



August 12, 2023

New York Regulatory District
United States Army Corps of Engineers
26 Federal Plz. Room 2113
New York, NY 10278-0090

Re: PIN 31907.29 – Iona Parks Trail and Boardwalk Construction Project
Town of Stony Point, Rockland County, NY

Dear Sir or Madame:

OSPA Engineering Services, PC has been contracted to submit the attached permit application for the proposed construction of an ADA accessible trail and boardwalk with a viewing platform at Iona Island in Bear Mountain State Park, Stony Point, NY.

The project is located at the following coordinates:

Project Coordinates NAD 83: N 41° 18' 9.9108", W -73° 58' 42.5676"

The project proposes the construction of an ADA accessible trail and boardwalk with a viewing platform along the edge of the tidal wetland that adjoins Snake Hole Creek; a Class SC/C stream, with the Hudson River. The United States Fish and Wildlife Service (USFWS) has deemed the project location to be an Estuarine and Marine Wetland (E2EM1N6).

The New York State Office of Parks, Recreation and Historic Preservation's (OPRHP) Cultural Resource Information System (CRIS) indicates that there are no structures on or eligible for inclusion on the State or National Register of Historic Places within or adjacent to the project site. The project site is located within an archaeologically sensitive area.

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (iPaC) review has indicated that the federally endangered Indiana Bat (*Myotis sodalis*) and federally endangered Northern Long-eared Bat (*Myotis septentrionalis*) have the potential to occur within the project area. There is also the potential for the Monarch Butterfly, a candidate species to occur in the project area. It is anticipated that approximately 0.10 acres of trees with a diameter at breast height (DBH) of 3" or greater will be required to be removed for this project. All trees will be removed between November 1st and March 31st. A completed Joint Application Form and attachments including project plans and additional project information are included in this submission. At this time, we respectfully request your review of the permit application. I look forward to receiving your response regarding the project.

In addition, the project State Environmental Quality Review Act (SEQRA) forms are attached.

If you have any questions or require additional information regarding this request, please do not hesitate to call me at (518) 636-9956.

Sincerely,

A handwritten signature in black ink, appearing to read "Melanie Osterhout".

Melanie Osterhout, P.E.
President

Enclosures

c: NYSDEC Region 3
NYSOGS
file



JOINT APPLICATION FORM

For Permits for activities affecting streams, waterways, waterbodies, wetlands, coastal areas, sources of water, and endangered and threatened species.

You must separately apply for and obtain Permits from each involved agency before starting work. Please read all instructions.

1. Applications To:

>NYS Department of Environmental Conservation

☐ Check here to confirm you sent this form to NYSDEC.

Check all permits that apply:

☐ Stream Disturbance

☐ Dams and Impoundment Structures

☐ Tidal Wetlands

☐ Water Withdrawal

☐ Excavation and Fill in Navigable Waters

☐ 401 Water Quality Certification*

☐ Wild, Scenic and Recreational Rivers

☐ Long Island Well

☐ Docks, Moorings or Platforms

☐ Freshwater Wetlands

☐ Coastal Erosion Management

☐ Incidental Take of Endangered / Threatened Species

* See Instructions (page 3)

>US Army Corps of Engineers

☐ Check here to confirm you sent this form to USACE.

Check all permits that apply: ☐ Section 404 Clean Water Act

☐ Section 10 Rivers and Harbors Act

Is the project Federally funded? ☐ Yes ☐ No

If yes, name of Federal Agency:

General Permit Type(s), if known:

Preconstruction Notification: ☐ Yes ☐ No

>NYS Office of General Services

☐ Check here to confirm you sent this form to NYSOGS.

Check all permits that apply:

☐ State Owned Lands Under Water

☐ Utility Easement (pipelines, conduits, cables, etc.)

☐ Docks, Moorings or Platforms

>NYS Department of State

☐ Check here to confirm you sent this form to NYSDOS.

Check if this applies: ☐ Coastal Consistency Concurrence

2. Name of Applicant

Taxpayer ID (if applicant is NOT an individual)

Mailing Address

Post Office / City

State

Zip

Telephone

Email

Applicant Must be (check all that apply): ☐ Owner ☐ Operator ☐ Lessee

3. Name of Property Owner (if different than Applicant)

Mailing Address

Post Office / City

State

Zip

Telephone

Email

For Agency Use Only

Agency Application Number:

4. Name of Contact / Agent

<input type="text"/>		<input type="text"/>		<input type="text"/>	<input type="text"/>
Mailing Address		Post Office / City	State	Zip	
<input type="text"/>		<input type="text"/>	<input type="text"/>	<input type="text"/>	
Telephone	<input type="text"/>	Email	<input type="text"/>		

5. Project / Facility Name

Property Tax Map Section / Block / Lot Number:

<input type="text"/>		<input type="text"/>	
Project Street Address, if applicable	Post Office / City	State	Zip
<input type="text"/>	<input type="text"/>	NY	<input type="text"/>

Provide directions and distances to roads, intersections, bridges and bodies of water

☐ Town ☐ Village ☐ City County Stream/Waterbody Name

<input type="text"/>	<input type="text"/>	<input type="text"/>
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Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: ° ' " Longitude: ° ' "

6. Project Description: Provide the following information about your project. Continue each response and provide any additional information on other pages. **Attach plans on separate pages.**

a. Purpose of the proposed project:

b. Description of current site conditions:

c. Proposed site changes:

d. Type of structures and fill materials to be installed, and quantity of materials to be used (e.g., square feet of coverage, cubic yards of fill material, structures below ordinary/mean high water, etc.):

e. Area of excavation or dredging, volume of material to be removed, location of dredged material placement:

f. Is tree cutting or clearing proposed? ☐ Yes If Yes, explain below. ☐ No

Timing of the proposed cutting or clearing (month/year):

Number of trees to be cut: Acreage of trees to be cleared:

g. Work methods and type of equipment to be used:

h. Describe the planned sequence of activities:

i. Pollution control methods and other actions proposed to mitigate environmental impacts:

j. Erosion and silt control methods that will be used to prevent water quality impacts:

k. Alternatives considered to avoid regulated areas. If no feasible alternatives exist, explain how the project will minimize impacts:

l. Proposed use: ☐ Private ☐ Public ☐ Commercial

m. Proposed Start Date: Estimated Completion Date:

n. Has work begun on project? ☐ Yes If Yes, explain below. ☐ No

o. Will project occupy Federal, State, or Municipal Land? ☐ Yes If Yes, explain below. ☐ No

p. List any previous DEC, USACE, OGS or DOS Permit / Application numbers for activities at this location:

q. Will this project require additional Federal, State, or Local authorizations, including zoning changes?

☐ Yes If Yes, list below. ☐ No

7. Signatures.

Applicant and Owner (If different) must sign the application. If the applicant is the landowner, the **landowner attestation form** can be used as an electronic signature as an alternative to the signature below, if necessary. Append additional pages of this Signature section if there are multiple Applicants, Owners or Contact/Agents.

I hereby affirm that information provided on this form and all attachments submitted herewith is true to the best of my knowledge and belief.

Permission to Inspect - I hereby consent to Agency inspection of the project site and adjacent property areas. Agency staff may enter the property without notice between 7:00 am and 7:00 pm, Monday - Friday. Inspection may occur without the owner, applicant or agent present. If the property is posted with "keep out" signs or fenced with an unlocked gate, Agency staff may still enter the property. Agency staff may take measurements, analyze site physical characteristics, take soil and vegetation samples, sketch and photograph the site. I understand that failure to give this consent may result in denial of the permit(s) sought by this application.

False statements made herein are punishable as a Class A misdemeanor pursuant to Section 210.45 of the NYS Penal Law. Further, the applicant accepts full responsibility for all damage, direct or indirect, of whatever nature, and by whomever suffered, arising out of the project described herein and agrees to indemnify and save harmless the State from suits, actions, damages and costs of every name and description resulting from said project. In addition, Federal Law, 18 U.S.C., Section 1001 provides for a fine of not more than \$10,000 or imprisonment for not more than 5 years, or both where an applicant knowingly and willingly falsifies, conceals, or covers up a material fact; or knowingly makes or uses a false, fictitious or fraudulent statement.

Signature of Applicant

Date

Joshua Laird

Digitally signed by Joshua Laird
Date: 2023.08.07 14:42:06 -04'00'

Applicant Must be (check all that apply): ☒ Owner ☐ Operator ☐ Lessee

Printed Name

Joshua R. Laird

Title

Executive Director

Signature of Owner (if different than Applicant)

Date

Printed Name

Title

Signature of Contact / Agent

Date

Printed Name

Melanie Osterhout, P.E.

Title

Project Manager

08/12/2023

For Agency Use Only

DETERMINATION OF NO PERMIT REQUIRED

Agency Application Number

(Agency Name) has determined that No Permit is required from this Agency for the project described in this application.

Agency Representative:

Printed Name

Title

Signature

Date

PROJECT DESCRIPTION

Additional Project Information

This project will involve the construction of a crushed stone, ADA accessible trail and a 6ft wide boardwalk with a viewing platform along the tidal wetland on Iona Island in Stony Point, Rockland County, NY.

Impacts to the tidal wetland will be limited to temporary impacts for access and permanent impacts for the boardwalk foundation. There are also impacts within the 300' buffer.

The New York State Department of Environmental Conservation's (NYSDEC) Environmental Resource Mapper (ERM) indicated this project is located within a state regulated tidal wetland. A federally regulated estuarine marine wetland is present at the project site as it pertains to the ordinary high water mark (OHW) of the tidal wetland and/or Snake Hole Creek. The OHW was delineated by OSPA Engineering Services, P.C. during a site visit in August 2020. The Wetland Delineation Report is attached. Snake Hole Creek is classified by the NYSDEC as a Class SC/C stream. The best usage for Class/Standard "C" waters is fishing. Water quality is suitable for fish propagation and survival. The water quality shall be suitable for primary and secondary contact recreation, although other factors may limit the use for these purposes. Grading activities adjacent to the stream will be performed with best management practices to ensure there are no additional impacts beyond the existing project scope.

A query of the New York State Historic Preservation Office's (NYSHPO) Cultural Resources Information Center (CRIS) website was conducted to identify historic or cultural resources located within or immediately adjacent to the project site. The project site is located within an archaeologically sensitive area. The project site is not located on or adjacent to a property listed or eligible to be listed on the State and/or National Register of Historic Places.

The United States Fish and Wildlife Service's (USFWS) Information for Planning and Consultation (iPaC) review has indicated that the federally endangered Indiana Bat (*Myotis sodalis*) and the federally endangered Northern Long-eared Bat (*Myotis septentrionalis*) have the potential to occur within the project area. It is anticipated that approximately 0.1 acres of trees with a diameter at breast height (DBH) of 3" or greater will require removal for this project. All tree clearing will take place during the bats' inactive season of November 1st through March 31st. There is also potential for the Monarch Butterfly (*Danaus plexippus*) to occur within the project area, which is listed as a candidate species. Candidate species are not afforded any protection under the Endangered Species Act. Locations of milkweed have been photographed and mapped and damage to milkweed should be minimized whenever possible.

The NYSDEC Environmental Assessment Form (EAF) Mapper indicates that there are a number of state-listed threatened or endangered species that have the potential to occur in the project area. These include the state-endangered Northern Long-eared Bat, Atlantic Sturgeon (*Acipenser oxyrinchus*), Shortnose Sturgeon (*Acipenser brevirostrum*), New England Bulrush (*Bolboschoenus novae-angliae*), Water Pygmyweed (*Crassula aquatica*) and Yellow Flat Sedge (*Cyperus flavescens*) and the state threatened Least Bittern (*Ixobrychus exilis*), Annual Salt Marsh Aster (*Symphyotrichum subulatum*), Spongy-leaved Arrowhead (*Sagittaria montevidensis*), Terrestrial Water Starwort (*Callitriche terrestris*) and the Bald Eagle (*Haliaeetus leucocephalus*).

NMFS Section 7

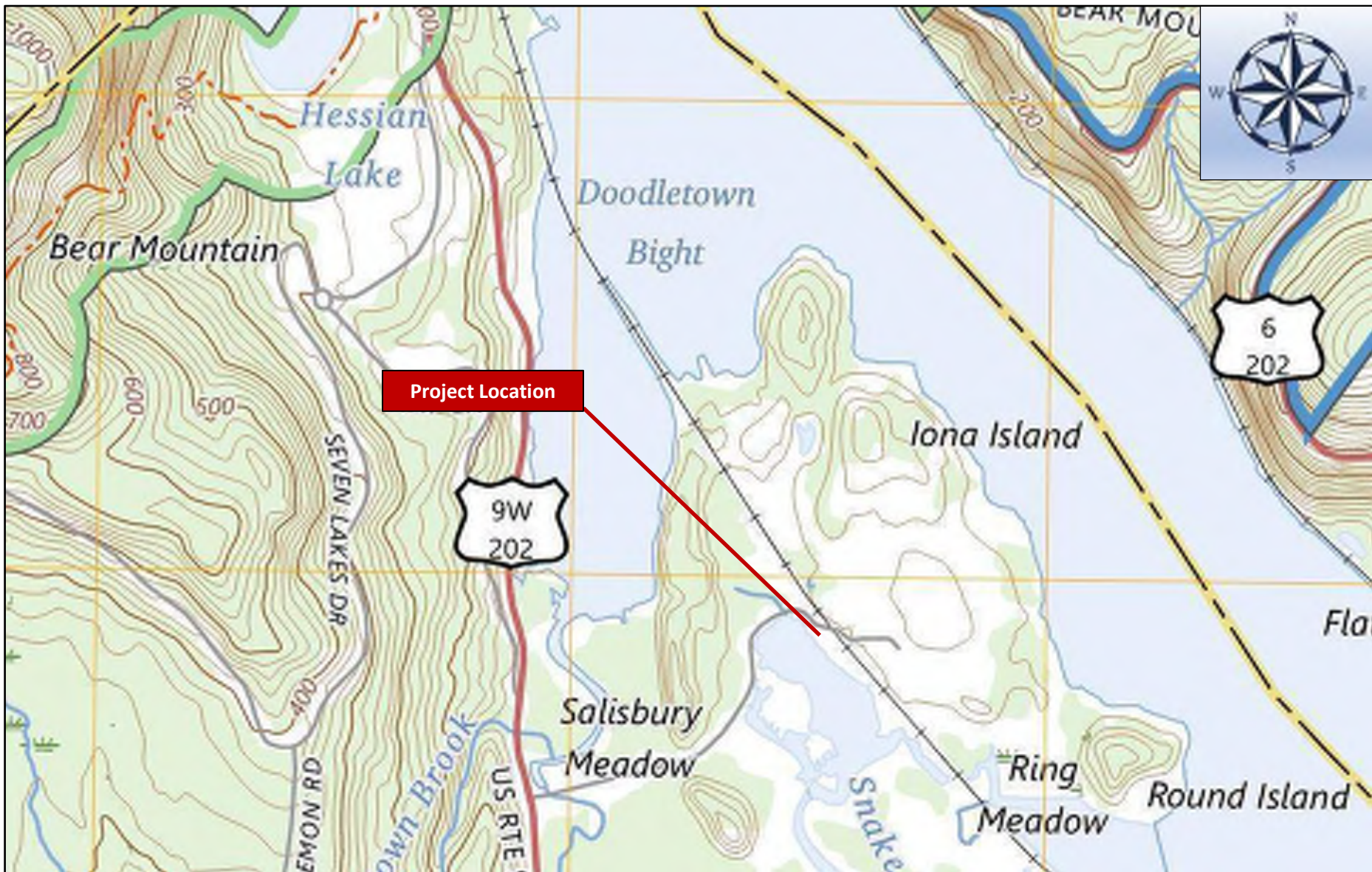
The National Oceanic and Atmospheric Administration (NOAA) Fisheries Essential Fish Habitat (EFH) Mapper indicates that this project site is within designated Essential Fish Habitat for eleven (11) species of diadromous fishes at various life stages. Due to the tidal nature of the site and hydrology that is limited to rivulets during low tide (otherwise a mud flat) it has been determined that the project location is not suitable habitat for any of these species during any of their life stages.

The project is located within a state coastal zone, the Town of Stony Point LWRP, the Iona Island Marsh Significant Coastal and Fish Habitat, the State Coastal Zone and a Scenic Area of Statewide Significance. Attached are a letter to the NYSDOS, the FCAF and a memo evaluating the coastal consistency policies.

The following is an overview of the proposed project work:

- Install erosion and sediment controls
- Remove unwanted vegetation and dispose off-site
- Grade trail location
- Construct stone dust trail
- Install boardwalk and platform foundations
- Construct boardwalk and viewing platform
- Stabilize site
- Remove erosion and sediment controls

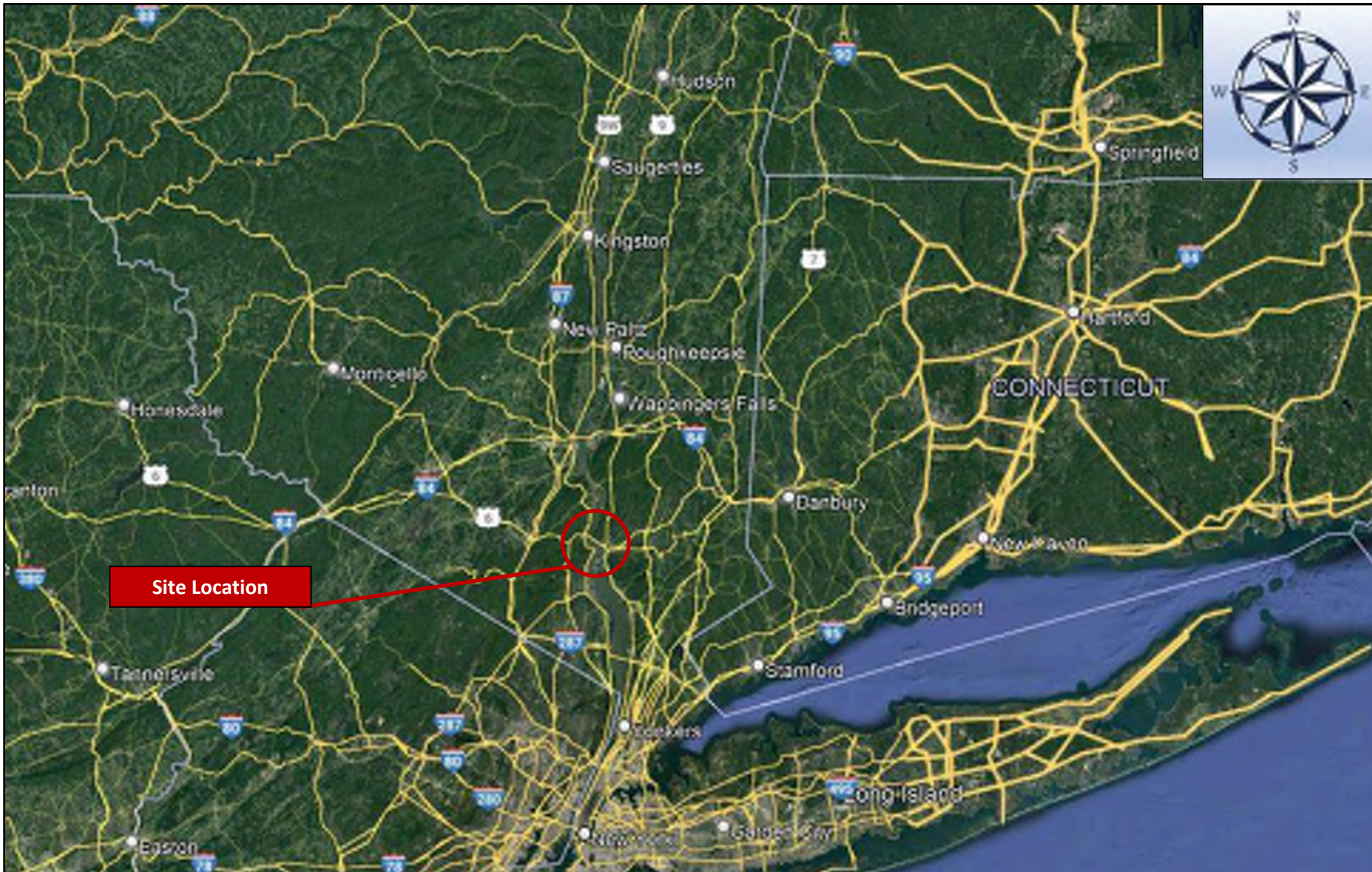
SITE LOCATION AND ENVIRONMENTAL MAPPING



USGS 24K Topographic Map

Peekskill Quadrangle
Iona Island, Stony Point
Rockland County

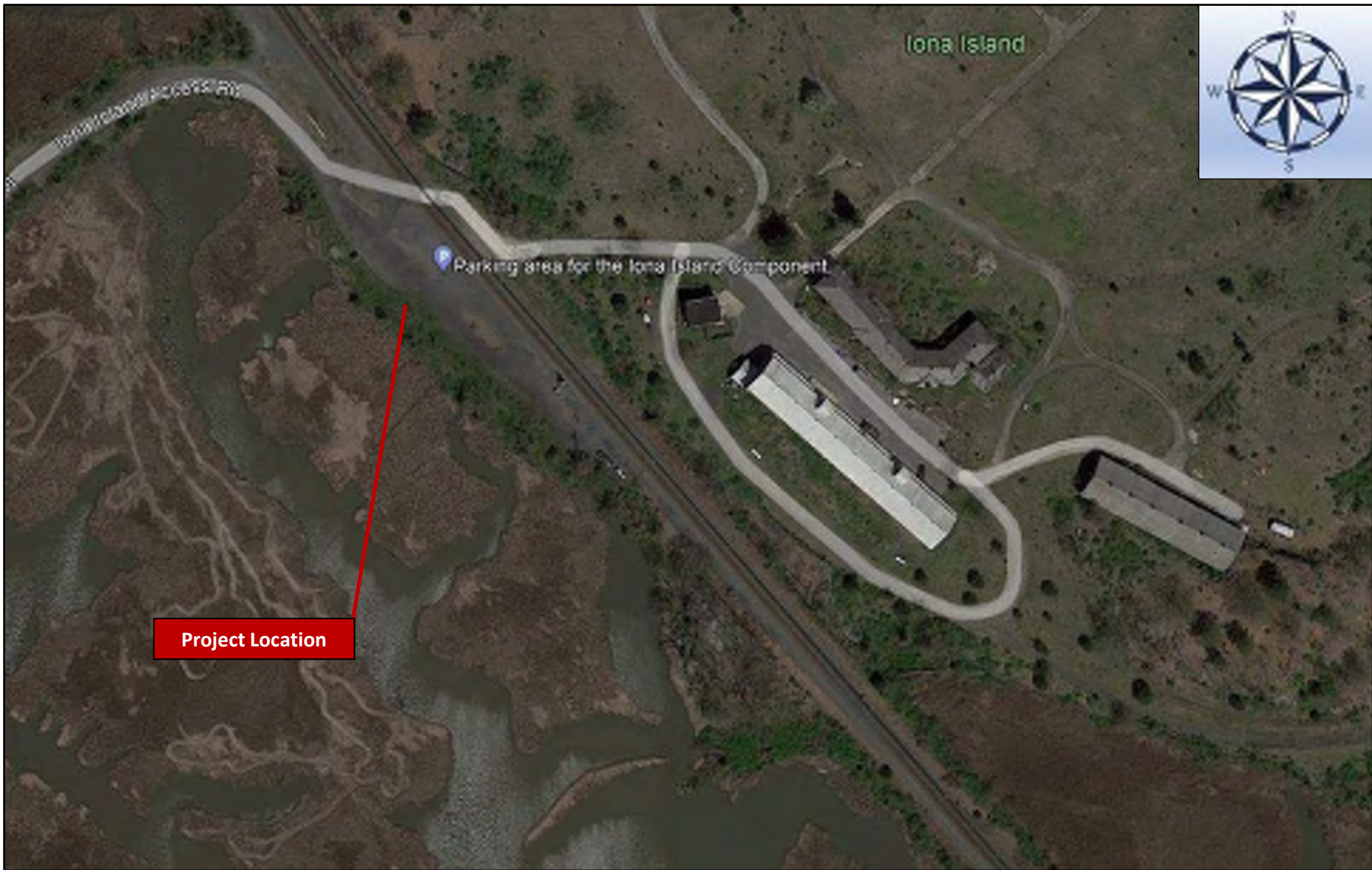
NOT TO SCALE



Google Earth Site Location Map

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Google Earth Project Location Map




Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Project Location

Layers and Legend

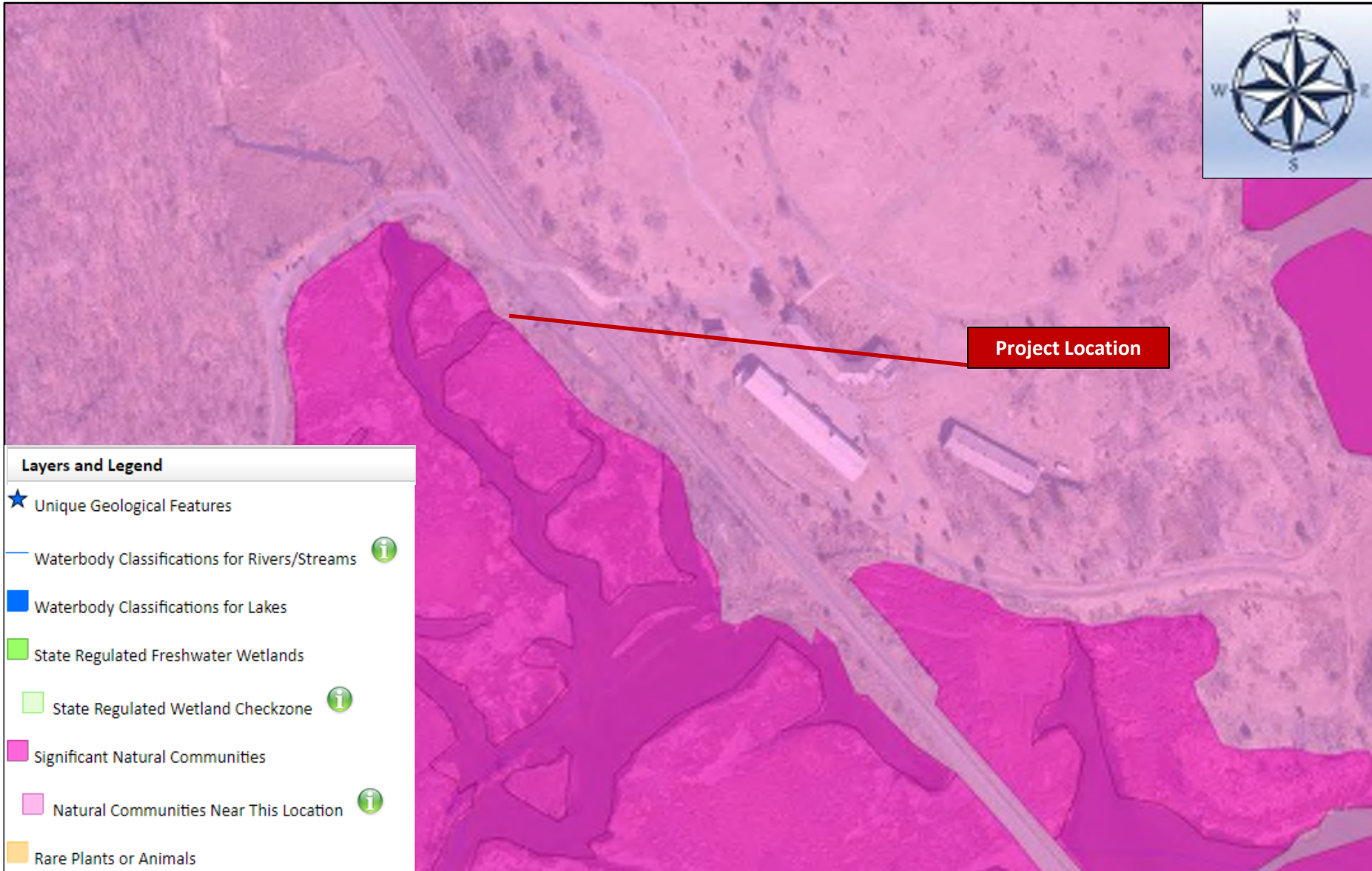
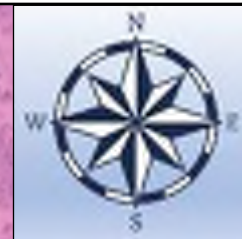
- ★ Unique Geological Features
- Waterbody Classifications for Rivers/Streams 
- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands
- State Regulated Wetland Checkzone 
- Significant Natural Communities
- Natural Communities Near This Location 
- Rare Plants or Animals






NYSDEC Environmental Resource Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Layers and Legend

- ★ Unique Geological Features
- Waterbody Classifications for Rivers/Streams 
- Waterbody Classifications for Lakes
- State Regulated Freshwater Wetlands
- State Regulated Wetland Checkzone 
- Significant Natural Communities
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NYSDEC Environmental Resource Mapper




Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Project Location

Layers and Legend

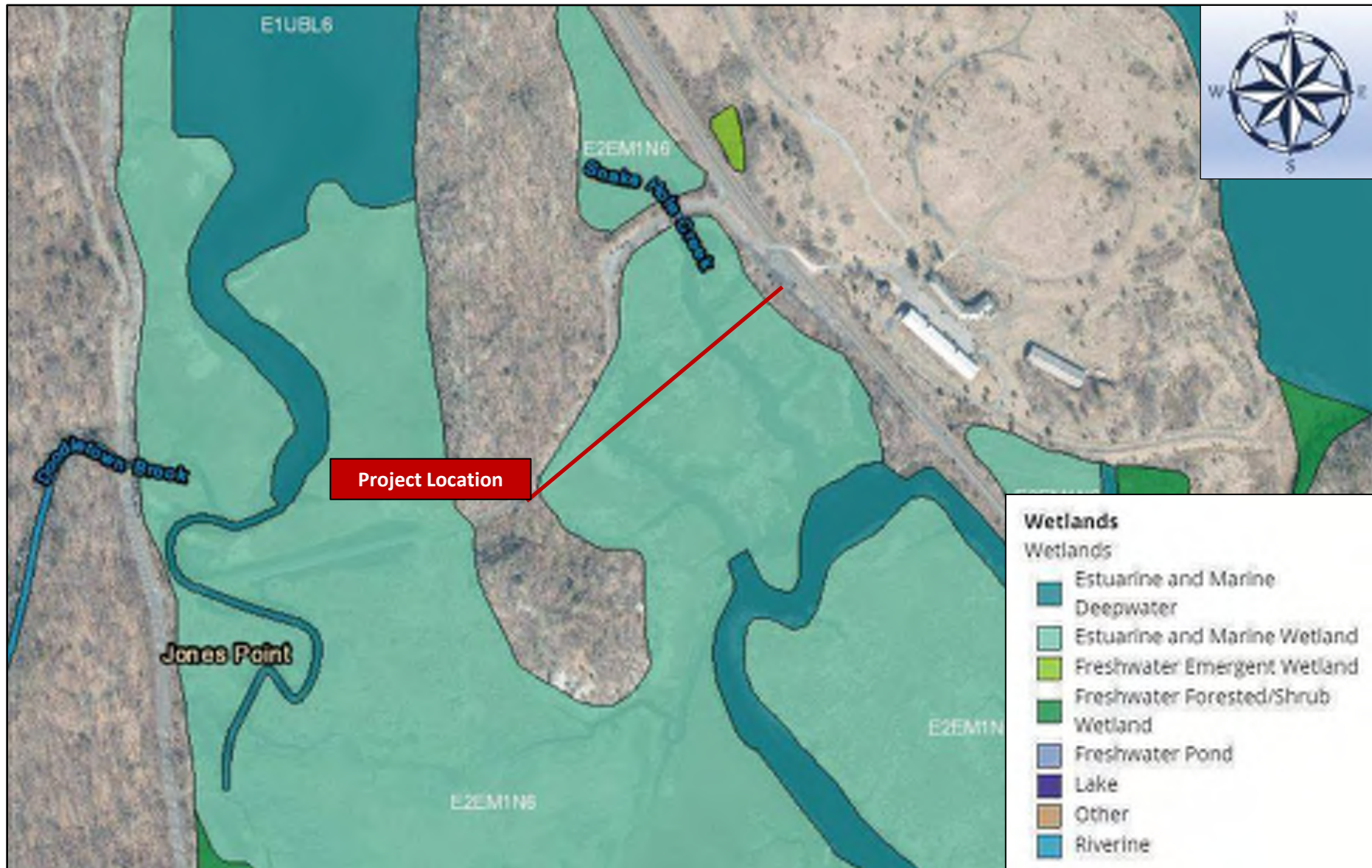
- ★ Unique Geological Features
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- State Regulated Freshwater Wetlands
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- Significant Natural Communities
- Natural Communities Near This Location 
- Rare Plants or Animals



NYSDEC Environmental Resource Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



USFWS NWI Mapper
 Iona Island Trail and Boardwalk
 Town of Stony Point
 Rockland County

NOT TO SCALE

National Register Building Sites
(View)



UN Building Districts (View)



Survey Archaeology Areas (View)



Survey Building Areas (View)



Conservation Projects (View)



Archaeologically Sensitive Areas



UN Building Points (View)

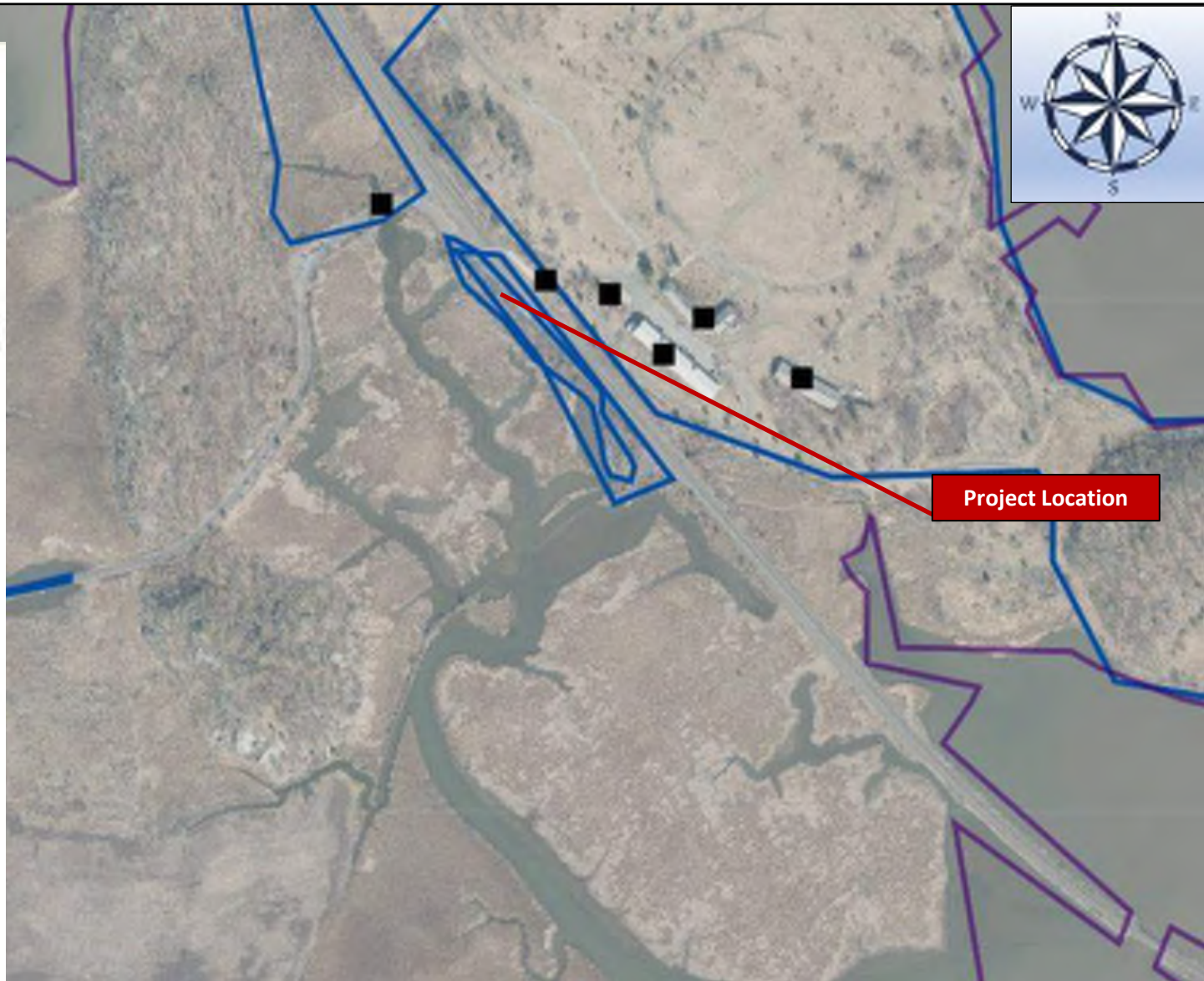
Eligible

Listed

Not Eligible

Not Eligible - Demolished

Undetermined

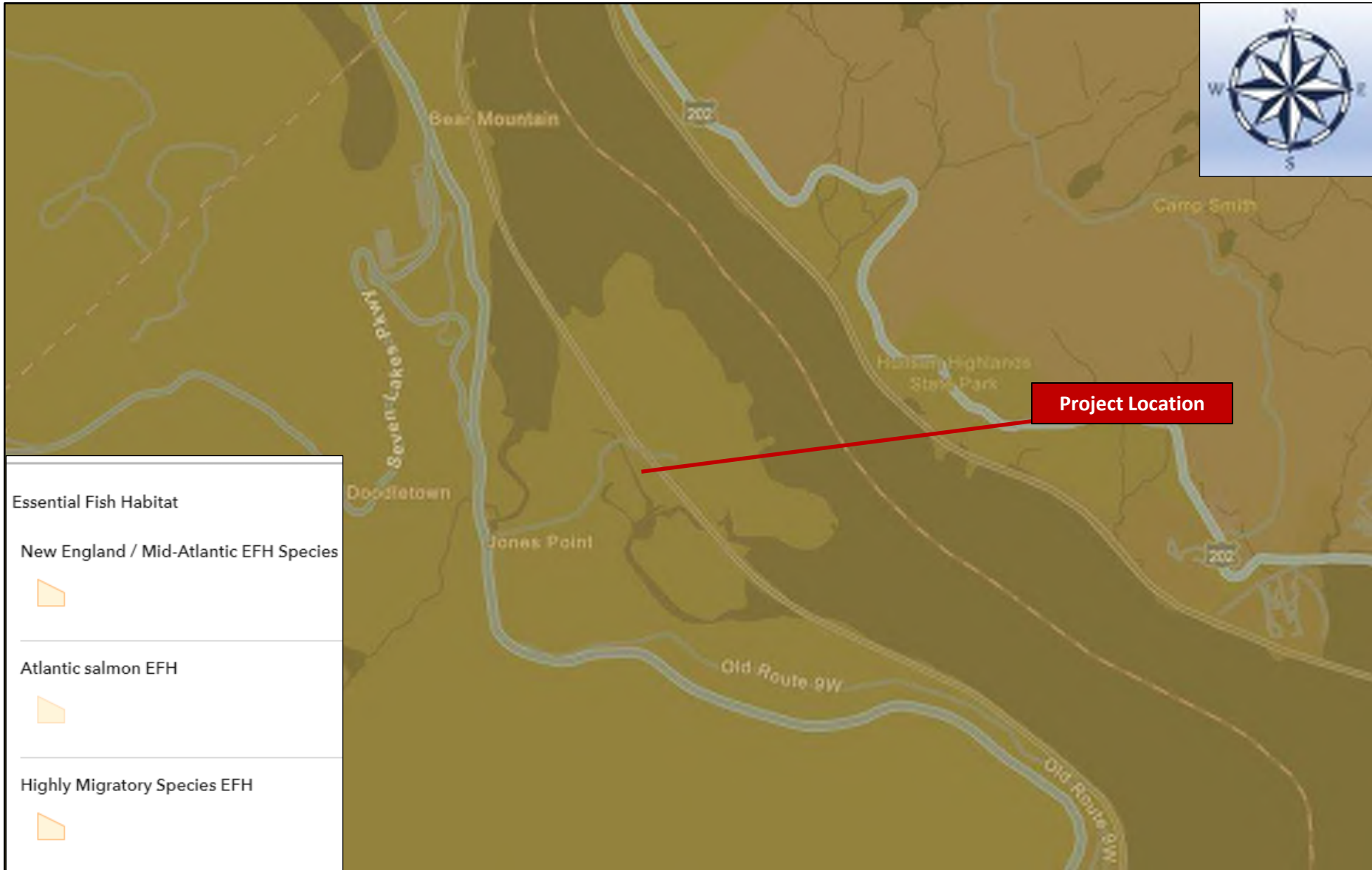


Project Location



NYSHPO CRIS Mapper
Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Essential Fish Habitat Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

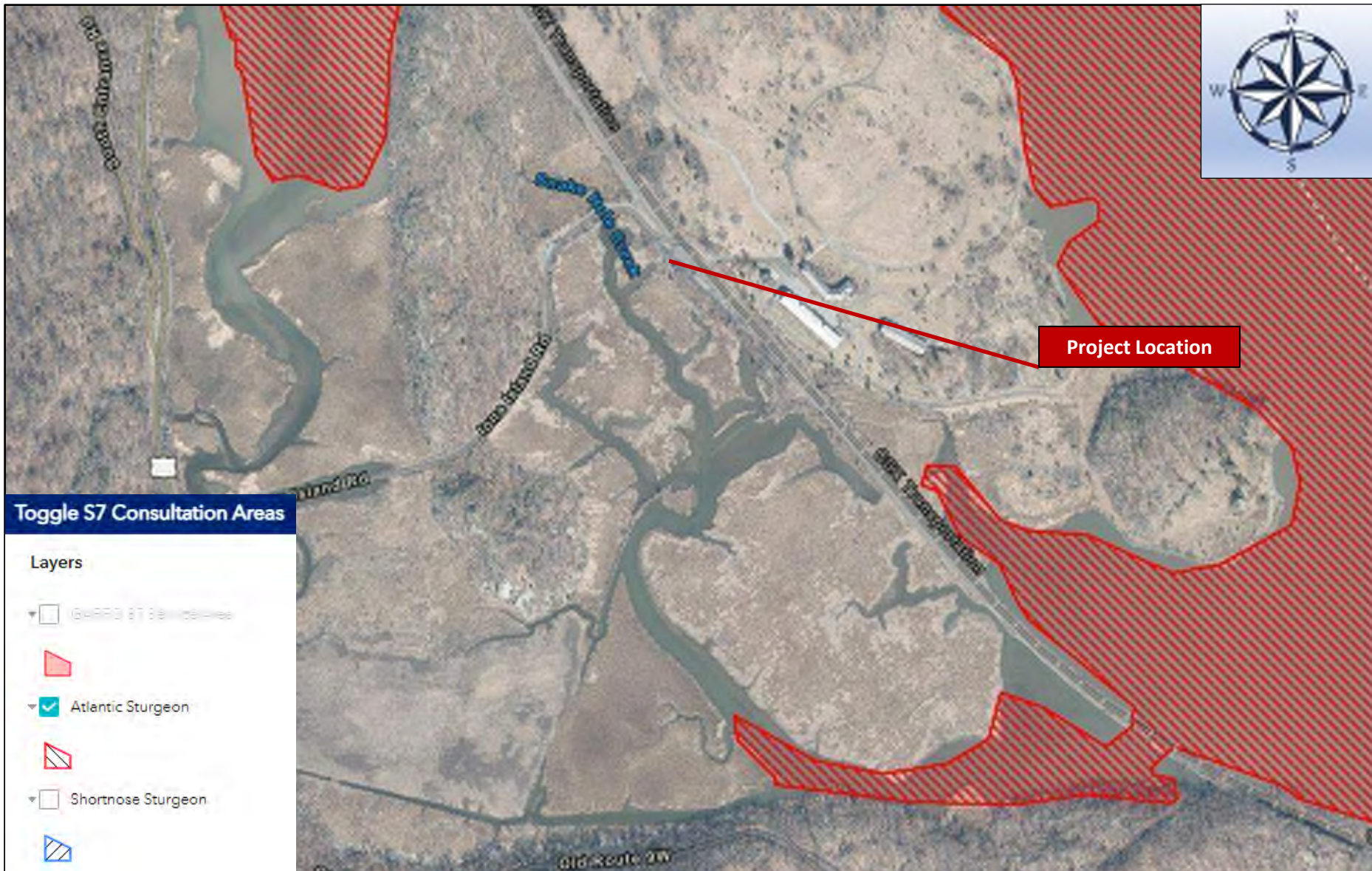
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NOAA Fisheries Critical Habitat Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

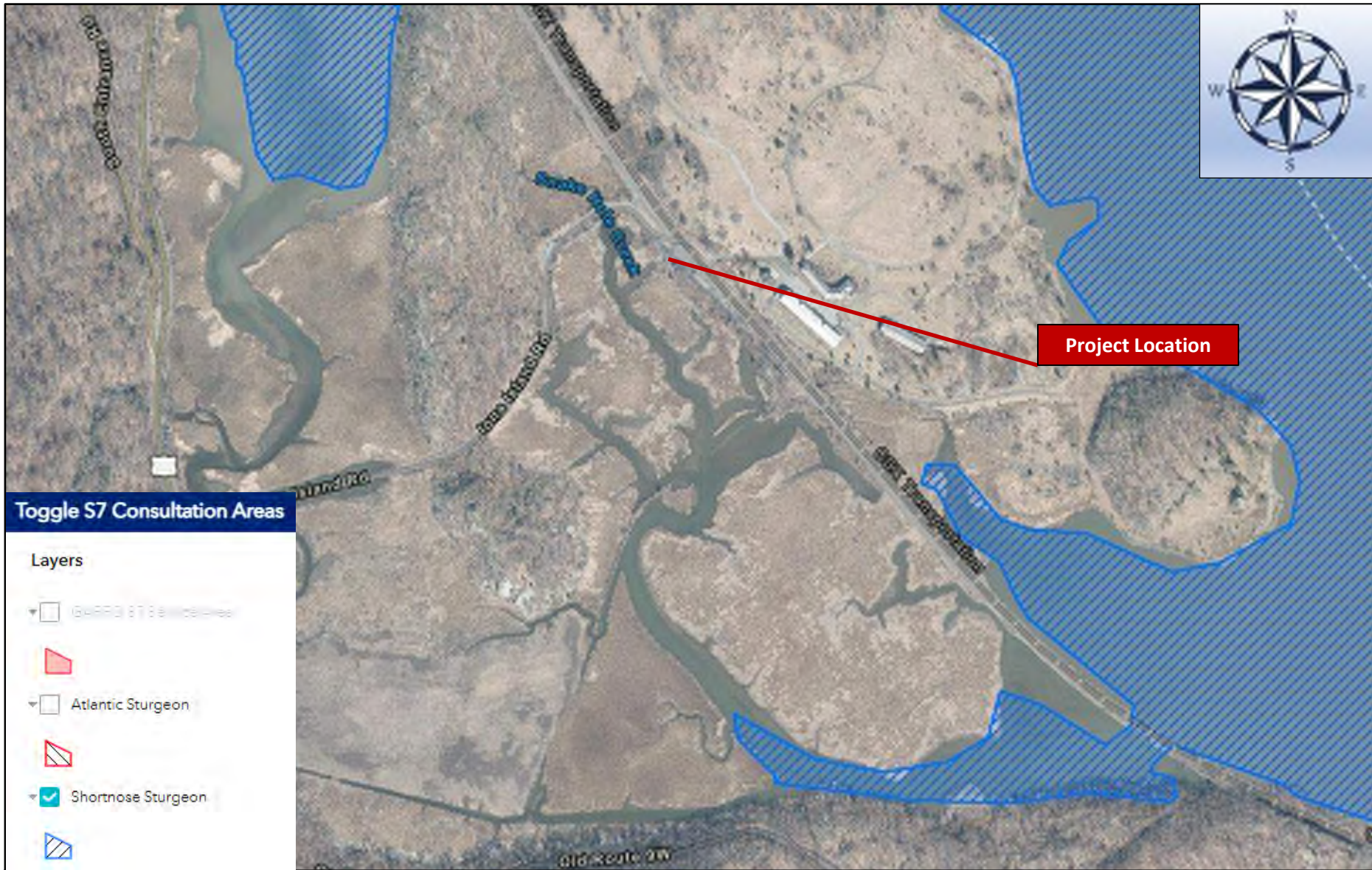
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NOAA ESA Section 7 Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



NOAA ESA Section 7 Mapper

Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, AR, AR1, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponds); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually dead flow on sloping terrain); average depths determined. For areas of shallow fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently destroyed. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE AR1** Area to be protected from 1% annual chance flood by a federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal Flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal Flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODPLAIN AREAS IN ZONE AE

The Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

- OTHER FLOOD AREAS**
ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile, and areas protected by levees from 1% annual chance flood.

- OTHER AREAS**
ZONE B Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Roadway boundary
- Zone boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard zones, and boundary dividing Special Flood Hazard areas of different base flood elevations, flood depths or flood velocities
- Line of historical levee action

Base Flood Elevation line and value; elevation in feet*

Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American vertical Datum of 1985

- Circle section line
- Traverse line

Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

100-foot Universal Transverse Mercator grid values, zone 18N

500-foot grid values; New York State Plane coordinate system, East zone (FIPS/ZONE 1801), Transverse Mercator projection

North arrow (for explanation in North arrow section of this FIRM panel)

Scale 1:50,000

North arrow



Project Location



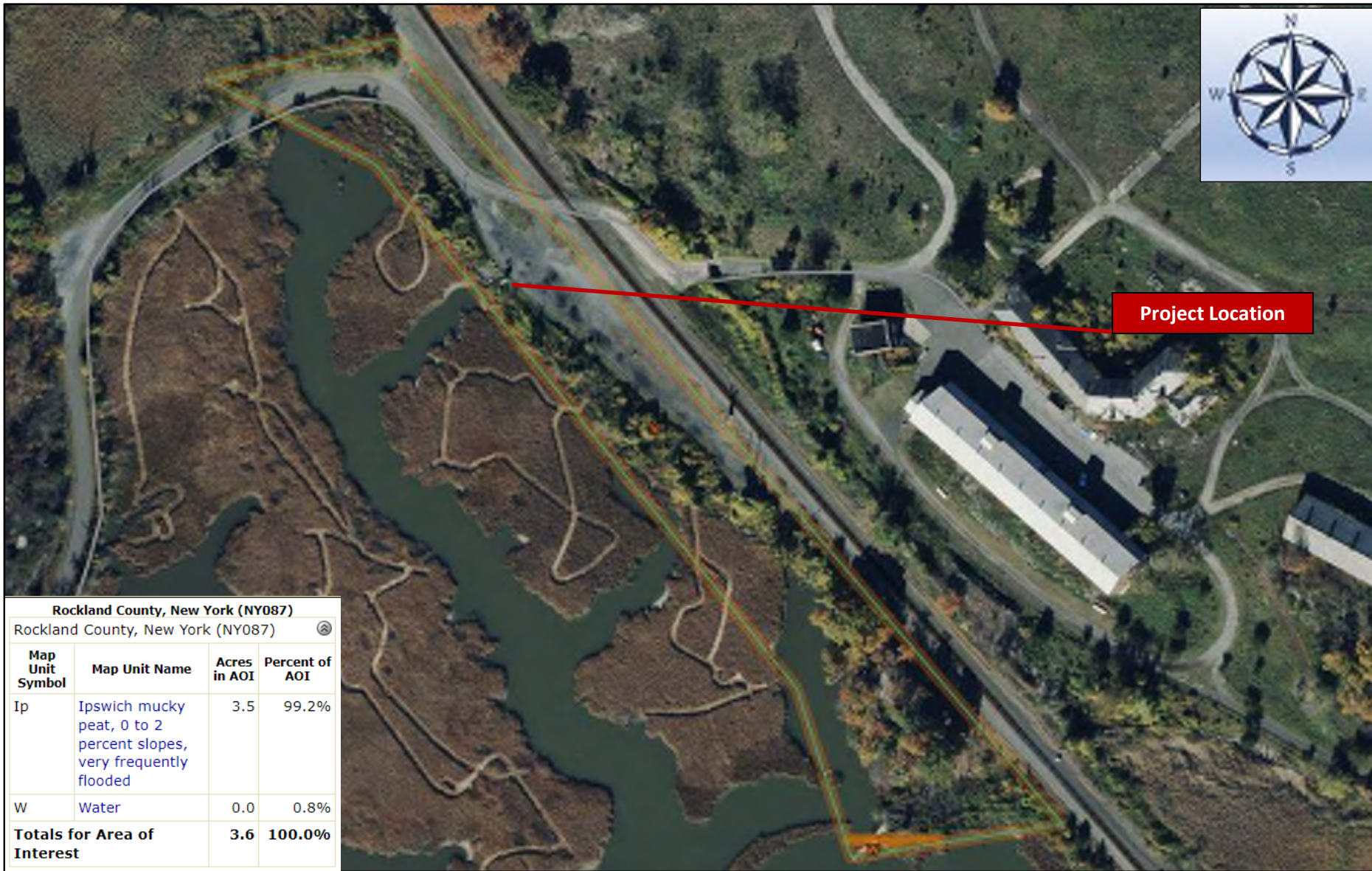
FEMA Floodplains Mapper

Iona Island Trail and Boardwalk

Town of Stony Point

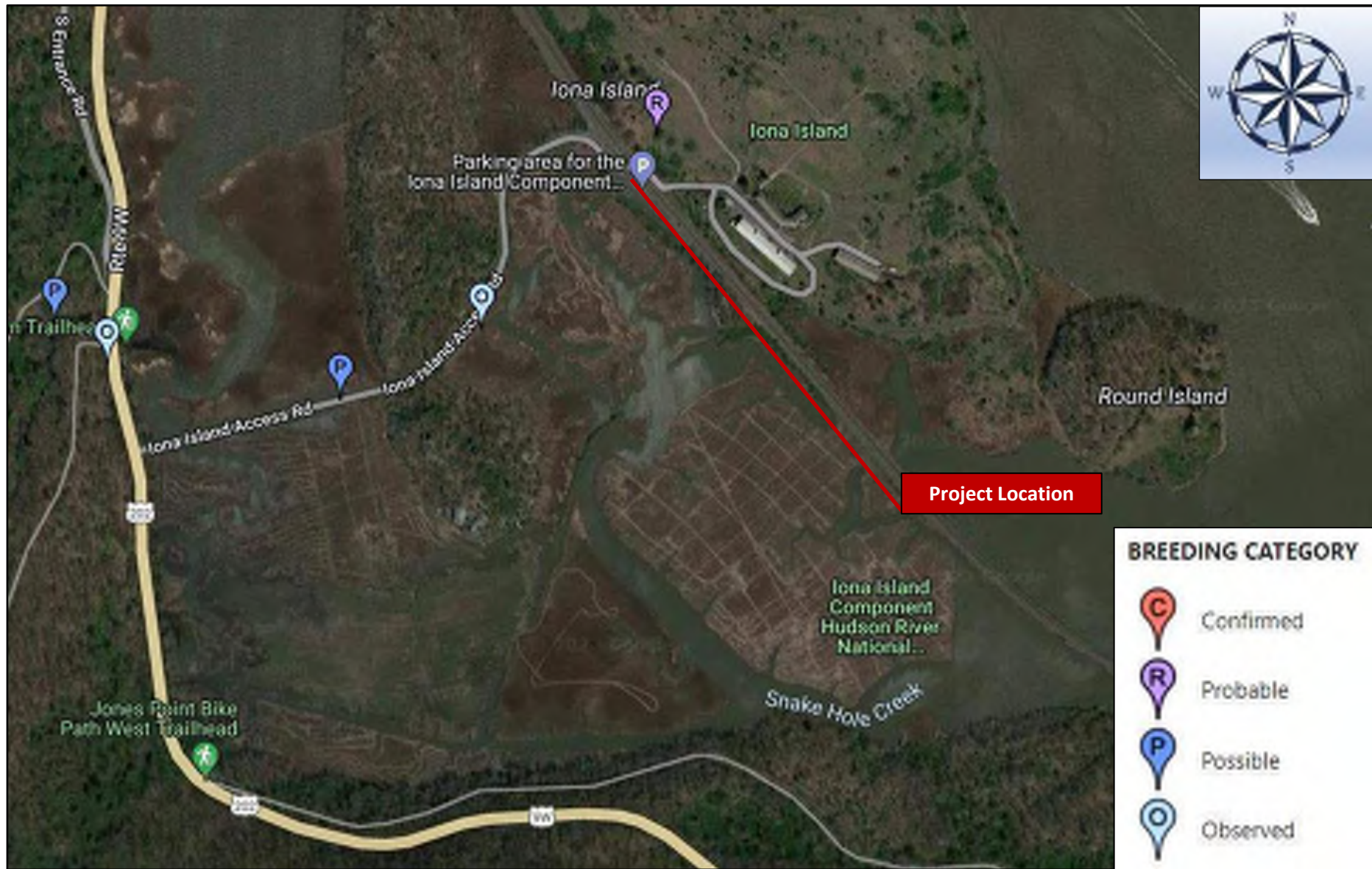
Rockland County

NOT TO SCALE



USDA Soils Map
Iona Island Trail and Boardwalk
Town of Stony Point
Rockland County

NOT TO SCALE



Breeding Bird Atlas Map

Bald Eagles (2020-2023)
Iona Island, Stony Point
Rockland County

NOT TO SCALE

PLANS

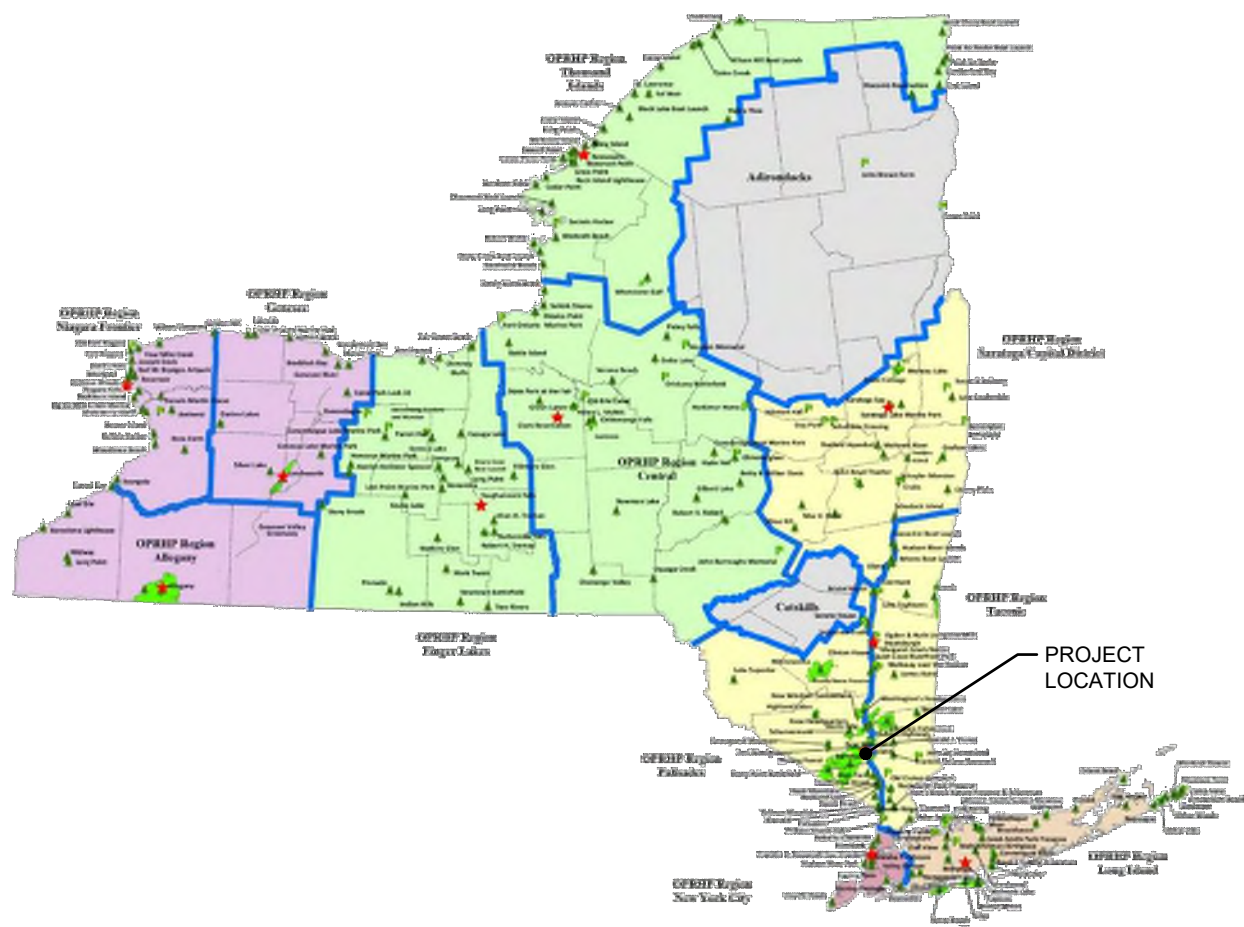
ADA TRAIL & BOARDWALK

PROJECT ID: PA-2017-003

IONA ISLAND NATURE PRESERVE
100 IONA ISLAND ROAD
BEAR MOUNTAIN, NY 10911

75% Design Drawings

PROJECT LOCATION MAP



SITE LOCATION MAP



LIST OF DRAWINGS

GENERAL:

- 1 G-001 TITLE SHEET
- 2 G-002 GENERAL NOTES

CIVIL/SITE:

- 3 C-100 EXISTING CONDITIONS PLAN
- 4 C-110 SITE PREPARATION AND REMOVALS PLAN
- 5 C-120 SITE LAYOUT AND LANDSCAPE PLAN
- 6 C-130 GRADING AND DRAINAGE PLAN
- 7 C-131 SECTIONS AND PROFILES
- 8 C-500 SITE DETAILS
- 9 C-510 BOARDWALK NOTES
- 10 C-511 BOARDWALK ENLARGEMENT PLANS
- 11 C-512 BOARDWALK PROFILE
- 12 C-513 BOARDWALK ENLARGED PARTIAL PLANS
- 13 C-514 BOARDWALK TYPICAL SECTIONS AND DETAILS
- 14 C-515 BOARDWALK SECTIONS

DESIGN CRITERIA:

SITE / CIVIL

ALL WORK SHALL COMPLY WITH THE RELATED PROVISIONS OF THE UNIFORM CODE OF NEW YORK STATE AND ITS REFERENCE STANDARDS.

DESIGN BASIS

GOVERNING CODE.....2020 BCNYS
SUPPLEMENTAL CODES:.....ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES

STRUCTURAL

ALL WORK SHALL COMPLY WITH THE RELATED PROVISIONS OF THE UNIFORM CODE OF NEW YORK STATE AND ITS REFERENCE STANDARDS.

DESIGN BASIS

GOVERNING CODE.....2020 BCNYS
BUILDING INFORMATION
RISK CATEGORY.....II

(SEE SHEET C510 FOR ADDITIONAL CRITERIA)

PERMITTING

- NYSDEC ARTICLE 25 TIDAL WETLANDS, NYSDEC SECTION 401 WATER QUALITY CERTIFICATION
- USACE SECTION 404, NYSOSQS STATE OWNED LANDS UNDER WATER
- NYSOSQS COASTAL CONSISTENCY CONCURRENCE



New York State
Parks, Recreation and
Historic Preservation

Governor Kathy Hochul

Commissioner Erik Killeseid

IT IS A VIOLATION OF STATE EDUCATION LAW FOR ANY PERSON, UNLESS UNDER THE DIRECTION OF A LICENSED ARCHITECT/ENGINEER TO ALTER THIS DOCUMENT IN ANYWAY. ALTERATIONS MUST HAVE THE SEAL, AFFIXED ALONG WITH A DESCRIPTION OF THE ALTERATIONS, DATE AND ARCHITECTS/ENGINEERS SIGNATURE. COPYRIGHT © 2015

Survey / Site Consultant

LABELLA ASSOCIATES
4 BRITISH AMERICAN BOULEVARD
LATHAM, NY 12110



NYS OPRHP Palisades Region

3006 Seven Lakes Dr, PO Box 427
Bear Mountain, NY 10911
(845) 786-2701

Executive Director: Joshua Laird

Project Title:

ADA Trail and Boardwalk
Project ID: PA-BM-2017-003

Project Location:

100 Iona Island Rd
Bear Mountain, New York 10911

Key Plan

REVISIONS

Rev#	Description	Date:

Drawn By: JQ	Seal and Signature
Design By: BGB	
Checked By: MAK	
Approved By: JAR	
Date: 08-09-2023	

Sheet Title:	Drawing Number:
Title Sheet	G-001

Project Number: 2220842	Sheet: 1 of 14
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PROJECT INFORMATION:

PERMITTING

- NYSDEC ARTICLE 25 TIDAL WETLANDS, NYSDEC SECTION 401 WATER QUALITY CERTIFICATION
- USACE SECTION 404, NYSOGS STATE OWNED LANDS UNDER WATER
- NYSOGS COASTAL CONSISTENCY CONCURRENCE

ENVIRONMENTAL RESTRICTIONS

- ENVIRONMENTAL RESTRICTIONS – SEE BELOW FOR DATE RESTRICTIONS. IMPACTS ARE LIMITED TO THE AREAS DEFINED ON THE PLANS INCLUDED WITH THE PERMIT.

CONSTRUCTION SCHEDULE RESTRICTIONS

- TREE CLEARING MUST OCCUR NOVEMBER 1 –MARCH 31, NO CONSTRUCTION MAY 1 –AUGUST 1

SPECIES PROTECTION

- COMPLY WITH ALL PERMIT REQUIREMENTS, NO WORK SHALL OCCUR OUTSIDE OF DEFINED WORK AREAS

PEDESTRIAN SAFETY & CONSTRUCTION SEQUENCING NOTES:

1. THE CONTRACTOR IS TO MAINTAIN A SAFE ROUTE FOR PEDESTRIAN TRAFFIC THROUGHOUT THE DURATION OF CONSTRUCTION CONSTRUCTION.
2. THE CONTRACTOR IS TO ACCESS THE SITE THROUGH IONA ISLAND ACCESS ROAD. (SEE TITLE SHEET FOR LOCATION MAP).
3. CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL SIGNS THROUGHOUT THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL REMOVE AND REMEDIATE ANY DAMAGES FROM TEMPORARY SIGN INSTALLATION UPON CONSTRUCTION COMPLETION.
4. SIGNAGE SHALL BE PLACED NEAR THE EXISTING KIOSK STATING THAT NEW TRAIL IS UNDER CONSTRUCTION. SIGNS SHALL GENERALLY BE CONSTRUCTED AS SHOWN ON DETAIL 4&5/C500, OR AS OTHERWISE NOTED, AND AT A MINIMUM SHALL INCLUDE:
 - A. SITE TEMPORARILY CLOSED, NO PEDESTRIAN ACCESS PERMITTED.

EXISTING CONDITIONS NOTE:

1. NOT ALL EXISTING TREES ARE SHOWN ON PLAN, TREES SHOWN ARE OF SIGNIFICANT SIZE (>3"Ø).

SITE PREPARATION AND REMOVALS NOTES:

1. CONFORM TO APPLICABLE CODE FOR DEMOLITION OF STRUCTURES, SAFETY OF ADJACENT STRUCTURES, DUST CONTROL, RUNOFF CONTROL, AND HAULING, DISPOSAL AND STORAGE OF DEBRIS.
2. MAINTAIN EXISTING UTILITIES TO REMAIN IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING WORK. SELECTIVE DEMOLITION OPERATIONS, DO NOT INTERRUPT EXISTING UTILITIES SERVING OPERATING FACILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY OWNER AND AUTHORITIES HAVING JURISDICTION.
3. DEMOLISH AND REMOVE COMPONENTS IN AN ORDERLY AND CAREFUL MANNER.
4. PROTECT EXISTING FEATURES THAT ARE NOT TO BE DEMOLISHED.
5. CONDUCT OPERATIONS WITH MINIMUM INTERFERENCE TO PUBLIC OR PRIVATE ACCESSES.
6. ROUGH GRADE AND COMPACT AREAS AFFECTED BY DEMOLITION TO MAINTAIN SITE GRADES AND CONTOURS.
7. FIELD VERIFY EXISTING CONDITIONS AND CORRELATE WITH REQUIREMENTS INDICATED ON DEMOLITION PLAN TO DETERMINE EXTENT OF SELECTIVE DEMOLITION REQUIRED.
8. USE WATER MIST AND OTHER SUITABLE METHODS TO LIMIT THE SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL PROTECTION REGULATIONS. DO NOT USE WATER WHEN IT MAY DAMAGE EXISTING CONSTRUCTION, SUCH AS CAUSING FLOODING, AND TRANSPORTING POLLUTANTS. NO WATER IS AVAILABLE AT THE SITE SO CONTRACTOR SHALL PROVIDE WATER IF NEEDED.
9. PROMPTLY DISPOSE OF DEMOLISHED MATERIALS. ALL DEBRIS RESULTING FROM DEMOLITION ACTIVITIES SHALL BE DISPOSED OF OFF-SITE AT A FACILITY APPROVED TO RECEIVE THE DEBRIS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. DO NOT BURN DEMOLISHED MATERIALS ON-SITE. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.
10. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF SELECTIVE DEMOLITION.
11. ANY EXISTING TREES THAT ARE DAMAGED BY THE CONTRACTOR DURING THE COURSE OF CONSTRUCTION SHALL BE REPLACED IN KIND IF DAMAGED.

SITE LAYOUT NOTES:

GENERAL CONSTRUCTION:

1. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER, SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AND UNDER THE SUPERVISION OF A NEW YORK STATE LICENSED LAND SURVEYOR.
2. NOTIFY PARK MANAGER 48 HOURS PRIOR TO INITIALIZATION OF ANY WORK ON SITE.
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT PRIOR REVIEW FROM THE ENGINEER.
4. CONTRACTOR IS RESPONSIBLE FOR EMPLOYING AND MAINTAINING ALL TRAFFIC CONTROL AND SAFETY MEASURES DURING CONSTRUCTION.
5. CONTRACTOR IS RESPONSIBLE FOR PROPERLY & SAFELY MAINTAINING AREA BETWEEN ALL ADJOINING PROPERTIES.
6. NO WORK, STORAGE OR TRESPASS SHALL BE PERMITTED BEYOND THE SITE PROPERTY LINES OR PUBLIC RIGHT-OF-WAY.
7. ANY CONDITION ENCOUNTERED IN THE FIELD DIFFERING FROM THOSE SHOWN HEREON, SHALL BE REPORTED TO THE DIRECTOR'S REPRESENTATIVE BEFORE CONSTRUCTION IS TO PROCEED.

LAYOUT :

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FIELD LAYOUT. AS-BUILT PLANS TO BE DEVELOPED BY LICENSED SURVEYOR, AND SHALL BE REVIEWED BY THE OWNER AND THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ANY CORRECTION OR ADDITIONS TO THE SATISFACTION OF THE OWNER AND THE ENGINEER BEFORE UTILITIES WILL BE ACCEPTED.

GRADING AND DRAINAGE NOTES:

1. PRIOR TO SITE DISTURBANCE, CONTRACTOR TO INSTALL EROSION & SEDIMENT CONTROL MEASURES.
2. NO SOILS TO BE TRANSPORTED OFF-SITE. CONTRACTOR TO REFER TO MEMORANDUM DATED 8/7/2023 TITLED "IONA ISLAND NATURE PRESERVE – JUNE 2023 SAMPLING RESULTS" FOR ANY PRECAUTIONS RECOMMENDED FOR ON-SITE WORKERS.
3. STRIP ALL TOPSOIL PRIOR TO COMMENCING EARTHWORK OPERATIONS. TOPSOIL MAY BE STORED AND REUSED IN LAWN AND PLANTING AREAS ONLY. TOPSOIL AND SEED ALL AREAS DISTURBED BY CONSTRUCTION THAT ARE TO REMAIN GREEN.
4. ALL EARTHWORK SHALL BE SMOOTHLY AND EVENLY BLENDED INTO EXISTING CONDITIONS. NO WORK, STORAGE OR TRESPASS SHALL BE PERMITTED BEYOND THE BOUNDARIES OF ANY EASEMENT OR PROPERTY LINE.

STORMWATER COMPLIANCE NOTE:

1. THE TOTAL AREA OF DISTURBANCE PLANNED FOR THIS PROJECT IS LESS THAN 1 ACRE THEREFORE A SPODES GENERAL PERMIT (GP-0–020–001) IS NOT REQUIRED.

EROSION CONTROL SEQUENCING NOTES:

1. THERE SHALL BE A PRE-CONSTRUCTION MEETING WITH CONTRACTORS, DIRECTOR'S REPRESENTATIVE AND PARK MANAGER. BI-WEEKLY INSPECTION REPORTS SHALL BE SUBMITTED ELECTRONICALLY WITHIN 24 HOURS OF COMPLETION TO THE DIRECTOR'S REPRESENTATIVE AND PARK MANAGER.
2. PRIOR TO COMMENCING ANY CLEARING, GRUBBING, EARTHWORK ACTIVITIES, ETC. AT THE SITE, THE CONTRACTOR SHALL FLAG THE WORK LIMITS AND SHALL INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (I.E. WETLAND FENCE, SILT FENCES, TREE PROTECTION/BARRIER FENCES, STABILIZED CONSTRUCTION ENTRANCES, STORM DRAIN SEDIMENT FILTERS, DRAINAGE DITCH SEDIMENT FILTERS, INFILTRATION BASIN PROTECTION, ETC.) INDICATED ON THE PROJECT DRAWINGS. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MUST BE CONSTRUCTED, STABILIZED, AND FUNCTIONAL BEFORE SITE DISTURBANCE BEGINS WITHIN THEIR TRIBUTARY AREAS.
3. PRIOR TO COMMENCING CLEARING, GRUBBING AND/OR EARTHWORK ACTIVITIES IN ANY OTHER AREA OF THE SITE, THE CONTRACTOR SHALL INSTALL INLET PROTECTION MEASURES.
4. TEMPORARY DIVERSION MEASURES SHALL BE INSPECTED DAILY AND REPAIRED/STABILIZED AS NECESSARY TO MINIMIZE EROSION.
5. THE CONTRACTOR SHALL COMMENCE SITE CONSTRUCTION ACTIVITIES INCLUDING CLEARING & GRADING OF THE PROPOSED AREA OF DISTURBANCE AS REQUIRED.
6. INSTALL PROTECTIVE MEASURES AT THE LOCATIONS OF ALL GRATE INLETS, AND CURB INLETS.
7. CONSTRUCT ALL UTILITIES, CURB INLETS, AREA INLETS, AND STORM SEWER MANHOLES, AS SHOWN ON THE PLANS. INLET PROTECTION MAY BE REMOVED TEMPORARILY FOR THIS CONSTRUCTION.
8. FINALIZE TRAIL SUB-GRADE PREPARATION.
9. REMOVE PROTECTIVE MEASURES AROUND INLETS AND MANHOLES NO MORE THAN 24 HOURS PRIOR TO PLACING STABILIZED BASE COURSE.
10. INSTALL SUB-BASE MATERIAL AS REQUIRED FOR PAVEMENT.
11. PRIOR TO FINALIZING CONSTRUCTION OF THE STORMWATER MANAGEMENT FACILITY, ALL CATCH BASINS AND DRAINAGE LINES SHALL BE CLEANED OF ALL SILT AND SEDIMENT.
12. THE CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND IMMEDIATELY ESTABLISH PERMANENT VEGETATION ON THE AREAS DISTURBED DURING THEIR REMOVAL.

EROSION AND SEDIMENT CONTROL MEASURES:

1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE SCOPE AND DURATION OF SOIL DISRUPTION.

GENERAL EROSION AND SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IN STRICT COMPLIANCE WITH "NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL", CURRENT VERSION.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE COURSE OF CONSTRUCTION.
3. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST BY SPRINKLING EXPOSED SOIL AREAS FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS.
4. WHEN ALL DISTURBED AREAS ARE STABLE, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES:

PERMANENT AND TEMPORARY VEGETATION:

INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. ALL AREAS THAT HAVE RECEIVED VEGETATION SHOULD BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:

INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE.

SILT FENCE:

INSPECT FOR DAMAGE EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE FENCE. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:

INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE OR HAY BALE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO 1/3 THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANYWAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCK PILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:

SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORK. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

CHECK DAM:

INSPECT CHECK DAMS EVERY SEVEN DAYS & AFTER EVERY RAIN EVENT. IF SIGNIFICANT EROSION HAS OCCURRED BETWEEN STRUCTURES A LINER OF STONE OR OTHER SUITABLE MATERIAL SHOULD BE INSTALLED IN THAT PORTION OF THE CHANNEL. REMOVE SEDIMENT ACCUMULATED BEHIND THE DAM AS NEEDED TO ALLOW CHANNEL TO DRAIN THROUGH THE STONE CHECK DAM AND PREVENT LARGE FLOWS FROM CARRYING SEDIMENT OVER THE DAM. REPLACE STONES AS NEEDED TO MAINTAIN THE DESIGN CROSS SECTION OF THE STRUCTURES. REMOVE CHECK DAMS AS PER APPROVAL OF ENGINEER.

DEWATERING PITS:

(IF REQUIRED) – INSPECT DAILY DURING OPERATION FOR CLOGGING OR OVERFLOW. CLEAR INLET AND DISCHARGE PIPES OF OBSTRUCTIONS. IF A FILTER MATERIAL BECOMES CLOGGED WITH SEDIMENT, PIT SHALL BE DISMANTLED AND CONSTRUCT NEW PITS AS NEEDED.

SNOW AND ICE CONTROL:

PARKING LOTS, ROADWAYS, AND DRIVEWAYS ADJACENT TO WATER QUALITY FILTERS SHALL NOT BE SANDED DURING SNOW EVENTS DUE TO HIGH POTENTIAL FOR CLOGGING FROM SAND IN SURFACE WATER RUNOFF. USE SALT ONLY FOR SNOW AND ICE CONTROL.

NOTE SUBJECT TO FURTHER REFINEMENT

LANDSCAPING NOTES:

1. THE LANDSCAPE CONTRACTOR SHALL CAREFULLY COORDINATE CONSTRUCTION ACTIVITIES WITH THAT OF THE EARTHWORK CONTRACTOR AND OTHER SITE DEVELOPMENT.
2. THE CONTRACTOR SHALL VERIFY DRAWING DIMENSIONS WITH ACTUAL FIELD CONDITIONS AND INSPECT RELATED WORK AND ADJACENT SURFACES. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL FINISH GRADES WITHIN THE WORK AREA. THE CONTRACTOR SHALL REPORT TO THE LANDSCAPE ARCHITECT/ENGINEER AND OWNER ALL CONDITIONS WHICH PREVENT PROPER EXECUTION OF THIS WORK.
3. THE EXACT LOCATION OF ALL EXISTING UTILITIES, STRUCTURES AND UNDERGROUND UTILITIES, WHICH MAY NOT BE INDICATED ON THE DRAWINGS, SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITY SERVICES AND IS RESPONSIBLE FOR THEIR REPLACEMENT IF DAMAGED.
4. THE CONTRACTOR SHALL KEEP THE PREMISES FREE FROM RUBBISH AND ALL DEBRIS AT ALL TIMES AND SHALL ARRANGE MATERIAL STORAGE SO AS NOT TO INTERFERE WITH THE OPERATION OF THE PROJECT. ALL UNUSED MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED FROM THE SITE.
5. NO TREES OR SHRUBS SHALL BE PLANTED ON EXISTING OR PROPOSED UTILITY LINES.
6. QUALITY ASSURANCE:
 - A. NOMENCLATURE: PLANT NAMES SHALL CONFORM TO THE LATEST EDITION OF "STANDARDIZED PLANT NAMES" AS ADOPTED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE.
 - B. SIZE AND GRADING: PLANT SIZES AND GRADING SHALL CONFORM TO THE LATEST EDITION OF "AMERICAN STANDARD FOR NURSERY STOCK" AS SPONSORED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. (AAN), UNLESS OTHERWISE SPECIFIED.
 - C. NURSERY SOURCE: OBTAIN FRESHLY DUG, HEALTHY, WOODOUS PLANTS NURSERY GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT FOR A MINIMUM OF 2 YEARS. PLANTS SHALL HAVE BEEN LINED OUT IN ROWS, ANNUALLY CULTIVATED, SPRAYED, PRUNED AND FERTILIZED IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. ALL PLANTS SHALL HAVE BEEN TRANSPLANTED OR ROOT PRUNED AT LEAST ONCE IN THE PAST 3 YEARS. BALLED AND BURLAPPED PLANTS MUST COME FROM SOIL WHICH WILL HOLD A FIRM ROOT BALL. HEELED IN PLANTS AND PLANTS FROM COLD STORAGE ARE NOT ACCEPTABLE.
 - D. SUBSTITUTIONS: DO NOT MAKE SUBSTITUTIONS OF TREES AND/OR SHRUB MATERIALS. IF REQUIRED LANDSCAPE MATERIAL IS NOT OBTAINABLE, SUBMIT PROOF OF NON-AVAILABILITY AND PROPOSAL FOR USE OF EQUIVALENT MATERIAL. WHEN AUTHORIZED, ADJUSTMENTS OF CONTRACT AMOUNT (IF ANY) WILL BE MADE BY CHANGE ORDER.
7. PRODUCTS
 - A. IMPORTED TOPSOIL: SEE SPECIFICATIONS.
 - B. FERTILIZER: SEE SPECIFICATIONS.
 - C. PLANT MATERIAL: SEE SPECIFICATIONS.
 - D. MULCH: SEE SPECIFICATIONS.
8. SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:
 - A. SEE PROJECT INFORMATION NOTES.
 - B. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY RESTORATION ACTIVITIES WHERE SEED MIXES OR PLANTINGS ARE TO BE ESTABLISHED AND WORK IS COMPLETE, SHALL BE RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS AFTER WORK IS COMPLETE. WORK SHALL BE EVALUATED PER THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER CROP (SEE CONSERVATION SEED MIXTURE COVER CROPS FOR TYPES AND DATES OF USAGE) WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.

PRODUCTS

- A. IMPORTED TOPSOIL: SEE SPECIFICATIONS.
- B. FERTILIZER: SEE SPECIFICATIONS.
- C. PLANT MATERIAL: SEE SPECIFICATIONS.
- D. MULCH: SEE SPECIFICATIONS.

SEEDING & PLANTING SEASONS AND TIMING CONDITIONS:

- A. SEE PROJECT INFORMATION NOTES.
- B. AREAS UNDERGOING CLEARING OR GRADING AND ANY AREAS DISTURBED BY RESTORATION ACTIVITIES WHERE SEED MIXES OR PLANTINGS ARE TO BE ESTABLISHED AND WORK IS COMPLETE, SHALL BE RESTORED WITH PERMANENT VEGETATIVE COVER AS SOON AS SITE AREAS ARE AVAILABLE AND WITHIN 14 DAYS AFTER WORK IS COMPLETE. WORK SHALL BE EVALUATED PER THE SEASONAL LIMITATIONS FOR EACH KIND OF LANDSCAPE WORK REQUIRED. PROVIDE STABILIZATION WITH TEMPORARY VEGETATIVE COVER CROP (SEE CONSERVATION SEED MIXTURE COVER CROPS FOR TYPES AND DATES OF USAGE) WITHIN 14 DAYS AFTER WORK IS COMPLETE, FOR SEEDING OUTSIDE PERMITTED SEEDING PERIODS.

C. MESIC AREAS CONSERVATION SEED MIXTURES:

PROVIDE FRESH, CLEAN, NEW-CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS. PROVIDE THE FOLLOWING MIXTURES:

a. EASTERN ECOTYPE NATIVE GRASS MIX (ENRMX-177 OR APPROVED EQUAL)

%	SPECIES
35.0%	Andropogon gerardii (Big Bluestem)
30.0%	Sorghastrum nutans NYA Ecotype (Indiangrass)
20.0%	Panicum virgatum (Switchgrass)
15.0%	Elymus virginicus (Virginia Wildrye, Madison NY Ecotype)

a.1.1. SEEDING RATE

- a.1.1.1. 1 LB PER 1,000 SQ.FT. WITH A COVER CROP.

b. DEER RESISTANT MEADOW MIX (ENRMX-155 OR APPROVED EQUAL)

%	SPECIES
20.0%	Elymus virginicus (Virginia Wildrye)
18.0%	Scirpochyrium scopari (Little Bluestem)
16.0%	Bouteloua curtipendula (Butte Sideoats Grama)
11.0%	Echinacea purpurea (Purple Coneflower)
4.00%	Chamaecrista fasciculata (Partridge Pea)
4.00%	Coreopsis lanceolata (Lanceleaf Coreopsis)
3.70%	Rudbeckia hirta (Blackeyed Susan)
2.90%	Asclepias tuberosa (Butterfly Milkweed)
2.70%	Helopsis helianthoides (Oxeye Sunflower)
2.50%	Penstemon digitalis (Tall White Beardtongue)
2.00%	Liatris spicata (Marsh blazing Star)
1.70%	Zizia aurea (Golden Alexander)

1.30%	Eragrostis spectabilis (Purple Lovegrass)
1.30%	Lespedeza capitata (Roundhead Lespedeza)
1.30%	Senna hebecarpa (Wild Senna)
1.00%	Baptisia australis (Blue False Indigo)
0.80%	Aster oblongifolius (Aromatic Aster)
0.80%	Pycnanthemum tenuifolium (Narrowleaf Mountainmint)
0.70%	Rudbeckia hirta (Blackeyed Susan)
0.50%	Aster pilosus (Heath Aster)
0.50%	Monarda fistulosa (Wild Bergamot)
0.40%	Solidago nemoralis (Gray Goldenrod)
0.30%	Aster prenanthoides (Zigzag Aster)
0.30%	Solidago bicolor (White Goldenrod)
0.30%	Tradescantia ohiensis (Ohio Spiderwort)

b.0.1. SEEDING RATE

- b.0.1.1. 1 LB PER 1,000 SQ.FT. WITH A COVER CROP.

c. NATIVE HABITAT FOR STRIP MINES MIX (ENRMX-111 OR APPROVED EQUAL)

%	SPECIES
20.00%	Elymus virginicus (Virginia Wildrye)
18.00%	Andropogon gerardii, 'Southlow (Big Bluestem, 'Southlow)
18.00%	Scirpochyrium scoparium (Little Bluestem)
18.00%	Sorghastrum nutans (Indiangrass)
13.00%	Panicum virgatum, 'Shawnee' (Switchgrass 'Shawnee)
2.80%	Chamaecrista fasciculata (Partridge Pea)
2.50%	Rudbeckia hirta (Blackeyed Susan)
2.00%	Helopsis helianthoides (Oxeye Sunflower)
1.40%	Desmodium canadense (Showy Ticktrefoil)
0.20%	Asclepias syriaca (Common Milkweed)
0.20%	Monarda fistulosa (Wild Bergamot)

c.0.1. SEEDING RATE

- c.0.1.1. 1 LB PER 1,000 SQ.FT. WITH A COVER CROP.

d. COVER CROP

- d.1. USE ONE OF THE FOLLOWING:
 - d.a.a. (1 JANUARY TO 31 JULY; 30 LBS/ACRE): GRAIN OATS
 - d.a.b. (1 AUGUST TO 31 DECEMBER; 10 LBS/ACRE): GRAIN RYE

e. SITE PREPARATION

- e.1. COMPETITION FROM INVASIVE OR UNDESIRABLE VEGETATION IS THE MOST LIMITING FACTOR IN UPLAND MEADOW PREPARATION. PRIOR TO PLANTING, ALL SUCH VEGETATION MUST BE FULLY CONTROLLED. TYPICAL CONTROL STRATEGIES INCLUDE REPEATED TILLING, SMOTHERING WITH BLACK PLASTIC OR HERBICIDES. TILLAGE STRATEGY: A SITE IS DISC HARROWED EVERY TWO TO FOUR WEEKS FOR A ONE TO TWO MONTH PERIOD. THE UNDERLYING PREMISE OF THIS PROCESS IS THAT THE ROOT SYSTEM OF PERENNIAL SPECIES WILL BE WORN OUT TO THE POINT OF KILLING THE SPECIES. IN ADDITION, TILLAGE WILL STIMULATE GERMINATION OF DORMANT WEED SEED WHICH WILL BE KILLED BY SUBSEQUENT TILLAGE. PLANTING SHOULD NOT OCCUR UNTIL PERENNIAL SPECIES ARE COMPLETELY KILLED.
- e.1.2. BLACK PLASTIC MAY ALSO BE USED TO KILL WEEDS. IT MAY BE LAID ACROSS TILLED OR UNTILLED SOIL, AND ANCHORED DOWN BY BURYING THE EDGES IN SOIL OR LAYING BOARDS OR BRICKS ACROSS THE SURFACE. THIS PROTOCOL SHOULD BE UTILIZED DURING A GROWING SEASON WHERE THE INTENT IS TO FALL PLANT IN THE SAME YEAR OR SPRING PLANT THE FOLLOWING YEAR.

- e.1.3. THE APPLICATION OF AN APPROVED HERBICIDE BY A LICENSED SPRAY TECHNICIAN, SUCH AS GLYPHOSATE IS THE MOST COMMON AND LEAST TIME-INTENSIVE PROTOCOL FOR CONTROLLING EXISTING VEGETATION. HERBICIDES ARE MOST EFFECTIVE ON ACTIVELY GROWING PLANT TISSUES; THEREFORE, THEY ARE VERY EFFECTIVE ON NEW GROWTH IN THE SPRING. SPRAYING SHOULD BEGIN WHEN GROWTH IS APPROXIMATELY 6" HIGH. ONE TO TWO WEEKS LATER, A FOLLOW-UP APPLICATION OF SPRAY MAY BE MADE TO ADDRESS SKIPS OR PERSISTENT SPECIES. IF SUBSTANTIAL PLANT TISSUES REMAIN ON THE SURFACE FOLLOWING A FULL KILL BY HERBICIDES, A CLOSE MOWING, TILLAGE OR BURNING MAY BE NECESSARY TO ACHIEVE GOOD SEED-TO-SOIL CONTACT.

f. GROWING SEASON MAINTENANCE

f.1. FIRST GROWING SEASON

- f.1.1. WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-TRIM THE MEADOW TO A HEIGHT OF 8" (NOTE: A LAWN MOWER IS NOT RECOMMENDED AS THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED). THIS WILL REDUCE COMPETITION BY FAST-GROWING WEEDS FOR SUNLIGHT, WATER AND NUTRIENTS NEEDED BY SLOW-GROWING PERENNIAL NATIVES. MOWING SHOULD CEASE BY MID-SEPTEMBER.
- f.1.2. FOR SEEDINGS OF ANNUAL WILDFLOWER MIXES OR ANNUAL & PERENNIAL WILDFLOWER MIXES, PROBLEM WEEDS SHOULD BE HAND PULLED.
- f.1.3. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH APPROVED HERBICIDES (SUCH AS ROUNDUP® OR RODEO®).

f.2. SECOND GROWING SEASON

- f.2.1. PRIOR TO NEW SPRING GROWTH REACHING A HEIGHT OF 2" (E.G., SHORTLY AFTER REDBUD BLOOMS), TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2"). THIS WILL ALLOW THE SOIL TO WARM MORE QUICKLY, WHICH WILL STIMULATE THE EMERGENCE AND GROWTH OF NATIVE SEEDLINGS AND REDUCE THE LIKELIHOOD OF THE MEADOW BEING INVADED BY SHRUBS.
- f.2.2. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE.

E. HYDRIC AREAS SEED MIX:

PROVIDE FRESH, CLEAN, NEW-CROP SEED MIXED IN THE PROPORTIONS SPECIFIED FOR SPECIES AND VARIETY, AND CONFORMING TO FEDERAL AND STATE STANDARDS. PROVIDE THE FOLLOWING MIXTURES:

i. MD COASTAL PLAIN RIPARIAN MIX (ERNMX-732 OR APPROVED EQUAL)

%	SPECIES
39.70%	Sorghastrum nutans (Indiangrass)
20.00%	Elymus virginicus (Virginia Wildrye)
18.00%	Panicum virgatum (Switchgrass)
10.00%	Panicum rigidulum (Redtop Panicgrass)
3.00%	Chamaecrista fasciculata (Partridge Pea)
3.00%	Rudbeckia hirta (Blackeyed Susan)
2.00%	Helopsis helianthoides (Oxeye Sunflower)
1.00%	Asclepias incarnata (Swamp Milkweed)
0.80%	Vernonia noveboracensis (New York Ironweed)
0.80%	Eupatorium perfoliatum (Boneset)
0.80%	Helianum autumnale (Common Sneezeweed)
0.80%	Solidago rugosa (Wrinkleleaf Goldenrod)

a. SEEDING RATE

- a.1. 20 LB PER ACRE, OR ½ LB PER 1,000 SQ.FT. WITH A COVER CROP.

b. COVER CROP

- b.1. USE ONE OF THE FOLLOWING:
 - b.a.o. (1 SEP TO 30 APR; 30 LBS/ACRE): GRAIN RYE
 - b.a.b. (1 MAY TO 31 AUG; 10 LBS/ACRE): JAPANESE MILLET
 - b.a.c. (1 MAY TO 31 AUG; 10 LBS/ACRE): BARNYARD GRASS

c. SITE PREPARATION

- c.1. INVASIVE SPECIES, PARTICULARLY THOSE THAT WILL ADAPT TO WET CONDITIONS, SHOULD BE REMOVED OR SPRAYED WITH AN APPROVED HERBICIDE BEFORE BECOMING INCORPORATED INTO THE SITE. PERENNIAL WEEDS NOT ADDRESSED BEFORE ESTABLISHMENT WILL BE DIFFICULT TO REMOVE LATER. NORMAL VEGETATION CAN BE WORKED INTO THE TOPSOIL WHICH SHOULD BE STOCKPILED UNTIL THE FINAL GRADE HAS BEEN ESTABLISHED.
- c.a. WITH THE SPECIFICATIONS AND DIMENSIONS, ON-SITE CONSTRUCTION OF THE BERM AND OUTLETS MUST BE EXECUTED CAREFULLY TO MAINTAIN STRUCTURAL INTEGRITY. THE INFILTRATION AND PLANT GROWTH AREAS SHOULD BE LOOSE AND FRAGILE. HIGH IN ORGANIC MATTER AND COMPLETED WITHOUT COMPACTION FROM HEAVY EQUIPMENT. THE "DIG AND DROP METHOD": ONE CAN USE AN EXCAVATOR TO DIG AND DROP EACH AREA OF THE BOTTOM SOIL IN A LOOSE MANNER. AT THIS POINT, LIME, COMPOSTED LEAVES AND/OR GRASS CLIPPINGS CAN BE INCORPORATED. THE EXCAVATION MACHINE DOES NOT MOVE OVER THE FINISHED SURFACE, THUS AVOIDING UNNECESSARY COMPACTION. NATIVE VEGETATION CAN BE PLANTED OR SEEDED OVER THIS UNEVEN ABSORBENT SURFACE.
- c.2. ABOVE LISTED COVER CROPS TO PROTECT THE SOIL UNTIL PERMANENT VEGETATION CAN BE ESTABLISHED SHALL BE USED. THE USE OF SUCH NATIVE SPECIES AS ELYMUS VIRGINICUS (VIRGINIA WILD RYE) CAN CREATE AN INTERMEDIATE COVER THAT SUCCEEDS IN LONG-TERM NATIVE VEGETATION. STRAW MULCH OR STRAW COCONUT MATS ARE FREQUENTLY USED TO CONTROL EROSION AND PROTECT EMERGING SEEDLINGS FROM EXTREME TEMPERATURES AND DRYING OUT. MULCH SHOULD BE SPARSE IN ORDER TO ALLOW SUNLIGHT TO REACH THE GROUND. TRANSPLANTED SEEDLINGS AND SHRUBS MAY NEED TEMPORARY WATER UNTIL THEY BECOME WELL ROOTED AND ARE SUBJECT TO THE LANDSCAPE PLANTING MATERIAL PROJECT WARRANTY. IRRIGATING SEEDED AREAS IS BENEFICIAL UNTIL SEEDLINGS BECOME ESTABLISHED AND IS RESPONSIBLE OF THE CONTRACTOR.

d. GROWING SEASON MAINTENANCE

e. FIRST GROWING SEASON

- e.1. WHENEVER CANOPY (OVERALL VEGETATION) REACHES A HEIGHT OF 18"-24", USE A BRUSH HOG MOWER OR STRING TRIMMER TO TRIM THE MEADOW TO A HEIGHT OF 8" (NOTE: A LAWN MOWER IS NOT RECOMMENDED. THE MOWER HEIGHT WILL BE TOO LOW AND NATIVE SEEDLINGS WILL BE KILLED). THIS WILL REDUCE COMPETITION BY FAST-GROWING WEEDS FOR SUNLIGHT, WATER AND NUTRIENTS NEEDED BY SLOW-GROWING PERENNIAL NATIVES. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE, MOWING SHOULD BE ABOVE THE NEW GROWTH OF THESE MATERIALS. MOWING SHOULD CEASE BY MID-SEPTEMBER. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT SPRAYED WITH AN APPROVED HERBICIDE.

f. SECOND GROWING SEASON

- f.1. PRIOR TO NEW SPRING GROWTH REACHING A HEIGHT OF 2" (E.G., SHORTLY AFTER FORSYTHIA OR REDBUD BLOOMS), TRIM ANY MATERIAL STANDING FROM THE PREVIOUS YEAR CLOSE TO THE GROUND (APPROXIMATELY 2"). THIS WILL ALLOW THE SOIL TO WARM MORE QUICKLY, WHICH WILL STIMULATE THE EMERGENCE AND GROWTH OF NATIVE SEEDLINGS. IT WILL ALSO REDUCE THE LIKELIHOOD OF THE MEADOW BEING INVADED BY SHRUBS. IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED ON THE SITE OR SEED OF SHRUBS/TREES WERE PART OF THE MIX, THE SITE SHOULD NOT BE TRIMMED AFTER THE ESTABLISHMENT YEAR. PROBLEM WEEDS SHOULD BE HAND PULLED OR SPOT-SPRAYED.

g. SPECIAL CIRCUMSTANCES

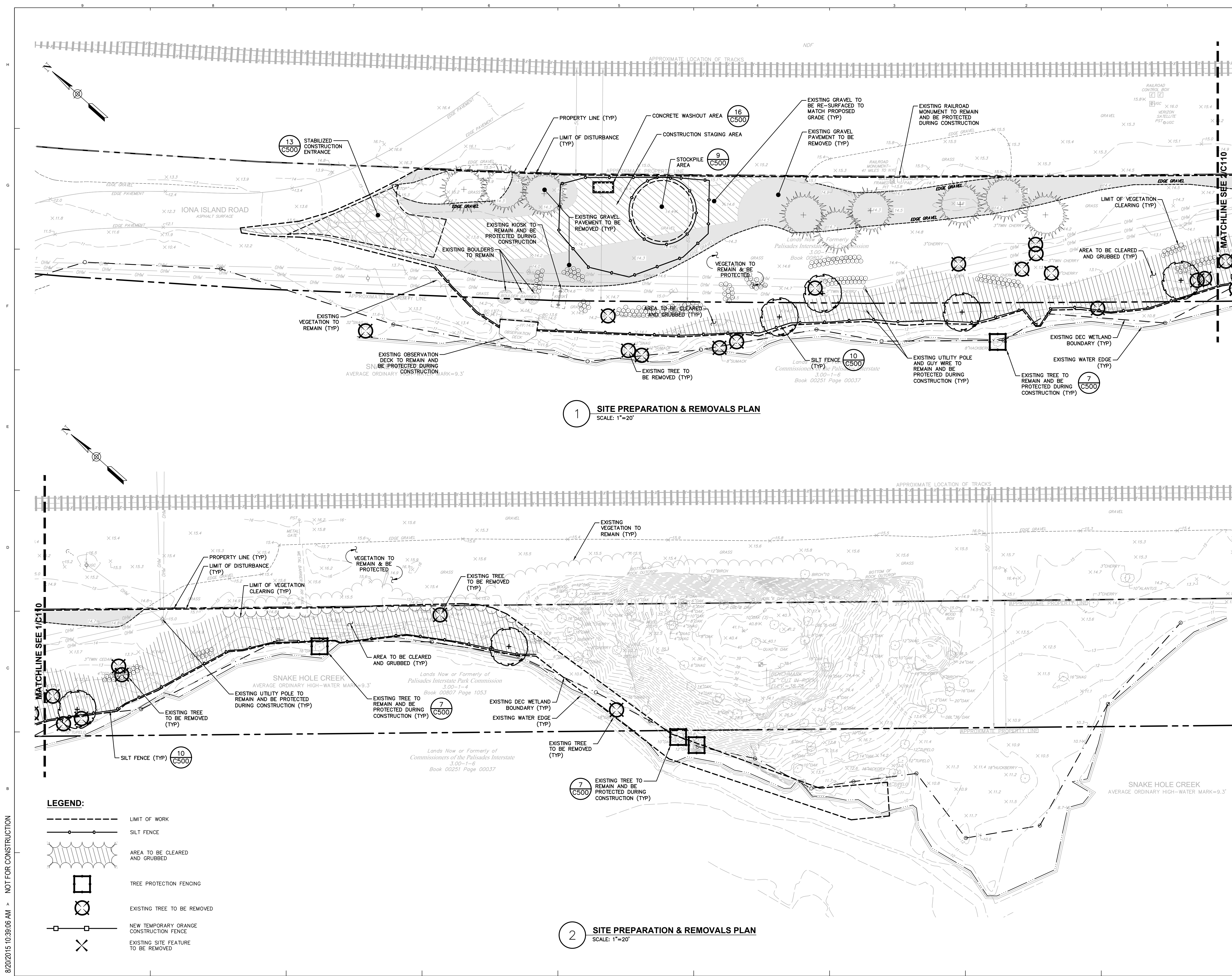
- g.1. IF YOU NOTICE A HEAVY INFESTATION OF RAGWEED OR FOXTAIL IN THE SECOND GROWING SEASON, TRIM THE MEADOW TO A HEIGHT OF 8" IF BIOENGINEERING OR CONTAINERIZED WOODY MATERIALS WERE USED, TRIMMING SHOULD BE ABOVE OR AROUND NEW GROWTH OF THE PLANTS. TRIMMING SHOULD CEASE AFTER MID-SEPTEMBER.



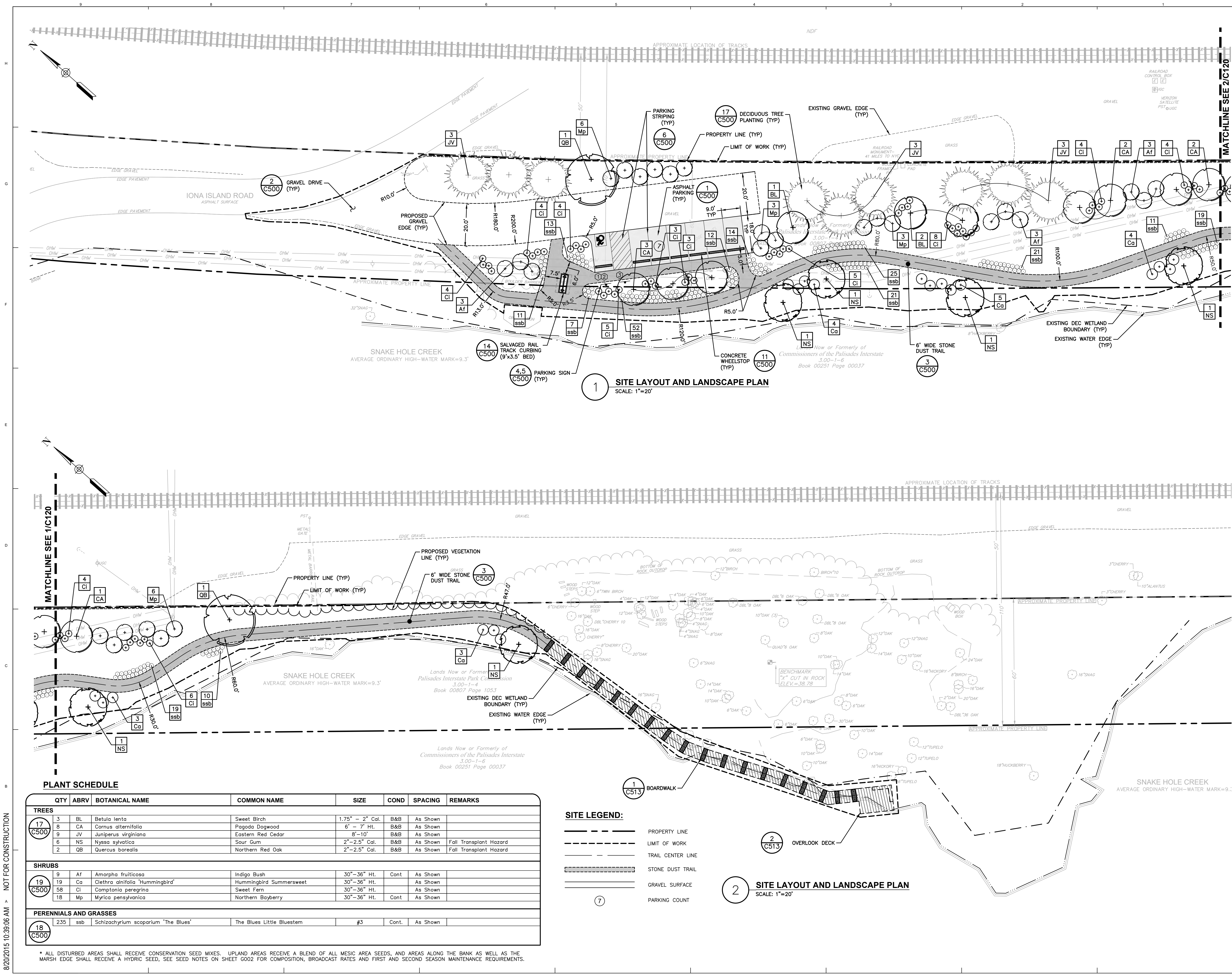
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<p><u>Sheet Title:</u></p> <p>Site Preparation and Removals Plan</p>	<p><u>Drawing Number:</u></p> <p>C-110</p>
<p>Project Number: 2220842</p>	<p>Sheet: 4 of 14</p>



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Governor Kathy Hochul
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3006 Seven Lakes Dr, PO Box 427
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(845) 786-2701

Executive Director: Joshua Laird

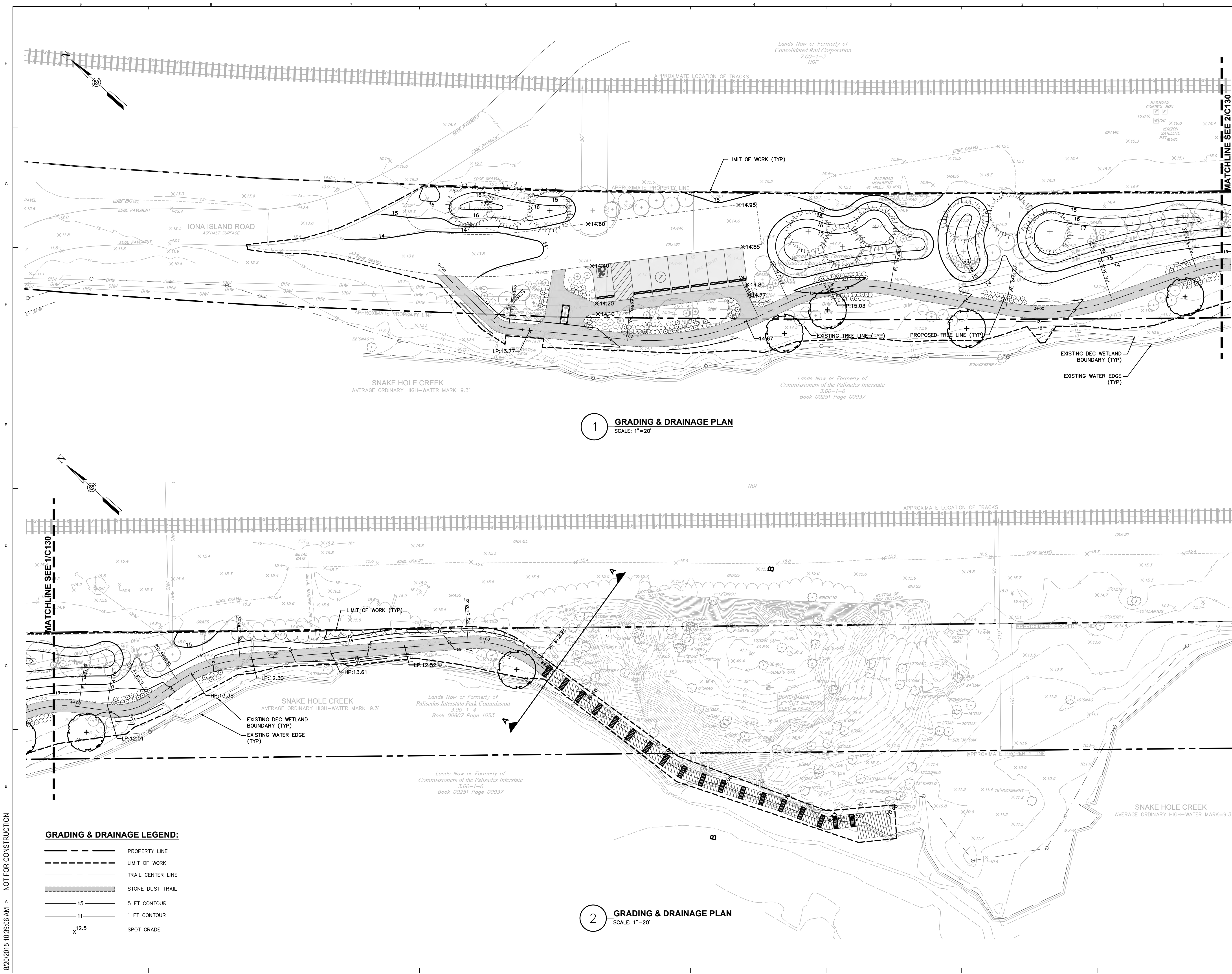
Project Title:
ADA Trail and Boardwalk
Project ID: PA-BM-2017-003


Project Location:
100 Iona Island Rd
Bear Mountain, New York 10911

Key Plan

REVISIONS		
Rev#	Description	Date:

Drawn By: JQ	Seal and Signature
Design By: BGB	
Checked By: MAK	
Approved By: JAR	
Date: 08-09-2023	
Sheet Title: Site Layout and Landscape Plan	Drawing Number: C-120
Project Number: 2220842	Sheet: 5 of 14






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Key Plan

REVISIONS		
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Drawn By: JQ	Seal and Signature
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Approved By: JAR	
Date: 08-09-2023	
Sheet Title: Grading and Drainage Plan	Drawing Number: C-130
Project Number: 2220842	Sheet: 6 of 14

GENERAL NOTES:

1. THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS GOVERNED BY THE RELATED PROVISIONS OF THE UNIFORM FIRE PREVENTION CODE AND 2020 BUILDING CODE OF NEW YORK STATE WHICH ADOPTS STANDARDS INCLUDING ASCE STANDARD (ASCE/SEI 7-10) MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES.
2. THE STRUCTURAL SYSTEM DEPICTED ON THE DRAWINGS IS STABLE IN ITS FINAL CONDITION. CONTRACTOR IS RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION INCLUDING ANY TEMPORARY BRACING OR SHORING NECESSARY TO MAINTAIN A STABLE STRUCTURE AND SAFE WORK ENVIRONMENT DURING CONSTRUCTION.
 - 2.1. MEANS AND METHODS OF CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR INCLUDING BUT NOT LIMITED TO TEMPORARY BRACING/ SHORING, RIGGINS, TEMPORARY WORK PLATFORMS, CREATING AND MAINTAINING STAGING AND TEMPORARY WORK AREAS ETC.
3. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. CONFLICTS BETWEEN DRAWINGS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH WORK.
4. DETAILS ENTITLED OR NOTED AS "TYPICAL" APPLY NOT ONLY WHERE SPECIFICALLY INDICATED OR REFERENCED, BUT ALSO IN ALL OTHER CASES WHERE THE NATURE OF THE CONSTRUCTION REQUIRES THEIR USE. TREAT SIMILAR CONDITIONS SIMILARLY AND CONTACT THE ENGINEER WITH ANY QUESTIONS.
5. ALL CONSTRUCTION WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE SAFETY CODES. APPLICABLE SAFETY CODES MEAN THE LATEST EDITION INCLUDING ANY AND ALL AMENDMENTS, REVISIONS, AND ADDITIONS THERE TO, TO THE FEDERAL DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH STANDARDS (OSHA), AND APPLICABLE LOCAL SAFETY AND HEALTH REGULATIONS AND BUILDING CODES FOR CONSTRUCTION IN THE STATE OF NEW YORK IN ADDITION TO ANY AND ALL "HOUSE RULES" AS REQUIRED BY OWNER.
6. THE GENERAL CHARACTER AND EXTENT OF THE WORK IS SHOWN ON THE CONTRACT DRAWINGS; HOWEVER, THE CONTRACTOR SHALL PROVIDE ALL WORK REQUIRED BY THE CONSTRUCTION DOCUMENTS REGARDLESS OF WHETHER OR NOT IT IS SHOW ON THE DRAWINGS.

SPECIAL INSPECTION NOTES:

1. THE OWNER SHALL ENGAGE THE SERVICES OF A QUALIFIED SPECIAL INSPECTOR FOR THE PROJECT, WHO WILL PROVIDE AND/OR COORDINATE INSPECTION AND TESTING REQUIREMENTS AS NECESSARY IN ACCORDANCE WITH THE PROVISIONS OF CHAPTER 17 OF THE 2020 BCNYS.
2. IN ADDITION TO SPECIAL INSPECTIONS, INSPECTION OF FOUNDATIONS, FOOTINGS, SLABS AND UNDERSLAB SYSTEMS, FLOOR ELEVATIONS, FRAMING, LATH AND GYPSUM BOARD, FIRE-RESISTANCE AND PENETRATIONS, ENERGY EFFICIENCY, PRELIMINARY AND FINAL INSPECTIONS MAY BE REQUIRED AND/OR PROVIDED BY THE LOCAL BUILDING OFFICIAL PER THE REQUIREMENTS OF THE NYS UNIFORM CODES. THE LOCAL BUILDING OFFICIAL MAY REQUIRE ADDITIONAL INSPECTIONS TO ASCERTAIN COMPLIANCE WITH THE PROVISIONS OF THE CODE. ALL INSPECTIONS REQUIRED AND/OR PROVIDED BY THE LOCAL BUILDING OFFICIAL SHALL BE AGREED UPON IN WRITING PRIOR TO THE START OF CONSTRUCTION.
3. SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTIONS AND THE SCHEDULE OF SPECIAL INSPECTIONS AND SPECIFICATIONS TO BE SUBMITTED WITH THE CONTRACT DOCUMENTS AND THE APPLICATION FOR BUILDING PERMIT TO THE CODE ENFORCEMENT OFFICIAL. LOCAL BUILDING OFFICIALS CANNOT PROVIDE SPECIAL INSPECTIONS.
4. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING INSPECTION AGENCIES WHEN WORK IS READY FOR INSPECTION WITH AT LEAST 48 HOUR NOTICE OR AS AGREED UPON PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ACCESS AND MEANS FOR INSPECTION INCLUDING ACCESS TO THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION AND REPLACEMENT OF ANY MATERIALS REQUIRED TO ALLOW INSPECTIONS.
5. REFER TO THE SCHEDULE OF SPECIAL INSPECTIONS AND TO THE SPECIFICATIONS FOR REQUIRED SPECIAL INSPECTIONS AND TESTING. SPECIAL INSPECTIONS AND TESTING SHALL BE CONTINUOUS OR PERIODIC DURING THE PERFORMANCE OF THE WORK, AS NOTED.
6. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING WITH THE ENGINEER, SPECIAL INSPECTOR, TESTING AGENCY, AND AFFECTED SUBCONTRACTORS TO REVIEW THE REQUIRED SPECIAL INSPECTIONS AND TESTING REQUIREMENTS FOR THE PROJECT. THE CONTRACTOR SHALL DISTRIBUTE CONSTRUCTION SCHEDULES TO EACH ATTENDEE. A SEPARATE MEETING WITH THE LOCAL BUILDING OFFICIAL TO REVIEW INSPECTION REQUIREMENTS, AND TO CONFIRM THE ROLES AND RESPONSIBILITIES OF THE TESTING AGENCIES AND BUILDING OFFICIALS.
7. THE SPECIAL INSPECTOR SHALL SUBMIT INTERIM AND FINAL REPORTS AND, AT COMPLETION OF SPECIAL INSPECTIONS, A FINAL STATEMENT OF SPECIAL INSPECTIONS. REPORTS SHALL BE STAMPED AND SIGNED BY A PROFESSIONAL ENGINEER. SPECIAL INSPECTORS SHALL KEEP RECORDS OF INSPECTIONS AND FURNISH TO CODE ENFORCEMENT OFFICIALS, AND THE THE ENGINEER OF RECORD. REPORTS SHALL INDICATE THAT WORK INSPECTED WAS DONE IN CONFORMANCE WITH APPROVED CONSTRUCTION DOCUMENTS. THE SPECIAL INSPECTOR SHALL NOTIFY THE CONTRACTOR IMMEDIATELY OF DISCREPANCIES. SUBSEQUENT REPORTS SHALL NOTE WHEN AND HOW DEFICIENCIES WERE CORRECTED. THE SPECIAL INSPECTOR SHALL NOTIFY THE ENGINEER AND THE CODE ENFORCEMENT OFFICIAL OF DISCREPANCIES WHICH HAVE NOT BEEN CORRECTED.
8. THE SPECIAL INSPECTION PROGRAM SHALL IN NO WAY RELIEVE THE CONTRACTOR OF THE OBLIGATION TO PERFORM THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS OR FROM IMPLEMENTING AN EFFECTIVE QUALITY CONTROL PROGRAM.
9. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND-OR SEISMIC-RESISTING COMPONENT LISTED IN THE STATEMENT OF SPECIAL INSPECTIONS SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE CODE ENFORCEMENT OFFICIAL AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT IN ACCORDANCE WITH BCNYS CHAPTER 17 "CONTRACTOR RESPONSIBILITY".
10. SPECIAL INSPECTIONS NOTED ON STRUCTURAL SHEETS ARE FOR STRUCTURAL SYSTEMS ONLY. SPECIAL INSPECTIONS MAY BE REQUIRED FOR NON-STRUCTURAL COMPONENTS SUCH AS SPRAY-ON FIRE RESISTANCE. NON-STRUCTURAL INSPECTIONS ARE BY OTHERS, SEE ARCHITECTURAL AND OTHER TRADES FOR ADDITIONAL INFORMATION.

SUBMITTAL NOTES:

1. SUBMITTALS OF SHOP DRAWINGS AND PRODUCT DATA ARE REQUIRED FOR ALL MATERIALS, SYSTEMS AND COMPONENTS AS SHOWN AND FOR DELEGATED DESIGN ELEMENTS.
2. SUBMITTALS SHALL BE MADE AND SUBMITTED IN TIME TO PROVIDE A MINIMUM OF TWO WEEKS FOR REVIEW BY THE ENGINEER PRIOR TO ONSET OF FABRICATION.
3. PRIOR TO SUBMISSION TO ENGINEER, CONTRACTOR SHALL REVIEW SUBMITTAL FOR COMPLETENESS. DIMENSIONS AND QUANTITIES ARE NOT REVIEWED BY ENGINEER AND THEREFORE MUST BE VERIFIED BY CONTRACTOR. CONTRACTOR SHALL PROVIDE ANY NECESSARY DIMENSIONAL DETAILS REQUESTED BY DETAILER AND PROVIDE CONTRACTOR'S REVIEW STAMP AND SIGNATURE BEFORE FORWARDING TO ENGINEER.
4. ONCE CONTRACTOR HAS COMPLETED CONTRACTOR'S REVIEW, ENGINEER WILL REVIEW SUBMITTAL FOR GENERAL CONFORMANCE WITH DESIGN CONCEPT AND CONTRACT DOCUMENTS OF BUILDING AND WILL STAMP SUBMITTAL ACCORDINGLY. MARKINGS OR COMMENTS SHALL NOT CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH PROJECT PLANS AND SPECIFICATIONS. NOR DEPARTURES THERE FROM. NO FABRICATION SHALL COMMENCE UNTIL ALL RELEVANT SUBMITTALS HAVE BEEN REVIEWED BY ENGINEER AND STAMPED WITH NO EXCEPTIONS TAKEN.
5. WHEN SHOP DRAWINGS (COMPONENT DESIGN DRAWINGS) DIFFER FROM OR ADD TO REQUIREMENTS OF STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND CERTIFIED BY A NEW YORK STATE LICENSED AND REGISTERED PROFESSIONAL ENGINEER.
6. ALL ELEMENTS, PIECES, PROCESSES AND SYSTEMS SHALL BE SUBMITTED FOR REVIEW IN THE FORM OF SHOP DRAWINGS, CUT SHEETS AND/ OR MANUFACTURER PRODUCT LITERATURE AS APPROPRIATE.
7. REPRODUCTION OF CONTRACT DRAWINGS SHALL NOT BE USED AS SHOP DRAWINGS UNDER ANY CIRCUMSTANCE.

DESIGN CRITERIA:

ALL WORK SHALL COMPLY WITH THE RELATED PROVISIONS OF THE UNIFORM CODE OF NEW YORK STATE AND ITS REFERENCE STANDARDS.

DESIGN BASIS
GOVERNING CODE.....2020 BCNYS
BUILDING INFORMATION
RISK CATEGORY.....II

DESIGN CRITERIA
(ALL LOADS PROVIDED BELOW ARE SERVICE-LEVEL LOADS)

DEAD LOADS:
PRIMARY STRUCTURE.....SELF+WEIGHT

LIVE LOADS:
BOARDWALK.....60 PSF
RAILING POST.....50 PLF / 200 LBS

SNOW LOADS:
GROUND SNOW LOAD (Pg).....30 PSF
BUILDING EXPOSURE.....EXP C, FULLY EXPOSED
EXPOSURE FACTOR (Ce).....1.0
IMPORTANCE FACTOR (Ie).....1.0
THERMAL FACTOR (Ct).....1.2

WIND LOADS:
RISK CATEGORYII
ULTIMATE WIND SPEED (3-SECOND GUST,Vult).....113 MPH
NOMINAL WIND SPEED (Vasd).....(0.6)^(1/2)Vult
EXPOSURE CATEGORY.....C

EARTHQUAKE DESIGN DATA
RISK CATEGORY.....II
IMPORTANCE FACTOR (Ie).....1.0
MAPPED SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (Sa).....0.277g
MAPPED SPECTRAL RESPONSE ACCELERATION FOR 1-SECOND PERIODS (Sd).....0.06g
SITE CLASS.....B
SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (Sds).....0.166g
SPECTRAL RESPONSE ACCELERATION FOR 1-SECOND PERIODS (Sd1).....0.032g
SEISMIC DESIGN CATEGORY.....C
BASIC SEISMIC FORCE RESISTING SYSTEM.....TYPE H ASSUME
RESPONSE MODIFICATION FACTOR (R).....3.0
DESIGN BASE SHEAR.....3.6KIPS
ANALYSIS PROCEDURE.....EQUIVALENT LATERAL FORCE PROCEDURE
SEISMIC DESIGN OF NON-STRUCTURAL COMPONENTS.....PER ASC7-10 CHAPTER 13

FLOOD DESIGN DATA
FLOOD DESIGN CLASS.....CLASS 2
FLOOD ZONE.....AE
100-YEAR BASE FLOOD ELEVATION.....9'
DESIGN FLOOD ELEVATION.....12'
FFE.....VARIES FROM 8.4' TO 14'
WATER VELOCITY IS ASSUMED LESS THAN 10FT/SEC. CONSIDERING OPEN MARSH LAND AND NO HYDRAULIC GRADIENT.

SOILS AND FOUNDATION NOTES:

1. CONFORM TO BCNYS CHAPTER 18 "SOILS AND FOUNDATIONS".
2. RECOMMENDATIONS CONTAINED IN THE MEMORANDUM TITLED "IONA ISLAND TRAIL - GEOTECHNICAL MEMORANDUM OF FINDINGS" PREPARED BY THE CHAZEN COMPANIES DATED DECEMBER 15, 2021, HEREINAFTER REFERRED TO AS "GEOTECHNICAL MEMORANDUM."
3. FOUNDATIONS SHALL BE FROST PROTECTED.
4. ALL SUBGRADES AND PREPARED SOIL BEARING SURFACES SHALL BE INSPECTED PER THE SPECIAL INSPECTION REQUIREMENTS PRIOR TO PLACEMENT OF THE PRECAST CONCRETE FOUNDATIONS. INSPECTOR SHALL PROVIDE A LETTER TO THE ENGINEER STATING THAT SOILS ARE ADEQUATE TO SUPPORT "ALLOWABLE FOUNDATION BEARING PRESSURES(S)".

WOOD NOTES:

1. ALL WOODS AND WOOD CONSTRUCTION SHALL COMPLY WITH ONE OR MORE OF THE FOLLOWING:
 - 1.1. BCNYS 2015 CHAPTER 23.
 - 1.2. AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (STANDARDS MANUAL).
 - 1.3. NATIONAL FOREST PRODUCTS ASSOCIATION: NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION.
 - 1.4. US DEPARTMENT OF COMMERCE NIST PS 1 AND PS 2.
 - 1.5. AMERICAN WOOD-PRESERVERS ASSOCIATION STANDARDS.
2. STRUCTURAL LUMBER SHALL BE STAMPED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTIONS' "CONSTRUCTION MANUAL" AND BE PRESSURE TREATED.
3. WOOD WITH GRADE LOSS RESULTING FROM EFFECTS OF WEATHERING, HANDLING, STORAGE, RESAWING OR DIVIDING LENGTHS SHALL BE REJECTED.
4. ALL LUMBER SHALL BE DRY (MOISTURE CONTENT LESS THAN 19%).
5. ALL WOOD SHALL BE PRESERVATIVE TREATED AND SEALED.
6. MATERIALS:
 - 6.1. LUMBER.....PRESSURE TREATED NO.1 SPRUCE-PINE-FIR Fb =900psi OR APPROVED EQUAL.
7. ALL CONNECTORS AND FASTENERS TO BE SIMPSON-STRONG-TIE OR APPROVED EQUAL WITH MAXIMUM FASTENING (FILL ALL HOLES WITH LARGEST APPROVED FASTENERS).
8. INSTALL LAG SCREWS IN DRILLED LEAD HOLES WITH A DIAMETER EQUAL TO 3/4 OF THE SHANK DIAMETER (LAG SCREWS SHALL NOT BE HAMMERED IN) WITH WASHERS. HOLES SHALL BE PROPERLY ALIGNED.
9. BOLT HOLES SHALL BE DRILLED 1/16" LARGER THAN BOLT DIAMETER. PROVIDE WASHERS. HOLES SHALL BE PROPERLY ALIGNED.
10. INSTALL DECK BOARDS WITH NATURAL CUP DOWN (TO SHED WATER).
11. ALL CONNECTORS AND FASTENERS SHALL BE GALV. OR S.S.
12. COMPOSITE DECKING MEETS ASTM D7032 REFERENCE SIMILAR TO GATOR SYSTEM. COLOR BY OWNER.

13. SAWING AND SHAPING OF ALL PRESSURE TREATED LUMBER TO BE DONE WITHIN CONSTRUCTION STAGING AREA AS SHOWN ON THE SITE PREPARATION AND REMOVAL PLAN, AND NOT TO BE DONE WITHIN ADJACENT WETLAND OR NEAR ANY WATER BODY TO MINIMIZE SAWDUST ENTERING SAID LOCATIONS. CONTRACTOR TO MAKE BEST EFFORT TO COLLECT DUST AT THE SOURCE WITHIN STAGING AREA.

NOTE SUBJECT TO FURTHER REFINEMENT

QUALITY ASSURANCE NOTES:

1. DESIGNER'S AND INSTALLER'S QUALIFICATIONS: THE FIRM THAT PERFORMS THE WORK OF THIS SECTION SHALL HAVE A MINIMUM OF 5 YEARS' EXPERIENCE IN THE TYPE OF CONSTRUCTION REQUIRED FOR THE WORK OF THIS SECTION AND SHALL HAVE INSTALLED FOUNDATION SYSTEMS FOR AT LEAST 5 PROJECTS OF EQUIVALENT OR GREATER DIFFICULTY AS REQUIRED BY THIS CONTRACT.
 - 1.1. THE FIRM'S SUPERVISING ENGINEER AND SITE FOREMAN OR SUPERINTENDENT FOR THIS PROJECT SHALL HAVE AT LEAST 5 YEARS OF EXPERIENCE IN THIS TYPE OF FOUNDATION WORK.



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(845) 786-2701

Executive Director: Joshua Laird

Project Title:

ADA Trail and Boardwalk
Project ID: PA-BM-2017-003

Project Location:

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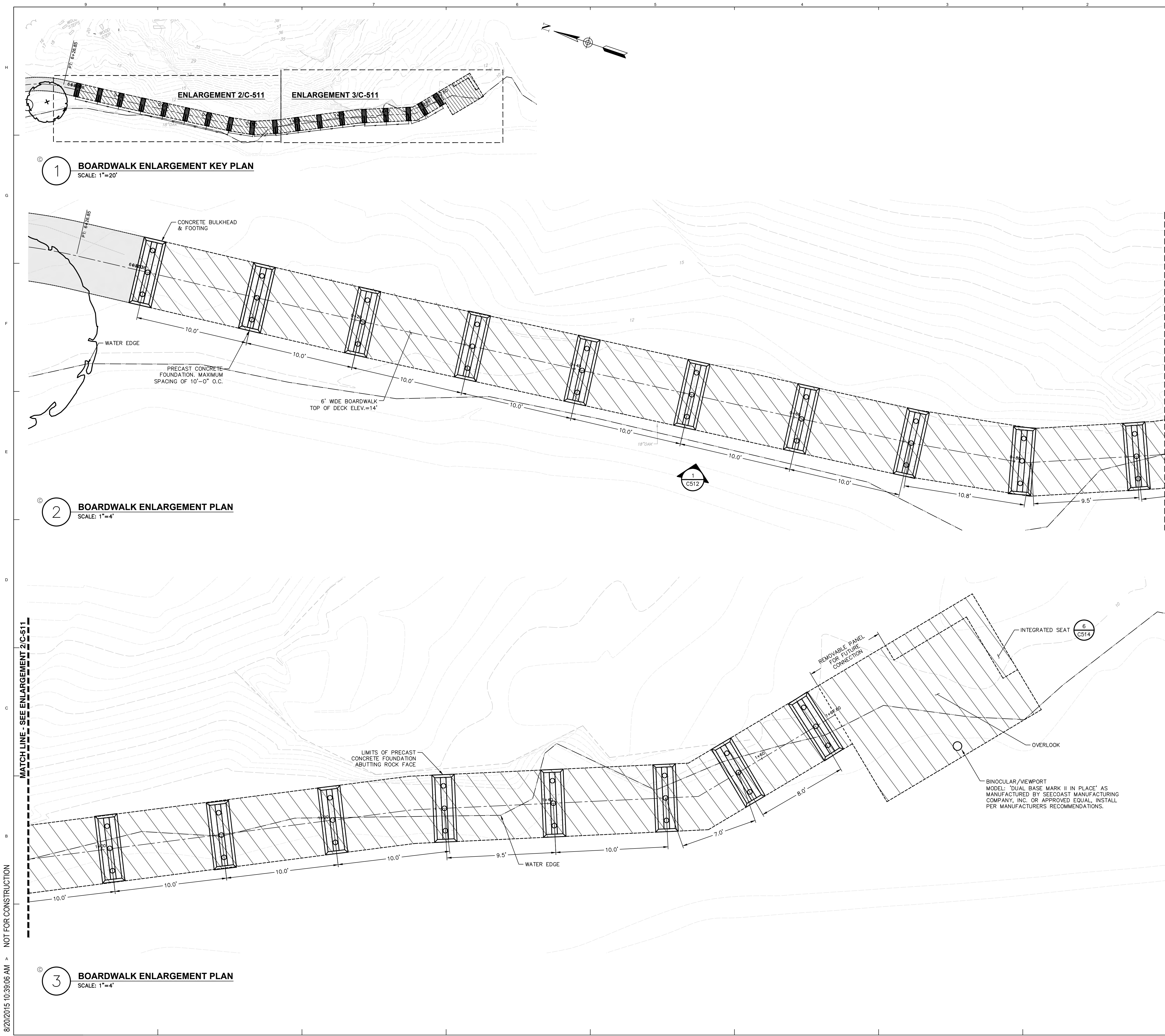
Key Plan

REVISIONS

Rev#	Description	Date:

Drawn By: JQ	Seal and Signature
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Checked By: MAK	
Approved By: JAR	
Date: 08-09-2023	

Sheet Title:	Drawing Number:
Boardwalk Notes	C-510
Project Number: 2220842	Sheet: 9 of 14



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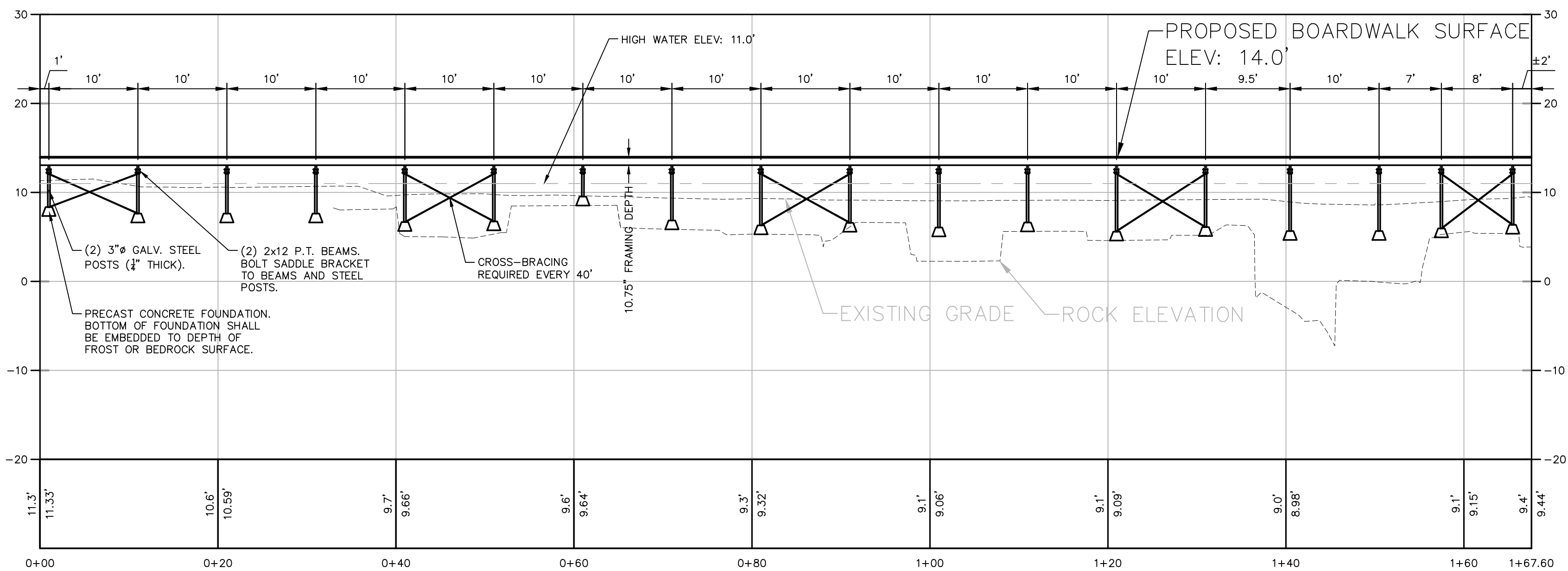
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Rev#	Description	Date:

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Sheet Title: Boardwalk Enlargement Plans	Drawing Number: C-511
Project Number: 2220842	Sheet: 10 of 14

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© 1 BOARDWALK PROFILE
SCALE: 1"=10'

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Sheet Title: Boardwalk Profile	Drawing Number: C-512
Project Number: 2220842	Sheet: 11 of 14

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Key Plan

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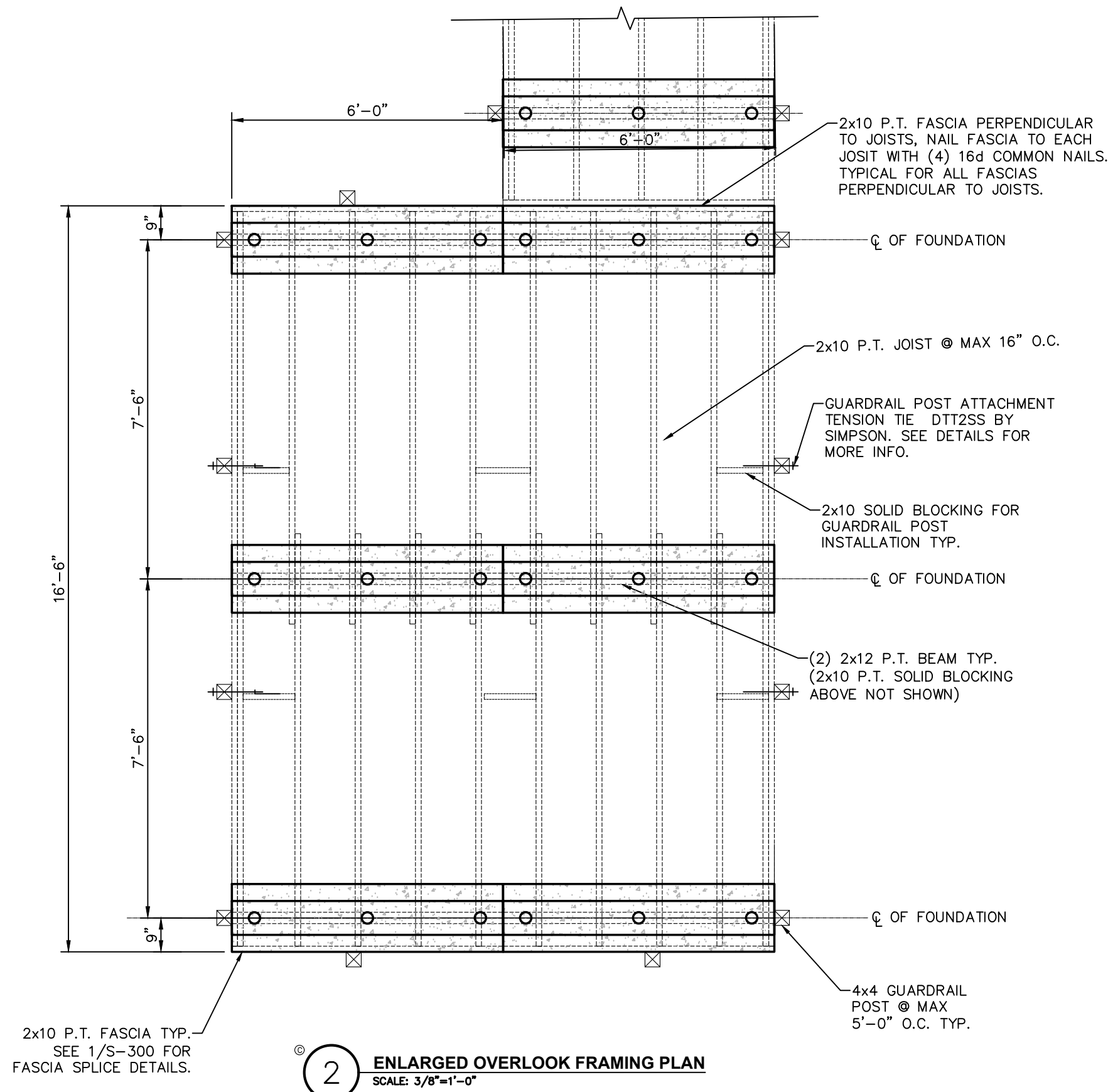
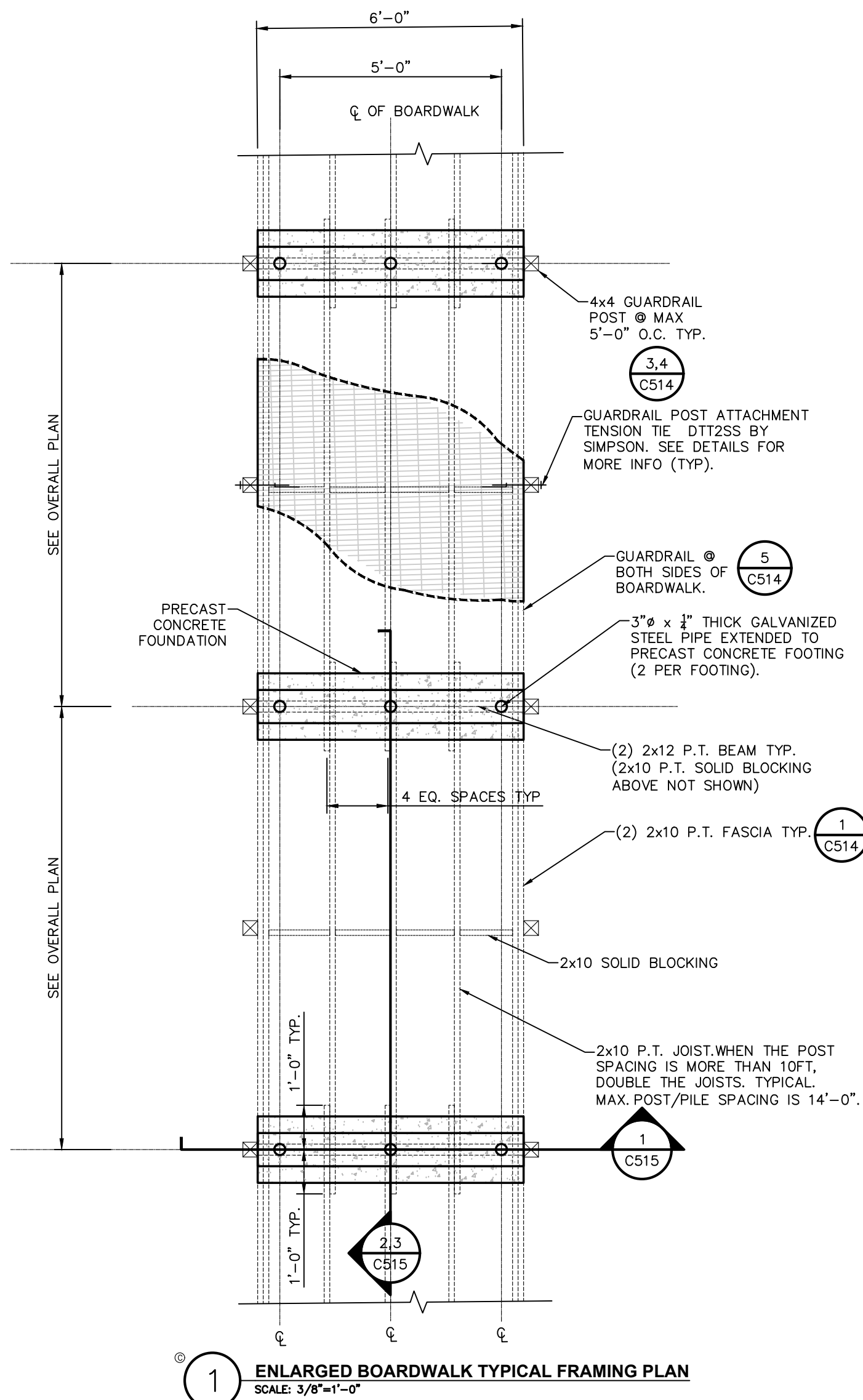
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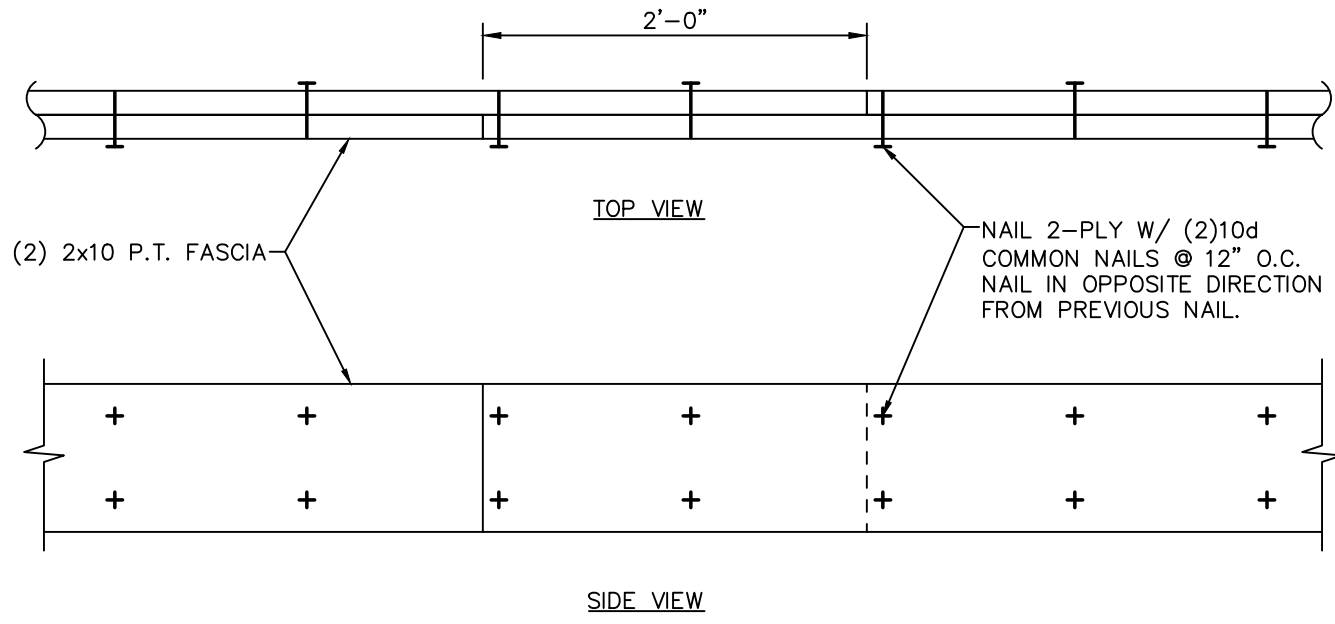
Boardwalk Enlarged Partial Plans

C-513

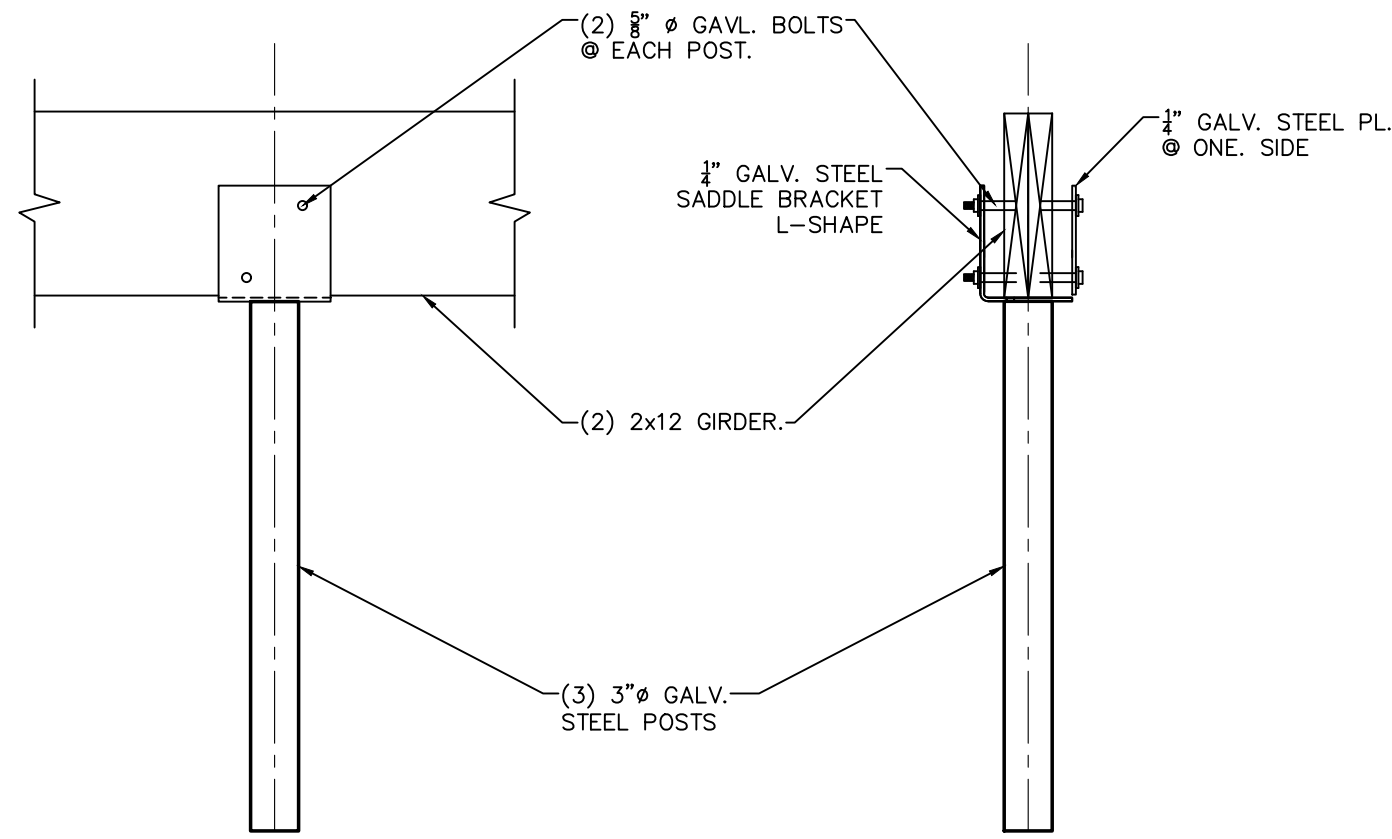
Project Number
2220842

Sheet:
12 of 14

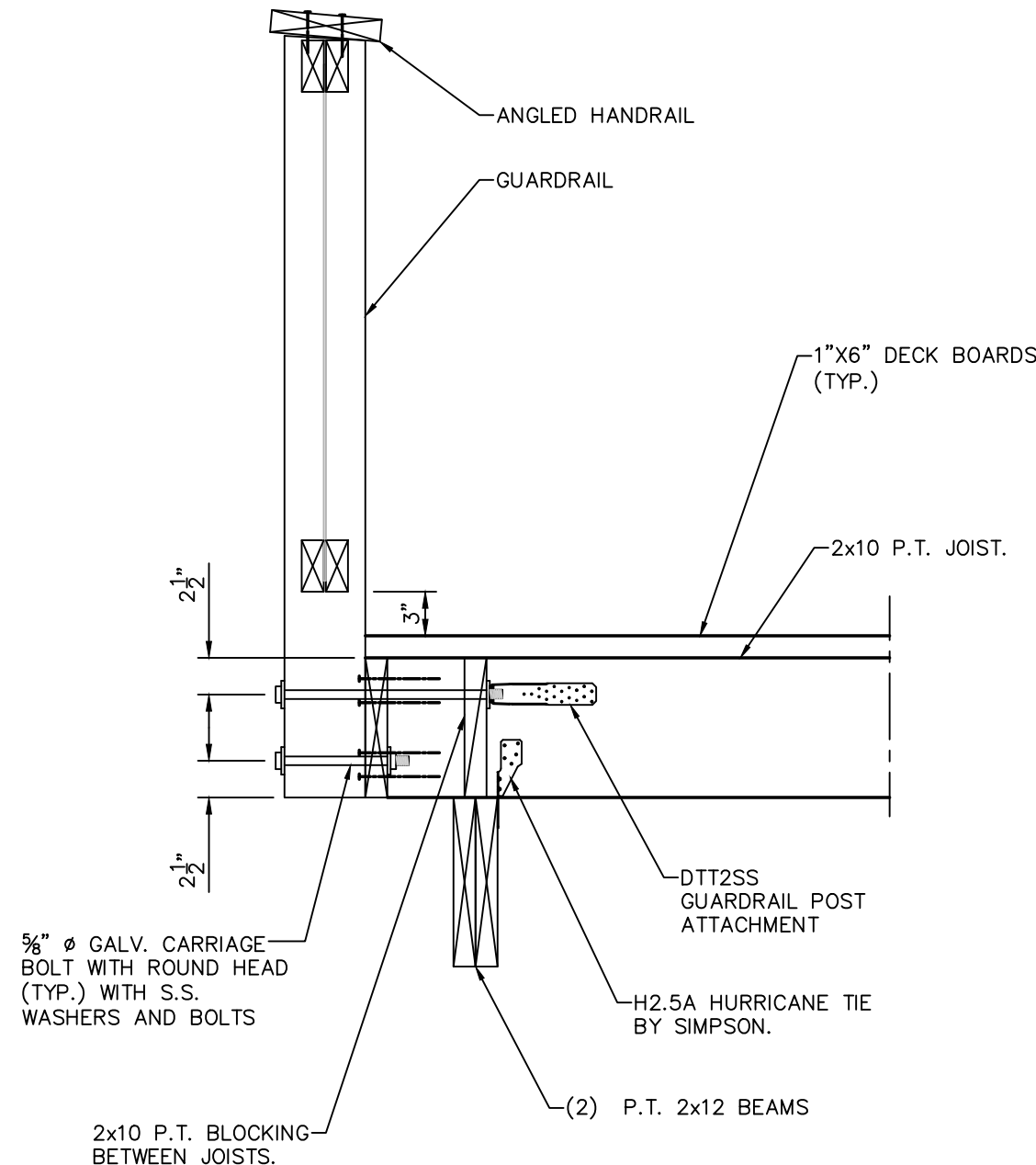




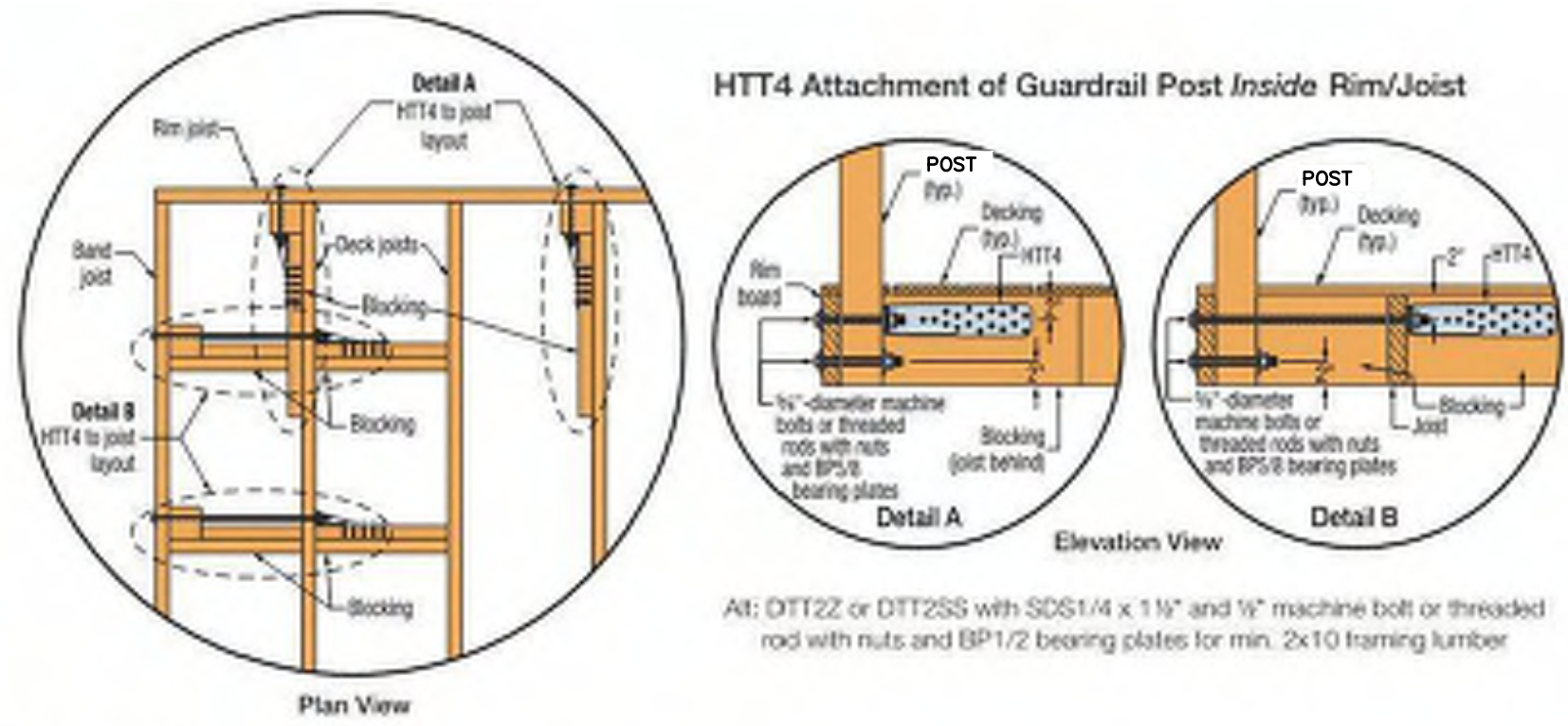
1 FASCIA BEAM SPLICE DETAIL
SCALE: 3/8"=1'-0"



2 POST & GIRDER CONNECTION DETAILS
SCALE: 3/8"=1'-0"



3 GUARDRAIL POST @ DECK END DETAILS
SCALE: 3/8"=1'-0"



Alt: DTT22 or DTT2SS with SDS1/4 x 1 1/2" and 1/2" machine bolt or threaded rod with nuts and BP1/2 bearing plates for min. 2x10 framing lumber

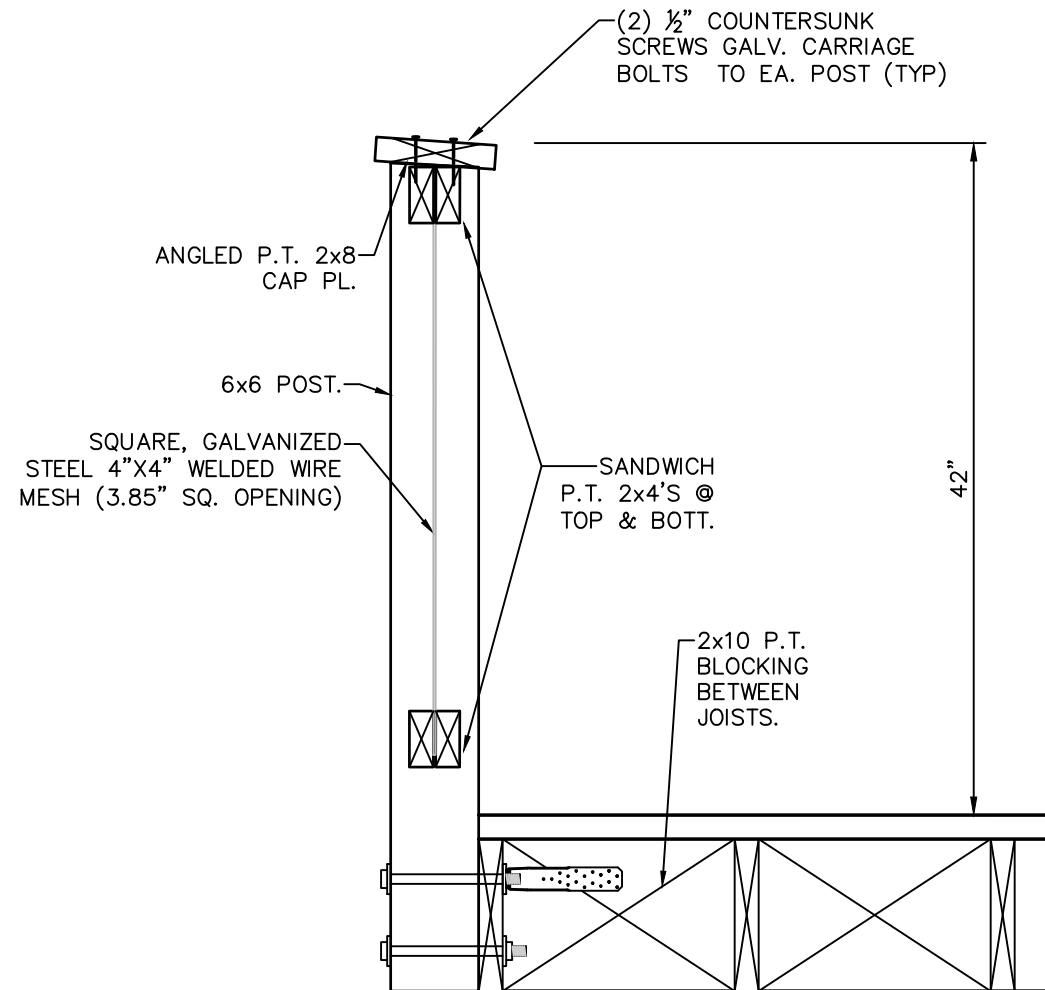
Post Inside Rim/Joist:

- Detail A: Fasten blocking to joist with (26) 10d common nails (0.148" x 3")
- Detail B: Fasten blocking together with (13) 10d common nails (0.148" x 3")

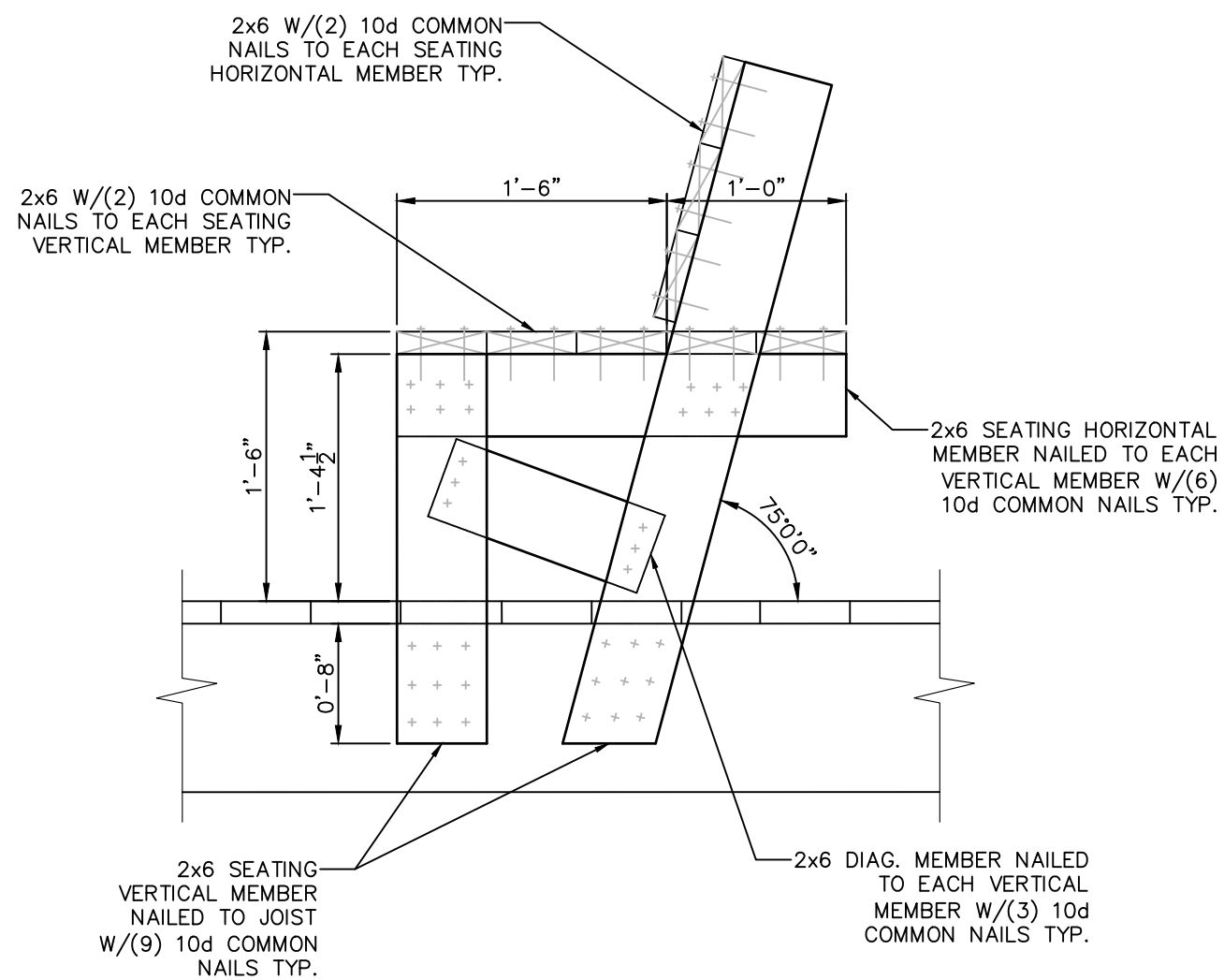
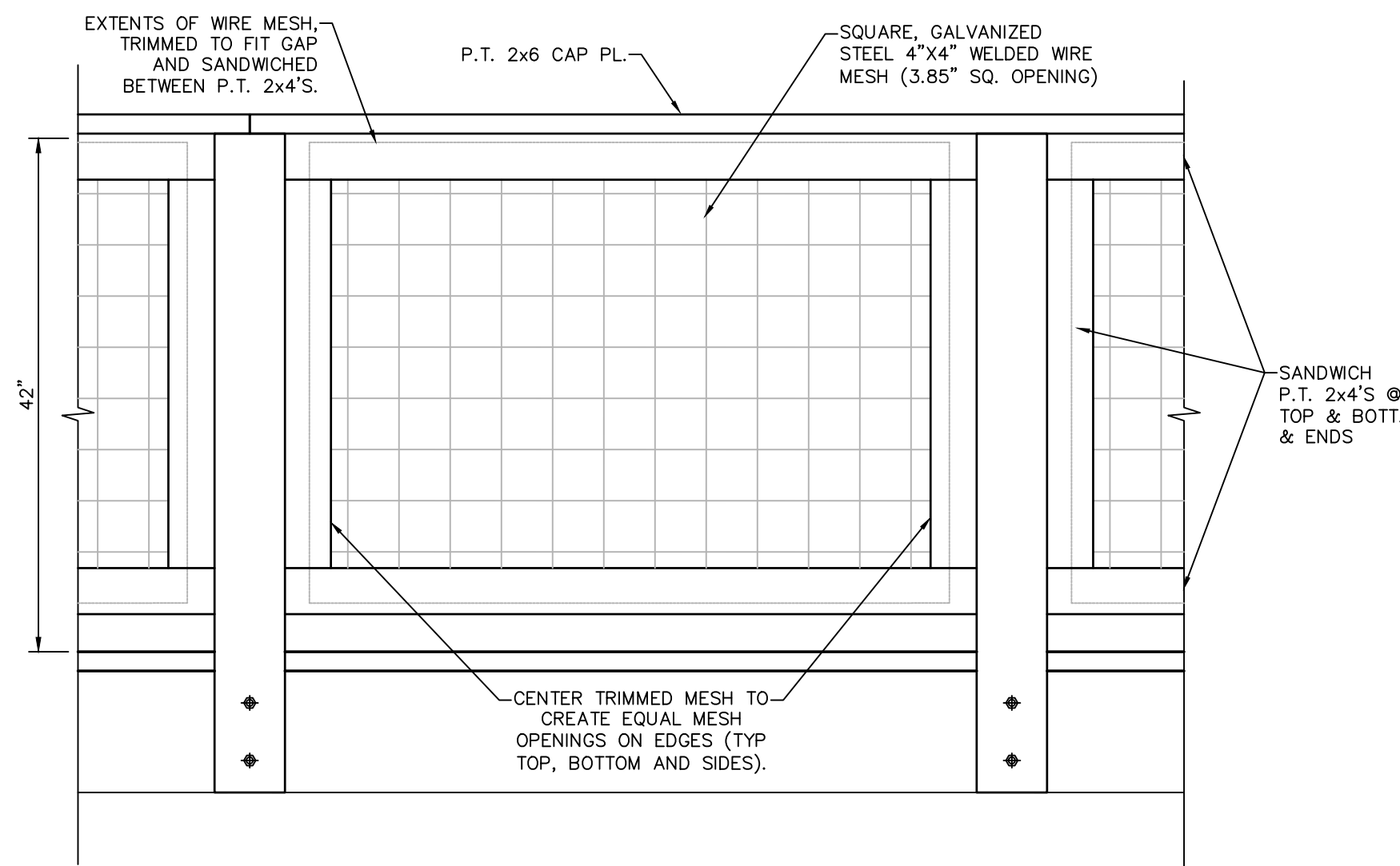
Details Assume the Following:

- Maximum 42" guardrail height and minimum nominal guardrail post
- HTT4 with #10 x 1 1/2" SD screws and minimum 2x8 HF or SPF framing lumber
- HTT4 with 0.148" x 1 1/2" nails and minimum 2x8 DF or SP framing lumber
- DTT22 with 1/4" x 1 1/2" SDS screws and minimum 2x10 DF, HF, SP or SPF framing lumber
- DTT22 uses 1/2"-diameter machine bolts or threaded rods with nuts and BP1/2 bearing plates

4 GUARDRAIL POST ATTACHMENT DETAIL
SCALE: 3/8"=1'-0"



5 TYPICAL GUARDRAIL DETAIL
SCALE: 3/8"=1'-0"



6 INTEGRATED SEAT DETAIL
SCALE: NTS

NYS OPRHP Palisades Region
3006 Seven Lakes Dr, PO Box 427
Bear Mountain, NY 10911
(845) 786-2701

Executive Director: Joshua Laird

Project Title:
ADA Trail and Boardwalk
Project ID: PA-BM-2017-003

Project Location:
100 Iona Island Rd
Bear Mountain, New York 10911

Key Plan

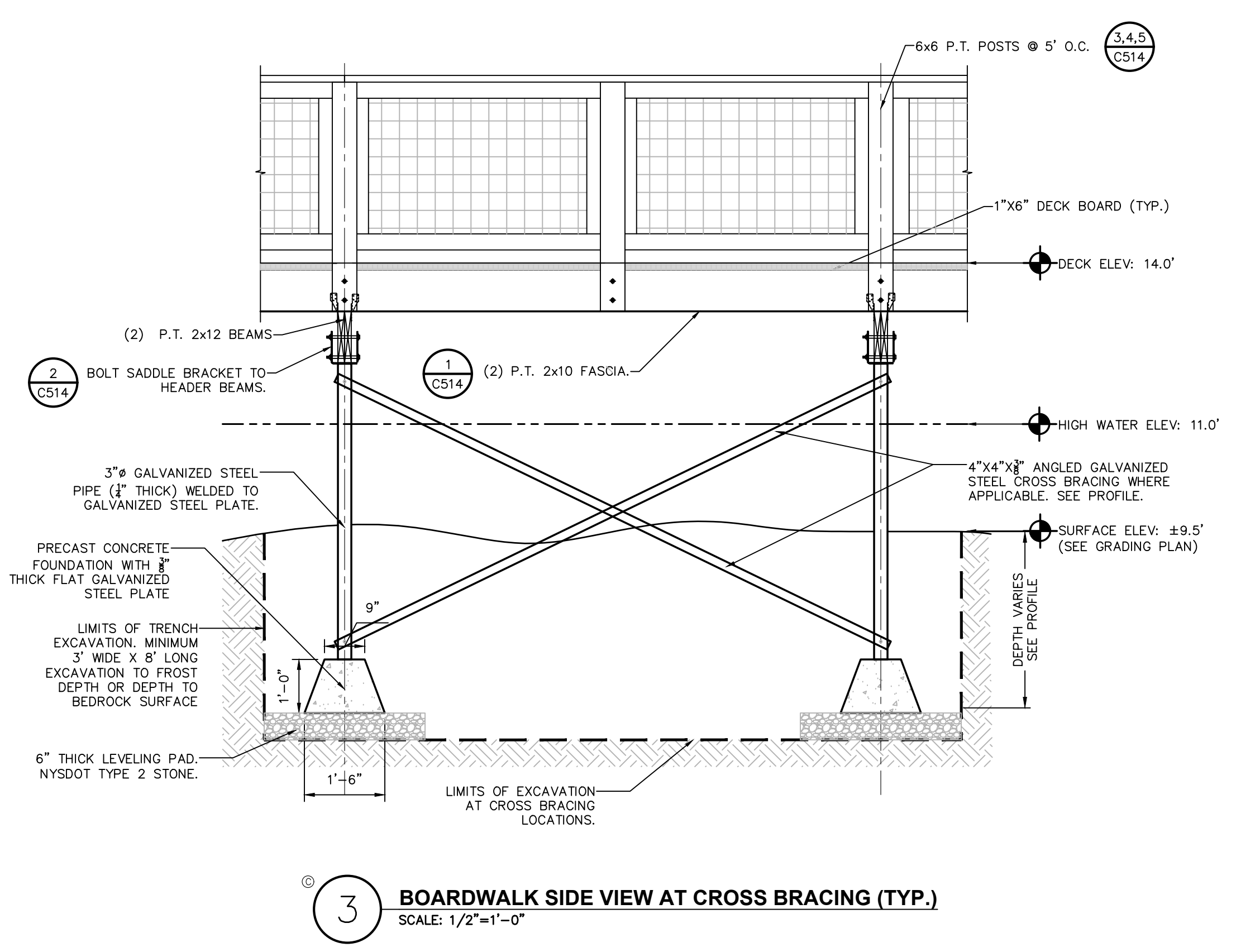
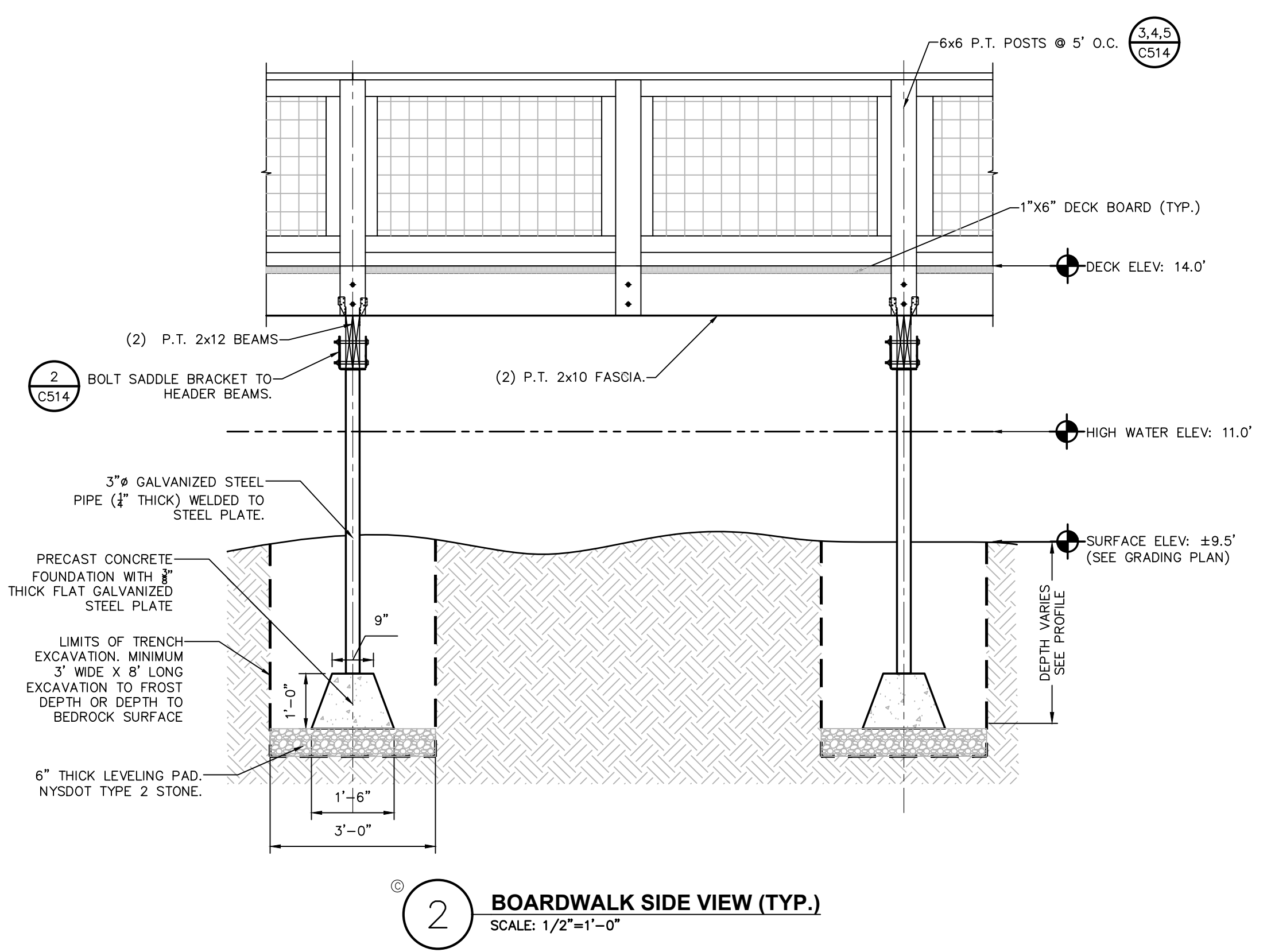
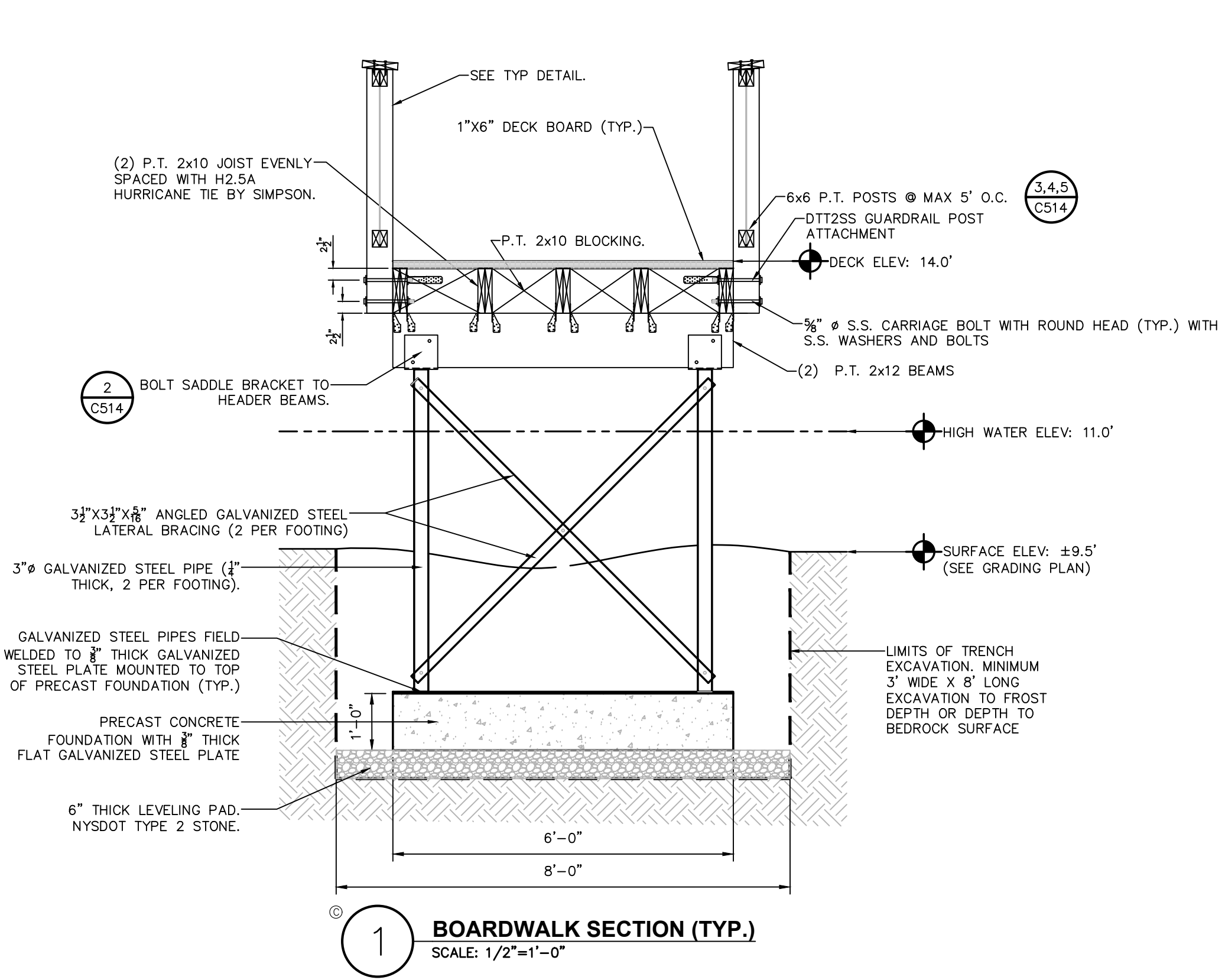
REVISIONS

Rev#	Description	Date:

Drawn By: JQ	Seal and Signature
Design By: BGB	
Checked By: MAK	
Approved By: JAR	
Date: 08-09-2023	

Sheet Title: Boardwalk Typical Sections and Details	Drawing Number: C-514
Project Number: 2220842	Sheet: 13 of 14

8/20/2015 10:39:06 AM NOT FOR CONSTRUCTION



NYS OPRHP Palisades Region
3006 Seven Lakes Dr, PO Box 427
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Key Plan

REVISIONS		
Rev#	Description	Date:

Drawn By: JQ	Seal and Signature
Design By: BGB	
Checked By: MAK	
Approved By: JAR	
Date: 08-09-2023	Drawing Number: C-515
Sheet Title: Boardwalk Sections	
Project Number: 2220842	Sheet: 14 of 14

SITE PHOTOGRAPHS

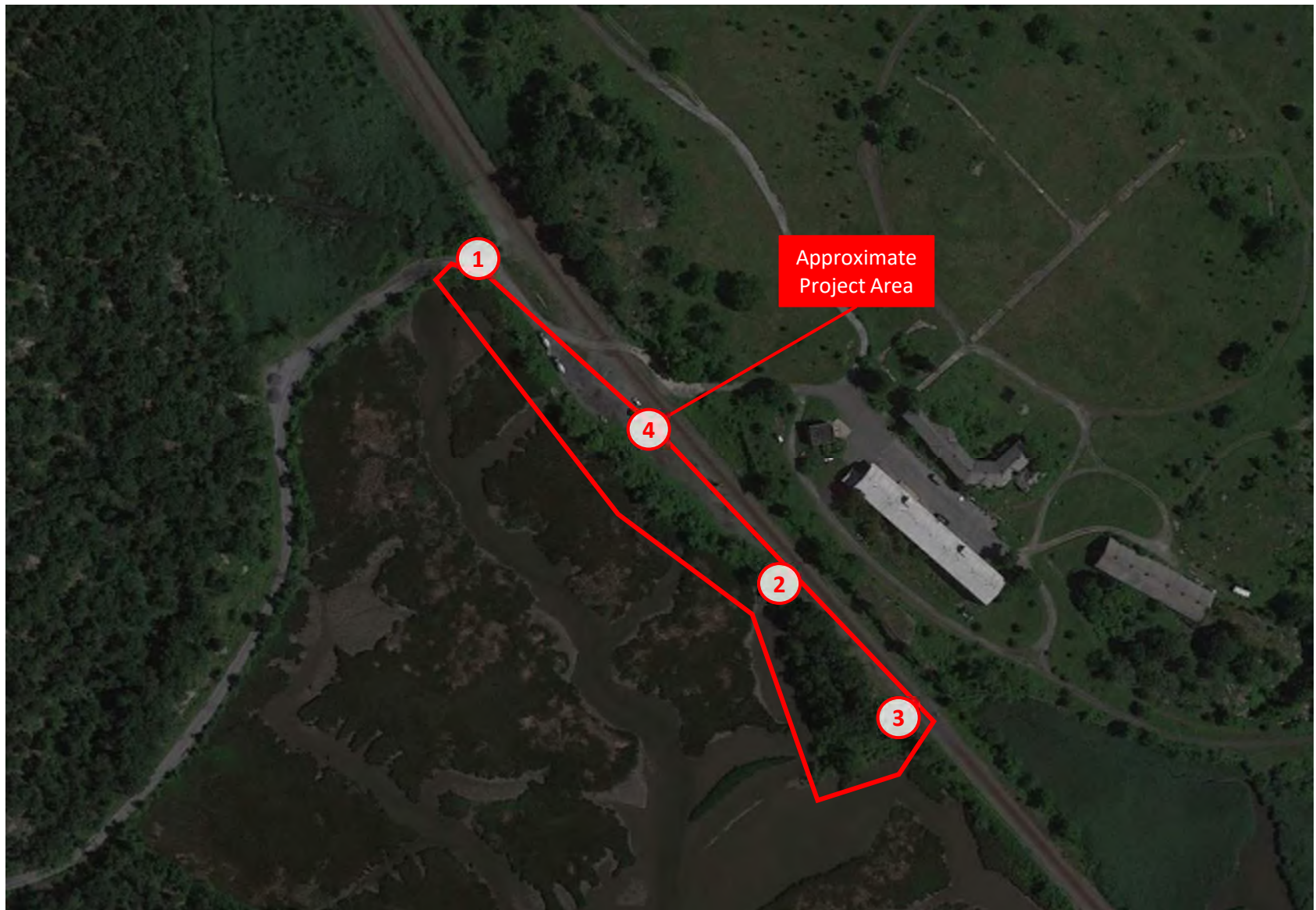
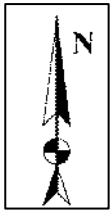


Photo Location Map

Rockland County
Iona Island Nature Preserve
Stony Point, New York
NOT TO SCALE

Iona Island — Bear Mountain State Park
Site Photographs
August 5, 2020



Photo 1a: View of the northern end of the project area; looking southeast.



Photo 1b: View of the northern end of the project area; looking south.



Photo 2a: View of the south-central portion of the project area; looking west.



Photo 2b: View of the south-central portion of the project area; looking southwest.



Photo 2c: View of the south-central portion of the project area; looking south.



Photo 3a: View of the southern portion of the project area; looking southeast.



Photo 3b: View of the southern portion of the project area; looking south.



Photo 3c: View of the southern portion of the project area; looking west.



Photo 4a: View of the central portion of the project area; looking northwest.



Photo 4b: View of the central portion of the project area; looking west.



Photo 4c: View of the central portion of the project area; looking southwest.



Photo 4d: View of the central portion of the project area; looking southeast.



Photo Location Map

Rockland County
Iona Island Nature Preserve
Stony Point, New York
NOT TO SCALE

Iona Island — Bear Mountain State Park
Site Photographs
May 12, 2023



Photo 5 – View from platform in project area, facing northwest.



Photo 6 – View from platform in project area, facing southwest.



Photo 7 – View from platform in project area, facing southeast.



Photo 8 – View of approach to project area, facing north/northwest.



Photo 9 – View of parking lot within project area, facing southeast.



Photo 10 – View from southeastern corner of bedrock outcropping, facing southeast.



Photo 11 – View from southeastern corner of bedrock outcropping, facing southwest.



Photo 12 – View from southeastern corner of bedrock outcropping, facing northeast.



Photo 13 – View from southeastern corner of bedrock outcropping, facing southeast.



Photo 14 – View from southeastern corner of project area, facing southeast.



Photo 15 – View from wetland boundary, facing southeast.



Photo 16 – View from wetland boundary, facing west.



Photo 17 – View of project area, facing northwest.



Photo 18 – View from wetland boundary, facing west.

WETLAND DELINEATION REPORT

WETLAND DELINEATION REPORT

**IONA ISLAND NATURE PRESERVE – D005476 PAL005
BEAR MOUNTAIN STATE PARK
ROCKLAND COUNTY, NEW YORK**



September 2020



Prepared For:
The Chazen Companies
547 River Street
Troy, NY 12180



Prepared By:
OSPA Engineering Services, PC
800 Route 146, Bldg. 200, Suite 280
Clifton Park, NY 12065

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LIST OF APPENDICES

APPENDIX A:	PROJECT DATABASE MAPPING
APPENDIX B:	PRELIMINARY WETLAND DELINEATION WITH DATA POINT
APPENDIX C:	WETLAND DETERMINATION DATA FORMS

1.0 INTRODUCTION

This wetland delineation was prepared for an approximately 3.25-acre project site located within Bear Mountain State Park, Rockland County, New York. The “Site Location Map”, in Appendix A – Project Database Mapping, illustrates the site location. This review area is bounded to the north and east by the railroad right-of-way and the island access road, and to the south and west by the estuary.

2.0 EXISTING CONDITIONS

2.1 Topography

Surface water appears to drain south and west toward Snake Hole Creek. The New York State Department of Environmental Conservation (NYSDEC) Environmental Mapper, United State Department of Agriculture (USDA) Soil Survey Map, the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) map and the United States Geological Survey (USGS) topographic mapping identify a series of wetlands along the western boundary of the subject area, which appear to be associated with Snake Hole Creek and the Hudson River. State and Federal background mapping is included in Appendix A.

2.2 Soils

The following is a description of the soils found on this site. The Soil Survey Mapping with the approximate property boundaries is included in Appendix A.

Ipswich mucky peat, 0 to 2 percent slopes, very frequently flooded (Ip): This soil series consists of very deep, very poorly drained soils formed in thick herbaceous organic deposits. They are on level tidal marshes subject to inundation by salt water twice daily. Saturated hydraulic conductivity is moderately high to very high.

2.3 Hydrology

Surface water generally drains in a southwestern direction by way of sheet flow into Snake Hole Creek (NYSDEC Class SC/C) and eventually outlets to the Hudson River (Class SB). Class SB waterbodies are marine waters suitable for swimming, other recreation and fishing. Class SC waterbodies are marine waters suitable for fishing and other non-contact activities. Class C waterbodies are freshwater and suitable for fishing and other non-contact activities.

Flood Emergency Management Act (FEMA) floodplain maps (36087C0036G, 2014) were reviewed for the project site. It was determined that the wetland portions of the site are located in Zone AE, within the floodplain of an adjacent stream. Areas within Zone AE must be kept free from encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

A review of the National Resources Conservation Service (NRCS) Wetland Determination Climate Data (WETS Table) indicates that the 30-year average annual rainfall is 52.10 inches per year (West Point, NY Station).

2.4 Vegetative Communities

Wetland plant communities follow the Cowardin system as identified in the “Classification of Wetlands and Deepwater Habitats of the United States” as utilized by the United States Fish and Wildlife Services (USFWS) National Wetland Inventory (NWI) mapping. The USFWS NWI mapping indicates an emergent intertidal estuarine wetland (E2EM1N6) that is regularly flooded and has oligohaline water chemistry (ie: it has a halinity of 0.5-5 ppt).

The site has historic disturbance throughout the subject property, but particularly within the northern portions of the site. The northern areas appear to be routinely maintained due to the presence of overhead powerlines, while the southern portion of the site does not experience routine maintenance and is undeveloped.

The northern portion of the site is dominated by herbaceous vegetative cover, deciduous shrubs and vines. The southern portions of the project area are comprised of deciduous trees and shrubs.

2.5 Wetland Mapping

The NYSDEC environmental resource mapper identifies the approximate locations of the wetlands, streams, and other environmental features on or near the project (Appendix A).

According to the NYSDEC, there is one state-regulated freshwater wetland (NYSDEC FWW PK-1, Class 1) immediately to the west of the subject property. The USFWS NWI mapping indicates an emergent intertidal estuarine wetland (E2EM1N6) that is regularly flooded and has oligohaline water chemistry (ie: it has a halinity of 0.5-5 ppt).

3.0 METHODOLOGY AND RESULTS

The wetland delineation for the project area was conducted on August 5, 2020. The delineation was performed using the three-parameter approach described in the United States Army Corps of Engineers’ (USACE) Wetland Delineation Manual and the Northcentral and Northeast Regional Supplement.

Data was collected within the wetlands and uplands at representative points to document the existing vegetation, soils and hydrology.

Using a soil auger, soil samples were taken to approximately 12 inches below the ground surface to characterize soils (where possible). Soil colors were documented using a Munsell Soil Color Chart. Hydrology was assessed by evaluating for inundation, saturation, and other site conditions.

Vegetation found at the sampling locations was identified in terms of the dominant species in the tree, shrub/sapling, herbaceous, and vine layers. The indicator status of the dominant plant species was determined using the “The National Wetland Plant List - Northcentral and Northeast Region 1” (Lichvar, R.W., 2016).

Following the establishment of the wetland boundary in the field, the boundary was collected by hand-held GPS and plotted on the field sketch. This wetland delineation mapping is included within Appendix B (“Preliminary Wetland Delineation With Data Points”) and includes the location of representative data points. The information collected at these data point locations is included in this report as Appendix C – Wetland Determination Data Forms. Photographs have also been included in Appendix C.

The field efforts identified one estuary wetland, coincident with the wetland identified on the reviewed state and federal mapping. This wetland had saturation to the soil surface, with inundation near the wetland boundary due to tidal influence. Vegetation on the subject property was dominated by herbaceous and shrub cover on the northern portion of the project area and shrub and forest cover on the southern portion of the project area. This wetland is adjacent to Snake Hole Creek which empties into the Hudson River.

The soils within these wetlands generally appear to be native, but the upland areas seem to have been utilized for staging for many years. The wetland soils are generally comprised of low chroma silt loams and muck (e.g. Munsell colors 10YR 2/1 and 10YR 3/1). The wetland areas are dominated by herbaceous cover, including many spreading vines. The upland areas are generally a mixture of broad-leaved deciduous forest, shrub and herbaceous cover types. Due to the influence of tidal hydroperiods, the wetlands showed evidence of consistent wetland hydrologic conditions, including saturation and inundation at the soil surface, oxidized root channels, and FAC-neutral tests.

4.0 WETLAND AND WATERWAY IMPACTS

It was concluded that all the wetlands on-site eventually drain to the Hudson River and are therefore regulated by the USACE. The wetlands are also mapped by the NYSDEC and would therefore be regulated by New York State.

Any activity which directly disturbs the wetlands will likely require a Section 404 Permit from the USACE, a Section 401 Water Quality Certification from the NYSDEC, and an Article 24 Freshwater Wetlands Permit from the NYSDEC. Additionally, any impacts to the adjacent area (i.e. area within 300 feet of a state-regulated tidal wetland) shall also require an Article 24 Freshwater Wetlands Permit. Activities should be minimized to those which are necessary for the proposed improvements. Ultimately, the exact permitting pathway can only be confirmed through coordination with the USACE and the NYSDEC.

References

U.S. Army Corps of Engineers. 1987. Wetlands Delineation Manual.

U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0)

National Wetland Inventory Map, USFWS.

USDA Natural Resource Conservation Service. Soil Survey for Rockland County, New York.

USDA Natural Resources Conservation Service. National Cooperative Soil Survey. Official Soil Descriptions from the National Soils Database.

U.S. Geological Survey. Peekskill and Popolopen Lake, NY 7.5-minute Quadrangles. 1981.

Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 36087C0036G, 2014

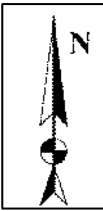
Lichvar, R.W. 2016. The National Wetland Plant List - Northcentral and Northeast Region
1. U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory.

APPENDIX A

PROJECT DATABASE MAPPING

MAPPING AND PHOTOS ALREADY
PROVIDED IN SUBMISSION

APPENDIX B
PRELIMINARY WETLAND DELINEATION
AND
DATAPOINT LOCATION



**Preliminary Wetland Delineation and
Datapoint Locations**

**Rockland County
Iona Island Nature Preserve
Stony Point, New York
NOT TO SCALE**

APPENDIX C

WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Iona Island Nature Preserve City/County: Rockland County Sampling Date: 8/5/2020
 Applicant/Owner: The Chazen Companies State: NY Sampling Point: DP-1
 Investigator(s): T. Massie Section, Township, Range: Town of Stony Point
 Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): Convex Slope (%): 2
 Subregion (LRR or MLRA): 142 Lat: 41.303060 Long: -73.978796 Datum: NAD 83
 Soil Map Unit Name: Ipswich mucky peat, 0 to 2 percent slopes, very frequently flooded NWI classification: N/A

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? (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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If yes, optional Wetland Site ID: _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Remarks: (Explain alternative procedures here or in a separate report.)			

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
<input type="checkbox"/> Surface Water (A1) <input checked="" type="checkbox"/> High Water Table (A2) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) <input checked="" type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Iron Deposits (B5) <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input checked="" type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>0</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>4</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0</u>		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: DP-1

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Fraxinus pennsylvanica</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>5</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>20</u>	= Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <th style="width: 50%;">Total % Cover of:</th> <th style="width: 50%;">Multiply by:</th> </tr> <tr> <td>OBL species <u>65</u></td> <td>x 1 = <u>65</u></td> </tr> <tr> <td>FACW species <u>20</u></td> <td>x 2 = <u>40</u></td> </tr> <tr> <td>FAC species <u>67</u></td> <td>x 3 = <u>201</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>2</u></td> <td>x 5 = <u>10</u></td> </tr> <tr> <td>Column Totals: <u>154</u> (A)</td> <td><u>316</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.05</u>	Total % Cover of:	Multiply by:	OBL species <u>65</u>	x 1 = <u>65</u>	FACW species <u>20</u>	x 2 = <u>40</u>	FAC species <u>67</u>	x 3 = <u>201</u>	FACU species <u>0</u>	x 4 = <u>0</u>	UPL species <u>2</u>	x 5 = <u>10</u>	Column Totals: <u>154</u> (A)	<u>316</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>65</u>	x 1 = <u>65</u>																	
FACW species <u>20</u>	x 2 = <u>40</u>																	
FAC species <u>67</u>	x 3 = <u>201</u>																	
FACU species <u>0</u>	x 4 = <u>0</u>																	
UPL species <u>2</u>	x 5 = <u>10</u>																	
Column Totals: <u>154</u> (A)	<u>316</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>20' X 20'</u>)																		
1. <u>Rhamnus cathartica</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
2. <u>Morella pensylvanica</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>20</u>	= Total Cover															
Herb Stratum (Plot size: <u>5' x 5'</u>)																		
1. <u>Typha angustifolia</u>	<u>50</u>	<u>Yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input checked="" type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Toxicodendron radicans</u>	<u>15</u>	<u>No</u>	<u>FAC</u>															
3. <u>Eutrochium maculatum</u>	<u>10</u>	<u>No</u>	<u>OBL</u>															
4. <u>Hibiscus moscheutos</u>	<u>5</u>	<u>No</u>	<u>OBL</u>															
5. <u>Asclepias syriaca</u>	<u>2</u>	<u>No</u>	<u>UPL</u>															
6. <u>Hordeum jubatum</u>	<u>2</u>	<u>No</u>	<u>FAC</u>															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>84</u>	= Total Cover															
Woody Vine Stratum (Plot size: <u>10' x 10'</u>)																		
1. <u>Vitis riparia</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>30</u>	= Total Cover															
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: DP-1

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

[illegible]

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | | |
|-------------------------------------|--------------------------------------|--------------------------|
| <input type="checkbox"/> | Histosol (A1) | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> | Histic Epipedon (A2) | <input type="checkbox"/> |
| <input type="checkbox"/> | Black Histic (A3) | <input type="checkbox"/> |
| <input type="checkbox"/> | Hydrogen Sulfide (A4) | <input type="checkbox"/> |
| <input type="checkbox"/> | Stratified Layers (A5) | <input type="checkbox"/> |
| <input type="checkbox"/> | Depleted Below Dark Surface (A11) | <input type="checkbox"/> |
| <input type="checkbox"/> | Thick Dark Surface (A12) | <input type="checkbox"/> |
| <input type="checkbox"/> | Sandy Mucky Mineral (S1) | <input type="checkbox"/> |
| <input type="checkbox"/> | Sandy Gleyed Matrix (S4) | <input type="checkbox"/> |
| <input type="checkbox"/> | Sandy Redox (S5) | <input type="checkbox"/> |
| <input type="checkbox"/> | Striped Matrix (S6) | <input type="checkbox"/> |
| <input type="checkbox"/> | Dark Surface (S7) (LRR R, MLRA 149B) | <input type="checkbox"/> |

- ☐ 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 Soils³:

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

³Indicators 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: Iona Island Nature Preserve City/County: Rockland County Sampling Date: 8/5/2020
Applicant/Owner: The Chazen Companies State: NY Sampling Point: DP-2
Investigator(s): T. Massie Section, Township, Range: Town of Stony Point
Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Convex Slope (%): 10
Subregion (LRR or MLRA): 142 Lat: 41.301537 Long: -73.976941 Datum: NAD 83
Soil Map Unit Name: Ipswich mucky peat, 0 to 2 percent slopes, very frequently flooded NWI classification: N/A

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? (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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		If yes, optional Wetland Site ID: _____	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: (Explain alternative procedures here or in a separate report.)					

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches):	<u>0</u>
(includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

VEGETATION – Use scientific names of plants.

 Sampling Point: DP-2

Tree Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Quercus falcata</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>9</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)														
2. <u>Tilia americana</u>	<u>50</u>	<u>Yes</u>	<u>FACU</u>															
3. <u>Quercus muehlenbergii</u>	<u>10</u>	<u>No</u>	<u>FACU</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
			<u>110</u> = Total Cover	Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>90</u></td> <td>x 3 = <u>270</u></td> </tr> <tr> <td>FACU species <u>120</u></td> <td>x 4 = <u>480</u></td> </tr> <tr> <td>UPL species <u>15</u></td> <td>x 5 = <u>65</u></td> </tr> <tr> <td>Column Totals: <u>225</u> (A)</td> <td><u>815</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.62</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>90</u>	x 3 = <u>270</u>	FACU species <u>120</u>	x 4 = <u>480</u>	UPL species <u>15</u>	x 5 = <u>65</u>	Column Totals: <u>225</u> (A)	<u>815</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>90</u>	x 3 = <u>270</u>																	
FACU species <u>120</u>	x 4 = <u>480</u>																	
UPL species <u>15</u>	x 5 = <u>65</u>																	
Column Totals: <u>225</u> (A)	<u>815</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>20' X 20'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Aralia spinosa</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators: <input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Rhamnus cathartica</u>	<u>5</u>	<u>Yes</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
			<u>15</u> = Total Cover															
Herb Stratum (Plot size: <u>5' x 5'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Toxicodendron radicans</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>	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 <input checked="" type="checkbox"/> No <input type="checkbox"/>														
2. <u>Smilax rotundifolia</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>															
3. <u>Celastrus orbiculatus</u>	<u>15</u>	<u>Yes</u>	<u>UPL</u>															
4. <u>Festuca rubra</u>	<u>10</u>	<u>No</u>	<u>FACU</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
			<u>75</u> = Total Cover															
Woody Vine Stratum (Plot size: <u>10' x 10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Smilax rotundifolia</u>	<u>15</u>	<u>Yes</u>	<u>FAC</u>															
2. <u>Vitis riparia</u>	<u>10</u>	<u>Yes</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
			<u>25</u> = Total Cover															

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

SOIL

Sampling Point: DP-2

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

[illegible]

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

²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

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

Indicators for Problematic Hydric Soils³:

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

³Indicators 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:

ETS PACKAGE



OSPA Engineering Services, PC
800 Route 146, Bldg. 200, Suite 280
Clifton Park, NY 12065
Phone: (518) 636-9956

Memorandum

To: Brit Basinger, RLS
CC: file
From: Melanie Osterhout, P.E.
Date: 6/26/2023
Re: Iona Island Boardwalk/Trail Construction Species Review Package

Mr. Basinger,

OSPA Engineering Services, PC has conducted the species review for the Iona Island Trail and Boardwalk construction project.

The location of the project and the action area are identified on the maps provided in **Attachments 1 and 2**. The project involves the construction of a trail and accessible boardwalk on Iona Island Nature Preserve in Stony Point, Rockland County NY. The project site is currently equipped with a viewing deck and a kiosk. The project area is limited to the area immediately west of the railroad, beginning approximately where Iona Island Access Road intersects the railroad. The project corridor continues southeast for approximately 700 feet adjacent to the railroad tracks to the east and wetlands to the west.

Refer to Figures 1 and 2 of this report for regional and local maps of the project area.

The objective of this project is to improve the existing infrastructure by adding a recreational trail and boardwalk as well as planting native species along the proposed trails.

According to the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC), the Indiana Bat (*Myotis sodalis*) and the Northern Long-eared Bat (*Myotis septentrionalis*), both federally endangered species, and the Monarch Butterfly (*Danaus plexippus*), a candidate species, were identified as having the potential to be found in the project area.

The New York State Department of Environmental Conservation (NYSDEC) Environmental Resources Mapper (ERM) indicates that the project site is within an area known to contain rare plants or animals. The NYSDEC Environmental Assessment Form (EAF) Mapper was consulted to determine the potential presence of state-listed endangered or threatened plants or animals. The state-endangered Northern Long-eared Bat, Atlantic Sturgeon (*Acipenser oxyrinchus*), Shortnose Sturgeon (*Acipenser brevirostrum*), New England Bulrush (*Bolboschoenus novae-angliae*), Water Pygmyweed (*Crassula aquatica*) and Yellow Flat Sedge (*Cyperus flavescens*) and the state threatened Least Bittern (*Ixobrychus exilis*), Annual Salt Marsh Aster (*Symphyotrichum subulatum*), Spongy-leaved Arrowhead (*Sagittaria*

montevidensis), Terrestrial Water Starwort (*Callitriche terrestris*) and Bald Eagle (*Haliaeetus leucocephalus*) have the potential to be found in the project area.

In addition, the EAF Mapper indicates the project area is within the vicinity of multiple natural communities, including an oak-tulip tree forest, a freshwater tidal marsh, brackish intertidal mudflats and a brackish tidal marsh.

While there is the potential for Indiana Bat and Northern Long-eared Bat habitat, significant clearing of trees is not expected. The nearest known hibernacula is approximately 4 miles west of the project site. Approximately 0.1 acres of trees with a diameter at breast height (DBH) greater than 3 inches will be removed within the clearing window of November 1st – March 31st for the proposed project. It was determined that the project may affect but is unlikely to adversely affect the Indiana Bat and the Northern Long-eared Bat due to minimal tree clearing (0.1 acres) between November 1st and March 31st.

While the Monarch Butterfly is a candidate species, it is currently not afforded any protection under the Endangered Species Act. The site has been checked for Milkweed and locations have been photographed and plotted on a map (see Attachment 1).

Although habitat for Yellow Flat Sedge is present within the project area, the Yellow Flat Sedge population that has been documented on Iona Island is located west of where construction is proposed and not within the project limits, making it unlikely that it will be affected by the proposed project. Project limits were traversed during site visits on 05/12/23 and 6/22/23. There was no Yellow Flat Sedge identified. Therefore, it has been determined that the project will not affect Yellow Flat Sedge.

The Spongy-leaved Arrowhead population on Iona Island intercepts the proposed trail location. Project limits were traversed during site visits on 05/12/23 and 6/22/23, there was no Spongy-leaved Arrowhead identified. Therefore, it has been determined that the project will not affect the Spongy-leaved Arrowhead.

Terrestrial Water Starwort has been historically documented at the project site. Although potential habitat is present, the last documented sighting occurred in 1993. Since no specimens have been found since 1993, and none were identified during the site visits, it has been determined that the project will not affect Terrestrial Water Starwort.

Although habitat for Annual Saltmarsh Aster is present within the project area, the population that has been documented at Iona Island is located both north and southeast of where construction is proposed and not within the project limits. In addition, there was no Annual Saltmarsh Aster identified during the site visits in May and June of 2023, therefore it has been determined that the project will not affect Annual Saltmarsh Aster.

The population of New England Bulrush that has been documented on Iona Island is located west of where construction is proposed and not within the project limits. There was no New England Bulrush identified during the site visits in May and June

of 2023, and therefore it has been determined that the project will not affect New England Bulrush.

The population of Water Pygmyweed that has been documented on Iona Island is located south of where construction is proposed and not within the project limits. There was no Water Pygmyweed identified during the site visits in May and June of 2023, and therefore it has been determined that the project will not affect Water Pygmyweed.

Both Atlantic Sturgeon and Shortnose Sturgeon have been documented in the Hudson River in Rockland County but spend the majority of their time in deeper portions of the river. Since the marshes adjacent to the project site are shallow, suitable habitat is not present and the project will have no effect on the Atlantic Sturgeon and the Shortnose Sturgeon. The site visit on 05/12/23 was conducted during low tide when hydrology was significantly reduced. It was confirmed that suitable habitat is not present for either of these species, and neither were observed during the site visit.

The Least Bittern is a bird that has been historically documented on Iona Island. Potential habitat for the Least Bittern is present at the Iona Island Marshes, however, the last sighting was during a wildlife survey conducted in 2005. In addition, the project site runs adjacent to an operational railroad which not only has frequent trains, but a crossing where trains utilize their horns. Noise created during construction can be a concern for certain bird species, however; construction noise would not raise noise levels above what is already produced by the passing trains. Since there have been no sightings since 2005, none were sighted during the site visit in May of 2023 and noise levels at the site will not increase, it has been determined that the project will not affect the Least Bittern.

The Bald Eagle has been documented extensively at Iona Island. A site visit confirmed that there are no trees suitable for eagle nesting within the project limits. There were no eagles observed during the site visit, but the project area may possess suitable hunting areas for Bald Eagles. Noise during construction can affect the Bald Eagle if they are nesting nearby. However; as previously stated, the project site runs adjacent to an operational railroad and the noise generated by construction would not raise noise levels above what is already produced by passing trains. Therefore, it has been determined that the project may affect but is unlikely to adversely affect the Bald Eagle.

There are two streams (the Snake Hole Creek and the Hudson River) that flow through the project site. The Snake Hole Creek is a class SC/C stream, and the Hudson River is a Class SB stream. The National Oceanic and Atmospheric Administration (NOAA) online Essential Fish Habitat Mapper (EFH) indicates that the project area is within an essential fish habitat area. The National Marine Fisheries Service (NMFS) list of 11 species with the potential to be located in the project area is included in **Attachment 2**. While the project area has the potential to contain these species, the marshes adjacent to the project site are shallow. The site visit on 05/12/23 was conducted during low tide when hydrology was significantly reduced.

June 26, 2023

It was confirmed that suitable habitat is not present for these species during low tide within the project area. The project proposes minimal impacts below ordinary high water (spread footings for the boardwalk). It is not anticipated that the installation of several spread footings within the project area during low tide will impact any of the species with the potential to be present in the project area.

Please contact us if you have any additional questions or require further information.

Attachments	
1.	Environmental Mapping
2.	IPaC Screening Document, Species Conclusion Table, EFH and NOAA Mappers
3.	State Agency Correspondence and Screening Forms
4.	Site Photos
5.	Indiana Bat Fact Sheet Northern Long-Eared Bat Fact Sheet Least Bittern Fact Sheet Atlantic Sturgeon Fact Sheet Shortnose Sturgeon Fact Sheet Yellow Flat Sedge Fact Sheet Spongy-Leaved Arrowhead Fact Sheet Terrestrial Water Starwort Fact Sheet Annual Saltmarsh Aster Fact Sheet New England Bulrush Fact Sheet Water Pygmyweed Fact Sheet Bald Eagle Fact Sheet

MAPPING ALREADY PROVIDED IN SUBMISSION



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New York Ecological Services Field Office
3817 Luker Road
Cortland, NY 13045-9385
Phone: (607) 753-9334 Fax: (607) 753-9699
Email Address: fw5es_nyfo@fws.gov

In Reply Refer To:
Project Code: 2023-0066793
Project Name: Iona Island Trail

April 07, 2023

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.**

Note: IPaC has provided all available attachments because this project is in multiple field office jurisdictions.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

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:

New York Ecological Services Field Office

3817 Luker Road

Cortland, NY 13045-9385

(607) 753-9334

This project's location is within the jurisdiction of multiple offices. However, only one species list document will be provided for all offices. The species and critical habitats in this document reflect the aggregation of those that fall in each of the affiliated office's jurisdiction. Other offices affiliated with the project:

Long Island Ecological Services Field Office

340 Smith Road

Shirley, NY 11967-2258

(631) 286-0485

PROJECT SUMMARY

Project Code: 2023-0066793

Project Name: Iona Island Trail

Project Type: Recreation - New Construction

Project Description: This project proposes the construction of an ADA accessible boardwalk and trail at the Iona Island Nature Preserve.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@41.30149505,-73.97642038372707,14z>



Counties: Rockland 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 Fisheries¹, 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.

-
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
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> 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.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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 OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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](#).

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1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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 <i>Haliaeetus leucocephalus</i> 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 Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Black-capped Chickadee <i>Poecile atricapillus praticus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 10 to Jul 31
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 27 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Golden Eagle <i>Aquila chrysaetos</i> 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
Golden-winged Warbler <i>Vermivora chrysoptera</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8745	Breeds May 1 to Jul 20
Kentucky Warbler <i>Oporornis formosus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker <i>Melanerpes erythrocephalus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere

NAME	BREEDING SEASON
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

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.

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 (|)

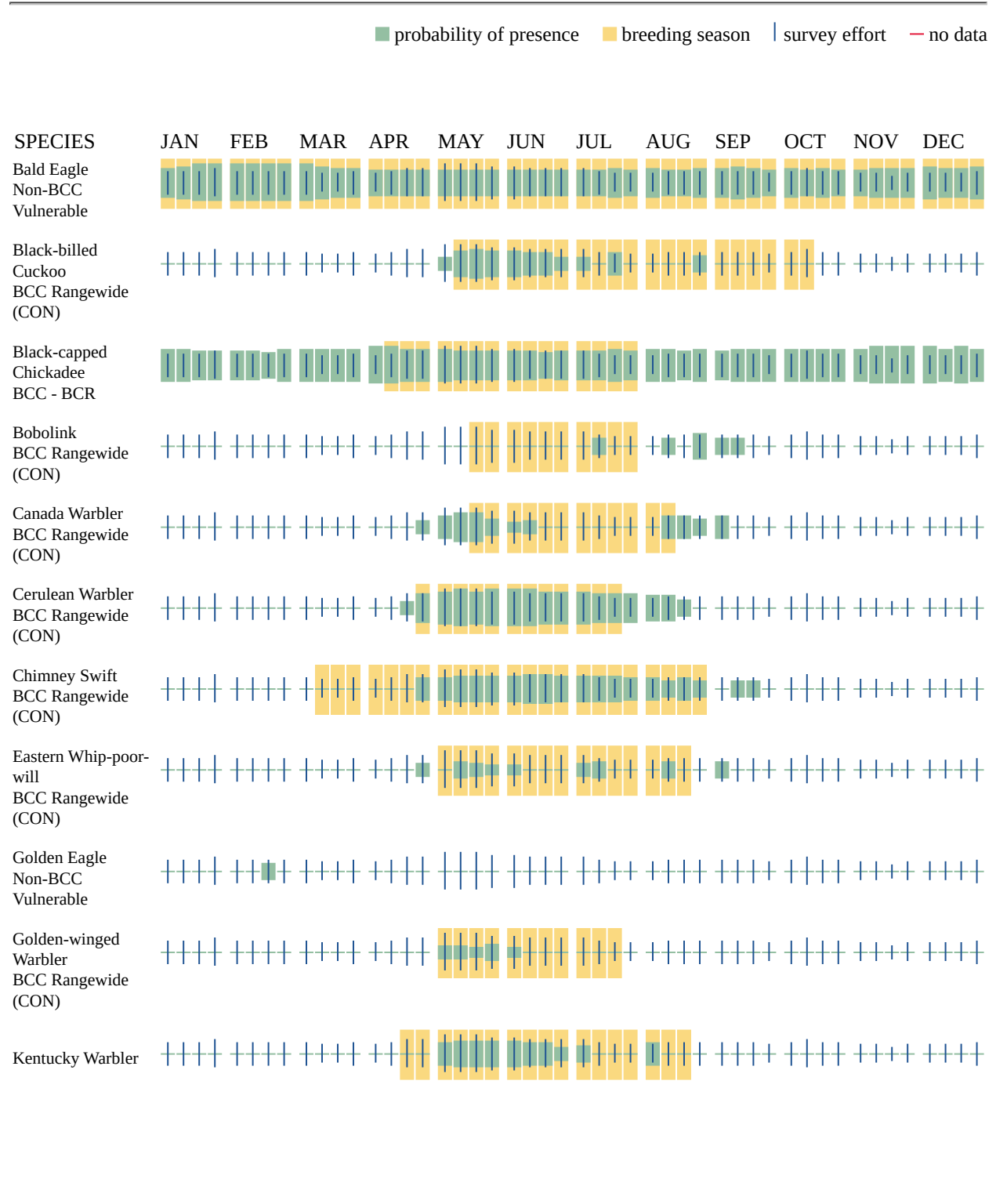
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

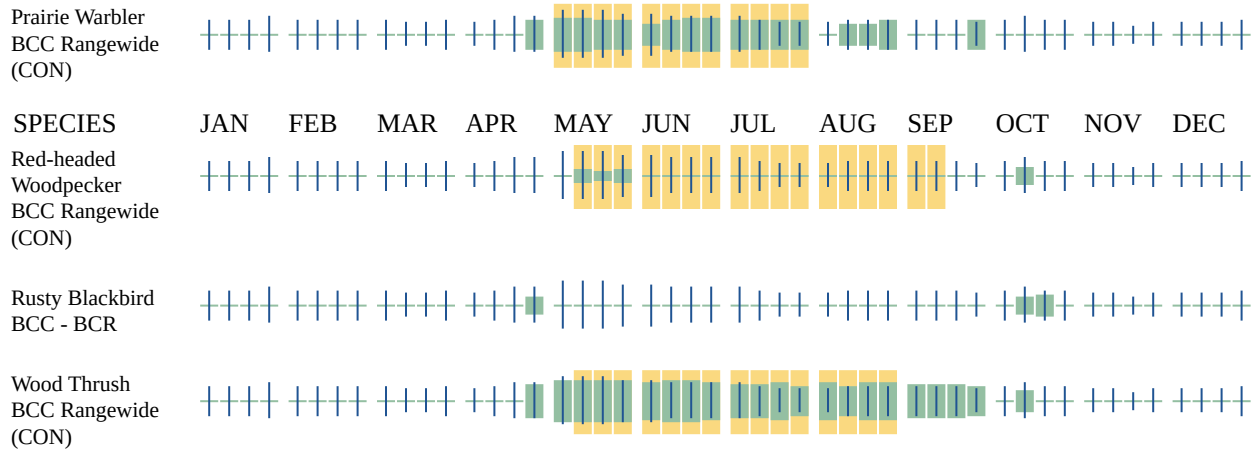
A week is marked as having no data if there were no survey events for that week.

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.



BCC Rangewide
(CON)



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>

MIGRATORY BIRDS FAQ

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 to 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.

WETLANDS

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.

ESTUARINE AND MARINE DEEPWATER

- [E1UBL6](#)

ESTUARINE AND MARINE WETLAND

- [E2EM1N6](#)

RIVERINE

- [R5UBH](#)

FRESHWATER EMERGENT WETLAND

- [PEM1F](#)
-

IPAC USER CONTACT INFORMATION

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Name: Julia Sovey

Address: 800 NY-146 Building 200, Suite 280, Clifton Park, NY, 12065

City: Clifton Park

State: NY

Zip: 12065

Email: jsovey@ospaengineering.com

Phone: 5186369956

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

[Greater Atlantic Regional Office](#)
[Atlantic Highly Migratory Species Management Division](#)

Query Results










Degrees, Minutes, Seconds: Latitude = 41° 18' 7" N, Longitude = 74° 1' 23" W
 Decimal Degrees: Latitude = 41.302, Longitude = -73.977

The query location intersects with spatial data representing EFH and/or HAPCs for the following species/management units.

*** WARNING ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
		Winter Flounder	Eggs Juvenile Larvae/Adult	New England	Amendment 14 to the Northeast Multispecies FMP
		Little Skate	Juvenile Adult	New England	Amendment 2 to the Northeast Skate Complex FMP
		Atlantic Herring	Juvenile Adult Larvae	New England	Amendment 3 to the Atlantic Herring FMP
		Red Hake	Adult Eggs/Larvae/Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP
		Windowpane Flounder	Adult Larvae Eggs Juvenile	New England	Amendment 14 to the Northeast Multispecies FMP