Chapter 6.1: Land Use, Neighborhood Character, and Social Conditions

A. INTRODUCTION

This chapter provides land use information, applicable zoning and public policy, descriptions of neighborhood character, as well as demographic data for the areas surrounding potential yard sites and alternative alignments. Open space resources and community facilities, which contribute to neighborhood character, are described throughout. Potential adverse effects to land use, neighborhood character, and social conditions are identified generally to facilitate further detailed review during any future Tier II analysis.

B. METHODOLOGY

STUDY AREAS

The extent of the study areas were determined to capture potential effects from the operation and construction of the project alternatives. The extent of the study areas has been defined as follows:

- **Alternative Alignments**. Study areas for project alternative alignments (e.g., rail lines) include a buffer that extends 1,000 feet from the rail centerline.
- **Facilities**. Study areas for facilities related to the project alternatives (i.e., rail yards, float and ferry landings, tunnel portals, etc.) include general facility boundaries plus the area within 1,000 feet of the boundaries.

Where appropriate, the study areas were refined to align more closely with available data. For example, the study areas for population characteristics are delineated according to census tract boundaries, since census tract-level data are utilized for that analysis; all census tracts crossed by facility boundaries, or extending to within the respective 1,000-foot buffer, together comprise the study area for population characteristics.

As described in Chapter 5, "Transportation," there may be the potential for some project alternatives to induce truck-related changes to local traffic levels. While a detailed traffic study is not part of this Tier I EIS, certain truck routes have been identified as likely to be affected by one or more proposed alternatives.

DATA

Sources for land use, zoning, and public policy, community facility, and open space data include the New York City Department of City Planning (NYCDCP), and the respective county planning agencies in New Jersey and on Long Island.[1] As illustrated by accompanying maps and

[1] Data to support analyses of land use, including open space, within the New York City study areas have been obtained from NYCDCP, as part of the MapPLUTO 2011 information series. Zoning and Community Facilities data for New York City study areas have been obtained from NYCDCP, as part of BYTES of the BIG APPLE™ at http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml, May of 2014.

text, variations in regional terminology or level of detail in data exist but do not inhibit clarity or comparability and therefore do not diminish data integrity. In addition, field observations have confirmed the general accuracy and relevance of these data in key locations. If necessary, any detailed environmental review performed subsequent to this Tier I EIS may include detailed field surveys for land use, community facilities, and open space in appropriate locations.

Demographic data are available from the U.S. Census. The most current Census data (2010 decennial Census) available at the time of preparing this Tier I EIS have been utilized. It should be noted that any subsequent environmental review following this Tier I EIS may update demographic data and perform accordant outreach as appropriate at that time.

Data have been managed with a Geographic Information System (GIS), both to organize information for assessment and evaluation and also to prepare the illustrational graphics included as part of this Tier I EIS.

C. EXISTING CONDITIONS

Most of the facilities related to the project alternatives considered in this Tier I EIS (discussed in Chapter 4, "Alternatives," and shown in Figures 4-5 through 4-15) are existing transportation uses. As described specifically for each facility below, most of the facilities are surrounded by industrial land uses, in some cases heavy manufacturing and port operations that are among the highest intensity industrial uses in the project area, and even the region. Throughout much of the project area, it is common for vibrant residential and commercial areas to be located near active industrial areas as well as rail lines and rail yards and there are numerous instances of individual residences, community facilities, and even neighborhood parks located in areas that are otherwise almost entirely industrial. Though lighter industry is encouraged through current zoning near residential and institutional areas, historically industrial or transportation heavy areas (e.g., the Maspeth Yard and Fresh Pond Yard areas in Queens) have coexisted with residential land uses for much of the 20th century.

Similarly, existing rail lines in the east-of-Hudson region (e.g., the Bay Ridge Branch in Brooklyn and the Fremont Secondary rail line in Queens) traverse areas where industrial and residential land uses coexist in close proximity. Within New York City, the residential areas also include numerous parks and community facilities. Within Brooklyn and Queens local study areas specifically there are large cemeteries near the rail lines, though these cemeteries generally serve to buffer the rail lines and rail yards from the residential neighborhoods in the vicinity of the project area. Rail lines in the west-of-Hudson region of the study area traverse more of a mix of industrial areas and transportation and parking. These land uses are part of the broader regional land use pattern with characteristically industrial waterfronts. Residential, commercial, and institutional comprise smaller portions of study area in the west-of-Hudson region.

Data to support analyses of land use, zoning, community facilities and open space in New Jersey study areas have been obtained from NJDEP 2007 Land Use/Land Cover Update (7/19/10) at http://www.state.nj.us/dep/gis/lulc07cshp.html in June 2011. Data to support analyses of land use, zoning, community facilities, and open space in Long Island Study Areas have been obtained from Long Island INDEX at http://www.longislandindexmaps.org/ in October 2011.

WEST-OF-HUDSON STUDY AREA

LAND USE AND NEIGHBORHOOD CHARACTER

The west-of-Hudson study area (**Figure 6.1-1**) comprises a mix of land uses, including a large proportion of industrial and transportation uses. The study area includes two existing rail yards, Oak Island Yard and Greenville Yard, separated from one another by water and a portion of a residential neighborhood that extends from Jersey City to the north to Bayonne to the south. The study area also includes a portion of Port Newark/Port Elizabeth along the Chemical Coast Secondary Rail Line and the potential truck ferry/truck float/container barge terminal in Elizabeth Channel for those Waterborne Alternatives.

The majority of uses in the study area are industrial or transportation-related, as is typical for this waterfront area in the vicinity of Newark Liberty International Airport (EWR). More than half of the study area is a mix of industrial areas and transportation and parking. A small portion of the study area in Hudson County, west of the Greenville Yard, includes residential land uses. Residential land uses, most of which are multi-family, account for less than a quarter of the total study area. There are no residential uses adjacent to any of the rail lines or other facilities in the study area.

The study area does not traverse major regional parks, though some of the natural open space, such as wetlands (less than a quarter of the study area) is present along the waterfront nearby in both counties. Public facilities and institutional uses are limited, amounting to only about one percent of the study area. Much of the study area is dominated by EWR and the facilities associated with the port.

Greenville Branch

The Greenville Branch is elevated on an embankment in the eastern portion of the study area and on an elevated structure in the western portion near Newark Bay.

Land uses immediately adjacent to the Greenville Branch between the Oak Island Yard and Greenville Yard include a mix of residential, commercial, retail, auto-related, and industrial uses. The New Jersey Turnpike Extension/I-78 parallels the rail line and forms much of the study area's southern border. The study area is most notably an intensive use transportation corridor that includes the rail line, New Jersey Route 440, and the New Jersey Turnpike Extension/I-78. These highways serve as a gateway to both Bayonne and Jersey City.

Oak Island Yard

As shown in **Figure 6.1-1**, land uses including and within 1,000 feet of Oak Island Yard are mainly transportation and industrial uses, such as the active rail yard, port facilities, warehouses, distribution centers, and manufacturing facilities. The area exhibits a high degree of uniformity in the land use pattern, and includes rail yards, port facilities, warehouses, distribution centers, manufacturing facilities, public utility infrastructure, and air freight businesses associated with nearby EWR (located just to the southwest of the study area). The Passaic Valley Sewerage Commissioners Pumping Station, several large industrial buildings, a chemical manufacturing building, the Newark Industrial Center, and several parking lots are also located nearby.

Greenville Yard

The 1,000 feet buffer in the vicinity of Greenville Yard extends roughly to Linden Avenue to the north, Harbor Drive to the south, the Upper New York Harbor to the east, and the New Jersey Turnpike Extension/I-78 to the west.

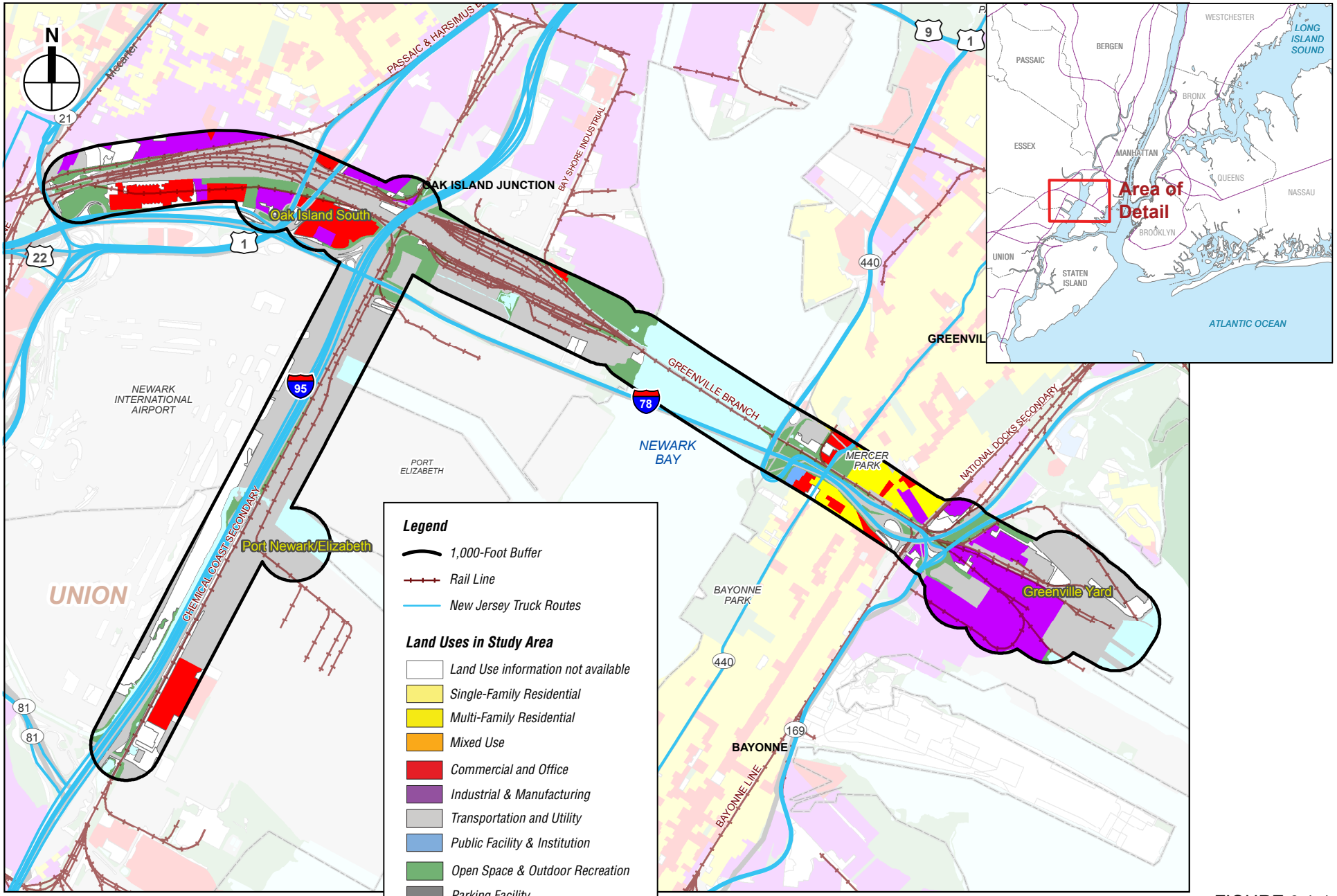

FIGURE 6.1-1

New Jersey Study Area

CROSS HARBOR FREIGHT PROGRAM

Land uses in the study area are industrial manufacturing and transportation related (see **Figure 6.1-1**) with a mix of port and marine related facilities, built industrial facilities, and large areas of open yard and storage facilities. Major distribution centers for Budweiser, *The Daily News*, and Tropicana are located in this area. Other uses nearby include a crane storage and maintenance facility located along the southern shoreline and the Jersey City Industrial Park, located to the south along Port Jersey Boulevard recent redevelopment projects include the Greenville Industrial Park completed in March 2009. To the west of New Jersey Turnpike Extension/I-78, land uses are primarily residential with concentrations of commercial uses along Garfield Avenue, Ocean Avenue, and John F. Kennedy Boulevard.

Port Newark/Port Elizabeth

As noted previously, the study area includes a potential terminal for the truck ferry, truck float, roll-on/roll-off (RORO) container barge, and lift-on/lift-off (LOLO) container barge at the head of Elizabeth Channel between Port Newark and the Port Authority Marine Terminal. The terminal would be fully surrounded by land uses associated with the port.

ZONING AND PUBLIC POLICY

Oak Island Yard

The area around Oak Island Yard is zoned for heavy industry where commercial and industrial activities are restricted only in that they shall not be in conflict with nuisance regulations. (See **Appendix C** for zoning maps of this and other study areas discussed throughout this chapter.)

In December 2004, the City of Newark adopted the *Land Use Element of the Master Plan for the City of Newark*. The master plan indicated that City policy was to maintain heavy industrial areas, including the Oak Island study area, as an important economic asset of the City. In March 2009, the Central Planning Board approved the City of Newark's reexamination of its master plan, *Shifting | Forward 2025: Newark Master Plan Re-Examination*. Under this plan, one of the stated goals was to create jobs for residents by maximizing growth at air and sea ports by "encouraging new models for industrial business districts within the Port and Port Support Areas, including modern production, warehouse and distribution centers, and improving freight mobility by creating freight intermodal hubs at the airport, seaport, and in the R121 industrial zone that integrate with regional freight infrastructure." This includes the Oak Island Yard and vicinity.

The Port Authority of New York and New Jersey (PANYNJ) and other agencies, such as the New Jersey Department of Transportation (NJDOT) and the North Jersey Transportation Planning Authority (NJTPA), are implementing other public policy and infrastructure investments within and adjacent to the Oak Island Yard. Most notably, the Portway and Comprehensive Port Improvement Plan (CPIP) initiatives are important long-term strategies to accommodate continued growth of cargo movement into the Port of New York and New Jersey and to improve truck and rail access. Under the Portway project, the Doremus Avenue and the Doremus Avenue Bridge over the rail yard was reconstructed and widened. This improvement has a direct effect on Oak Island Yard study area by improving access and relieving traffic congestion.

The area east of the rail yard falls within the NJDEP's Coastal Zone Management (CZM) area. (Please see Chapter 6.12, "Coastal Zone Management," for a description of policies that apply to the proposed project.) Other applicable public policies to encourage development in the study area include Newark's designation as a special urban area by the New Jersey State Legislature.

This enables the City to receive State aid for maintaining and upgrading municipal services and to offset local property taxes. It also encourages development that would be of economic and social benefit and that serves the needs of local residents and neighborhoods.

Greenville Yard

The *Greenville Industrial Redevelopment Plan* was adopted in May 1989, and last updated in November 1999. The plan was created to further the redevelopment goals of the blighted and underutilized industrial area. The overall plan is subdivided into a Terminal District and a Modern Industrial Park District, located primarily in the southwest third of the overall plan area. The Greenville Yard and lands within 1,000 feet of it are primarily located in the Terminal District. Permitted uses include light industrial, warehousing and distribution, terminal facilities, roadways, public uses, open spaces, utilities, and retail and service. In addition to the area-specific Greenville Industrial Redevelopment Plan described above, other public policy initiatives were identified as possibly influencing redevelopment opportunities in the study area.

As described in Chapter 4, "Alternatives," PANYNJ currently operates the New York New Jersey Rail (NYNJR) cross-harbor railcar float operation. Most recently, PANYNJ has begun planning for a redevelopment of Greenville Yard into several independent multi-modal freight facilities, as part of the Greenville Yard Master Plan. The Greenville Yard Master Plan includes not only new and improved facilities for NYNJR, but also an Intermodal Container Transfer Facility (ICTF) for Global Marine Terminal to transfer international shipping containers between truck and rail. Greenville Yard is also a proposed site for a containerized municipal solid waste (CMSW) transloading facility, which will transfer New York City CMSW in sealed containers arriving by barge at Greenville directly onto rail cars for shipment of the waste to landfills.

In June 2010, PANYNJ announced that it would purchase approximately 130 acres of property at the Military Ocean Terminal at Bayonne (MOTBY) from the Bayonne Local Development Authority. While no decisions on its redevelopment have been made, this action will reserve the land for port use and preclude other types of development.

NJDOT has undertaken the Portway project, a series of eleven independent projects that will improve access to and between the Newark-Elizabeth Air/Seaport Complex, intermodal rail facilities, trucking and warehousing/ transfer facilities and the regional surface transportation system. The projects are located in the counties of Union, Essex, Hudson and Bergen and the municipalities of Elizabeth, Newark, Bayonne, Jersey City, Kearny, Secaucus, North Bergen, Little Ferry and Ridgefield Park.

The *Hudson County Master Plan*, released in 2001, includes policies that encourage economic revitalization of the County's commercial and economic base, and improvements to the transportation network. Specifically, the plan seeks to support existing manufacturing and industrial uses through expansion and modernization and through the promotion of new manufacturing and industrial development. The plan also aims to assist in the implementation of development and redevelopment of the Hudson waterfront by encouraging growth of ports and by integrating waterfront development with adjacent neighborhoods through improved transportation networks.

In February 2010, Hudson County adopted the *Hudson County Regional Comprehensive Economic Development Strategy (CEDS)*, a five-year economic plan to guide the growth of jobs, development and commerce in the County. *CEDS* analyzes the strengths, weaknesses, opportunities and threats facing the region, identifies economic clusters within the County and establishes goals and objectives to guide economic development.

Port Newark/Port Elizabeth

As noted previously, the study area in this section comprises a potential terminal for a number of Waterborne Alternatives, and is located at the head of Elizabeth Channel, between the Port Newark Container Terminal and Maher Terminal, a private terminal which leases space from PANYNJ and manages the daily loading and unloading of container ships. There are a number of public policy and infrastructure investments aimed at accommodating continued growth of cargo movement into the Port of New York and New Jersey and to improve truck and rail access; these are described above under the Oak Island Yard section of the study area.

COMMUNITY FACILITIES AND OPEN SPACE

No community facilities are located within the New Jersey study area. Although natural open space is present at several points along the rail line, designated public open space is limited to a promenade and observation deck, and a small bird sanctuary. The promenade and observation deck provide views of the ports, Brooklyn, Lower Manhattan, Upper New York Harbor, and the Statue of Liberty and is used for active recreation such as jogging, rollerblading, walking, or biking.

POPULATION CHARACTERISTICS

Eleven census tracts extend into the New Jersey study area. The U.S. Census reports that the 2010 total population for the study area is 42,268, with about half the population in tracts near the Oak Island Yard. Approximately 65 percent of the population is non-white and about 31 percent is Hispanic. Consequently, Environmental Justice communities may be present throughout the study area.

EAST-OF-HUDSON STUDY AREA – BROOKLYN

LAND USE AND NEIGHBORHOOD CHARACTER

The Brooklyn study area (see **Figure 6.1-2**) generally follows the Bay Ridge Branch but includes a portion of Brooklyn's industrial waterfront at Sunset Park and Red Hook.

Over 40 percent of the study area is residential. As shown in **Figure 6.1-2**, residential uses can be found throughout virtually the entire length of the study area, representing the edges of the Ridgewood neighborhood in Queens, and multiple Brooklyn neighborhoods: Bay Ridge, Sunset Park, Dyker Heights, Borough Park, Flatbush, Midwood, East Flatbush, Flatlands, Remsen Village, Brownsville, New Lots, East New York, Broadway Junction, Highland Park, Ocean Hill, and Bushwick.

The remainder of the study area comprises a mix of industrial areas (about 15 percent of the study area) and transportation and parking (about 13 percent of the study area). These land uses tend to appear in masses surrounding the rail corridor, with the large agglomeration of these uses surrounding the railway in East Flatbush, Flatlands, and Remsen Village in the approximate center of the study area. Less extensive areas of industrial, transportation, and parking uses are also found in Ridgewood and Bushwick at the northern end of the study area; Broadway Junction, East New York and Brownsville, surrounding the East New York site and also along the rail line in between Borough Park and Sunset Park.

The study area does not traverse any major regional parks; however, several neighborhood parks and recreational facilities located along the railway. The rail line also extends through Cemetery of the Evergreens at the northern end of the study area. Several small East New York parks can be found within approximately a block-width of East New York Yard site, while the Bay Ridge

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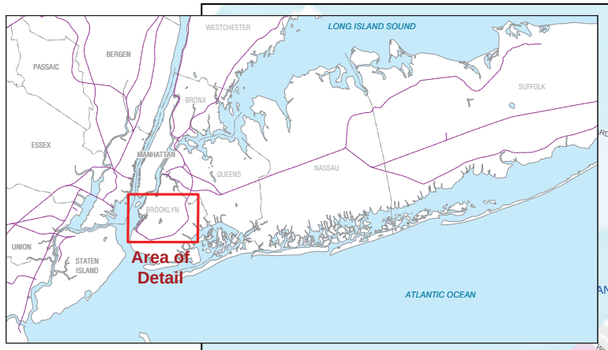
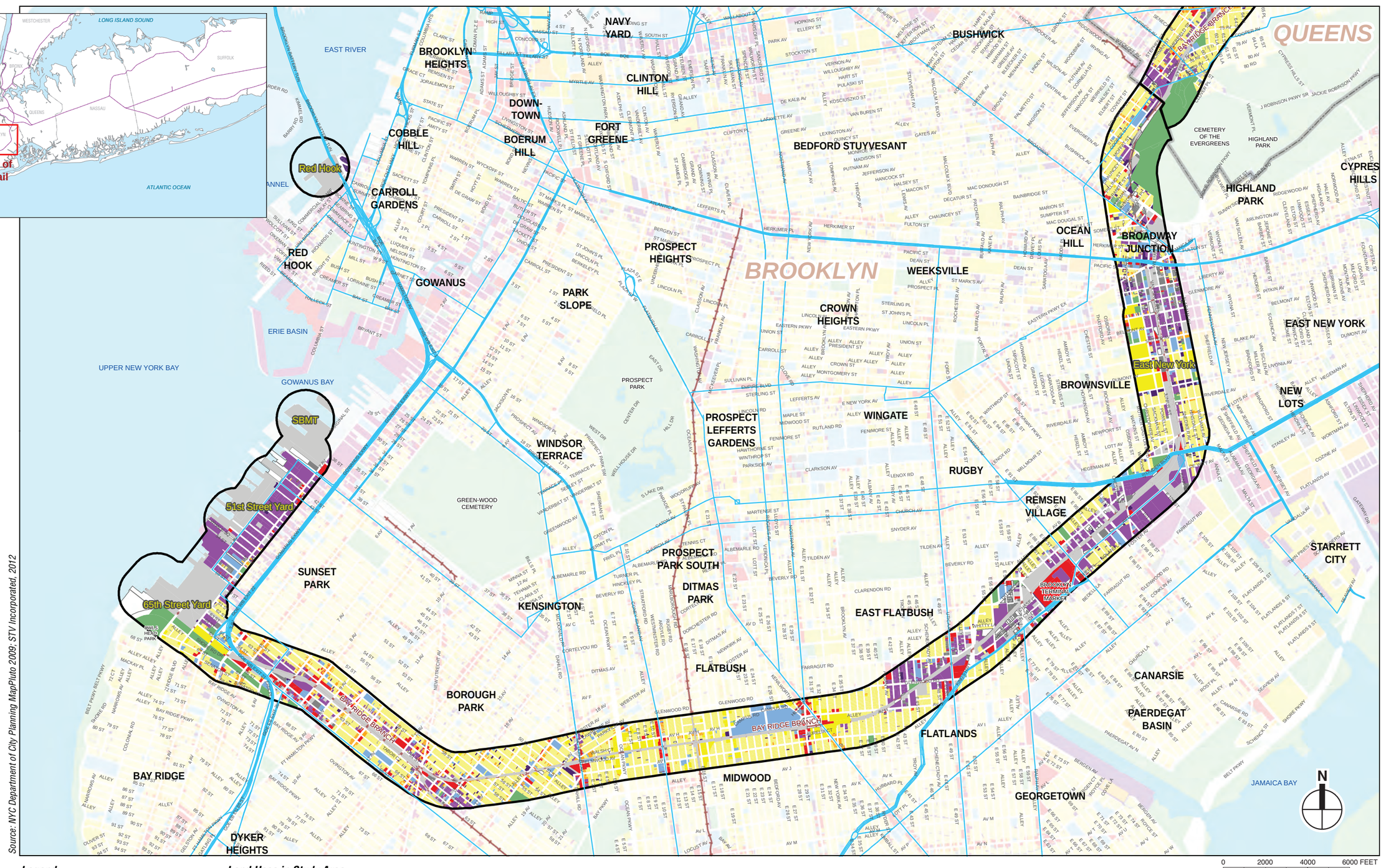




Source: NYC Department of City Planning MapPluto 2009; STV Incorporated, 2012

Legend

- 1,000-Foot Buffer
- Rail Line
- New York City Truck Routes

Land Uses in Study Area

- Land Use information not available
- Single-Family Residential
- Multi-Family Residential
- Mixed Use
- Commercial and Office
- Industrial & Manufacturing
- Transportation and Utility
- Public Facility & Institution
- Open Space & Outdoor Recreation
- Parking Facility
- Vacant Land

0 2000 4000 6000 FEET
SCALE

FIGURE 6.1-2
Brooklyn Study Area
CROSS HARBOR FREIGHT PROGRAM

Owl's Head Park, Shore Parkway green space and Leif Ericson Park are within a thousand feet of the 65th Street Yard.

The remainder of the study area includes about 6 percent commercial and mixed-use development (typically residential with ground-floor commercial space); 6 percent institutional land uses; and 3 percent vacant lands.

Public facilities and institutional uses, such as schools and houses of worship are integrated into the residential fabric of the study area, and are present along the rail line throughout the study area.

Bay Ridge Branch

At the western end of the study area, in Sunset Park, the study area consists of mixed uses, including industrial, transportation infrastructure, open spaces, residential, institutional and commercial uses. Between 4th Avenue and 9th Avenue is the convergence of the elevated Gowanus Expressway, two subway lines, and the below-grade rail line. This area is dominated by industrial, automobile-related and transportation uses. The perimeters of the study area also include portions of the residential portions of the Sunset Park and Bay Ridge neighborhoods. Some commercial and institutional uses are scattered throughout the easternmost section of this portion of study area.

Further inland (east), in the portions of Borough Park and Bensonhurst, land uses include a mix of residential, industrial, institutional, commercial and vacant uses. The blocks adjacent to the rail line, and north to about 59th Street provide a transition in land uses from industrial and commercial uses located along the rail line to predominantly residential uses in the heart of Borough Park. Blocks to the south of the rail line to about 64th Street, are predominantly residential with some large institutional uses and mixed use buildings along Fort Hamilton Parkway, 11th Avenue, and 14th Avenue.

From the Borough Park neighborhood to the East Flatbush and Flatlands neighborhoods the study area is predominantly residential. Community facilities are found throughout this section of the study area, most notably the Brooklyn College campus, which spans approximately 10 blocks north of the rail line from Ocean Avenue to Nostrand Avenue.

The physical characteristics of the rail line itself change near the midpoint of the study area in East Flatbush and Flatlands; in this eastern portion of the study area, where the rail line is at-grade or above grade, expanses of industrial uses are more prevalent than to the west. Between Albany Avenue and Glenwood Road, the rail line ascends to grade; between Glenwood Road and New Lots Avenue, the rail line is elevated on an embankment. Between New Lots Avenue and Evergreen Avenue (to the northeast), approximately the southern border of Cemetery of the Evergreens, the rail line is depressed and travels through the East New York Tunnel; here, except for the blocks surrounding the East New York site, the land use pattern is highly mixed near the rail line and includes residential uses. Northeast of Evergreen Avenue and the Brooklyn/Queens border, the rail line is elevated on an embankment.

The eastern half of the study area includes longer and more uniform patches of industrial uses. This area includes the Brooklyn Terminal Market and New Lots Yard, a NYCT train storage facility. From the Brooklyn-Queens border to the southern boundary of Fresh Pond Yard, the study area straddles the neighborhoods of Ridgewood and Glendale in southern Queens. The study area south of Cyprus Avenue is dominated by industrial uses and cemeteries. North of Cyprus Avenue land use is residential in nature. Commercial strips that serve the residential

areas are located along Fresh Pond Road, Central Avenue, and Myrtle Avenue, and are within walking distance to area residents. The residences in the study area tend to be on densely developed areas with closely spaced lots with front yards along tree-lined streets. For the most part, vehicular traffic travels along the larger, more commercial streets and the residential streets are quiet.

Sunset Park Waterfront – 65th Street Yard, 51st Street Yard, South Brooklyn Marine Terminal

Much of the study area in the vicinity of the 65th Street Yard, 51st Street Yard, and the South Brooklyn Marine Terminal (SBMT) is characterized by industrial uses and transportation infrastructure. Waterfront-related (and non-waterfront related) industrial uses surround these facilities and the industrial waterfront is generally inaccessible to the public. While some residential uses are present in this portion of the study area between 2nd and 3rd Avenue, the Brooklyn-Queens Expressway (which is elevated over 3rd Avenue) acts as a buffer between the industrial waterfront and the residential neighborhoods to the east and south. The Brooklyn Army Terminal and the Owls Head Waste Water Treatment Facility are located adjacent to 65th Street Yard. The area also hosts numerous food services warehouses and distribution facilities in the Brooklyn Army Terminal, surrounding 51st Street Yard. The DASNY sanitation department is located just south of the site.

Red Hook Container Terminal

The Red Hook Container Terminal is located in the Red Hook section of Brooklyn on Buttermilk Channel and is the only container terminal located east-of-Hudson. The terminal stretches from approximately Sackett Street to the north and Bowne Street to the south and from Van Brunt and Imlay Streets to the east to the waterfront on the west. Land uses adjacent to the terminal comprise largely industrial and manufacturing, and there are few residential land uses located within 1,000 feet of the site.

East New York Yard

The East New York Yard site, as described in Chapter 4, "Alternatives," comprises a portion of the rail line and right-of-way. The site is part of a pattern of mixed uses: light-industry, parking, outdoor storage, and warehousing. Some commercial uses extend for several blocks outward from the rail line. The mix of land uses around the northern end of the site, though primarily industrial, represents greater diversity of other land uses, than is found in the industrial mix immediately surrounding the site; community facilities, open space, commercial, transportation related uses, and single-family residential uses are mixed in. Residential uses are also present within 1,000 feet of the southern portion of the site. A mix of vacant properties, transportation uses, and industrial properties extends along the rail line south from the site, but much of the surrounding area within 1,000 feet of the southern end of the site is single-family residential.

ZONING AND PUBLIC POLICY

Zoning

Zoning is generally consistent with existing land uses throughout the study area, including both the rail line and the rail yards. Most of the Brooklyn study area is zoned for residential uses. While some manufacturing zoning districts are present at several locations along the rail line, residential zoning extends to within 1,000 feet of the rail lines and rail yards throughout the entire study area. Only the far western end of the study area is exclusively manufacturing zoning within 1,000 feet. Manufacturing zones in the study area are almost exclusively M1 zones, the lightest manufacturing (e.g., "industrial") classification.

Residential zoning comprises nearly the entire remainder of the study area, bordering the industrial zones where they are present along the rail line. Except for very few instances, virtually all residential zoning throughout the study area is medium-density residential zoning.

Commercial zoning districts in the study area are few and small, typically comprising only a portion of a block and no more than about three blocks. Some of the commercial zoning in the study area is commercial overlay zoning, which allows for commercial uses along certain streets throughout all neighborhoods, in complement to underlying zoning.

Public Policy

There are several public policy initiatives pertaining specifically to the waterfront portion of the Brooklyn study area.

The Excelsior Jobs Program was created by New York State Empire State Development (NYSESD) to replace the Empire Zones program, which expired on June 30, 2010. This program seeks to promote job creation by providing investment incentives to firms in targeted industries such as biotechnology, pharmaceutical, high-tech, clean-technology, green technology, financial services, agriculture, and manufacturing. Firms in these strategic industries that create and maintain new jobs or make significant financial investment are eligible to apply for new tax credits.

65th Street Yard, 51st Street Yard, SBMT, and the Red Hook Container Terminal are located within the area defined by NYCDCP's *New Waterfront Revitalization Program* (WRP; issued 2011) as the Sunset Park Significant Maritime Industrial Area (SMIA). Applicable policies of the WRP promote water-dependent and industrial uses, encourage working waterfront uses at appropriate areas outside of SMIAs, and provide infrastructure improvements necessary to support working waterfront uses. Policy two of the WRP specifically urges support of "water-dependent and industrial uses in New York City coastal areas that are well-suited to their continued operation." In October 2013, the New York City Council approved a number of revisions to the WRP, largely related to sustainability and climate resilience planning, as epitomized by the goals of the *Vision 2020* plan, discussed below. For a discussion of the consistency of the proposed project with the WRP, please see Chapter 6.1-12 "Coastal Zone Management."

In 2011 NYCDCP released *Vision 2020: New York City's Comprehensive Waterfront Plan*. The Brooklyn Study area is located in Reach 14 South of *Vision 2020*, which is divided into 22 segments, or reaches, to ensure that local strategies can be developed for New York City's diverse shoreline. The intention of this plan is to build upon the City's success in opening up to the public miles of shoreline that had been inaccessible for decades, and to support expansion of the maritime industry. *Vision 2020* promotes the expanded use of the City's waterfront for parks, housing, and economic development. It also promotes the use of the City's waterways for transportation, recreation, and natural habitats. *Vision 2020* also envisions the New York City waterfront as a thriving home for maritime and industrial businesses and includes a specific strategy to "coordinate with the Port Authority on its Cross Harbor Freight Movement Project Environmental Impact Statement to ensure that transportation improvement alternatives fully account for expansion of container shipping."[1]

[1] *Vision 2020 New York City Comprehensive Waterfront Plan*, Chapter 3, page 58. www.nyc.gov/html/dcp/pdf/cwp/vision2020/chapter3_goal3.pdf

COMMUNITY FACILITIES AND OPEN SPACE

There are over 180 institutional uses within the vicinity of the rail line or rail yards in the Brooklyn study area. These range from houses of worship, schools, healthcare facilities, police precincts, fire houses, and community centers and reflect the densely developed New York City neighborhoods crossed by the study area.

Most of the institutional uses (over 100) are concentrated between 9th Avenue and Albany Avenue, a predominantly residential area along the Bay Ridge Branch. In addition, there is a large concentration of institutional uses (nearly 50) between East 45th Street and Sutter Avenue. Many are located to the north of the rail line in residential areas. Major healthcare facilities include: Maimonides Cancer Center and Brookdale Hospital, as well as numerous smaller adult care facilities, nursing homes, and neighborhood health clinics and medical offices. Educational facilities include the campus of Brooklyn College, 15 public schools ranging grades from elementary to high school, and numerous smaller private or parochial schools. There are over 80 houses of worship or related buildings (i.e., convent or parsonage or rectory). The study area contains three police precincts, two fire houses, and two libraries in the study area.

There are numerous open spaces located along the study area, including open spaces associated with the Belt Parkway and Shore Road Drive right-of-ways, John Allen Payne Park, Owls Head Park, and the New York City Department of Transportation (NYCDOT) Sunset Greenway. These open spaces are near the 65th Street Yard. In addition, the study area includes the 69th Street Pier, which is a recreational pier located at the end of Bay Ridge Avenue in the westernmost section of the alignment. The pier provides public access to the waterfront including fishing and waterfront views. Portions of Leif Ericson Park and Square are located within the study area between 66th Street and 67th Street and 8th Avenue and Fort Hamilton Parkway. The Parkville Youth Organization John C. Gallo Little League Fields are located between 8th Avenue and 9th Avenue and 65th Street and 66th Street. A ball field named "The Dust Bowl" is located on 8th Avenue between 65th Street and 66th Street. In the Queens section of the Bay Ridge Branch study area there is one local park, P.S. 68 Playground/Evergreens Park at St. Felix Avenue and Seneca Avenue, located in the middle of the study area to the east of the rail line. This park consists of approximately 3.3 acres and offers playground uses, such as swing sets and jungle gyms for the primary school students and the neighborhood children and benches for passive use. There are also a few neighborhood green spaces located along 78th Avenue between 60th Street and Cypress Avenue.

POPULATION CHARACTERISTICS

Over 100 census tracts extend into the Brooklyn study area. The U.S. Census reports that the 2010 total population for the study area is 3,308,540, with about 70 percent of the population concentrated north of East New York. Approximately 68 percent of the population is non-white and about 20 percent is Hispanic. Consequently, Environmental Justice communities may be present throughout the study area.

EAST-OF-HUDSON STUDY AREA – QUEENS 1

LAND USE AND NEIGHBORHOOD CHARACTER

For the purposes of this document, this section of the east-of-Hudson study area in Queens has been divided into two portions. Queens Study Area 1 includes Fresh Pond Yard, Maspeth Yard, and a portion of the West Montauk Branch connecting the two yards. Queens study area 1 comprises a mix of land uses, including a large expanse of industrial and transportation uses

lining Newtown Creek at the Brooklyn and Queens Border, with a few residential uses present at the west end of the study area in Queens and larger residential areas at the east end in Queens and Brooklyn.

Just over half of the study area comprises a mix of industrial areas (about 40 percent of the study area) and transportation and parking (about 11 percent of the study area). As shown in **Figure 6.1-3**, these land uses are heavily agglomerated around the railway and define nearly the entirety of about two-thirds of the study area length, including both Queens and Brooklyn properties. The Maspeth Yard is wholly situated within this industrial expanse. These three yards are part of an expanse of industrial uses that extend both north into Queens and south into Brooklyn. Fresh Pond Yard, at the eastern end of the study area is buffered from much of the surrounding uses by industrial and transportation related uses, but such areas are much smaller than are found nearer the other rail yards in the study area.

Residential land uses account for approximately 16 percent of the study area, most of which is single-family residential (less than one-half percent of the study area is multi-family residential).

The study area does not traverse major regional parks. There are however, several neighborhood parks located along the railway within the study area, including Gantry State Park in Hunters Point on the waterfront, and a small park in Ridgewood; though within the study area, these parks are not near any of the four rail yards within the study area. Joseph Mafera Park in Ridgewood, however, is adjacent to the Fresh Pond Yard and a playground is located about a block away from the rail yard in Glendale.

Cemeteries are notable land features in the vicinity of the study area, with Mount Olivet Cemetery, Lutheran Cemetery and Calvary Cemetery extending to within 1,000 of the rail line; Lutheran Cemetery is adjacent both to the rail line at the eastern end of the study area and Fresh Pond Yard, while Calvary Cemetery is adjacent to the railway further west.

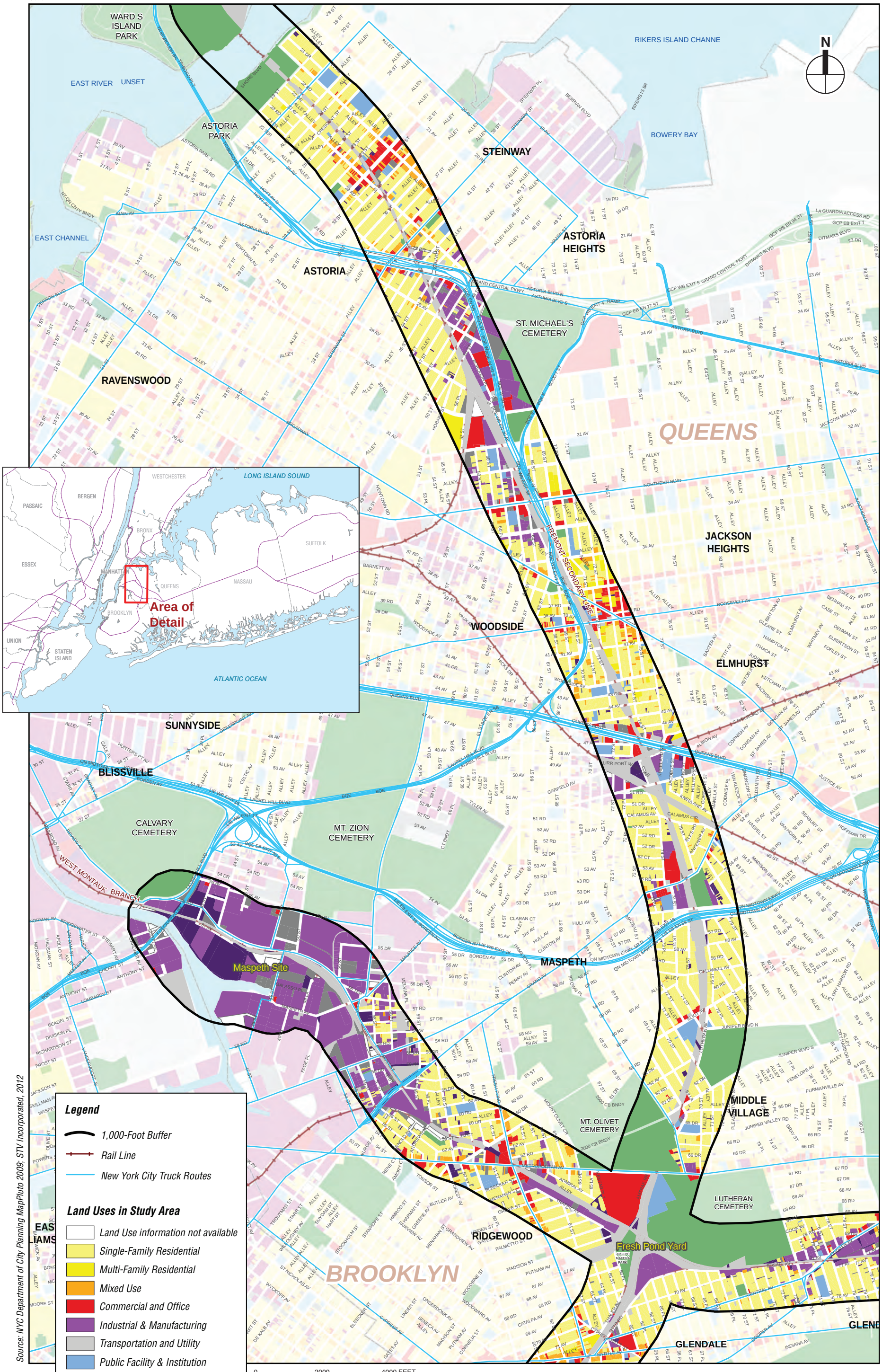
The remainder of the study area includes about 6 percent commercial and mixed-use development (typically residential with ground-floor commercial space); 2 percent public facilities and institutional land uses; but about 8 percent of the study area is vacant land.

West Montauk Branch Line

As shown in **Figure 6.1-3**, the land use pattern within 1,000 feet of the Montauk Branch from Maspeth Yard to Fresh Pond Yard is uniformly industrial along Newtown Creek. Residential areas and associated mixed uses extend to points adjacent or very near the rail line at the far western end and the eastern end of the study area. Between 73rd Place and Fresh Pond Yard, the rail line divides the neighborhoods of Maspeth to the north and Ridgewood to the south. Although residential uses are nearer the rail line in these neighborhoods than in most of the study area to the west the rail line and some abutting commercial and industrial lots, physically and visually separate the residential neighborhoods. The residential land uses are generally semi-attached single and multi-family houses.

Maspeth Yard

The dominant uses in the vicinity of Maspeth Yard are industrial and transportation-related, with buildings used for warehousing and distribution purposes. There are also metal shops, lumberyards, food storage facilities, junkyards, automobile-related uses. To the east, at 57th Place and Maurice Drive, there is a cluster of residential land uses with some commercial and mixed use buildings. A number of residences and several mixed-use buildings and commercial uses are located within about 1,000 feet of the rail yard to the east, around 56th Terrace and



Source: NYC Department of City Planning MapPluto 2009; STV Incorporated, 2012

FIGURE 6.1-3

Queens Study Area

CROSS HARBOR FREIGHT PROGRAM

Maurice Avenue. A large vacant lot is amid the residential uses, though adjacent to the rail line at 57th Road and 58th Street.

Fresh Pond Yard

The rail yard is sub-divided into two smaller yards, the East Yard and the West Yard, with an "upper yard" that extends south into Brooklyn. The East Yard is generally bounded by Lutheran Cemetery to the north, Otto Road to the south, to the west, and 71st Street to the east. The West Yard is bounded by Admiral Avenue to the north, Traffic Avenue to south, Fresh Pond Road to the west, and the NYCT Myrtle Avenue Line to the east. The upper yard, which comprises rail sidings in a portion of right-of-way elevated above the surrounding residential communities

The land uses with the 1,000 foot radius of the East Yard include the Lutheran Cemetery abutting the yard and a major institutional land use (Christ the King High School) to the north, directly to the south are industrial uses and south of Otto Road, land uses are predominantly residential. To the west is the right-of-way for the Freemont Secondary, and to the east is Lutheran Cemetery, an industrial land use adjacent to the Montauk Branch right-of-way and residential uses and open space (Glendale Playground).

The land uses surrounding the West Yard are more varied. To the north of the West Yard are a large commercial use (Rentar Plaza), single-family residential uses, and several industrial and auto-related commercial uses clustered at Metropolitan Avenue and Fresh Pond Road. Directly to the south of West Yard are predominantly industrial uses (warehousing and manufacturing). South of Traffic Avenue, land uses are generally single-family residential with mixed uses and commercial uses located along both sides of Fresh Pond Road. A significant open space, Joseph F. Mafera Park, is located in the southeast corner of West Yard.

The development pattern surrounding the upper yard is almost exclusively residential, with commercial uses located only along a couple roadways connecting Ridgewood on the west, to Glendale on the east. Several parks and community facilities, as well as the expansive Cemetery of the Evergreens, are located alongside the rail corridor at the southern end of the upper yard.

ZONING AND PUBLIC POLICY

Zoning

Zoning is generally consistent with existing land uses throughout the study area, including both the rail line and the rail yards. About two-thirds of the Queens study area is zoned for manufacturing uses; this includes both yards: Maspeth Yard and Fresh Pond Yard. Aside from Calvary Cemetery—which is zoned residential as part of the Sunnyside neighborhood to the north—residential zoning extends to within 1,000 feet of the rail lines only at the eastern end of the study area in Maspeth and Ridgewood. Further, except for Calvary Cemetery, residential zoning extends to within 1,000 feet of Fresh Pond Yard, while West Maspeth Yard is not within 1,000 feet of residential zoning.

No commercial districts are present within the study area. However, commercial overlay zones allow for commercial uses along certain streets throughout the residential areas of the Hunters Point, Maspeth, and Ridgewood neighborhoods, in complement to underlying residential zoning.

Public Policy

Maspeth Yard is located within Reach 13 of *Vision 2020*; this reach encompasses 3.5 miles along Newtown Creek and includes four tributaries: Dutch Kills, Maspeth Creek, Whale Creek, and English Kills. Among the neighborhood strategies proposed under this plan is to support

Brownfield redevelopment, promote industrial and recreational use of the waterway, and improve public access to the waterfront. The plan also recognizes the area as a Significant Maritime Industrial Area.

Maspeth has been identified by the Mayor's Office of Industrial and Manufacturing Business as an Industrial Business Zone (IBZ). The IBZs represent areas in which the City provides expanded assistance services to industrial firms in partnership with local development groups. In addition, IBZs reflect a commitment by the City not to support the re-zoning of industrial land for residential use within these areas. In March 2011, the Business Outreach Center Network (BOCN) proposed creating a new industrial association for industrial factories and businesses in Maspeth.

COMMUNITY FACILITIES AND OPEN SPACE

No community facilities or open spaces are located in the vicinity of the Maspeth Yard. However, there are a number of schools and religious facilities in the study area serving the local communities around Fresh Pond Yard. There are also several open spaces in the vicinity of Fresh Pond Yard. Joseph F. Mafera Park, which is located immediately adjacent to Fresh Pond Yard, just south of the West Yard; Glendale Playground, located in the eastern portion of the study area along Central Avenue between 70th Street and 71st Street; and Albert C. Benniger Playground is located on Madison Street near Fresh Pond Road.

POPULATION CHARACTERISTICS

Twenty-four census Tracts extend into the Queens Study Area 1. The U.S. Census reports that the 2010 total population for the study area is 58,644. Approximately 42 percent of the population is non-white and about 29 percent is Hispanic. Consequently, Environmental Justice communities may be present throughout the study area.

EAST-OF-HUDSON STUDY AREA – QUEENS 2

LAND USE AND NEIGHBORHOOD CHARACTER

The second portion of the study area, comprising the Freemont Secondary, is a mix of land uses, including a large proportion of residential uses, as it passes through several New York City neighborhoods. Approximately 46 percent of the study area is residential; in fact, the study area is primarily single-family residential (about 43 percent). As shown in **Figure 6.1-3**, residential uses can be found throughout virtually the entire length of this study area, representing the edges of multiple Queens neighborhoods: Steinway, Astoria, Jackson Heights, Woodside, Elmhurst, Maspeth and Middle Village. Residential uses line portions of the rail line in the study area throughout each of these neighborhoods.

The remainder of the study area contains some industrial areas (about 6 percent of the study area) and transportation and parking (about 2 percent of the study area). These land uses tend to appear in locations where the rail line intersects with major roadways, including Astoria Boulevard/Grand Central Parkway at the northern end of the study area and a portion of the Brooklyn-Queens Expressway. Similar patches of industrial uses can be found near the eastern end of the study area in Elmhurst and Maspeth, near Queens Boulevard and the Queens-Midtown Expressway.

Commercial uses, which account for approximately 7 percent of the study area, are found mixed in among the industrial uses, as well as together with mixed-use properties (typically residential

with ground-floor commercial) in the residential neighborhoods of the northern half of the study area.

Public facilities and institutional uses (approximately 4 percent of the study area) are scattered throughout the study area, both within the industrial and commercial areas and also in otherwise exclusively residential areas.

In addition to St. Michael's Cemetery in Astoria, in the northern portion of the study area and the Mount Olivet Cemetery and Lutheran Cemetery on the southern end of the study area in Middle Village and Maspeth, there are several other parks and open spaces scattered throughout the study area, all together accounting for approximately 26 percent of the study area. As with residential and institutional uses, parks are present adjacent to the rail line in several locations, including in Astoria, Woodside, Maspeth, and Middle Village.

COMMUNITY FACILITIES AND OPEN SPACE

There are several schools within the study area, including: Christ the King Primary School and High School, Our Lady of Hope School, P.S. 128, I.S. 5, 51st Avenue Academy, P.S. 12, Rainbow Christian Preschool and Kindergarten, CCB English School, S.D.A. School of Jackson Heights, P.S. 152, and the Corpus Christi School.

Open spaces include two large parks, Juniper Valley Park (55.25 acres) which provides both passive and active uses, such as benches, trees, a ball field, and a track, and Astoria Park (66 acres) offering passive and active recreational uses, including baseball fields, Bocce courts, and one of the City's largest outdoor pools, Astoria Pool. Smaller parks in the study area include Long Island Mews, St. Michaels Playground, Edward Hart Playground, and Ralph Demarco Park along the shore of the East River.

POPULATION CHARACTERISTICS

Forty-eight census tracts extend into this portion of the Queens study area. The U.S. Census reports that the 2010 total population for the study area is 156,406. Approximately 62 percent of the population is non-white and about 26 percent is Hispanic. Consequently, Environmental Justice communities may be present throughout the study area.

EAST-OF-HUDSON STUDY AREA – BRONX

LAND USE AND NEIGHBORHOOD CHARACTER

The Bronx study area (**Figure 6.1-4**) comprises a mix of land uses, including a large proportion of industrial uses along the Bronx waterfront where the Oak Point Yard and Hunts Point are located.

The study area comprises a predominant mix of industrial areas (about 23 percent of the study area) and transportation and parking (about 8 percent of the study area). Both are on the water and separated from the more residential areas inland by the Bruckner Expressway.

Residential land uses account for about 5 percent of the study area, about evenly divided between single and multi-family properties, with most of residences in the study area located within a portion of Longwood to the north of Oak Point Yard, north of the Bruckner Expressway. There are a few scattered residences on blocks surrounding the Oak Point Yard, south of the Bruckner Expressway; however, though none are adjacent to the rail yard.

Commercial uses and mixed uses (typically residential properties with ground-floor commercial space) account for about 2 percent of the study area. Except for a few commercial properties

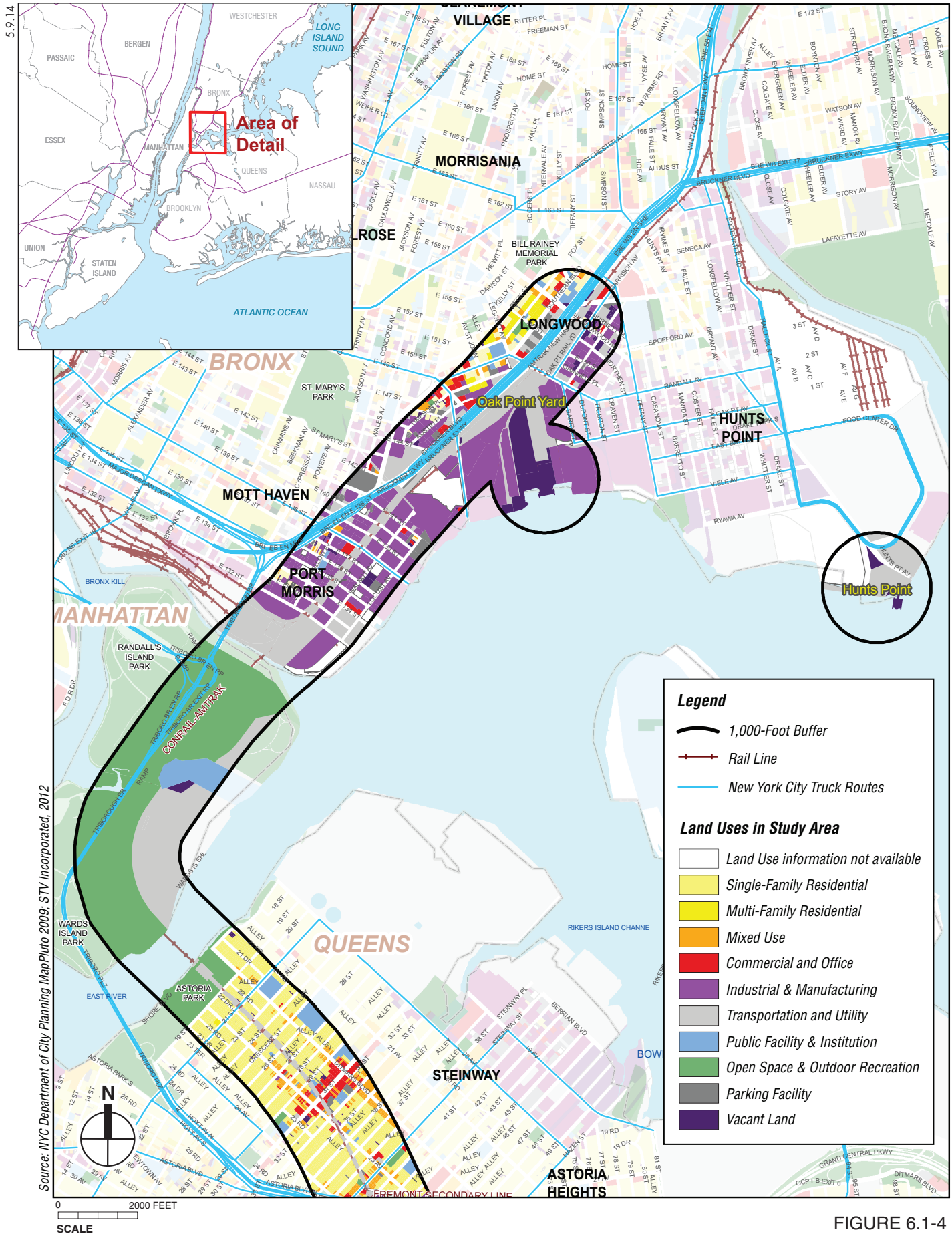


FIGURE 6.1-4

Bronx Study Area

CROSS HARBOR FREIGHT PROGRAM

within the industrial areas near the waterfront, most commercial and mixed uses are located together with residential uses north of the two rail yards. The public facility and institutional uses present in the study area (about 4 percent of the area) are located both among the industrial uses along the waterfront and also among the residential uses inland; none are immediately adjacent to the two rail yards.

Open space is a major land use in the study area, as the rail line crosses from Queens over Randall's Island Park and Wards Island Park. These parks together are part of Manhattan, though directly south of the Bronx industrial waterfront, separated by only the narrow Bronx Kill.

ZONING AND PUBLIC POLICY

Zoning

Zoning is generally consistent with existing land uses throughout the study area, including both the rail line and the rail yards. About half of the Bronx study area is zoned for manufacturing, with much of the large Randall's Island and Wards Island designated as park. Residential zones extend inland from Longwood, Hunts Point and Mott Haven but represent only a small proportion of study area.

Commercial zoning is represented only sporadically in the Bronx Study Area.

Public Policy

Oak Point Yard and Hunts Point Yards are located a Significant Maritime and Industrial Area and in Reach 7 of *Vision 2020*. Among the neighborhood strategies proposed under this plan is to promote redevelopment of vacant land within the Significant Maritime and Industrial Area for industrial uses with preference for water-dependent maritime industries, where feasible and preserve waterfront access to industrial properties and intermodal connections to facilitate waterborne movement of goods. In addition, the Port Morris and Hunts Point neighborhoods are designated as Excelsior Jobs Program Investment Zones, described previously.

There is an In-Place Industrial Park (IPIP) program designation for the Port Morris neighborhood. The Local Development Corporation (LDC) overseeing the IPIP program in Port Morris is the South Bronx Overall Economic Development Corporation, which advises businesses in the area already as well as assisting businesses locating to the area.

COMMUNITY FACILITIES AND OPEN SPACE

Community facilities in vicinity of Oak Point Yard and Hunts Point are located in and around the residential areas. The study area includes a number of public schools, religious institutions, and houses of worship.

POPULATION CHARACTERISTICS

Fourteen census tracts extend into the Bronx study area. The U.S. Census reports that the 2010 total population for the study area is 56,212. Approximately 98 percent of the population is non-white and about 70 percent is Hispanic. It should be noted, however, that given the land use pattern of the area, this total population is not generally near the project area, even though most of the population is reported for tracts extending to within 1,000 feet of the two facilities and adjacent industrial areas. While other study areas also include tracts that extend beyond the 1,000 buffer, the population in this case is notably and almost entirely distributed beyond 1,000 feet of the project area. Nevertheless, it is also important to note that the proportion of

population that may be within 1,000 feet of the project area is likely to be almost entirely non-white and predominantly Hispanic. Consequently, Environmental Justice communities may be present throughout the study area.

EAST-OF-HUDSON STUDY AREA – LONG ISLAND

LAND USE AND NEIGHBORHOOD CHARACTER

The land use along the LIRR Main Line leading east out of the Fresh Pond Yard includes a large proportion of residential uses as it passes through several neighborhoods in New York City and on Long Island.

Much of this study area is single-family residential, both within Queens and on Long Island. Residential uses can be found throughout virtually the entire length of the study area, representing the edges of the multiple Queens neighborhoods: Middle Village, Glendale, Forest Hills Gardens, Kew Gardens, Richmond Hill, Briarwood, Jamaica Center, Jamaica Hills, South Jamaica, Jamaica Estates, Holliswood, Hollis, and Queens Village at the eastern border of Queens. Long Island neighborhoods crossed traversed by the LIRR Main Line are in the Towns of North Hempstead, Oyster Bay, Huntington, Islip (in Nassau County) and Brookhaven in Suffolk County. Yet there is a distinctive pattern throughout the length of the study area, where a mix of commercial, industrial, and transportation uses comprise the blocks along much of the rail line.

The industrial and transportation land uses tend to are clustered along the rail line in several Queens neighborhoods, including Glendale on the north side of the rail line, south of St. John's Cemetery; Richmond Hill, along Jamaica Avenue, near its intersection with the rail line; Jamaica Center, Hollis and Queens Village, all along Jamaica Avenue, which runs along the northern side of the rail line in these neighborhoods. Industrial uses within the Long Island portion of the study area while also along the rail line tend to appear in nodes or broader groupings to include portions of roadways that intersect the study area.

Jamaica Avenue, together with the rail line in the Queens portion of the study area, is definitively industrial and commercial, a pattern that extends along the roadway even outside the study area on the western end in Woodhaven. Commercial uses in the Queens portion of the study area are clustered along the north side of the rail line in Glendale, together with the industrial uses there. While they are located along Jamaica Avenue throughout the study area east of Forest Park, in Richmond Hill, Jamaica Center, Hollis and Queens Village, the largest concentration is found in Jamaica Center, extending south to the rail line. Commercial uses within the Long Island portion of the study area follow the trend of industrial land uses, also being clustered at the intersections of major roadways.

Public facilities and institutional uses account for a relatively small portion of the land uses in the study area in Queens and on Long Island. Within the Queens portion of the study area, public facility and institutional uses are scattered, located both within the industrial and commercial areas and also in otherwise exclusively residential areas. As such, these uses are, in several cases throughout the Queens portion of the study area, located adjacent to the rail line. On Long Island, the public facilities and institutional uses are also scattered, though generally not located within close proximity to rail line.

Open space within this study area includes a large proportion of natural areas and conservation lands, particularly on Long Island, rather than public parks for active recreational use as may be more common in Queens. The study area crosses Lutheran Cemetery and a small portion of St.

John's Cemetery, both in Middle Village, Queens. Lutheran Cemetery is substantially contiguous to the rail line. The rail line also crosses through Forest Park, between Kew Gardens and Glendale, with parkland adjacent to both the north and south sides of the rail line for nearly a mile. Smaller open spaces are present in the remainder of the Queens portion of the study area, some adjacent to the rail line and associated rail infrastructure in Richmond Hill, Jamaica Center, Hollis, and Queens Village.

The Brookhaven Rail Terminal (see **Figure 6.1-5**) represents a unique site among rail yards considered, insofar as it is an approved rail yard site, but one which has not yet begun to function as such. Further, the subdivision of property comprising the site reveals a pattern that historically may have been intended to be residential, thus a continuation of the residential pattern generally present in the vicinity. However, neither the site, nor much of the study area contains residential uses; in fact, vacant lands extend north and west beyond the study area, as well as south in the vicinity of the rail line and beyond. Industrial uses extend to the west and a mix of natural and agricultural uses extend from the site to comprise the eastern portion of the study area.

Pilgrim Intermodal Terminal

The Pilgrim Intermodal Terminal (see **Figure 6.1-5**) is centrally located on Long Island in the Town of Islip. The site consists of approximately 105 acres of land on property previously occupied by the Pilgrim State Hospital. To the south, the site borders an industrial park development that extends beyond the study area along the rail line. The remainder of the land within 1,000 feet of the site is New York State conservation area, which buffers the hospital property and site, as well as the industrial park, from a sprawling residential area to the northwest of the study area. A more densely developed residential subdivision is located to the southeast of the study area as well, buffered from the site by hospital lands, the rail line, and industrial uses mirroring the industrial park to the west.

ZONING AND PUBLIC POLICY

Brookhaven Rail Terminal

Strong planning policy and zoning is in place for the entire Long Island portion of this study area. Zoning is generally consistent with existing land uses throughout the study area, and in the Town of Brookhaven in particular, where the Brookhaven Rail Terminal is located. The area including the Brookhaven Rail Terminal is zoned for light industrial uses (L1).

Pilgrim Intermodal Terminal

Pilgrim Intermodal Terminal is zoned "AAA" residential (Town of Islip), which permits single-family detached dwellings and other similar low-intensity uses common in such districts. While this zoning does allow for railway right-of-way or passenger stations, it does not allow railway yards or freight stations. Surrounding uses include more AAA residential to the east, and a light industrial district (IND1) to the south, also in the Town of Islip. Single-family residential zoning directly to the west and northwest of the site, in the Town of Huntington and to the southwest in the town of Babylon resemble the Pilgrim Intermodal Terminal zoning. An area zoned "Shopping Center Business" (commercial) and an area zoned "Wholesale and Service Industry" (industrial) lie just north of the site in the Town of Smithtown.

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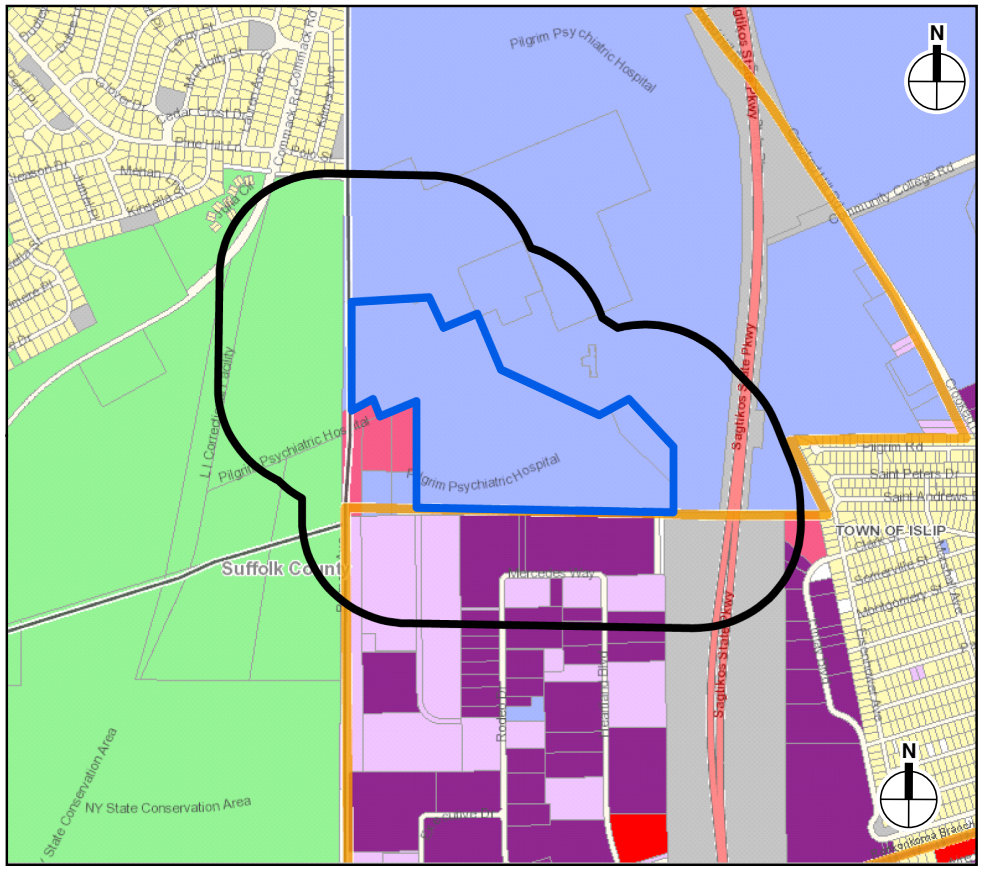
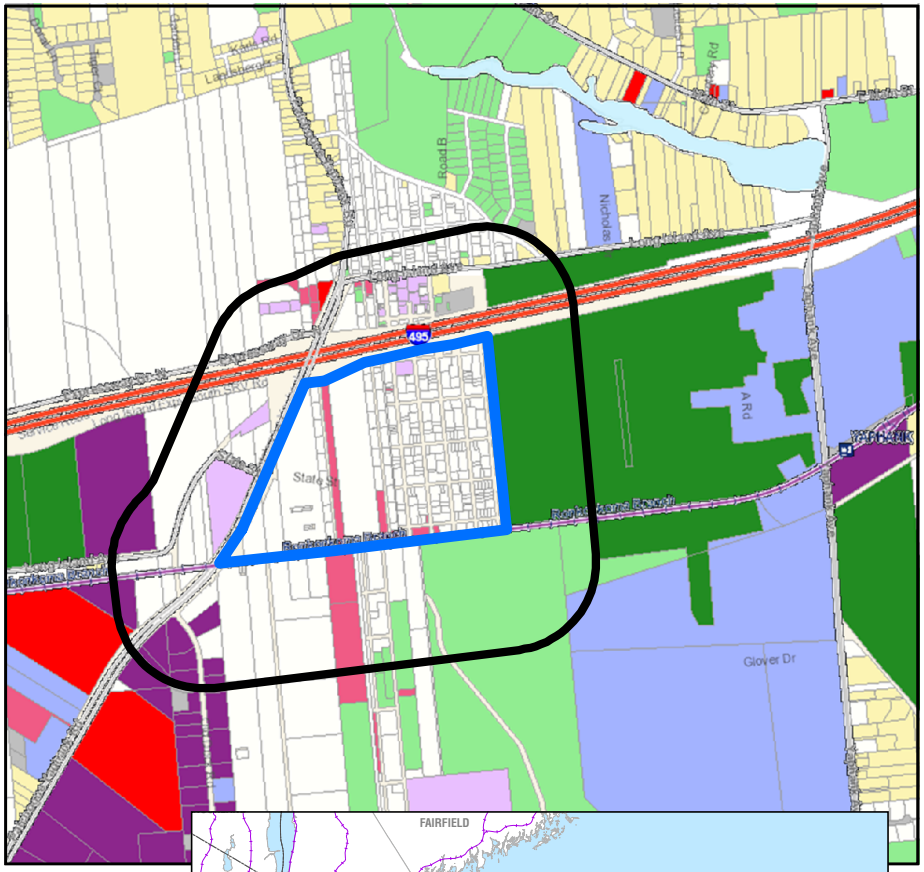
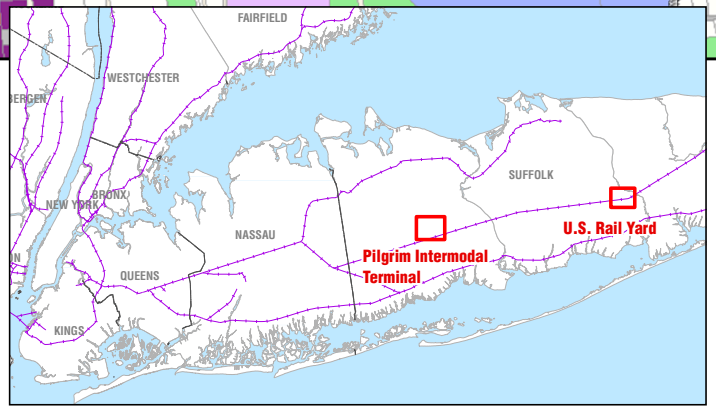


PILGRIM INTERMODAL TERMINAL



U.S. RAIL YARD



Legend

- *Rail Yard*
- *Rail Line*
- *1,000-Foot Buffer*

Land Uses in Study Area

- *Agriculture*
- *Commercial*
- *Community Services*
- *Industrial*
- *Recreation and Open Space*
- *Residential*
- *Transportation*
- *Utilities*
- *Vacant*
- *Waste Handling and Management*
- *Unknown*

FIGURE 6.1-5

Long Island Study Areas

CROSS HARBOR FREIGHT PROGRAM

COMMUNITY FACILITIES AND OPEN SPACE

Brookhaven Rail Terminal

Community facilities and open space, both recreational and to serve conservation purposes, are found throughout the Long Island portion of the study area. No community facilities are located within 1,000 feet of the Brookhaven Rail Terminal. A natural open space is located within 1,000 feet to the southeast of the facility.

Pilgrim Intermodal Terminal

The site is part of the Pilgrim Psychiatric Hospital property, which according to the New York State Office of Mental Health provides in-patient and out-patient psychiatric, residential and related services, with approximately 450 in-patient beds. Built in the 1920s and including 825 acres, it was the largest facility of its kind in the world and in the mid-1950s housed more than 13,000 patients. A New York State conservation area is located within 1,000 feet to the west of the site, and extends beyond the study area.

POPULATION CHARACTERISTICS

Three census tracts extend to within 1,000 feet of and include Pilgrim Intermodal Terminal; two of these census tracts extend to within 1,000 feet of and include Brookhaven Rail Terminal. The U.S. Census reports that the population in tracts near Pilgrim Intermodal Terminal and Brookhaven Rail Terminal together is about 35,850. The percentages of non-white and Hispanic populations for tracts around the three yards, respectively, are as follows: 65 percent non-white and 47 percent Hispanic in vicinity of Pilgrim Intermodal Terminal; and 35 percent non-white and 19 percent Hispanic in vicinity of Brookhaven Rail Terminal. Consequently, Environmental Justice communities may be present throughout the study area.

D. POTENTIAL EFFECTS FROM THE PROJECT ALTERNATIVES

INTRODUCTION

This section presents a discussion of potential effects to land use, neighborhood character, and social conditions that may result from any of the Build Alternatives. A description of the No Action Alternative is provided as well, to allow comparison among conditions with and without the Cross Harbor Freight Program (CHFP).

A key function of this Tier I EIS is to identify geographic areas that, given available information, may be sensitive to project-related changes to land use, neighborhood character and social conditions. Potential effects may be evident locally in the following ways:

- As noted throughout this document, existing freight transfer facilities may have to be expanded to accommodate the project alternatives; some new facilities would have to be constructed. Therefore, direct effects to land use would result from the acquisition of those properties which are not currently used to support rail or transport functions. As noted throughout this EIS, details regarding property acquisitions are not available in the Tier I EIS. Therefore direct effects to land use are presented below in a generalized manner.
    - Changes to land uses comprising open space or community facilities, may also constitute indirect effects to neighborhood character and social conditions, as open space and community facilities are contributing elements. These potential impacts are also presented only generally.

  - Changes to land uses, including but not limited to residential land uses, may result in indirect effects to neighborhood character and social conditions, either by relocating population or by affecting community cohesion. These potential impacts are also presented only generally.

- If resident or worker populations were to be relocated or new workers were to be introduced to the area, direct effects to social conditions may result. Because the proposed project does not involve the introduction or relocation of any residential populations or any substantial worker populations (as known at this time), no direct changes to social conditions are expected from any alternative.
  - Indirect effects to open space and community facilities could also result from changes in demand for outdoor recreational areas, schools, hospitals, etc. However, since no direct effects on social conditions are expected at this time for any of the alternatives, indirect effects are also not expected.

- Increases in truck traffic, rail yard activity, or activity at waterfront termini may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. Potential effects associated with traffic, air quality and noise (as described in Chapter 5, "Transportation"; Chapter 6.6, "Air Quality"; and Chapter 6.7, "Noise and Vibration," respectively) are determined regionally and at a screening level for this Tier I EIS. Therefore, the following sections identify, generally, the geographic areas of concern with regard to potential indirect effects to open space, community facilities, and neighborhood character as a result of increased truck traffic and resultant adverse effects on air quality or increases in noise.

OPERATIONAL EFFECTS

The following section discusses potential effects from the operation of the Build Alternatives that were selected for detailed evaluation and comparison with the No Action Alternative throughout this EIS. The alternatives are described in detail in Chapter 4, "Alternatives."

NO ACTION ALTERNATIVE

Under the No Action Alternative, the proposed project would not be implemented. No significant population shifts are anticipated, nor changes in land use patterns or development trends. Improvements to properties and areas on which one or more proposed project alternative may rely, however, are anticipated in the future without the project. Specifically, as described in Chapter 4, "Alternatives," under the No Action Alternative there would be several changes to the operations or improvements at the Greenville Yard and at the 65th Street Yard. These changes would not constitute changes to land use and would be in keeping with existing rail- and freight transport-related functions that characterize these properties and study areas under existing conditions. Therefore, under the No Action Alternative, future land use, neighborhood character, and social conditions in the study areas would resemble existing conditions.

WATERBORNE ALTERNATIVES

Enhanced Railcar Float Alternative

The Enhanced Railcar Float Alternative would rely largely on existing infrastructure throughout the entire project area, and so neighborhood character, community facility, open space or population issues that could be identified at this level of analysis, would be related to direct

changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

The Enhanced Railcar Float Alternative would not result in changes to land use within or along the extent of existing rail lines; therefore, no direct effects to land use would be expected along any rail corridor except at the following rail yards. No indirect effects to land use or land use-related effects to neighborhood character would be expected for the portions of study area encompassing rail lines only.

As noted in Chapter 4, "Alternatives," this alternative would utilize Greenville Yard as the western terminus; either 51st Street Yard, 65th Street Yard, or Oak Point Yard as the main eastern terminus. 65th Street Yard and 51st Street Yard, Oak Point Yard, and Maspeth would be used to transfer carload freight; East New York Yard would be used for storage and sidings; and Fresh Pond Yard for classification and switching. As described in the No Action Alternative, Greenville Yard would be improved over existing conditions but would continue to operate in a similar manner. Therefore, with the Enhanced Railcar Float Alternative, these yards would continue to function as rail and freight-handling facilities, similar to existing conditions and the No Action Alternative and consequently no indirect changes to land use patterns or development trends in the vicinity would be expected.

Land acquisition and the resultant potential for direct effects to land use would be as follows:

- It is anticipated that 65th Street Yard would be expanded by approximately 7.5 acres to support yard operations under this alternative. As the land uses in this location are industrial and related to freight-handling; no direct changes to land use would be expected. No indirect effects to land use patterns would be expected. No residential areas, community facilities or open space would be affected.
- Oak Point Yard would be expanded to support yard operations under this alternative, however the extent of the proposed acquisition has not been determined at this time. The land uses in this location are light and heavy industry, many related to freight-handling; no direct changes to land use would be expected. No indirect effects to land use patterns would be expected. No residential areas, community facilities or open space would be affected.
- Additional area may be required southeast of the Fresh Pond Yard, to improve the curve on the east leg of the Fresh Pond wye to facilitate current yard operations and to accommodate the trains anticipated with the proposed project. Survey and acquisitions information is not available at this time, but preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location.
- Maspeth Yard would be expanded by approximately 15 acres to handle bulk and intermodal freight. In the case where the Enhanced Railcar Float Alternative is developed as a carload-only option (see Chapter 4), the required expansion would be smaller than 15 acres.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result from the Enhanced Railcar Float Alternative. The properties directly adjacent to locations where rail yard or similar facility expansions may occur are typically industrial in function, if not already directly containing transportation infrastructure or freight-handling operations. As the project would enhance existing rail- and transport-related infrastructure and would be in keeping with No Action Alternative developments, it is reasonable to conclude that the Enhanced Railcar Float Alternative would be consistent with regional transportation policy and its representation in local

land use and community planning policy. It is anticipated, however, that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to land use would be anticipated along any rail line outside proposed rail facilities. Consequently no direct changes to community facilities or population characteristics would be expected at these locations. As noted previously no direct or indirect effects to community facilities, open space, or population characteristics would be anticipated to result from the facilities required to support operations under this alternative.

Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Truck Float Alternative

The Truck Float Alternative would rely largely on existing truck infrastructure throughout the entire project area, and so neighborhood character, community facility, open space or population issues that could be identified at this level of analysis, would be related to direct changes in land use resulting from the establishment of terminals for this alternative, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

The Truck Float Alternative is not expected to result in significant changes to land use. As noted in Chapter 4, this alternative would utilize Port Newark/Port Elizabeth as the western terminus. The eastern terminus of this alternative would comprise either one of the Brooklyn waterfront facilities (SBMT, 51st Street Yard, 65th Street Yard), one of the Bronx waterfront facilities (Oak Point or Hunts Point), or Maspeth.

Each of these facilities would be located in established industrial areas that can accommodate terminal facilities needed to support this alternative and in fact, land uses at both the western and eastern termini already include some waterfront transportation facilities. Land acquisition and the resultant potential for direct effects to land use may occur if existing facilities have to be transformed from their current or future uses or expanded to accommodate the infrastructure required for this alternative. It is expected that a terminal facility required to support this alternative would comprise approximately 10 acres, however such a facility could potentially be accommodated (in full or in part) within existing waterfront facilities and would not require land acquisition.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result from this alternative. The properties directly adjacent to locations where termini may be located are typically industrial in function, if not already directly containing transportation infrastructure or freight-handling operations. As the project would enhance existing transportation related infrastructure the project would be consistent with regional transportation policy and its representation in local land use and community planning policy. It is anticipated, however, that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties that may need to be acquired if any of the existing facilities are to be expanded.

Community Facilities, Open Space, and Population Characteristics

No direct changes to land use would be anticipated from this alternative, therefore no direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity. No direct or indirect effects to open space would be anticipated to result. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Truck Ferry Alternative

As described in Chapter 4, the difference between the Truck Float and Truck Ferry Alternatives is that in the latter, truck drivers move with the truck trailers or whole trucks as they are transferred on a vessel across the harbor, whereas in the former, a different truck driver picks up the truck or trailer on the other side of the harbor. Therefore, the infrastructure requirements of both alternatives are nearly identical.

As with the Truck Float Alternative, the Truck Ferry Alternative would rely largely on existing truck infrastructure throughout the entire project area, and so neighborhood character, community facility, open space or population issues, that could be identified at this level of analysis, would be related to direct changes in land use resulting from the establishment of terminals for this alternative, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

The Truck Ferry Alternative is not expected to result in significant changes to land use. As noted in Chapter 4, this alternative would utilize Port Newark/Port Elizabeth as the western terminus. The eastern terminus of this alternative would comprise either one of the Brooklyn waterfront facilities (SBMT, 51st Street Yard, 65th Street Yard), one of the Bronx waterfront facilities (Oak Point or Hunts Point), or Maspeth.

Each of these facilities would be located in established industrial areas that can accommodate terminal facilities needed to support this alternative and in fact, land uses at both the western and eastern termini already include some waterfront transportation facilities. Land acquisition and the resultant potential for direct effects to land use may occur if existing facilities have to be transformed from their current or future uses or expanded to accommodate the infrastructure required for this alternative. It is expected that a terminal facility required to support this alternative would comprise approximately 10 acres, however such a facility could potentially be accommodated (in full or in part) within existing waterfront facilities and would not require land acquisition.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result from this alternative. The properties directly adjacent to locations where termini may be located are typically industrial in function, if not already directly containing transportation infrastructure or freight-handling operations. As the project would enhance existing transportation related infrastructure the project would be consistent with regional transportation policy and its representation in local land use and community planning policy. It is anticipated, however, that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties that may need to be acquired if any of the existing facilities are to be expanded.

Community Facilities, Open Space, and Population Characteristics

No direct changes to land use would be anticipated from this alternative, therefore no direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity. No direct or indirect effects to open space would be anticipated to result. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

RORO Container Barge Alternative

The RORO Container Barge Alternative would rely largely on existing truck infrastructure throughout the entire project area, and so neighborhood character, community facility, open space or population issues that could be identified at this level of analysis, would be related to direct changes in land use resulting from the establishment of terminals for this alternative, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

The Container Barge Alternative is not expected to result in changes to land use. As noted in Chapter 4, "Alternatives," the alternative would utilize Port Newark/Port Elizabeth or Greenville Yard as the western terminus and Brooklyn waterfront facilities (SBMT, 51st Street Yard, 65th Street Yard, or Red Hook Container Terminal). As with the Truck Ferry and Truck Float Alternatives, terminals required to support this alternative would be located in established waterfront industrial areas that can accommodate facilities with sufficient capacity to accommodate this alternative. In fact, land uses at both the western and eastern termini already include some waterfront transportation facilities. Land acquisition and the resultant potential for direct effects to land use may occur if existing facilities have to be transformed from their current or future uses or expanded to accommodate the infrastructure required for this alternative. It is expected that a terminal facility required to support this alternative would comprise approximately 15 acres, however such a facility could potentially be accommodated (in full or in part) within existing waterfront facilities and would not require land acquisition.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result from this alternative. The properties directly adjacent to locations where facility expansions may occur are typically industrial in function, if not already directly containing transportation infrastructure or freight-handling operations. As the project would enhance existing transportation related infrastructure the project would be consistent with regional transportation policy and its representation in local land use and community planning policy. It is anticipated, however, that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to land use would be anticipated under this alternative. Consequently no direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity. No direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

LOLO Container Barge Alternative

As described in Chapter 4, the difference between the RORO and LOLO Container Barge Alternatives is that in the latter the containers are lifted off and loaded directly onto a barge via crane, whereas in the former, the containers are rolled on and off on a chassis.

The LOLO Container Barge Alternative would rely largely on existing truck infrastructure throughout the entire project area, and so neighborhood character, community facility, open space or population issues that could be identified at this level of analysis, would be related to direct changes in land use resulting from the establishment of terminals for this alternative, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

The LOLO Container Barge Alternative is not expected to result in changes to land use. As noted in Chapter 4, the alternative would utilize Port Newark/Port Elizabeth or Greenville Yard as the western terminus and Brooklyn waterfront facilities (SBMT, 51st Street Yard, 65th Street Yard, or Red Hook Container Terminal). As with the Truck Ferry, Truck Float, and RORO Container Barge Alternatives, terminals required to support this alternative would be located in established waterfront industrial areas that can accommodate facilities with sufficient capacity to accommodate this alternative. In fact, land uses at both the western and eastern termini already include some waterfront transportation facilities. Land acquisition and the resultant potential for direct effects to land use may occur if existing facilities have to be transformed from their current or future uses or expanded to accommodate the infrastructure required for this alternative. It is expected that a terminal facility required to support this alternative would comprise approximately 15 acres, however such a facility could potentially be accommodated (in full or in part) within existing waterfront facilities and would not require land acquisition.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result from this alternative. The properties directly adjacent to locations where facility expansions may occur are typically industrial in function, if not already directly containing transportation infrastructure or freight-handling operations. As the project would enhance existing transportation related infrastructure the project would be consistent with regional transportation policy and its representation in local land use and community planning policy. It is anticipated, however, that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to land use would be anticipated under this alternative. Consequently no direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity. No direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

RAIL TUNNEL ALTERNATIVES

Rail Tunnel Alternative

In its land-side portions, the Rail Tunnel Alternative would rely in large part on existing infrastructure throughout the entire project area, and so neighborhood character, community

facility, open space or population issues that could be identified at this level of analysis, would be related to direct changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

As described in Chapter 4, this alternative would utilize Oak Island Yard for storage and classification and potentially for fillet/toupee operations; East New York Yard for storage and sidings and potentially as a fillet/toupee yard; Fresh Pond Yard for classification and switching; 65th Street Yard, 51st Street Yard, and Oak Point Yard would be used to transfer carload freight, and Maspeth would be used to transfer intermodal freight. For this and all other tunnel-based alternatives, the tunnel portals will be in Greenville Yard and along the Bay Ridge Branch, as described in Chapter 4. The Rail Tunnel Alternative would result in no changes to land use within or along the extent of existing rail line within the study areas, except where directly associated with and physically connected to a proposed yard expansion. Therefore, no direct effects to land use would be expected along any rail corridor, and therefore, no indirect effects to land use or land use-related effects to neighborhood character would be expected in those portions of the study area.

Land acquisition and the resultant potential for direct effects to land use would only occur in those rail yards requiring expansion to support this alternative:

- It is anticipated that the existing Oak Island Yard would be expanded by approximately 50 acres to support operations at under this alternative. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area.
- It is anticipated that 65th Street Yard would be expanded by approximately 7.5 acres to support yard operations under this alternative. As the land uses in this location are industrial and related to freight-handling; no direct changes to land use would be expected. No indirect effects to land use patterns would be expected. No residential areas, community facilities or open space would be affected.
- It is anticipated that Oak Point Yard would be expanded by approximately 9 acres to support yard operations under this alternative. As the land uses in this location are industrial and related to freight-handling; no direct changes to land use would be expected. No indirect effects to land use patterns would be expected. No residential areas, community facilities or open space would be affected.
- If the existing East New York facility is expanded into a fillet/toupee operation to support this and other Rail Tunnel Alternatives, land outside of the right-of-way would be required. The size of the expansion is not determined at this time with the level or engineering and operational detail available in Tier I, however direct effects to land use would be likely as result of property acquisition. It is unlikely that broader land use patterns or development trends in the area would be affected, however there may be the potential for indirect land use effects to some sensitive uses within approximately one block of the expanded rail yard perimeter, where residences, commercial uses, and institutional uses (e.g., community facilities) would remain but with intervening structures being removed and replaced with a rail yard. The aesthetics of such proximity may affect marketability and enjoyment of residential properties, and as described below, the potential noise or air quality effects

associated with yard activity may affect residences, businesses and community facilities. Therefore, there is the potential for direct and indirect land use effects with the expansion of the East New York Yard with this alternative. Further assessment would be required to determine potential effects on community cohesion, as roadways traversing the rail line without the proposed project may no longer provide direct access to both sides of the tracks with this alternative in place. Further assessment of potential indirect effects to neighborhood character may also be appropriate, when details regarding traffic, air quality and noise impacts on community facilities and open space are known.

- Additional area may be required southeast of the Fresh Pond Yard, to improve the curve on the east leg of the Fresh Pond wye to facilitate current yard operations and to accommodate the trains anticipated with the proposed project. Preliminary estimates indicate that approximately 3.5 acres outside the existing right-of-way may be required at this location.
- Maspeth Yard would be expanded by approximately 60 acres to handle bulk and intermodal freight.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result with the Rail Tunnel Alternative. It is anticipated that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy affects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity since the area around the aforementioned expansions is largely industrial and manufacturing; however, this conclusion would be confirmed during any subsequent environmental review. Similarly, no direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Rail Tunnel with Shuttle ("Open Technology') Service

As described in Chapter 4, the Rail Tunnel with Shuttle Service Alternative comprises one of two rail tunnel service options. With this alternative, trucks are rolled on and off rail flatcars via loading ramps. This alternative requires specialized train sets and loading and unloading areas at the rail terminals. Neighborhood character, community facility, open space or population issues that could be identified at this level of analysis as resulting from this alternative, would be related to direct changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

As described in Chapter 4, the western terminus for the Rail Tunnel with Shuttle Service would be constructed outside of the Port District, at a location that is not determined at this time. Therefore an evaluation of the potential effects that may result from the construction and operation of a western terminus for this alternative would be undertaken in any Tier II documentation. In the east-of-Hudson region, this alternative would utilize Maspeth Yard for the transfer of intermodal freight and as an eastern terminus for the shuttle service. The Rail Tunnel with Shuttle Service Alternative would result in no changes to land use within or along the extent of existing rail line within the study areas, except where directly associated with and

physically connected to a proposed yard expansion. Therefore, no direct effects to land use would be expected along any rail corridor outside rail yards, and following, no indirect effects to land use or land use-related effects to neighborhood character would be expected for the portions of study area encompassing rail lines only.

Land acquisition under this alternative would be similar to the Rail Tunnel Alternative described above, however Maspeth Yard would be expanded by an additional 10 acres over what is described under the Rail Tunnel Alternative (for a total of 70 acres). Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result with this alternative. It is anticipated that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity since the area around the aforementioned expansions is largely industrial and manufacturing; however, this conclusion would be confirmed during any subsequent environmental review. Similarly, no direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Rail Tunnel with Chunnel Service Alternative

As described in Chapter 4, the Rail Tunnel with Chunnel Service Alternative comprises one of the rail tunnel service options. Under this alternative, trucks drive onto specialized railcars to travel through the tunnel, therefore this alternative would also require specialized train sets and loading and unloading areas at the rail terminals. Neighborhood character, community facility, open space or population issues that could be identified at this level of analysis as resulting from the aforementioned alternatives, would be related to direct changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

As described in Chapter 4, this alternative would utilize Oak Island Yard as the western terminus and East New York Yard as the eastern terminus for the chunnel service. The alternative would result in no changes to land use within or along the extent of existing rail line within the study areas, except where directly associated with and physically connected to a proposed yard expansion. Therefore, no direct effects to land use would be expected along any rail corridor outside rail yards, and following, no indirect effects to land use or land use-related effects to neighborhood character would be expected for the portions of study area encompassing rail lines only.

Land acquisition under this alternative would comprise an expansion of Oak Island Yard, by approximately 20 acres (in addition to the 50 acres required for the Rail Tunnel Alternative), and East New York, which would be expanded by approximately 13 acres (in addition to what would

be required under the Rail Tunnel Alternative). Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result with this alternative. It is anticipated that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity since the area around the aforementioned expansions is largely industrial and manufacturing; however, this conclusion would be confirmed during any subsequent environmental review. Similarly, no direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Rail Tunnel with Automated Guided Vehicle (AGV) Technology

As described in Chapter 4, under this alternative, containers would be lifted from a truck to AGV at an originating terminal, carried through the tunnel, then lifted from AGV to truck at a destination terminal; the trucker would not accompany the freight. AGVs can be steel-tired (operating on rail tracks) or rubber-tired (operating on guideways or pavement within the rail tunnel). AGV service would require AGV platforms and control systems, dedicated train sets and specialized loading and unloading terminals

Neighborhood character, community facility, open space or population issues that could be identified at this level of analysis as resulting from the aforementioned alternatives, would be related to direct changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

As described in Chapter 4, "Alternatives," the Rail Tunnel with AGV Technology Alternative would utilize Greenville Yard as the western terminus for the alternative (as a tunnel portal and as an AGV operating area) and new facility at East New York Yard as the eastern terminus. This alternative would operate largely within the alignments of existing rail lines and would therefore result in no changes to land use within or along the extent of existing rail line within the study areas, except where directly associated with and physically connected to a proposed yard expansion. Therefore, no direct effects to land use would be expected along any rail corridor outside rail yards; in addition, no indirect effects to land use or land use-related effects to neighborhood character would be expected for the portions of study area encompassing rail lines only.

Land acquisition under this alternative would be similar to the Rail Tunnel Alternative, except that Greenville Yard would be expanded by 30 acres (in addition to what would be required under the Rail Tunnel Alternative) and at East New York a new terminal would be constructed to accommodate the AGV terminal (approximately 15 acres in addition to what would be

required under the Rail Tunnel Alternative). Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected to result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result with this alternative. It is anticipated that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity since the area around the aforementioned expansions is largely industrial and manufacturing; however, this conclusion would be confirmed during any subsequent environmental review. Similarly, no direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities. Increases in truck traffic or rail yard activity may result in increased noise or diminished air quality, amounting to potential indirect effects on community facilities, open space, and neighborhood character. These potential effects would be evaluated in any subsequent environmental review.

Rail Tunnel with Truck Access Alternative

As described in Chapter 4, under this alternative the tunnel could be designed with pavement to allow rubber-tired vehicles to run through the tunnel during periods when trains are not present. With alternating truck and rail access, the service might be offered to trucks 12 hours a day, seven days a week (12/7 Tunnel). Alternatively, the Rail Tunnel could be designed to provide truck lanes that are continuously available to vehicles without impacting rail operations (24/7 Tunnel), however, as described in Chapter 4, the 12/7 operations are more feasible and therefore the following screening describes potential impacts for the 12/7 option.

Neighborhood character, community facility, open space or population issues that could be identified at this level of analysis as resulting from the aforementioned alternatives, would be related to direct changes in land use, or indirectly related to effects of increased truck traffic or changes in yard operations.

Land Use and Neighborhood Character

As described in Chapter 4, the Rail Tunnel with Truck Access Alternative would utilize largely the same termini as the Rail Tunnel with AGV Technology Alternative. This alternative would operate on existing rail lines and would therefore result in no changes to land use within or along the extent of existing rail line within the study areas, except where directly associated with and physically connected to a proposed yard expansion. Therefore, no direct effects to land use would be expected along any rail corridor outside rail yards, and following, no indirect effects to land use or land use-related effects to neighborhood character would be expected for the portions of study area encompassing rail lines only.

In addition the facilities described for the Rail Tunnel Alternative above, it was assumed that trucks would enter the tunnel near Exit 14B of the New Jersey Turnpike and would run through the tunnel to the Bay Ridge Branch. From there, trucks would continue in the Bay Ridge Branch rail right-of-way and terminate at Linden Boulevard.

Land acquisition under this alternative would be similar to the Rail Tunnel with AGV Technology Alternative. Direct effects to the industrial, manufacturing, and commercial land uses surrounding this facility would be expected result of property acquisition and would be investigated further in subsequent environmental review. It is unlikely that broader land use patterns or development trends in the area would be affected since the expanded facility would be in line with land use at the existing facility and the industrial and transportation-related nature of the area.

Zoning and Public Policy

No changes to zoning or public policy are anticipated to result with this alternative. It is anticipated that subsequent environmental review(s) would consider both the land use effects and also the potential zoning and public policy effects associated with properties to be acquired.

Community Facilities, Open Space, and Population Characteristics

No direct changes to community facilities or population characteristics would be expected at these locations or in the vicinity since the area around the aforementioned expansions is largely industrial and manufacturing; however, this conclusion would be confirmed during any subsequent environmental review. Similarly, no direct or indirect effects to open space would be anticipated to result from expansion of the aforementioned facilities.

CONSTRUCTION EFFECTS

Construction activities, as described in Chapter 4, "Alternatives," would be located primarily within existing rail yards and rail corridors, where construction activities would not be anticipated to alter land use patterns, zoning, or public policy. Likewise, construction activities in these areas would not be anticipated to alter land use patterns or adversely affect a number of businesses to such an extent that residential or worker populations would change significantly or permanently.

Despite the fact that construction activity would occur largely within the existing rail yards and rights-of-way, construction work may occur near residences, community facilities and parks. Therefore, there remains the potential for construction period activities to affect neighborhood character, community facilities, and open space as a result of construction related effects to transportation, air quality, noise, and visual and aesthetic conditions associated with construction activities.

No project-related construction would occur under the No Action Alternative; therefore, no construction-related effects on land use, neighborhood character, or social conditions could occur with the No Action Alternative.

WATERBORNE ALTERNATIVES

Enhanced Railcar Float Alternative

As described in Chapter 4, "Alternatives," construction activities associated with the Enhanced Railcar Float Alternative would comprise augmenting the hydraulic lift bridges installed under the No Action Alternative with a third bridge, and associated track work.

Analyses conducted under any subsequent Tier II environmental review would determine the potential for construction-related impacts associated with transportation, air quality, noise, or visual and aesthetic conditions. Impacts in these technical areas may result in subsequent effects to neighborhood character; however, it is anticipated that such effects generally would be temporary. If these adverse effects are determined to be significant, measures to avoid,

minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

Truck Float Alternative

Waterfront facilities to support the truck float system would require the construction of vehicle ramps, truck staging/parking areas, utility, gate/office, and maintenance facility. Similar to other waterborne alternatives, local construction-related impacts from this alternative would be associated with transportation, air quality, noise, or visual and aesthetic conditions. Detailed project designs that would be available during future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

Truck Ferry Alternative

Waterfront facilities to support the truck ferry system would require the construction of vehicle ramps, truck staging/parking areas, utility, gate/office, and maintenance facility. Similar to other Waterborne Alternatives, local construction-related impacts from this alternative would be associated with transportation, air quality, noise, or visual and aesthetic conditions. Detailed project designs that would be available during future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

RORO Container Barge Alternative

The construction of western and eastern termini for this alternative would comprise vehicle ramps from waterfront landing areas, tractor staging area, trailer and chassis parking, truck staging/parking areas, utility, gate/office, and maintenance facility. In addition, road access to highway truck routes would be required. Detailed project designs that would be available during future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

LOLO Container Barge Alternative

As with the RORO Container Barge Alternative, the construction of western and eastern termini for this alternative would comprise vehicle ramps from waterfront landing areas, tractor staging area, trailer and chassis parking, truck staging/parking areas, utility, gate/office, and maintenance facility. In addition, road access to highway truck routes would be required. Detailed project designs that would be available during future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

RAIL TUNNEL ALTERNATIVES

Rail Tunnel Alternative

As with the Waterborne Alternatives described above, temporary construction-related effects associated with traffic, air quality and noise may occur where rail yards are expanded or rail line is being installed, both within and adjacent to existing rail yards and within the existing rail

corridor. The Rail Tunnel Alternative would also include construction activities associated with the tunnel and associated infrastructure, as described in Chapter 4. Construction of tunnel portals, cut-and-cover tunnel construction areas, ventilation structures, and shaft sites providing access to tunnel boring machines (TBMs) would be located within the existing rights-of-way. As mentioned above, detailed project designs that would be available during future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

Rail Tunnel with Shuttle ("Open Technology') Service Alternative

As described in Chapter 4, "Alternatives," the Rail Tunnel with Shuttle Service Alternative would have nearly the same infrastructure requirements as the Rail Tunnel Alternative, thereby making the construction activities and potential effects nearly the same as well. In addition to being developed as an intermodal yard, Maspeth Yard would also include a truck loading terminal, driveways, ramps, office, and other service facilities. As with the Rail Tunnel Alternative above, Tier II environmental review would allow a quantitative analysis of potential effects and their severity, which would inform the selection of appropriate measures to avoid, minimize, or mitigate any effects.

Rail Tunnel with Chunnel Service Alternative

The Rail Tunnel with Chunnel Service Alternative would also have nearly the same infrastructure requirements as the Rail Tunnel Alternative. The differences may be found in the two terminals at Oak Island Yard and East New York Yard, where new platforms, truck ramps, parking/staging areas, gates, driveways, office and auxiliary buildings would be constructed to accommodate the chunnel service. As with the Rail Tunnel Alternative above, Tier II environmental review would allow a quantitative analysis of potential effects and their severity, which would inform the selection of appropriate measures to avoid, minimize, or mitigate any effects.

Rail Tunnel with Automated Guided Vehicle (AGV) Technology Alternative

The Rail Tunnel with AGV Technology Alternative is nearly identical to the Rail Tunnel Alternative in its infrastructure requirements, except that an independent AGV loading terminal would be constructed at Greenville Yard, in addition to the tunnel portal. On the east-of-Hudson side, an independent AGV loading terminal would be constructed between New Lots Avenue and Pitkin Avenue, which would include a container storage area, an AGV staging area, and an AGV queuing area. The AGV queuing area would have a direct and easy access to the rail tracks. The terminal would also include truck driveways, ramps, platforms, staging areas, office, and other service facilities.

Rail Tunnel with Truck Access Alternative

Similarly, the Rail Tunnel with Truck Access Alternative is nearly identical to the Rail Tunnel Alternative in its infrastructure requirements except that in Greenville Yard, an independent truck access terminal would be constructed at this yard; this terminal would include a truck parking area, a staging/queuing area, and truck ramps to rail tracks. The terminal would also include driveways, ramps, truck staging areas, office space, and other service facilities. Road access to highway truck routes would be constructed, including Interstate-78, Route 185 and Route 440. The eastern terminal would be constructed at East New York, near New Lots Avenue and Pitkin Avenue. As mentioned above, detailed project designs that would be available during

future Tier II environmental review would allow a quantitative analysis of potential effects and their severity. If these adverse effects are determined to be significant, measures to avoid, minimize, and mitigate the effects would be designed in consultation with affected communities and relevant regulatory agencies.

E. TIER II ANALYSIS AND POTENTIAL MITIGATION MEASURES

Given the limited design information available to support land use analyses, the results of this Tier I EIS do not reveal the significance of potential effects; rather, it is anticipated that the sensitivities to environmental effects identified in this Tier I EIS would guide subsequent, detailed environmental review(s) as appropriate, at which time engineering and survey information would be available at a level of detail appropriate to determine effects and their significance.

Potential areas of detailed analysis with regard to land use, neighborhood character, and social conditions are summarized as follows:

- Direct effects to land use are anticipated for those alternatives that require property acquisition to expand existing rail facilities or to establish trucking facilities. It is expected that further assessment of potential effects to land use and neighborhood character may be warranted when detailed property acquisition information is available for the Build Alternatives.
- Direct effects to land use are anticipated with the Rail Tunnel Alternatives in the Brooklyn study area, specifically with regard to the proposed development of the East New York Yard. It is anticipated that further analysis would be conducted as part of subsequent environmental reviews, if necessary, to determine whether these direct effects to land use in the vicinity of East New York Yard would be adverse and significant under this alternative.
- It is anticipated that further analysis of potential effects to zoning would be conducted as part of subsequent environmental review, informed by acquisitions information and detailed assessment of potential direct effects to land use.
- Detailed traffic analyses may be required in areas surrounding all rail yards to be developed and utilized for each Build Alternative. It is also anticipated that detailed air quality and noise modeling would be conducted as part of subsequent environmental reviews, likely focused on rail yards and tunnel portal areas.
- It is anticipated that appropriate public involvement and outreach to Environmental Justice communities would be undertaken as part of subsequent environmental reviews that may be required, and that the Environmental Justice assessment would rely on the most current Census data available at that time.
- Tier II investigations would include analyses of construction period air quality impacts, since these impacts may affect neighborhood character during construction. The investigations would consider both on-site and on-road sources of air emissions, and the overall combined impact of both sources, where applicable. The focus would be on estimating and reducing particulate matter and NO_x emissions, as these pollutants have greater potential to result in adverse effects on air quality during construction. These analyses would inform potential mitigation measures to reduce construction period impacts—e.g., maximizing the use of rail and marine modes for transporting construction materials and debris as a way to reduce local pollutant emissions, and/or using electricity for construction equipment employed for yard expansion.

- Similarly, Tier II traffic investigations would include level-of-service analyses for specific intersections (as described in Chapter 5, "Transportation," to quantify traffic effects on neighborhood conditions and determine appropriate mitigation measures. These mitigation measures could range from low-cost and easily implementable improvements such as signal timing/phasing adjustments and travel-lane-use reconfigurations to more high-cost measures such as right-of-way acquisitions for roadway widening.
- A detailed construction noise and vibration analysis would be performed as part of the Tier II environmental review process. This detailed analysis would evaluate alternative-specific construction noise and vibration impacts and, if impacts are predicted to occur, would provide an evaluation of potential mitigation measures.

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