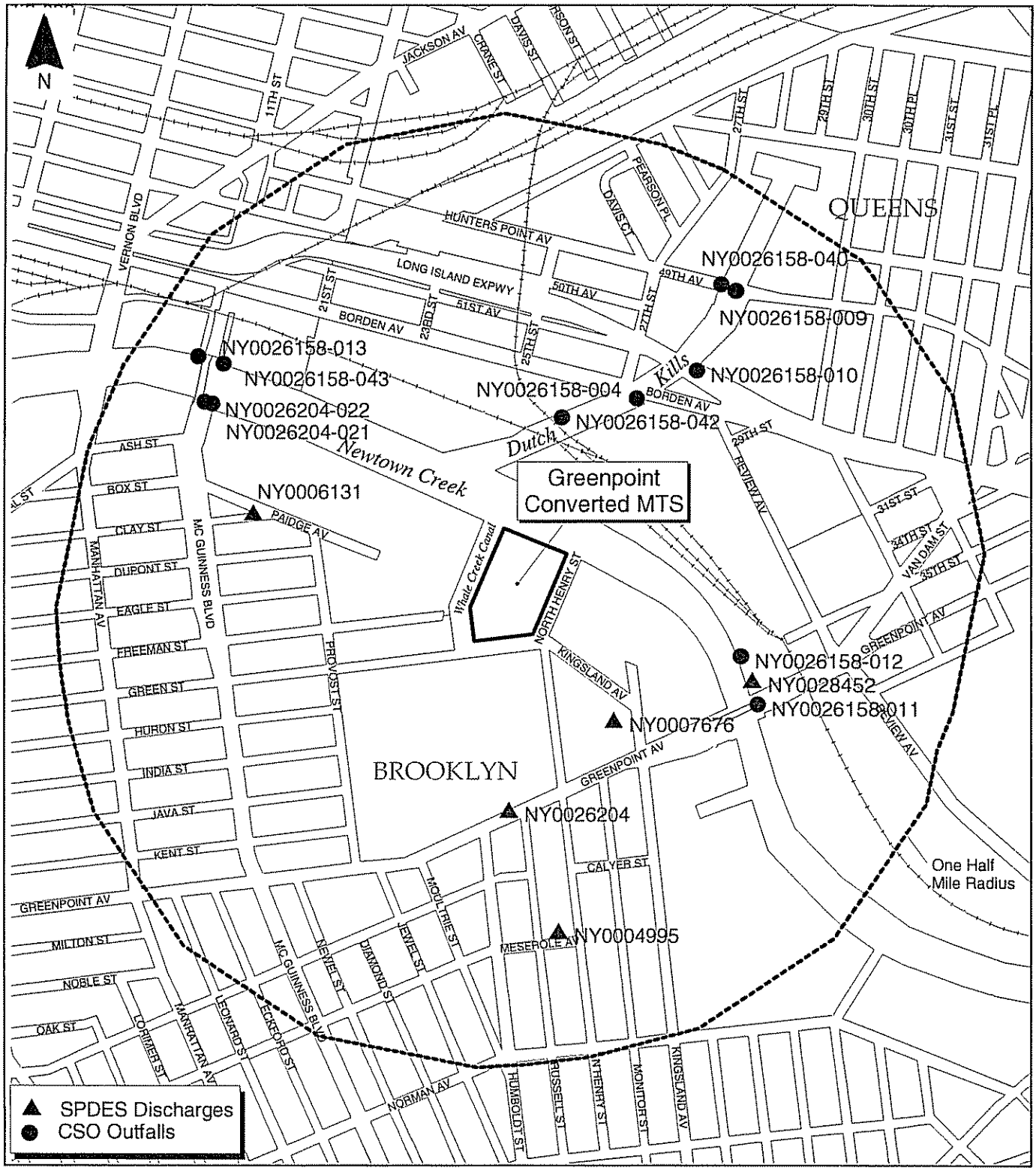
BOD = biochemical oxygen demand

NH_3-N = ammonia

NO_3 = nitrate; NO_2 = nitrite

PO_4 = phosphate MPN/100 ml = most probable number per 100 milliliters

mg/L = milligrams per liter MF = membrane filter MF = membrane filter µg/L = micrograms per liter



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

500 0 500 Feet

Figure 20.11-2 Permitted Outfalls and CSO Locations Greenpoint Converted MTS

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Table 20.11-2
Existing Permitted Discharges
Greenpoint Converted MTS Study Area

Combined Sewer Overflows (CSOs)			
Outfall Location /WPCP	**Permit Number**	**County**	**Receiving Water Body**
McGuiness Boulevard./Newtown Creek	NY0026204-022	Kings	Newtown Creek
McGuiness Boulevard./Newtown Creek	NY0026204-021	Kings	Newtown Creek
Greenpoint Avenue/Bowery Bay	NY0026158-011	Queens	Newtown Creek
35th Street/Bowery Bay	NY0026158-012	Queens	Newtown Creek
Borden Avenue/Bowery Bay	NY0026158-004	Queens	Dutch Kills
Hunterspoint Avenue/Bowery Bay	NY0026158-009	Queens	Dutch Kills
Midtown Tunnel/Bowery Bay	NY0026158-010	Queens	Dutch Kills
49th Avenue/Bowery Bay	NY0026158-040	Queens	Dutch Kills
27th Street/Bowery Bay	NY0026158-042	Queens	Dutch Kills
11th Street/Bowery Bay	NY0026158-043	Queens	Newtown Creek
11th Street/Bowery Bay	NY0026158-013	Queens	Newtown Creek
Point Sources			
Company Name	**Permit Number**	**County**	**Receiving Water Body**
Metro Terminals Corp.	NY0007676	Kings	Newtown Creek
Getty Terminal Corp.	NY0028452	Queens	Newtown Creek
Newtown Creek WPCP	NY0026204	Kings	Newtown Creek
Motiva Enterprises LLC	NY0006131	Kings	Newtown Creek
Exxon Mobile Oil Corp.	NY0004995	Kings	Newtown Creek

20.11.1.4 Existing Pollutant Loads and Stormwater Runoff

Using available databases on stormwater pollutant concentrations and local precipitation data, estimates of stormwater pollutant loadings were calculated. The existing paved areas were assumed to be completely impervious, and the existing unpaved areas were assumed to have 100% storage and infiltration. A runoff flow of 0.341 cfs was calculated using the impervious site area (5.7 acres), an average rainfall intensity per storm of 0.06 inches/hour and a runoff coefficient of 1. The resulting stormwater loads, shown in Table 20.11-3, represent the existing loads at the site.

Table 20.11-3
Estimated Existing Pollutant Loads and Runoff Flows
Greenpoint Converted MTS Study Area

Pollutant	Concentration	Pollutant Loading (lbs/day)
Fecal Coliform MPN/100 ml	34,000	62,577[1]
BOD mg/L	11	20
Heavy Metals		
Copper µg/L	35	0.064
Lead µg/L	28	0.052
Zinc µg/L	154	0.283
Total Impervious Area (acre) = 5 69		Runoff Coefficient (C) = 1.00
Average Rainfall Intensity per Storm (inch/hour) = 0 06[2]		Runoff Flow (cfs) = 0.341

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

20.11.2 Future No-Build Conditions

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

20.11.3 Potential Impacts with the Greenpoint Converted MTS

With the development and operation of the Greenpoint Converted MTS, there would be a decrease in the impervious area and therefore the stormwater loadings at the site would decrease. Table 20.11-4 shows the existing impervious area, the change in the impervious area and pollutant loads. With the development of the Greenpoint Converted MTS, conditions would not be significantly different from Future No-Build Conditions.

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

Stormwater loads and the impervious area for the Greenpoint Converted MTS, shown in Table 20.11-4, would be expected to decrease from Existing Conditions. According to the 208 Model, the decreased loads would have no significant impact on water quality in the adjacent surface waters.

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

Table 20.11-4
Impervious Area and Estimated Pollutant Loads
Greenpoint Converted MTS

			Estimated Pollutant Loadings/Incremental Change [1]				
Condition	**Total Impervious Area (acres)**	**Change in Impervious Area (acres)**	**Fecal Coliform[2]**	**BOD (lbs/day)**	**Copper (lbs/day)**	**Lead (lbs/day)**	**Zinc (lbs/day)**
Existing Conditions	5.69	0.0	62,577/NA	20/NA	0.064/NA	0.052/NA	0.283/NA
Future Build Conditions	4.90	-0.79	53,908/-8,670	17/-3	0.055/-0.008	0.044/-0.007	0.244/-0.039

Notes:

[1] Incremental change refers to the difference in pollutant loading between the Existing Conditions and Future Build Conditions.

[2] Coliform loads are not shown in lbs/day Loading comparable to MPN/100 ml.

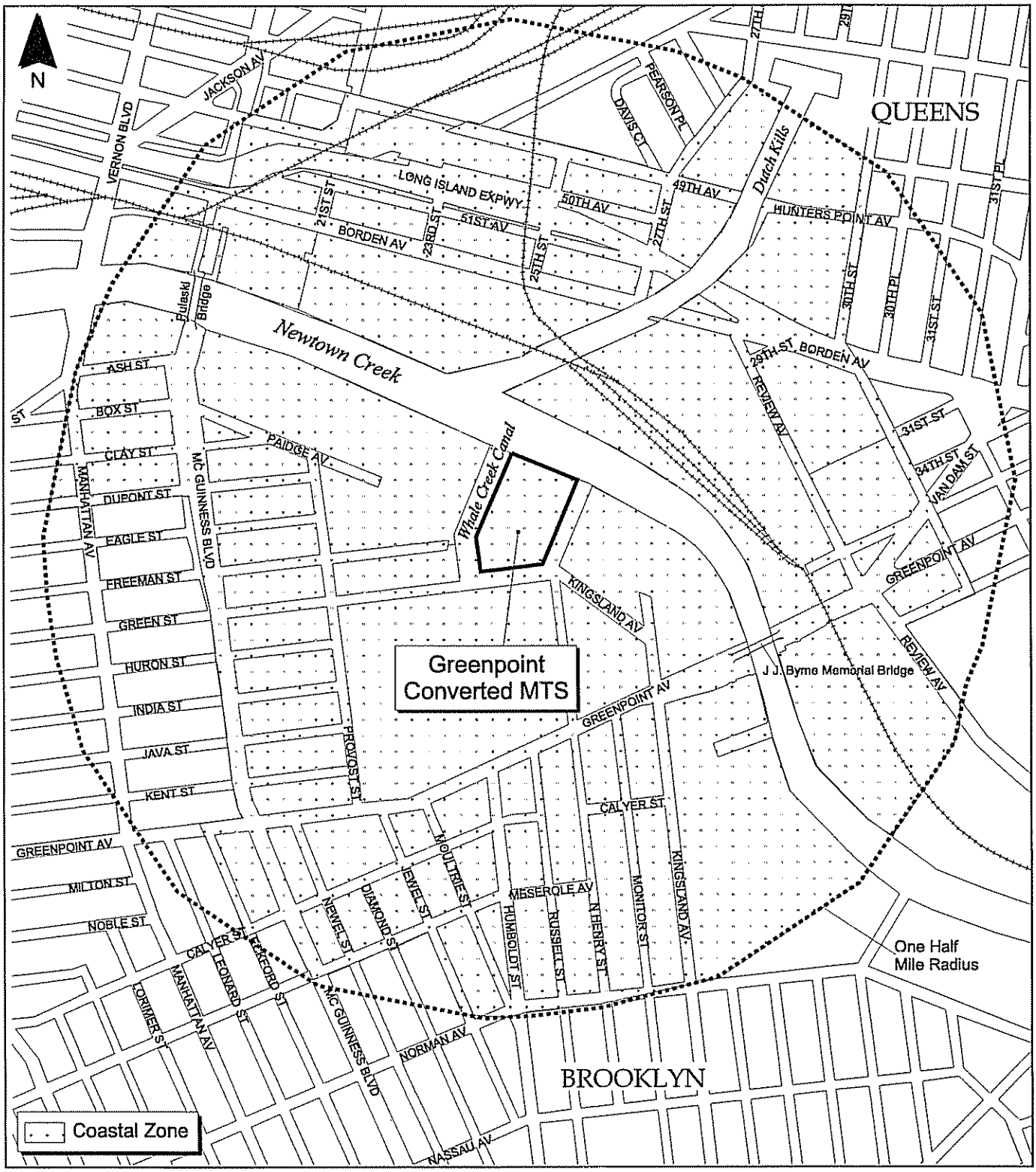
NA = Not Applicable

20.12 Waterfront Revitalization

20.12.1 Introduction

The Federal Coastal Zone Management Act of 1972 established coastal zone management programs to preserve, protect, develop and restore the coastal zone of the U.S. Due to its proximity to the waterfront of Newtown Creek, the Greenpoint Converted MTS would be within the City's coastal zone boundary (see Figure 20.12-1). According to "The New Waterfront Revitalization Program," the Greenpoint Converted MTS would be classified as a water-dependent industrial use and would be located within Reach 13/Newtown Creek as indicated within the "New York City Comprehensive Waterfront Plan – Reclaiming the City's Edge" and the "Plan for the Brooklyn Waterfront." The site would also be located within the Newtown Creek SMIA. The Greenpoint Converted MTS is subject to review under the 10 primary policies and the 32 subpolicies identified within "The New Waterfront Revitalization Program" that address the waterfront's important natural, recreational, industrial, commercial, ecological, cultural, aesthetic and energy resources.

The Greenpoint Converted MTS was reviewed to determine its general consistency with each of these policies and subpolicies. This review identified several subpolicies that were not applicable. These include subpolicies 1.1, 1.2, 2.2, 3.1, 4.4, 6.2, 6.3, and 8.5. All policies and subpolicies, including those identified as not applicable, are listed in Table 3.14.1. Further discussion is provided below for those policies or subpolicies needing more clarification or found to be inconsistent with a component of the Greenpoint Converted MTS. A description of waste handling operations that would occur at the Greenpoint Converted MTS is provided in Section 2.4.2.



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

500 0 500 Feet

Figure 20.12-1 Coastal Zone Boundary

Greenpoint Converted MTS

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20.12.2 Consistency Assessment

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

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

A review of available information indicates that there are sufficient public services and facilities to support the Greenpoint Converted MTS. As part of the Greenpoint Converted MTS, connections from the new facility to existing utilities (e.g., sewer and electrical connections, etc) in the vicinity would be established.

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

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

The Greenpoint Converted MTS would be located within the Newtown Creek SMIA and would be located within an existing M3-1 zoning designation at the site of the existing MTS. It would involve the conversion of the existing over-water, truck-to-barge waste MTS into an upland TCB transfer station that would transport DSNY-managed Waste to remote out-of-City disposal facilities via marine transport. A large portion of the Greenpoint Converted MTS would be located on the site of the existing Greenpoint incinerator building, which will be demolished under the Future No-Build Conditions.

The Greenpoint Converted MTS site, as described in Section 2.4.2, would largely represent the reactivation of an existing industrial and water-dependent use. It would serve to maintain this use while restoring and revitalizing existing

industrial waterfront property, and it would be compatible with existing neighboring industrial uses. Upland development would involve construction of four primary components: (1) an elevated access ramp; (2) an enclosed processing building, including the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a bulkhead/fendering system. The Greenpoint Converted MTS would be consistent with existing land uses in the immediate vicinity of the site and the "Plan for the Brooklyn Waterfront," which recommends the continued industrial use of the site. Although the Greenpoint Converted MTS would not encourage or facilitate the siting of any additional water-dependent uses, it would represent an upland expansion and reactivation of an existing water-dependent use and would be compatible with surrounding uses.

2.3 *Provide infrastructure improvements necessary to support working waterfront uses*

The Greenpoint Converted MTS would involve the demolition of the existing MTS and the construction of a new MTS within the upland portions of the site. It would allow for marine transport of solid waste to licensed out-of-City disposal facilities. Upland development would involve four primary components: (1) an elevated access ramp; (2) an enclosed processing building, which includes the tipping floor, loading floor and pier level; (3) an outside gantry crane system; and (4) a rehabilitated bulkhead and fendering system. The entire pier deck floor area serviced by the gantry cranes would be located outside the confines of the enclosed facility. The Greenpoint Converted MTS would be consistent with existing waterfront uses in the vicinity of the site.

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

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

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

The Greenpoint Converted MTS would be located within an existing, heavily industrialized area, and would not interfere with any maritime industrial, commercial or recreational vessel activities in the area. Activities within Newtown Creek resulting from the Greenpoint Converted MTS would be limited to barge loading along the pier level and the periodic swapping of loaded barges at the slips. Four of five barges would be filled on a daily basis. These swapping activities would be similar to previous barge activities at the site. Therefore, no adverse impact to other uses within the water body would be anticipated. The Greenpoint Converted MTS would be consistent with this subpolicy.

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

The Greenpoint Converted MTS would involve the conversion of the existing over-water MTS where loose waste was placed in open barges, into an upland TCB transfer station where DSNY-managed Waste would be transferred into containers that would be sealed and placed into flat deck barges, then transported to an out-of-City disposal site. All solid waste handling would be done within an

enclosed processing building and, therefore, would be protective of the aquatic environment and surrounding land and water uses. Building ventilation would be maintained under negative pressure, which would maintain dust inside the building. Additional dust, odor and vector control systems would also be used to minimize impacts to the surrounding environment. Litter control methods, such as routine sweeping and washing of the tipping floor, would also be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. All process wastewaters would be treated on site prior to being discharged to the municipal sewer system. In addition, any on-site storage of petroleum and handling of unauthorized wastes would be managed in accordance with applicable federal, state and local regulations.

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

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

Based upon a review of SNWAs, Recognized Ecological Complexes, and SCFWHs, the Greenpoint Converted MTS would not be located within any designated areas. It would represent an upland expansion in size of a previous over-water use and would not be anticipated to result in any long-term impacts to natural resources in the vicinity of the site. The Greenpoint Converted MTS would be consistent with this subpolicy.

4.2 Protect and restore tidal and freshwater wetlands.

A review of NYSDEC tidal and freshwater wetland and NWI maps was conducted to determine the presence of wetlands. As noted in Section 20.9.1, the site contains no freshwater wetlands. The Greenpoint Converted MTS would be

within Newtown Creek, which is identified as a littoral zone, a state-designated wetland. The demolition of the existing MTS and subsequent development of the Greenpoint Converted MTS would result in limited, short-term impacts to these tidal wetlands.

Impacts to littoral zones would be minimized due to the impacted nature of the existing waterway, previous and ongoing industrial activities at and in the vicinity of the site, and permitted dredging activities that have historically occurred at the site. The Greenpoint Converted MTS would be largely land-based and would require the demolition of the existing MTS. It will be sited at the approximate location of the Greenpoint incinerator, which will be demolished as part of the Future No-Build Conditions. Dredging would be required to improve existing water depths at and in the immediate vicinity of the site and allow for the unimpeded operation of barges and tugboats once the Greenpoint Converted MTS is operational. Potential impacts due to dredging would be short-term and localized. All dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be acquired prior to any dredging activities. Mitigation, if required, would be proposed during the environmental review and permitting of the Greenpoint Converted MTS to address any potential impacts to wetlands that may occur due to its development. The Greenpoint Converted MTS would, therefore, be consistent with this policy.

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

There are no known vulnerable fish or plant species found within the vicinity of the Greenpoint Converted MTS. A review of the "Atlas of Breeding Birds in New York," indicates the Common Nighthawk (*Chordeiles minor*) as a species suspected to be breeding in the area. The Common Nighthawk is classified by the state as a Protected-Special Concern species. As noted in Section 20.9.3, the Greenpoint Converted MTS would not impact these species and their habitats.

The Greenpoint Converted MTS would involve the demolition of the existing MTS and construction of the new facility, which will be located upland to minimize potential impacts to natural resources. Upland development would include an elevated access ramp; an enclosed processing building, which includes the tipping floor, loading floor and pier level; an outside gantry crane system; and a rehabilitated bulkhead and fendering system. Development of the Greenpoint Converted MTS would involve dredging, but potential impacts to plant, fish and wildlife species would be minimized and all dredging would be conducted in compliance with applicable federal, state and local regulations. Required permits would be obtained prior to any dredging activities.

In addition, all handling and containerization of solid waste would be performed inside the processing building, thereby limiting the risk of an introduction of hazardous wastes or other pollutants into the environment that could impact surrounding fish and wildlife resources. Sanitary and process wastewaters would be routed to on-site treatment systems and would then be discharged to the municipal sewer systems. Stormwater runoff from the Greenpoint Converted MTS and the storage of any petroleum products would be conducted in accordance with applicable federal, state and local regulations. The Greenpoint Converted MTS would, therefore, be consistent with this subpolicy.

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

5.1 Manage direct or indirect discharges to waterbodies.

The Greenpoint Converted MTS would be developed in accordance with applicable federal, state and local regulations. Consistent with this subpolicy, the processing areas would be cleaned on a regular basis. All sanitary and process wastewaters (e.g., floor washdown waters, etc.) would be conveyed to an on-site disposal treatment system that would include an oil-water separator, and then discharged to the municipal sewer system. In addition, the slope of the tipping

floor would prevent the build-up of free liquids by directing all liquids to drains. Stormwater runoff from the Greenpoint Converted MTS would be managed in accordance with applicable regulations.

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

During the development and operation of the Greenpoint Converted MTS, BMPs would be used to the extent possible to minimize any nonpoint discharges. The Greenpoint Converted MTS would comply with applicable federal, state and local requirements concerning the management of stormwater runoff and erosion. All handling and containerization of solid waste would be performed inside the enclosed processing building, limiting the risk for the introduction of hazardous wastes or other pollutants into the environment. During construction, non-structural (such as silt curtains) or structural measures would be used to manage erosion and stormwater runoff. In addition, litter control methods would be implemented at the facility to minimize or eliminate the potential for litter to enter surface waters.

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

Development of the Greenpoint Converted MTS would include demolition of the existing MTS. Barges would be staged along a refurbished or reconstructed bulkhead wall for loading and unloading of containers. Dredging would be needed to remove accumulated sediments in the barge berthing areas to provide adequate draft for barges and tugboats. Potential impacts due to dredging would be short-term and localized. All dredging would be conducted in compliance with applicable federal, state and local regulations and removed materials would be disposed of at a permitted upland facility.

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

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

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

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

According to a review of the FEMA National Flood Insurance Program maps, the site is located within the 100-year flood plain (Zone A) and the 500-year flood plain boundary (Zone B). Development of the Greenpoint Converted MTS would not affect the potential for flooding or erosion. All demolition and redevelopment activities would comply with applicable building code requirements and, to the extent practicable and necessary, non-structural (such as silt curtains) or structural measures would be implemented to minimize damage from flooding or erosion.

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

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

The Greenpoint Converted MTS would involve the management and processing of solid waste through a TCB system. Waste would be transported in waterproof, airtight, sealed containers. All waste handling operations would occur inside an enclosed processing building, which would minimize the escape of litter into the surrounding water body. Unless emergencies close the facility, solid waste would generally be containerized within 24 hours of tipping. All solid waste handling operations would be conducted in accordance with NYSDEC Part 360 regulations (6NYCRR Parts 360-1 and 360-11) for solid waste transfer stations, which would be incorporated by reference into the permit to construct and operate the Greenpoint Converted MTS. Radiation detection equipment would be located at the facility, and contingency plans would be in place in the event of unauthorized waste and/or other situations that could disrupt the operation of the facility. Litter control methods would be implemented at the facility to minimize or eliminate the potential for litter entering surface waters. The Greenpoint Converted MTS would not result in adverse impacts and would operate in a manner to ensure that there would be no impact to ground and surface water supplies, significant fish and wildlife habitats, recreational areas and scenic resources.

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

7.2 *Prevent and remediate discharge of petroleum products.*

See response to Subpolicy 7.1.

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

See response to Subpolicy 7.1.

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

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

Due to the existing, heavy industrial uses at and in the immediate vicinity of the Greenpoint Converted MTS, public access would generally not be compatible with the principal use of the site. Therefore, this subpolicy is not applicable.

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

The Greenpoint Converted MTS would be a stand-alone, water-dependent facility fronting Newtown Creek. Public access would not be compatible with the Greenpoint Converted MTS; however, its development would not preclude any future development of public access along Newtown Creek.

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

The Greenpoint Converted MTS would be compatible and consistent with adjacent properties along the waterfront and would not obstruct or impair visual access to coastal lands, waters or open space. It would involve construction of a new TCB MTS at the location of the incinerator, which will have been demolished, but it would have little effect on the visual quality of its industrial setting. The barge slip gantry cranes were designed as slender structures to minimize their visual impact. As discussed in Section 20.7.3, visual access to the coastal lands is minimal and, therefore, no impacts to visual access would be anticipated. See also response to Subpolicy 9.1.

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

No mapped parklands or open space areas have been identified at or within the immediate vicinity of the site. Therefore, this subpolicy is not applicable.

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

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

The Greenpoint Converted MTS would not result in a significant impact on views, as noted in Section 20.7.3. Based on the information discussed in that section, the Greenpoint Converted MTS would be consistent with this subpolicy.

9.2 Protect scenic values associated with natural resources.

The Greenpoint Converted MTS would be an upland expansion of an existing over-water use and would pose no new impacts to scenic values associated with natural resources. It would be compatible with surrounding buildings and would be consistent with this subpolicy.

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

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

No effects on cultural resources would result from the Greenpoint Converted MTS, as stated in Section 20.6.3. Based on the information presented in that section, the Greenpoint Converted MTS would be consistent with this subpolicy.

10.2 Protect and preserve archaeological resources and artifacts.

No archaeologically significant resources are located at the site or in the immediate vicinity of the site. This subpolicy is, therefore, not applicable.

20.13 Infrastructure, Solid Waste and Sanitation Services, and Energy

20.13.1 Existing Conditions

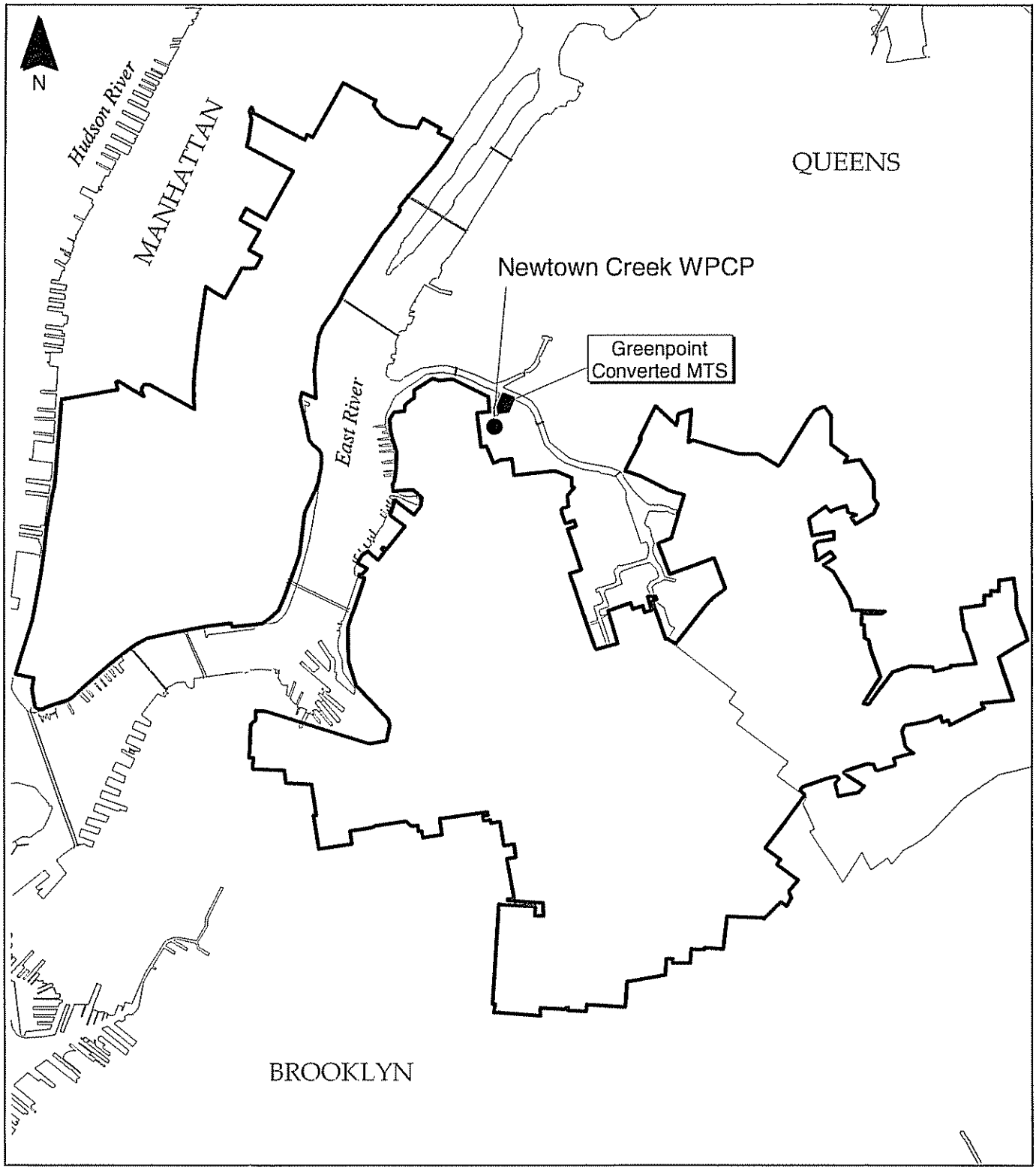
20.13.1.1 Water Supply

Water is supplied to the existing Greenpoint MTS from the Delaware and Catskill reservoir systems through the City's municipal water distribution system. A 6-inch-diameter water line provides potable water for both process and sanitary requirements. Adjacent to the existing site is a pump house connected to an incoming 6-inch water line, which ensures adequate pressure for the fresh water fire system. Water pressure throughout the City system is generally maintained at about 20 psi, which is the minimum pressure acceptable for uninterrupted service (2001 CEQR Technical Manual).

20.13.1.2 Sanitary Sewage and Stormwater

A review of NYCDEP I&I maps shows that the site is served by the Newtown Creek WPCP, which serves portions of Manhattan, Queens and Brooklyn. The WPCP drainage area is illustrated in Figure 20.13-1. From July 2002 through June 2003, the WPCP treated an average of 216 mgd of wastewater under dry weather flow conditions and an average flow of 238 mgd, which includes the sanitary and stormwater flows received by the WPCP during wet weather (Table 20.13-1). The maximum dry weather flow during this period was 239 mgd in August 2002 and the maximum average flow was 259 during June 2003. Effluent from the plant is discharged to the East River and is regulated by NYSDEC under the SPDES program. The current SPDES permit limit for flow to the Newtown Creek WPCP is 310 mgd. It is estimated that current on-site employee water usage is about 75 gpd. This estimate is based on three employees (one guard per shift, three shifts per day) using 25 gallons per person per day (2001 CEQR Technical Manual). As the facility does not currently accept waste, no significant process water is used and no operations personnel are currently assigned to the site.

Duplex sewage ejection pumps within the existing Greenpoint MTS convey wastewaters to the municipal sewer system through a 6-inch-diameter pipe that discharges to a 15-inch sewer (combined sanitary and stormwater system) running south along North Henry Street. The sewer connects to an interceptor that eventually conveys the wastewater to the Newtown Creek WPCP for treatment.



Site delineations are approximate

5000 0 5000 Feet

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Figure 20.13-1 Existing WPCP Drainage Area

Greenpoint Converted MTS

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Table 20.13-1
Average Monthly Dry Weather -and Average Flows
Newtown Creek Water Pollution Control Plant
Fiscal Year 2003

Month	Dry Weather Flow (mgd)	Average Monthly Flows-[1] (mgd)
July 2002	223	229
August	239	256
September	229	253
October	224	255
November	208	238
December	213	228
January 2003	212	223
February	204	224
March	218	240
April	207	228
May	201	219
June	218	259
Average Effluent	**216**	**238**

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

20.13.1.3 Solid Waste

Based on solid waste generation information from the 2001 CEQR Technical Manual, it was estimated that each of the three employees at the existing MTS produces approximately 9 pounds of solid waste per week for a facility total of 27 pounds per week (approximately 4 pounds per day). The solid waste is collected by DSNY personnel and transported by truck to an appropriately licensed solid waste management facility.

20.13.1.4 Energy

Consolidated Edison of New York supplies electrical service to the facility. A review of applicable service plans shows electric lines along North Henry Street. Utility maps from KeySpan show that there is a 2-inch gas main running up North Henry Street that serves the facility. Current electricity and gas utilization is negligible due to the low staffing levels for security.

20.13.2 Future No-Build Conditions

The existing Greenpoint MTS would continue to not accept waste. Potable water use, process and sanitary wastewater generation, solid waste generation and energy use would remain at or near the Existing Conditions levels for security employees. Wastewater flows to the Newtown Creek WPCP would continue to increase and would be projected to be 240.4 mgd by 2006.

20.13.3 Potential Impacts with the Greenpoint Converted MTS

20.13.3.1 Water Supply

The Greenpoint Converted MTS would have up to 60 employees working three shifts per day. They would require approximately 1,500 gallons of potable water per day plus an additional 1,800 gpd for truck and tipping floor washdown and dust control. The combined total usage of 3,300 gpd of potable water would represent an increase of 3,225 gpd above current consumption levels.

The Greenpoint Converted MTS would have no impact on the existing system's ability to supply water reliably. According to NYCDEP, the water pressure in the area is about 45 psi. Under worst-case conditions, the increased usage would not have significant impacts on water pressure in the system.

20.13.3.2 Sanitary Sewage

Based on the estimated water usage of 3,330 gpd for the Greenpoint Converted MTS, the small quantities of wastewater sent to the Newtown Creek WPCP would not significantly impact the sewage flow rate or the ability of the Newtown Creek WPCP to meet its SPDES permit limits. The projected wastewater flows at the WPCP would be anticipated to be approximately 240.4 mgd in 2006, which would be well below the permitted capacity of 310 mgd. In addition, the new wastewater flows from the proposed action would not result in a significant increase in combined sewer overflows (CSO).

20.13.3.3 Solid Waste

Solid waste transfer station facility use is not cited under the solid waste generation rates provided in the 2001 CEQR Technical Manual, so rates for a commercial office building (1.3 lbs/day per employee) were used as a basis for a conservative estimate of waste generation. For an estimated 60 facility employees per day, 468 pounds of solid waste would be generated per week (78 lbs/day) and would represent an incremental increase of approximately 444 pounds per week (74 lbs/day) above current waste generation levels. This volume would be managed at the Greenpoint Converted MTS and would not significantly impact the system.

20.13.3.4 Energy

The Greenpoint Converted MTS would require approximately 5.51E+10 BTU/year of electricity to operate the facility. Natural gas facility heating would be used with an estimated demand of 1.34E+08 BTU/year.

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

Consolidated Edison was also notified of the natural gas requirements of the Greenpoint Converted MTS and has stated that the facility could be supplied with natural gas with no adverse impacts on the utility.

20.14 Traffic, Parking, Transit, and Pedestrians

20.14.1 Introduction

The Greenpoint Converted MTS would receive waste from DSNY and other agency collection vehicles. Therefore, pursuant to CEQR guidelines, a traffic analysis was performed on the projected net increase in collection vehicles in the study area (which is defined below) and on other site-generated traffic. (See Section 3.16 for a discussion of CEQR analysis thresholds.)

20.14.2 Existing Conditions

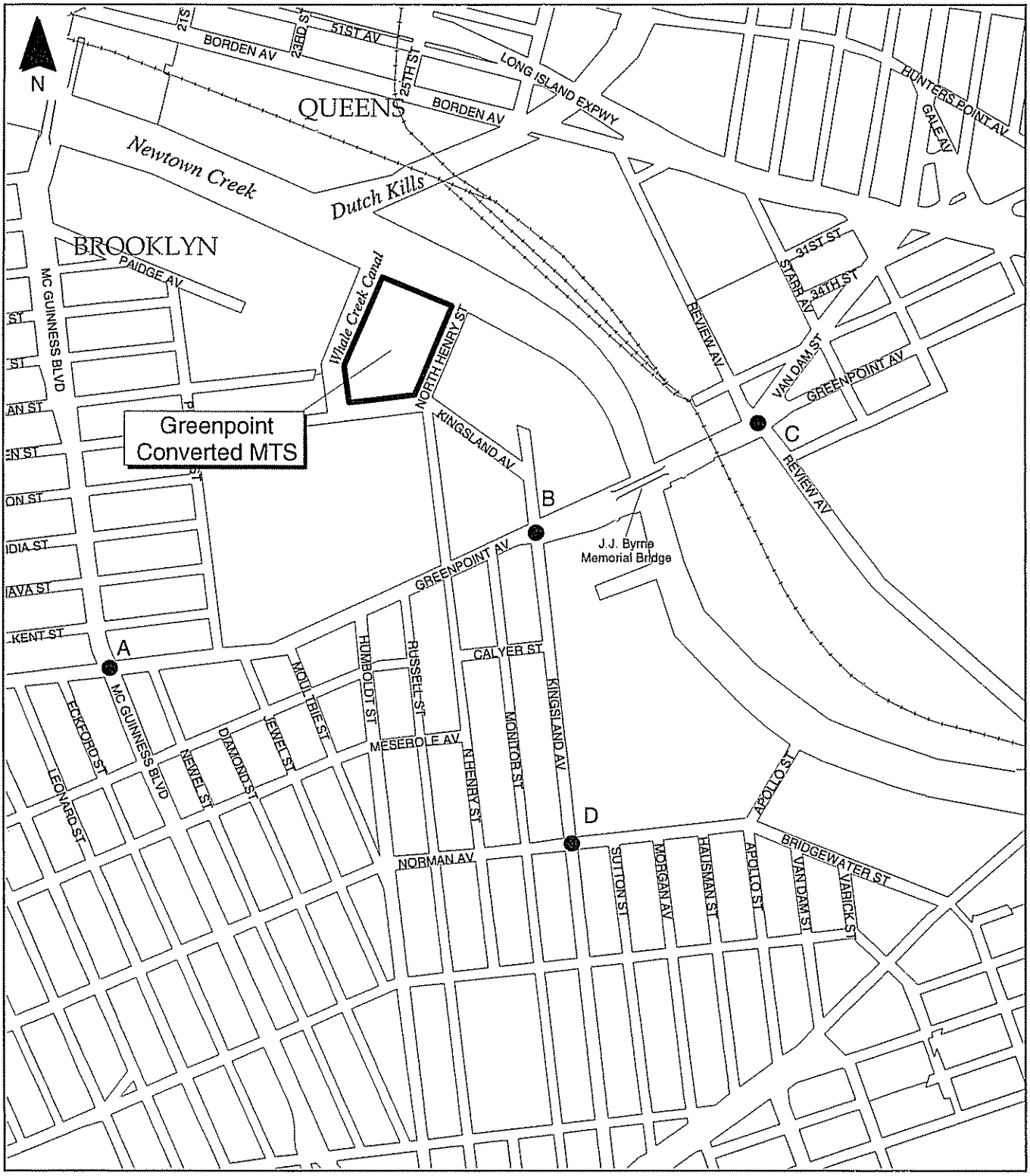
20.14.2.1 Definition of Study Area

The traffic analysis study area is broad and includes the Greenpoint and Long Island City neighborhoods of Brooklyn and Queens, respectively. It includes the corridor along Greenpoint Avenue that is bounded by McGuiness Boulevard on the west and the LIE on the east. The traffic study area is predominantly light industrial in nature. There are no CEQR-defined areas of concern located within the study area. Figure 20.14-1 shows the locations of the intersections selected for analysis (locations A through D). Intersections analyzed were selected using the procedures defined in Section 3.16.

The analysis of collection vehicle routing to the site included highway access points more than ½-mile away in conjunction with local truck routes. Eastbound and westbound collection vehicles would approach the site along Greenpoint Avenue and turn northbound onto Kingsland Avenue. Northbound collection vehicles would approach from the south via Kingsland Avenue.

20.14.2.2 Surface Network

Two major highways, the predominantly east-west LIE and the predominantly north-south BQE, service the traffic analysis study area. Greenpoint Avenue is a local truck route that provides access from the east and west of the site. McGuiness Boulevard and Kingsland Avenue are local truck routes that provide access from south of the site. Maps showing all major truck routes and local truck routes in Brooklyn and Queens are provided in Section 3.16 (see Figures 3.16-3 and 3.16-5).



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

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Figure 20.14-1 Traffic Analysis Study Area

Greenpoint Converted MTS

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Greenpoint Avenue (and Van Dam Street in Queens) and McGuiness Boulevard are principal arterials that provide access to the LIE and BQE, respectively. Norman Avenue is a minor arterial that provides local east-west truck access through the industrial areas of Greenpoint. Kingsland Avenue is a northbound collector road for local traffic and provides access for local and industrial traffic between the BQE (and points south) and Greenpoint Avenue. Review Avenue is a minor arterial and a designated truck route that services the industrial areas north and adjacent to Newtown Creek in Queens.

DSNY and other agency collection vehicles approaching the Greenpoint Converted MTS from the LIE would exit at Greenpoint Avenue and travel west towards the Converted MTS. Other vehicles approaching the Converted MTS from Queens would follow Van Dam Street or Review Avenue to Greenpoint Avenue. DSNY and other agency collection vehicles traveling to the facility from the south would approach the area using the BQE and exit onto Meeker Street. Other vehicles would travel north along Vandervoort Avenue to Meeker Street. From Meeker Street, the vehicles would proceed north along McGuiness Avenue or along various local roads to Norman Avenue and then to Kingsland Avenue. All inbound DSNY and other agency collection vehicles converge at the intersection of Greenpoint Avenue and Kingsland Avenue. At this intersection, all vehicles would proceed north along Kingsland Avenue to the Converted MTS. Exiting vehicles would follow the same truck routes back to their respective CDs, except for vehicles that traveled north on Kingsland Avenue. These vehicles would turn west on Greenpoint Avenue, then travel south on Monitor Street to Norman Avenue, and then follow truck routes back to their CDs.

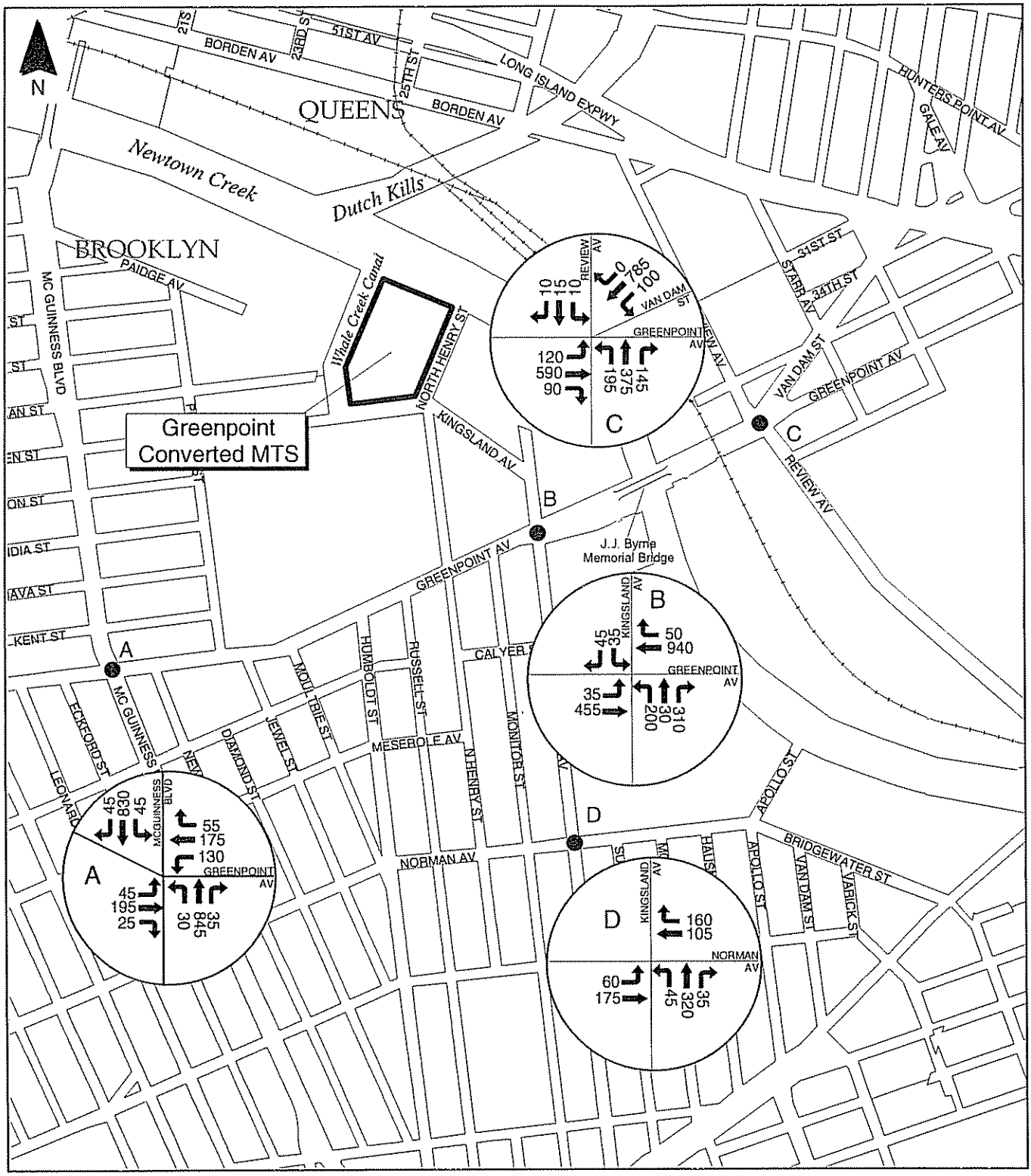
20.14.2.3 Existing Traffic Operations

The four intersections listed below were identified for analysis because they are the most likely to be impacted by the Greenpoint Converted MTS. Diagrams of these intersections are included in technical backup submitted to NYCDOT.

- Greenpoint Avenue and McGuiness Boulevard – Signalized Intersection (see Figure 20.14-1 – location A)
- Greenpoint Avenue and Kingsland Avenue – Signalized Intersection (see Figure 20.14-1 – location B)
- Greenpoint Avenue and Review Avenue and Van Dam Street – Signalized Intersection (see Figure 20.14-1 – location C)
- Norman Avenue and Kingsland Avenue – Signalized Intersection (see Figure 20.14-1 – location D)

Greenpoint Avenue (and Van Dam Street in Queens) and McGuiness Boulevard are principal arterials that provide access to the LIE and BQE, respectively. Norman Avenue is a minor arterial that provides east-west access through the industrial areas of Greenpoint. Kingsland Avenue is a northbound collector road for local traffic and provides access for local and industrial traffic between the BQE (and points south) and Greenpoint Avenue. Review Avenue is a minor arterial that services the industrial areas north and adjacent to Newtown Creek in Queens.

A traffic data collection program that consisted of manual turning movement counts with vehicle classifications and ATR counts was undertaken to define existing weekday traffic operations (see Section 3.16 for a discussion on traffic data collection). Manual turning movement counts were conducted between February 4 and February 6, 2003, while ATR counts were conducted between February 3 and February 7, 2003. Figures 20.14-2, 20.14-3 and 20.14-4 depict the existing traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. The AM peak generally occurred between 7:30 a.m. and 8:30 a.m., the Facility peak between 10:00 a.m. and 11:00 a.m., and the PM peak between 4:45 p.m. and 5:45 p.m. Table 20.14-1 presents the v/c ratio, delay and LOS for the four intersections during the AM, Facility, and PM peaks.



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

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Figure 20.14-2 Existing Traffic Volumes - AM Peak

Greenpoint Converted MTS

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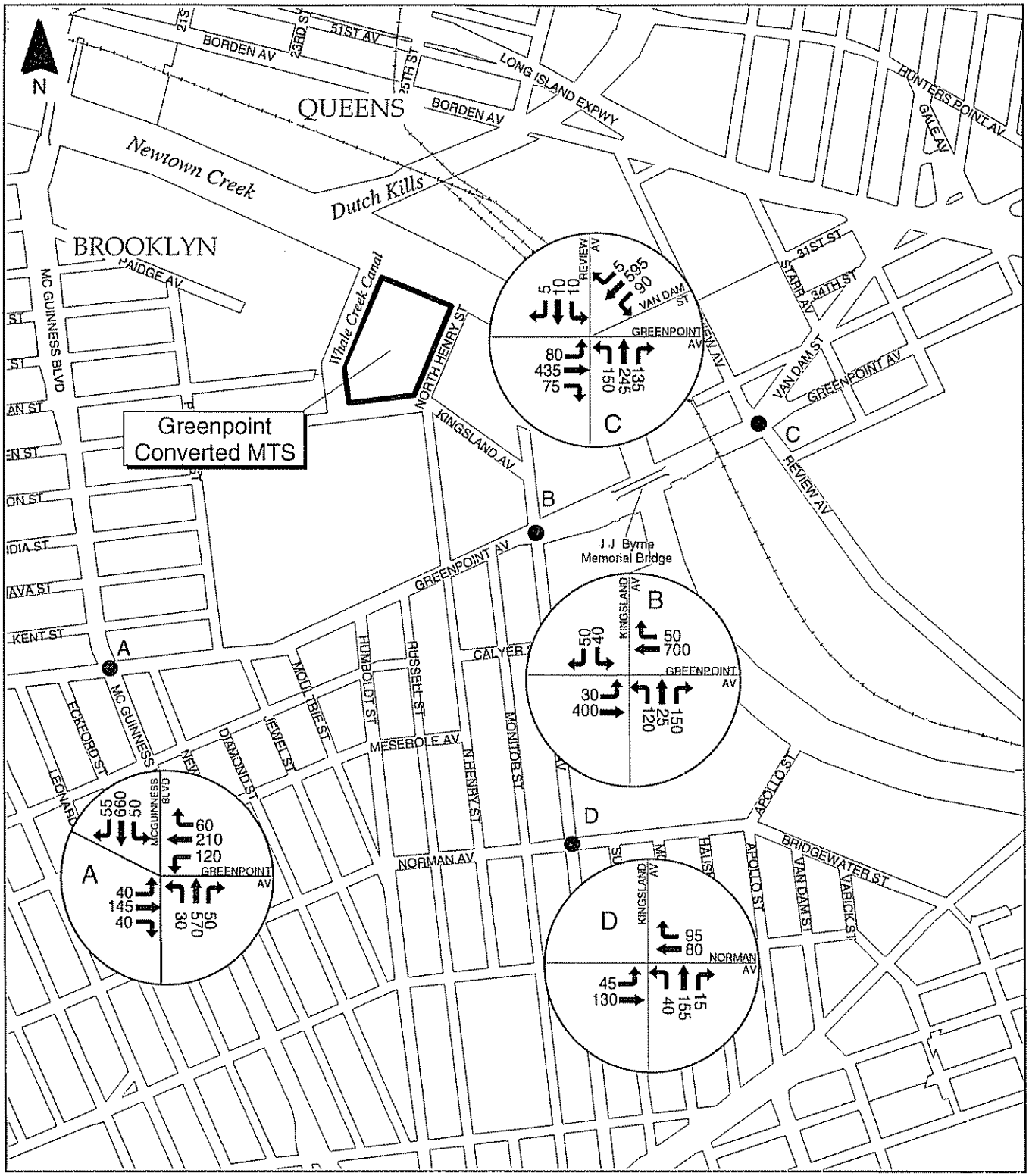

Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-3 Existing Traffic Volumes Facility Peak Greenpoint Converted MTS

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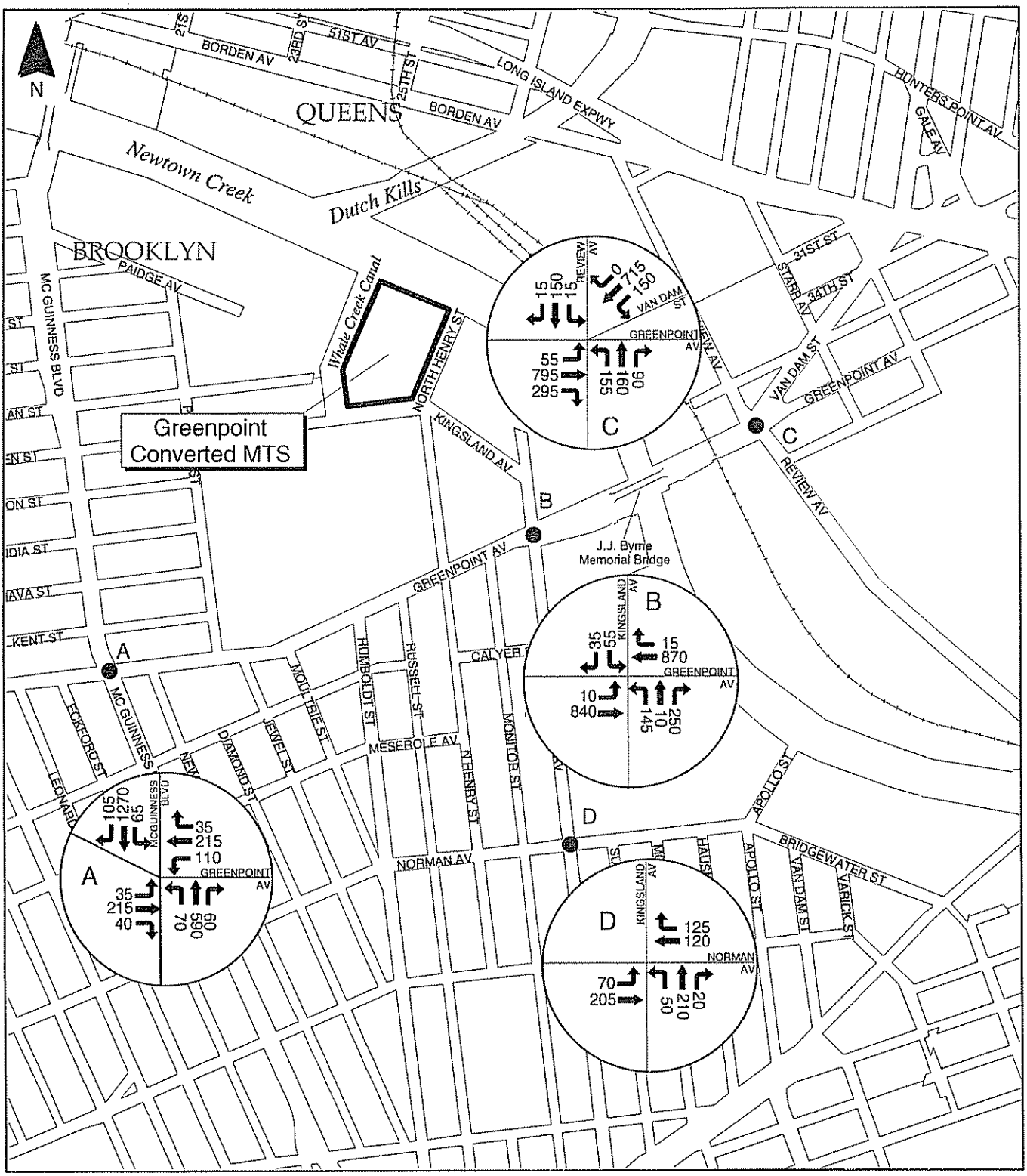

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Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-4 Existing Traffic Volumes - PM Peak

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Table 20.14-1
HCM Analysis[1] – Existing Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.73	50.6	D	0.69	48.4	D	0.77	52.2	D
WB LTR	0.78	46.5	D	1.04	86.9	F	1.04	87.4	F
NB L	0.15	3.8	A	0.10	3.3	A	0.53	16.1	B
NB TR	0.49	4.7	A	0.40	4.1	A	0.39	4.1	A
SB L	0.18	4.2	A	0.16	3.8	A	0.21	4.3	A
SB TR	0.51	4.8	A	0.41	4.2	A	0.80	9.3	A
OVERALL		16.0	B		25.1	C		23.4	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.52	16.3	B	0.38	13.7	B	0.67	20.6	C
WB TR	0.60	18.4	B	0.41	14.2	B	0.50	15.2	B
SB LTR	0.50	14.1	B	0.29	11.8	B	0.33	12.2	B
OVERALL		15.9	B		13.1	B		16.1	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.41	6.9	A	0.39	6.8	A	0.64	9.3	A
WB TR	0.68	9.4	A	0.55	7.9	A	0.62	8.6	A
NB LTR	0.71	22.4	C	0.48	17.8	B	0.54	18.8	B
SB L	0.33	21.7	C	0.23	17.4	B	0.55	28.5	C
SB R	0.19	15.7	B	0.24	16.6	B	0.16	15.3	B
OVERALL		12.5	B		10.2	B		11.6	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	0.98	36.9	D	0.67	12.8	B	0.97	29.7	C
WB LTR	0.88	20.6	C	0.71	13.5	B	1.05	57.5	E
NB LTR	0.76	21.5	C	0.63	18.4	B	0.44	15.2	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.34	14.4	B
OVERALL		26.2	C		14.6	B		35.1	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement

Existing truck traffic through most of the intersections was relatively high. The percentages of trucks increases steadily during the morning hours, remaining at between 20% and 25% during mid-day hours, then decreases to 12% or lower during the PM peak hours.

20.14.2.3.1 LOS at Signalized Intersections

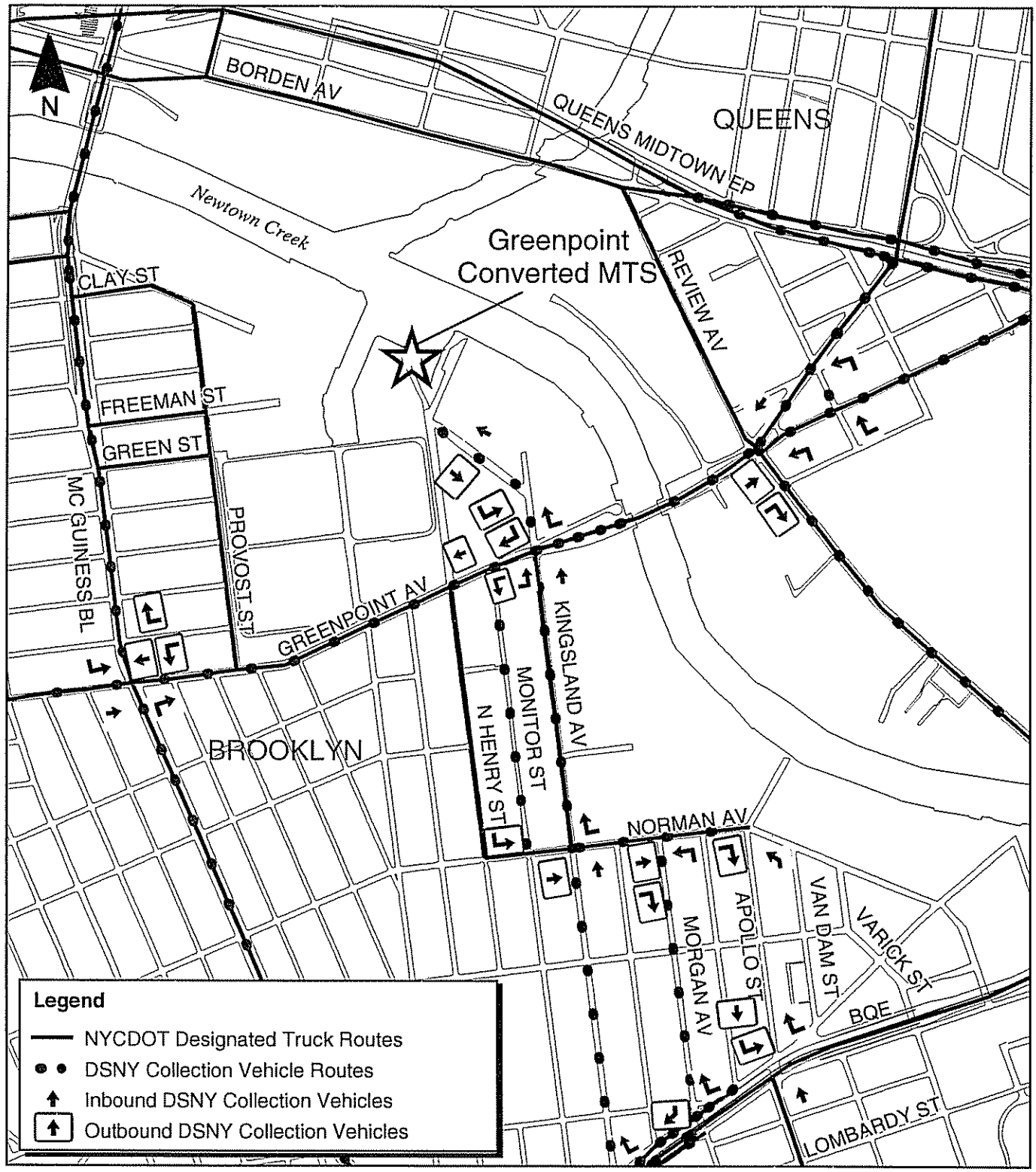
Table 20.14-1 shows that the signalized intersections generally operated at an overall LOS of B or C with the following exceptions. The lane group with the least favorable LOS was the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard. During both the Facility and PM peak hours, this approach operated at LOS F with delays of 86.9 and 87.4 seconds, respectively. During the PM peak hour, the westbound approach at the intersection of Greenpoint Avenue and Review Avenue and Van Dam Street operated at LOS E with 57.5 seconds of delay. Several other lane groups at various intersections operated at LOS D during various peak hours.

20.14.2.3.2 LOS at Unsignalized Intersections

No unsignalized intersections were analyzed.

20.14.2.4 Existing DSNY-Related Traffic

The privately owned Waste Management Review transfer facility, located on Review Avenue between Greenpoint Avenue and Laurel Hill Boulevard in the nearby West Maspeth section of Queens, accepts waste from Queens CDs 2, 3, 4, 5, 6 and 14. The existing DSNY-related traffic in the vicinity of the Greenpoint Converted MTS is generated by the Review Avenue facility. Within the study area, DSNY-related traffic is primarily routed along Greenpoint Avenue, Review Avenue and Van Dam Street. The existing routes to the commercial vendors are presented in Figure 20.14-5.



Site delineations are approximate
Base Map Source: New York City Department of Information Technology & Telecommunications

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Figure 20.14-5 DSNY Collection Vehicle Routes
Greenpoint Converted MTS

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20.14.2.5 Public Transportation

Subway and bus service are provided within the vicinity of the site. The "Greenpoint Avenue" stop on the MTA's "G" subway line is located approximately one mile southwest of the site at the Greenpoint Avenue/Manhattan Avenue intersection. The MTA operates one bus line, B24, along Greenpoint Avenue. Bus stops are located at the Greenpoint Avenue/McGuiness Boulevard and Greenpoint Avenue/Review Avenue/Van Dam Street intersections and scheduled stops occur at various times during the day.

20.14.2.6 Pedestrian Activity

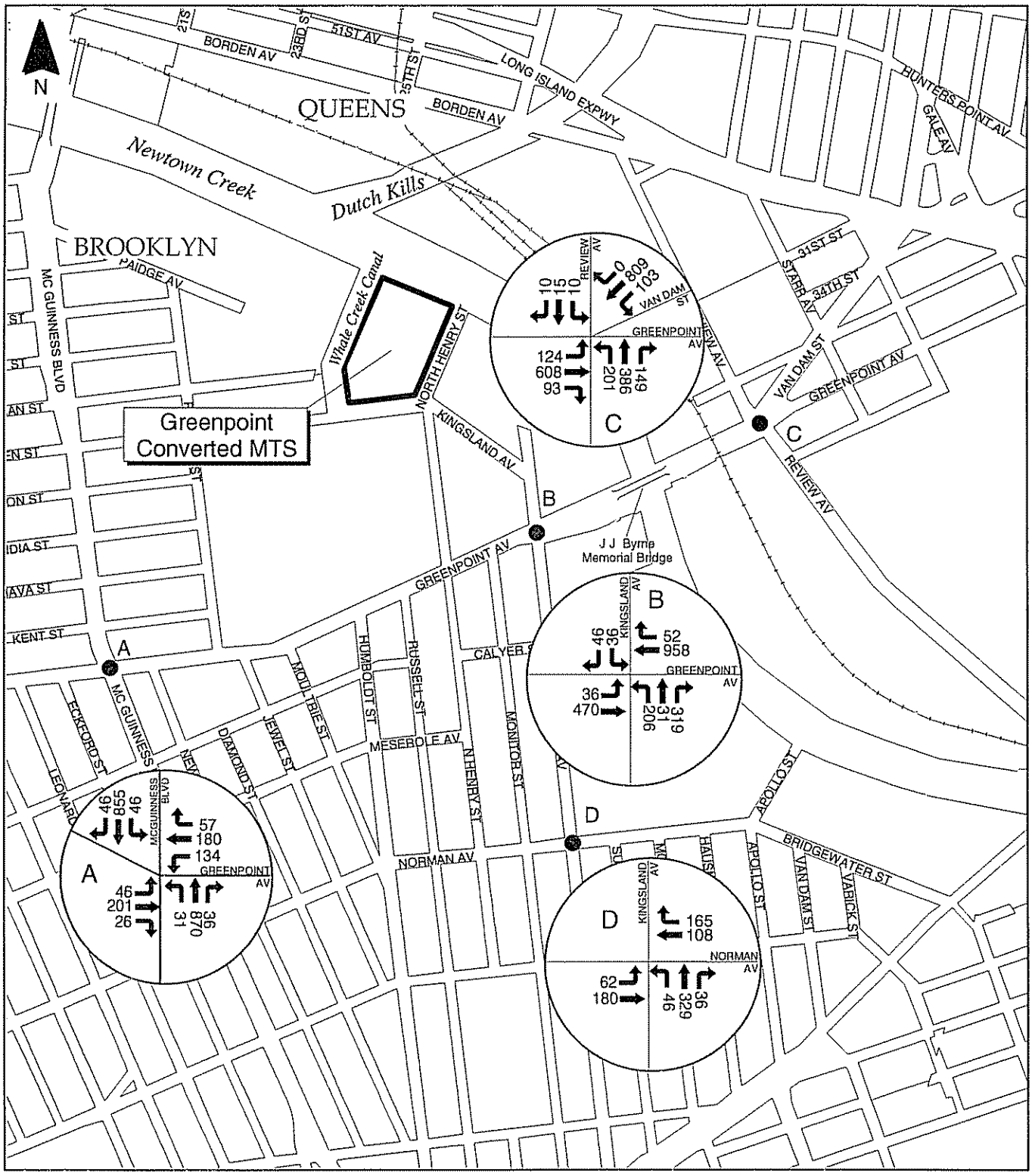
Pedestrian activity is generally low within the study area. Striped crosswalks and pedestrian signals are provided at all signalized study intersections. During several field visits, pedestrian activity was minimal and it is not expected to affect the capacity analysis significantly.

20.14.3 Future No-Build Conditions

20.14.3.1 Traffic Conditions

Future No-Build traffic volumes were determined by applying a growth rate of 1% per year to existing traffic volumes in accordance with the 2001 CEQR Technical Manual. Additional traffic generated in the Future No-Build year (2006) generally amounted to less than 100 vehicles per intersection. There are no new developments planned in the study area that would affect Future No-Build traffic volumes in the study area.

Figures 20.14-6, 20.14-7 and 20.14-8 depict the Future No-Build traffic volumes for AM, Facility, and PM peaks at the intersections analyzed. Table 20.14-2 (Future No-Build Conditions) shows the Future No-Build v/c ratio, delay and LOS for the studied intersections. Overall, signalized intersections experienced relatively small increases in delay (less than 5 seconds) and are projected to remain at their Existing Condition LOS, with the following exceptions:



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

Figure 20.14-6 Future No-Build Traffic Volumes AM Peak Greenpoint Converted MTS

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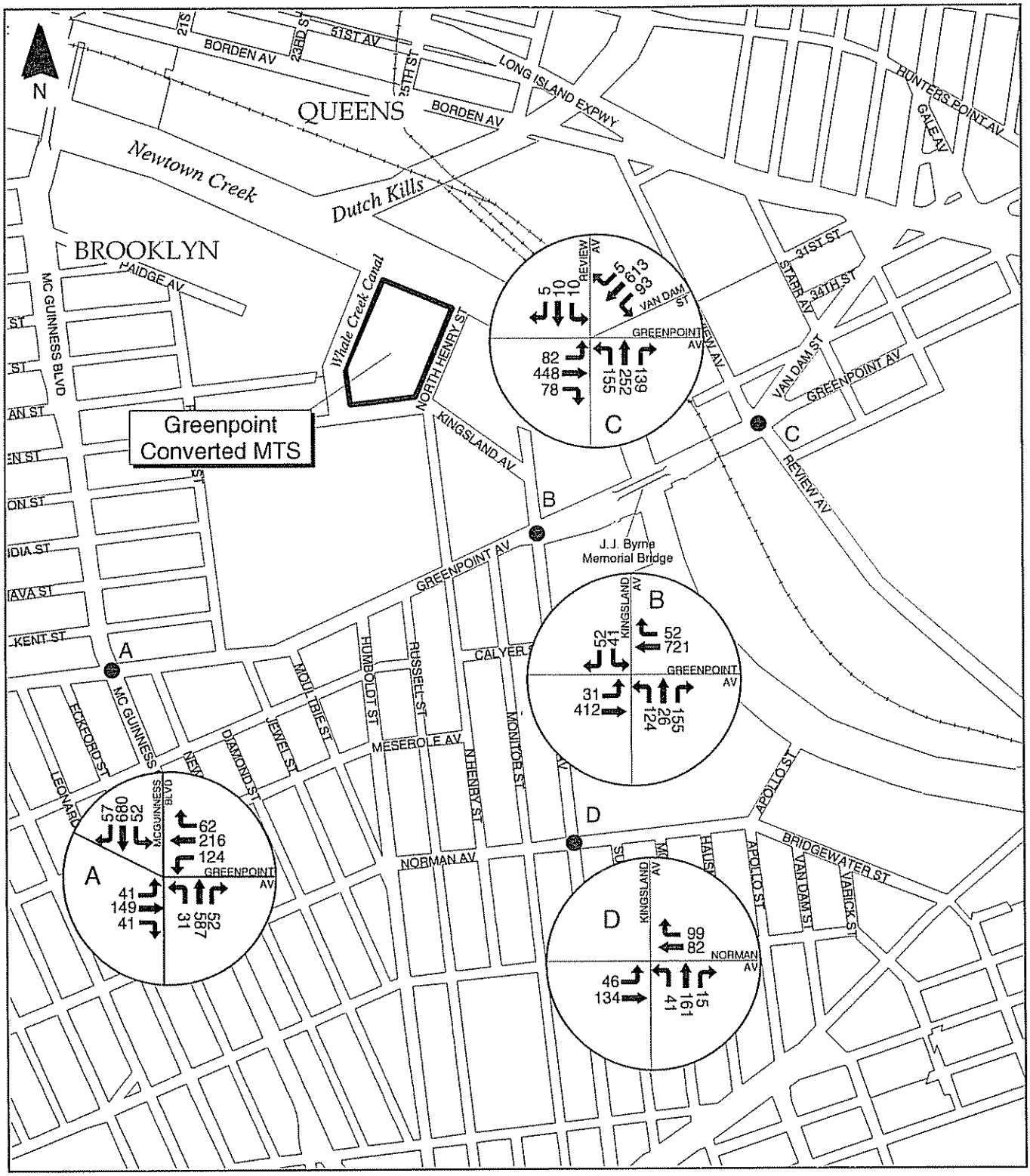

Site delineations are approximate
Base Map Source: New York City Department of City Planning

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Figure 20.14-7 Future No-Build Traffic Volumes Facility Peak Greenpoint Converted MTS

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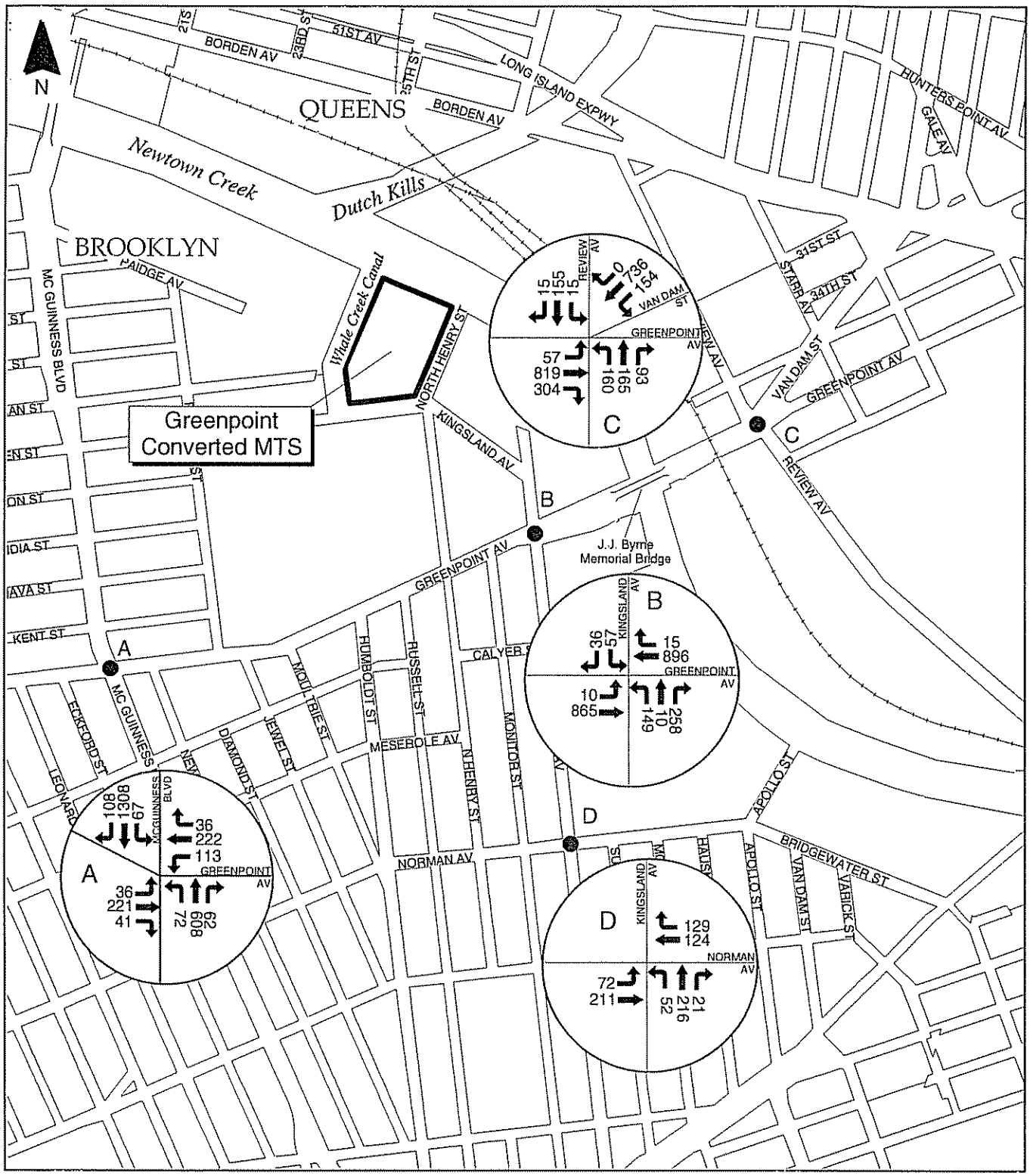

Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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Figure 20.14-8 Future No-Build Traffic Volumes PM Peak Greenpoint Converted MTS

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Table 20.14-2
HCM Analysis[1] – Future No-Build Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.77	53.5	D	0.72	49.9	D	0.80	54.5	D
WB LTR	0.81	48.3	D	1.08	99.8	F	1.08	100.0	F
NB L	0.16	4.0	A	0.11	3.4	A	0.59	20.1	C
NB TR	0.51	4.8	A	0.42	4.2	A	0.41	4.2	A
SB L	0.19	4.4	A	0.17	3.9	A	0.23	4.4	A
SB TR	0.52	4.9	A	0.43	4.3	A	0.83	10.1	B
OVERALL		16.8	B		27.7	C		25.8	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.54	16.8	B	0.40	13.9	B	0.70	21.9	C
WB TR	0.62	18.9	B	0.42	14.5	B	0.51	15.6	B
SB LTR	0.51	14.3	B	0.30	11.9	B	0.34	12.3	B
OVERALL		16.3	B		13.3	B		16.7	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.43	7.0	A	0.41	6.9	A	0.66	9.6	A
WB TR	0.70	9.8	A	0.57	8.1	A	0.63	8.9	A
NB LTR	0.73	23.0	C	0.49	18.0	B	0.56	19.1	B
SB L	0.35	22.6	C	0.24	17.7	B	0.58	30.5	C
SB R	0.20	15.8	B	0.25	16.7	B	0.16	15.4	B
OVERALL		12.9	B		10.4	B		11.9	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	1.04	51.2	D	0.70	13.4	B	1.00	37.4	D
WB LTR	0.92	25.0	C	0.74	14.4	B	1.11	75.6	E
NB LTR	0.78	22.4	C	0.65	18.8	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERALL		32.9	C		15.3	B		44.3	D

Notes:
[1] HCM output is included in technical backup submitted to the NYCDOT.
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement

- During the AM peak hour, the delay of the eastbound approach at the intersection of Greenpoint Avenue and Review Avenue and Van Dam Street increased from 36.9 to 51.2 seconds (LOS D in both cases).

- During the Facility peak hour, the delay of the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard increased from 86.9 to 99.8 seconds (LOS F in both cases).

- During the PM peak hour, the delay of the westbound approach at the intersection of Greenpoint Avenue and McGuiness Boulevard increased from 87.4 to 100.0 seconds (LOS F in both cases). Also during this period, both the eastbound (29.7 to 37.4 seconds) and westbound (57.5 to 75.6 seconds) approaches at the Greenpoint Avenue and Review Avenue and Van Dam Street intersection experienced an increase in delay.

20.14.3.2 Public Transportation

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

20.14.3.3 Pedestrian Activity

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

20.14.4 Potential Impacts with the Greenpoint Converted MTS

The Greenpoint Converted MTS would receive waste from Brooklyn (CDs 1, 3, 4 and 5 and the Auxiliary Field Force [AFF]), Queens (CDs 1, 2, 3, 4, 5 and 6) and Manhattan (AFF). Potential traffic impacts may result from the increase in DSNY and other agency collection vehicle trips to and from the site during all peak hours. Additionally, employee trips to and from the site may result in traffic impacts during the AM peak hour.

20.14.4.1 2006 Future Build Traffic Conditions

2006 Future Build Conditions assume that the Greenpoint Converted MTS would generate 423 net inbound collection vehicles per average peak day. As per NYCDOT Title 34, truck trips to and from the site are restricted to travel along local truck routes directly to the site or the intersection closest to the site if the streets adjacent to the site are not designated truck routes.

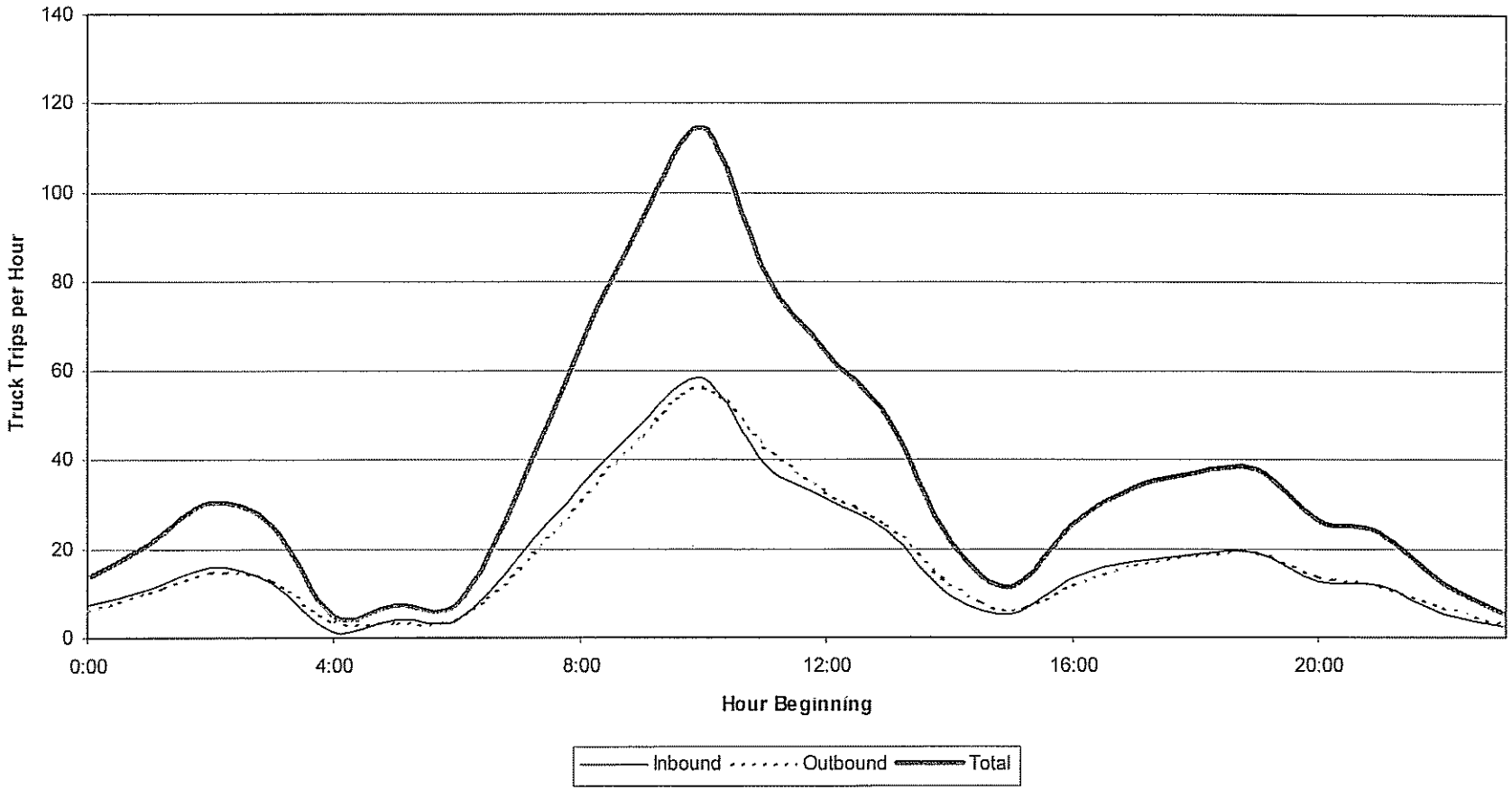
The proposed collection vehicle truck routes for the Greenpoint Converted MTS are shown in Figure 20.14-5.

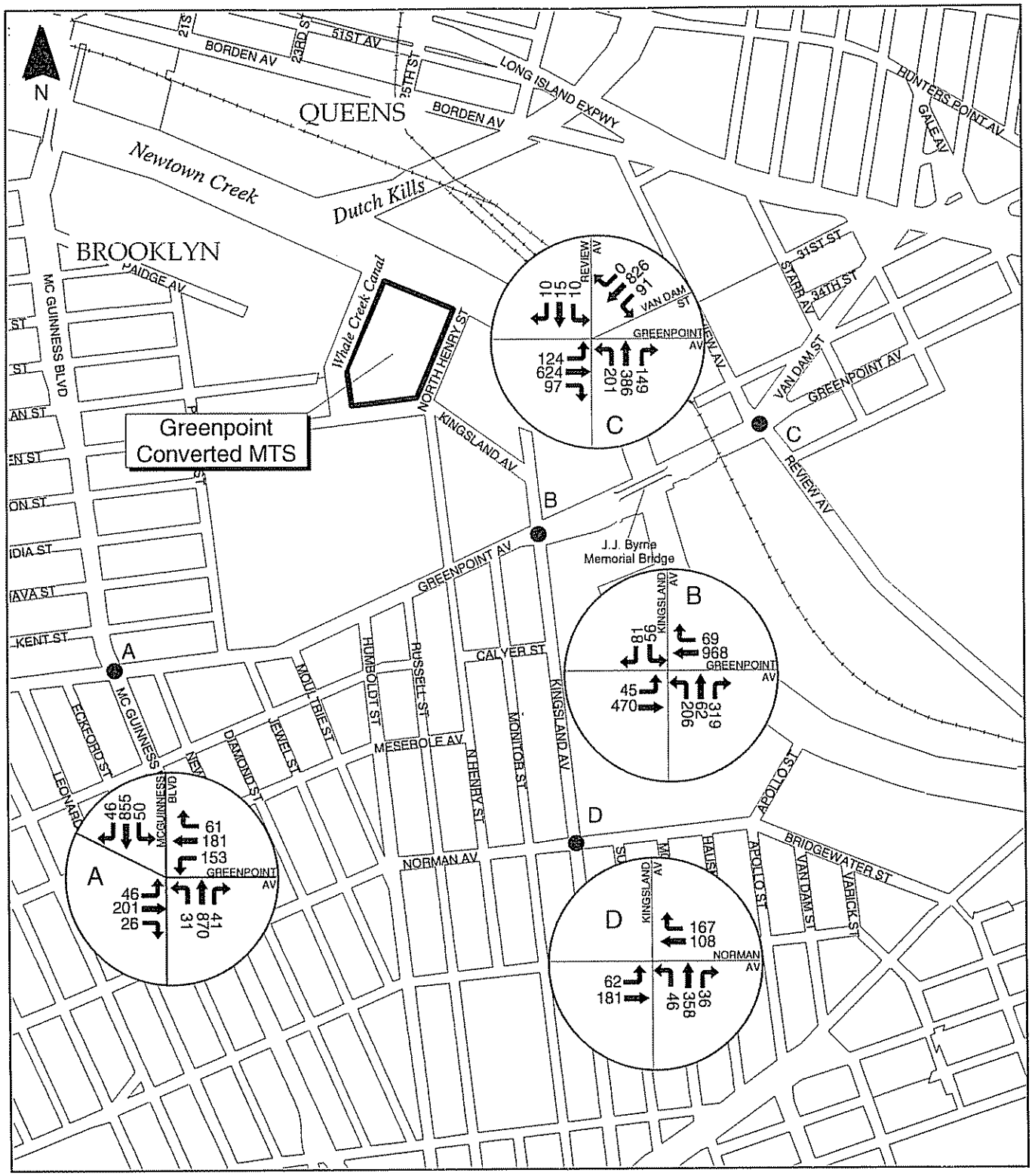
Figure 20.14-9 presents the average peak day temporal distribution of collection vehicles for the Greenpoint Converted MTS. Section 3.16 provides a detailed explanation of DSNY collection and delivery operational shifts (priority, non-priority and relay). As shown, the number of collection vehicles generated by the Greenpoint Converted MTS is expected to vary between approximately 5 to 30 truck trips per hour in the late evening/early morning, 10 to 118 truck trips per hour in the mid-morning/early afternoon, and 10 to 40 truck trips per hour in the late afternoon/early evening. The peak hourly number of collection vehicle truck trips (118) occurs at approximately 10:00 a.m.

Employee trips generated as a result of the Greenpoint Converted MTS are expected to be about 44 per shift (22 entering and 22 departing). Employee shifts are projected to run from 8:00 a.m. to 4:00 p.m., 4:00 p.m. to 12:00 a.m., and 12:00 a.m. to 8:00 a.m. Therefore, during shift changes, employees would arrive about ½-hour before the start of a shift and leave about ½-hour after the end of a shift. With these projections, employee trips are expected between 7:30 a.m. and 8:30 a.m., 3:30 p.m. and 4:30 p.m., and 11:30 p.m. and 12:30 a.m.

Because only the AM peak (7:30 a.m. to 8:30 a.m.) coincided with a projected employee shift change (7:30 a.m. to 8:30 a.m.), employee trips both to and from the Greenpoint Converted MTS during the shift change (44) were considered as part of the net increase in site-generated traffic. Figures 20.14-10, 20.14-11 and 20.14-12 show the intersections analyzed with the net increase in site-generated traffic added to the Future No-Build traffic levels. Figures 20.14-13, 20.14-14 and 20.14-15 show the intersections analyzed with only the net increase in site generated traffic. Traffic volumes indicated by a dash (-) are the result of changing the disposal location from the existing commercial vendor facilities to the Greenpoint Converted MTS. These projected net increases were routed through the intersections for each of the three peak hours. The highest net increase in trucks in the ingress or egress direction was 60. The highest net increase at any one intersection was 118 trucks. Both of these net increases occurred at the intersection of Greenpoint and Kingsland Avenues.

Figure 20.14-9
Truck Trips per Hour
Greenpoint Converted MTS



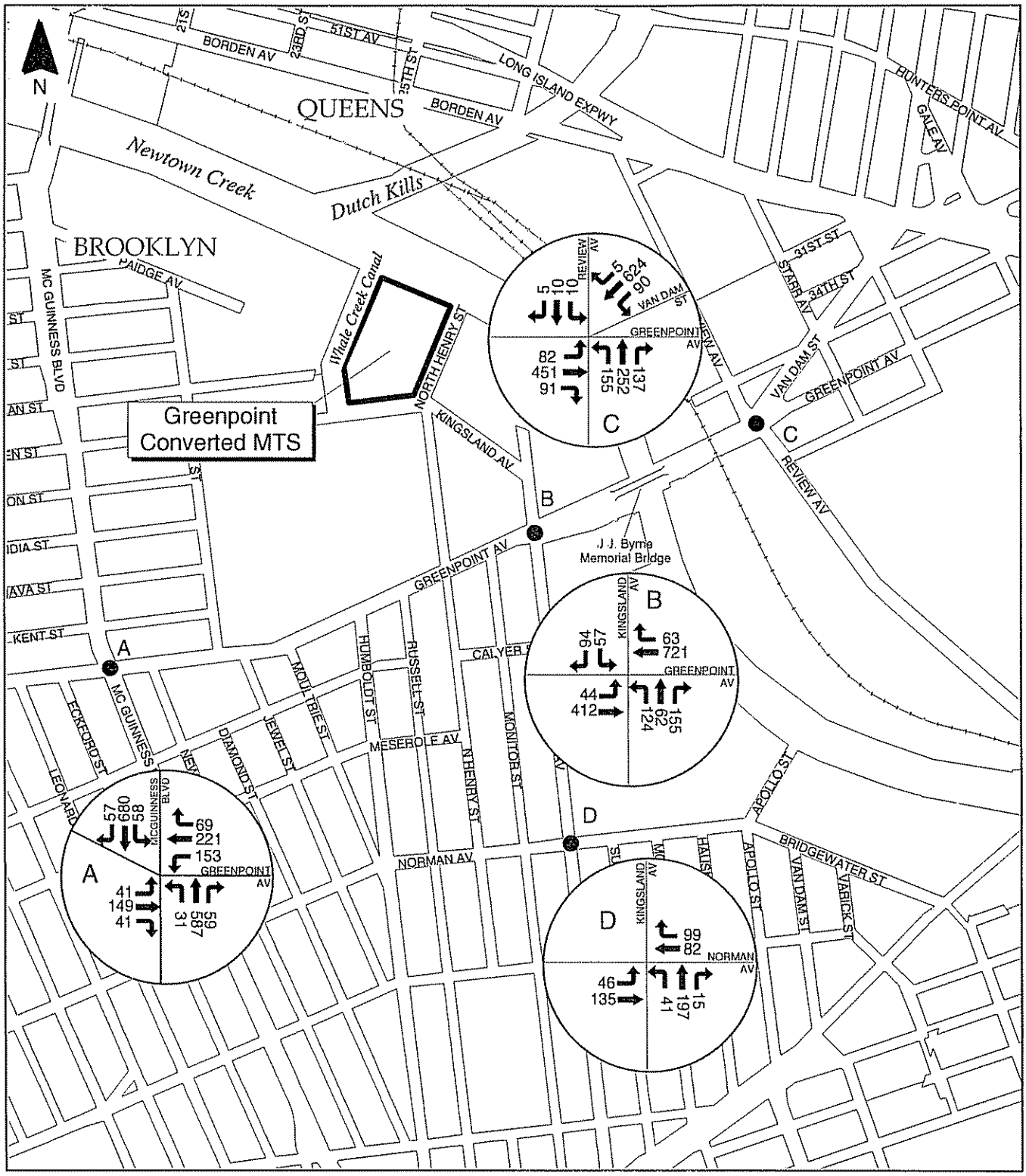


500 0 500 Feet

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

Figure 20.14-10 2006 Future Build Traffic Volumes
AM Peak
Greenpoint Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION



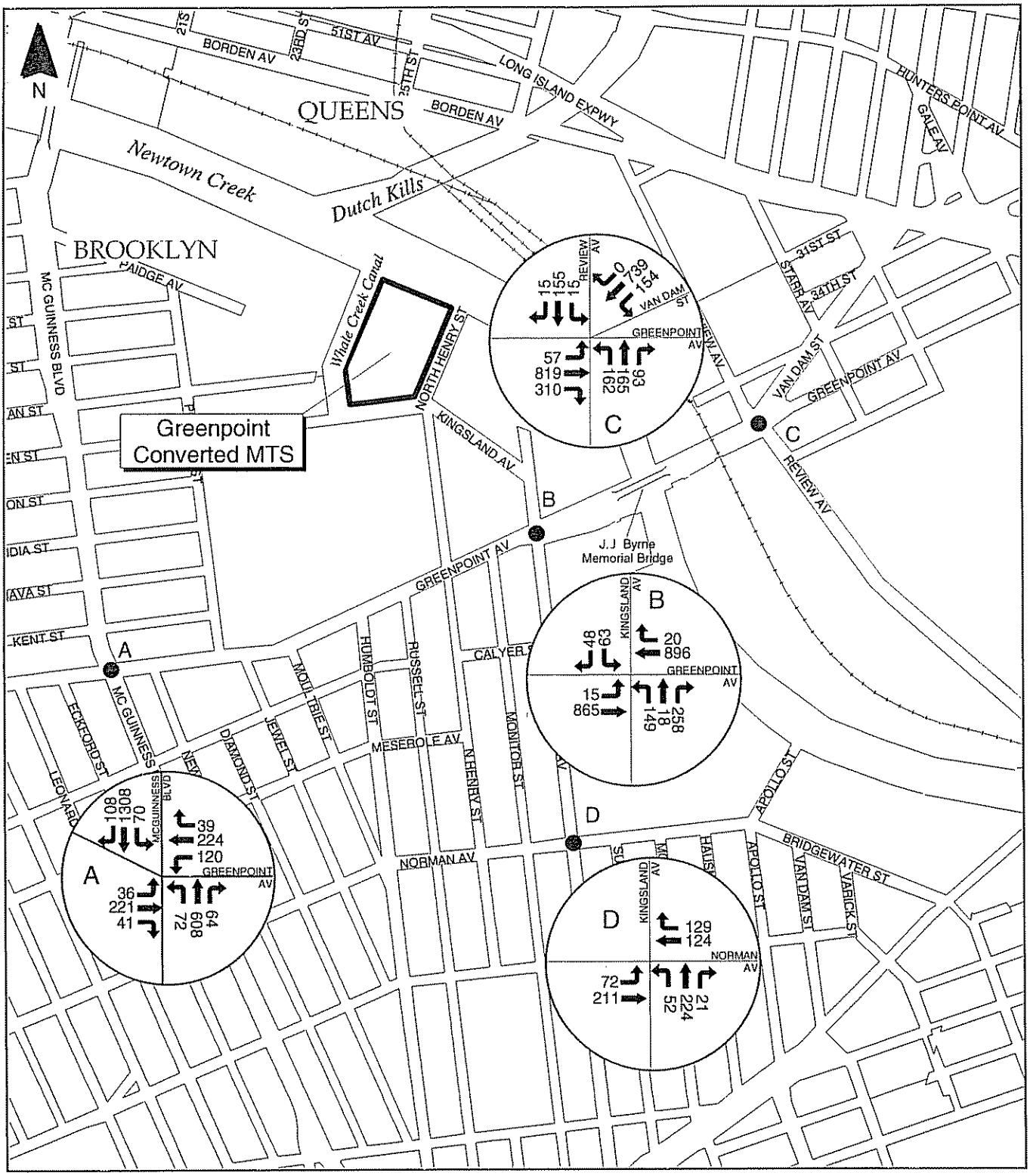
Site delineations are approximate.
Base Map Source: New York City Department of City Planning

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

Figure 20.14-11 2006 Future Build Traffic Volumes Facility Peak Greenpoint Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



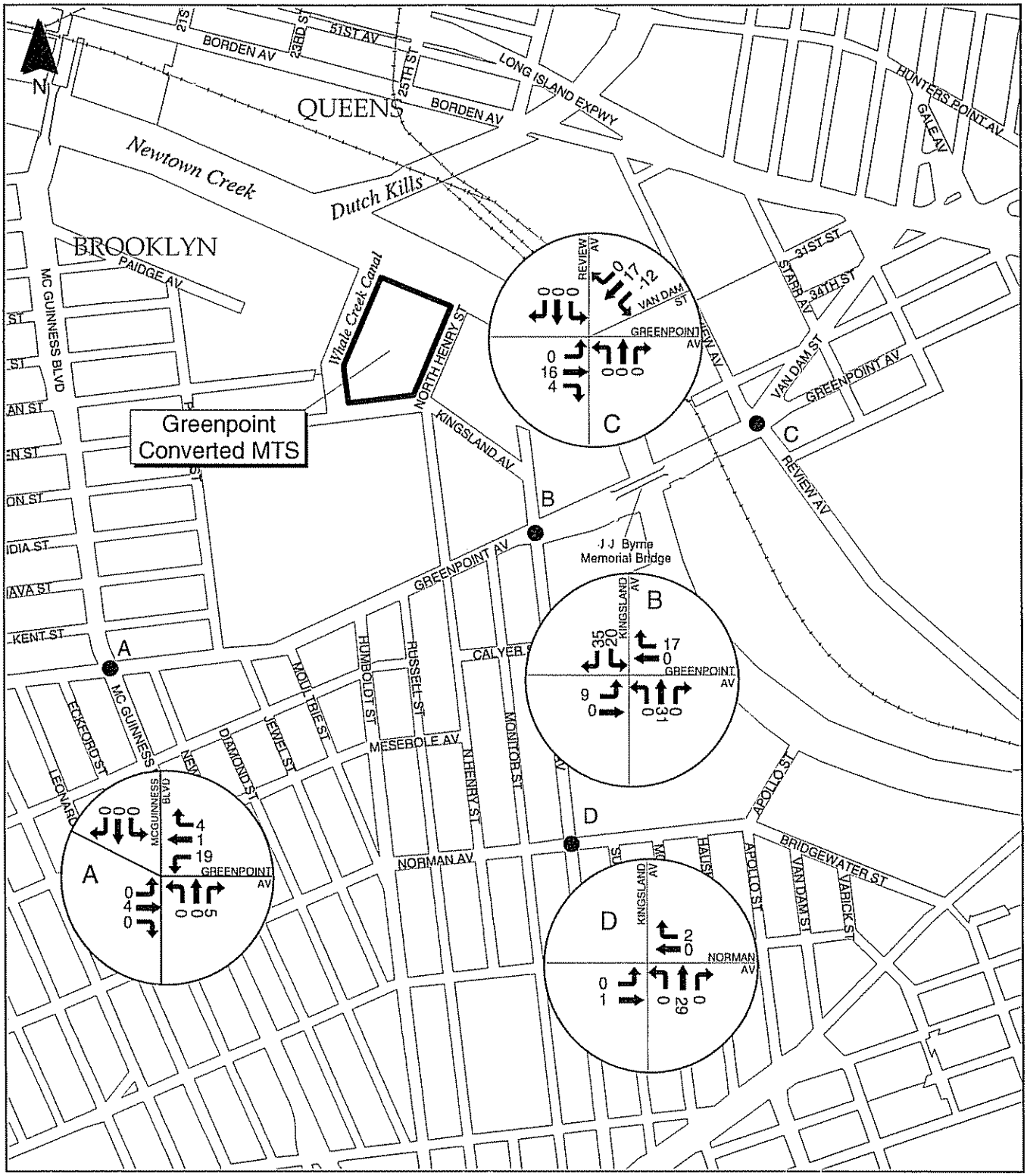
Site delineations are approximate
Base Map Source: New York City Department of City Planning

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

Figure 20.14-12 2006 Future Build Traffic Volumes PM Peak Greenpoint Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

THE CITY OF NEW YORK DEPARTMENT OF SANITATION



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

500 0 500 Feet

HDR URBITRAN EEA Cambridge Environmental Inc HydroQual PB

Figure 20.14-13 2006 Net Traffic - AM Peak

Greenpoint Converted MTS

CITY OF NEW YORK
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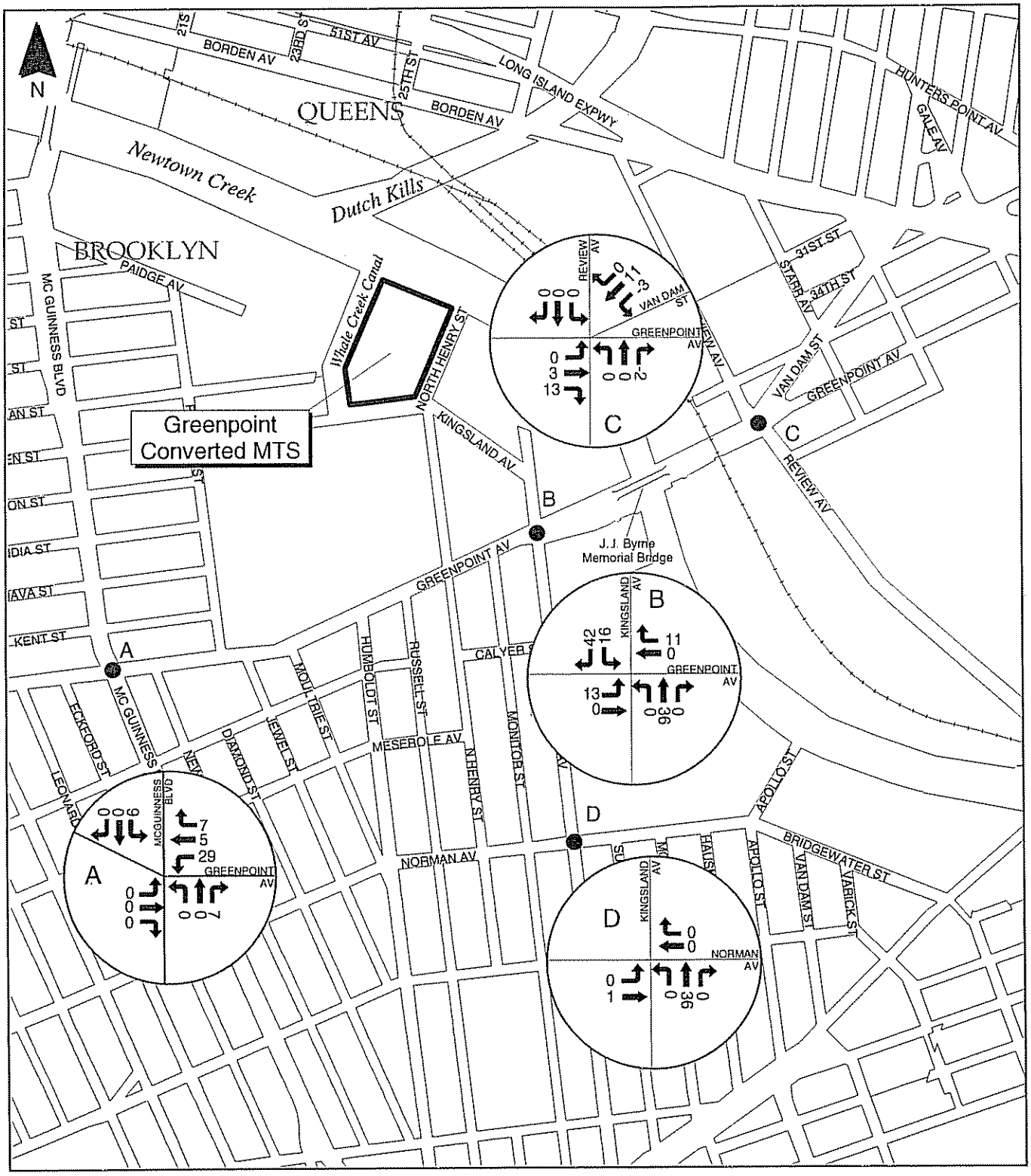

Site delineations are approximate
Base Map Source: New York City Department of City Planning

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

Figure 20.14-14 2006 Net Traffic - Facility Peak

Greenpoint Converted MTS

CITY OF NEW YORK
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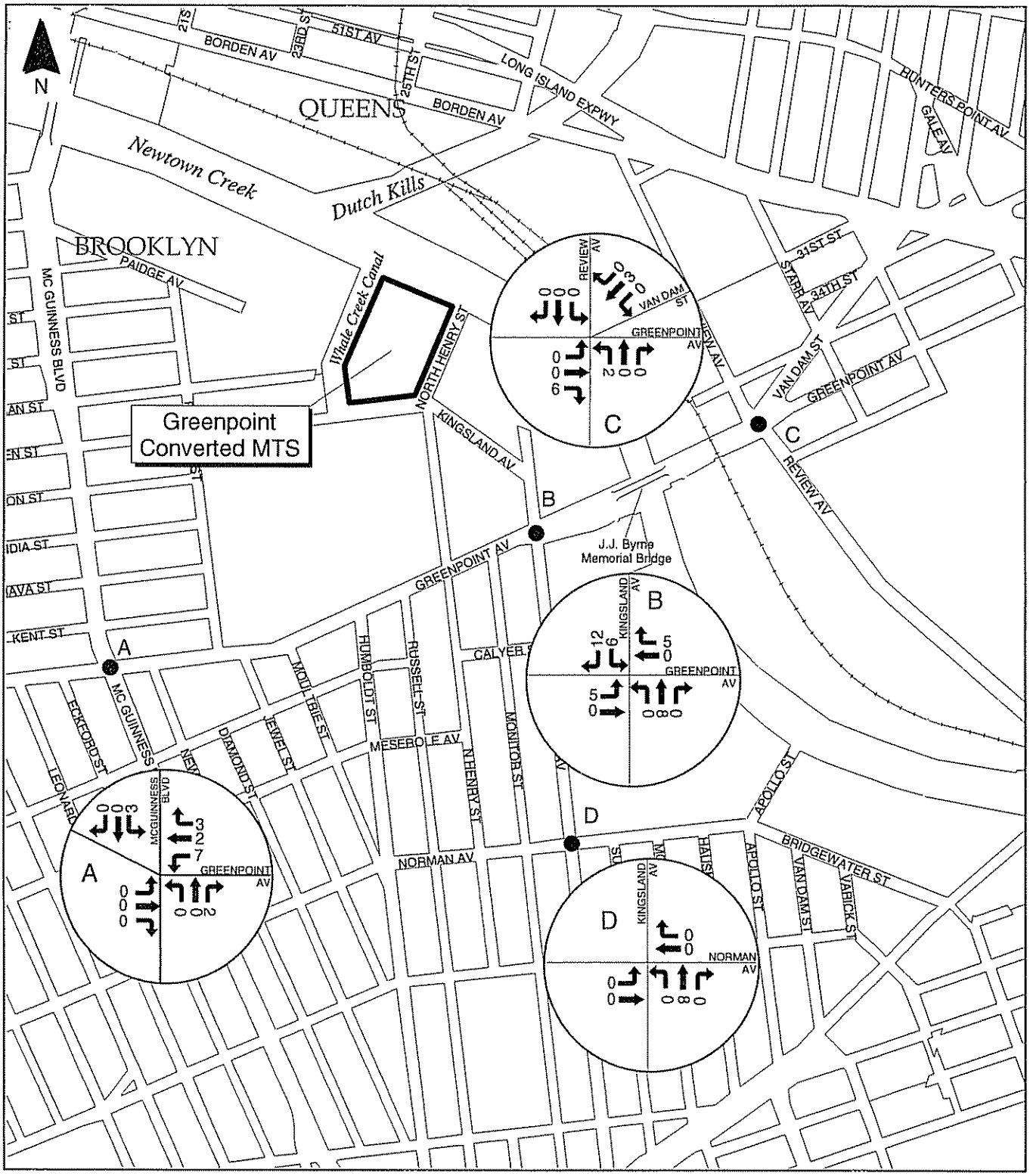
THE CITY OF NEW YORK DEPARTMENT OF SANITATION



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

500 0 500 Feet

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

Figure 20.14-15 2006 Net Traffic - PM Peak

Greenpoint Converted MTS

CITY OF NEW YORK
DEPARTMENT OF SANITATION

The need for Saturday analysis was considered. However, a traffic analysis was not performed on the projected net increases on Saturday truck trips because the total net increase in collection vehicles delivering waste on Saturdays would be approximately 75% of the inbound loads delivered during a typical average peak day. Additionally, traffic data indicated that the weekend background traffic volumes were approximately 55% of weekday traffic volumes. Table 20.14-3 illustrates the decrease in weekday background traffic and the decrease in DSNY and other agency collection vehicle traffic on the weekend. No analysis was performed for Sunday because the Greenpoint Converted MTS would not operate on Sundays. It was, therefore, judged that peak weekday analysis would represent the overall worst-case conditions.

Table 20.14-3
Weekday and Weekend Traffic
Greenpoint Converted MTS

DSNY and Other Agency Collection Vehicle Traffic		**Background Traffic EB and WB on Greenpoint Avenue [1]**	
Average Peak Day Trucks/Day	Saturday Trucks/ Day	Weekday average vehicles/Day	Weekend average vehicles/Day
423	318	29,296	16,171

Note:
[1] EB and WB traffic data collected from ATR counts taken on Greenpoint Avenue between Kingsland Avenue and Monitor Street from September 11 to 17, 2003.

Table 20.14-4 shows the 2006 Future Build v/c ratio, delay time and LOS for the intersections analyzed during the AM, Facility, and PM peak times associated with the Greenpoint Converted MTS. Over an average peak day, the intersections should not experience an extended increase in delay. The three intersections that may experience potentially significant impacts are discussed in Section 20.14.4.2 and summarized in Table 20.14-5.

20.14.4.2 Impacts and Mitigation

Three of the four intersections may experience impacts great enough to be considered significant during one of the peak times analyzed; however, 2001 CEQR Technical Manual guidelines requires mitigation for significant impacts regardless of the duration, as discussed in Section 3.16. The potential impacts identified and the mitigation measures analyzed are presented below; their effectiveness is summarized in Table 20.14-5.

Table 20.14-4
HCM Analysis[1] – 2006 Future Build Conditions
Greenpoint Converted MTS

Intersection & Lane Group	AM Peak Hour (7:30 a.m. – 8:30 a.m.)			Facility Peak Hour (10:00 a.m. – 11:00 a.m.)			PM Peak Hour (4:45 p.m. – 5:45 p.m.)		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized)									
EB LTR	0.71	48.3	D	0.75	52.0	D	0.82	56.1	E
WB DFL	0.84	60.8	E	-	-	-	-	-	-
WB TR	0.70	44.9	D	-	-	-	-	-	-
WB LTR	-	-	-	1.23	156.6	F	1.15	125.0	F
NB L	0.16	4.0	A	0.11	3.4	A	0.59	20.1	C
NB TR	0.51	4.8	A	0.42	4.3	A	0.41	4.2	A
SB L	0.22	4.7	A	0.21	4.3	A	0.24	4.6	A
SB TR	0.52	4.9	A	0.43	4.3	A	0.83	10.1	B
OVERALL		16.9	B		40.6	D		29.8	C
Norman Avenue & Kingsland Avenue (signalized)									
EB L	0.54	16.9	B	0.40	14.0	B	0.70	21.9	C
WB TR	0.63	19.2	B	0.42	14.5	B	0.51	15.6	B
SB LTR	0.56	15.0	B	0.37	12.6	B	0.36	12.5	B
OVERALL		16.5	B		13.4	B		16.7	B
Greenpoint Avenue & Kingsland Avenue (signalized)									
EB LT	0.47	7.5	A	0.48	7.7	A	0.69	10.0	B
WB TR	0.72	10.1	B	0.59	8.3	A	0.64	9.0	A
NB LTR	0.78	24.9	C	0.56	19.0	B	0.58	19.5	B
SB L	0.57	35.0	C	0.43	23.7	C	0.71	40.5	D
SB R	0.40	19.6	B	0.55	24.1	C	0.24	16.6	B
OVERALL		14.2	B		11.7	B		12.9	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized)									
EB LTR	1.07	60.3	E	0.73	14.3	B	1.01	39.8	D
WB LTR	0.87	19.9	B	0.75	14.8	B	1.12	79.4	E
NB LTR	0.78	22.4	C	0.65	18.7	B	0.46	15.4	B
SB LTR	0.08	12.1	B	0.07	12.1	B	0.35	14.5	B
OVERALL		34.6	C		15.8	B		46.5	D

Notes:

[1] HCM output is included in technical backup submitted to the NYCDOT.

DFL = defacto left
LTR = left, through and right movements
NB = northbound
SB = southbound
EB = eastbound
WB = westbound
LT = left through movement
L= left movement
TR = through right movement
R = right movement

Table 20.14-5
HCM Analysis[1] – 2006 Future Build Conditions with Mitigation
Greenpoint Converted MTS

Intersection & Lane Group	2006 Future No-Build			2006 Future Build			2006 Future Build after Mitigation		
	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS	V/C Ratio	Delay (sec/veh)	LOS
Greenpoint Avenue & McGuinness Boulevard (signalized) – AM Peak									
EB LTR	0.77	53.5	D	0.71	48.3	D	0.59	39.8	D
WB DFL	-	-	-	0.84	60.8	E	0.78	50.7	D
WB TR	-	-	-	0.70	44.9	D	0.60	38.1	D
WB LTR	0.81	48.3	D	-	-	-	-	-	-
NB L	0.16	4.0	A	0.16	4.0	A	0.17	6.3	A
NB TR	0.51	4.8	A	0.51	4.8	A	0.55	7.7	A
SB L	0.19	4.4	A	0.22	4.7	A	0.24	7.7	A
SB TR	0.52	4.9	A	0.52	4.9	A	0.56	7.9	A
OVERALL		16.8	B		16.9	B		16.6	B
Greenpoint Avenue & McGuinness Boulevard (signalized) – Facility Peak									
EB LTR	0.72	49.9	D	0.75	52.0	D	0.62	41.2	D
WB LTR	1.08	99.8	F	1.23	156.6	F	1.09	99.2	F
NB L	0.11	3.4	A	0.11	3.4	A	0.12	5.4	A
NB TR	0.42	4.2	A	0.42	4.3	A	0.45	6.9	A
SB L	0.17	3.9	A	0.21	4.3	A	0.22	6.6	A
SB TR	0.43	4.3	A	0.43	4.3	A	0.45	6.9	A
OVERALL		27.7	C		40.6	D		27.9	C
Greenpoint Avenue & McGuinness Boulevard (signalized) – PM Peak									
EB LTR	0.80	54.5	D	0.82	56.1	E	0.75	49.0	D
WB LTR	1.08	100.0	F	1.15	125.0	F	1.07	94.8	F
NB L	0.59	20.1	C	0.59	20.1	C	0.63	25.3	C
NB TR	0.41	4.2	A	0.41	4.2	A	0.42	5.1	A
SB L	0.23	4.4	A	0.24	4.6	A	0.25	5.6	A
SB TR	0.83	10.1	B	0.83	10.1	B	0.85	12.4	B
OVERALL		25.8	C		29.8	C		26.3	C
Greenpoint Avenue & Kingsland Avenue (signalized) – PM Peak									
EB LT	0.66	9.6	A	0.69	10.0	B	0.71	11.2	B
WB TR	0.63	8.9	A	0.64	9.0	A	0.66	10.1	B
NB LTR	0.56	19.1	B	0.58	19.5	B	0.55	18.2	B
SB L	0.58	30.5	C	0.71	40.5	D	0.67	35.2	D
SB R	0.16	15.4	B	0.24	16.6	B	0.23	15.6	B
OVERALL		11.9	B		12.9	B		13.2	B
Greenpoint Avenue & Van Dam Street / Review Avenue (signalized) – AM Peak									
EB LTR	1.04	51.2	D	1.07	60.3	E	1.02	43.7	D
WB LTR	0.92	25.0	C	0.87	19.9	B	0.84	16.7	B
NB LTR	0.78	22.4	C	0.78	22.4	C	0.82	24.9	C
SB LTR	0.08	12.1	B	0.08	12.1	B	0.09	12.8	B
OVERALL		32.9	C		34.6	C		28.3	C

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

Greenpoint Avenue/McGuiness Boulevard – During the AM peak hour, a potential impact was identified on the westbound approach when the increase in delay created a defacto left movement operating at LOS E with a delay of 67.6 seconds. During the Facility peak hour, the same (westbound) approach is expected to experience an increase in delay from 99.8 seconds to 185.3 seconds (LOS F in both cases). During the PM peak hour, the delay of the westbound approach is expected to increase from 100.0 seconds to 126.0 seconds (LOS F in both cases). During both the AM and Facility peak hours, an increase in green time of five seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay.

This mitigation measure would subtract five seconds from the northbound and southbound approach green time, but would improve the LOS for the westbound approach to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches. During the PM peak hour, an increase in green time of two seconds for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract two seconds from the northbound and southbound approach green time, but would improve the LOS for the westbound approach (again) to below Future No-Build Condition levels with minimal increases to the delay of the northbound and southbound approaches.

Greenpoint Avenue/Kingsland Avenue – During the PM peak hour, a potential impact was identified on the southbound left movement when the delay increased from 30.5 seconds to 40.5 seconds (LOS C to LOS D).

An increase in green time of one second for the northbound and southbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second of green time from the eastbound and westbound approaches, but would reduce the delay for the southbound left movement from 40.5 seconds to 35.2 seconds. The delay of both the northbound and southbound (right) approaches would decrease by approximately one second. The eastbound and westbound approach delays would increase by approximately one second. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

Greenpoint Avenue/Review Avenue/Van Dam Street – During the AM peak hour, a potential impact was identified on the eastbound approach when the delay increased from 51.2 seconds to 60.3 seconds (LOS D to LOS E).

An increase in green time of one second for the eastbound and westbound approaches should eliminate this unacceptable increase in delay. This mitigation measure would subtract one second of green time from the northbound and southbound approaches, but would reduce the delay for the eastbound approach from 60.3 seconds to 43.4 seconds. The delay of the westbound approach would decrease by 3.5 seconds. The eastbound and westbound approach delays would increase by 2.5 seconds and 0.7 seconds, respectively. This mitigation should not generate any adverse impacts on other lane groups during other time periods.

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

20.14.4.3 Public Transportation

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

20.14.4.4 Pedestrian Activity

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

20.15 Air Quality

20.15.1 Definition of the Study Areas

The study area for the on-site air quality analysis for criteria pollutants (except $PM_{2.5}$) is defined as the area within 500 meters (0.3 miles) of the property line in all directions. The study area for the on-site analysis for $PM_{2.5}$ is defined as the area within 500 meters from the highest impact location of the Greenpoint Converted MTS. The study area for the off-site air quality analysis is defined as the area or intersection listed in Section 20.15.4.2.

20.15.2 Existing Conditions

Applicable air quality data collected at the monitoring station(s) nearest to the study area are shown in Table 20.15-1. These data were compiled by NYSDEC for the latest calendar year for which applicable data are currently available. The monitored levels do not exceed national and state ambient air quality standards.

Table 20.15-1
Representative Ambient Air Quality Data
Greenpoint Converted MTS

Pollutant	Monitor	Averaging Time	Value	NAAQS
CO[(1)]	MTA, Flatbush Avenue between Tillary Street and Johnson Avenue	8-Hour	3,436 $\mu g/m^3$	10,000 $\mu g/m^3$
		1-Hour	4,695 $\mu g/m^3$	40,000 $\mu g/m^3$
NO_2	College Point Post Office	Annual	56 $\mu g/m^3$	100 $\mu g/m^3$
PM_{10}[(2)]	Greenpoint	Annual	23 $\mu g/m^3$	50 $\mu g/m^3$
		24-Hour	51 $\mu g/m^3$	150 $\mu g/m^3$
SO_2[(2)]	Greenpoint	3-Hour	188 $\mu g/m^3$	1,300 $\mu g/m^3$
		24-Hour	84 $\mu g/m^3$	365 $\mu g/m^3$
		Annual	18 $\mu g/m^3$	80 $\mu g/m^3$

Notes:
Source: NYCDEP, April 2003 & USEPA Airdata – Monitor Values Report (http://oaspub.epa.gov/airdata)
(1) Values are the highest pollutant levels recorded during the 2003 calendar year.
(2) Values are the highest pollutant levels recorded during the 1999 calendar year.

20.15.3 Future No-Build Conditions

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

20.15.4 Potential Impacts with the Greenpoint Converted MTS

20.15.4.1 On-Site Analysis

20.15.4.1.1 Sources Considered in the Analysis

The sources of emissions and the number of each type of source that are anticipated to be in operation during the peak hour and under daily average conditions are provided in Table 20.15-2. Figure 20.15-1 shows the locations of these sources within the site.

20.15.2.1.2 Results of the Criteria Pollutant Analysis

The highest estimated criteria pollutant concentrations at any of the receptor locations considered are presented in Table 20.15-3. These values are below the national and state ambient air quality standards for the appropriate averaging time periods. In addition, the highest estimated changes in 24-hour and annual $PM_{2.5}$ concentrations from Greenpoint Converted MTS-generated vehicles at any of the receptor locations considered, which are also presented in Table 20.15-3, are below the STVs. Based on the results presented in Table 20.15-3, operations at the Greenpoint Converted MTS would not significantly impact air quality in the area.

20.15.2.1.3 Results of the Toxic Pollutant Analysis

The results of the toxic pollutant analysis are summarized in Table 20.15-4. The highest estimated non-carcinogenic toxic air pollutant impacts are below the short-term (acute) and long-term (chronic) hazard index thresholds specified in New York State's Air Guide 1. In addition, the highest

Table 20.15-2
Emission Sources Considered for On-Site Air Quality Analysis[1]
Greenpoint Converted MTS

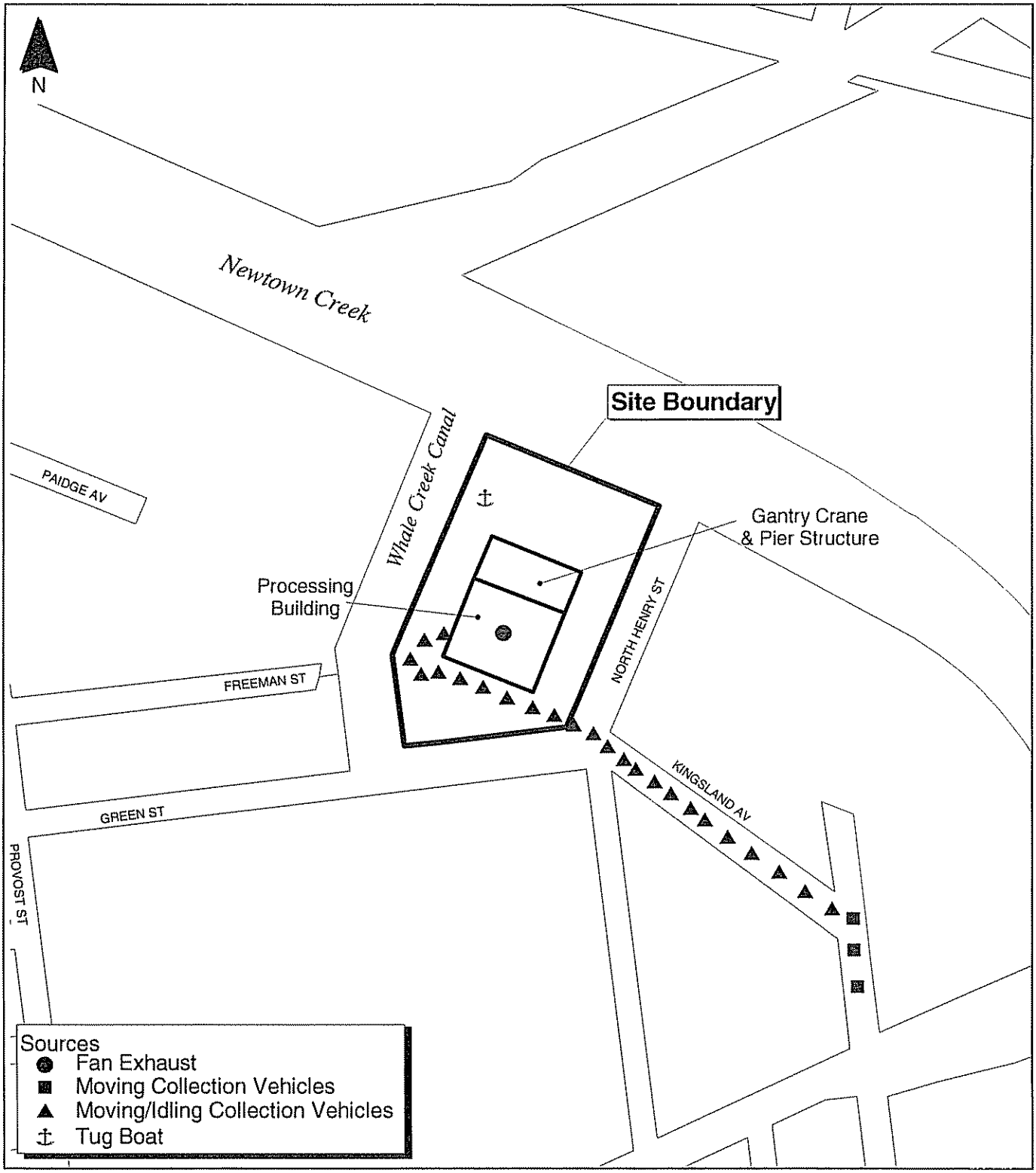
Type of Emission Source	Maximum Number of Sources Operated During a Single Hour[2]	Number of Sources Operated During 24-hour and Annual Average Hour
Within Processing Building		
Wheel Loaders	2	1
Mini Loaders	1	1
Tamping Cranes	1	1
Mini-Sweepers	1	1
Vacuum Sweepers	1	1
Moving/Queuing Collection Vehicles	46	18
Space Heaters	10	10
Boiler	1	1
Outside Processing Building		
Moving Collection Vehicles	46	18
Queuing Collection Vehicles[3]	37 in, 1 out	3 in, 1 out
Oceangoing Tugboats	1	1

Notes:

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

(2) This is based on design capacity of the Converted MTS, not analyzed truck arrival rates.

(3) Peak 8-hour and 3-hour average number of queuing collection vehicles outside building is 6. Theoretically, the 3-hour value should be no less than one-third of the peak 1-hour value (37), but for this analysis, the 3-hour and 8-hour values are more realistic estimates of actual peak queuing activity, while the 1-hour peak is a conservative assumption based on the maximum available physical queuing space on the entrance road/ramp.



Site delineations are approximate.
Base Map Source: New York City Department of City Planning
Note: These are modeled source locations used in the on-site air quality analysis and do not represent individual collection vehicles

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Figure 20.15-1 On-Site Air Quality Analysis

Greenpoint Converted MTS

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Table 20.15-3
Highest Estimated Concentrations of the Criteria Pollutants from On-Site Emissions
Greenpoint Converted MTS

Pollutant	Averaging Time Period	Maximum Impacts from On-Site Emission Sources [1]	Background Pollutant Concentrations [2]	Highest Estimated On-Site Pollutant Concentrations	NAAQS[3]	STV[4]
Carbon Monoxide (CO), $\mu g/m^3$	1-hour[6]	726	~~2,635~~ 3,781	~~3,361~~ 4,507	40,000	NA
	8-hour[6]	302	~~3,322~~ 2,635	~~3,624~~ 2,937	10,000	NA
Nitrogen Dioxide (NO_2), $\mu g/m^3$	Annual	11	56	67	100	NA
Particulate Matter (PM_{10}), $\mu g/m^3$	24-hour[7]	12	~~57~~ 90	~~69~~ 102	150	NA
	Annual	2	~~23~~ 20	~~25~~ 22	50	NA
Particulate Matter ($PM_{2.5}$), $\mu g/m^3$	24-hour	2.36	NA	NA	NA	5
	Annual Neighborhood Average [5]	0.029[5]	NA	NA	NA	0.1
Sulfur Dioxide (SO_2), $\mu g/m^3$	3-hour[6]	143	~~189~~ 186	~~332~~ 329	1,300	NA
	24-hour[6]	11	~~87~~ 107	~~98~~ 118	365	NA
	Annual	2	~~21~~ 18	~~23~~ 20	80	NA

Notes:

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

[2] Background concentrations were obtained from the NYCDEP in ~~April 2003~~memorandum dated February 18, 2005.

[3] NAAQS = National Ambient Air Quality Standard.

[4] Screening threshold value (STV) established by the NYCDEP and NYSDEC.

[5] Average $PM_{2.5}$ concentration over 1 km x 1 km "neighborhood-scale" receptor grid.

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

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

NA = Not Applicable

Table 20.15-4
Highest Estimated Non-Cancer Hazard Index and Cancer Risk of Toxic Air Pollutants from On-Site Emissions
Greenpoint Converted MTS

No.	Toxic Air Pollutants	Acute Non-Cancer Risk			Chronic Non-Cancer Risk			Cancer Risk		
		Highest Estimated Short-Term (1-hr) Pollutant Conc.[1] ($\mu g/m^3$)	Short-Term (1-hr) Guideline Conc. (SGCs)[2] ($\mu g/m^3$)	Acute Non-Cancer Hazard Index[3]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Long-Term (Annual) Guideline Conc. (AGCs)[5] ($\mu g/m^3$)	Chronic Non-Cancer Hazard Index[6]	Highest Estimated Long-Term (Annual) Pollutant Conc.[4] ($\mu g/m^3$)	Unit Risk Factors[7] ($\mu g/m^3$)	Maximum Cancer Risk[8,9]
Carcinogenic Pollutants										
1	Benzene	5.02E-01	1.30E+03	3.86E-04	3.48E-03	1.30E-01	2.68E-02	3.48E-03	8.30E-06	2.89E-08
2	Formaldehyde	6.34E-01	3.00E+01	2.11E-02	4.40E-03	6.00E-02	7.33E-02	4.40E-03	1.30E-05	5.72E-08
3	1,3 Butadiene	2.10E-02	-	-	1.46E-04	3.60E-03	4.05E-02	1.46E-04	2.80E-04	4.08E-08
4	Acetaldehyde	4.12E-01	4.50E+03	9.16E-05	2.86E-03	4.50E-01	6.36E-03	2.86E-03	2.20E-06	6.29E-09
5	Benzo(a)pyrene	1.01E-04	-	-	7.01E-07	2.00E-03	3.50E-04	7.01E-07	1.70E-03	1.19E-09
Non-Carcinogenic Pollutants[10]										
6	Propylene	1.39E+00	-	-	9.62E-03	3.00E+03	3.21E-06	9.62E-03	NA	NA
7	Acrolein	4.97E-02	1.90E-01	2.62E-01	3.45E-04	2.00E-02	1.72E-02	3.45E-04	NA	NA
8	Toluene	2.20E-01	3.70E+04	5.94E-06	1.53E-03	4.00E+02	3.81E-06	1.53E-03	NA	NA
9	Xylenes	1.53E-01	4.30E+03	3.56E-05	1.06E-03	7.00E+02	1.52E-06	1.06E-04	NA	NA
10	Anthracene	1.01E-03	-	-	6.97E-06	2.00E-02	3.49E-04	6.97E-06	NA	NA
11	Benzo(a)anthracene	9.03E-04	-	-	6.26E-06	2.00E-02	3.13E-04	6.26E-06	NA	NA
12	Chrysene	1.90E-04	-	-	1.32E-06	2.00E-02	6.58E-05	1.32E-06	NA	NA
13	Naphthalene	4.56E-02	7.90E+03	5.77E-06	3.16E-04	3.00E+00	1.05E-04	3.16E-04	NA	NA
14	Pyrene	2.57E-03	-	-	178E-05	2.00E-02	8.91E-04	1.78E-05	NA	NA
15	Phenanthrene	1.58E-02	-	-	1.10E-05	2.00E-02	5.48E-03	1.10E-04	NA	NA
16	Dibenz(a,h)anthracene	3.14E-04	-	-	2.17E-06	2.00E-02	1.09E-04	2.17E-06	NA	NA
		Total Estimated Acute Non-Cancer Hazard Index		**2.83E-01**	**Total Estimated Chronic Non-Cancer Hazard Index**		**1.72E-01**	**Total Estimated Combined Cancer Risk**		**1.34E-07**
		Acute Non-Cancer Hazard Index Threshold[11]		**1.0E+00**	**Chronic Non-Cancer Hazard Index Threshold[11]**		**1.0E+00**	**Cancer Risk Threshold[11]**		**1.0E-06**

Notes to Table 20.15-4:

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

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

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

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

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

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

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

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

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

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

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

NA = Not Applicable

estimated carcinogenic impacts are less than the one-in-a-million threshold level that is defined by NYSDEC as being significant. As such, the potential impacts of the toxic pollutant emissions from the on-site operations of the Greenpoint Converted MTS are not considered to be significant.

20.15.4.2 Off-Site Analysis

20.15.4.2.1 Pollutants Considered and Analyses Conducted

Locations potentially affected by DSNY and other collection agency's collection vehicles were identified using 2001 CEQR Technical Manual guidelines outlined in Section 3.17. Following these guidelines, mobile source analyses were conducted at the following locations for the applicable (i.e., worst-case) time periods:

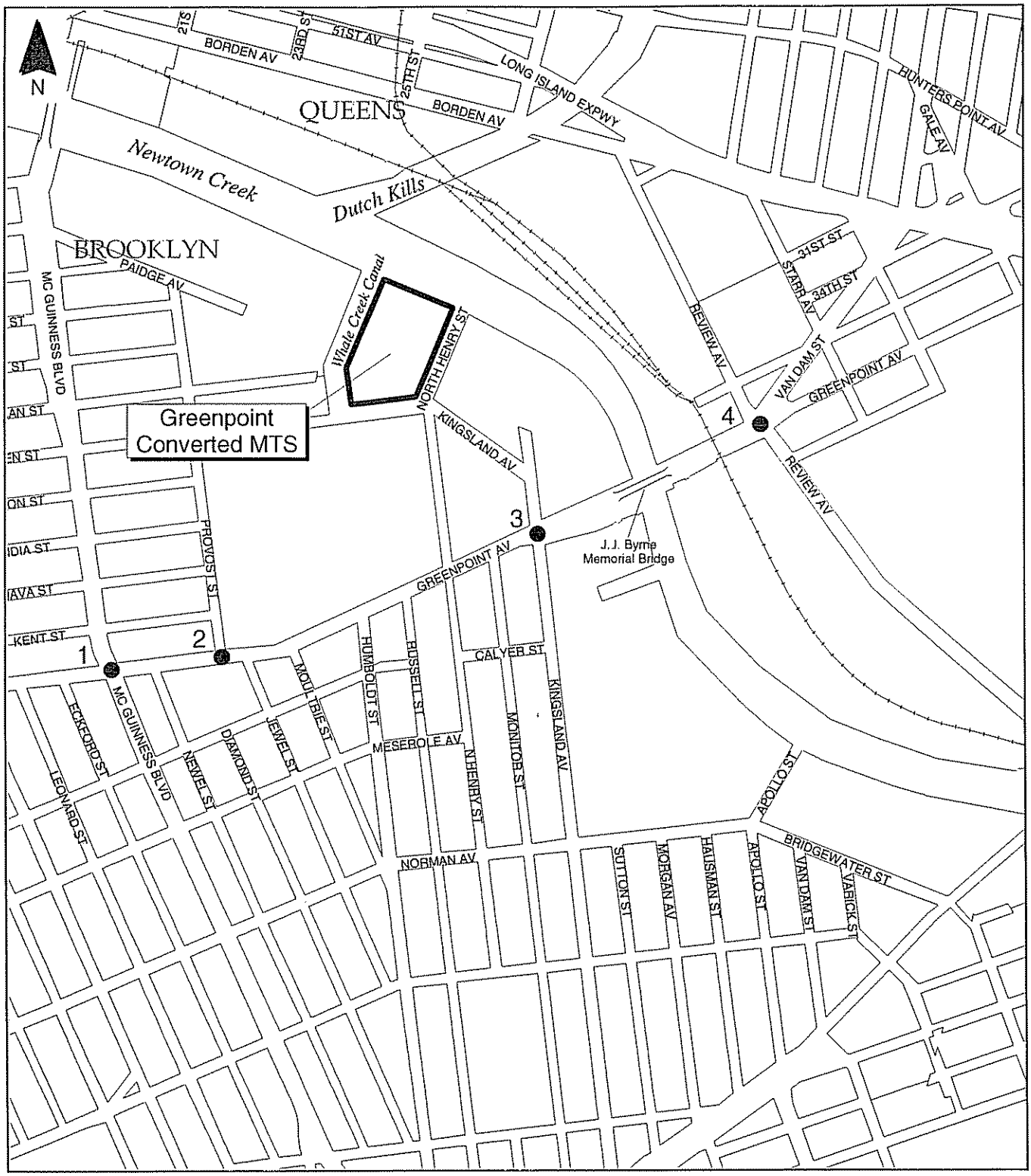
- The intersections of Kingsland Avenue at Greenpoint Avenue and Kingsland Avenue at Norman Avenue to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's 8-hour CO "de minimus" value or a violation of the 8-hour NAAQS;
- The intersections of Kingsland Avenue at Greenpoint Avenue, Kingsland Avenue at Norman Avenue, Greenpoint Avenue at Review Avenue and Van Dam Street, and Greenpoint Avenue at McGuiness Boulevard and Provost Street to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of NYCDEP's and NYSDEC's 24-hour and annual $PM_{2.5}$ STVs; and
- The intersections of Kingsland Avenue at Greenpoint Avenue, Kingsland Avenue at Norman Avenue, Greenpoint Avenue at Review Avenue and Van Dam Street, and Greenpoint Avenue at McGuiness Boulevard and Provost Street to determine whether Greenpoint Converted MTS-generated traffic has the potential to cause exceedances of the 24-hour and annual PM_{10} NAAQS.

The roadway intersections selected for the mobile source analysis are shown in Figure 20.15-2.

20.15.4.2.2 Results of the Off-Site Analysis

Applicable pollutant concentrations estimated near each selected intersection, which are shown in Table 20.15-5, are all within (less than) the applicable state and federal ambient air quality standards, STVs (for $PM_{2.5}$) and/or "de minimus" impact values (for CO) with the exception of the annual $PM_{2.5}$ neighborhood STV at the intersection of Kingsland Avenue at Greenpoint

Avenue. However, it should be noted that the off-site air analysis at this intersections as performed using a conservative Tier I approach which assumes peak hour conditions for every hour of the day. If a Tier II approach was performed for the annual $PM_{2.5}$ neighborhood analyses, the concentrations reported in Table 20.15-5 would decrease by as much as 40%, thereby bringing the results below the STV. In addition, a precipitation factor adjustment could be applied to Equation 1 in Section 13.2.1.3 of AP-42 used to determine the $PM_{2.5}$ emission factors. This factor assumes that annual average emissions are inversely proportional to the frequency of measurable (>0.01 inch) precipitation. Applying the precipitation factor to the off-site annual $PM_{2.5}$ neighborhood analysis would further decrease the concentrations reported in Table 20.15-5. —Therefore, the off-site operations of the Greenpoint Converted MTS, ~~therefore,~~ are not considered to be significant.



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

Figure 20.15-2 Off-Site Air Quality Intersections Studied Greenpoint Converted MTS

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Table 20.15-5
Estimated Pollutant Concentrations Near Selected Roadway Intersections
Greenpoint Converted MTS

Air Quality Receptor Site	CO	PM_{10}		$PM_{2.5}$					
				24 -hrs			Annual Neighborhood		
	8-hr CO Conc.[1] ppm (NAAQS: 9 ppm)	24-hr PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 150 $\mu g/m^3$)	Annual PM_{10} Conc.[1] $\mu g/m^3$ (NAAQS: 50 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[3] $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 5 $\mu g/m^3$)	Impacts from On-Site Emission Sources[2] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Impacts from Off-Site Emission Sources[4] $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)	Total Combined Impacts from On- and Off-Site Emission Sources $\mu g/m^3$ (STV: 0.1 $\mu g/m^3$)
Kingsland Avenue, Greenpoint Avenue & Norman Avenue									
Existing Conditions	5.2	137	40						
Future No-Build Conditions	4.8	138	40						
Future Build Conditions	4.9	138	40						
Future Build Incremental				0.22	0.70	0.92	0.029	0.05[6]	0.079
Greenpoint Avenue, Review Avenue & VanDam Street									
Existing Conditions	NA[5]	148	46						
Future No-Build Conditions	NA[5]	135	37						
Future Build Conditions	NA[5]	136	37						
Future Build Incremental				0.13	0.30	0.43	0.029	0.07	0.099
Greenpoint Avenue, McGuiness Boulevard & Provost Street									
Existing Conditions	NA[5]	137	37						
Future No-Build Conditions	NA[5]	138	37						
Future Build Conditions	NA[5]	139	38						
Future Build Incremental				0.13	0.50	0.63	0.029	0.05	0.079

Notes for Table 20.15-5:

(1) CO and PM_{10} concentrations are the maximum concentrations estimated using the AM, Facility, and PM peak traffic information plus background concentration (8 hr CO = 2.3 ppm; 24-hr PM_{10} = ~~57~~ 90 $\mu g/m^3$; Annual PM_{10} = ~~23~~ 20 $\mu g/m^3$).

(2) The maximum incremental concentrations of the on-site emissions at the intersection considered.

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

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

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

(6) The result of a Tier I analysis for this intersection (0.13$\mu g/m^3$) which assumed that peak period project traffic occur every hour of a 24-hour analysis period, was multiplied by a conservative ratio (0.40) of peak period project-induced traffic to average project-induced traffic to approximate the Tier II result (0.05$\mu g/m^3$).

ppm: parts per million

$\mu g/m^3$: microgram per cubic meter

NA = Not Applicable

20.16 Odor

20.16.1 Existing Conditions

The existing MTS is not in operation, and there are no existing sources of odor at the site. The study area is within 500 meters (0.3 miles) from the facility boundary. The locations for sensitive receptors in this analysis are the same as those used in the noise analysis. The nearest sensitive receptor is the apartment building located on Van Dam Street southwest of the LIE, approximately 1,188 feet away from the site boundary.

20.16.2 Future No-Build Conditions

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

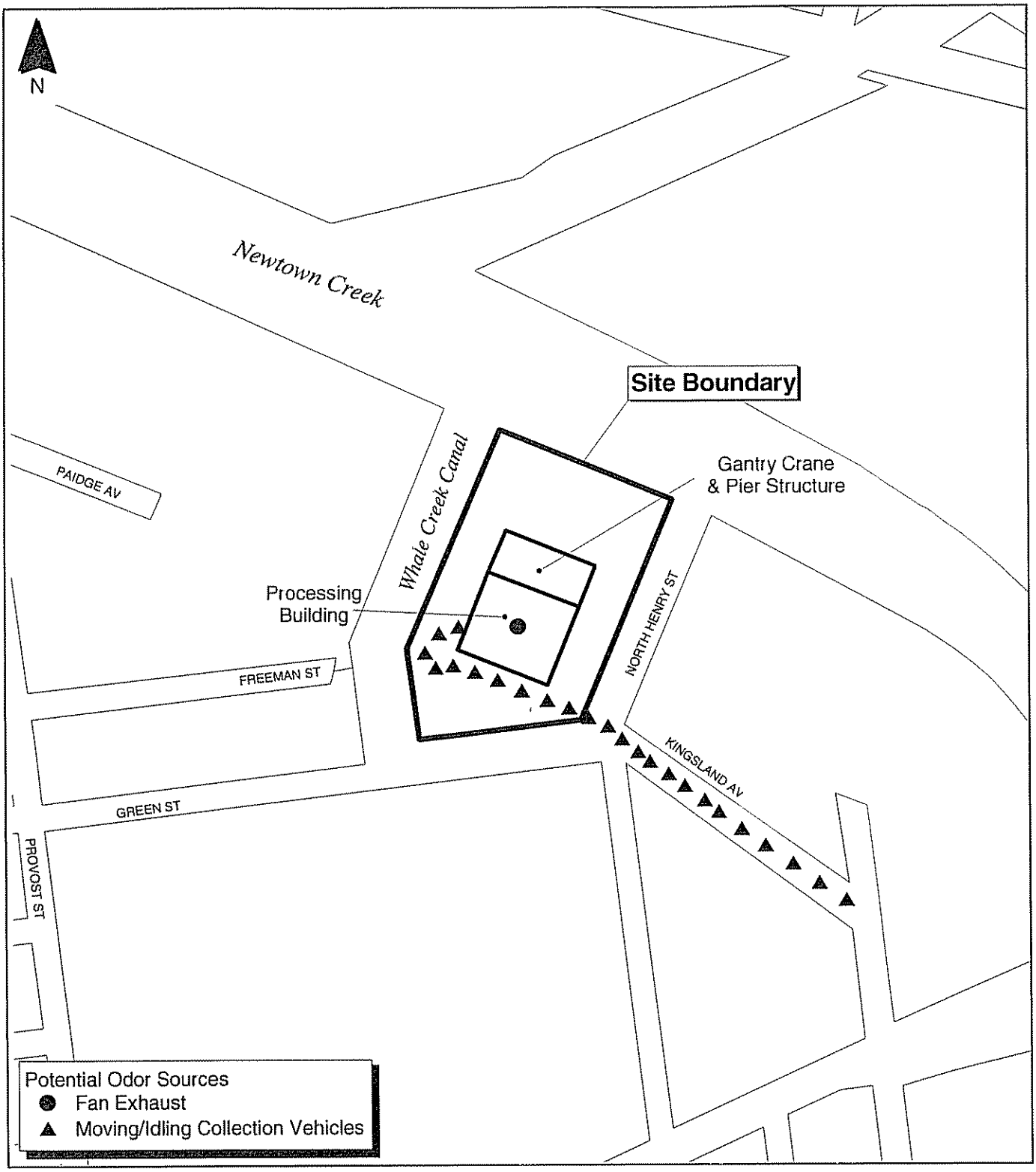
20.16.3 Potential Impacts with the Greenpoint Converted MTS

20.16.3.1 Odor Source Types and Locations Considered in the Analysis

The anticipated number and types of odor sources that would be associated with waste processing operations at peak design capacity at the Greenpoint Converted MTS are provided in Table 20.16-1. Figure 20.16-1 shows the locations of these sources within the site.

Table 20.16-1
Odor Sources Included in Odor Analysis
Greenpoint Converted MTS

Type of Emission Source	Number of Sources Operated During Peak Design Capacity
Exhaust Fans from Processing Building	1
Moving and Idling Collection Vehicles	38



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

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Figure 20.16-1 Potential Odor Sources

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

20.16.3.2 Results of the Odor Analysis

The highest estimated odor concentrations at any of the receptor sites considered and the concentrations at the closest sensitive receptor are presented in Table 20.16-2. The predicted OU values at sensitive receptor locations are compared to an OU of 5, which represents the level of odor impact that would begin to be detected by an average observer. The highest predicted OU associated with the Greenpoint Converted MTS at any nearby sensitive receptor is less than 1, so odors from the Greenpoint Converted MTS would not be detectable by off-site sensitive receptors and the facility would comply with NYSDEC requirements for effective odor control. Therefore, no significant adverse impacts from odors on receptors are expected to occur as a result of this facility.

Table 20.16-2
Highest Predicted Odor Concentration(s) from On-Site Sources
Greenpoint Converted MTS

Parameter	Resulting Odor Unit [1]
Estimated Detectable Concentration	5.0
Highest Result	0.35
Type of Receptor	Fence Line Receptor
Location of Receptor	Site Boundary
Closest Sensitive Receptor Result [2]	0.03
Type of Receptor	Apartment Building
Distance to Receptor	2,498 Feet

Notes:
[1] Odor Unit is defined as concentration that an average person in a laboratory setting could just barely detect.
[2] Sensitive receptors in this analysis are the same as sensitive receptors in the noise analysis.

20.17 Noise

The noise analysis addresses on-site and off-site sources of noise emissions from Greenpoint Converted MTS-related solid waste management activities. It is based on Section R of the 2001 CEQR Technical Manual for both on-site and off-site sources, and, for on-site sources only, the Performance Standards of the New York City Zoning Code for Manufacturing Districts and the Current New York City Noise Code. Section 3.19 provides a general discussion of the relevant regulatory standards and methodologies used in this analysis.

20.17.1 Existing Conditions

20.17.1.1 Introduction

Figure 20.17-1 shows the location of the Greenpoint Converted MTS, the surrounding area and points that represent the property boundary (D1, etc.) for all noise analyses. The nearest noise-sensitive receptor is an apartment building on Van Dam Street southwest of the LIE, approximately 761 meters (2,498 feet) from the Greenpoint Converted MTS property line.

20.17.1.2 On-Site Noise Levels

Existing on-site noise levels consist of noise created by the activities and events on and immediately surrounding the site. Existing noise levels were monitored hourly for a 24-hour period at the property line closest to the nearest noise-sensitive receptor. Noise monitoring data recorded hourly included $L_{eq(1)}$, L_{min} and L_{max},[14] and the statistical metrics of L_{10}, L_{50} and L_{90}.[15] Table 20.17-1 presents monitored noise levels. As shown, the quietest hour at the monitoring location occurred between 2:00 a.m. and 3:00 a.m. and had an $L_{eq(1)}$ of 65.9 dBA on January 10, 2003. Activities and events that contribute to the on-site noise levels are as follows:

- Heavy truck traffic in the area;
- Boat traffic on Newtown Creek;
- Construction at the Newtown Creek WPCP; and
- Train traffic on LIRR tracks.

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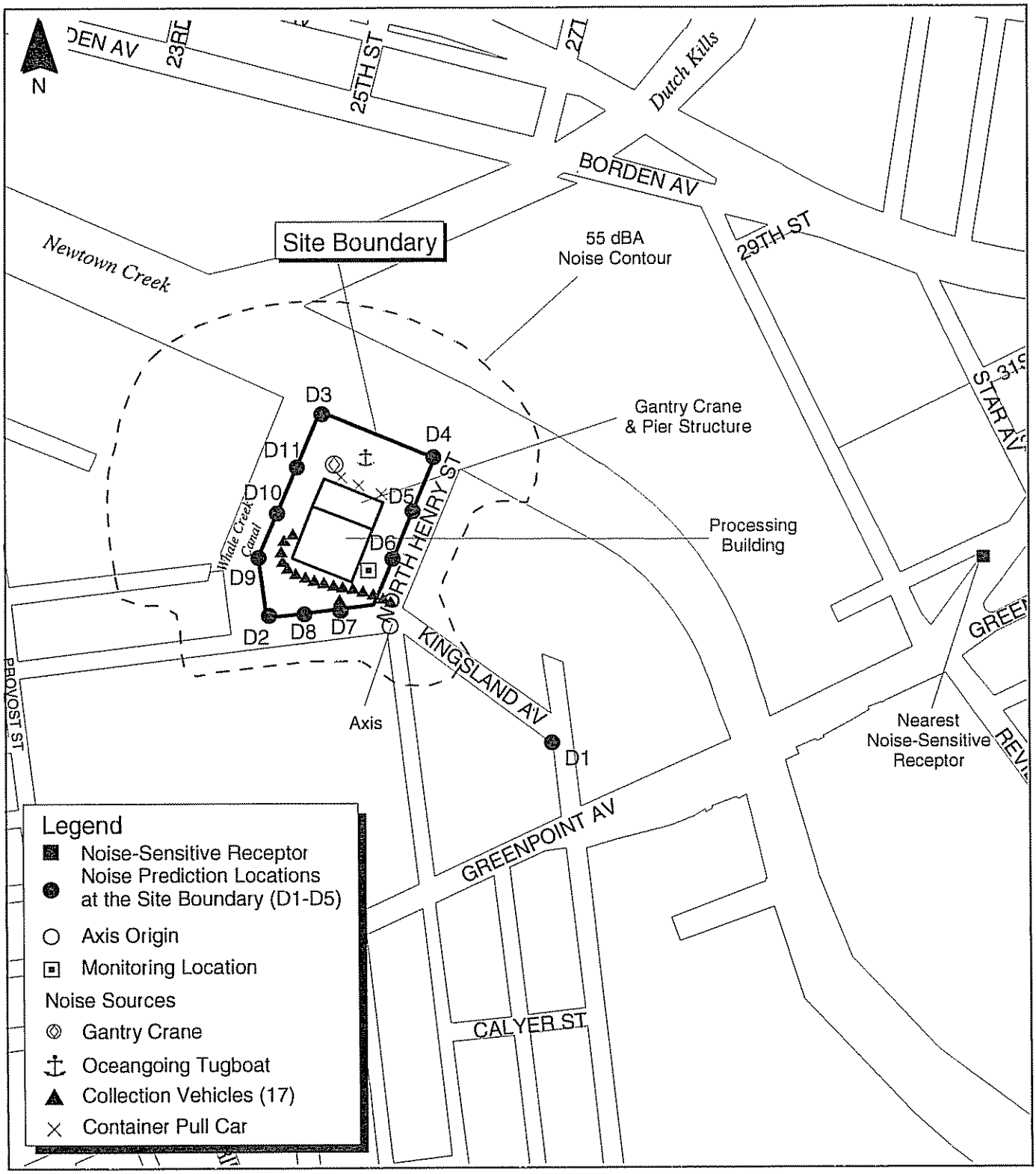
[14] Terms $L_{eq(1)}$, L_{min} and L_{max} are defined in Section 3.19.2.
[15] Terms L_{10}, L_{50} and L_{90} are defined in Section 3.19.2.



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

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Figure 20.17-1 Noise Sources and Receptors

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Table 20.17-1
Existing Hourly (Monitored) Noise Levels On Site[1]
Greenpoint Converted MTS

Time of Measurement	$L_{eq(1)}$ (dBA)	L_{90} (dBA)	L_{50} (dBA)	L_{10} (dBA)	L_{min} (dBA)	L_{max} (dBA)
3:00-4:00 p.m.	75.4	70.4	73.7	78.0	67.7	93.9
4:00-5:00 p.m.	72.0	68.2	70.1	75.0	66.3	82.8
5:00-6:00 p.m.	69.8	67.2	68.8	71.5	65.8	82.5
6:00-7:00 p.m.	70.3	67.3	69.3	72.8	65.8	81.8
7:00-8:00 p.m.	70.9	67.9	70.1	73.2	66.0	80.9
8:00-9:00 p.m.	68.6	66.2	68.2	70.6	64.0	76.3
9:00-10:00 p.m.	70.0	64.7	68.7	72.6	61.6	87.7
10:00-11:00 p.m.	68.6	63.4	65.8	71.3	61.7	84.7
11:00 p.m.-12:00 a.m.	70.6	64.5	68.2	73.1	62.1	86.8
12:00-1:00 a.m.	71.4	66.6	70.1	74.0	62.2	83.7
1:00-2:00 a.m.	67.1	62.1	66.0	69.8	60.5	79.4
2:00-3:00 a.m.	65.9	61.1	63.0	68.5	59.5	80.9
3:00-4:00 a.m.	74.7	62.4	66.6	74.1	59.9	98.4
4:00-5:00 a.m.	74.6	63.9	69.8	78.6	60.5	90.9
5:00-6:00 a.m.	72.6	65.1	69.5	75.9	62.1	89.5
6:00-7:00 a.m.	74.3	70.0	72.8	77.0	66.8	86.1
7:00-8:00 a.m.	76.0	71.7	74.3	78.7	69.6	89.6
8:00-9:00 a.m.	76.1	71.3	74.8	78.5	69.1	91.8
9:00-10:00 a.m.	79.8	70.4	73.9	82.4	68.2	99.9
10:00-11:00 a.m.	83.0	73.3	78.8	86.7	69.3	99.2
11:00 a.m.-12:00 p.m.	83.5	72.6	78.6	86.6	69.6	102.7
12:00-1:00 p.m.	80.2	71.9	76.9	83.6	68.4	94.1
1:00-2:00 p.m.	76.9	70.7	74.1	80.1	68.1	93.4
2:00-3:00 p.m.	76.3	69.9	73.1	79.4	67.5	90.8

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

20.17.1.3 Off-Site Noise Levels

Existing off-site noise levels consist of noise from the existing traffic and other background noise. A screening analysis was conducted to determine if noise monitoring would be required along the facility-related truck routes due to an increase in traffic caused by DSNY and other agency collection vehicles. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Therefore, off-site noise monitoring was not conducted.

20.17.2 Future No-Build Conditions

20.17.2.1 On-Site Noise Levels

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

20.17.2.2 Off-Site Noise Levels

Off-site noise levels for the Future No-Build Conditions in 2006 were calculated using the annual growth rates for traffic volume provided in Section O: Traffic of the 2001 CEQR Technical Manual. Table 20.17-2 presents the existing traffic volume and the Future No-Build traffic volume for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime for locations where there is a possible impact based on the first-level screening.

Table 20.17-2
Off-Site Noise Traffic Volume
Greenpoint Converted MTS

Location	Hour	Existing Traffic Volume [1] (Vehicles / Hour)	Future No-Build Traffic Volume [2] (Vehicles / Hour)
Greenpoint Avenue east of McGuiness Boulevard	2:00 a.m.	88	92
Greenpoint Avenue east of McGuiness Boulevard	10:00 a.m.	766	797
Greenpoint Avenue east of Kingsland Avenue	2:00 a.m.	152	159
McGuiness Boulevard north of India Street	2:00 a.m.	39	40

Notes:
[1] Existing Traffic Volumes are based on ATR data.
[2] Future No-Build Traffic Volumes are based on CEQR annual traffic growth rates.

20.17.3 Potential Impacts with the Greenpoint Converted MTS

20 17.3.1 On-Site Noise Levels

Equipment assumed to be operating at the Greenpoint Converted MTS and its reference noise levels used in the CEQR and Current Noise Code analyses are shown in Table 20.17-3. Spectral noise levels used in the Performance Standards analysis are shown in Table 20.17-4. The number and types of equipment assumed for this analysis were based on the Greenpoint Converted MTS's peak design capacity. Shown earlier, Figure 20.17-1 indicates the Greenpoint Converted MTS layout, the locations of the points along its boundary where overall noise predictions were calculated and the predicted 55 dBA contour line.

Table 20.17-3
Equipment Modeled in the Noise Analysis and Reference Noise Levels (L_{eq})
Greenpoint Converted MTS

Equipment Name (quantity) [1]	Reference Sound Pressure Noise Level at 50 feet (dBA) [2]
Indoor	
Tip Floor Wheel Loaders type CAT 966G (2)	80.6
Mini-Loader type CAT 908 (1)	69.3
Tamping Cranes type CAT 325 (1)	81
Spreader Crane/Hoist (1)	70
Skid Steer Loader (Bobcat S300) (1)	76
Vacuum Sweeper (1)	64.3
Moving/Queuing DSNY Collection Vehicles (7)	79
Outdoor	
Container Shuttle Cars (3)	45
Gantry Cranes (1) [3]	67
Harbor Tug Boat (1) [4]	69
Moving/Queuing DSNY Collection Vehicles (17) [5]	67

Notes:
(1) Instantaneous maximum number of pieces of equipment on site at any given time.
(2) Noise level representative of each piece of equipment.
(3) Noise level will be specified for the gantry crane in DSNY's plans and specifications for construction of the converted MTS's.
(4) Noise level will be specified for the harbor tug boat in DSNY's plans and specification for construction of the converted MTS's.
(5) Quantity includes one truck queuing on the outbound scale.

Table 20.17-4
Equipment Modeled in the Noise Analysis and Spectral Noise Levels (L_{max})
Greenpoint Converted MTS

Equipment Name (quantity) [1],[2]	Reference Sound Pressure Noise Level at 50 feet (dB) [3]							
	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
Indoor								
Tip Floor Wheel Loaders type CAT 966G (2)	78	77	75	76	77	74	68	60
Mini-Loader type CAT 908 (1)	78	77	75	76	77	74	68	60
Tamping Cranes type CAT 325 (1)	95	90	85	85	81	78	73	64
Spreader Crane/Hoist (1)	77	78	77	71	74	71	69	57
Skid Steer Loader (Bobcat S300) (1)	71	74	69	74	71	68	64	56
Vacuum Sweeper (1)	71	74	69	74	71	68	64	56
Outdoor								
Container Shuttle Cars (3)	31	30	47	44	36	35	42	46
Gantry Cranes (1) [4]	78	81	78	71	66	60	55	55

Notes:

[1] Instantaneous maximum number of pieces of equipment on site at any given time.

[2] Trucks and tugboats are not included in the Performance Standard analysis because they are transportation facilities.

[3] Noise level representative of each piece of equipment.

[4] Noise level will be specified for the gantry crane in DSNY's plans and specification for construction of the Converted MTS's.

Hz = Hertz

K = Thousand

20.17.3.2 CEQR Analysis

A screening analysis was conducted to determine if a detailed noise analysis would be required for the on-site operations at the Greenpoint Converted MTS. Noise levels from indoor and outdoor sources were combined to determine the location of the 55 dBA contour line. The 55 dBA contour line is 62 meters (203 feet) from the property line in the direction of the nearest noise-sensitive receptor, which is 761 meters (2,498 feet) from the site boundary. The 55 dBA contour line was selected as a limit for the study area because 55 dBA (i.e., the point off site where noises generated on site attenuate to 55 dBA) is considered an acceptable noise level in an urban environment. Section 3.19.5.1 discusses this concept in greater detail. The results of the screening analysis show that noise-sensitive receptors are not located within the 55 dBA contour line (see Figure 20.17-1); therefore, an on-site noise analysis, including noise monitoring, was not required.

20.17.3.3 Performance Standards for Zoning Code Analysis

Overall noise predictions were calculated at the locations of the points representative of the Greenpoint Converted MTS boundary (D1, etc.) to determine the total noise level for each octave band from indoor and outdoor sources, not including DSNY and other agency collection vehicles and tugboats, in accordance with the New York City Zoning Code Performance Standards for Manufacturing Districts (assuming tugboats are transportation facilities) (see Table 20.17-5). Based on this analysis, ~~no~~ exceedances to the Performance Standards are predicted.

Table 20.17-5
Zoning Code Analysis
Predicted Spectral Noise Levels (L_{max}) at the Property Boundary
Greenpoint Converted MTS

Manufacturing District Regulation (M3)								
Frequency (Hz)	63	125	250	500	1K	2K	4K	8K
Threshold	79	74	69	63	57	52	48	45
Total Lp dB: D1	73.8	68.2	58.2	52.3	44.7	36.1	26.7	22.8
Total Lp dB: D2	61.8	57.6	51.1	44.4	38.2	31.1	23.8	21.2
Total Lp dB: D3	65.0	62.8	58.2	51.3	45.7	39.1	32.7	31.0
Total Lp dB: D4	67.3	64.3	59.1	52.2	46.6	39.9	33.9	32.8
Total Lp dB: D5	71.2	67.8	62.2	55.4	49.8	43.2	37.8	37.5
Total Lp dB: D6	80.5	75.0	65.3	59.3	51.9	43.7	36.3	35.6
Total Lp dB: D7	74.7	69.2	59.6	53.5	46.2	37.9	29.2	25.8
Total Lp dB: D8	63.5	59.0	52.1	45.4	39.2	32.0	24.7	22.2
Total Lp dB: D9	69.3	65.2	58.9	52.2	46.2	39.3	32.4	30.2
Total Lp dB: D10	71.1	67.6	62.0	55.2	49.5	42.9	36.6	35.2
Total Lp dB: D11	67.7	65.5	61.0	54.0	48.6	42.1	36.0	34.8

Notes:
Hz = Hertz
Lp = Sound pressure level
dB = Decibel
D1 through D11 are the points representative of the Greenpoint Converted MTS boundary that are used in all noise analyses.
K = Thousand

20.17.3.4 NYC Noise Code Analysis – Current

Overall noise predictions were calculated at the locations of the points (D1, etc.) representative of the Greenpoint Converted MTS boundary to determine the total L_{eq} from all indoor and outdoor sources for comparison to the current Noise Code. This is shown in Table 20.17-6. Based on this analysis, the total L_{eq} does ~~not~~ exceed the current Noise Code Standard of 70 dBA at the property boundary.

Table 20.17-6
Current Noise Code Analysis
Greenpoint Converted MTS

Location at Plant Boundary[1]	Total L_{eq} Contribution at Plant Boundary (dBA)
D1	~~59.0~~ 71.6
D2	~~66.8~~ 66.2
D3	~~64.4~~ 62.8
D4	~~63.6~~ 60.0
D5	62.9
D6	64.65
D7	**71.1**
D8	64.0
D9	**72.4**
D10	68.4
D11	64.8

Notes:
[1] D1 through D11 are the points representative of the Greenpoint Converted MTS boundary that are used in all noise analyses.
Bold=Exceedence

20.17.3.5 Mitigation Measures

Mitigation measures available were limited to those that affect the source, the propagation path or the receiver. The typical mitigation measure for the path of noise between source and receiver is a noise wall. Noise walls can be designed to provide noise attenuation for noise-sensitive areas located relatively close to the wall. Noise attenuation provided by the wall decreases as distance from the wall increases. Receiver treatments may include the construction of noise walls at residential property lines or the installation of replacement windows and air conditioning. The latter two mitigation measures are suggested in the 2001 CEQR Technical Manual. Typical mitigation measures at the source include: (1) changes in operations schedules to reduce noise emissions; (2) reduction in DSNY collection vehicles; (3) using noise mufflers for the exhaust pipes of material handling equipment (e.g., side loaders, yard tractors, etc.) or other source noise reduction methods; and (4) maintaining the equipment through regularly scheduled maintenance and repairs.

The data presented in this section is for the analysis to date. If the Greenpoint Converted MTS is included in the New SWMP, a supplemental analysis will be performed.

20.17.3.~~5~~6 Off-Site Noise Levels

A screening analysis was conducted to determine if a detailed off-site noise analysis including noise monitoring would be required along the truck routes serving the Greenpoint Converted MTS. The assumed DSNY and other agency collection vehicle routes are provided in Section 14 of this chapter. As a result of this screening, which is described in Section 3.19.5.2, no off-site noise analysis was required. Results of the second-level screening for the hour expected to receive the largest change in noise levels (when the difference between traffic noise levels and background noise levels is greatest) during the daytime (if any) and nighttime are provided in Table 20.17-7.

Because the screening results presented below showed that the PCEs would not double on a roadway due to DSNY and other agency collection vehicles coming to or going from the Greenpoint Converted MTS, a detailed off-site noise analysis was not required.

20.17.3.~~6~~7 Combined On-Site and Off-Site Noise Levels

As a result of both the on- and off-site screening analyses performed for the Greenpoint Converted MTS, neither the on- or the off-site noise analyses were required; therefore, a combined noise analysis was not performed.

Table 20.17-7
Off-Site Noise Screening Results
Greenpoint Converted MTS

Location	Hour	Future No-Build PCEs[1]	Collection Vehicles	Employee Vehicles	Total Net DSNY Collection Vehicle PCEs[1]	Future Build PCEs[1][2]	Possible Impact[3]
Greenpoint Avenue east of McGuiness Boulevard	2:00 a.m.	1,132	13	0	611	1,743	No
Greenpoint Avenue east of McGuiness Boulevard	10:00 a.m.	5,644	46	0	2,162	7,806	No
Greenpoint Avenue east of Kingsland Avenue	2:00 a.m.	1,891	11	0	517	2,408	No
McGuiness Boulevard north of India Street	2:00 a.m.	161	3	0	141	302	No

Notes:

(1) Total PCEs are rounded to the nearest whole number.

(2) Future Build PCEs include Greenpoint Converted MTS-related collection vehicles and employee vehicles. Per CEQR, collection vehicles are converted to PCEs using a factor of 47 and employee vehicles are converted to PCEs using a factor of 1.

(3) There is a possible impact if the Future Build PCEs are double the Future No-Build PCEs or more.

20.18 Commercial Waste to the Greenpoint Converted MTS

20.18.1 Existing Conditions

No commercial waste is delivered to the Greenpoint MTS site under Existing Conditions. Commercial waste generated in Brooklyn is delivered to privately owned and operated transfer stations in the City, or taken directly out of the City to remote disposal locations.

20.18.2 Future No-Build Conditions

Under Future No-Build Conditions, no commercial waste would be delivered to the Greenpoint Converted MTS; therefore, Future No-Build Conditions are the same as Existing Conditions.

20.18.3 Potential Impacts of Sending Commercial Waste to the Greenpoint Converted MTS

The complete analysis of potential impacts of sending commercial waste to the Converted MTSs is presented in Volume III of the March 2004 Commercial Waste Management Study, which is included as Appendix D to this FDEIS.

20.18.3.1 On-Site Air Quality, Odor and Noise

Under Future Build Conditions, the Greenpoint Converted MTS was evaluated for on-site air quality, odor and noise impacts at its maximum design capacity of approximately 4,290 tpd (see Sections 20.15, 20.16 and 20.17). Results showed no unmitigatible adverse on-site air quality, odor or noise impacts. Although the peak hourly arrival rates of collection vehicles are not sustained over a 24-hour period, the analysis of on-site impacts conservatively modeled these peak hour conditions to predict the potential for on-site noise and odor impacts, and air quality impacts for short-term (1-hour, 3-hour, 8-hour and 24-hour) averaging periods. Because the analysis of short-term averaging periods was based on facility operations at the design capacity, no additional evaluation of on-site noise was required.

An evaluation of potential on-site air quality impacts for pollutants compared to annual average standards was modeled assuming commercial waste was processed at the Converted MTS. Based on these analyses, the potential processing of these quantities of the City's commercial putrescible waste would not cause any significantly adverse air quality impacts attributable to on-site operations. Likewise, odors from on-site operations of the Converted MTS with the addition of commercial waste at levels discussed in the Commercial Waste Management Study were also analyzed and results showed no unmitigatible significant adverse odor impacts.

See Appendix D for the revised tables to the Commercial Waste Management Study that contain the results of the on-site air quality and odor analyses.

20.18.3.2 Off-Site Traffic, Air Quality and Noise

Potential off-site traffic, air quality and noise impacts of deliveries of DSNY-managed Waste to the Greenpoint Converted MTS were evaluated in Sections 20.14, 20.15 and 20.17 based on temporal distributions of DSNY and other agency collection vehicles identified in Section 20.14.

The greatest number of DSNY and other agency collection vehicles analyzed for traffic impacts during all three periods (AM, midday and PM peak hours) was 61 (inbound trip ends) per hour, which occurred during the AM peak. These 61 DSNY and other agency collection vehicles are also more than the 24 peak hour DSNY and other agency collection vehicle and commercial waste hauling vehicle inbound trip ends that can be processed per hour at the Greenpoint Converted MTS during the 8:00 p.m. to 8:00 a.m. shift. In addition, the intersection LOS is lower (i.e., poorer) and the background volumes of traffic are higher during the AM peak than the 8:00 p.m. to 8:00 a.m. hours, so the AM peak analysis represents worst-case conditions. As reported above, there were no unmitigatible significant adverse environmental impacts from the 61 DSNY and other collection agency vehicle trip ends at the Greenpoint Converted. Therefore, the addition of the 24 DSNY and other agency collection vehicles and commercial waste hauling vehicles at the Greenpoint Converted MTS during the 8:00 p.m. to 8:00 a.m. shift — during a period with a better LOS and lower background traffic volumes — would also have no unmitigatible significant adverse traffic impacts.

Likewise, the 61 inbound DSNY and other agency collection vehicles analyzed for off-site air quality impacts during the AM peak hour was the highest number of collection vehicles analyzed for all three periods (AM, midday and PM peak hours). For off-site air quality modeling, a Tier I analysis assumed conservatively that the 61 inbound DSNY and other agency collection vehicles would travel through the analyzed intersections each hour over a 24 hour period. Results showed there would be no unmitigatible significant adverse environmental impacts. Consequently, because the 24 inbound DSNY and other agency collection vehicles and commercial waste hauling vehicles that can be processed at the Greenpoint Converted MTS per hour during the 8:00 p.m. to 8:00 a.m. shift would be fewer than the number of such vehicles analyzed for the AM peak over a 24-hour period, there would be no significant adverse off-site air quality impacts.

Evaluating the potential for off-site noise impacts required the use of a second-level noise screening analysis. The results of this analysis indicate that the potential number of commercial waste hauling vehicles that could be routed to the Greenpoint Converted MTS during various hours within the 8:00 p.m. to 8:00 a.m. period must be limited to less than the available excess capacity to avoid causing potential impacts at noise-sensitive receptors on the approach routes these vehicles would take to the Converted MTS. The amount of available capacity that can be used to process commercial waste during the hours of 8:00 p.m. to 8:00 a.m., without causing any significant adverse noise impacts, is 1,145 tons (or 109 commercial waste hauling vehicles, assuming an average of 11 tons per truck) over this 12-hour period.