APPENDIX A
EAF AND ATTACHMENTS

ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS PROJECT

Revised Environmental Assessment Form

Lead Agency
New York State Office of Parks, Recreation and Historic Preservation

Lead Agency Contact
David Brito
Deputy Regional Director, OPRHP, New York City Region

Preparers

AKRF, Inc.

The RBA Group

Halcrow, a CH2M Hill Company

July 2014

Full Environmental Assessment Form
Part 1 – Project and Setting

Instructions for Completing Part 1

Part 1 is to be completed by the applicant or project sponsor. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonable available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D, & E, most items contain an initial question that must be answered either "Yes" or "No." If the answer to the initial question is "Yes," complete the sub-questions that follow. If the answer to the initial question is "No," proceed to the next question. Section F allows the project sponsor to verify that the information contained in Part 1 is accurate and complete.

A. Project and Sponsor Information

Name of Action or Project: **Roberto Clemente State Park Shoreline and Park Improvements**		
Project Location (describe, and attach a general location map): **Roberto Clemente State Park, Bronx County, NY, see Figure A-1**		
Brief Description of Proposed Action (include purpose or need): **The Proposed Project is the replacement of a portion of the existing sheet pile bulkhead within Roberto Clemente State Park, improvements to the esplanade adjacent to the bulkhead, creation of a tidal/intertidal habitat from uplands as part of the sheetpile bulkhead replacement, enhancements to the Lower Plaza area that will reduce hardscape and improve it as a public gathering space, repair of the south stair entrance, regrading and replanting with native vegetation over portions of the shoreline within the Park, refurbishment of the existing baseball field, construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the park from the existing riverfront trail. The purpose of the Proposed Project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline, allow the re-opening of the closed esplanade following bulkhead repairs, improve recreational facilities offered within the Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.**		
Name of Applicant/Sponsor: **New York State Office of Parks, Recreation and Historic Preservation**	Telephone: **212-866-2794** E-Mail: **David.Brito@parks.ny.gov**	
Address: **163 West 125th St, 17th Floor**		
City/PO: **New York**	State: **NY**	Zip Code: **10027**
Project Contact (if not same as sponsor; give name and title/role): **David Brito, Deputy Regional Director, NYC Region**	Telephone: **212-866-2794** E-Mail: **David.Brito@parks.ny.gov**	
Address: **163 West 125th St, 17th Floor**		
City/PO: **New York**	State: **NY**	Zip Code: **10027**
Property Owner (if not same as sponsor):	Telephone: E-Mail:	
Address:		
City/PO:	State:	Zip Code:

B. Government Approvals

B. Government Approvals Funding, or Sponsorship. ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)

Government Entity		If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Council, Town Board, or Village Board of Trustees	☐ Yes ☒ No		
b. City, Town or Village Planning Board or Commission	☐ Yes ☒ No		
c. City Council, Town or Village Zoning Board of Appeals	☐ Yes ☒ No		
d. Other local agencies	☒ Yes ☐ No	NYC Department of City Planning for LWRP review	December 2013 – consistency received April 23, 2014 (WRP # 14-004)
e. County agencies	☐ Yes ☒ No		
f. Regional agencies	☐ Yes ☒ No		
g. State agencies	☒ Yes ☐ No	NYSDEC – excavation and fill in navigable waters and tidal wetlands, activities within tidal adjacent area, 401 water quality certification, and State Pollutant Discharge Elimination System. NYSDOS – Coastal Consistency Concurrence. GOSR under HTFC/HCR – Smart Growth Impact Evaluation Form. The Governor's Office of Storm Recovery ("GOSR"), operating under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation, is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58.	December 2013 to NYSDEC, April 2014 to GOSR under HTFC/HCR, December 2013 to NYSDOS – General Concurrence for project (as described in the Joint Application and subsequent submissions of additional information) received from NYSDOS April 10, 2014 (file # F-2013-0984)
h. Federal agencies	☒ Yes ☐ No	USACE – Section 404 of CWA and Section 10 of Rivers and Harbors Act.	December 2013; permit received February 20, 2014 (Permit Number NAN-2013-01606-EOF)

i. Coastal Resources

i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? ☒ Yes ☐ No

If Yes,

ii. If the project site located in a community with an approved Local Waterfront Revitalization Program? ☒ Yes ☐ No

iii. Is the project site within a Coastal Erosion Hazard Area? ☐ Yes ☒ No

C. Planning and Zoning

C.1. Planning and zoning actions.

Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed? ☐ Yes ☒ No

- **If Yes**, complete sections C, F and G.
- **If No**, proceed to question C.2 and complete all remaining sections and questions in Part 1.

C.2. Adopted land use plans.

a. Do any municipally adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located? ☐ Yes ☒ No

If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located? ☐ Yes ☐ No

b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?) ☐ Yes ☒ No

If Yes, identify the plan(s):

_____

c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan? ☐ Yes ☒ No

If Yes, identify the plan(s):

_____

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance? ☒ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
Park NYS

b. Is the use permitted or allowed by a special or conditional use permit? ☐ Yes ☒ No

c. Is a zoning change requested as part of the proposed action? ☐ Yes ☒ No
If Yes,
i. What is the proposed new zoning for the site? _____

C.4. Existing community services.

a. In what school district is the project site located? **NYC schools**

b. What police or other public protection forces serve the project site?
NYPD

c. Which fire protection and emergency medical services serve the project site?
FDNY

d. What parks serve the project site?
The project site is within Roberto Clemente State Park.

D. Project Details

D.1. Proposed and Potential Development

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)?
recreational

b. a. Total acreage of the site of the proposed action? **15.96** acres
b. Total acreage to be physically disturbed? **15.96** acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? **24.72** acres

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☒ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? %_____ Units: _____

d. Is the proposed action a subdivision, or does it include a subdivision? ☐ Yes ☒ No
If Yes,
i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types)
_____
ii. Is a cluster/conservation layout proposed? ☐ Yes ☐ No
iii. Number of lots proposed? _____
iv. Minimum and maximum proposed lot sizes? Minimum _____ Maximum _____

e. Will proposed action be constructed in multiple phases? ☒ Yes ☐ No
i. If No, anticipated period of construction: _____ months
ii. If Yes:
- Total number of phases anticipated **3**
- Anticipated commencement date of phase 1 (including demolition) **August** month **2014** year
- Anticipated completion date of final phase **August** month **2019** year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases:

First phase – bulkhead/esplanade with tidal/intertidal habitat, Lower Plaza, and south stair entrance repair; second phase – northern shoreline improvements, ball fields, and repair/expansion of the maintenance building; third phase – soccer field and southern park pedestrian entrance improvements. Phases would have limited overlap.

f. Does the project include new residential uses? ☐ Yes ☒ No

If Yes, show number of units proposed.

	One Family	Two Family	Three Family	Multiple Family (four or more)
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☒ No

If Yes,

i. Total number of structures _____

ii. Dimensions (in feet) of largest proposed structure: _____ height; _____ width; and _____ length

iii. Approximate extent of building space to be heated or cooled: _____ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☒ No

If Yes,

i. Purpose of the impoundment: _____

ii. If a water impoundment, the principal source of the water: ☐ Ground Water ☐ Surface water streams ☐ Other specify:

_____

iii. If other than water, identify the type of impounded/contained liquids and their source.

_____

iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres

v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

_____

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? (Not including general site preparation, grading, or installation of utilities or foundations where all excavated materials will remain onsite) ☒ Yes ☐ No

If Yes:

i. What is the purpose of the excavation or dredging? **excavation of fill material behind existing bulkhead for creation of tidal/intertidal habitat, and replacement of sheet pile**

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): **678 cy tidal/intertidal habitat creation/20,278 cy for bulkhead replacement**
- Over what duration of time? **1 month for tidal/intertidal habitat, 2 months for excavation behind existing bulkhead**

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, managed or dispose of them.

Excavation of urban fill material from uplands. Prior to excavation, samples will be collected to assess the potential for contamination. Soils and fill materials requiring off-site disposal would be removed, handled and disposed of in accordance with applicable state and local regulatory requirements. A Materials Management Plan will be prepared for approval by NYSDEC. Recent soil sampling within the footprint of the tidal/intertidal habitat indicated no significant evidence of contamination (see Attachment B and Appendix D).

iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☒ No

If yes, describe.

_____

v. What is the total area to be dredged or excavated? **0.2 acres tidal/intertidal habitat + 0.06 acres excavation behind bulkhead/wall = 0.26** acres

vi. What is the maximum area to be worked at any one time? 0.2 acres

vii. What would be the maximum depth of excavation or dredging? approximately 16 feet

viii. Will the excavation require blasting? ☐ Yes ☒ No

ix. Summarize site reclamation goals and plan:

New sheet pile bulkhead to protect the shore and esplanade area, and a new tidal/intertidal habitat area to enhance the visitor experience and river viewing opportunities.

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☒ Yes ☐ No

If Yes,

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description):

Harlem River

ii. Describe how the proposed action would affect that water body or wetland, e.g., excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

Offshore replacement of bulkhead along 1,370 linear feet, inshore replacement of bulkhead and creation of tidal/intertidal habitat along 556 linear feet, repair 89 linear feet of eroding concrete gravity wall within eastern portion of cove with offshore sheet pile, replacement of 61 linear feet of steel sheet pile bulkhead and concrete steps in northeast portion of cove with sheet pile and fill, regrading and replanting with native species along approximately 850 linear feet of shoreline adjacent to existing baseball field. The Proposed Project would result in placement of fill within approximately 3,288 square feet of NYSDEC littoral zone wetland; however, this would be offset by a net gain of 6,657 square feet of aquatic habitat due to creation of the tidal/intertidal habitat discussed below under Question D.2.b.v.

iii. Will proposed action cause or result in disturbance to bottom sediments? ☒ Yes ☐ No

If Yes, describe: **Potential short-term construction-related disturbance of sediment from installation of sheet pile. Silt curtains will be deployed where appropriate.**

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation? ☐ Yes ☒ No

If Yes:

- [area] acres of aquatic vegetation proposed to be removed _____
- expected acreage of aquatic vegetation remaining after project completion _____
- purpose of proposed removal (e.g., beach clearing, invasive species control, boat access): _____
- proposed method of plant removal: _____
- if chemical/herbicide treatment will be used, specify product(s): _____

v. Describe any proposed reclamation/mitigation following disturbance:

The Proposed Project includes habitat enhancement through creation of approximately 9,000 square feet of tidal/intertidal habitat from upland portion of the Park adjacent to a portion of the bulkhead replacement area, resulting in a net increase of 6,657 square feet, some of which is expected to be littoral zone habitat. Replanting shoreline with native species.

c. Will the proposed action use, or create a new demand for water? ☐ Yes ☒ No

If Yes:

i. Total anticipated water usage/demand per day: _____ gallons/day

ii. Will the proposed action obtain water from an existing public water supply? ☐ Yes ☐ No

If Yes:

- Name of district or service area: _____
- Does the existing public water supply have capacity to serve the proposal? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing lines serve the project site? ☐ Yes ☐ No

iii. Will line extension within an existing district be necessary to supply the project? ☐ Yes ☐ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project:_____
- Source(s) of supply for the district: _____

iv. Is a new water supply district or service area proposed to be formed to serve the project site? ☐ Yes ☐ No

If Yes:

- Applicant/sponsor for new district: _____
- Date application submitted or anticipated: _____
- Proposed source(s) of supply for new district: _____

v. If a public water supply will not be used, describe plans to provide water supply for the project:

vi. If water supply will be from wells (public or private), maximum pumping capacity: _____ gallons/minute.

d. Will the proposed action generation liquid wastes? ☐ Yes ☒ No

If Yes:

i. Total anticipated liquid waste generation per day: _____ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each):

_____

iii. Will the proposed action use any existing public wastewater treatment facilities? ☐ Yes ☐ No

If Yes:

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No
- Do existing sewer lines serve the project site? ☐ Yes ☐ No
- Will line extension within an existing district be necessary to serve the project? ☐ Yes ☐ No
  If yes:
- Describe extensions or capacity expansions proposed to serve this project:

_____

_____

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site? ☐ Yes ☐ No

If Yes:

- Applicant/sponsor for new district:_____
- Date application submitted or anticipated:_____
- What is the receiving water for the wastewater discharge?_____

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):

_____

_____

vi.Describe any plans or designs to capture, recycle or reuse liquid waste

_____

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e., ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e., sheet flow) during construction or post construction? ☒ Yes ☐ No

If Yes:

i. How much impervious surface will the project create in relation to total size of project parcel?

138,074 Square feet or **3.1** acres (impervious surface)
94,966 Square feet or **15.96** acres (parcel size)

ii.Describe types of new point sources

None. Project will result in decrease in impervious surface compared to existing condition.
See response to Question E.1b

iii. Where will the stormwater runoff be directed (i.e., on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?

On-site surface water management structures including permeable pavers, rain gardens, bioswales, etc., along the esplanade. Runoff within the hardscape area adjacent to the tidal/intertidal habitat will be directed to a freshwater wetland prior to drainage to the tidal/intertidal habitat. The majority of the runoff within the Lower Plaza will be collected and piped to the tidal/intertidal habitat. Both artificial turf fields would be designed to provide post-construction stormwater quality and quantity controls, and to discharge to existing Park stormwater outfalls.

- If to surface waters, identify receiving water bodies or wetlands: **_ To the extent possible storm water will be dealt with on site, as discussed above. Waters not directed to on site facilities will be received by the Harlem River.**
- Will stormwater runoff flow to adjacent properties? ☐ Yes ☒ No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater? ☒ Yes ☐ No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations? ☐ Yes ☒ No

If Yes, identify:

i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)

_____

ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)

_____

iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)

_____

g. Will any air emission sources in D.2.f (above) require a NY State Air Registration, Air Facility Permit, or federal Clean Air Act Title IV or Title V permit? ☐ Yes ☒ No

If Yes,

i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year) ☐ Yes ☐ No

ii. In addition to emissions as calculated in the application, the project will generate:

- _____ Tons/year ([metric] short tons) of Carbon Dioxide (CO_2)
- _____ Tons/year ([metric] short tons) of Nitrous Oxide (N_2O)
- _____ Tons/year ([metric] short tons) of Perfluorocarbons (PFCs)
- _____ Tons/year ([metric] short tons) of Sulfur Hexafluoride (SF_6)
- _____ Tons/year ([metric] short tons) of Carbon Dioxide equivalent of [Hydroflorocarbons] Hydroflourocarbons ([HCFs] HFCs)
- _____ Tons/year ([metric] short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities? ☐ Yes ☒ No

If Yes,

i. Estimate methane generation in tons/year (metric): _____

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring):

_____

_____

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations? ☐ Yes ☒ No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust):

_____

_____

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services? ☐ Yes ☒ No

If Yes:

i. When is the peak traffic expected (check all that apply): ☐ Morning ☐ Evening ☐ Weekend
☐ Randomly between hours of _____ to _____.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: _____

iii. Parking spaces: Existing _____ Proposed _____ Net increase/decrease _____

iv. Does the proposed action include any shared use parking? ☐ Yes ☐ No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe:

_____

_____

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site? ☐ Yes ☐ No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles? ☐ Yes ☐ No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes? ☐ Yes ☐ No

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy? ☐ Yes ☒ No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action:_____

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):

_____

_____

l. Hours of operation. Answer all items which apply.

i. During Construction:

- Monday – Friday: ____**7AM – 6PM**___
- Saturday: _____none_____
- Sunday: _____none_____
- Holidays: _____none_____

ii. During Operations:

- Monday – Friday: ___**7AM – 11PM**_____
- Saturday: _____**7AM – 11PM** _____
- Sunday: _____**7AM – 11PM** _____
- Holidays: _____**7AM – 11PM**_____

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both? ☒ Yes ☐No

If Yes:

i. Provide details including sources, time of day and duration:

The adjacent Major Deegan highway and Metro-North rail line generate ambient noise. The Proposed Project will not increase the noise during operation. However, during construction, additional noise will be generated from heavy machinery used to remove and install sheet piles, and to excavate the tidal/intertidal habitat. See Section P, "Noise," in Attachment B for more detail.

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen? ☐ Yes ☒ No

Describe:

_____

_____

n. Will the proposed action have outdoor lighting? ☒ Yes ☐ No

If Yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:

New fixtures on 12' height pole will replace existing lighting at ± 60' spacing along esplanade and along paths servicing sport fields (no new sport field lighting). Lighting within the Lower Plaza destroyed by Hurricane Sandy will also be replaced.

ii. Will proposed action remove existing natural barrier that could act as light barrier or screen? ☐ Yes ☒ No

Describe:

_____

_____

o. Does the proposed action have the potential to produce odors for more than one hour per day? ☐ Yes ☒ No

If yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: _____

_____

_____

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products ([over 550 gallons] 185 gallons in above ground storage or any amount in underground storage)? ☐ Yes ☒ No

If Yes,

i. Product(s) to be stored _____

ii. Volume(s) _____ per unit time _____ (e.g., month, year)

iii. Generally describe proposed storage facilities

_____

_____

q. Will the proposed action (commercial, industrial and recreational project only) use pesticides (i.e., herbicides, insecticides) during construction or operation? ☐ Yes ☒ No

If Yes:

i. Describe proposed treatment(s):

_____

_____

ii. Will the proposed action use Integrated Pest Management Practices? ☐ Yes ☐ No

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)? ☐ Yes ☒ No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: _____ tons per _____ (unit of time)
- Operation: _____ tons per _____ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction:

_____

_____

- Operation:

_____

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction:

_____

_____

- Operation:

_____

_____

s. Does the proposed action include construction or modification of a solid waste management facility? ☐ Yes ☒ No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): _____

ii. Anticipated rate of disposal/processing:

- _____ Tons/month, if transfer or other non-combustion/thermal treatment, or
- _____ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: _____ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste? ☐ Yes ☒ No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility:

_____

_____

ii. Generally describe processes or activities involving hazardous waste or constituents:

iii. Specify amount to be handled or generated: ____ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents:

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility? ☐ Yes ☐ No

If Yes: provide name and location of facility:

If No: Describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility:

E. Site and Setting of Proposed Action

E.1 Land uses on and surrounding the project site

a. Existing land uses.

i. Check all land uses that occur on, adjoining and near the project site.

☒ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☐ Rural (non-farm)
☐ Forest ☐ Agriculture ☒ Aquatic ☒ Other (specify): **State Park**

ii. If mix of uses, generally describe:

Project site is within Roberto Clemente State Park, which is located in the Bronx along the Harlem River

b. Land uses and covertypes on the project site.

Land use or covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	**3.8**	**3.1**	**0.7**
• Forested			
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse, etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)	**0.07**	**0.22**	**+0.15**
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: **playing fields, lawn areas, shoreline/riprap slope**	**11.11**	**11.41**	**+0.3**

c. Is the project site presently used by members of the community for public recreation? ☒ Yes ☐ No

i. If yes: explain: **Project site is within Roberto Clemente State Park**

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site? ☒ Yes ☐ No

If Yes:

i. Identify Facilities:

Cedar Avenue Apartments, 1854 Cedar Avenue, Bronx, NY

e. Does the project site contain an existing dam? ☐ Yes ☒ No

If Yes:

i. Dimensions of the dam and impoundment:

- Dam height: _____ feet
- Dam length: _____ feet
- Surface area: _____ acres
- Volume impounded: _____ gallons OR acre-feet

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility? ☐ Yes ☒ No

If Yes:

i. Has the facility been formally closed?

- If yes, cite sources/documentation: _____

ii. Describe the location of the project site relative to the boundaries of the solid waste management facility:

_____

iii. Describe any development constraints due to the prior solid waste activities:

_____

_____

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store, and/or dispose of hazardous waste? ☐ Yes ☒ No

If Yes:

i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred:

_____

_____

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site? ☐ Yes ☒ No

If Yes:

i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply: ☐ Yes ☐ No

☐ Yes – Spills Incidents database Provide DEC ID number(s): _____

☐ Yes – Environmental Site Remediation database Provide DEC ID number(s): _____

☐ Neither database

ii. If site has been subject of RCRA corrective activities, describe control measures:

_____

_____

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database? ☐ Yes ☐ No

If yes, provide DEC ID number(s): _____

iv. If yes to (i), (ii) or (iii) above, describe current status of site(s):

_____

_____

v. Is the project site subject to an institutional control limiting property uses? ☐ Yes ☐ No

- If yes, DEC site ID number: _____
- Describe the type of institutional control (e.g., deed restriction or easement): _____
- Describe any use limitations: _____
- Describe any engineering controls: _____
- Will the project affect the institutional or engineering controls in place? ☐ Yes ☐ No
- Explain: _____

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? __**10-25**_____ feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☒ No

If Yes, what proportion of the site is comprised of bedrock outcroppings? _____%

c. Predominant soil type(s) present on project site: **urban fill material** **100**%

_____ ___%

_____ ___%

d. What is the average depth to the water table on the project site? Average: __**7-10**____ feet

e. Drainage status of project site soils:
☐ Well Drained: _____% of Site
☒ Moderately Well Drained: _**100**_% of Site
☐ Poorly Drained: _____% of Site

f. Approximate proportion of proposed action site with slopes: :
☒ 0-10%: _**100**_% of Site
☐ 10-15%: _____% of Site
☐ 15% or greater: _____% of Site

g. Are there any unique geologic features on the project site? ☐ Yes ☒ No

If Yes, describe:

_____

h. Surface water features:

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)? ☒ Yes ☐ No

ii. Do any wetlands or other waterbodies adjoin the project site? ☒ Yes ☐ No

If Yes to either i or ii, continue. If No, skip to E.2.1.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency? ☒ Yes ☐ No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information.

- Streams: Name ___**Harlem River**_____ Classification___ **Class I**_____
- Lakes or Ponds: Name ___**none**_____ Classification_____
- Wetlands: Name _**NYSDEC littoral zone tidal wetlands of the Harlem River**_ Approximate Size_____

  Wetland No. (if regulated by DEC) __**N/A**_____

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies? ☒ Yes ☐ No

If yes, name of impaired water body/bodies and basis for listing as impaired:

Harlem River – impaired for fish consumption because of sediments contaminated with PCBs and other toxics potentially including mercury, dioxins/furans, PAHs, pesticides, and other heavy metals

i. Is the project site in a designated Floodway? ☐ Yes ☒ No

j. Is the project site in the 100 year Floodplain? ☒ Yes ☐ No

k. Is the project site in the 500 year Floodplain? ☒ Yes ☐ No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer? ☐ Yes ☒ No

If Yes:

i. Name of aquifer: _____

[*ii.* Source of information: _____]

m. Identify the predominant wildlife species that occupy or use the project site:

gray squirrel

Norway rat | European starling | American robin

House sparrow | Canada goose | rock pigeon

n. Does the project site contain a designated significant natural community? ☐ Yes ☒ No

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation):

_____

ii. Source(s) of description or evaluation: _____

iii. Extent of community/habitat:

- Currently: _____ acres
- Following completion of project as proposed: _____ acres
- Gain or loss (indicate + or -): _____ acres

o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? ☐ Yes ☒ No

[If Yes:

i. Species and listing (endangered or threatened):

_____

_____

ii. Nature of use of site by the species (e.g., resident, season, transient):] _____

p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? ☐ Yes ☒ No

[If Yes:

i. Species and listing: _____

ii. Nature of use of site by the species (e.g., resident, seasonal, transient):

_____

_____]

q. Is the project site or adjoining area currently used for hunting, trapping, fishing, or shell fishing? ☐ Yes ☒ No

If yes, give a brief description of how the proposed action may affect that use:

_____

_____

E.3. Designated Public Resources On or Near the Project Site

a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Marks Law, Article 25-AA, Sections 303 and 304? ☐ Yes ☒ No

If Yes, provide county plus district name/number: _____

b. Are agricultural lands consisting of highly productive soils present? ☐ Yes ☒ No

i. If Yes: acreage(s) on project site? _____

ii. Source(s) of soil rating(s) _____

c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? ☐ Yes ☒ No

If Yes:

i. Nature of the natural landmark: ☐ Biological Community ☐ Geological Feature

ii. Provide brief description of landmark, including values behind designation and approximate size/extent:

_____

_____

d. Is the project site located in or does it adjoin a state-listed Critical Environmental Area? ☐ Yes ☒ No

If Yes:

i. CEA name: _____

ii. Basis for designation: _____

iii. Designating agency and date: _____

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on, or has been nominated by the NYS Board of Historic Preservation for inclusion on, the State or National Register of Historic Places? ☐ Yes ☒ No

If Yes:

i. Nature of historic/archaeological resource: ☐ Archaeological Site ☐ Historic Building or District

ii. Name: _____

iii. Brief description of attributes on which listing is based:

_____

_____

f. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory? ☐ Yes ☒ No

g. Have additional archaeological or historic site(s) or resourced been identified on the project site? ☐ Yes ☒ No

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. [Would] Is the project site [be visible from] within five miles of any officially designated and publicly accessible federal, scenic or state, or local aesthetic resource? ☐ Yes ☒ No

If Yes:

i. Identify resource: _____

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): _____

iii. Distance between project and resource: _____ miles.

i. Is the project site located within a designated river corridor under the Wild, Scenic and Recreational Rivers Program 6 NYCRR 666? ☐ Yes ☒ No

If Yes:

i. Identify the name of the river and its designation: _____

ii. Is the activity consistent with development restrictions contain in 6NYCrr Part 666? ☐ Yes ☐ No

F. Additional Information

Attach any additional information which may be needed to clarify your project.

If you have identified any adverse impacts which could be associated with your proposal, please describe those impacts plus any measures which you propose to avoid or minimize them.

G. Verification

I certify that the information provided is true to the best of my knowledge.

Applicant/Sponsor Name **David Brito** Date 7/15/14

Signature _____ Title **Deputy Regional Director, NYC Region, NYSOPRHP**

Full Environmental Assessment Form
Part 2 - Identification of Potential Project Impacts

Part 2 is to be completed by the lead agency. Part 2 is designed to help the lead agency inventory all potential resources that could be affected by a proposed project or action. We recognize that the lead agency's reviewer(s) will not necessarily be environmental professionals. So, the questions are designed to walk a reviewer through the assessment process by providing a series of questions that can be answered using the information found in Part 1. To further assist the lead agency in completing Part 2, the form identifies the most relevant questions in Part 1 that will provide the information needed to answer the Part 2 question. When Part 2 is completed, the lead agency will have identified the relevant environmental areas that may be impacted by the proposed activity.

If the lead agency is a state agency **and** the action is in any Coastal Area, complete the Coastal Assessment Form before proceeding with this assessment.

Tips for completing Part 2:

- Review all of the information provided in Part 1.
- Review any application, maps, supporting materials and the Full EAF Workbook.
- Answer each of the 18 questions in Part 2.
- If you answer "**Yes"** to a numbered question, please complete all the questions that follow in that section.
- If you answer "**No"** to a numbered question, move on to the next numbered question.
- Check appropriate column to indicate the anticipated size of the impact.
- Proposed projects that would exceed a numeric threshold contained in a question should result in the reviewing agency checking the box "Moderate to large impact may occur."
- The reviewer is not expected to be an expert in environmental analysis.
- If you are not sure or undecided about the size of an impact, it may help to review the sub-questions for the general question and consult the workbook.
- When answering a question consider all components of the proposed activity, that is, the "whole action".
- Consider the possibility for long-term and cumulative impacts as well as direct impacts.
- Answer the question in a reasonable manner considering the scale and context of the project.

1. Impact on Land
Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1) ☐ NO ☑ YES
If "Yes", answer questions a - j. If "No", move on to Section 2.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may involve construction on land where depth to water table is less than 3 feet.	E2d	☑	☐
b. The proposed action may involve construction on slopes of 15% or greater.	E2f	☑	☐
c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.	E2a	☑	☐
d. The proposed action may involve the excavation and removal of more than 1,000 tons of natural material.	D2a	☑	☐
e. The proposed action may involve construction that continues for more than one year or in multiple phases.	D1e	☑	☐
f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).	D2e, D2q	☑	☐
g. The proposed action is, or may be, located within a Coastal Erosion hazard area.	B1i	☑	☐
h. Other impacts: _____ _____		☐	☐

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g)

☑ NO ☐ YES

If "Yes", answer questions a - c. If "No", move on to Section 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Identify the specific land form(s) attached: _____	E2g	☐	☐
b. The proposed action may affect or is adjacent to a geological feature listed as a registered National Natural Landmark. Specific feature: _____	E3c	☐	☐
c. Other impacts: _____		☐	☐

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h)

☐ NO ☑ YES

If "Yes", answer questions a - l. If "No", move on to Section 4.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may create a new water body.	D2b, D1h	☑	☐
b. The proposed action may result in an increase or decrease of over 10% or more than a 10 acre increase or decrease in the surface area of any body of water.	D2b	☑	☐
c. The proposed action may involve dredging more than 100 cubic yards of material from a wetland or water body.	D2a	☑	☐
d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.	E2h	☑	☐
e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.	D2a, D2h	☑	☐
f. The proposed action may include construction of one or more intake(s) for withdrawal of water from surface water.	D2c	☑	☐
g. The proposed action may include construction of one or more outfall(s) for discharge of wastewater to surface water(s).	D2d	☑	☐
h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.	D2e	☑	☐
i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.	E2h	☑	☐
j. The proposed action may involve the application of pesticides or herbicides in or around any water body.	D2q, E2h	☑	☐
k. The proposed action may require the construction of new, or expansion of existing, wastewater treatment facilities.	D1a, D2d	☑	☐

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 5.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.	D2c	☐	☐
b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer. Cite Source: _____	D2c	☐	☐
c. The proposed action may allow or result in residential uses in areas without water and sewer services.	D1a, D2c	☐	☐
d. The proposed action may include or require wastewater discharged to groundwater.	D2d, E2l	☐	☐
e. The proposed action may result in the construction of water supply wells in locations where groundwater is, or is suspected to be, contaminated.	D2c, E1f, E1g, E1h	☐	☐
f. The proposed action may require the bulk storage of petroleum or chemical products over ground water or an aquifer.	D2p, E2l	☐	☐
g. The proposed action may involve the commercial application of pesticides within 100 feet of potable drinking water or irrigation sources.	E2h, D2q, E2l, D2c	☐	☐
h. Other impacts: _____ _____		☐	☐

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2) ☐ NO ☑ YES

If "Yes", answer questions a - g. If "No", move on to Section 6.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in development in a designated floodway.	E2i	☑	☐
b. The proposed action may result in development within a 100 year floodplain.	E2j	☑	☐
c. The proposed action may result in development within a 500 year floodplain.	E2k	☑	☐
d. The proposed action may result in, or require, modification of existing drainage patterns.	D2b, D2e	☑	☐
e. The proposed action may change flood water flows that contribute to flooding.	D2b, E2i, E2j, E2k	☑	☐
f. If there is a dam located on the site of the proposed action, is the dam in need of repair, or upgrade?	E1e	☑	☐

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

The proposed action may include a state regulated air emission source. (See Part 1. D.2.f., D,2,h, D.2.g) ☑ NO ☐ YES

If "Yes", answer questions a - f. If "No", move on to Section 7.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. If the proposed action requires federal or state air emission permits, the action may also emit one or more greenhouse gases at or above the following levels:			
i. More than 1000 tons/year of carbon dioxide (CO_2)	D2g	☐	☐
ii. More than 3.5 tons/year of nitrous oxide (N_2O)	D2g	☐	☐
iii. More than 1000 tons/year of carbon equivalent of perfluorocarbons (PFCs)	D2g	☐	☐
iv. More than .045 tons/year of sulfur hexafluoride (SF_6)	D2g	☐	☐
v. More than 1000 tons/year of carbon dioxide equivalent of hydrochloroflourocarbons (HFCs) emissions	D2g	☐	☐
vi. 43 tons/year or more of methane	D2h	☐	☐
b. The proposed action may generate 10 tons/year or more of any one designated hazardous air pollutant, or 25 tons/year or more of any combination of such hazardous air pollutants.	D2g	☐	☐
c. The proposed action may require a state air registration, or may produce an emissions rate of total contaminants that may exceed 5 lbs. per hour, or may include a heat source capable of producing more than 10 million BTU's per hour.	D2f, D2g	☐	☐
d. The proposed action may reach 50% of any of the thresholds in "a" through "c", above.	D2g	☐	☐
e. The proposed action may result in the combustion or thermal treatment of more than 1 ton of refuse per hour.	D2s	☐	☐
f. Other impacts: _____ _____		☐	☐

7. Impact on Plants and Animals

The proposed action may result in a loss of flora or fauna. (See Part 1. E.2. m.-q.) ☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 8.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2o	☑	☐
b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.	E2o	☑	☐
c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.	E2p	☑	☐
d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.	E2p	☑	☐

e. The proposed action may diminish the capacity of a registered National Natural Landmark to support the biological community it was established to protect.	E3c	☑	☐
f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community. Source: _____	E2n	☑	☐
g. The proposed action may substantially interfere with nesting/breeding, foraging, or over-wintering habitat for the predominant species that occupy or use the project site.	E2m	☑	☐
h. The proposed action requires the conversion of more than 10 acres of forest, grassland or any other regionally or locally important habitat. Habitat type & information source: _____ _____	E1b	☑	☐
i. Proposed action (commercial, industrial or recreational projects, only) involves use of herbicides or pesticides.	D2q	☑	☐
j. Other impacts: _____ _____		☐	☐

8. Impact on Agricultural Resources

The proposed action may impact agricultural resources. (See Part 1. E.3.a. and b.) ☑ NO ☐ YES

If "Yes", answer questions a - h. If "No", move on to Section 9.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may impact soil classified within soil group 1 through 4 of the NYS Land Classification System.	E2c, E3b	☐	☐
b. The proposed action may sever, cross or otherwise limit access to agricultural land (includes cropland, hayfields, pasture, vineyard, orchard, etc).	E1a, Elb	☐	☐
c. The proposed action may result in the excavation or compaction of the soil profile of active agricultural land.	E3b	☐	☐
d. The proposed action may irreversibly convert agricultural land to non-agricultural uses, either more than 2.5 acres if located in an Agricultural District, or more than 10 acres if not within an Agricultural District.	E1b, E3a	☐	☐
e. The proposed action may disrupt or prevent installation of an agricultural land management system.	El a, E1b	☐	☐
f. The proposed action may result, directly or indirectly, in increased development potential or pressure on farmland.	C2c, C3, D2c, D2d	☐	☐
g. The proposed project is not consistent with the adopted municipal Farmland Protection Plan.	C2c	☐	☐
h. Other impacts: _____		☐	☐

9. Impact on Aesthetic Resources

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource. (Part 1. E.1.a, E.1.b, E.3.h.)

☑ NO ☐ YES

If "Yes", answer questions a - g. If "No", go to Section 10.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.	E3h	☐	☐
b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.	E3h, C2b	☐	☐
c. The proposed action may be visible from publicly accessible vantage points: i. Seasonally (e.g., screened by summer foliage, but visible during other seasons) ii. Year round	E3h	 ☐ ☐	 ☐ ☐
d. The situation or activity in which viewers are engaged while viewing the proposed action is: i. Routine travel by residents, including travel to and from work ii. Recreational or tourism based activities	E3h E2q, E1c	 ☐ ☐	 ☐ ☐
e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.	E3h	☐	☐
f. There are similar projects visible within the following distance of the proposed project: 0-1/2 mile ½ -3 mile 3-5 mile 5+ mile	D1a, E1a, D1f, D1g	☐	☐
g. Other impacts: _____ _____		☐	☐

10. Impact on Historic and Archeological Resources

The proposed action may occur in or adjacent to a historic or archaeological resource. (Part 1. E.3.e, f. and g.)

☑ NO ☐ YES

If "Yes", answer questions a - e. If "No", go to Section 11.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on or has been nominated by the NYS Board of Historic Preservation for inclusion on the State or National Register of Historic Places.	E3e	☐	☐
b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.	E3f	☐	☐
c. The proposed action may occur wholly or partially within, or substantially contiguous to, an archaeological site not included on the NY SHPO inventory. Source: _____	E3g	☐	☐

d. Other impacts: _____ _____		☐	☐
e. If any of the above (a-d) are answered "Yes", continue with the following questions to help support conclusions in Part 3:			
i. The proposed action may result in the destruction or alteration of all or part of the site or property.	E3e, E3g, E3f	☐	☐
ii. The proposed action may result in the alteration of the property's setting or integrity.	E3e, E3f, E3g, E1a, E1b	☐	☐
iii. The proposed action may result in the introduction of visual elements which are out of character with the site or property, or may alter its setting.	E3e, E3f, E3g, E3h, C2, C3	☐	☐

11. Impact on Open Space and Recreation

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.
(See Part 1. C.2.c, E.1.c., E.2.q.)
If "Yes", answer questions a - e. If "No", go to Section 12.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.	D2e, E1b E2h, E2m, E2o, E2n, E2p	☐	☐
b. The proposed action may result in the loss of a current or future recreational resource.	C2a, E1c, C2c, E2q	☐	☐
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.	C2a, C2c E1c, E2q	☐	☐
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.	C2c, E1c	☐	☐
e. Other impacts: _____ _____		☐	☐

12. Impact on Critical Environmental Areas

The proposed action may be located within or adjacent to a critical environmental area (CEA). (See Part 1. E.3.d)
If "Yes", answer questions a - c. If "No", go to Section 13.

☑ NO ☐ YES

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may result in a reduction in the quantity of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
b. The proposed action may result in a reduction in the quality of the resource or characteristic which was the basis for designation of the CEA.	E3d	☐	☐
c. Other impacts: _____ _____		☐	☐

13. Impact on Transportation

The proposed action may result in a change to existing transportation systems. ☑ NO ☐ YES
(See Part 1. D.2.j)
If "Yes", answer questions a - g. If "No", go to Section 14.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. Projected traffic increase may exceed capacity of existing road network.	D2j	☐	☐
b. The proposed action may result in the construction of paved parking area for 500 or more vehicles.	D2j	☐	☐
c. The proposed action will degrade existing transit access.	D2j	☐	☐
d. The proposed action will degrade existing pedestrian or bicycle accommodations.	D2j	☐	☐
e. The proposed action may alter the present pattern of movement of people or goods.	D2j	☐	☐
f. Other impacts: _____		☐	☐

14. Impact on Energy

The proposed action may cause an increase in the use of any form of energy. ☑ NO ☐ YES
(See Part 1. D.2.k)
If "Yes", answer questions a - e. If "No", go to Section 15.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action will require a new, or an upgrade to an existing, substation.	D2k	☐	☐
b. The proposed action will require the creation or extension of an energy transmission or supply system to serve more than 50 single or two-family residences or to serve a commercial or industrial use.	D1f, D1q, D2k	☐	☐
c. The proposed action may utilize more than 2,500 MWhrs per year of electricity.	D2k	☐	☐
d. The proposed action may involve heating and/or cooling of more than 100,000 square feet of building area when completed.	D1g	☐	☐
e. Other Impacts: _____			

15. Impact on Noise, Odor, and Light

The proposed action may result in an increase in noise, odors, or outdoor lighting. ☐ NO ☑ YES
(See Part 1. D.2.m., n., and o.)
If "Yes", answer questions a - f. If "No", go to Section 16.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may produce sound above noise levels established by local regulation.	D2m	☑	☐
b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.	D2m, E1d	☑	☐
c. The proposed action may result in routine odors for more than one hour per day.	D2o	☑	☐

d. The proposed action may result in light shining onto adjoining properties.	D2n	☑	☐
e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.	D2n, E1a	☑	☐
f. Other impacts: _____ _____		☐	☐

16. Impact on Human Health

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants. (See Part 1.D.2.q., E.1. d. f. g. and h.) ☑ NO ☐ YES

If "Yes", answer questions a - m. If "No", go to Section 17.

	Relevant Part I Question(s)	No,or small impact may cccur	Moderate to large impact may occur
a. The proposed action is located within 1500 feet of a school, hospital, licensed day care center, group home, nursing home or retirement community.	E1d	☐	☐
b. The site of the proposed action is currently undergoing remediation.	E1g, E1h	☐	☐
c. There is a completed emergency spill remediation, or a completed environmental site remediation on, or adjacent to, the site of the proposed action.	E1g, E1h	☐	☐
d. The site of the action is subject to an institutional control limiting the use of the property (e.g., easement or deed restriction).	E1g, E1h	☐	☐
e. The proposed action may affect institutional control measures that were put in place to ensure that the site remains protective of the environment and human health.	E1g, E1h	☐	☐
f. The proposed action has adequate control measures in place to ensure that future generation, treatment and/or disposal of hazardous wastes will be protective of the environment and human health.	D2t	☐	☐
g. The proposed action involves construction or modification of a solid waste management facility.	D2q, E1f	☐	☐
h. The proposed action may result in the unearthing of solid or hazardous waste.	D2q, E1f	☐	☐
i. The proposed action may result in an increase in the rate of disposal, or processing, of solid waste.	D2r, D2s	☐	☐
j. The proposed action may result in excavation or other disturbance within 2000 feet of a site used for the disposal of solid or hazardous waste.	E1f, E1g E1h	☐	☐
k. The proposed action may result in the migration of explosive gases from a landfill site to adjacent off site structures.	E1f, E1g	☐	☐
l. The proposed action may result in the release of contaminated leachate from the project site.	D2s, E1f, D2r	☐	☐
m. Other impacts: _____ _____			

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES
(See Part 1. C.1, C.2. and C.3.)
If "Yes", answer questions a - h. If "No", go to Section 18.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action's land use components may be different from, or in sharp contrast to, current surrounding land use pattern(s).	C2, C3, D1a E1a, E1b	☐	☐
b. The proposed action will cause the permanent population of the city, town or village in which the project is located to grow by more than 5%.	C2	☐	☐
c. The proposed action is inconsistent with local land use plans or zoning regulations.	C2, C2, C3	☐	☐
d. The proposed action is inconsistent with any County plans, or other regional land use plans.	C2, C2	☐	☐
e. The proposed action may cause a change in the density of development that is not supported by existing infrastructure or is distant from existing infrastructure.	C3, D1c, D1d, D1f, D1d, Elb	☐	☐
f. The proposed action is located in an area characterized by low density development that will require new or expanded public infrastructure.	C4, D2c, D2d D2j	☐	☐
g. The proposed action may induce secondary development impacts (e.g., residential or commercial development not included in the proposed action)	C2a	☐	☐
h. Other: _____ _____		☐	☐

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES
(See Part 1. C.2, C.3, D.2, E.3)
If "Yes", answer questions a - g. If "No", proceed to Part 3.

	Relevant Part I Question(s)	No, or small impact may occur	Moderate to large impact may occur
a. The proposed action may replace or eliminate existing facilities, structures, or areas of historic importance to the community.	E3e, E3f, E3g	☐	☐
b. The proposed action may create a demand for additional community services (e.g. schools, police and fire)	C4	☐	☐
c. The proposed action may displace affordable or low-income housing in an area where there is a shortage of such housing.	C2, C3, D1f D1g, E1a	☐	☐
d. The proposed action may interfere with the use or enjoyment of officially recognized or designated public resources.	C2, E3	☐	☐
e. The proposed action is inconsistent with the predominant architectural scale and character.	C2, C3	☐	☐
f. Proposed action is inconsistent with the character of the existing natural landscape.	C2, C3 E1a, E1b E2g, E2h	☐	☐
g. Other impacts: _____ _____		☐	☐

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ATTACHMENT A
PROJECT DESCRIPTION

Attachment A: Project Description

The approximately 25-acre Roberto Clemente State Park ("Park") is located on the eastern shore of the Harlem River just north of West Tremont Avenue and west of the Major Deegan Expressway (Highway 87) in the Bronx, New York (see **Figure A-1**). The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) is proposing improvements within an approximately 16-acre portion of the park (project site) that would include replacement of the existing sheet pile bulkhead that is in critical condition and reconstruction of the adjacent esplanade, creation of a tidal/intertidal habitat[1] from uplands as part of the bulkhead replacement, enhancements to the Lower Plaza area that will reduce hardscape and improve it as a public gathering space, repair of the south stair entrance, regrading and replanting with native plant species on portions of the remaining shoreline that is not stabilized with sheet pile, refurbishment of the existing natural turf baseball field, construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and upland placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the Park from the existing riverfront trail (Proposed Project), as described in detail below. The purpose of the Proposed Project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline, allow the re-opening of the closed esplanade following bulkhead repairs, improve recreational facilities offered within the Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.

The Proposed Project includes the following improvements (see **Figures A-2 through A-11 and Exhibit 1**):

- Replacement of approximately 1,926 linear feet of the existing steel sheet pile bulkhead and cast in place reinforced concrete cap, and reconstruction of the existing esplanade adjacent to approximately 1,370 linear feet of bulkhead (see **Figures A-2 and A-4 and Exhibit 1 Sheets 3 through 6, 10, 13, 14, 15, 20 and 21**). The existing steel sheet pile is in critical condition due to severe corrosion of the unprotected steel and loss of fill behind the sheet pile; these conditions were exacerbated by Superstorm Sandy in October 2012. Two types of bulkhead replacement have been proposed—placement of new sheet pile bulkhead offshore of the existing bulkhead for approximately 1,370 linear feet in the southern portion of the bulkhead replacement (Type 1) (see **Figure A-2, and Exhibit 1, Sheets 3 through 5, 10, 14, and 15**), and placement of the new sheet pile bulkhead inshore of the existing bulkhead and creation of tidal/intertidal habitat, for approximately 556 linear feet at the northern end of the bulkhead replacement (Type 2) (see **Figures A-3 and A-4, and Exhibit 1 Sheets 5, 6, 13, 20, and 21**), as described below.

[1] In response to comments received during the public comment period, the tidal pool and intertidal habitat is now referred to as "tidal/intertidal habitat."

- Type 1, new bulkhead offshore of existing bulkhead (see **Figure A-2, and Exhibit 1, Sheets 3 through 5, 10, 14, and 15**)—A new anchored steel pile bulkhead would be constructed immediately offshore of the existing structure, installed within approximately 5 inches of the offshore face of the existing sheet piles. This will require the removal and replacement of the existing railing, concrete cap, and portions of the concrete slab along the esplanade along the entire length of the existing bulkhead (see **Exhibit 1 Sheet 14**) to reduce encroachment into the Harlem River and minimize the potential for environmental impacts. The new bulkhead would leave the existing tie-rods and concrete deadman in place but would require a new soil anchoring system (see **Exhibit 1, Sheet 15**). Following installation of the new sheet piles, the existing tie-rods would be exposed, and the upper portions of the existing sheet piles removed. The new size of the concrete cap would be minimized to ensure that no additional materials are placed within the waterway (see **Exhibit 1 Sheet 15**). Due to access and loading restrictions along the park shoreline, bulkhead construction activities would be performed with construction barges and barge-based cranes and construction equipment. The bulkhead replacement would include improvements to the areas of the esplanade immediately adjacent to the structure, including an approximately fifty percent reduction in impervious surfaces through the use of permeable pavers, planted areas, and rain gardens. It will also allow for improvements in the aesthetics and accessibility of the waterfront at the park. The reconstructed esplanade would include new ornamental railings to replace existing railings and chain link fencing, new paving, seating, lighting, and utilities. Easements would be obtained from the owners of the River Park Towers buildings to allow for esplanade improvements adjacent to these buildings. The areas to be covered by these easements total less than 5,000 square feet (see **Figure A-9**).

- Type 2, new sheet pile bulkhead inshore of the existing bulkhead— In the northern portion of the bulkhead replacement area (see **Figures A-2, A-3, and A-4**) the new sheet pile would be located about 1.5 feet inshore of the existing bulkhead. This bulkhead replacement type will include the creation of an approximately 9,000 square-foot (sf) tidal/intertidal habitat from uplands as part of the bulkhead design (see **Figures A-2 and A-3**), resulting in a net increase in aquatic habitat of 6,657 sf at the project site. The tidal/intertidal habitat would comprise three tidal/intertidal habitat areas adjacent to the bulkhead and four tidal/intertidal habitat areas adjacent to the eastern boundary of the tidal /intertidal habitat, along with vegetated intertidal habitat interconnected by stone-lined and earthen tidal channels. In addition, a freshwater wetland would be created at the landward side of the tidal/intertidal habitat complex. Tidal water from the Harlem River would enter the tidal/intertidal habitat complex through three crenels (i.e., cutouts) (see **Figure A-3**) in the replacement bulkhead, which would be screened and would extend from just below the MLW elevation to above the Mean Higher High Water (MHHW) elevation. Runoff from the Lower Plaza would be directed to the tidal/intertidal habitat complex, as discussed below under Improvement to the Lower Plaza area. The existing railing, asphalt paving, concrete cap, and tie-rod/deadman/wale system, and fill behind the existing sheet pile will be removed, and the existing sheet pile would be cut at the mudline (see **Exhibit 1, Sheets 5, 6, 20 and 21**). A new combi wall system will be installed and new backfill will be placed. The tidal/intertidal habitat will be lined with a layer of geotextile fabric and bedding stone, which will be topped with heavy riprap. The riprap will be designed to resist shoreline erosion during large storm events. The pile cap for the replacement sheet pile bulkhead at the tidal/intertidal habitat complex would be below the Mean High Water (MHW) elevation. Crenels

within the sheet pile structure and/or pile caps would be designed to allow water to drain out of the tidal/intertidal habitat but maintain a water depth of at least 1 foot in the open water areas. Wave attenuators will be placed within the tidal/intertidal habitat to decrease the wave energy entering the area. As currently envisioned, the tidal/intertidal habitat would comprise a mosaic of intertidal wetlands (high and low marsh), channels, and open water designed to provide a range of water depths throughout the tidal cycle and foster habitat for various species. The tidal/intertidal habitat would result in an increase in water volume of 18,313 cubic feet (cf, or 678 cubic yards (CY)), for a net increase in water volume of 129 CY within the project site.

- Repair approximately 89 linear feet of eroding concrete gravity wall within the eastern portion of the cove with offshore sheet pile (see **Exhibit 1, Sheets 5, 11, 16, and 17**). Repair would comprise installation of new sheet pile and concrete pile cap outboard of the existing abutment wall, and filling the void between the abutment wall and the new sheet pile with concrete.
- Replacement of approximately 61 linear feet of steel sheet pile bulkhead and concrete steps within the northeast portion of the cove with sheet pile and fill (see **Figure C-11, Photograph 12 and Exhibit 1, Sheets 5, 12, 18, and 19**). The existing step area was originally designed to allow patrons of the park to "step down" to the water's edge. However, the stairs have now been covered with timber planking and a guardrail added as a safety measure, because the marine growth on the steps posed a slip hazard. The replacement sheet pile would be driven about 1.5 feet inboard of the existing steel sheet pile that supports the waterward edge of the steps and outboard of the outermost step and would include new soil anchor system. Driving the sheet pile outboard of the steps is a structural necessity to accommodate the tidal/intertidal habitat to the north of the step area. The sheet pile cannot be driven inboard of the bottom step due to a large concrete obstruction below the stair area. The concrete steps, overhanging wood deck and support columns, existing tie-rods and concrete deadman system would be removed, and the backfill behind the steps excavated. The existing sheet pile would be cut at the mudline and new backfill placed behind the new sheet pile to the new paving grade.
- Improvement to the approximately 1.5-acre (65,340-square foot) Lower Plaza area to increase landscaping and pervious surfaces (see **Figures A-2, A-10, and A-11**). Improvements would result in an approximately 25% reduction in impervious area through the addition of permeable surfaces and planting areas. Stormwater would be directed from a portion of the Lower Plaza area to the tidal /intertidal habitat area via subsurface drainage (see **Figure A-11**). Other improvements include repair and expansion of the barbeque areas, replacement of the gazebo with a new stage structure to serve as a viewing platform for the tidal/intertidal habitat, removal of asphalt and replacement with new pavement surfaces and new planting areas, and maintenance of all healthy trees with a plan for replacement of unhealthy trees over time.
- Repair of the south stair entrance (see **Figure A-2**). The stairs are currently cracked and water is leaking into the room below, which contains electrical infrastructure for the pool. The stairs would be repaired or reconstructed in kind, and some of the electrical infrastructure may be raised further off the ground.
- Regrading and replanting with native plant species (see **Table A-1**) of approximately 850 linear feet of shoreline adjacent to the existing baseball field and proposed synthetic turf athletic field, as habitat enhancement and to improve the setting for park visitors (see

Figures A-4 and A-8). This portion of the shoreline has a non-structured stabilization comprising rock and other hard material and invasive plant species. As currently envisioned, all shoreline improvement activities would be conducted above the Mean High Water Spring (MHWS) elevation. However, there is the possibility that, upon further assessment of the shoreline stability that some shoreline improvement activities may be required below MHWS. This project would also include removal of invasive plant species and the existing chain link fence, minimal regrading, replanting with native plant species (see **Table A-1**) and installation of a new ornamental fence that would allow an unimpaired view of the Harlem River. A new retaining wall is proposed along an approximately 80-linear foot section of shoreline, located above MHW, adjacent to the proposed turf athletic field. At this location, invasive species would be removed, the shoreline would be regraded and replanted with native species, and a concrete wall with chain link fence would be installed. A new 10' wide asphalt path servicing the sports fields is proposed to replace the existing failing asphalt path. This path would generally follow the same alignment, extending along approximately 543 linear feet of shoreline and then continue landward to connect other proposed park improvements. OPRHP is exploring the feasibility of using pervious asphalt for the new path.

- Refurbishment of an existing natural turf baseball field (see **Figure A-4**). The existing field is in disrepair due to heavy use by various local organizations. Proposed improvements include new infield surfacing, natural turf outfield, fencing, site furnishings, drainage, and irrigation.

Table A-1
Preliminary Plant List
Roberto Clemente State Park – Bulkhead Repair

Scientific Name	Common Name
Trees	
Amelanchier x	June Berry/Service Berry
Betula nigra	River Birch
Cercis canadensis	Eastern Redbud
Cornus florida	Flowering Dogwood
Gleditsia triancanthos L.	Thornless Honeylocust
Quercus palustris	Pin Oak
Quercus phellos	Willow Oak
Tilia cordata	Littleleaf Linden
Shrubs and Grasses	
Azalea sp.	Azalea
Clethra alnifolia	Summersweet Clethra
Cornus sericea	Red Osier Dogwood
Eupatorium maculatum	Joe Pye Weed
Hydrangea quercifolia	Oakleaf Hydrangea
Ilex glabra	Inkberry
Itea virginica	Virginia Sweetspire
Juncus effusus	Common Rush
Myrica pensylvanica	Northern Bayberry
Physocarpus opulifolius var. *opulifolius*	Common Ninebark
Vaccinium angustifolium	Lowbush Blueberry
Viburnum acerifolium	Mapleleaf Viburnum
Viburnum dentatum	Arrowwood Viburnum
Perennials, Groundcovers, and Ferns	
Eurybia divaricatus	White Wood Aster
Symphyotrichum novae-angliae	New England Aster
Symphyotrichum novi-belgii	New York Aster
Arctostaphylos uva-ursi	Bearberry
Ceanothus americanus	New Jersey Tea
Coreopsis verticillata'	Whorled Tickseed
Dennstaedtia punctilobula	Hay-Scented Fern
Echinacea purpurea	Purple Coneflower
Geranium maculatum	Wild Germanium
Polystichum acrostichoides	Christmas Fern

- Construction of an approximately 63,000 square foot permeable synthetic turf athletic field (see **Figures A-4, A-5 and A-6**) within an existing grass covered recreational field with scattered shade trees. Installation of the synthetic turf field would require the removal of the existing grass and tree cover (approximately 24 trees), grading, and installation of the synthetic turf components (i.e. synthetic turf, pad, aggregate base and perforated under drain). Artificial turf fields are designed with very high surface infiltration rates to move precipitation from the turf surface to the subsurface gravel bed beneath which provides for some retention and the opportunity for some infiltration to the underlying soil when perforated/slotted drainage pipes are used (see http://www.fieldturf.com/media/W1siZiIsIjIwMTIvMDgvMDEvMjIvMjgvMTEvMjYvRWZmZWN0aXZlbmVzc19vZl9GaWVsZFR1cmZfQXJ0aWZpY2lhbF9UdXJmX2Zvcl9NYW5hZ2VtZW50X29mX1N0b3Jtd2F0ZXIucGRmIl1d/Effectiveness_of_FieldTurf_Artificial_Turf_for_Management_of_Stormwater.pdf and http://www.ct.gov/deep/lib/deep/artificialturf/dep_artificial_turf_report.pdf). New York City Department of Environmental Protection assigns synthetic turf fields the same weighted runoff coefficient (annual average runoff rate) as porous asphalt/concrete, permeable pavers, and green roof with 4 or more inches of growing media (http://www.nyc.gov/html/dep/pdf/green_infrastructure/stormwater_guidelines_2012_final.pdf). The synthetic turf field would be designed to provide post-construction stormwater quality and quantity controls, and would be tied into the existing stormwater drainage system that discharges to the Harlem River through an existing outfall. The synthetic turf field would comprise the following (see **Figures A-4, A-5 and A-6**):
  - a compacted subgrade separated from base aggregate by non-woven separation fabric;
  - a panel drain system consisting of 12”-diameter slotted polyethylene collector pipe and panel drain connection;
  - base aggregate;
  - an elastic layer shock pad;
  - primary and secondary backing material; and
  - synthetic turf.
- Construction of an approximately 18,000 square foot permeable synthetic turf baseball field (see **Figure A-4**) within an existing grass covered multi-use field with scattered shade trees. Installation of the synthetic turf field would require the removal of the existing grass and tree cover (approximately 18 trees), grading, and installation of the synthetic turf components (i.e. synthetic turf, pad, aggregate base and perforated under drain). This turf field is expected to be similar in design to the synthetic turf athletic field. It would be designed to provide post-construction stormwater quality and quantity controls, and to discharge to existing Park stormwater outfalls, if feasible.
- Repair of the existing 10,000 square foot maintenance building and repair to the adjacent plaza are being considered to support the activities of the adjacent athletic fields.
- Construction of an approximately 30,000 square foot natural turf soccer field within an existing grass covered area on the southern portion of the project site (see **Figures A-2 and A-7**). Construction of the soccer field would require the removal of approximately 23 trees.
- Habitat enhancement in the vicinity of the existing turf baseball field, proposed synthetic turf athletic field and baseball field, and natural turf soccer field. Approximately 24 trees,

including pin oaks and Norway maples would be removed for the construction of the synthetic turf athletic field, approximately 18 trees would be removed for the construction of the synthetic turf baseball field, approximately 23 trees would be removed for the construction of the natural turf soccer field, and 10 trees would be removed for the purposes of path re-alignment. These trees are common species. After construction of the athletic field, 102 trees comprising native species indigenous to this region of New York (see **Table A-1**) would be planted, replacing those that were removed, enhancing the habitats available on the project site and improving the setting for park visitors.

- Placement of topsoil and sand within a 17,200 square foot (0.40 acre) upland area on the southern portion of the project site (see **Figure A-7**), to create a growing medium for installation of native landscaping at the southern pedestrian entrance to the Park along the riverfront. A total of 956 CY of material would be placed, consisting of 8 inches of sand (approximately 425 CY, and 10 inches of topsoil (approximately 531 CY).

In total, the Proposed Project would disturb approximately 16 acres within Roberto Clemente State Park.

The proposed project would be constructed in three phases (bulkhead/esplanade with tidal/intertidal habitat, Lower Plaza, and south stair entrance; ballfields, northern shoreline, and repair/expansion of the maintenance building; and soccer field and placement of soil for landscaping in the southern portion of the project site) within an approximately 60-month construction period. While the three phases of the Proposed Project would be constructed over a period of 60 months, the impacts of this construction period would be phased and would impact different parts of the park at different times. The anticipated construction period for bulkhead/esplanade phase would be approximately 20 months. During this time construction would not be occurring simultaneously along the entire 2,076 linear foot bulkhead area; instead it would be phased with construction occurring in sections along the shoreline. The same approach to construction would be true of the northern shoreline phase. Finally the southern soccer field and soil placement phase would be a very short construction phase. Measures would be taken during all three phases to maintain access to as much of the park as possible and to shield the visual impacts of construction.

The following discretionary actions are required for the project:

- Permits from the New York State Department of Environmental Conservation, for excavation and fill in navigable waters and tidal wetlands, activities within the tidal wetland adjacent area, a 401 water quality certification, and a state pollutant discharge elimination system (SPDES) general permit for the discharge of stormwater from construction activities; and
- Permits from the United States Army Corps of Engineers under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. A USACE permit was granted for the project under Nationwide Permit 3 (Maintenance) on February 20, 2014 (Permit Application File Number NAN-2013-01606-EOF).

The project also will require a Coastal Consistency Concurrence from the New York State Department of State (NYSDOS); a letter of General Concurrence for the project as described in the Joint Application and subsequent submissions of additional information was received from NYSDOS on April 10, 2014 (file # F-2013-0984). Federal consistency requirements will also be met since the project requires a USACE permit. In addition, review will be coordinated with the

New York City Department of City Planning (DCP) for the Local Waterfront Revitalization Program (WRP), as required pursuant to New York Executive Law Article 42 section 915.9. DCP found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies in an email dated April 23, 2014 (WRP # 14-004, application # F-13-0984). The project also will require compliance with the New York State Smart Growth Public Infrastructure Policy Act through the Governor's Office of Storm Recovery (GOSR). GOSR, operating under the auspices of New York State Homes and Community Renewal's Housing Trust Fund Corporation, is the entity responsible for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58.

As the project site is located within New York State parkland, OPRHP is acting as lead agency for the project's environmental review under SEQRA. The Federal Emergency Management Agency (FEMA) is an interested Federal agency for this project.

B. ALTERNATIVES ANALYSIS

The conceptual design approach for the restoration of the bulkhead and stabilization of the shoreline at Roberto Clemente State Park included consideration of several alternatives for rehabilitation and replacement, as well as a No Action alternative.

BULKHEAD ALTERNATIVES

Five design alternatives considered for the rehabilitation of the existing bulkhead outside the cove area:

- installation of a new steel sheet pile bulkhead offshore of the existing bulkhead for the full length of the project site;
- installation of a new steel sheet pile bulkhead inshore of the existing bulkhead for the full length of the project site;
- installation of a new steel sheet pile bulkhead offshore of the existing bulkhead along the southern section of the project site and inshore of the existing bulkhead along the northern section of the project site;
- installation of a new steel sheet pile bulkhead offshore of the existing bulkhead along the southern section of the project site and inshore of the existing bulkhead along with creation of a new tidal/intertidal habitat area along the northern section of the project site; and
- installation of a new steel sheet pile bulkhead within the same footprint as the existing bulkhead along the southern section of the project site and inshore of the existing bulkhead along with creation of a new tidal/intertidal habitat area along the northern section of the project site.

These alternatives are described below and those found to be impracticable or not considered further, identified.

BULKHEAD REPLACEMENT OFFSHORE OF THE EXISTING BULKHEAD:

The existing structure is an anchored sheet pile bulkhead with steel tie-rods and a concrete deadman (see **Exhibit 1 Sheets 3 through 6, and Sheets 10 and 13**). Installation of a new steel sheet pile bulkhead offshore of the existing bulkhead would require excavation behind the existing bulkhead to expose each tie-rod, demolition of the existing bulkhead to an elevation below the tie-rod elevation, installation of a new steel sheet pile bulkhead offshore of the existing bulkhead, and extending the existing tie-rod to the new bulkhead wall. The new steel

sheet pile bulkhead would be installed approximately 5 inches offshore of the existing bulkhead with the resulting void to be filled with crushed stone. This alternative minimizes the impact on the upland park area through reduced upland demolition and excavation work and also represents the most cost efficient alternative. This alternative, however, also represents the greatest environmental impact with the new sheet pile bulkhead placed offshore of the existing resulting in a net loss of approximately 3,150 square feet (0.07 acres) of benthic habitat. For this reason this alternative was not given further consideration.

BULKHEAD REPLACEMENT INSHORE OF THE EXISTING BULKHEAD:

Installation of a new bulkhead inshore or in place of the existing structure would require extensive excavation inshore of the bulkhead to relieve lateral pressure from the structure while also representing an even larger upland impact due to loss of existing uplands and park elements, than if the bulkhead were to be installed offshore of the existing wall. Once the bulkhead is unloaded and the tie-rods can be removed, the existing bulkhead can be demolished. With a varying exposed height from 7 feet to 20 feet, excavation inshore of the bulkhead would need to extend approximately 25 feet inshore of the bulkhead. The potential area of upland excavation, however, currently contains existing structures, such as buildings, walls, and other permanent features along the esplanade which would interfere with this alternative. Further, the construction sequencing to unload the existing wall to allow the tie-rods to be disconnected is complex, leaving the potential for collapse of the existing bulkhead during the construction process. The consequences of an unanticipated collapse could include uncontrolled fill loss into the waterway, upland fill material that will be exposed to the river's tides and currents, and the potential for construction debris to enter the waterway. For these reasons this alternative was not found to be practicable.

PARTIAL INSHORE BULKHEAD REPLACEMENT AND PARTIAL OFFSHORE BULKHEAD REPLACEMENT:

Having considered the previous two alternatives, a third alternative was evaluated that comprised the best features of the offshore and inshore replacement bulkhead alternatives, while eliminating the cost and environmentally prohibitive elements of these two alternatives. The greatest challenge with installing the sheet pile wall inshore of the existing bulkhead is the multiple interferences that exist between the size of the required excavation and the existing permanent features. The northern 625 feet of the bulkhead replacement area (see **Figures A-2 and A-4**), however, are without these permanent features that would prohibit excavation inland of the existing bulkhead. Within this segment of the replacement bulkhead, the new steel sheet pile bulkhead would be located a minimum of 5 ft inshore of the existing bulkhead wall resulting in the restoration of approximately 2,553 square feet of benthic habitat. Installation of the new sheet pile bulkhead along the offshore face of the existing bulkhead remains the only feasible alternative for the southern 1,375 ft of the proposed bulkhead replacement area (see **Figure A-2**) and although this would result in a loss of habitat in this area (approximately 2,186 square feet), the loss would be minimal and would be offset on a little more than one to one basis by the approximately 2,553 square feet of benthic habitat restored by the inshore portion of the bulkhead replacement. This alternative would result in a net increase of 366 square feet of restored benthic habitat. While this alternative would provide some offset for the loss of bottom habitat due to the outboard placement of habitat, the offset would be less than in the tidal/intertidal habitat alternative. This alternative would also adversely affect Park programming because it would result in a larger reduction in useable park space, would not provide the

opportunity for environmental education, and would not provide the opportunity for patrons to get down to the river.

PARTIAL OFFSHORE BULKHEAD REPLACEMENT AND PARTIAL INSHORE BULKHEAD REPLACEMENT WITH CREATION OF TIDAL/INTERTIDAL HABITAT:

This alternative would involve installation of a new steel sheet pile bulkhead outboard of the existing bulkhead along the southern section of the project site (approximately 1,370 linear feet), separated from the existing bulkhead by just 5 inches, and would also include installation of a new steel sheet pile bulkhead inshore of the existing bulkhead along with creation of a tidal/intertidal habitat along the northern section of the bulkhead replacement (collectively, approximately 556 linear feet). Approximately 3,288 sf (0.07 acres) of bottom habitat would be lost due to the outboard placement of the sheet pile. However, this would be offset by a ratio of 3 to 1 by the 945 sf of bottom habitat restored through the inboard replacement of sheet pile, and creation of an approximately 9,000 sf tidal/intertidal habitat area from upland portions of Roberto Clemente State Park in the northern portion of the sheet pile bulkhead. Because this alternative would provide the greatest offset for aquatic habitat lost, minimize loss of Park land, and would be compatible with current and future Park programing plans to provide greater opportunity for interaction by Park visitors with the natural resources of the Harlem River and promote environmental education, it was selected as the preferred alternative.

PARTIAL REPLACEMENT OF BULKHEAD WITHIN SAME FOOTPRINT AND PARTIAL INSHORE BULKHEAD REPLACEMENT WITH CREATION OF TIDAL/INTERTIDAL HABITAT:

This alternative would be the same as the preferred alternative but instead of replacing the sheet pile outboard of the existing bulkhead, would replace it within the existing sheet pile footprint. However, the existing steel sheet pile within this section of the shoreline is heavily corroded and contains large holes up to four feet in diameter. If the contractor was to “pull” on this corroded steel sheet pile to remove it from the shoreline, the sections would likely snap, posing a risk of fill from behind the sheet pile falling into the Harlem River. Extruding the sheet pile from the shoreline under this condition would be very time consuming and costly. The steel sheet pile can be burned at the mudline; however, once the steel sheet pile is burned the section of the steel sheet pile which is under the mud will remain in place. The new steel sheet pile wall would not be able to be driven with the existing sections of steel sheet pile under the mud. For these reasons this alternative was not found to be practicable.

SHORELINE STABILIZATION ALTERNATIVES

A discounted concept for stabilization of the shoreline north of the bulkhead (see **Figure A-8**) included installation of an engineered riprap revetment along the shoreline. Following review of the condition of the existing shoreline and consideration of environmental factors, including current, wave activity, and boat traffic on the river, it has been determined that the existing shoreline stabilization is generally good with isolated areas requiring regrading to reduce slope and stabilize the existing earth embankment. Therefore the placement of additional riprap stone within the waterway along the slope was determined to be unnecessary. To stabilize localized areas of the embankment, regrading of the soil will adequately address any existing issues.

NO ACTION ALTERNATIVE

In the No Action alternative, none of the proposed improvements to Roberto Clemente State Park would be implemented. Resiliency of the Park to future storm events would not be

improved. The existing steel sheet pile bulkhead—which is in critical condition—concrete cap, and adjacent bulkhead would not be replaced. It is assumed that the corrosion of the steel elements of the bulkhead would continue in this scenario, leading to eventual failure. The tidal/intertidal habitat would not be created, and improvements to the Lower Plaza area would not occur. The non-structured portion of the shoreline would not be regraded or replanted with native plant species, and invasive plant species and existing chain link fencing would not be removed. The south stair entrance would not be repaired. No tidal wetlands or aquatic habitat would be restored; the athletic field, new baseball field, and soccer field would not be constructed; and the existing baseball field would not be rehabilitated. The existing baseball field, which is in disrepair due to heavy use, would be expected to continue in that condition. This alternative would not address the purpose and need for the Proposed Project.

5.7.14

Project Site

Roberto Clemente State Park Boundary

Bridge Park

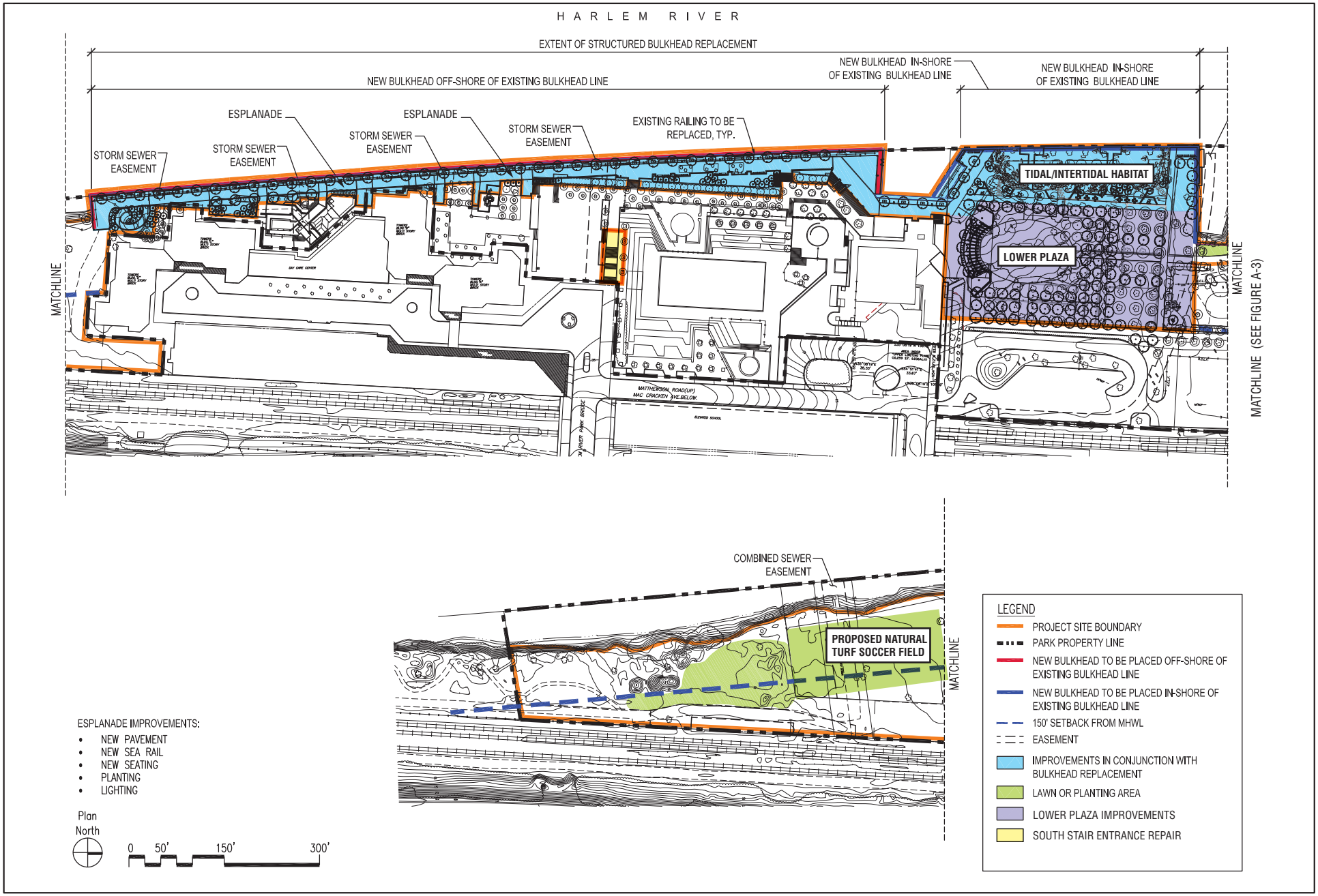
0 2000 FEET

SCALE

Approximate coordinates of Project Site:
40°51'16"N 73°55'15"W

USGS Topographic Map
Central Park Quad
Figure A-1

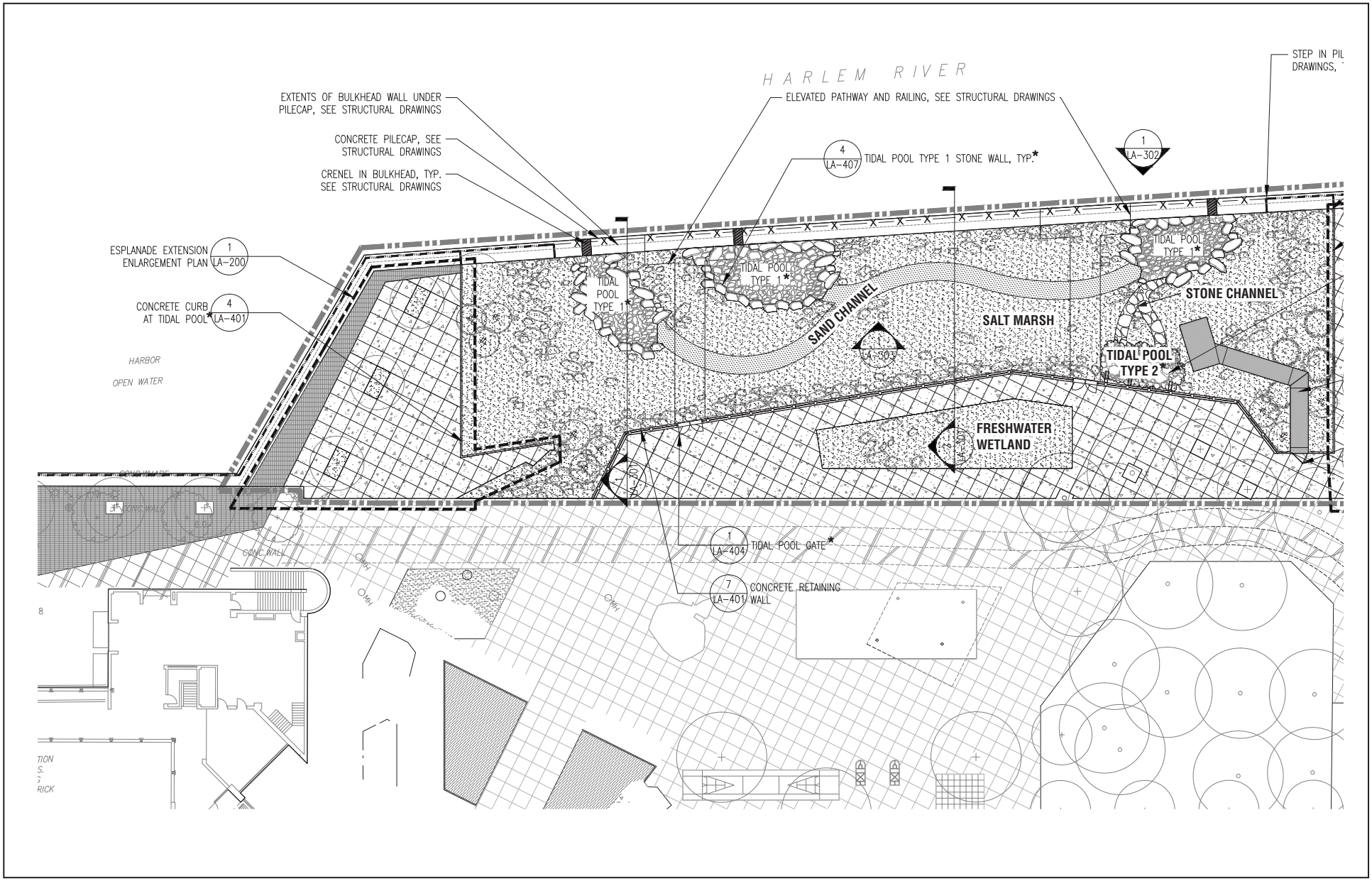
7.7.14



Site Plan - Southerly Portion

Figure A-2

7.7.14

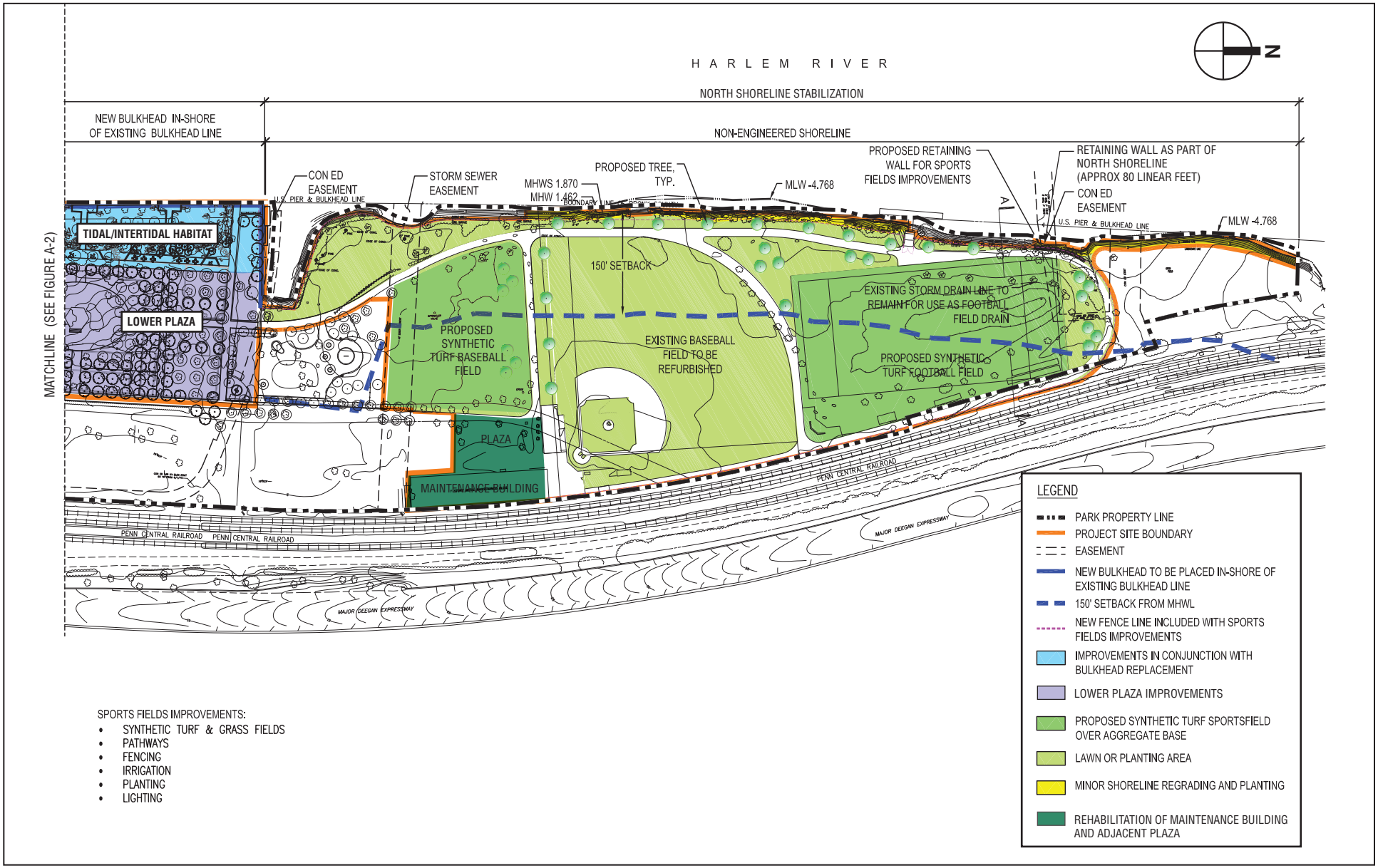


*In response to comments received during the public comment period, the tidal pool and intertidal habitat is now referred to as "tidal/intertidal habitat."

Proposed Tidal/Intertidal Habitat Complex

Figure A-3

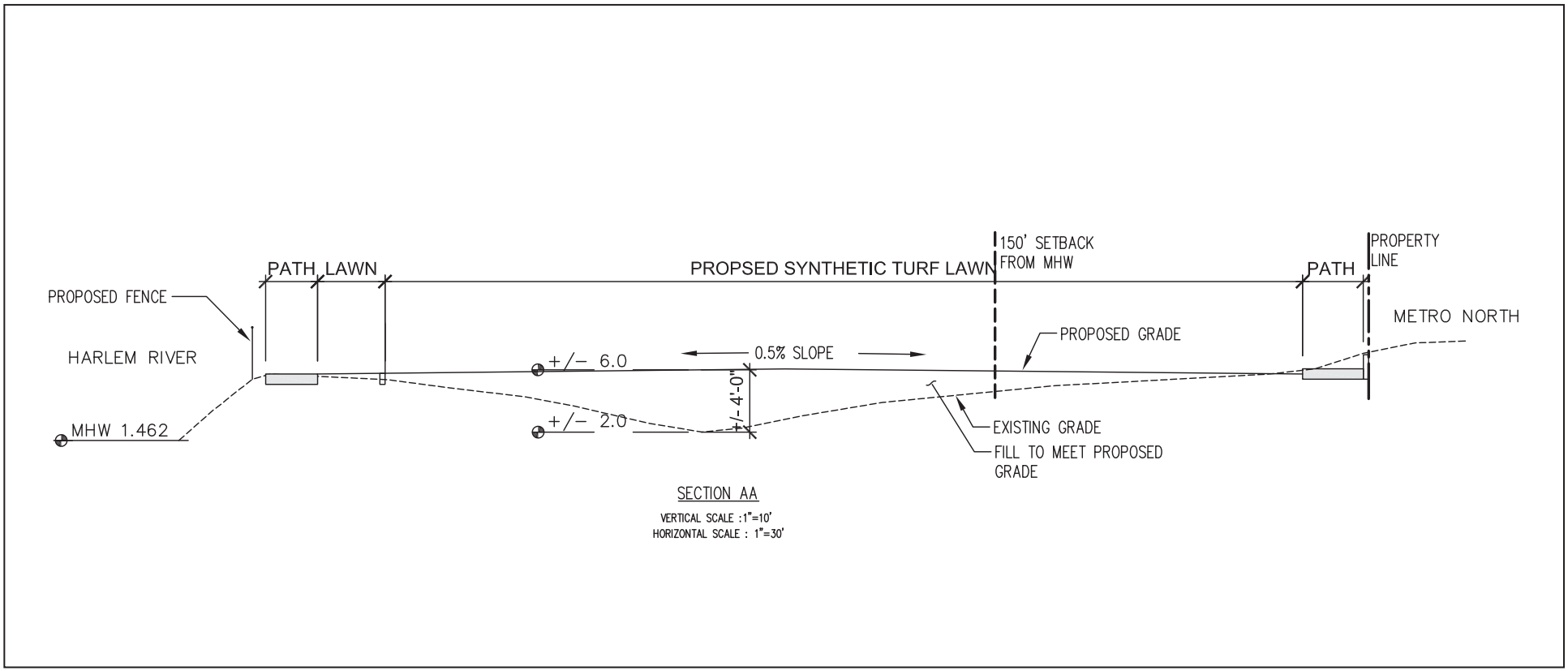
7.7.14



Site Plan - Northerly Portion

Figure A-4

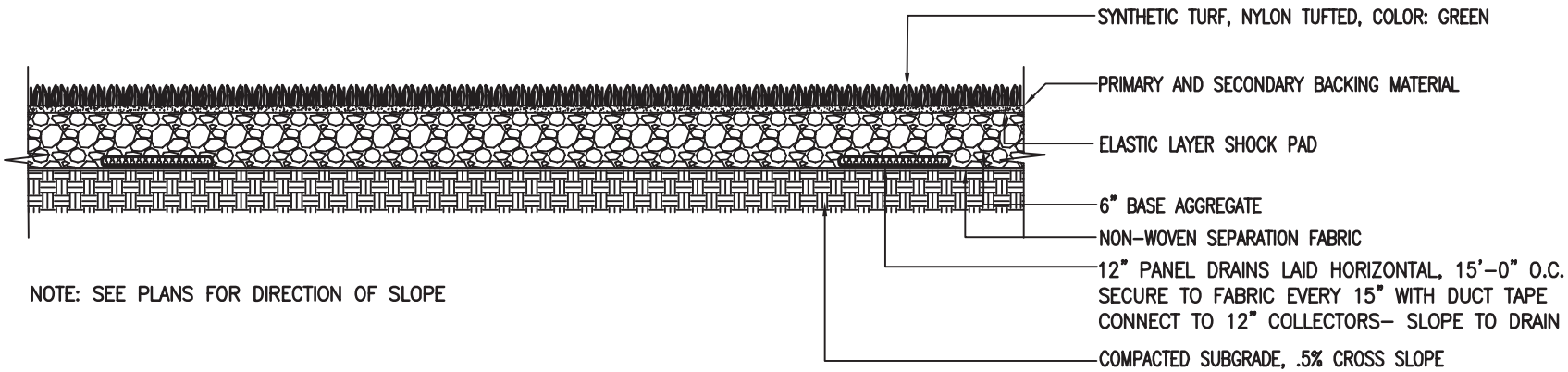
11.4.13



Section A-A

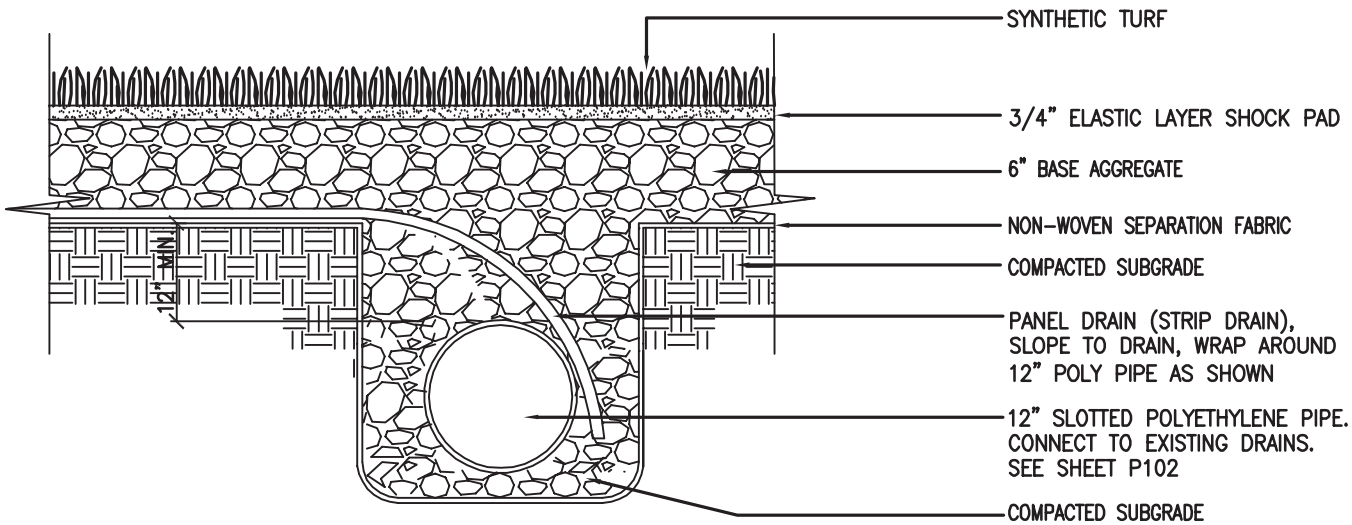
Figure A-5

11.4.13



SECTION THRU FIELD

SCALE 1"=1'



12" SLOTTED POLYETHYLENE COLLECTOR PIPE & PANEL DRAIN CONNECTION

NOT TO SCALE

Drain Connection Detail

Figure A-6

11.4.13

Soil Placement Area

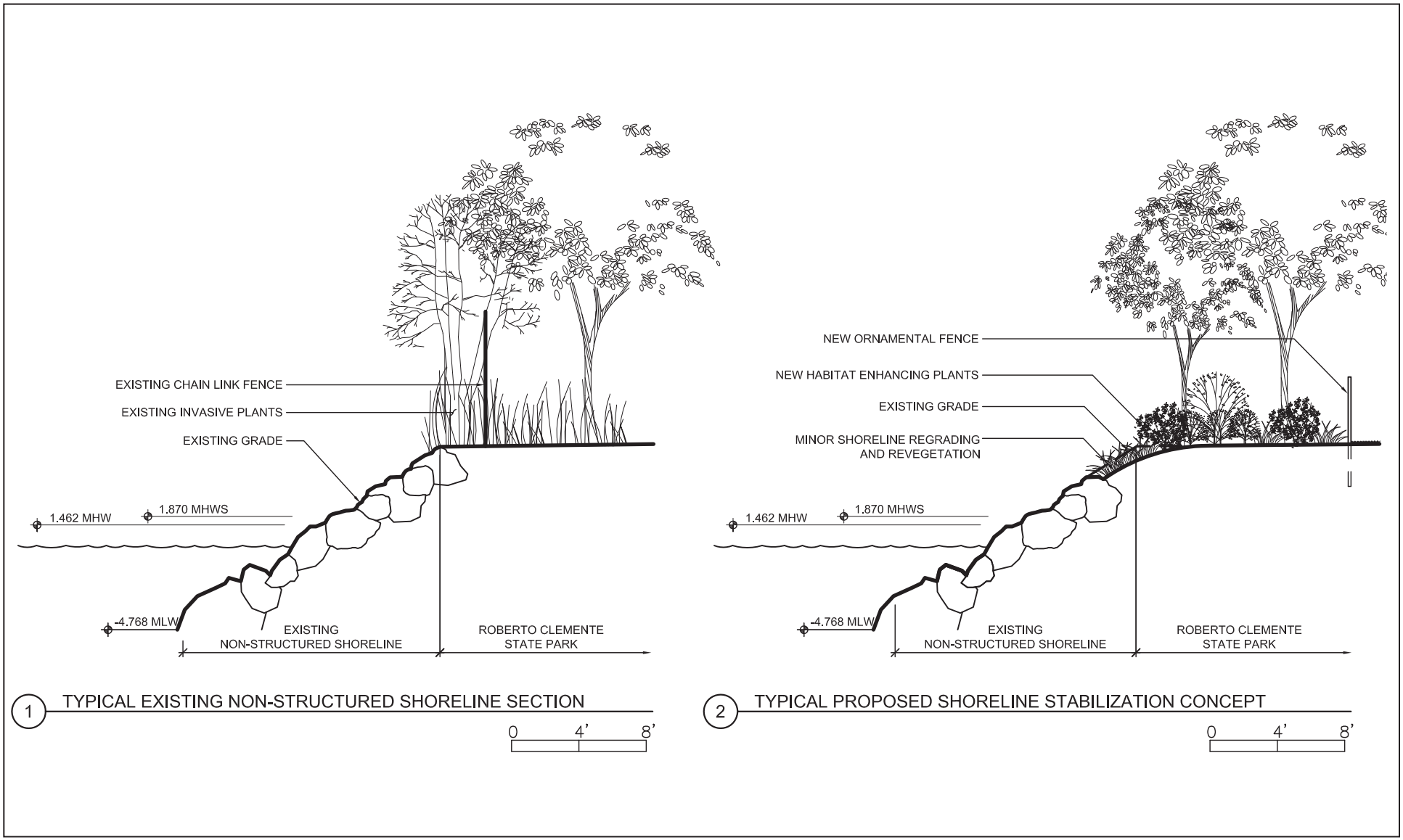
Proposed Soccer Field

SCALE 0 200 FEET

Soil Placement Area and Proposed Soccer Field

Figure A-7

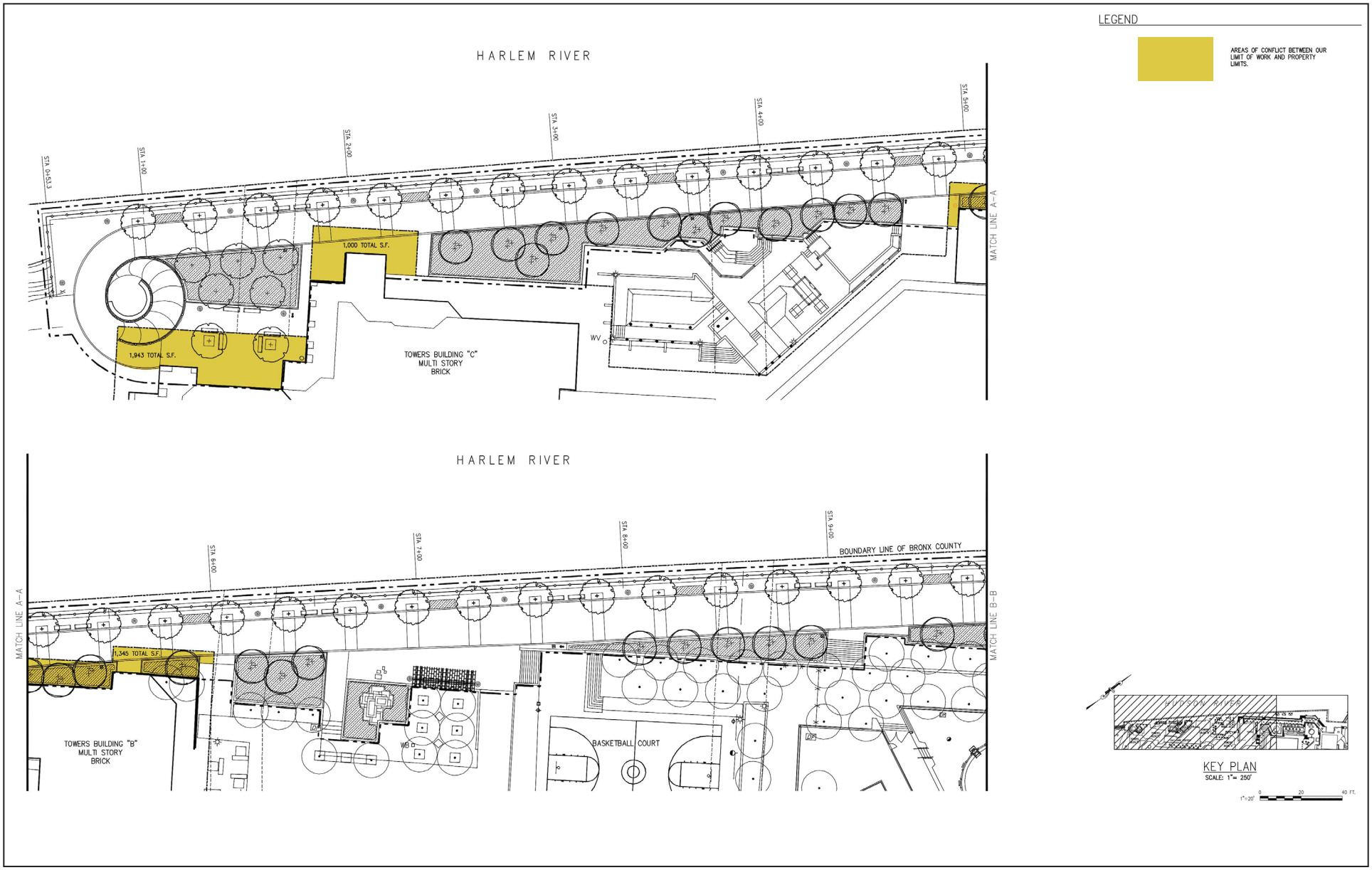
9.6.13



Existing and Proposed Shoreline Stabilization Sections

Figure A-8

7.7.14



Areas Needing Easement Adjacent to
River Park Towers Buildings

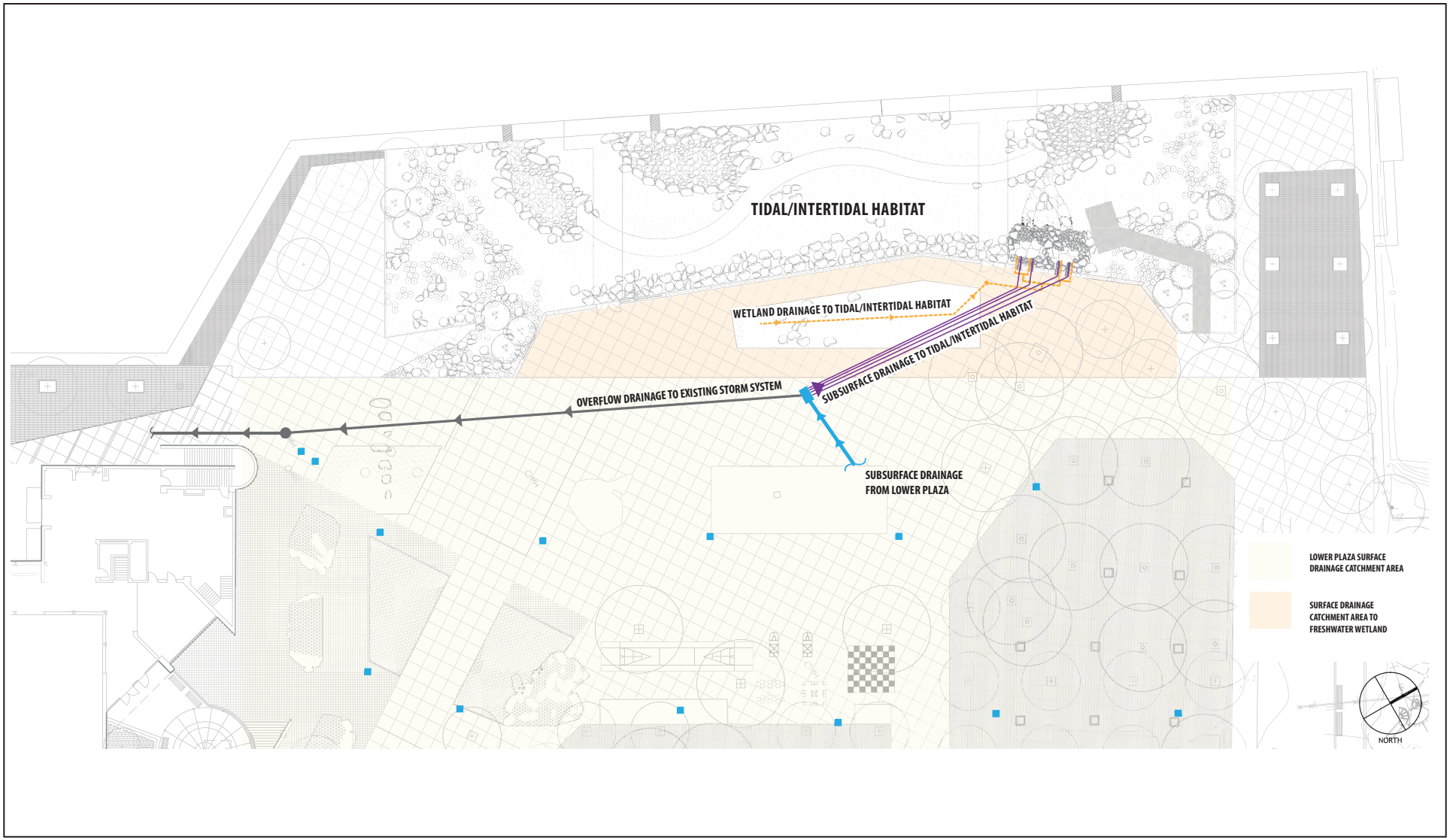
Figure A-9

7.7.14

Lower Plaza Stormwater Drainage

Figure A-10

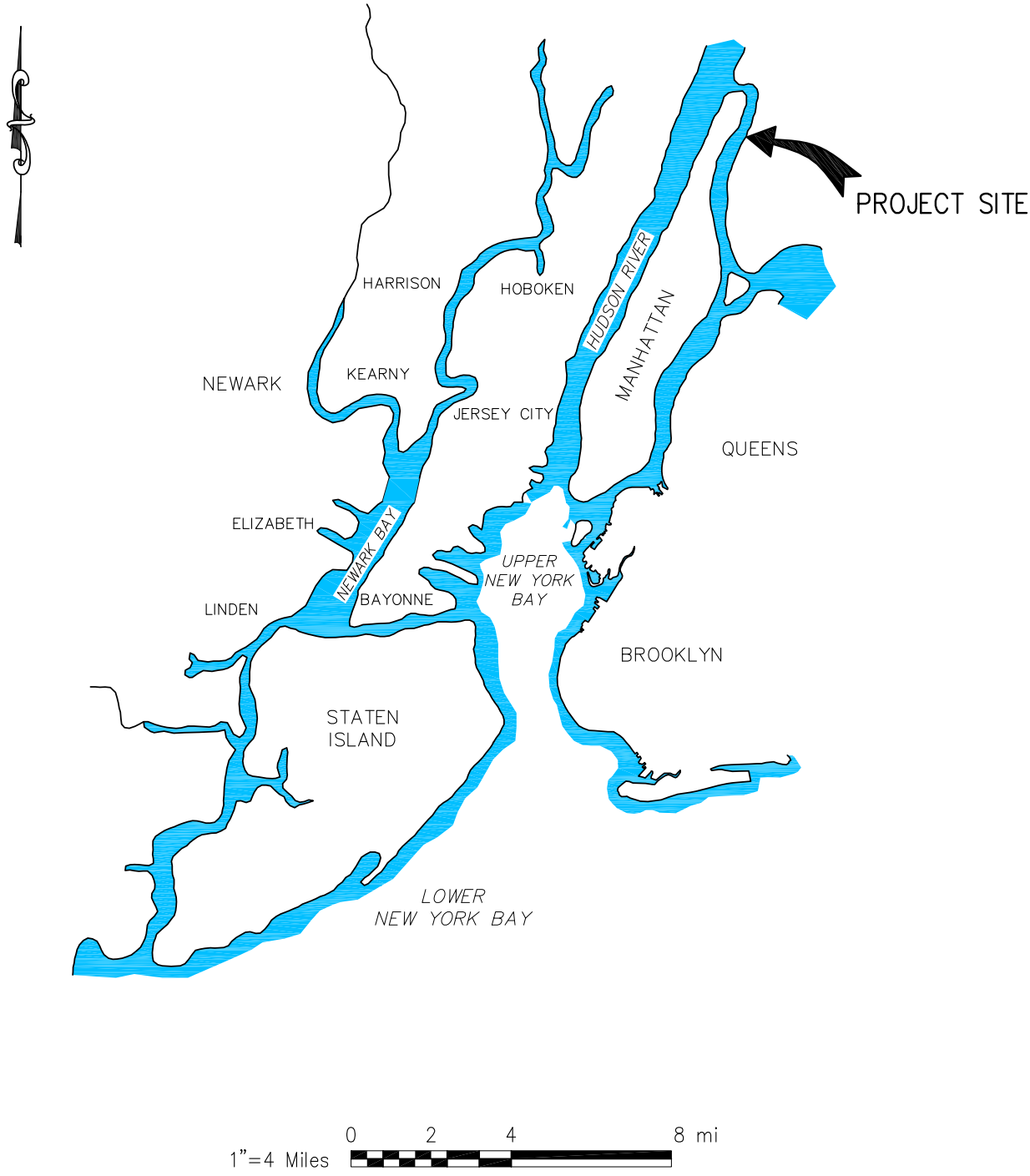
7.7.14



Lower Plaza and Intertidal Zone Section View

Figure A-11

EXHIBIT 1
BULKHEAD REPAIR/REPLACEMENT DRAWINGS



PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY VICINITY MAP NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 1 OF 21 DATE: DEC 18, 2013

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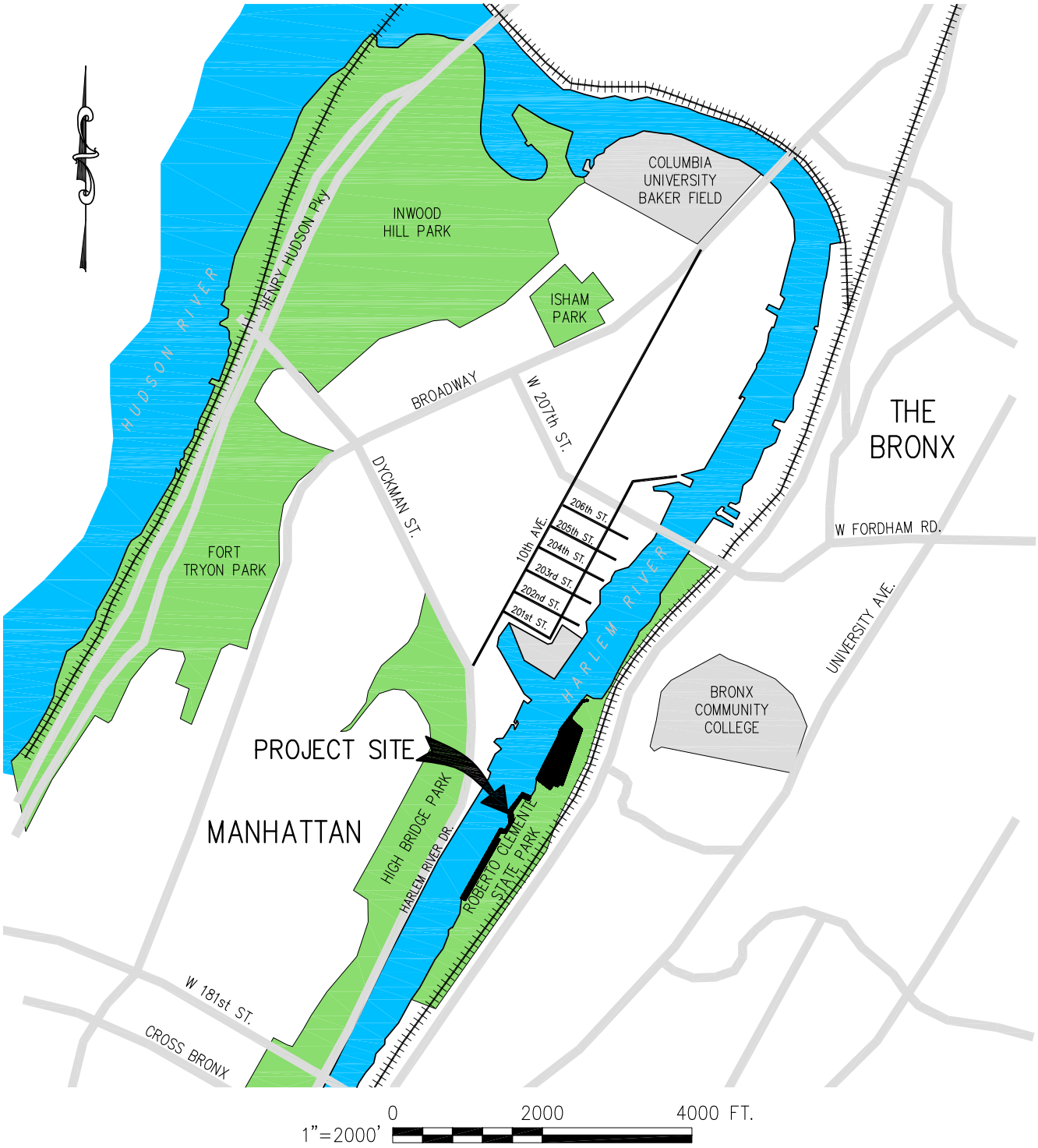

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY LOCATION MAP NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 2 OF 21 DATE: DEC 18, 2013

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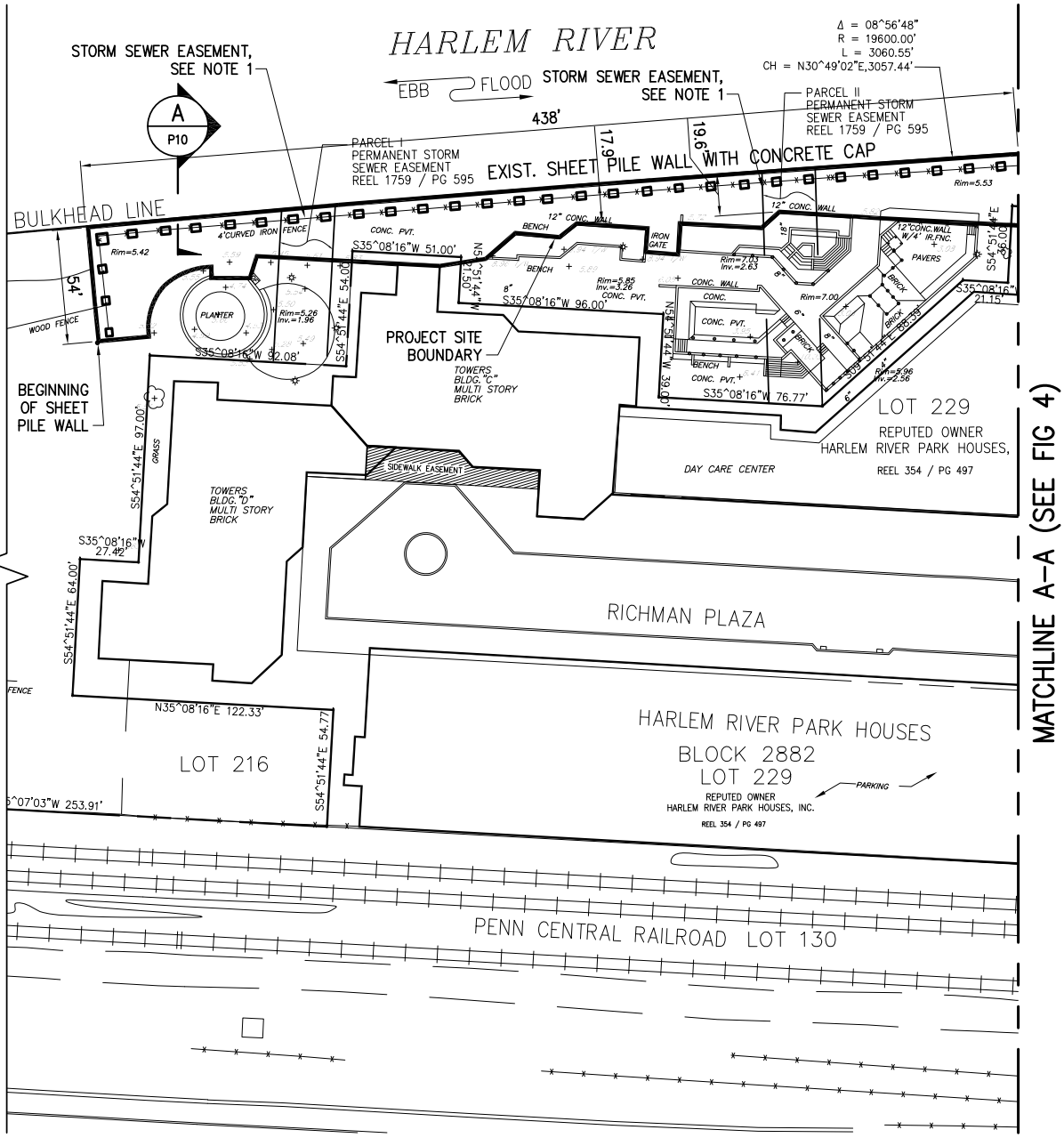

BULKHEAD REPLACEMENT PLAN

SCALE: 1"=80'

NOTES:

1. EXISTING STORM SEWERS ARE INACTIVE AND HAD BEEN PLUGGED AT OUTBOARD FACE OF EXISTING BULKHEAD WALL.

1"=80' 0 80 160 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY	PROPOSED: REPAIR AND UPGRADE
PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	SITE SURVEY PLAN (1 OF 7)	CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP
	NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	SHEET 3 OF 21 DATE: DEC 18, 2013

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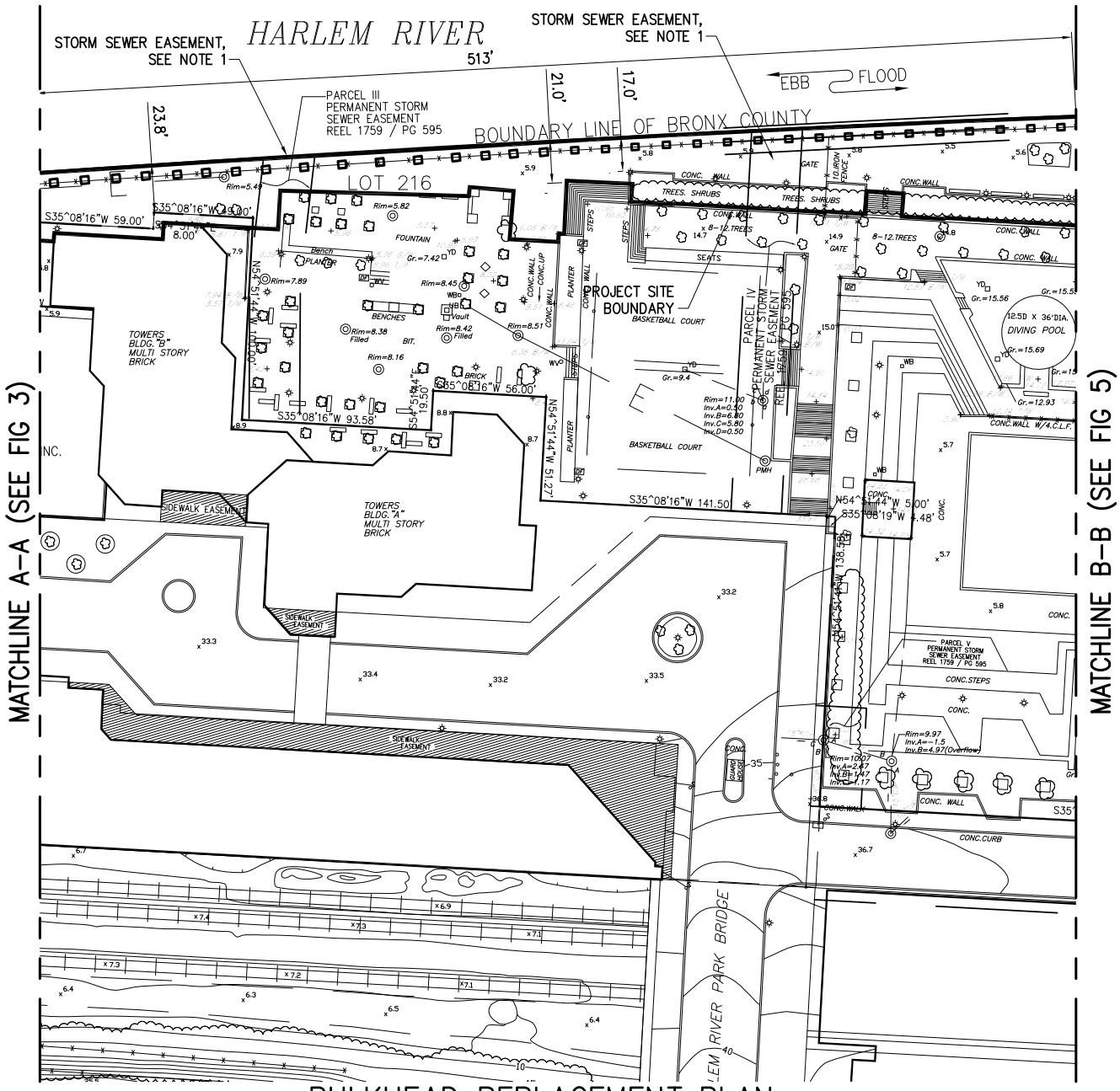

BULKHEAD REPLACEMENT PLAN

SCALE 1"=80'

NOTES:

1. EXISTING STORM SEWERS ARE INACTIVE AND HAD BEEN PLUGGED AT OUTBOARD FACE OF EXISTING BULKHEAD WALL.

1"=80' 0 80 160 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY	PROPOSED: REPAIR AND UPGRADE
PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	SITE SURVEY PLAN (2 OF 7)	CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP
	NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	SHEET 4 OF 21 DATE: DEC 18, 2013

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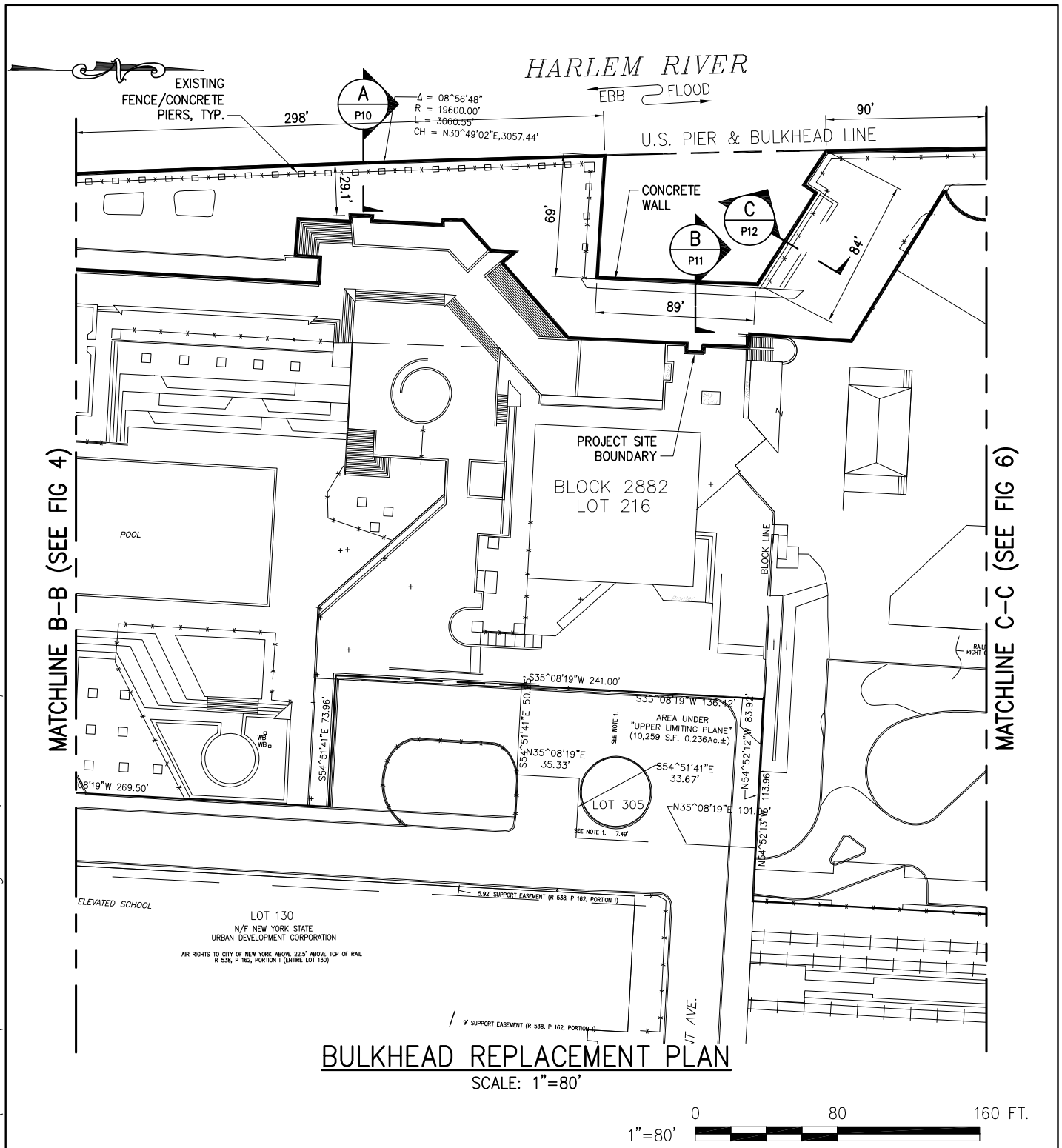

BULKHEAD REPLACEMENT PLAN

SCALE: 1"=80'

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY SITE SURVEY PLAN (3 OF 7) NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 5 OF 21 DATE: DEC 18, 2013

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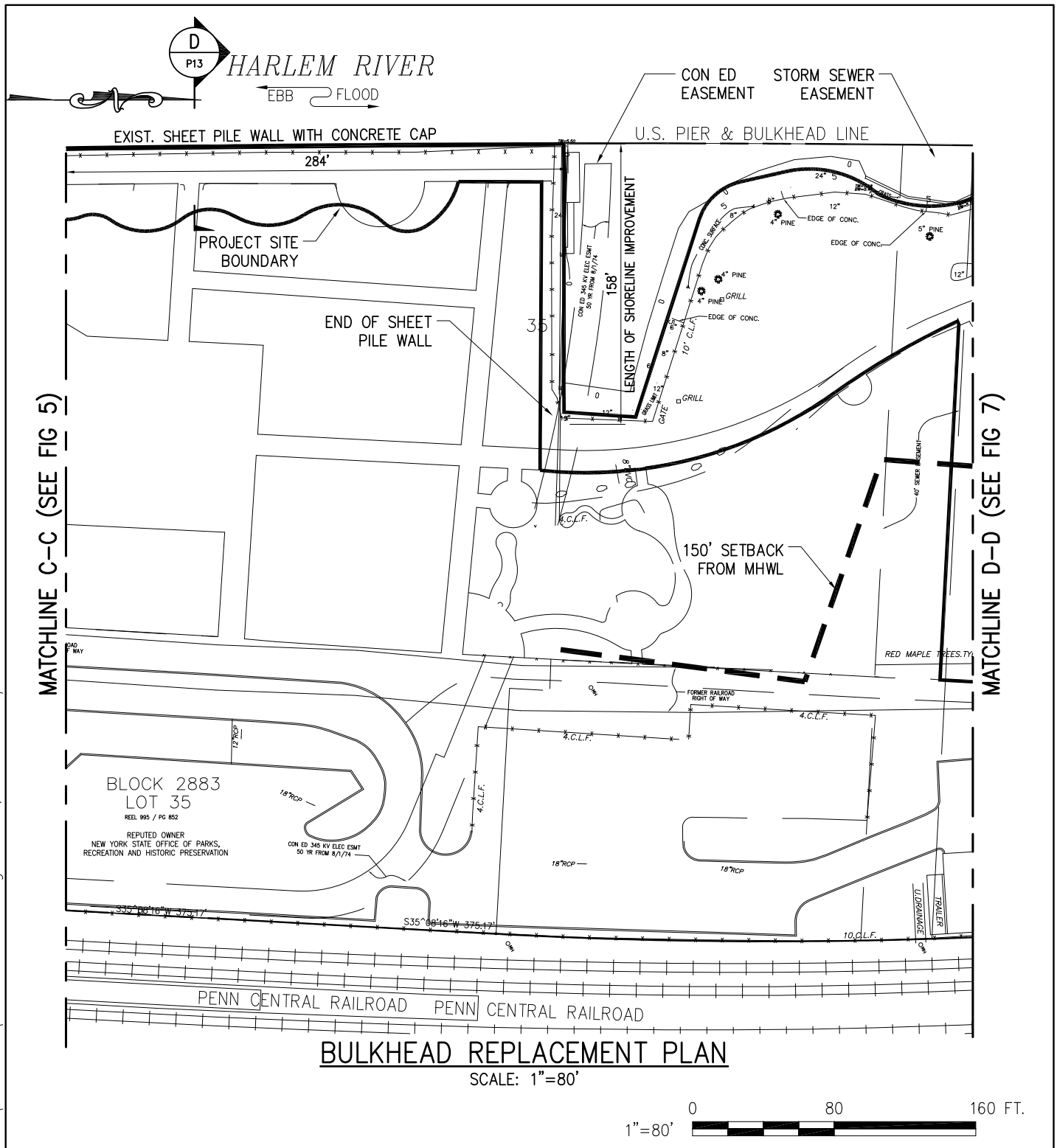

BULKHEAD REPLACEMENT PLAN

SCALE: 1"=80'

0 80 160 FT.
1"=80'

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY SITE SURVEY PLAN (4 OF 7) NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 6 OF 21 DATE: DEC 18, 2013

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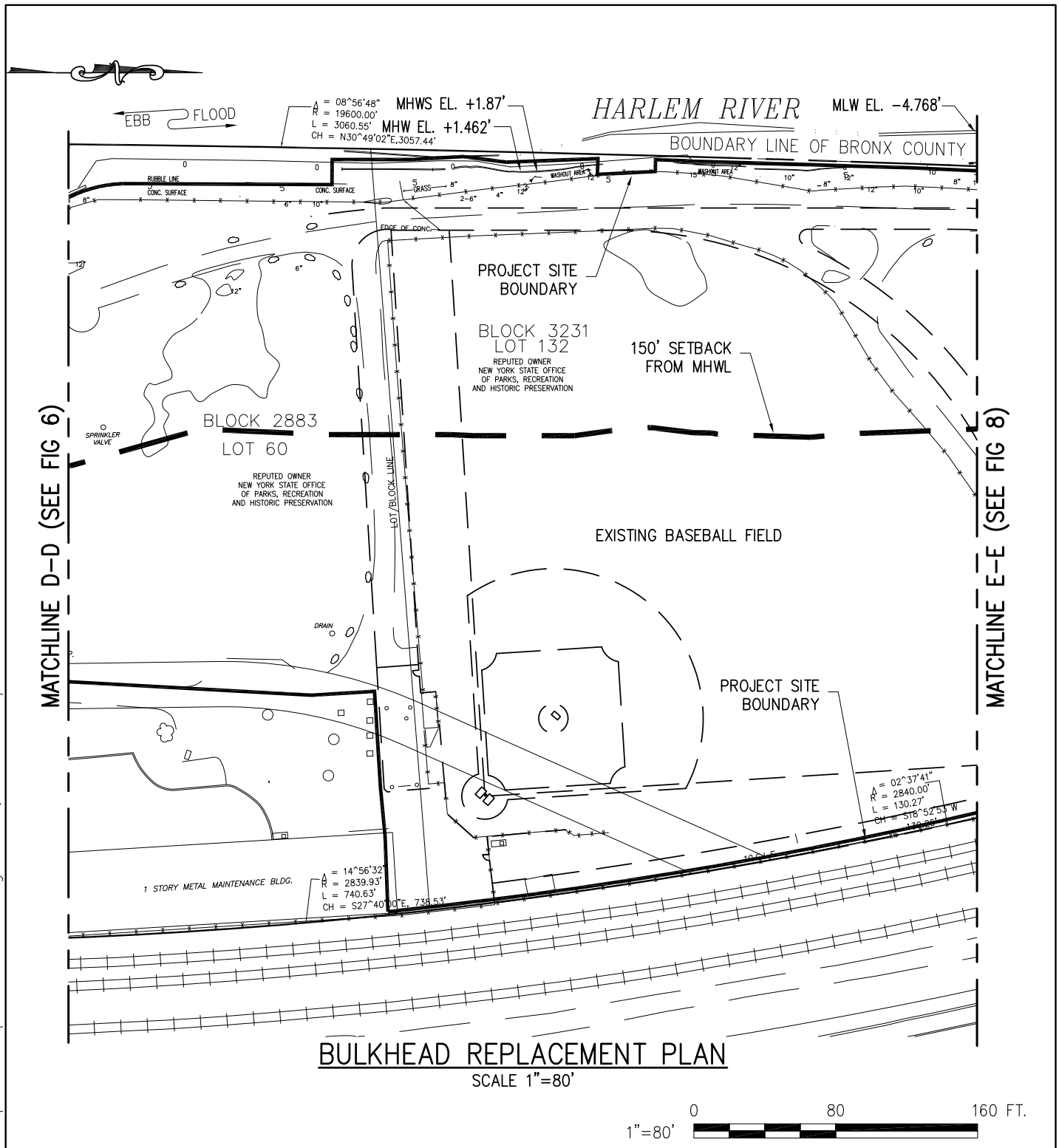

BULKHEAD REPLACEMENT PLAN

SCALE 1"=80'

1"=80' 0 80 160 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY SITE SURVEY PLAN (5 OF 7) NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 7 OF 21 DATE: DEC 18, 2013

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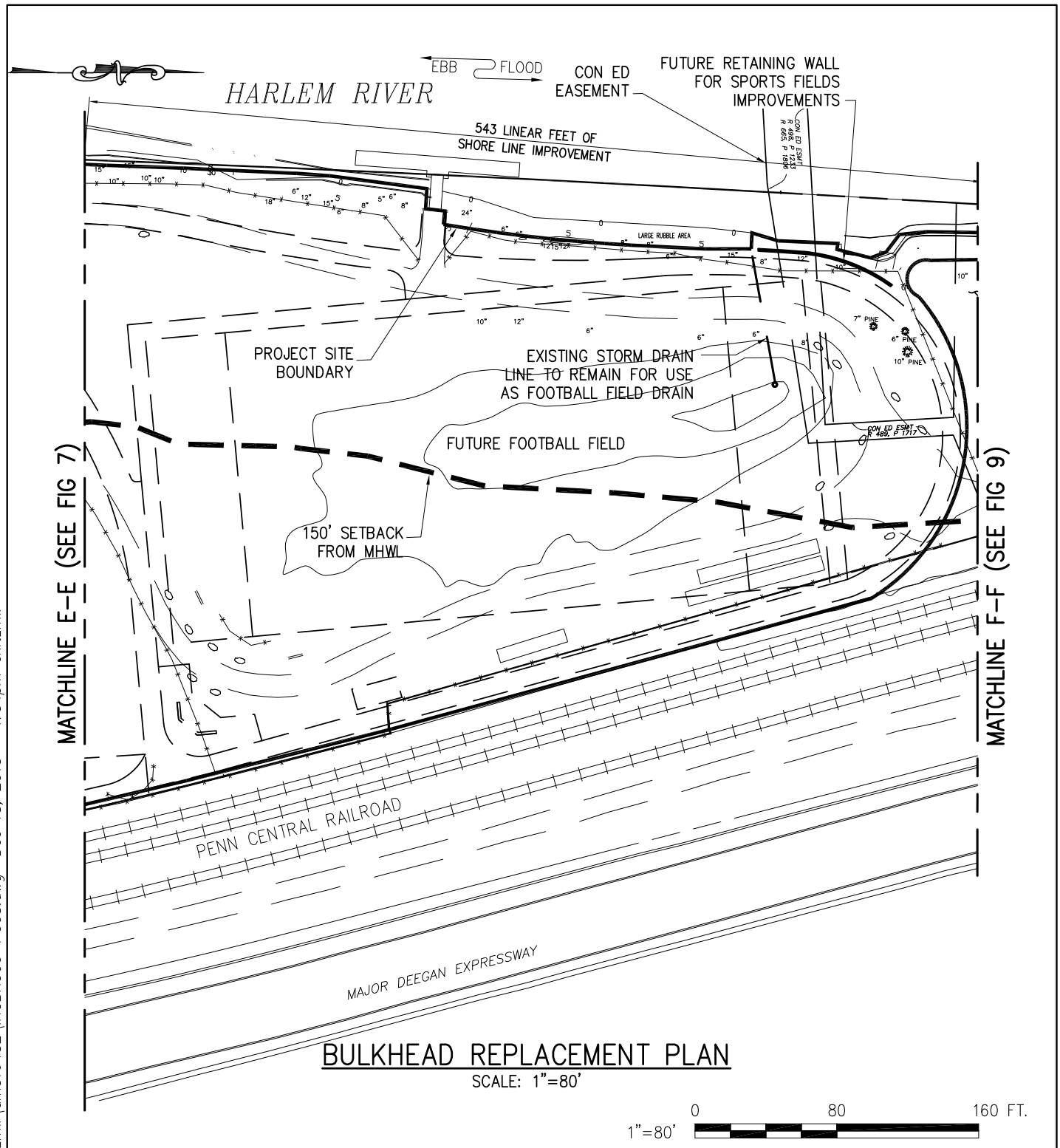

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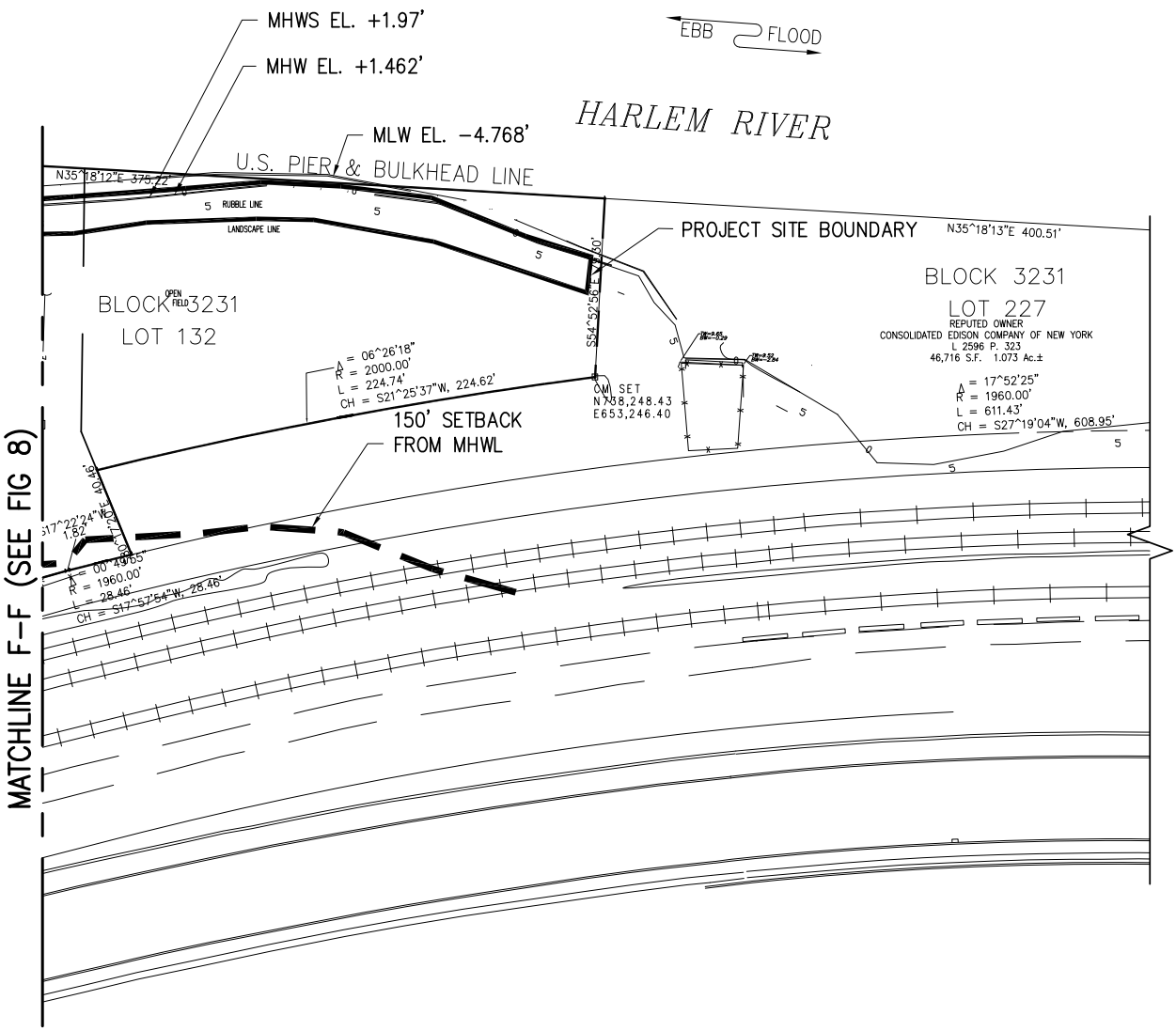

BULKHEAD REPLACEMENT PLAN

SCALE: 1"=80'

1"=80' 0 80 160 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY SITE SURVEY PLAN (7 OF 7) NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 9 OF 21 DATE: DEC 18, 2013

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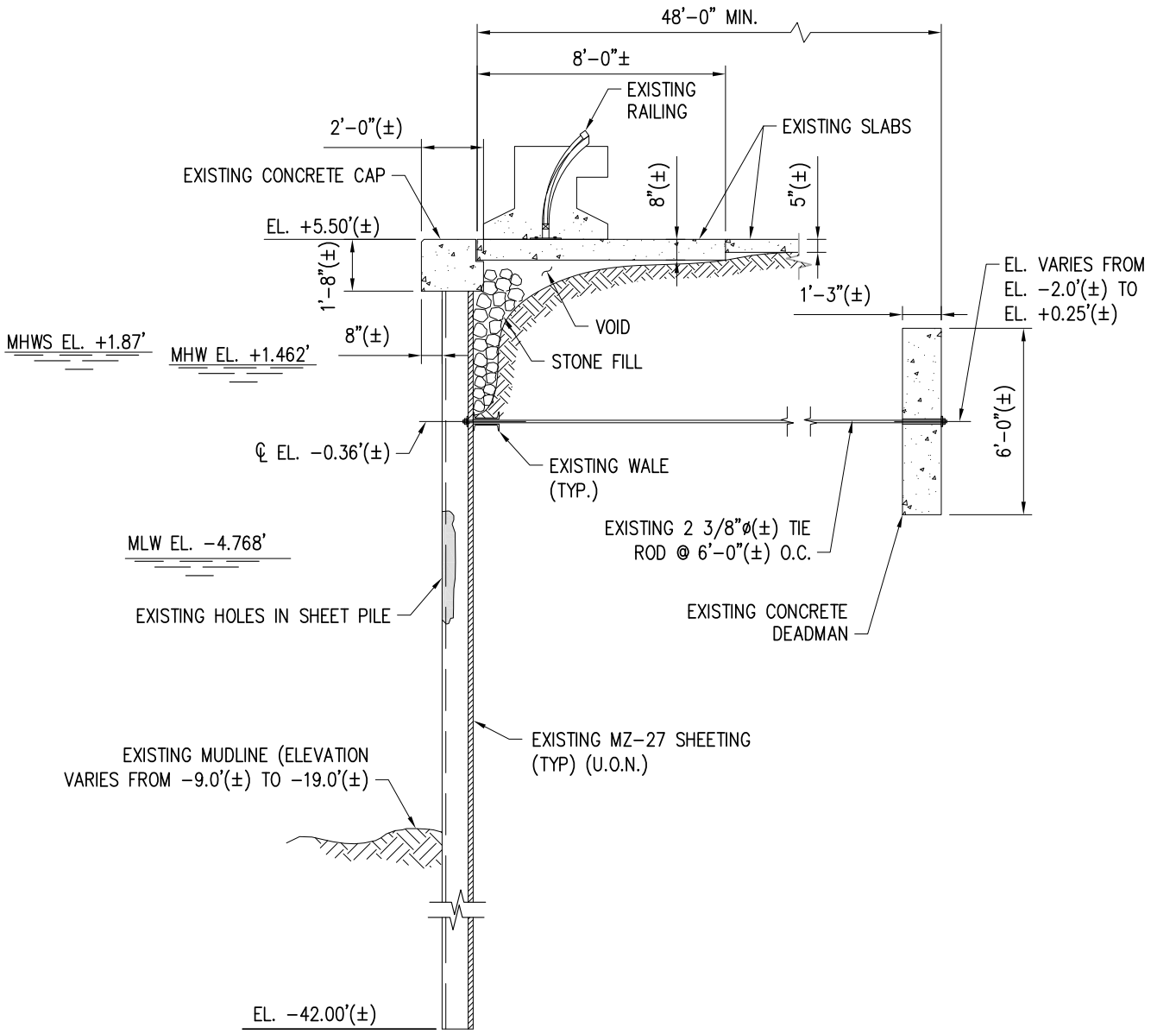

A P3,P4,P5 EXISTING BULKHEAD SECTION

SCALE: 3/16"=1'-0"

3/16"=1'-0" 0 5 10 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY EXISTING BULKHEAD SECTION "A" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 10 OF 21 DATE: DEC 18, 2013

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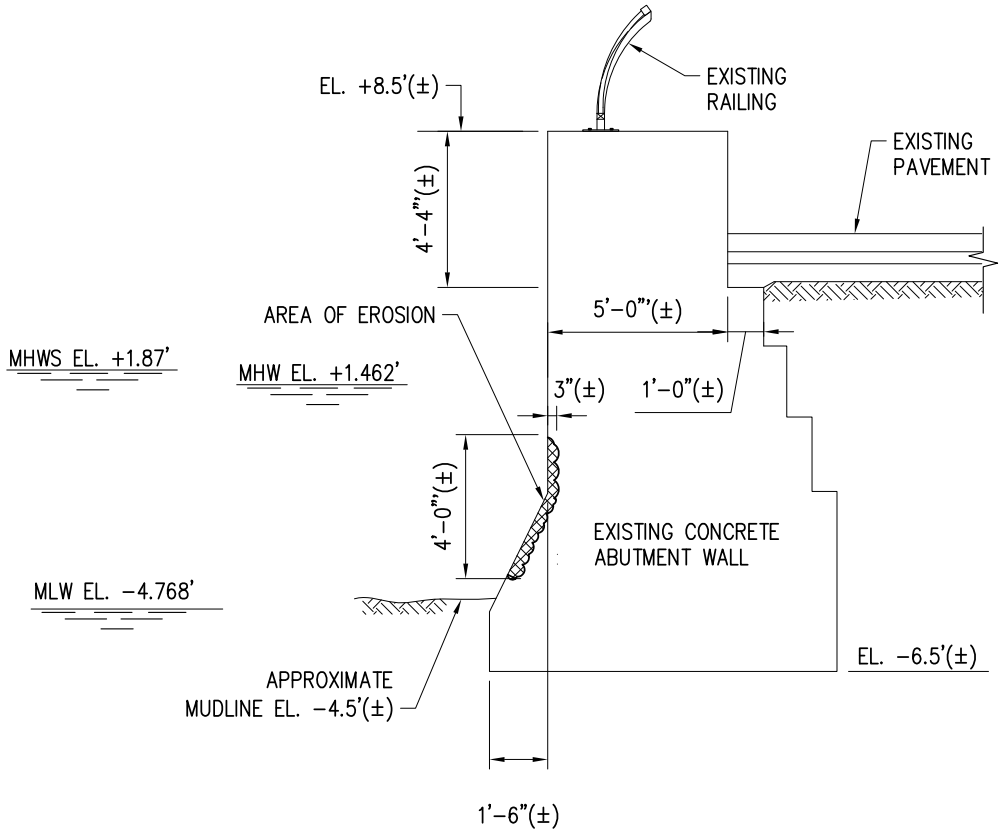

B / P5 EXISTING CONDITION SECTION

SCALE: 3/16"=1'-0"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY EXISTING BULKHEAD SECTION "B" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 11 OF 21 DATE: DEC 18, 2013

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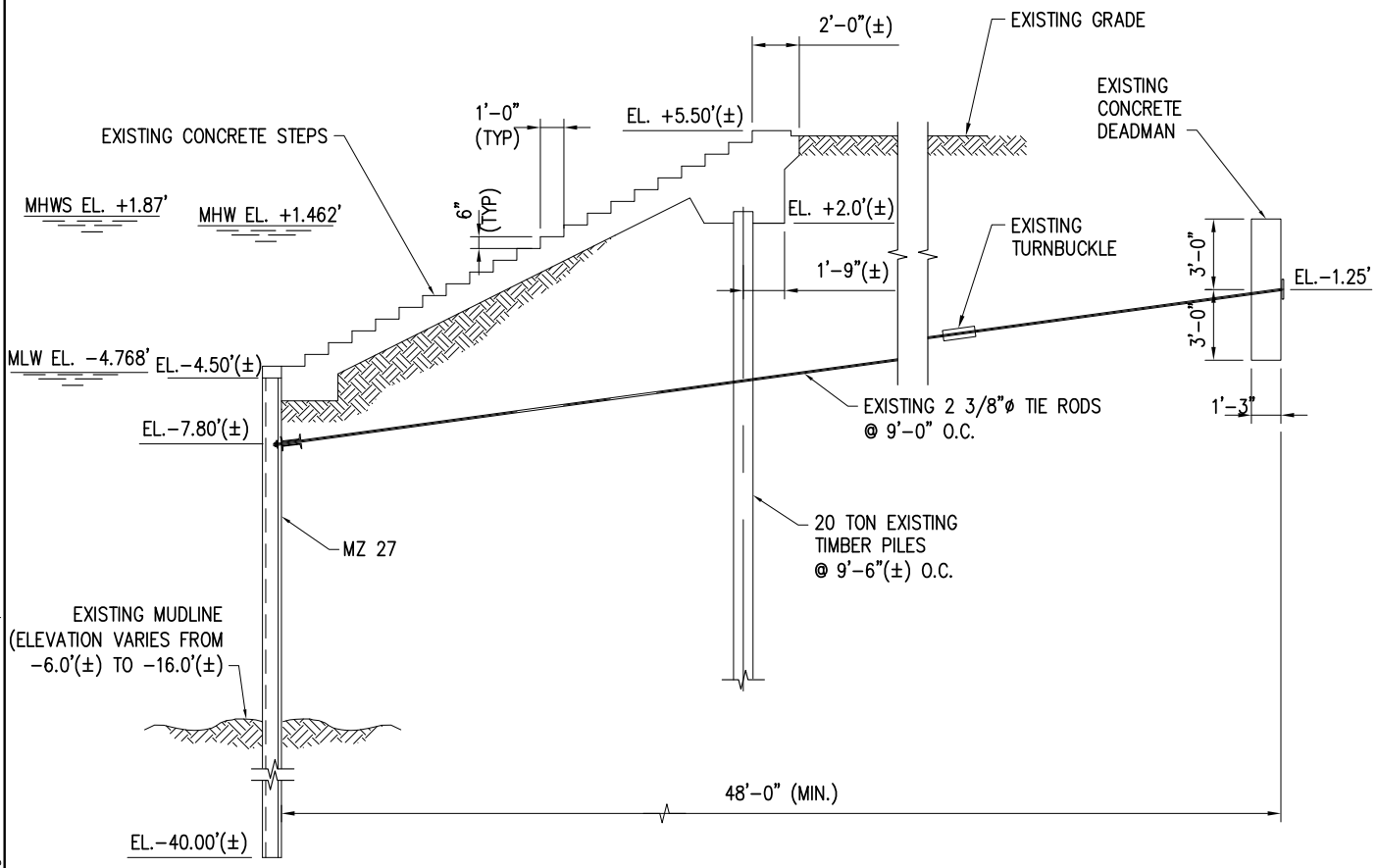

C / P5 EXISTING BULKHEAD SECTION

SCALE: 1/8"=1'-0"

1/8"=1'-0" 0 5 10 15 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY EXISTING BULKHEAD SECTION "C" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 12 OF 21 DATE: DEC 18, 2013

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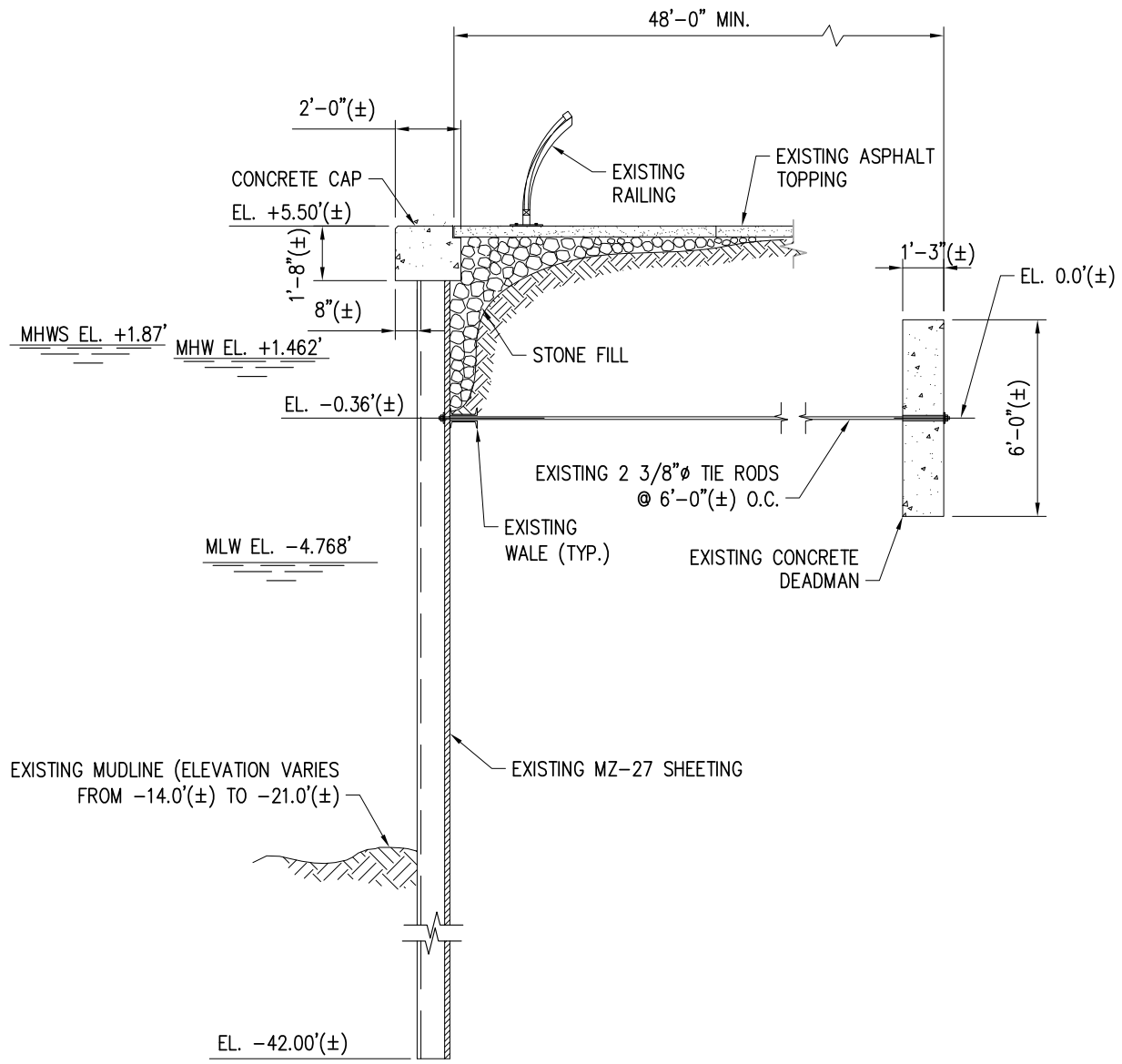

D / P6 EXISTING BULKHEAD SECTION

SCALE: 3/16"=1'-0"

3/16"=1'-0" 0 5 10 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY EXISTING BULKHEAD SECTION "D" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 13 OF 21 DATE: DEC 18, 2013

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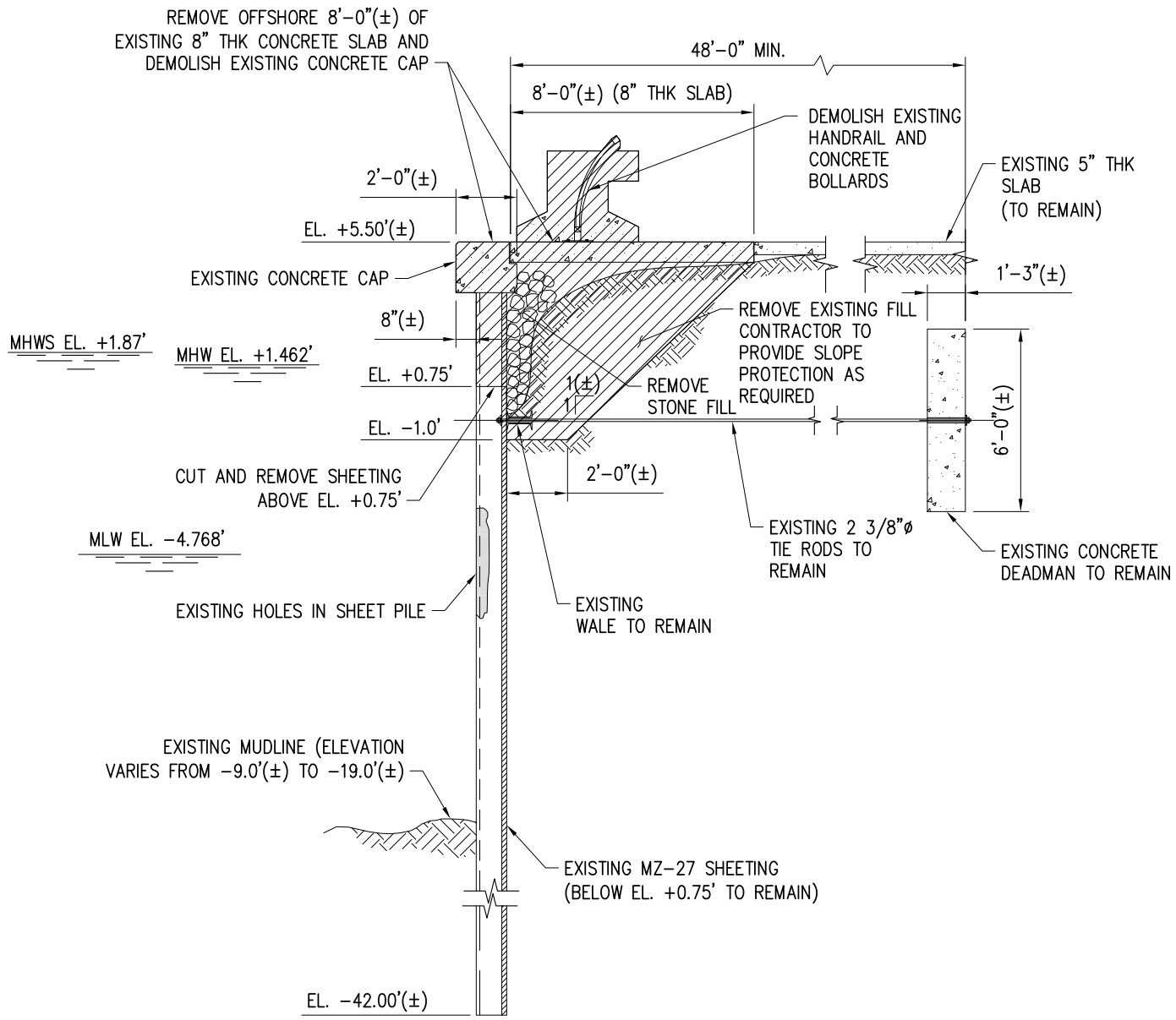

TYPICAL BULKHEAD DEMOLITION SECTION "A"

SCALE: 3/16"=1'-0"

3/16"=1'-0" 0 5 10 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD DEMOLITION SECTION "A" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 14 OF 21 DATE: DEC 18, 2013

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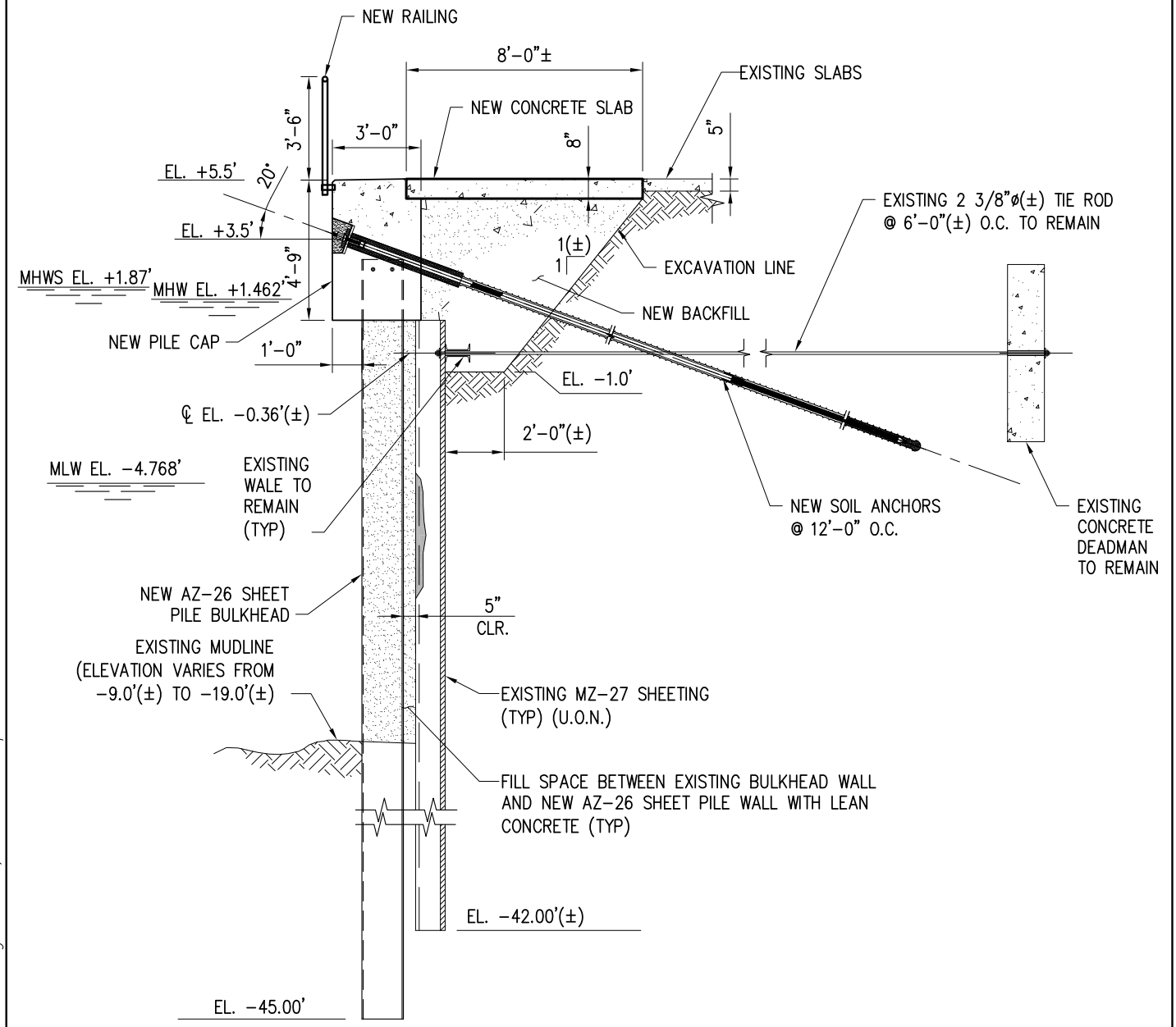

TYPICAL BULKHEAD REHABILITATION SECTION "A"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY TYPICAL BULKHEAD REHABILITATION SECTION A NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 15 OF 21 DATE: DEC 18, 2013

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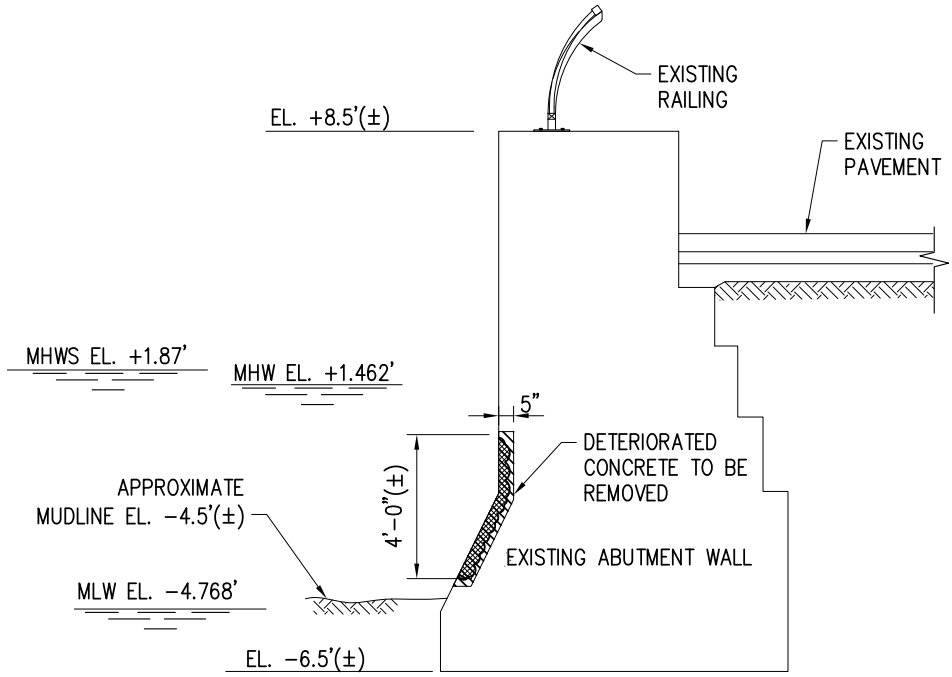

TYPICAL BULKHEAD DEMOLITION SECTION "B"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD DEMOLITION SECTION "B" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 16 OF 21 DATE: DEC 18, 2013

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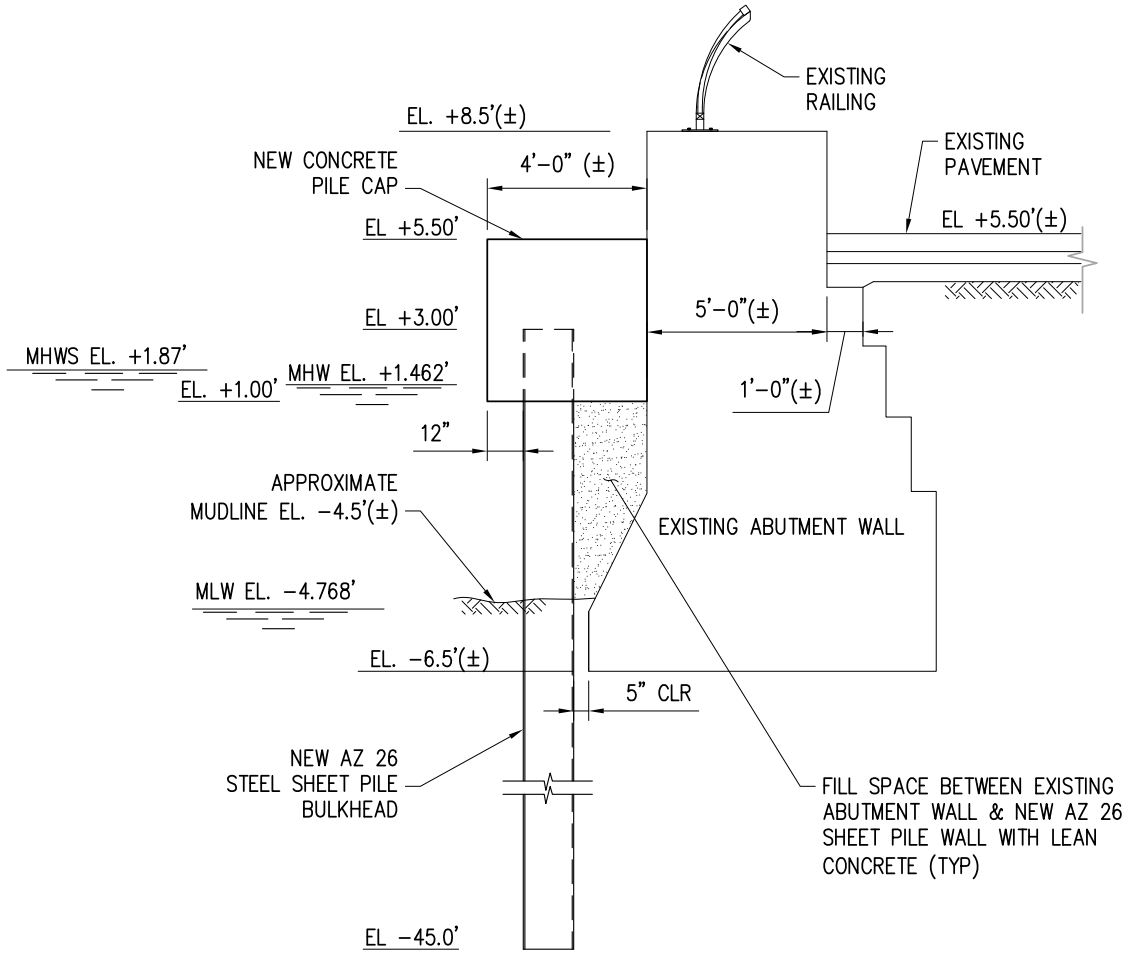

TYPICAL BULKHEAD REPAIR SECTION "B"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD REPAIR SECTION "B" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 17 OF 21 DATE: DEC 18, 2013

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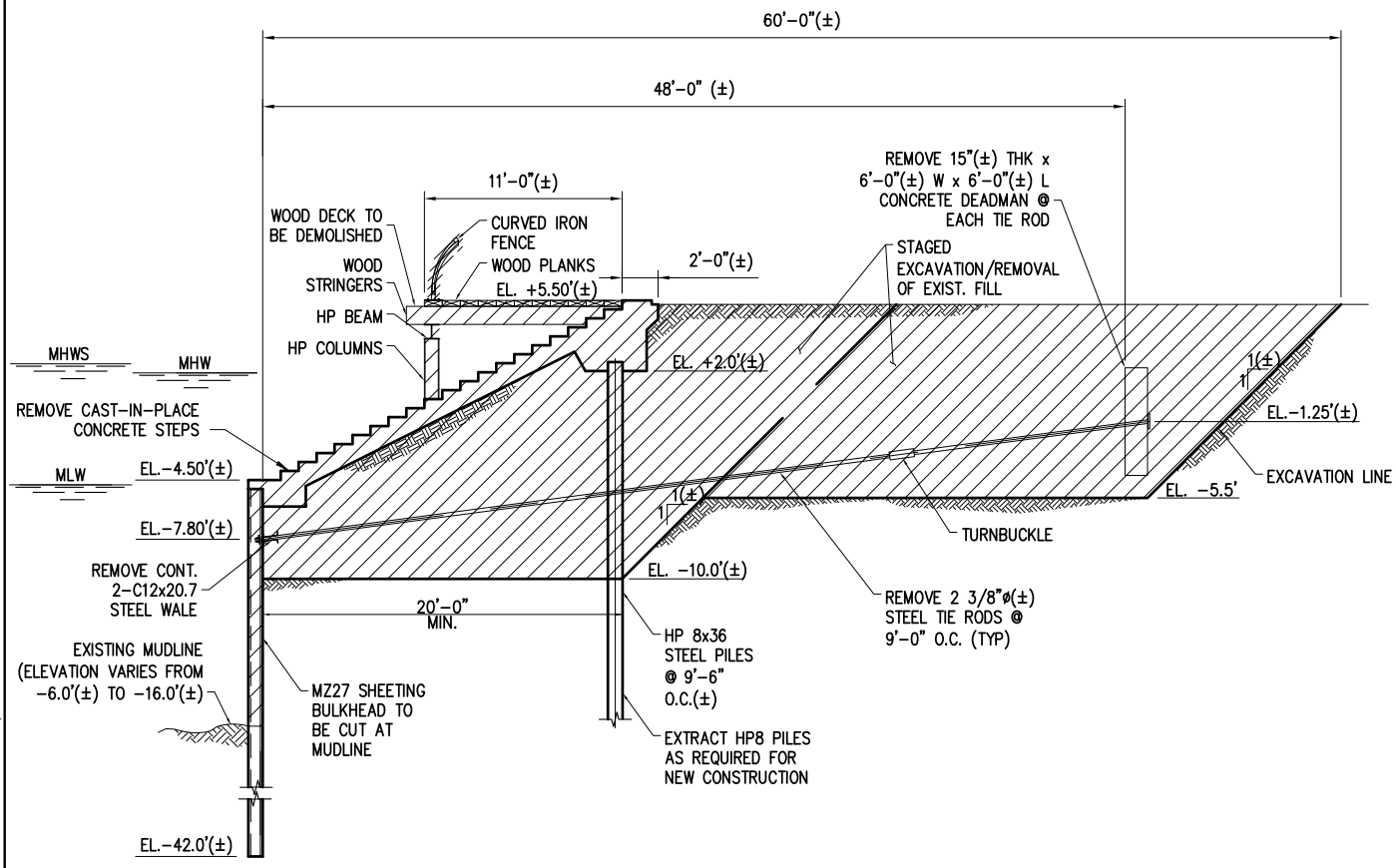

TYPICAL BULKHEAD DEMOLITION SECTION "C"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD DEMOLITION SECTION "C" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 18 OF 21 DATE: DEC 18, 2013

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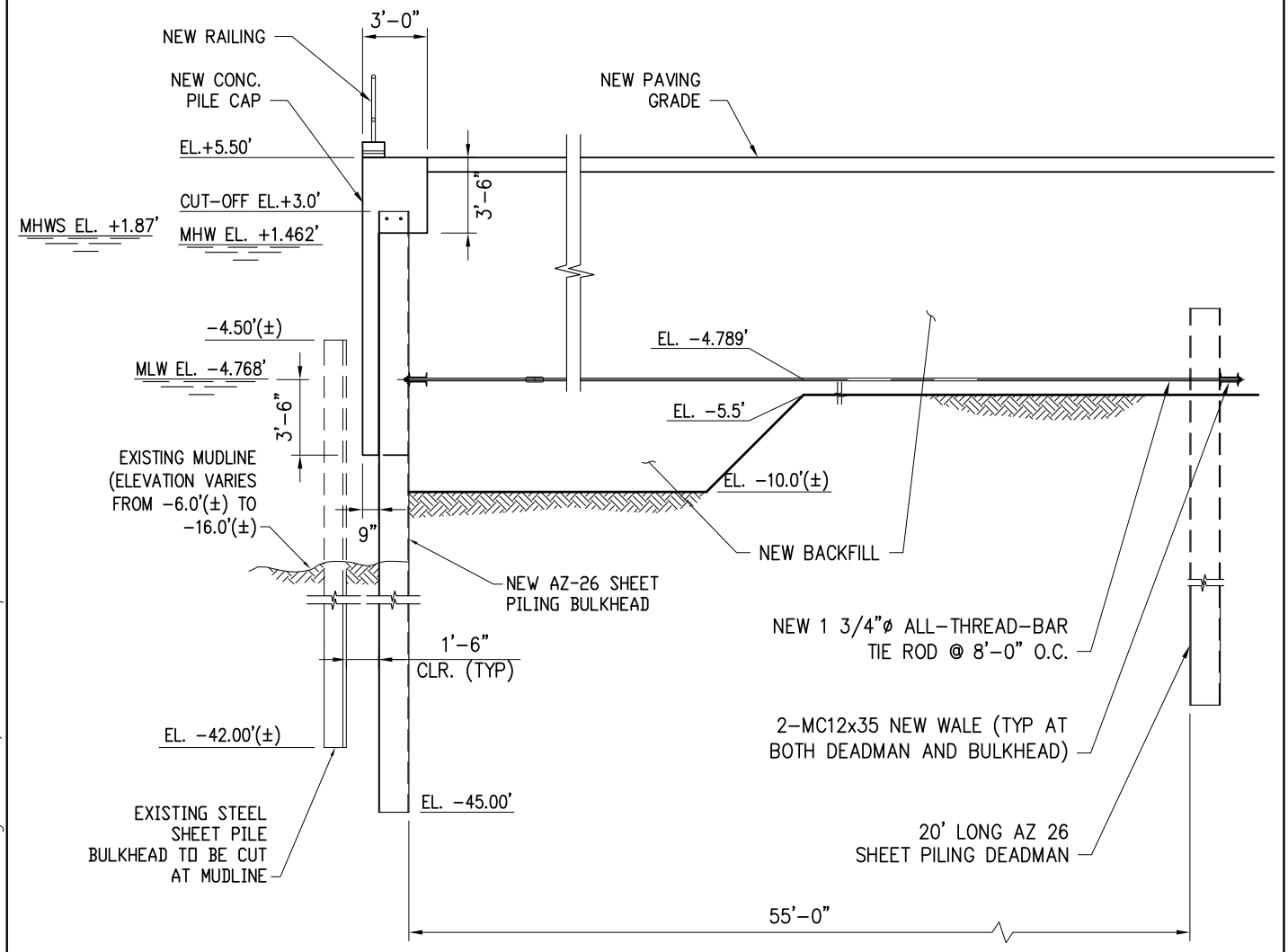

TYPICAL BULKHEAD REPAIR SECTION "C"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD REPAIR SECTION "C" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 19 OF 21 DATE: DEC 18, 2013

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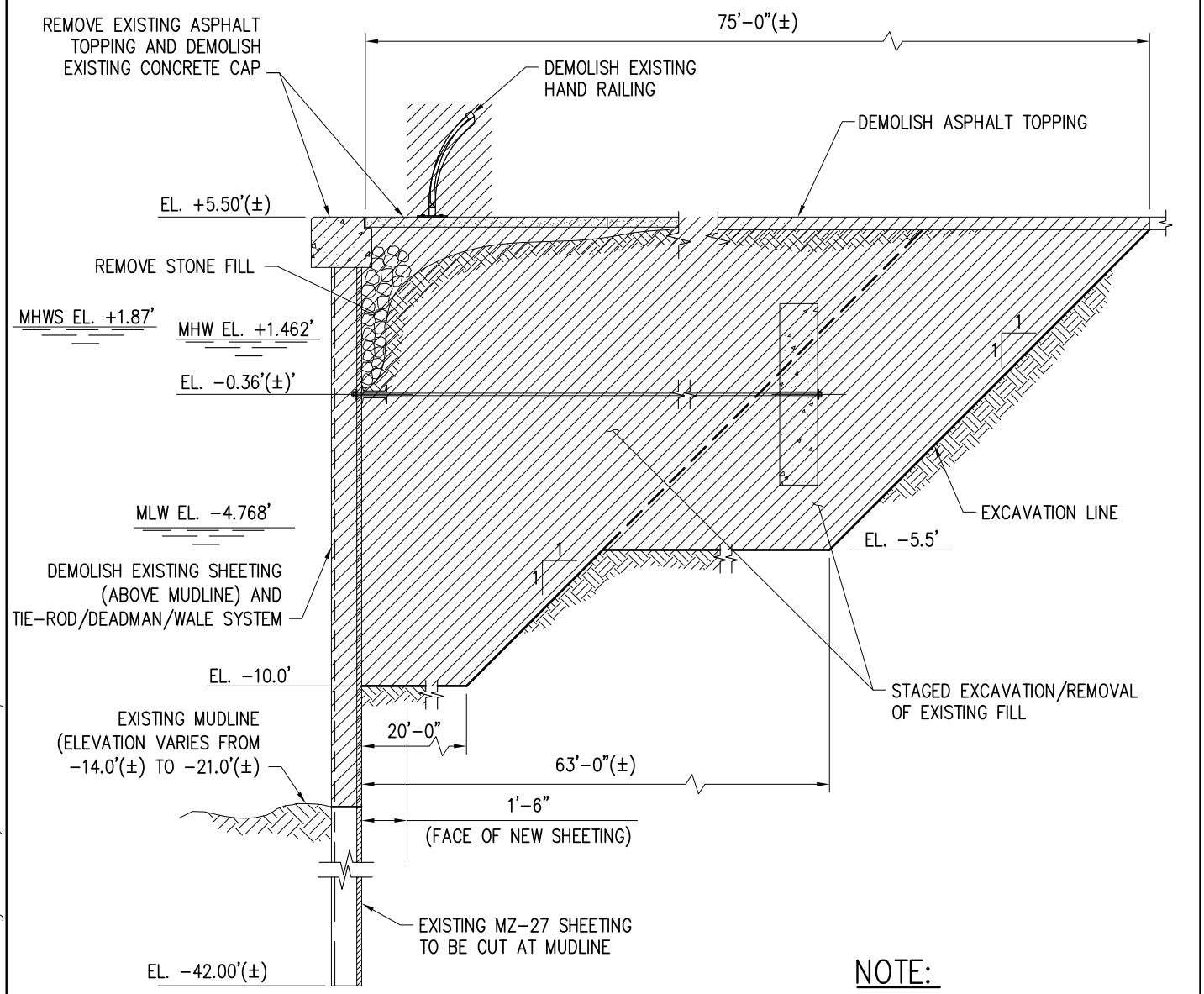

NOTE:

DEMOLITION AND CONSTRUCTION SHALL BE SEQUENCED TO INSTALL NEW ANCHORED SHEET PILE WALL.

TYPICAL BULKHEAD DEMOLITION SECTION "D"

SCALE: 3/16"=1'-0"

3/16"=1'-0" 0 5 10 FT.

PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD DEMOLITION SECTION "D" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 20 OF 21 DATE: DEC 18, 2013

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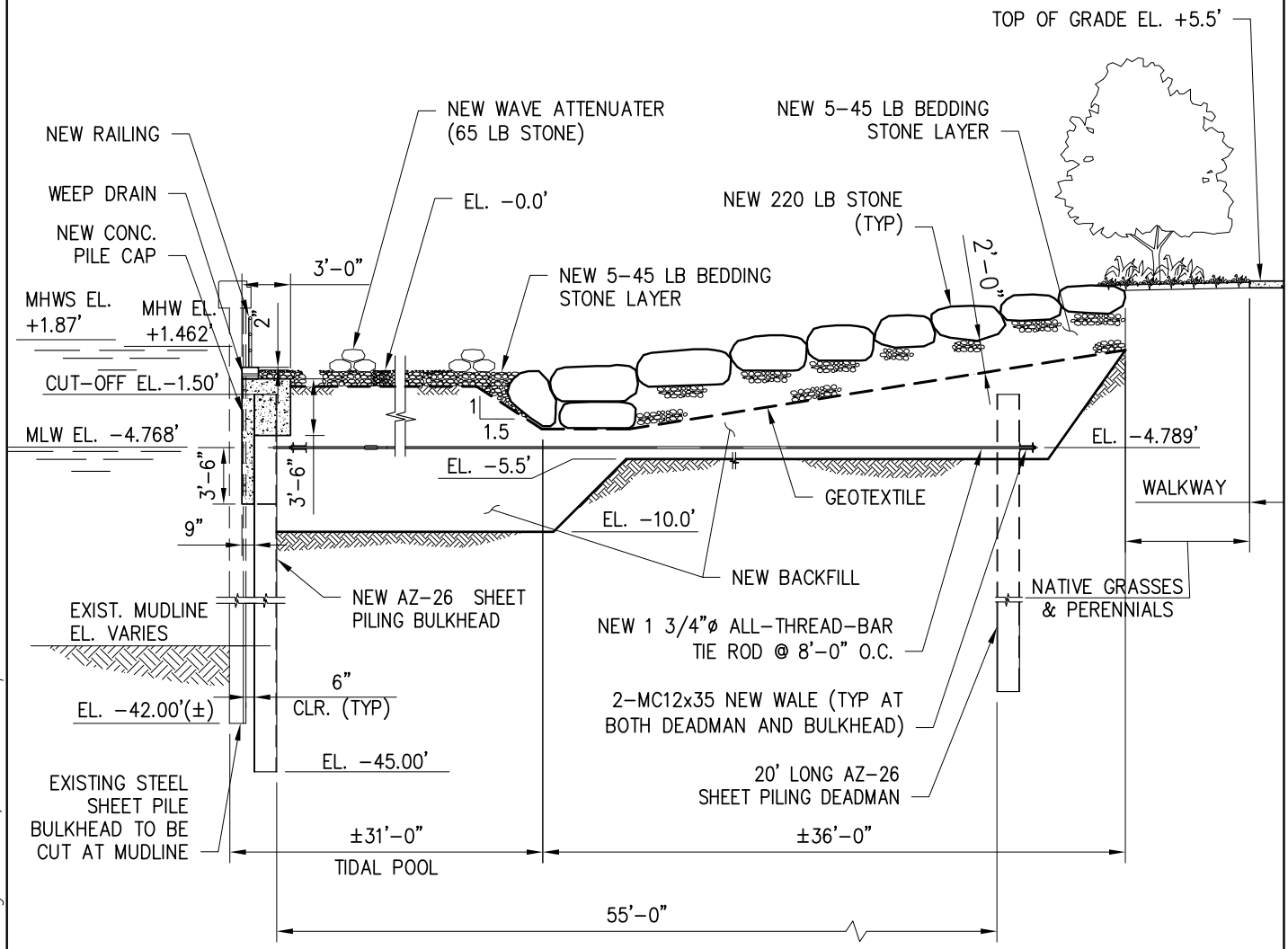

TYPICAL BULKHEAD REPAIR SECTION "D"

SCALE: 3/32"=1'-0"

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PURPOSE: REPAIR AND UPGRADE OF THE WATERFRONT STRUCTURES PREPARED BY HALCROW ENGINEERS, P.C. NEW YORK, NY	ROBERTO CLEMENTE STATE PARK SHORELINE AND PARK IMPROVEMENTS HARLEM RIVER BRONX COUNTY, NY BULKHEAD REPAIR SECTION "D" NEW YORK STATE OFFICE OF PARKS, RECREATION, AND HISTORIC PRESERVATION	PROPOSED: REPAIR AND UPGRADE CITY: NEW YORK COUNTY: BRONX APPLICANT: NYSOPRHP SHEET 21 OF 21 DATE: DEC 18, 2013

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ATTACHMENT B
SCREENING ANALYSES

Attachment B: Screening Analyses

This attachment to the Full Environmental Assessment Form (EAF) for the proposed Roberto Clemente State Park Shoreline and Park Improvements Project (Proposed Project) supplements the information provided in the EAF and provides an assessment of the potential environmental impacts from the proposed project.

A. LAND USE, ZONING, AND PUBLIC POLICY

The project site is located within Roberto Clemente State Park, an approximately 25-acre open space that is owned and operated by the New York State Office of Parks, Recreation and Historic Preservation (OPRHP). The park opened in 1973 as the Harlem River Bronx State Park and was later renamed after Roberto Clemente, the first Latino-American inducted into the Baseball Hall of Fame. The park is bounded to the west by the Harlem River, to the east by the railway tracks of Metro North's Hudson line, and to the south by the recently built Bridge Park. Access to the park is limited, due to the physical barriers presented by the Metro North railway line and the adjacent Major Deegan Expressway (I-87). Access is provided by two bridges over the railway tracks and expressway: the Harlem River Park Bridge, and the West Tremont Avenue Bridge, and from the south by the waterfront trail developed as part of Bridge Park.

The northern portion of the project site, located north of West Tremont Avenue, contains a waterfront pathway; the Lower Plaza area with gazebo, picnic, and barbeque areas; two ball fields; and a maintenance building. Other park amenities located north of West Tremont Avenue but outside the project site include basketball courts, a playground, and a parking lot. While one of the ball fields is in good condition and contains amenities such as dugouts and lighting for night use, the other ball field is in a more deteriorated condition.

South of West Tremont Avenue, the only park amenities within the project site are a concrete waterfront promenade that is in poor condition with some sinkholes and cracked concrete, and an open field south of the River Park Towers residential development. Other park amenities located south of West Tremont Avenue but outside the project site include a multi-purpose recreation building, Olympic-size swimming pool complex, a non-motorized boat launch, and basketball courts. The recreation building contains a gymnasium, a fitness room, locker rooms, a multi-purpose conference room, classrooms, and a game room. The swimming pool facility and basketball courts were recently refurbished.

The project site, and the remaining portions of Roberto Clemente State Park are parkland designated by the New York State Legislature, and owned by OPRHP. Easements would need to be obtained from the owner of the River Park Towers buildings to allow for esplanade improvements adjacent to these buildings. The total area to be covered by these easements would be less than 5,000 square feet (see **Figure A-9**).

The Proposed Project would not introduce any new uses to the project site, which would remain a portion of a public park with recreational amenities. It would be expected to improve land use conditions within the project site by re-opening and upgrading the riverfront promenade,

improving the Park's resiliency to future storm events, providing greater opportunity for visitors to interact with the waterfront and the natural resources of the Harlem River through the creation of the tidal/intertidal habitat, shoreline improvements in the northern portion of the Park that would enhance the patron experience of the adjacent Harlem River, reduction of the hardscape areas within the Park, adding and improving playing fields, which would provide improved recreational opportunities; and performing needed reconstruction of the bulkhead. Overall, the Proposed Project would result in additional park and recreational uses on the project site that would be consistent with, and supportive of, existing uses. The Proposed Project would not alter the mix of land uses in the study area, as the proposed recreational uses would be compatible with existing recreational uses surrounding it within Roberto Clemente State Park. The Proposed Project would provide a new recreational resource to the park and to the City as a whole. Therefore, the Proposed Project would not result in significant adverse land use impacts.

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM

The New York City Waterfront Revitalization Program (WRP) is the City's principal coastal zone management tool. As originally adopted in 1982 and revised in 2002, it establishes the City's policies for development and use of the waterfront. All proposed actions subject to City Environmental Quality Review (CEQR), Uniform Land Use Review Procedure (ULURP), or other local, state, or federal agency discretionary actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the WRP. As shown in **Figure B-1,** the project site and Roberto Clemente State Park are within the Coastal Zone Boundary, and therefore, a WRP consistency assessment is necessary (**see Appendix A** for the WRP Coastal Assessment Form [CAF] and State Coastal Assessment Form [SCAF]). As determined by the CAF, the Proposed Project requires detailed assessment for several WRP policies, including the following: Policies 2 (2.3), 3 (3.2), 4 (4.2), 5 (5.3), 6 (6.1, 6.2), 7 (7.2), 8 (8.4, 8.5), and 9 (9.1). The consistency assessment is provided below.

New York City's WRP includes 10 principal policies designed to maximize the benefits derived from economic development, environmental preservation, and public use of the waterfront, while minimizing the conflicts among those objectives. For each policy and sub-policy question that was answered "yes" in the CAF, this analysis includes a discussion of the policy's applicability to the Proposed Project and the Proposed Projects' consistency with the respective policy.

The New York City Department of City Planning and New York State Department of State (NYSDOS) found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies (WRP # 14-004) and the New York State Coastal Management Program (# F-13-0984) in April 2014.

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

Policy 2.3: Provide infrastructure improvements necessary to support working waterfront uses.

Approximately 2,076 linear feet of bulkhead are present within the project site. The Proposed Project would result in infrastructure improvements to the bulkhead to support the recreational use of the project site, including offshore replacement of bulkhead along 1,370 linear feet, inshore replacement of bulkhead and creation of tidal/intertidal habitat along 556 linear feet, repair of 89 linear feet of eroding concrete gravity wall within eastern portion of cove with offshore sheet pile, replacement of 61 linear feet of steel sheet pile bulkhead and

concrete steps in northeast portion of cove with sheet pile and fill, regrading and replanting with native species along approximately 850 linear feet of shoreline adjacent to existing baseball field. The Proposed Project bulkhead repair and Park improvements would occur within an existing State park and would not, therefore, be suitable for working waterfront uses. Therefore, this policy does not apply to the proposed project.

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

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

The Proposed Project would facilitate the continued use of a floating dock for recreational boats. The occasional use of the floating dock would not be expected to cause any conflicts between commercial and recreational boating. The Harlem River does not contain heavy concentrations of maritime and industrial, ferry, and commercial vessel activity. Therefore, the Proposed Project would be consistent with this policy.

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

4.2: Protect and restore tidal and freshwater wetlands.

The Proposed Project would result in the placement of fill (sheet pile bulkhead, backfill material) within approximately 3,288 square feet of NYSDEC littoral zone tidal wetlands and aquatic habitat in the Harlem River for the bulkhead replacement, and grading and excavation activities within the tidal wetland adjacent area. However, this would be offset by a ratio of 3 to 1 by the 945 square feet of bottom habitat restored through the inboard replacement of sheet pile, and creation of approximately 9,000 square feet tidal/intertidal habitat area from uplands in the northern portion of the sheet pile bulkhead. Therefore the proposed project would result in a net gain of 6,657 square feet of aquatic habitat, some of which would be expected to be littoral zone habitat, and would not result in significant adverse impacts to this type of wetland within this region of New York.

During construction of the Proposed Project, Implementation of the Stormwater Pollution Prevention Plan (SWPPP) prepared for the Proposed Project would minimize erosion and deposition of soil into surface waters and wetlands of the Harlem River. The modifications within the tidal wetland adjacent area would result in a decrease in impervious land cover within the adjacent area and an improvement of the vegetated riparian buffer along the shoreline. The adjacent area at the southern portion of the project site would be consistent with the goal of further enhancing the tidal wetlands adjacent area and its role in protecting the character, quality, values and functions of the adjacent tidal wetland. Therefore, the Proposed Project would be consistent with this policy.

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

5.1: Manage direct or indirect discharges to waterbodies

Stormwater from the areas of disturbance resulting from the Proposed Project would be directed to existing stormwater outlets within the Park that discharge to the Harlem River. Most of the runoff from the Lower Plaza would be conveyed to the tidal/intertidal habitat complex, with some flow conveyed to existing Park stormwater outfalls. By reducing impervious cover by 25 percent in the Lower Plaza, discharging runoff to the tidal/intertidal habitat complex, and by designing the artificial turf fields to provide some quantity controls,

the proposed project would not result in large quantities of freshwater into the Harlem River and would be consistent with this policy.

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

The Proposed Project would result in the placement of approximately 3,288 square feet of fill within NYSDEC littoral zone tidal wetlands in the Harlem River for the bulkhead replacement. The installation of the new sheet pile bulkhead, development of the tidal/intertidal habitat, shoreline enhancements, and placement of clean soil suitable for landscaping at the south end of the project site would be conducted in accordance with measures required by state and federal regulatory authorities to minimize the potential for adverse impacts to water quality and wetland resources (e.g., use of turbidity curtains and/or floating booms for bulkhead work, silt fence for upland work). During construction of the Proposed Project, implementation of the Stormwater Pollution Prevention Plan prepared for the Proposed Project would minimize erosion and deposition of soil into surface waters and wetlands of the Harlem River. Because runoff from the project site would be discharged to the Harlem River, a surface water of New York State, and more than one acre of land would be disturbed as a result of the Proposed Project, compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) will be required. In order to obtain coverage under this permit, a Notice of Intent would be submitted to NYSDEC and a SWPPP would be prepared. The SWPPP would include a written narrative describing the project, hydraulic computations of existing and proposed conditions, design of the new or modified stormwater management system, a discussion and quantification of water quality treatment practices, post-construction water quality treatment plans, and erosion and sediment control drawings which will specify temporary practices to be employed during the construction period in accordance with "New York Standards and Specifications for Erosion and Sediment Control." Therefore, the Proposed Project would be consistent with this policy.

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

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

The Proposed Project is located along the Harlem River waterfront in the Bronx. It would include offshore replacement of bulkhead along 1,370 linear feet, inshore replacement of bulkhead and creation of tidal/intertidal habitat along 556 linear feet of shoreline, repair of 89 linear feet of eroding concrete gravity wall within eastern portion of cove with offshore sheet pile, replacement of 61 linear feet of steel sheet pile bulkhead and concrete steps in northeast portion of cove with sheet pile and fill, and regrading and replanting with native species along approximately 850 linear feet of shoreline adjacent to existing baseball field. These actions are necessary to maintain the integrity of the shoreline and prevent erosion, improve the Park's resiliency to future storm events, and enhance the Park. The replacement of the sheet pile bulkhead, shoreline improvements, creation of a tidal/intertidal habitat complex, Lower Plaza area, proposed natural turf soccer field, proposed synthetic turf baseball field, portions of the maintenance building and adjacent plaza, and portions of the existing baseball field renovation and synthetic turf athletic field would be located within the 100-year floodplain and all of the proposed project would be located within the 500-year

floodplain, based on the FEMA effective Flood Insurance Rate Maps (FIRMS). The FEMA preliminary work maps based on the Best Available Flood Hazard Data (BAFHD) indicate that the entire project site would be located in the 100-year floodplain, except for the southern soil placement, which would be located in the 500-year floodplain, and the south entrance stair repair, which would have a small portion located in the 500-year floodplain. 100-year flood elevation for the BAFHD is 10 feet above North American Vertical Datum of 1988 (NAVD 88). The construction and operation of the project elements would not exacerbate flooding conditions near the project site. New York City is affected by local (e.g., flooding of inland portions of the city from short-term, high-intensity rain events in areas with poor drainage), fluvial (e.g., rivers and streams overflowing their banks), and coastal flooding (e.g., long and short wave surges that affect the shores of the Atlantic Ocean, bays such as Upper New York Bay, and tidally influenced rivers and straits such as the Harlem River, streams, and inlets). The floodplain within and adjacent to the project site is affected by coastal flooding, which is influenced by astronomic tide and meteorological forces (e.g., northeasters and hurricanes), and, therefore, would not be affected by the proposed project. The continued use of this portion of the 100-year floodplain for open space areas would not adversely affect the floodplain and the proposed selective removal of invasive species within the successional southern hardwoods community along the shoreline, and replacement with native tree species would enhance the natural resources along the shoreline. Therefore, the Proposed Project would be consistent with this policy.

Policy 6.2: Direct public funding for flood prevention or erosion control measures to those locations where the investment will yield significant public benefit.

The bulkhead is an original structure from 1971 that has deteriorated over recent years. An evaluation following Superstorm Sandy revealed severe corrosion of the steel at or below the mean low water (MLW) line. Loss of fine fill material through the deteriorated sheet pile wall was considerable and significant at many locations with the overall bulkhead condition being rated as "critical" by our engineering consultants. Since Superstorm Sandy the esplanade has remained barricaded and off limits to vehicles and pedestrians. Without intervention the structure will continue to deteriorate and will eventually fail. A failure could result in the loss of developed park property and infrastructure, and in land erosion that could lead to landmass collapsing into the Harlem River. If erosion were allowed to continue, there are also potential longer-term impacts to the adjacent low-income housing at River Park Towers. The Proposed Project would prevent against this continued deterioration of the bulkhead structure and subsequent impacts. Replacement of the bulkhead, creation of the tidal/ intertidal habitat complex, and collection of stormwater from the Lower Plaza would help to improve the resiliency of the Park to future storm events. The Proposed Project would, therefore, be consistent with this policy.

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

Policy 7.2: Prevent and remediate discharge of petroleum products.

The project site comprises filled land (fill material of unknown origin). Underground storage tanks used to store gasoline have been documented east of the project site and piping for "naptha" and gasoline were known to traverse the Park. Prior to any excavation or construction activities, samples will be collected to determine if the potential for contamination exists. A Materials Management Plan will be prepared for approval by the New York State Department of Environmental Conservation (NYSDEC) for the areas of the project site that will undergo excavation, grading, or fill placement. The Material

Management Plan will characterize soil within the areas of disturbance for the proposed project with respect to soil contaminants (i.e., heavy metals, pesticides, and Semivolatile Organic Compounds (SVOCs), compare the level of contamination in the excavation and soil placement areas, and compare the concentrations to Part 375 Soil Cleanup Objectives for Protection of Public Health Residential and Protection of Groundwater. The Materials Management Plan will demonstrate that the material being excavated and reused onsite is no more contaminated than the material in the placement area. Any materials needing off-site disposal would be removed, handled and disposed of in accordance with applicable state and local regulatory requirements. With these measures, the Proposed Project would be consistent with this policy.

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

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

The Proposed Project would not require acquisition of new parkland. It would result in open space enhancements within the existing Roberto Clemente State Park, including: repair and replacement of deteriorated bulkhead; upgrades to the existing waterfront promenade and the shoreline; new opportunities for visitors to interact with natural resources of the Harlem River; new environmental education opportunities; and improved and new playing fields. Therefore, the Proposed Project would preserve and improve waterfront open space and recreation in a State Park and would be consistent with this policy.

Policy 8.5: Preserve the public interest in and use of lands and waters held in public trust by the state and city.

The Proposed Project would not result in the loss of public ownership or usage of Roberto Clemente State Park. Rather, the Proposed Project would result in open space improvements that would enhance park visitation and further support the surrounding community and region with recreational opportunities. In addition, the Proposed Project would improve the Park's resiliency to future storm events. Therefore, the Proposed Project is consistent with this policy.

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

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

The Proposed Project would not impede views or access to the waterfront. Instead, the Proposed Project would result in the needed repair and replacement of existing bulkhead, the re-opening and refurbishment of the waterfront promenade and Lower Plaza area, and the provision of a new element to the Park in the form of the created tidal/intertidal habitat complex that would enhance the waterfront view and draw visitors to the waterfront. The Proposed Project would result in the removal of chain link fencing and invasive plant species that currently block views of the Harlem River. Additionally, the regrading, removal of invasive plant species and replanting with native plant species (see Table A-1) of approximately 850 linear feet of shoreline would enhance the visual quality of the shoreline within the park. Therefore, the Proposed Project would improve the visual quality of the waterfront and would be consistent with this policy.

SMART GROWTH

In 2010 New York State enacted the State Smart Growth Public Infrastructure Policy Act (SSGPIPA). The purpose of this act is to maximize the social, economic, and environmental benefits from public infrastructure development through minimizing unnecessary costs of sprawl development. The act mandates that all state agencies not approve, undertake, support, or finance a public infrastructure project unless that project is—to the extent practicable—consistent with 10 smart growth criteria. Consistency with these criteria is discussed below.

1. To advance projects for the use, maintenance, or improvement of existing infrastructure.

The Proposed Project consists of the improvement of an existing State Park, within the existing boundaries of the Park. Improvements include replacement of the existing sheet pile bulkhead that is in critical condition. These improvements would protect critical Park and housing infrastructure behind the bulkhead, allow the re-opening of the Park's esplanade, and increase the Park's resiliency to future storm events. Therefore, the Proposed Project would be supportive of this criterion.

2. To advance projects located in municipal centers.

The Proposed Project is located within the NYC WRP area. The Proposed Project involves improvements of an existing State Park within a very dense urban area and consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program for the project as described in the Joint Application and subsequent submissions of additional information was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984). The Proposed Project is located within a potential environmental justice area (http://www.dec.ny.gov/public/899.html). It would not result in any disproportionately high and adverse effects on potential environmental justice areas and would be in compliance with all applicable environmental justice protections. In fact, the Proposed Project would protect the Park and adjacent affordable housing, and improve the Park's significant amenities. Therefore, the Proposed Project would be supportive of this criterion.

3. To advance projects in developed areas or areas designated for concentrated infill development in a municipally-approved comprehensive land use plan, local waterfront revitalization plan, and/or brownfield opportunity area plan.

The Proposed Project consists of the improvement of an existing State Park, within existing boundaries of the Park. The Proposed Project is located within the NYC WRP area and consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program for the project as described in the Joint Application and subsequent submissions of additional information was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984). The New York City Department of City Planning found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies in an email dated April 23, 2014 (WRP # 14-004, application # F-13-0984).

4. To protect, preserve, and enhance the state's resources, including agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archeological resources.

The Proposed Project would have a positive effect on the State's recreational resources through the refurbishment of an existing baseball field, and addition of a new baseball field, soccer field, and athletic field. In addition, other open space areas, including barbeque areas within the Lower Plaza, will be improved. The Proposed Project would result in a net increase of 6,657 square feet of aquatic habitat. Surface water will be protected through the creation of the tidal/intertidal habitat complex, which would receive stormwater runoff from the Lower Plaza area and provide a significant environmental amenity to park patrons. See Attachment C, Natural Resources, for more detail. Additionally, the Proposed Project would enhance scenic areas along the Harlem River. Therefore, the Proposed Project would be supportive of this criterion.

5. To foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation, and commercial development, and the integration of all income and age groups.

The Proposed Project would have a positive effect on the State's recreational resources and would also increase the net amount of aquatic habitat by 6,657 square feet. Additionally, the Proposed Project would enhance the beauty in public spaces and overall enhance scenic areas along the Harlem River, as well as protect adjacent affordable housing. The Proposed Project would be consistent with this criterion.

6. To provide mobility through transportation choices, including improved public transportation and reduced automobile dependency.

The Proposed Project would not involve transportation; this criterion would not be relevant.

7. To coordinate between state and local government and intermunicipal and regional planning.

The Proposed Project is located within the NYC WRP area and consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program for the project as described in the Joint Application and subsequent submissions of additional information was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984). The New York City Department of City Planning found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies in an email dated April 23, 2014 (WRP # 14-004).

OPRHP, as lead agency, has been conducting a coordinated review of the Proposed Project in accordance with *SEQRA*. Other involved agencies include NYSDEC, NYSDOS, FEMA, Housing Trust Fund Corporation (HTFC), and the New York State Department of Homes and Community Renewal (NYSDHCR). The Proposed Project would be consistent with this criterion.

8. To participate in community-based planning and collaboration.

The Proposed Project consists of the improvement of an existing State Park, within the existing boundaries of the Park. The State's Community Development Block Grant Disaster Recovery (CDBG-RD) action plan, which was created with an element of public participation, includes a section that sets forth how CDBG-DR funds will be utilized as the

non-Federal match for public infrastructure and facilities, such as Roberto Clemente State Park.

9. To ensure predictability in building and land use codes.

The Proposed Project consists of the improvement of an existing State Park, within the existing boundaries of the Park, and does not involve predictability in building or land use codes. This criterion would not be relevant.

10. To promote sustainability by strengthening existing and creating new communities which reduce greenhouse gas ("GHG") emissions and do not compromise the needs of future generations, by among other means encouraging broad based public involvement in developing and implementing a community plan and ensuring the governance structure is adequate to sustain its implementation.

The Proposed Project consists of the improvement of an existing State Park, within the existing boundaries of the Park, and any increase in GHG emissions would be de minimis during construction. This criterion would not be relevant.

A Housing Trust Fund Corporation Smart Growth Impact Evaluation Form ("SGIEF") was completed to assist in determining whether the Proposed Project is consistent with SSGPIPA, Article 6 of the New York Environmental Conservation Law ("ECL"), for a variety of policy areas related to land use and sustainable development. The SGIEF is included in Appendix B.

B. SOCIOECONOMIC CONDITIONS

The Proposed Project would not result in new commercial or residential development or any direct displacement of residents or businesses. Therefore, the Proposed Project would not result in any significant adverse impacts on socioeconomic conditions.

C. COMMUNITY FACILITIES

The Proposed Project would not physically alter or displace any community facilities, nor would it directly affect the delivery of public services. Therefore, the proposed project would not have any significant adverse impacts on community facilities.

D. OPEN SPACE

The Proposed Project would result in modifications to Roberto Clemente State Park that would be expected to improve the quality of this open space resource and would not result in a reduction in available parkland. Portions of the project site and surrounding area would not be accessible to the public during construction of the proposed improvements; however, this condition would be temporary and upon completion of the project these areas would be enhanced for recreational use. Therefore, the Proposed Project would be expected to improve open space conditions on the project site and would not have any significant adverse effects on open space.

E. SHADOWS

The proposed project would not result in any new structures. Therefore, the Proposed Project would not be expected to result in any significant adverse shadows impacts.

F. HISTORIC AND CULTURAL RESOURCES

According to OPRHP correspondence dated July 1, 2014, the Park was constructed on relatively recent landfill and thus there are no archaeological concerns for the project site.

There are no known or potential architectural resources on the project site. The proposed action would not be expected to result in adverse impacts to historic resources. In correspondence dated July 1, 2014, OPRHP states that the project would have no effect upon cultural resources in or eligible for inclusion in the National Register of Historic Places (see **Appendix C**).

G. URBAN DESIGN AND VISUAL RESOURCES

While the Proposed Project would result in some changes in the appearance of the project site, it would not alter any street patterns, block shapes, building bulks, or topography; would not introduce an incompatible use to the project site; and would not be expected to adversely affect wind or sunlight conditions in the surrounding area. All of the proposed work would be consistent with the project site's current use as parkland. No new buildings would be constructed on the project site, no views to visual resources would be obstructed, and upon completion the proposed bulkhead work would be minimally visible to pedestrians in the surrounding area. The proposed changes to the Park improve the urban design of the project site and thus would be expected to enhance the pedestrian's experience of the project site and study area. Therefore, the Proposed Project would not result in significant adverse impacts to urban design and visual resources, and further analysis is not warranted.

H. NATURAL RESOURCES

See **Attachment C**.

I. HAZARDOUS MATERIALS

The majority of the area where the project site and Roberto Clemente Park is now located was created through filling of the Harlem River. Fill materials may include ash or other waste materials from industrial processes and demolition debris from pre-existing structures. Prior to construction of the Park, the land was primarily a shipbuilding facility until after World War II. Uses, within both the project site and the remainder of the Park, included fuel storage, heavy machine work, engine testing, chemical engraving, coal storage, a junk yard, and the New York University (NYU) Aerospace Laboratory. The Proposed Project would require construction activities (e.g., excavation or grading) that would disturb soil potentially contaminated from these or other undocumented prior uses. Recent soil sampling conducted within the project site within the footprint of the tidal/intertidal habitat complex (see Appendix D), and within the northern portion of the project site has indicated no significant evidence of contamination; Semivolatile Organic Compounds (SVOCs) and metals exceeding Part 375 Soil Cleanup Objectives were attributable to the urban fill material. Prior to any excavation or construction activities, samples would be collected in accordance with the Materials Management Plan described below.

A Materials Management Plan will be prepared for approval by the NYSDEC for the areas of the project site that will undergo excavation, grading, or fill placement. The Material Management Plan will characterize soil within the areas of disturbance for the proposed project with respect to soil contaminants (i.e., heavy metals, pesticides, and SVOCs), compare the level of contamination in the excavation and soil placement areas, and compare the concentrations to

Part 375 Soil Cleanup Objectives for Protection of Public Health Residential and Protection of Groundwater. The Materials Management Plan will demonstrate that the material being excavated and reused onsite is no more contaminated than the material in the placement area. Any materials needing off-site disposal would be removed, handled and disposed of in accordance with applicable state and local regulatory requirements.

With these measures, the Proposed Project would not result in any significant adverse impacts related to hazardous materials.

J. WATER AND SEWER INFRASTRUCTURE

The Proposed Project would not result in any notable increases in water consumption or sanitary sewage and stormwater disposal. Since the project discharges to surface waters of New York State and more than one acre of land would be disturbed to achieve the project, compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) will be required. Stormwater from the areas of disturbance resulting from the Proposed Project would be directed to existing stormwater outlets within the Park that discharge to the Harlem River. Implementation of the Stormwater Pollution Prevention Plan prepared for the Proposed Project would minimize erosion and deposition of soil into surface waters and wetlands of the Harlem River during construction of the Proposed Project. Potential impacts would be minimized through the implementation of measures identified during the permitting process for these shoreline improvements by federal and state agencies. Therefore, the Proposed Project would not have significant adverse impacts on infrastructure.

Stormwater runoff from the project area does not drain to the NYC sewer system. The project area currently drains to the Harlem River via a combination of overland flow and a series of drainage inlets which discharge to the river through small outfall pipes along the waterfront. Improvements within the Lower Plaza area include collection of stormwater runoff through catch basins; runoff would then be piped to four outlets within the tidal/intertidal habitat complex. Stormwater within the esplanade area adjacent to the tidal/intertidal habitat would be directed into a proposed freshwater wetland area and then drain through a perforated filtration pipe into the tidal/intertidal habitat area. Impervious surfaces within the Lower Plaza would be reduced by at least 25 percent by increasing the amount of pervious area in proposed new planted areas and incorporating pervious paving materials. A majority of the existing impervious area within the tidal/intertidal habitat limits would be replaced by the pervious surfaces comprising the tidal/intertidal habitat complex. OPRHP will develop a Stormwater Pollution Prevention Plan which will include a written narrative describing the project, hydraulic computations of existing and proposed conditions, design of the new or modified stormwater management system, a discussion and quantification of water quality treatment practices, post-construction water quality treatment plans, and erosion and sediment control drawings which will specify temporary practices to be employed during the construction period.

Per a pre-application meeting with NYSDEC held in 2008, the requirements of the Redevelopment Chapter of the New York State Stormwater Management Design Manual can be followed for the reconstruction of the ballfield area as well as any other areas of the site that are currently paved. Accordingly, stormwater treatment practices will be designed to handle portions of the Water Quality Volume (WQv). Because the runoff from the site will discharge to tidal waters, attenuation of the larger storm events (1, 10, and 100 year, 24 hour storm events) will not be required.

K. SOLID WASTE AND SANITATION SERVICES

The Proposed Project would not result in the development of any uses that would generate solid waste. Therefore, the Proposed Project would not significantly increase the demand for solid waste and sanitation services.

L. ENERGY

The Proposed Project would conform to the New York State Energy Conservation Code, which reflects New York State and New York City energy policies. The Proposed Project would not result in the construction of any new structures that would consume energy. Therefore, the Proposed Project would not have a significant adverse impact on energy.

M. TRANSPORTATION

The Proposed Project would result in improvements to parkland and would not result in any new development that would generate traffic and would not generate substantial pedestrian, transit, or vehicle trips. Therefore, the Proposed Project would not be expected to result in any significant adverse transportation impacts.

N. AIR QUALITY

The Proposed Project would not generate any additional vehicle trips and would not increase the number of parking spaces at the project site and would not otherwise create any new permanent sources of emissions. Therefore, the Proposed Project would not result in adverse impacts to air quality. However, The project would receive up to $46.5 million in funding from the U.S. Department of Housing and Urban Development's Community Development Block Grant Disaster Recovery (CBDG-DR) program and is therefore subject to conformity analysis requirements of the Clean Air Act (CAA).

Projects for which emissions from criteria pollutants are expected to be below the threshold levels established in 40 CFR 93.153(b) are not required to make a conformity determination. See 40 CFR 93.153(c)(1). As will be explained in the applicability analysis[1] below, emissions from the Proposed Project are not expected to exceed the thresholds in 40 CFR 93.153(b) and therefore the Proposed Project is exempt from the other requirements of 40 CFR § 93 Subpart B.

REGULATORY CONTEXT

AIR QUALITY STANDARDS

The Clean Air Act mandated the establishment of primary and secondary National Ambient Air Quality Standards (NAAQS) for six "criteria" air pollutants: carbon dioxide (CO), nitrogen dioxide (NO_2), ozone, respirable particulate matter (PM—in two size categories, $PM_{2.5}$ and PM_{10}), sulfur dioxide (SO_2), and lead. The primary standards represent levels that are needed to protect the public health, allowing an adequate margin of safety. The secondary standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the environment. The NAAQS are

[1] Federal regulations define applicability analysis as "the process of determining if your Federal action must be supported by a conformity determination." 40 CFR § 93.152

presented in **Table B-1**. The NAAQS for CO, annual NO_2, and 3-hour SO_2 have also been adopted as the ambient air quality standards for New York State, but are defined on a running 12-month basis rather than for calendar years only. New York State also has standards for total suspended particles, settleable particles, non-methane hydrocarbons, 24-hour and annual SO_2, and ozone which correspond to federal standards that have since been revoked or replaced, and for the noncriteria pollutants beryllium, fluoride, and hydrogen sulfide.

Table B-1
National Ambient Air Quality Standards (NAAQS)

Pollutant	Primary		Secondary	
	ppm	µg/m^3	ppm	µg/m^3
Carbon Monoxide (CO)				
8-Hour Average [1]	9	10,000	None	
1-Hour Average [1]	35	40,000		
Lead				
Rolling 3-Month Average [2]	NA	0.15	NA	0.15
Nitrogen Dioxide (NO_2)				
1-Hour Average [3]	0.100	188	None	
Annual Average	0.053	100	0.053	100
Ozone (O_3)				
8-Hour Average [4,5]	0.075	150	0.075	150
Respirable Particulate Matter (PM_{10})				
24-Hour Average [1]	NA	150	NA	150
Fine Respirable Particulate Matter ($PM_{2.5}$)				
Annual Mean [6]	NA	12	NA	15
24-Hour Average [7]	NA	35	NA	35
Sulfur Dioxide (SO_2) [8]				
1-Hour Average[9]	0.075	196	NA	NA
Maximum 3-Hour Average [1]	NA	NA	0.50	1,300

Notes:
ppm – parts per million (unit of measure for gases only)
µg/m^3 – micrograms per cubic meter (unit of measure for gases and particles, including lead)
NA – not applicable
All annual periods refer to calendar year.
Standards are defined in ppm. Approximately equivalent concentrations in µg/m^3 are presented.

(1) Not to be exceeded more than once a year.
(2) EPA has lowered the NAAQS down from 1.5 µg/m^3, effective January 12, 2009. Federal standard is not to be exceeded.
(3) 3-year average of the annual 98th percentile daily maximum 1-hr average concentration. Effective April 12, 2010.
(4) 3-year average of the annual fourth highest daily maximum 8-hr average concentration.
(5) EPA has proposed lowering the primary standard further to within the range 0.060-0.070 ppm, and adding a secondary standard measured as a cumulative concentration within the range of 7 to 15 ppm-hours aimed mainly at protecting sensitive vegetation. A final decision on this standard is currently in review.
(6) 3-year average of annual mean. EPA has lowered the primary standard from 15 µg/m^3, effective March 2013.
(7) Not to be exceeded by the annual 98th percentile when averaged over 3 years.
(8) EPA revoked the 24-hour and annual primary standards, replacing them with a 1-hour average standard. Effective August 23, 2010.
(9) 3-year average of the annual 99th percentile daily maximum 1-hr average concentration.

Source: 40 CFR Part 50: National Primary and Secondary Ambient Air Quality Standards.

NAAQS ATTAINMENT STATUS

When the levels of one or more criteria pollutants in an area exceed the NAAQS, U.S. Environmental Protection Agency (EPA) designates the region as a *nonattainment* area. For *nonattainment* areas, the state is required to develop and implement a State Implementation Plan (SIP), which delineates how the state plans to achieve air quality that meets the NAAQS under the deadlines established by the CAA. Federal regulations designate areas with levels below the NAAQS as *attainment* areas. *Maintenance* areas are those that have previously been designated nonattainment and have been redesignated to attainment for a probationary period through implementation of maintenance plans.

The Bronx is part of a maintenance area for CO and for $PM_{2.5}$. EPA has strengthened the annual average primary standard for $PM_{2.5}$ to 12 $\mu g/m^3$ in December 2012 and will make initial attainment designations for that standard by early 2015. Based on analysis of 2009-2011 monitoring data, on October 2, 2013, New York State recommended that the region be designated as in attainment for the new standard.

The Bronx is also within a non-attainment area for ozone (classified as marginal non-attainment). EPA has designated the entire state of New York as "unclassifiable/attainment" of the 1-hour NO_2 standard effective February 29, 2012. Since additional monitoring is required for the 1-hour standard, areas will be reclassified once three years of monitoring data are available (likely 2017). EPA has established a 1-hour SO_2 standard. Draft attainment designations for the 1-hour SO_2 standard were published by EPA in February 2013, indicating that EPA is deferring action to designate areas in New York State and expects to proceed with designations once additional data are gathered.

CONFORMITY WITH STATE IMPLEMENTATION PLANS

The conformity requirements of the CAA and regulations promulgated thereunder (conformity requirements) limit the ability of federal agencies to assist, fund, permit, and approve projects in non-attainment or maintenance areas that do not conform to the applicable SIP. When subject to these requirements, the lead federal agency is responsible for demonstrating either a basis for exemption or conformity of its proposed action (in the case of the Proposed Project, the federal action is the approval of up to $46.5 million in CBDG-DR funding). Conformity determinations for federal actions related to transportation plans, programs, and projects which are implemented, funded, or approved under title 23 U.S.C. or the Federal Transit Act (49 U.S.C. 1601 et seq.) must be made in accordance with 40 CFR § 93 Subpart A (federal transportation conformity regulations). Conformity determinations for all other federal actions must be made according to the requirements of 40 CFR § 93 Subpart B (federal general conformity regulations). Federal actions funded through the CDBG-DR program are subject to the General Conformity Rule. The Proposed Project must either demonstrate that it is exempt from the provisions of 40 CFR § 93 or that it conforms to the purpose of State Implementation Plans for ozone and Maintenance Plans for $PM_{2.5}$ and CO. For non-exempt projects, a conformity determination is needed for each pollutant of concern in the non-attainment or maintenance area affected by a federal action. Conforming actions would not:

1. Cause or contribute to any new violation of any standard in any area;
2. Interfere with provisions in the applicable SIP for maintenance of any standard;
3. Increase the frequency or severity of any existing violation of any standard in any area; or

4. Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

APPLICABILITY ANALYSIS

According to the regulations, federal actions whose criteria pollutant emissions have already been included in the local SIP's attainment or maintenance demonstrations are assumed to conform to the SIP. Levels of emissions above which a conformity determination must be performed (*de minimis*) levels have been defined for various criteria pollutants and non-attainment or maintenance areas. For the Bronx, the *de minimis* threshold for VOC is 50 tons per year (applicable to marginal and moderate nonattainment inside an ozone transport region). For NOx the threshold is 100 tons per year (applicable to severe ozone nonattainment areas). For CO, the threshold is 100 tons per year (applicable to marginal and moderate nonattainment inside an ozone transport region). For $PM_{2.5}$, the threshold (including both direct and $PM_{2.5}$ precursor emissions) is 100 tons per year (applicable to all nonattainment and maintenance areas), and therefore a conformity determination is not required.

The Proposed Project would result in the rehabilitation and improvement of existing uses. During Proposed Project operation – the continued use of the Roberto Clemente Park – there would be no increase in air pollutant emissions. The construction of the Proposed Project would result in some emissions from on-site construction equipment and the transport of construction materials. However, based on the expected construction activity and construction costs of the Proposed Project and review of emissions and construction costs for projects involving similar types of construction, the Proposed Project would not exceed General Conformity *de minimis* emissions thresholds.

The total construction cost for the Proposed Project would be approximately $54.2 million. Construction would last approximately five years and would include bulkhead replacement, tidal/intertidal habitat creation, and work on the esplanade, as well as the repairs of existing structures and ball fields, soccer field, and soil replacement. The most intense construction activity would occur during the first two years of construction, when the bulkhead would be replaced. The maximum annual expenditure for construction would be approximately $24.5 million, in the first year of construction.

Emissions estimates were prepared for a similar type of (but much larger) CDBG-funded project, the East River Waterfront Esplanade and Piers Project ("Esplanade Project"), and provide a reference point for purposes of making the threshold determination regarding whether criteria pollutants associated with the Proposed Project would be expected to exceed de minimis levels. Peak annual construction costs for the Esplanade Project were expected to be $91 million in 2008, almost four times higher than peak annual construction costs expected for the Proposed Project. Despite the much higher level of construction costs (which are closely correlated with actual construction activity and emissions) associated with the Esplanade Project, the estimated emissions of the criteria pollutants VOC, PM2.5, CO, NOx (precursor of PM2.5 and ozone) and SOx (PM2.5 precursor) were all below current de minimis thresholds for those pollutants. Therefore, emissions from the Proposed Project would also be below the de minimis emission thresholds, and no further analysis under 40 CFR § 93 is required.

O. GREENHOUSE GAS EMISSIONS

Increased greenhouse gas (GHG) emissions are changing the global climate, which is predicted to lead to wide-ranging effects on the environment, including rising sea levels, increases in temperature, and changes in precipitation levels. The Proposed Project would not be expected to result in any significant adverse impacts related to GHG emissions. With the addition of significant native planting and the significant reduction in impervious surfaces, the Proposed Project may reduce GHG emissions during the operation phase. The construction period would result in small GHG emissions.

P. NOISE

The Proposed Project would not generate any additional vehicle trips and would not increase the number of parking spaces at the project site. Consequently, it would not have the potential to result in a significant noise impact (i.e., it would not result in a doubling of Noise Passenger Car Equivalents [Noise PCEs] which would be necessary to cause a 3 dBA increase in noise levels).

Due to the Park's proximity to the heavily-trafficked Major Deegan Expressway, existing and future noise levels at some locations within the Park may exceed the 55 dBA $L_{10(1)}$ noise level guideline included in the CEQR *Technical Manual* for outdoor areas requiring serenity and quiet and/or the 65 dBA L_{dn} acceptable noise-level threshold included in the United States Department of Housing and Urban Development (HUD) noise guidelines. However, noise levels at the project site are comparable to or lower than noise levels in a number of open space areas that are within range of substantial noise sources (ex: roadways, aircraft, etc.), including Hudson River Park, Riverside Park, and Bryant Park. The 55 dBA $L_{10(1)}$ guideline and 65 dBA L_{dn} guideline are worthwhile goals for outdoor areas requiring serenity and quiet; however, due to the level of activity present at most open space areas and parks throughout the city (except for areas far away from traffic and other typical urban activities), these relatively low noise levels are often not achieved. Consequently, noise levels in the Park, while potentially exceeding the applicable guideline thresholds, would not constitute a significant adverse impact.

Q. PUBLIC HEALTH

Public health involves the activities that society undertakes to create and maintain conditions in which people can be healthy. Public health may be jeopardized by poor air quality resulting from traffic or stationary sources, hazardous materials in soil or groundwater used for drinking water, significant adverse impacts related to noise or odors, solid waste management practices that attract vermin and pest populations.

The Proposed Project would not be expected to result in adverse impacts to air quality, water quality, hazardous materials, or noise. No exceedances of federal, state, or city standards would occur as a result of the Proposed Project. Therefore, the Proposed Project would not result in any significant adverse impacts to public health, and no further analysis is warranted.

R. NEIGHBORHOOD CHARACTER

Neighborhood character assessments consider how elements of the environment combine to create the context and feeling of a neighborhood and how a project may affect that context and feeling. These elements include a neighborhood's land use, urban design, visual resources, historic resources, socioeconomic conditions, traffic, and noise.

As analyzed above and in Attachment C, the Proposed Project does not have the potential to result in significant adverse impacts to: land use, zoning, and public policy; socioeconomic conditions; natural resources, open space; historic and cultural resources; urban design and visual resources; shadows; transportation; or noise. Further, the Proposed Project would not result in a combination of moderate effects to several elements that may cumulatively affect neighborhood character. The Proposed Project would result in improvements to Roberto Clemente State Park. Therefore, the Proposed Project would not result in any significant adverse impacts to neighborhood character.

S. CONSTRUCTION

The proposed project would be constructed in three phases (bulkhead/esplanade with tidal/intertidal habitat complex, Lower Plaza, and south stair entrance; ballfields/northern shoreline, and soccer field and placement of soil for landscaping in the southern portion of the project site) within an approximately 60-month construction period. Construction activities associated with the Proposed Project would result in temporary disruption to the surrounding community, including the temporary closure of portions of Roberto Clemente State Park bordering the project site, construction-related traffic from workers and deliveries, and occasional noise and dust. However, this would be true of any construction project and these effects would be considered temporary and not significant.

All appropriate fugitive dust control measures would be employed to reduce the generation and spread of dust. Construction noise is regulated by the New York City Noise Control Code and by the Environmental Protection Agency noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Except under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7 AM and 6 PM. No significant adverse impacts are expected to occur as a result of the construction of the Proposed Project.

While the three phases of the Proposed Project would be constructed over a period of 60 months, the impacts of this construction period would be phased and would impact different parts of the park at different times. The anticipated construction period for bulkhead/esplanade phase would be approximately 20 months. During this time construction would not be occurring simultaneously along the entire 2,076 linear foot bulkhead area; instead it would be phased with construction occurring in sections along the shoreline. The same approach to construction would be true of the northern shoreline phase. Finally the soccer field and southern soil placement phase would be a very short construction phase.

The sheet pile bulkhead would be driven using a variable moment hammer to minimize vibration. The vibration would be limited to a peak particle velocity of 0.5 inches per second, which is the threshold for effects on buildings set by the US Department of Transportation below which construction vibrations are considered to have minimal potential for damage to weak or sensitive structures. During the driving of sheet pile there will be some vibration. Impacts of significance include those to the four high-rise towers in River Park Towers, as well as the underground ConEdison lines that run under the Harlem River and cross through a ConEdison easement in Roberto Clemente State Park within feet of the northernmost portion of sheet pile on the Park's shoreline.

- The River Park Towers buildings are high rises constructed of steel and reinforced concrete; therefore, these buildings would not be considered weak or sensitive and no damage is

expected to occur. Regardless, both pre- and post-construction inspections of these buildings would be conducted, as well as vibration monitoring during construction. It is expected that residents may be able to feel a slight vibration when the machine initially starts and stops, but should not be felt continuously. Construction vibrations with a peak particle velocity of 0.5 is the threshold for effects on humans below which vibrations are considered by the US Department of Transportation to be unacceptable for people exposed to continuous or long-term vibration, which would not be the case here.

- The ConEdison utility lines. Although ConEd easements exist within the vicinity of bulkhead replacement, there would be an estimated six foot clearance between the new sheetpile and the ConEd infrastructure. Using a variable moment hammer, limiting the peak particle velocity to 0.5 inches per second, and conducting vibration monitoring would ensure protection of the ConEd infrastructure. Therefore, installation of the sheet pile bulkhead would not be expected to result in a significant adverse impact on humans, buildings, or the ConEd infrastructure.

Measures would be taken during all three phases to maintain access to as much of the park as possible and to shield the visual impacts of construction.

T. ENVIRONMENTAL JUSTICE

INTRODUCTION

This section identifies minority and low-income populations that could be affected by the Proposed Project and addresses any potential environmental justice concerns. In terms of interested of involved agencies, the Federal Emergency Management Agency (FEMA) is an interested Federal agency for this project. Because the project will be undertaken in a State park, OPRHP is acting as the project's lead agency. The NYSDEC will be involved through the issuance of permits under Articles 15 and 25 of the Environmental Conservation Law, Section 401 Water Quality Certification, and a state pollutant discharge elimination system (SPDES) general permit for the discharge of stormwater from construction activities; and the United States Army Corps of Engineers (USACE) through the issuance of the Nationwide Permit granted for the project (Nationwide Permit 3 (Maintenance), Permit Application File Number NAN-2013-01606-EOF) on February 20, 2014.

REGULATORY CONTEXT

At the federal level, environmental justice analysis is required under Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations." EO 12898 requires "each Federal Agency [to] make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." EO 12898 also requires federal agencies to work to ensure greater public participation by low-income and minority populations in the decision-making process.

The Council on Environmental Quality (CEQ) has oversight of the Federal government's compliance with Executive Order 12898, and has provided guidance for incorporating environmental justice concerns into environmental review in its "Environmental Justice Guidance Under the National Environmental Policy Act (NEPA)" (December 1997).

Certain state agencies, such as the NYSDEC, have developed their own policies for incorporating environmental justice concerns into environmental review. On March 19, 2003,

NYSDEC issued *Commissioner Policy 29 (CP-29), "Environmental Justice and Permitting,"* to address environmental justice concerns and ensure community participation in NYSDEC's permit review process and implementation of the State Environmental Quality Review Act (SEQRA). As set forth in *CP-29*, "Environmental justice means the fair treatment and meaningful involvement of all people regardless of race, color, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies."

The environmental justice analysis for the Proposed Project is consistent with both CEQ and NYSDEC guidance and methodology for incorporating environmental justice concerns into environmental review. The analysis will assist both NYSDEC and the USACE in their permit review processes related to the Proposed Project. The project requires permits from NYSDEC for excavation and fill in navigable waters and tidal wetlands, activities within the tidal wetland adjacent area, a Section 401 Water Quality Certification, and a state pollutant discharge elimination system (SPDES) general permit for the discharge of stormwater from construction activities. The proposed project has received authorization from USACE under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.

METHODOLOGY

The CEQ methodology involves collecting demographic information on the area where the project may cause significant adverse effects; identifying low-income and minority populations in that area using census data; and identifying whether the project's adverse effects are disproportionately high on the low-income and minority populations in comparison with those on other populations. Mitigation measures should be developed and implemented for any disproportionately high and adverse effects. Under NEPA, the potential for disproportionately high and adverse effects on minority and/or low-income populations should then be one of the factors the federal agency considers in making its finding on a project and issuing a Record of Decision.

Following NYSDEC guidance, the environmental justice analysis includes identifying the area that could be affected by potential adverse environmental impacts of the Proposed Project (i.e., establishing a study area) and determining whether those impacts would affect a potential environmental justice area (i.e., assessing whether low-income and/or minority communities are present in the study area). Any adverse environmental impact related to an action must be avoided or minimized to the greatest extent practicable.

METHODOLOGY USED FOR THIS ASSESSMENT

The assessment of environmental justice for the Proposed Project was based on CEQ and NYSDEC guidance, as described above. It involved four basic steps:

1. Identify the area where the project may cause significant and adverse effects (i.e., the study area);
2. Compile race and ethnicity and poverty status data for the study area and identify minority or low-income populations'
3. Identify the Proposed Project's potential significant adverse effects on minority and low-income populations; and

4. Evaluate the Proposed Project's potential significant adverse effects on minority and low-income communities relative to its overall effects to determine whether any potential significant adverse effects on those communities would be disproportionate and, therefore, disproportionately high and adverse.

DELINEATION OF STUDY AREA

For purposes of this study, the project site has been conservatively chosen to include the boundaries of Roberto Clemente State Park, although the project site itself (where the proposed shoreline and park improvements would occur) would occupy a smaller portion (about 16 acres of the parks total of about 25 acres) of the entire park. The study area for this environmental justice analysis was defined to include all census block groups substantially within 1/4-mile of the project site. This area was chosen for analysis because the proposed project is located in a densely populated area within New York City, which also has physical characteristics that serve as barriers separating this area from adjacent areas, including steep slopes to the east of the site, a major highway to the south (the Cross Bronx Expressway [I-95]), the University Heights Bridge and Fordham Road to the north, and the Harlem River to the west. The 1/4-mile study area also encompasses the area where construction trucks would travel on local streets within the area. Additionally, the study area specifically excludes the portion of Manhattan that falls within the 1/4-mile radius of the park, since it is anticipated that the Harlem River would act as a natural barrier that would limit the potential project impacts to areas within the Bronx (see **Figure B-2**).

IDENTIFICATION OF POTENTIAL ENVIRONMENTAL JUSTICE AREAS

The next step in the analysis was to determine whether low-income or minority populations are present in the study area. To identify minority and low-income populations within the study area, demographic information was obtained from the U.S. Census Bureau's *Census 2010* (total population, as well as race and ethnicity data) and the American Community Survey (ACS) 2008-2012 Five-Year Estimates (poverty data). Demographic data were compiled at the census block group level, and aggregated for the study area as a whole. In addition, data were compiled for the Bronx and New York City as a whole, to allow for a comparison of study area characteristics to larger reference areas.

The following definitions were used to identify minority and low-income populations in the study area:

- *Minority populations:* CEQ guidance defines minority as American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic origin; or Hispanic. NYSDEC's policy defines minority populations as including Hispanics, African-Americans or Black persons, Asians and Pacific Islanders, and Native Americans. This analysis also includes as minorities persons who identified themselves as being either "some other race" or "two or more races" in *Census 2010*. Following CEQ guidance, minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. Following NYSDEC guidance, a minority community is a census block group, or contiguous area composed of multiple census block groups, having a minority population equal to or greater than 51.1 percent of the total population in an urban area and 33.8 percent of the total population in a rural area. The project site is located within an environmental justice study area that is defined as an urban area, as established by the U.S.

Census Bureau. For this environmental justice analysis, to be conservative, any census block group or contiguous area composed of multiple census block groups with a minority population equal to or greater than 50 percent was considered to be a minority community.

- *Low-income populations:* CEQ guidance indicates that low-income populations should be identified with the annual statistical poverty thresholds from the U.S. Census Bureau. *CP-29* defines a low-income population as having an annual income below the poverty threshold, as established by the U.S. Census Bureau. In accordance with *CP-29*, this environmental justice analysis defines a low-income community to be a census block group, or contiguous area composed of multiple census block groups, for which the low-income population is equal to or greater than 23.59 percent of the total population.

IDENTIFICATION OF POTENTIAL ENVIRONMENTAL JUSTICE AREAS WITHIN THE STUDY AREA

As shown in **Table B-2**, the entire study area is considered both a minority and low-income community, since both its total minority population and population below poverty level exceed the applicable thresholds (50 percent for minority and 23.59 for low-income). The study area's minority and poverty percentages (98.7 and 32.6 percent, respectively) are higher than in the Bronx (89.1 and 29.3 percent, respectively) and New York City (66.7 and 19.9 percent, respectively). All of the study area's 19 block groups (except Block Group 1 in Census Track 249, which doesn't contain any residents) are considered minority communities, with total minority population percentages ranging from approximately to 95.1 to 99.3 percent. Some of the study area's block groups are also low-income communities.

Table B-2
Study Area Race, Ethnicity, and Poverty Characteristics

Census Tract	Block Group	2010 Population	White	Black	Asian	Other	Hispanic	Total Minority (%)*	Poverty (%)**
53	1	2,592	22	1,427	2	34	1,107	99.2	42.7
53	2	2,077	18	1,094	6	39	920	99.1	53.7
205.01	1	1,315	29	477	0	13	796	97.8	5.1
205.01	2	2,355	16	918	5	39	1,377	99.3	40.6
205.01	3	1,797	20	826	3	30	918	98.9	53.5
205.01	4	1,529	14	395	12	11	1,097	99.1	23.2
205.02	1	1,102	13	205	0	12	872	98.8	40.2
205.02	2	267	13	118	0	1	135	95.1	71.1
205.02	3	395	9	227	3	8	148	97.7	38.3
215.01	2	1,365	13	445	3	10	894	99.0	27.2
215.01	3	727	5	275	7	6	434	99.3	18.7
245.01	2	1,159	15	250	9	10	875	98.7	26.3
245.01	4	1,253	9	184	1	5	1,054	99.3	10.7
245.02	1	1,570	24	512	4	18	1,012	98.5	36.8
245.02	3	1,566	17	379	4	31	1,135	98.9	52.4
247	1	852	15	315	29	9	484	98.2	9.8
247	2	912	24	519	5	26	338	97.4	18.9
249	1	0	0	0	0	0	0	N/A	N/A
257	1	1,912	37	390	4	32	1,449	98.1	33.4
Study Area		**24,745**	**313**	**8,956**	**97**	**334**	**15,045**	**98.7**	**32.6**
Bronx		**1,385,108**	**151,209**	**416,695**	**47,335**	**28,456**	**741,413**	**89.1**	**29.3**
New York City		**8,175,133**	**2,722,904**	**1,861,295**	**1,028,119**	**226,739**	**2,336,076**	**66.7**	**19.9**

Notes: *Total minority includes all persons except for White persons. The race and ethnicity categories provided are further defined as: White (White alone, not Hispanic or Latino); Black (Black or African American alone, not Hispanic or Latino); Asian (Asian alone, not Hispanic or Latino); Other (American Indian and Alaska Native alone, not Hispanic or Latino; Native Hawaiian and Other Pacific Islander alone, not Hispanic or Latino; Some other race alone, not Hispanic or Latino; Two or more races, not Hispanic or Latino); Hispanic (Hispanic or Latino; Persons of Hispanic origin may be of any race).

**Percentage of individuals with incomes below the established poverty level. The U.S. Census Bureau's established income threshold defines the poverty level.

Sources: U.S. Census Bureau, *Census 2010* (race and ethnicity) and *American Community Survey 2008-2012 Five-Year Estimates* (poverty).

POTENTIAL EFFECTS OF THE PROPOSED PROJECT

CEQ's guidance requires that "[a]gencies should recognize that the impacts within minority populations, low-income populations, or Indian tribes may be different from impacts on the general population due to a community's distinct cultural practices." NYSDEC policy requires DEC to consider sources of pollution or similar facility types in the respective airshed, watershed, or wasteshed for the project under consideration, and to describe the existing environmental burden on the potential environmental justice area and evaluate the additional burden of any significant adverse environmental impact on the potential environmental justice area. Based on the impact analyses included in the EAF Attachments, the Proposed Project is not expected to result in any significant adverse impacts on minority or low-income populations.

The approximately 25-acre Roberto Clemente State Park ("Park") is located on the eastern shore of the Harlem River just north of West Tremont Avenue and west of the Major Deegan Expressway (Highway 87) in the Bronx, New York. The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) is proposing improvements within an approximately 16-acre portion of the park (project site) that would include replacement of the existing sheet pile bulkhead that is in critical condition and reconstruction of the adjacent esplanade, creation of a tidal/ intertidal habitat from uplands as part of the bulkhead replacement, enhancements to the Lower Plaza area that will change the nature of this portion of the park from one dominated by hardscape to a landscaped area with increased pervious surfaces, repair of the south stair entrance, regrading and replanting with native plant species on portions of the remaining shoreline that is not stabilized with sheet pile, refurbishment of the existing natural turf baseball field and construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and upland placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the Park from the existing riverfront trail (Proposed Project). The purpose of the Proposed Project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline, allow the re-opening of the closed esplanade following bulkhead repairs, improve recreational facilities offered within the Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.

The Proposed Project would also result in some temporary potential effects during construction, including new truck trips. Most of the construction effects would occur within the park and would not significantly affect the residential populations in the study area, including minority and low-income populations. Any potential construction effects would not be significant.

The sheet pile bulkhead would be driven using a variable moment hammer to minimize vibration. The vibration would be limited to a peak particle velocity of 0.5 inches per second, which is the threshold for effects on buildings set by the US Department of Transportation below which construction vibrations are considered to have minimal potential for damage to weak or sensitive structures. The River Park Towers buildings are high rises constructed of steel and reinforced concrete; therefore, these buildings would not be considered weak or sensitive and no damage is expected to occur. Regardless, both pre- and post-construction inspections of these buildings would be conducted, as well as vibration monitoring during construction. It is expected that residents may be able to feel a slight vibration when the machine initially starts and stops, but should not be felt continuously. Construction vibrations with a peak particle velocity of 0.5 is the threshold for effects on humans below which vibrations are considered by the US

Department of Transportation to be unacceptable for people exposed to continuous or long-term vibration, which would not be the case here. Therefore, installation of the sheet pile bulkhead would not be expected to result in a significant adverse impact on humans or on buildings.

It is estimated that there would be an average of 10-15 workers on the project site during construction. Peak staffing would reach approximately 25 individuals over an eight month period. Although over 50 percent of construction activity would be carried out from the water side via barge, upland area will require vehicular access. The landside construction duration is expected to be 14 months with approximately 280 working days. With an expected five daily truck movements per day, this would equate to a total of 1,400 truck round trips. Significant material delivery would be water born via barge. Construction vehicles would primarily use the Major Deegan Expressway/I-87 for project access. Northbound Exit No. 8 would be utilized from I-87 to enter the local street grid. Vehicles bringing material into the project would proceed from Exit 8 to W. 179th Street, then turning right onto Sedgwick Avenue southbound, and then proceeding on Sedgwick Avenue to the I-87 overpass/West Tremont Avenue. West Tremont Avenue leads directly to the park entrance and the site staging and construction areas. Vehicles leaving the project site would depart out of the area crossing I-87 over W. Tremont Avenue, proceed to turn left onto Cedar Avenue, and continue directly on Cedar Avenue to Exit No. 8 access onto I-87. The truck routes that are anticipated to be used for project construction vehicles are shown in Figure B-3.

The small numbers of daily trucks anticipated to be traveling to and from the site on the highway system during the construction period (less than one truck per hour on weekdays during the construction period) will be insignificant in comparison to the existing volumes of vehicles (trucks and autos) that are found on these highways. Moreover, construction workers tend to travel outside of peak traffic hours. Also, it is anticipated that some workers would carpool or utilize public transit to travel to and from the project site, thereby further reducing the traffic anticipated from construction activities at the site.

All appropriate fugitive dust control measures would be employed to reduce the generation and spread of dust. Construction noise is regulated by the New York City Noise Control Code and by the Environmental Protection Agency noise emission standards for construction equipment. These federal and local requirements mandate that certain classifications of construction equipment and motor vehicles meet specified noise emissions standards. Except under exceptional circumstances, construction activities are limited to weekdays between the hours of 7 AM and 6 PM. No significant adverse impacts are expected to occur as a result of the construction of the Proposed Project.

DISPROPORTIONATELY HIGH AND ADVERSE EFFECTS

Based on CEQ guidance, a disproportionately high and adverse effect on minority and low-income populations means an adverse effect that is predominantly borne by a minority and/or low-income population, or will be suffered by the minority and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect on the general population. As discussed above, the Proposed Project would not result in any significant adverse impacts on minority or low-income populations, and would ultimately result in positive enhancements to the shoreline and park—improved recreational facilities offered within the Park, an enhanced visitor experience along the shoreline of the Harlem River, enhancements to the habitats present within the Park, and the creation of new environmental education opportunities—that could be used and enjoyed by the area's residents, including minority and/or low-income populations residing within the adjacent areas. Therefore, the propose project would

not result in any disproportionately high and adverse effects on potential environmental justice areas.

PUBLIC PARTICIPATION

CEQ's regulations require agencies to make diligent efforts to involve the public throughout the NEPA process. Participation of low-income or minority populations may require adaptive or innovative approaches to overcome potential barriers to effective participation in the decision-making process. Meanwhile, NYSDEC requires permit applicants to actively seek public participation throughout the permit review process. OPRHP is acting as lead agency for the project, since it will be undertaken in a state park; however, OPRHP will be coordinating with several other federal, state and local (New York City) agencies, including the NYC Department of City Planning (DCP) concerning necessary approvals for the project. The project is still in the design stage, and is in the process of seeking approvals from NYSDEC for various permits associated with bulkhead and shoreline improvements proposed. As part of the permitting process, public notification about the permits being sought will be made in the Environmental notice Bulletin (ENB) as well as in local area newspapers, soliciting public input on the project and permitting process.

On December 14, 2006 a public meeting was held to present plans for a series of park improvements, including the renovation of the bulkhead, lower plaza, athletic facilities, and other facilities that have since been renovated. The meeting was well attended by residents of the adjacent River Park Towers, the surrounding community, and elected officials. The meeting was also covered by the local press, including the Bronx Times. The proposed project is still consistent with the uses and recreational types that were discussed at that meeting.

On August 19, 2013, Governor Cuomo issued a press release announcing a $5 million investment from the NY Works initiative to fund improvements to Roberto Clemente State Park's building hot water system, playground, and baseball field. Comments from both Congressman Charles B. Rangel and Bronx Borough President Ruben Diaz Jr. were included in the press release, as well as funding from the Borough President for the lower plaza. State Senator Jose M. Serrano and Assemblywoman Vanessa L. Gibson, also representing the area surrounding the park, were consulted and included in the release as well.

Borough, City, State and Federal agencies have been consulted, updated, and continue to be advised of projects in the Park. OPRHP, as lead agency, has been conducting a coordinated review of the Proposed Project in accordance with the State Environmental Quality Review Act. Involved agencies include the USACE, NYSDEC, NYSDOS, FEMA, Housing Trust Fund Corporation (HTFC), and the New York State Department of Homes and Community Renewal (NYSDHCR). The Army Corps (USACE) approved the project pursuant to the Nationwide General Permit 3 – Maintenance. The State DOS and NYC Planning have approved consistency with State coastal policies and the local Waterfront Revitalization Program based on the project as described in the Joint Application and subsequent submissions of additional information. State Parks has responded to requests for additional information from DEC and is awaiting a Notice of Complete Application.

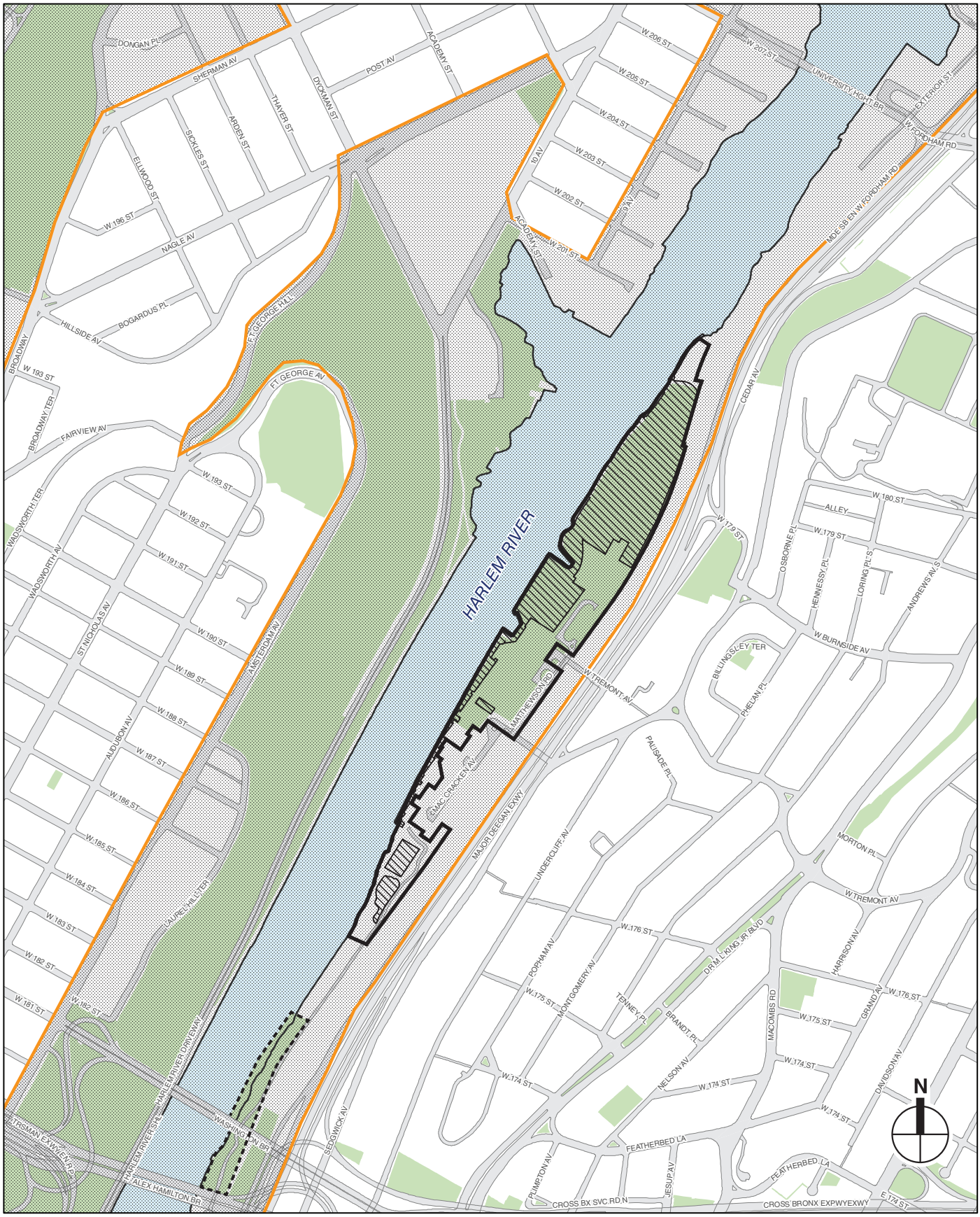
The State's Community Development Block Grant Disaster Recovery (CDBG-DR) action plan, which was created with an element of public participation, includes a section that sets forth how CDBG-DR funds will be utilized as the non-Federal match for public infrastructure and facilities, such as Roberto Clemente State Park. Thus this project is intended for site enhancement through participation of the community.

The owners of the adjacent River Park Towers have been consulted regarding the proposed development. One additional public meeting will be scheduled prior to proceeding with development in order to assure public input. Similar and wider distribution of local notices will be posted and a press release issued prior to the public meetings to be scheduled.

CONCLUSION

The Proposed Project would not result in any disproportionately high and adverse effects on potential environmental justice areas and would be in compliance with all applicable environmental justice protections. ✷

5.7.14



Source: NYC Dept of City Planning, MapPLUTO 11v1, 2011/AKRF

Project Site

Roberto Clemente State Park Boundary

Bridge Park

Coastal Zone Boundary

Open Space

0 400 1000 FEET

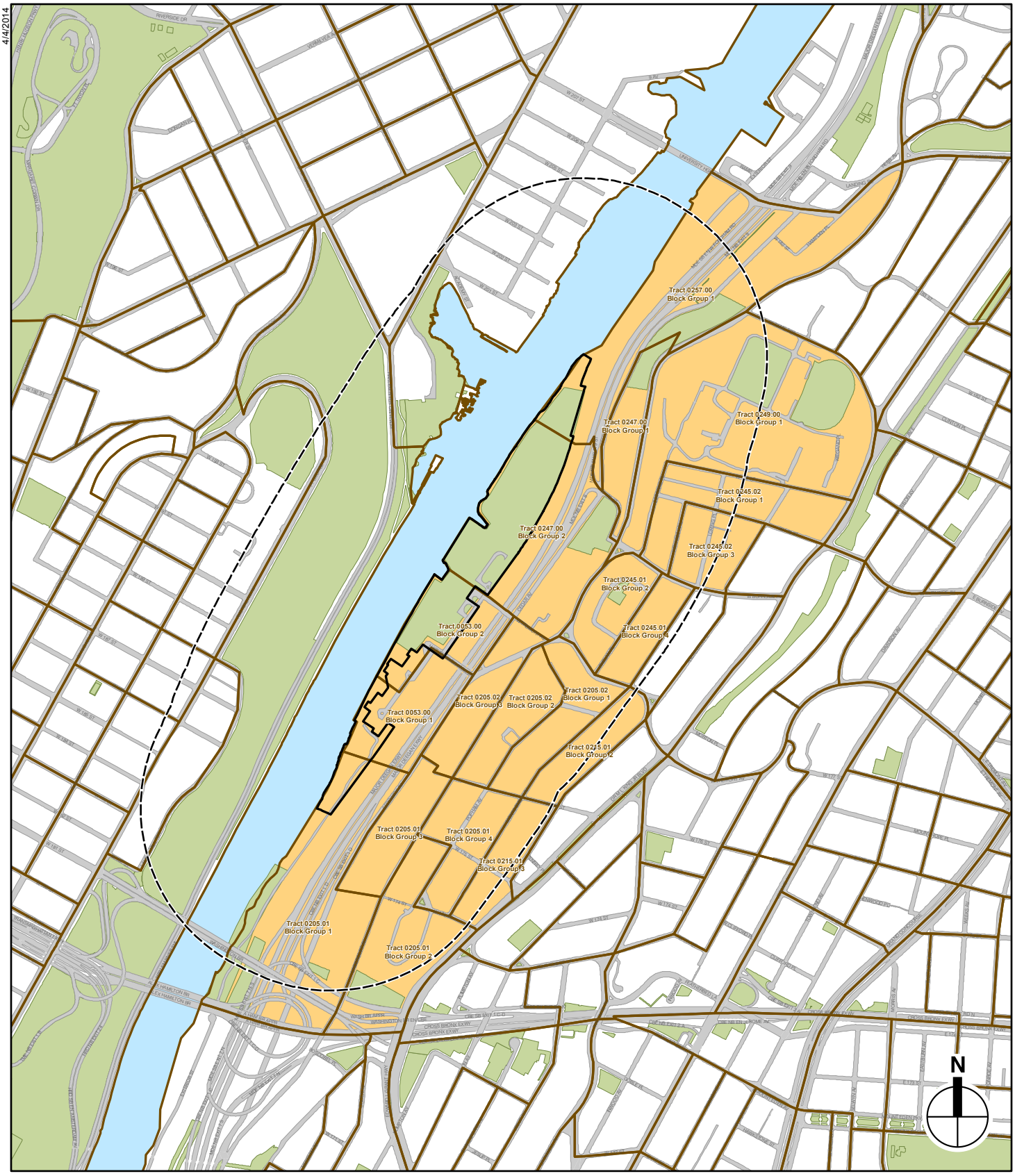
SCALE

ROBERTO CLEMENTE State Park Shoreline and Park Improvements

Coastal Zone Boundary

Figure B-1

4/4/2014



Roberto Clemente State Park

1/4-Mile Study Area

Environmental Justice Study Area Block Groups

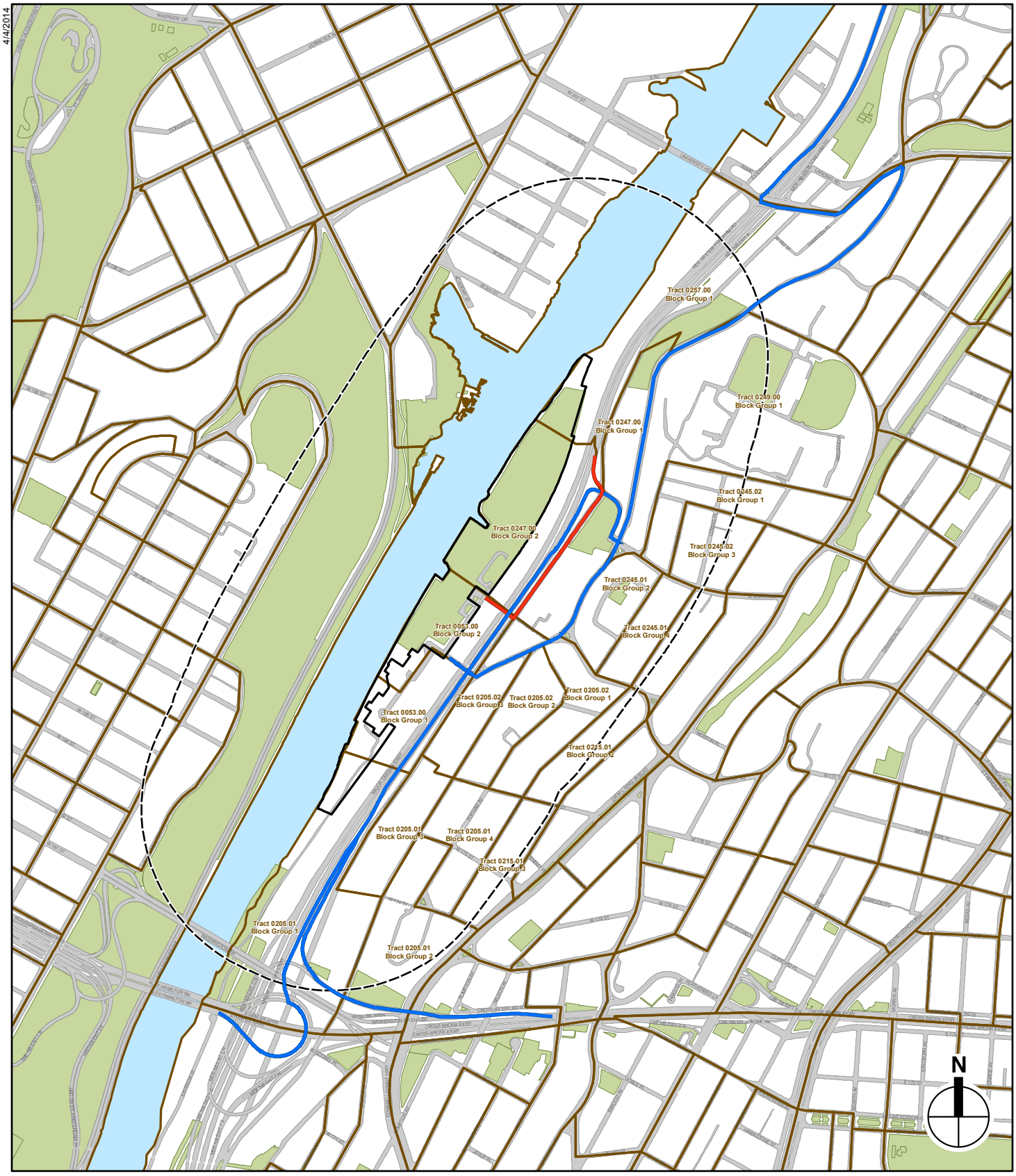
0 1,000 Feet

SCALE

Environmental Justice Analysis

Figure B-2

ROBERTO CLEMENTE State Park Shoreline and Park Improvement



Roberto Clemente State Park

1/4-Mile Study Area

Truck route into site

Truck Route out of site

0 1,000 Feet

SCALE

Environmental Justice Analysis

ROBERTO CLEMENTE State Park Shoreline and Park Improvement

Figure B-3

ATTACHMENT C
NATURAL RESOURCES

Attachment C: Natural Resources

A. INTRODUCTION

This section assesses the potential for the Proposed Project to affect wetlands, ecological communities, and wildlife within the project site. As stated in Attachment A, "Project Description," the project site comprises approximately 16 acres within Roberto Clemente State Park, a 25-acre urban park consisting of maintained landscapes (see **Figure C-1**). Activities with the potential to affect natural resources of the project site include:

- Replacement of approximately 1,926 linear feet of the existing steel sheet pile bulkhead and concrete cap, with new sheet pile bulkhead and reconstruction of the adjacent esplanade along the Harlem River.
- Creation of a tidal/intertidal habitat complex that would comprise a mosaic of intertidal wetlands (high and low marsh), channels, and open water designed to provide a range of water depths throughout the tidal cycle and foster habitat for various species. The complex of tidal/intertidal habitat areas would comprise three tidal/intertidal habitat areas adjacent to the bulkhead and four tidal/intertidal habitat areas adjacent to the eastern boundary of the tidal/intertidal habitat area, along with vegetated intertidal habitat interconnected by stone-lined and earthen tidal channels. In addition, freshwater wetland would be created at the landward side of the tidal/intertidal habitat complex. Runoff from the esplanade area adjacent to the tidal/intertidal habitat would be conveyed to this freshwater wetland via overland flow. Flow from this freshwater wetland will drain through a perforated filtration pipe into the eastern-most tidal/intertidal habitat area to encourage flushing. Runoff from the Lower Plaza area to the east of the tidal/intertidal habitat complex will also be conveyed to the eastern tidal/intertidal habitat areas to encourage flushing. The open water areas will be lined with a layer of geotextile fabric and bedding stone, which will be topped with heavy riprap. The riprap will be designed to resist shoreline erosion. Wave attenuators will be placed within the tidal/intertidal habitat to decrease the wave energy entering the area. The tidal/intertidal habitat complex will have an area of approximately 9,000 square feet and a volume of approximately 678 cubic yards (CY).
- Repair approximately 89 linear feet of eroding concrete gravity wall within the eastern portion of the cove using cast-in place concrete.
- Replacement of approximately 61 linear feet of steel sheet pile bulkhead and concrete steps within the northeast portion of the cove. The replacement sheet pile would be driven about 1.5 feet inland of the existing steel sheet pile that supports the waterward edge of the steps, and the existing sheet pile would be cut to the mudline. The concrete steps, overhanging wood deck and support columns, existing tie rods and concrete deadman system would be removed and new backfill placed behind the new sheet pile to the new paving grade.
- Improvement to the approximately 1.5-acre (65,340-square foot) Lower Plaza area to increase landscaping and pervious surfaces (see **Figures A-2, A-10, and A-11**). Improvements would result in an approximately 25% reduction in impervious area through

the addition of permeable surfaces and planting areas. The majority of the stormwater would be directed from a portion of the Lower Plaza area to the tidal/intertidal habitat complex via subsurface drainage (see **Figure A-11**), with the remainder of captured runoff routed to an existing manhole that connects to an existing Park stormwater outfall. Other improvements include repair and expansion of the barbeque areas, replacement of the gazebo with a new stage structure to serve as a viewing platform for the tidal/intertidal habitat, removal of asphalt and replacement with new pavement surfaces and new planting areas, and maintenance of all healthy trees with a plan for replacement of unhealthy trees over time.

- Repair of the south stair entrance (see **Figure A-2**). The stairs are currently cracked and water is leaking into the room below, which contains electrical infrastructure for the pool. The stairs would be repaired or reconstructed in kind, and some of the electrical infrastructure may be elevated further off the ground.
- Rehabilitation of an existing natural turf baseball field.
- Construction of an approximately 63,000 square foot permeable synthetic turf athletic field, which would include a new 80 linear foot retaining wall along the shoreline above mean high water (MHW) and the replacement of 850-linear feet of a deteriorating 10-foot-wide asphalt path along the shoreline. In addition, invasive species and chain link fencing would be removed along this 850-linear foot section, followed by regarding and replanting with native species (see Attachment A).
- Construction of an approximately 18,000 square foot permeable synthetic turf baseball field within an existing grass covered multi-use field with scattered shade trees.
- Repair of the existing 10,000 square foot maintenance building and repair to the adjacent plaza are being considered to support the activities of the adjacent athletic fields.
- Construction of an approximately 30,000 square foot natural turf soccer fields within an existing grass covered area.
- Placement of topsoil and sand within a 17,200 square foot (0.40 acre) upland area on the southern portion of the project site (see **Figure A-7**), to create a growing medium for installation of native landscaping at the southern pedestrian entrance to the Park along the riverfront. A total of 956 CY of material would be placed, consisting of 8 inches of sand at approximately 425 CY, and 10 inches of topsoil at approximately 531 CY.

In total, the Proposed Project would disturb approximately 16 acres within the Park.

The objectives of this analysis are to:

- Describe existing floodplains, terrestrial (i.e., vegetation, wildlife, threatened or endangered species), and aquatic resources of the project site;
- Project floodplains and natural resource conditions in the future without the Proposed Project;
- Assess the potential effects to floodplains, terrestrial resources, and threatened and endangered species from the Proposed Project; and
- Determine the temporary construction period impacts to aquatic resources from in-water activities associated with the installation of a new steel sheet pile bulkhead and the shoreline improvements.

This chapter concludes that the Proposed Project would not result in any significant adverse impacts to natural resources of the region.

B. METHODOLOGY

The study area for the assessment of terrestrial natural resources analysis is limited to the project site due to the urban land uses of the surrounding area. However, three exceptions were made for the study area for state-listed species and aquatic resources. State-listed species and ecological communities were assessed for a 0.5-mile radius of the project site. With respect to aquatic resources, water quality data were analyzed for the closest New York City Department of Environmental Protection (NYCDEP) Harbor Survey station located in the Harlem River approximately two miles south of the project site and sediments and aquatic biota were examined for both the Harbor Estuary and the Harlem River.

In order to document existing conditions of the project site, a field visit was conducted on June 7, 2011. The field investigation involved walking the project site to record general descriptions of dominant ecological communities and individual flora and wildlife species that were readily observable. In addition to the field investigation, existing conditions were summarized from information identified in literature sources. Existing information sources used in this analysis included the following databases, reports, and maps:

- United States Geological Survey (USGS) — topographic map for the Central Park quadrangle;
- New York State Department of Environmental Conservation (NYSDEC) — Breeding Bird Atlas, tidal and freshwater wetlands maps, Amphibian and Reptile Atlas Project;
- NYCDEP — Harbor Survey data;
- Federal Emergency Management Agency (FEMA) — Flood Insurance maps (2007) and preliminary work maps (2013);
- United States Fish and Wildlife Service (USFWS) — National Wetland Inventory (NWI) maps and species listed under Section 7(a)(2) of the Endangered Species Act (ESA) for Bronx County, NY;
- Ecological Communities of New York State (Edinger et al. (2002); and
- Responses to requests for information on rare, threatened and endangered species or special habitats within the vicinity of the project site.

Potential impacts to natural resources from the Proposed Project were assessed by considering the existing and expected future natural resources at the project site and the potential changes to these natural resources that would occur as a result of the Proposed Project by 2019, the expected build year.

C. EXISTING CONDITIONS

FLOODPLAINS

Figure C-2a presents the effective 100-year (area with a 1 percent chance of flooding each year, Zone AE) and the effective 500-year (area with a 0.2 percent chance of flooding each year, Zone X) floodplain boundaries for the project site. The 100-year flood elevation according to the effective Flood Insurance Rate Maps (FIRMS) is at elevation 10 feet National Geodetic Vertical Datum of 1929, or 8.9 feet North American Vertical Datum of 1988 (NAVD 88). FEMA released new preliminary work maps in June 2013 that precede the future publication of new duly adopted FIRMS. The preliminary work maps represent the Best Available Flood Hazard Data (BAFHD) at this time. FEMA encourages communities to use the BAFHD when making decisions about floodplain management and post-Hurricane Sandy recovery efforts. **Figure C-**

2b presents the FEMA preliminary work map floodplain boundaries for the project site. The 100-year flood elevation on the basis of the BAFHD is at elevation 10 feet NAVD 88. The replacement of the sheet pile bulkhead, shoreline improvements, creation of the tidal/intertidal habitat complex, Lower Plaza area, proposed natural turf soccer field, proposed synthetic turf baseball field, portions of the maintenance building and adjacent plaza, and portions of the existing baseball field renovation and synthetic turf athletic field would be located within the 100-year floodplain, based on the FEMA effective FIRMS. The soil placement area in the southern portion of the project site and the south stair repair would not be located within the 100-year floodplain indicated on the FEMA preliminary work maps. All of the Proposed Project would be located within the effective 500-year floodplain.

WETLANDS

As shown in **Figure C-3**, the Harlem River shoreline within the project site is mapped by NYSDEC as littoral zone tidal wetlands (LZ). LZ wetlands are defined as "[t]he tidal wetland zone that includes all lands under tidal waters which are not included in any other category. There shall be no LZ under waters deeper than six feet at mean low water." These LZ wetlands are also mapped by the NWI as estuarine wetlands with unconsolidated bottoms that have a subtidal water regime (E1UBL) (**Figure C-4**). Substrates of E1UBL wetlands are those that have at least 25 percent cover of particles smaller than stones (less than 2.8 inches), and vegetative cover of less than 30 percent.

As described in Attachment A and shown in **Figures A-2** and **A-4**, the shoreline of the project site includes approximately 1,926 linear feet of deteriorated metal sheet pile bulkhead with a concrete cap (see View 1 of **Figure C-5**), 89 linear feet of concrete gravity wall and approximately 61 linear feet of bulkhead with concrete steps within a cove area, and 850 linear feet of non-engineered riprap. Two New York City Department of Environmental Protection (NYCDEP) combined sewers and five storm sewers are present along the shoreline. The metal sheet pile bulkhead is primarily in the southern portion of the project site along the esplanade in front of the buildings. With the exception of the southern and northernmost portions of the project site, the paved path and esplanade follow the length of the project site and are present at elevations below the 10 foot[1] contour line. Hydrophytic vegetation is not present along this shoreline. Some litter and concrete and demolition debris was observed along the shoreline during the field investigation (see View 2 of **Figure C-5**).

TIDAL WETLANDS – ADJACENT AREAS

Figure C-6 indicates the NYSDEC tidal wetlands adjacent area within the project site (i.e., 150 feet from the landward boundary of the tidal wetland in accordance with 6 NYCRR Part 661). Landcover within the adjacent area on the northern portion of the project site as a result of the Proposed Project would include the replacement path, grass/tree landscaped area, a portion of the refurbished baseball field, a portion of the synthetic turf baseball field, and a portion of the synthetic turf athletic field. Landcover within the adjacent area on the southern portion of the project site as a result of the Proposed Project would include a portion of the soil placement/landscaped area and a portion of the natural turf soccer field.

[1] Vertical elevations are based on Bronx Borough datum (0 ft = -2.67 ft).

TERRESTRIAL RESOURCES

VEGETATION

Ecological communities of the project site would be best described as "terrestrial cultural." Terrestrial cultural communities are those that are "either created and maintained by human activities, or are modified by human influence to such a degree that the physical conformation 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" (Edinger et al. 2002). There are several subsystems of this community and a small number of these are present within the project site including mowed lawn, mowed lawn with trees, flower/herb garden, and paved road/path (see Views 3 through 9 of **Figures C-7** through **C-10**). With the exception of a southern successional hardwoods community, also identified within the project site, all of these subsystems are associated with landscaped portions of the park. Descriptions of each of these communities are provided below.

Mowed Lawn and Mowed Lawn with Trees

A mowed lawn is defined as "land that is dominated by clipped grasses with less than 30 percent cover of trees. There may be ornamental and/or shrubs, but there is usually less than 50 percent cover" (Edinger et al. 2002). A mowed lawn with trees has at least 30 percent cover of trees and usually less than 50 percent shrub ornamental shrub cover (Edinger et al. 2002). These communities are present throughout the project site, particularly in the northern portion of the site where the ball fields are located (see View 3 through 5 of **Figures C-5** and **C-7** through **C-8**, above) and in the southern portion where the soccer field is located (see View 20 of **Figure C-15**). Dominant trees and shrubs of these communities include Norway maple (*Acer platanoides* "Crimson King") and pin oaks (*Quercus palustris*). Other commonly occurring trees in these areas include ash (*Fraxinus* sp.), honey locust (*Gleditsia triacanthos*), eastern white pine (*Pinus strobus*), and Japanese black pine (*Pinus thunbergii*). The majority of the trees that occur within these communities line the paths through the lawn areas of the site. These communities and the species associated with it are very common to urban and suburban areas within the region.

Paved Road/Path Communities

Paved road and paths are those consisting of asphalt, concrete, brick, stone, etc. (Edinger et al. 2002). Impervious surfaces associated with the paths, esplanade, Lower Plaza, and south stair entrance are present throughout the project site (see **Figures C-7 through C-10 and C-12 through C-14**).

Urban Vacant Lot

The area of soil placement at the southern end of the project site near the recently built New York City Department of Parks and Recreation's Bridge Park comprises vacant land (see **Figure A-7)** that is primarily unvegetated.

Flower/Herb Garden

Flower/herb gardens are "residential, commercial, or horticultural land cultivated for the production of ornamental herbs and shrubs" (Edinger et al. 2002). Flower/herb gardens are concentrated in areas closer to buildings. This community contains small planters with small trees and ornamental plants, large row planters along portions of the esplanade with large trees, and tree pits surrounded by brick or concrete/pavement (see **Figures C-9, C-10, C-12, and C-13**). Dominant tree species include stands of silver maple (*Acer saccharinum*), London plane

(*Platanus x acerifolia*), and little-leaf linden (*Tilia cordata*) in picnic areas, and honey locust in tree pits along the esplanade (<~14 inches diameter at breast height [dbh]). Callery pear (*Pyrus calleryana)*, red maple (*Acer rubrum*), cottonwood (*Populus deltoides*), Norway maple (*Acer platanoides*), and oaks (*Quercus* spp), including willow oak (*Quercus phellos*) (a State-listed endangered species that is described in more detail below) are also present in this community in smaller numbers. Small trees in planters include hawthorn (*Crataegus* sp.) and cherry (*Prunus* sp). Commonly occurring non-native plants such as mugwort (*Artemisia vulgaris*), clovers (*Trifolium* spp.), moth mullein (*Verbascum blattaria*), English ivy (*Hedera helix*), bedstraw (*Galium* sp.), and orchard grass (*Dactylis glomerata*) were noted within the overgrown portions of the planters and small pocket gardens.

Successional Southern Hardwoods Community

The successional southern hardwoods community is a broadly defined community with several regional variants. Edinger et al. (2002) defines this community as "a hardwood or mixed forest that occurs on sites that have been cleared or otherwise disturbed. Characteristic trees and shrubs include any of the following: American elm (*Ulmus americana*), slippery elm (*U. rubra*), white ash (*Fraxinus americana*), red maple (*Acer rubrum*), box elder (*Acer negundo*), silver maple (*A. saccharinum*), sassafras (*Sassafras albidum*), gray birch (*Betula populifolia*), hawthorns (*Crataegus* spp.), eastern red cedar (*Juniperus virginiana*), and choke-cherry (*Prunus virginiana*). Certain introduced species are commonly found in successional forests, including black locust (*Robinia pseudo-acacia*), tree- of- heaven (*Ailanthus altissima*), and buckthorn (*Rhamnus cathartica*)." This community occupies a very narrow swath (up to ~12 feet wide) along the non-structured portions of the shoreline (see Views 10 and 11 of **Figures C-10** and **C-11**). Characteristic tree species include pockets where Chinese elm (*Ulmus parvifolia*), mulberry (*Morus alba*), (up to ~36 inches dbh) tree-of-heaven, and black locust dominate the canopy and areas where all of these species are nearly equally distributed. Understory species include poison ivy (*Toxicodendron radicans*), Asiatic bittersweet (*Celastrus orbiculatus*), mugwort, and seedlings and saplings of the canopy species. This community is of low ecological value.

The successional southern hardwoods community is also present along the shoreline in the southern portions of the property in the vicinity of the proposed southern soil placement area and proposed soccer field (see View 11 of **Figure C-11** and View 20 of **Figure C-15**), although a few individuals of native species such as marsh elder (*Iva fructescens*) and pasture rose (*Rosa carolina*) are also present. Other species observed in this area include mulberry saplings, black cherry, staghorn sumac (*Rhus typhina*), willow oak in the shrub and sub-canopy strata, and mugwort, poison ivy, Virginia creeper, holly (*Ilex* sp.), and Japanese knotweed (*Polygonum cuspidatum*) in the shrub and herbaceous layers. This community is of low ecological value.

WILDLIFE

Birds

The New York State Breeding Bird Atlas is an ongoing project to document the distribution of birds breeding throughout the state. The project site is located in Atlas Block 5852D. During the 2000-2005 period a total of 58 species were documented for Block 5852D, 40 of which have been confirmed. With the exception of some commonly occurring birds, most of the species of Block 5852D require much larger and more natural habitats than those present in the project site and within this block, there are portions of large parks that contain woodlands and open habitats including the majority of Inwood Hill Park (~196 acres) and Bronx Park (~718 acres). Inwood Hill Park contains mature forest and salt marsh habitats. Bronx Park is known for some of the

most diverse wildlife in the city (NYCDPR 2011) and is likely where the majority of breeding birds listed for the block were documented. Although Fort Tryon Park (~67 acres), a small section of High Bridge Park (~130 acres), and Crotona Park (~127 acres) are all located within block 5852D, they contain more terrestrial cultural habitats than the larger parks described above. Birds observed during the field investigation are extremely common, disturbance-tolerant, urban birds including European starling (*Sturnus vulgaris*), American robin (*Turdus migratorius*), house sparrow (*Passer domesticus*), Canada goose *(Branta canadensis*), rock pigeon (*Columbia livia*), double-crested cormorant (*Phalacrocorax auritus*), and a mallard (*Aix sponsa*) with chicks. The only species expected to nest within the project site are those that are tolerant of site disturbance and all of the birds noted above, with the exception of the double-crested cormorant, would be expected to breed within the project site. The winter bird community is expected to be similar, with the exception of American robin, double-crested cormorant, and mallard.

Some of the more common migratory bird species that pass through the City during spring and fall may briefly occur in the project site. These include northern parula (*Parula americana*), ovenbird (*Seiurus aurocapillus*), white-throated sparrow (*Zonotrichia albicollis*), ruby-crowned kinglet (*Regulus calendula*), golden-crowned kinglet (*R. satrapa*), dark-eyed junco (*Junco hyemalis*), and American robin. However, the number of individuals of such species occurring in the project site during spring or fall migration is likely to be extremely minimal. Migrants in search of a stopover habitat in this part of the City would be more likely to select a larger, more forested site such as Bronx Park, which offers more suitable stopover habitat than the sports fields, street trees, and impervious surfaces of the project site.

Table C-1 lists the breeding birds that have been documented for Block 5852D.

Mammals

Mammals with the potential to occur on the project site are typical urban species with a high tolerance to human disturbance and none would be dependent upon habitats specific to the project site. Species with the potential to occur include small mammals such as Norway rat (*Rattus norvegicus*), house mouse (*Mus musculus*), moles (*Scalopus* sp.), and gray squirrel (*Sciurus carolinensis*). The gray squirrel was observed during the field investigation.

Reptiles and Amphibians

The NYSDEC Amphibian and Reptile Atlas Project conducted a survey between 1990 and 1999 documenting the geographic distribution of New York's reptiles (i.e., turtles, snakes, and lizards) and amphibians (i.e., frogs, toads, and salamanders). Of the species documented for Bronx County, only one salamander (northern redback [*Plethodon c. cinereus*]) and two snakes (common garter snake [*Thamnophis sirtalis*] and northern brown snake [*Storeria d. dekayi*]) would have the potential to occur within the project site, as all three are common species that are well adapted to residential and urban areas (Gibbs et al. 2007). No reptiles or amphibians were observed on the project site during the field investigation.

Table C-1
Breeding Birds listed for New York State Breeding Bird Atlas Block 5852D

Common Name	Scientific Name
Canada Goose**	*Branta Canadensis*
Mute Swan	*Cygnus olor*
Wood Duck	*Aix sponsa*
Mallard**	*Anas platyrhynchos*
Ring-necked Pheasant	*Phasianus colchicus*
Green Heron	*Butorides virescens*
Black-crowned Night-Heron	*Nycticorax nycticorax*
Cooper's Hawk*	*Accipiter cooperii*
Red-tailed Hawk	*Buteo jamaicensis*
American Kestrel	*Falco sparverius*
Spotted Sandpiper	*Actitis macularius*
Rock Pigeon**	*Columba livia*
Mourning Dove	*Zenaida macroura*
Monk Parakeet	*Myiopsitta monachus*
Eastern Screech-Owl	*Megascops asio*
Great Horned Owl	*Bubo virginianus*
Chimney Swift	*Chaetura pelagic*
Red-bellied Woodpecker	*Melanerpes carolinus*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Northern Flicker	*Colaptes auratus*
Eastern Wood-Pewee	*Contopus virens*
Eastern Phoebe	*Sayornis phoebe*
Great Crested Flycatcher	*Myiarchus crinitus*
Eastern Kingbird	*Tyrannus tyrannus*
Warbling Vireo	*Vireo gilvus*
Red-eyed Vireo	*Vireo olivaceus*
Blue Jay	*Cyanocitta cristata*
American Crow	*Corvus brachyrhynchos*
Fish Crow	*Corvus ossifragus*
Tree Swallow	*Tachycineta bicolor*
Northern Rough-winged Swallow	*Stelgidopteryx serripennis*
Barn Swallow	*Hirundo rustica*
Black-capped Chickadee	*Poecile atricapillus*
Tufted Titmouse	*Baeolophus bicolor*
White-breasted Nuthatch	*Sitta carolinensis*
Carolina Wren	*Thryothorus ludovicianus*
House Wren	*Troglodytes aedon*
Wood Thrush	*Hylocichla mustelina*
American Robin**	*Turdus migratorius*
Gray Catbird	*Dumetella carolinensis*
Northern Mockingbird	*Mimus polyglottos*
European Starling**	*Sturnus vulgaris*
Cedar Waxwing	*Bombycilla cedrorum*
Yellow Warbler	*Dendroica petechia*
Pine Warbler	*Dendroica pinus*
Common Yellowthroat	*Geothlypis trichas*
Chipping Sparrow	*Spizella passerine*
Song Sparrow	*Melospiza melodia*
Northern Cardinal	*Cardinalis cardinalis*
Red-winged Blackbird	*Agelaius phoeniceus*
Common Grackle	*Quiscalus quiscula*
Brown-headed Cowbird	*Molothrus ater*
Orchard Oriole	*Icterus spurious*
Baltimore Oriole	*Icterus galbula*
House Finch	*Carpodacus mexicanus*
American Goldfinch	*Spinus tristis*
House Sparrow**	*Passer domensticus*

Notes: (*) denotes a state-listed "species of special concern; (**) species observed during the field investigation.
Sources: NYSDEC Breeding Bird Atlas 2000-2005

AQUATIC RESOURCES

The Harlem River is a tidal strait that is approximately 6 miles long and 400 feet wide that connects the Hudson and East Rivers. It is part of the New York/New Jersey Harbor Estuary (Harbor Estuary). The water depth of the navigation channel is maintained at 15 feet below mean low water (MLW), except for the area around Spuyten Duyvil where the channel is maintained at 18 feet below MLW. The tidal currents in the Harlem River run in two directions: north and west toward the Hudson River and south and east toward the East River, although this varies with the season. The mean tidal range is 5.1 feet at Hell Gate and 3.6 feet at the confluence with the Hudson River. The current velocity is approximately 2.0 knots, with faster currents occurring in the narrower parts of the channel (USACE 1999).

EXISTING WATER QUALITY CONDITIONS

NYCRR Part 703 includes surface water standards for each use class of New York surface waters. The Harlem River is use classification Class I. Best usages for Class I waters are secondary contact recreation and fishing. Water quality should be suitable for fish survival and propagation. Water quality standards for fecal and total coliform, dissolved oxygen (DO), and pH for Class I waters are as follows (there are no New York State standards for chlorophyll-*a* or water clarity):

- Fecal coliform—Monthly geometric mean less than or equal to 2,000 colonies/100 milliliters (mL) from five or more samples.
- Total coliform—The monthly geometric mean from a minimum of five examinations shall not exceed 10,000 colonies/100 mL.
- DO—Never less than 4 milligrams per liter (mg/L).
- pH—The normal range shall not be extended by more than 0.1 of a pH unit.

The City of New York has monitored the Harbor Estuary water quality with an annual survey (Harbor Survey) for over 95 years. NYCDEP conducts the survey by collecting water samples at stations in four designated regions: Inner Harbor, Upper East River-Western Long Island Sound, Lower New York Bay-Raritan Bay, and Jamaica Bay (NYCDEP 2010b). The project site is within the area designated as the Upper East River-Western Long Island Sound. Every year, NYCDEP produces a report summarizing the results of the current survey and provides a synopsis of recent trends in coliform counts, chlorophyll-*a*, DO, and Secchi transparency.

The results of the Harbor Surveys (NYCDEP 2010b) suggest that the water quality of the Harbor Estuary has improved significantly since the 1970s as a result of measures undertaken by the City. These measures include an effort to eliminate all raw dry-weather sewage discharges, reduce illegal discharges, increase the capture of wet-weather related floatables, and construction or upgrades at the City's 14 wastewater treatment plants (NYCDEP 2010b). The year-round disinfection requirement for discharges to waters within the Interstate Environmental Commission's (IEC) district (including the New York Harbor Estuary) has contributed significantly to water quality improvements in coliform counts since 1989 (IEC 2009).

The following provides a brief summary of the water quality conditions in the sampling region (Upper East River-Western Long Island Sound) of the Harbor Survey, which includes the project site. The closest sampling station (H3) is located to the south of the project site at East 155th Street.

In 2012, salinity measurements collected at the surface during the Harbor Survey (http://www.nyc.gov/html/dep/html/harborwater/harbor_water_sampling_results.shtml) ranged from 23.86 to 29.63 Practical Salinity Units (PSU). Bottom water salinity was generally only slightly greater than top water salinity, ranging from 23.92 to 29.51.

The presence of coliform bacteria in surface waters indicates potential health impacts from human or animal waste, and elevated levels of coliform can result in the closing of bathing beaches and shellfish beds. Overall, fecal coliform concentrations in the New York Harbor Estuary have declined, improving water quality from the early 1970s when levels were routinely well above 2,000 colonies/100 mL. However, temporary increases in fecal coliform concentrations may occur during periods of intense precipitation and runoff due to increased fecal coliform loadings. The summer average fecal concentration in the Upper East River-Western Long Island Sound was 36 cells/100 mL in 2009, which was up slightly from the 2008 average of 22 cells/100mL (NYCDEP 2010b). In general, the results of water quality sampling in 2012 indicated that water quality at the H3 sampling station meets the state standard for fecal coliform (less than or equal to 2,000 colonies/100 mL).). The Harlem River, however, is listed as impaired for fish consumption in the 2012 Final Section 303(d) List of Impaired Waters requiring a Total Maximum Daily Load (TMDL) development (NYSDEC 2013). It is identified as impaired, along with other waters of the Harbor Estuary, for fish consumption because of sediments contaminated with PCBs and other toxics potentially including mercury, dioxins/furans, PAHs, pesticides and other heavy metals. The New York State Department of Health 2010-2011 fish consumption advisory for the Harlem River advises against consumption of channel catfish, gizzard shad, white catfish, crab tomalley (hepatopancreas) and crab cooking liquid. Fish that should only be eaten only once per month include Atlantic needlefish, bluefish, rainbow smelt, striped bass, white perch, carp, and goldfish (NYSDOH 2011).[1]

DO in the water column is necessary for respiration by all aerobic forms of life including fish and invertebrates (e.g., crabs and clams) and zooplankton. The bacterial breakdown of high organic loads from various sources can deplete DO in the water column. Persistently low DO can degrade habitat and cause a variety of sublethal or, in extreme cases, lethal effects. Consequently, DO is one of the most universal indicators of overall water quality in aquatic systems. Although DO levels have steadily improved in the Harbor Estuary since the 1970s, concentrations below the Class I criteria are still occasionally recorded, most often during the summer months. In 2012, summer DO concentrations recorded at Station H3 generally met the standard in bottom waters, with occasionally lows around 2 mg/L up to 7.28 mg/L. DO measurements in surface waters also generally met the standard, ranging from a low of 3.74 up to 9.4 mg/L.

Secchi transparency is a measure of the clarity of surface waters. Transparencies greater than 5 feet are indicative of clear water and less than 3 feet are indicative of turbid water. Decreased clarity can be caused by high suspended solid concentrations or plankton blooms. Secchi transparencies less than 3 feet are generally indicative of poor water quality conditions. Secchi transparency measurements collected at Station H3 in 2012 indicate that water quality in this portion of the Harlem River is impaired by reduced water transparency (i.e., Secchi transparencies of less than 3 feet). The Harlem River is highly turbid, carrying high levels of sediment, organic materials, and other suspended solids.

[1] Scientific names were not included in the advisory.

Chlorophyll-*a* concentrations greater than 20 micrograms per liter (µg/l) are indicative of eutrophication or excessive plant growth. Chlorophyll-*a* levels recorded in 2012 ranged from a low of 1.4 up to a high of 54. µg/l at station H3, with most of the concentrations being over 20 µg/l.

SEDIMENT QUALITY

Sediment samples collected in July 2002 in the Harlem River off of East 129th Street in Manhattan south of project site for another project (Second Avenue Subway), were mostly silt and clay with some sand (FTA and MTA 2003). Typical of any urban watershed, Harbor Estuary sediments, including the Harlem River, are contaminated due to a history of industrial uses. Contaminants found throughout the Harbor Estuary included pesticides such as chlordane and dichlorodiphenyltrichloroethane (DDT), metals such as mercury and copper, and various polycyclic aromatic hydrocarbons. Adams et al. (1998) found the mean sediment contaminant concentration for 50 of 59 chemicals measured to be statistically higher in the Harbor Estuary than other coastal areas on the East Coast. Concentrations of contaminants in the samples taken off of East 129th Street exceeded NYSDEC guidance levels (TAGM #4046 Determination of Soil Cleanup Objectives and Cleanup Levels) for some semi-volatile organic compounds (SVOCs) and heavy metals. No pesticides were detected in any of the samples collected in July 2002, and only one volatile organic compound (VOC) and one polychlorinated biphenyl (PCB) mixture (Aroclor® 1248) were detected in these samples. The VOC and Aroclor® did not exceed NYSDEC guidance levels. While the sediments of the Harbor Estuary are contaminated, the levels of most sediment contaminants have decreased substantially over the past 30 years (Steinberg et al. 2002). Between 1993 and 1998, the percentage of sediment sampling locations with benthic macroinvertebrate communities considered impacted, or of degraded quality, decreased throughout the Harbor Estuary (Steinberg et al. 2004).

AQUATIC BIOTA

The following sections provide a brief description of aquatic biota found within the Harlem River and Harbor Estuary. The descriptions are largely drawn from existing information on the Harbor Estuary's aquatic resources as well as a preliminary benthic and aquatic resource assessment conducted in the interpier areas for another project (Yankee Stadium) in autumn 2003. Because the Harlem River is connected to the Hudson and East Rivers, the aquatic community found within the river would be expected to include species found in the lower Hudson River, East River, and Upper New York Harbor.

Primary Producers

Phytoplankton

Phytoplankton are microscopic plants whose movements within the system are largely governed by prevailing tides and currents. Several species can obtain larger sizes as chains or in colonial forms. Light penetration, turbidity, and nutrient concentrations are important factors in determining phytoplankton productivity and biomass. While nutrient concentrations in most areas of the Harbor Estuary are very high, low light penetration has often precluded the occurrence of phytoplankton blooms.

Resident times of phytoplankton species within the Harbor Estuary are short and species move quickly through the system. Species found in the Harbor Estuary would also likely be present within the waters adjacent to the project site. In a 1993 survey of the New York Harbor Estuary, 29 taxa of phytoplankton were identified, with the diatom *Skeletonema costatum* and the green

algae *Nannochlorus atomus* determined to be the most abundant species at the monitored sites (Brosnan and O'Shea 1995).

Submerged Aquatic Vegetation and Benthic Algae

Submerged aquatic vegetation (SAV) are rooted aquatic plants that are often found in shallow areas of estuaries. They are important because they provide nursery and refuge habitat for fish. Benthic algae are large multicellular algae that occur on rocks, jetties, pilings, and sandy or muddy bottoms. Since these organisms require sunlight as their primary source of energy, the limited light penetration in waters of the Harbor Estuary limits their distribution to shallow areas. No SAV was observed in the Harlem River adjacent to the project site during the field investigation. However, macroalgae was observed on riprap and construction and demolition debris along the shoreline.

Zooplankton

Zooplankton (early life stages of fish, decapods and barnacles; copepods, rotifers, cumaceans, mysid shrimp, and amphipods [Stepien et al. 1981; USACE 1984]) are another integral component of the aquatic food web. They are primary grazers on phytoplankton and detritus material, and are themselves consumed by forage fish such as bay anchovy, as well as commercially and recreationally important species, such as striped bass and white perch, during their early life stages. The most dominant species in the Harbor Estuary include the copepods *Acartia tonsa*, *Acartia hudsonica*, *Eurytemora affinis*, and *Temora longicornis*, with each species being prevalent in certain seasons.

Benthic Invertebrates

Invertebrate organisms that inhabit river bottom sediments as well as surfaces of submerged objects (such as rocks, pilings, or debris) are commonly referred to as benthic invertebrates. These organisms are important to an ecosystem's energy flow because they convert detrital and suspended organic material into biomass and are also integral components of the diets of ecologically and commercially important fish and waterfowl species. Benthic invertebrates also promote the exchange of nutrients between the sediment and water column. They include those that can be retained on a 0.5 millimeter (mm) screen (macroinvertebrates) as well as smaller forms retained on 0.04 - 0.2 mm sieves called meiofauna. Some of these animals live on top of the substratum (epifauna) and some within the substratum (infauna). Substrate type (rocks, pilings, sediment grain size, etc.), salinity, and DO levels are the primary factors influencing benthic invertebrate communities. Currents, wave action, predation, succession, and disturbance also influence the benthic community.

A literature review identified over 180 benthic taxa in the Hudson River, East River, and Upper New York Harbor (PBS&J 1998). Common infaunal macroinvertebrates collected within the Harbor Estuary system include aquatic earthworms, segmented worms, snails, bivalves and soft shell clams, barnacles, cumaceans, amphipods, isopods, crabs and shrimp (EEA 1988; EA Engineering, Science and Technology 1990; NJDEP 1984; Princeton Aqua Science 1985a & 1985b; LMS 1980 & 1984). Epifauna include hydrozoans, sea anemones, flatworms, oligochaete worms, polychaetes, bivalve, barnacles, gammaridean and caprellid amphipods, isopods, sea squirts, hermit crabs, rock crabs, grass shrimp, sand shrimp, blue crabs, mud dog whelks, mud crabs, horseshoe crabs, blue mussels, softshell clams, and sea slugs (EEA 1988; EA Engineering, Science and Technology 1990; Able et al. 1995).

In a 2002 survey conducted in the Harlem River south of the project site near East 129th Street, Second Avenue, Manhattan, large numbers of pollution-tolerant benthic invertebrates (primarily

polychaetes in the families Capitellidae and Spionidae) were collected (FTA and MTA 2003). Pollution-sensitive benthic invertebrate species were also collected, including a snail, an amphipod, and a clam. Other invertebrates collected at the East 129th Street site were shrimp, cumaceans, nemerteans, nematodes, and isopods. Sensitive species were found at all six sampling locations at the East 129th Street site. In addition, rock crabs, polychaete worms, snails and clams were observed during a preliminary survey of the interpier area to the east of the Oak Point Link rail that was conducted in November 2003 for the Gateway Center at Bronx Terminal Market project.

At the project site, vertical surfaces such as riprap, construction and demolition debris, and outfalls may offer some habitat for attached invertebrates such as mussels or barnacles.

Fish

New York City is located at the convergence of several major river systems, all of which connect to the New York Bight portion of the Atlantic Ocean. The finfish community in the Harbor Estuary is typical of large coastal estuaries along the Mid-Atlantic Bight, supporting a variety of estuarine, marine, and anadromous fish species that use the area for spawning habitat, as a migratory pathway, and as a nursery and foraging area. Populations of numerically dominant fish within the Harbor Estuary, such as hogchoker (*Trinectes maculatus*), winter flounder (*Pseudopluronectes americanus*), white perch (*Morone americana*), and striped bass (*Morone saxatilis*), remain relatively stable from year to year (Woodhead 1990).

Estuarine species are year-round residents of the Harbor Estuary and use the different habitats available for shelter and food during various life stages. Examples of estuarine species include Atlantic silverside (*Menidia menidia*), mummichog (*Fundulus heteroclitus*), striped killifish (*Fundulus majalis*), and three-spined stickleback (*Gasterosteus aculeatus*), all of which provide an important forage base for larger predatory fish species (USFWS 1997).

Anadromous fish migrate through the Harbor Estuary on the way to spawning areas in the Hudson River or its tributaries and on their seaward migration out of the estuary. Blueback herring (*Alosa aestivalis*), alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), striped bass, Atlantic tomcod (*Microgadus tomcod*), and Atlantic sturgeon (*Acipenser oxyrhynchus*) are examples of anadromous fish that occur in the estuary (Woodhead 1990). Fish that use the estuary for nursery and forage habitat include striped bass, winter flounder, bluefish, summer flounder (*Paralichthys dentatus*), weakfish (*Cynoscion regalis*), Atlantic menhaden (*Brevoortia tyrannus*), and mullet (*Mugil sp.*) (USFWS 1997).

American eel (*Anguilla rostrata*) is the only catadromous species that occurs in the Harbor Estuary. Eels spawn at sea and the young move into the estuary as elvers in the spring, typically in February and March (EEA 1988). American eels are opportunistic feeders and juveniles eat crustaceans, polychaetes, bivalves and fish (Ogden 1970, Wenner and Musick 1975). They grow slowly and at sexual maturity move down the estuary in the fall and out to sea (Bigelow and Schroeder 1953).

Table C-2 lists fish species that were collected in November 2003 in the interpier area of the Harlem River for the Gateway Center at Bronx Terminal Market project, located down river from the project site.

Table C-2
Fish Identified in Interpier Areas, Autumn 2003

Species	Scientific Name
Blueback herring	*Alosa aestivalis*
Mummichog	*Fundulus heteroclitus*
Atlantic silverside	*Menidia menidia*
Striped bass	*Morone saxatilis*
Winter flounder	*Pseudopluronectes americanus*
Source: AKRF, Inc. et al. (2006).	

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

The Harlem River is not considered Significant Coastal Fish and Wildlife Habitat by New York State Department of State (NYSDOS) (1992). NYSDEC has no current records rare or state listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of the project site (NYSDEC 2011a and 2013) (see **Exhibit 2**). The state-threatened plant Yellow Giant-hyssop (*Agastache nepetoides*) listed as occurring within Bronx County on the New York Nature Explorer data search for Roberto Clemente Park (NYSDEC 2014b) was last confirmed for the county in 1997. Correspondence from NYSDEC regarding the New York Natural Heritage database and results of a data search using the USFWS Information, Planning and Conservation System (IPAC) (see **Exhibit 2**) indicate two federally listed species that may be affected by the project: piping plover (*Charadrius melodus*, threatened), and northern long-eared bat (*Myotis septentrionalis*, proposed endangered) (see **Exhibit 3)** (NYSDEC 2014a; USFWS 2014). NYSDEC determined that the proposed project would have no effect on any listed species (NYSDEC 2014a). National Marine Fisheries Service (NMFS) (2011) indicated that no shortnose sturgeon occur in the Harlem River. While the NMFS (http://www.nero.noaa.gov/protected/section7/guidence/maps/atlanticsturgeon.pdf) identifies the Harlem River as a waterbody accessible to the endangered Atlantic sturgeon (*Acipenser oxyrinchus*) it is not confirmed as being present in the river. In addition, the Breeding Bird Atlas lists one state-listed special concern bird, the Cooper's hawk, as a breeding bird for Block 5852D and NYCDEP lists the state-listed endangered Peregrine falcon as occurring within the City year-round (NYCDEP 2011). Brief descriptions of these species and those for marine turtles and mammals that would only have the potential to occur in the Harlem River as transient individuals are provided below.

PIPING PLOVER

Piping plovers breed on dry sandy beaches, or in areas where dredged sand has been deposited, often near dunes in areas with little or no beach grass (http://www.dec.ny.gov/animals/7086.html). Nesting of piping plovers within New York City is limited to small colonies on Rockaway Peninsula and occasional, individual nesting pairs within the Jamaica Bay complex (Wells 1996, Boretti et al. 2007, Wasilco 2008), many miles from the project site. Piping plovers overwinter along the coast from Texas to North Carolina (http://www.dec.ny.gov/animals/7086.html). Heavy levels of human activity and development at the project site make the area unsuitable habitat for piping plovers, which are highly sensitive to disturbance (Elliot-Smith and Haig 2004). Piping plovers are not considered to have the potential to occur near the project site, and the proposed project would not have significant

adverse impacts on the species or its habitat. No piping plovers were found during the 2011 site visit, nor does suitable habitat for this species exist within the park (Lundgren 2014).

NORTHERN LONG-EARED BAT

The northern long-eared bat is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases - reproduction and hibernation. Northern long-eared bats hibernate in caves or mines during winter and then emerge in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. Summer habitat of the northern long-eared bat generally includes upland and riparian forest within predominantly forested landscapes (Ford et al. 2005, Henderson et al. 2008). The long-eared bat is considered a forest-dependent species that is sensitive to fragmentation and requires interior forest for both foraging and breeding (Foster and Kurta 1999, Broders et al. 2006, Henderson et al. 2008). Although they may occur in urbanized areas (Whitaker et al. 2004, Johnson et al. 2008) and will occasionally utilize buildings and other artificial structures rather than trees for roosting (Timpone et al. 2010, USFWS 2013b), urban northern long-eared bats tend to occur near large, forested parks or other green spaces with abundant tree cover (Johnson et al. 2008).

Until additional occurrence information is gathered, northern long-eared bats are assumed to occur anywhere in New York State. USFWS recommends tree removal to be completed between October 1st and March 31st while northern long-eared bats are still in hibernation to avoid direct impacts during their active season (April through September) (Stilwell 2014). In addition, USFWS recommends retaining standing live trees greater than 12 inches dbh that have exfoliating bark, as well as snags and trees with cavities. Construction guidance would be provided to include these measures to the greatest extent practicable, notwithstanding hazard trees. Due to the urban nature of the park, much of the area would be subject to hazard tree inspection, and OPRHP must remove such trees on an as-needed basis to protect the safety of staff and patrons.

Since the bats rely on feeding in forested hillsides and ridges, it is unlikely there is appropriate habitat for them in the Park. Northern long-eared bats are not considered to have the potential to occur in the area during either the breeding or non-breeding period, and there is little or no potential for effect.

SHORTNOSE STURGEON

The federally- and state-listed endangered shortnose sturgeon is an anadromous bottom-feeding fish that can be found throughout the Hudson River system. These fish spawn, develop, and overwinter in the Hudson River well upriver of its confluence with the Harlem River, and prefer colder, deeper waters for all lifestages. Although larvae can be found in brackish areas of the river, the juveniles (fish ranging from 2 to 8 years old) are predominately confined to freshwater reaches above the downstream saline area. The primary summer habitat for shortnose sturgeon in the middle section of the Hudson River Estuary (far upriver of the Harlem River) is the deep river channel (13 to 42 meters [m] deep, 43 to 138 feet). The river channel downstream of this middle estuary area is 18 to 48 m deep (59 to 157 feet) (Peterson and Bain 2002). Individuals are only expected to use the lower Hudson River when traveling to or from the upriver spawning, nursery and overwintering areas (Bain 2004). Similarly, shortnose sturgeon would only be expected to use the Harlem River when traveling to or from the Hudson River spawning, nursery, or overwintering areas. Because of this species' preference for deeper water, occasional individuals using the Harlem River would only be expected to occur in the navigation channel

located west of the project site. The Harlem River channel is much shallower (15 to 18 feet) than the channel areas of the Hudson River. Therefore, it is unlikely that the shortnose sturgeon would occur within the Harlem River, except as an occasional transient.

ATLANTIC STURGEON

The endangered Atlantic sturgeon is the largest sturgeon found in New York, occasionally weighing over 200 pounds and measuring 6 to 8 feet long (Stegemann 1999). This anadromous species occurs within New York Harbor (Woodhead 1990) and the Hudson River Estuary. In the Hudson River, Atlantic sturgeon are found in the deeper portions and do not occur further upstream than Hudson, New York. Atlantic sturgeon migrate from the ocean upriver to spawn above the salt front from April to early July (Smith 1985, Stegemann 1999). Female sturgeon move out of the river following spawning, but the males may remain in the river until October or November. Therefore, it is unlikely that the Atlantic sturgeon would occur within the Harlem River, except as an occasional transient.

MARINE MAMMALS

Marine mammals use the waters of the New York Bight, and occasionally come into New York Harbor, but are not commonly observed in the Lower Hudson River Estuary. The most commonly observed marine mammal in the Bight is the harbor seal (*Phoca vitulina*) which winters in the Harbor and hauls out onto islands in Jamaica Bay, Sandy Hook, Staten Island, and the Westchester and Connecticut shorelines of Long Island Sound. Less frequently, but seen in similar locations, is the grey seal (*Halichoerus grypus*). A harp seal (*Pagophilus groenlandicus*) was observed within the Hudson River Park in the winter of 2005. The occasional sightings of cetaceans (e.g., dolphins and whales) in the Harbor are generally of individuals that are likely to be unhealthy and/or lost. Historic records indicate the harbor porpoise (*Phocoena phocoena*) may have once been a regular visitor to the Harbor (USFWS 1997).

MARINE TURTLES

Four species of marine turtles—loggerhead (*Caretta caretta*), green (*Chelonia mydas*), Kemp's ridley (*Lepidochelys kempii*), and leatherback (*Dermochelys coriacea)*—all state- and federally-listed (NYSDEC 2010b; USFWS 2010), can occur in the Harbor Estuary. Juvenile Kemp's ridley and large loggerhead turtles enter the New York Harbor and bays in the summer and fall. The other two species, green sea turtle and leatherback sea turtle, are usually restricted to the higher salinity areas of the Harbor (USFWS 1997). In general, however, these four turtles mostly inhabit Long Island Sound and Peconic and Southern Bays. They neither nest in the New York Harbor Estuary, nor reside there year-round (Morreale and Standora 1993). Turtles leaving Long Island Sound for the winter usually do so by heading east to the Atlantic Ocean before turning south (Standora et al. 1990). It is unlikely that these turtle species would occur in the lower Hudson River or Harlem River except as occasional transients.

PEREGRINE FALCON

The peregrine falcon (*Falco peregrines*) is globally widespread and common in many areas (White et al. 2002), but remains listed as endangered in New York as populations continue to recover from declines experienced in the 1960s and 1970s. Peregrine falcons traditionally nest on cliff ledges, but will also commonly nest on bridges, buildings, and other tall artificial structures, often in cities. Peregrine falcons generally prefer open landscapes, particularly for foraging, and occupy similar areas during the breeding and non-breeding periods (White et al. 2002). Although tall buildings border the project site, peregrine falcons are unlikely to use these

buildings for nesting habitat, since better nesting and foraging habitat is located elsewhere in the region.

COOPER'S HAWK

Cooper's hawk (*Accipiter cooperii*) 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 (NYBBA, Curtis et al. 2006), but the species remains a state-listed species of special concern.

Cooper's hawks generally nest in deep interior deciduous and mixed forests, but they are considered relatively tolerant of human disturbance and fragmentation, and are occasionally found nesting in small woodlots and even urban parks (DeCandido and Allen 2005, Curtis et al. 2006). During migration and winter, Cooper's hawks will utilize a variety of forest habitats, ranging from large woodland tracts to agricultural shelter belts and small parks. The project site does not contain deep interior forest that is preferred by Cooper's hawks for nesting, and no Cooper's hawks were observed during the field investigation. The Cooper's hawk is unlikely to nest in the project, particularly since there are more suitable habitats nearby (i.e., Bronx Park).

YELLOW GIANT-HYSSOP

The yellow giant-hyssop (http://www.acris.nynhp.org/report.php?id=9122) is a state-listed threatened plant that is ranked as "S2S3"[1] by NYNHP. In New York, this species is found in a diversity of habitats that include weedy or early-successional areas such as roadsides, railroads, and thickets but also open deciduous woods, meadows, and lowland woods, with many of the known sites being located on limestone-derived soils that support plant species associated with rich sites (NYNHP Conservation Guide – Yellow Giant-hyssop (Agastache nepetoides) http://www.acris.nynhp.org/report.php?id=9122). Habitat for this plant species does not appear to be present within the predominantly landscaped habitats within the project site, or along the shoreline within the primarily invasive plant community. It was not observed during the reconnaissance survey.

WILLOW OAK

The willow oak is a state-listed endangered plant species that 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) (Young 2010). The range of the willow oak is limited to New York City and portions of Long Island as this species is more commonly known to occur south of New York State (USDA 2011). This species occurs mostly on the coastal plain in moist soils or swamps (Gleason and Cronquist 1963). Three willow oaks (~8 to 12 in dbh) were observed in a linear arrangement in raised beds along the esplanade in the vicinity of the Roberto Clemente State Park facilities and office building indicating that these trees were planted. In addition, one smaller willow oak (~4 in dbh) was observed along the shoreline of the southern portion of the site in the vicinity of the existing combined sewer outfall. In personal communication, Julie Lundgren of NYNHP has indicated that, due to the likely planted origin of

[1] S2—Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State. S3—Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

these trees, although the species is state-listed, this would not qualify as an NYNHP rare-species record.

ESSENTIAL FISH HABITAT (EFH)

The NMFS designates EFH within 10-foot by 10-foot squares identified by latitude and longitude coordinates. The project site is within a portion of the Hudson River estuary EFH that is situated in the NMFS 10-foot by 10-foot square with coordinates (North) 40°50.0' N, (East) 73°50.0' W, (South) 40°40.0' N, (West) 74°00.0' W. This square includes the following waters: Manhattan Island, New York City, College Point, NY, Long Island City, NY, Brooklyn, NY, Port Morris, NY, Unionport, NY, Flushing Bay, Astoria, NY, LaGuardia Airport, Badland Island, Rikers Island, Roosevelt Island, Wards Island, and Hells Gate, along with the East River, Harlem River, and the Bronx River. **Table C-3** lists the species and life stages of fish identified as having EFH in the portion of the Hudson River near the project site (NOAA 2010a).

Table C-3
Essential Fish Habitat Designated Species in the Vicinity of the Harlem River

Species	Eggs	Larvae	Juveniles	Adults
Pollock (*Pollachius virens*)			X	X
Red hake (*Urophycis chuss*)		x	X	X
Redfish (*Sebastes fasciatus*)	n/a			
Winter flounder (*Pseudopleuronectes americanus*)	X	x	X	X
Windowpane flounder (*Scopthalmus aquosus*)	X	x	X	x
Atlantic sea herring (*Clupea harengus*)		x	X	x
Bluefish (*Pomatomus saltatrix*)			X	x
Atlantic butterfish (*Peprilus triacanthus*)		x	X	x
Atlantic mackerel (*Scomber scombrus*)			X	x
Summer flounder (*Paralicthys dentatus*)		x	X	x
Scup (*Stenotomus chrysops*)	X	x	X	x
Black sea bass (*Centropristus striata*)	n/a		X	x
King mackerel (*Scomberomorus cavalla*)	X	x	X	x
Spanish mackerel (*Scomberomorus maculatus*)	X	x	X	x
Cobia (*Rachycentron canadum*)	X	x	X	x
Clearnose skate (*Raja eglanteria*)			X	x
Little skate (*Leucoraja erinacea*)			X	x
Winter skate (*Leucoraja ocellata*)			X	x
Sand tiger shark (*Odontaspis taurus*)		x(1)		
Dusky shark (*Charcharinus obscurus*)		x(1)		
Sandbar shark (*Charcharinus plumbeus*)		x(1)		x

Notes:
n/a – insufficient data for this lifestage exists and no EFH designation has been made.
(1) Neither of these species have a free-swimming larval stage; rather they are live bearers that give birth to fully formed juveniles. For the purposes of this table, "larvae" for sand tiger and sandbar sharks refers to neonates and early juveniles.
Source:
National Marine Fisheries Service. "Summary of Essential Fish Habitat (EFH) Designation" posted on the Internet at http://www.nero.noaa.gov/hcd/STATES4/conn_li_ny/40407350.html and
http://www.nero.noaa.gov/hcd/skateefhmaps.htm
National Marine Fisheries Service EFH Mapper accessed online at
http://www.habitat.noaa.gov/protection/efh/habitatmapper.html

D. FUTURE WITHOUT THE PROPOSED PROJECT

WITHIN THE PROJECT SITE

The future without the Proposed Project is a projection of the impact to natural resources in the vicinity of the project site independent of the Proposed Project. In the future without the Proposed Project, the conditions described in the previous sections would remain essentially the same. Along the shoreline, the bulkhead would continue to deteriorate. Terrestrial cultural ecological communities would continue to be maintained and the successional southern hardwoods community would be expected to remain intact. Individual trees would be expected to mature.

OUTSIDE THE PROJECT SITE

There are several proposed and ongoing projects aimed at improving water quality and aquatic resources in the New York/New Jersey Harbor Estuary that have the potential to result in water quality and aquatic habitat improvements in the Harlem River in the vicinity of the project site. These projects are independent of the Proposed Project. Improvements that would result from

these projects, described below, would occur without the Proposed Project and are expected to continue through the construction and operation of the Proposed Project.

NEW YORK/NEW JERSEY HEP PROJECTS

Several of the future water quality improvement efforts in the Lower Hudson River Estuary will be coordinated by the New York/New Jersey Harbor Estuary Program (HEP). The Final HEP Comprehensive Conservation and Management Plan (CCMP) (NY/NJ HEP 1996) includes a number of goals to improve water quality and aquatic resources in the area. The CCMP outlines objectives for the management of toxic contamination, dredged material, pathogenic contamination, floatable debris, nutrients and organic enrichment, and rainfall-induced discharges. The HEP Habitat Workgroup has developed watershed-based priorities for identifying acquisition, protection, and restoration sites for the preservation and enhancement of tidal wetlands that will provide improved habitat for fish and macroinvertebrates as well as the birds, mammals, and reptiles that depend on these habitats. No NY/NJ HEP Acquisition and Restoration Sites have been identified within the vicinity of the project area. NY/NJ HEP Acquisition and Restoration Sites closest to the project area include Inwood Hill Park, Fort Tryon Park, and Fort Washington Park on the northern end of Manhattan and the Little Hell Gate Wetlands on Randalls Island at the confluence of the Harlem and East Rivers. NY/NJ HEP actions taken with respect to these sites will occur with or without the Proposed Project.

The Contamination Assessment and Reduction Project (CARP), sponsored by the Port Authority of New York and New Jersey (PANYNJ), is a component of HEP focused on understanding the fate and transport of contaminants discharged to the estuary, and using this information to develop measures that may be necessary to reduce sediment contamination. The principal chemicals of concern include dioxins/furans, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), metals (mercury, cadmium, and lead), and pesticides (dieldrin and chlordane). Continued research and monitoring programs are anticipated to play a role in the development of future management strategies for Harbor sediments (NY/NJ HEP undated, USACE 1999).

STATE AND REGIONAL PROJECTS

The Hudson-Raritan Estuary Ecosystem Restoration Project is a cooperative project being led by the USACE that was funded by a U.S. House of Representatives Resolution on April 15, 1999. PANYNJ is a co-sponsor of this project. Other agencies involved in this project include United States Environmental Protection Agency (USEPA), USFWS, National Oceanic Atmospheric Administration (NOAA), National Resource Conservation Service (NRCS), New Jersey Department of Environmental Protection (NJDEP), New Jersey Department of Transportation (Office of Maritime Resources), NYSDEC, NYSDOS, NYCDEP, New York City Department of Parks and Recreation (NYCDPR), and the New Jersey Meadowlands Commission. The focus of the study is to identify the actions needed to restore the Hudson-Raritan Estuary and develop a plan for their implementation. The study area for the program includes all the waters of the New York and New Jersey Harbor Estuary and the tidally influenced portions of all rivers and streams that empty into the Harbor Estuary and ecologically influence the Harbor Estuary. The program will identify measures and plans to restore natural areas within the estuary and enhance their ecological value, and address habitat fragmentation, and past restoration and mitigation efforts that were piecemeal in nature. Thirteen initial representative restoration sites in New York and New Jersey have been targeted as the first sites for inclusion as potential restoration projects for feasibility level analysis. It is anticipated that expedited restoration of these representative restoration sites will provide substantial immediate value to the ecosystem. One of the sites is

located at Sherman Creek, to the north and west of the project site, including the small embayment of the Harlem River near Academy Street and Tenth Avenue in Manhattan.

The Comprehensive Port Improvement Plan (CPIP), sponsored by PANYNJ, is a multi-agency plan for implementing economic development and environment improvement decisions for PANYNJ. Among the priority objectives for the plan are the identification and protection of significant habitats, the investigation of innovative best management practices for reduction of non-point sources of water pollutants, and the incorporation of green technologies in port improvement projects.

NYSDEC and NJDEP, in coordination with the Interstate Environmental Commission (IEC), will continue to develop TMDLs and to identify priority waterbodies in bi-annual 305(b) reports to USEPA. TMDLs, once implemented, would reduce the daily inputs of various contaminants in an effort to improve water quality. The State intends to continue water quality improvement projects in the Harbor Estuary for the foreseeable future.

NYCDEP PROJECTS

USEPA's National Combined Sewer Overflow (CSO) Strategy of 1989 requires states to eliminate dry weather overflows of sewers, meet federal and state water quality standards for wastewater discharges, and minimize impacts on water quality, plant and animal life, and human health. CSOs are the largest single source of pollutants and pathogens to the New York Harbor Estuary. NYCDEP has taken numerous steps in recent years to mitigate discharges from CSOs, which, in combination with improvements that have been made to water pollution control plants (WPCPs) are expected to result in future improvement in coliform, DO, and floatables levels in the New York Harbor area. Improvements have included replacing deteriorating and obsolete equipment and pilot-testing new technologies (IEC 2005). These improvements have led to increased wet-weather capture and treatment at WPCPs from just 18 percent in 1989 to 72 percent in 2003 (NYCDEP 2004b). With the introduction of secondary treatment to the Newtown Creek WPCP, the last of the 14 New York City facilities to be upgraded to secondary treatment, is expected to be complete in 2013, all of the WPCPs are expected to be able to meet the Clean Water Act's pollutant removal requirements. The NYCDEP CSO abatement facilities should result in continuing improvement in coliform, DO, nutrients, and floatables in the Harlem River as well as the rest of the Harbor Estuary.

SHERMAN CREEK PARK

Sherman Creek Park is located opposite Roberto Clemente State Park on the Manhattan side of the Harlem River. The New York City Economic Development Corporation (EDC) prepared the *Sherman Creek Waterfront Esplanade Master Plan* in August 2010. Plans for the shoreline north of the project site include wetland and upland restoration, a nature trail, and an environmental center. The restoration activities proposed for the park will improve aquatic and terrestrial habitats and provide habitat connectivity with the proposed Sherman Creek Park, a 1.64-acre site degraded site that would be transformed into a public park, and the south-adjacent Swindler Cove Park.

E. PROBABLE IMPACTS OF THE PROPOSED PROJECT

FLOODPLAINS

As indicated in Figure C-2a the replacement of the sheet pile bulkhead, shoreline improvements, tidal/intertidal habitat complex, Lower Plaza area, proposed natural turf soccer field, proposed

synthetic turf baseball field, portions of the maintenance building and adjacent plaza, and portions of the existing baseball field renovation and synthetic turf athletic field would be located within the effective 100-year floodplain. The southern soil placement and south entrance stair repair are located outside the 100-year floodplain but are within the 500-year floodplain.

Development in floodplains defined by Federal Emergency Management Agency (FEMA) mapping is regulated at the federal level by the Floodplain Management Executive Order 11988 (42 CFR 26951) and National Flood Insurance Act of 1968 (44 CFR § 59). Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

The construction and operation of project elements would not exacerbate flooding conditions near the project site. New York City is affected by local (e.g., flooding of inland portions of the city from short-term, high-intensity rain events in areas with poor drainage), fluvial (e.g., rivers and streams overflowing their banks), and coastal flooding (e.g., long and short wave surges that affect the shores of the Atlantic Ocean, bays such as Upper New York Bay, and tidally influenced rivers and straits such as the Harlem River, streams, and inlets [FEMA 2013]). The floodplain within and adjacent to the project site is affected by coastal flooding, which is influenced by astronomic tide and meteorological forces (e.g., northeasters and hurricanes [FEMA 2013]), and, therefore, would not be affected by the proposed project. The continued use of this portion of the 100-year floodplain for open space areas would not adversely affect the floodplain.

The Proposed Project would include storm resilience elements, such as replacement of the existing degraded sheet pile, the creation of the tidal/intertidal habitat complex, raising electrical infrastructure within the area of disturbance to be above the 100-year flood elevation or waterproofing it where elevating the electrical components is not feasible. The tidal/intertidal habitat complex would be designed to control erosive water velocities and would include wave attenuators. This complex would also receive stormwater runoff from the Lower Plaza area. The Proposed Project does not involve development and would serve to increase the Park's resiliency to future storm events, which would protect the existing 25-acre park and the 1,600 units of low-income housing at the adjacent River Park Towers buildings. Therefore, the Proposed Project would be consistent with Executive Order 11988.

WETLANDS

In accordance with Executive Order 11990, "Protection of Wetlands," federal agencies must avoid undertaking or providing assistance for new construction in wetlands unless there is no practical alternative to such construction and the proposed action includes all practicable measures to minimize harm to the wetland.

As stated above, the Proposed Project would involve the reconstruction of approximately 1,926 linear feet of the existing deteriorating steel sheet pile bulkhead and concrete cap adjacent to the existing esplanade. As described in Attachment A, "Project Description," two types of sheet pile bulkhead replacement have been proposed—placement of new sheet pile bulkhead offshore of the existing bulkhead for approximately 1,370 linear feet in the southern portion of the bulkhead replacement (Type 1), and placement of the new sheet pile bulkhead inshore of the existing bulkhead along with creation of a tidal/intertidal habitat for approximately 556 linear feet at the northern end of the bulkhead replacement (Type 2)(see **Exhibit 1 Sheets 13, 15, and 17**).

The project would also include the repair of approximately 89 linear feet of concrete gravity wall with cast in place concrete and replacement of approximately 61 linear feet of steel sheet pile bulkhead and concrete steps within the cove (see **Figure C-11, Photograph 12 and Exhibit 1 Sheet 10**). The replacement sheet pile would be driven about 1.5 feet in-shore of the existing steel sheet pile that supports the waterward edge of the steps (see **Exhibit 1 Sheet 17**). The existing sheet pile would be cut at the mudline, and the concrete steps, overhanging wood deck and support columns would be removed and new backfill placed behind the new sheet pile to the new paving grade.

The construction of the Type I bulkhead replacement and replacement of the sheet pile, repair of concrete gravity wall, and replacement of the sheet pile and concrete steps within the cove would result in the placement of fill within approximately 3,288 square feet (0.07 acres) of bottom habitat within NYSDEC littoral zone tidal wetlands and aquatic habitat in the Harlem River. However, this minimal loss would be offset by a ratio of 3 to 1 by the 945 square feet of bottom habitat restored through the inboard replacement of sheet pile, and creation of approximately 9,000 square feet of tidal/intertidal habitat from uplands along the shoreline adjacent to the northern portion of the sheet pile bulkhead. Therefore the Proposed Project would result in a net increase of approximately 6,657 square feet of aquatic habitat, some of which would be expected to be littoral zone habitat, and would not result in significant adverse impacts to this type of wetland within this region of New York. Therefore, the Proposed Project would be consistent with Executive Order 11990. Due to access and loading restrictions along the park shoreline, bulkhead construction activities would be performed with construction barges and barge-based cranes and construction equipment.

With the exception of plantings near a new retaining wall (see **Figure A-4**) that would be constructed along an 80 linear foot section of shoreline above MHW, as currently envisioned, all shoreline improvement activities along the approximately 850 linear feet of shoreline with non-structured stabilization would be conducted above the Mean High Water Spring (MHWS) elevation (see **Figure A-8**). However, there is the possibility that, upon further assessment of the shoreline stability that some shoreline improvement activities may be required below MHWS. This project would also include removal of invasive plant species and the existing chain link fence, minimal regrading, replanting with native plant species and installation of a new ornamental fence that would allow unimpaired view of the Harlem River. Particularly in the vicinity of the existing baseball field, the existing riprap would remain in place, but re-grading would take place to ease the top of the slope in order to make it suitable for the installation of habitat enhancing plants at the top and edge of the slope. Within the location of the approximately 80-linear foot section of new retaining wall adjacent to the proposed turf athletic field, invasive species would be removed, the shoreline would be regraded and replanted with native species and a concrete wall with chain link fence installed. During construction of the Proposed Project, implementation of the Stormwater Pollution Prevention Plan, discussed in greater detail below under "Aquatic Resources," would minimize erosion and deposition of soil into surface waters and wetlands of the Harlem River. Potential impacts to wetlands would be minimized through the implementation of measures identified during the permitting process for these shoreline improvements by federal and state agencies. With these measures in place, no significant adverse impacts to wetlands would occur as part of the Proposed Project, and this portion of the Proposed Project would also be consistent with Executive Order 11990.

As indicated in Attachment A, "Project Description," because the synthetic turf athletic field and synthetic turf baseball field would provide some stormwater detention and would also allow some infiltration of stormwater, it should be considered a pervious surface. Therefore, with the

Proposed Project, there would be no change in impervious area within the adjacent area from the 12 percent under the existing condition, and the Proposed Project would comply with the requirement in 6 NYCRR Part 661 that not more than 20 percent of the adjacent area be covered by existing and new structures and other impervious surfaces (see **Figure C-6)**. The pervious area could further increase if it is determined feasible to replace the path with pervious asphalt.

TERRESTRIAL RESOURCES

VEGETATION

As stated above, the majority of the ecological communities of the project site are maintained areas consisting of either impervious surfaces with trees or maintained lawns with trees. Along the esplanade and within portions of the Lower Plaza, these ecological communities would be enhanced by the removal of asphalt and the replacement and expansion of additional planting areas. The enhancement of these areas would require some trees to be removed. However, the loss of these commonly occurring trees would not result in a significant adverse impact to trees of the region. The south stair entrance would be repaired or replaced in kind, with some electrical infrastructure in the room below the stairs raised; these activities would not impact vegetation as this area is currently entirely impervious surface.

The 63,000 square foot synthetic turf athletic field, 18,000 square foot synthetic turf baseball field, and 30,000 square foot natural turf soccer field would be installed in areas currently occupied by mowed lawn with trees. The removal of this lawn and associated trees would result in short-term adverse effects to terrestrial resources but would not result in a significant adverse impact to this ecological community. With respect to individual trees, approximately 24 trees, including pin oaks and Norway maples would be removed as part of the construction of the synthetic turf athletic field. Approximately 18 trees would be removed as part of the construction of the synthetic turf baseball field and approximately 23 trees would be removed as part of the construction of the natural turf soccer field. An additional 10 trees would be removed for the purposes of path re-alignment. These trees are common and the removal of these species as a result of the Proposed Project would not represent a significant adverse impact to trees of the region. Additionally, after construction, 102 trees comprising native species indigenous to this region of New York (see **Table A-1** of Attachment A, "Project Description") would be replanted, replacing those that were removed, resulting in long-term improvements to terrestrial habitat within the park.

Along the shoreline, the invasive species within the successional southern hardwoods community would be selectively removed as part of the shoreline improvements and habitat enhancements, as described above. These losses of non-native and invasive species would not result in a significant adverse impact. Instead, as described above, the replacement with native species, as listed in **Table A-1** of Attachment A, "Project Description," would result in a beneficial impact to the ecological communities of the shoreline. Therefore, the Proposed Project would benefit the ecological communities of the project site.

The placement of sand and topsoil along a portion of vacant land just south of the Park boundary would provide a growing medium for native landscaping. This area is primarily vacant with limited vegetation and the placement of sand and planting medium followed by landscaping would not result in significant adverse impacts to vegetation or wildlife. A silt fence would be used during placement of the material to minimize erosion from the site.

WILDLIFE

In general, the wildlife species expected to occur within the project site are common to urban areas, and the relocation and/or loss of some individuals would not result in a significant adverse impact on the wildlife community of the region. The current vegetative community is limited to maintained ecological communities and a narrow band of successional southern hardwoods consisting of non-native and invasive species. The proposed selective removal of invasive plants along the shoreline and replanting with native plants, as well as replacing the trees removed elsewhere within the project sit with native species would enhance the habitats available on the project site. The proposed plants would be sufficient to provide limited food and shelter for a variety of birds and other wildlife commonly found within urban areas of the region, and the tidal/intertidal habitat may also enhance the habitat for some species. Therefore, the construction and operation of the Proposed Project would not result in significant adverse impacts on wildlife of the region.

AQUATIC RESOURCES

STORMWATER

Because runoff from the project site would be discharged to the surface waters of New York State and more than one acre of land would be disturbed as a result of the Proposed Project, compliance with the New York State Department of Environmental Conservation (NYSDEC) State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity (GP-0-10-001) will be required. In order to obtain coverage under this permit, a Notice of Intent would be submitted to NYSDEC and a SWPPP would be prepared. The SWPPP would include a written narrative describing the project, hydraulic computations of existing and proposed conditions, design of the new or modified stormwater management system, a discussion and quantification of water quality treatment practices, post-construction water quality treatment plans, and erosion and sediment control drawings which will specify temporary practices to be employed during the construction period in accordance with "New York Standards and Specifications for Erosion and Sediment Control."

Improvements within the Lower Plaza area include collection of stormwater runoff through catch basins; runoff would then be piped to four outlets within the tidal/intertidal habitat complex. Stormwater within the esplanade area adjacent to the tidal/intertidal habitat would be directed into a proposed freshwater wetland area and then drain through a perforated filtration pipe into the tidal/intertidal habitat area. Impervious surfaces within the Lower Plaza would be reduced by at least 25 percent by increasing the amount of pervious area in proposed new planted areas and incorporating pervious paving materials. A majority of the existing impervious area within the tidal/intertidal habitat limits would be replaced by the pervious surfaces comprising the tidal/intertidal habitat complex.

Improvements to the Esplanade would result in an approximately 50 percent reduction in impervious surfaces through the use of permeable pavers, planted areas, and rain garden, that will capture runoff from the esplanade. Per a pre-application meeting with NYSDEC held in 2008, the requirements of the Redevelopment Chapter of the New York State Stormwater Management Design Manual can be followed for the reconstruction of the ballfield areas as well as any other areas of the site that are currently paved. Accordingly, stormwater treatment practices will be designed to handle portions of the Water Quality Volume (WQv). Because the runoff from the site will discharge to tidal waters, attenuation of the larger storm events (1, 10, and 100 year, 24 hour storm events) will not be required. Both artificial turf fields would be

designed to provide post-construction stormwater quality and quantity controls, and to discharge to existing Park stormwater outfalls.

BULKHEAD AND SHORELINE IMPROVEMENTS

The installation of the steel sheet pile bulkhead has the potential to result in short-term construction-related impacts to water quality due to increases in suspended sediment and re-suspension of contaminated sediments. Water quality changes associated with these increases in suspended sediment would be expected to be temporary and limited to the immediate area of the activity. Suspended sediments would be expected to dissipate shortly after pile driving is completed and would not result in long-term adverse impacts to water quality. Measures to reduce and control increases in suspended sediment (e.g., silt curtains and erosion control) would be implemented where appropriate and consistent with any additional requirements identified by federal and state agencies during the permitting process. Therefore, no significant adverse impact on water quality as a result of bulkhead installation is expected to occur in the Harlem River.

Aquatic Biota

Compliance with the terms and conditions of the NYSDEC General Permit described above would preclude the potential for significant adverse impacts on water quality and aquatic biota from the discharge of stormwater during construction of the proposed project.

As discussed above, the installation of the Type 1 steel sheet pile bulkhead (i.e., sheet pile bulkhead installed off-shore of the existing bulkhead), installation of sheet pile bulkhead inboard of the existing steel sheet pile that supports the waterward edge of the concrete steps in the cove, and installation of the sheet pile inboard of the existing sheet pile adjacent to the proposed tidal/intertidal habitat complex, have the potential to result in short-term construction related impacts to water quality and aquatic biota that would not be significant. These impacts may include localized increases in suspended sediment and re-suspension of contaminated sediments, temporary loss of fish habitat, and disturbance to benthic communities during the installation of the shoreline stabilization features. Water quality changes associated with these increases in suspended sediment would be expected to be minimal and temporary, limited to the immediate area of the activity (USACE 1993). Measures (e.g., silt curtains and erosion control) would be implemented where appropriate and as identified during the permitting process by federal and state agencies to reduce and control increases in suspended sediment in the vicinity of construction activity. Suspended sediments would dissipate shortly after the shoreline improvements are completed (USACE 1993). Because the increase in suspended sediment would be localized and temporary, no significant adverse impacts would occur to aquatic biota.

As described in Attachment A, “Project Description,” two types of bulkhead replacement have been proposed—placement of new sheet pile bulkhead off-shore of the existing bulkhead for approximately 1,370 linear feet in the southern portion of the bulkhead replacement (Type 1), and placement of the new sheet pile bulkhead inshore of the existing bulkhead along with creation of a tidal/intertidal habitat complex for approximately 556 linear feet at the northern end of the bulkhead replacement (Type 2)(see **Exhibit 1 Sheets 13 and 19)**. The construction of the Type I bulkhead replacement, the replacement of the bulkhead and concrete steps with bulkhead and the repair of the concrete gravity wall within the cove (see **Exhibit 1 Sheets 15 and 17**), would result in the placement of fill (approximately 39,226 cubic feet below mean high water spring (MHWS)) within approximately 3,288 square feet (0.07 acres) of bottom habitat. However, this would be offset by a ratio of 3 to 1 by the 945 square feet of bottom habitat

restored through the inboard replacement of sheet pile, and creation of approximately 9,000 square feet of tidal/intertidal habitat from uplands along the northern portion of the sheet pile bulkhead. Therefore the Proposed Project would result in a net increase of approximately 6,657 square feet square feet of aquatic habitat restored at the project site and would not result in significant adverse impacts to this type of wetland within this region of New York.

The removal of approximately 2,215 square feet of benthic habitat due to the construction of the Type 1 bulkhead installation, and an additional 356 square feet due to the repair of the concrete bulkhead would result in the loss of some benthic macroinvertebrates unable to move from within these footprints. The loss of some macroinvertebrates during the installation of the new bulkhead and concrete bulkhead repair would not result in significant adverse impacts to populations of macroinvertebrates, nor would it significantly impact the food supply for fish foraging in the area. Encrusting organisms and benthic macroinvertebrates would be expected to recolonize the new bulkhead shortly after construction is completed. Additionally, the proposed tidal/intertidal habitat complex would also be expected to provide habitat for encrusting organisms and macroinvertebrates, increasing the diversity of aquatic habitat for benthic macroinvertebrates and fish available within the project site. In general, the greater the physical complexity, the better the aquatic habitat.

ESSENTIAL FISH HABITAT (EFH)

The Proposed Project would not result in any significant adverse impacts to EFH in the Harlem River. As described above, the project would not result in a significant loss of fish habitat or forage species. The replacement of sheet pile bulkhead and 850 linear feet of non-engineered shoreline improvements would be conducted according to federal and state permit requirements to protect water quality and benthic habitat. The net increase in aquatic habitat that would result from the Proposed Project, and the increased diversity of habitat resulting from the creation of the tidal/intertidal habitat complex would be expected to provide some additional habitat for use by aquatic organisms, including EFH species.

ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES

PIPING PLOVER AND LONG-EARED BAT

As presented under *Existing Conditions*, neither piping plovers nor long-eared bats have the potential to occur on or near the project site. Correspondence from NYSDEC dated July 3, 2014 indicates that the proposed project would have effect on these two species.

SHORTNOSE AND ATLANTIC STURGEON

As described above, the Proposed Project would not result in any significant adverse impacts to water or sediment quality or result in a significant loss of fish habitat or benthic invertebrates used for food. Use of the Harlem River channel by shortnose and Atlantic sturgeon, located to the east of the project site would be rare, and only on a transient basis while traveling to spawning areas on the Hudson River. Temporary adverse impacts to water quality resulting from increased suspended sediment or sediment disturbance during the construction period would be limited to the immediate area of activity along the shoreline where the shallow water depths would likely preclude the occurrence of shortnose and Atlantic sturgeon. Furthermore, no significant adverse impacts would occur to the water quality of the Harlem River channel from the construction or operation of the proposed project. Therefore, no significant adverse impacts would occur to the federally- and state-listed endangered shortnose sturgeon and the Atlantic sturgeon.

MARINE MAMMALS

Marine mammals are not commonly observed in the Harbor Estuary or the Harlem River. It is unlikely that marine mammals would occur in the Harlem River unless they were unhealthy and/or lost. Therefore, no significant adverse impacts to marine mammals would occur as a result of the Proposed Project.

MARINE TURTLES

As stated above, federally- and state-listed marine turtles mostly inhabit Long Island Sound and Peconic and Southern Bays and they neither nest in the New York Harbor Estuary, nor reside there year-round. It is unlikely that these turtle species would occur in the Harlem River except as occasional transients. Therefore, no significant adverse impacts would occur to federally- and state-listed marine turtles as a result of the Proposed Project.

PEREGRINE FALCON

Although peregrine falcons are known to occur in New York City year-round, no peregrine falcons are documented as occurring within the project site or breeding within Atlas Block 5852D and no peregrine falcon individuals were observed during the field investigation. In addition, prime peregrine falcon habitat is not present on the project site. Therefore, no significant adverse impacts to the peregrine falcon would occur as a result of the Proposed Project.

COOPER'S HAWK

Although Cooper's hawks are known to breed in Breeding Bird Atlas Block 5852B, no Cooper's hawks are known to occur within the project site and no Cooper's hawk individuals were observed during the field investigation. It is unlikely that this species would occur on the project site due to the larger, high quality habitats available elsewhere within Block 5852D (e.g. Bronx Park). Therefore, no significant adverse impacts to the Cooper's hawk would occur as a result of the Proposed Project.

YELLO GIANT-HYSSOP

Individuals of this species would not be expected to occur within the project site and were not observed during site reconnaissance. Additionally, the most recent record of this species in Bronx County was in 1997. Therefore, the Proposed Project would not be expected to result in significant adverse impacts to this species.

WILLOW OAK

The three willow oak trees present in planters in front of the parks buildings and pool are within the portion of the esplanade that would be redesigned with new pavement, seating, lighting, and plantings. There is also a willow oak located in the vicinity of the southern soil placement area; this tree would not need to be removed. Because the individuals within the esplanade were likely planted the loss of some of these individuals would not adversely affect regional populations of this species.

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5.7.14

Project Site

Roberto Clemente State Park Boundary

Photograph Number and View Direction

0 400 1000 FEET

SCALE

Natural Resources Photograph Key

Figure C-1

5.7.14

Source: FEMA, Digital Flood Insurance Rate Map, 2007

Roberto Clemente State Park Boundary

Project Site

100-Year Floodplain

500-Year Floodplain

0 200 500 FEET

SCALE

FEMA Effective FIRM
Flood Hazard Areas

Figure C-2a

5.7.14

Source: FEMA, Preliminary Work Maps, June, 2013

Roberto Clemente State Park Boundary

Project Site

100-Year Floodplain

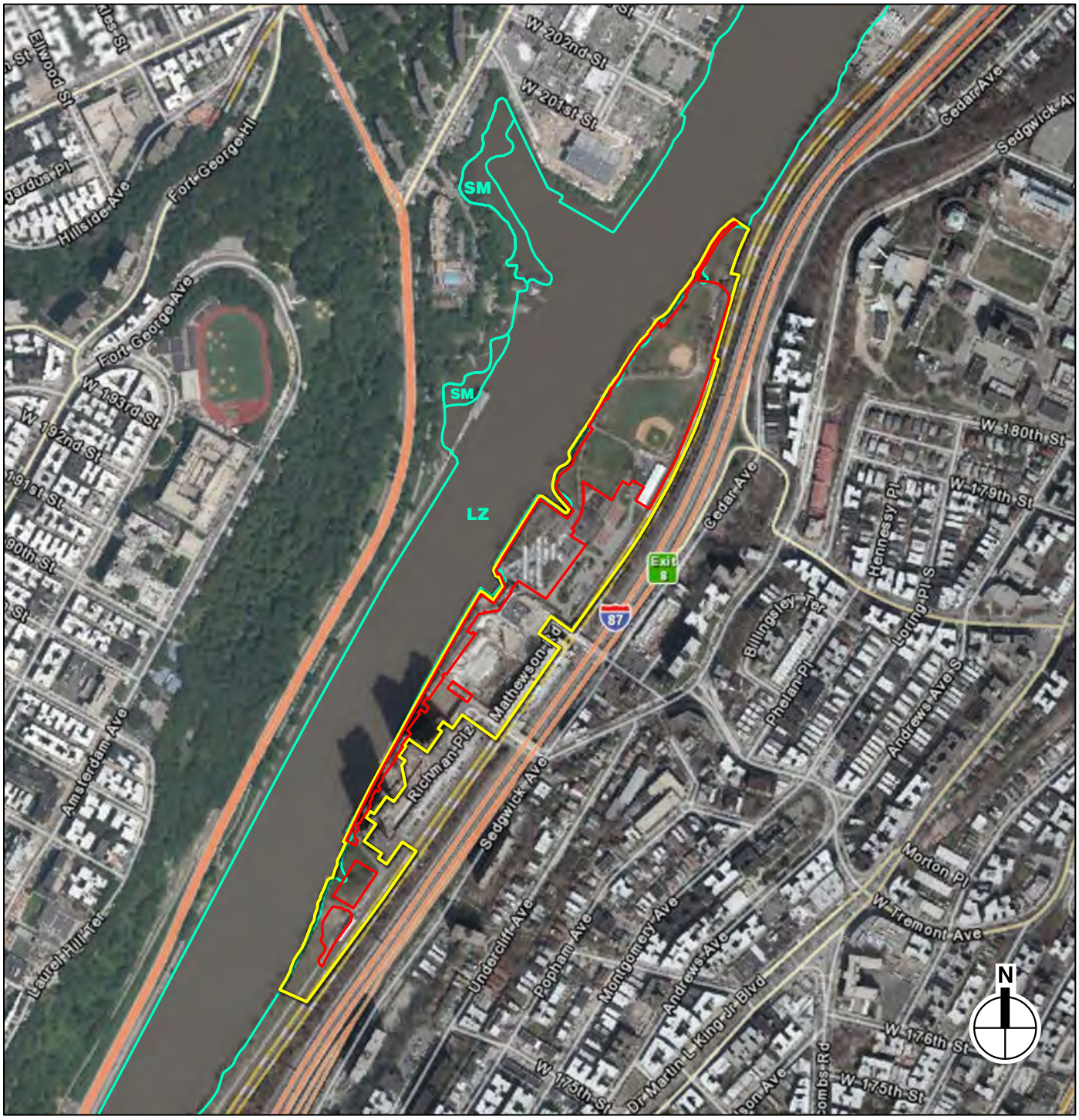
500-Year Floodplain

0 200 500 FEET

SCALE

FEMA Preliminary Work Maps
Flood Hazard Areas
Figure C-2b

5.7.14



0 400 1000 FEET
SCALE

Project Site

Roberto Clemente State Park Boundary

Tidal Wetlands - NYC and Long Island - 1974 (NYSDEC)

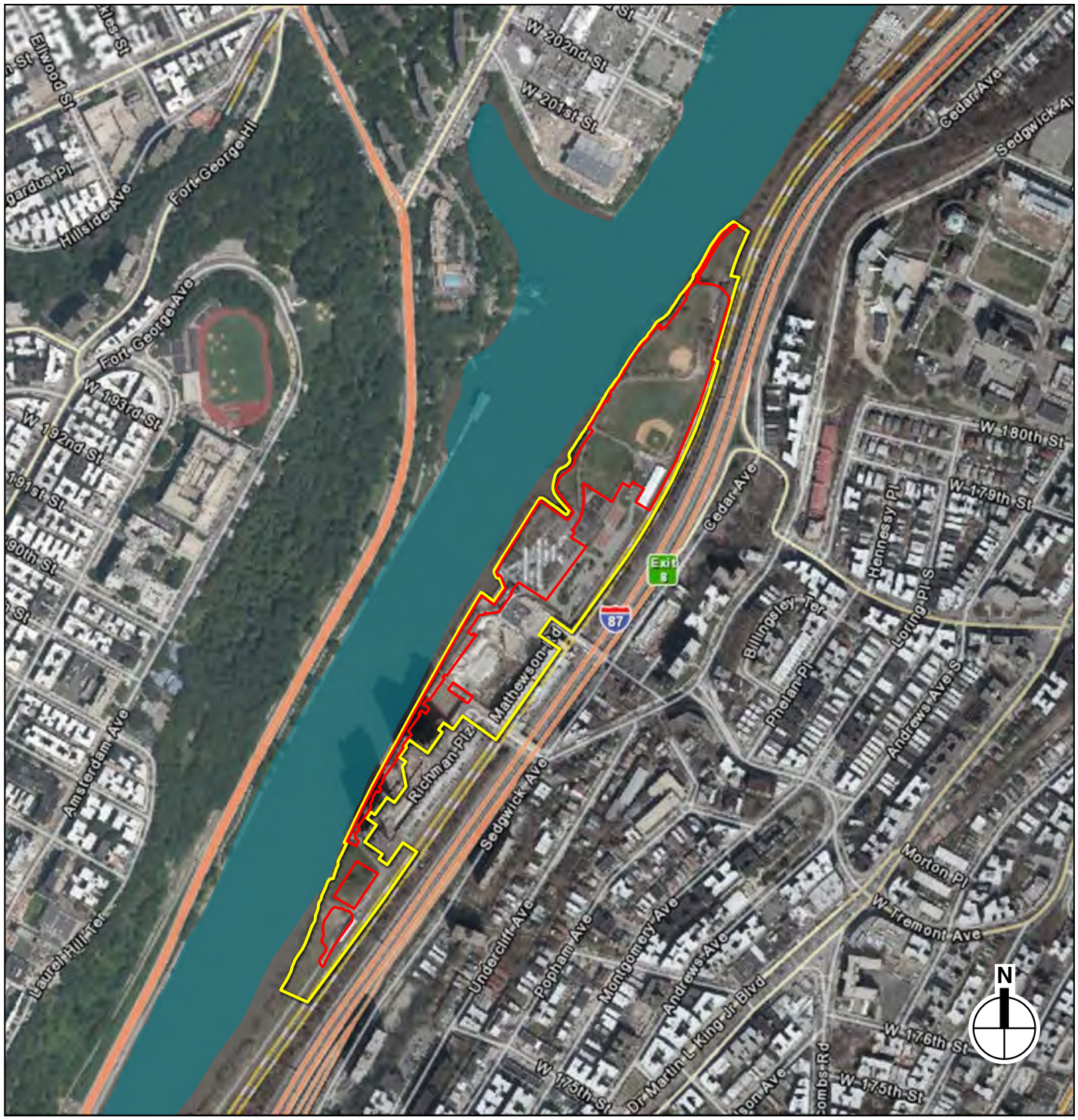
LZ *Littoral Zone*

SM *Coastal Shoals, Bars and Mudflats*

NYSDEC Wetland Zones

Figure C-3

5.7.14



0 400 1000 FEET

SCALE

Project Site

Roberto Clemente State Park Boundary

Estuarine Unconsolidated Bottom Subtidal (E1UBL)

NWI Wetland Zones

Figure C-4

9.6.13

Existing bulkhead with fence and trees **1**

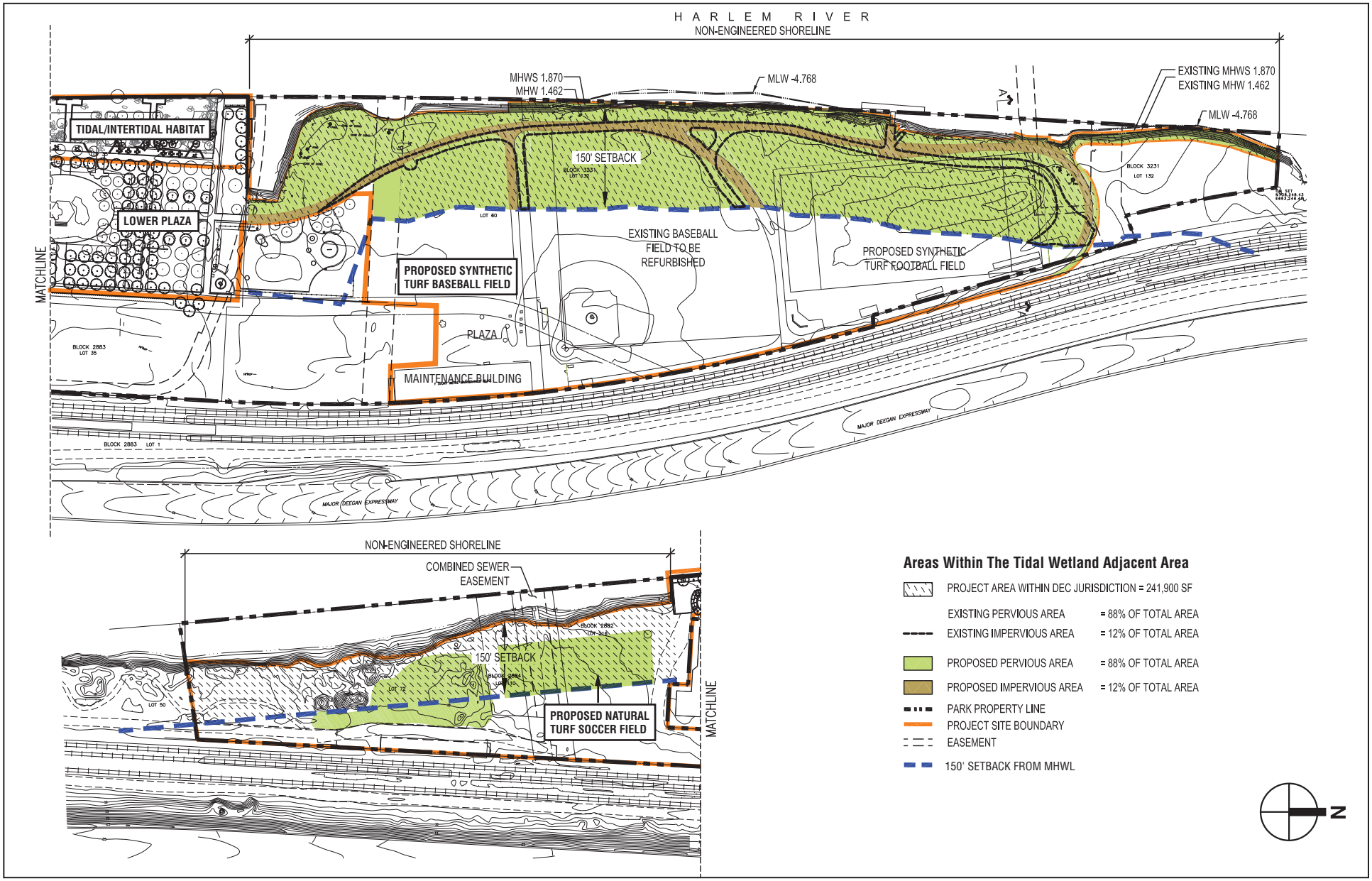
Un-vegetated wetlands of the project site **2**

Natural Resources

ROBERTO CLEMENTE State Park Shoreline and Park Improvements

Figure C-5

7.7.14



Areas Within The Tidal Wetland Adjacent Area

Figure C-6

4.3.14

Mowed lawn near ball fields **3**

Mowed lawn with trees in picnic area **4**

Natural Resources

4.3.14

Mowed lawn in the vicinity of the proposed synthetic turf athletic field **5**

Existing path in the vicinity of the proposed retaining wall of the proposed synthetic turf athletic field **6**

Natural Resources

4.3.14

Mowed lawn with trees and pocket gardens of the picnic area **7**

Planters of the Central Plaza area **8**

Natural Resources

4.3.14

Row planters and tree pits along the esplanade **9**

Successional southern hardwoods community along the shoreline **10**

Natural Resources

4.3.14

Looking south along the shoreline **11**

Looking northeast within the cove at concrete steps **12**

Natural Resource

ROBERTO CLEMENTE State Park Shoreline and Park Improvements

Figure C-11

4.3.14

Looking north across Lower Plaza **13**

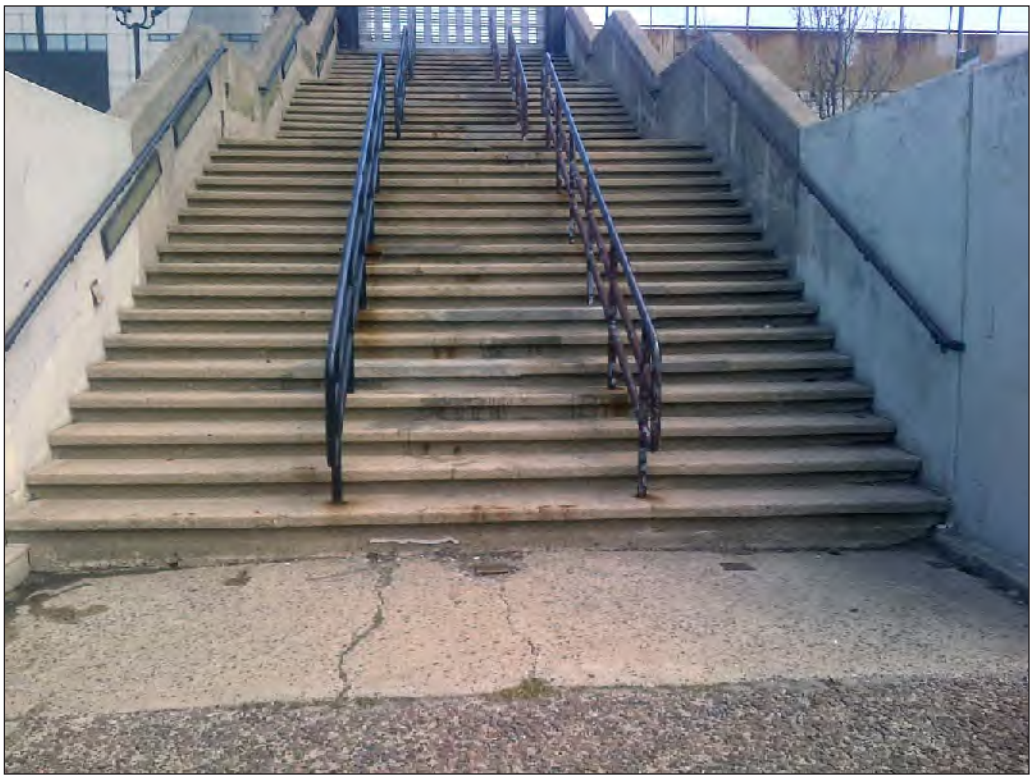
Looking south across Lower Plaza **14**

Natural Resources

Figure C-12

4.3.14

Barbecue area in Lower Plaza **15**



Bottom of south entrance stairs **16**

Natural Resource

Figure C-13

Top of south entrance stairs **17**

Electrical infrastructure in room beneath south stairs **18**

4.3.14

Electrical infrastructure in room beneath south stairs **19**

Looking south across proposed soccer field **20**

Natural Resource

Figure C-15

5.7.14

Looking northeast across proposed artificial turf baseball field toward maintenance building and adjacent plaza **21**

Looking south across proposed artificial turf baseball field toward maintenance building and adjacent plaza **22**

EXHIBIT 2
AGENCY CORRESPONDENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
LONG ISLAND ECOLOGICAL SERVICES FIELD OFFICE
340 SMITH ROAD
SHIRLEY, NY 11967
PHONE: (631)286-0485 FAX: (631)286-4003

Consultation Tracking Number: 05E1LI00-2014-SLI-0013 November 27, 2013
Project Name: Roberto Clemente Statepark

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project.

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment

United States Department of Interior
Fish and Wildlife Service

Project name: Roberto Clemente Statepark

Official Species List

Provided by:

LONG ISLAND ECOLOGICAL SERVICES FIELD OFFICE
340 SMITH ROAD
SHIRLEY, NY 11967
(631) 286-0485

Consultation Tracking Number: 05E1LI00-2014-SLI-0013
Project Type: Shoreline Usage Facilities / Development
Project Description: Bulkhead replacement and shoreline improvment

United States Department of Interior
Fish and Wildlife Service

Project name: Roberto Clemente Statepark

Project Location Map:

Project Coordinates: MULTIPOLYGON (((-73.9251095 40.8491849, -73.9180263 40.8591826, -73.9174255 40.8573325, -73.9251095 40.8491849)))

Project Counties: Bronx, NY | New York, NY

United States Department of Interior
Fish and Wildlife Service

Project name: Roberto Clemente Statepark

Endangered Species Act Species List

Species lists are not entirely based upon the current range of a species but may also take into consideration actions that affect a species that exists in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. Please contact the designated FWS office if you have questions.

northern long-eared Bat *(Myotis septentrionalis)*

Listing Status: Proposed Endangered

Piping Plover *(Charadrius melodus)*

Population: except Great Lakes watershed

Listing Status: Threatened

U.S. Fish and Wildlife Service

Natural Resources of Concern

This resource list is to be used for planning purposes only — it is not an official species list.

Endangered Species Act species list information for your project is available online and listed below for the following FWS Field Offices:

LONG ISLAND ECOLOGICAL SERVICES FIELD OFFICE
340 SMITH ROAD
SHIRLEY, NY 11967
(631) 286-0485

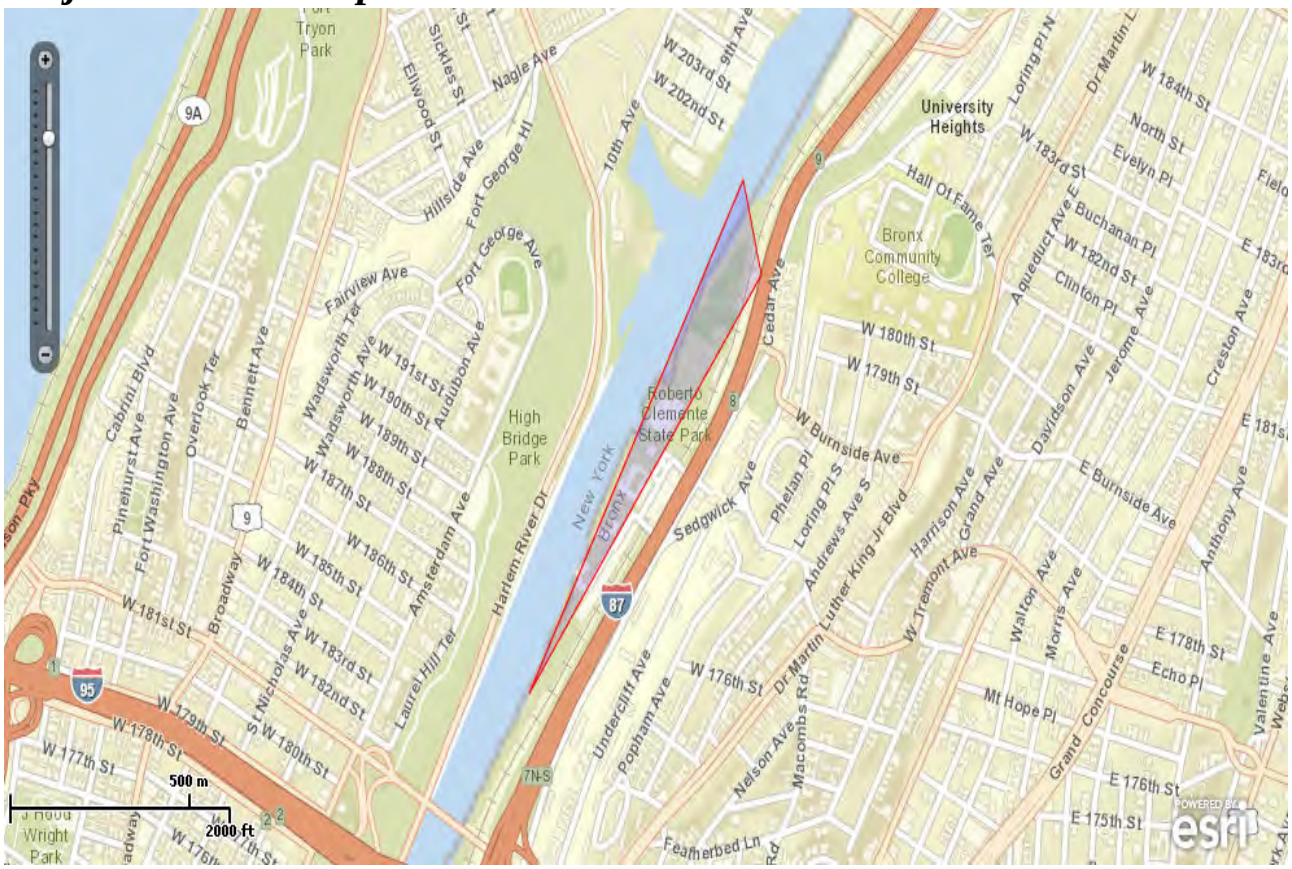
Project Name:

Roberto Clemente State Park

U.S. Fish and Wildlife Service

Natural Resources of Concern

Project Location Map:



Project Counties:

Bronx, NY | New York, NY

Geographic coordinates (Open Geospatial Consortium Well-Known Text, NAD83):

MULTIPOLYGON (((-73.9251095 40.8491849, -73.9180263 40.8591826, -73.9174255 40.8573325, -73.9251095 40.8491849)))

Project Type:

Shoreline Usage Facilities / Development

U.S. Fish and Wildlife Service

Natural Resources of Concern

Endangered Species Act Species List (USFWS Endangered Species Program).

There are a total of **2** threatened, endangered, or candidate species, and/or designated critical habitat on your species list. Species on this list are the species that may be affected by your project and could include species that exist in another geographic area. For example, certain fishes may appear on the species list because a project could cause downstream effects on the species. Please contact the designated FWS office if you have questions.

Species that may be affected by your project:

Birds	Status	Species Profile	Contact
Piping Plover (*Charadrius melodus*) Population: except Great Lakes watershed	Threatened	species info	Long Island Ecological Services Field Office
Mammals			
northern long-eared Bat (*Myotis septentrionalis*) Population:	Proposed Endangered	species info	Long Island Ecological Services Field Office

FWS National Wildlife Refuges (USFWS National Wildlife Refuges Program).

There are no refuges found within the vicinity of your project.

FWS Migratory Birds (USFWS Migratory Bird Program).

Most species of birds, including eagles and other raptors, are protected under the Migratory Bird Treaty Act (16 U.S.C. 703). Bald eagles and golden eagles receive additional protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668). The Service's Birds of Conservation Concern (2008) report identifies species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become listed under the Endangered Species Act as amended (16 U.S.C 1531 et seq.).

Migratory bird information is not available for your project location.

U.S. Fish and Wildlife Service

Natural Resources of Concern

NWI Wetlands (USFWS National Wetlands Inventory).

The U.S. Fish and Wildlife Service is the principal Federal agency that provides information on the extent and status of wetlands in the U.S., via the National Wetlands Inventory Program (NWI). In addition to impacts to wetlands within your immediate project area, wetlands outside of your project area may need to be considered in any evaluation of project impacts, due to the hydrologic nature of wetlands (for example, project activities may affect local hydrology within, and outside of, your immediate project area). It may be helpful to refer to the USFWS National Wetland Inventory website. The designated FWS office can also assist you. Impacts to wetlands and other aquatic habitats from your project may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal Statutes. Project Proponents should discuss the relationship of these requirements to their project with the Regulatory Program of the appropriate U.S. Army Corps of Engineers District.

The following wetlands intersect your project area:

Wetland Types	NWI Classification Code	Approximate Acres
Estuarine and Marine Deepwater	E1UBL	502403.528792

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
NORTHEAST REGION
55 Great Republic Drive
Gloucester, MA 01930-2276

SEP 13 2011

Aubrey McMahon
AKRF
7250 Parkway Drive
Suite 210
Hanover, Maryland 21076

Re: Roberto Clemente State Park

Dear Ms. McMahon,

This is in response to your letter dated September 1, 2011, requesting information on the presence of species listed by NOAA's National Marine Fisheries Service (NMFS) in the vicinity of the proposed Roberto Clemente State Park Bulkhead Repair Project located along the Harlem River in the Bronx, New York.

While a population of the federally endangered shortnose sturgeon (*Acipenser brevirostrum*) is recognized to exist in the Hudson River, no shortnose sturgeon occur within the Harlem River. No other federally listed or proposed threatened or endangered species and/or designated critical habitat for listed species under the jurisdiction of the NOAA's National Marine Fisheries Service (NMFS) are known to exist in the Harlem River. Therefore, no further coordination with NMFS is required. Should project plans change or new information become available that changes the basis for this determination, further coordination should be pursued. If you have any questions about these comments, please contact Danielle Palmer at (978)282-8468.

Sincerely,

Mary A. Colligan
Assistant Regional Administrator
for Protected Resources

File Code: Sec 7 no species present 2011

Appendix A

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Martens
Commissioner

September 19, 2011

Aubrey McMahon
A K R F Environmental and Plan. Consultants
7250 Parkway Drive, Suite 210
Hanover, MD 21076

Dear Mr. McMahon:

In response to your recent request, we have reviewed the New York Natural Heritage Program database, with respect to an Environmental Assessment for the proposed Shoreline Stabilization Project at Roberto State Park, area as indicated on the map you provided, located in Bronx County.

We have no records of rare or state listed animals or plants, significant natural communities or other significant habitats, on or in the immediate vicinity of your site.

The absence of data does not necessarily mean that rare or state-listed species, natural communities or other significant habitats do not exist on or adjacent to the proposed site. Rather, our files currently do not contain information which indicates their presence. For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environmental assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

This response applies only to known occurrences of rare or state-listed animals and plants, significant natural communities and other significant habitats maintained in the Natural Heritage Data bases. Your project may require additional review or permits; for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

Sincerely,

Jean Pietrusiak

Jean Pietrusiak, Information Services
NYS Department Environmental Conservation

Enc.
cc: Region 2

909

EXHIBIT 3
NYSDEC NY NATURAL HERITAGE DATABASE CONSULTATION

New York State Department of Environmental Conservation
Division of Fish, Wildlife and Marine Resources
Bureau of Wildlife, 5th Floor
625 Broadway, Albany, New York 12233-4755
Phone: (518) 402-8919 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Joe Marter
Commissior

Pamela Otis, Director
Environmental Management
NY State Office of Parks, Recreation and Historic Preservation
Environmental Management Bureau
Albany, NY 12238

July 3, 2014

Re: HUD Community Development Block Grant (CDBG), Roberto Clemente State Park

Dear Director Otis,

In regards to the above referenced project at Roberto Clemente State Park, located within the City of New York, Bronx County, I have reviewed the project information and reviewed the NY Natural Heritage database with regard to individual project compliance with the federal Endangered Species Act, Section 7. The following listed, proposed or candidate species may be present within or adjacent to the project sites:

Species	Scientific Name	Federal Status
Animals:		
Northern long-eared myotis	*Myotis septentrionalis*	Proposed
Piping plover	*Charadrius melodus*	Threatened

The project will make the shoreline more resilient to storm damage. Activities include reforestation and conversion of bulkhead to natural shoreline.

No known listed species or critical habitat occurs at or near the project site. For this reason, the activities proposed in your grant will have NO EFFECT on any listed species. If any federally listed species are found within the project areas during the implementation of the actions referenced above and in the attached table, state and federal authorities should be notified, and actions will cease until another Section 7 review is completed and approved by Federal Assistance. If you have any questions, please feel free to contact me at (518) 402-8884.

Sincerely,

Daniel Rosenblatt
Wildlife Diversity Section

APPENDIX A

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM CONSISTENCY ASSESSMENT FORM AND NEW YORK STATE COASTAL ASSESSMENT FORM

For Internal Use Only:	WRP no._____
Date Received:_____	DOS no._____

NEW YORK CITY WATERFRONT REVITALIZATION PROGRAM
Consistency Assessment Form

Proposed action subject to CEQR, ULURP, or other Local, State or Federal Agency Discretionary Actions that are situated within New York City's designated Coastal Zone Boundary must be reviewed and assessed for their consistency with the *New York City Waterfront Revitalization Program (WRP)*. The WRP was adopted as a 197-a Plan by the Council of the City of New York on October 13, 1999, and approved in coordination with local, state and Federal laws and regulations, including the State's Coastal Management Program (Executive Law, Article 42) and the Federal Coastal Zone Management Act of 1972 (P.L. 92-583). As a result of these approvals, state and federal discretionary actions within the city's coastal zone must be consistent to the maximum extent practicable with the WRP policies and the city must be given the opportunity to comment on all state and federal projects within its coastal zone.

This form is intended to assist an applicant in certifying that the proposed activity is consistent with the WRP. It should be completed when the local, state, or federal application is prepared. The completed form and accompanying information will be used by the New York State Department of State, other State Agency or the New York City Department of City Planning in its review of the applicant's certification of consistency.

A. APPLICANT

1. Name:

New York State Office of Parks, Recreation and Historic Preservation

Address:

163 West 125th St, 17th Floor, New York, NY 10027

3. Telephone: **212-866-2794** Fax:

E-mail Address:

David.Brito@parks.ny.gov

4. Project site owner:

New York State Office of Parks, Recreation and Historic Preservation

B. PROPOSED ACTIVITY

1. Brief description of activity:

The Proposed Project is the replacement of the existing sheet pile bulkhead within Roberto Clemente State Park, improvements to the esplanade adjacent to the bulkhead, creation of a tidal/intertidal habitat complex from uplands as part of the bulkhead replacement, enhancements to the Lower Plaza area that will reduce hardscape and improve it as a public gathering space, repair of the south stair entrance, regrading and replanting with native vegetation over portions of the shoreline within the Park, refurbishment of the existing baseball field, construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the park from the existing riverfront trail.

2. Purpose of activity:

The purpose of the Proposed Project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline, allow the re-opening of the closed esplanade following bulkhead repairs, improve recreational facilities offered within the Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.

3. Location of activity: **Roberto Clemente State Park** Borough: **Bronx**

Street Address or Site Description:

Bronx Block 2882, Lots 216 and 229; Block 2883, Lots 35 and 60; Block 2884, Lots 72, 110, and 8900; and Block 3231, Lot 132, Roberto Clemente State Park, West Tremont Avenue and Matthewson Road, Bronx, NY 10453

Proposed Activity Cont'd

4. If a federal or state permit or license was issued or is required for the proposed activity, identify the permit type(s), the authorizing agency and provide the application or permit number(s), if known:

   Authorization from the US Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act (permit received 2/20/2014; Permit Application File Number NAN-2013-01606-EOF), and authorization from the New York State Department of Environmental Conservation under Section 401 Water Quality Certification, and Articles 15 and 25 of the Environmental Conservation Law. Consistency with the smart growth criteria in the State Smart Growth Public Infrastructure Policy Act will also be required through the Housing Trust Fund Corporation/New York State Department of Homes and Community Renewal.

5. Is federal or state funding being used to finance the project? If so, please identify the funding source(s).

   The project will be funded by a combination of New York State Office of Parks, Recreation and Historic Preservation funding, FEMA Superstorm Sandy recovery funds, and up to $46.5 million in Community Development Block Grant funding.

6. Will the proposed project result in any large physical change to a site within the coastal area that will require the preparation of an environmental impact statement? **Yes** ____ **No** **X**

   If yes, identify Lead Agency:

   An Environmental Assessment Form has been prepared. The lead agency is the New York State Office of Parks, Recreation and Historic Preservation.

7. Identify **City** discretionary actions, such as **zoning amendment or adoption of an urban renewal plan**, required for the proposed project.

   No City discretionary actions are required. The Proposed Project does not include a change in zoning, and the proposed development would conform to all applicable zoning regulations.

C. COASTAL ASSESSMENT

The following questions represent, in a broad sense, the policy of the WRP. The number in the parentheses after each question indicated the policy or policies that are the focus of the question. A detailed explanation of the Waterfront Revitalization Program and its policies are contained in the publication the *New York City Waterfront Revitalization Program.*

Check either "Yes" or "No" for each of the following questions. Once the checklist is completed, assess how the proposed project affects the policy or standards indicated in "( )" after each question with a Yes response. Explain how the action is consistent with the goals of the policy or standard.

Location Questions:	**Yes**	**No**
1. Is the project site on the waterfront or at the water's edge?	**X**	
2. Does the proposed project require a waterfront site?	**X**	
3. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land underwater, or coastal waters? **The Proposed Project would result in replacement of existing bulkhead, improvement in shoreline vegetation along the shoreline, creation of a tidal/intertidal habitat complex, repair of the south stair entrance, rehabilitation of baseball field, construction of a new artificial turf baseball field, replacement of existing recreational field with artificial turf field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and upland placement of clean soil suitable for landscaping, all of which would occur in the vicinity of the shoreline within the existing Roberto Clemente State Park.**	**X**	

Policy Questions:	**Yes**	**No**
The following questions represent, in a broad sense, the policies of the WRP. Numbers in parentheses after each questions indicate the policy or policies addressed by the question. The new Waterfront Revitalization Program offers detailed explanations of the policies, including criteria for consistency determinations.		
Check either "Yes" or "No" for each of the following questions. For all "yes" responses, provide an attachment assessing the effects of the proposed activity on the relevant policies or standards. Explain how the action would be consistent with the goals of those policies and standards.		
4. Will the proposed project result in revitalization or redevelopment of a deteriorated or under- used waterfront site? (1)		**X**
5. Is the project site appropriate for residential or commercial redevelopment? (1.1)		**X**
6. Will the action result in a change in scale or character of a neighborhood? (1.2)		**X**

Policy Questions cont'd:	**Yes**	**No**
7. Will the proposed activity require provision of new public services or infrastructure in undeveloped or sparsely populated sections of the coastal area? (1.3)		**X**
8. Is the action located in one of the designated Significant Maritime and Industrial Areas (SMIA): South Bronx, Newtown Creek, Brooklyn Navy Yard, Red Hook, Sunset Park, or Staten Island? (2)		**X**
9. Are there any waterfront structures, such as piers, docks, bulkheads or wharves, located on the project sites? (2) **Approximately 2,076 linear feet of bulkhead are present within the project site.**	**X**	
10. Would the action involve the siting or construction of a facility essential to the generation or transmission of energy, or a natural gas facility, or would it develop new energy resources? (2.1)		**X**
11. Does the action involve the siting of a working waterfront use outside of a SMIA? (2.2)		**X**
12. Does the proposed project involve infrastructure improvement, such as construction or repair of piers, docks, or bulkheads? (2.3, 3.2) **Offshore replacement of bulkhead along 1,370 linear feet, inshore replacement of bulkhead and creation of tidal/intertidal habitat complex along 556 linear feet, repair 89 linear feet of eroding concrete gravity wall within eastern portion of cove with offshore sheet pile, replacement of 61 linear feet of steel sheet pile bulkhead and concrete steps in northeast portion of cove with sheet pile and fill, regrading and replanting with native species along approximately 850 linear feet of shoreline adjacent to existing baseball field. Therefore, the Proposed Project would be consistent with this policy.**	**X**	
13. Would the action involve mining, dredging, or dredge disposal, or placement of dredged or fill materials in coastal waters? (2.3, 3.1, 4, 5.3, 6.3) **The Proposed Project would result in the placement of fill material for bulkhead replacement within approximately 3,288 square feet of the Harlem River but would also result in the restoration of approximately 945 square feet of littoral zone tidal wetland through inshore replacement of bulkhead and creation of approximately 9,000 square feet of aquatic habitat through creation of a tidal/intertidal habitat complex from upland portions of Roberto Clemente Park along the shoreline, for a net increase of 6,657 square feet of habitat. Therefore, the Proposed Project would be consistent with this policy.**	**X**	
14. Would the action be located in a commercial or recreational boating center, such as City Island, Sheepshead Bay or Great Kills or an area devoted to water-dependent transportation? (3)		**X**
15. Would the proposed project have an adverse effect upon the land or water uses within a commercial or recreation boating center or water-dependent transportation center? (3.1)		**X**
16. Would the proposed project create any conflicts between commercial and recreational boating? (3.2)		**X**
17. Does the proposed project involve any boating activity that would have an impact on the aquatic environment or surrounding land and water uses? (3.3)		**X**

18.	Is the action located in one of the designated Special Natural Waterfront Areas (SNWA): Long Island Sound-East River, Jamaica Bay, or Northwest Staten Island? (4 and 9.2)		**X**
19.	Is the project site in or adjacent to a Significant Coastal Fish and Wildlife Habitats? (4.1)		**X**
20.	Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1and 9.2)		**X**
21.	Would the action involve any activity in or near a tidal or freshwater wetland? (4.2) **The Proposed Project would result in a net gain of 6,657 square feet of aquatic habitat which would be adjacent to NYSDEC-mapped littoral zone tidal wetland. Therefore, the Proposed Project would be consistent with this policy.**	**X**	
22.	Does the project site contain a rare ecological community or would the proposed project affect a vulnerable plant, fish, or wildlife species? (4.3)		**X**
23.	Would the action have any effects on commercial or recreational use of fish resources? (4.4)		**X**
24.	Would the proposed project in any way affect the water quality classification of nearby waters or be unable to be consistent with that classification? (5)		**X**

Policy Questions cont'd:		**Yes**	**No**
25.	Would the action result in any direct or indirect discharges, including toxins, hazardous substances, or other pollutants, effluent, or waste, into any waterbody? (5.1)		**X**
26.	Would the action result in the draining of stormwater runoff or sewer overflows into coastal waters? (5.1) **Stormwater from the areas of disturbance resulting from the Proposed Project would be directed to existing stormwater outlets within the Park that discharge to the Harlem River. Most of the runoff from the Lower Plaza would be conveyed to the tidal/ intertidal habitat complex, with some flow conveyed to existing Park stormwater outfalls. The proposed project would not result in large quantities of freshwater into the Harlem River.**	**X**	
27.	Will any activity associated with the project generate nonpoint source pollution? (5.2)		**X**
28.	Would the action cause violations of the National or State air quality standards? (5.2)		**X**
29.	Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (5.2C)		**X**
30.	Will the project involve the excavation or placing of fill in or near navigable waters, marshes, estuaries, tidal marshes or other wetlands? (5.3) **See response to Question 13.**	**X**	
31.	Would the proposed action have any effects on surface or ground water supplies? (5.4)		**X**
32.	Would the action result in any activities within a Federally designated flood hazard area or State designated erosion hazards area? (6) **The Proposed Project would be within the 100-year floodplain but would not exacerbate flooding conditions near the project site. The use of this portion of the 100-year floodplain for open space areas already exists and the proposed project would not adversely affect the floodplain. The Proposed Project would increase the Park's resiliency to future storm events. Additionally, the proposed selective removal of invasive species along the shoreline, and replacement with native tree species would enhance the natural resources along the shoreline. Therefore, the Proposed Project would be consistent with this policy.**	**X**	
33.	Would the action result in any construction activities that would lead to erosion? (6)		**X**
34.	Would the action involve construction or reconstruction of flood or erosion control structure? (6.1) **The Proposed Project would include offshore replacement of bulkhead along 1,370 linear feet, inshore replacement of bulkhead and creation of a tidal/intertidal habitat complex along 556 linear feet, repair of 89 linear feet of eroding concrete gravity wall within eastern portion of cove with offshore sheet pile, replacement of 61 linear feet of steel sheet pile bulkhead and concrete steps in northeast portion of cove with sheet pile and fill, and regrading and replanting with native species along approximately 850 linear feet of shoreline adjacent to existing baseball field. These shoreline repairs and improvements improve the Park's resiliency to future storm events and would be consistent with this policy.**	**X**	

35.	Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (6.1)		**X**
36.	Does the proposed project involve use of public funds for flood prevention or erosion control? (6.2) **The project will be funded by a combination of New York State Office of Parks, Recreation and Historic Preservation funding, FEMA Superstorm Sandy recovery funds, and up to $46.5 million in Community Development Block Grant funding. An evaluation following Superstorm Sandy revealed severe corrosion of the steel at or below the mean low water line. Loss of fine fill material through the deteriorated sheet pile wall was considerable and significant at many locations with the overall bulkhead condition being rated as critical. Since Superstorm Sandy the esplanade has remained barricaded and off limits to vehicles and pedestrians. Without intervention the structure will continue to deteriorate and will eventually fail. A failure could result in the loss of developed park property and infrastructure, and in land erosion that could lead to landmass collapsing into the Harlem River. If erosion were allowed to continue, there are also potential longer-term impacts to the adjacent low-income housing at River Park Towers. The Proposed Project would prevent against this continued deterioration of the bulkhead structure and subsequent impacts. Replacement of the bulkhead, creation of the tidal/intertidal habitat complex, and collection of stormwater from the Lower Plaza would help to improve the resiliency of the Park to future storm events. The Proposed Project would, therefore, be consistent with this policy.**	**X**	
37.	Would the proposed project affect a non-renewable source of sand? (6.3)		**X**
38.	Would the action result in shipping, handling, or storing of solid wastes; hazardous materials, or other pollutants? (7)		**X**
39.	Would the action affect any sites that have been used as landfills? (7.1)		**X**
40.	Would the action result in development of a site that may contain contamination or has a history of underground fuel tanks, oil spills, or other form or petroleum product use or storage? (7.2) **Prior to excavation, samples will be collected to assess the potential for contamination. Soils and fill materials requiring off-site disposal would be removed, handled and disposed of in accordance with applicable state and local regulatory requirements. A Materials Management Plan will be prepared for approval by NYSDEC. Recent soil sampling within the footprint of the tidal/intertidal habitat complex indicated no significant evidence of contamination. The Proposed Project would be consistent with this policy.**	**X**	
41.	Will the proposed activity result in any transport, storage, treatment, or disposal of solid wastes or hazardous materials, or the siting of a solid or hazardous waste facility? (7.3)		**X**
42.	Would the action result in a reduction of existing or required access to or along coastal waters, public access areas, or public parks or open spaces? (8)		**X**

Policy Questions cont'd:		**Yes**	**No**
43.	Will the proposed project affect or be located in, on, or adjacent to any federal, state, or city park or other land in public ownership protected for open space preservation? (8) **The Proposed Project is located within Roberto Clemente State Park and would be consistent with this policy.**	**X**	
44.	Would the action result in the provision of open space without the provision for its maintenance? (8.1)		**X**
45.	Would the action result in any development along the shoreline but NOT include new water enhanced or water dependent recreational space? (8.2)		**X**
46.	Will the proposed project impede visual access to coastal lands, waters and open space? (8.3)		**X**
47.	Does the proposed project involve publically owned or acquired land that could accommodate waterfront open space or recreation? (8.4) **The Proposed Project is located within Roberto Clemente State Park and would be consistent with this policy.**	**X**	

48.	Does the project site involve lands or waters held in public trust by the state or city? (8.5) **The Proposed Project is located within Roberto Clemente State Park and would be consistent with this policy.**	**X**	
49.	Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (9)		**X**
50.	Does the site currently include elements that degrade the area's scenic quality or block views to the water? (9.1) **The Proposed Project would result in the removal of chain link fencing that currently blocks views of the Harlem River and removal of invasive plant species. These actions would be consistent with this policy.**	**X**	
51.	Would the proposed action have a significant adverse impact on historic, archeological, or cultural resources? (10)		**X**
52.	Will the proposed activity affect or be located in, on, or adjacent to an historic resource listed on the National or State Register of Historic Places, or designated as a landmark by the City of New York? (10)		**X**

D. CERTIFICATION

The applicant must certify that the proposed activity is consistent with New York City's Waterfront Revitalization Program, pursuant to the New York State Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If the certification can be made, complete this section.

"The proposed activity complies with New York State's Coastal Management Program as expressed in New York City's approved Local Waterfront Revitalization Program, pursuant to New York State's Coastal Management Program, and will be conducted in a manner consistent with such program."

Applicant/Agent Name: **David Brito**

Address: **NYS Office of Parks, Recreation and Historic Preservation, 163 West 125th St, 17th Floor, New York, NY 10027**

Telephone **212-866-2794**

Applicant/Agent Signature: _____ Date: 7/15/14

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Coastal Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

1. State agencies shall complete this CAF for proposed actions which are subject to Part 600 of Title 19 of the NYCRR. This assessment is intended to supplement other information used by a state agency in making a determination of significance pursuant to the State Environmental Quality Review Act (see 6 NYCRR, Part 617). If it is determined that a proposed action will not have a significant effect on the environment, this assessment is intended to assist a state agency in complying with the certification requirements of 19 NYCRR Section 600.4.

2. If any question in Section C on this form is answered "yes," then the proposed action may affect the achievement of the coastal policies contained in Article 42 of the Executive Law. Thus, the action should be analyzed in more detail and, if necessary, modified prior to either (a) making a certification of consistency pursuant to 19 NYCRR Part 600 or, (b) making the findings required under SEQR, 6 NYCRR, Section 617.11, if the action is one for which an environmental impact statement is being prepared. If an action cannot be certified as consistent with the coastal policies, it shall not be undertaken.

3. Before answering the questions in Section C, the preparer of this form should review the coastal policies contained in 19 NYCRR Section 600.5. A proposed action should be evaluated as to its significant beneficial and adverse effects upon the coastal area.

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):
   (a) ✓ Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction)
   (b) Financial assistance (e.g. grant, loan, subsidy)
   (c) Permit, license, certification

2. Describe nature and extent of action: **The Proposed Project is the replacement the existing sheet pile bulkhead within Roberto Clemente State Park, improvements to the esplanade adjacent to the bulkhead, creation of a tidal/intertidal habitat complex from uplands as part of the bulkhead replacement, enhancements to the Lower Plaza area that will reduce hardscape and improve it as a public gathering space, repair of the south stair entrance, regrading and replanting with native vegetation over portions of the shoreline within the Park, refurbishment of the existing baseball field, construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the park from the existing riverfront trail. The purpose of the Proposed Project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline, allow the re-opening of the closed esplanade following bulkhead repairs, improve recreational facilities offered within the Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.**

3. Location of action:

Bronx	**New York City**	**Roberto Clemente State Park, West Tremont Avenue and Matthewson Road, Bronx, NY 10453**
County	City, Town or Village	Street or Site Description

4. If an application for the proposed action has been filed with the state agency, the following information shall be provided:

(a) Name of applicant: **New York State Office of Parks, Recreation and Historic Preservation**

(b) Mailing address: **163 West 125th St, 17th Floor, New York, NY 10027**

(c) Telephone Number: Area Code **212-866-2794**

(d) State agency application number: **Unknown**

5. Will the action be directly undertaken, require funding, or approval by a federal agency?

Yes **X** No ____ If yes, which federal agency? **USACE (permit received 2/20/2014; Permit Application File Number NAN-2013-01606-EOF)**

C. COASTAL ASSESSMENT (Check either "YES" or "NO" for each of the following questions)

1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:

		YES	NO
(a)	Significant fish or wildlife habitats?		X
(b)	Scenic resources of statewide significance?		X
(c)	Important agricultural lands?		X

2. Will the proposed activity have a significant effect upon:

		YES	NO
(a)	Commercial or recreational use of fish and wildlife resources?		X
(b)	Scenic quality of the coastal environment?		X
(c)	Development of future, or existing water dependent uses?		X
(d)	Operation of the State's major ports?		X
(e)	Land and water uses within the State's small harbors?		X
(f)	Existing or potential public recreation opportunities? **The Proposed Project would result in beneficial impacts through the improvement of recreational facilities available at Roberto Clemente State Park**	X	
(g)	Structures, sites or districts of historic, archeological or cultural significance to the State or nation?		X

3. Will the proposed activity involve or result in any of the following:

		YES	NO
(a)	Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters? **The Proposed Project would result in replacement of existing bulkhead, improvement in shoreline vegetation along the shoreline, creation of a tidal/intertidal habitat complex, repair of the south stair entrance, rehabilitation of baseball field, construction of a new artificial turf baseball field, replacement of existing recreational field with artificial turf field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and upland placement of clean soil suitable for landscaping, all of which would occur in the vicinity of the shoreline within the existing Roberto Clemente State Park.**	X	
(b)	Physical alteration of five (5) acres or more of land located elsewhere in the coastal area		X
(c)	Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area?		X
(d)	Energy facility not subject to Article VII or VIII of the Public Service Law?		X
(e)	Mining, excavation, filling or dredging in coastal waters? **The Proposed Project would result in the placement of fill material for bulkhead replacement within approximately 3,288 square feet of the Harlem River but would also result in the restoration of approximately 945 square feet of littoral zone tidal wetland through inshore replacement of bulkhead and creation of approximately 9,000 square feet of aquatic habitat through creation of a tidal/intertidal habitat complex from upland portions of Roberto**	X	

	Clemente Park along the shoreline, for a net increase of 6,657 square feet of habitat.		
(f)	Reduction of existing or potential public access to or along the shore?		**X**
(g)	Sale or change in use of state-owned lands located on the shoreline or under water?		**X**
(h)	Development within a designated flood or erosion hazard area?		**X**
		YES	NO
(i)	Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion?		**X**

4. Will the proposed action be located in or have a significant effect upon an area included in an approved Local Waterfront Revitalization Program?
   Project is consistent with the New York City Waterfront Revitalization Program. **X**

D. SUBMISSION REQUIREMENTS

If any question in Section C is answered "Yes", AND either of the following two conditions is met:

Section B.1(a) or B.1(b) is checked; or
Section B.1(c) is checked AND B.5 is answered "Yes",

THEN one copy of the Completed Coastal Assessment Form shall be submitted to:

New York State Department of State
Division of Coastal Resources
41 State Street, 8th Floor
Albany, New York 12231

If assistance of further information is needed to complete this form, please call the Department of State at (518) 474-6000.

E. REMARKS OR ADDITIONAL INFORMATION

Preparer's Name: David Brito
(Please print)

Title: Deputy Regional Director, NYC Region

Agency: New York State Office of Parks, Recreation and Historic Preservation

Telephone Number: (212) 866-2794

Date: 7/9/2014

APPENDIX B
SMART GROWTH IMPACT EVALUATION FORM

HOUSING TRUST FUND CORPORATION

STATE SMART GROWTH PUBLIC INFRASTRUCTURE POLICY ACT
Smart Growth Impact Evaluation Form

This Smart Growth Impact Evaluation Form will assist the New York State Homes and Community Renewal (HCR) Smart Growth Advisory Committee to determine whether a proposed financing, acquisition or construction of a project by certain HCR agencies (collectively, the "Covered Agencies") complies with the NY State Smart Growth Public Infrastructure Policy Act (the "Act").

Covered Agencies are the New York State Housing Financing Agency, State of New York Mortgage Agency, Housing Trust Fund Corporation, New York State Affordable Housing Corporation, State of New York Municipal Bond Bank Agency and Tobacco Settlement Financing Corporation.

PART A
Project Information

Project Name: Roberto Clemente State Park Shoreline and Park Improvements
GOSR Project #: NR002
Project Address: Bronx Block 2882, Lots 216 and 229; Block 2883, Lots 35 and 60; Block 2884, Lots 72, 110 and 8900; and Block 3231, Lot 132. Roberto Clemente State Park, West Tremont Avenue and Matthewson Road, Bronx, New York 10453
Applicant/Sponsor: New York State Office of Parks, Recreation and Historic Preservation
Address: Albany, New York 12238

1. **List all the programs of the Covered Agencies subject to compliance with the Act which are expected to participate in the financing, acquisition, construction or rehabilitation of the Project:**

Program(s) of Covered Agencies:	Funding Amount:
HTFC: Housing Trust Fund	$46,500,000.00
Choose an item.	
Choose an item.	
Other:	

NOTES:

2. **Description of the proposed scope of work of rehabilitation and/or new construction of Project:**
The New York State Office of Parks, Recreation and Historic Preservation is proposing improvements within an approximately 16-acre portion of Roberto Clemente State Park (the Park) that would include replacement of the existing sheet pile bulkhead that is in critical condition and reconstruction of the adjacent esplanade, creation of a tidal/intertidal habitat complex from uplands as part of the bulkhead replacement, enhancements to the Lower Plaza area that will reduce hardscape and improve it as a public gathering space, repair of the south stair entrance, regrading and replanting with native species on portions of the remaining shoreline that is not stabilized with sheet pile, refurbishment of the existing natural turf baseball field, construction of a new artificial turf baseball field, construction of an artificial turf athletic field, construction of a natural turf soccer field, rehabilitation of the maintenance building and adjacent plaza, and upland placement of clean soil suitable for landscaping to improve the southern pedestrian entrance to the Park from the existing riverfront trail. The purpose of the project is to improve the Park's resiliency to future storm events, ensure the stabilization of the shoreline damaged during Hurricane Sandy, improve recreational facilities offered within the

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Park, enhance the visitor experience along the shoreline of the Harlem River, enhance the habitats present within the Park, and create environmental education opportunities.

3. Have applicable boards of any of the Covered Agencies approved or authorized, prior to September 29, 2010, the financing, acquisition, construction or rehabilitation of the Project described above?

☐ Yes Date and Form of Approval:

IF "YES", SELECT THE APPROPRIATE "FINDING" IN PART C BELOW

☒ No

Explain briefly: Project initially proposed on December 30, 2013.

4. Have any other municipal entities issued a written statement or completed a smart growth review of the Project in connection with the Act?

☐ Yes. Name of Entity: (Attach copy of written statement or results of smart growth review)

☒ No.

5. Is the Project subject to review as a public infrastructure project?

☐ Project DOES NOT involve the acquisition, new construction of, or expansion or reconstruction by a Covered Agency of infrastructure such as roads, sewers or sidewalks that are open and accessible to the public. A public infrastructure project does not include financing, acquisition, construction or rehabilitation of infrastructure owned and used solely by the private owners or tenants of a project. *(For example, the construction or rehabilitation of a project-owned sewage treatment facility used by the private owners or tenants* of *project would not be a public infrastructure project).*

IF CHECKED, SELECT THE APPROPRIATE "FINDING" IN PART C BELOW

OR

5. Is the Project subject to review as a public infrastructure project?

☒ Project DOES involve the acquisition, new construction of, or expansion or reconstruction by a Covered Agency of infrastructure such as roads, sewers or sidewalks that are open and accessible to the public and such infrastructure is not owned and used solely by the project.

INTER-AGENCY DOCUMENT – NOT SUBJECT TO FOIL
CONFIDENTIAL – DO NOT QUOTE OR CITE

STATE SMART GROWTH PUBLIC INFRASTRUCTURE POLICY ACT
Smart Growth Impact Evaluation Form

IF CHECKED, GO ON TO PART B BELOW

PART B
Public Infrastructure Project Criteria Review

(*Briefly describe whether the proposed public infrastructure project satisfies the following criteria or why a criterion is not relevant or practicable.)*

Does the public infrastructure project satisfy the following criteria?

1. To advance projects for the use, maintenance or improvement of existing infrastructure:

Yes

☒ Explain briefly: The proposed project, as described above, consists of the improvement of an existing State Park, within the existing boundaries of the Park.

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

2. To advance projects located in "Municipal Centers"

2a. an area of concentrated and mixed land use that serves as a center for various activities including, but not limited to:

(1) Downtown areas or Central business districts (such as the commercial and often geographic heart of a city, "downtown", "city center"); or
(2) Main streets (such as the primary retail street of a village, town, or small city. It is usually a focal point for shops and retailers in the central business district, and is most often used in reference to retailing and socializing); or
(3) Brownfield Opportunity Areas (http://nyswaterfronts.com/BOA_projects.asp); or
(4) Downtown areas of Local Waterfront Revitalization Plan areas (http://nyswaterfronts.com/maps_regions.asp); or
(5) Locations of transit-oriented development (such as projects serving areas that have access to mass or public transit for residents); or

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(6)Environmental Justice areas (http://www.dec.ny.gov/public/899.html); or
(7)Hardship areas;

☒ Yes

Explain briefly: The proposed project, as described above, is located within the New York City Local Waterfront Revitalization Plan area. The proposed project consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program for the project as described in the Joint Application and subsequent submissions of additional information was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984).

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐Compliance with the Criteria is considered Impracticable

Explain briefly:

2b. an area adjacent to a Municipal Center defined in 2a. above which have clearly defined borders, are designated for concentrated development in the future in a municipal or regional comprehensive plan, and exhibit strong land use, transportation, infrastructure and economic connections to a municipal center; and areas designated in a municipal or comprehensive plan, and appropriately zoned in a municipal zoning ordinance, as a future municipal center.

☐ Yes

Explain briefly:

☒ Criteria is Not Relevant

Explain briefly: See answer to question 2a above.

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

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Explain briefly:

3. To advance projects in developed areas or areas designated for concentrated infill development in a municipally approved comprehensive land use plan, local waterfront revitalization plan and/or brownfield opportunity area plan:

☒ Yes

Explain briefly: The proposed project, as described above, consists of the improvement of an existing State Park, within the existing boundaries of the Park. The proposed project is located within the New York City Local Waterfront Revitalization Plan area. The proposed project consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984). The New York City Department of City Planning found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies in an email dated April 23, 2014 (WRP # 14-004, application # F-13-0984).

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

4. To protect, preserve and enhance the State's resources, including agricultural land, forests, surface and groundwater, air quality, recreation and open space, scenic areas, and significant historic and archeological resources:

☒ Yes

Explain briefly: The proposed project, as described above, would have a positive effect on the State's recreational resources and would also increase the net amount of benthic habitat on site by 6,657 square feet. Additionally, the project would enhance scenic areas along the Harlem River.

☐ Criteria is Not Relevant

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Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

5. To foster mixed land uses and compact development, downtown revitalization, brownfield redevelopment, the enhancement of beauty in public spaces, the diversity and affordability of housing in proximity to places of employment, recreation and commercial development and the integration of all income and age groups:

☒ Yes

Explain briefly: The proposed project, as described above, would have a positive effect on the State's recreational resources and would also increase the net amount of benthic habitat on site by 6,657 square feet. Additionally, the project would enhance scenic areas along the Harlem River as well as protect adjacent affordable housing.

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

6. To provide mobility through transportation choices including improved public transportation and reduced automobile dependency:

☐ Yes

Explain briefly:

☒ Criteria is Not Relevant

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Explain briefly: The proposed project does not involve transportation.

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

7. To coordinate between state and local government and intermunicipal and regional planning:

☒ Yes

Explain briefly: The proposed project is located within the New York City Local Waterfront Revitalization Plan area. The proposed project consists of replacing failing sections of bulkhead and creation of a tidal/intertidal habitat complex that will result in a net increase of 6,657 square feet of aquatic habitat. General Concurrence with the Coastal Management Program for the project as described in the Joint Application and subsequent submissions of additional information was obtained from New York State Department of State on April 10, 2014 (file # F-2013-0984). The New York City Department of City Planning found the project as described in the Joint Application and subsequent submissions of additional information to be consistent with the WRP policies in an email dated April 23, 2014 (WRP # 14-004, application # F-13-0984).

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

8. To participate in community based planning and collaboration:

☒ Yes

Explain briefly: The proposed project, as described above, consists of the improvement of an existing State Park, within the existing boundaries of the Park. The State's CDBG-DR action plan, which was created with an element of public participation includes a section

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(page 59) that sets forth how CDBG-DR funds will be utilized as the non-Federal match for public infrastructure and facilities, such as Roberto Clemente State Park.

☐ Criteria is Not Relevant

Explain briefly:

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

9. To ensure predictability in building and land use codes:

☐ Yes

Explain briefly:

☒ Criteria is Not Relevant

Explain briefly: The proposed project, as described above, consists of the improvement of an existing State Park, within the existing boundaries of the Park, and does not involve predictability in building or land use codes.

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

10. To promote sustainability by strengthening existing and creating new communities which reduce greenhouse gas emissions and do not compromise the needs of future generations. The local public is involved in developing and implementing a community plan and ensuring the governance structure is adequate to sustain its implementation:

☐ Yes

Explain briefly:

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☒ Criteria is Not Relevant

Explain briefly: The proposed project, as described above, consists of the improvement of an existing State Park, within the existing boundaries of the Park, and any increase in GHG emissions will be de minimis during construction.

☐ No

Explain briefly:

☐ Compliance with the Criteria is considered Impracticable

Explain briefly:

*SELECT THE APPROPRIATE **"FINDING" IN PART C BELOW***

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PART C
HCR Smart Growth Advisory Committee Finding

1. ☐ **This Project is not a public infrastructure project (as described in Part A, Question 5) or the applicable boards of the Covered Agencies have approved or authorized, prior to September 29, 2010, the financing, acquisition or construction of the Project described in Part A above.** ***(Review is Complete)***

2. ☒ **This Project is a public infrastructure project (as described in Part A, Question 5) and the Project does satisfy relevant smart growth criteria set forth in Part B.**
   (Go onto *Part "D", Next Page)*

3. ☐ **This Project is a public infrastructure project (as described in Part A, Question 5) and the Project does not satisfy smart growth criteria set forth in Part B or compliance with such criteria is considered impracticable.** ***(Determine if project should be ineligible based on unsatisfactory compliance or if compliance is impractible. Initiate discussion as to whether the project should be rescinded.)***

4. ☐ **Although this Project does not satisfy smart growth criteria set forth in Part B or compliance of the Project with such criteria is considered to be impracticable, this Project is in compliance with the State Smart Growth Public Infrastructure Policy Act based on the following Statement of Justification:**
   (Go onto *Part "D", Next Page)*

Date: February 4, 2014

Heather Spitzberg
Member, Smart Growth Advisory Committee

INTER-AGENCY DOCUMENT – NOT SUBJECT TO FOIL
CONFIDENTIAL – DO NOT QUOTE OR CITE

PART D

SMART GROWTH IMPACT STATEMENT
(Attestation)

I, the Director of the Governor's Office of Storm Recovery for HTFC, hereby attest that:

☒ The **NR002** Project ("Project") satisfies relevant smart growth criteria, as described in Part B of the attached State Smart Growth Public Infrastructure Policy Act, Smart Growth Impact Evaluation Form ("Smart Growth Evaluation"); **or**

☐ Although the _____ Project does not satisfy smart growth criteria (as described in Part B of the Smart Growth Evaluation) or compliance of the Project with such criteria is considered to be impracticable, the Project is in compliance with the State Smart Growth Public Infrastructure Policy Act based on the Statement of Justification contained in Part C of the attached Smart Growth Evaluation.

This attestation is made pursuant to subdivision 3 of Section 6-0107 of the Environmental Conservation Law relating to the State Smart Growth Public Policy Infrastructure Act, and is based solely on the information provided to me by the Applicant/Sponsor of the Project and set forth in the attached Smart Growth Evaluation.

Name: Jamie Rubin
Title: Director, Governor's Office of Storm Recovery, HTFC

APPENDIX C

CORRESPONDEC FROM NEW YORK STATE PARKS, RECREATION AND HISTORIC PRESERVATION

STATE HISTORIC PRESERVATION OFFICE

Andrew M. Cuomo
Governor

Rose Harvey
Commissioner

New York State Office of Parks, Recreation and Historic Preservation

Division for Historic Preservation
P.O. Box 189, Waterford, New York 12188-0189
518-237-8643

1 July 2014

Ms. Pamela Otis
Environmental Management
NYS OPRHP
625 Broadway
Albany, NY 12238

Re: HUD
Roberto Clemente State Park Shoreline and Park Improvements
Borough of the Bronx, Bronx County
14PR02574

Dear Ms. Otis:

The State Historic Preservation Office (SHPO) has reviewed the latest information submitted for this project. Our review has been in accordance with Section 106 of the National Historic Preservation Act and relevant implementing regulations.

SHPO has received additional information regarding this project, specifically a subsurface geotechnical investigation report (AKRF, January 2014), as well as a series of project drawings. Based on a review of this and previously submitted information, SHPO recommends that the planned project will have **No Effect** on historic properties listed or eligible for listing on the National Register of Historic Places. This recommendation pertains only to the Area of Potential Effects (APE) described in the submitted materials. It is not applicable to any other portion of the project property. Should the project design be changed SHPO recommends further consultation with this office.

These comments are those of the Division for Historic Preservation and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8) and its implementing regulations (6 NYCRR Part 617).

If you have any questions please don't hesitate to contact me.

Sincerely,

Philip A. Perazio, Historic Preservation Program Analyst – Archaeology Unit
Phone: 518-237-8643 x3276; FAX: 518-233-9049
Email: Philip.Perazio@parks.ny.gov

Cc: Victor J. Gallo, Carter Ledyard & Milburn LLP, representing HUD (via email)
Kathleen Martens, OPRHP (via email)

APPENDIX D

ROBERTO CLEMENTE STATE PARK BULKHEAD REPAIR PROJECT SUBSURFACE (PHASE II) INVESTIGATION

AND

ROBERTO CLEMENTE STATE PARK SOIL SAMPLING REPORT

Enclosed on CD

Roberto Clemente State Park
Bulkhead Repair Project

BRONX, NEW YORK

Subsurface (Phase II) Investigation

AKRF Project Number: 51114

Prepared for:

Halcrow, Inc. - A CH2M Hill Company
22 Cortlandt Street
New York, NY 10007

Prepared by:

AKRF

440 Park Avenue South
New York, NY 10016
212-696-0670

JANUARY 2014

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APPENDICES

Appendix A – NYSDEC November 21, 2013 Email
Appendix B – Soil Boring Logs
Appendix C – Laboratory Analytical Data Sheets (CD)

1.0 INTRODUCTION

This report presents the results of a subsurface (Phase II) investigation conducted at the Roberto Clemente State Park Bulkhead Repair Project site in the Bronx, New York (the Site) (Tax Block 2883, Lot 35). Roberto Clemente State Park is an approximately 25-acre park located along the eastern shore of the Harlem River. The New York State Office of Parks, Recreation, & Historic Preservation (OPRHP) is proposing to construct an approximately 13,500-square foot tidal pool on a central portion of the park along the river as part of a bulkhead reconstruction project. A site location map is provided as Figure 1. The purpose of this investigation was to characterize soil within the tidal pool excavation area for possible reuse on-site prior to construction activities. The scope is based on recommendations from the New York State Department of Environmental Conservation (NYSDEC) outlined in an email dated November 21, 2013 (provided in Appendix A), and on information provided by the OPRHP. At the request of OPRHP, the scope also included conducting soil analyses, including particle size distribution, in an area east of the proposed tidal pool that could be designated for construction of freshwater wetlands in the future. Eight soil borings were advance at the Site and 19 soil samples were collected for laboratory analysis.

2.0 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

AKRF was retained by The RBA Group to prepare a Phase I Environmental Site Assessment (ESA) of the Site (dated September 2011) in support of the Hazardous Materials section of the Environmental Assessment Form (EAF) submitted to the OPRHP. The assessment revealed evidence of known and potential Recognized Environmental Conditions (RECs) as follows:

- According to historical records, almost the entire Site was created as a result of filling in the early to late 1900s. Areas along the shoreline were filled to facilitate the use of the Site and adjoining areas for the manufacturing of marine vessels and the storage of coal and fuel to support these vessels as well as the railroad immediately east of the Site. The fill material is of unknown origin and may, therefore, contain contaminated materials.
- According to Sanborn maps, the Consolidated Shipbuilding Company occupied the majority of the Roberto Clemente State Park property (including the Site) between the late 1800s and the mid-1950s. Several petroleum underground storage tanks (USTs) were identified at the park. Past industrial activities may have adversely affected soil and groundwater conditions at the Site.
- Based on the historical Sanborn maps and the Site reconnaissance, historic and current rail yards were present near the Site. Sanborn maps also identified a rail spur through the northern and central portions of the Site associated with the Consolidated Shipbuilding Company. Rail yards and train tracks can contaminate surrounding soil with creosote from rail ties, spills from diesel and other petroleum products, releases from cargo loading and unloading, and from maintenance and fueling activities.
- Due to the size of the Site and its industrial/manufacturing history, there is a potential for illegal dumping to have occurred, which may have affected subsurface conditions at the Site.
- Roberto Clemente State Park is the address listed on the NY Spills and RCRA Hazardous Waste Generators databases in association with various Con Edison vaults and manholes, which are actually located immediately east of the Site. None of the spills remain active, however, operations associated with these vaults and the Con Edison easement located in the northern portion of the park may have affected subsurface conditions at the Site.

3.0 PHYSICAL SETTING

At the time of the investigation, the Site included concrete waterfront pathways, an asphalt-paved plaza with a gazebo, and landscaped areas (as shown on Figure 2). U.S. Geological Survey mapping indicate that the Site is located approximately 10 to 15 feet above mean sea level. Based on a review of historical Sanborn Maps and aerial photographs, it is believed that almost the entirety of the Site consists of fill imported to the area in the early to late 1900s. Groundwater was encountered during this investigation at a depth of approximately 9 to 11 feet below grade and is expected to flow westerly to the adjoining Harlem River and may be influenced by tides. Groundwater is likely brackish and is not used for potable supply.

4.0 FIELD ACTIVITIES

4.1 Soil Analysis

Field activities were conducted on January 10, 2014 by AKRF personnel and Zebra Environmental Corp. (Zebra) of Lynbrook, New York. Eight soil borings were advanced to collect soil samples for laboratory analysis: five borings from within the proposed tidal pool area; and three borings east of the tidal pool area (as shown on Figure 2). The borings were advanced to 11 feet below grade, which was approximately 5 feet below the proposed tidal pool. In accordance with the request from the NYSDEC (provided in Appendix A), the five borings within the tidal pool area were evenly distributed in two rows across the proposed tidal pool area: 2 borings approximately 15 feet east of the bulkhead; and 3 borings approximately 40 feet east of the bulkhead. The soil boring locations are provided on Figure 2.

The soil borings were advanced using a Geoprobe® Direct-Push Probe (DPP) rig. Soil cores were obtained in a stainless steel, macro-core sampler with an internal acetate liner and field-screened using a photoionization detector (PID), which measures relative concentrations of volatile organic compounds (VOCs). Per the NYSDEC's request, two soil samples were collected from each boring for laboratory analysis: one from above the anticipated tidal pool water level at approximately five feet below grade; and one from below the anticipated tidal pool water level at approximately 11 feet below grade. At each boring location, AKRF field personnel recorded and documented subsurface conditions. Boring logs are provided in Appendix B.

Soil samples slated for laboratory analysis were placed in laboratory-supplied containers and shipped in accordance with appropriate EPA protocols to a New York State Department of Health-certified laboratory. Per the NYSDEC's request, the samples were analyzed for VOCs using EPA Method 8260, semi-volatile organic compounds (SVOCs) using EPA Method 8270, and Target Analyte List (TAL) metals (6000/7000 series). Soil samples designated for VOC analysis were collected using Encore® samplers. In addition, for quality assurance/quality control (QA/QC) purposes, one trip blank was sent with the collected samples for laboratory analysis. The trip blank will be analyzed for VOCs only.

In addition, at the three boring east of the tidal pool area, AKRF collected soil samples for sieve analysis in accordance with the American Society for Testing and Materials (ASTM) D-422 protocol. Per OPRHP's request, the soil samples were collected from a depth of five feet below grade.

4.2 Field Observations

Fill (generally sand and silt with gravel and brick) was observed from the surface to approximately 11 feet below grade in each boring. Groundwater was encountered approximately 9 to 11 feet below grade. Bedrock was not encountered during this investigation.

No staining was noted in the soil from any of the borings. An organic odor was noted in soil from boring B-305 at a depth of 7 to 11 feet below grade, where organic clay was noted; no other odors were noted in the screened soil. Soil was field-screened with a PID to measure relative concentrations of VOCs. PID readings ranging from 0.5 parts per million (ppm) to 1.7 ppm were detected in soil from boring B-301. However, the levels detected are not likely indicative of contamination and no evidence of contamination was noted in the soil (i.e., odors or staining). No other PID readings were detected in the screened soil. Results of the field screening are provided in the soil borings logs provided in Appendix B.

5.0 FINDINGS

Sixteen soil samples were collected for laboratory analysis of VOCs, SVOCs, and TAL metals, and three samples were collected for sieve analysis. Soil sampling results for VOCs, SVOCs, and TAL metals were compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted–Residential Use (RRSCOs). Soil laboratory analytical results are summarized in Tables 1 through 3. The complete laboratory analytical data sheets are located in Appendix C. Results of the sieve analysis are presented in this section and Appendix C.

Volatile Organic Compounds

Acetone was detected in samples B-301 (11’), B-303 (5’), B-303 (11’), B-304 (11’), B-305 (5’), B-306 (11’), and B-307 (11’) at concentrations ranging from 0.0056 ppm to 0.018 ppm, below the USCO of 0.05 ppm and RRSCO of 500 ppm. Acetone was detected in the field blank and associated laboratory method blank; therefore, the acetone is not likely indicative of a release or spill.

2-butanone was detected in samples B-301 (11’), B-302 (5’), B-302 (11’), B-303 (5’), B-304 (11’), B-305 (5’), B-305 (11’), B-306 (5’), B-306 (11’), and B-307 (11’) at concentrations ranging from 0.0006 ppm to 0.003 ppm, below the USCO of 0.12 ppm and RRSCO of 100 ppm.

Many of the VOCs detected were identified as “J” values, indicating that the concentrations were below the method detection limits and the value given was estimated. No other VOCs were detected in the analyzed samples.

Soil analytical results for VOCs are presented in Table 1.

Semivolatile Organic Compounds

Twenty SVOCs were detected in 7 of the 16 soil samples analyzed, primarily at concentrations below the USCOs and RRSCOs. SVOC concentrations exceeding both the USCOs and RRSCOs were detected only in sample B-305 (11’) and included benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The concentrations of these compounds ranged from 0.8 ppm to 7.1 ppm. The SVOCs exceeding the USCOs and RRSCOs were polycyclic aromatic hydrocarbons (PAHs), a class of compounds found in coal ash and urban fill as well as some petroleum products. Urban fill was noted in soil from all of the borings. Based on the specific compounds and the concentrations detected, the SVOCs are attributable to the fill and not to a release or spill. All other compounds detected were at concentrations below both the USCOs and RRSCOs.

Soil analytical results for SVOCs are presented in Table 2.

Target Analyte List (TAL) Metals

Metals were detected in all of the samples analyzed, with some concentrations above USCOs and/or RRSCOs. Metals detected at concentrations above the USCOs but below the RRSCOs included chromium, copper, lead, mercury, nickel and zinc in samples B-300 (5'), B-304 (11'), B-305 (5'), B-305 (11'), B-306 (11'), B-307 (5'), and B-307 (11').

Concentrations of metals exceeding both the USCOs and RRSCOs were detected in four samples analyzed. Arsenic was detected in sample B-307 (5') at a concentration of 19 ppm, above the USCO and RRSCO of 13 and 16 ppm, respectively. Copper was detected in sample B-307 (11') at a concentration of 980 ppm, above the USCO and RRSCO of 50 and 270 ppm, respectively. Lead was detected in samples B-305 (11') and B-306 (11') at concentrations of 840 ppm and 720, respectively; the USCO and RRSCO for lead are 63 and 400 ppm, respectively. Nickel was detected in sample B-307 (5') at a concentration of 1,600 ppm, above the USCO and RRSCO of 30 and 310 ppm, respectively.

Based on the types and levels detected, the metals are likely attributable to the fill material, which typically contains highly variable concentrations of metals.

Soil analytical results for metals are presented in Table 3.

Sieve Analysis

Sieve analysis in accordance with the American Society for Testing and Materials (ASTM) D-422 protocol was conducted on samples B-305 (5'), B-306 (5') and B-307 (5'). Results of the analysis are provided in the following table and Appendix B:

Results of Sieve Analysis

Sample ID:	**B305 (5')**	**B306 (5')**	**B307 (5')**
Grain Size	**Results**		
Cobbles	ND	ND	ND
% Coarse Gravel	10.9	ND	ND
% Fine Gravel	7.55	42.6	26.8
% Coarse Sand	9.16	14.2	13.4
% Medium Sand	24	21.5	29.3
% Fine Sand	33.8	13.8	20.1
% Total Fines	14.6	7.8	10.4

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

AKRF, Inc. (AKRF) conducted a subsurface (Phase II) investigation at the Roberto Clemente State Park Bulkhead Repair Project site in the Bronx, New York (the Site) (Tax Block 2883, Lot 35). At the time of the investigation, the Site included concrete waterfront pathways, an asphalt-paved plaza with a gazebo, and landscaped areas.

The purpose of this investigation was to characterize soil within the tidal pool excavation area for possible reuse on-site prior to construction activities. The scope is based on a request from the New York State Department of Environmental Conservation (NYSDEC), and on information provided by the New York State Office of Parks, Recreation, & Historic Preservation (OPRHP). At the request of OPRHP, the scope also included conducting soil analyses (for both chemical analyses and particle size distribution) in an area east of the proposed tidal pool that could be designated for construction of freshwater wetlands in the future.

Sixteen soil samples were collected for laboratory analysis of: volatile organic compounds (VOCs) by EPA Method 8260; semivolatile organic compounds (SVOCs) by EPA Method 8270; and Target Analyte List (TAL) metals, and three samples were collected for sieve analysis in accordance with the American Society for Testing and Materials (ASTM) D-422 protocol. Soil sampling results for VOCs, SVOCs, and TAL metals were compared to NYSDEC 6 NYCRR Part 375 Unrestricted Use Soil Cleanup Objectives (USCOs) and Part 375 Soil Cleanup Objectives for Restricted–Residential Use (RRSCOs).

Fill (generally sand and silt with gravel and brick) was observed from the surface to approximately 11 feet below grade in each boring. Groundwater was encountered approximately 9 to 11 feet below grade. Bedrock was not encountered during this investigation. No significant evidence of contamination [i.e., odors, staining or photoionization detector (PID) readings] were noted in the sampled soil. Results of the analyses were as follows:

- Acetone and 2-butanone were detected in 10 soil samples, but at concentrations well below the USCOs and RRSCOs. No other VOCs were detected in the samples.
- SVOC concentrations exceeding both the USCOs and RRSCOs were detected only in sample B-305 (11’) and included benzo(a)anthracene, benzo(a)pyrene, and benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, and Indeno(1,2,3-cd)pyrene. Based on the specific compounds and the concentrations detected, the SVOCs are attributable to the fill. All other compounds detected were at concentrations below both the USCOs and RRSCOs.
- Metals were detected in all of the samples analyzed. Metals detected at concentrations above the USCOs but below the RRSCOs included chromium, copper, lead, mercury, nickel and zinc in five of the analyzed samples. Concentrations of metals exceeding both the USCOs and RRSCOs were detected in four samples and included arsenic, copper, lead, and nickel. Based on the types and levels detected, the metals are likely attributable to the fill material, which typically contains highly variable concentrations of metals.

Results of the sieve analysis are provided in Appendix B.

6.2 Recommendations

The analytical results of this investigation should be provided to the NYSDEC for review to determine whether the soil tested can be approved for re-use on-site. Approval to reuse the soil on-site will depend upon the details of the end use of the soil excavated from the proposed tidal

pool area (i.e., as surface soil, beneath pavement, as fill for shoreline areas, etc.). Based on the findings of the Phase II investigation and prior environmental reports, our recommendations are as follows:

- Soil encountered during the proposed project will include fill material containing VOCs, SVOCs, and metals. Subsurface disturbance should be conducted in accordance with a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prepared to provide measures for managing the on-site soil and addressing any potential contamination and/or underground storage tanks (USTs) that may be encountered during the proposed development of the Site.
- Any soil or fill excavated as part of future site development activities should be managed in accordance with applicable regulations. All material intended for off-site disposal should be tested in accordance with the requirements of the intended receiving facility. Transportation of all soil leaving for off-site disposal should be in accordance with requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. Excavation may reveal different or more significant soil and/or groundwater contamination in areas not tested as part of this investigation. If discovered, such contamination could require further investigation and/or remediation in accordance with applicable regulations.
- Dewatering for the proposed project, if required, should be conducted in accordance with a New York City Department of Environmental Protection (NYCDEP) sewer discharge permit. Additional groundwater testing and pre-treatment would be necessary to comply with NYCDEP requirements for obtaining a sewer discharge permit.

7.0 LIMITATIONS

The findings set forth in this report are strictly limited in scope and time to the date of the evaluation described herein. The conclusions and recommendations presented in the report are based solely on the services and any limitations described in this report.

This report may contain conclusions that are based on the analysis of data collected at the time and locations noted in the report through intrusive or non-intrusive sampling. However, further investigation might reveal additional data or variations of the current data, which may differ from our understanding of the conditions presented in this report and require the enclosed recommendations to be reevaluated or modified.

Chemical analyses may have been performed for specific parameters during the course of this investigation, as summarized in the text and tables. It should be noted that additional chemical constituents, not searched for during this investigation, may be present at the Site. Due to the nature of the investigation and the limited data available, no warranty, expressed or implied, shall be construed with respect to undiscovered liabilities. The presence of biological hazards, radioactive materials, lead-based paint and asbestos-containing materials was not investigated, unless specified in the report.

Interpretations of the data, including comparison to regulatory standards, guidelines or background values, are not opinions that these comparisons are legally applicable. Furthermore, any conclusions or recommendations should not be construed as legal advice. For such advice, the client is recommended to seek appropriate legal counsel. Disturbance, handling, transportation, storage and disposal of known or potentially contaminated materials is subject to all applicable laws, which may or may not be fully described as part of this report.

The analytical data, conclusions, and/or recommendations provided in this report should not be construed in any way as a classification of waste that may be generated during future disturbance of the Site. Waste(s) generated at the Site including excess fill may be considered regulated solid waste and potentially hazardous waste. Requirements for intended disposal facilities should be determined beforehand as the data provided in this report may be insufficient and could vary following additional sampling.

This report may be based solely or partially on data collected, conducted, and provided by, AKRF and/or others. No warranty is expressed or implied by usage of such data. Such data may be included in other investigation reports or documentation. In addition, these reports may have been based upon available previous reports, historical records, documentation from federal, state and local government agencies, personal interviews, and geological mapping. This report is subject, at a minimum, to the limitations of the previous reports, historical documents, availability and accuracy of collected documentation, and personal recollection of those persons interviewed. In certain instances, AKRF has been required to assume that the information provided is accurate with limited or no corroboratory evidence.

This report is intended for the use solely by New York State Office of Parks, Recreation, & Historic Preservation. Reliance by third parties on the information and opinions contained herein is strictly prohibited and requires the written consent of AKRF. AKRF accepts no responsibility for damages incurred by third parties for any decisions or actions taken based on this report. This report must be used, interpreted, and presented in its entirety.

8.0 SOIL DISPOSAL ISSUES

In addition to the discussions in the Conclusions, Recommendations, and Limitations Sections (Sections 6.0 and 7.0), the issue of appropriate management of off-site disposal of soil warrants careful consideration. Any material being disposed of off-site is a regulated waste, and disposal must be in accordance with:

- Requirements of the specific receiving facility;
- Requirements of any agencies overseeing the cleanup/excavation; and
- Federal and state requirements (sometimes in both the state where the soil is generated and where disposal will occur).

For hazardous wastes and petroleum-contaminated soil (and other 'clearly contaminated' materials), the requirements are usually fairly well defined. It is in the situation where contamination is not readily apparent (e.g., so called "historic or urban fill" or "construction and demolition debris" or material that may have been formerly identified as "clean fill") that present the greatest potential for problems and cost overruns. Even on sites where no contamination requiring remediation is identified, it is common that most of the excavated material is considered "contaminated" for purposes of waste disposal. Concentrations of the various contaminants in historic fill can be highly variable, and upon further testing, the material could contain higher contaminant concentrations than outlined in this investigation. Portions of this material could be classified as hazardous waste.

It is important that the intended disposal facility (or facilities) be identified in advance of off-site disposal. Agency approval is sometimes required for disposal, and the facility will frequently require additional testing prior to (and sometimes at the time of) accepting material. Material must conform to a lengthy list of requirements based on both chemical composition and sometimes numerous other parameters (related to size, percentage of liquids, presence of odors, etc.) for acceptance at the facility. Assuming (or allowing a contractor to assume) that all, or even most, of the soil from a site can be disposed of at minimal cost may result in unanticipated and expensive change orders.

For these reasons, we recommend that professional advice be sought prior to preparing bid documents and contracts incorporating soil disposal.

9.0 REFERENCES

1. U.S. Geological Survey; *Central Park, N.Y. – N.Y. Quadrangle*; 7.5 minute Series (Topographic); Scale 1:24,000; 1995.
2. *Phase I Environmental Site Assessment – Roberto Clemente State Park Bulkhead Repair Project – Bronx, New York,* AKRF, Inc., September 2011.

Tables, Figures, and Appendices to January 2014 Subsurface (Phase II) Investigation are available from OPRHP

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August 12, 2013

David Brito
Deputy Regional Director, NYC Region,
New York State Office of Parks, Recreation, & Historic Preservation
163 West 125th Street, 17th Floor
New York, New York 10027

Dear Mr. Brito:

AKRF, Inc. is pleased to present this letter report documenting the sampling and analysis of fill material located inside an area of concern located at the Roberto Clemente Park at 301 W. Tremont Avenue in the Bronx, NY. On July 17, 2013, AKRF personnel collected soil samples from the northern point of the park at locations inside and outside of the "area of concern", at specific locations shown on the attached sketch, to determine whether the suspected fill material was suitable to remain on park grounds. This report documents the findings of the laboratory analysis and conditions encountered in and around the area of concern

Two soil samples were collected from within the area of concern and two samples were collected from outside the area of concern. The samples were collected using a hand auger and screened for volatile organic compounds (VOCs) using a photoionization detector (PID). Each sample was collected at approximately two feet below grade and analyzed for VOCs by EPA Method 8260, semivolatile organic compounds (SVOCs) by EPA Method 8270, total Target Analyte List (TAL) metals, polychlorinated biphenyls (PCBs) by EPA Method 8082 and pesticides by EPA Method 8081. No staining or odors were detected and PID readings indicated that no VOCs were present during field screening. Subsurface conditions within the area of concern revealed a mixture of urban fill (soil, gravel, brick, scrap metal) and large cobbles. Subsurface conditions outside the area of concern consisted of primarily soil, silt, sand and gravel.

No metals, PCBs, or pesticides were detected above the respective NYSDEC Part 375 Commercial Soil Cleanup Objectives (SCO). The VOC methylene chloride was detected at concentrations ranging from an estimated 6.3 parts per million (ppm) to 13 ppm in all four soil samples. The presence of methylene chloride in the analytical results is likely a laboratory artifact and not actually in the samples collected. A full laboratory report is included as attachment A.

Based on this data and the intended use of the sampled material, there is no regulatory requirement to remove this material from its current location at Roberto Clemente Park.

Sincerely,
AKRF, Inc.

Michelle Lapin
Senior Vice President

Laboratory Figures and Report, included as Attachment A to August 12, 2013 Soil Sampling Correspondence, is available from OPRHP