Appendix K: Natural Resources Documentation

Preliminary Jurisdictional Determination Plan

- Initially, a Jurisdictional Determination (JD) was submitted to the US Army Corps of Engineers (USACE) in October 2019. Based on regulatory changes since the initial submissions and correspondence with the USACE, it was determined that a Preliminary Jurisdictional Determination (PJD) be requested for the Proposed Project. The attached plan was revised and provided to USACE in July, 2023.

Appendix 2 - PRELIMINARY JURISDICTIONAL DETERMINATION (PJD) FORM

BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR PJD: August 3, 2023

B. NAME AND ADDRESS OF PERSON REQUESTING PJD: MTA C&D, 2 Broadway, New York, New York 10004

C. DISTRICT OFFICE, FILE NAME, AND NUMBER: NAN-2019-01138-EMI

D. PROJECT LOCATION(S) AND BACKGROUND INFORMATION:
(USE THE TABLE BELOW TO DOCUMENT MULTIPLE AQUATIC RESOURCES AND/OR AQUATIC RESOURCES AT DIFFERENT SITES)

State: New York County/parish/borough: Staten Island City: New York

Center coordinates of site (lat/long in degree decimal format):

Lat.: Long.:

Universal Transverse Mercator:

Name of nearest waterbody: Kill Van Kull

E. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):

☒ Office (Desk) Determination. Date: July 26, 2023

☒ Field Determination. Date(s): December 19, 2019

TABLE OF AQUATIC RESOURCES IN REVIEW AREA WHICH "MAY BE" SUBJECT TO REGULATORY JURISDICTION.

Site number	Latitude (decimal degrees)	Longitude (decimal degrees)	Estimated amount of aquatic resource in review area (acreage and linear feet, if applicable)	Type of aquatic resource (i.e., wetland vs. non-wetland waters)	Geographic authority to which the aquatic resource "may be" subject (i.e., Section 404 or Section 10/404)
1 (A)	40.630439	-74.167051	1.37 acres	wetland	404
2 (B)	40.631149	-74.166642	0.12 acres	wetland	404
3 (C)	40.632218	-74.167987	0.55 acres	wetland	404
4 (D/E)	40.639574	-74.124183	0.06 acres	wetland	404
5 (G/F)	40.645040	-74.106159	0.78 acres	wetland	10/404

1) The Corps of Engineers believes that there may be jurisdictional aquatic resources in the review area, and the requestor of this PJD is hereby advised of his or her option to request and obtain an approved JD (AJD) for that review area based on an informed decision after having discussed the various types of JDs and their characteristics and circumstances when they may be appropriate.

2) In any circumstance where a permit applicant obtains an individual permit, or a Nationwide General Permit (NWP) or other general permit verification requiring "pre-construction notification" (PCN), or requests verification for a non-reporting NWP or other general permit, and the permit applicant has not requested an AJD for the activity, the permit applicant is hereby made aware that: (1) the permit applicant has elected to seek a permit authorization based on a PJD, which does not make an official determination of jurisdictional aquatic resources; (2) the applicant has the option to request an AJD before accepting the terms and conditions of the permit authorization, and that basing a permit authorization on an AJD could possibly result in less compensatory mitigation being required or different special conditions; (3) the applicant has the right to request an individual permit rather than accepting the terms and conditions of the NWP or other general permit authorization; (4) the applicant can accept a permit authorization and thereby agree to comply with all the terms and conditions of that permit, including whatever mitigation requirements the Corps has determined to be necessary; (5) undertaking any activity in reliance upon the subject permit authorization without requesting an AJD constitutes the applicant's acceptance of the use of the PJD; (6) accepting a permit authorization (e.g., signing a proffered individual permit) or undertaking any activity in reliance on any form of Corps permit authorization based on a PJD constitutes agreement that all aquatic resources in the review area affected in any way by that activity will be treated as jurisdictional, and waives any challenge to such jurisdiction in any administrative or judicial compliance or enforcement action, or in any administrative appeal or in any Federal court; and (7) whether the applicant elects to use either an AJD or a PJD, the JD will be processed as soon as practicable. Further, an AJD, a proffered individual permit (and all terms and conditions contained therein), or individual permit denial can be administratively appealed pursuant to 33 C.F.R. Part 331. If, during an administrative appeal, it becomes appropriate to make an official determination whether geographic jurisdiction exists over aquatic resources in the review area, or to provide an official delineation of jurisdictional aquatic resources in the review area, the Corps will provide an AJD to accomplish that result, as soon as is practicable. This PJD finds that there *"may be"* waters of the U.S. and/or that there *"may be"* navigable waters of the U.S. on the subject review area, and identifies all aquatic features in the review area that could be affected by the proposed activity, based on the following information:

SUPPORTING DATA. Data reviewed for PJD (check all that apply)

Checked items should be included in subject file. Appropriately reference sources below where indicated for all checked items:

- [x] Maps, plans, plots or plat submitted by or on behalf of the PJD requestor:
  Map: "Design and Construction of North Shore Bus Rapid Transit System", prepared by Amy G. Greene Environmental Consultants, Inc., dated May 23, 2023.
- [x] Data sheets prepared/submitted by or on behalf of the PJD requestor.
  - [x] Office concurs with data sheets/delineation report.
  - [ ] Office does not concur with data sheets/delineation report. Rationale: _____.
- [ ] Data sheets prepared by the Corps: _____.
- [ ] Corps navigable waters' study: _____.
- [ ] U.S. Geological Survey Hydrologic Atlas: _____.
  - [ ] USGS NHD data.
  - [ ] USGS 8 and 12 digit HUC maps.
- [ ] U.S. Geological Survey map(s). Cite scale & quad name: _____.
- [ ] Natural Resources Conservation Service Soil Survey. Citation: _____.
- [x] National wetlands inventory map(s). Cite name: NWI / NYSDEC Wetlands & Streams Map ASGECI Project # 4348.
- [x] State/local wetland inventory map(s): NWI / NYSDEC Wetlands & Streams Map ASGECI Project # 4348.
- [ ] FEMA/FIRM maps: _____.
- [ ] 100-year Floodplain Elevation is: _____.(National Geodetic Vertical Datum of 1929)
- [x] Photographs: [x] Aerial (Name & Date): NWI / NYSDEC Wetlands & Streams Map ASGECI Project # 4348 (2018 Imagery).
  or [x] Other (Name & Date): Applicant Site Photos April 11, 2019; USACE Site Photos December 11, 2019.
- [ ] Previous determination(s). File no. and date of response letter: _____.
- [ ] Other information (please specify): _____.

IMPORTANT NOTE: The information recorded on this form has not necessarily been verified by the Corps and should not be relied upon for later jurisdictional determinations.

2023.08.03 12:06:05 -04'00'

Signature and date of Regulatory staff member completing PJD

Naomi Delphin Digitally signed by Naomi Delphin Date: 2023.08.30 14:34:33 -04'00'

Signature and date of person requesting PJD (REQUIRED, unless obtaining the signature is impracticable)[1]

[1] Districts may establish timeframes for requestor to return signed PJD forms. If the requestor does not respond within the established time frame, the district may presume concurrence and no additional follow up is necessary prior to finalizing an action.

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

REGULATORY BRANCH

August 10, 2023

SUBJECT: Permit Application Number NAN-2019-01138
by MTA New York City Transit Authority

MTA New York City Transit Authority
Attn: David Leyzerovsky
2 Broadway, A17.14
New York, New York 10004

Dear Mr. Leyzerovsky:

On August 27, 2019, the New York District of the U.S. Army Corps of Engineers received a request for a Department of the Army preliminary jurisdictional determination for the Staten Island North Shore Bus Rapid Transit Project by MTA New York City Transit Authority. The project area is located in the Borough of Staten Island, Richmond County, City of New York, New York along the Kill Van Kill and its watershed. The proposed project would provide new and enhanced public transit service along between South Avenue and St. George Terminal.

The submittal received by this office on August 27, 2019, included a proposed delineation of the extent of potential waters of the United States within the project boundary. A site inspection was conducted by a representative of this office on December 19, 2019, in which it was agreed that changes would be made to the delineation and that the modified delineation would be submitted to this office. On July 19, 2023, this office received the modified delineation.

Based on the material submitted, including the drawings entitled "Design and Construction of North Shore Bus Rapid Transit System", prepared by Amy S. Greene Environmental Consultants, Inc., dated May 23, 2023, and last revised July 18, 2023, there are approximately 2.88 acres of wetlands, within the review area, that may be jurisdictional under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act.

This preliminary jurisdictional determination (JD) is non-binding and indicates that there may be waters of the United States, including wetlands, within the review area. A preliminary JD is advisory in nature, and may not be appealed. As you requested, enclosed is a copy of the Preliminary Jurisdictional Determination Form signed by this office. Please be aware that for purposes of computation of impacts, compensatory mitigation requirements, and other resources protection measures, a permit decision made on the basis of a preliminary JD will treat all waters and wetlands that would be affected by the permitted activity as jurisdictional. If you wish, prior to commencement of

any work on the site you may request an approved JD, which may be appealed, by contacting the New York District, U.S. Army Corps of Engineers for further instruction. To assist you in this decision and address any questions you may have on the differences between preliminary and approved jurisdictional determinations, please review U.S. Army Corps of Engineers Regulatory Guidance Letter No. 16-01, which can be found at:

http://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Guidance-Letters/

In accordance with Regulatory Guidance Letter 05-02, “Preliminary jurisdictional determinations are not definitive determinations of areas within regulatory jurisdiction and do not have expiration dates.” However, it is strongly recommended that the boundaries of the delineated waters be re-evaluated by a qualified consultant after five years of the date of this letter. This will ensure that any changes are appropriately identified and you do not inadvertently incur a violation of Federal law while working on your project site.

These determinations may not be valid for the wetland conservation provisions of the Food Security Act of 1985, as amended. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service prior to starting work.

It is strongly recommended that the development of the site be carried out in such a manner as to avoid as much as possible the discharge of dredged or fill material into the delineated waters of the United States. If the activities proposed for the site involve such discharges, authorization from this office may be necessary prior to the initiation of the proposed work. The extent of such discharge of fill will determine the level of authorization that would be required.

In order for us to better serve you, please complete our Customer Service Survey located at:

http://www.nan.usace.army.mil/Missions/Regulatory/CustomerSurvey.aspx

If any questions should arise concerning this matter, please contact Christopher Minck, of my staff at Christopher.W.Minck@usace.army.mil.

Sincerely,

Rosita Miranda
Chief, Western Section

Enclosures

USACE FILE: NAN-2019-01138-EMI

LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- MEAN HIGHER HIGH WATER (GPS LOCATED)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

250 0 250 500

1 inch = 250 feet

NOTES:

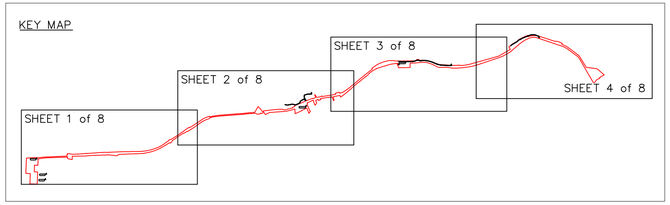
Wetlands within the Review Area were delineated and flagged by Amy S. Greene Environmental Consultants, Inc. on April 11– 12, April 15 and May 24, 2019. Wetlands were delineated by utilizing the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) [USACE 1987 Manual], and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012). Delineated Wetlands and other Waters of the United States boundaries are subject to review and verification by the US Army Corps Engineers.

1 Mean Higher High Water (GPS Located) was located in the field using GPS by Davey Resource Group, April 28, 2023.

Naik Consulting Group, P.C. established the wetlands flags locations by Conventional Surveying methods utilizing a Leica Total Station between the dates of April 22 and June 13, 2019.

Naik Consulting Group, Inc. (Naik) established control for aerial photography which was performed by Geod Corporation from aerial Lidar topographic mapping technics. The aerial Horizontal and Vertical control points values were established by performing three (3) fifteen–minute RTK GPS sessions on each control point. Naik also established additional control points using this same methodology to perform the Laser Scanning in areas obscured by the original aerial flight. This control network was used to perform bridge clearances and abutment locations at all streets which traverse over the old Railroad Bed. A closed route traverse was performed by conventional surveying technics utilizing a Leica Total Station. Conventional surveying methods were also used to establish the bridge abutment & retaining wall locations as well as the bridge clearances. All work was process and adjusted with allowable guidelines.

KEY MAP



2

Wetland	Sq. Ft.*	Acres*
A	59,793	1.37
B	5,236	0.12
C	23,791	0.55
D/E	2,713	0.06
G/F	33,819	0.78

*Area of wetland within project review area.

JURISDICTIONAL DETERMINATION PLAN PREPARED BY:
AMY S. GREENE ENVIRONMENTAL CONSULTANTSINC.
4 WALTER E. FORAN BLVD. SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED
2	CHANGES TO CALLOUTS AND TABLES	7/18/23	HS
1	ADDED MEAN HIGHER HIGH WATER (GPS LOCATED)	5/23/23	HS

New York City Transit Authority

CONTRACT B–62040

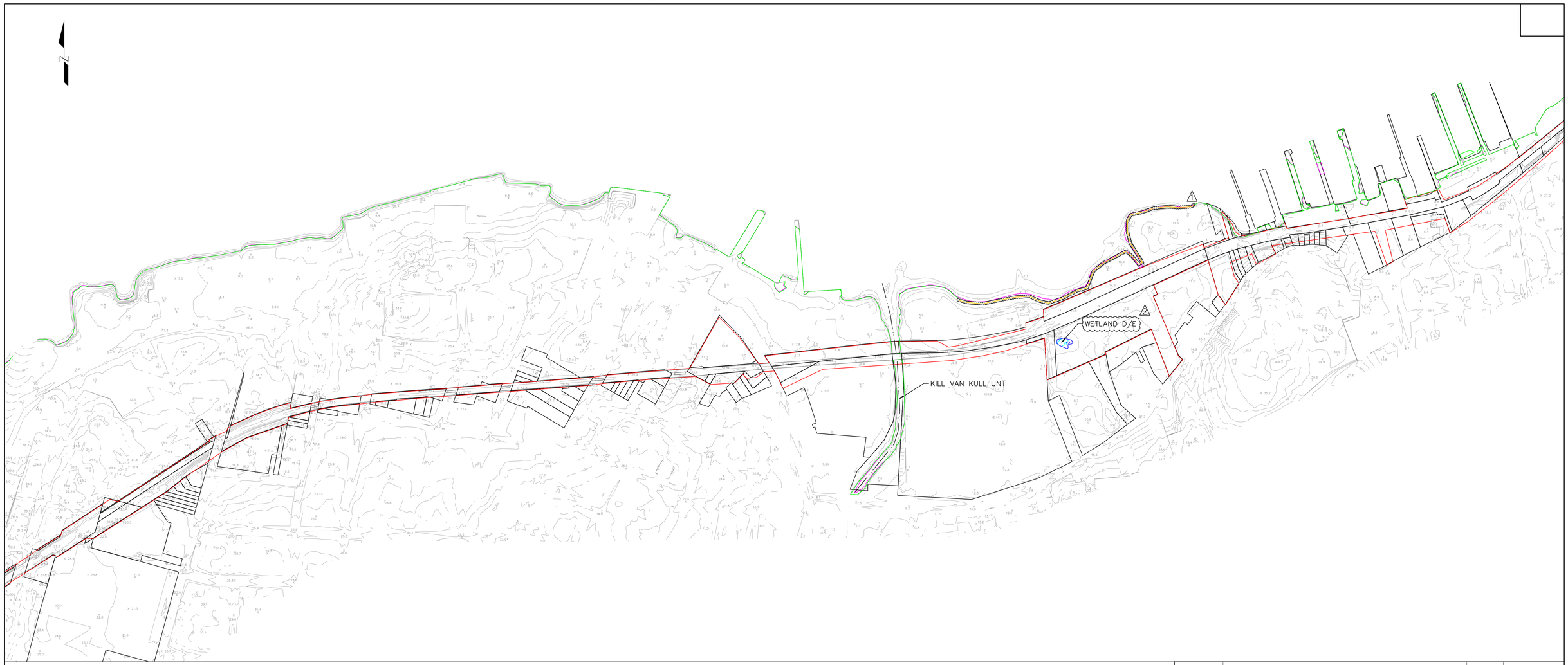
DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

PRELIMINARY JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 1 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION

1 OF 4

USACE FILE: NAN-2019-01138-EMI



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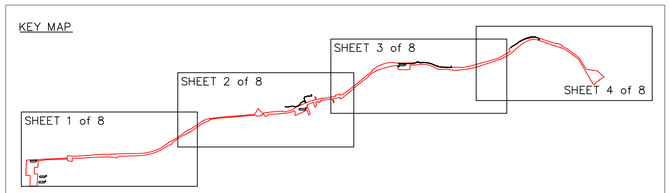

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CONTRACT B–62040
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DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 2 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION __

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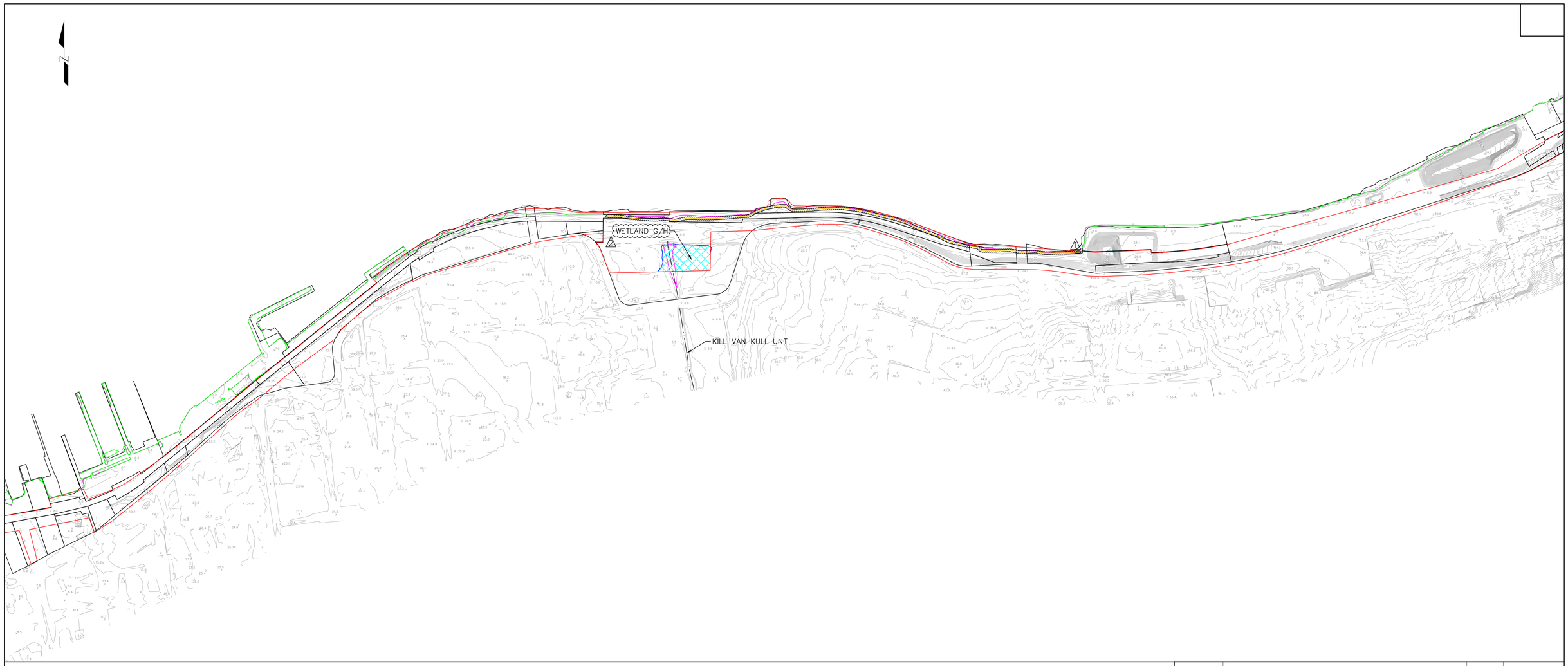

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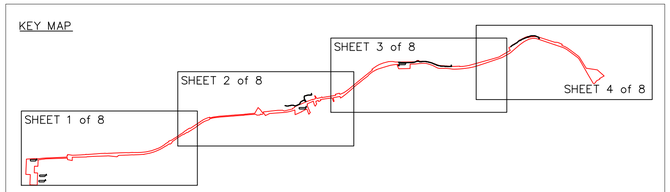

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REVISION	DESCRIPTION	DATE	APPROVED
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PRELIMINARY JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 3 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION

USACE FILE: NAN-2019-01138-EMI

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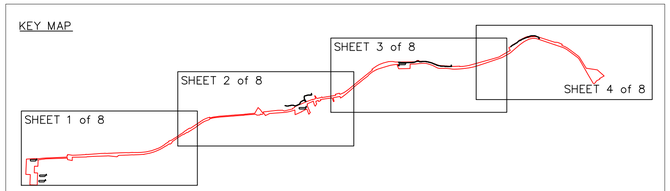

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FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED
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1	ADDED MEAN HIGHER HIGH WATER (GPS LOCATED)	5/23/23	HS

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

PRELIMINARY JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 4 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION

CENAN-OP-RE

August 10, 2023

MEMORANDUM FOR THE RECORD

SUBJECT: Application Number NAN-2019-01138
by MTA New York City Transit Authority

1. On August 27, 2019, this office received a request for a Department of the Army preliminary jurisdictional determination for the Staten Island North Shore Bus Rapid Transit Project by MTA New York City Transit Authority. The project area is located in the Borough of Staten Island, Richmond County, City of New York, New York along the Kill Van Kill and its watershed. The proposed project would provide new and enhanced public transit service along between South Avenue and St. George Terminal.

2. The submittal received by this office on August 27, 2019, included a proposed delineation of the extent of potential waters of the United States within the project boundary. A site inspection was conducted by a representative of this office on December 19, 2019, in which it was agreed that changes would be made to the delineation and that the modified delineation would be submitted to this office. On July 19, 2023, this office received the modified delineation. The project was put on hold during the Covid-19 Pandemic between 2020-2023.

3. Based on the material submitted, including the drawings entitled "Design and Construction of North Shore Bus Rapid Transit System", prepared by Amy S. Greene Environmental Consultants, Inc., dated May 23, 2023, and last revised July 18, 2023, there are approximately 2.88 acres of wetlands, within the review area, that may be jurisdictional under Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act.

4. It is recommended that the applicant be informed of the above determination.

Recommended by:

2023.08.03
12:16:59 -04'00'

Christopher Minck
Project Manager, Eastern Section

Approved by:

Digitally signed by Rosita Miranda
Date: 2023.08.10
14:06:51 -04'00'

Rosita Miranda
Chief, Western Section

AMY S. GREENE
ENVIRONMENTAL
CONSULTANTS INC.

In Reply: Refer to Project #4348 October 2, 2019

U.S. Army Corps of Engineers, New York District
ATTN: Regulatory Branch, Room 1937
26 Federal Plaza
New York, NY 10278-0090

RE: Jurisdictional Determination Request
Applicant: Eric Bohn, Manager, Capital Projects, NYCT Operations Planning
Proposed North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

To Whom It May Concern:

On behalf of the applicant, New York City Transit, Amy S. Greene Environmental Consultants, Inc. (ASGECI) has provided the enclosed documentation for a Jurisdictional Determination (JD) request. The JD request is associated with a proposed project involving the development of a Rapid Transit Bus Route between Arlington and St. George Terminal on Staten Island, Richmond County, New York.

If you have any questions please feel free to contact me at (908) 788-9676, *extension 26*, or at hstrano@amygreene.com.

Sincerely,

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

Harry Strano , *Project Manager*

cc: Jenifer Young, VHB
ASGECI # 4348 file

REQUEST FOR A
U.S. ARMY CORPS OF ENGINEERS
JURISDICTIONAL DETERMINATION

For:

Staten Island North Shore Bus Rapid Transit System

Borough of Staten Island
Richmond County, New York
#CM-0143
SSE# 0000189595

October 2, 2019

APPLICANT

New York City Transit Authority
2 Broadway
New York City, New York 10004
Attn: Eric Bohn, *Manager, Capital Projects- NYCT Operations Planning*

PREPARED FOR:

VHB/STV North Shore Joint Venture
99 High Street
Boston, MA 02110-2354
Attn: Steven P. McElligott, PE, *Senior Vice President*

PREPARED BY:

Amy S. Greene Environmental Consultants, Inc.
4 Walter E. Foran Boulevard, Suite 209
Flemington, NJ 08822
ASGECI #4348

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SECTION 1
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
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USACE CHECKLIST

CHECKLIST OF INFORMATION INCLUDED WITH REQUESTS FOR JURISDICTIONAL DETERMINATIONS (JD)*

1. Names (including POC if a corporation or other entity), complete mailing addresses and phone numbers of the following:
   - CURRENT PROPERTY OWNER (include a letter granting ACOE access to review the parcel)
   - APPLICANT (Project Sponsor)
   - WETLAND DELINEATOR (Consultant)

2. 8 ½-inch x 11-inch Size Location Map (preferably a copy of the USGS Quad or DEC Wetlands Map with site identified on it), coordinates of the approximate center point of site AND of each potentially jurisdictional waters of the U.S. feature on the site (either Latitude/Longitude or UTM Grid Coordinate), showing the stream orders of all streams in the vicinity of the site AND the location of each stream reach associated with the project review area. Please provide the coordinates of the start and end points of these reaches, and identify them as traditionally navigable waters [TNWs], non-navigable perennial relatively permanent waters [perennial RPWs], non-navigable seasonal relatively permanent waters [seasonal RPWs], or non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally [non-RPWs]

3. Cover letter describing the purpose of the request, a general description of the proposed project, the size (acres) of the parcel, and the size of the limits of the project site or review area (if smaller than the parcel)**

4. Delineation report, including the following supporting information:
   - Description of any current and/or historic land uses on the site
   - DEC Wetlands Maps, NWI Maps, Soil Survey Maps
   - Watershed size, drainage area size (for each stream reach), average annual rainfall/snowfall
   - Discussion of whether tributaries (streams) on the site are TNWs, perennial RPWs, seasonal RPWs, or non-RPWs. Include a description of general flow patterns, volume and frequency ***
   - Description of whether each wetland on the site either abuts or is adjacent to a tributary, identify which tributary (e.g. Wetland A directly abuts an unnamed tributary to Kayaderosseras Creek), and provide a discussion of the justification for this determination
   - Description of tributary connections to a TNW for each aquatic resource on the site, including a discussion of wetland and/or other connections (e.g. Wetland B connects to Wetland A via a culvert under Elm St. Wetland B abuts an unnamed tributary to Kayaderosseras Creek, which is a TNW)
   - River miles to a TNW; aerial (straight) miles to a TNW
   - Description of tributary substrate composition (e.g. silts, sands, gravel, etc.)
   - Identify potential pollutants
   - Identify potential habitat for species
   - Justification for proposed "isolated" (SWANCC) or non-jurisdictional determinations on any wetlands or streams
   - Description of vegetative cover types on the site
   - Wetland Delineation Forms for each cover type
   - Color photographs of all representative areas of the site (taken during the growing season), including any connections between tributaries or between tributaries and wetlands

5. Surveyed delineation drawing, including the following:
   - Title block, including drawing date, scale, revision dates, north arrow, existing topographic contours (if available), benchmarks, and the stamp of a licensed surveyor or a narrative describing how the GPS data were obtained
   - Boundary lines of the parcel, AND of the project site, clearly marked with the acres shown on the drawing
   - Delineation flags shown as points that are connected by straight lines (or extend off-site at parcel boundaries), and are identified on the drawing with the corresponding number and/or letter that is written on the flag in the field ****
   - Appropriate hatching and/or shading to identify the extent of waters of the US, including jurisdictional wetlands, and any "isolated" or non-jurisdictional waterbodies or wetlands
   - All defined tributaries on the site, identified either via flagging or a standard tributary symbol that is in the legend, and locations of any other connections between waters (e.g. culverts, ditches and/or swales)
   - Table outlining the acres of the waters of the US, and "isolated" or non-jurisdictional waters, in addition to the linear feet of all tributaries within the boundaries of the project site or parcel

*** A JD is a determination of the extent of jurisdictional waterbodies and/or wetlands within the boundaries of a parcel of land *or a project site***

**** A project site is the limits of all lands expected to be disturbed for a single and complete project, or the initial phases of a phased project such as a subdivision**

***** For seasonal RPWs, non-RPWs and wetlands adjacent to RPWs and non-RPWs that require a significant nexus determination, please also provide information regarding whether the stream and/or wetland has more than an insubstantial or speculative effect on the chemical, physical and/or biological integrity of TNWs, such as a functional assessment of the aquatic resource functions that the stream and its adjacent wetlands provides**

****** Delineation flags may need to be replaced on a site prior to scheduling a site inspection with the ACOE**

SECTION 2
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

REQUEST FOR DEPARTMENT OF THE ARMY JURISDICTIONAL DETERMINATION

REQUEST FOR DEPARTMENT OF THE ARMY JURISDICTIONAL DETERMINATION

The Department of the Army permit program is authorized by Section 10 of the rivers and Harbors Act of 1899, Section 404 of the Clean Water Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. These laws require permits authorizing activities in or affecting navigable waters of the United States, the discharge of dredged or fill material into water of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided on this form will be used in determining Department of the Army jurisdictional boundaries. Information in this application is made a matter of public record. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to establish Federal regulatory jurisdiction. If the necessary information is not provided, the jurisdictional determination cannot be completed.

1. Jurisdictional Determination Request Number

2. Applicant/Owner:
Name: Eric Bohn, NYC Transit Authority
Address: 2 Broadway
City, State, Zip: New York, NY 10004
Phone number during business hours:
Residence:
Office: 646-252-5165

3. Authorized Agent:
Name: Amy S. Greene
Address: 4 Walter E Foran Boulevard, Ste. 209
City, State, Zip: Flemington, NJ 08822
Phone number during business hours:
Residence:
Office: 908-788-9676

I hereby designate and authorize Amy S. Greene
To act on my behalf as my agent in the processing of this jurisdictional determination application and to furnish, upon request, supplemental information in support of this application.

SIGNATURE OF APPLICANT DATE
10/10/19

4. For Commercial Properties: Project Name:

5. Does the property contain agricultural land? ☐ YES ☑ NO
If yes, is the applicant, owner, or lessee a USDA Program Participant? ☐ YES ☐ NO

6. Names and addresses of adjoining property owners, lessees, etc.
See Section 8 of the application.

7. Name of water body in closest proximity to property:

Kill van Kull

8. Location of property:

Address: _____
Street, Road, Route, or other descriptive location

Staten Island	Richmond	New York	
Municipality	County	State	Zip Code

Latitude: N: 40° 38' 25.10" Longitude: W: 74° 7' 22.09

Local Governing Body with Jurisdiction:

9. List all approvals or certifications required and/or received from other Federal, Interstate, State, or local agencies for development of the project site:

Issuing Agency	Type of Approval	Identification Number

Date of Application	Date of Approval	Date of Denial

10. Application is hereby made for a Department of the Army Jurisdictional Determination for the property described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to request this jurisdictional determination and I am acting as the duly authorized agent of the applicant. I hereby grant permission for representatives of the U.S. Army Corps of Engineers to inspect the project site as necessary in order to perform the requested jurisdictional determination.

Signature of Applicant	Date	Signature of Agent	Date
[signature]	10/10/19	[signature]	9/27/2019

The application must be signed by the person who desires to have the jurisdictional determination performed (applicant), or it may be signed by a duly authorized agent if the statement in Block 3 has been filled out and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious, or fraudulent statement or entry, shall be fined not more than $10,000 or imprisoned not more than five years, or both.

SECTION 3
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

SITE INFORMATION SHEET

Legal Designation:	Staten Island North Shore Bus Rapid Transit System Borough of Staten Island Richmond County, New York
Applicant:	VHB/STV North Shore Joint Venture 99 High Street Boston, MA 02110-2354 Attn: Steven P. McElligott, PE, *Senior Vice President*
Sponsor:	New York City Transit Authority 2 Broadway New York, NY 10004 #CM-0143 SSE# 0000189595
Wetland Delineator:	Amy S. Greene Environmental Consultants, Inc. 4 Walter Foran Blvd., Suite 209 Flemington, NJ 08822 Tel: 908-788-9676 Attn: Harry Strano, *Project Manager*
Engineers/Surveyors:	STV Inc. 225 Park Avenue South New York, NY 10003 Attn: Kevin Lai, PE
USGS Quadrangle:	Elizabeth NJ/NY, Arthur Kill NY/NJ, and Jersey City NJ/NY Quadrangles Western limits of study area: N 40°37’51.66/W 74° 10’1.45” Approx. center of study area: N 40° 38’25.10”/W 74° 7’22.09” Eastern limits of study area: 40° 38’35.84”/74° 4’31.21”

SITE INFORMATION SHEET (Cont.)

Soil Mapping:	U.S. Dept. of Agriculture, Natural Resources Conservation Service Fort Worth Texas, October 2017 (Section 5 – Figure 3)
Nearest Waterways:	Sawmill Creek- Traditionally navigable waterway Old Place Creek- Traditionally navigable waterway Kill van Kull- Traditionally navigable waterway Kill van Kull UNT (Three tributaries)- Traditionally navigable waterways
Subdrainage Basin:	Sawmill Creek & Old Place Creek/Kill van Kull UNT
Drainage Basin:	Arthur Kill/Kill van Kull
NYSDEC Stream Classification:	Sawmill Creek- SD Old Place Creek- SD/G Kill van Kull- SD Kill van Kull UNT (three tributaries)- SD/B and SD/C

SECTION 4
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

WETLANDS/OPEN WATERS INVESTIGATION SUMMARY

I. SITE DESCRIPTION AND LAND USE

The proposed Staten Island North Shore Bus Rapid Transit (BRT) Project involves an approximately 8-mile-long linear corridor, including approximately 4.8 miles of right-of-way (ROW) from the former North Shore Railroad and approximately 3.2 miles of City roadways such as Richmond Terrace (0.5 miles) and South Avenue (2.7 miles). The proposed alignment includes at-grade, elevated viaduct, and below-grade open-cut sections, with street-running portions along South Avenue (mixed-traffic) and Richmond Terrace (exclusive two-lane median busway). The Proposed Project would also provide improved connectivity to other modes of transit in St. George, including Staten Island Ferry, the Staten Island Railway, and the planned NYC Ferry St. George Route.

Between St. George and Nicholas Street, the BRT would operate on Richmond Terrace in a new, exclusive two-lane median busway. Between Nicholas Street and Heritage Park, the alignment would follow an at-grade portion of the former North Shore Railroad ROW near the shoreline of the Kill Van Kull. Due to coastal erosion in this area, portions of the ROW are currently submerged; the proposed alignment would include an elevated busway away from the shoreline and closer to Richmond Terrace. Between Heritage Park and east of the Bayonne Bridge, near John Street, the busway would use the 1.2-mile former North Shore Railroad viaduct structure. Between John Street and Roxbury Street, the proposed alignment would follow the former ROW in an open cut, approximately 0.9 mile long and 20 to 30 feet below grade. Near Roxbury Street, the alignment would leave the open cut and rise to grade below the South Avenue bridge. It would then pass through Arlington, where it would join South Avenue at approximately Cable Way and operate in mixed traffic along South Avenue to West Shore Plaza. The segment along South Avenue would not require any modification to the existing roadway.

The elevated platform continues eastward before returning to grade as it approaches Heritage Park. Most of the recessed portions of the alignment corridor are underlain with railroad ballast. Elevated portions are largely cement and gravel. The cement structures associated with the abandoned stations and platforms are present and nonfunctional. Topography within the study area is generally flat to gently sloping, with elevations ranging from approximately 10 to 20 feet above sea level.

Much of the land use surrounding the study area is residential, with single-family houses and small apartment buildings the predominant residential type. The proposed corridor also passes under the Bayonne Bridge, and through commercial and industrial areas, through some New York City public parks (Heritage Park and Snug Harbor) and through or adjacent to other small undeveloped open spaces.

Land cover at the proposed bus terminal at Arlington is primarily wetland and upland forest, with many locations underlain with historic (trash) fill. There is also a small semi-maintained grassland associated with a landfill on the northernmost end of the proposed Arlington terminus. The beginning portion of the corridor is adjacent to an active rail line that extends to a bumping post near Van Name Ave. The predominant vegetation communities found within the corridor itself are mid-successional or secondary successional upland forest. Several NYSDEC and NWI-mapped waterbodies cross the alignment (see Figure 4) and include three unnamed tributaries of the Kill van Kull. These streams are classified as SD waters under 6 NYCRR Part 701, indicating suitability for fishing and fish survival. Additionally, the study area occurs within and adjacent to various NYSDEC and/or NWI mapped wetlands, including 2 freshwater and estuarine wetlands. Five wetlands were delineated during the investigation (See Section 10, Wetland Location Survey). These comprise a total of 2.804 acres within the study area. With the exception of the wetlands identified along an unnamed saline tidal creek near Snug Harbor (delineated as Wetland F/G), all delineated wetlands are freshwater and non-tidal. The findings of this wetland delineation are described in detail in Section IV of this report. Wetland sampling data sheets are found in Appendix B of this report.

The western limits of the study area lie adjacent to the Arthur Kill; the North Shore Railroad ROW portion of the study area lies adjacent to the Kill van Kull. Several NYSDEC and NWI-mapped waterbodies cross the study area (See Figures 4, 5, and 6) and include Sawmill Creek, Old Place Creek, and unnamed tributaries of the Kill van Kull. These streams are classified as SD waters under 6 NYCRR Part 701, indicating suitability for fishing and fish survival. Additionally, the study area occurs within and adjacent to various mapped wetlands, including freshwater and estuarine wetlands.

Amy S. Greene Environmental Consultants, Inc. (ASGECI) performed a wetland delineation of the entire study area in April and May of 2019. Based on the results of this wetlands delineation, a total of 2.8 acres of wetlands were identified and delineated within the site. With the exception of the wetlands identified along a tidal creek near Snug Harbor (delineated as Wetland F/G), all delineated wetlands appear to be non-tidal and hydrologically isolated from waterbodies occurring within and adjacent to the study area.

The findings of this wetland delineation are described in detail in Section II of this application.

II. WETLAND/WATERS OF THE U.S. DELINEATION

Wetlands are defined by the USACE as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal

circumstances do support, a prevalence of vegetation typically adapted for life in saturated conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

The delineated wetlands D/E and F/G occur within 1,000 feet of the ordinary high-water mark of the Kill van Kull. In addition, Wetland F/G occurs along the edge of an unnamed tidal tributary of the Kill van Kull. Therefore, these features are subject to the U.S. Army Corps of Engineers (USACE) jurisdiction.

ASGECI performed a wetland delineation of the entire study area on April 11, 12, 15, and May 24, 2019. Vegetation, soils, and hydrology were examined for evidence of wetland characteristics according to the methodology outlined in the *1987 U.S. Army Corps of Engineers Manual for Delineating Jurisdictional Wetlands* and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (version 2.0),* as required by the USACE.

The study area is heavily developed and includes existing road and railroad rights-of-way, as well as disturbed areas around residences and other facilities. Despite this, the delineated features showed distinct indicators of hydric soils, wetland hydrology, and hydrophytic vegetation. ASGECI identified five wetlands within the study area, which included one tidal wetland fringe and four non-tidal emergent and forested wetlands of varying size. Wetlands were identified as follows (Section 9 - Wetland Location Survey):

Wetland A (A1 through A46) is an approximately 1.374-acre non-tidal freshwater palustrine forested wetland. It is located in an undeveloped lot immediately north of Cable Way, west of South Avenue. A culvert conveys drainage from the wetland to the south, beneath Cable Way.

Wetland B (B1 through B15) is a small palustrine forested wetland contained within a depression, approximately 0.120 acres in size. It is located immediately adjacent to Wetland A, but is separated by a man-made berm. It appears to be contained entirely onsite.

Wetland C (C1 through C52) is an approximately 0.547-acre palustrine forested/scrub-shrub/emergent wetland. It is located in a forested lot to the west of South Avenue, and to the south of the North Shore Railroad ROW. A portion of the wetland occurs as an emergent ditch, which appears to convey drainage outside the study area.

Wetland D/E (D1 through D10 and E1 through E4) is a 0.062-acre emergent wetland occurring in a disturbed, litter-strewn lot near Heritage Park (to the northeast) and the Port Richmond Water Pollution Control Plant (located to the west). The outer limit of the feature is flagged as Wetland D; the Wetland E line delineates an upland island within the interior of Wetland D.

Wetland F/G (F1 through F8 and G1 through G8) is a tidal scrub-shrub/emergent wetland fringe (approximately 0.701 acre) occurring along the banks of a creek. This feature drains beneath Richmond Terrace via culvert and empties into the Kill van Kull, located immediately to the north.

There are mapped permanent surface water features located within and adjacent to the study area. Wetland F/G occurs along the banks of an unnamed tributary of the Kill van Kull. Another unnamed Kill van Kull tributary crosses beneath the railroad ROW immediately west of the Port Richmond Water Pollution Control Plant. Although a third unnamed tributary is mapped, it was not located during the delineation; based on aerial mapping, it appears to have been filled or culverted within the study area at some point in the past.

A. Vegetation

To be considered a wetland, the area must be vegetated with a predominance of hydrophytes. A hydrophyte is any plant "growing in water, soil, or on a substrate that is at least periodically deficient of oxygen as a result of excessive water content." Since most plant species tolerate a range of growing conditions, individual species are not restricted to either wetland or upland communities. Plants that are listed as hydrophytes are those identified as Facultative (FAC), Facultative Wetland (FACW) or Obligate Wetland (OBL).

Plant Affinity for Wetland Conditions:

Classification	% Occurrence in Wetland
Obligate (OBL)	> 99
Facultative Wet (FACW)	67 – 99
Facultative (FAC)	34 – 66
Facultative Upland (FACU)	1 – 33
Upland (UPL)	< 1

In order to determine the dominance of each plant species, the cover class (based on percent aerial cover) is determined.

Wetland Vegetation

The delineated forested wetlands within the proposed Arlington terminus contain canopies dominated by pin oak (*Quercus palustris*, FACW), red maple (*Acer rubrum*, FAC), sweet gum (*Liquidambar styraciflua*, FAC), and black gum (*Nyssa sylvatica*, FAC). Northern spicebush (*Lindera benzoin*, FACW), coastal sweet pepperbush (*Clethra alnifolia*, FAC), soft rush (*Juncus effusus*, OBL), and a variety of sedges dominate the understory within Wetland A. Wetland B's understory is sparse; however, it contains some woolgrass (*Scirpus cyperinus*, OBL), sedges, and roundleaf catbrier (*Smilax rotundifolia*, FAC).

The forested portions of Wetland C are dominated by red maple and some pin oak. Wetter, shrub-dominant portions of the wetland contain black willow (*Salix nigra*, OBL), silky dogwood (*Cornus amomum*, FACW) and buttonbush (*Cephalanthus occidentalis*, OBL) (see Photo F). Understory species observed in this wetland include Northern spicebush, common reed (*Phragmites australis*, FACW), Japanese honeysuckle (*Lonicera japonica*, FACU), skunk cabbage (*Symplocarpus foetidus*, OBL), woolgrass, and fowl mannagrass (*Glyceria striata*, OBL).

The emergent wetland D/E contains some sedges, including tussock sedge (*Carex stricta*, OBL), as well as seaside goldenrod (*Solidago sempervirens*, FACW), greater water dock (*Rumex*

britannica, OBL), and reed canary grass (*Phalaris arundinacea*, FACW). Small numbers of silver maple (*Acer saccharinum*, FACW) and multiflora rose (*Rosa multiflora*, FACU) were also observed.

The tidal marsh fringe (Wetland F/G) contains small amounts of saltmarsh cordgrass (*Spartina alterniflora*, OBL) and hightide bush (*Iva frutescens*, FACW), with lesser amounts of groundsel bush (*Baccharis halimifolia*, FACW) and is otherwise dominated by common reed. Common hackberry (*Celtis occidentalis*, FAC), pin oak, and ash (*Fraxinus* sp., NIS) occur on the outer limits of this wetland.

These vegetation communities were determined to be hydrophytic, using the methodology described for hydrophytic vegetation in the 1987 Manual (see Wetland Data Sheets).

Upland Vegetation

Vegetation associated with the upland areas adjacent to the delineated wetlands varied throughout the study area and included forested, scrub-shrub, and herbaceous communities. In most areas the upland vegetation communities show signs of historic disturbance and are colonized by opportunistic and/or exotic plant species. These communities are often growing within or on old railway infrastructure or debris piles from historic dumping. Portions of Wetlands A, B, and C are surrounded by a dry oak-dominant Coastal Plain upland forest consisting of a canopy of red oak (*Quercus rubra*, FACU), black gum, and sassafras (*Sassafras albidum*, FACU), with a sparse understory made up of black cherry saplings (*Prunus serotina*, FACU) and a few trout lilies (*Erythronium americanum*, UPL) (see Photos B, D, and G). This native upland community type was not observed elsewhere in the study area.

Other upland vegetation communities within the study area consist of disturbed communities in varying stages of succession ranging from semi-maintained fields or lawns to secondary successional forest.

Semi-maintained early successional areas such as the landfill location near Arlington and in portions of Heritage park consist of a mix of grasses including little bluestem (*Schizachyrium scoparium*, FACU) and panic grass (*Panicum virgatum*, FAC) (See Photo I). Other species that periodically occur in these communities include juvenile Eastern cottonwood (*Populus deltoides*, FAC) and dogbane (*Apocynum cannabinum* FAC). Areas that were less maintained including forest and field edges, and disturbed areas within the rail corridor often contain a dense mix of exotic and native saplings, shrubs, vines and herbaceous species. Common saplings and trees in mid and late-successional vegetation communities include Norway maple (*Acer platanoides*, UPL) Eastern cottonwood, white mulberry (*Morus alba*, FACU), empress tree (*Paulownia tomentosa*, UPL), tree-of-heaven (*Ailanthus altissima*, FACU), boxelder (*Acer negundo*, FAC), black locust (*Robinia pseudoacacia*, UPL), and black cherry.

Shrubs and woody vines observed in successional uplands include multiflora rose, Autumn olive (*Elaeagnus umbellata* UPL), poison ivy (*Toxicodendron radicans, FAC*), Japanese honeysuckle, oldfield cinquefoil (*Potentilla simplex*, FACU), wineberry (*Rubus phoenicolasius*, FACU) and blackberries (*Rubus* spp.) fox grape (*Vitis labrusca*, FACU), and Virginia creeper (*Parthenocissus quinquefolia*, FACU) (see Photos R and S).

Common herbaceous species in uplands include Japanese knotweed (*Reynoutria japonica*, FACU), mugwort, common reed, white snakeroot (*Ageratina altissima*, FACU) goldenrods (*Solidago* spp.), barnyard grass (*Echinochloa crus-galli* FAC), bittercress (*Cardamine* sp.), and mullein (*Verbascum* sp.). Heavily maintained uplands, such as those within Heritage Park and maintained lawn infields and edges, consist of cool season grasses (*Poa, Festuca* spp.) and crabgrass (*Digitaria* sp.) interspersed with forbs including plantain (*Plantago* spp.), white clover (*Trifolium repens*, FACU), and red clover (*Trifolium pratense*, FACU).

B. Soils

The Soil Survey Geographic database (SSURGO) for New York identifies forty (40) soil mapping units across the project study area (See Section 3, Figure 3). The delineated wetlands and adjacent uplands occurred within the following soil units:

- *WWB- Windsor complex, 0 to 8 percent slopes, loamy substratum (Not listed/Non-hydric)*
- *LGA- Laguardia-Greenbelt complex, 0 to 3 percent slopes (Not listed/Non-hydric)*
- *NaA- Natchaug muck, 0 to 3 percent slopes, frequently ponded (Hydric)*

Wetlands A, B, and most of Wetland C occur in the mapped soil unit WWB, which is typically associated with kames and terminal moraines. It is derived from sandy glaciofluvial deposits derived from igneous and metamorphic rock. It is classified as excessively drained and is not listed as a hydric soil.

Wetland D/E and a small portion of Wetland C occur in the mapped soil unit LGA. LGA is a well-drained soil that is not considered a hydric soil. It is derived from loamy-skeletal human transported material. It is typically associated with summits, shoulders, backslopes, footslopes, and toeslopes.

Wetland F/G occurs in the mapped soil unit NaA. This soil is derived from highly decomposed organic material over loamy glaciofluvial deposits and/or loamy glaciolacustrine deposits and/or loamy till. It is associated with depressions. NaA is considered very poorly drained and is considered a hydric soil.

Soils sampled within the five delineated wetlands exhibited distinct hydric characteristics, most commonly depleted matrices with redoximorphic concentrations. Some sampled areas lacked visible hydric soil characteristics but featured a strong hydrogen sulfide odor (A4) characteristic of long-term inundation.

Upland soils lacked these characteristics (see attached Wetland Data sheets). Often upland soils were urban soils comprised of trash and other anthropogenic debris, including gravel. Nearly all of the recessed portions of the rail line are underlain with gravel ballast. Areas at grade or below grade often had paved substrate components.

C. Hydrology

Several indicators of wetland hydrology were observed during the field investigation. These included surface water (A1), a high water table (A2), soil saturation (A3), water marks (B1), drift deposits (B3), water-stained leaves (B9), a hydrogen sulfide odor (C1), inundation and saturation that is visible from aerial imagery (B7 and C9), and microtopographic relief (D4), among others.

A pool of shallow water (A1) comprised a large portion of Wetland A and pockets of surface water were observed in the majority of delineated features. The landscape surrounding the wetlands is highly urbanized and manmade drainage features were identified in some of the delineated areas. A culvert was observed conveying drainage from Wetland A beneath Cable Way. In addition, a manmade ditch was observed within the southern portion of Wetland C, which continued offsite, outside the study area.

Wetland F/G occurs as a fringe along an unnamed tributary of Kill van Kull; this tidal stream drains beneath Richmond Avenue via culvert. This delineated feature is tidally influenced; all other wetlands delineated within the study area appear to be non-tidal.

Several locations along the recessed and at-grade portions of the alignment contained accumulations of puddled or ponded water (See Photos P and Q) derived from stormwater runoff. In all areas where this kind of ponding occurred, the underlying substrate was dense gravel or other semi-impervious to impervious anthropogenic material which prevents drainage. In one location to the east of Lake Avenue, extensive ponding was the result of a leaking septic system (See Photo O). These areas were therefore determined not to be Waters of the US.

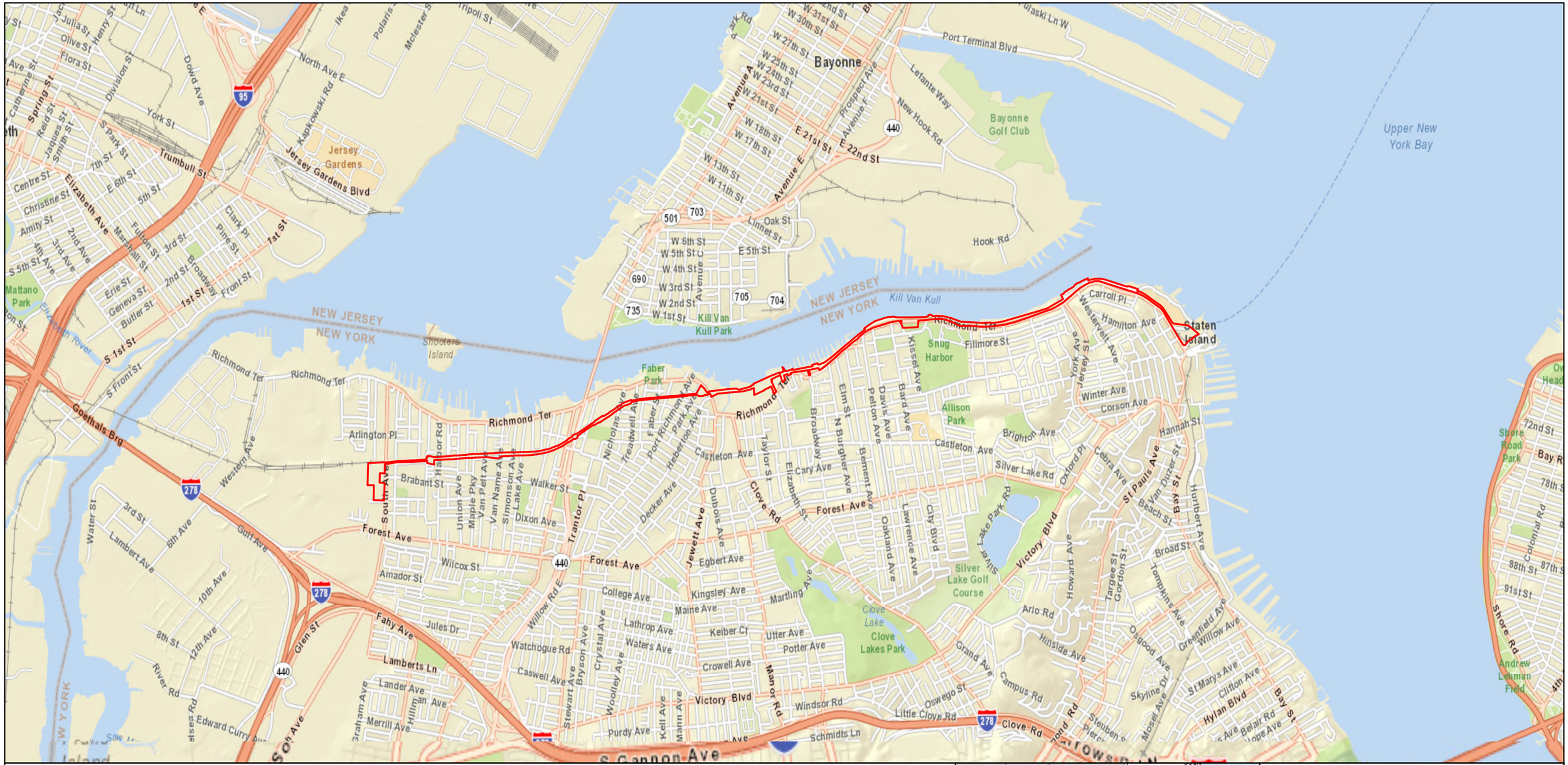
III. SUMMARY

To identify the presence of jurisdictional wetlands and non-wetland waters within the North Shore BRT study area, ASGECI environmental scientists conducted detailed data gathering and reviews of State and federal data sources and field investigations. Periodic soil sampling was conducted at locations throughout the study area, along with hydrology and vegetation evaluations. A total of four freshwater wetlands and one tidal wetland were delineated in the study area.

Although surrounded by heavy development and other disturbances, the delineated wetlands contain clear signs of hydric soils, hydrology, and hydrophytic vegetation. Most remaining portions of the study area lacked wetland characteristics and have limited ecological value or function due to historic disturbance and development. Aside from the Arlington area and some locations below mean high water, the study area substrates are mostly anthropogenic fills that are often compacted. Collected water in the study area (recessed rail corridor) was the result of pooled runoff or leaking sewage and not a sufficient source of wetland hydrology.

SECTION 5
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

SITE FIGURES



Legend

□ Project Area

Source:
ESRI Street Map was developed using Esri basemap data, DeLorme basemap layers, U.S. Geological Survey elevation data, HERE data, and select data from the GIS user community, released by ESRI® Data & Maps, Redlands, California, 2019.

Figure 1
Site Location Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

N
W E
S

3,000
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS

Legend

- Project Area
- Coordinate Points

Latitude and Longitude Coordinates in NAD83 at approximate 1,000 ft intervals -

Point # 1 : N: 40° 37' 51.66" / W: 74° 10' 1.45"
Point # 2 : N: 40° 37' 59.24" / W: 74° 10' 4.66"
Point # 3 : N: 40° 38' 0.60" / W: 74° 9' 51.71"
Point # 4 : N: 40° 38' 1.49" / W: 74° 9' 38.72"
Point # 5 : N: 40° 38' 1.98" / W: 74° 9' 25.67"
Point # 6 : N: 40° 38' 2.42" / W: 74° 9' 12.65"
Point # 7 : N: 40° 38' 2.77" / W: 74° 8' 59.67"
Point # 8 : N: 40° 38' 5.06" / W: 74° 8' 47.11"
Point # 9 : N: 40° 38' 10.45" / W: 74° 8' 36.29"
Point # 10 : N: 40° 38' 15.59" / W: 74° 8' 25.18"
Point # 11 : N: 40° 38' 19.28" / W: 74° 8' 13.31"
Point # 12 : N: 40° 38' 20.12" / W: 74° 8' 0.32"
Point # 13 : N: 40° 38' 20.88" / W: 74° 7' 47.26"
Point # 14 : N: 40° 38' 21.64" / W: 74° 7' 34.28"
Point # 15 : N: 40° 38' 25.10" / W: 74° 7' 22.09"
Point # 16 : N: 40° 38' 27.88" / W: 74° 7' 9.52"
Point # 17 : N: 40° 38' 30.46" / W: 74° 6' 57.09"
Point # 18 : N: 40° 38' 36.78" / W: 74° 6' 47.15"
Point # 19 : N: 40° 38' 42.42" / W: 74° 6' 36.45"
Point # 20 : N: 40° 38' 43.52" / W: 74° 6' 23.58"
Point # 21 : N: 40° 38' 43.86" / W: 74° 6' 10.53"
Point # 22 : N: 40° 38' 41.73" / W: 74° 5' 57.74"
Point # 23 : N: 40° 38' 42.07" / W: 74° 5' 44.79"
Point # 24 : N: 40° 38' 44.79" / W: 74° 5' 32.32"
Point # 25 : N: 40° 38' 48.82" / W: 74° 5' 20.50"
Point # 26 : N: 40° 38' 54.65" / W: 74° 5' 10.05"
Point # 27 : N: 40° 38' 53.17" / W: 74° 4' 57.41"
Point # 28 : N: 40° 38' 49.18" / W: 74° 4' 45.52"
Point # 29 : N: 40° 38' 41.87" / W: 74° 4' 36.79"
Point # 30 : N: 40° 38' 35.84" / W: 74° 4' 31.21"

Source:
High Resolution Orhtophotography of New York State, USGS EROS Web Map Service: USGS_EDC_Ortho_NYSDOP_Grid, Earth Resources Observation and Science (EROS), United States Geological Survey (USGS), Regional Coverage published 2006 to 2008.

Figure 2
USGS Topographic Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

N W E S

2,000
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

Legend

- Project Area
- Key Map

Soils List

FGA Flatbush-Greenbelt complex, 0 to 3 percent slopes
GbC Greenbelt loam, 8 to 15 percent slopes
GUA Greenbelt-Urban land complex, 0 to 3 percent slopes
GUB Greenbelt-Urban land complex, 3 to 8 percent slopes
LGA Laguardia-Greenbelt complex, 0 to 3 percent slopes
LUA Laguardia-Urban land complex, 0 to 3 percent slopes
NaA Natchaug muck, 0 to 3 percent slopes, frequently ponded
UFA Urban land-Flatbush complex, 0 to 3 percent slopes
UFAI Urban land-Flatbush complex, 0 to 3 percent slopes, low impervious surface
UFB Urban land-Flatbush complex, 3 to 8 percent slopes
UFBI Urban land-Flatbush complex, 3 to 8 percent slopes, low impervious surface
UGA Urban land-Greenbelt complex, 0 to 3 percent slopes
UGB Urban land-Greenbelt complex, 3 to 8 percent slopes
UGBI Urban land-Greenbelt complex, 3 to 8 percent slopes, low impervious surface
UGDI Urban land-Greenbelt complex, 15 to 25 percent slopes, low impervious surface
ULA Urban land-Laguardia complex, 0 to 3 percent slopes
ULAI Urban land-Laguardia complex, 0 to 3 percent slopes, low impervious surface
UmB Urban land, tidal marsh substratum, 3 to 8 percent slopes
UoA Urban land, outwash substratum, 0 to 3 percent slopes
UrA Urban land, reclaimed substratum, 0 to 3 percent slopes
UtA Urban land, till substratum, 0 to 3 percent slopes
UtB Urban land, till substratum, 3 to 8 percent slopes
WWB Windsor complex, 0 to 8 percent slopes, loamy substratum

Sources:
Soil Survey Geographic (SSURGO) database for Richmond County, New York, U.S. Department of Agriculture, Natural Resources Conservation Service, Fort Worth, Texas, May 2014.
2018 Imagery in Richmond County, NY Statewide Digital Orthoimagery Program (NYSDOP) Imagery Coverage, Statewide Web Map Service
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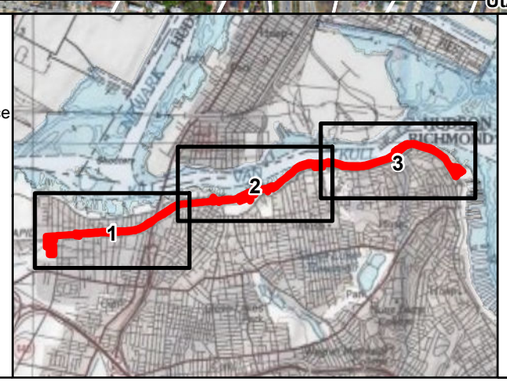

Figure 3 - Sheet # 1
SSURGO Soils Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

N W E S

600
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS

Legend

Project Area

Key Map

Soils List

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GbC Greenbelt loam, 8 to 15 percent slopes
GUA Greenbelt-Urban land complex, 0 to 3 percent slopes
GUB Greenbelt-Urban land complex, 3 to 8 percent slopes
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LUA Laguardia-Urban land complex, 0 to 3 percent slopes
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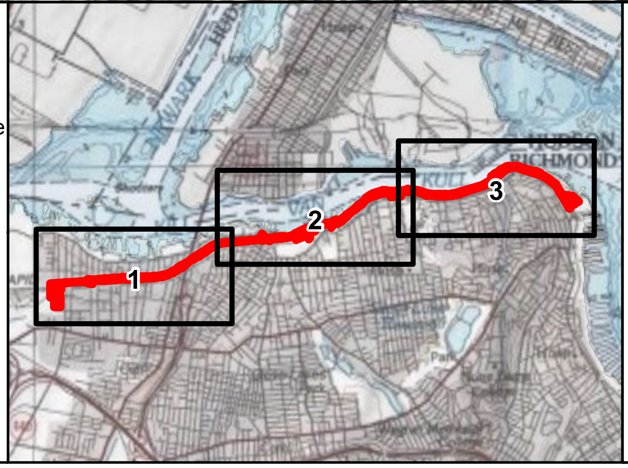

Figure 3 - Sheet # 2
SSURGO Soils Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

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Feet

AMY S. GREENE
ENVIRONMENTAL
CONSULTANTS INC

Legend

- Project Area
- Key Map

Soils List

FGA□Flatbush-Greenbelt complex, 0 to 3 percent slopes
GbC□Greenbelt loam, 8 to 15 percent slopes
GUA□Greenbelt-Urban land complex, 0 to 3 percent slopes
GUB□Greenbelt-Urban land complex, 3 to 8 percent slopes
LGA□Laguardia-Greenbelt complex, 0 to 3 percent slopes
LUA□Laguardia-Urban land complex, 0 to 3 percent slopes
NaA□Natchaug muck, 0 to 3 percent slopes, frequently ponded
UFA□Urban land-Flatbush complex, 0 to 3 percent slopes
UFAl□Urban land-Flatbush complex, 0 to 3 percent slopes, low impervious surface
UFB□Urban land-Flatbush complex, 3 to 8 percent slopes
UFBl□Urban land-Flatbush complex, 3 to 8 percent slopes, low impervious surface
UGA□Urban land-Greenbelt complex, 0 to 3 percent slopes
UGB□Urban land-Greenbelt complex, 3 to 8 percent slopes
UGBl□Urban land-Greenbelt complex, 3 to 8 percent slopes, low impervious surface
UGDl□Urban land-Greenbelt complex, 15 to 25 percent slopes, low impervious surface
ULA□Urban land-Laguardia complex, 0 to 3 percent slopes
ULAl□Urban land-Laguardia complex, 0 to 3 percent slopes, low impervious surface
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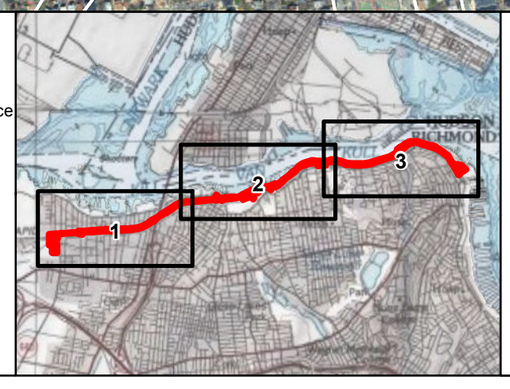

Figure 3 - Sheet # 3
SSURGO Soils Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

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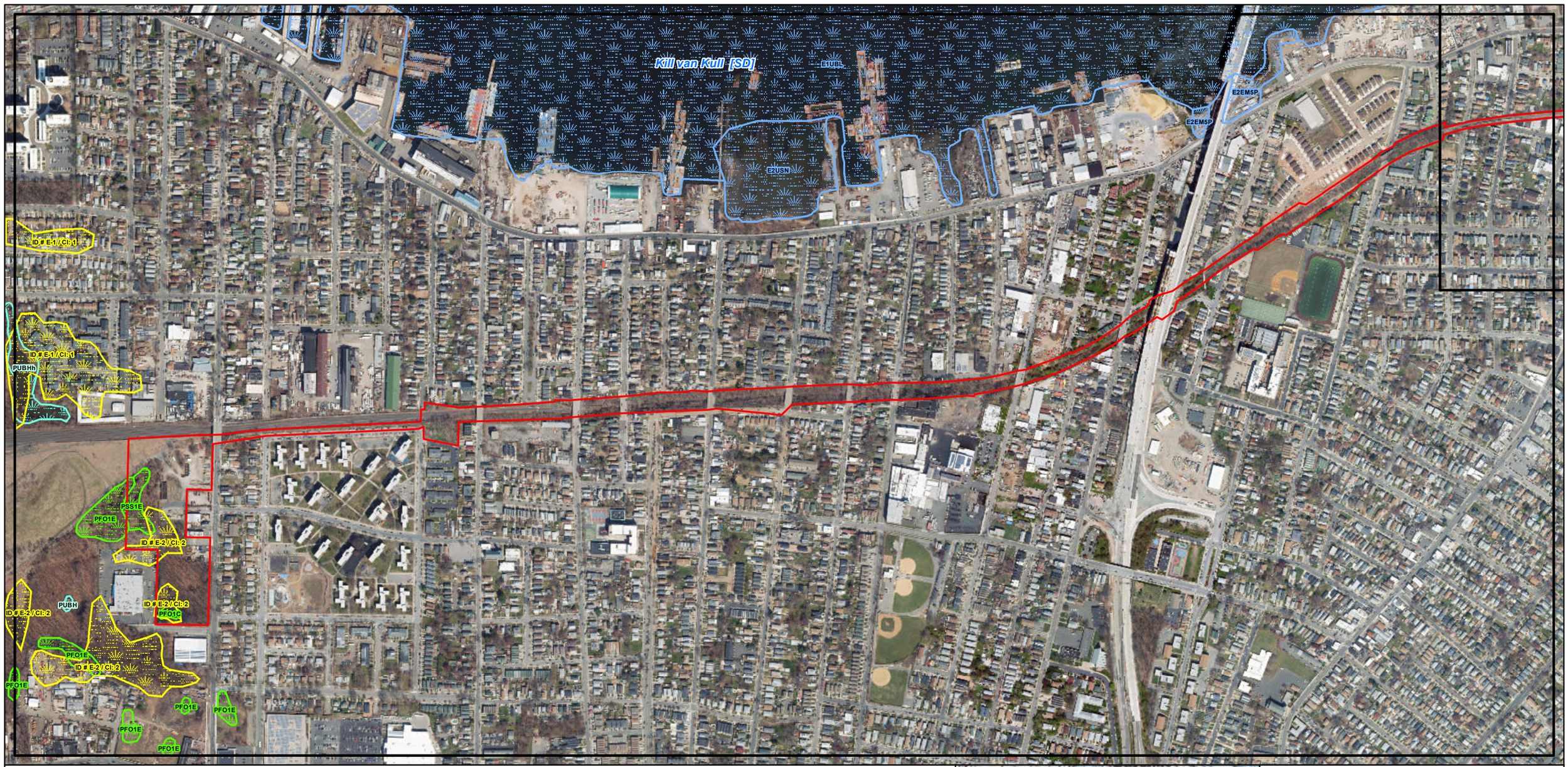
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.



Legend

- Project Area
- Key Map
- NYSDEC Wetlands
- NWI Freshwater Wetland
- NWI Estuarine / Marine Wetland
- Freshwater Pond, Lake, or Riverine
- Stream (with classification)

Water Quality Classifications

B - Class B waters are primary and secondary contact recreation andfishing; suitable for fish propagation and survival.

C - The best usage of Class C waters is fishing; suitable for fish propagation and survival.

SD - The best usage of Class SD waters is fishing; suitable for fish survival.

NWI Wetland Classifications

E1UBL - Estuarine, Subtidal, Unconsolidated Bottom, Subtidal
E1UBLx - Estuarine, Subtidal, Unconsolidated Bottom, Subtidal, Excavated
PFO1A - Palustrine, Forested, Broad-Leaved Deciduous, Temporarily Flooded
PFO1B - Palustrine, Forested, Broad-Leaved Deciduous, Saturated
PFO1C - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded
PFO1E - Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
PSS1E - Palustrine, Scrub-Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
R1UBVx - Riverine, Tidal, Unconsolidated Bottom, Permanent Tidal, Excavated
R2UBHx - Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded, Excavated
R3UBH - Riverine, Upper Perennial, Unconsolidated Bottom, Permanently Flooded
R5UBH - Riverine, Unknown Perennial, Unconsolidated Bottom, Permanently Flooded

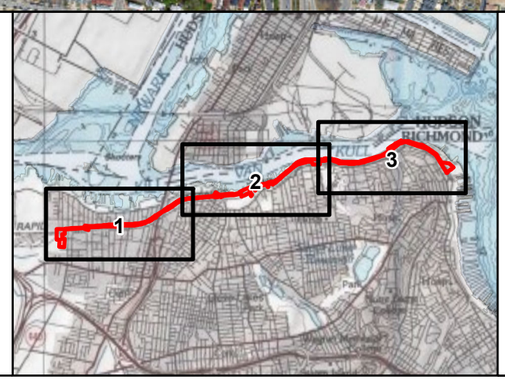


Figure 4 - Sheet # 1
NWI / NYSDEC Wetlands & Streams Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

N W E S

600
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

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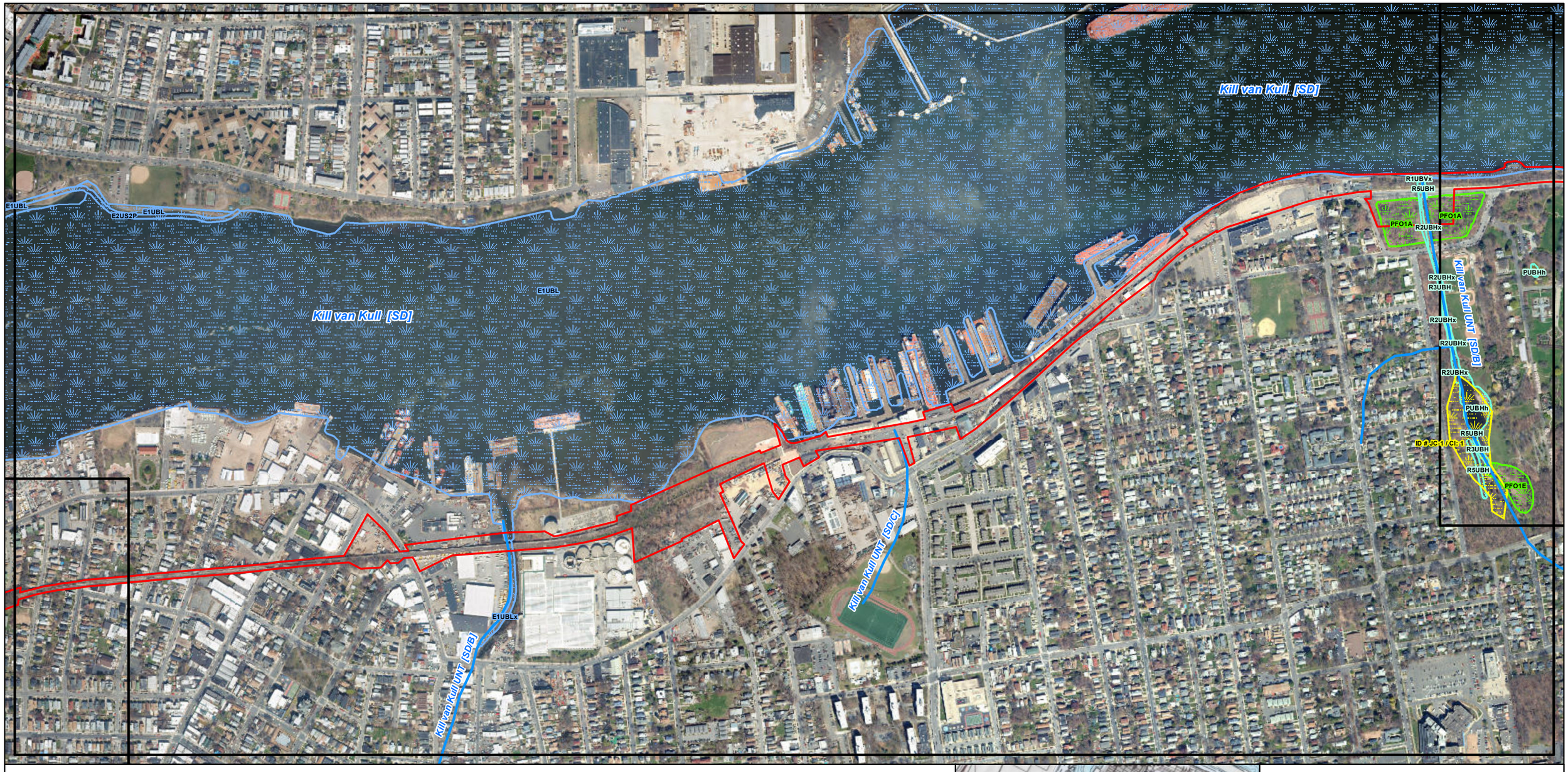
Water Quality Classifications (WQC) - NYS (NYSDEC), NYS Department of Enviromental Conservation, Division of Water, Bureau of Flood Protection and Dam Safety, vector digital data, NYSDEC, Albany, New York, April 2013.



Legend

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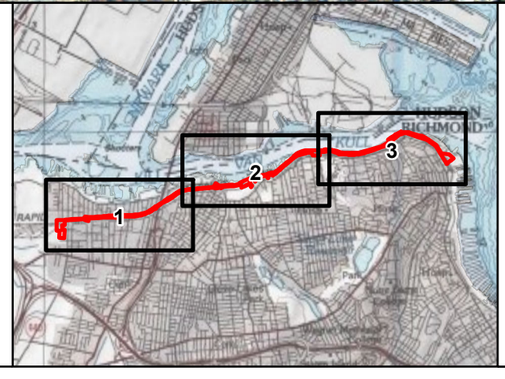

Figure 4 - Sheet # 2
NWI / NYSDEC Wetlands & Streams Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

N W E S

600
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

Legend

- Project Area
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- NWI Freshwater Wetland
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NWI Wetland Classifications

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E1UBLx - Estuarine, Subtidal, Unconsolidated Bottom, Subtidal, Excavated
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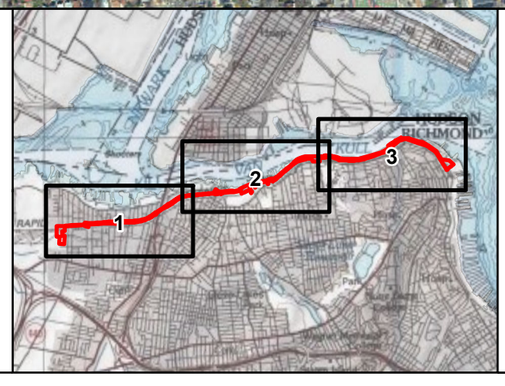

Figure 4 - Sheet # 3
NWI / NYSDEC Wetlands & Streams Map

North Shore Bus Rapid Transit System
Borough of Staten Island
Richmond County, New York

ASGECI Project # 4348

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Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.

SECTION 6
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

SAMPLING STATION DATA TABLES

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/11/19

Applicant/Owner: NYC TA State: NY Sampling Point: SS-1

Investigator(s): HS, LD Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: WnB - Windsor complex, 0 to 8% slopes, loamy substratum NWI classification: PFO 1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	If yes, optional Wetland Site ID: PFO

Remarks: (Explain alternative procedures here or in a separate report.)

Datapoint located near wetland flag A43.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ✓ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No ____	Depth (inches): 1"
Water Table Present?	Yes ✓	No ____	Depth (inches): 1"
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Standing water in swamp ~1'

VEGETATION – Use scientific names of plants.

Sampling Point: SS-1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	40%	*	FAC
2. Nyssa sylvatica	15%		FAC
3. Quercus palustris	20%	*	FACW
4. Liquidambar styraciflua	15%		FAC
5.			
6.			
7.			
	90%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Nyssa sylvatica	20%	*	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	

Herb Stratum (Plot size: 5')			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	0%	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. None			
2.			
3.			
4.			
	0%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0%	x 1 =	0
FACW species	20%	x 2 =	40
FAC species	90%	x 3 =	270
FACU species	0%	x 4 =	0
UPL species	0%	x 5 =	0
Column Totals:	110% (A)		310 (B)

Prevalence Index = B/A = 2.82

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [x] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [x] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4"	10YR 2/1	100%	None				Mucky sand	
4-6"	10YR 4/1	100%	None				Sand.	
6-10"	10YR 5/1	100%	None				Sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☑ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☑ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/11/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS-2

Investigator(s): HS, LD Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Sloping Slope (%): 10%

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS84

Soil Map Unit Name: WWB - Windsor complex, 0-8% slopes, loamy substratum NWI classification: PFO1C

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ✓	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Datapoint in upland adjacent to Wetland flag A43.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 10"

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Soils likely saturated due to recent & frequent rain events. Did not encounter water table w/in 20" of soil surface.

VEGETATION – Use scientific names of plants.

Sampling Point: SS-2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus rubra	50%	★	FACU
2. Nyssa sylvatica	10%		FAC
3. Sassafras albidum	20%	★	FACU
4.			
5.			
6.			
7.			
	80%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Prunus serotina	30%	★	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	30%	= Total Cover	

Herb Stratum (Plot size: 5')			
1. Erythronium americanum	5%	★	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5%	= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. None			
2.			
3.			
4.			
	0%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0%	x 1 =	0
FACW species	0%	x 2 =	0
FAC species	10%	x 3 =	30
FACU species	100%	x 4 =	400
UPL species	5%	x 5 =	25
Column Totals:	115% (A)		455 (B)

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [x] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [x] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6"	10YR 2/1	100%	None				Organic	
6-10"	10YR 2/1	100%	None				Sand	
10-14"	10YR 4/3	100%	None				Sand	
14-20"	10YR 4/6	50%	None				Sand - Blended matrix	
	10YR 5/4	50%						

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/11/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS-3

Investigator(s): HS, LD Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 2/1

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: WWB - Windsor complex, 0 to 8 percent slopes, loamy substratum NWI classification: PFO1E/PSS1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	If yes, optional Wetland Site ID: PFO/PSS

Remarks: (Explain alternative procedures here or in a separate report.)

Datapoint located adjacent to Wetland flag C8.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [✓] Surface Water (A1)
- [✓] High Water Table (A2)
- [✓] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [✓] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✓	No ____	Depth (inches): 4"
Water Table Present?	Yes ✓	No ____	Depth (inches): 0"
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 0"

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS-3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1. Cephalanthus occidentalis	50%	*	OBL
2. Rosa multiflora	10%		FACU
3.			
4.			
5.			
6.			
7.			
	60% = Total Cover		
Herb Stratum (Plot size: 5')			
1. Symplocarpus foetidus	10%	*	OBL
2. Glyceria striata	20%	*	OBL
3. Scirpus cyperinus	5%		OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35% = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1. None			
2.			
3.			
4.			
	0% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	85%	x 1 =	85
FACW species	0%	x 2 =	0
FAC species	0%	x 3 =	0
FACU species	10%	x 4 =	40
UPL species	0%	x 5 =	0
Column Totals:	95% (A)		125 (B)

Prevalence Index = B/A = 1.32

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [x] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [x] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100%	None				Organic	
3-12	10YR 2/1	90%	5YR 5/4	10%	C	M	Loamy sand	
12-20	10YR 3/2	90%	5YR 4/6	10%	C	M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5)
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Sandy Mucky Mineral (S1)
- [ ] Sandy Gleyed Matrix (S4)
- [x] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Dark Surface (S7) **(LRR R, MLRA 149B)**
- [ ] Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- [ ] Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- [ ] Loamy Mucky Mineral (F1) **(LRR K, L)**
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [ ] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- [ ] 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- [ ] Coast Prairie Redox (A16) **(LRR K, L, R)**
- [ ] 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- [ ] Dark Surface (S7) **(LRR K, L)**
- [ ] Polyvalue Below Surface (S8) **(LRR K, L)**
- [ ] Thin Dark Surface (S9) **(LRR K, L)**
- [ ] Iron-Manganese Masses (F12) **(LRR K, L, R)**
- [ ] Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- [ ] Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- [ ] Red Parent Material (F21)
- [ ] Very Shallow Dark Surface (TF12)
- [ ] Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No _____

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/11/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS-4

Investigator(s): HS, LD Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Slightly concave Slope (%): 0-2%

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: WnB-Windsor complex, 0 to 8 percent slopes, loamy substratum NWI classification: PFOIE/PSSIE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Upland datapoint located adjacent to wetland flag C8.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): ____
Water Table Present?	Yes ____	No ✓	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ✓	Depth (inches): ____

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS-4

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	30%	✱	FAC
2. Nyssa sylvatica	10%	✱	FAC
3. Acer rubrum	10%	✱	FAC
4.			
5.			
6.			
7.			
	50%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15')			
1. Rosa multiflora	5%	✱	FACU
2.			
3.			
4.			
5.			
6.			
7.			
		= Total Cover	

Herb Stratum (Plot size: 5')			
1. Reynoutria japonica	10%	✱	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		= Total Cover	

Woody Vine Stratum (Plot size: 30')			
1. Smilax rotundifolia	20%	✱	FAC
2. Lonicera japonica	20%	✱	FACU
3. Vitis sp.	20%	—	NI9
4.			
	40%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 57% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0%	x 1 =	0
FACW species	0%	x 2 =	0
FAC species	70%	x 3 =	210
FACU species	35%	x 4 =	140
UPL species	0%	x 5 =	0
Column Totals:	105% (A)		350 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [x] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 2/1	100%	None				Organic	
3-15	10YR 2/1	100%	None				Loamy sand	
15-18	10YR 3/2	90%	5YR 4/6	10%	C	M	Loamy sand	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/15/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS-5

Investigator(s): HS, SQ Section, Township, Range: —

Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: LGA - Laguardia - Greenbelt complex, 0 to 3% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ____	No ____	
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

Wetland data point located adjacent to wetland flag D8.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): 2-3"
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 4"

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS 5

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer saccharinum	5%	★	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Rosa multiflora	5%	★	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	5%	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1. Carex sp.	60%	—	NLS
2. Carex stricta	5%	★	OBL
3. Solidago sempervirens	10%	★	FACW
4. Rumex britannica	5%	★	OBL
5. Phalaris arundinacea	5%	★	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	25%	= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1. Ø			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 83.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10%	x 1 =	10
FACW species	20%	x 2 =	40
FAC species	0%	x 3 =	0
FACU species	5%	x 4 =	20
UPL species	0%	x 5 =	0
Column Totals:	35% (A)		70 (B)

Prevalence Index = B/A = 2.0

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ✓ 3 - Prevalence Index is ≤3.0[1]
- ___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
1-3	10YR 2/1	100	None				Organic	
3-12	10 YR 2/1	100	None	-	-	-	Sand	
12-18	10YR 2/1	100	None				gravelly sandy loam	
18+	refusal- gravel							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ✓ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 18" +

Hydric Soil Present? Yes ✓ No ___

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/Richmond Sampling Date: 4/15/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS6

Investigator(s): HS, SQ Section, Township, Range: —

Landform (hillslope, terrace, etc.): Man-made mound Local relief (concave, convex, none): Convex Slope (%): 20%

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: LGA Laguardia-Greenbelt complex, 0-3% slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ✓, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No ✓	**Is the Sampled Area within a Wetland?** Yes ___ No ✓
Hydric Soil Present?	Yes ___	No ✓	
Wetland Hydrology Present?	Yes ✓	No ___	If yes, optional Wetland Site ID: ___

Remarks: (Explain alternative procedures here or in a separate report.)

Upland datapoint- located adjacent to wetland flag D8.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No ✗	Depth (inches): ___
Water Table Present?	Yes ___	No ✗	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ✗	No ___	Depth (inches): 12"

Wetland Hydrology Present? Yes ✓ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS6

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus deltoides	10%	★	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft)			
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0% = Total Cover		
Herb Stratum (Plot size: 5 ft)			
1. Polygonum cuspidatum	70%	★	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft)			
1. Toxicodendron radicans	20%	★	FAC
2. Lonicera japonica	20%	★	FACU
3.			
4.			
	40% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0%	x 1 =	0
FACW species	0%	x 2 =	0
FAC species	30%	x 3 =	90
FACU species	90%	x 4 =	360
UPL species	0%	x 5 =	0
Column Totals:	120% (A)		450 (B)

Prevalence Index = B/A = 3.75

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ___ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS-6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
-1-0	10YR 2/1	100	None				Organic	
0-14	10 YR 3/2	100	—	—	—	—		
14+	refusal- gravel							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ___ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ___ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ___ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ___ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ___ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ___ Dark Surface (S7) **(LRR K, L)**
- ___ Polyvalue Below Surface (S8) **(LRR K, L)**
- ___ Thin Dark Surface (S9) **(LRR K, L)**
- ___ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ___ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ___ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel

Depth (inches): 14" +

Hydric Soil Present? Yes ____ No ✓

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348-North Shore BRT City/County: Richmond Sampling Date: 5/24/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS 7

Investigator(s): HS Section, Township, Range: —

Landform (hillslope, terrace, etc.): Streambank Local relief (concave, convex, none): Sloping Slope (%): 5%

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: NaA-Natchaug muck, 0 to 3% slopes, freq. ponded NWI classification: PFO1A/R2UBHx

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes X	No ____	If yes, optional Wetland Site ID: PSS/PEM
Wetland Hydrology Present?	Yes X	No ____	

Remarks: (Explain alternative procedures here or in a separate report.)

Wetland datapoint located adjacent to wetland flag F-7

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [X] Surface Water (A1)
- [ ] High Water Table (A2)
- [X] Saturation (A3)
- [ ] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [X] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [ ] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres on Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Drainage Patterns (B10)
- [ ] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [ ] Stunted or Stressed Plants (D1)
- [ ] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [ ] Microtopographic Relief (D4)
- [ ] FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ____	Depth (inches): ~2"
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 0"

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS7

Tree Stratum (Plot size: 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
5.			
6.			
7.			
	0%	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15ft)			
1. Iva frutescens	55%	*	FACW
2. Baccharis halimifolia	15%		FACW
3.			
4.			
5.			
6.			
7.			
	70%	= Total Cover	

Herb Stratum (Plot size: 5ft)			
1. Spartina alterniflora	15%	*	OBL
2. Phragmites australis	35%	*	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	50%	= Total Cover	

Woody Vine Stratum (Plot size: 30ft)			
1. None			
2.			
3.			
4.			
	0%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	15%	x 1 =	15
FACW species	105%	x 2 =	210
FAC species	0%	x 3 =	0
FACU species	0%	x 4 =	0
UPL species	0%	x 5 =	0
Column Totals:	120% (A)		225 (B)

Prevalence Index = B/A = 1.88

Hydrophytic Vegetation Indicators:

- [x] 1 - Rapid Test for Hydrophytic Vegetation
- [x] 2 - Dominance Test is >50%
- [x] 3 - Prevalence Index is ≤3.0[1]
- [ ] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [ ] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SS 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10 YR 3/2	70	5 YR 5/5	30	C	M	clay loam	
5-10	10 YR 3/2	60	5 YR 5/8	40	C	M	clay loam	
10+	refusal							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
- ☐ Polyvalue Below Surface (S8) **(LRR R, MLRA 149B)**
- ☐ Thin Dark Surface (S9) **(LRR R, MLRA 149B)**
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☒ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ☐ 2 cm Muck (A10) **(LRR K, L, MLRA 149B)**
- ☐ Coast Prairie Redox (A16) **(LRR K, L, R)**
- ☐ 5 cm Mucky Peat or Peat (S3) **(LRR K, L, R)**
- ☐ Dark Surface (S7) **(LRR K, L)**
- ☐ Polyvalue Below Surface (S8) **(LRR K, L)**
- ☐ Thin Dark Surface (S9) **(LRR K, L)**
- ☐ Iron-Manganese Masses (F12) **(LRR K, L, R)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149B)**
- ☐ Mesic Spodic (TA6) **(MLRA 144A, 145, 149B)**
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: #4348 - North Shore BRT City/County: Staten Island/ Richmond Sampling Date: 5/24/19

Applicant/Owner: NYCTA State: NY Sampling Point: SS8

Investigator(s): HS Section, Township, Range: —

Landform (hillslope, terrace, etc.): Berm Local relief (concave, convex, none): Slightly sloping Slope (%): 3%

Subregion (LRR or MLRA): LRR R Lat: Long: Datum: WGS 84

Soil Map Unit Name: NaA - Natchaug muck, 0 to 3% slopes, frq ponded NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? No Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** Yes ____ No ✓
Hydric Soil Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____
Wetland Hydrology Present?	Yes ____	No X	

Remarks: (Explain alternative procedures here or in a separate report.)

Upland datapoint located adjacent to Wetland flag F-7

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres on Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Stunted or Stressed Plants (D1)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ Microtopographic Relief (D4)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): —
Water Table Present?	Yes ____	No X	Depth (inches): —
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): —

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SS 8

Tree Stratum (Plot size: 30 ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Celtis occidentalis	20	★	FAC
2. Acer negundo	10		FAC
3. Acer platanoides	20	★	UPL
4. Aesculus hippocastanum	5		UPL
5. Prunus serotina	10		FACU
6.			
7.			
	50	= Total Cover	

Sapling/Shrub Stratum (Plot size: 15 ft)			
1. Rosa multiflora	10		FACU
2. Buxus sp.	5	—	NIS
3.			
4.			
5.			
6.			
7.			
	15	= Total Cover	

Herb Stratum (Plot size: 5 ft)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
		= Total Cover	

Woody Vine Stratum (Plot size: 30 ft)			
1. Toxicodendron radicans	50	★	FAC
2.			
3.			
4.			
	50	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	3	x 3 =	9
FACU species	2	x 4 =	8
UPL species	1	x 5 =	10
Column Totals:	7	(A)	27 (B)

Prevalence Index = B/A = 3.86

Hydrophytic Vegetation Indicators:

- [✓] 1 - Rapid Test for Hydrophytic Vegetation
- [✓] 2 - Dominance Test is >50%
- [✓] 3 - Prevalence Index is ≤3.0[1]
- [✓] 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- [✓] Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ____ No ✓

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SSB

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10 YR 3/2	100	None				clay loam	
4-20	10 YR 4/4	100	None				clay loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
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- ☐ Dark Surface (S7) **(LRR R, MLRA 149B)**
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- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

SECTION 7
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

SITE PHOTOGRAPHS WITH DESCRIPTIONS

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Photo A: View looking southeast at SS-1 in Wetland A near flag A-43. Wetland A is a palustrine forested wetland dominated by red maple and pin oak.

Photo B: View looking north at upland oak dominant forest adjacent to Wetland A near SS-2.

Photo C: View looking east at Wetland B – small palustrine forested wetland. A small stretch of upland separates this wetland from Wetland A.

Photo D: View looking northwest from Wetland B. This area was dominated by secondary successional forest.

Photo E: View looking north at dense successional vegetation in the central portion of the site. Much of this location was underlain with historic debris.

Photo F: View looking south across Wetland C at a buttonbush dominated portion of Wetland C near flag C8 (SS-3).

Photo G: View looking east at the wetland/upland boundary near flag C 8 (SS-4).

Photo H: View looking east at a ditched portion of Wetland C near C-25. There was evidence historic fill and historic wetland disturbance throughout much of the Arlington portion of the site.

Photo I: Looking at semi-maintained upland grasses near the northern portion of the Arlington Site.

Photo J: looking south at a resting yellow-crowned night heron resting in the canopy of Wetland A. Several occupied yellow-crowned night heron nests were identified in this wetland.

Photo K: View looking north along the property boundary near the southern end of Arlington. This area was underlain with asphalt or gravel/debris and lacked hydric soils.

Photo L: View looking at an upland lawn on a parcel south of the rail line between Lockman Ave. and Harbor Road. No wetlands were identified here.

Photo M: View looking west at a recessed portion of the EDC property below Van Name Ave. Substrates in this location consisted of firm anthropogenic gravel.

Photo N: View looking west at early successional vegetation along the abandoned rail line near the old Mariners Harbor station platforms. Early successional communities dominated by exotic species are common along the rail portion of the entire study area.

Photo O: View of a leaking sewer depositing water into the recessed portion of the study area near Lake Avenue.

Photo P: View looking east at pooled sewer water resulting from the leaking sewer system this area appears to lack any wetland characteristics and is underlain by ballast and gravel.

Photo Q: View looking west at the recessed train line just west of the Bayonne Bridge. Ponded water was common within the recessed portions of the line, however these areas consistently lacked hydric soils and/or were underlain with gravel ballast.

Photo R: View looking west at mid and late at-grade successional uplands east of the Bayonne Bridge.

Photo S: View looking at mid successional species colonizing the elevated platform near the Port Richmond station platform.

Photo T: View looking north at the tidal Boone Creek from the elevated platform. The banks of this stream within the study area consist of bulkheads and debris and lack wetland characteristics.

Photo U: View looking south at Wetland D near Flag D-8 (SS-5).

Photo V: View looking northeast at uplands adjacent to Wetland D (SS-6) showing Japanese knotweed. Uplands in this area are underlain with debris and dominated by exotic species in most locations.

Photo W: View looking east at the shoreline just east of Heritage Park. The shoreline along the study area typically consists of bulkhead and debris and occasionally successional vegetation. Wetland vegetation was not observed directly along the shoreline in the study area.

Photo X: View looking northeast across maintained upland fields at Heritage Park.

Photo Y: View looking west along the old rail alignment at Heritage Park. Small amounts of hydrophytic vegetation were periodically observed; however, these areas lacked hydric soils and appropriate wetland hydrology.

Photo Z: View of panic grass and young cottonwood along near the Heritage Park shoreline these species appeared to be planted. Wetland soils were not observed in these locations.

Photo AA: View looking south at tidal creek and adjacent wetlands (Wetland F-G) that extends offsite near Snug Harbor.

Photo BB: View looking south at a shrub and emergent wetland sample station near Flag F-8 (SS-7).

Photo CC: View looking north at late successional uplands adjacent to Wetland F-G (SS-8).

Photo DD: View of the culvert outflow of the tidal creek adjacent to Snug Harbor.

Photo EE: View of secondary successional upland forest fringe opposite Snug Harbor. These woods were dominated by Norway maple

Photo FF: View looking west of the shoreline and forest opposite Snug Harbor. The shoreline consists of gravel and boulders used as a bulkhead.

Photo GG: View looking east along the parking garage access road (north of Richmond Terrace) showing mid-successional upland growth and bulkhead along the shoreline.

Photo HH: View looking south from the Staten Island Ferry Viaduct at the eastern end of the study area.

SECTION 8
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

ADJACENT PROPERTY OWNERS

PARCEL ADDRESS	SBL	PRIMARY OWNER
1 RICHMOND TERRACE	5000020001	NYC DOT
BOROUGH PLACE	5000020010	MTA - STATEN ISLAND R
55 RICHMOND TERRACE	5000020015	ST. GEORGE OUTLET DEV
RICHMOND TERRACE	5000020018	RICHARD DE SIO
75 RICHMOND TERRACE	5000020020	DEPARTMENT OF SMALL B
BOROUGH PLACE	5000020021	NYC DOT
155 RICHMOND TERRACE	5000020022	NEW YORK WHEEL LLC
BOROUGH PLACE	5000020045	NOT ON FILE
BOROUGH PLACE	5000020599	PARKS AND RECREATION
RICHMOND TERRACE	5000020601	THE CITY OF NEW YORK/
RICHMOND TERRACE	5000020726	PARKS AND RECREATION
BANK STREET	5000020746	NYC DOT
BANK STREET	5000020754	PARKS AND RECREATION
7 BANK STREET	5000020759	TRG WATERFRONT LENDER
BANK STREET	5000020767	TRG WATERFRONT LENDER
BANK STREET	5000020775	DCAS
BANK STREET	5000020778	DCAS
BANK STREET	5000020800	DCAS
BANK STREET	5000020801	DCAS
RICHMOND TERRACE	5000020830	ANTOINE LUTFY
RICHMOND TERRACE	5000040001	PARKS AND RECREATION
RICHMOND TERRACE	5000040010	THE CITY OF NEW YORK/
RICHMOND TERRACE	5000040011	STATEN ISLAND RAILWAY
561 RICHMOND TERRACE	5000040021	REGAL ESTATES LLC A
BANK STREET	5000040069	NEW YORK STATE P S C
BANK STREET	5000040090	15 KILL VAN KULL, LLC
RICHMOND TERRACE	5000680001	REGAL ESTATES LLC A
RICHMOND TERRACE	5000680035	THE CITY OF NEW YORK/
RICHMOND TERRACE	5000680040	MTA-STATEN ISLAND RAI
RICHMOND TERRACE	5000680060	PARKS AND RECREATION
RICHMOND TERRACE	5000680070	THE CITY OF NEW YORK/
RICHMOND TERRACE	5000680080	MTA-STATEN ISLAND RAI
RICHMOND TERRACE	5000680085	PARKS AND RECREATION
565 RICHMOND TERRACE	5000680125	REGAL ESTATES LLC A
RICHMOND TERRACE	5000750001	PARKS AND RECREATION
RICHMOND TERRACE	5000750030	PARKS AND RECREATION
1125 RICHMOND TERRACE	5000750049	LEEMILTS PETROLEUM IN
1115 RICHMOND TERRACE	5000750059	1115 RICHMOND TERRACE
RICHMOND TERRACE	5000750060	NYC DSBS
RICHMOND TERRACE	5000750100	THE CITY OF NEW YORK/

PARCEL ADDRESS	SBL	PRIMARY OWNER
RICHMOND TERRACE	5000750150	PARKS AND RECREATION
RICHMOND TERRACE	5000750200	PARKS AND RECREATION
1149 RICHMOND TERRACE	5001840001	S I EDISON CO
RICHMOND TERRACE	5001840033	CADDELL DRYDOCK REPAI
PELTON PLACE	5001840080	CADDELL DRY DOCK&REPA
RICHMOND TERRACE	5001840100	THE CITY OF NEW YORK/
RICHMOND TERRACE	5001840142	CADDELL DRYDOCK REPAI
RICHMOND TERRACE	5001840163	CONSOLIDATED EDISON C
BARD AVENUE	5001840188	NYC DSBS
1441 RICHMOND TERRACE	5001840225	BLOCK 184 LLC
RICHMOND TERRACE	5001840227	BLOCK 184 LLC
1449 RICHMOND TERRACE	5001840248	TATUMAL, LLC
RICHMOND TERRACE	5001840254	T F QUINLAN SON INC
1473 RICHMOND TERRACE	5001840256	T F QUINLAN SON INC
1483 RICHMOND TERRACE	5001840275	CADDELL DRYDOCK REPAI
RICHMOND TERRACE	5001840280	CADDELL DRYDOCK REPAI
1432 RICHMOND TERRACE	5001840300	CADDELL DRYDOCK REPAI
81 REAR RICHMOND TERRACE	5001840315	CADDELL DRYDOCK REPAI
71 REAR RICHMOND TERRACE	5001840320	CADDELL DRYDOCK REPAI
1435 RICHMOND TERRACE	5001840330	BLOCK 184 LLC
RICHMOND TERRACE	5001840340	BLOCK 184 LLC
2945 RICHMOND TERRACE	5001840360	CADDELL DRY DOCK & RE
NORTH STREET	5001840400	THE CITY OF NEW YORK/
1551 BROADWAY	5001850001	CADDELL DRYDOCK REPAI
1521 RICHMOND TERRACE	5001850016	CADDELL DRY DOCK AND
RICHMOND TERRACE	5001850020	CADDELL DRY DOCK AND
1535 RICHMOND TERRACE	5001850021	CADDELL DRYDOCK REPAI
1551 RICHMOND TERRACE	5001850025	CADDELL DRY DOCK AND
1553 RICHMOND TERRACE	5001850027	CADDELL DRYDOCK REPAI
RICHMOND TERRACE	5001850028	CADDELL DRYDOCK REPAI
RICHMOND TERRACE	5001850029	AB40 LLC
RICHMOND TERRACE	5001850030	AB40 LLC
RICHMOND TERRACE	5001850031	AB40 LLC
RICHMOND TERRACE	5001850033	AB40 LLC
RICHMOND TERRACE	5001850035	AB40 LLC
1571 RICHMOND TERRACE	5001850037	AB40 LLC
RICHMOND TERRACE	5001850038	AB40 LLC
1593 RICHMOND TERRACE	5001850043	NYC PARKS
1595 RICHMOND TERRACE	5001850045	NYC PARKS
RICHMOND TERRACE	5001850048	NYC PARKS

PARCEL ADDRESS	SBL	PRIMARY OWNER
RICHMOND TERRACE	5001850049	DEPT OF PARKS AND REC
1615 RICHMOND TERRACE	5001850052	MBDB LLC
RICHMOND TERRACE	5001850100	THE CITY OF NEW YORK/
RICHMOND TERRACE	5001850101	CADDELL DRYDOCK REPAI
1567 RICHMOND TERRACE	5001850116	AB40 LLC
RICHMOND TERRACE	5001850118	AB40 LLC
RICHMOND TERRACE	5001850120	AB40 LLC
RICHMOND TERRACE	5001850127	NYC PARKS
RICHMOND TERRACE	5001850129	NYC PARKS
RICHMOND TERRACE	5001850130	NYC PARKS
RICHMOND TERRACE	5001850132	NYC PARKS
RICHMOND TERRACE	5001850133	DEPT OF PARKS AND REC
RICHMOND TERRACE	5001850134	THE CITY OF NEW YORK/
RICHMOND TERRACE	5001850135	NYC PARKS
1633 RICHMOND TERRACE	5001850150	MBDB LLC
1641 RICHMOND TERRACE	5001850152	MBDB LLC
1641 RICHMOND TERRACE	5001850153	INGRASSIA, RONALD
RICHMOND TERRACE	5001850170	NYC TRANSIT
RICHMOND TERRACE	5001850171	98 S & S LLC
1681 RICHMOND TERRACE	5001850172	98 S & S LLC
1709 RICHMOND TERRACE	5001850185	ZAKEN & COHEN REALTY
RICHMOND TERRACE	5001850187	R.O.C.I. INC.
RICHMOND TERRACE	5001850235	ROCI INC
RICHMOND TERRACE	5001850276	MTA-STATEN ISLAND RAI
RICHMOND TERRACE	5001850386	NYC PARKS
RICHMOND TERRACE	5001850390	DEPT OF ENVIRONMENTAL
RICHMOND TERRACE	5001850391	ROCI, INC
RICHMOND TERRACE	5001850400	DEPT OF ENVIRONMENTAL
1869 RICHMOND TERRACE	5001850468	1869 RICHMOND TERRACE
1957 RICHMOND TERRACE	5001850527	TERRACE DEVELOPMENT L
RICHMOND TERRACE	5001850531	MTS GROUP INC.
RICHMOND TERRACE	5001850536	THE CITY OF NEW YORK/
1983 RICHMOND TERRACE	5001850539	RTC RICHMOND TERRACE,
RICHMOND TERRACE	5001850600	DEPT OF ENVIRONMENTAL
1983A RICHMOND TERRACE	5001850750	RTC RICHMOND TERRACE
81 PORT RICHMOND AVENUE	5010040001	PATRICK SILVESTRI JR
RICHMOND AVENUE	5010040002	THE CITY OF NEW YORK/
69 PORT RICHMOND AVENUE	5010040007	TOMMASO CUSUMANO
54 CHURCH STREET	5010040015	THOMAS FILECCIA SR
52 CHURCH STREET	5010040019	THOMAS FILECCIA SR

PARCEL ADDRESS	SBL	PRIMARY OWNER
56 PARK AVENUE	5010040024	ROBERT HETZEL
60 PARK AVENUE	5010040027	GEORGE LAURO
91 ANN STREET	5010040035	U.S. BANK TRUST, NA,
95 ANN STREET	5010040036	GUDDEMI PROPERTIES, I
97 ANN STREET	5010040037	EST. OF RUBY J COLEMA
99 ANN STREET	5010040038	JOHN J BARBIERI
103 ANN STREET	5010040040	DOMINICK BOYCE
CHURCH STREET	5010060024	S I EDISON CP
CHURCH STREET	5010060025	NEW YORK CITY INDUSTR
PARK AVENUE	5010060028	THE CITY OF NEW YORK/
RICHMOND TERRACE	5010060032	PERFETTO REALTY CO. I
RICHMOND TERRACE	5010060056	BETTINA CONST CO
1976 RICHMOND TERRACE	5010060060	1978 RICHMOND TERRACE
1972 RICHMOND TERRACE	5010060062	1972 RICHMOND TERRACE
34 HEBERTON AVENUE	5010060071	CAVAGNARO JOHN
36 HEBERTON AVENUE	5010060072	FEDELE JOSEPH
108 PORT RICHMOND AVENUE	5010730016	VASANT RE CORP
MAPLE AVENUE	5010730020	THE CITY OF NEW YORK/
51 MAPLE AVENUE	5010730023	TOP GEAR ENTERPRISES
47 MAPLE AVENUE	5010730024	TOP GEAR ENTERPRISES
MAPLE AVENUE	5010730031	PORT RICMOND REALTY A
PORT RICHMOND AVENUE	5010730097	PORT RICMOND REALTY A
PORT RICHMOND AVENUE	5010730102	NYC DSBS
90 PORT RICHMOND AVENUE	5010730104	PORT RICHMOND CENTER
102 PORT RICHMOND AVENUE	5010730107	PORT RICHMOND CENTER
104 PORT RICHMOND AVENUE	5010730110	TOLONA REALTY CORP
71 FABER STREET	5010740011	RESENDIZ ROCHA, RICAR
FABER STREET	5010740013	THE CITY OF NEW YORK/
55 FABER STREET	5010740015	NICK & ANTOINETTE CUT
50 MAPLE AVENUE	5010740082	NESBITT, VICTOR
52 MAPLE AVENUE	5010740083	52 MAPLE AVE LLC
62 MAPLE AVENUE	5010740086	FANELLI MICHAEL
78 FABER STREET	5010760001	ALBERT MAZZARISI
GROVE AVENUE	5010760003	DEBORAH MAZZARISI
GROVE AVENUE	5010760004	THE CITY OF NEW YORK/
79 GROVE AVENUE	5010760005	DEBORAH MAZZARISI
GROVE AVENUE	5010760006	THE CITY OF NEW YORK/
87 GROVE AVENUE	5010760008	MASSA, THOMAS

PARCEL ADDRESS	SBL	PRIMARY OWNER
97 GROVE AVENUE	5010760014	MITCHELL TYSON
GROVE AVENUE	5010760019	THE CITY OF NEW YORK/
49 SHARPE AVENUE	5010760022	PARIMA IN
48 LARKIN STREET	5010760042	DANIEL DELGADO
64 FABER STREET	5010760058	CRUZ, SAMUEL
FABER STREET	5010760060	THE CITY OF NEW YORK/
61 TREADWELL AVENUE	5010840041	WALSH, BRIAN A
TREADWELL AVENUE	5010840042	THE CITY OF NEW YORK/
TREADWELL AVENUE	5010840043	STATEN ISLAND RAILWAY
41 TREADWELL AVENUE	5010840045	MILDRED JACKSON
56 SHARPE AVENUE	5010840102	GERARDO BRENES % VILM
68 SHARPE AVENUE	5010840107	MICHAEL MITCHELL
11 SLAIGHT STREET	5010860006	JOSE RAMIREZ
31 SLAIGHT STREET	5010860008	NICHOLAS MANOR APTS L
NICHOLAS AVENUE	5010860022	THE CITY OF NEW YORK/
51 NICHOLAS AVENUE	5010860027	CASTELLANO, NADINE
41 NICHOLAS AVENUE	5010860029	DEANGELIS, LORETTA
2-34 PORT LANE	5010860056	KUNLE O OKUNOLA
46 TREADWELL AVENUE	5010860088	M DONNELLY SR
TREADWELL AVENUE	5010860091	STATEN ISLAND RAILWAY
TREADWELL AVENUE	5010860092	STATEN ISLAND RAILWAY
62 TREADWELL AVENUE	5010860093	TERZIC MENSUR
66 TREADWELL AVENUE	5010860094	GARCIA, JUAN
68 TREADWELL AVENUE	5010860095	IDOWU, JOSEPH
76 TREADWELL AVENUE	5010860098	MTV DEVELOPMENT GROUP
60 NICHOLAS AVENUE	5011160100	REN, MENG JING
24 RIVERSIDE LANE	5011160102	YAMAKI, EDWARD MOORE
26 RIVERSIDE LANE	5011160104	MORALES-TAVERAS, NATA
28 RIVERSIDE LANE	5011160106	139 ALVIN LLC
30 RIVERSIDE LANE	5011160108	139 ALVIN LLC
NICHOLAS AVENUE	5011160109	THE CITY OF NEW YORK/
NICHOLAS AVENUE	5011160110	THE CITY OF NEW YORK/
NICHOLAS AVENUE	5011160112	THE CITY OF NEW YORK/
32 RIVERSIDE LANE	5011160114	139 ALVIN LLC
34 RIVERSIDE LANE	5011160116	139 ALVIN LLC
36 RIVERSIDE LANE	5011160118	139 ALVIN LLC
38 RIVERSIDE LANE	5011160120	139 ALVIN LLC
40 RIVERSIDE LANE	5011160122	139 ALVIN LLC
42 RIVERSIDE LANE	5011160124	139 ALVIN LLC
44 RIVERSIDE LANE	5011160125	139 ALVIN LLC

PARCEL ADDRESS	SBL	PRIMARY OWNER
46 RIVERSIDE LANE	5011160126	139 ALVIN LLC
48 RIVERSIDE LANE	5011160127	139 ALVIN LLC
50 RIVERSIDE LANE	5011160144	139 ALVIN LLC
52 RIVERSIDE LANE	5011160145	139 ALVIN LLC
54 RIVERSIDE LANE	5011160146	139 ALVIN LLC
56 RIVERSIDE LANE	5011160147	139 ALVIN LLC
58 RIVERSIDE LANE	5011160148	139 ALVIN LLC
RIVERSIDE LANE	5011160155	NICHOLAS AVENUE ESTAT
150 NICHOLAS AVENUE	5011170037	BRIDGEVIEW APARTMENTS
NICHOLAS AVENUE	5011170049	NICHOLAS AVENUE HOMEO
102 NICHOLAS AVENUE	5011170050	COVINGTON, LISA
106 NICHOLAS AVENUE	5011170051	BELL-MORRIS, NINA
108 NICHOLAS AVENUE	5011170052	VANCE E HORNE
112 NICHOLAS AVENUE	5011170053	CAMACHO, JAIME D
114 NICHOLAS AVENUE	5011170054	GUILLERMO ARRIAGA
118 NICHOLAS AVENUE	5011170055	LOLA A HILL
120 NICHOLAS AVENUE	5011170056	KOLAWOLE AKANMU
IRVING PLACE	5011180038	THE CITY OF NEW YORK/
IRVING PLACE	5011180040	THE CITY OF NEW YORK/
IRVING PLACE	5011180041	THE CITY OF NEW YORK/
IRVING PLACE	5011180042	RONALD A RADICE
67 INNIS STREET	5011210001	DCAS/DEPARTMENT OF ED
105 JOHN STREET	5011210074	AMERICAN SRI LANKA BU
JOHN STREET	5011210077	THE CITY OF NEW YORK/
87 JOHN STREET	5011210085	CARLOS SANTILLAN
JOHN STREET	5011210086	THE CITY OF NEW YORK/
JOHN STREET	5011210091	THE CITY OF NEW YORK/
83 JOHN STREET	5011210092	83 JOHN STREET LLC.
85 NEWARK AVENUE	5011230001	HERNANDEZ, ODILIA
81 NEWARK AVENUE	5011230003	DECOFIN LLC
73 NEWARK AVENUE	5011230004	ALCIVAR, ELVIS
JOHN STREET	5011230112	STATEN ISLAND RAILWAY
JOHN STREET	5011230113	STATEN ISLAND RAILWAY
JOHN STREET	5011230115	THE CITY OF NEW YORK/
JOHN STREET	5011230116	THE CITY OF NEW YORK/
120 JOHN STREET	5011230120	SCARTOZZI, JOHN
EATON PLACE	5011240018	STATEN ISLAND RAILWAY
EATON PLACE	5011240020	MTA - STATEN ISLAND R
EATON PLACE	5011240021	STATEN ISLAND RAILWAY
EATON PLACE	5011240022	THE CITY OF NEW YORK/

PARCEL ADDRESS	SBL	PRIMARY OWNER
EATON PLACE	5011240023	STATEN ISLAND RAILWAY
NEWARK AVENUE	5011240025	DCAS
EATON PLACE	5011240026	THE CITY OF NEW YORK/
EATON PLACE	5011240027	THE CITY OF NEW YORK/
EATON PLACE	5011240032	STATEN ISLAND RAILWAY
EATON PLACE	5011240037	STATEN ISLAND RAILWAY
INNIS STREET	5011250001	PORT OF NY AUTH
127 MORNINGSTAR ROAD	5011250010	AVENOSO LUISA
MORNINGSTAR ROAD	5011250014	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011250017	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011250022	STATEN ISLAND RAILWAY
MORNINGSTAR ROAD	5011250025	THE CITY OF NEW YORK/
RICHMOND TERRACE	5011250075	PORT OF NY AUTH
WINANT STREET	5011520031	STELLA D'ORO CORP
WINANT STREET	5011520034	THE CITY OF NEW YORK/
WINANT STREET	5011520035	595 BAY LLC
WINANT STREET	5011520036	THE CITY OF NEW YORK/
113 WINANT STREET	5011520042	COMMUNITY ELECTRIC IN
111 WINANT STREET	5011520047	DERRICK EDWARDS
17 SHAINA COURT	5011520064	NUNEZ, SAMUEL
19 SHAINA COURT	5011520065	MARTINEZ, GENOVEVA
21 SHAINA COURT	5011520066	ROBERTO ORTIZ
MORNINGSTAR ROAD	5011520067	THE CITY OF NEW YORK/
23 SHAINA COURT	5011520068	NELLY COLON
25 SHAINA COURT	5011520069	LENA D. SEARLS
27 SHAINA COURT	5011520070	GRINBERG M & DEVELOPM
29 SHAINA COURT	5011520071	GEORGE CLARKE
31 SHAINA COURT	5011520072	APPUHAMY, RANDENI
MORNINGSTAR ROAD	5011520073	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011520074	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011520075	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011520076	THE CITY OF NEW YORK/
MORNINGSTAR ROAD	5011520078	THE CITY OF NEW YORK/
132 MORNINGSTAR ROAD	5011520079	ALL NEW REALTY LLC
140 MORNINGSTAR ROAD	5011520083	MOHAMMAD ISMAIL
142 MORNINGSTAR ROAD	5011520084	KRESHNIK BLAKAJ
133 GRANITE AVENUE	5011550071	BARBRO CORPORATION
GRANITE AVENUE	5011550079	THE CITY OF NEW YORK/
GRANITE AVENUE	5011550080	THE CITY OF NEW YORK/
40 LA SALLE STREET	5011550085	GRANITE AVENUE PROP

PARCEL ADDRESS	SBL	PRIMARY OWNER
WINANT STREET	5011550120	THE CITY OF NEW YORK/
WINANT STREET	5011550133	THE CITY OF NEW YORK/
WINANT STREET	5011550134	BARBRO CORPORATION
124 GRANITE AVENUE	5011570001	124 GRANITE, LLC
HOUSMAN AVENUE	5011570060	THE CITY OF NEW YORK/
93 WRIGHT AVENUE	5011580001	JOSEPH J MARINO JR
GIGI STREET	5011580105	JOSEPH PANOBIANCO
HOUSMAN AVENUE	5011580112	THE CITY OF NEW YORK/
97 LAKE AVENUE	5011590001	MERLINO, KARIN U
94 WRIGHT AVENUE	5011590100	EDEN II SCHOOL AUTIST
WRIGHT AVENUE	5011590110	THE CITY OF NEW YORK/
97 SIMONSON AVENUE	5011600003	HOLLEY, JULIA C
LAKE AVENUE	5011600116	E BURSTEIN
104 LAKE AVENUE	5011600117	SLUPINSKA , MARIANNA
LAKE AVENUE	5011600118	THE CITY OF NEW YORK/
125 LAKE AVENUE	5011610001	CHAYIL PROPERTIES LLC
GRANITE AVENUE	5011610043	THE CITY OF NEW YORK/
GRANITE AVENUE	5011610148	STATEN ISLAND RAILWAY
GRANITE AVENUE	5011610149	THE CITY OF NEW YORK/
150 GRANITE AVENUE	5011610150	EDEN II SCHOOL AUTIST
119 SIMONSON AVENUE	5011650039	HOLLEY, BETTY
SIMONSON AVENUE	5011650040	THE CITY OF NEW YORK/
120 LAKE AVENUE	5011650052	DOUGLAS R. MARSHALL,
19 HEUSDEN STREET	5011860001	YIM , MING
VAN NAME AVENUE	5011860002	THE CITY OF NEW YORK/
99 VAN NAME AVENUE	5011860009	TSE, JUAN JOSE NG
93 VAN NAME AVENUE	5011860011	HALL, MICHAEL
98 SIMONSON AVENUE	5011860117	THOMAS M MC CORMICK
SIMONSON AVENUE	5011860119	THE CITY OF NEW YORK/
126 SIMONSON AVENUE	5011860124	TABORE MAR THOMA CHUR
17 HEUSDEN STREET	5011860129	DENNIS GLANTON
VAN PELT AVENUE	5011880001	THE CITY OF NEW YORK/
89 VAN PELT AVENUE	5011880002	GHIGNONE, LORRAINE A
VAN NAME AVENUE	5011880119	BEAMER COURT HOMEOWNE
VAN NAME AVENUE	5011880120	THE CITY OF NEW YORK/
VAN NAME AVENUE	5011880126	PATTY'S FLATBED SERVI
50 BEAMER COURT	5011880254	OKEICHE, RAYMUND F
VAN PELT AVENUE	5011920029	NY STATE PUBLIC SERV
VAN PELT AVENUE	5011920030	MTA - STATEN ISLAND R
54 HEUSDEN STREET	5011920040	SANCHEZ, MARITZA

PARCEL ADDRESS	SBL	PRIMARY OWNER
52 HEUSDEN STREET	5011920041	JOSE, THOMAS K
50 HEUSDEN STREET	5011920042	IQBAL MOHAMMAD S
46 HEUSDEN STREET	5011920045	JOANNY A ASTUDILLO
44 HEUSDEN STREET	5011920046	MYADUNNA, ANURA
34 HEUSDEN STREET	5011920048	CARMEL ITE INVESTMENT
VAN PELT AVENUE	5012110001	THE CITY OF NEW YORK/
VAN PELT AVENUE	5012110020	THE CITY OF NEW YORK
89 ERASTINA PLACE	5012110021	MIRANDA, JAIME I
92 VAN PELT AVENUE	5012110150	FIGUEROA , PRISCILLA
2 MAPLE PARKWAY	5012120019	JAMES SAHOYE
DE HART AVENUE	5012120020	THE CITY OF NEW YORK/
DE HART AVENUE	5012120021	THE CITY OF NEW YORK/
DE HART AVENUE	5012120024	THE CITY OF NEW YORK/
95 DE HART AVENUE	5012120025	JOHN, ORPHEUS
90 ERASTINA PLACE	5012120098	LUCENTI, LOUIS
UNION AVENUE	5012130019	THE CITY OF NEW YORK/
UNION AVENUE	5012130020	THE CITY OF NEW YORK/
UNION AVENUE	5012130021	THE CITY OF NEW YORK/
UNION AVENUE	5012130025	SCALICI, JACK
100 DE HART AVENUE	5012130131	CLAIE SCALICI
DE HART AVENUE	5012130133	THE CITY OF NEW YORK/
DE HART AVENUE	5012130142	THE CITY OF NEW YORK/
BUSH AVENUE	5012240055	
BUSH AVENUE	5012240100	THE CITY OF NEW YORK/
151 HARBOR ROAD	5012260007	647-649 WASHINGTON AV
HARBOR ROAD	5012260011	647-649 WASHINGTON AV
BUSH AVENUE	5012260013	THE CITY OF NEW YORK/
BUSH AVENUE	5012260014	THE CITY OF NEW YORK/
111 BUSH AVENUE	5012260031	GIAMBRONE, PIETRO
104 UNION AVENUE	5012260051	PACCIONE, MICHAEL
UNION AVENUE	5012260054	THE CITY OF NEW YORK/
130 UNION AVENUE	5012260057	647-649 WASHINGTON AV
LEYDEN AVENUE	5012260100	THE CITY OF NEW YORK/
HARBOR ROAD	5012270001	THE CITY OF NEW YORK/
HARBOR ROAD	5012270002	NYC DSBS
111 HARBOR ROAD	5012270003	GEORGE DELGADIO
112 BUSH AVENUE	5012270114	FRIEDA A COLSON-SYKES
BUSH AVENUE	5012270115	THE CITY OF NEW YORK/
HARBOR ROAD	5012360100	THE CITY OF NEW YORK/
HARBOR ROAD	5012360117	DCAS

PARCEL ADDRESS	SBL	PRIMARY OWNER
HARBOR ROAD	5012360173	DCAS
HARBOR ROAD	5012360180	THE CITY OF NEW YORK/
LOCKMAN AVENUE	5012370164	THE CITY OF NEW YORK/
LOCKMAN AVENUE	5012370165	THE CITY OF NEW YORK/
20 LOCKMAN LOOP	5012430020	BUSHWICK SHARP REALTY
LOCKMAN AVENUE	5012430030	CSX TRANSPORTATION, I
HARBOR ROAD	5012430045	THE CITY OF NEW YORK/
124 HARBOR ROAD	5012430046	HARBOR ROAD DEVELOPME
126 HARBOR ROAD	5012430047	
128 HARBOR ROAD	5012430048	
130 HARBOR ROAD	5012430049	
150 HARBOR ROAD	5012430050	MUNIZ VIDALS, ARIEL
152 HARBOR ROAD	5012430053	ROBLES, JOSE H
132 HARBOR ROAD	5012430149	
MERSEREAU AVENUE	5012560001	THE CITY OF NEW YORK/
GRANDVIEW AVENUE	5012570001	THE CITY OF NEW YORK/
SOUTH AVENUE	5012610079	NYC DSBS
SOUTH AVENUE	5012610082	NYC DSBS
GRANDVIEW AVENUE	5012610090	NYC DSBS
310 GRANDVIEW AVENUE	5012610093	PEGGY H ARCHER
NORTHFIELD AVENUE	5012680060	SIRC-142
270 SOUTH AVENUE	5012680209	SONNY'S PIER LLC
SOUTH AVENUE	5012680217	S I EDISON CO
SOUTH AVENUE	5012680220	SONNYS PIER LLC
300 SOUTH AVENUE	5012680229	SONNY'S PIER, LLC
306 SOUTH AVENUE	5012680231	APONTE, CHRISTINE
312 SOUTH AVENUE	5012680234	KOREAN PRESBYTERIAN C
SOUTH AVENUE	5012680237	KOREAN PRESBYTERIAN C
SOUTH AVENUE	5012680240	LUCIANA DESIMONE
SOUTH AVENUE	5012680245	TRI-STATE REALTY LLC
SOUTH AVENUE	5012680270	TRI-STATE REALTY LLC
100 CABLE WAY	5012680278	TIME WARNER CABLE NEW
HOLLAND AVENUE	5012840200	STATEN ISLAND RAILWAY

SECTION 9
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

RESUME OF PREPARER

HARRY STRANO

PROJECT MANAGER/SENIOR ENVIRONMENTAL SCIENTIST
ASCE Grade PIII

YEARS OF EXPERIENCE: 22

EDUCATION:
B.S. Natural Resource Management, Rutgers University, New Brunswick, NJ, 1999; B.A. Communications, Rowan University, Glassboro, NJ, 1993.

PROFESSIONAL REGISTRATION:
Recognized Qualified Bog Turtle Surveyor, New Jersey, Pennsylvania (USFWS), New York (USFWS/HHRU), and Maryland (USFWS/MD DNR); OSHA 40-Hour HAZWOPER (November, 2017).

TRAINING:
NJDOT Permits/NJDEP Regulations: Flood Hazard Area Control Permits – Module 3: Why Didn't the Bobcat Cross the Road (ACENJ & NJDOT, November 2017); Bog Turtle Phase I Habitat Training (PennDOT Bureau of Design, April 20, 2010); Threatened and Endangered Species Desk Reference Training (PennDOT Bureau of Design, March 31-April 2, 2009); Hydric Soils course (Rutgers University, 2005).

KEY QUALIFICATIONS:
Mr. Strano has experience delineating wetlands for a variety of wetland habitats including palustrine freshwater and brackish emergent wetlands, scrub/shrub and forested wetlands, and modified agricultural wetlands. Mr. Strano has prepared numerous successful permit applications for NJDEP Letters of Interpretation, Coastal permits including CAFRA, Coastal Wetlands; and Freshwater Wetlands permits, and Flood Hazard Area permits. Mr. Strano is familiar with the flora and fauna of a wide variety of local communities in New Jersey including freshwater aquatic ecosystems, coastal communities, Pinelands, upland forest and grassland habitats. He has prepared a variety of threatened and endangered/wetland reports of findings. Mr. Strano has prepared Ecological Assessments (EA) in accordance with NEPA requirements. He has prepared Environmental Resources Inventories (ERI) for Municipalities statewide in New Jersey and one county (Essex County) including the inventory of natural and cultural resources. He has worked closely with environmental commissions to develop documents that properly and accurately reflect the resources and conditions of the locality. Mr. Strano is proficient in identification of coastal plain aquatic, wetland and estuarine ecosystem flora and fauna; including fish and invertebrates. He has prepared habitat management plans for aquatic and terrestrial species. He has delineated wetlands and evaluated habitat in rural, industrial, preserved open space, suburban and urban settings. He has performed numerous studies of threatened and endangered species and wetlands, and prepared permit applications. Mr. Strano has conducted onsite construction monitoring for both State and Federally threatened and endangered species, including bald eagle, bog turtle and wood turtle, peregrine falcon and beach nesting birds; invertebrates, including freshwater mussels; and plants on a wide variety of construction sites. He has trained construction crews in species protection during construction activities.

EMPLOYMENT HISTORY:

2001 to 2005, *Staten Island Zoo* - Education Department Assistant Director/Director – Responsible for developing curricula and operating all educational and volunteer programs at the Zoo**.**

1999 to 2001, *Staten Island Zoo,* Animal Care Specialist - Responsible for the general husbandry of birds, mammals, reptiles and amphibians.

1996, 1998 –*NJ Division of Fish and Wildlife*, Research Assistant – Evaluated areas in central New Jersey for bog turtle populations and suitable wetland habitat. Conducted endangered and threatened freshwater mussel surveys of rivers throughout New Jersey.

RELEVANT EXPERIENCE:

50 Mile Garden State Parkway Widening Interchanges 30-80, Atlantic, Burlington and Ocean Counties, NJ. NJ Turnpike Authority/T & M Associates. Environmental Scientist responsible for preparing the Species Management Plan for 15 endangered and threatened species identified within the 50 milelong project area. Assessed potential impacts to endangered and threatened species habitat and prepared habitat management recommendations, which were incorporated into project design and implemented during construction. Species included various herptile species and avian species including bald eagle, peregrine falcon, barred owl and red-shouldered hawk. Presented plan and findings to US Fish and Wildlife Service (USFWS), NJ Department of Environmental Protection (NJDEP), US Army Corps of Engineers, NJ Pinelands Commission (NJPC) and other participating agencies. The Management Plan facilitated the development of a Memorandum of Agreement (MOA) between the NJ Turnpike Authority and NJPC. Obtained USFWS approval under Section 7 of the *Endangered Species Act*. The study was subsequently used by Pepco to obtain NJ Pinelands Commission approval for construction of a new electric transmission line parallel to the Parkway.

Tappan Zee Bridge/I-287 Corridor, Rockland and Westchester Counties, NY. NY State Department of Transportation/AECOM (formerly Earth Tech, Inc). Environmental Scientist responsible for identification and GPS mapping of wetlands, vegetation communities, and threatened and endangered species habitat along an approximate 15-mile section of the Interstate 287 corridor for the proposed Bridge replacement. Responsible for assisting the Project Manager in the compilation of data and preparation of a report of findings.

Route 206 over Assiscunk Creek Bridge Replacement, Springfield and Mansfield Townships, Burlington County NJ. NJ Department of Transportation/Stantec. Scientist responsible for a detailed wetland delineation and site evaluation for a bridge replacement project on Route 206. Responsible for preparing a wetland report of findings. Consulted with USFWS regarding protections for bog turtle habitat adjacent to the site. Qualified Bog Turtle Surveyor responsible for weekly on-site construction monitoring for the duration of the project. Monitored site and reported field conditions to the client. Coordinated monitoring and oversaw demobilization of the site.

Atsion Lake Dam Rehabilitation Project, Shamong Township, Burlington County, NJ. NJ Department of Transportation/Taylor Wiseman and Taylor. Environmental Scientist responsible for performance of a detailed wetland delineation of the project area on U.S. Route 206, Milepost 7.25.

Andover House, Andover Borough, Green Township and Andover Township, NJ. Private Client. Environmental Scientist responsible for the offsite evaluation of an approximate 232-acre property for potential threatened and endangered species habitat including bog turtle, Indiana bat, forest and grassland birds, vernal pool species, and mussel species. Contributed to preparation of a letter of findings for submission to the US Fish and Wildlife Service.

Kew Gardens Interchange Infrastructure & Operational Improvement Project, Kew Gardens, Queens, NY. NYS Department of Transportation/ Hardesty & Hanover, LLP. Environmental Scientist responsible for wetland delineation and rare species habitat analysis of a site as part of a wetland

delineation and Ecological Assessment report. The report was prepared and submitted to the NYS Department of Transportation.

Blenheim-Gilboa Pumped Storage Power Project, Town of Blenheim & Town of Gilboa, Schoharie, NY. New York Power Authority (NYPA)/ Kleinschmidt Associates, PA, PC. Project Manager/Sr. Environmental Scientist responsible for participating in a habitat survey and vegetation characterization at the Blenheim-Gilboa Reservoir and power facility. Assisted in targeted habitat surveys for timber rattlesnake, spring salamander, and bald eagle. Prepared a database of information that included the characterization of various location points within a 1000 + acre property that included the upper and lower facility reservoirs, and surrounding upland forest, wetlands, riparian habitats, rock outcrops, and successional areas. Recorded wildlife and dominant plant species, landform features, and habitat conditions. Compiled a database of findings that are to be incorporated into NYPA applications of relicensing under the Federal Energy Regulatory Commission (FERC).

Rondout West Branch Tunnel [RWBT] and Roseton Study Area Phase II, Roseton Area, Orange County NY. New York City Department of Environmental Protection (NYCDEP) /HDR. Project Manager responsible for reviewing the Phase I Bog Turtle Habitat Assessment; conducting site reconnaissance; and developing and leading Phase II visual surveys for bog turtle on five separate sites associated with NYCDEP Aqueduct Connection Environmental Support project (ACES) performed in anticipation of repairing/replacing existing water supply aqueducts that supply New York City. Responsible for determining perimeters of Phase II survey areas based on Phase I reports and site reconnaissance. Survey area boundaries were recorded via GPS and utilized to create mapping and determine survey-hours for each site. Responsible for leading all Phase II bog turtle survey events between May and June, 2013 (total of 20 survey events). Instructed survey team biologists on all areas to survey and what protocols to follow. Multiple herptiles were found by surveyors on all surveys. No bog turtles or other threatened or endangered species were identified during the surveys. Prepared a report of findings for submission to US Fish and Wildlife Service for review and approval in support of Federal *Endangered Species Act* Section 7 consultation. Project met schedule requirements. Work authorization was received after the start of the allowable turtle survey season but the project team was able to complete the required 20 surveys by June 15, the end of the survey season.

C&S Engineers, Inc. / Port Authority of NY & NJ. Stewart International Airport Runway 16 Obstruction Removal, New Windsor, Orange County, NY. Environmental Scientist responsible for assisting in a Wetland Delineation, and conducting a Habitat Assessment and Phase I bog turtle survey for an obstruction removal project associated with the airport. Multiple wetlands meeting bog turtle criteria were identified. A Phase I report and separate habitat assessment for upland sandpiper, small whorled pogonia, dwarf wedgemussel, and Indiana and Northern Long-eared bats were prepared and submitted to agencies for review. Agencies concurred with findings and construction monitoring was conducted in the winter of 2015-16 during double silt fence installation.

SECTION 10
Request for USACE Jurisdictional Determination
Staten Island North Shore Bus Rapid Transit System
Borough of Staten Island, Richmond County, New York
ASGECI Project #4348

WETLANDS LOCATION SURVEY - BACK POCKET

Plans entitled:

Contract # B-62040
Design & Construction of North Shore Bus Rapid Transit System

Jurisdictional Determination Plan

8 Sheets

October 2, 2019

Prepared by:
Amy S. Greene Environmental Consultants, Inc.

LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

Wetland	Sq. Ft.*	Acres*
A	59,793	1.37
B	5,236	0.12
C	23,791	0.55
D/E (Non-Jurisdictional)	2,713	0.06
G/F	33,819	0.78

*Area of wetland within project review area.

250 0 250 500

1 inch = 250 feet

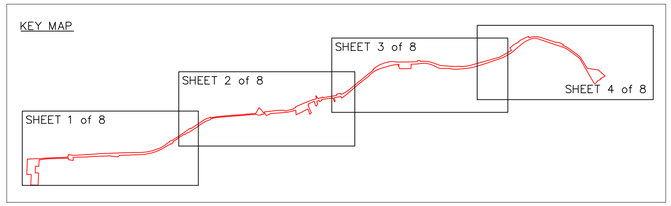
NOTES:

Wetlands within the Review Area were delineated and flagged by Amy S. Greene Environmental Consultants, Inc. on April 11– 12, April 15 and May 24, 2019. Wetlands were delineated by utilizing the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) [USACE 1987 Manual], and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012). Delineated Wetlands and other Waters of the United States boundaries are subject to review and verification by the US Army Corps Engineers.

Naik Consulting Group, P.C. established the wetlands flags locations by Conventional Surveying methods utilizing a Leica Total Station between the dates of April 22 and June 13, 2019.

Naik Consulting Group, Inc. (Naik) established control for aerial photography which was performed by Geod Corporation from aerial Lidar topographic mapping technics. The aerial Horizontal and Vertical control points values were established by performing three (3) fifteen–minute RTK GPS sessions on each control point. Naik also established additional control points using this same methodology to perform the Laser Scanning in areas obscured by the original aerial flight. This control network was used to perform bridge clearances and abutment locations at all streets which traverse over the old Railroad Bed. A closed route traverse was performed by conventional surveying technics utilizing a Leica Total Station. Conventional surveying methods were also used to establish the bridge abutment & retaining wall locations as well as the bridge clearances. All work was process and adjusted with allowable guidelines.

KEY MAP



JURISDICTIONAL DETERMINATION PLAN PREPARED BY:

AMY S. GREENE ENVIRONMENTAL CONSULTANTSINC.
4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

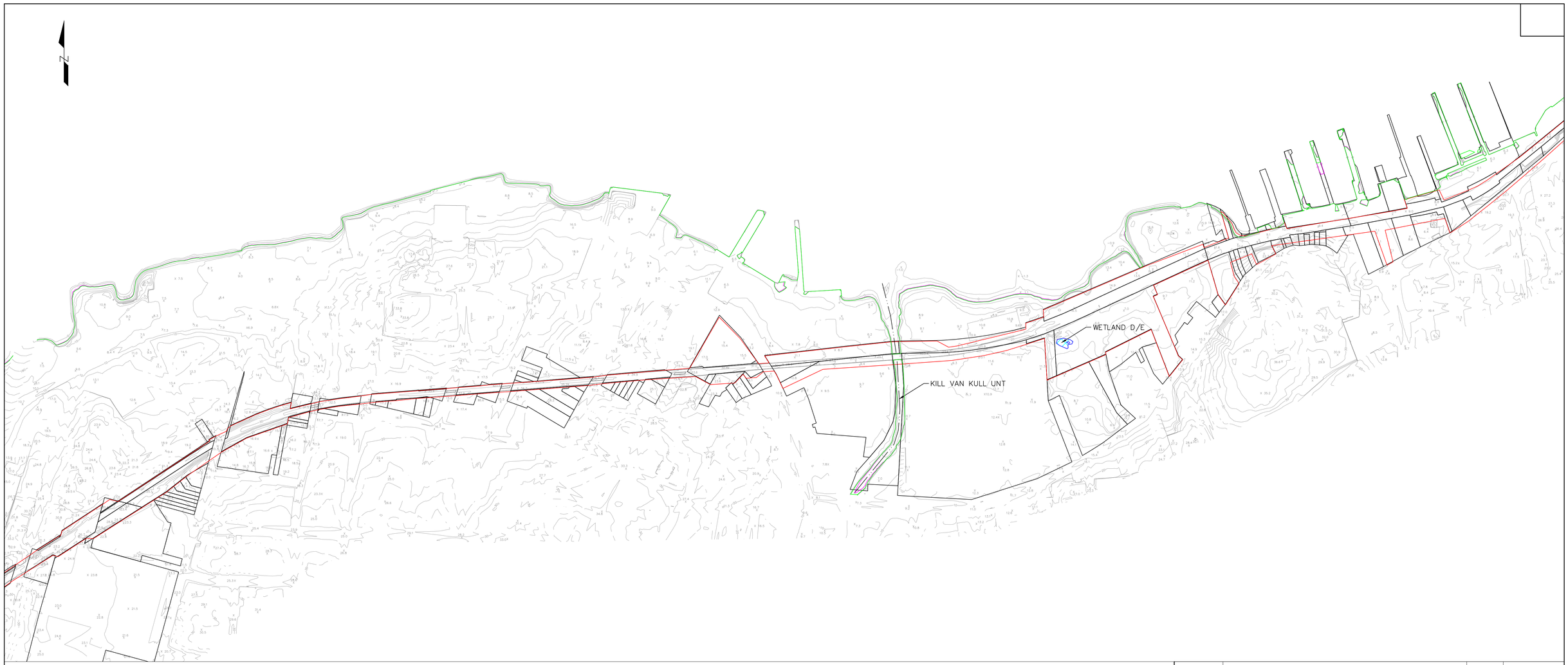
New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 1 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION



LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

Wetland	Sq. Ft.*	Acres*
A	59,793	1.37
B	5,236	0.12
C	23,791	0.55
D/E (Non-Jurisdictional)	2,713	0.06
G/F	33,819	0.78

*Area of wetland within project review area.

250 0 250 500

1 inch = 250 feet

NOTES:

Wetlands within the Review Area were delineated and flagged by Amy S. Greene Environmental Consultants, Inc. on April 11– 12, April 15 and May 24, 2019. Wetlands were delineated by utilizing the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) [USACE 1987 Manual], and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012). Delineated Wetlands and other Waters of the United States boundaries are subject to review and verification by the US Army Corps Engineers.

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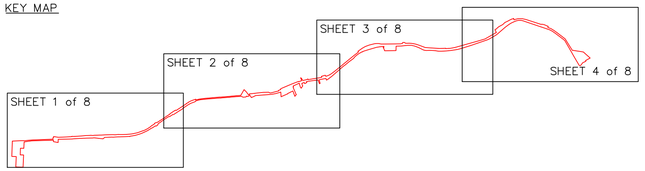

JURISDICTIONAL DETERMINATION PLAN PREPARED BY:
AMY S. GREENE ENVIRONMENTAL CONSULTANTSINC.
4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 2 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION __

LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

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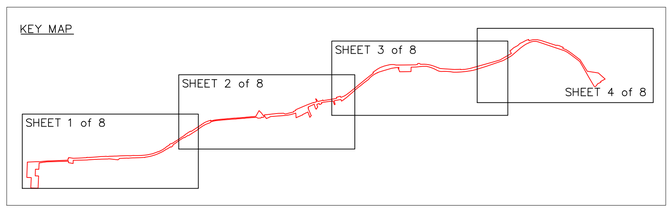

JURISDICTIONAL DETERMINATION PLAN PREPARED BY:

AMY S. GREENE ENVIRONMENTAL CONSULTANTS, INC.
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SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 3 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION __

LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

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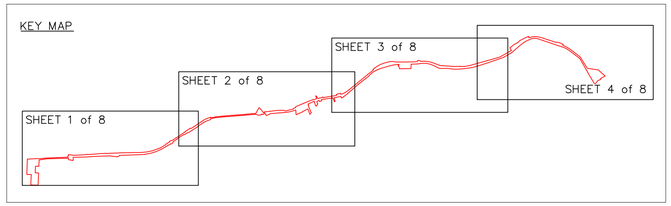

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FLEMINGTON, NJ 08822
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REVISION	DESCRIPTION	DATE	APPROVED

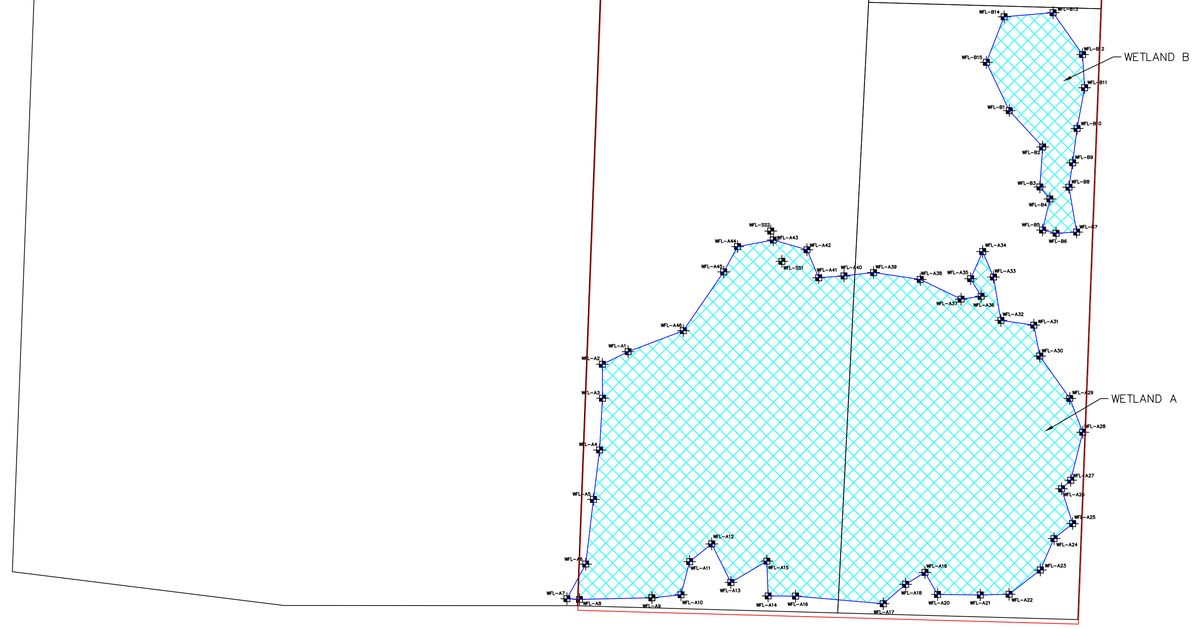
New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 4 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION



LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

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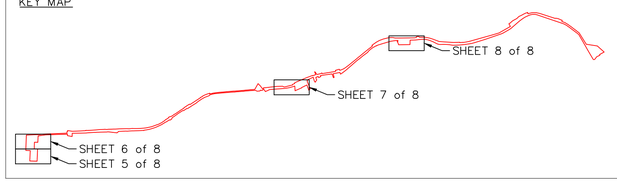

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4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

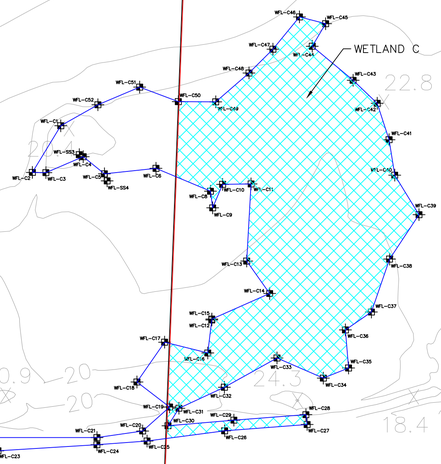
New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 5 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION



LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

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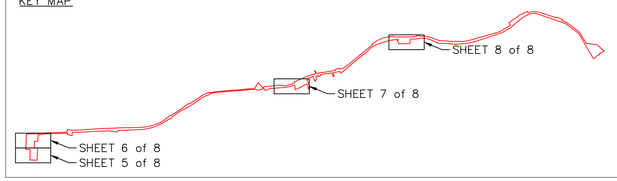


JURISDICTIONAL DETERMINATION PLAN PREPARED BY:
AMY S. GREENE ENVIRONMENTAL CONSULTANTS INC.
4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

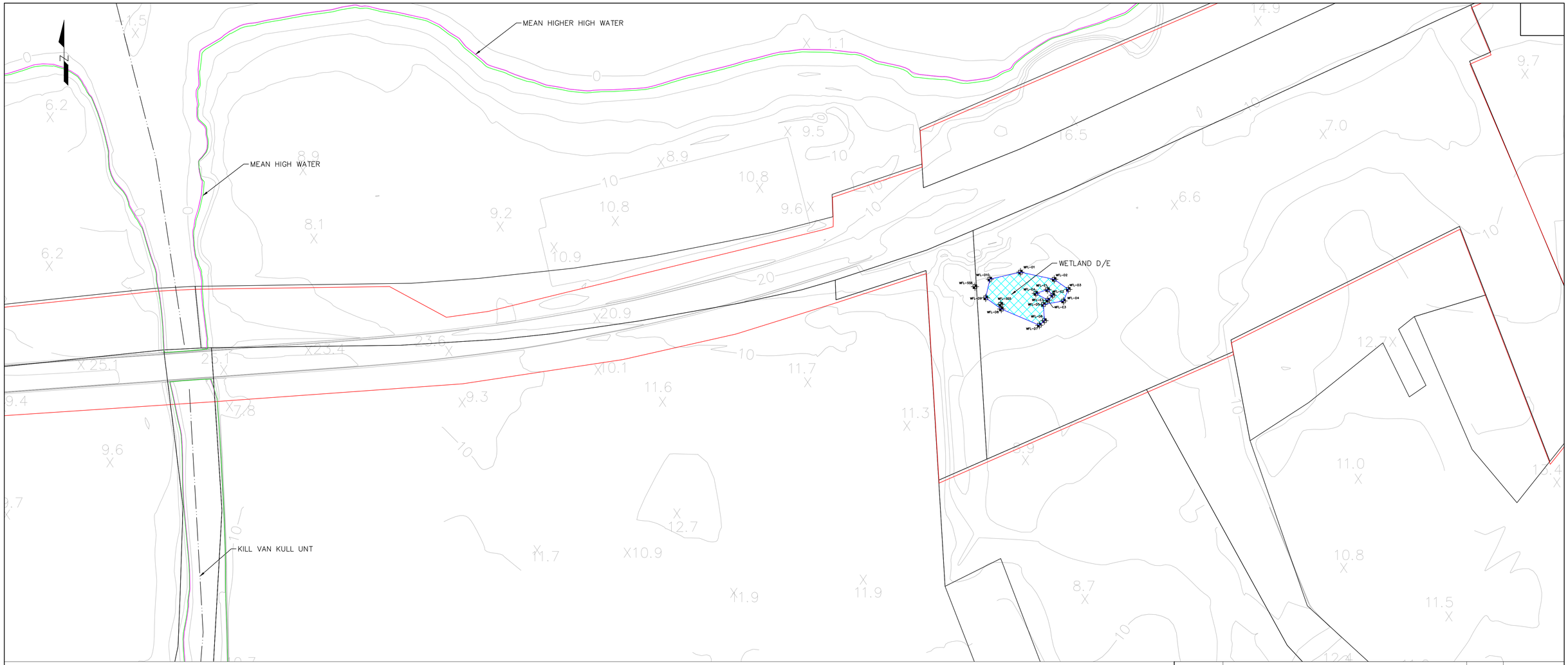
New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF
NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 6 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION __



LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
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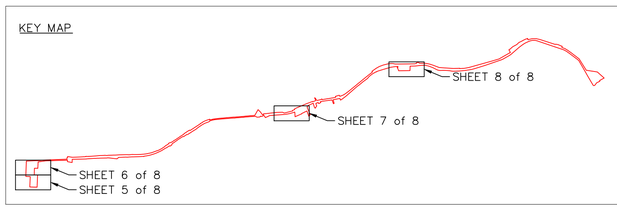

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4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 7 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION

LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
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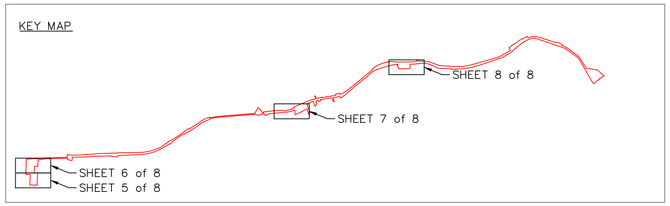

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REVISION	DESCRIPTION	DATE	APPROVED

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 8 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003

In Reply Refer To: July 18, 2023
Project Code: 2023-0047974
Project Name: AGE 4348 North Shore Bus Rapid Transit System

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological

evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

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

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

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

PROJECT SUMMARY

Project Code: 2023-0047974
Project Name: AGE 4348 North Shore Bus Rapid Transit System
Project Type: Road/Hwy - New Construction
Project Description: reconstruct a 5-mile portion of the right-of-way of the former North Shore branch of the Staten Island Rapid Transit into a dedicated exclusive-use two-lane busway
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.640670400000005,-74.12161978896623,14z

Counties: Richmond County, New York

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Piping Plover *Charadrius melodus* Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency:	Amy Greene Environmental, a Davey Company
Name:	John Pabish
Address:	Amy Greene Environmental, a Davey Company
Address Line 2:	4 Walter E. Foran Blvd, Suite 209
City:	Flemington
State:	NJ
Zip:	08822
Email	jpabish@amygreene.com
Phone:	9087889676

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Project information

NAME

AGE 4348 North Shore Bus Rapid Transit System

LOCATION

Richmond County, New York

DESCRIPTION

Some(reconstruct a 5-mile portion of the right-of-way of the former North Shore branch of the Staten Island Rapid Transit into a dedicated exclusive-use two-lane busway)

Local office

Long Island Ecological Services Field Office

(631) 286-0485
(631) 286-4003

340 Smith Road
Shirley, NY 11967-2258

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6039	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list,click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Sep 1 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and

understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (▪)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (▪)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

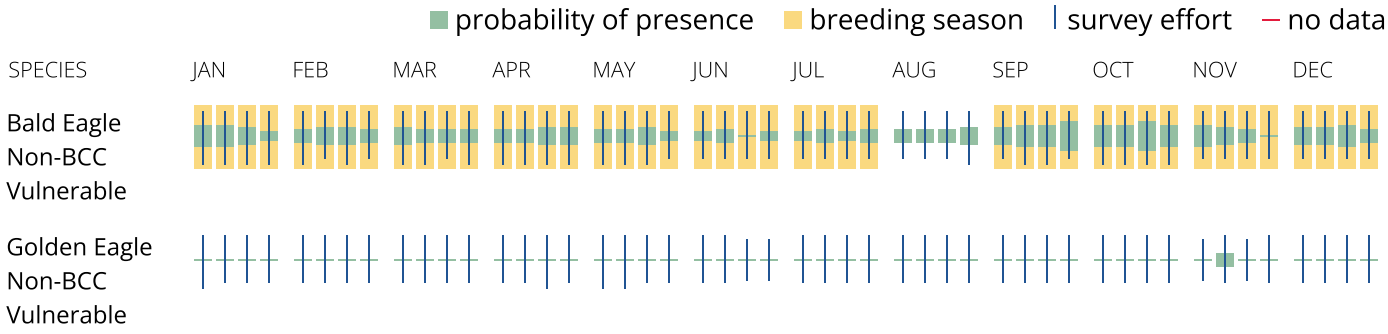
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON

Bald Eagle Haliaeetus leucocephalus — Breeds Sep 1 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Black Scoter Melanitta nigra — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Black-billed Cuckoo Coccyzus erythropthalmus — Breeds May 15 to Oct 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9399

Black-legged Kittiwake Rissa tridactyla — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Brown Pelican Pelecanus occidentalis — Breeds Jan 15 to Sep 30
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Cerulean Warbler Dendroica cerulea — Breeds Apr 28 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Eider Somateria mollissima — Breeds Jun 1 to Sep 30
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Common Loon gavia immer — Breeds Apr 15 to Oct 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/4464

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Golden Eagle Aquila chrysaetos — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Great Shearwater Puffinus gravis — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Kentucky Warbler Oporornis formosus — Breeds Apr 20 to Aug 20

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

King Rail Rallus elegans — Breeds May 1 to Sep 5

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8936

Long-tailed Duck Clangula hyemalis — Breeds elsewhere

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/7238

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Razorbill Alca torda — Breeds Jun 15 to Sep 10
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Red-breasted Merganser Mergus serrator — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon Gavia stellata — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Ring-billed Gull Larus delawarensis — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Royal Tern Thalasseus maximus — Breeds Apr 15 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Sooty Tern Onychoprion fuscatus — Breeds Mar 10 to Jul 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Surf Scoter Melanitta perspicillata — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

White-winged Scoter Melanitta fusca — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Wilson's Storm-petrel Oceanites oceanicus — Breeds elsewhere
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

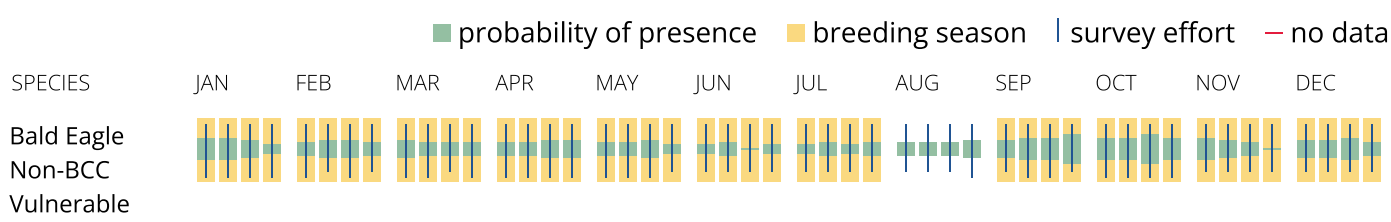
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

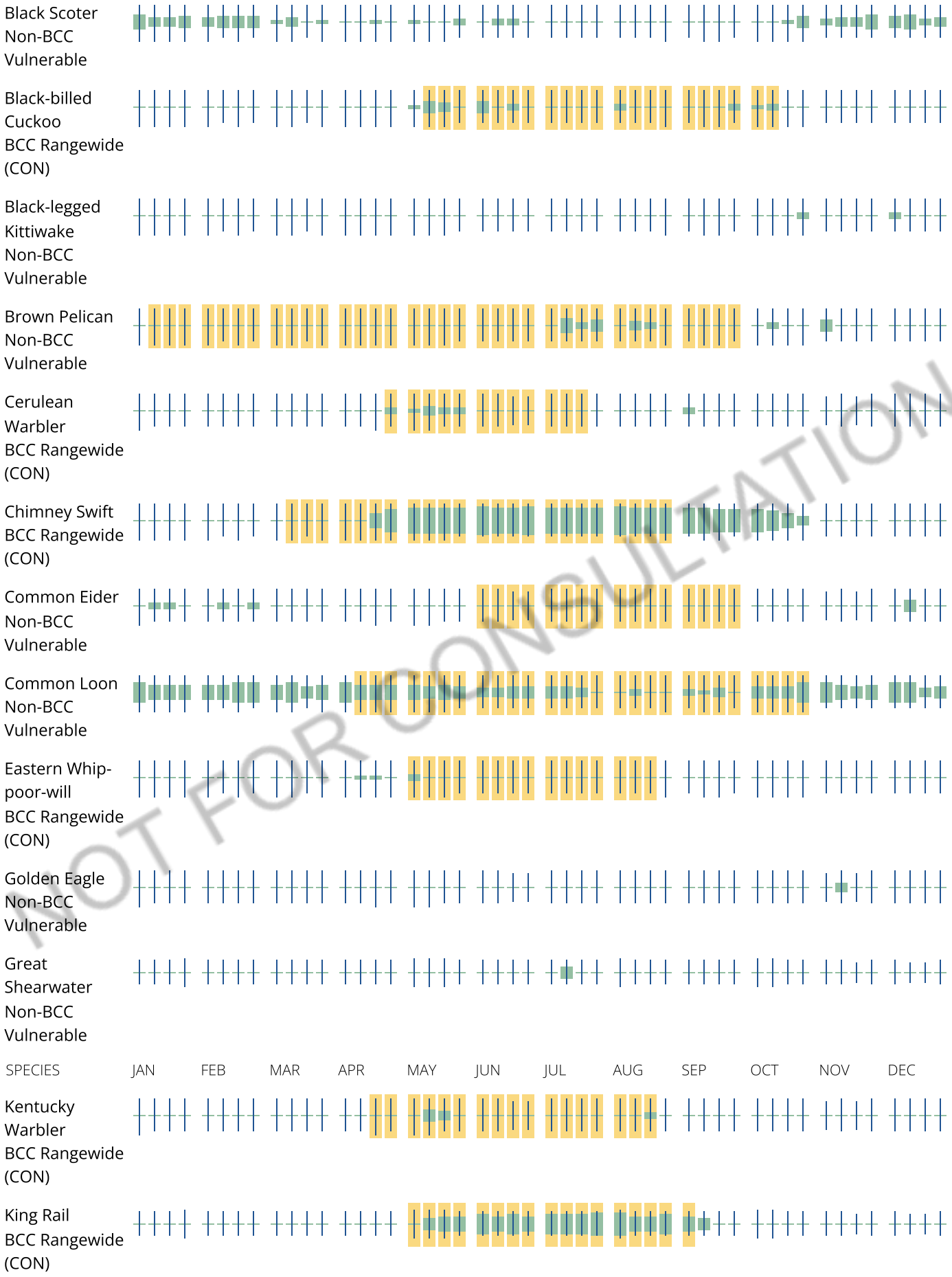
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

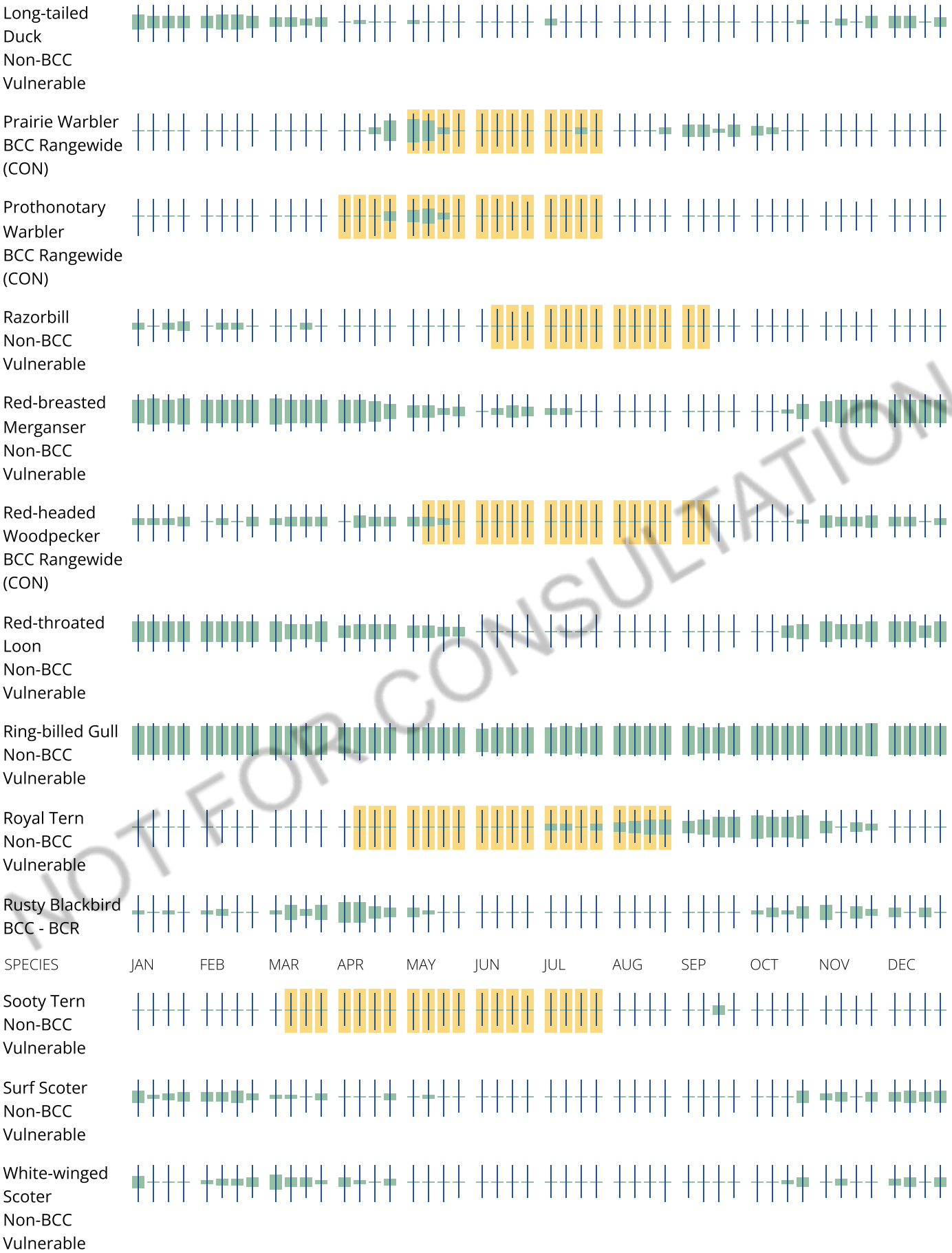
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

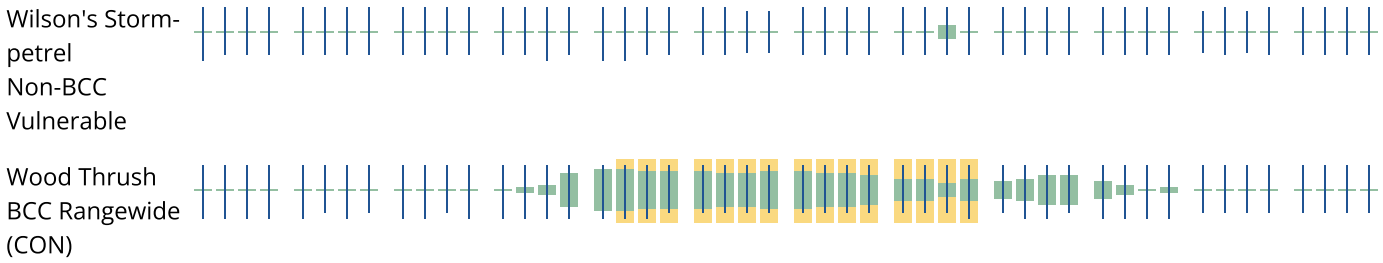
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.









Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability

of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

- E1UBL
- E1UBLx

FRESHWATER FORESTED/SHRUB WETLAND

- PSS1E

RIVERINE

- R5UBH
- R1UBVx

A full description for each wetland code can be found at the National Wetlands Inventory website

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

According to the NOAA Essential Fish Habitat mapper, the Snug Harbor area is Essential Fish Habitat or 14 species of fish and associated life stages, as listed below.

Designated Species- Essential Fish Habitat for Kill Van Kull

Species (Common Name [Species])	Eggs Present (Y/N)	Larvae Present (Y/N)	Juveniles Present (Y/N)	Adults Present (Y/N)
Winter flounder (*Pseudopleuronectes americanus*)	Y	Y	Y	Y
Little skate (*Leucoraja erinacea*)	N	N	Y	Y
Atlantic herring (*Clupea harengus*)	N	Y	Y	Y
Red hake (*Urophycis chuss*)	Y	Y	Y	Y
Silver hake (*Merluccius bilinearis*)	Y	Y	N	N
Yellowtail flounder (*Pleuronectes ferruginea*)	N	N	Y	N
Windowpane flounder (*Scophthalmus aquosus*)	Y	Y	Y	Y
Winter skate (*Leucoraja ocellata*)	N	N	Y	Y
Clearnose skate (*Raja eglanteria*)	N	N	Y	Y
Smoothhound Shark Complex (Atlantic Stock) (*Mustelus mustelus*)	Y	Y	Y	Y
Longfin Inshore Squid (*Doryteuthis pealeii*)	Y	N	N	N
Bluefish (*Pomatomus saltatrix*)	N	N	Y	Y
Atlantic Butterfish (*Peprilis triacanthus*)	N	Y	N	N
Summer flounder (*Paralichthys dentatus*)	N	Y	Y	Y

Source: National Marine Fisheries Service. Summary of Essential Fish Habitat (EFH) Designation (list generated 12/6/2019)

AMY GREENE ENVIRONMENTAL
a DAVEY company

Region 2 Permits
NYSDEC
47-40 21st Street
Long Island City, NY 11101
Attn: Stephen Watts, Regional Permit Administrator

August 3, 2023

OVERNIGHT MAIL

Re: Request for NYSDEC Wetland Determination
Proposed North Shore Bus Rapid Transit
Arlington to St. George Terminal
Portion of Block 1268, Lot 60
Borough of Staten Island, Richmond County, NY
AGE Project #4348

Dear Mr. Watts:

On behalf of the Metropolitan Transportation Authority (MTA), Amy S. Greene Environmental Consultants, Inc, doing business as Amy Greene Environmental, a Davey Company (AGE) is requesting a New York State Department of Environmental Conservation (NYSDEC) wetland line verification for a portion of a delineated wetland. The subject wetland is located on a portion of Block 1268, Lot 60 in the Arlington section of Staten Island, Richmond County, New York (see attached Figures). The subject wetland line is located west of South Avenue, north of/adjacent to the Staten Island Cable facility (100 Cable Way), and south of the open cut railroad right-of-way. The wetland complex includes an approximate 0.5 acre forested/scrub-shrub NYSDEC mapped wetland (ID# E-2/CL:2 – portion of "Wetland C" on attached Figure).

This request is associated with the proposed MTA Staten Island North Shore Bus Rapid Transit Project. Attached to this letter are the following items: "Request for a Wetland Determination or Delineation" form, USGS Topo Map, Aerial Map showing the subject wetland and corresponding NYSDEC mapping, and a plan section showing wetland flagging entitled "Jurisdictional Determination Plan". Landowner access permission documentation can be provided upon confirmation of a field verification visit.

The proposed MTA project is designed to avoid NYSDEC-jurisdictional freshwater wetlands and their regulated 100-foot adjacent areas. The Arlington Station bus terminal is proposed to be constructed in disturbed uplands north of Wetland C and outside its 100-foot adjacent area. The project area will be adjusted as needed to avoid regulated impacts in this location. In order to confirm impact avoidance, we are requesting that a delineated portion of Wetland C between Flags C-39 to C-50 (see attached plan) be verified by NYSDEC. No other wetland areas/sections will require NYSDEC verification.

The subject wetland was delineated by AGE in April 2019. The wetland delineation was performed with consideration of both the NYSDEC Freshwater Wetlands Delineation Manual (revised July 1995) and the U.S. Army Corps of Engineers (USACE) Wetlands Delineation Manual (1987). The Regional Supplement to the Corps of Engineers Wetland Delineation Manual Northcentral and Northeast Region version 2.0 was also utilized during the wetland delineation. Freshwater wetland boundaries were field-verified by USACE in December 2019.

■ 4 Walter E. Foran Blvd. Suite 209 ■ Flemington, NJ 08822 ■ **908.788.9676** ■
■ fax 908.788.6788 ■ **agemarketing@davey.com** ■ www.amygreene.com ■

At the time of the delineation, portions of the wetland contained several inches of standing water. Other indicators of wetland hydrology that were observed included a high water table, saturation, and water-stained leaves. These characteristics were absent from the surrounding uplands.

The wetland contains a predominance of hydrophytic plant species as defined under the methodologies of the 1987 USACE manual, and included pin oak (*Quercus palustris,* FACW), red maple (*Acer rubrum,* FAC), black willow (*Salix nigra,* OBL), silky dogwood (*Cornus amomum,* FACW), common buttonbush (*Cephalanthus occidentalis,* OBL), northern spicebush (*Lindera benzoin,* FACW), common reed (*Phragmites australis,* FACW), skunk cabbage (*Symplocarpus foetidus,* OBL), cottongrass bulrush (*Scirpus cyperinus,* OBL), and fowl manna grass (*Glyceria striata,* OBL). The upland communities surrounding the wetland were predominantly dry oak-dominant Coastal Plain upland forest, with species such as northern red oak (*Quercus rubra,* FACU), black tupelo (*Nyssa sylvatica,* FAC), and sassafras (*Sassafras albidum,* FACU), with sparse understories of black cherry saplings (*Prunus serotina,* FACU) and several yellow trout lilies (*Erythronium americanum,* UPL).

According to the Soil Survey Geographic (SSURGO) database of New York, most of Wetland C occurs within the mapped soil unit Windsor complex, 0 to 8 percent slopes, loamy substratum (WWB), which is typically associated with kames and terminal moraines. It is classified as excessively drained and is not listed as a hydric soil. Soils sampled within the wetland contained a low chroma matrix and redoximorphic concentrations consistent with the sandy redox hydric soil indicator. Soils sampled in the upland areas lacked these characteristics.

If you have any questions, would like to schedule a field visit, or require any additional information regarding this request, please do not hesitate to contact me at 732-299-6139 or at the email address identified below.

Sincerely,

Harry Strano
Department Manager, Threatened and Endangered Species
Amy Greene Environmental, a Davey Company
harry.strano@davey.com

enc.

Cc: Naomi Delphin, Kevin Gurley - MTA
Michael Goldemberg, Nancy Doon – VHB
Liz Dancer, File #4348 - AGE

New York State Department of Environmental Conservation
Division of Fish, Wildlife & Marine Resources
1115 NYS Route 86 - PO Box 296, Ray Brook, New York 12977
website: www.dec.state.ny.us

Alexander B. Grannis
Commissioner

Request for a Wetland Determination or Delineation

To request a wetland field inspection on a parcel of property, please complete this form and submit it with the items listed below to the appropriate regional DEC office.

NOTE: Because a delineation is based on observation of field indicators of plants, soils, and other ground features, wetland field work is often limited to when conditions allow (typically May 1 until November 1).

1. **Person requesting the services**:

   Name: Harry Strano, Department Manager, Amy Greene Environmental, a Davey Company on behalf of MTA.

   Mailing Address: 4 Walter E. Foran Boulevard, Suite 209

   City/State/Zip: Flemington, NJ, 08822

   Daytime Telephone: 908-788-9676, ext 4907 Cell: 732-299- 6139

   e-mail address: harry.strano@davey.com

2. **Landowner (if different):**

   Name: NY State Public Service Commission

   Mailing Address: Empire State Plaza, Agency Building 3, 3 Madison Avenue

   City/State/Zip: Albany, NY 12223

   Daytime Telephone: 518-474-7080

Note: If the person requesting the delineation or determination is NOT the owner of the parcel of land, you must obtain and attach a letter with the landowner's *written permission* in order for an agency representative to inspect the property.

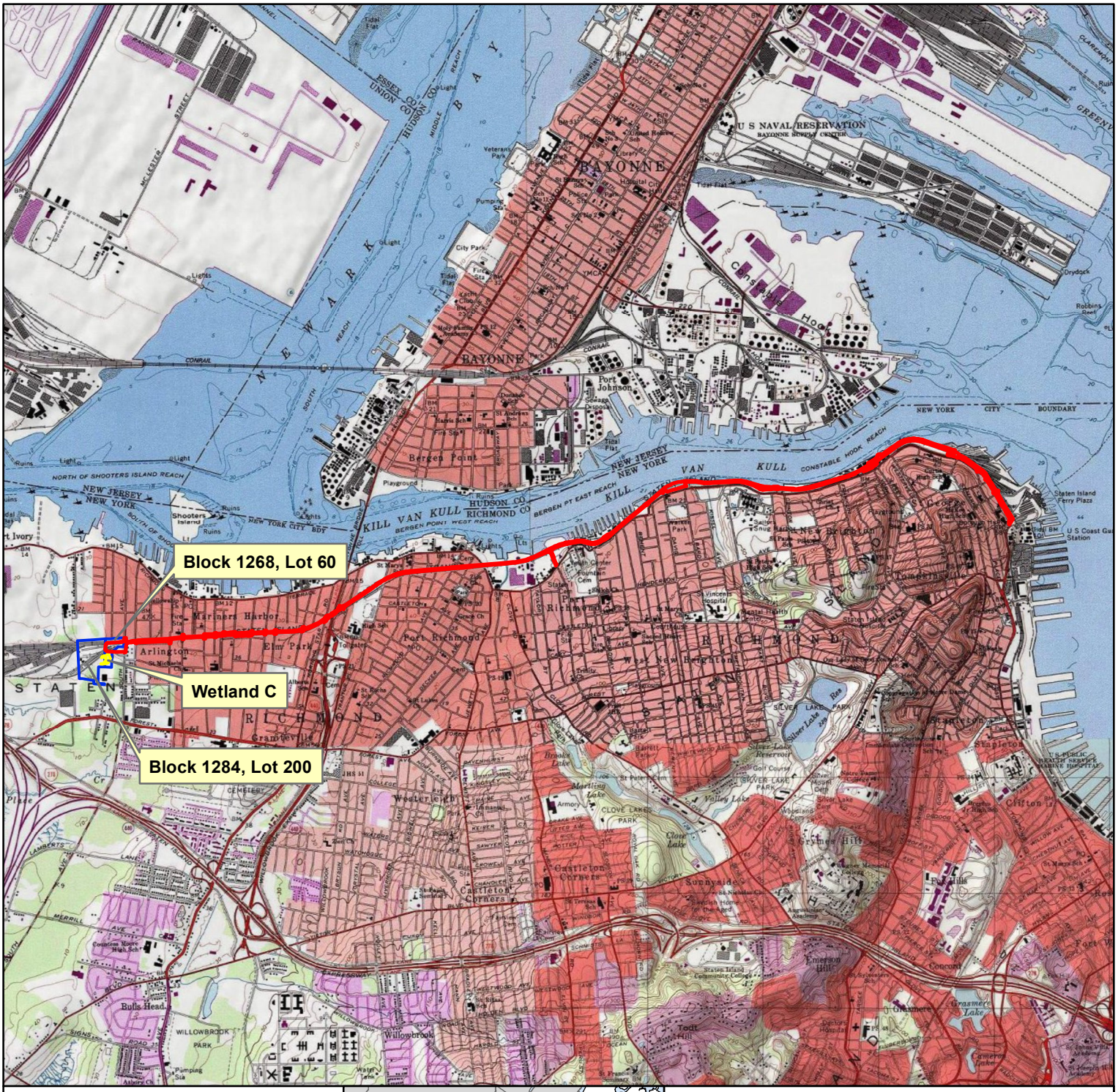
3. **Reason for requesting a field inspection at this time:**
   - ☐ purchasing or selling property
   - ☑ proposing a project to develop a new MTA busway utilizing portions of the former North Shore Railroad ROW and city roadways.
   - ☐ other (explain): _____

4. **Property Location**:
   Street address of property: 112-4 Cable Way, Staten Island, NY 10303
   Wetland Identification Number (if known): e.g. GR-15 E-2/CL:2
   Section/block/lot number (from tax map) if known: Block 1268, Lot 60
   Attach the following maps, if available:
   - ☑ a section of either a county road map or a USGS topographic map with the location of the property highlighted; *and*, if available
   - ☑ a tax map, plat, or survey map that shows all the property boundaries.

I hereby request that a Department representative inspect the property indicated to determine the presence or boundary of any wetlands present. If a delineation is performed, and the Department deems necessary for the purpose of any subsequent permit application, I agree to have the boundary surveyed and to send three (3) copies of the survey map to the Department for approval.

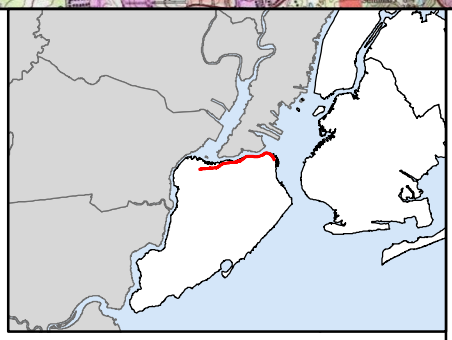
_____ 8/3/2023
Signature of requestor/owner Date

For Agency Use Only:				
Inquiry #	Wetland #	Wetland Class:	USGS Quad Name:	GIS File:
Forwarded to:			Date:	



Legend

- Project Area
- Delineated Wetland
- Parcel Boundary



Sources:
National Geographic Society (NGS) USA Topographic Maps, seamless, scanned images of United States Geological Survey (USGS) paper topographic maps, Elizabeth, Jersey City, Arthur Kill, and The Narrows Quadrangles, distributed as a web mapping service by ESRI® Data & Maps, Redlands, California, 2023.
Parcel Boundaries for Richmond County, Statewide Parcel Map Program, NYS Department of Taxation and Finances Office, New York State Office of Information Technology Services GIS Program, July 2019.

N
W E
S

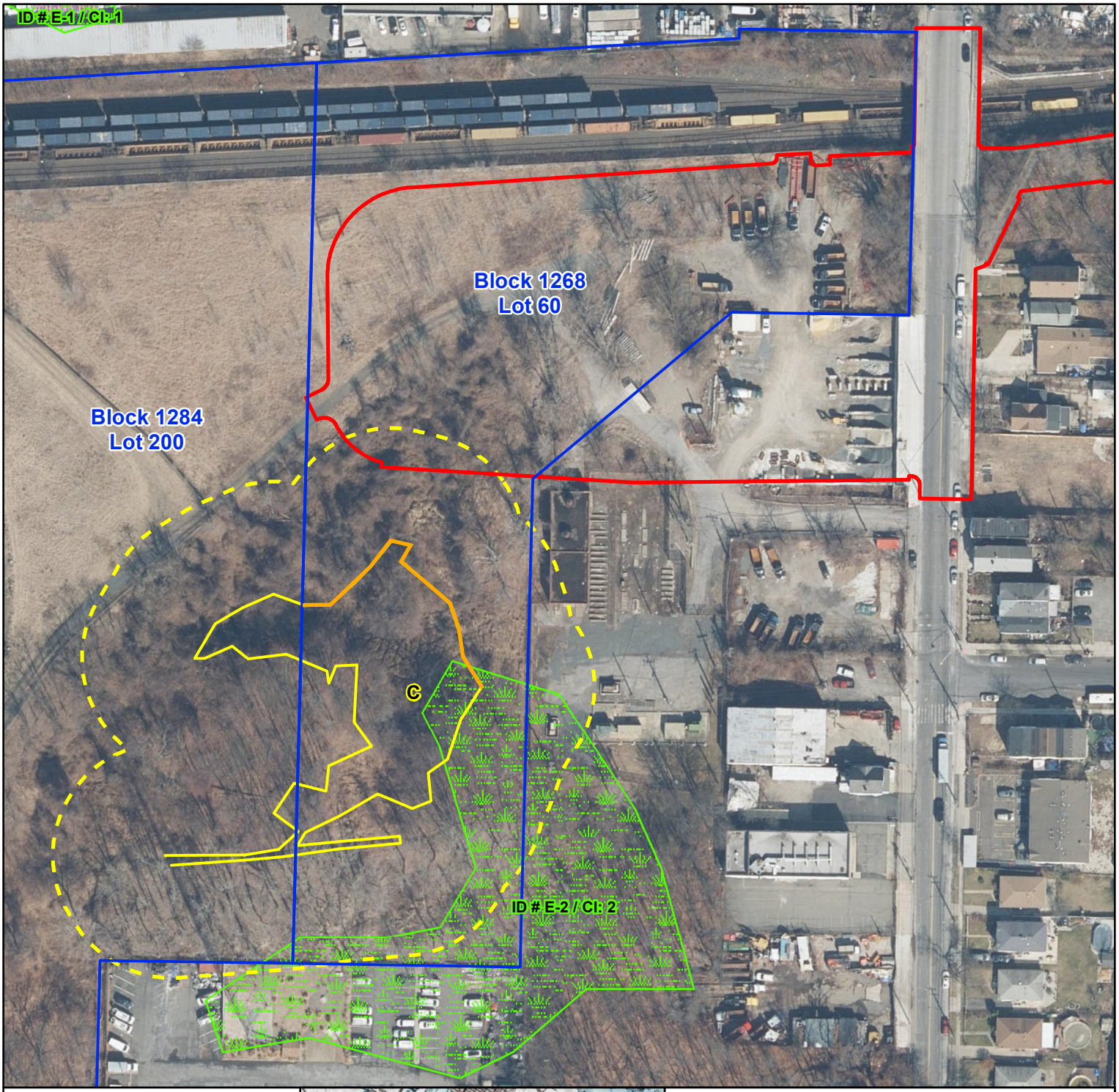
USGS Topographic Map

Proposed North Shore Bus Rapid Transit
Arlington to St. George Terminal
Borough of Staten Island
Richmond County, New York

AGE Project # 4348

4,000
Feet

AMY GREENE ENVIRONMENTAL
a DAVEY company



Legend

- Project Area
- Delineated Wetland
- Adjacent Area
- NYSDEC Wetlands
- Parcel Boundary
- Delineated Wetland - NYSDEC Verification Request

N
W E
S

Sources:
New York State Regulatory Freshwater Wetlands by County, New York State Department of Environmental Conservation (NYSDEC), Albany, NY, August 2013.
Parcel Boundaries for Richmond County, Statewide Parcel Map Program, NYS Department of Taxation and Finances Office, New York State Office of Information Technology Services GIS Program, July 2019.
2022 Imagery in Richmond County, NY Statewide Digital Orthoimagery Program (NYSDOP)
Imagery Coverage, Statewide Web Map Service Regional Coverage from 2000 to 2022, NYS Division of Homeland Security and Emergency Services (DHSES), NYS Cyber Security, distributed 2023.

Delineated & NYSDEC Wetlands Map

Proposed North Shore Bus Rapid Transit
Arlington to St. George Terminal
Borough of Staten Island
Richmond County, New York

AGE Project # 4348

125
Feet

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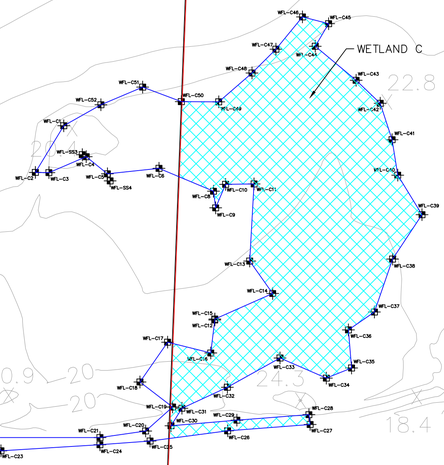


LEGEND:

- PROJECT REVIEW AREA
- PARCEL BOUNDARIES
- EXISTING CONTOUR
- MEAN HIGH WATER (EL. 1.96)
- MEAN HIGHER HIGH WATER (EL. 2.28)
- TRIBUTARY
- DELINEATED WETLAND
- WETLAND WITHIN REVIEW AREA

Wetland	Sq. Ft.*	Acres*
A	59,793	1.37
B	5,236	0.12
C	23,791	0.55
D/E (Non-Jurisdictional)	2,713	0.06
G/F	33,819	0.78

*Area of wetland within project review area.

50 0 50 100

1 inch = 50 feet

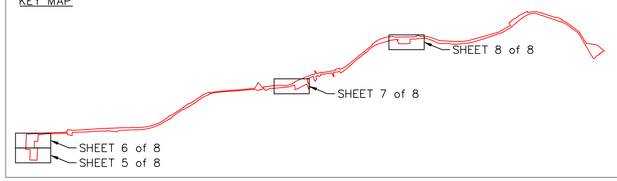
NOTES:

Wetlands within the Review Area were delineated and flagged by Amy S. Greene Environmental Consultants, Inc. on April 11– 12, April 15 and May 24, 2019. Wetlands were delineated by utilizing the U.S. Army Corps of Engineers Wetlands Delineation Manual (1987) [USACE 1987 Manual], and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region Version 2.0 (January 2012). Delineated Wetlands and other Waters of the United States boundaries are subject to review and verification by the US Army Corps Engineers.

Naik Consulting Group, P.C. established the wetlands flags locations by Conventional Surveying methods utilizing a Leica Total Station between the dates of April 22 and June 13, 2019.

Naik Consulting Group, Inc. (Naik) established control for aerial photography which was performed by Geod Corporation from aerial Lidar topographic mapping technics. The aerial Horizontal and Vertical control points values were established by performing three (3) fifteen–minute RTK GPS sessions on each control point. Naik also established additional control points using this same methodology to perform the Laser Scanning in areas obscured by the original aerial flight. This control network was used to perform bridge clearances and abutment locations at all streets which traverse over the old Railroad Bed. A closed route traverse was performed by conventional surveying technics utilizing a Leica Total Station. Conventional surveying methods were also used to establish the bridge abutment & retaining wall locations as well as the bridge clearances. All work was process and adjusted with allowable guidelines.

KEY MAP



JURISDICTIONAL DETERMINATION PLAN PREPARED BY:
AMY S. GREENE ENVIRONMENTAL CONSULTANTS INC.
4 WALTER E. FORAN BLVD.
SUITE 209
FLEMINGTON, NJ 08822
(908) 788-9676

REVISION	DESCRIPTION	DATE	APPROVED

New York City Transit Authority

CONTRACT B–62040

DESIGN AND CONSTRUCTION OF
NORTH SHORE BUS RAPID TRANSIT SYSTEM

JURISDICTIONAL DETERMINATION PLAN

DRAWN BY	S. RONAN		DATE :
DESIGNED BY			DRAWING NO. 6 OF 8
CHECKED BY	H. STRANO		
APPROVED BY			REVISION __