

Chapter 6A: Land Use, Zoning, and Public Policy

6A.1 INTRODUCTION

This chapter analyzes the potential effects of the No Action and Preferred Alternatives on land use, zoning, and adopted public planning and policy documents. “Land use” refers to the activity that occurs on land and within the structures that occupy it—for example, residential; commercial, industrial, institutional and community facilities, transportation-related, parks and recreational uses, and vacant land. Zoning is the legal method by which municipalities define what land uses are allowed on a given parcel of land and the physical restrictions, such as bulk, height, or setbacks, that have been placed on development. The analysis considers the uses and development trends in the area that may be affected by the Project, and determines whether the Project is compatible with those conditions or may affect them. The analysis also considers the Project’s consistency with, and effect on, the area’s zoning and other applicable public policies. Direct effects on study area land uses, zoning, or public policy may constitute an adverse impact if the change would negatively affect community facilities or community character, or if the Project would generate land use or zoning designation that would be incompatible with existing or surrounding uses or development patterns.

This chapter contains the following sections:

- 6A.1 Introduction
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6A.2 ANALYSIS METHODOLOGY

During development of this Environmental Impact Statement (EIS), the Federal Railroad Administration (FRA) and NJ TRANSIT developed methodologies for evaluating the potential effects of the Hudson Tunnel Project in coordination with the Project's Cooperating and Participating Agencies (i.e., agencies with a permitting or review role for the Project). The methodologies used for analysis of land use, zoning, and public policy are summarized in this chapter.

6A.2.1 REGULATORY CONTEXT

FRA's *Procedures for Considering Environmental Impacts*¹ call for environmental reviews to consider a proposed project's potential to affect existing and planned land uses, land use controls, and comprehensive regional planning. In addition, the Council on Environmental Quality's (CEQ) National Environmental Policy Act (NEPA) regulations state that EISs shall discuss possible conflicts and inconsistencies with Federal, regional, state, and local land use plans, policies, and controls. New Jersey, New York State, and New York City environmental regulations also call for consideration of a project's effects on land use, when environmental reviews are required. In addition, local zoning regulations typically require compliance with designated standards related to land use.

The Project Sponsor that will advance the Project through final design and construction, including compliance with mitigation measures, has not yet been identified. The Project Sponsor may include one or more of the Port Authority of New York & New Jersey (PANYNJ), the National Railroad Passenger Corporation (Amtrak), NJ TRANSIT, and/or another entity that has not yet been determined. Depending on the Project Sponsor, the Hudson Tunnel Project may not be subject to local zoning. For example, Amtrak and the PANYNJ are not subject to local zoning, and NJ TRANSIT is not subject to local zoning in New Jersey, but is in New York.

In addition to zoning, as set forth in the New York City Charter, some actions in New York City are subject to the Uniform Land Use Review Procedure (ULURP). The ULURP process applies to the following actions by New York City agencies: changes to the city map; mapping of subdivisions or platting of land into streets, avenues or public places; designation or change of zoning districts; special permits within the Zoning Resolution requiring approval of the City Planning Commission; site selection for capital projects; revocable consents, requests for proposals and other solicitations or franchises, and major concessions; improvement in real property, the costs of which are payable other than by New York City, housing and urban renewal plans and project pursuant to city, state and federal laws; sanitary or waterfront landfills; disposition of city owned property; acquisition of real property by the City. Projects subject to ULURP undergo a required public review process with specific reviews by the affected Community Board(s), borough president, City Planning Commission, and City Council before they can be approved. The Preferred Alternative does not include any actions that are subject to New York City's ULURP process.

6A.2.2 ANALYSIS TECHNIQUES

This analysis begins with descriptions of the existing environment in the study area, including land uses, zoning, and public policy within the study areas to describe the Project's setting. The analysis identifies land uses in the study areas and identifies existing zoning and public policy documents (e.g., local and regional comprehensive or master plans) that indicate community visions for the study areas. Data sources included available planning documents, field visits

¹ 64 Federal Register 28545, May 26, 1999.

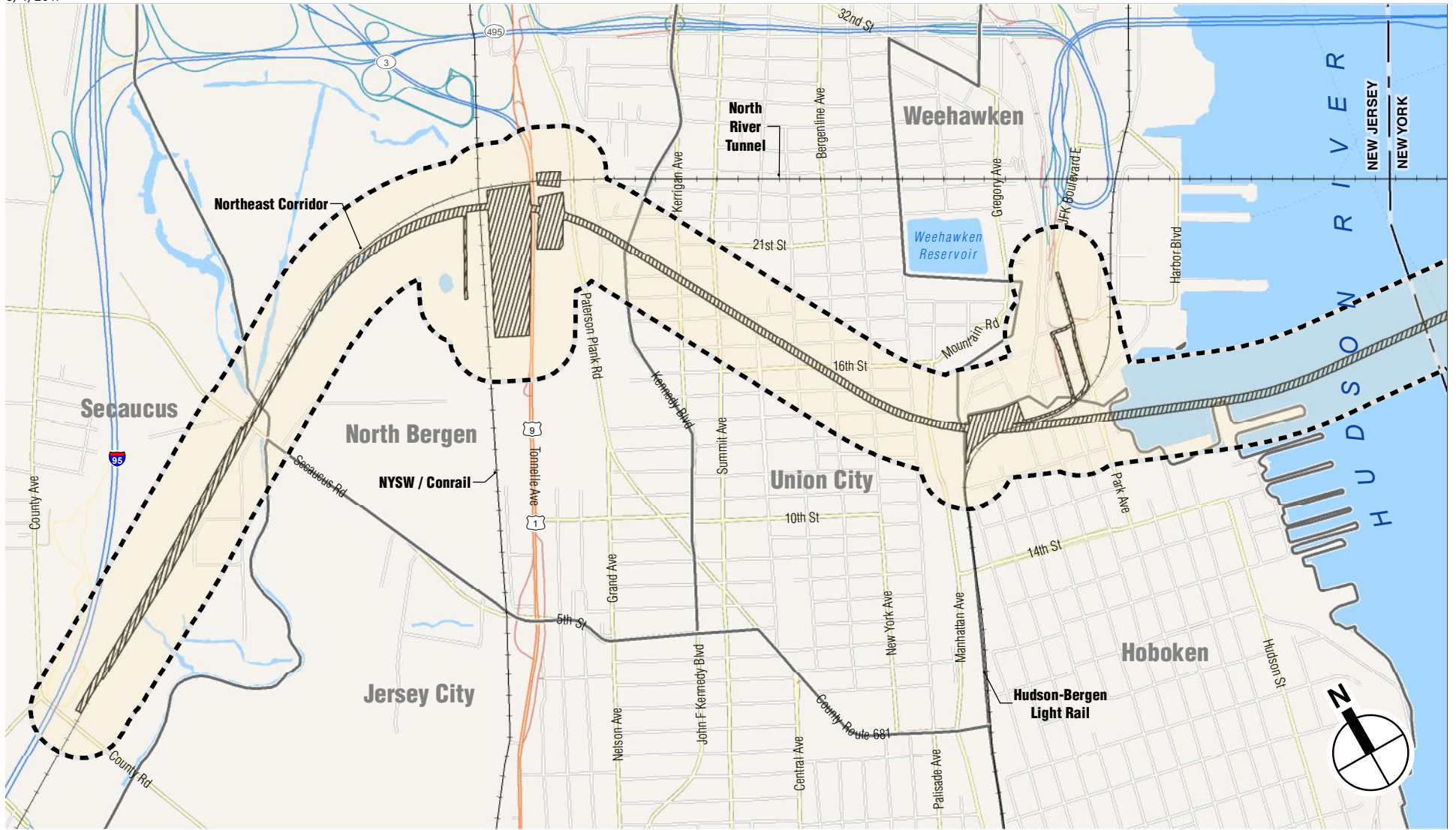
conducted by the Project team to the New Jersey study area in September and October 2016 and to the New York study area in November 2016, and Geographic Information Systems (GIS) mapping layers, including data from the New Jersey Office of GIS, New Jersey Treasury, State Office of Information and Technology, and from the New York City Department of City Planning (NYCDCP). Information on zoning and public policy was compiled based on reviews of local zoning ordinances and comprehensive plans for the applicable jurisdictions. In connection with the identification of planned development and potential changes to policy or plans, coordination with the municipalities within the study area was conducted by contacting their planning departments (or appropriate equivalent departments) to gather approved redevelopment plans as well as gain an understanding of proposed developments that may occur within the study areas. In New Jersey, the appropriate departments (e.g., Planning, Public Works) of Hudson County, the New Jersey Sports and Exposition Authority (NJSEA), the Cities of Hoboken and Union City, and the Townships of Weehawken, Secaucus, and North Bergen were contacted. In New York City, NYCDCP was contacted. The analysis of impacts on public policy is not required by NEPA but is undertaken here to comply with New York City Environmental Quality Review (CEQR).




Following the description of the existing conditions in the affected environment, this chapter describes the affected environment in the future, including a discussion of proposed projects and initiatives that will change the affected environment by the Project's analysis year.

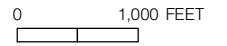
The chapter then analyzes the effect of the No Action Alternative and the Preferred Alternative with existing and proposed land uses (i.e., planned developments), zoning policies, and public policy documents. An adverse land use impact may occur if a project results in a land use that is incompatible with existing or surrounding uses or development patterns; similarly, an adverse zoning impact when a project is not consistent with its site's zoning; and an adverse impact may occur if a project is inconsistent with a given public policy. For Project components and elements located in New York City, the guidance of the 2014 *CEQR Technical Manual* was used. The *CEQR Technical Manual* was developed by New York City for evaluation of the environmental impacts of projects proposed in New York, based on local conditions and issues. These criteria for adverse impacts are well suited for evaluation of effects in the study area and were therefore also used for purposes of NEPA in this analysis.

6A.2.3 STUDY AREAS

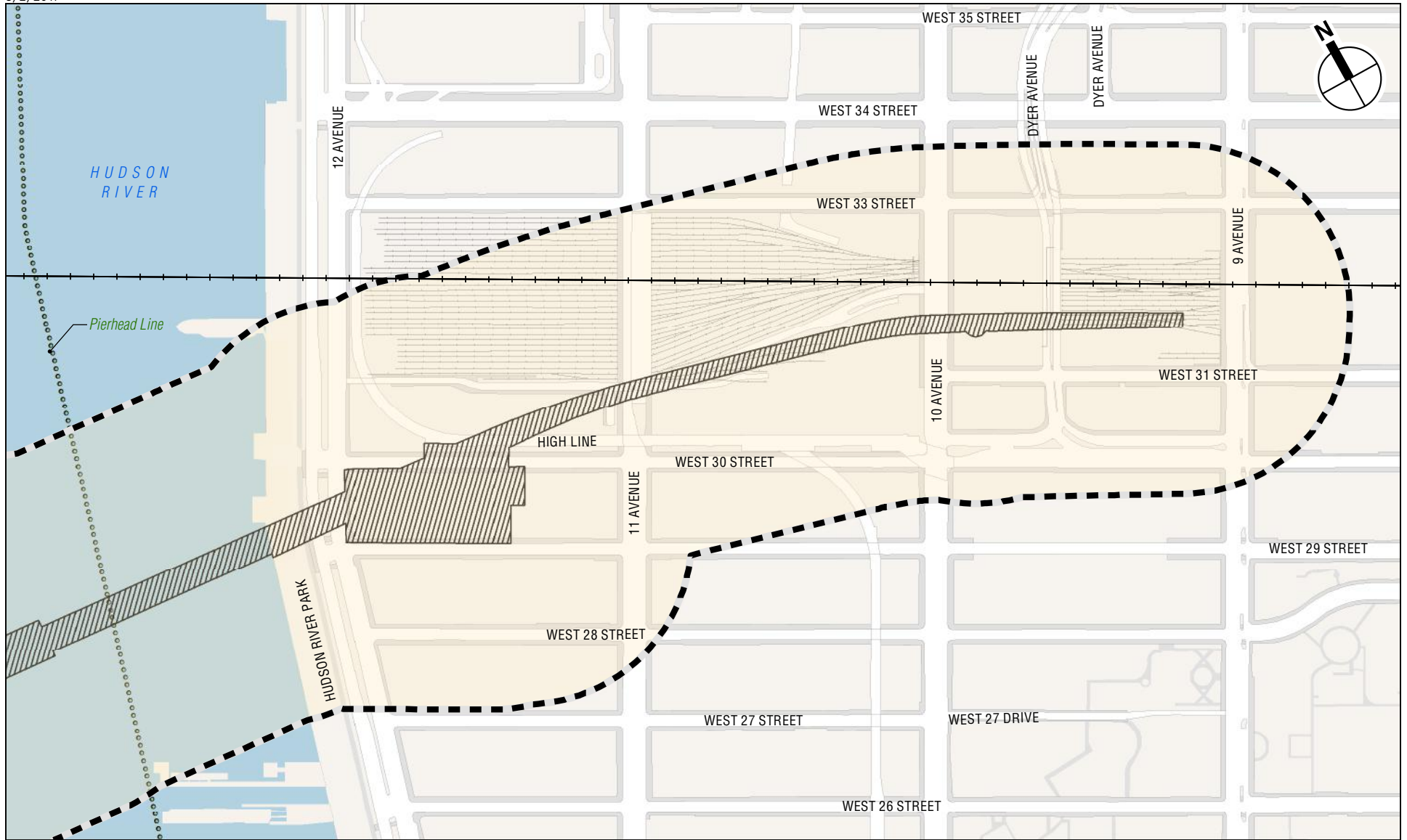
In general, the study area for the assessment of land use, zoning, and public policy is the area 500 feet from the Project site (defined as the area that would be affected by construction activities associated with the Preferred Alternative, including both the new tunnel and rehabilitation of the North River Tunnel, as well as the permanent elements of the Preferred Alternative; see Chapter 4, "Analysis Framework," for a detailed description of the Project site). This is the area that is most likely to be affected by construction or operation of the Preferred Alternative. This study area was adjusted in Weehawken to include the portion of construction truck routes that would use local, non-arterial streets. No study area was included for the rehabilitation work that would occur entirely within the underground North River Tunnel since this work would occur well below the surface within an existing tunnel and does not have the potential to adversely affect land uses above. Similarly, once the North River Tunnel has been rehabilitated and trains are operating in the rehabilitated tunnel, there would be no potential for adverse effects to open spaces above, as conditions would be similar to existing conditions since the Project would not change rail operations. (The potential for vibration impacts above either tunnel is evaluated in Chapter 12, "Noise and Vibration," and takes into consideration the specific land uses and activities above each tunnel.) The New Jersey study area is shown in **Figure 6A-1** and the New York study area is shown in **Figure 6A-2**.



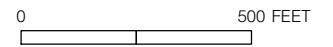
-  Project Site
-  Municipal Boundaries
-  Study Area (500-Foot Boundary)



New Jersey Land Use Study Area
Figure 6A-1



- Project Site
- Study Area (500-Foot Boundary)
- Existing Northeast Corridor





6A.3 AFFECTED ENVIRONMENT: EXISTING CONDITIONS

6A.3.1 NEW JERSEY

6A.3.1.1 LAND USE

Maps illustrating the land use in the New Jersey study area are provided in **Figure 6A-3**, which shows the western portion of the New Jersey study area (generally, Secaucus, Jersey City, and North Bergen), and **Figure 6A-4**, which shows the eastern portion of the New Jersey study area (generally, North Bergen, Union City, Weehawken, and Hoboken).

6A.3.1.1.1 County Road to Tonnelle Avenue

6A.3.1.1.1.1 Project Site

The western portion of the study area includes portions of Secaucus, Jersey City, and North Bergen. From approximately County Road in Secaucus to an area just east of Secaucus Road in North Bergen, the Project site incorporates some of the raised embankment of the Northeast Corridor (NEC) and land just to its south, consisting of both paved and natural areas (see **Figure 6A-3**). More specifically, along the south side of the NEC embankment, the Project site in that area includes:

- Portions of paved driveways and parking areas associated with industrial and warehousing uses.
- Natural (wetland) areas close to the NEC (which are shown on **Figure 6A-3** as vacant land).

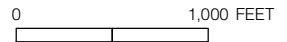
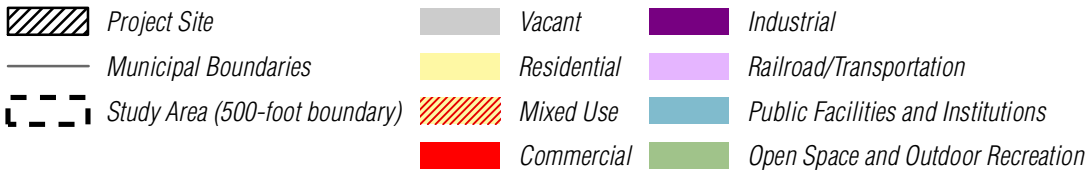
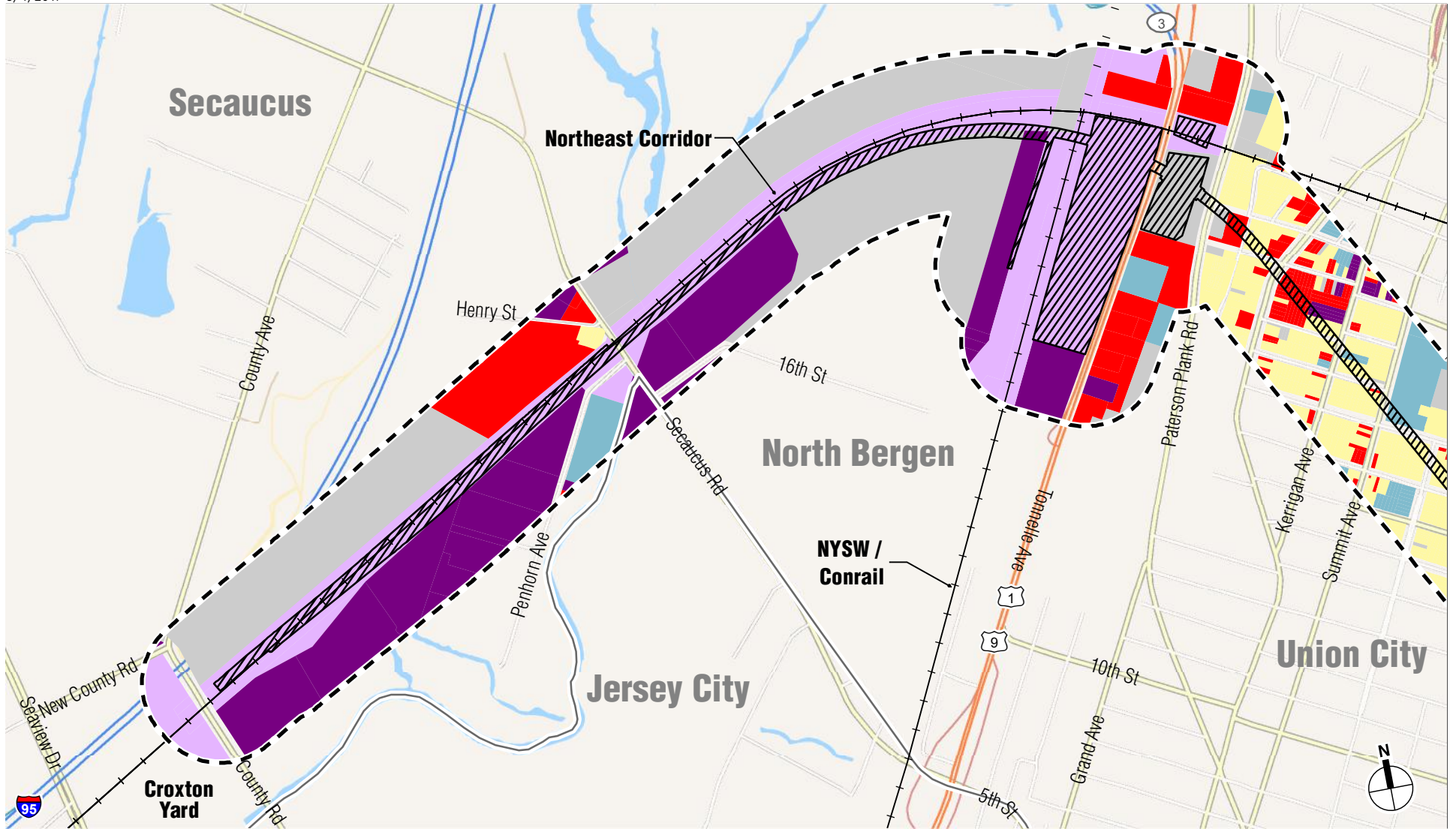
East of Secaucus Road, the Project site diverges from the NEC and includes the following:

- Portions of paved driveways and parking areas associated with industrial and warehousing uses.
- Natural (wetland) areas.
- A portion of a freight railroad yard adjacent to the right-of-way owned by New York, Susquehanna & Western Railway (NYSW).
- An area above existing freight railroad rights-of-way operated by Conrail and NYSW. This area also includes a utility right-of-way for Public Service Electric & Gas (PSE&G) high-tension power lines.
- Property owned by NJ TRANSIT and Amtrak, including a substation, a large lot used for storage of buses and other equipment (including storage within a warehouse building) on the west side of Tonnelle Avenue, and a vacant site on the east side of Tonnelle Avenue.

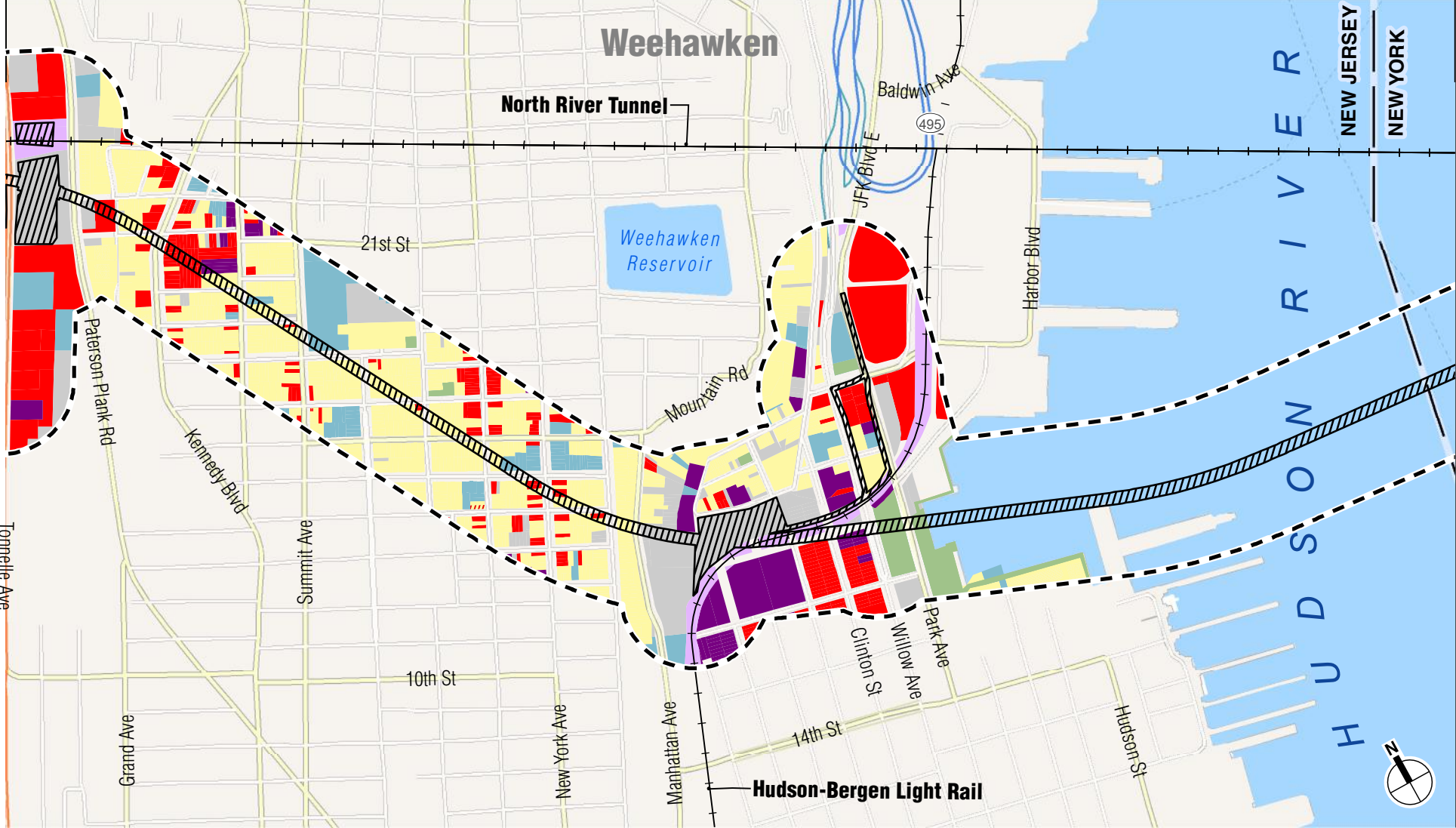
The specific properties that are included within the Project site are listed in **Table 6A-1**.

6A.3.1.1.1.2 Study Area

As shown in **Figure 6A-3**, beyond the Project site, the study area from County Road to Tonnelle Avenue is generally parallel to the existing NEC tracks. Land use south of the NEC is predominantly industrial, consisting of light industrial, warehousing, and distribution uses in industrial parks along Penhorn Avenue (in Secaucus) and 16th Street (in North Bergen). At the western end of the study area, a small portion of Croxton Yard, a large freight rail yard and intermodal facility, is in the study area. Across County Road from the railyard, a vacant site is currently being developed with a new warehouse and distribution facility. The study area also includes undeveloped land, largely consisting of wetland areas and the water of Penhorn Creek, which curves through the area south of the NEC and crosses the NEC twice.



Land Use in Western Portion of New Jersey Study Area
Figure 6A-3



- Project Site
- Study Area (500-foot boundary)
- Vacant
- Residential
- Commercial
- Industrial
- Railroad/Transportation
- Public Facilities and Institutions
- Open Space and Outdoor Recreation
- Mixed Use

0 1,000 FEET



Land Use in Eastern Portion of New Jersey Study Area
Figure 6A-4

North of the NEC, most of the study area is undeveloped land near the I-95/New Jersey Turnpike (on the east) or undeveloped wetlands.

Near Secaucus Road, the study area also includes a warehouse and three small residences north of the NEC (on Henry Street), and a Hindu religious institution, the Shree Swaminarayan Temple located south of the NEC on Penhorn Avenue within the Penhorn Avenue industrial park. South of Penhorn Creek on Secaucus Road, a portion of a trucking terminal (located in Jersey City) is in the study area.

Close to Tonnelle Avenue, the study area includes the freight railroad rights-of-way operated by Conrail and NYSW as well as a utility right-of-way for PSE&G high-tension power lines.

**Table 6A-1
Properties and Land Uses on the Project Site,
County Road to Tonnelle Avenue**

Property		Land Use
Address	Block/Lot	
County Road to Secaucus Road		
County Road, Secaucus	Block 44, Lot 2	Vacant area and paved parking area at an industrial / warehousing facility
801 Penhorn Avenue	Block 44, Lot 5.04	Paved area providing access to warehouse loading docks
405 Penhorn Avenue	Block 44, Lot 4.08	Paved parking area at an industrial / warehousing facility
301 Penhorn Avenue	Block 44, Lot 3.01	Paved parking area at an industrial / warehousing facility
201 Penhorn Avenue	Block 44, Lot 2.01	Paved parking area at an industrial / warehousing facility
Secaucus Road to Tonnelle Avenue		
2806 Secaucus Road, North Bergen	Block 449.01, Lot 1.02	Paved parking area at an industrial / warehousing facility
2820 16th Street, North Bergen	Block 449.01, Lot 1	Paved area used for parking and storage of tractor trailers, containers, and equipment
2400 16th Street, North Bergen	Block 449.01, Lot 4	Paved container area at an industrial / warehousing facility, undeveloped wetland area
NA	Block 442, Lot 1.01	Undeveloped wetland area
NA	Block 442, Lot 1.09	PSE&G utility right-of-way
NA	Block 485, Lot 1	NYSW freight railroad right-of-way and lumber reload facility; PSE&G aerial high-tension power lines; wetland area being created
NA	Block 486, Lot 1	Conrail freight railroad right-of-way
Tonnelle Avenue	Block 35, Lot 6.01	Amtrak electric substation (Hackensack Substation 42)
2001 Tonnelle Avenue	Block 35, Lot 5.03	NJ TRANSIT bus storage and warehouse
2126 Tonnelle Avenue	Block 27, Lots 29, 41, 39, 42, 43.01	Vacant area
Notes: NA = not applicable; PSE&G = Public Service Electric & Gas Company.		

6A.3.1.1.2 *Tonnelle Avenue Area*

6A.3.1.1.2.1 *Project Site*

The Project site along Tonnelle Avenue consists of the following:

- An electric substation on the south side of the NEC (west side of Tonnelle Avenue) that provides power to the NEC (Amtrak’s Hackensack Substation 42).
- A large property on the west side of Tonnelle Avenue (2001 Tonnelle Avenue) that includes a large area used by NJ TRANSIT for buses that are no longer in service, a warehouse

building used by NJ TRANSIT for storage, and a small parking area used by a private bus operator for midday storage of buses serving the Port Authority Bus Terminal.

- A vacant, paved property on the east side of Tonnelle Avenue (2126 Tonnelle Avenue) adjacent to the slope of the Palisades.
- The open cut of the NEC's approach to the existing North River Tunnel (on the east side of Tonnelle Avenue).

6A.3.1.1.2.2 Study Area

The Tonnelle Avenue portion of the study area falls within North Bergen. Tonnelle Avenue (U.S. Routes 1& 9) is a busy arterial roadway with two traffic lanes in each direction and a concrete divider separating the directions. In the study area, this road is lined with commercial uses, including restaurants, gas stations and other auto-related uses (auto wrecking), building supply and retail stores (see **Figure 6A-3**). Some light industrial and industrial uses are also in this corridor, including self-storage units and a waste management facility.

The Tonnelle Avenue corridor also includes one notable exception to this industrial and commercial land use pattern: a Hindu religious institution, BAPS Shri Swaminarayan Mandir Temple, on the east side of the road approximately 250 feet south of the Project site.

In addition, commercial and residential uses are located on the slope of the Palisades above the Tonnelle Avenue corridor, along Paterson Plank Road and Grand Avenue.

6A.3.1.1.3 The Palisades

6A.3.1.1.3.1 Project Site

The Project site consists of land underground beneath the Palisades.

6A.3.1.1.3.2 Study Area

The Palisades are a line of steep cliffs that run along the western side of the Hudson River from northeastern New Jersey into southern New York State. In the study area, the Palisades are approximately 300 feet above the land to their west and east. The steep slopes on the western and eastern side of the Palisades are largely undeveloped and vegetated, except the western face is traversed by Paterson Plank Road and land uses along that road and the eastern face is traversed by Manhattan Avenue and land uses along that road. Portions of North Bergen and Union City are located on the Palisades in the study area.

As shown in **Figure 6A-4**, the study area on the Palisades is predominantly residential. Institutional and community facility uses that support the residential neighborhoods are also located in this area, including several schools, religious institutions, and libraries. Commercial and retail uses are clustered along the major north-south streets, including JFK Boulevard, Bergenline Avenue, and New York Avenue.

Notable community facilities and institutions in the study area include the Union City Library and a number of public and parochial schools, including the Eugenio Maria de Hostos Center for Early Childhood Education, the Jose Marti Freshman Academy, St. Francis Academy, the Miftaahul Uloom Academy, Mother Seton School, and Colin Powell Elementary School. The study area also includes several publicly accessible parks and recreational facilities, described in Chapter 8, "Open Space and Recreational Resources."

6A.3.1.1.4 East of the Palisades

6A.3.1.1.4.1 Project Site

East of the Palisades, the Project site includes the following:

- Vacant land at the base of the Palisades, north of the Hudson-Bergen Light Rail (HBLR) right-of-way and south of West 18th Street. This property is owned by NJ TRANSIT. NJ TRANSIT acquired this site as part of the Access to the Region's Core (ARC) Project and demolished the light industrial buildings that were on the site.
- Land below ground, passing beneath the HBLR, the edge of a wastewater treatment plant, a PSE&G substation and related building, Clinton Street, two roadway viaducts (Willow Avenue viaduct and Park Avenue viaduct), and two parks and a riverfront walkway, described below in the discussion of the study area.

6A.3.1.1.4.2 Study Area

The study area east of the Palisades includes portions of Hoboken and Weehawken and is generally divided in two by the curving right-of-way of the HBLR tracks (see **Figure 6A-4**). The study area is bounded on the west by the steep vegetated slope of the Palisades. In the study area, two major streets, Willow Avenue and Park Avenue, are raised on viaducts, both several blocks (more than 1,000 feet) long, to cross the HBLR right-of-way. Adjacent to each viaduct, at-grade local roadways (i.e., service roads) that do not cross the HBLR provide access to land uses on these two streets. Willow Avenue has a southbound and a northbound service road, on either side of the viaduct, and the area under the viaduct is used for parking. Park Avenue has a two-way service road on the west side of the viaduct and no service road on the other side.

The area north of the HBLR tracks includes a residential neighborhood generally west of Park Avenue and north of West 18th Street. This neighborhood, known as "The Shades" because of its location at the base of the Palisades, includes low-rise, attached residences and a new 10-story apartment building between the Willow Avenue and Park Avenue viaducts on the north side of the HBLR tracks. This building's entrance is on West 18th Street; the south side of the building has a private dog run adjacent to the building. This portion of the study area also includes a church and a small neighborhood playground (Pizzuta Park).²

North of West 19th Street, the study area includes the Township of Weehawken's North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue, which has with-driveway access on both Willow Avenue and JFK Boulevard East/Park Avenue, with an adjacent public basketball court (19th Street Basketball Courts). On the east side of Park Avenue, the study area includes a large lumber retail warehouse store (Dykes Lumber) and two office buildings.

The area south of the HBLR tracks is predominantly an industrial district of Hoboken that includes the HBLR right-of-way, the North Hudson Sewerage Authority's wastewater treatment plant, which serves Hoboken, Union City, Weehawken, and West New York; a PSE&G electric substation and associated building containing electrical equipment; a self-storage facility; and a dialysis center. A portion of surface lot used by private bus companies for bus storage is also in the study area.

East of the viaducts, the Hoboken portion of the study area south of the HBLR includes two parks, 1600 Park and Harborside/Cove Park, as well as a portion of the Hudson River Waterfront Walkway (see Chapter 8, "Open Space and Recreational Resources").

The waterfront area of Weehawken from JFK Boulevard East to the Hudson River is part of the Lincoln Harbor redevelopment area, an area where extensive waterfront development of office buildings, residential buildings, and park spaces has occurred over the past two decades. At the

² Please note that open spaces and recreational resources are described in more detail in Chapter 8, "Open Space and Recreational Resources," and, where appropriate, are included in the Draft Section 4(f) Evaluation relating to the Project's impacts on parks and historic resources in Chapter 24, "Draft Section 4(f) Evaluation."



eastern edge of the study area, construction of a 600-unit residential development at 800 Harbor Boulevard was approved in December 2016.

6A.3.1.2 ZONING

In the New Jersey portion of the study area, zoning in the Meadowlands is controlled by NJSEA, the planning and zoning authority for the 30.4-square-mile Meadowlands District, which consists of portions of 14 municipalities in Bergen and Hudson Counties, including Secaucus and North Bergen. Within the Meadowlands District, wetland enhancement, restoration, or creation and wildlife habitat creation are permitted uses in all zoning districts. The rest of the study area is under the jurisdiction of the local municipalities: North Bergen, Jersey City, Union City, Weehawken, and Hoboken. **Table 6A-2** lists the zoning districts or categories for each municipality in the study area along with their permitted uses. Zoning for the New Jersey portion of the study area is shown in **Figures 6A-5 and 6A-6**.

As shown in **Table 6A-2** and **Figure 6A-5**, zoning within the study area in the Secaucus and North Bergen Meadowlands areas predominantly consists of rail right-of-way, light industrial, and environmental conservation districts, along the south side of the railroad corridor in North Bergen. As shown in **Figure 6A-6**, in Union City, zoning is mostly residential, with small areas designated for multiple use, public use, and park; a historic preservation overlay area on top of the Palisades above the Project site; and neighborhood commercial uses mapped along major north-south streets. The eastern slope of the Palisades, including a small portion of the proposed Hoboken shaft site, is mapped with the Palisades Preservation overlay district. This overlay district is intended to minimize erosion on the steep slopes of the Palisades and requires minimum building setback line from the edge of the cliff face at both the top and bottom of the cliff, limited disturbance of steep slope areas, and vegetation and grading to protect natural contours, among other requirements. In Weehawken, the study area is mapped with residential zoning and a special waterfront redevelopment district east of Willow Avenue (see **Figure 6A-6**). The section of Hoboken in the study area has industrial zoning, with a mix of light industrial, including on the Project site, and light industrial waterfront for the area east of Willow Avenue (see **Figure 6A-6**).

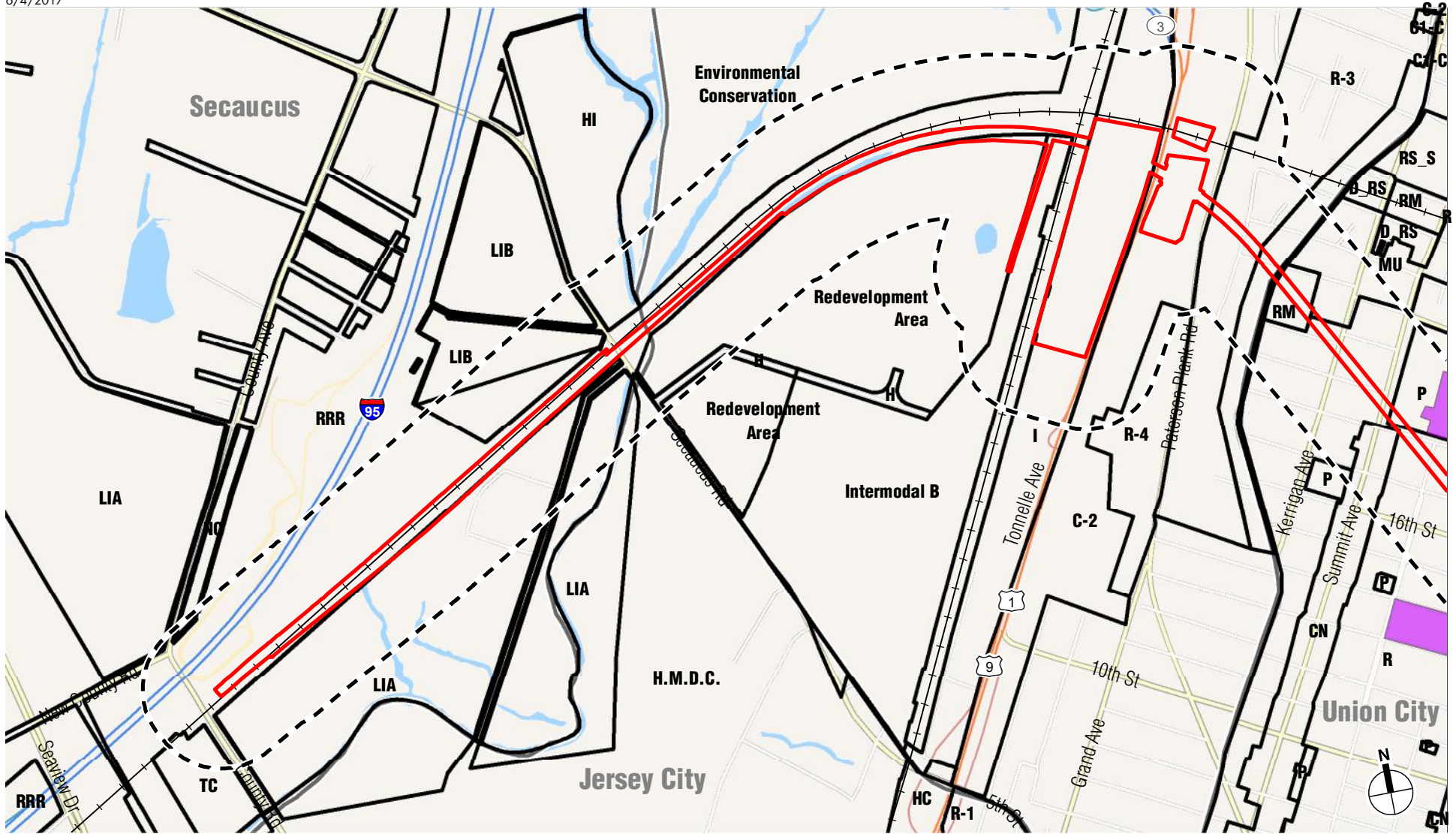
6A.3.1.3 PUBLIC POLICY

Public policy related to land use and development in the New Jersey study area includes the policies specific to the Meadowlands District, Hudson County plans related to land use, and local municipalities' comprehensive plans, which are generally reflected in their zoning ordinances. In addition, New Jersey has a number of statewide coastal zone management policies that relate to development.

6A.3.1.3.1 Meadowlands District

The New Jersey Legislature created the Hackensack Meadowlands Development Commission in 1968 and charged it with protecting the environment, promoting orderly development, and providing for solid waste disposal needs of the region. The commission was renamed the New Jersey Meadowlands Commission (NJMC) in 2001 and more recently was consolidated with NJSEA in 2015. The NJSEA is the planning and zoning authority for the 30.4-square-mile Meadowlands District.

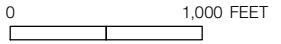
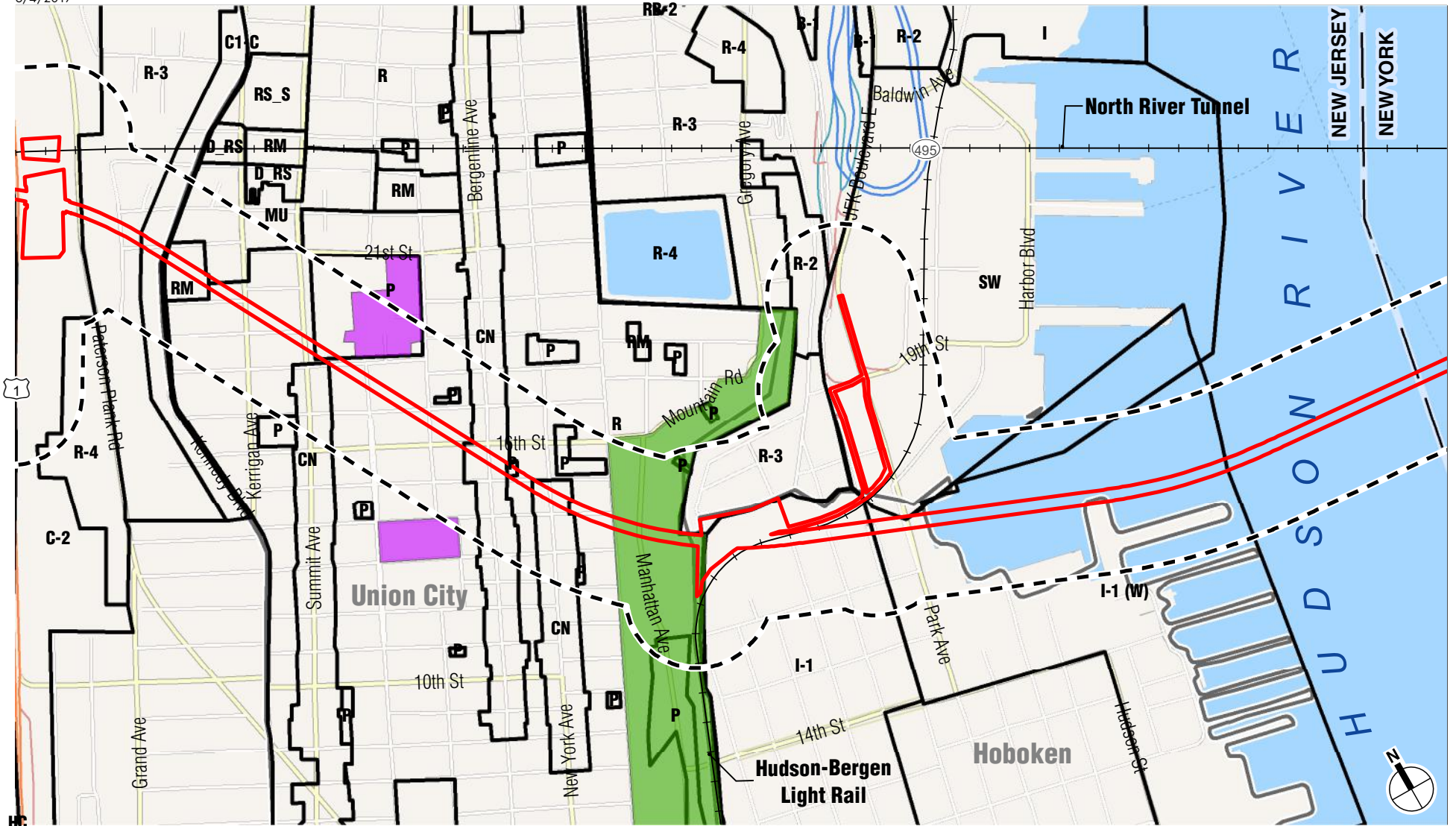
The NJMC Master Plan, adopted in 2004, sets the planning framework for environmental protection and development in the Meadowlands District. The primary goal of the NJMC Master Plan is the protection of the Meadowlands District's valuable natural resources (particularly 8,400 acres of wetlands) while promoting economic growth through sustainable redevelopment practices, with an emphasis on limiting urban sprawl and improving mass transit.



- Project Site
- Zoning Districts
- Overlay Districts
- HPOD Overlay - Historic Preservation Overlay District
- Municipal Boundaries
- Study Area (500-foot boundary)



Zoning in Western Portion of New Jersey Study Area
Figure 6A-5



Zoning in Eastern Portion of New Jersey Study Area
Figure 6A-6

Table 6A-2
Existing Zoning in the New Jersey Study Area

Zoning District	Permitted Uses
New Jersey Meadowlands District Zoning (Secaucus, Jersey City, and North Bergen)	
Roads, Rails, Rights of Way	Mapped over highways and railroad rights-of-way
Transportation Center (TC)	Intended for major commuter transfer center and associated office, hotel, and commercial uses; mapped at Secaucus Junction Station area. Permitted uses includes passenger rail terminals, commercial off-street parking, offices, restaurants, retail, institutional uses, and parks or recreational facilities
Light Industrial A (LI-A)	Commercial and business uses on large lots, including warehouse and distribution facilities, light industry, wholesale establishments, self-storage, offices, certain commercial uses, institutional uses, essential public services and parks or recreational facilities
Light Industrial B (LI-B)	Wide range of industrial, distribution, and commercial uses, including the uses permitted in LI-A and others such as fuel service stations, truck terminals, recycling facilities
Intermodal B (IB)	High-intensity transportation facilities proximate to rail lines with operations related port and rail activities, including rail and trucking facilities and construction-related uses; includes intermodal facilities, warehouses and distribution facilities, heavy industry, truck terminals, railroads terminals and yards, recycling facilities, materials recovery, heavy and light public utility uses
Heavy Industrial (HI)	Intensive industrial, utility, and commercial uses, including major auto repair facilities, recycling facilities, intermodal facilities, construction equipment; materials recovery facilities; resource recovery facilities; outdoor storage; heavy and light public utility uses; railroad terminals and yards; and truck terminals.
16th Street Redevelopment Area (RA)	Adopted redevelopment plan supersedes zoning regulations; primary purpose is to accommodate the demand for office space associated with trucking and distribution facilities. Permitted uses include office, trucking, distribution
Environmental Conservation (EC)	To preserve and enhance ecological value of water and adjacent uplands. Permits existing public utility equipment and appurtenances; public access to water features, scientific and educational study related to wetland ecology; wetland enhancement, restoration, or creation activities; and wildlife habitat creation; other uses by special exception including transmission towers
North Bergen Township Zoning	
Industrial (I)	Light industrial and manufacturing uses, wholesale business, storage, distribution, and warehousing, truck terminals, motor vehicle repairs, storage of buses, passenger vans, taxis and limousines.
Highway Business (C-2)	Commercial; for larger scale general commercial development such as shopping centers, car sales and repair and warehouse/office buildings; permitted uses include restaurants, hotels, public utilities, commercial and office; shopping centers
Paterson Plank Road Residential (R-4)	Multi-family, mid-rise residential, townhouse residential
Moderate Density Residential (R-3)	Residential permitting a variety of housing types, including 1- and 2-family detached dwellings, 2-family semi-attached dwellings, 3- and 4-family detached dwellings, and multi-family dwellings including mid- and high-rise buildings, garden apartments, and townhouses; also parks and schools
General Business Mixed Use (C-1C)	For commercial development along major north-south arteries with a limited amount of residential use. Permitted uses include retail, restaurants, commercial services and offices, houses of worship; residential uses as conditional use.
Union City Zoning	
Low-Density Residential (R)	1-, 2- and 3-family unit dwellings, municipal uses, and parks and playgrounds; schools, clubs, and institutional uses as conditional uses
Medium Density Residential (R-M)	1-, 2- and 3-family unit dwellings, rowhouses, low- and mid-rise apartment buildings, nursing homes, municipal uses, and parks; schools, clubs, institutional uses, parking garages, and wireless telecommunications facilities as conditional uses



Table 6A-2 (Cont'd)
Existing Zoning in the New Jersey Study Area

Zoning District	Permitted Uses
Union City Zoning (Cont'd)	
Multiple Use (MU)	Mixed uses of industrial, commercial, and residential uses in close proximity; permitted uses include low-rise and mid-rise apartment buildings, retail sales and personal services, offices, medical offices, light industrial, self-storage facilities, live/work units in conjunction with the adaptive reuse of an existing building, child-care centers, municipal and government uses, parks
Neighborhood Commercial (C-N)	Retail uses and services to support adjoining neighborhoods; permitted uses include retail sales and personal services, offices and medical offices (upper floors only), apartments (upper floors only) in low-rise or mid-rise apartment buildings that have one or more permitted nonresidential uses on the ground floor, live/work units (upper floors only), restaurants (excluding drive-through restaurants), banks (excluding drive-through banks), health clubs, child-care centers, municipal and government uses, parks
Public (P)	Municipal and government uses, schools, public parks and playgrounds, age-restricted housing and affordable housing in low- or mid-rise apartment buildings
Historic Preservation Overlay District (HPOD)	Intended to provide additional protection for Monastery of Perpetual Rosary and Monastery and Church of St. Michael the Archangel historic sites and residential areas surrounding them; permits 1- and 2-family dwellings and existing institutional uses
Palisades Preservation Overlay District (PPOD)	Intended to provide development controls on steep slopes of Palisades, minimizing potential for erosion; provides additional setback regulations and performance standards
Weehawken Township Zoning	
Residential (R-2)	1-, 2-, and 3-family residences, municipal buildings, parks, institutions (hospitals, museums, schools, houses of worship, libraries)
Residential (R-3)	Uses permitted in R-2 zones, clubs and townhouses
Special Waterfront Zone Planned Development (SW)	Waterfront development, including industry, office, and recreation
Hoboken Zoning	
Industrial (Light Manufacturing) (I-1)	Manufacturing activities that meet performance standards; office buildings, research laboratories, warehouses and related office buildings, accessory and other permitted uses; range of conditional uses including building supply, auto service stations and garages,
Waterfront Subdistrict (I-1(W))	Subdistrict intended to protect employment opportunities while recognizing the demand for residential and retail development near waterfront; all proposed developments must undergo urban design review. Permits same uses as I-1 district, and planned unit developments (which may include a mix of residential, commercial, industrial, public, or quasi-public uses); conditional uses include marinas, restaurants, riverborne public transportation
Sources: District Zoning Regulations of the Hackensack Meadowlands District, as amended through April 1, 2013 (NJAC 19:4) and NJSEA Zoning Map (2009); Township of North Bergen Zoning Ordinance (2006); City of Union City Zoning Map (2012) and Union City Master Plan (2009); Township of Weehawken Zoning Map (2003); City of Hoboken Zoning Map (2002) and City of Hoboken Master Plan (2004).	

6A.3.1.3.2 Hudson County Master Plan and Master Plan Update

Hudson County's 2002 Master Plan and 2008 Master Plan Update identify goals of economic development (particularly through revitalization of the county's commercial and manufacturing industries), preservation of well-established residential neighborhoods with enhanced quality of life and improved community services, redevelopment along the Hudson River waterfront, and improvements to the transportation network, including the promotion of mass transit. Goals include: providing a safe and efficient transportation system; providing transportation improvements which support economic development; promoting alternate transportation modes including bicycling, tele-commuting, transit, and walking; coordinating land use activities with the transportation network; supporting system coordination, efficiency, and safety; reducing traffic and mitigating congestion on local roads and highways and improving air quality; protecting and improving quality of life; and reducing greenhouse gas emissions from mobile sources.

6A.3.1.3.3 Municipal Master Plans

Four of the local municipalities in the New Jersey study area have a master plan used to establish zoning, as discussed below.

6A.3.1.3.3.1 Jersey City

The Jersey City Master Plan was adopted in 2001 and identified such issues as inappropriate residential development, industrial and commercial disinvestment, lack of recreational and open space, environmental conservation, aging infrastructure, the extent of contaminated sites, traffic congestion, and quality of life. To address these issues, the plan's principal goals include increased residential development of variety and quality; concentration of accessible cultural, commercial and institutional activity; availability of community resources; connectivity between residential areas and activity districts that is both pedestrian-friendly and incorporates "a wide range of mode choices" including mass transit; local and regional economic development including tourism; and maintaining the port as a "global economic node" while balancing quality of life for residents.

The land use objectives of this plan include the encouragement of brownfield redevelopment, creation of performance and design standards for industrial uses, development of clean industries, coordination of land use policies in the Hackensack Meadowlands District, waterfront development, and coordination of land use planning with the existing transportation network and planned improvements to it.

The Jersey City Master Plan's circulation plan notes that Jersey City has historically functioned as a transportation gateway for the region due to its strategic location. The plan recommends a focus on repairing and maintaining existing infrastructure, providing new infrastructure in targeted locations, constructing missing links, and retrofitting existing infrastructure. The circulation objectives of the plan (as it relates) seek to capitalize on the city's status as a regional transportation center by identifying and addressing limited east-west connectors and supporting infrastructure improvements and service expansion that best promote mass transit use, mobility, economic development and quality of life.

6A.3.1.3.3.2 North Bergen

The 2009 Adopted Reexamination of the Master Plan of the Township of North Bergen is the third and most recent reexamination of the township's 1987 comprehensive master plan. Each reexamination has included an account of issues and objectives since the last report, the extent to which they have been addressed, any changes in conditions, and subsequently any revisions to the recommendations that resulted.

The issues and objectives outlined in the 2009 Report relate to industrial redevelopment, appropriate retail mix, design standards for new development, the need for a housing plan and

policy, and the development of the “Tonnelles Avenue Corridor.” The report details the current status of addressing these issues and objectives, and then delineates revisions to the recommendations of the report. As an important connector to neighboring municipalities and a gateway into the community, the report emphasizes an “enhanced development character” for the Tonnelles Avenue Corridor. At the time of the report it was noted that land uses continued to transition (e.g., 49th Street light rail station, improved bus stop and commuter parking) as new construction replaced obsolete industrial structures. A call for additional zoning changes to accelerate redevelopment was a recommendation of the plan. The report also identifies plans to widen the Tonnelles Avenue roadway by six feet.

6A.3.1.3.3.3 Union City

The goals of the 2009 Union City Master Plan sought a balance of land uses in appropriate locations, the preservation of community character, economic development, community facilities and open space, the facilitation of local and regional circulation, housing diversity, promotion of the city as desirable and attractive, and improvements to the quality of life for its residents. Objectives to accomplish these goals included revising the zoning ordinance to promote consistent development, preserve character, and create open space and parking, and facilitating affordable housing through programs and grants.

6A.3.1.3.3.4 Hoboken

The adopted 2010 City of Hoboken Reexamination Report is the most recent and only reexamination report of the 2004 City of Hoboken Master Plan. Transportation is the prominent issue for Hoboken (specifically parking and traffic). The report reiterates the 2004 Master Plan’s problems and objectives related to community facilities, parks, housing, economic development, land use, design, and zoning and redevelopment planning.

The original Master Plan’s principal goals included preservation of the city’s residential neighborhoods and downtown historic district; redevelopment of underutilized sites, particularly in the area around the historic Hoboken Terminal rail facility; and improvements to the city’s pedestrian, bicycle, and transit networks. The 2010 update generally maintained the Master Plan’s original goals, with an added recommendation for comprehensive sustainability and green infrastructure improvements. The Master Plan states that its overarching concept is sustainability, described by four tenets: economics (the New/Next/Green Economy), environment (climate change, in particular), equity, and institutionalization.

6A.3.1.3.3.5 Summary of Master Plans

Common themes among the municipal master plans described above focus on providing and improving transportation options; encouraging development in an environmentally sustainable manner; improving transit; and increasing resiliency.

6A.3.1.3.4 New Jersey Coastal Zone Management Policies

New Jersey’s coastal zone management policies include review under the Coastal Area Facility Review Act (CAFRA), the Waterfront Development Act, and Coastal Zone Management rules. These are discussed in Chapter 21, “Coastal Zone Consistency.”

6A.3.2 HUDSON RIVER

The Hudson River is located between the New Jersey and New York portions of the Project site. On the New York side, the portion of the river up to the pierhead line is public open space within the designated boundaries of Hudson River Park (described further below).

6A.3.3 NEW YORK

6A.3.3.1 LAND USE

6A.3.3.1.1 Project Site

The New York portion of the Project site is located in the area between the Hudson River bulkhead near West 30th Street and the eastern side of Tenth Avenue between West 31st and 33rd Streets (see Chapter 4, “Analysis Framework,” for a description of the Project site in New York). Existing land uses on the Project site in New York include the following:

- A portion of Hudson River Park, which is a linear park that extends along the west side of Route 9A (to the pierhead line) from the Battery in Lower Manhattan to West 59th Street. The portion of the park within the Project site includes a waterfront esplanade and a bikeway. It also includes the West 30th Street Heliport, which is within the park boundaries and generates revenue for the park.
- A portion of the West 30th Street Heliport, a privately run heliport along the water’s edge, that extends from approximately West 29th Street to West 33rd Street (within the boundaries of Hudson River Park). The heliport has 10 helipads and provides commercial, general aviation, and air taxi services. No tourist flights are operated from this location. In the summer approximately 72 flights operate each day from the heliport; in the winter, this number decreases to about 36 daily flights. The portion of the heliport within the Project site includes two of the heliport’s 10 helipads and a fueling area.
- The Project site crosses Route 9A (also known as Twelfth Avenue at the Project site), a two-way, New York State highway with three southbound lanes and four northbound lanes separated by a raised, planted median, plus a northbound parking lane and a sidewalk along the eastern side of the road.
- On the east side of Twelfth Avenue, the Project site between West 29th and West 30th Streets (the proposed Twelfth Avenue fan plant site) includes a fenced paved lot that is controlled by PANYNJ under an easement on the property. A portion of this lot is leased by Greyhound Lines, Inc. for midday storage of buses serving the Port Authority Bus Terminal and the rest of the site is used by the Port Authority Police Department, with office and support space, and the New York City Department of Sanitation. This Project site also includes a portion of a second privately owned lot, containing a paved parking area, the foundation of a demolished structure, and a piece of a single-story industrial building. The block where these lots are located—the full block between West 29th and West 30th Streets and Eleventh and Twelfth Avenues—is Manhattan Block 675.
- The Project site crosses West 30th Street, a one-way local street with serving eastbound traffic.
- From West 30th Street to Tenth Avenue north of West 31st Street, the Project site includes a below-grade area that is currently undergoing construction, as part of the Hudson Yards Right-of-Way Preservation Project, with a concrete casing to preserve a railroad right-of-way beneath the large-scale development being planned above the Metropolitan Transportation Authority (MTA) Long Island Rail Road’s (LIRR) John D. Caemmerer West Side Yard. This is discussed below in Section 6A.4.3.
- The Project site crosses Tenth Avenue, a one-way arterial street with four northbound lanes and a parking lane and sidewalk on each side of the street.
- The portion of the Project site on the east side of Tenth Avenue between West 31st and West 33rd Streets is the area beneath a 16-story, 1.8 million-square-foot (sf) office building (450 West 33rd Street, also known as the Lerner Building), which is on a platform over the rail right-of-way. Beneath this building are railroad tracks leading into Penn Station New York

(PSNY) and rail storage tracks. The Lerner Building also has louvers in its façade that serve as passive ventilation for the tracks below.

6A.3.3.1.2 Study Area

The New York study area is located in Manhattan's Far West Side neighborhood, also known as the Hudson Yards area (see **Figure 6A-7**). The study area primarily contains transportation-related uses, with a more limited amount of manufacturing, residential and commercial uses. This area is currently undergoing extensive construction with high-density residential and commercial developments as a result of recent public policy initiatives. These new developments will substantially alter the land use in the area (discussed further below in Section 6A.4.3).

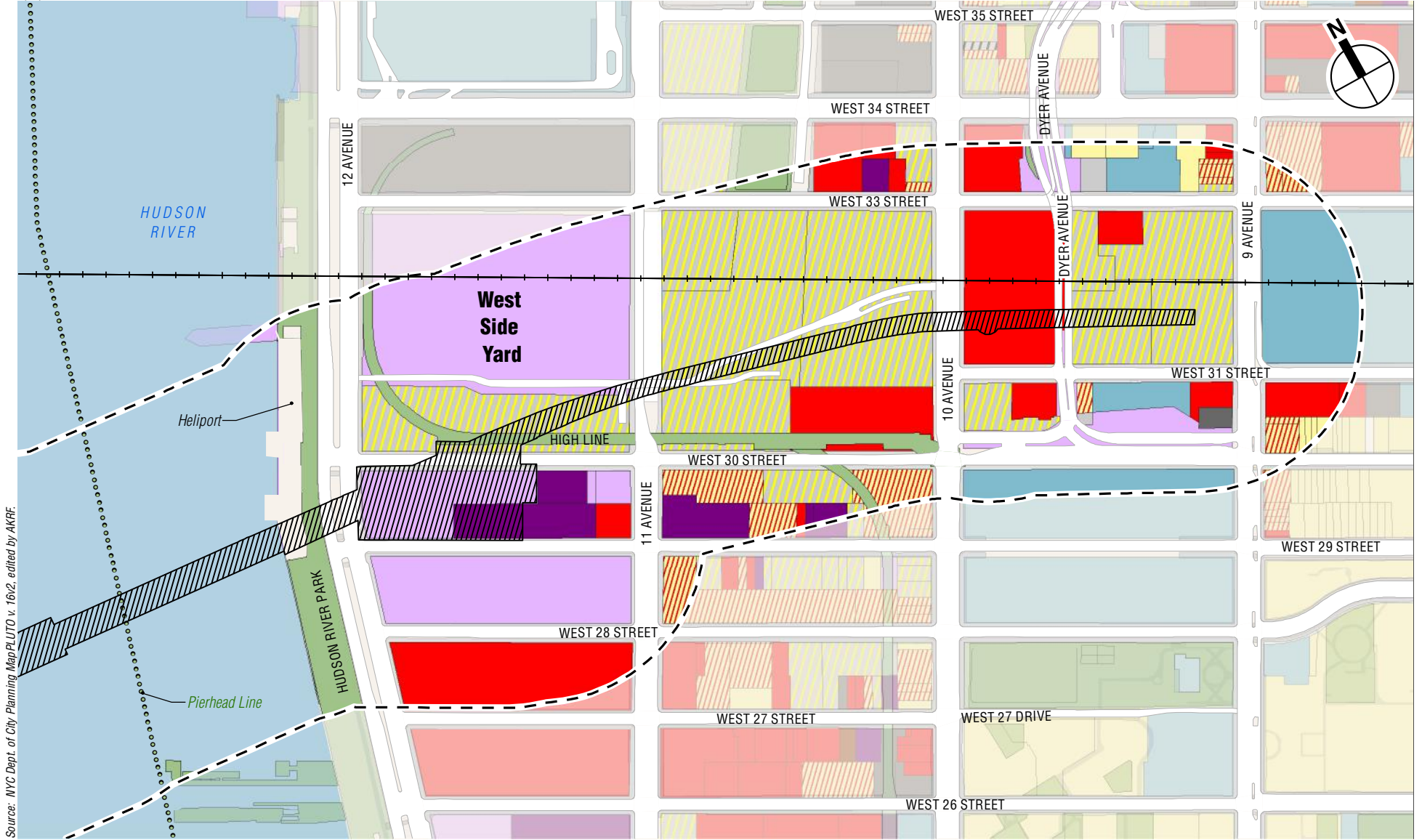
The predominant current land use in the New York study area is the large railyard (the West Side Yard) located on the superblock from Twelfth Avenue to Ninth Avenue between West 30th and West 33rd Streets. The Long Island Rail Road (LIRR) uses the West Side Yard for midday storage of trains. Eleventh Avenue crosses over the West Side Yard on a viaduct. This yard connects to the array of tracks leading into PSNY. Two other, smaller railyards are also located in the PSNY complex, as discussed in Chapter 5B, "Transportation Services." The North River Tunnel enters Manhattan beneath the West Side Yard, with a portal just east of Tenth Avenue beneath the Lerner Building.

The area above the West Side Yard is currently planned for extensive redevelopment, known as Hudson Yards, which is currently being constructed on a platform above the tracks (see Section 6A.4.3 below). The development areas created by that platform are generally referred to as the Western Rail Yard (west of Eleventh Avenue) and the Eastern Rail Yard (east of Eleventh Avenue). One building at Hudson Yards has already been completed: 10 Hudson Yards, a 52-story, 1.8 million-sf commercial office building at the northwest corner of West 30th Street and Tenth Avenue. In addition, another area of below-grade rail tracks leading to PSNY east of the Lerner Building has been covered with a platform and is being redeveloped with a high-rise office, residential, and retail building and public open space (see Section 6A.4.3 below). As part of the overall redevelopment efforts in this area, the MTA New York City Transit (NYCT) No. 7 subway line was recently extended to this area, with a new station located at West 34th Street between Tenth and Eleventh Avenues.

Dyer Avenue, an access road to the Lincoln Tunnel, extends north from West 30th Street through the study area between Ninth and Tenth Avenues. Dyer Avenue is adjacent to the east side of the Lerner Building, and is covered by a platform forming a two-block-long tunnel.

As noted in the previous section, the study area includes part of Hudson River Park and the West 30th Street Heliport. The study area also contains a portion of the High Line, a public open space constructed on an elevated former freight rail line, which runs along the western and southern edges of the West Side Yard before turning south near Tenth Avenue.

The properties between West 29th and West 30th Streets adjacent to the Project site are occupied by auto repair and light manufacturing buildings, a gas station on Eleventh Avenue, and two buildings used by the New York City Department of Sanitation (DSNY), a garage on West 30th Street, and a worker lounge facility on West 29th Street. A garage building at the corner of West 29th Street and Eleventh Avenue houses art studio and production space for the American artist Jeff Koons. To the south of the Project site, the Con Edison West 28th Street facility occupies the full block between West 28th and West 29th Streets and Eleventh and Twelfth Avenues, and includes electrical operations, a natural gas refueling station, an equipment storage area, office space, and parking for 250 trucks and other service vehicles. South of West 28th Street, the blocks between Eleventh and Twelfth Avenues contain several large former shipping and warehouse buildings that have been repurposed for mixed light manufacturing and commercial uses. This includes the Starrett-Lehigh Building, a former freight



Source: NYC Dept. of City Planning MapPLUTO v. 16v2, edited by AKRF.

- Project Site
- Study Area (500-foot boundary)
- Existing Northeast Corridor
- Commercial and Office Buildings
- Industrial and Manufacturing
- Open Space and Outdoor Recreation
- Parking Facilities
- Public Facilities and Institutions
- Residential
- Transportation and Utility
- Vacant Land
- Under Construction
- Residential with Commercial Below

0 500 FEET



Land Use in New York Study Area
Figure 6A-7

terminal and shipping facility occupying the full block bounded by Eleventh and Twelfth Avenues and West 26th and 27th Streets.

Residential uses in the study area are generally limited to the areas to the north and south of the railyard and east of Eleventh Avenue. The area south of the Project site along West 30th Street between Tenth and Eleventh Avenues contains several recently built high-rise apartment buildings, as well as several sites currently under construction with new residential buildings; residential growth in this area is largely the result of a zoning change (the West Chelsea/High Line rezoning) intended to facilitate high-density residential development along the High Line. Several high-rise apartment buildings are located along West 34th Street near Dyer Avenue and the access road to the Lincoln Tunnel. There are also limited public facility and institutional uses in the study area. Two churches (the Church of Saint Michael and the Church in New York City), as well as a supportive housing facility for women (the Webster Apartments) are located along West 34th Street between Ninth and Tenth Avenues. The U.S. Postal Service Morgan General Mail Facility occupies the block bounded by West 29th and West 30th Streets and Ninth and Tenth Avenues.

6A.3.3.2 ZONING

Zoning in the New York study area is controlled by the New York City Zoning Resolution, which designates both general zoning districts (e.g., residential, commercial, or manufacturing) as well as area-specific districts (known as Special Purpose Districts). The Zoning Resolution includes additional regulations applicable to sites located along the waterfront throughout the city. Zoning regulations are not applicable to parcels located within the public right-of-way or parcels that are designated as public parkland. **Tables 6A-3 and 6A-4** summarize the zoning districts located within the study area, and **Figure 6A-8** shows their location.

6A.3.3.2.1 Project Site

Hudson River Park and the West 30th Street Heliport are located within a manufacturing district (M2-3), although zoning regulations do not apply to designated public parkland. The paved lot between West 29th and West 30th Streets (Twelfth Avenue fan plant site) is also located in a manufacturing district (M1-6). The Hudson Yards Right-of-Way Preservation Project being built to preserve the railroad right-of-way beneath the Hudson Yards overbuild project is located in a commercial district (C6-4) within the Special Hudson Yards District, although zoning regulations do not apply to this below-grade area. The Lerner Building portion of the Project site is also located in a C6-4 commercial district and the Special Hudson Yards District (Farley Corridor Subdistrict B, Western Blocks Subarea B1). Descriptions of the zoning regulations applicable to these Project site parcels are included in **Tables 6A-3 and 6A-4**.

6A.3.3.2.2 Study Area

As shown in **Figure 6A-8**, the study area consists of a mix of manufacturing and commercial zoning districts. Most of the study area is mapped with two special districts, which were both adopted in 2005 as part of rezoning efforts to promote redevelopment in the area with high-density commercial and residential uses: the Special Hudson Yards District and the Special West Chelsea District. The Special Hudson Yards District occupies a large portion of the study area and provides for high-density commercial and residential development, retail on major corridors, streetwall continuity, pedestrian circulation space, and other features. Other zoning districts in the study area include mixed commercial and manufacturing, and mixed residential and community uses.



**Table 6A-3
Existing Zoning Districts in the New York Study Area**

Zoning District	Maximum FAR ¹	Uses/Zone Type
Manufacturing Districts		
M1-5	5.0 Commercial 5.0 Manufacturing 6.5 Community Facility ²	Light manufacturing districts allowing industrial uses that conform with performance standards (related to dust, noise, or vibration), such as repair shops, shipping, and storage facilities; typically mapped as buffers between areas of heavy industry and adjacent commercial or residential districts. Residential uses not permitted. Also permits community facilities and all commercial uses.
M1-6	10.0 Commercial ³ 10.0 Manufacturing ³ 10.0 Community Facility ^{2,3}	
M2-3	2.0 Commercial 2.0 Manufacturing	
Commercial Districts		
C6-3	6.0 Commercial ³ 0.99-7.52 Residential 10.0 Community Facility ³	High-density commercial districts permitting a wide range of uses, including residential uses; typically located in Central Business Districts with large-scale office and retail establishments serving the entire metropolitan region.
C6-4	10.0 Commercial ³ 10.0 Residential ³ 10.0 Community Facility	
C2-5 Overlay	2.0 Commercial (within high-density residential districts)	Overlay district within a residential district along a major street; allows for local commercial facilities (e.g., restaurants or grocery stores) serving a residential area.
Residential Districts		
R8A	6.02 Residential 6.5 Community Facility	Higher density residential district with predominantly large apartment buildings; contextual lot coverage and height regulations provide for buildings that match the scale of historic residential neighborhoods
Notes: 1. Floor Area Ratio (FAR) is a measure of density establishing the amount of development allowed in proportion to the base lot area. For example, a lot of 10,000 sf with an FAR of 1 has an allowable building area of 10,000 sf. The same lot with an FAR of 10 has an allowable building area of 100,000 sf. 2. Certain community facilities (including houses of worship, hospitals, and ambulatory health care facilities) are permitted in M1 districts. 3. Up to 20 percent increase for a public plaza bonus.		
Source: <i>New York City Zoning Resolution.</i>		

**Table 6A-4
Special Zoning Districts in the Study Area**

District	District Description and Regulations
Special Hudson Yards District	Includes variety of use, bulk, and urban design controls in six subdistricts. Provides for high-density commercial and residential development along two corridors. New developments required to provide retail on major corridors, street wall continuity, pedestrian circulation space, plantings, subway entrance easements, and screened or below-grade parking. District Improvement Bonus mechanism provides for increased bulk in some areas with the provision of capital improvements.
Special West Chelsea District	To facilitate the redevelopment of the former manufacturing area in West Chelsea with residential and commercial uses, centered on the High Line. Includes a High Line Transfer Corridor (HLTC) allowing sites along and underneath the High Line to transfer development rights to designated receiving sites in order to preserve light, air, and views around the High Line. Includes 10 mapped subareas with special bulk and lot coverage regulations.
Source: <i>New York City Zoning Resolution.</i>	

6A.3.3.3 PUBLIC POLICY

6A.3.3.3.1 New York City Waterfront Revitalization Program

New York City has adopted a Local Waterfront Revitalization Program (LWRP) that has been formally approved by the New York State Department of State in conformance with the federal Coastal Zone Management Act. Chapter 21, “Coastal Zone Consistency,” discusses the New York City LWRP.

6A.3.3.3.2 PlaNYC/OneNYC

In April 2007, the New York City Mayor’s Office of Long Term Planning and Sustainability released *PlaNYC: A Greener, Greater New York* (PlaNYC), which included policies to address key challenges faced by New York City: population growth, aging infrastructure, and global climate change. Since that time, updates to PlaNYC build on the goals set forth in 2007 and provide new objectives and strategies. In 2015, *One New York: The Plan for a Strong and Just City* (OneNYC) was released by the Mayor’s Office of Sustainability and the Mayor’s Office of Recovery and Resiliency. OneNYC builds upon the sustainability goals established by PlaNYC and focuses on growth, equity, sustainability, and resiliency. OneNYC’s Transportation Initiative 3 calls for expansion of the transit network, including developing a regional transit strategy to address the growing number of commuters from west of the Hudson River.

6A.3.3.3.3 Vision 2020

In March 2011, the New York City Department of City Planning released *Vision 2020: New York City Comprehensive Waterfront Plan*. It contains eight strategies to achieve the goal of improving the New York City waterfront: expand public access; enliven the waterfront; support the working waterfront; improve water quality; restore the natural waterfront; enhance the blue network; improve government oversight; and increase climate resilience.

6A.3.3.3.4 Block 675 Planning Framework

In May 2017, NYCDP released a planning study, *Block 675 Planning Framework*,³ that provides an overall vision for Block 675 in terms of land use, density, massing, and urban design. The document proposes rezoning the block to a C-6 high-density commercial district in which developers would be allowed to purchase development rights from Hudson River Park. The planning framework specifies a mix of land uses for the block including residential, commercial, and public facility, with active uses on lower floors to activate the streetscape along West 30th Street and Eleventh Avenue. The study proposes a building massing rhythm that would increase from south to north and from west to east in response to the existing built context and allow views of the city and toward the Hudson River. The planning framework recognizes the need to incorporate the Hudson River Tunnel into Block 675.

6A.3.3.3.5 Hudson River Park Act

Hudson River Park, consisting of both land and water (from the shoreline to the pierhead line) along the western boundary of the New York study area, was created by the New York State legislature through the Hudson River Park Act. As defined within that legislation, the park is required to be financially self-supporting to the extent practicable; a non-tourism/non-recreational heliport is a permissible use in the park and generates revenues in support of the park’s operations; and the park is permitted to transfer by sale unused development rights to properties

³ <https://www1.nyc.gov/assets/planning/download/pdf/plans-studies/block-675-planning-framework/block-675-presentation-0517.pdf>.



located up to one block east of the boundaries of the park, if and to the extent provided under local zoning ordinances.

6A.4 AFFECTED ENVIRONMENT: FUTURE CONDITIONS

In the future, changes will occur to the New Jersey and New York study areas by the Project's analysis year of 2030. These are discussed below. This condition is the baseline against which the impacts of both the No Action and Preferred Alternatives are compared.

6A.4.1 NEW JERSEY

6A.4.1.1 LAND USE

No notable changes are proposed in the North Bergen and Union City portions of the study area in the future by 2030, with the exception of some planned modifications at Substation 42, where Amtrak currently has plans to add a fifth traction power transformer and build a new control house to relocate equipment from the deteriorating historic substation building adjacent to Substation 42. In Weehawken, large-scale waterfront redevelopment will continue. In the Lincoln Harbor Redevelopment Area, vacant parcels just beyond the study area boundaries will be redeveloped with a mix of retail, office, and residential uses similar to the other new waterfront properties in Weehawken. At the eastern edge of the study area, construction of a 600-unit residential development was approved in December 2016 for a site at 800 Harbor Boulevard.

In Hoboken, the New Jersey Department of Environmental Preservation (NJDEP) is proposing the Rebuild By Design project, an initiative to reduce frequent flooding in Hoboken due to major storm surges, high tides, and heavy rainfall events. That project proposes numerous green infrastructure elements, such as landscaped berms and levees and bioretention basins, to "resist" and "delay" flooding. Within the study area, the Rebuild By Design project is proposing three features near the Project site:

- A "resist" feature, a flood barrier, along the east side of Park Avenue in Hoboken. Based on preliminary information, the barrier will begin at approximately 14th Street on the east side of Park Avenue and will continue northward to the south side of the HBLR. It will then curve along the south and east side of the HBLR right-of-way to approximately 19th Street. The wall will be 6 to 8 feet tall, with deep, pile-supported foundations.
- Harborside Park/Cove Park will be replaced with a new signature park that incorporates flood resist structures. Potential enhancements to the park include playgrounds, lawn areas, game courts and a viewing deck overlooking Weehawken Cove. Design and landscaping improvements to the Hudson River Walkway are also included in the Rebuild by Design project.
- A "delay, store, discharge" feature, a below-grade pump station, is proposed in the vicinity of Hoboken's wastewater treatment plant. Conceptual plans site this pump station beneath Clinton Street on the south side of the HBLR.

The Rebuild By Design project is currently in the planning stages and a Final EIS (FEIS) evaluating its impacts was completed in June 2017.⁴ Depending on the availability of funding, work on the Rebuild By Design project's "resist" features to protect against storm surge may begin in 2019 and end in 2022, with other project features added later.

⁴ <http://www.nj.gov/dep/floodresilience/rbd-hudsonriver-feis.htm>.

6A.4.1.2 ZONING AND PUBLIC POLICY

Within the study area, the Rebuild By Design project represents a notable public policy that will be implemented in the future by the analysis year for this EIS of 2030. In terms of public policy, the Jersey City Division of City Planning is currently undertaking a comprehensive update to its Master Plan, which is scheduled to be completed by 2020. No other policy changes are currently proposed in the New Jersey study area. No zoning changes are currently proposed in the study area.

6A.4.2 HUDSON RIVER

Conditions in the Hudson River near the Project site will remain unchanged in the future by the Project's analysis year of 2030. As discussed below in Section 6A.4.3.1.2, an amendment to the Hudson River Park Act calls for the relocation of the West 30th Street Heliport to a floating structure located between West 29th and West 32nd Streets, but the timing of such a relocation is unknown.

6A.4.3 NEW YORK

6A.4.3.1 LAND USE

6A.4.3.1.1 Project Site

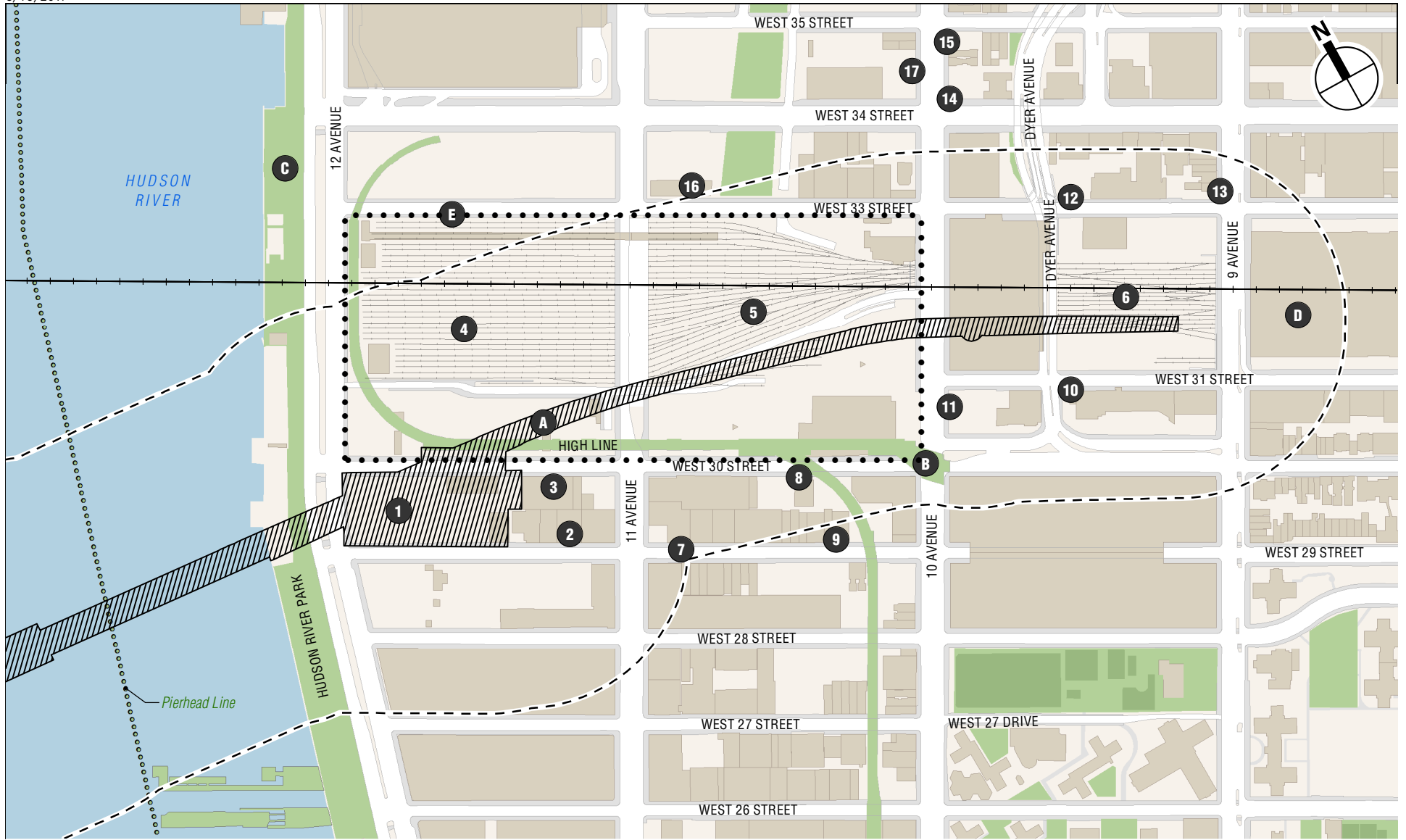
A number of development initiatives are proposed or planned in the study area by 2030, including on the Project site. Developments proposed in the study area, including on the Project site, are shown in **Figure 6A-9**. Along the waterfront, the Hudson River Park Trust (HRPT) is planning to make improvements to the portion of Hudson River Park located between West 29th and 34th Streets, including the portion that is included in the Project site. See the discussion of the study area below in Section 6A.4.3.1.2.

When the PANYNJ's current easement on the western end of the block between West 29th and West 30th Streets and Eleventh and Twelfth Avenues (Manhattan Block 675) expires, the existing uses on the site (PANYNJ security functions and commercial bus parking) will relocate to other sites. On the site of the proposed Twelfth Avenue fan plant (Lot 1 on Block 675), after PANYNJ's easement on the property expires, a developer is proposing to redevelop the site. No specific development plan has been proposed at this time, but a large commercial building (office or hotel) is permitted under the site's current zoning. Assuming use of the site's existing zoning, this 78,441-square-foot property can be redeveloped with approximately 941,000 square feet of commercial and/or hotel space. This assumes use of a zoning bonus for development of a public plaza. It does not include transfer of development rights from Hudson River Park, which would require approval from NYCDCP (see the discussion of zoning below). The M1-6 district does not prescribe any maximum height, and the new development would likely be a high-rise building along Twelfth Avenue to take advantage of waterfront views over the Hudson River.

In addition, Amtrak will construct a concrete casing on the Project site along the southern portion of the LIRR's West Side Yard. As discussed in Chapter 2, "Project Alternatives and Description of the Preferred Alternative," this concrete casing structure, the Hudson Yards Right-of-Way Preservation Project, is intended to preserve a future location for rail operations, since Hudson Yards, a large-scale redevelopment, is planned on a platform above the West Side Yard (discussed in the next section).


6A.4.3.1.2 Study Area

The New York study area is currently undergoing extensive redevelopment as a result of recent public policy initiatives in the area, and many sites are currently under construction with high-density developments. **Table 6A-5** summarizes the projects planned in the New York study area by 2030 (see also **Figure 6A-9**).



 Project Site

 Existing Northeast Corridor

 Study Area (500-foot boundary)

 Potential Future Developments (see Table 6A-5)



**Table 6A-5
Potential Future Projects in New York Study Area**

Fig. Ref.*	Project Name/Address	Project Description/Program	Completion Year
Development Projects			
1	Twelfth Avenue between West 29th and West 30th Streets	Approximately 941,000 square feet of hotel and/or commercial space	Unknown
2	601 West 29th Street	Mixed-Use: high-rise (62 stories), 960,000 sf of residential and retail space (up to 990 apartments), accessory parking, and an EMS station	2020
3	606 West 30th Street	Mixed-Use: 37 stories, 231,000 sf of residential, hotel, and retail space (approximately 206 apartments)	2020
4	Hudson Yards—Western Rail Yard	Mixed-Use: eight towers (approximately 30 to 75 stories), 6.2 million sf of residential, office, retail, and school space with public open space	2024
5	Hudson Yards—Eastern Rail Yard	Mixed-Use: six towers (approximately 50 to 90 stories), 7-level retail building, and retail pavilion, 11.7 million sf of residential, office, retail, and hotel space; 220,000 sf performing arts space; public open space	2019
6	Manhattan West	Mixed-Use: four towers (approximately 30 to 70 stories), and retail podiums, 4.7-million sf of office, residential, and retail space; public open space	2024
7	550 West 29th Street	Mixed-Use: 32 dwelling units, 4,500 sf of retail space	UC
8	520 West 30th Street	Mixed-Use: 179 dwelling units, 13,000 sf of retail	UC
9	515 West 29th Street	Mixed-Use: 12 dwelling units, 1,700 sf of retail	Unknown
10	432 West 31st Street	Commercial: 220-room hotel	Unknown
11	360 Tenth Avenue	Mixed-Use: 721 dwelling units, 12,000 sf of retail space	UC
12	431 West 33rd Street	Mixed-Use: 24 dwelling units, 5,500 sf of retail	Unknown
13	411 Ninth Avenue	Mixed-Use: 12 dwelling units, 1,200 sf of retail	UC
14	461 West 34th Street (428 Tenth Avenue)	Commercial: 399-room hotel	UC
15	444 Tenth Avenue	Commercial: 111-room hotel	UC
16	55 Hudson Yards	Commercial: 1.2 million sf of office space	UC
17	435 Tenth Avenue (Hudson Yards Projected Development Site 5)	Commercial: 2.2 million sf of office space	Unknown
Infrastructure/Open Space Projects			
A	Hudson Yards Right-of-Way Preservation Project	Concrete casing preserving rail right-of-way underneath Western and Eastern Rail Yards	UC
B	High Line—Tenth Avenue Spur	Completion of repurposed High Line with open space amenities	Unknown
C	Hudson River Park	Park improvements, 29th-34th Streets	Unknown
D	Farley Post Office/Moynihan Station	Phase 1: West End Concourse Expansion	UC
E	West Side Yard Perimeter Protection Project	Resiliency project to construct protection for the West Side Yard	Unknown
<p>Notes: UC = Under Construction * See Figure 6A-9.</p> <p>Sources: <i>No. 7 Subway Extension—Hudson Yards Rezoning and Development Program Final Generic Environmental Impact Statement</i> (2004); NYC Dept. of Buildings; Related Companies (http://www.hudsonyardsnewyork.com/, accessed December 2016); Brookfield Properties; Friends of the High Line (http://www.thehighline.org/, access December 2016); New York YIMBY; AKRF, Inc. field survey, November 2016.</p>			

The eastern end of Block 675 will be redeveloped with high-rise developments in the future. In addition to the high-rise commercial or hotel project that may be built on the Project site (discussed in the previous section), two other private developments are also proposed, one on West 29th Street at Eleventh Avenue (601 West 29th Street) and the other on West 30th Street (606 West 30th Street). NYDCDP is currently evaluating a possible rezoning of the eastern end of the block, where these developments are proposed. The rezoning, referred to as the Block 675 East project, would permit a range of commercial uses, as well as residential and community facility uses. NYDCDP issued a Draft Scope of Work for an EIS for Block 675 East on April 14, 2017.⁵ The Block 675 East Draft Scope of Work describes the two projects proposed by private applicants for the east end of the block, both expected to be completed in 2021. Both projects will introduce new mixed-use towers (with a tower up to 700 feet tall on West 29th Street and a tower approximately 510 feet tall on West 30th Street) with both residential and retail space. The West 29th Street project may also include a new station for use by the New York City Fire Department (FDNY) Emergency Medical Services (EMS), to replace a station currently located on West 23rd Street. The developers of these projects are seeking zoning map and text amendments to allow the planned uses and bulk, discussed further below in Section 6A.4.3.2.

North of West 30th Street, three major redevelopment projects will result in a new high-rise neighborhood built on platforms above the rail yard, collectively referred to as Hudson Yards. The redevelopment between Tenth and Eleventh Avenues known as the Eastern Rail Yard project will be completed by 2019 and will include six towers, a seven-level retail building, and a retail pavilion constructed on the platform over the rail yard totaling approximately 11.7 million square feet of residential, office, retail, and hotel space (one of the towers, 10 Hudson Yards, has already been constructed). The Eastern Rail Yard project will also include an approximately 220,000-square-foot cultural and performing arts facility. On the Western Rail Yard site between Eleventh and Twelfth Avenues, eight towers will be constructed over the rail yard totaling approximately 6.2 million square feet of residential, office, retail, and school space. This project has a proposed completion year of 2024. In addition, east of the Lerner Building, the Manhattan West project will include four towers and two retail podiums with approximately 4.7 million square feet of office, residential, and retail space, also to be completed by 2024. All three development projects will also construct extensive public open space, with approximately 14 acres of open space on the Eastern and Western Rail Yards and approximately 2 acres of open space in the Manhattan West project.

Along the western edge of the New York study area, Hudson River Park will continue to be improved in the future. This park is being gradually developed as funding becomes available. Developers proposing to build on the block between West 29th and West 30th Street are seeking transfer of development rights from the park in exchange for payments to the park. The anticipated funding will allow HRPT to undertake improvements on the segment of the park from 29th to 34th Street. Park improvements in this area will require relocation of the West 30th Street Heliport to another suitable location. An amendment to the Hudson River Park Act calls for the relocation of the heliport to a floating structure located between West 29th and West 32nd Streets, but the timing of such a relocation is unknown.⁶

In addition to the projects noted above, the Lerner Building is currently undergoing renovations to replace the building's façade and introduce new retail uses on Tenth Avenue that will complement the large-scale redevelopment occurring at the Eastern and Western Rail Yards. In the area immediately to the east of the New York study area across Ninth Avenue, the James A.

⁵ <https://www1.nyc.gov/site/planning/applicants/scoping-documents.page>.

⁶ 2013 Amendment to Hudson River Park Act (Chapter 517 of the Laws of 2013), Section 3(m)(v).



Farley Post Office Building is currently undergoing renovations to convert the building into a multiuse facility including a new rail passenger station known as Moynihan Station. The Moynihan Station Project will create a new grand train hall for passengers and improved passenger amenities, and may also include commercial and/or hotel space. The project is advancing in phases, and the first phase is now substantially complete. Phase 1 includes the West End Concourse Expansion to create access to most of PSNY's tracks and platforms through the Farley Building, expansion and rehabilitation of the underground connecting corridor between the new West End Concourse and existing PSNY, and new and reconfigured entrances for the Eighth Avenue subway lines (A/C/E) at PSNY.

6A.4.3.2 ZONING

NYCDP is proposing a rezoning on the eastern portion of Block 675 consistent with the Block 675 Planning Framework study released in May 2017. The zoning contemplates a proposed zoning map amendment, zoning text amendments, and special permits to allow the mixed residential and retail uses envisioned in the Block 675 Planning Framework and to allow for the transfer of unused development rights from Hudson River Park, which would increase the allowable bulk for the development sites while providing payments to Hudson River Park. As part of the proposed actions, the Special Hudson River Park District would be mapped on the east end of Block 675 as a receiving site for development rights transferred from a proposed granting site to be mapped as part of the district at Chelsea Piers.⁷ These zoning modifications require approval by New York City. No other modifications to zoning regulations within the New York study area are currently proposed by 2030.⁸

6A.4.3.3 PUBLIC POLICY

No modifications to public policies applicable to the New York portion of the Project site and the New York study area are currently proposed.

6A.5 IMPACTS OF NO ACTION ALTERNATIVE

No new passenger rail tunnel across the Hudson River would be constructed in the No Action Alternative and the North River Tunnel would not be fully rehabilitated. The No Action Alternative assumes that the existing North River Tunnel remains in service, with continued maintenance as necessary to address ongoing deterioration to the extent possible.

Without proper maintenance of the transportation infrastructure, delays on Amtrak and NJ TRANSIT service for unplanned maintenance and repairs would continue to worsen. As trans-Hudson travel demand continues to grow, more and more people would be affected as access to work, home, and areas of commerce would be more difficult in New Jersey, New York, and throughout the NEC. Eventually, this would have adverse effects on the region's economy that could in turn inhibit development and land use change. Locally, the No Action Alternative

⁷ The New York City Planning Commission and New York City Council adopted a zoning change to establish the Special Hudson River Park District in the New York City Zoning Resolution in 2016. The intent of the special district is to facilitate the repair, rehabilitation, maintenance, and development of Hudson River Park through the transfer of development rights within the Special Hudson River Park District, as well as to promote appropriate uses on the receiving sites that complement the Park and serve residents of varied income levels, to the extent residential use is included.

⁸ According to Hudson River Park Trust, a development on Lot 1 would likely seek to purchase development rights from Hudson River Park in the future; however, no developer is currently seeking such a transfer.

would have no effect on land uses on or near the Project site or in the study area. Since it would not add any new buildings, it also would have no effect with respect to zoning.

In terms of public policy, the No Action Alternative would not be supportive of transportation and therefore would not be consistent with public policies seeking to strengthen the area's transportation network.

6A.6 CONSTRUCTION IMPACTS OF THE PREFERRED ALTERNATIVE

6A.6.1 OVERVIEW

Potential impacts related to land use, zoning and public policy during the construction of the Preferred Alternative, including both the new tunnel and rehabilitation of the North River Tunnel, are discussed in this section. Construction activities associated with the Preferred Alternative would potentially be disruptive to nearby land uses, because of the activity, dust, and noise at the Project site and the increased truck traffic traveling to and from the site. In most locations, construction would not physically affect nearby properties, but there would be some exceptions, as discussed below.

Some temporary and permanent property acquisitions and easements would be needed to implement the Preferred Alternative. These are discussed in the following chapter of this EIS, Chapter 6B, "Property Acquisition."

6A.6.2 NEW JERSEY

6A.6.2.1 LAND USE

6A.6.2.1.1 County Road to Tonnelle Avenue

In the western portion of the New Jersey study area where new surface tracks would be constructed alongside the existing NEC, construction activities for the Preferred Alternative would occur on a narrow strip of land close to and including the NEC. In general, for land uses that are proximate to construction activities, the noise, truck activity, and other construction would be discernible from neighboring properties, but this disruption would be unlikely to adversely affect functions at nearby industrial, warehousing, and trucking businesses.

In this area, some private property would need to be acquired to facilitate construction (temporary construction easements) and for the permanent location of the Project's rail right-of-way (permanent easements and/or acquisitions). The acquisitions would consist of narrow strips of land at the northern edge of larger properties that are occupied by warehousing and trucking businesses. The temporary and permanent property acquisitions are described in detail in Chapter 6B, "Property Acquisition."

In addition, temporary use of some properties would be required to allow access to the construction zone. In most locations, this would consist of construction workers and trucks using driveways and paved areas of nearby industrial uses to access the construction zone. The Project Sponsor would make agreements with private property owners regarding how this access would occur, so as to minimize adverse impacts on business activities.

Temporary construction activities have the potential to adversely affect the land use on certain affected properties. As also discussed in Chapter 7, "Socioeconomic Conditions," Section 7.6.3, this may include the following:

- Light industrial and warehousing businesses at 801/901 Penhorn Avenue (Secaucus). Specifically, construction-related activities would encroach on the area immediately adjacent

to loading docks located on the northwestern side of the building. Over a period of five years, there would be intermittent periods totaling approximately 12 months when occupants of this building would not have use of the loading bays on that side of the building. Six parking spaces on the east side of the building would also need to be removed. Work would be staged so that access to some loading docks would be available while others were closed. During these periods, the Project contractor would drive piles to serve as the foundation for a new retaining wall, install the retaining wall to support the widened embankment, and install a large (36-inch-diameter) underground drainage pipe beneath the paved parking area. The Project Sponsor would coordinate access needs with the property owner and building tenants to minimize the disruption that would occur to business activities, where possible.

- Light industrial and warehousing businesses at other properties on the north side of Penhorn Avenue in Secaucus and on the north side of 16th Street in North Bergen. The temporary easements for construction of the Preferred Alternative would remove parking spaces or container storage areas for these businesses. Temporary loss of parking spaces would be required for a total of up to five months intermittently over a five-year period at these properties. Based on the large amount of off-street parking available in the vicinity, it is likely that replacement parking would be available for any temporary loss of parking. The Project Sponsor would fully restore the property once construction is complete.
- The Shree Swaminarayan Temple on Penhorn Avenue (Secaucus). Noise associated with construction of the surface tracks has the potential to disrupt religious services at this Hindu temple located within the Penhorn Avenue industrial park. However, as discussed in Chapter 12, "Noise and Vibration, Section 12.6.2.1.1, noise levels higher than noise impact criteria would occur at this location for only a short period, likely less than a month. Therefore this construction noise is not considered an adverse noise impact.
- NYSW's lumber reload facility at the terminus of 16th Street (North Bergen). This long, rectangular 10-acre property adjacent to the NYSW freight tracks is used to unload freight from rail cars for transfer to customers' trucks. The reload facility is active on weekdays and is secured and locked at other times. The Preferred Alternative would operate a temporary access road for construction vehicles headed to and from the new embankment construction site through the lumber reload facility for a period of approximately 4.5 years, which would temporarily reduce the amount of space available at the reload facility. NYSW has a large adjacent property and may be able to shift some of the reload function to that property. Coordination related to the use of the reload facility for construction access is ongoing and will continue as the Project design advances. The Project Sponsor will fully restore the reload facility once construction is complete.

The Project Sponsor will coordinate with Conrail and NYSW regarding construction of the new bridge structure over the freight railroad right-of-way used by Conrail and NYSW close to Tonnelle Avenue, so that any required track outages would have minimal disruption to the freight railroads.

6A.6.2.1.2 Tonnelle Avenue Area

In the Tonnelle Avenue area, utility locations and the construction of a new Tonnelle Avenue roadway overpass to accommodate the Preferred Alternative's new rail right-of-way would be managed so that two-way traffic could be maintained on Tonnelle Avenue at all times, similar to construction of other bridge projects throughout the state. Any required lane closures would be coordinated to limit impacts to off-peak periods. To provide adequate work zone widths, it is possible that the travel lanes would be reduced from their current 12-foot widths and the roadway shoulders would be closed throughout the construction zone. Lane closures would be

required in this area for up to two years to facilitate utility relocations and construction of the new bridge. Resultant traffic delays could impede vehicular access to surrounding businesses.

In addition, the Preferred Alternative would involve heavy construction activities at three different construction staging sites on Tonnelle Avenue for a period of approximately 11 years, including staging for the surface tracks through the Meadowlands, the new Palisades tunnel, and rehabilitation of the North River Tunnel. During that time, construction equipment on the staging sites would be noticeable, as would heavy truck traffic on Tonnelle Avenue delivering construction equipment and materials and removing debris from the sites. This construction traffic could cause additional disruptions to local vehicular traffic on Tonnelle Avenue. Most of the immediate land uses in the area are commercial or industrial; therefore, they would not be adversely affected by this construction. However, the noise from nearby construction has the potential to disturb quiet activities in the BAPS Shri Swaminarayan Mandir, a Hindu temple located 150 feet south of the construction zone; and residences farther south on Tonnelle Avenue near 10th Street and Secaucus Road. As described in Chapter 12, "Noise and Vibration," Section 12.6.2.1.2, noisy construction activities here would last approximately two years.

Tonnelle Avenue construction activities also would be disruptive to the residential uses located on the slope of the Palisades above the Tonnelle Avenue corridor, along Paterson Plank Avenue and Grand Avenue. Construction would be most noticeable when the tunnel portal and initial tunnel are created, requiring the use of controlled drill-and-blast activities in the rock face. As discussed in Chapter 12, "Noise and Vibration," Section 12.9, drilling and blasting would only be conducted during daytime hours (i.e., between 7 AM and 7 PM) and would not be performed after 7PM near residential areas unless permission from local regulatory agencies is provided. As described in Chapter 12, Section 12.9, the Project Sponsor will offer to provide window improvements to residences here so that interior noise levels would be lower.

6A.6.2.1.3 The Palisades

The study area in North Bergen and Union City located above the Preferred Alternative's new tunnel alignment through the Palisades would be largely unaffected by construction activities, other than land uses directly uphill from the Tonnelle Avenue construction sites (discussed in the previous section). Operation of the tunnel boring machine may result in discernible vibration for a few days as the machine passes deep below the surface, but this would not be disruptive to land uses. In addition, vibration may also be noticeable during controlled drill-and-blast operations to create the tunnel cross passages between the Preferred Alternative's two tubes, but again would not be disruptive to activities on the surface. More information on vibration during construction is provided in Chapter 12, "Noise and Vibration," in Section 12.6.2.2.

6A.6.2.1.4 East of the Palisades

At the Hoboken shaft site, heavy construction staging activities associated with construction of the river tunnel, ventilation shaft, and fan plant would last approximately seven years. During that time, the noise, dust, and trucking activities at the site and on local roadways leading to and from the site would be disruptive to the Shades residential neighborhood to the north (in Weehawken). As described in Chapter 3, "Construction Methods and Activities," an average of approximately 8 to 16 trucks per hour would arrive at and depart from the Hoboken staging site during the most intensive construction activity. The staging site would be enclosed by a noise barrier that may be up to 25 feet high (see Chapter 12, "Noise and Vibration," Section 12.9), which would lessen the noise from this site for the residential neighborhood.

As described in Chapter 3, "Construction Methods and Activities," a construction access route ("haul route") would be created away from the local street system to move construction trucks away from the Shades neighborhood. This truck access route would be via a new roadway to be

constructed along the northern border of the HBLR right-of-way at the southern edge of the construction site and adjacent industrial property. The haul route would bring trucks to and from the local roadways (i.e., service roads) of Willow Avenue and Park Avenue that run alongside the Willow Avenue and Park Avenue viaducts. **Figure 6A-4**, above, and Figure 3-7 in Chapter 3, “Construction Methods and Activities,” shows the haul route. While this would divert trucks from the residential neighborhood immediately north of the Hoboken shaft site, trucks would still pass some residential uses, including a 10-story apartment building located on the north side of the HBLR right-of-way between the Willow and Park Avenue viaducts. This building has four levels of parking below the residential portion of the building, which would help to buffer the apartments from construction truck traffic on the local roadways beneath the viaducts.

Trucks leaving the shaft site would head eastward on the temporary road along the north side of the HBLR right-of-way, pass under the Willow Avenue viaduct, and turn left (north) onto the northbound Willow Avenue service road, which runs adjacent to the east side of Willow Avenue viaduct. At 19th Street, trucks would turn right (east) and then left (north) onto northbound Park Avenue/JFK Boulevard East, which leads to I-495 near the Lincoln Tunnel entrance.

Two different routes are being evaluated for trucks traveling to and from the shaft site: one option using a combination of the Park Avenue service road (along the west side of the Park Avenue viaduct) with the Willow Avenue service road (on the east side of the Willow Avenue viaduct), and the other option using only the Willow Avenue service road, on both sides of the Willow Avenue viaduct (see Chapter 3, “Construction Methods and Activities,” Section 3.3.3.3):

- In the first truck route option, trucks headed to the construction site on the Park Avenue service road would be close to the east side of the 10-story residential building (the Gateway building at 1700 Park Avenue) that is between West 18th Street and the HBLR. After passing the residential building, trucks would turn west and use an area along the southern side of the residential building where NJ TRANSIT has a permanent easement. The building curves to avoid this easement area, which was originally acquired to allow truck access for the Access to the Region’s Core (ARC) Project. The easement area is occupied by a private dog run used by residents of the apartment building, which would be displaced for the 10-year construction period. Trucks would then continue to the shaft site on a temporary construction road along the north side of the HBLR. Trucks leaving the shaft site would travel north on the Willow Avenue service road along the west side of the Gateway building. To shift trucks farther from the building, the Preferred Alternative could create a wider curve from the temporary construction road, which would require underpinning the Willow Avenue viaduct to allow a support pier to be moved.
- The second truck route option would not use NJ TRANSIT’s easement along the southern side of the Gateway apartment building and therefore would not displace the dog run. Instead, trucks headed to the construction site would use the southbound Willow Avenue service road. This narrow road is along the west side of the Willow Avenue viaduct, and includes three blocks with small three- and four-story apartment buildings and a church community center facing the service road. Truck traffic headed to the shaft site would be close to these buildings and could be noisy and disruptive, although these buildings already face the traffic on the Willow Avenue viaduct nearby. At the southern end of this route, a multi-building warehouse structure faces the roadway. The southernmost building in this warehouse complex (1714 Willow Avenue) would have to be acquired and demolished to create adequate turning room for trucks if this haul route is selected. Trucks leaving the shaft site would use the same route as described above, which could include underpinning the Willow Avenue viaduct to shift trucks farther from the Gateway apartment building.

The presence of construction traffic throughout the day for approximately four years would be noticeable at the Gateway apartment building and the other residential and community facility

buildings on Willow Avenue. As discussed in Chapter 12, “Noise and Vibration,” Section 12.9, the Project Sponsor will offer to provide window improvements to residences here so that interior noise levels would be lower.

Beyond the Willow and Park Avenue viaducts, trucks headed to and from the construction site would continue on JFK Boulevard East, passing the Township of Weehawken’s North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue, which has a driveway onto JFK Boulevard East as well as Willow Avenue. A traffic management plan would be implemented to ensure that fire trucks have access to the street network and are not blocked by construction trucks queuing at the intersection.

Construction at the Hoboken construction site would not be disruptive to neighborhoods of Hoboken located south of the site. The construction site is separated from the area to the south by the right-of-way of the HBLR and an adjacent industrial neighborhood to the south, including a wastewater treatment plant. The nearest residential uses are well outside the study area, and are not within the area where trucking activities would occur.

Construction activities would be coordinated with the City of Hoboken’s Rebuild By Design project to ensure that the two projects do not conflict during their construction and long-term permanent condition, such as at the location where the wall proposed in the Rebuild By Design project would cross the Preferred Alternative’s tunnel alignment.

6A.6.2.2 ZONING

Depending on the Project Sponsor, the Preferred Alternative may not be subject to local zoning ordinances. Any temporary disruptions associated with construction also would not be subject to zoning.

6A.6.2.3 PUBLIC POLICY

Construction of the Preferred Alternative would incorporate sustainability principles to the extent applicable and practicable. Chapter 14, “Greenhouse Gas Emissions and Resilience,” describes many of the sustainable construction practices that would be implemented as part of the Preferred Alternative. Master plans are generally focused on long-term actions and goals and therefore few elements apply to construction impacts, but rather apply to the permanent features of the Preferred Alternative analyzed later in this chapter.

6A.6.3 HUDSON RIVER

As discussed in Chapter 3, “Construction Methods and Activities,” the in-water construction activities in the Hudson River would occur in a small area approximately 600 feet from the New York bulkhead (100 feet past the pierhead line), and this activity would last approximately 15 months. The construction activity would be visible from the New Jersey and New York shorelines and could result in some noise, particularly during installation of sheet piles to create the cofferdam that encloses the work area. Equipment in use for the in-water construction could require rerouting of helicopters headed to and from the West 30th Street Heliport to avoid conflicts between aircraft and tall construction equipment. Overall, given its short duration and limited area of activity, the in-water construction activity would not be disruptive to nearby onshore or in-water land uses, such as the land and water areas of Hudson River Park. (See Chapter 8, “Open Space and Recreational Resources,” for discussion of waterborne recreation at Hudson River Park.)



6A.6.4 NEW YORK

6A.6.4.1 LAND USE

As described in Chapter 3, “Construction Methods and Activities,” construction activities for the Preferred Alternative would include staging and other work centered on the western third of the block between West 29th and West 30th Streets and Twelfth and Eleventh Avenues (Block 675), as well as related work within the streetbed of West 30th Street. This work would last approximately seven years, during which time there would be lane closures, traffic diversions, heavy truck activity, and the use of noisy equipment. All roadway lanes near the western end of West 30th Street may be closed for up to three years. As with any construction project, construction activities would at times be disruptive to nearby activities. For the portion of Hudson River Park across Twelfth Avenue from this staging site, the disruption would be limited by the presence of heavily trafficked Twelfth Avenue and the nearby West 30th Street Heliport. In addition, a site enclosure or temporary noise barrier 15 feet high would be used to buffer the staging site from the surrounding area.

Construction for the Preferred Alternative would require temporary narrowing of the Hudson River Park walkway to about half of its current width, for a length of about 150 feet for a period of five months when equipment is installed, and four months when it is removed. Based on the conceptual construction schedule provided in Chapter 3, “Construction Methods and Activities,” this work would occur in spring 2021 (for installation of equipment) and spring 2022 (for removal). The walkway would be narrowed but would remain open during these periods. Construction activities on the shaft site and staging area could also be disruptive to people using Hudson River Park which are both close to the construction site, but neither of these parks is characterized by quiet today, and the construction activity would not adversely affect activities that occur there. The bikeway would remain open throughout the construction period, with a potential exception of a short period of time (up to several days) to allow trenching across the bikeway for utility installation and possible temporary closures of sections to remove buried piles that may be present beneath the bikeway. Following completion of the construction, the Project Sponsor will restore the affected area of Hudson River Park in coordination with HRPT. The construction activities in Hudson River Park in 2021 and 2022 may delay completion of park improvements in this area.

Construction activities related to ground freezing and tunneling would also affect the West 30th Street Heliport. The installation of freeze pipes within the southern portion of the heliport would affect heliport operations and would require the relocation of helicopter fueling facilities, as well as rendering one or more of the landing pads inaccessible during the 18-month duration of the ground freezing activities. In addition to the two helipads directly affected, there could be the need to reroute helicopters headed to and from the West 30th Street Heliport to avoid conflicts between aircraft and tall construction equipment during ground freezing and during the in-water construction activities (Section 6A.6.3 above). The Project Sponsor will obtain a construction permit from the Federal Aviation Administration for this work. The Project Sponsor will coordinate with the heliport operator and HRPT, which receives revenues from the heliport, to minimize disruption to the heliport operation to the extent practicable.

Construction activities at the Twelfth Avenue shaft site and staging area would occupy the same site where a new high-rise hotel and/or commercial office building is likely in the No Action Alternative. Therefore, this building’s completion would likely be delayed until after completion of the Preferred Alternative.

During the construction period, the two new high-rise residential buildings proposed on the eastern end of the same block as the Preferred Alternative’s Twelfth Avenue shaft site and staging area would be completed and occupied. As discussed earlier (Section 6A.4.3.1.2), these

buildings have a proposed completion date of 2021. The ongoing construction activities for the Preferred Alternative would occur immediately adjacent to these residential buildings and would be disruptive to residents of the new buildings, some of whom would have windows overlooking the construction site. When the western end of West 30th Street is closed, access would be maintained for the new residential building that would be located on the east end of the block (606 West 30th Street).

The Preferred Alternative's staging site on the block would include a portion of the property where the new development at 601 West 29th Street will be built. The Hudson Tunnel Project team is coordinating with the site's developer to accommodate the tunnel staging while minimizing delays to construction of 601 West 29th Street. However, based on conceptual design information developed to date, construction of the Preferred Alternative would require the western 205 feet of the development site (a portion of Block 675 Lot 12) for use as part of the tunnel construction area. This portion of Lot 12 is proposed for a one-story parking garage and a potential station for EMS as part of the development project. The proposed EMS facility will be a base and support area for ambulance operators but not a staging area for ambulances; they would stage in locations throughout their service area waiting for calls. These components of the development project are therefore likely to be delayed by construction of the Preferred Alternative, potentially up to seven years—from the proposed completion date of 2021 to a date of approximately 2028.

In this case, construction of the new garage and potential EMS station would occur adjacent to the new residential buildings on West 29th and West 30th Street, resulting in some additional construction noise and disruption to those new residential buildings for approximately two years longer than would occur for the Preferred Alternative alone. The new residential buildings would be of modern construction, with well insulated windows, so interior noise levels would remain acceptable.

Construction activities at the Twelfth Avenue staging area, including in West 30th Street, would likely be disruptive for people on the High Line in the immediate vicinity. However, the affected area along West 30th Street is a relatively short segment (about 800 feet) of the 1.45-mile-long linear park, so the overall value of the High Line as an open space resource would not be diminished (see discussion in Chapter 8, "Open Space and Recreational Resources").

Work within the Hudson Yards Right-of-Way Preservation Project would not disturb activities above, including construction of the Western Rail Yard and Eastern Rail Yard projects, nor would it disturb railroad activities at the adjacent West Side Yard. The concrete casing is being constructed as a separate project intended to preserve the right-of-way beneath the Hudson Yards overbuild and adjacent to the West Side Yard, specifically so that railroad operations can be maintained in this right-of-way without disrupting those nearby uses. The Preferred Alternative would use the concrete casing structure for its tracks and systems.

Other construction activities at and near Tenth Avenue for the Preferred Alternative, including construction of the tunnel alignment across Tenth Avenue using cut-and-cover construction techniques and potential installation of a railroad fan plant beneath the Lerner Building, would have minimal disruption to the surrounding area. When work is being conducted in Tenth Avenue, it would be staged so that some traffic lanes would be maintained at all times (although limited closures may be required during off-peak periods such as nights and weekends). Construction for the Tenth Avenue fan plant may occur within or near the lower portion of the Lerner Building and would be staged to minimize disruption to building occupants.

Overall, the construction activities for the Preferred Alternative would occur within the context of extensive construction occurring in the immediate area, including on the same block as the



Twelfth Avenue shaft site and staging area. These projects would be coordinated to minimize disruptions wherever possible.

6A.6.4.2 ZONING

Depending on the Project Sponsor, the Preferred Alternative would likely not be subject to local zoning ordinances (see discussion in Section 6A.7 below). Any temporary disruptions associated with construction also would not be subject to zoning.

6A.6.4.3 PUBLIC POLICY

Construction activities required for a new Hudson River rail crossing would be consistent with the New York City public policies related to expansion of the transit network and maintaining and improving resiliency.

To the extent that construction activities for the Preferred Alternative delay future private development on Lot 1, this would also delay future purchase of development rights from Hudson River Park, if any are sought by a Lot 1 developer. Construction activities for the Preferred Alternative could delay completion of the portion of Hudson River Park between West 29th and West 34th Street, but otherwise would not affect public policies related to Hudson River Park.

6A.7 PERMANENT IMPACTS OF THE PREFERRED ALTERNATIVE

6A.7.1 OVERVIEW

Once the Preferred Alternative is complete, Amtrak and NJ TRANSIT operations on the NEC between New Jersey and New York would operate with additional reliability. As discussed in Chapter 2, "Project Alternatives and Description of the Preferred Alternative," upon completion of the Preferred Alternative in 2030, neither Amtrak nor NJ TRANSIT is proposing additional train service beyond that provided in the No Action Alternative. Any increase in peak-hour service requires expansion to the capacity of PSNY in Manhattan, which is not part of the Preferred Alternative.

In addition to the new and rehabilitated tunnel, the Preferred Alternative would include new surface right-of-way through the Meadowlands and three new fan plants. The permanent effects of the Preferred Alternative related to land use, zoning, and public policy are discussed in this section.

6A.7.2 NEW JERSEY

6A.7.2.1 LAND USE

6A.7.2.1.1 County Road to Tonnelle Avenue

The Preferred Alternative would widen the existing NEC railroad right-of-way through Secaucus and North Bergen, converting the northern edges of adjacent industrial and warehouse properties to transportation use. For some properties along Penhorn Avenue and 16th Street, a permanent easement would be needed through vacant land and the edge of paved parking areas to accommodate below-grade drainage features. Activities at adjacent land uses would not be affected by the Preferred Alternative. Access drives and loading docks would continue to be available and could operate as they do today. West of the 16th Street Redevelopment area in North Bergen, the Preferred Alternative would create new rail embankment through a currently natural wetland area (for information on the Preferred Alternative's impacts to natural resources, see Chapter 11, "Natural Resources"). The rail freight yard area where a temporary access road

is proposed for construction would be returned to freight use once construction of the Preferred Alternative is complete in this area.

6A.7.2.1.2 Tonnelle Avenue Area

In the Tonnelle Avenue area, once construction is complete, conditions would return largely to their existing state. Trains would operate at high speed along the new right-of-way and into the new tunnel portal. The new portal would bring train activity closer to certain residences directly above than the portal (which is approximately 500 feet from the existing North River Tunnel portal), but noise from the trains would be imperceptible or barely perceptible (see Chapter 12, "Noise and Vibration," Section 12.7.2.1 for more information.) Noise from trains operating along the new alignment, which would be in a cut lower than Tonnelle Avenue, would also be imperceptible at the Hindu temple on Tonnelle Avenue.

6A.7.2.1.3 The Palisades

Land uses in the study area in North Bergen and Union City located above the Preferred Alternative's new tunnel alignment through the Palisades would be unaffected by rail operations in the new tunnel. As shown in Figure 2-5 in Chapter 2, "Project Alternatives and Description of the Preferred Alternative," the tunnel would be deep below the surface as it passes beneath the Palisades. The top (i.e., crown) of the tunnel would be approximately 70 feet below the surface at Paterson Plank Road, 150 feet at Grand Avenue, 175 feet at John F. Kennedy Boulevard, 225 feet at Summit Avenue, 260 feet at Central Avenue, 275 feet at West Avenue and Bergenline Avenue, 250 feet at New York Avenue and Palisade Avenue and 180 feet at Manhattan Avenue. At this depth, train operations would not be discernible from the surface and no vibration impacts would occur to structures above. (See also Chapter 12, "Noise and Vibration," Section 12.7.2.2.)

6A.7.2.1.4 East of the Palisades

The proposed Hoboken fan plant on the south side of West 18th Street, adjacent to the Shades neighborhood, would introduce an industrial building on a vacant site previously occupied by such buildings. The fan plant would house fans, ventilation, signals, and communications equipment, a substation, and emergency access. This NEPA analysis is based on conceptual plans (10 percent design). Based on conceptual design, the fan plant would occupy a footprint of approximately 200 feet by 140 feet and would be approximately 65 feet high. The shape, size, and design treatment of the fan plant will be refined during preliminary and final engineering. The Hoboken fan plant will be designed to be compatible with the character of the surrounding area. The Project Sponsor for the Hudson Tunnel Project will coordinate with the local community and seek input in determining the appropriate design for the visible portions of the fan plant.

Little activity would occur at the fan plant, other than visits by maintenance workers who need access to the tunnel below or to the equipment within the fan plant. The fans within the building would operate during congested conditions or emergencies, and would also undergo regular testing. As described in Chapter 12, "Noise and Vibration," outside noise from the fans would be minimized through the use of dampers in the building. Overall, the fan plant would not conflict with nearby land uses and would not result in changes to land use patterns in the surrounding area.

6A.7.2.2 ZONING

Depending on the Project Sponsor, the Preferred Alternative would likely not be subject to local zoning ordinances, and therefore no changes to zoning are required for the Preferred Alternative. For example, Amtrak and the PANYNJ are not subject to local zoning, and NJ TRANSIT is not subject to local zoning in New Jersey, but is in New York.



6A.7.2.3 PUBLIC POLICY

In terms of public policy, the Preferred Alternative would be consistent with the state, county, and local public policies regarding the importance of transportation infrastructure to the region. The Preferred Alternative would promote or support many of the goals that are common to the municipal master plans described in Section 6A.3.1.3. Common themes are: the promotion of modal choice; improvement of transit; increasing resiliency; increasing sustainability, and promoting economic development. The NEC is a critical link in the regional transportation network for intercity travel and for commuting and its continued uninterrupted service is a key factor to allow municipalities to continue on a path of economic development. The reliability of the transportation system is important for economic and environmental sustainability.

6A.7.3 HUDSON RIVER

Once the Preferred Alternative is complete, it would be invisible beneath the Hudson River, similar to the existing North River Tunnel and would not affect nearby activities, land uses, or public policies.

Within the boundaries of Hudson River Park (which includes water area from the New York bulkhead to the pierhead line), the West 30th Street Heliport could be located to an in-water site consistent with the Hudson River Park Act, which calls for relocation of the heliport to a floating structure located between West 29th and West 32nd Streets. Any pile supports for such a structure could not be located in the approximately 120-foot-wide area where the new Hudson River Tunnel would be buried beneath the river bottom. This area would be located close to 29th Street, and would not affect relocation of the heliport to the rest of the area designated in the Hudson River Park Act.

6A.7.4 NEW YORK

6A.7.4.1 LAND USE

In New York, most of the Preferred Alternative would be beneath the surface and would not affect land uses above. Most notably, the Preferred Alternative's tunnel would pass beneath Hudson River Park, Twelfth Avenue, Block 675, West 30th Street, and Eleventh and Tenth Avenues. The new tunnel alignment within the Hudson Yards Right-of-Way Preservation Project beneath Hudson Yards would avoid any potential conflict with the large-scale redevelopment occurring on a platform above the West Side Yard. Similarly, since the Preferred Alternative would be at track level and well below street level east of Dyer Avenue, it would have no effect on the Manhattan West project being constructed on a platform above the tracks there. The reconstructed North River Tunnel would also be invisible at the surface, and would continue to run beneath the West Side Yard and Lerner Building.

At Hudson River Park, the permanent location of the tunnel beneath the park would mean that no new structures could be located immediately above the tunnel, generally in the area close to 29th Street. No other restrictions would apply to this area, and this park space could be landscaped or developed for other recreational uses. As noted in the previous section, the presence of the below-grade tunnel alignment would still allow relocation of the West 30th Street Heliport to an in-water site consistent with the Hudson River Park Act.

The new Twelfth Avenue fan plant would occupy part of a large property between West 29th and West 30th Streets on Block 675 that, after the expiration of the existing PANYNJ easement on the property, is likely to be developed with other uses (see the discussion of the future background conditions above in Section 6A.4.3). The Project Sponsor may acquire the site of the Twelfth Avenue fan plant, as well as the tunnel alignment across the block, through an easement or fee acquisition. This may be an acquisition of a portion of the property (Block 675

Lot 1) or potentially all of the property. As noted earlier in Section 6A.4.3.1, when the PANYNJ's current easement on the property expires, the existing uses on the site (PANYNJ security functions and commercial bus parking) will relocate to other sites.

The Twelfth Avenue fan plant would be designed to be compatible with the character of the surrounding area and any urban design goals that the City of New York has established for the area. The design of visible elements of the fan plant will be coordinated with NYCDCP. Design of the fan plant could be coordinated with other plans for the western end of the block and the fan plant could potentially be incorporated within a future commercial or residential building constructed at the site. As discussed earlier, while no specific development plan has been proposed for this portion of the block at this time, a large commercial building (office or hotel) is permitted under the site's current zoning. In consideration of the site's zoning, the new development would likely be a high-rise building along Twelfth Avenue to take advantage of waterfront views over the Hudson River. The Project Sponsor for the Hudson Tunnel Project will seek to coordinate the design of the new fan plant with any private development proposed for Lot 1. Since construction activities at the Twelfth Avenue shaft site and staging area would occupy the same site where such a building could be constructed, its completion would likely be delayed until after completion of the Preferred Alternative.

The shape and specific location of the fan plant on Block 675 will be refined during preliminary and final engineering. This NEPA analysis is based on conceptual plans (10 percent design). Based on conceptual design, the Twelfth Avenue fan plant may be developed with its tunnel fans oriented vertically, in which case the building would require a footprint of approximately 120 feet by 130 feet and a maximum height of approximately 150 feet. It is also possible for the tunnel fans to be oriented horizontally, resulting in a lower building with a larger footprint. In either of those configurations, the fan plant could be freestanding or adjacent to or integrated with a commercial or residential development built by another party as a separate project. The shape, size, and design treatment of the fan plant will be refined during preliminary and final engineering.

As described above in Section 6A.6.4.1, a portion of Block 675 Lot 12 may be used for Project construction staging. This portion of the lot is proposed for a one-story parking garage and a potential station for EMS as part of a separate development project, and these components of the development project are likely to be delayed by construction of the Preferred Alternative, potentially up to seven years—from the proposed completion date of 2021 to a date of approximately 2028. The potential EMS facility would replace a facility farther south in the same neighborhood; with the delay, EMS services would continue to operate from the existing facility for longer.

The Preferred Alternative's other New York fan plant, the Tenth Avenue fan plant, would be located beneath the Lerner Building on Tenth Avenue between West 31st and 33rd Streets. It would be housed within an existing void beneath the building and would not require displacement of any active uses in the building.

Overall, the Preferred Alternative would result in construction of new rail infrastructure similar to the existing transportation infrastructure in the New York study area, with limited new above-grade spaces. The new above-grade features would be designed to be compatible with surrounding land uses. Therefore, no adverse impacts related to land use would occur as a result of the Preferred Alternative.

6A.7.4.2 ZONING

As noted earlier, depending on the Project Sponsor the Preferred Alternative would likely not be subject to local zoning regulations. For example, Amtrak and the PANYNJ are not subject to local zoning, and NJ TRANSIT is not subject to local zoning in New Jersey, but is in New York.



Nonetheless, the Twelfth Avenue fan plant would be designed to comply with the applicable bulk regulations of its site, to the extent practicable.

6A.7.4.3 PUBLIC POLICY

The Preferred Alternative would be consistent with public policies affecting the New York study area. Chapter 21, "Coastal Zone Consistency," evaluates the Preferred Alternative's consistency with New York City's LWRP. The Project would be consistent with other applicable public policies, in particular local policies such as PlaNYC that seek to improve the city's transportation infrastructure, promote sustainability and resiliency; OneNYC calls for addressing the growing number of commuters from west of the Hudson. Vision 2020 promotes increasing climate resilience.

In the long-term, the Preferred Alternative would not affect public policies related to Hudson River Park. It would not interfere with the public policy intent of the Special Hudson River Park District nor the park's ability to sell air rights to properties on Block 675.

The Twelfth Avenue fan plant would be designed in consultation with NYCDP to ensure consistency with the overall vision laid out in the *Block 675 Planning Framework*, which recognizes the need to incorporate the Hudson River Tunnel into Block 675. Overall, the Preferred Alternative would be consistent with public policies relative to the Project area.

6A.8 MEASURES TO AVOID, MINIMIZE, AND MITIGATE IMPACTS

A number of measures will be implemented for the Preferred Alternative to avoid or minimize adverse impacts on nearby land uses. These will include the following:

- In the Meadowlands area where temporary construction access is required in connection with the Preferred Alternative's surface tracks, agreements will be made with private property owners regarding how this access would occur, so as to minimize adverse impacts on business activities. Specific access requirements will be coordinated with the property owners and building tenants to minimize the disruption that would occur to business activities, where possible.
- The Project Sponsor will coordinate with Conrail and NYSW regarding construction of the new bridge structure over the freight railroad right-of-way so that any required track outages would have minimal disruption to the freight railroads.
- Controlled drilling and blasting for the Preferred Alternative's new tunnel will be conducted only during daytime hours (i.e., between 7 AM and 7 PM) and would not be performed after 7 PM near residential areas unless permission from the applicable local regulatory agency (e.g., North Hudson Regional Fire and Rescue, Fire Department of New York) is provided (see Chapter 12, "Noise and Vibration," Section 12.9).
- The Hoboken staging site will have a noise barrier to buffer the nearby residential neighborhood on the north side of West 18th Street from construction activities (see Chapter 12, "Noise and Vibration," Section 12.9).
- In Hoboken and Weehawken, a construction access route (i.e., haul route) will be created away from the local street system, to divert construction traffic away from the Shades neighborhood.
- In all locations where disruptions to roadways is required, including at Secaucus Road at the NEC, at Tonnelle Avenue, at local roadways in Hoboken and Weehawken (including on Park Avenue in front of the North Hudson Regional Fire and Rescue Engine 3 fire station), and in Manhattan near the construction site, Maintenance and Protection of Traffic (MPT) plans will

be implemented to manage traffic disruptions (see Chapter 5A, “Traffic and Pedestrians,” Section 5A.8).

- An MPT plan will be implemented specifically to ensure that fire trucks leaving from and returning to the Township of Weehawken’s North Hudson Regional Fire and Rescue Engine 3 fire station at 1900 Willow Avenue (between Willow Avenue and JFK Boulevard East) have access to the street network and are not blocked by construction trucks queuing at the intersection.
- Construction activities in Hoboken and Weehawken will be coordinated with the City of Hoboken’s Rebuild By Design project to ensure that the two projects do not conflict during their construction and long-term permanent condition, such as at the location where the wall proposed in the Rebuild By Design project would cross the Preferred Alternative’s tunnel alignment.
- In New York, tunnel excavation from the bulkhead to the shaft site will be conducted below ground, with ground improvement such as ground freezing to prepare the area. This will avoid the need for excavation across Hudson River Park.
- The Project Sponsor will coordinate with the West 30th Street Heliport operator and HRPT, which receives revenues from the heliport, to minimize disruption to the heliport operation during construction of the Preferred Alternative to the extent practicable.
- Following completion of the construction, the Project Sponsor will restore the affected area of Hudson River Park in coordination with HRPT.
- For construction sites in New York, site enclosures or temporary noise barriers (will be used to buffer surrounding areas from construction noise and activity. At cut-and-cover construction sites, barriers will be constructed along the curblines while the street nearest the curb will remain open to accept equipment to complete the excavation across the street (see Chapter 12, “Noise and Vibration,” Section 12.9).
- Construction of the Preferred Alternative across Tenth Avenue using cut-and-cover construction techniques would be staged so that some traffic lanes would be maintained at all times (although limited closures may be required during off-peak periods such as nights and weekends). Construction would be staged to minimize disruption to building occupants.
- The Hoboken fan plant will be designed to be compatible with the character of the surrounding area. The Project Sponsor for the Hudson Tunnel Project will coordinate with the local community and seek input in determining the appropriate design for the visible portions of the fan plant.
- The design of the Twelfth Avenue fan plant will be coordinated with NYCDOP, in order to meet the needs of the Preferred Alternative while being consistent with the urban design and land use goals. *