

# Wards Point Infrastructure Improvements

## Environmental Assessment Statement

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Borough of Staten Island, New York

DDC Project No.: SER200208

Contract Registration No.: 2005-0030-156

CEQR No.: 10DEP024R

Prepared for:



City of New York Department of Design and Construction  
**and**



Prepared by:

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**June 2013**



**City Environmental Quality Review**  
**ENVIRONMENTAL ASSESSMENT STATEMENT FULL FORM**  
*Please fill out, print and submit to the appropriate agency (see instructions)*

<b>PART I: GENERAL INFORMATION</b>			
<b>PROJECT NAME</b> <b>Capital Project SER200208 – Wards Point Infrastructure Improvements</b>			
<b>1. Reference Numbers</b>			
CEQR REFERENCE NUMBER (To Be Assigned by Lead Agency) <b>10DEP024R</b>	BSA REFERENCE NUMBER (If Applicable) <b>N/A</b>		
ULURP REFERENCE NUMBER (If Applicable) <b>N/A</b>	OTHER REFERENCE NUMBER(S) (If Applicable) (e.g., Legislative Intro, CAPA, etc.) <b>N/A</b>		
<b>2a. Lead Agency Information</b>		<b>2b. Applicant Information</b>	
NAME OF LEAD AGENCY <b>NYC Department of Environmental Protection</b>		NAME OF APPLICANT <b>New York City Department of Design + Construction</b>	
NAME OF LEAD AGENCY CONTACT PERSON <b>Angela Licata, Deputy Commissioner of Sustainability</b>		NAME OF APPLICANT'S REPRESENTATIVE OR CONTACT PERSON <b>N. Venugopalan, Assistant Commissioner</b>	
ADDRESS <b>59-17 Junction Boulevard</b>		ADDRESS <b>30-30 Thomson Avenue</b>	
CITY <b>Flushing</b>	STATE <b>NY</b>	ZIP <b>11368</b>	CITY <b>Long Island City</b>
TELEPHONE <b>(718) 595-4398</b>	FAX <b>(718) 595-4479</b>	TELEPHONE <b>718-391-2283</b>	FAX <b>718-391-2277</b>
EMAIL ADDRESS <b>alicata@dep.nyc.gov</b>		EMAIL ADDRESS <b>venugopa@ddc.nyc.gov</b>	
<b>3. Action Classification and Type</b>			
<b>SEQRA Classification</b>			
<input checked="" type="checkbox"/> UNLISTED <input type="checkbox"/> TYPE I; SPECIFY CATEGORY (see 6 NYCRR 617.4 and NYC Executive Order 91 of 1977, as amended):			
<b>Action Type</b> (refer to Chapter 2, "Establishing the Analysis Framework" for guidance)			
<input checked="" type="checkbox"/> LOCALIZED ACTION, SITE SPECIFIC <input type="checkbox"/> LOCALIZED ACTION, SMALL AREA <input type="checkbox"/> GENERIC ACTION			
<b>4. Project Description:</b>			
The New York City Department of Design and Construction (DDC), on behalf of the New York City Department of Environmental Protection (DEP), is proposing the Wards Point Infrastructure Improvements project, which is located in Staten Island Community District 3 in the Tottenville section of Richmond County. The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and a tidal wetland restoration.			
<b>Project Location</b>			
BOROUGH <b>Staten Island</b>	COMMUNITY DISTRICT(S) <b>3</b>	STREET ADDRESS <b>See Figures C-1 through C-3</b>	
TAX BLOCK(S) AND LOT(S) <b>See Figure C-3</b>		ZIP CODE <b>10307</b>	
DESCRIPTION OF PROPERTY BY BOUNDING OR CROSS STREETS <b>See Attachment A, "Project Description," and C, "EAS Graphics," for a description of the project area properties and streets.</b>			
EXISTING ZONING DISTRICT, INCLUDING SPECIAL ZONING DISTRICT DESIGNATION, IF ANY <b>R1-2, R3X, Special South Richmond Development District (SSRDD)</b>		ZONING SECTIONAL MAP NO: <b>35a</b>	
<b>5. REQUIRED ACTIONS OR APPROVALS</b> (check all that apply)			
<b>City Planning Commission:</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNIFORM LAND USE REVIEW PROCEDURE (ULURP)			
<input type="checkbox"/> CITY MAP AMENDMENT	<input type="checkbox"/> ZONING CERTIFICATION	<input type="checkbox"/> CONCESSION	
<input type="checkbox"/> ZONING MAP AMENDMENT	<input checked="" type="checkbox"/> ZONING AUTHORIZATION	<input type="checkbox"/> UDAPP	
<input type="checkbox"/> ZONING TEXT AMENDMENT	<input type="checkbox"/> ACQUISITION—REAL PROPERTY	<input type="checkbox"/> REVOCABLE CONSENT	
<input type="checkbox"/> SITE SELECTION—PUBLIC FACILITY	<input type="checkbox"/> DISPOSITION—REAL PROPERTY	<input type="checkbox"/> FRANCHISE	
<input type="checkbox"/> HOUSING PLAN & PROJECT	<input type="checkbox"/> OTHER, explain:		
<input type="checkbox"/> SPECIAL PERMIT (if appropriate, specify type: <input type="checkbox"/> MODIFICATION; <input type="checkbox"/> RENEWAL; <input type="checkbox"/> OTHER);    EXPIRATION DATE:			
SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION			
<b>Board of Standards and Appeals:</b> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>			
<input type="checkbox"/> VARIANCE (USE)			
<input type="checkbox"/> VARIANCE (BULK)			
<input type="checkbox"/> SPECIAL PERMIT (if appropriate, specify type: <input type="checkbox"/> MODIFICATION; <input type="checkbox"/> RENEWAL; <input type="checkbox"/> OTHER);    EXPIRATION DATE:			
SPECIFY AFFECTED SECTION(S) OF THE ZONING RESOLUTION			

<b>Department of Environmental Protection:</b>		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If "yes," specify:
<b>Other City Approvals Subject to CEQR</b> (check all that apply)				
<input type="checkbox"/> LEGISLATION	<input checked="" type="checkbox"/> FUNDING OF CONSTRUCTION; specify	<b>Capital Project SER200208</b>		
<input type="checkbox"/> RULEMAKING	<input type="checkbox"/> POLICY OR PLAN; specify			
<input type="checkbox"/> CONSTRUCTION OF PUBLIC FACILITIES	<input type="checkbox"/> FUNDING OR PROGRAMS; specify			
<input type="checkbox"/> 384(B)(4) APPROVAL	<input type="checkbox"/> PERMITS; specify			
<input checked="" type="checkbox"/> OTHER; EXPLAIN <b>See Attachment A, "Project Description."</b>				
<b>Other City Approvals Not Subject to CEQR</b> (check all that apply)				
<input checked="" type="checkbox"/> PERMITS FROM DOT'S OFFICE OF CONSTRUCTION MITIGATION AND COORDINATION (OCMD)	<input type="checkbox"/> LANDMARKS PRESERVATION COMMISSION APPROVAL			
	<input type="checkbox"/> OTHER; explain:			
<b>State or Federal Actions/Approvals/Funding:</b>		YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	If "yes," specify
<b>State Approvals: NYSDEC Water Quality Certification and Protection of Waters; NYSDEC Tidal Wetlands Permit; NYSDEC SPDES MS4 Permit (Modification); NYSDEC SPDES General Permit for Stormwater Discharges from Construction Activity.</b>				
<b>Federal Approvals: Nationwide Permit 7-Outfall Structures and Associated Intake Structures for activities related to the construction or modification of outfall structures and associated intake structures.</b>				
<b>See also Attachment A, "Project Description," under "Permits and Approvals."</b>				
<b>6. Site Description:</b> The directly affected area consists of the project site and the area subject to any change in regulatory controls. Except where otherwise indicated, provide the following information with regard to the directly affected area.				
<b>GRAPHICS</b> The following graphics must be attached and each box must be checked off before the EAS is complete. Each map must clearly depict the boundaries of the directly affected area or areas and indicate a 400-foot radius drawn from the outer boundaries of the project site. Maps may not exceed 11x17 inches in size and, for paper filings, must be folded to 8.5x11 inches.				
<input checked="" type="checkbox"/> SITE LOCATION MAP	<input checked="" type="checkbox"/> ZONING MAP	<input checked="" type="checkbox"/> SANBORN OR OTHER LAND USE MAP		
<input checked="" type="checkbox"/> TAX MAP	<input type="checkbox"/> FOR LARGE AREAS OR MULTIPLE SITES, A GIS SHAPE FILE THAT DEFINES THE PROJECT SITE(S)			
<input checked="" type="checkbox"/> PHOTOGRAPHS OF THE PROJECT SITE TAKEN WITHIN 6 MONTHS OF EAS SUBMISSION AND KEYED TO THE SITE LOCATION MAP				
<b>See Attachment C, "EAS Graphics," for all graphics.</b>				
<b>Physical Setting</b> (both developed and undeveloped areas)				
Total directly affected area (sq. ft.):	<b>±135,300 sq. ft.</b>	Waterbody area (sq. ft.) and type:	<b>±350 sq. ft. (the Arthur Kill)</b>	
Roads, building and other paved surfaces (sq. ft.):	<b>±126,000 sq. ft.</b>	Other, describe (sq. ft.):	<b>±9,000 sq. ft<sup>1</sup></b>	
<b>7. Physical Dimensions and Scale of Project</b> (if the project affects multiple sites, provide the total development below facilitated by the action)				
SIZE OF PROJECT TO BE DEVELOPED (gross square feet):	<b>N.A (the proposed project would only install below grade infrastructure)</b>			
NUMBER OF BUILDINGS:	<b>N/A</b>	GROSS FLOOR AREA OF EACH BUILDING (sq. ft.):	<b>N/A</b>	
HEIGHT OF EACH BUILDING (ft.):	<b>N/A</b>	NUMBER OF STORIES OF EACH BUILDING:	<b>N/A</b>	
Does the proposed project involve changes in zoning on one or more sites?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>		
If "Yes," specify:	The total square feet owned or controlled by the applicant: <b>N/A</b>			
	The total square feet non-applicant owned area: <b>N/A</b>			
Does the proposed project involve in-ground excavation or subsurface disturbance, including but not limited to foundation work, pilings, utility lines, or grading?	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>		
If "Yes," indicate the estimated area and volume dimensions of subsurface disturbance (if known):				
AREA OF TEMPORARY DISTURBANCE:	<b>135,300 sq.ft.</b>	sq. ft. (width x length)	VOLUME OF DISTURBANCE:	<b>±25,000 cubic yards</b>
AREA OF PERMANENT DISTURBANCE:	<b>135,300 sq.ft.</b>	sq. ft. (width x length)	cubic feet (width x length x depth)	
<b>8. Analysis Year</b> <i>CEQR Technical Manual, Chapter 2</i>				
ANTICIPATED BUILD YEAR (DATE THE PROJECT WOULD BE COMPLETED AND OPERATIONAL):	<b>2014</b>			
ANTICIPATED PERIOD OF CONSTRUCTION IN MONTHS:	<b>12 months</b>			
WOULD THE PROJECT BE IMPLEMENTED IN A SINGLE PHASE?	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	IF MULTIPLE PHASES, HOW MANY?	<b>N/A</b>
BRIEFLY DESCRIBE PHASES AND CONSTRUCTION SCHEDULE:	<b>See Attachment B: "Impact Analyses" under "Construction Impacts"</b>			
<b>9. Predominant Land Use in the Vicinity of Project?</b> (Check all that apply)				
<input checked="" type="checkbox"/> RESIDENTIAL	<input type="checkbox"/> MANUFACTURING	<input type="checkbox"/> COMMERCIAL	<input checked="" type="checkbox"/> PARK/FOREST/OPEN SPACE	<input type="checkbox"/> OTHER, specify:

<sup>1</sup> This is the area of the existing drainage swale and land that would be occupied by the proposed outfall corridor.

**DESCRIPTION OF EXISTING AND PROPOSED CONDITIONS**

The information requested in this table applies to the directly affected area. The directly affected area consists of the project site and the area subject to any change in regulatory control. The increment is the difference between the No-Action and the With-Action conditions.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	INCREMENT
<b>Land Use</b>				
<b>Residential</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
If yes, specify the following				
Describe type of residential structures	<b>There are no residential structures in the area of the proposed land acquisition.</b>	<b>There are known changes proposed in the land conditions in the area to be acquired.</b>	<b>Approximately 894 square feet of private residential property would be acquired within the mapped right-of-way of Amboy Road; no residential structures would be affected.<sup>1</sup></b>	
No. of dwelling units				
No. of low- to moderate-income units				
Gross Floor Area (sq. ft.)				N/A
<b>Commercial</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify the following:				
Describe type (retail, office, other)				
Gross floor area (sq. ft.)				
<b>Manufacturing/Industrial</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify the following:				
Type of use				
Gross floor area (sq. ft.)				
Open storage area (sq. ft.)				
If any unenclosed activities, specify				
<b>Community Facility</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify the following				
Type				
Gross floor area (sq. ft.)				
<b>Vacant Land</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, describe				
<b>Publicly Accessible Open Space</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify type (mapped City, State, or Federal Parkland, wetland—mapped or otherwise known, other)				
<b>Other Land Uses</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	N/A
If yes, describe	<b>City Streets (±126,000 sq. ft.)</b>	<b>City Streets (±126,000 sq. ft.)</b>	<b>City Streets (±126,000 sq. ft.)</b>	N/A
<b>Parking</b>				
<b>Garages</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				
Attended or non-attended				
<b>Lots</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If yes, specify the following:				
No. of public spaces				
No. of accessory spaces				
Operating hours				

<sup>1</sup> The proposed project area includes approximately 894 square feet of privately owned property located in the mapped but unbuilt right-of-way of Amboy Road. As described in greater detail in Attachment A "Project Description" this land is proposed for acquisition by the City to install the proposed outfall from Amboy Road.

	EXISTING CONDITION	NO-ACTION CONDITION	WITH-ACTION CONDITION	
<b>Other (includes street parking)</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If yes, describe	On street parking in the project area	No change in the on-street parking conditions	No change in the on-street parking conditions	N/A
<b>Population</b>				
<b>Residents</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If any, specify number				
Briefly explain how the number of residents was calculated				
<b>Businesses</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If any, specify the following:				
No. and type				
No. and type of workers by business				
No. and type of non-residents who are not workers				
Briefly explain how the number of businesses was calculated				
<b>Students (non-resident)</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
If any, specify number				
Briefly explain how the number of students was calculated				
<b>Zoning</b>				
Zoning classification	R3X <sup>1</sup>	R3X	R3X	N/A
Maximum amount of floor area that can be developed	0.5	0.5	0.5	N/A
Predominant land use and zoning classifications within land use study areas or a 400-foot radius of proposed project	Residential and parkland R1-2, R3X, SSRDD	Residential and parkland R1-2, R3X, SSRDD	Residential and parkland R1-2, R3X, SSRDD	N/A
Attach any additional information as may be needed to describe the project.				
If your project involves changes that affect one or more sites not associated with a specific development, it is generally appropriate to include total development projections in the above table and attach separate tables outlining the reasonable development scenarios for each site.				

<sup>1</sup> The site of the proposed project is within mapped City streets that are mostly built and where zoning would not apply. The R1-2 zoning district is that portion of land to be acquired along the alignment of the proposed outfall.

**PART II: TECHNICAL ANALYSIS**

**INSTRUCTIONS:** For each of the analysis categories listed in this section, assess the proposed project's impacts based on the thresholds and criteria presented in the *CEQR Technical Manual*. Check each box that applies.

- If the proposed project can be demonstrated not to meet or exceed the threshold, check the "no" box.
- If the proposed project will meet or exceed the threshold, or if this cannot be determined, check the "yes" box.
- For each "yes" response, provide additional analyses (and attach supporting information, if needed) based on guidance in the *CEQR Technical Manual* to determine whether the potential for significant impacts exists. Please note that a "yes" answer does not mean that EIS must be prepared—it means that more information may be required for the lead agency to make a determination of significance.
- The lead agency, upon reviewing Part II, may require an applicant to either provide additional information to support the Full EAS Form. For example, if a question is answered "no," an agency may request a short explanation for this response.

	YES	NO
<b>1. LAND USE, ZONING AND PUBLIC POLICY: <i>CEQR Technical Manual, Chapter 4</i></b>		
(a) Would the proposed project result in a change in land use different from surrounding land uses?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in a change in zoning different from surrounding zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Is there the potential to affect an applicable public policy?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(d) If "yes" to (a), (b), and/or (c), complete a preliminary assessment and attach. <b>See Attachment B:" Impact Analyses" under "Land Use, Zoning and Public Policy" and also Appendix A "Coastal Assessment Form"</b>		
(e) Is the project a large, publicly sponsored project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete a PlaNYC assessment and attach. <b>N/A</b>		
(f) Is any part of the directly affected area within the City's Waterfront Revitalization Program boundaries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete the Consistency Assessment Form.		
<b>2. SOCIOECONOMIC CONDITIONS: <i>CEQR Technical Manual, Chapter 5</i></b>		
(a) Would the proposed project:		
• Generate a net increase of more than 200 residential units or 200,000 square feet of commercial space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," answer questions 2(b)(ii) and 2(b)(iv) below. <b>N/A</b>		
• Directly displace 500 or more residents?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," answer questions 2(b)(i), 2(b)(ii), and 2(b)(iv) below. <b>N/A</b>		
• Directly displace more than 100 employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," answer questions under 2(b)(iii) and 2(b)(iv) below. <b>N/A</b>		
• Affect conditions in a specific industry?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," answer question 2(b)(v) below. <b>N/A</b>		
(b) If "Yes" to any of the above, attach supporting information to answer the relevant questions. If "No" was checked for each category above, the remaining questions in this technical area do not need to be answered. <b>N/A</b>		
<b>i. Direct Residential Displacement</b>		
o If more than 500 residents would be displaced, would these displaced represent more than 5% of the primary study area population?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," is the average income of the directly displaced population markedly lower than the average income of the rest of the study area population?	N/A	N/A
<b>ii. Indirect Residential Displacement</b>		
o Would expected average incomes of the new population exceed the average incomes of the study area populations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes:"	N/A	N/A
▪ Would the population of the primary study area increase by more than 10 percent?	N/A	N/A
▪ Would the population of the primary study area increase by more than 5 percent in an area where there is the potential to accelerate trends toward increasing rents?	N/A	N/A
o If "yes," to either of the preceding questions, would more than 5 percent of all housing units be renter-occupied and unprotected?	N/A	N/A

	YES	NO
<b>iii. Direct Business Displacement</b>		
o Do any of the displaced businesses provide goods or services that otherwise would not be found within the trade area, either under existing conditions or in the future with the proposed project?	N/A	N/A
o Is any category of business to be displaced the subject of other regulations or publicly adopted plans to preserve, enhance, or otherwise protect it?	N/A	N/A
<b>iv. Indirect Business Displacement</b>		
o Would the project potentially introduce trends that make it difficult for businesses to remain in the area?	N/A	N/A
o Would the project capture the retail sales in a particular category of goods to the extent that the market for such goods would become saturated, potentially resulting in vacancies and disinvestment on neighborhood commercial streets?	N/A	N/A
<b>v. Affects on Industry</b>		
o Would the project significantly affect business conditions in any industry or any category of businesses within or outside the study area?	N/A	N/A
o Would the project indirectly substantially reduce employment or impair the economic viability in the industry or category of businesses?	N/A	N/A
<b>3. COMMUNITY FACILITIES: CEQR Technical Manual, Chapter 6</b>		
<b>(a) Direct Effects</b>		
o Would the project directly eliminate, displace, or alter public or publicly funded community facilities such as educational facilities, libraries, health care facilities, day care centers, police stations, or fire stations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>(b) Indirect Effects</b>		
<b>i. Child Care Centers</b>		
o Would the project result in 20 or more eligible children under age 6, based on the number of low or low/moderate income residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project result in a collective utilization rate of the group child care/Head Start centers in the study area that is greater than 100 percent?	N/A	N/A
<b>ii. Libraries</b>		
o Would the project result in a 5 percent or more increase in the ratio of residential units to library branches? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project increase the study area population by 5 percent or more from the No-Action levels?	N/A	N/A
o If "yes," would the additional population impair the delivery of library services in the study area?	N/A	N/A
<b>iii. Public Schools</b>		
o Would the project result in 50 or more elementary or middle school students, or 150 or more high school students based on number of residential units? (See Table 6-1 in Chapter 6)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project result in a collective utilization rate of the elementary and/or intermediate schools in the study area that is equal to or greater than 100 percent?	N/A	N/A
o If "yes," would the project increase this collective utilization rate by 5 percent or more from the No-Action scenario?	N/A	N/A
<b>iv. Health Care Facilities</b>		
o Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project affect the operation of health care facilities in the area?	N/A	N/A
<b>v. Fire and Police Protection</b>		
o Would the project result in the introduction of a sizeable new neighborhood?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the project affect the operation of fire or police protection in the area?	N/A	N/A
<b>4. OPEN SPACE: CEQR Technical Manual, Chapter 7</b>		
(a) Would the project change or eliminate existing open space?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Is the project located within an underserved area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes," would the proposed project generate more than 50 additional residents or 125 additional employees?	N/A	N/A
(d) Is the project located within a well-served area in the Bronx, Brooklyn, Manhattan, Queens, or Staten Island?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e) If "yes," would the project generate more than 350 additional residents or 750 additional employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) If the project is located within an area that is neither underserved nor well-served, would it generate more than 200 additional residents or 500 additional employees?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) If "yes" to questions (c), (e), or (f) above, attach supporting information to answer the following: <b>(See Attachment B: "Impact Analyses")</b>		
o If in an underserved area, would the project result in a decrease in the open space ratio by more than 1 percent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If in an area that is not under-served, would the project result in a decrease in the open space ratio by more than 5 percent?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," are there qualitative considerations, such as the quality of open space, that need to be considered? Please specify:	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO
<b>5. SHADOWS: CEQR Technical Manual, Chapter 8.</b>		
(a) Would the proposed project result in a net height increase of any structure of 50 feet or more?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in any increase in structure height and be located adjacent to or across the street from a sunlight-sensitive resource?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes" to either of the above questions, attach supporting information explaining whether the project's shadow reach any sunlight-sensitive resource at any time of the year. <b>N/A</b>		
<b>6. HISTORIC AND CULTURAL RESOURCES: CEQR Technical Manual, Chapter 9</b>		
(a) Does the proposed project site or an adjacent site contain any architectural and/or archaeological resource that is eligible for or has been designated (or is calendared for consideration) as a New York City Landmark, Interior Landmark or Scenic Landmark; that is listed or eligible for listing on the New York State or National Register of Historic Places; or that is within a designated or eligible New York City, New York State, or National Register Historic District? (See the <u>GIS System for Archaeology and National Register</u> to confirm.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project involve construction resulting in in-ground disturbance to an area not previously excavated?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) If "yes" to either of the above, list any identified architectural and/or archaeological resources and attach supporting information on whether the proposed project would potentially affect any architectural or archaeological resources. <b>See Attachment B:" Impact Analyses" under "Historic and Cultural Resources"</b>		
<b>7. URBAN DESIGN AND VISUAL RESOURCES: CEQR Technical Manual, Chapter 10</b>		
(a) Would the proposed project introduce a new building, a new building height, or result in any substantial physical alteration to the streetscape or public space in the vicinity of the proposed project that is not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project result in obstruction of publicly accessible views to visual resources not currently allowed by existing zoning?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If "yes" to either of the questions above, please provide the information requested in Chapter 10. <b>N/A</b>		
<b>8. NATURAL RESOURCES: CEQR Technical Manual, Chapter 11</b>		
(a) Does the proposed project site or a site adjacent to the project contain natural resources as defined in Section 100 of Chapter 11?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," list the resources and attach supporting information on whether the proposed project would affect any of these resources. <b>See Attachment B:" Impact Analyses" under "Natural Resources"</b>		
(b) Is any part of the directly affected area within the <u>Jamaica Bay Watershed</u> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," complete the <u>Jamaica Bay Watershed Form</u> and submit according to its instructions. <b>N/A</b>		
<b>9. HAZARDOUS MATERIALS: CEQR Technical Manual, Chapter 12</b>		
(a) Would the proposed project allow commercial or residential use in an area that is currently, or was historically, a manufacturing area that involved hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Does the proposed project site have existing institutional controls (e.g., (E) designations or a Restrictive Declaration) relating to hazardous materials that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the project require soil disturbance in a manufacturing area or any development on or near a manufacturing area or existing/historic facilities listed in <u>Appendix 1</u> (including nonconforming uses)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Would the project result in the development of a site where there is reason to suspect the presence of hazardous materials, contamination, illegal dumping or fill, or fill material of unknown origin?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(e) Would the project result in development on or near a site that has or had underground and/or aboveground storage tanks (e.g., gas stations, oil storage facilities, heating oil storage)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Would the project result in renovation of interior existing space on a site with the potential for compromised air quality; vapor intrusion from either on-site or off-site sources; or the presence of asbestos, PCBs, mercury, or lead-based paint?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(g) Would the project result in development on or near a site with potential hazardous materials issues such as government-listed voluntary cleanup/brownfield site, current or former power generation/transmission facilities, coal gasification or gas storage sites, railroad tracks or rights-of-way, or municipal incinerators?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Has a Phase I Environmental Site Assessment been performed for the site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o If "yes," were Recognized Environmental Conditions (RECs) identified? Briefly identify: <b>Vacant lot (potential urban fill or dumping)</b>		
(i) Based on the Phase I Assessment, is a Phase II Assessment needed? <b>Yes. A Phase 2 Limited Corridor Investigation has been prepared and is summarized in Attachment B, "Impact Analyses," under "Hazardous Materials."</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>10. WATER AND SEWER INFRASTRUCTURE: CEQR Technical Manual, Chapter 13</b>		
(a) Would the project result in water demand of more than one million gallons per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If the proposed project is located in a combined sewer area, would it result in at least 1,000 residential units or 250,000 sq. ft. or more of commercial space in Manhattan, or at least 400 residential units or 150,000 sq. ft. or more of commercial space in the Bronx, Brooklyn, Staten Island or Queens?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) If the proposed project is located in a separately sewered area, would it result in the same or greater development than that listed in Table 13-1 in Chapter 13?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Would the project involve development on a site that is 5 acres or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If the project is located within the Jamaica Bay Watershed or in certain specific drain areas, including Bronx River, Coney Island Creek, Flushing Bay and Creek, Gowanus Canal, Hutchinson River, Newtown Creek, or Westchester Creek, would it involve development on a site that is 1 acre or larger where the amount of impervious surface would increase?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) Would the proposed project be located in an area that is partially sewered or currently unsewered?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

	YES	NO
(g) Is the project proposing an industrial facility or activity that would contribute industrial discharges to a Wastewater Treatment Plant and/or contribute contaminated stormwater to a separate storm sewer system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(h) Would the project involve construction of a new stormwater outfall that requires federal and/or state permits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(i) If "yes" to any of the above, conduct the appropriate preliminary analyses and attach supporting documentation. <b>See Attachment B:" Impact Analyses" under "Water and Sewer Infrastructure"</b>		
<b>11. SOLID WASTE AND SANITATION: CEQR Technical Manual, Chapter 14</b>		
(a) Using Table 14-1 in Chapter 14, the project's projected operational solid waste generation is estimated to be (pounds per week):		
o Would the proposed project have the potential to generate 100,000 pounds (50 tons) or more of solid waste per week?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project involve a reduction in capacity at a solid waste management facility used for refuse or recyclables generated within the City?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "yes," would the proposed project comply with the City's Solid Waste Management Plan?	N/A	N/A
<b>12. ENERGY: CEQR Technical Manual, Chapter 15</b>		
(a) Using energy modeling or Table 15-1 in Chapter 15, the project's projected energy use is estimated to be (annual BTUs):		
(b) Would the proposed project affect the transmission or generation of energy?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>13. TRANSPORTATION: CEQR Technical Manual, Chapter 16</b>		
(a) Would the proposed project exceed any threshold identified in Table 16-1 in Chapter 16?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "yes," conduct the appropriate screening analyses, attach back up data as needed for each stage, and answer the following questions:		
o Would the proposed project result in 50 or more Passenger Car Equivalents (PCEs) per project peak hour?	N/A	N/A
If "yes," would the proposed project result in 50 or more vehicle trips per project peak hour at any given intersection? <i>**It should be noted that the lead agency may require further analysis of intersections of concern even when a project generates fewer than 50 vehicles in the peak hour. See Subsection 313 in Chapter 16 for more information.</i>	N/A	N/A
o Would the proposed project result in more than 200 subway/rail or bus trips per project peak hour?	N/A	N/A
If "yes," would the proposed project result, per project peak hour, in 50 or more bus trips on a single line (in one direction) or 200 subway trips per station or line?	N/A	N/A
o Would the proposed project result in more than 200 pedestrian trips per project peak hour?	N/A	N/A
If "yes," would the proposed project result in more than 200 pedestrian trips per project peak hour to any given pedestrian or transit element, crosswalk, subway stair, or bus stop?	N/A	N/A
<b>14. AIR QUALITY: CEQR Technical Manual, Chapter 17</b>		
(a) <i>Mobile Sources:</i> Would the proposed project result in the conditions outlined in Section 210 in Chapter 17?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) <i>Stationary Sources:</i> Would the proposed project result in the conditions outlined in Section 220 in Chapter 17?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o If "Yes," would the proposed project exceed the thresholds in the Figure 17-3, Stationary Source Screen Graph in Chapter 17? (Attach graph as needed)	N/A	N/A
(c) Does the proposed project involve multiple buildings on the project site?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project require Federal approvals, support, licensing, or permits subject to conformity requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Does the proposed project site have existing institutional controls (e.g., (E) designations or a Restrictive Declaration) relating to air quality that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(f) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. <b>N/A</b>		
<b>15. GREENHOUSE GAS EMISSIONS: CEQR Technical Manual, Chapter 18</b>		
(a) Is the proposed project a city capital project or a power generation plant?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Would the proposed project fundamentally change the City's solid waste management system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project result in the development of 350,000 square feet or more?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) If "yes" to any of the above, would the project require a GHG emissions assessment based on guidance in Chapter 18? <sup>1</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "yes," would the project result in inconsistencies with the City's GHG reduction goal? (see <u>Local Law 22 of 2008</u> ; § 24-803 of the Administrative Code of the City of New York). Please attach supporting documentation.	N/A	N/A

<sup>1</sup> The proposed project is a City capital project; however, it is an intersection improvement project that would not result in any greenhouse gas (GHG) emissions. Therefore, no further analysis is necessary.

	YES	NO
<b>16. NOISE: CEQR Technical Manual, Chapter 19</b>		
(a) Would the proposed project generate or reroute the vehicular traffic?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) Would the proposed project introduce new or additional receptors (see Section 124 in Chapter 19) near heavily trafficked roadways, within one horizontal mile of an existing or proposed flight path, or within 1,500 feet of an existing or proposed rail line with a direct line of sight to that rail line?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(c) Would the proposed project cause a stationary noise source to operate within 1,500 feet of a receptor with a direct line of sight to that receptor or introduce receptors into an area with high ambient stationary noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Does the proposed project site have existing institutional controls (e.g., (E) designation or Restrictive Declaration) relating to noise that preclude the potential for significant adverse impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) If "yes" to any of the above, conduct the appropriate analyses and attach any supporting documentation. N/A		
<b>17. PUBLIC HEALTH: CEQR Technical Manual, Chapter 20</b>		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Air Quality, Hazardous Materials, Noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "yes," explain why an assessment of public health is or is not warranted based on the guidance in Chapter 20, "Public Health." Attach a preliminary analysis, if necessary. N/A		
<b>18. NEIGHBORHOOD CHARACTER: CEQR Technical Manual, Chapter 21</b>		
(a) Based upon the analyses conducted, do any of the following technical areas require a detailed analysis: Land Use, Zoning, and Public Policy; Socioeconomic Conditions; Open Space; Historic and Cultural Resources; Urban Design and Visual Resources; Shadows; Transportation; Noise?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If "Yes," explain why an assessment of neighborhood character is or is not warranted based on the guidance in Chapter 21, "Neighborhood Character." Attach a preliminary analysis, if necessary. N/A		
<b>19. CONSTRUCTION: CEQR Technical Manual, Chapter 22</b>		
(a) Would the project's construction activities involve:		
o Construction activities lasting longer than two years?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Construction activities within a Central Business District or along an arterial or major thoroughfare?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Closing, narrowing, or otherwise impeding traffic, transit or pedestrian elements (roadways, parking spaces, bicycle routes, sidewalks, crosswalks, corners, etc.)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction of multiple buildings where there is a potential for on-site receptors on buildings completed before the final build-out?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o The operation of several pieces of diesel equipment in a single location at peak construction?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Closure of a community facility or disruption in its service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
o Activities within 400 feet of a historic or cultural resource?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Disturbance of a site containing or adjacent to a site containing natural resources?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
o Construction on multiple development sites in the same geographic area, such that there is the potential for several construction timelines to overlap or last more than two years overall?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(b) If any boxes are checked "yes," explain why a preliminary construction assessment is or is not warranted based on the guidance in Chapter 22, "Construction." It should be noted that the nature and extent of any commitment to use the Best Available Technology for construction equipment or Best Management Practices for construction activities should be considered when making this determination. Attachment B, "Impact Analyses," provides a full examination of potential impacts from construction, under the section "Construction Impacts."		
<b>20. APPLICANT'S CERTIFICATION</b>		
I swear or affirm under oath and subject to the penalties for perjury that the information provided in this Environmental Assessment Statement (EAS) is true and accurate to the best of my knowledge and belief, based upon my personal knowledge and familiarity with the information described herein and after examination of pertinent books and records and/or after inquiry of persons who have personal knowledge of such information or who have examined pertinent books and records.		
Still under oath, I further swear or affirm that I make this statement in my capacity as the applicant or representative of the entity that seeks the permits, approvals, funding, or other governmental action(s) described in this EAS.		
APPLICANT/REPRESENTATIVE NAME:	SIGNATURE	DATE
PINAR BALCI for A. Licata		06/26/13
<b>PLEASE NOTE THAT APPLICANTS MAY BE REQUIRED TO SUBSTANTIATE RESPONSES IN THIS FORM AT THE DISCRETION OF THE LEAD AGENCY SO THAT IT MAY SUPPORT ITS DETERMINATION OF SIGNIFICANCE.</b>		

**A. OVERVIEW OF PROPOSED PROJECT**

The New York City Department of Design and Construction (DDC), on behalf of the New York City Department of Environmental Protection (DEP), is proposing Capital Project No. SER200208, Wards Point Infrastructure Improvements, which is located in Staten Island Community District 3 in the Tottenville section of Richmond County (“proposed project”). The proposed project area is primarily residential single-family uses.

The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration (see **Figures C-1 through C-3**). The proposed project area is generally bounded by Amboy Road to the north, Satterlee Street to the east, the southerly end of Wards Point Road to the south, and the Arthur Kill to the west. Streets affected by the proposed project include Amboy Road (between Satterlee Street and the Arthur Kill), Tottenville Place (between Satterlee Street and Wards Point Avenue), Perth Amboy Place (between Satterlee Street and Wards Point Avenue), Wards Point Avenue (between Amboy Road and a point south of Perth Amboy Place), and Satterlee Street (between Amboy Road and Shore Road). The proposed 40-foot-wide outfall corridor would be constructed within a mapped portion of the 80-foot-wide Amboy Road and requires the acquisition of private lands within the right-of-way. Current uses along this proposed outfall corridor include a small portion of privately owned yard and street, and a deteriorated concrete drainage swale that conveys runoff from the end of Amboy Road out to the Arthur Kill. Specifically, the proposed project includes the following:

- Installation of a 3-foot-diameter stormwater outfall in a corridor about 40-foot-wide and 250-feet long extending from the west end of Amboy Road westward to the bulkhead line in the Arthur Kill. The proposed outfall would include a splashpad at its outlet to attenuate the velocities of the discharged stormwater which would minimize scouring of the sand beach between the outfall and the mean low water line of the Arthur Kill. The outfall was designed at the maximum height above mean higher high water (MHHW) based on local topography and the upstream drainage area.
- Installation of approximately 1,350 linear feet of stormwater collection sewers that would serve a drainage area of approximately 30 acres, including segments of Wards Point Avenue, Amboy Road, Satterlee Street, and Tottenville Place.
- Installation of approximately 1,000 linear feet of sanitary collection sewers along segments of Wards Point Avenue, Amboy Road, and Tottenville Place and serving a drainage area about 26 acres in size. Once the collection sewers are installed, household septic systems would need to be decommissioned and homeowners would be required to connect to the proposed sanitary lines. The sanitary lines would convey the flow to Amboy Road and the wastewater would be treated at the Oakwood Beach Wastewater Treatment Plant (WWTP).

- Replacement of approximately 2,700 linear feet of 8-inch water mains that would serve an area about 60 acres in size (the area of proposed water main improvements is larger since the length of proposed water main is more extensive) and includes the following streets: Amboy Road between Satterlee Street and the end of Amboy Road; Tottenville Place between Satterlee Street and Wards Point Avenue; Perth Amboy Place between Satterlee Street and Wards Point Avenue; Wards Point Avenue between Amboy Road and a point south of Perth Amboy Place; and Satterlee Street between Amboy Road and Shore Road.
- Restoration, both on- and off-site, to offset of approximately 3,075 square feet of tidal wetlands and adjacent area affected by the proposed temporary (construction period) impacts along with approximately 245 square feet of tidal wetlands and 480 square feet of tidal wetlands adjacent area that would be permanently affected by the proposed outfall structure.

## **B. ELEMENTS OF THE PROPOSED PROJECT**

### **PROPOSED OUTFALL**

The proposed 36-inch stormwater outfall would be installed within a 40-foot-wide corridor that is part of an 80-foot-wide mapped segment of Amboy Road that extends west from the built end of Amboy Road (at its intersection with Wards Point Avenue) out to the bulkhead line in the Arthur Kill, or a distance of about 200 linear feet. The proposed outfall would provide the necessary drainage outlet for collected stormwater and would require the acquisition of private lands along the outfall corridor (see description below). The proposed outfall would replace an existing concrete drainage swale and would convey the collected stormwater out to the Arthur Kill (see **Figure C-4**). The existing drainage swale would be replaced with soil and grass cover; the proposed outfall structure would include a headwall and splash pad along the shoreline of the Arthur Kill. The headwall structure would serve as a retaining wall to prevent further erosion of upland soils into the surrounding wetlands while the splash pad would attenuate stormwater velocity and reduce sediment load conveyed to the Arthur Kill. Approximately 60 linear feet at the end of the outfall is within tidal wetlands or adjacent area associated with the Arthur Kill.

### **PROPOSED WETLAND RESTORATION PLAN**

Construction of the proposed stormwater outfall and splash pad would result in permanent and temporary impacts to intertidal sand beach and a littoral zone tidal wetland as designated by the New York State Department of Environmental Conservation (NYSDEC). Littoral zone wetlands are not included in any other NYSDEC-designated wetland category and are submerged beneath tidal waters up to a depth of six feet at mean low water. Impacts to these tidal wetlands would be addressed in part through the use of appropriate erosion, sediment control and stabilization measures (e.g., cofferdams, reinforced silt fencing, turbidity curtains, etc.). With the proposed project approximately 7 cubic yards of material would be excavated below the mean higher high water line (MHHW, or spring high tide line) and then replaced with approximately 7 cubic yards of outfall structure, which includes the outfall pipe and the splash pad. The proposed wetland restoration plan includes the following:

- On-site restoration to pre-construction conditions of the approximately 225 square feet of coastal shoals, bars, and mudflats within the littoral zone that would be temporarily impacted during the construction of the proposed outfall. Under the proposed wetland restoration, debris would be cleared from the temporarily impacted construction area.

- On-site restoration of approximately 2,850 square feet of tidal wetland adjacent area that would be temporarily impacted during construction of the proposed outfall. Under the proposed wetland restoration, adjacent area would be restored with sandy beach and maritime grassland habitat.
- On-site creation of approximately 480 square feet of new maritime grassland habitat to address the 480 square feet of tidal wetland adjacent area that would be permanently impacted by the proposed outfall. This restoration would be provided at a 1 to 1 replacement ratio.
- Off-site restoration is proposed for the approximately 245 square feet of coastal shoals, bars, and mudflats within the littoral zone that would be permanently impacted as part of the installation of the proposed outfall and splash pad, requiring a restoration area of about 490 square feet (at a ratio of 2 to 1). The objective of the proposed plan is to restore currently degraded tidal wetlands that are of low habitat value. The proposed restoration site is a publically-owned waterfront property under the jurisdiction of the Metropolitan Transportation Authority (MTA) and located immediately north of the project site (Block 8003, Lot 120), just west of Ellis Street and the Staten Island Railway railyard in the Tottenville neighborhood (see **Figure C-4a**). This proposed mitigation site has approximately 3,150 square-feet of coastal shoals, bars, and mudflats and adjacent area that are in need of restoration. The proposed restoration activities would involve clearing debris that has accumulated in the wetlands, including rubber tires, concrete, asphalt, rebar, brick, fencing, and miscellaneous plastics (in total an estimated 25 cubic yards of debris would be removed). All removed debris would be disposed of at an approved NYSDEC facility. In addition, the proposed project includes intertidal plantings that would expand upon a small area of intertidal marsh vegetation at the site (about 390 square feet of salt marsh cordgrass) that is growing in a protected area behind a deteriorated wooden bulkhead. The proposed restoration would also involve rearranging larger rocks and using the existing deteriorated bulkhead and concrete outfall to create a protected area to plant approximately 180 square feet of saltmarsh cordgrass with an additional 190 square feet of high marsh that would be planted with saltmeadow cordgrass and saltgrass.

Restoration at this location would also be used to address the DEP Capital Project SER002311 (Bertram Avenue), which is an outfall project proposed along the South Shore of Staten Island in the Huguenot Beach neighborhood. Implementing the proposed restoration at this site would require an agreement between the DDC and MTA which would be finalized prior to initiating the site work.

## **PROPOSED LAND ACQUISITION**

The proposed stormwater outfall within Amboy Road would be installed in a corridor about 40 feet wide and 250 feet long that would extend out to the Arthur Kill from the end of the existing built street. A portion of this corridor is privately owned land within the mapped right-of-way of Amboy Road. This land would be acquired by the City of New York in order to provide the necessary land area to install the proposed outfall (currently, much of the corridor is occupied by a concrete drainage swale that was previously installed). The total amount of private land area to be acquired in the mapped right-of-way of Amboy Road is about 894 square feet (see Table A-1, below). In accordance with the city's land acquisition process, DDC conducts a public hearing on its land acquisition proposal before commencing acquisition and works with property owners during the appraisal process and award financial compensation. The acquisition process from the time of the public hearing to completion can take up to two years.

**Table A-1  
Privately-owned Land Proposed for Acquisition**

<b>Block and Lot Numbers</b>	<b>Acquisition Area (Sq. Ft.)</b>
Block 8005, part of Lot 220	40
Block 8005, part of Lot 205	2
Block 7966, part of Lot 1	852
<b>TOTAL</b>	<b>894</b>
<b>Source:</b> Damage and Acquisition map, DDC, June 26, 2008.	

### **C. PURPOSE AND NEED**

The proposed project would provide a stormwater collection system and a discharge location for the collected stormwater from newly sewered streets, thereby reducing runoff as well as local street and property flooding. The proposed project area has neither sanitary nor storm sewer service. Thus, a full network of stormwater collection sewers is proposed with a drainage outfall to the Arthur Kill for the collected stormwater, along with the removal of an existing substandard concrete drainage swale that handles runoff from the end of Amboy Road. The proposed outfall site is advantageous in that its location is at a low point in the drainage area, which allows for the opportunity to maximize runoff conveyance from the local streets to nearby surface waters using gravity flow. The site is also previously disturbed from the concrete drainage swale, which would further minimize impacts to natural resources. Its location at the end of Amboy Road also allows for future monitoring and maintenance access to the outfall.

The proposed project also includes the installation of new sanitary sewers, which would eliminate the use of septic tanks in the proposed project area. The collected sanitary wastewater would flow to an existing interceptor sewer in Amboy Road and then be conveyed to the Oakwood Beach WWTP for treatment.

Finally, approximately 2,700 linear feet of 8-inch unlined cast iron water supply lines would be replaced with new 8-inch water pipes, thereby improving local water supply.

### **D. CONSTRUCTION SCHEDULE**

Construction of the proposed project is expected to commence in late 2013 and be completed in late 2014. Thus, the duration of construction is expected to be about 12 months. This includes approximately 6 to 9 months of sewer, water main and street work, and 3 months for the construction of the proposed outfall. The proposed off-site wetland restoration should be completed in 60 days or less. A more detailed description of the proposed project’s construction program is provided in Attachment B “Impact Analyses.”

### **E. ENVIRONMENTAL REVIEW, PERMITS AND APPROVALS**

#### **ENVIRONMENTAL REVIEW**

This Environmental Assessment Statement (EAS) has been prepared in accordance with the requirements of both the City Environmental Quality Review Act (CEQR) and the State Environmental Quality Review Act (SEQRA). It has been prepared following the methodologies of the *CEQR Technical Manual (2012)*, which were used to assess the potential for environmental impacts resulting from the proposed project

## **PERMITS AND APPROVALS**

This EAS has been prepared in support of the following discretionary approvals that are necessary to implement the proposed project.

### *LOCAL (NEW YORK CITY)*

- New York City Department of Transportation (DOT) street and sidewalk construction permit for work in local streets.
- Coastal Zone consistency review by the New York City Department of City Planning (DCP) via the federal and State permit review process and approval for clearing and grading in the Special South Richmond Development District (SSRDD).
- If de-watering into New York City storm/sewer drains is proposed during construction, a DEP Sewer Discharge Permit must be obtained by the contractor prior to the start of any de-watering activities at the site.

### *STATE (NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NYSDEC)*

- Tidal Wetlands Permit for activities in tidal wetlands and tidal wetlands adjacent areas (Article 25, 6NYCRR Part 661).
- Water Quality Certification for activities in State waters (protection of waters, Article 15, Section 401).
- Protection Of Waters Permit for excavating or placing fill in navigable waters of the State, below the mean high water level, including adjacent and contiguous marshes and wetlands (Article 15, 6NYCRR Part 608).
- Modification of DEP's MS4 State Pollution Discharge Elimination System (SPDES) Permit (NY0026174) for an additional stormwater outfall (Oakwood Beach WWTP SPDES permit).
- SPDES General Permit GP-010-001 for Stormwater Discharges from Construction Activity (this would be applied for by the project contractor as necessary).
- Industrial SPDES Discharge Permit for any temporary dewatering (this permit would be applied for by the project contractor as necessary).

### *STATE (NEW YORK STATE DEPARTMENT OF STATE, NYSDOS)*

- New York State Coastal Management Program Coastal Zone Consistency.

### *FEDERAL (UNITED STATES ARMY CORPS OF ENGINEERS, USACE)*

- Nationwide Permit 7 - Outfall Structures and Associated Intake Structures for activities related to the construction or modification of outfall structures and associated intake structures.

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**Wards Point Outfall Drainage Plan**

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## **A. INTRODUCTION**

This environmental assessment has been prepared to examine the potential environmental impacts of the proposed project. As described in detail in Attachment A, “Project Description,” The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration. The proposed project area is located in Staten Island Community District 3 in the Tottenville section of Richmond County (see **Figures C-1 and C-2**).

Provided below are the environmental impact analyses for the proposed project that have been prepared following the methodologies of the *CEQR Technical Manual* (2012). Figures referred to in this attachment (e.g., land use) are provided in Attachment C, “EAS Graphics.”

## **B.1 LAND USE, ZONING, AND PUBLIC POLICY**

### **INTRODUCTION**

This section examines the existing land use, zoning, and public land use policies that apply to the proposed project. The analysis presents the current land use conditions in the proposed project area and identifies any anticipated changes in land use, zoning, and public policy that are expected in the future independent of the proposed project through 2014 (the proposed project’s build year). The analysis then assesses any potential adverse impacts to land use, zoning, and public policy that would occur as a result of the proposed project for a study area within 400 feet of the proposed infrastructure improvements.

### **LAND USE**

The proposed project is located in southwest Staten Island (in the Tottenville neighborhood) and is generally bounded by Amboy Road to the north, Satterlee Street to the east, the southerly end of Wards Point Road to the south, and the Arthur Kill to the west. As shown in **Figure C-5**, the predominant land use in the proposed project area is single-family residential uses, including local streets and a small portion of Conference House Park, which occupies 265 acres along the waterfront of Arthur Kill waterfront. There are only two vacant parcels within the proposed project area (Block 7694, Lot 16 and Block 8005, Lot 220). **Table B-1** provides a detailed breakdown of proposed project area land uses by acreage.

In the future without the proposed project, it is assumed that land uses in the proposed project area would remain unchanged. Based on information from the New York City Department of City Planning (DCP), there are no land use changes anticipated through the project’s 2014 build year.

**Table B-1**  
**Land Uses in Proposed Project Area**

Land Uses	Study Area Acres	Percentage of Total
Residential	23.24	56.98
Open Space	0.42	1.02
Parking Facilities	1.85	4.53
Vacant Lands	0.74	1.81
Other (Roads, Rail, and Water)	14.53	35.63
<b>Total</b>	<b>40.78</b>	

**Sources:** DCP, mapPluto 09v1, February 2010.

The proposed project requires the acquisition of privately owned land for the installation of the proposed outfall at the west end of the built segment of Amboy Road (the other infrastructure improvements would be installed in mapped and built streets and do not require any land acquisition). The total amount of private land to be acquired is about 894 square feet, which is currently occupied by portions of a residential side yard and a small portion of a private street. The proposed acquisition would neither directly nor indirectly displace any uses or structures, nor would it conflict with or impact any adjacent uses. Access to the private street would remain with the proposed project. In accordance with the City's land acquisition process, the New York City Department of Design and Construction (DDC) conducts a public hearing on its land acquisition proposal before commencing acquisition and works with property owners during the appraisal process and award financial compensation. The acquisition process from the time of the public hearing to completion is approximately two years.

The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP where no such systems currently exist, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts to land use.

## ZONING

As shown in **Figure C-6**, the proposed project area is predominantly zoned for lower-density residential uses, including R1-2, R3X, and R3A zoning districts. The southwestern portion of the proposed project area includes a R3A zoning district, reflecting the general land use pattern of the proposed project area, which is predominantly single-family houses, with a limited number of two-family residences along Amboy Road.

In the future without the proposed project, it is assumed that the proposed project site would remain unchanged. Based on correspondence with DCP, no changes in local zoning are proposed through the build year.

The proposed project would not require any changes to existing zoning, nor would it conflict with existing zoning district regulations. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts on zoning.

## **PUBLIC POLICY**

In addition to the zoning regulations, there are several comprehensive public policies that apply to the proposed project area. Since the proposed project is located within the boundaries of New York City's Coastal Zone, an analysis of the proposed project's consistency with policies of the Waterfront Revitalization Program (WRP) as well as the long term plans of "Vision 2020, the New York City Comprehensive Waterfront Plan," (released by DCP in March 2011) and the Plan for the Staten Island Waterfront (issued by the DCP Staten Island Borough Office in 1994) are provided below.

### *WATERFRONT REVITALIZATION PROGRAM*

The WRP, first adopted in 1982, encourages coordination among all levels of government to promote sound waterfront planning and requires consideration of the program's goals in making land use decisions. DCP administers the program, which is designed to balance economic development and preservation by promoting waterfront revitalization and water-dependent uses while protecting fish and wildlife, open space and scenic vistas, public access to the shoreline, and farmland. The WRP also aims to minimize adverse changes to ecological systems, erosion and flood hazards.

Because the proposed project is located within the coastal zone (see **Figure C-10**), it is subject to review under the WRP. Therefore, this section reviews the applicable WRP policies and assesses the consistency of the proposed project with those policies. A completed WRP Consistency Assessment Form (CAF) is also provided (see Appendix A).

As described in greater detail below, the proposed project is concluded to be consistent with the WRP policies, specifically those that address infrastructure and development in the coastal zone, protection and restoration of coastal ecosystems (e.g., wetlands), protection of water quality, and minimizing coastal flooding and erosion impacts.

The proposed project would be consistent with all WRP policies and specifically promote the following policies:

**Policy 1:** Support and facilitate commercial and residential redevelopment in appropriate coastal zone areas.

The proposed project would not directly result in any new residential or commercial uses or redevelopment, nor would it induce any new development through the installation of new infrastructure (see also the discussion below under "Growth Inducing"). Installation of the proposed infrastructure would support existing residential and commercial development in the Tottenville neighborhood. The proposed project would also benefit residents by improving stormwater drainage, providing connections to the sanitary sewer system, and improving local water supply. Therefore, the proposed project is consistent with this policy.

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

The proposed project is not located within a Significant Maritime Industrial Area, nor is it a maritime infrastructure project that would support water-dependent uses. However, consistent with this policy, the proposed project would also not conflict with any water-dependent or waterfront industrial uses.

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

Consistent with this policy, the proposed project would not conflict with any in-water recreational activities. It would not introduce any structures that would preclude use of the City's waterways

for commercial or recreational boating or transportation, nor would it result in any water quality impacts that would indirectly affect use of City waters.

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

The proposed project involves the installation of sewers with a new storm sewer outfall into the Arthur Kill, a small portion of which would be in tidal wetlands. As described under “Natural Resources” and “Construction Impacts” below, consistent with this policy, the proposed project would not adversely impact water quality and includes a plan for restoring tidal wetlands and adjacent areas. In addition, in order to avoid impacts due to construction-period activity, the proposed project includes measures to protect tidal wetlands from impacts during construction (see “Construction Impacts”). Therefore, the proposed project is consistent with this policy.

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

The proposed project would manage any direct or indirect discharges to waterbodies during construction through a Storm Water Pollution Prevention Plan (SWPPP) (see “Construction Impacts”). It would also eliminate the use of septic tanks in the project area by providing new sanitary sewer lines for connection to the municipal sanitary sewer system. This would reduce the introduction of pollutants into local groundwater. Therefore the proposed project is consistent with this policy.

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

The proposed project is a publicly funded capital improvement project that would provide new stormwater conveyance via sewer and outfall improvements that would reduce flooding on local streets. All construction activities would also be performed in accordance with NYSDEC technical standards for erosion and sediment control (e.g., use of silt fences, hay bales, and containment booms) that would be implemented in accordance with a SWPPP in order to minimize potential erosion impacts. With these measures in place, no significant erosion impacts are expected. Therefore, the proposed project is consistent with this policy.

**Policy 8:** Provide public access to, from, and along New York City’s coastal waters.

Consistent with this policy, the proposed project involves improvements to local streets and the street ends at Amboy Road. These improvements would enhance physical and visual access to the waterfront. The site of the proposed outfall is not dedicated to public open space and the proposed outfall would be installed in a mapped City street right-of-way on land that would be acquired for street-use (infrastructure) purposes. In addition, consistent with this policy, the proposed project would also not conflict with public access along the shoreline. Finally, consistent with this policy, the proposed project would secure the public right-of-way for uses that are in the public interest.

#### *NEW YORK CITY COMPREHENSIVE WATERFRONT PLAN*

In March 2011, DCP released *Vision 2020: New York City Comprehensive Waterfront Plan* as an update of the 1992 Comprehensive Waterfront Plan. The Vision 2020 Plan articulates goals for the City’s waterfront and lays out strategies to achieve each goal.

The proposed project would not impact or conflict with any public access to the waterfront and would not significantly impact water quality or natural resources along the Arthur Kill (see also “Natural Resources,” below). It would improve water quality through measures that benefit natural habitats, support public recreation, and enhance waterfront and upland communities. The proposed project would also restore degraded natural shorelines and protect wetlands and shorefront habitats through the design and construction of a wetland restoration plan that would address all permanent and

temporary impacts to tidal wetland and adjacent areas associated with the proposed project. This proposed restoration would benefit the ecology of the Arthur Kill by providing increased saltmarsh habitat. Therefore, the proposed project is not expected to result in potential significant adverse impacts with respect to this policy.

#### *PLAN FOR THE STATEN ISLAND WATERFRONT*

The principal goals of the “Plan for the Staten Island Waterfront” (1994) are to protect and enhance the natural waterfront, enhance the working waterfront, and reestablish the public’s connection with the public waterfront with waterfront redevelopment. The Tottenville waterfront is in Reach 20 of the plan (a reach is a segment of shoreline or waterfront), which covers about six linear shoreline miles and is referred to as Arthur Kill South. In this reach, the plan identifies the natural shoreline, open spaces, and undeveloped lands that characterize the water’s edge, including extensive tidal wetlands, as well as historic resources along the waterfront such as Conference House Park.

The plan includes general recommendations for the protection of Staten Island’s natural shoreline. The proposed project would comply with this objective by protecting natural resources including the proposed wetland restoration plan. The proposed project would benefit residents by improving stormwater drainage and thereby decreasing the potential for local flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in any potential significant adverse impacts with respect to this plan.

## **B.2 SOCIOECONOMIC CONDITIONS**

Socioeconomic character is defined by elements such as the population, housing, and economic activity. In addition to determining whether a proposed project would directly or indirectly displace residents or businesses, the objective of the CEQR socioeconomic analysis is to disclose whether any changes created by the proposed project would have a significant impact on land use patterns, low-income populations, the availability of goods and services, or economic investment in a way that changes the socioeconomic character of the area. The proposed project would not result in any new development or conflict with existing uses in the proposed project area, nor would it generate new employees, or new residential or commercial uses. The proposed acquisition of the easement would not displace either directly or indirectly any residents, businesses, institutions, or employees. The proposed project would require each homeowner in the proposed project area to pay a onetime connection cost (once the sanitary sewer is installed) and pay for the decommissioning of septic systems. However, homeowners would no longer have to operate and maintain their septic systems, thereby providing future cost savings. Therefore, the proposed project is not expected to result in potential significant adverse impacts on socioeconomic conditions.

## **B.3 COMMUNITY FACILITIES AND SERVICES**

The *CEQR Technical Manual* (2012) specifies that a community facilities analysis is needed if the potential exists for a project to have a direct or indirect effect on any community facilities. The proposed project would not directly or significantly increase the demand on services, affect any community facilities, or generate any demand for community services. The proposed project would benefit residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts on community facilities and services.

## **B.4 OPEN SPACE**

An analysis of open space is conducted to determine whether or not a proposed project will have a direct or indirect impact to open space, as defined in the *CEQR Technical Manual* (2012). It also recommends a detailed open space assessment if a proposed project would generate 200 residents or 500 employees, or if a proposal would have a direct impact on an open space. The proposed project would not introduce new residents or employees to the proposed project area. While Conference House Park is in the vicinity of the proposed project area, it would not be affected by the proposed project. Therefore, the proposed project is not expected to result in potential significant adverse impacts on open space.

## **B.5 SHADOWS**

The *CEQR Technical Manual* (2012) states that an assessment of shadows is generally necessary only for projects that would result in new structures or additions to existing structures of at least 50 feet in height. The proposed project would not develop any structures 50 feet in height or greater, nor would it create any new shadows. Therefore, the proposed project is not expected to result in potential significant adverse impacts from shadows.

## **B.6 HISTORIC RESOURCES**

### **INTRODUCTION**

According to the *CEQR Technical Manual* (2012), a historic resources impact assessment is required if there is the potential for a proposal to impact either archaeological or architectural resources. Projects that typically require a historic resources impact assessment for archaeology are those that involve in-ground disturbance, or below-grade construction and excavation in archaeologically sensitive areas. Projects that can trigger an assessment of impacts to architectural resources include new construction, demolition, or significant alteration to any historic building, structure, or object; a change in scale, visual prominence, or visual context of any historic building, structure, object or landscape; construction activities near historic resources; additions to or significant removal, grading, or replanting of significant historic landscape features; screening or elimination of publicly accessible views of historic resources; or the introduction of significant new shadows or significant lengthening of the duration of existing shadows over a historic landscape or historic structure with sunlight dependent features. The assessment of potential impacts to archaeological and historical resources is presented below.

### **ARCHAEOLOGICAL RESOURCES**

On February 20, 2010, the New York Landmarks Preservation Commission (LPC) issued a technical memorandum stating that the proposed project area may contain potentially significant archaeological resources. In response to this memorandum, a Phase IA archaeological survey was prepared to research the potential for any sensitive archaeological resources in the proposed project area that could be disturbed by the proposed project. That Phase 1A concluded that there has been significant archaeological documentation of precontact period occupation in the proposed project area including the use of trails between the upland and the water. Thus, the potential for precontact period resources to be extant in the proposed project area was considered to be high.

There is also the potential for historic period archaeological resources, as the Tottenville neighborhood was the site of some of the earliest ferries between Staten Island and New Jersey. Likewise, recreational uses and summer resorts once occupied the nearby Arthur Kill shoreline. Wood piles and fragments were also observed along the shoreline during the site investigations. Precontact prior resources are often buried beneath soils. In order to avoid impact to archaeological

resources, Phase 1B field testing would therefore be undertaken in the portion of the proposed project area between Amboy Road and the shoreline of the Arthur Kill (i.e., the proposed outfall corridor) in order to determine the potential presence (or absence) of any precontact or historic period archaeological resources. In addition, the wooden elements along the beach would be researched by a maritime archaeologist to determine potential significance as maritime structures along the waterfront.<sup>1</sup> These additional archaeological investigations would be implemented under the proposed project. Therefore, the proposed project is not expected to result in potential significant adverse impacts on archaeological resources.

## **ARCHITECTURAL RESOURCES**

With respect to historic architectural resources (standing structures), the proposed project area is characterized primarily by relatively new (i.e., 1960s and 1970s) residential structures. There is one designated historic landmark in the proposed project area, the Henry Hogg Biddle House, located at 70 Satterlee Street. This structure, which dates from the 1840s, is characterized by LPC as a classic Staten Island representation of colonial and Greek Revival styles. The site of the proposed outfall does not contain any standing structures. All proposed infrastructure improvements would be installed in city streets and no historic structures would be directly affected. Since this building is a registered landmark, the proposed project would need to follow the guidance set forth in the New York City Department of Buildings (DOB) *Technical Policy and Procedure Notice #10/88*, which outlines procedures for the avoidance of damage to historic structures resulting from adjacent construction.<sup>2</sup> Therefore, the proposed project is not expected to result in potential significant adverse impacts on historic architectural resources.

## **B.7 URBAN DESIGN AND VISUAL RESOURCES**

The *CEQR Technical Manual* (2012) states that an analysis of potential urban design and visual resources impacts is appropriate if a proposed project would result in new structures that are substantially different in height, bulk, form, setbacks, size, scale, use, or arrangement from those that already exist in the project area, or if a proposal would alter the form, arrangement, or use of blocks and streets that may then interrupt the general street grid or conflict with an existing consistency of street walls, curb cuts, or other streetscape elements. A visual resources assessment is also generally appropriate when above-ground construction would limit or impede existing important public views.

The proposed project would include the installation of new below-grade stormwater and sanitary collection sewers, water mains, and the reconstruction of affected streets. These infrastructure improvements would not alter the local street grid or built development pattern, and would be on sites that were previously disturbed (e.g. paved streets). There are a limited number of street trees that would need to be removed for the proposed project. It is possible that some street trees would not be replaced in their exact current location in order to minimize potential damage to DEP infrastructure from tree roots. Where street trees are impacted by the proposed project, DEP, DDC, and the New York City Department of Parks & Recreation (DPR) would coordinate to find the best location to plant replacement street trees. Every effort would be made to replace the trees in their current location.

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<sup>1</sup> Phase 1A Archaeological Documentary Study, Wards Point Infrastructure Improvements, Historical Perspectives for DEP), January 2011 (report accepted by the LPC March 17, 2011).

<sup>2</sup> Adjacent construction is defined as within a lateral distance of 90 feet from the historic resource.

With the exception of the outfall headwall, splash pad and portion of the outfall just above the headwall, which would be visible during low-tide, the proposed infrastructure improvements would be buried and not visible. At the headwall, existing shoreline vegetation coupled with the proposed wetland restoration vegetation would obscure much of the above-grade structure, such that the presence of the outfall/headwall along the shoreline would not significantly impact views from the adjacent properties. Upon completion, the ground surface along the outfall corridor would be stabilized with grasses and would remain open as an access corridor for DEP maintenance. Given that the proposed outfall is only 36-inches in size and would be screened by the proposed wetland vegetation, installation of the outfall is not expected to have a significant adverse impact on views along the shoreline.

Under the proposed project, the proposed 40-foot-wide outfall corridor would also be cleared out to the Arthur Kill (this corridor currently includes a deteriorated concrete drainage swale). The opening of this corridor and the clearing of undergrowth and some trees is not expected to result in any significant adverse visual resource impacts, although it would require some limited clearing in a residential side yard. Due to the limited scope and scale of the changes to the neighborhood, no significant adverse impacts would occur to urban design or visual resources and the general character of the surrounding neighborhood would remain unchanged. Therefore, the proposed project is not expected to result in potential significant adverse impacts to urban design or visual resources.

## **B.8 NATURAL RESOURCES**

### **INTRODUCTION**

The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration. The proposed project area has neither sanitary nor storm sewer service. Therefore, a full network of stormwater collection sewers is proposed with a drainage outfall to the Arthur Kill for the collected stormwater, along with the removal of an existing substandard concrete drainage swale that handles runoff from the west end of Amboy Road.

The proposed project includes a wetland restoration plan for the temporary and permanent impacts to tidal wetlands and adjacent areas associated with the proposed project. The proposed outfall headwall would be sited within littoral zone tidal wetlands as mapped by NYSDEC and estuarine and deepwater habitats (E1UBL) as mapped by the National Wetlands Inventory (NWI). Therefore, the proposed project requires federal and state permits and approvals; specifically, water quality certification under the Clean Water Act and authorization for construction within wetlands and waters of the United States.

The objectives of this natural resource analysis are to:

- Describe existing natural resources (i.e., wetlands, floodplains, terrestrial resources, water quality, aquatic biota, vegetation, wildlife, and threatened or endangered species) at the proposed outfall site and in uplands (i.e., tree surveys), and water quality within the Arthur Kill;
- Project natural resource conditions in the future without the proposed project; and
- Assess the potential impacts on natural resources with the proposed project.

### **METHODOLOGY**

Potential impacts to natural resources from the proposed project were assessed based on existing

conditions, site surveys, and existing literature research. For the purposes of this impact assessment, a 400-foot study area was delineated around the proposed project area, which was evaluated as part of the natural resources investigation (see Figures C-7 and C-8). In order to document existing conditions, field investigations were conducted in June 2010. The proposed project site was investigated by a field team and observations of flora and fauna were recorded. The site visits were conducted to identify wildlife activity at times of peak activity (e.g., morning and evening foraging). Habitat classifications were determined based on the observed dominant cover types and current uses of the proposed project area and then cross-referenced with the habitat classifications provided in *Ecological Communities of New York State* (Edinger et al. [2002]). Surveyors also targeted field work to determine the potential presence or absence of plant and wildlife species and habitats that have been identified in the study area as rare, threatened or endangered by NYSDEC's New York State Natural Heritage Program (NYNHP), the US Fish and Wildlife Service (USFWS), and the National Marine Fisheries Service (NMFS). In addition to the field surveys, the existing conditions description includes information from a number of literature sources, databases, and maps, including:

- United States Geological Survey (USGS)—topographic quadrangle map for the Perth Amboy quadrangle;
- NYSDEC's Breeding Bird Atlas; NYSDEC and USFWS wetlands maps;
- NYSDEC's Amphibian and Reptile Atlas Project;
- Federal Emergency Management Agency (FEMA)—Flood Insurance Rate Maps;
- DEP's harbor survey; and
- NMFS essential fish habitat (EFH) designations.

The field investigations concentrated on the location of the proposed outfall, including the shoreline along the Arthur Kill, since the streets in the upland portion of the proposed project area are largely built (see Figures C-11 through C-17). Since there are no consequential changes in natural resource conditions through the future without the proposed project, potential impacts to natural resources were assessed by determining changes in the baseline conditions that are attributable to the proposed project.

## EXISTING CONDITIONS

### FLOODPLAINS

**Figure C-9** shows the 100-year floodplain (i.e., a 1 percent chance of flooding each year) and the 500-year floodplain (i.e., a 0.2 percent of flooding each year) for the study area. As shown in the figure, a very small portion of the proposed project area is within these floodplains along the Arthur Kill shoreline.

### WETLANDS

As shown in **Figures C-7 and C-8**, no wetlands are present in the uplands. However, the proposed headwall and splash pad (i.e., end of the outfall) would extend across intertidal sand beach and a littoral zone tidal wetland as designated by NYSDEC. The littoral zone is the tidal wetland zone that includes all lands under tidal waters that are not included in any other NYSDEC category. There are no littoral zone wetlands in waters deeper than six feet at mean low water.

With respect to NWI wetlands, the waterway and shoreline of the Arthur Kill is mapped as estuarine subtidal waters with an unconsolidated bottom and a subtidal water regime (E1UBL) (see **Figure C-8**). This wetland type includes wetlands and deepwater habitats with at least 25 percent cover of particles smaller than stones (less than 6 to 7 cm) and a vegetative cover of less than 30 percent. The substrate is permanently flooded with tidal water. The tidal wetland intertidal and adjacent area

shoreline along the proposed project area is largely a sandy shoreline with some rock and deteriorated structures. Wetlands constitute the sand and muck bottom of the Arthur Kill. There were no known or observed aquatic vegetation habitats or higher quality wetlands at this location.

**TERRESTRIAL RESOURCES**

*Vegetation*

The majority of the uplands in the 400-foot study area are highly developed (i.e., buildings, yards, streets) and would be defined by Edinger et. al. as *terrestrial cultural habitats*, which 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.” Likewise, “residential, recreational, or commercial land is dominated by clipped grasses and forbs, shaded by at least 30 percent tree cover – ornamental and/or native shrubs may be present, usually with less than 50 percent cover and the groundcover is maintained by mowing.” Plant species common to this habitat and observed during the June 2010 field investigation included Norway maple (*Acer pseudoplatanus*), Callery pear (*Pyrus calleryana*), Japanese maple (*Acer palmatum*), and Pin oak (*Quercus palustris*). Unmaintained street edges and the upland portion of the outfall corridor are also characterized by *terrestrial cultural habitats* with sparse vegetation, a concrete drainage swale, and exposed soil along with rubble and other debris. Plant species common within the outfall upland corridor and observed during the June 2010 field investigation included tree-of-heaven (*Ailanthus altissima*), black locust (*Robinia pseudoacacia*), American pokeweed (*Phytolacca Americana*), and common morning glory (*Ipomoea purpurea*). **Table B-2** provides a comprehensive list of plants observed throughout the project area.

**Table B-2  
Proposed Project Area Vegetation**

Common name	Scientific name
Trees and shrubs	
tree-of-heaven	<i>Ailanthus altissima</i>
Eastern white pine	<i>Pinus strobus</i>
black cherry	<i>Prunus serotina</i>
Hawthorn species	<i>Crataegus Spp.</i>
Crabapple species	<i>Malus Spp.</i>
multiflora rose	<i>Rosa multiflora</i>
black locust	<i>Robinia pseudoacacia</i>
eastern cottonwood	<i>Populus deltoides</i>
northern catalpa	<i>Catalpa speciosa</i>
pin oak	<i>Quercus palustris</i>
Norway maple	<i>Acer pseudoplatanus</i>
Chinese elm	<i>Ulmus parvifolia</i>
Mulberry species	<i>Morus Spp.</i>
callery pear	<i>Pyrus calleryana</i>
Japanese maple	<i>Acer palmatum</i>

London planetree	<i>Platanus x acerifolia</i>
Purple leaf maple	<i>Acer truncatum</i>
Japanese pagoda	<i>Saphora japonica</i>
honeylocust	<i>Gleditsia triacanthos</i>
Herbs and forbs	
mugwort	<i>Artemesia vulgaris</i>
Japanese knotweed	<i>Polygonum cuspidatum</i>
American pokeweed	<i>Phytolacca americana</i>
common reed	<i>Phragmites australis</i>
lady's thumb	<i>Polygonum cespitosum</i>
Vines	
Common morning glory	<i>Ipomoea purpurea</i>
Virginia creeper	<i>Parthenocissus quinquefolia</i>
English ivy	<i>Hedera helix</i>
poison ivy	<i>Toxicodendron radicans</i>
<b>Sources:</b> AKRF, Inc., June 2010 field investigation	

## AQUATIC RESOURCES

### *Water Quality Conditions and Trends*

As per Title 6 of the New York Codified Rules and Regulations (NYCRR), Part 703 (which identifies surface water use standards), New York State has classified uses for the Arthur Kill as “SD,” which requires that the water be suitable for fish survival. The lowermost reach is use classification “I” which requires that the waters be suitable for secondary contact recreation and fishing (see **Figure C-7a**). In SD waters, dissolved oxygen (DO) levels must never be less than 3.0 milligrams per liter (mg/L). No standards for coliform have been established for SD waters (this classification is reserved for water bodies that would not be expected to attain the water quality standards for either primary or secondary human contact or fish propagation). The standard for coliform in I waters states that the monthly geometric mean for fecal coliform must be less than or equal to 2,000 cells/100 milliliters from 5 or more samples.

New York City has monitored New York Harbor water quality for over 90 years through the Harbor Survey. DEP manages this survey and evaluates surface water quality within four designated regions including the Inner Harbor Area, the Upper East River-Western Long Island Sound, Lower New York Bay-Raritan Bay, and the Arthur Kill. The results of Harbor Surveys over the past decade have disclosed that water quality in New York Harbor has improved significantly since the 1970s as a result of water quality improvement measures undertaken by the City and throughout the region. This includes eliminating dry-weather sewage discharges, reducing illegal discharges, increasing the capture of wet-weather discharges and removing “floatables,” and reducing toxic metals loadings from industrial sources. Recent survey data for the lower Arthur Kill also indicate that the water quality in this reach is consistent with these trends and has improved to I standards throughout the Arthur Kill for parameters such as DO.

### *Temperature, Salinity and Dissolved Oxygen*

Water temperature and salinity influence several physical and biological processes. Temperature can also affect oxygen solubility and concentrations that, in turn, influence the spatial and seasonal distribution of fish and other aquatic species. Salinity fluctuates with the tide and volume of freshwater inputs. Salinity and temperature, together, can determine water density and can affect vertical stratification of the water column. Salinity is also an important habitat variable as a number of aquatic species have a limited salinity tolerance.

Average temperatures taken in the Arthur Kill have historically ranged from about 3°C (37.4°F) in winter months to nearly 30°C (86°F) in summer. Salinity measurements historically range from about 14.3 to 28.0 parts per thousand (ppt), with bottom water salinity generally slightly greater than surface water salinity. Periodic high freshwater flows in extremely wet years can occasionally create mesohaline conditions (salinity between 5 and 18 ppt) for relatively short periods.

DO in the water column is necessary for respiration by all aerobic forms of life, including fish and invertebrates such as crabs, clams, and zooplankton. The bacterial breakdown of high organic loads from various sources can deplete DO, and 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. DO concentrations have increased through much of the harbor over the past 30 years from an average that was once regularly below 3.0 mg/L in 1970 to approximately 5.2 mg/L in recent years (DEP), which is above the 3.0 mg/L standard for SD waters and the 4.0mg/l standard for I waters. These trends and improvements have also been consistent in the Arthur Kill.

### *Coliform*

The presence of coliform bacteria in surface waters is used as an indicator of potential health impacts from human or animal waste, as elevated levels of coliform can result in the closing of bathing beaches and shellfish beds. Fecal coliform concentrations in the Arthur Kill have declined, significantly improving water quality from the early 1970s when levels were well above 2,000 cells/100 ml. Currently, the waters of the Arthur Kill are generally in the range of 100 cells/100 ml even in the summer months (New York Harbor Water Quality Report, DEP, 2010). These improvements in water quality have supported increased recreational use of local waters, although much of the Arthur Kill remains classified as SD waters and, therefore, is not intended for recreational uses (see **Figure C-7a**). The waters of the Arthur Kill now generally meet fecal coliform standards for I waters, although temporary increases occur during wet weather due to increased runoff that contains fecal coliform loadings following rain events.

### *Sediment Quality*

Typical of any urban watershed, New York Harbor Estuary sediments, including those in the Arthur Kill, are contaminated due to historical industrial uses in the region. These contaminants include pesticides such as chlordane and dichlorodiphenyltrichloroethane (DDT), metals such as mercury and copper, and various polycyclic aromatic hydrocarbons (PAHs). 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 estuaries along the East Coast. While the sediments of the New York Harbor Estuary are contaminated, the intensity of most sediment contaminants (e.g., dioxin, DDT, and mercury) has decreased on average by an order of magnitude 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 New York/New Jersey Harbor Estuary. For example, within the Upper Harbor, the percentage of benthic communities considered impacted decreased significantly from 75 percent in 1993 to 48 percent in 1998 (Steinberg et al. 2004).

Sediment in the Arthur Kill has been found to have very high concentrations of polychlorinated biphenyls (PCBs), dioxin, and DDT. Sediment quality data reported in the US Environmental Protection Agency (USEPA) National Sediment Database for the northern reaches of the Arthur Kill have shown concentrations of PAHs, metals (lead, mercury, and zinc), PCBs, and total DDT that may affect benthic organisms (Maxus 1991, National Oceanic and Atmospheric Administration (NOAA) 1991, USEPA 1993).

#### *Aquatic Biota*

##### *Phytoplankton*

Phytoplankton are microscopic plants whose movements are determined by the tides and currents. Phytoplankton, submerged aquatic vegetation (SAV), and benthic macroalgae (multi-cellular algae that attach to surfaces) are the primary producers in the aquatic food chain. They require sunlight as their primary energy source, and their productivity, biomass, and distribution are a product of light penetration into the water column. Diatoms (unicellular members of the largest group of algae in the golden algae phylum) dominate the phytoplankton community in the Harbor Estuary in late winter to early spring, when they are succeeded by smaller forms (Malone 1977, Lively et al. 1983). Brosnan and O'Shea (1995) have identified 29 taxa of phytoplankton in a 1993 survey of the New York Harbor. Among the common species are Diatoms (*Bacillariophyta*), dinoflagellates (a group of microscopic algae characterized by two flagella, whip-like projections), green algae (*Chlorophyta*), and blue-green algae (*Cyanophyta*).

##### *Zooplankton*

Zooplankton are another integral component of the aquatic food web – they are primary grazers on phytoplankton and detrital (organic debris formed by decomposition of plants and animals) material, and are themselves consumed by fish such as bay anchovy (*Anchoa mitchilli*), striped bass, and white perch. Zooplankton include life stages of other organisms such as fish eggs and larvae and decapod (group of crustacean invertebrates with 5 pairs of legs, e.g., shrimp, lobster and crab) larvae that spend only part of their life cycle as plankton. Copepods (microscopic crustaceans) are the dominant mesozooplankton (retained on nets with mesh openings greater than 200 µm) group throughout the year (Stepien et al. 1981). The most dominant species include the copepods *Acartia tonsa*, *Acartia hudsonica*, *Eurytemora affinis*, and *Temora longicornis*, with each species being prevalent in certain seasons (Stepien et al. 1981, Lonsdale and Cosper 1994, Perlmutter 1971, Hazen and Sawyer 1983). Copepods, rotifers, and barnacle larva (Cirripedia) are common microzooplankton (smallest zooplankton) (USACE & U.S. Department of Transportation (USDOT) 1984). Common larger macrozooplankton (retained on nets with mesh openings of 505 µm) are mysid shrimp (*Neomysis americana*), cumaceans, and amphipods (USACE & USDOT 1984).

##### *Benthic Invertebrates*

Benthic macroinvertebrates live within or on sediment and submerged structures. In estuarine systems they include mollusks, crustaceans, marine worms, and amphipods. Benthic communities are regulated by both substrate type and the quality of surface water and sediment, as tolerance to pollution varies among species. Both diversity and abundance of species tolerant or susceptible to pollution are used as relative indices of benthic community health. Benthic macroinvertebrates support higher level consumers such as fish and birds, and thus play an important role in estuarine food webs in terms of nutrient cycling (Steinberg et al. 2004). Species identified in the NY-NJ Harbor include cnidarians (i.e., anemones), annelids (i.e., oligochaete and polychaete worms), mollusks (i.e., bivalves such as clams and mussels), and arthropods (i.e., shrimps, crabs, isopods) (EA 1988, EA Engineering Science & Technology 1990, NJDEP 1984, Princeton Aqua Science 1985a & 1985b, LMS 1980 & 1984).

Benthic macroinvertebrate habitats in the Arthur Kill have been adversely impacted in much the same way as the sediment (described above). There is some indication that benthic invertebrate distributions in the Harbor are changing as sediment quality improves (Adams et al. 1998). In 1993 and 1998, the USEPA conducted the Regional Environmental Monitoring and Assessment Program (R-EMAP) in the Harbor to examine benthic community structure and sediment contamination. In 1993, a substantial proportion of sampling sites near the Arthur Kill (Newark and Raritan Bays) were considered degraded, although improvements in both sediment quality and benthic species diversity were observed (Adams and Benyi 2003). However, as the percent of pollution-tolerant species significantly declined, pollution-sensitive species did not show an increasing trend (Adams and Benyi 2003).

#### *Fish and Essential Fish Habitat*

The Arthur Kill is located near the mouth of several major rivers (e.g., the Raritan, Passaic, Rahway), which supports a variety of marine fish including both anadromous fish (those that migrate up rivers from the sea to breed in freshwater), and catadromous fish (those that live in freshwater, but migrate to marine waters to breed). Some species may use the Arthur Kill only on a seasonal basis as a migratory route while others are resident species. Examples of resident species include naked goby (*Gobiosoma bosc*), winter flounder (*Pseudopleuronectes americanus*), mummichog (*Fundulus heteroclitus*), Atlantic silverside (*Menidia menidia*), striped killifish (*Fundulus majalis*), and grubby sculpin (*Myoxocephalus aeneus*) (USFWS 1997).

Fish sampling conducted in the Arthur Kill, Kill Van Kull, and Newark Bay in the mid-1990s (United States Coast Guard, 1995, and LMS 1996) indicate seasonal and spatial patterns for the most abundant fish species. Fish found to be abundant in the shoals included bay anchovy, striped bass, winter flounder, windowpane flounder (*Scopthalmus aquosus*), Atlantic silverside (*Menidia menidia*), summer flounder (*Paralichthys dentatus*), northern pipefish (*Syngnathus fuscus*), white perch, Atlantic herring (*Clupea harengus*), and Atlantic tomcod (*Microgadus tomcod*). Fish that were abundant in the channels included grubby (*Myoxocephalus aeneus*), scup (*Stenotomus chrysops*), spot (*Leiostomus xanthurus*), cunner (*Tautoglabrus adspersus*), alewife (*Alosa pseudoharengus*), gizzard shad, bay anchovy, rainbow smelt, Atlantic tomcod, spotted hake (*Urophycis regia*), white perch, striped bass, weakfish (*Cynoscion regalis*), summer flounder, and winter flounder. Fish were much more abundant from April to October in the shoals, with more consistent use of deeper waters year round. Striped and common killifish/mummichog are dominant in the shoals and these species, along with bay anchovy, Atlantic silverside and white perch are important forage species for larger predator fish. Duffy-Anderson et al. (2003) also conducted fish sampling in the Arthur Kill on alternate weeks from August to November 1995 to characterize juvenile fish assemblages around man-made structures. Young-of-the-year comprised the majority of the individuals collected with silver perch and naked goby among the most abundant. **Table B-3** lists the Essential Fish Habitat-designated species for the Lower Bay and the Arthur Kill as reported by the NMFS.

**Table B-3**  
**Essential Fish Habitat Species for**  
**the Arthur Kill**

Species	Eggs	Larvae	Juveniles	Adults
Red hake ( <i>Urophycis chuss</i> )	X	X	X	
Winter flounder ( <i>Pleuronectes americanus</i> )	X	X	X	X
Windowpane flounder ( <i>Scopthalmus aquosus</i> )	X	X	X	X
Atlantic sea herring ( <i>Clupea harengus</i> )		X	X	X
Bluefish ( <i>Pomatomus saltatrix</i> )			X	X
Atlantic butterfish ( <i>Peprilus triacanthus</i> )		X	X	X
Atlantic mackerel ( <i>Scomber scombrus</i> )			X	X
Summer flounder ( <i>Paralichthys dentatus</i> )		X	X	X
Scup ( <i>Stenotomus chrysops</i> )	X	X	X	X
Black sea bass ( <i>Centropristus striata</i> )	n/a		X	X
King mackerel ( <i>Scomberomorus cavalla</i> )	X	X	X	X
Spanish mackerel ( <i>Scomberomorus maculatus</i> )	X	X	X	X
Cobia ( <i>Rachycentron canadum</i> )	X	X	X	X
Clearnose skate ( <i>Raja eglanteria</i> )			X	X
Little skate ( <i>Leucoraja erinacea</i> )			X	X
Winter skate ( <i>Leucoraja ocellata</i> )			X	X
Dusky shark ( <i>Charcharinus obscurus</i> )		X <sup>(1)</sup>		
Sandbar shark ( <i>Charcharinus plumbeus</i> )		X <sup>(1)</sup>		X

**Notes:**<sup>(1)</sup> 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/40307350.html](http://www.nero.noaa.gov/hcd/STATES4/conn_li_ny/40307350.html) and <http://www.nero.noaa.gov/hcd/skateefhmaps.htm>

## WILDLIFE

### Avian

The New York State Breeding Bird Atlas is an ongoing NYSDEC project to document the presence of avian breeders throughout the State. It organizes the survey in blocks, and the proposed project area is located in Breeding Block 5548D. Between 2000 and 2005, the Breeding Bird Atlas recorded 18 species of potential breeding birds within this block (see **Table B-4**). The upland and shoreline features of the proposed project area in particular have the potential to attract bird life associated with coastal areas of New York City.

### Reptiles and Amphibians

The NYSDEC Herp Atlas Project (1999) is a survey that was conducted between 1990 to 1999 to document the geographic distribution of reptiles and amphibians across the State. For southwestern Staten Island, these species may include several varieties of salamanders (e.g., northern redback and

two-lined salamanders), newt, toads and frogs (e.g., red spotted newt, Fowler’s toad, northern spring peeper, bullfrog, green frog), lizards (northern fence lizard), snakes (northern water, brown and ringneck snakes, common garter snake, northern black racer) and turtles (e.g. common snapping turtle, common musk turtle, eastern mud turtle, spotted turtle, eastern box turtle, northern diamondback terrapin, red-eared slider, painted turtle). Although habitats in the southwestern portion of Staten Island have been found suitable for several reptiles and amphibians, species that have the potential to use the proposed project area would be limited due to its developed condition and absence of freshwater wetlands such as streams and ponds. Thus, no reptiles or amphibians were observed during the field observations.

**Table B-4**  
**Potential Breeding Birds in the Proposed Project Area**

Common Name	Scientific Name
American robin	<i>Turdus migratorius</i>
Gray catbird	<i>Dumetella carolinensis</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Brown thrasher	<i>Toxostoma rufum</i>
European starling	<i>Sturnus vulgaris</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Yellow warbler	<i>Dendroica petechia</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Scarlet tanager	<i>Piranga olivacea</i>
Eastern towhee	<i>Pipilo erythrophthalmus</i>
Northern cardinal	<i>Cardinalis cardinalis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Common grackle	<i>Quiscalus quiscula</i>
Orchard oriole	<i>Icterus spurius</i>
Baltimore oriole	<i>Icterus galbula</i>
House finch	<i>Carpodacus mexicanus</i>
American goldfinch	<i>Carduelis tristis</i>
House sparrow	<i>Passer domesticus</i>
<b>Sources:</b> New York State Breeding Bird Atlas, Block 5548D, 2000 and 2005.	

*Mammals*

The limited vegetative cover in the proposed project area could provide habitat for mammals that are common to the less intensively developed neighborhoods of New York City. These species include Virginia opossum, white-footed mouse, eastern cottontail rabbit, little brown myotis, meadow vole, raccoon, gray squirrel and feral cats. No mammals were observed during the field investigations.

## *PROTECTED, ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES*

Information on protected, endangered, threatened, and special concern species that may use the proposed project area was requested from the NYNHP, USFWS, and NMFS. NYNHP records indicate that the State-listed threatened yellow giant-hyssop (*Agastache nepetoides*) and State-listed endangered white-bracted boneset (*Eupatorium leucolepis* var. *leucolepis*) were identified within a half-mile of the proposed project area in 1998 and 1990, respectively. However, the closest reported location of these species is over one quarter of a mile from the proposed project area. These species were not observed during the field surveys. Because yellow giant-hyssop is supported by moist to mesic conditions and a fertile loamy soil while white-bracted boneset occurs along coastal plain ponds, the proposed project area is also not expected to support these species.

According to NMFS, several species of listed whales and sea turtles are known to be seasonally present in the waters of New York. However, none of these species would be expected in the Arthur Kill.

## *NATURAL RESOURCES PROGRAMS AND POLICIES*

### *New York/New Jersey Harbor Estuary Program*

The *New York/New Jersey Harbor Estuary Program (HEP) Final Comprehensive Conservation and Management Plan (CCMP)* includes a number of goals to improve water quality and aquatic resources throughout the Harbor Estuary. To meet these goals, the CCMP outlines objectives for the management of toxic contamination, dredged material, pathogenic contamination, floatable debris, nutrients and organic enrichment, and rainfall-induced discharges. Most of these objectives aim to increase knowledge of the nature and extent of various forms of pollution (e.g., toxic chemicals, sewage overflows, and floatables), reduce inputs of these pollutants, and increase the habitat and human use potential of the Harbor Estuary. For example, the floatables management plan seeks to reduce the amount of debris in the Harbor and includes marine debris survey collection programs, improved street cleaning, combined sewer overflow and stormwater abatement, enforcement of solid waste transfer regulations, shoreline cleanup programs, and public education.

The HEP Habitat Workgroup has developed watershed-based priorities for acquisition, protection, and restoration of freshwater and tidal wetlands, aquatic, and upland communities in the Harbor Estuary based on the following criteria: the presence of protected species or habitats; existing and potential ecological value; habitat size; and economic and development factors. USACE New York District, as part of the HEP Habitat Workgroup, began a feasibility study in 2001 to assess potential sites for habitat restoration in the Harbor Estuary and in May 2003, the Regional Plan Association (RPA) also identified needs and opportunities for environmental restoration in the Hudson-Raritan Estuary. Protection of these designated sites would preserve and enhance tidal wetlands that provide improved habitat for fish and macroinvertebrates as well as the birds, amphibians, and reptiles that depend on these habitats.

### *Hudson-Raritan Estuary Ecosystem Restoration Project*

The Hudson-Raritan Estuary Ecosystem Restoration Project is a cooperative project being led by USACE. The Port Authority of New York and New Jersey (PANYNJ) co-sponsors the project along with other involved agencies including the USEPA, USFWS, NOAA, National Resources Conservation Service (NRCS), New Jersey Department of Environmental Protection (NJDEP), New Jersey Department of Transportation (Office of Maritime Resources), NYSDEC, NYSDOS, DEP, DPR, and the New Jersey Meadowlands Commission. The study examines all the waters of the Harbor Estuary and the tidally influenced portions of all tributary rivers and streams. It is the project's objective to identify measures that will restore the Hudson-Raritan Estuary and to develop a plan for their implementation. The *Hudson Raritan Estuary Comprehensive Restoration Plan* (Draft, March

2009) has also proposed several restoration goals for the Arthur Kill waterfront and western Staten Island including wetland preservation and restoration sites.

## **FUTURE WITHOUT THE PROPOSED PROJECT**

In the future without the proposed project, the natural resources conditions of the proposed project area are expected to remain essentially unchanged. Additionally, it is expected that the proposed project area would continue to experience street flooding and unmanaged runoff during storm events. It is also assumed that residential septic systems would remain in place and would require ongoing replacement and maintenance. It is also assumed that programs and policies aimed at protecting and improving water quality and wetlands in the Harbor Estuary would remain active.

## **IMPACTS OF THE PROPOSED PROJECT**

Provided below is an impact assessment of the permanent natural resources impacts of the proposed project. Impacts that would occur during the construction period are presented below under “Construction Impacts.”

### *LAND COVERAGE AND WETLANDS*

With the exception of the outfall headwall and splashpad, the proposed project would not have a direct or indirect impact on wetlands since it would be largely installed within built streets and upland from the tidal wetlands. The proposed stormwater outfall from the west end of Amboy Road out to the Arthur Kill would be partially installed in tidal wetland habitat located along the shoreline of the Arthur Kill (the outfall would also be partially within land previously disturbed by an existing concrete drainage swale) that is regulated by NYSDEC. This westernmost segment of the proposed project is therefore the focus of this wetland impact analysis. With the proposed project approximately 7 cubic yards of material would be excavated below the mean higher high water line (MHHW, or spring high tide line), within tidal wetlands, and then replaced with approximately 7 cubic yards of outfall structure, which would be comprised of the outfall pipe and splashpad. These structures would permanently displace the existing tidal wetlands. Wetlands that are temporarily affected during the construction period are addressed below under “Construction Impacts” along with a description of the proposed restoration.

For the permanent impacts due to the proposed structures, off-site restoration is proposed for the approximately 245 square feet of coastal shoals, bars, and mudflats within the littoral zone that would be within the footprint of the proposed outfall and splash pad. This proposed off-site restoration would be provided at a 2 to 1 replacement ratio, providing approximately 490 square feet of wetland restoration habitat equal to, or greater than, the existing habitat (see also Attachment A “Project Description”).

The objective of the proposed restoration plan for the permanent impacts associated with the proposed outfall is to restore currently degraded tidal wetlands that are of low habitat value. The proposed restoration site is a publically-owned waterfront property under the jurisdiction of the Metropolitan Transportation Authority (MTA) and located immediately north of the proposed project site (Block 8003, Lot 120), just west of Ellis Street and the Staten Island Railway railyard in the Tottenville neighborhood (see **Figure C-4a**). This proposed restoration site has approximately 3,150 square-feet of coastal shoals, bars, and mudflats and adjacent area that are in need of restoration. The proposed restoration activities would involve clearing debris that has accumulated in the wetlands, including rubber tires, concrete, asphalt, rebar, brick, fencing, and miscellaneous plastics (in total an estimated 25 cubic yards of debris would be removed). All removed debris would be disposed of at an approved NYSDEC facility. In addition, the proposed restoration includes intertidal plantings that would supplement a small area of intertidal marsh vegetation at the site (about 390 square feet of salt marsh cordgrass) that is growing in a protected area behind a deteriorated wooden bulkhead. The

proposed restoration would also include rearranging larger rocks and using the existing deteriorated bulkhead and concrete outfall to create a protected area to plant approximately 180 square feet of saltmarsh cordgrass with an additional 190 square feet of high marsh to be planted with saltmeadow cordgrass and saltgrass.

Restoration at this location would also be used to address the DEP Capital Project SER002311 (Bertram Avenue), which is an outfall project proposed along the South Shore of Staten Island in the Huguenot Beach neighborhood. Implementing the proposed restoration at this site would require an agreement between the DDC and MTA, which would be finalized prior to initiating the site work.

In addition, as described below under “Construction Impacts,” all wetlands and adjacent areas temporarily affected by construction outside of the structural footprint of the proposed outfall would be re-vegetated. Therefore, the proposed project is not expected to result in potential significant adverse impacts on wetlands.

### *FLOODPLAINS*

The proposed project would not adversely affect floodplains or exacerbate flooding conditions. New York City is affected by local street flooding (e.g., flooding of inland portions due to short-term, high-intensity rain events in areas with poor drainage), fluvial flooding (e.g., when 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 Raritan Bay, along with tidally influenced rivers, streams, and inlets [FEMA 2007]). The mapped floodplain in the proposed project area is the result of coastal flooding, which is caused by astronomic tides and meteorological forces (e.g., northeasters and hurricanes [FEMA 2007]). This floodplain would not be adversely impacted by the outflow from the proposed outfall. Rather, the proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding. Therefore, the proposed project is not expected to result in potential significant adverse impacts on floodplains.

### *WATER QUALITY*

The drainage area for the proposed outfall is small, about 30 acres, and is largely comprised of low-density single-family residential uses, yards, and open space (in addition to local streets). With the proposed storm sewer outfall, there would be some additional stormwater runoff discharged to the Arthur Kill. However, the volume and rate of flow from this additional runoff is limited (flow rates of 20-25 cubic feet per second in a 1-year storm event and 40-50 cubic feet per second in a 5-year event) when compared with the overall drainage area of the Arthur Kill watershed and its large volume of tidal exchange. Furthermore, the proposed outfall would discharge to the open waters of the Arthur Kill, allowing for good mixing of the runoff with the existing waterbody. The proposed installation of a splash pad would also attenuate the runoff velocity at the outfall. Finally, negligible impacts on water quality have been modeled for other larger outfalls discharging into more confined water bodies.<sup>1</sup> The proposed project would not result in any consequential changes in the key water quality parameters such as DO, nutrient loading, suspended solids, metals or the overall water quality of the Arthur Kill, nor would it compromise the NYSDEC use attainment objectives for the Arthur Kill. It is also assumed that the decommissioning of septic tanks in the drainage area (the proposed project would eliminate the use of all septic systems along streets where the proposed sanitary lines would be installed) would result in significant improvements in fecal coliform concentrations in the Arthur Kill,

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<sup>1</sup> *Water Quality Impact Assessment for the Proposed Bay 32nd Street Stormwater Outfall*, Hydroqual, November 2009, *Water Quality Impact Assessment for the Proposed Beach 42nd Street Stormwater Outfall*, Hydroqual, March 2009, *Water Quality Impact Assessment for the Proposed Chandler Street Stormwater Outfall*, <sup>1</sup>Hydroqual, January 2008.

as all sanitary flow would enter city sewers and avoiding any potential water quality impairment, further contributing to the use attainment objectives for the Arthur Kill (SD waterbody). Therefore, the proposed project is not expected to result in potential significant adverse impacts on water quality.

#### *AQUATIC BIOTA*

The proposed project would permanently impact a limited area of benthic habitat that is within the footprint of the proposed outfall, affecting about 245 square feet of coastal mudflat. This is a minimal direct impact on aquatic habitat and the aquatic biota of the Arthur Kill. Potential impacts on aquatic life including zooplankton and macroinvertebrate populations would be negligible. In addition, the proposed project includes a wetland restoration plan for this impact at an off-site location. As stated above, no water quality impacts are expected during operation of the proposed outfall. Thus, the proposed project would have no indirect impacts on the aquatic biota community including shellfish and finfish resources. Therefore, the proposed project is not expected to result in potential significant adverse impacts on aquatic biota.

#### *TERRESTRIAL RESOURCES*

Impacts on terrestrial resources due to the proposed project would be minor. The majority of the infrastructure would be installed in built streets with limited clearing necessary along the proposed outfall corridor between the end of the built segment of Amboy Road and the wetlands of the Arthur Kill. In addition, if isolated street trees need to be removed as part of sewer construction, permits and approvals would be obtained from DPR and there would be an approved tree replacement plan. Overall impacts of this project on street trees are expected to be limited given that construction will be primarily in developed streets that are wide with limited street trees (see **Figure C-17** for views along Satterlee Street and Perth Amboy Place). Therefore, the proposed project is not expected to result in potential significant adverse impacts on terrestrial resources.

#### *WILDLIFE*

The proposed project area is largely developed with residential uses and therefore does not provide any primary habitats preferred by the wildlife of southwest Staten Island. Moreover, approximately 90 percent of the project-specific excavation would be within paved surfaces while the balance would be along a previously disturbed drainage swale or sand beach. Therefore, the proposed project is not expected to result in potential significant adverse impacts on wildlife.

#### *PROTECTED, ENDANGERED, THREATENED, AND SPECIAL CONCERN SPECIES*

##### *Plants*

With respect to protected plants, NYNHP records indicate that the State-listed (threatened status) yellow giant-hyssop (*Agastache nepetoides*) and (endangered status) white-bracted boneset (*Eupatorium leucolepis* var. *leucolepis*) have been reported near the project area, but more than one quarter mile away. These species were not observed during the field observations and the undeveloped portions of the proposed project area (the sandy soils/beach sand) would not support these species (yellow giant-hyssop is found in moist to mesic conditions with fertile loamy soils and white-bracted boneset is found along coastal plain ponds). Therefore, the proposed project is not expected to result in potential significant adverse impacts on protected plants.

##### *Wildlife*

Although several species of listed whales and sea turtles are known to be seasonally present in the waters of New York Harbor, no species listed by NMFS are known to occur in the Arthur Kill. Therefore, the proposed project is not expected to result in potential significant adverse impacts on rare, threatened, or endangered animals.

## NATURAL RESOURCES PROGRAMS AND POLICIES

The proposed project would not result in significant adverse impacts to wetlands, plant communities, wildlife, water quality, or aquatic biota along the Arthur Kill. For these reasons, it is concluded that the proposed project would not conflict with natural resources public policies such as the New York and New Jersey Harbor Estuary Program, or the Hudson-Raritan Estuary Ecosystem Restoration Project.

Therefore, the proposed project is not expected to result in potential significant adverse impacts to natural resources programs and policies.

## B.9 HAZARDOUS MATERIALS<sup>1</sup>

### INTRODUCTION

The *CEQR Technical Manual* (2012) states that the potential for significant impacts related to hazardous materials can occur when (1) elevated levels of hazardous materials exist on a site; (2) a project would increase pathways to their exposure; or (3) a project would introduce new activities or processes using hazardous materials and the risk of human or environmental exposure is increased. In order to determine the potential for environmental concern or possible contamination posed by nearby properties, a Phase 1 Corridor Assessment Report was prepared for DDC's Bureau of Environmental and Geotechnical Services. That report includes, but is not limited to, a site visit and reconnaissance of the project corridor and the adjacent properties; a review of Sanborn fire insurance maps to document historical property uses; a review of government regulatory agency databases for potential impact from properties within and adjacent to the proposed project area; photographic documentation of properties adjacent to the corridor categorized as "High" or "Moderate" risk, or otherwise considered to be of environmental concern; and preparation of a report identifying sites or issues considered to be of potential environmental concern and providing recommendations for additional investigation. Provided below is a summary of the testing that was performed and the measures that would be implemented for this proposed project. The conclusions presented below are based on information gathered from a Phase I Corridor Assessment Report prepared in July 2009 and a Phase II Limited Subsurface Corridor Investigation Report prepared in February 2010 for the proposed project.

### CORRIDOR ASSESSMENT REPORT

Based on the results of the Phase 1 Corridor Assessment Report and risk criteria protocol established by DDC, nine sites were preliminarily categorized as having a "High" risk for hazardous materials. Based on additional information and investigations, one of the nine initial "High" risk sites was reclassified as a "Moderate" risk site, and eight of the initial nine "High" risk sites were reclassified as "Low" risk sites. Sites were reclassified because they were found to be outside of the corridor limits, or based on additional information and examination they were determined to be a lower risk to the environment. The additional information that modified the preliminary categorizations included sites where spills had been officially closed by NYSDEC, sites where there was no substantive evidence or records of spills or other concerns, or sites that had been redeveloped and no longer posed an evident risk due to hazardous materials. Therefore, the conclusion of the final Phase I Corridor

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<sup>1</sup> The analysis below is based on the following two reports: "Final Phase I Corridor Assessment Report for Sanitary and Storm Sewers in Wards Point Avenue, Staten Island, NY," ATC Associates Inc., for DDC, July 9, 2009 and "Final Phase II Subsurface Corridor Investigation Report for Sanitary Sewers in Wards Point Avenue," ATC for DDC, February 26, 2010.

Assessment Report was that based on risk criteria protocol established by DDC, there were no “High” risk sites and only one site categorized as having a “Moderate” risk for hazardous materials conditions. The moderate-risk conditions were then further investigated to assess the potential for soil conditions to have been impacted by hazardous materials.

## **SUBSURFACE CORRIDOR INVESTIGATION**

A Phase II Subsurface Corridor Investigation was performed in the vicinity of the identified moderate risk site to determine if there were issues or concerns related to hazardous materials. The investigation consisted of:

- Three borings (SB-01 through SB-03) were advanced to a maximum depth of 20 feet below grade or refusal (whichever was encountered first) with a field screening of soil samples, including photo-ionization detection (PID) readings and visual and olfactory indicators of contamination (staining, odors);
- The collection of three soil samples, which were analyzed for the following parameters: (1) USEPA Target Compound List (TCL) volatile organic compounds (VOCs); (2) TCL Base Neutral/Acid (BN/A) extractable semi-volatile organic compounds (SVOCs); (3) Target Analyte List (TAL) metals; (4) TCL pesticides; and (5) TCL polychlorinated biphenyls (PCBs). Field-derived Quality Assurance/Quality Control samples (i.e., field blanks, trip blanks, duplicates) were not collected for this project;
- Collection of one sediment sample (SS-01) from the Arthur Kill shoreline immediately adjacent to the corridor, which was analyzed for TCL, VOCs, SVOCs, TAL metals, TCL pesticides, and PCBs;
- Collection of one soil and one sediment (composite of SS-01 and SS-02) waste characterization samples, which were analyzed for (1) the USEPA Full Toxicity Characteristics Leaching Procedure (TCLP); (2) the Resource Conservation and Recovery Act (RCRA) Characteristics ignitability, reactivity, and corrosivity; and (3) Total Petroleum Hydrocarbons Diesel Range Organics/Gasoline Range Organics (TPHC DRO/GRO). Sediment sample (SS-02) was collected and composited with SS-01 and not analyzed as a separate sample; and
- Installation of two temporary well points (TWPs) in borings SB-01 and SB-02 and the collection of one groundwater sample, which was analyzed for (1) TCL VOCs; (2) TCL SVOCs; (3) TAL Metals (filtered and unfiltered); (4) TCL pesticides; (5) TCL PCBs; and (6) the parameters published by DEP as Limitations for Effluent to Sanitary or Combined Sewers (DEP Sewer Discharge Criteria).

In order to evaluate the subsurface soil and groundwater quality, laboratory analytical results were compared to the regulatory standards of NYSDEC and USEPA, and DEP standards for sanitary and storm sewer effluent limit concentrations. During the field testing, screening did not identify evidence of petroleum impacts, such as stained soil or petroleum odors in any of three soil borings advanced along the corridor or in the sediment samples. PID readings were not recorded in any of the soil borings or in the sediment samples. Testing results showed that VOCs, SVOCs, pesticides, and PCBs were either not detected or detected below applicable standards in the soil and sediment samples collected. Several metals were detected in the soil and sediment samples. However, these metals did not exhibit hazardous waste characteristics in the two waste characterization soil and sediment samples.

## **IMPACTS OF THE PROPOSED PROJECT**

With the exception of a few metals, no other contaminants were detected in the soil or groundwater sample at levels exceeding TOGS standards or guidance values. Therefore, it is concluded that the proposed project should include the following measures:

- A site-specific Construction Health and Safety Plan (CHASP) would be prepared and submitted to DEP for review/approval prior to construction.
- Excavated soils that are temporarily stockpiled on-site must be covered with polyethylene sheeting while disposal options are determined. Additional testing may be required by the disposal/recycling facility. Excavated soil should not be reused for grading purposes.
- If any petroleum-impacted soils (which display petroleum odors and/or staining) are encountered during the excavation/grading activities, the impacted soils should be removed and promptly disposed of in accordance with all NYSDEC regulations.
- Dust suppression must be maintained by the contractor during the excavating and grading activities at the site.
- If de-watering into New York City storm/sewer drains is proposed during construction, then a DEP Sewer Discharge Permit must be obtained prior to the start of any de-watering activities at the site.

With these measures in place, the proposed project is not expected to result in potential significant adverse impacts due to hazardous materials.

## **B.10 WATER AND SEWER INFRASTRUCTURE**

### **WATER SUPPLY**

The proposed project would not introduce new residents or employees and would not increase water supply demands. The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration. It is also expected that the proposed project would improve local water supply by replacing the existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts to water supply.

### **STORM AND SANITARY DRAINAGE**

The new sanitary line connections would eliminate the need for septic systems in the proposed project area. This would increase the collection of sanitary wastewater flow to the Oakwood Beach WWTP. However, this increase would be only about 18,000 gallons per day (it is estimated that the proposed project would serve about 60 houses with an average flow rate of about 300 gallon per day). This added service would not significantly increase sanitary flows to the Oakwood Beach WWTP, which currently handles an average of about 29 million gallons per day dry weather flow and, with a rated treatment capacity of 40 million gallons per day, has adequate capacity to handle additional flow. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, and providing sanitary sewers for conveyance of wastewater to the WWTP. Therefore, the proposed project is not expected to result in potential significant adverse impacts on storm and sanitary drainage systems.

## **B.11 SOLID WASTE AND SANITATION SERVICES**

The *CEQR Technical Manual* (2012) identifies a significant impact to solid waste and sanitation services when a project generates 50 tons of solid waste or more per week. The proposed project would not introduce any new residents or employees. Thus, no increase in solid waste generation is expected. Therefore, the proposed project is not expected to result in potential significant adverse impacts on solid waste or sanitation services.

## **B.12 ENERGY**

An assessment of potential impacts to energy, according to the *CEQR Technical Manual* (2012) considers the “project's consumption of energy and, where relevant, potential effects on the transmission of energy that may result from the project.” The proposed project would not generate any additional demand for energy. While additional energy demand would be generated during the construction phase, any increase in energy use would be negligible and temporary. Therefore, the proposed project is not expected to result in potential significant adverse impacts related to energy.

## **B.13 TRANSPORTATION**

### **TRAFFIC**

The impact methodology guidelines of the *CEQR Technical Manual* (2012) state that for projects generating more than 50 new vehicular trips (i.e., due to new residential development or commercial buildings), the potential for traffic impacts should be analyzed. The proposed project would install new infrastructure but would not generate new vehicular trips, nor would it open new streets that would create any permanent traffic diversions, modify any traffic patterns, turning lanes, or traffic flows. The need for potential temporary limited traffic diversions during construction is discussed below under “Construction Impacts.” Therefore, the proposed project is not expected to result in potential significant adverse impacts to traffic.

### **PARKING**

The project does not propose any changes in local on-street parking regulations nor would it result in the permanent loss of any on-street parking. Potential temporary displacement of on-street parking during construction is discussed below under “Construction Impacts.” Therefore, the proposed project is not expected to result in potential significant adverse impacts to parking.

### **TRANSIT AND PEDESTRIANS**

The project does not propose any changes in transit facilities or services. It would not result in added pedestrians nor would it adversely impact sidewalks or crosswalks. Potential temporary impacts on sidewalks are discussed below under “Construction Impacts.” Therefore, the proposed project is not expected to result in potential significant adverse impacts to transit and pedestrians.

## **B.14 AIR QUALITY**

As described in the *CEQR Technical Manual* (2012), an air quality analysis is appropriate if a project would result in direct or indirect impacts on ambient air quality. Direct impacts involve emissions generated by stationary sources, such as fuel burned on-site for heating, ventilation, and air conditioning (HVAC) systems. The proposed project would not involve the addition of any new HVAC emission sources. Therefore, the proposed project is not expected to result in potential significant adverse impacts to air quality due to stationary sources.

Indirect air quality impacts involve emissions generated by mobile sources, such as motor vehicles traveling to and from the proposed project area. The proposed project would not generate new vehicle trips (see “Transportation” above); potential air quality impacts related to vehicle trips during construction is discussed below under “Construction Impacts.” Therefore, the proposed project is not expected to result in potential significant adverse impacts to air quality due to mobile sources.

## **B.15 GREENHOUSE GAS EMISSIONS**

The *CEQR Technical Manual* (2012) recommends a greenhouse gas analysis for projects being

analyzed where the project size is greater than 350,000 gross square feet, or projects that have unique energy demands (e.g., power plants, major modifications in transportation). The project does not propose any developed gross square feet of structures nor would it have any measureable energy demand, or mobile or stationary sources of air emissions during its operation. Therefore, the proposed project is not expected to result in potential significant adverse impacts related to greenhouse gasses.

## **B.16 NOISE**

According to the *CEQR Technical Manual* (2012) a detailed noise study may be required for stationary noise sources if the proposed project would cause the source to operate within the line of site and 1,500 feet of a receptor (see also “Construction Impacts” below). The proposed project would not generate new traffic and therefore no significant increase in noise levels due to mobile sources would occur. The proposed project would also not result in the introduction of any new stationary sources of noise or new sensitive noise receptors. Therefore, the proposed project is not expected to result in potential significant adverse noise impacts.

## **B.17 PUBLIC HEALTH**

The *CEQR Technical Manual* (2012) states that a public health assessment may be warranted if it is determined that “an unmitigated significant adverse impact is identified in other CEQR analysis areas, such as air quality, water quality, hazardous materials, or noise.” As discussed in previous sections, the proposed project would not result in unmitigated impacts upon completion. In addition, any hazardous materials, air quality emissions, or noise encountered during construction would be handled in accordance with federal, state, and local regulations (see also “Construction Impacts” below). Therefore, the proposed project is not expected to result in potential significant adverse impacts on public health.

## **B.18 NEIGHBORHOOD CHARACTER**

A neighborhood character impact assessment is an evaluation of potential impacts on the elements that collectively define a neighborhood. According to the *CEQR Technical Manual* (2012), these elements typically include land use, urban design and visual resources, socioeconomics, traffic, air quality, and noise. As described in greater detail above, the proposed project would not result in any significant adverse impacts with respect to these neighborhood elements. Moreover, the proposed project would provide a stormwater collection system and a discharge location for the collected stormwater from newly sewered streets. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts on neighborhood character.

## **B.19. CONSTRUCTION IMPACTS**

### **DESCRIPTION OF PROPOSED CONSTRUCTION ACTIVITIES**

The proposed project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration to address all permanent and temporary wetland impacts associated with construction of the new outfall. Construction of the proposed project is expected to start in late 2013 and be completed in late 2014. The major phases of construction include:

- Project initiation and construction staging including installation of a stabilized construction entrance.
- Clearing of vegetation for installation of the outfall, and excavation and installation of the outfall and headwall within the existing Amboy Road right-of-way.
- Excavation of approximately 7 cubic yards of material below the mean higher high water line to allow construction and installation of the outfall. Excavation and dredging at the location of the proposed outfall headwall would include the following detailed stages of construction: installation of a turbidity curtain; installation of a cofferdam to allow dewatering pumps to remove water from the construction zone before dredging; a portable sediment tank to remove sediments from dewatered water prior to discharge into Arthur Kill; and mechanical dredging with dredge spoils transported in a sealed/watertight container and disposed of at a NYSDEC-approved upland disposal facility. Dredge material would undergo chemical analyses prior to disposal to satisfy requirements of the disposal facility (no dewatering effluent from the dredging operation would be discharged directly to the Arthur Kill). Approximately 7 cubic yards of fill would be placed below the mean higher high water line with about 4.8 cubic yards of concrete and 2.2 cubic yards of rip-rap.
- Landscaping and wetland restoration alongside the proposed outfall including installation of final cover (i.e., grasses) along the outfall corridor; and
- Partial and phased in-street work, including partial lane closings for the installation of the proposed water mains, sanitary lines, and stormwater collection sewers. These activities include excavation, installation of sewers, and final paving (it is expected that this construction would proceed at about 40-80 feet per day).

While it is expected that construction activities would overlap, the general duration of the activities is expected to be as follows:

- Project initiation and staging—45 days;
- Installation of sewers, water mains and street reconstruction—210 days;
- Outfall and headwall construction—120 days;
- Landscaping and wetland restoration (on-site)—45 days; and
- Final finishes and close out—30 days.
- Proposed wetland restoration (off-site)—up to 60 days.

Construction staging for the in-street work is expected to be within the street itself and would be subject to DOT permits and approval. The contractor may also secure a local property for temporary construction staging (e.g., storage of materials, parking of vehicles). Construction staging for the proposed outfall may occur within the sewer easements, along the adjacent street (e.g., Amboy Road), or at an off-site location to be determined by the contractor. To avoid impacts to tidal wetlands and water quality, construction staging, soil stockpiling, and other storage locations would be at least 100 feet upslope of the mean higher high water line. In addition, the locations of any dewatering activities or discharge locations would be sited and designed to protect wetlands and waterways. An engineer would also be on-site full time during construction to ensure that impacts to wetlands are minimized and that no fill is placed or pushed past the cofferdam into the Arthur Kill.

Principal activities during construction are expected to include heavy equipment for construction of the outfall, storm and sanitary sewers, including the use of backhoes and small cranes, pile driving (or drilling), jackhammers, concrete and dump trucks for the delivery and removal of materials, tractor trailers to deliver materials, and pavement cutters and pavers. Lighter duty vehicles and equipment would be used during the final landscaping and finishing work, as well as during wetland restoration.

All equipment would be operated from land (i.e., to water-based equipment). To avoid impacts to water quality, all equipment would be regularly inspected for leaks and necessary repairs conducted immediately. Best management practices would also be utilized to prevent trash, debris, and excavated spoils from being discharged to the Arthur Kill. Trash, debris, and excavated spoils would be disposed of off-site in compliance with federal, state and local regulations.

Construction activities are expected to take place Monday through Friday, between 7 AM and 4 PM, in accordance with City laws and regulations. Any work between 4 PM and 6 AM would be under exceptional circumstances and would require approval per New York City Noise Code.

The analysis below examines the potential for construction-period impacts as a result of these proposed activities.

### **LAND USE, ZONING, AND PUBLIC POLICY**

The proposed project is expected to proceed along (and within) the proposed project area streets at a pace of about 40-80 feet per day. Construction of the proposed outfall would take about three to four months. During this time, there would be some disruptions to local traffic during in-street work as well as noise and other short-term impacts associated with construction activities. Construction of the proposed outfall would take place on a portion of private land to be acquired within the bed of a mapped, but unbuilt, segment of Amboy Road. The potential for indirect impacts on adjacent residential uses, such as noise and vibration during construction, are examined below.

Construction impacts under the proposed project would be typical for a sewer, water main, or utility installation project in New York City and, although temporarily disruptive, would not be expected to have any long-term or permanent adverse impacts on local land use. Construction of the proposed project would not conflict with local zoning or public policies. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts on land use, zoning or public policy during construction.

### **HAZARDOUS MATERIALS**

See the “Hazardous Materials” analysis, above.

### **NATURAL RESOURCES**

#### *Land Coverage and Wetlands*

Construction of the proposed stormwater collections sewers, water mains, sanitary sewer lines, and street reconstruction would not adversely impact land coverage or wetlands. Construction of the proposed stormwater outfall and splashpad would have a limited temporary (construction period) impact on tidal wetlands. Construction of the proposed outfall would include mechanical dredging, installation of the proposed outfall, headwall, and splash pad. For wetlands and wetland adjacent areas that are temporarily affected during construction (i.e., the affected areas outside of the footprint of the proposed outfall and splashpad structures), the following on-site work is proposed:

- Restoration to pre-construction conditions for the approximately 225 square feet of coastal shoals, bars, and mudflats within the littoral zone that would be temporarily impacted. Under the proposed wetland restoration, debris would be cleared from the temporarily impacted construction area.
- Restoration of approximately 2,850 square feet of tidal wetland adjacent area that would be temporarily impacted during construction of the proposed outfall. Under the proposed wetland restoration, adjacent area would be restored with sandy beach and maritime grassland habitat.

- Creation of approximately 480 square feet of new maritime grassland habitat to address the 480 square feet of tidal wetland adjacent area that would be permanently impacted by the proposed outfall. This restoration would be provided at a 1 to 1 replacement ratio.

This restoration would all take place within the proposed outfall corridor (see **Figure C-4**) or at the proposed off-site restoration site (see **Figure C-4a**).

Any indirect impacts to wetlands during construction of the proposed outfall would be avoided and minimized through a number of protective measures that are described below (see “Natural Resources and Water Quality Protections”). Construction of the proposed outfall would last three to four months and would also be temporary and short in duration. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, the proposed project is not expected to result in potential significant adverse impacts to wetlands during construction.

#### *Terrestrial Resources*

No significant impacts on terrestrial resources are expected with the construction of the proposed project. These activities would occur primarily within existing built streets. Therefore, the proposed project is not expected to result in potential significant adverse impacts on terrestrial resources during construction.

#### *Wildlife*

As stated above, the proposed stormwater collections sewers, water mains, sanitary sewer lines, and street reconstruction would occur in previously built streets that do not provide any wildlife habitat. In addition, the proposed outfall would be located along the corridor of an existing concrete drainage swale. Temporary impacts from construction include approximately 225 square feet of unvegetated littoral zone tidal wetland and 2,850 square feet of tidal wetland adjacent area. The proposed project would also include wetland restoration activities at an off-site location, which encompasses about 3,150 square feet. Although a limited number of aquatic species may be temporarily displaced or impacted during construction due to the work along the shoreline and in the wetlands, commensurate habitat is available in Conference House Park and other coastal habitat along the Arthur Kill for any displaced wildlife. Given the small size of the affected aquatic habitat site and its previously disturbed condition, significant wildlife populations do not currently inhabit or use the site of the proposed outfall. Moreover, it is expected that any wildlife currently using the site would return to the project site post-construction. Construction of the proposed outfall would last only three to four months and construction of the proposed off-site wetland restoration would last up to about 60 days. Therefore both construction activities would be temporary and short in duration. The construction period impacts are necessary in order to improve local stormwater drainage. Therefore, the proposed project is not expected to result in potential significant adverse impacts on wildlife during construction.

#### *Aquatic Resources*

Bottom disturbing activities associated with the proposed project would include the installation of the proposed outfall within the Arthur Kill. Water quality changes associated with increases in suspended sediment during construction are expected to be temporary and limited to the immediate location of the construction activity. Suspended sediments would be expected to dissipate shortly once the outfall construction is completed and would not result in long-term adverse impacts to water quality. The proposed project also includes measures to control and contain turbidity during construction (e.g., booms and silt curtains). In addition, with respect to upland construction, all construction activities would be subject to and performed in accordance with NYSDEC’s technical standards for erosion and sediment control, as well as traditional practices for minimizing impacts to water quality for in-water

construction activities (e.g., use of reinforced silt fences, straw bale dikes, portable sediment tanks, a stabilized construction driveway entrance, cofferdams and containment booms; see “Natural Resources and Water Quality Protections” below).

Construction of the proposed outfall would last only three to four months and would be temporary and short in duration. Therefore, the proposed project is not expected to result in potential significant adverse impacts on water quality during construction.

#### *Aquatic Biota*

The proposed project would have limited short-term construction related impacts to water quality and aquatic biota. These impacts may include localized temporary increases in suspended sediment and re-suspension of contaminated sediments, fish habitat avoidance, and a *de minimis* disturbance to benthic communities during the installation of the proposed outfall. Water quality changes associated with these increases in suspended sediment are expected to be minimal, temporary, and limited to the immediate location of the proposed construction activity. Protection measures (e.g., silt curtains and erosion control) are also proposed.

In addition, as described above, the proposed project would comply with all construction period requirements for runoff control and sediment control practices, which would be specified in a SWPPP and the construction documents. Lastly, measures would be implemented as required by state and federal permits to protect tidal wetlands, water quality, and aquatic habitats during construction.

The proposed project also includes restoration of wetlands affected by construction (see above). After restoration, benthic macroinvertebrates would be expected to recolonize the area shortly after construction is completed.

Impacts associated with construction of the proposed project including aquatic biota would be limited as well as temporary and short in duration. Therefore, the proposed project is not expected to result in potential significant adverse impacts to aquatic biota during construction.

#### *Natural Resources and Water Quality Protections*

All construction activities would be performed in accordance with NYSDEC’s technical standards for erosion and sediment control (e.g., use of silt fences, hay bales, and containment booms) and would be implemented in accordance with a SWPPP in order to minimize potential adverse impacts to water quality and aquatic biota. With these measures in place, no significant impacts on the water quality of the Arthur Kill are expected as a result of project construction. This SWPPP would be developed by a licensed/certified professional and comply with New York State’s State Pollutant Discharge Elimination System (SPDES) General Permit for Storm Water Runoff from Construction Activity.

The SWPPP would describe the specific Stormwater Management Practices (SMPs) to be used to reduce the pollutants in stormwater runoff, and would ensure that with the implementation of the prescribed SMPs, the proposed project would not contravene water quality standards. The SWPPP also includes a soil and erosion control plan (SECP) in conformance with NYSDEC’s “Standard and Specifications for Erosion and Sediment Control” that at a minimum includes, but is not limited to, the following control measures: construction limit fence, staked straw bales, reinforced silt fence, sediment trap with filter, sediment filter, portable sediment tank, storm drain inlet protection, and sandbags.

Construction of the proposed outfall involves activities within tidal wetlands and tidal wetland adjacent areas. As a result, the following measures are proposed to avoid potential impacts:

- Sediment and erosion control practices would be made part of the contract requirements, including specific techniques and methods to control sedimentation and erosion, such as snow

fencing and silt fence/surface water collectors along the particularly sensitive segments, as appropriate.

- Within the wetlands to be replanted, biodegradable erosion-control matting or jute mesh would be used to stabilize soils during the grown-in period. Individual plants would be planted after the mat has been installed. This matting reduces erosion and sedimentation from the created wetlands to existing wetlands by protecting soil during the period when new wetland plantings are taking root.
- Flagging and marking the edge of wetlands so that construction activities do not extend into wetlands not intended for construction or restoration.
- Removal of debris and invasive species within the proposed project area. With the installation of the proposed outfall, several measures would be undertaken to restore natural coastal habitat including the removal of invasive plants as well as the removal of debris (e.g., concrete, rebar, bricks, etc., along the shore). Under this proposal, these areas would be planted with tidal plants that are native to the Arthur Kill shoreline and consistent with adjoining shoreline habitats.
- During construction, the contractor, in accordance with the SWPPP, must conduct a site inspection at least once a week and after each rainfall of 0.5 inches or more. The contractor must also perform a final site inspection to certify that the site has undergone final stabilization, using either vegetative or structural stabilization methods, and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed.

In addition, to protect surface waters from the impacts of turbidity during construction, the proposed project would include techniques to minimize turbidity impacts and ensure that the proposed construction activity does not adversely impact local water quality. These measures are expected to include the following.

- A turbidity curtain and cofferdam, to be installed prior to the start of any construction activities associated with the construction of the new stormwater outfall. The turbidity curtain would be placed below the mean low water line to continually contain any resuspended sediment. The cofferdam would be installed to allow dewatering pumps to remove water from the construction zone prior to excavation.
- All dewatering activity would be within the construction zone and no dewatering effluent from the excavating operations would be discharged directly into the Arthur Kill.
- During construction, portable sediment tanks would be used to remove sediments from dewatering effluent prior to discharge into the Arthur Kill. Dredged materials would be transported in a sealed/watertight container and disposed of at a NYSDEC-approved upland disposal facility. Any dredge material for off-site disposal would undergo chemical analyses to satisfy requirements of the disposal facility and would be disposed in accordance with federal, state, and local regulations.
- When water level within the cofferdam rises, mechanical excavation would be performed.

It is expected that these measures would be identified during the permit review process with NYSDEC and USACE. Impacts associated with construction of the proposed project including natural resources and water quality would be temporary and short in duration. Therefore, the proposed project is not expected to result in potential significant adverse impacts to natural resources and water quality during construction.

## **TRANSPORTATION**

### *CONSTRUCTION TRAFFIC*

#### *Construction Workers*

The proposed project would generate trips from workers traveling to and from the site, as well as from the movement of goods and equipment. The estimated average number of construction workers on-site at any one time would vary, depending on the stage of construction, as follows:

- Sewer installation and outfall work would require an average of approximately 10 to 20 individuals;
- Street reconstruction work would require an average of approximately 10 to 15 individuals; and
- For less intensive work periods (e.g., wetland restoration), average workers at the site would total between 5 and 10 individuals.

Given typical construction hours (described above), worker trips would occur in off-peak travel times and would not represent a substantial increase in local traffic. Standard peak traffic periods in New York City are from 8:00 AM to 10:00 AM and 5:00 PM to 7:00 PM. Temporary increases in vehicular traffic during construction of the proposed project would not be expected to exceed the 50-peak hour trip threshold established by the CEQR guidelines. Construction period vehicle trips are not expected to result in a significant increase in traffic congestion on local streets and, therefore, are not expected to result in potential significant adverse impacts on traffic during construction.

#### *Truck Traffic*

Truck movements, including delivery and removal of soil, asphalt, piping, and materials, would be spread throughout the weekday, and generally occur between the hours of 7:30 AM and 3:30 PM, depending on the period of construction. The following estimated numbers of trucks (for delivery of soils, materials, and concrete) are anticipated during the various stages of construction:

- Sewer installation and outfall work: 10 to 15 trucks per day (e.g., dump trucks and concrete trucks)
- Street construction work: 7 trucks per day
- Other site work (e.g., staging): 2 trucks per day.

It is assumed that only a limited number of trips would occur in the standard peak traffic hours (e.g., 8:00 to 10:00 AM and 5:00 to 7:00 PM). Impacts associated with construction of the proposed project, including traffic generated during construction, would be temporary and short in duration. For the level of construction activity proposed, it is also expected that truck traffic would not exceed CEQR thresholds for significant traffic impacts during the standard hours for analysis. Therefore, the proposed project is not expected to result in potential significant adverse impacts due to truck traffic during construction.

### *TRAFFIC DIVERSIONS*

The proposed project would require work in local streets for the installation of the stormwater collection sewers, sanitary sewers, water mains, and street reconstruction, which would require temporary lane and possible street closures along with disruption of local traffic. It is expected that traffic flows would be only partially and temporarily affected by the proposed project. If full street closures are required, these would also be temporary. Overall, work in local streets is expected to be short-term and last for approximately 9 months across the entire proposed project area—the project would proceed in segments along each street. In addition, the contractor would be required to restore the full width of the street at the end of each daily construction period to allow free flow of traffic.

Lastly, all construction activities and closures would be subject to DOT approval under a street and sidewalk construction permit that would include a traffic management plan.

Impacts associated with construction of the proposed project including traffic diversions would be temporary and short in duration, would be coordinated with DOT, and would include a traffic management plan. Therefore, the proposed project is not expected to result in potential significant adverse impacts due to traffic diversions during construction.

### *PARKING*

Construction of the proposed project may temporarily affect curbside parking along affected streets, but would be limited and temporary. Street construction is expected, on average, to impact about 20 to 30 on-street parking spaces during the periods of more intensive street construction activities and repaving, and would also occur in phases as the construction program progresses. On-street construction vehicle parking may also be necessary at the west end of Amboy Road during the installation of the proposed outfall, which may affect 5-10 spaces at the end of that street while trucks deliver materials and concrete for the installation of the outfall. All construction activities and temporary removal of street parking would be subject to DOT approval under a street and sidewalk construction permit.

Parking impacts associated with construction of the proposed project, including on-street parking, would be temporary and short in duration. Therefore, the proposed project is not expected to result in potential significant adverse impacts to on-street parking during construction.

### *TRANSIT*

No transit facilities would be affected by construction.

### *PEDESTRIANS*

It is expected that the proposed project may require temporary sidewalk closures along each segment of construction. This closure period would be limited, and adequate temporary diversions would be provided for each phase and segment of street construction. During construction, any sidewalk diversions would be provided with the appropriate protection measures, as well as diversion signage, and all sidewalks and pedestrian paths would be restored as part of the street reconstruction. All construction activities and sidewalk closures would also be subject to DOT approval under a street and sidewalk construction permit.

Pedestrian impacts associated with construction of the proposed project, including sidewalk closures, would be temporary and short in duration. Therefore, the proposed project is not expected to result in potential significant adverse impacts to pedestrians during construction.

## **NOISE AND VIBRATION**

### *NOISE*

Construction activities associated with the proposed project would cause localized temporary noise increases. Impacts on community noise levels during construction typically result from two sources: (1) construction equipment operation; and (2) construction and delivery vehicles traveling to and from the site. Noise levels at a given location typically depend on the number and type of construction equipment being operated, distance of the receptor from the construction site, and any shielding effects (attenuation due to structures or natural barriers). Noise levels caused by construction activities also vary widely and depend on the construction phase. Typically, the loudest noise associated with construction is from pile drilling and the use of jackhammers, both of which are expected to be used during construction activities for the proposed project.

Construction noise is regulated by the New York City Noise Control Code (Local Law 113) and USEPA 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. Unless under exceptional circumstances, construction activities must be limited to weekdays between the hours of 7 AM and 4 PM. While it is expected that there would be a limited localized increase in noise levels during construction, these emissions would be temporary and short in duration and, at the projected pace of construction 40-80 feet per day, would shift locations as construction progresses throughout the proposed project area. Construction materials would also be handled and transported so as to not create any unnecessary noise. Compliance with these noise control measures would be ensured by including them in the contract documents as specifications and directives to the construction contractors.

Additionally, in accordance with City regulations, a noise control plan would be developed and implemented to minimize intrusive noise into nearby neighborhoods and to limit effects on sensitive receptors during the construction. The noise control plan may include measures such as restricting unnecessary evening construction activities. A copy of the noise mitigation plan would be kept at the project site for compliance review by DEP and DOB. Significant noise impacts to sensitive receptors are not expected to result from the proposed project given the short construction duration.

Impacts associated with construction noise from the proposed project would be temporary and short in duration, and would include a number of controls to minimize construction noise impacts. Therefore, the proposed project is not expected to result in potential significant adverse noise impacts during construction.

#### *VIBRATION*

Vibrations generated by construction activities can be perceptible and in some cases potentially damaging to structures. No blasting is proposed with the proposed project; however, pile driving (or drilling) may be necessary for the proposed outfall. Vibratory levels at a given receptor are a function of the source strength (which, in turn, is dependent upon the construction equipment and construction methods utilized), the distance between the equipment and the structural receptor, characteristics of the transmitting medium, and the receiver building construction. Construction equipment operation can cause ground vibrations that travel through the ground and therefore decrease in strength with distance. Truck and heavy equipment operation, even in locations close to major roadways, typically does not result in perceptible vibration levels, unless there are irregular road surfaces. Where fragile or historically significant structures exist, such as the Henry Hogg Biddle House (see “Historic Resources” above), typical cut and cover construction activities for the installation of infrastructure do not attain vibration levels that result in architectural or structural damage to buildings, although they can achieve levels that are perceptible.

Vibration impacts associated with construction of the proposed project would be temporary, short in duration, and monitored to avoid impacts. All construction activities would also occur Monday-Friday during daylight hours. Therefore, the proposed project is not expected to result in potential significant adverse impacts due to vibration during construction.

#### **AIR QUALITY**

Emissions during construction can include mobile source emissions from vehicles (e.g., trucks and automobiles) and particulate matter from dust. Such emissions may result from trucks delivering or hauling construction and demolition materials and removing debris; worker vehicles; and construction equipment. It is expected that the proposed wetland restoration would only require hand held tools and small equipment with some limited truck deliveries. While it is expected that there would be a limited localized increase in mobile source emissions during construction, these emissions would be

temporary and short in duration and, at the projected pace of construction (40-80 feet per day), would shift locations as construction progresses throughout the proposed project area. City regulations require all project contractors to reduce particulate matter emissions to the extent practicable by employing modern equipment, including diesel oxidation catalysts. Construction activities would be subject to New York City Local Law 77, which requires the use of Best Available Technology (BAT) for equipment at the time of construction.<sup>1</sup>

The contractor would also be required to implement a dust control plan with fugitive dust control measures and specifications. For example, watering could be used for excavation and earth moving activities to ensure that soils are dampened as necessary to avoid the suspension of dust into the air. Loose materials could be watered, stabilized with a biodegradable suppressing agent, or covered. In addition, the soil erosion and sediment control practices presented above would have the dual benefit of providing dust suppression. All fugitive dust control measures would be employed as required by the City of New York to reduce the creation and spread of construction dust.

Impacts associated with construction of the proposed project including air quality would be temporary and short in duration and include the measures required above to minimize emissions. Therefore, the proposed project is not expected to result in potential significant adverse impacts to air quality during construction.

## **B.20 GROWTH INDUCING**

The proposed project would involve construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration. The *CEQR Technical Manual* (2012) identifies the introduction or expansion of infrastructure as potentially having growth inducing impacts that may need to be examined. However, the proposed project is largely developed, already contains some infrastructure, and would not affect land use or zoning policies. The proposed project would be beneficial to residents by improving stormwater drainage and thereby decreasing the potential for flooding, providing sanitary sewers for conveyance of wastewater to the WWTP, and improving local water supply by replacing existing water mains. Therefore, it is concluded that the proposed project would not result in potential significant adverse growth inducing impacts.

\*

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<sup>1</sup> New York City Administrative Code § 24-163.3, adopted December 22, 2003, also known as Local Law 77, requires that any diesel-powered non-road engine with a power output of 50 hp or greater that is owned by, operated by or on behalf of, or leased by a City agency shall be powered by ultra-low sulfur diesel fuel (ULSD), and utilize the best available technology (BAT) for reducing the emission of pollutants, primarily particulate matter and secondarily nitrogen oxides. DEP is charged with defining and periodically updating the definition of BAT.

**Attachment C**  
**EAS Graphics**



*Proposed Outfall*



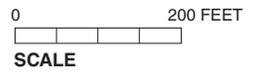
*Proposed Sanitary and/or Storm Sewers*



*Proposed Replacement Water Mains*



*Study Area Boundary  
(400-Foot Perimeter)*

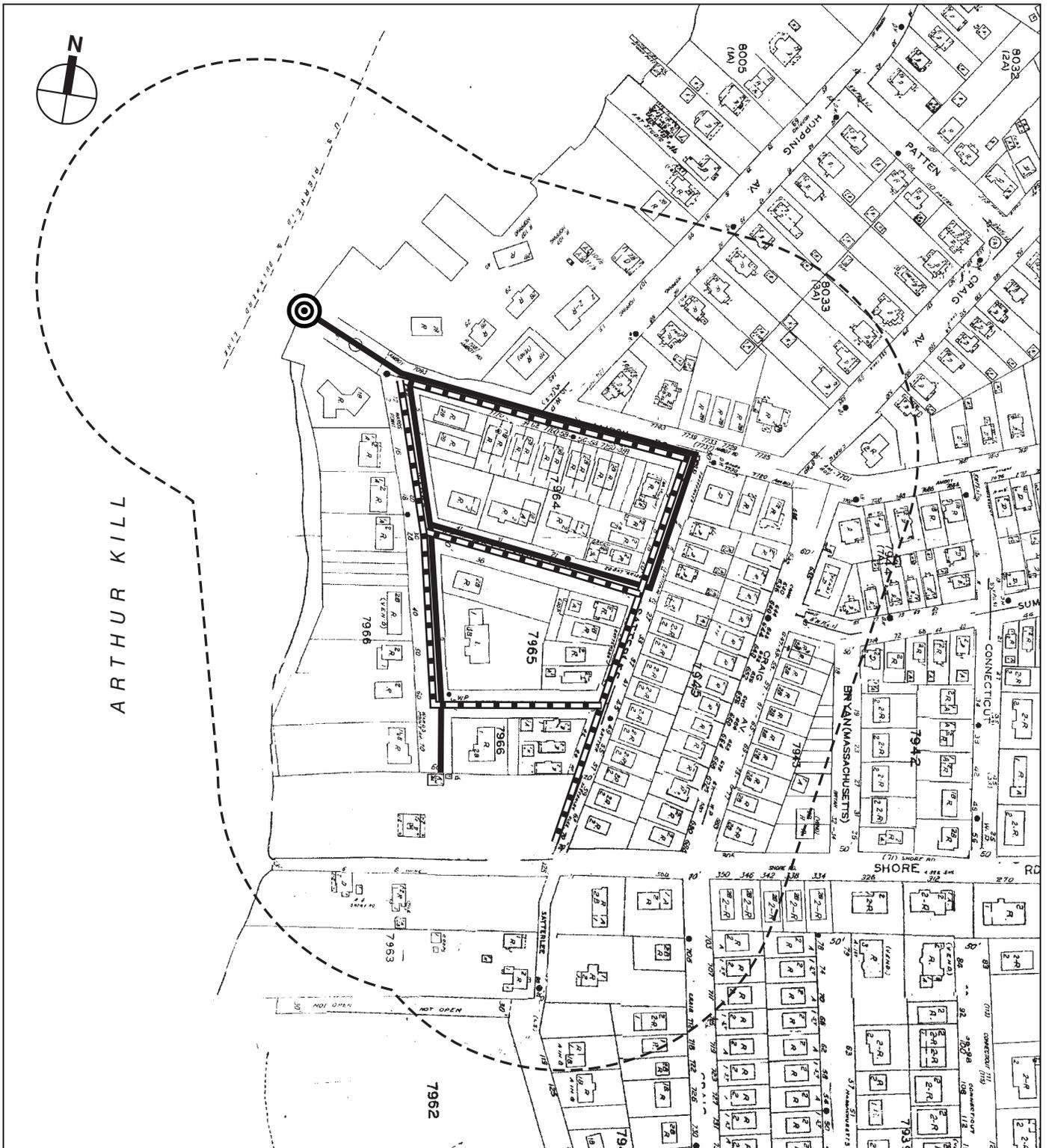


**Aerial Photograph  
Proposed Project Area**  
Figure C-1

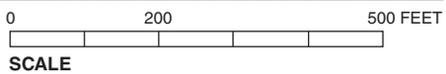


 Proposed Outfall Corridor

0 100 FEET  
SCALE



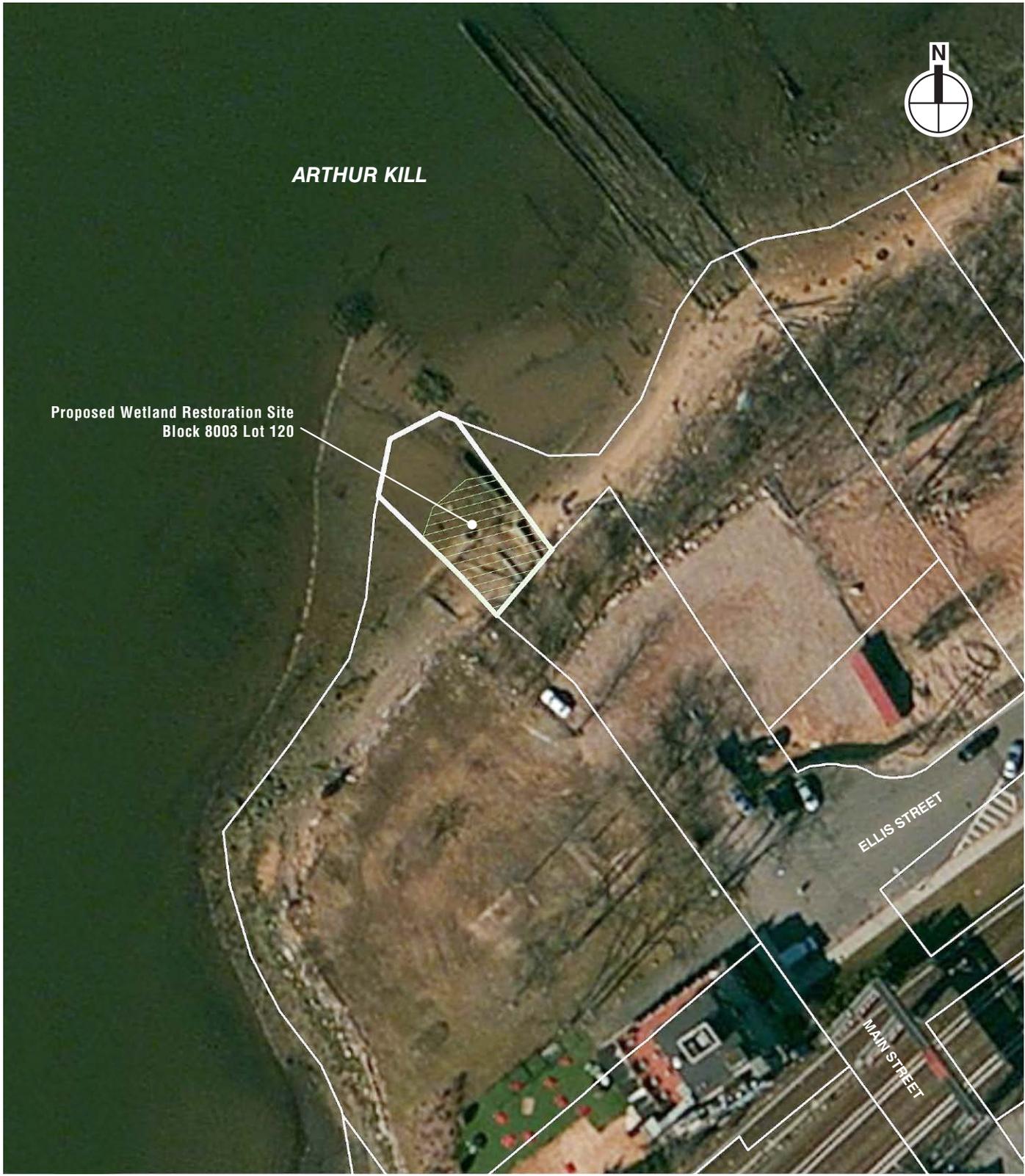
-  Proposed Outfall
-  Proposed Sanitary and/or Storm Sewers
-  Proposed Replacement Water Mains
-  Study Area Boundary (400-Foot Perimeter)



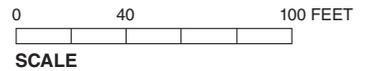
**Sanborn Map**  
**Proposed Project Area**  
Figure C-2







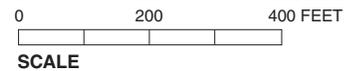
-  Proposed Wetland Restoration Area
-  City Block/Lot Boundary



**Proposed Wetland Restoration Area (Off-site)**  
Figure C-4a

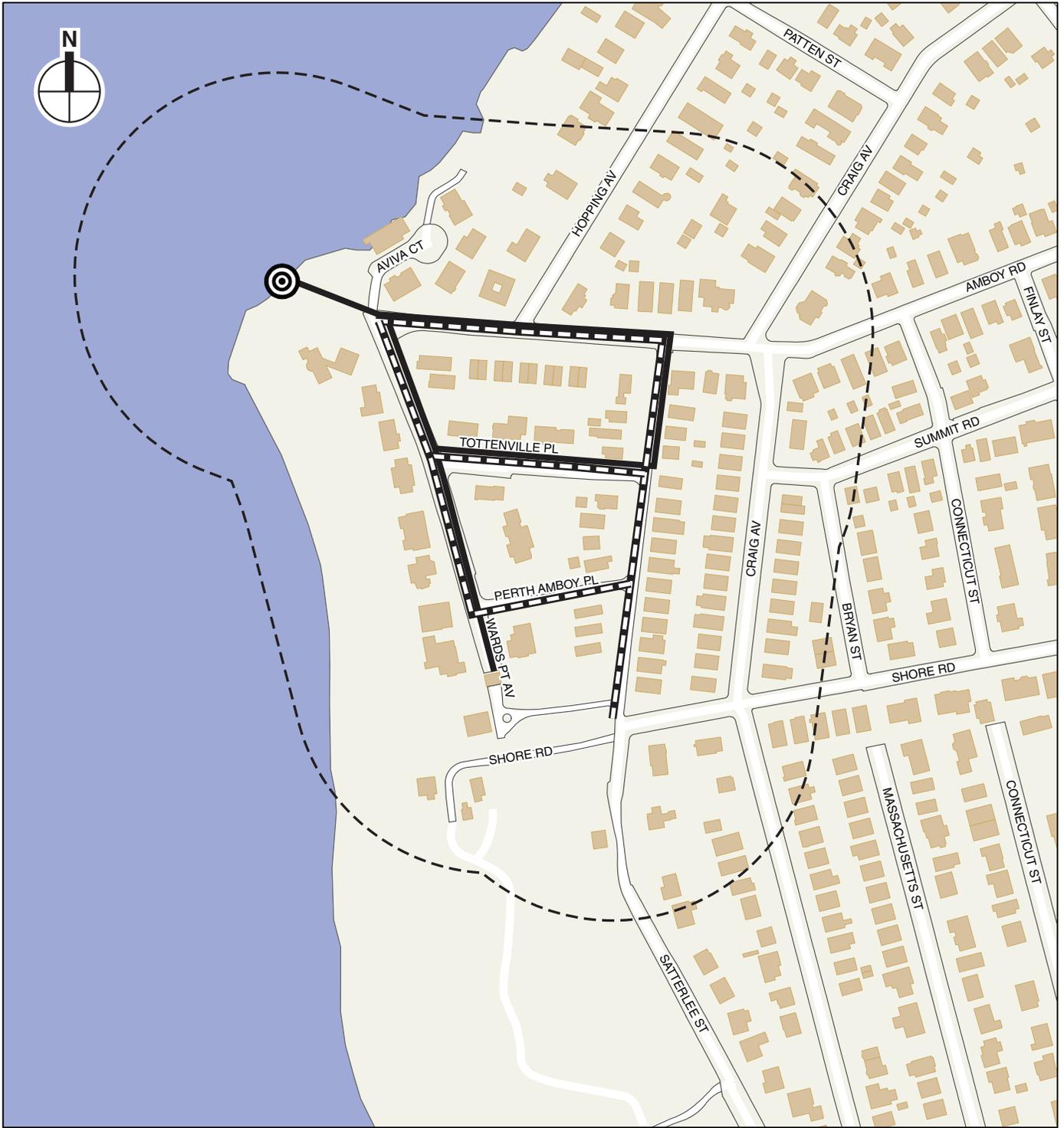


- Proposed Outfall
- Proposed Sanitary and/or Storm Sewers
- Study Area Boundary (400-Foot Perimeter)
- Residential
- Open Space and Outdoor Recreation
- Vacant Land
- Proposed Replacement Water Mains
- Parking Facilities

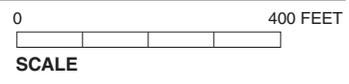


**Land Use**  
**Proposed Project Area**  
Figure C-5





-  Proposed Outfall
-  Proposed Sanitary and/or Storm Sewers
-  Proposed Replacement Water Mains
-  Study Area Boundary (400-Foot Perimeter)
-  Littoral Zone





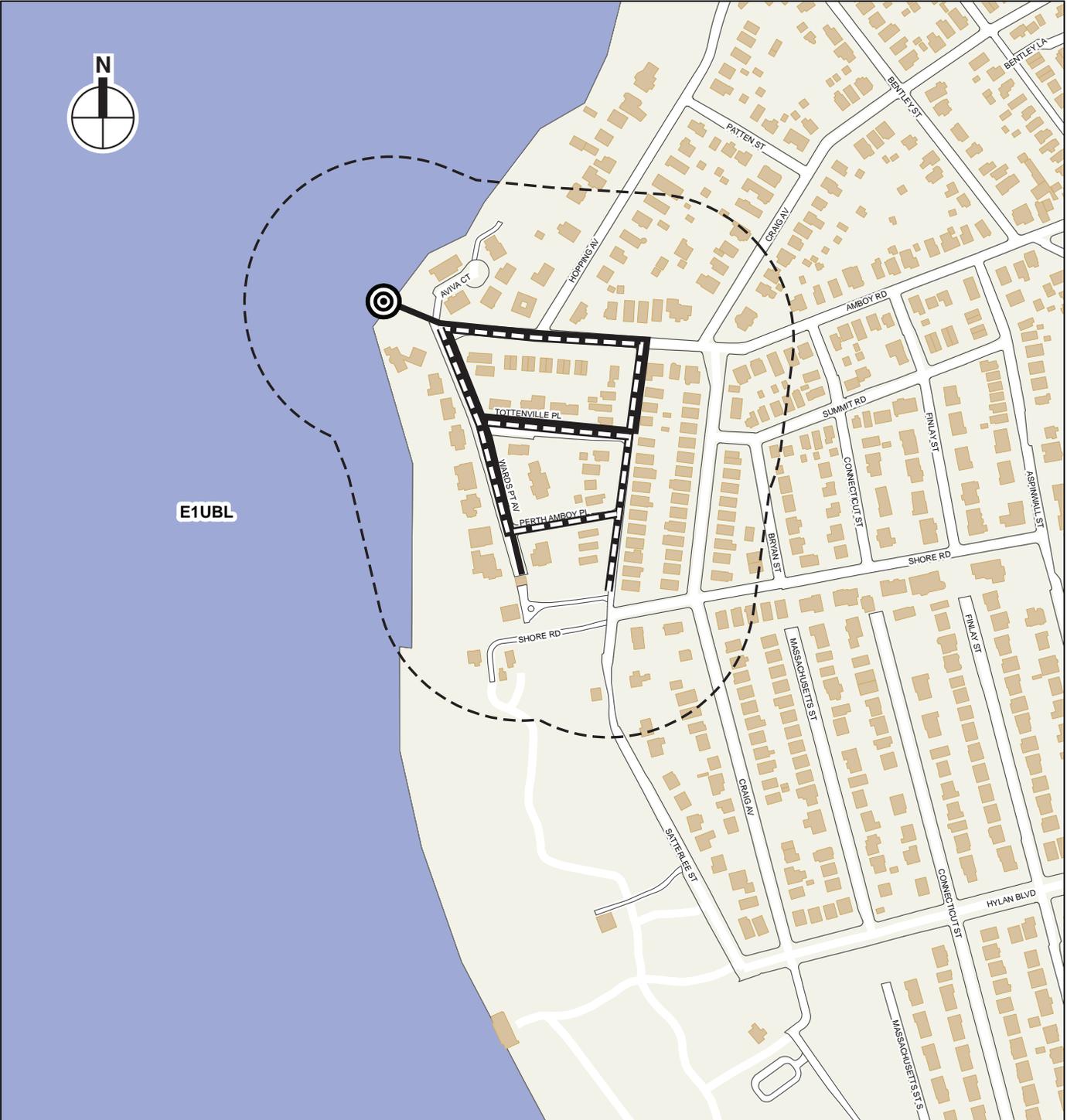
**Data Source:** Vector digital data published by NYS Department of Environmental Conservation 2010-04-13.  
<http://www.dec.ny.gov/chemical/23853.html>



 *Proposed Outfall*

**NYSDEC Water Quality Classifications**

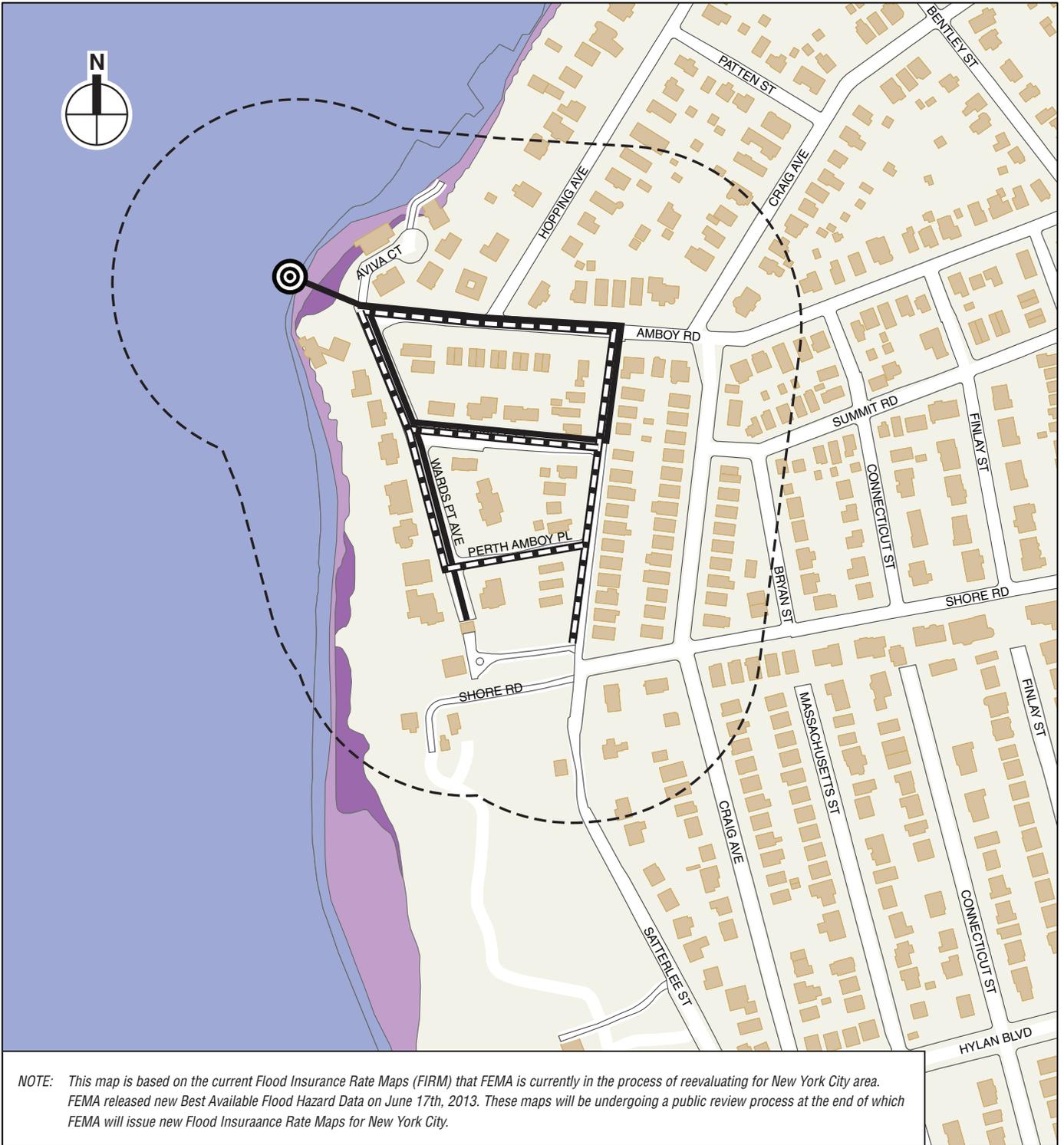




-  Proposed Outfall
-  Proposed Sanitary and/or Storm Sewers
-  Proposed Replacement Water Mains
-  Study Area Boundary (400-Foot Perimeter)
-  Estuarine and Marine Deepwater (E1UBL)



**National Wetlands Inventory  
Mapped Wetlands**  
Figure C-8



Proposed Outfall



Proposed Sanitary and/or Storm Sewers



Proposed Replacement Water Mains



Study Area Boundary  
(400-Foot Perimeter)



1% Annual Chance Floodplain (100-Year Floodplain)



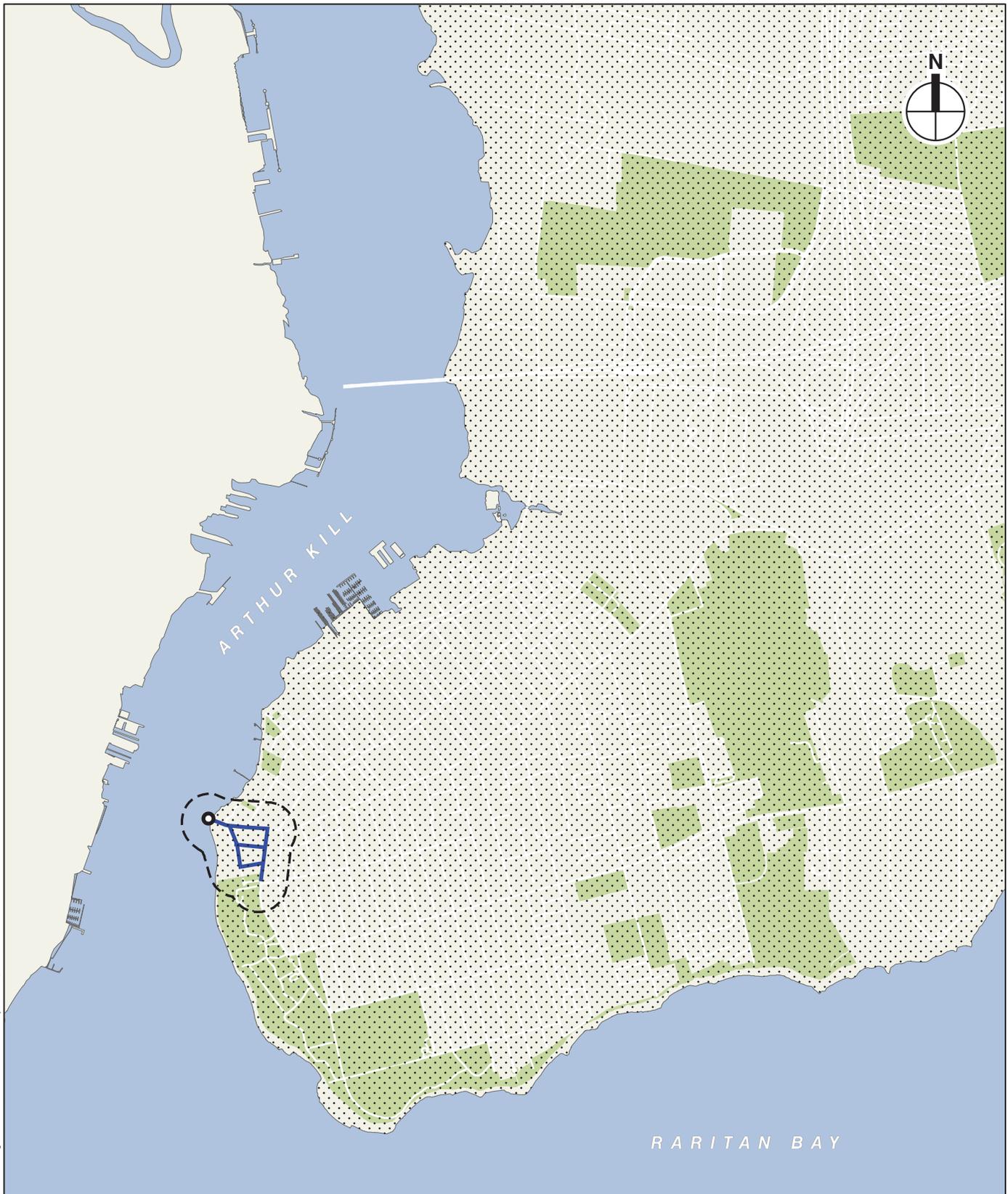
0.2% Annual Chance Floodplain (500-Year Floodplain)

0 200 400 FEET

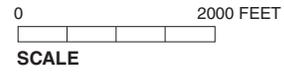
SCALE

### Flood Hazard Areas

Figure C-9



- Proposed Outfall
- Proposed Infrastructure Improvements
- - - Study Area Boundary (400-Foot Perimeter)
- ▨ Coastal Zone Boundary



### NYC Coastal Zone Management Area

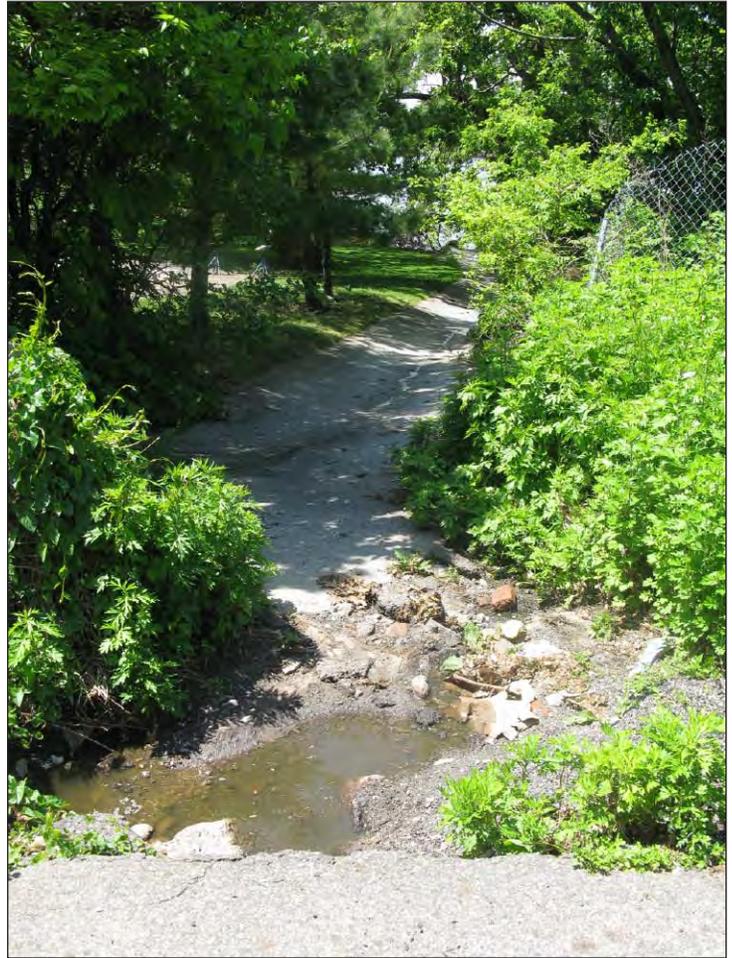
Figure C-10



View of residential area at corner of Amboy Road and Wards Point Avenue 1

View of residential street runoff in proposed sewer/  
outfall right-of-way

2



View of 3 of the existing white pines (approximately 7" caliper) in residential yard,  
immediately adjacent to concrete lined swale,  
along proposed sewer/outfall right-of-way (view facing west)

3

**Proposed Project Area  
Photographs**

Figure C-12



View of vacant area, adjacent to proposed sewer right-of-way, facing northwest from the corner of Amboy Road and Wards Point Avenue

4

**Proposed Project Area  
Photographs**

Figure C-13



View of foliage and leaning eastern cottonwood at terminus of concrete lined swale, facing west from proposed outfall right-of-way 5



View of leaning eastern cottonwood, facing northeast from proposed outfall location 6



View of proposed outfall area, facing east from Arthur Kill shore 7



View of immediately adjacent residential use, facing southeast from Arthur Kill shore 8

**Proposed Project Area  
Photographs**  
Figure C-15



View of Arthur Kill from existing concrete swale terminus, facing west 9



View of Wards Point Avenue facing southeast 10



View south along Satterlee Street 11



View east along Perth Amboy Place 12

**Proposed Project Area  
Photographs**  
Figure C-17

## **APPENDIX A**

### **New York City Waterfront Revitalization Program Consistency Assessment Form**

For Internal Use Only:  
Date Received: \_\_\_\_\_

WRP no. \_\_\_\_\_  
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: **Narayana Venugopalan, New York City Department of Design and Construction**

Address: **30-30 Thompson Avenue, 3rd Floor, Long Island City, NY 11101**

3. Telephone: **(718) 391-2283** Fax: **718 391-2276**

E-mail Address: **venugopa@ddc.nyc.gov**

4. Project site owner: **City of New York**

### B. PROPOSED ACTIVITY

1. Brief description of activity: **The New York City Department of Design and Construction (DDC), on behalf of the New York City Department of Environmental Protection (DEP), is proposing Capital Project No. SER200208, Wards Point Infrastructure Improvements, which is located in Staten Island Community District 3 in the Tottenville section of Richmond County ("proposed project"). The proposed capital project involves construction of a new stormwater outfall, installation of new stormwater and sanitary collection sewers, relocation and replacement of water mains along with the reconstruction of affected streets, and tidal wetland restoration.**

2. Purpose of activity: **The proposed project would provide a much needed stormwater collection system and a discharge location for the collected stormwater from newly sewered streets, thereby reducing runoff as well as local street and property flooding. The proposed project area has neither sanitary nor storm sewer service. Thus, a full network of stormwater collection sewers is proposed with a drainage outfall to the Arthur Kill for the collected stormwater, along with the removal of an existing substandard concrete drainage swale that handles runoff from the end of Amboy Road.**

3. Location of activity: **The proposed project area is bounded by Amboy Road to the north, Satterlee Street to the east, Shore Road to the south and the Arthur Kill to the west in the developed Tottenville section of Staten Island.**

Borough: **Staten Island**

Street Address or Site Description: **The proposed storm and sanitary sewers would be constructed on Wards Point Avenue between Amboy Road and just south of Perth Amboy Place; Amboy Road between Satterlee Street and the Arthur Kill; Satterlee Street between Amboy Road and Tottenville Place; and Tottenville Place between Wards Point Avenue and Satterlee Street. The proposed outfall would be constructed within the mapped Amboy Road right-of-way leading from the intersection of Wards Point Avenue and Amboy Road to the Arthur Kill.**

**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: **New York State Department of Environmental Conservation (NYSDEC) 401 Water Quality Certification; NYSDEC Tidal Wetlands Permit; Modification of DEP's MS4 State Pollution Discharge Elimination System (SPDES) Permit (NY0026174) for an additional stormwater outfall (Oakwood Beach WWTP SPDES permit); SPDES General Permit GP-010-001 for activities during construction; NYSDEC Protection of Waters Permit; and United States Army Corp of Engineers (USACE) Nationwide Permit No. 7.**

5. Is federal or state funding being used to finance the project? If so, please identify the funding source(s). **No**

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? If yes, identify Lead Agency:	<b>Yes</b>	<b>No</b>
	_____	_____ <input checked="" type="checkbox"/>

7. Identify City discretionary actions, such as zoning amendment or adoption of an urban renewal plan, required for the proposed project.  
**The proposed capital project would be a discretionary action undertaken by the New York City Department of Design + Construction.**

**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:**

	<b>Yes</b>	<b>No</b>
1. Is the project site on the waterfront or at the water's edge?	_____ <input checked="" type="checkbox"/>	_____
2. Does the proposed project require a waterfront site?	_____ <input checked="" type="checkbox"/>	_____
3. Would the action result in a physical alteration to a waterfront site, including land along the shoreline, land underwater, or coastal waters?	_____ <input checked="" type="checkbox"/>	_____

**Policy Questions:**

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.

	<b>Yes</b>	<b>No</b>
4. Will the proposed project result in revitalization or redevelopment of a deteriorated or under- used waterfront site? (1)	_____	_____ <input checked="" type="checkbox"/>
5. Is the project site appropriate for residential or commercial redevelopment? (1.1)	_____	_____ <input checked="" type="checkbox"/>
6. Will the action result in a change in scale or character of a neighborhood? (1.2)	_____	_____ <input checked="" type="checkbox"/>
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)	_____	_____ <input checked="" type="checkbox"/>

**Policy Questions cont'd:**

	Yes	No
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)	_____	✓ _____
9. Are there any waterfront structures, such as piers, docks, bulkheads or wharves, located on the project sites? (2)	✓ _____	_____
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)	_____	✓ _____
11. Does the action involve the siting of a working waterfront use outside of a SMIA? (2.2)	_____	✓ _____
12. Does the proposed project involve infrastructure improvement, such as construction or repair of piers, docks, or bulkheads? (2.3, 3.2)	✓ _____	_____
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)	✓ _____	_____
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)	_____	✓ _____
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)	_____	✓ _____
16. Would the proposed project create any conflicts between commercial and recreational boating? (3.2)	_____	✓ _____
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)	_____	✓ _____
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)	_____	✓ _____
19. Is the project site in or adjacent to a Significant Coastal Fish and Wildlife Habitats? (4.1)	_____	✓ _____
20. Is the site located within or adjacent to a Recognized Ecological Complex: South Shore of Staten Island or Riverdale Natural Area District? (4.1 and 9.2)	_____	✓ _____
21. Would the action involve any activity in or near a tidal or freshwater wetland? (4.2)	✓ _____	_____
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)	_____	✓ _____
23. Would the action have any effects on commercial or recreational use of fish resources? (4.4)	_____	✓ _____
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)	_____	✓ _____
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)	✓ _____	_____
26. Would the action result in the draining of stormwater runoff or sewer overflows into coastal waters? (5.1)	✓ _____	_____
27. Will any activity associated with the project generate nonpoint source pollution? (5.2)	✓ _____	_____

**Policy Questions cont'd:**

	<b>Yes</b>	<b>No</b>
28. Would the action cause violations of the National or State air quality standards? (5.2)	_____	✓ _____
29. Would the action result in significant amounts of acid rain precursors (nitrates and sulfates)? (5.2C)	_____	✓ _____
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)	✓ _____	_____
31. Would the proposed action have any effects on surface or ground water supplies? (5.4)	_____	✓ _____
32. Would the action result in any activities within a Federally designated flood hazard area or State designated erosion hazards area? (6)	✓ _____	_____
33. Would the action result in any construction activities that would lead to erosion? (6)	✓ _____	_____
34. Would the action involve construction or reconstruction of flood or erosion control structure? (6.1)	✓ _____	_____
35. Would the action involve any new or increased activity on or near any beach, dune, barrier island, or bluff? (6.1)	_____	✓ _____
36. Does the proposed project involve use of public funds for flood prevention or erosion control? (6.2)	✓ _____	_____
37. Would the proposed project affect a non-renewable source of sand? (6.3)	_____	✓ _____
38. Would the action result in shipping, handling, or storing of solid wastes; hazardous materials, or other pollutants? (7)	_____	✓ _____
39. Would the action affect any sites that have been used as landfills? (7.1)	_____	✓ _____
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)	_____	✓ _____
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)	_____	✓ _____
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)	_____	✓ _____
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)	_____	✓ _____
44. Would the action result in the provision of open space without the provision for its maintenance? (8.1)	_____	✓ _____
45. Would the action result in any development along the shoreline but NOT include new water enhanced or water dependent recreational space? (8.2)	_____	✓ _____
46. Will the proposed project impede visual access to coastal lands, waters and open space? (8.3)	_____	✓ _____

**Policy Questions cont'd:**

	Yes	No
47. Does the proposed project involve publically owned or acquired land that could accommodate waterfront open space or recreation? (8.4)	<u>                    </u>	<u>          ✓          </u>
48. Does the project site involve lands or waters held in public trust by the state or city? (8.5)	<u>          ✓          </u>	<u>                    </u>
49. Would the action affect natural or built resources that contribute to the scenic quality of a coastal area? (9)	<u>                    </u>	<u>          ✓          </u>
50. Does the site currently include elements that degrade the area's scenic quality or block views to the water? (9.1)	<u>                    </u>	<u>          ✓          </u>
51. Would the proposed action have a significant adverse impact on historic, archeological, or cultural resources? (10)	<u>                    </u>	<u>          ✓          </u>
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)	<u>                    </u>	<u>          ✓          </u>

**D. CERTIFICATION**

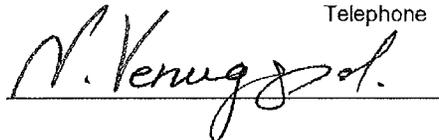
The applicant must certify that the proposed activity is consistent with New York City's Waterfront Revitalization Program, pursuant to the New York State Coastal Management Program. If this certification cannot be made, the proposed activity shall not be undertaken. If the certification can be made,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

Address: 30-30 Thompson Avenue, 3rd Floor, Long Island City, NY 11101

Telephone (718) 391-2283

Applicant/Agent Signature:  Date: 6.28.13