

A. INTRODUCTION

This chapter examines the potential impacts from the redevelopment of the Lambert Houses buildings (the proposed project) on terrestrial and aquatic natural resources and floodplains near the Development Site in the West Farms neighborhood of the Bronx. This chapter describes:

- The regulatory programs that protect floodplains, wildlife, threatened or endangered species, aquatic resources, or other natural resources within the Development Site;
- The current condition of the floodplain and natural resources within the Development Site, including groundwater, aquatic resources, terrestrial biota, and threatened or endangered species and species of special concern;
- The floodplain, water quality, and natural resources conditions in the future without the proposed project (the “No-Action” condition);
- The potential impacts of the proposed project on the floodplain, water quality, and natural resources (the With-Action condition); and
- The measures that would be developed, as necessary, to mitigate and/or reduce any of the proposed project’s potential significant adverse effects on natural resources, water quality, and floodplains.

As detailed in this chapter, the condition of groundwater, floodplains, wetlands, aquatic resources, terrestrial resources, and threatened, endangered, and special concern species within the Development Site and study area would remain generally unchanged in the future with the proposed project. The proposed project would include mixed-use redevelopment of residential/commercial lots that presently contain minimal natural resources other than small areas of manicured lawn with trees, ruderal vegetation, and disturbance-tolerant wildlife species that are ubiquitous in urban areas. Protective measures, including erosion and sediment control and stormwater BMPs, as well as landscaping and planting within the Development Site would prevent adverse impacts to natural resources and improve conditions within the Development Site post construction.

B. METHODOLOGY

The Development Site consists of approximately 11.7 acres of residential and commercial buildings, with manicured lawns and courtyards, and asphalt roads and walkways. Terrestrial natural resources and floodplains were evaluated within 400 feet of the boundaries of the Development Site. Threatened, endangered, and special concern species were evaluated for a distance of 0.5 miles from the Development Site. The study area for water quality and aquatic resources included the overall aquatic resources within the Bronx River.

Existing conditions for floodplains and natural resources within the study area were summarized from:

- Existing information identified in literature and obtained from governmental and nongovernmental sources, such as the New York City Department of Environmental Protection (NYCDEP) Harbor Water Quality Survey reports; U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps and Information, Planning and Consultation (IPaC) system for federally threatened and endangered species (<http://ecos.fws.gov/ipac>); New York State Breeding Bird Atlas, 2000-2005; New York/New Jersey Harbor Estuary Program; and Federal Emergency Management Agency (FEMA) preliminary Flood Insurance Rate Maps (FIRMs).
- Responses to requests for information on rare, threatened, or endangered species in the vicinity of the Development Site from the New York Natural Heritage Program (NYNHP) (see **Appendix 9**).
- Observations made during site reconnaissance conducted within the Development Site on June 19, 2015.

C. REGULATORY CONTEXT

The following sections identify the federal and state legislation and regulatory programs that pertain to activities in coastal areas, surface waters, floodplains, wetlands, and the protection of species of special concern that would apply to the proposed project.

FEDERAL

CLEAN WATER ACT (33 USC §§ 1251 TO 1387)

The objective of the Clean Water Act, also known as the Federal Water Pollution Control Act, is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. It regulates point sources of water pollution, such as discharges of municipal sewage, industrial wastewater, and stormwater; the discharge of dredged or fill material into navigable waters and other waters; and non-point source pollution, such as runoff from streets, agricultural fields, construction sites, and mining.

Under Section 401 of the Act, any applicant for a federal permit or license for an activity that may result in a discharge to navigable waters must provide to the federal agency issuing a permit a certificate, either from the state where the discharge would occur or from an interstate water pollution control agency, that the discharge would comply with Sections 301, 302, 303, 306, 307, and 316 (b) of the Clean Water Act. Applicants for discharges to navigable waters in New York must obtain a Water Quality Certification from NYSDEC.

Section 404 of the Act requires authorization from the Secretary of the Army, acting through USACE, for the permanent or temporary discharge of dredged or fill material into navigable waters and other waters of the United States. Waters of the United States is defined in 33 CFR 328.3 and includes wetlands, mudflats, and sandflats that meet the specified requirements, in addition to streams and rivers that meet the specified requirements. Activities authorized under Section 404 must comply with Section 401 of the Act.

RIVERS AND HARBORS ACT OF 1899

Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through USACE, for the construction of any structure in or over any navigable water of the United States, the excavation from or deposition of material in these waters, or any

obstruction or alteration in navigable waters of the United States. The purpose of this Act is to protect navigation and navigable channels. Any structures placed in or over navigable waters, such as pilings, piers, or bridge abutments up to the mean high water line, are regulated pursuant to this Act.

MAGNUSON-STEVENS ACT (16 USC §§ 1801 TO 1883)

Section 305(b)(2)-(4) of the Magnuson-Stevens Act outlines the process for the NMFS and the Regional Fishery Management Councils (in this case, the Mid-Atlantic Fishery Management Council) to comment on activities proposed by federal agencies (issuing permits or funding projects) that may adversely impact areas designated as Essential Fish Habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC §1802(10)).

Adverse impacts on EFH, as defined in 50 CFR 600.910(A), include any impact that reduces the quality and/or quantity of EFH. Adverse impacts may include:

- Direct impacts, such as physical disruption or the release of contaminants;
- Indirect impacts, such as the loss of prey or reduction in the fecundity (number of offspring produced) of a managed species; and
- Site-specific or habitatwide impacts that may include individual, cumulative, or synergetic consequences of a federal action.

ENDANGERED SPECIES ACT OF 1973 (16 USC §§ 1531 TO 1544)

The Endangered Species Act of 1973 recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The Act prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the Act, and interstate or foreign commercial activities. The Act also provides for the protection of critical habitats on which endangered or threatened species depend for survival.

FISH AND WILDLIFE COORDINATION ACT (PL 85-624; 16 USC 661-667D)

The Fish and Wildlife Coordination Act entrusts the Secretary of the Interior with providing assistance to, and cooperation with, federal, state, and public or private agencies and organizations to ensure that wildlife conservation receives equal consideration and coordination with other water-resource development programs. These programs can include the control (such as a diversion), modification (such as channel deepening), or impoundment (dam) of a body of water.

NEW YORK

PROTECTION OF WATERS, ARTICLE 15, TITLE 5, ENVIRONMENTAL CONSERVATION LAW [ECL], IMPLEMENTING REGULATIONS 6 NYCRR PART 608.

NYSDEC is responsible for administering the Protection of Waters Act and regulations to govern activities on surface waters (rivers, streams, lakes, and ponds). The Protection of Waters Permit Program regulates five different categories of activities: disturbance of stream beds or banks of a protected stream or other watercourse; construction, reconstruction, or repair of dams

and other impoundment structures; construction, reconstruction, or expansion of docking and mooring facilities; excavation or placement of fill in navigable waters and their adjacent and contiguous wetlands; and Water Quality Certification for placing fill or other activities that result in a discharge to waters of the United States in accordance with Section 401 of the Clean Water Act.

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) (N.Y. ECL ARTICLE 3, TITLE 3; ARTICLE 15; ARTICLE 17, TITLES 3, 5, 7, AND 8; ARTICLE 21; ARTICLE 70, TITLE 1; ARTICLE 71, TITLE 19; IMPLEMENTING REGULATIONS 6 NYCRR ARTICLES 2 AND 3)

Title 8 of Article 17, ECL, Water Pollution Control, authorized the creation of SPDES to regulate discharges to New York State's waters. Activities requiring a SPDES permit include point source discharges of wastewater into surface or groundwater of the state, including the intake and discharge of water for cooling purposes, constructing or operating a disposal system (sewage treatment plant), discharge of stormwater, and construction activities that disturb one or more acres.

TIDAL WETLANDS ACT, ARTICLE 25, ECL, IMPLEMENTING REGULATIONS 6 NYCRR PART 661.

Tidal wetlands regulations apply anywhere tidal inundation occurs on a daily, monthly, or intermittent basis. In New York, tidal wetlands occur along the tidal waters of the Hudson River up to the salt line and along the saltwater shore, bays, inlets, canals, and estuaries of Long Island, New York City, and Westchester County. NYSDEC administers the tidal wetlands regulatory program and the mapping of the state's tidal wetlands. A permit is required for almost any activity that would alter wetlands or the adjacent areas (up to 300 feet inland from the wetland boundary or up to 150 feet inland within New York City).

ENDANGERED AND THREATENED SPECIES OF FISH AND WILDLIFE; SPECIES OF SPECIAL CONCERN (ECL, SECTIONS 11-0535[1]-[2], 11-0536[2], [4], IMPLEMENTING REGULATIONS 6 NYCRR PART 182)

The Endangered and Threatened Species of Fish and Wildlife, Species of Special Concern Regulations prohibit the taking, import, transport, possession, or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of these species as listed in 6 NYCRR §182.6.

D. EXISTING CONDITIONS

The 2014 *City Environmental Quality Review (CEQR) Technical Manual* defines natural resources as “(1) the City's biodiversity (plants, wildlife and other organisms); (2) any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and (3) any areas capable of functioning in support of the ecological systems that maintain the City's environmental stability.” Under CEQR, a natural resources assessment is to consider the plant, wildlife and other species in the context of the surrounding environment, habitat or ecosystem and examines a project's potential to impact those resources. Resources such as groundwater, soils and geologic features, natural and human-created habitats, and any areas used by wildlife may be considered in a natural resources analysis. Stormwater runoff may also be considered in a natural resources assessment and

evaluated in the context of its impact on local ecosystem functions and on the quality of adjacent waterbodies.

In accordance with the *CEQR Technical Manual*, this section describes the following existing natural resources within the study areas on the basis of existing information and the results of the reconnaissance field survey: aquatic resources, wetlands, groundwater and floodplains, vegetation and ecological communities, wildlife, and threatened, endangered, and special concern species.

GROUNDWATER

As discussed in Chapter 10, “Hazardous Materials,” groundwater is first encountered at approximately 9 to 17 feet below grade. Groundwater within the Development Site and study area is most likely to flow toward the Bronx River based on the local topography. Groundwater in the Bronx is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

FLOODPLAINS

FEMA released preliminary FIRMs on January 30, 2015 that precede the future publication of new, duly adopted, final FIRMs. The preliminary FIRMs represent the Best Available Flood Hazard Data at this time. FEMA encourages communities to use the preliminary FIRMs when making decisions about floodplain management until final maps are available. As indicated in **Figure 9-1**, no areas of the Development Site are within the 100-year floodplain (the area with a 1 percent probability of flooding each year). Small portions of Parcel 5 and Parcel 10 located closest to the Bronx River are within the 500-year floodplain (the area with a 0.2 percent probability of flooding each year). The portion of the study area east of the Development Site contains areas mapped as 100-year floodplain and 500-year floodplain.

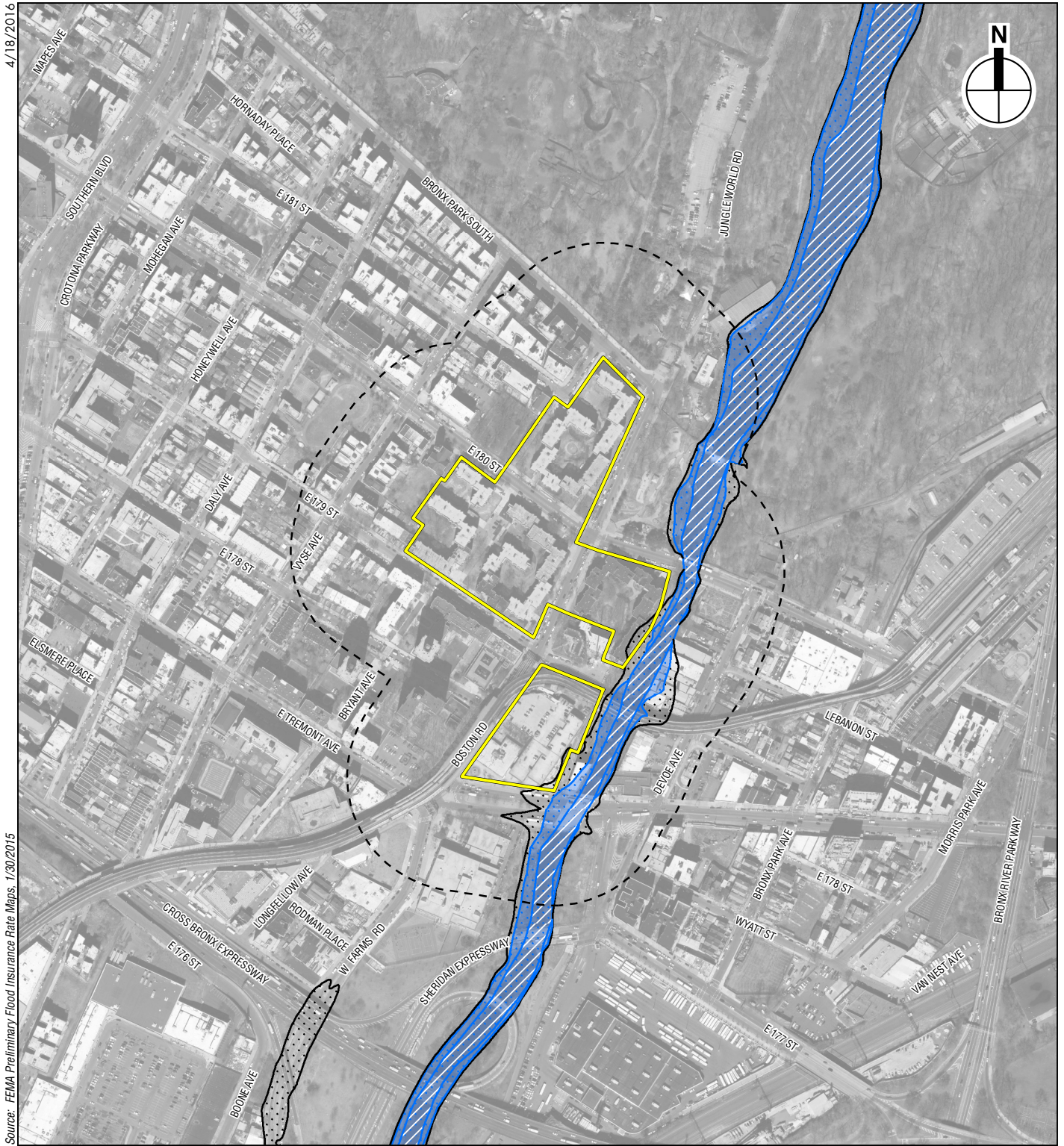
WETLANDS

NWI-mapped wetlands within the study area include estuarine subtidal wetlands with unconsolidated bottoms that are permanently flooded (E1UBL). This wetland is associated with the Bronx River. There are no NWI-mapped wetlands within the Development Site (see **Figure 9-2**).

NYSDEC-mapped wetlands within the study area include littoral zone (LZ) tidal wetlands associated with the Bronx River south of Wyatt Street. Littoral zone wetlands are any tidal wetlands under no more than 6 feet of water at mean low water (MLW) that are not included under another tidal wetland category. There are no NYSDEC-mapped tidal or freshwater wetlands within the Development Site (see **Figure 9-3**).

AQUATIC RESOURCES

There are no aquatic resources within the Development Site; however the Bronx River is located within the study area. The portion of the Bronx River located within the study area is mapped by NYSDEC as a class B stream, which indicates its best usage for swimming and other contact recreation, but not for drinking water. The Bronx River flows approximately 24 miles through Westchester and Bronx Counties until it empties into the East River. Standards for Use Class B waters are listed in **Table 9-1**. There are no New York State standards for chlorophyll-*a* or water clarity.



Development Site

Study Area (400-foot boundary)

Special Flood Hazard Areas (100-Year Flood)

Other Flood Areas (500-Year Flood)

1% Annual Chance Floodplain Boundary

0.2% Annual Chance Floodplain Boundary

Floodway Areas in Zone AE

0 500 FEET



Development Site

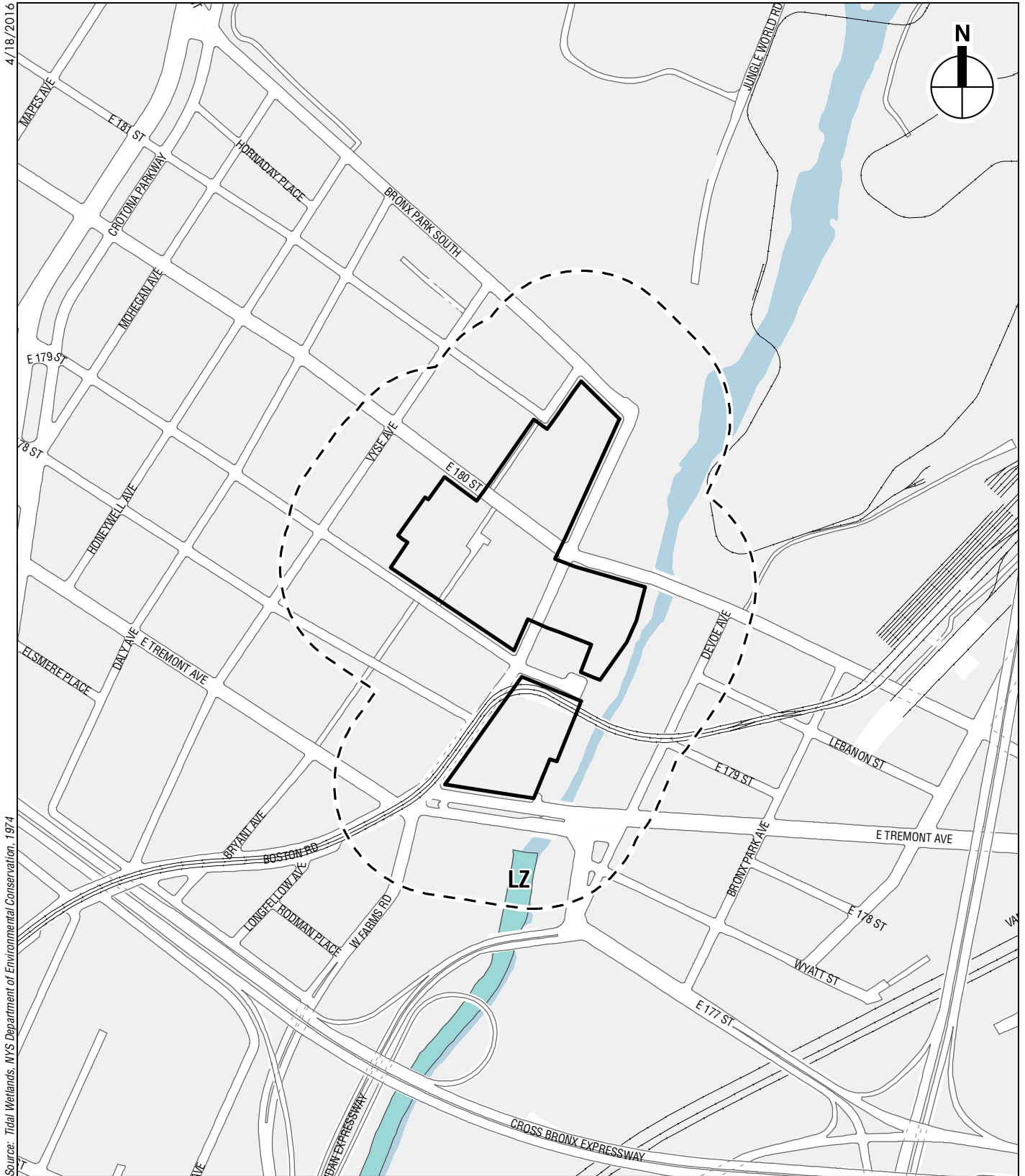
Study Area (400-foot boundary)

Freshwater Forested/Shrub Wetland

Riverine

Estuarine and Marine Deepwater

0 500 FEET



Development Site
 Study Area (400-foot boundary)

Littoral Zone

0 500 FEET

Table 9-1
New York State Water Quality Standards by Use Class

Parameter	Use Class B Standard
Fecal coliforms (per 100mL)	The monthly geometric mean, from a minimum of five examinations, shall not exceed 200
Total coliforms (per 100mL)	The monthly median value and more than 20 percent of the samples, from a minimum of five examinations, shall not exceed 2,400 and 5,000, respectively.
Dissolved Oxygen (mg/L)	For nontrot waters, the minimum daily average shall not be less than 5.0 mg/L, and at no time shall the DO concentration be less than 4.0 mg/L.
pH	Shall not be less than 6.5 nor more than 8.5.
Source: NYCRR, Title 6, Part 703, 2015.	

The City of New York has monitored New York Harbor water quality for over 100 years through its Harbor Survey Program. NYCDEP evaluates surface water quality in four designated areas of the New York Harbor: the Inner Harbor, Upper East River-Western Long Island Sound, Lower New York Bay-Raritan Bay, and Jamaica Bay. Harbor Survey data show that water quality has improved significantly throughout the Harbor Estuary since the 1970s as a result of the construction, upgrade, and operational improvements to both City-operated and regional water pollution control plants. Water quality improvements include both reductions in fecal and total coliform concentrations and significant increases in DO concentrations.

The Bronx River is considered to be part of the Upper East River-Western Long Island Sound area of the New York Harbor. Of the 17 monitoring stations within the Upper East River-Western Long Island Sound, the closest station to the Development Site is Station BR3, which is located where Westchester Avenue crosses over the Bronx River (south of the Development Site). During 2012, six out of eight of the water quality parameters monitored by NYCDEP improved in the Upper East River-Western Long Island Sound. Dissolved oxygen showed virtually no change. Fecal coliform, enterococci, total suspended solids, total nitrogen and chlorophyll-*a* all showed improvement in the form of decreases over 2012. Secchi transparency (a measure of water clarity) showed a decrease over 2012, indicating a reduction in water clarity.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

The Development Site and study area are located within the urban landscape of the Bronx's West Farms neighborhood, and the habitat primarily consists of roadways, buildings, maintained lawns, and vegetated riparian areas. Following Edinger et al. (2014), the Development Site would best be described as having "terrestrial cultural" communities, which are defined as "communities that are either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformations of the substrate, or the biological composition of the resident community is substantially different from the character of the substrate or community as it existed prior to human influence." The terrestrial cultural communities that are present within the Development Site, as defined by Edinger et al. (2014), include paved road/path¹, urban structure exterior² and mowed lawn with trees³. The paved

¹ Edinger et al. (2014) define this community as "a road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in cracks in the paved surface."

road/path and urban structure exterior communities are both unvegetated and represent the surrounding streets and residential /commercial buildings respectively. The mowed lawn with trees community is found throughout the Development Site and study area around the edges and within the courtyards of the residential/commercial buildings. The trees most commonly planted within this community are Japanese zelkova (*Zelkova serrata*), callery pear (*Pyrus calleryana*), red maple (*Acer rubrum*), honey locust (*Gleditsia triacanthos*), black oak (*Quercus velutina*), Norway maple (*Acer platanoides*), and willow oak (*Quercus phellos*). There are few shrubs planted within this community, and most are yew (*Taxus* sp) and euonymus (*Euonymus* sp). The herbaceous layer is primarily mowed Kentucky bluegrass (*Poa pratensis*), crabgrass (*Digitaria* sp), and common plantain (*Plantago major*).

In addition to these terrestrial cultural communities, the study area also contains areas that following Edinger et al. (2014) would be best described as a “forested uplands” community. Forested uplands communities are “upland communities with more than 60 percent canopy cover of trees (greater than 5 meters tall); these communities occur on substrates with less than 50 percent rock outcrop or shallow soil over bedrock.” The forested uplands community that is present within the study area, as defined by Edinger et al. (2014) is successional southern hardwoods⁴. The successional southern hardwoods community is located adjacent to the Bronx River. The canopy is composed of a several species, but the dominant trees are box elder (*Acer negundo*), white mulberry (*Morus alba*), and Norway maple. The herbaceous layer is robust with lamb’s quarters (*Chenopodium album*), great burdock (*Arctium lappa*), common smartweed (*Polygonum hydropiperoides*), grape (*Vitis* sp), and Virginia creeper (*Parthenocissus quinquefolia*) as the dominant species.

Table 9-2 summarizes the vegetation identified in the Development Site and study area.

WILDLIFE

Natural habitats available to terrestrial wildlife within the study area are limited to small buffers between areas of urban residential/commercial land use and human disturbance. As a consequence, these habitats are of limited value to native wildlife. The study area is otherwise developed and covered by buildings, asphalt, and maintained lawns. As such, only the most urban-adapted, generalist species that can tolerate highly degraded environments and high levels of human activity currently have the potential to occur within the study area.

² Edinger et al. (2014) define this community as “the exterior surfaces of metal, wood, or concrete structures (such as commercial buildings, apartment buildings, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in an urban or densely populated suburban area. These sites may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks. Nooks and crannies may provide nesting habitat for birds and insects, and roosting sites for bats.”

³ Edinger et al. (2014) define this community as “residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and is shaded by at least 30 percent of trees. Ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The groundcover is maintained by mowing and broadleaf herbicide application.”

⁴ Edinger et al. (2014) define this community as “a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed.”

Table 9-2
Vegetation Identified within
the Development Site and Study Area

Common Name	Scientific Name	Stratum
Box elder	<i>Acer negundo</i>	Tree
Norway maple	<i>Acer platanoides</i>	Tree
Red maple	<i>Acer rubrum</i>	Tree
Great burdock	<i>Arctium lappa</i>	Herb
Common mugwort	<i>Artemisia vulgaris</i>	Herb
Hedge bindweed	<i>Calystegia sepium</i>	Herb
Asiatic bittersweet	<i>Celastrus orbiculatus</i>	Vine
Lamb's quarters	<i>Chenopodium album</i>	Herb
Virgin's bower	<i>Clematis virginiana</i>	Herb
Asiatic dayflower	<i>Commelina communis</i>	Herb
Crabgrass	<i>Digitaria</i> sp	Herb
Daisy fleabane	<i>Erigeron annuus</i>	Herb
Euonymus	<i>Euonymus</i> sp	Shrub
Strawberry	<i>Fragaria virginiana</i>	Herb
Quickweed	<i>Galinsoga ciliata</i>	Herb
Ginko	<i>Ginko biloba</i>	Tree
Honey locust	<i>Gleditsia triacanthos</i>	Tree
Sweetgum	<i>Liquidambar styraciflua</i>	Tree
Pineapple weed	<i>Matricaria discoidea</i>	Herb
White mulberry	<i>Morus alba</i>	Tree
Virginia creeper	<i>Parthenocissus quinquefolia</i>	Vine
Common plantain	<i>Plantago major</i>	Herb
Kentucky bluegrass	<i>Poa pratensis</i>	Herb
Japanese knotweed	<i>Polygonum cuspidatum</i>	Herb
Common smartweed	<i>Polygonum hydropiperoides</i>	Herb
Eastern cottonwood	<i>Populus deltoides</i>	Tree
Callery pear	<i>Pyrus calleryana</i>	Tree
Sawtooth oak	<i>Quercus acutissima</i>	Tree
Shingle oak	<i>Quercus imbricaria</i>	Tree
Pin oak	<i>Quercus palustris</i>	Tree
Willow oak	<i>Quercus phellos</i>	Tree
Black oak	<i>Quercus velutina</i>	Tree
Curly dock	<i>Rumex crispus</i>	Herb
Goldenrod	<i>Solidago</i> sp	Herb
Sow thistle	<i>Sonchus oleraceus</i>	Herb
Common dandelion	<i>Taraxacum officinale</i>	Herb
Yew	<i>Taxus</i> sp	Shrub
Field pennycress	<i>Thlaspi arvense</i>	Herb
American basswood	<i>Tilia americana</i>	Tree
Poison ivy	<i>Toxicodendron radicans</i>	Vine
Arrowwood viburnum	<i>Viburnum dentatum</i>	Shrub
Grape	<i>Vitis</i> sp	Vine
Japanese zelkova	<i>Zelkova serrata</i>	Tree

Note: Boldface type denotes New York State listed species.

Source: AKRF reconnaissance investigation on June 19, 2015.

Birds

The Breeding Bird Atlas is a periodic census of the distribution of breeding birds across New York State. The most recent census was conducted from 2000-2005 and documented 58 species as confirmed or probable/possible breeders in the survey block in which the study area is located (Block 5852D) (see **Table 9-3**). However, although the 3 square mile survey block covers natural areas where there is habitat to support these species, the Development Site and surrounding study area contain habitat that is suitable for only a few of the most urban-adapted birds. The vegetated area along the Bronx River includes habitat that is not found in other portions of the study area and may support a wider range of urban-adapted birds. The bird species that are considered most likely to breed within the study area are the non-native European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columbia livia*). These are extremely disturbance-tolerant, generalist species that can thrive in heavily developed, urban environments. Bird species observed during the June 19, 2015 reconnaissance investigation include rock pigeon, house sparrow, and American robin (*Turdus migratorius*).

Mammals

Habitat for mammals is limited within the Development Site, and is likely to be used only by urban-adapted and synanthropic species (those that benefit from an association with humans). These include the raccoon (*Procyon lotor*), Norway rat (*Rattus norvegicus*), gray squirrel (*Sciurus carolinensis*) and domestic cat (*Felis catus*). No mammals were observed in the study area during the June 19, 2015 reconnaissance investigation.

Reptiles and Amphibians

The NYSDEC Herp Atlas Project identified 17 species as occurring within the atlas block that covers the study area (Central Park USGS quadrangle) (see **Table 9-4**). The atlas block spans a large geographic area that includes parks and other natural areas where there is habitat to support these species, whereas the Development Site and study area lack habitat that would be suitable for most of these species. The study area mainly consists of lots covered by buildings, asphalt, and a river in a heavily urbanized and residential/commercial setting. Of the 17 species identified in the Herp Atlas Project, the green frog (*Rana clamitans*), common snapping turtle (*Chelydra serpentina*), painted turtle (*Chrysemys picta*), red-eared slider (*Trachemys scripta elegans*), eastern red belly turtle (*Pseudemys rubriventris*), Italian wall lizard (*Podarcis sicula*) and northern brown snake (*Storeria dekayi*) are considered to have the potential to occur within the study area, on the basis of their association with the available habitats. No reptile or amphibian species were observed during the June 19, 2015 reconnaissance investigation.

Table 9-3

NYS Breeding Bird Atlas 2000-2005 for Block 5852D

Common Name	Scientific Name
Cooper's hawk [†]	<i>Accipiter cooperii</i>
Spotted sandpiper	<i>Actitis macularius</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Wood duck	<i>Aix sponsa</i>
Mallard	<i>Anas platyrhynchos</i>
Tufted titmouse	<i>Baeolophus bicolor</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Canada Goose	<i>Branta canadensis</i>
Great horned owl	<i>Bubo virginianus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Green heron	<i>Butorides virescens</i>
Northern cardinal	<i>Cardinalis cardinalis</i>
House finch	<i>Carpodacus mexicanus</i>
Chimney swift	<i>Chaetura pelagica</i>
Northern flicker	<i>Colaptes auratus</i>
Rock pigeon	<i>Columba livia</i>
Eastern wood-pewee	<i>Contopus virens</i>
American crow	<i>Corvus brachyrhynchos</i>
Fish crow	<i>Corvus ossifragus</i>
Blue jay	<i>Cyanocitta cristata</i>
Mute swan	<i>Cygnus olor</i>
Yellow warbler	<i>Dendroica petechia</i>
Pine warbler	<i>Dendroica pinus</i>
Gray catbird	<i>Dumetella carolinensis</i>
American kestrel	<i>Falco sparverius</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Barn swallow	<i>Hirundo rustica</i>
Wood thrush	<i>Hylocichla mustelina</i>
Baltimore oriole	<i>Icterus galbula</i>
Orchard oriole	<i>Icterus spurius</i>
Eastern screech-owl	<i>Megascops asio</i>
Red-bellied woodpecker	<i>Melanerpes carolinus</i>
Song sparrow	<i>Melospiza melodia</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Great crested flycatcher	<i>Myiarchus crinitus</i>
Monk parakeet	<i>Myiopsitta monachus</i>
Black-crowned night-heron	<i>Nycticorax nycticorax</i>
House sparrow	<i>Passer domesticus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
Downy woodpecker	<i>Picoides pubescens</i>
Hairy woodpecker	<i>Picoides villosus</i>
Black-capped chickadee	<i>Poecile atricapillus</i>
Common grackle	<i>Quiscalus quiscula</i>
Eastern phoebe	<i>Sayornis phoebe</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
American goldfinch	<i>Spinus tristis</i>
Chipping sparrow	<i>Spizella passerina</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
European starling	<i>Sturnus vulgaris</i>
Tree swallow	<i>Tachycineta bicolor</i>
Carolina wren	<i>Thryothorus ludovicianus</i>
House wren	<i>Troglodytes aedon</i>
American robin	<i>Turdus migratorius</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Warbling vireo	<i>Vireo gilvus</i>
Red-eyed vireo	<i>Vireo olivaceus</i>
Mourning dove	<i>Zenaida macroura</i>
Note:	[†] New York State listed species of special concern.
Source:	2000-2005 NYS Breeding Bird Atlas for Block 5852D.

Table 9-4
New York State Herp Atlas Project (1990-1999)
Central Park USGS Quadrangle

Common Name	Scientific Name
Spotted salamander	<i>Ambystoma maculatum</i>
Eastern American toad	<i>Bufo americanus</i>
Fowler's toad	<i>Bufo fowleri</i>
Common snapping turtle	<i>Chelydra serpentina</i>
Painted turtle	<i>Chrysemys picta</i>
Northern two-lined salamander	<i>Eurycea bislineata</i>
Gray treefrog	<i>Hyla versicolor</i>
Northern redback salamander	<i>Plethodon cinereus</i>
Italian wall lizard	<i>Podarcis sicula</i>
Northern spring peeper	<i>Pseudacris crucifer</i>
Eastern red belly turtle	<i>Pseudemys rubriventris</i>
Bullfrog	<i>Rana catesbeiana</i>
Green frog	<i>Rana clamitans</i>
Wood frog	<i>Rana sylvatica</i>
Northern brown snake	<i>Storeria dekayi</i>
Eastern box turtle	<i>Terrapene carolina</i>
Red-eared slider	<i>Trachemys scripta elegans</i>
Notes: Boldface type denotes NYS listed species of Special Concern	
Sources: New York State Herp Atlas Project (1990-1999) for the Central Park USGS Quadrangle	

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

The piping plover (*Charadrius melodus*; threatened) is the only federally listed species indicated by the USFWS IPaC system as occurring within the Development Site.

A response from NYNHP to requests for information on rare, threatened, and endangered species, and significant natural communities within a half mile of the project site dated July 31, 2015 indicated no records of rare, state-listed animals or plants, or significant natural communities within the study area.

The federally- or state-listed species of birds, reptiles, or amphibians documented by the 2000-2005 Breeding Bird Atlas and Herp Atlas Projects in the respective census blocks in which the proposed project would be located are the eastern box turtle (*Terrapene carolina*; special concern) and Cooper's hawk (*Accipiter cooperii*; special concern). However, as discussed under "Reptiles and Amphibians," due to lack of appropriate habitat in the Development Site, the eastern box turtle is not considered to have the potential to occur within the Development Site.

The only federally- or state-listed species observed within the Development Site or study area during the June 19, 2015 reconnaissance investigation was willow oak (*Quercus phellos*; endangered), which was planted within Parcel 3 and Parcel 5.

PIPING PLOVER

The breeding population of piping plovers in New York City is limited to the Rockaway Peninsula in Queens County (Fowle and Kerlinger 2001, Boretti et al. 2007), and the Development Site lacks wide, open expanses of unvegetated beach that the piping plover uses

for habitat. Therefore, piping plovers are not considered to have the potential to occur within the Development Site.

COOPER'S HAWK

Cooper's hawk is one of North America's most widespread and common raptors. Cooper's hawk populations in the eastern U.S. appear to have fully recovered from population declines experienced in the mid-1900s (Curtis et al. 2006). In New York State specifically, the density and range of both breeding and overwintering Cooper's hawks have increased markedly in recent decades (Curtis et al. 2006, Hames and Lowe 2008), but the species remains a Species of Special Concern. Cooper's hawk was documented in the atlas blocks encompassing the study area during the 2000-2005 Breeding Bird Atlas. However, Cooper's hawks nest in interior deciduous and mixed forests, which are lacking in the study area. The potential occurrence of Cooper's hawks in the study area is limited to winter and migration when they occur in a wider variety of habitat types and are most abundant in the region. However, the likelihood of their occurrence in the study area is considered very low.

WILLOW OAK

The willow oak is ranked as "S1" by NYNHP, indicating that it is critically imperiled in the state because of extreme rarity (i.e., five or fewer sites or very few remaining individuals) (NYNHP 2013c). Habitat for this species is mostly on the coastal plain in moist soils or swamps (Gleason and Cronquist 1963). There are six willow oaks planted within the courtyard of Parcel 5, which range in size from approximately 21 inches diameter at breast height (dbh) to 27 inches dbh. There are three willow oaks planted within the courtyard of Parcel 3, which range in size from approximately 23 inches dbh to 26 inches dbh. According to the *New York City, New York Municipal Forest Resource Analysis* (Peper et al. 2007), willow oak is a commonly planted tree in New York City, and these trees do not constitute one of the five or fewer sites or very few remaining individuals of this species in New York State as is intended by the NYNHP "S1" rank. Otherwise, due to the urbanized nature and absence of moist soils, this species would not be likely to occur elsewhere within the study area.

E. THE FUTURE WITHOUT THE PROPOSED PROJECT

The assessment of natural resources in the future without the proposed project assumes that by the analysis year (2029), land cover type and human activity would not differ from the present condition. Thus, no change to the existing conditions, with regards to natural resources, is expected in the future without the proposed project.

F. PROBABLE IMPACTS OF PROPOSED PROJECT

GROUNDWATER

As discussed under "Existing Conditions," groundwater in the Bronx is not used as a potable water supply. Therefore, construction and operation of the proposed project would not have significant adverse impacts to groundwater within the Development Site or study area.

FLOODPLAINS

As discussed under “Existing Conditions,” small portions of the Development Site (the eastern portions of Parcel 5 and Parcel 10) are located within the 500-year floodplain. The proposed project would therefore result in construction within the 500-year floodplain. However, the redeveloped buildings would not be considered critical structures and their construction would not significantly alter the floodplain or result in additional flooding to adjacent properties. In addition, the footprints of the proposed buildings would be similar to the footprints of existing buildings. Therefore, construction and operation of the proposed project would not have significant adverse impacts to floodplains within the Development Site or study area.

WETLANDS

As discussed under “Existing Conditions,” there are no NWI- or NYSDEC-mapped wetlands, or NYSDEC-regulated wetland adjacent areas within the Development Site. The proposed project would involve excavation and other soil disturbance and would utilize sediment and erosion control measures as necessary. Therefore, construction and operation of the proposed project would not have significant adverse impacts to wetlands or NYSDEC-regulated wetland adjacent areas.

AQUATIC RESOURCES

As part of the proposed project, coverage under a NYSDEC State Pollution Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) would be required due to soil disturbance of greater than 1 acre. In accordance with NYSDEC SPDES (GP-0-10-001), a SWPPP consisting of both temporary erosion and sediment controls and post-construction stormwater management practices would be prepared. Water quality treatment would be designed consistent with the Manual. Bioswales, rain gardens, permeable pavers, and planted vegetation will be incorporated into the landscape designs of the proposed project, which will help control stormwater runoff from the Development Site. Therefore, construction and operation of the proposed project would not have significant adverse impacts to aquatic resources.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

As discussed under “Existing Conditions,” ecological communities within the Development Site and study area are limited to paved road/path, urban structure exterior, mowed lawn with trees, and successional southern hardwoods communities. The paved road/path and urban structure exterior communities are unvegetated and the mowed lawn with trees and successional southern hardwoods communities are largely vegetated with ruderal species or planted species and have limited ecological value. Construction of the proposed project would result in the removal of 13 street trees and a number of trees planted within building courtyards within the Development Site. However, all work would be performed in compliance with Local Law 3 of 2010 and the City of New York Department of Parks and Recreation’s (DPR) Tree Protection Protocol, to minimize potential significant adverse impacts. Any required replacement and/or restitution would be provided in compliance with Local Law 3 and Chapter 5 of Title 56 of the Rules of the City of New York. In addition, the proposed project would also plant trees, shrubs, and herbaceous plants as part of landscape designs. Willow oaks will be considered in the

landscaping plans to the extent that the construction schedule allows based on the required planting seasons. Therefore, construction and operation of the proposed project would not have significant adverse impacts to vegetation and ecological communities.

WILDLIFE

Construction of the proposed project would not have significant adverse impacts to wildlife at either the individual or population level. Terrestrial wildlife habitat within the Development Site is presently limited to a mowed lawn with trees in a highly urbanized setting. The study area contains a successional southern hardwood community that is limited to a narrow strip along the Bronx River, in which no construction will occur. Therefore, construction activities would not eliminate any high quality or valuable habitat for wildlife, and would not adversely affect wildlife within the area. As disturbance from construction activities would be temporary and occur in phases throughout the Development Site, any wildlife individuals that may be displaced from the site during project construction would be expected to easily move to alternative habitat. Overall, construction and operation of the proposed project would not have significant adverse impacts to wildlife at the individual or population level.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

As discussed under “Existing Conditions,” the federal- or state-listed endangered, threatened, and special concern species, or significant natural communities that is considered to have the potential to occur or is known to occur within the Development Site or study area is willow oak.

Willow oaks were observed on Parcel 3 and Parcel 5 during the June 19, 2015 reconnaissance investigation. These nine trees would be removed as a result of the project. All nine willow oaks located within the Development Site were planted within the building courtyards and do not represent natural populations. Because willow oak is a commonly planted tree in New York City (Peper et al. 2007), these trees do not constitute one of the “five or fewer sites or very few remaining individuals” of this species in New York State as is intended by the NYNHP “S1” rank. Therefore the removal of these trees would not be considered significant adverse impacts to protected willow oak populations. As discussed under “Vegetation and Ecological Communities,” willow oaks would be considered in the landscaping plans to the extent that the construction schedule allows based on the required planting seasons.

Therefore, construction and operation of the proposed project would not have significant adverse impacts to threatened, endangered, and special concern species and significant natural communities. *