Breakneck Connector and Bridge Project

Joint Application for Permits

Applicant:

Hudson Highlands Fjord Trail, Inc.
Scenic Hudson, Inc.

Prepared By:

AKRF, Inc.

April 2023

HUDSON HIGHLANDS FJORD TRAIL, INC. C/O SCENIC HUDSON, INC.
REQUEST FOR PERMITS

BREAKNECK CONNECTOR AND BRIDGE PROJECT
TOWN OF FISHKILL, DUTCHESS COUNTY, NEW YORK

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Attachment 10: Coastal Zone Consistency Forms

- Federal Consistency Assessment Form
- State Consistency Assessment Form

NEW YORK STATE | Department of Environmental Conservation | Office of General Services | Department of State

US Army Corps of Engineers

JOINT APPLICATION FORM

For Permits for activities 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
- ☑ Excavation and Fill in Navigable Waters
- ☐ Docks, Moorings or Platforms
- ☐ Dams and Impoundment Structures
- ☑ 401 Water Quality Certification *
- ☐ Freshwater Wetlands
- ☐ Tidal Wetlands
- ☐ Wild, Scenic and Recreational Rivers
- ☐ Coastal Erosion Management
- ☐ Water Withdrawal
- ☐ Long Island Well
- ☐ 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: NWP 14 - Linear Transportation

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**

Hudson Highlands Fjord Trail Inc., c.o. Amy Kacala

Taxpayer ID (if applicant is NOT an individual)

EIN: 84-4261224

Mailing Address	Post Office / City	State	Zip
85 Civic Center Plaza Suite 300	Poughkeepsie	NY	12601

Telephone 845-473-4440 Email akacala@hhft.org

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

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

NYC Department of Environmental Protection

Mailing Address	Post Office / City	State	Zip
71 Smith Avenue	Kingston	NY	12401

Telephone 845-340-7262 Email epereira@dep.nyc.gov

For Agency Use Only	Agency Application Number:

4. **Name of Contact / Agent**

Sandy Collins, AKRF

Mailing Address	Post Office / City	State	Zip
7250 Parkway Drive, Suite 210	Hanover	MD	21076

Telephone 646-388-9657 Email scollins@akrf.com

5. **Project / Facility Name**

Breakneck Connector and Bridge Project

Property Tax Map Section / Block / Lot Number: TO COME

Project Street Address, if applicable	Post Office / City	State	Zip
n/a	Fishkill	NY	12508

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

0.58-mile linear trail along the Hudson River between State Route 9D and Metro North Railroad tracks from Philipstown (Breakneck Ridge Trailhead) to Fishkill (Metro North station at Breakneck Ridge)

☑ Town ☐ Village ☐ City

County	Stream/Waterbody Name
Dutchess	Hudson River

Fishkill

Project Location Coordinates: Enter Latitude and Longitude in degrees, minutes, seconds:

Latitude: 41 ° 26 ' 50.5 N " Longitude: 73 ° 58 ' 49.4 W "

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:

Purpose of project is to improve visitor safety at the Breakneck Ridge Trail with respect to traffic, parking, pedestrian, and cyclist conditions; and enhance access for all persons to this area by building trails and parking areas that meet generally accepted accessibility standards and formalize trails that are already in place and currently in use. See Attachment 1.

b. Description of current site conditions:

Previously disturbed land along roadways, rail right-of-way, and heavily trafficked trails between the existing Breakneck Ridge Trailhead (TH) to south and Wilkinson Memorial TH to north. Gravel parking area at Breakneck Ridge TH and ad hoc street parking along Route 9D providing access to Hudson Highlands State Park Preserve trails. Limited vegetation present in parking areas and along informal trails. Hudson River shoreline is riprap with scrubby vegetation.

c. Proposed site changes:

0.58-mile publicly accessible shared-use trail that includes a new 445 LF bridge over the MNR tracks, parking areas along NYS Route 9D, trail connections to existing trails, addition of two comfort station buildings, and removal and replacement of existing MNR Breakneck Ridge platforms. No permanent changes to Hudson River habitat. Minor grading affecting freshwater wetlands. See Attachment 1.

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.):

Temporary shoreline stabilization at new bridge location to provide construction access from water comprising 260 LF of riprap with 126 CY below SHW and 106 CY below MHW placed on geotextile. Riprap and geotextile will be removed following bridge construction. No footings or trail components will be placed below SHW or MHW or within wetlands. Western bridge abutments and landing construction will be supported by barge but will be installed above SHW.

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

No excavation, dredging, or material removal is proposed.

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

Timing of the proposed cutting or clearing (month/year): November 1st through March 31st

Number of trees to be cut: 179 Acreage of trees to be cleared: n/a (scattered)

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

In-water includes mobilization/logistics barge (260x60 feet), materials barge (200x50 feet), bridge barge (200x50 feet), crane barge (260x60 feet), debris scow (150x45 feet), crew and safety vessel, floating transfer docks between crew vessels and barges. Land-based equipment includes excavators, earth movers, delivery trucks. See Attachment 1.

h. Describe the planned sequence of activities:

Install turbidity curtain; install temporary shoreline stabilization; mobilize barges and place access ramp across stabilized shoreline; construct western abutment and bridge deck over tracks; remove shoreline stabilization and demobilize barges. Landside activities will occur concurrently. Barge-supported work on southbound MNR platform will begin after bridge is complete (i.e., not concurrently with other barge-supported work on bridge).

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

Riprap will be placed on geotextile so everything below SHW can be removed easily after construction. Mobilization/logistics barge will install spud piles hydraulically and under self-weight to limit underwater noise. Other barges will moor directly to mobilization/logistics barge. Barges will maintain separation from the bottom at all times. See Attachment 1.

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

Full-length turbidity curtain will be used around the temporary shoreline stabilization area to minimize potential impacts of sediment resuspension. Land-based activities will implement erosion and sediment control measures in accordance with SWPPP prepared for the Project, including use of silt fencing around LOD, straw bales, temporary pumps, filter bags, and marsh/timber mats over wetland soils. See Attachment 1.

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

No alternatives to barge-supported construction of the bridge and western abutment because heavy equipment is not permitted to cross the MNR tracks. There are no permanent in-water impacts associated with the Project. Project has avoided and minimized potential impacts to delineated wetlands. See Attachment 1.

l. Proposed use: ☐ Private ☑ Public ☐ Commercial

m. Proposed Start Date: April 2024 Estimated Completion Date: November 2025

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

Hudson Highlands State Park Preserve
MNR and NYSDOT rights-of-way
NYCDEP Hudson River Drainage Chamber

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: Apr 4, 2023

Amy Kacala (Apr 4, 2023 11:07 EDT)

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

Printed Name: Amy Kacala — Title: Executive Director, HHFT Inc.

Signature of Owner (if different than Applicant) — Date: 3/15/23

Emily Pereira

Printed Name: Emily Pereira — Title: Capital Design Project Manager, NYCDEP

Signature of Contact / Agent — Date: 4/4/2023

Sandra L Collins

Printed Name: Sandy Collins — Title: Senior Vice President, AKRF Inc.

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

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Telephone 845-473-4440 Email akacala@hhft.org

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Metro-North Railroad, c.o. Clare Sammon

Mailing Address	Post Office / City	State	Zip
420 Lexington Avenue 11th Floor	New York	NY	10170

Telephone 212-340-3445 Email Sammon@mnr.org

For Agency Use Only	Agency Application Number:

4. **Name of Contact / Agent**

Sandy Collins, AKRF

Mailing Address	Post Office / City	State	Zip
7250 Parkway Drive, Suite 210	Hanover	MD	21076

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Signature of Applicant

Amy Kacala (Apr 4, 2023 11:07 EDT)

Date: Apr 4, 2023

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

Printed Name: Amy Kacala

Title: Executive Director, HHFT Inc.

Signature of Owner (if different than Applicant)

Clare Sammon

Date: 3/6/23

Printed Name: Clare Sammon

Title: Deputy Dir, Environmental Compliance,MNR

Signature of Contact / Agent

Sandra L Collins

Date: 4/4/2023

Printed Name: Sandy Collins

Title: Senior Vice President, AKRF Inc.

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.

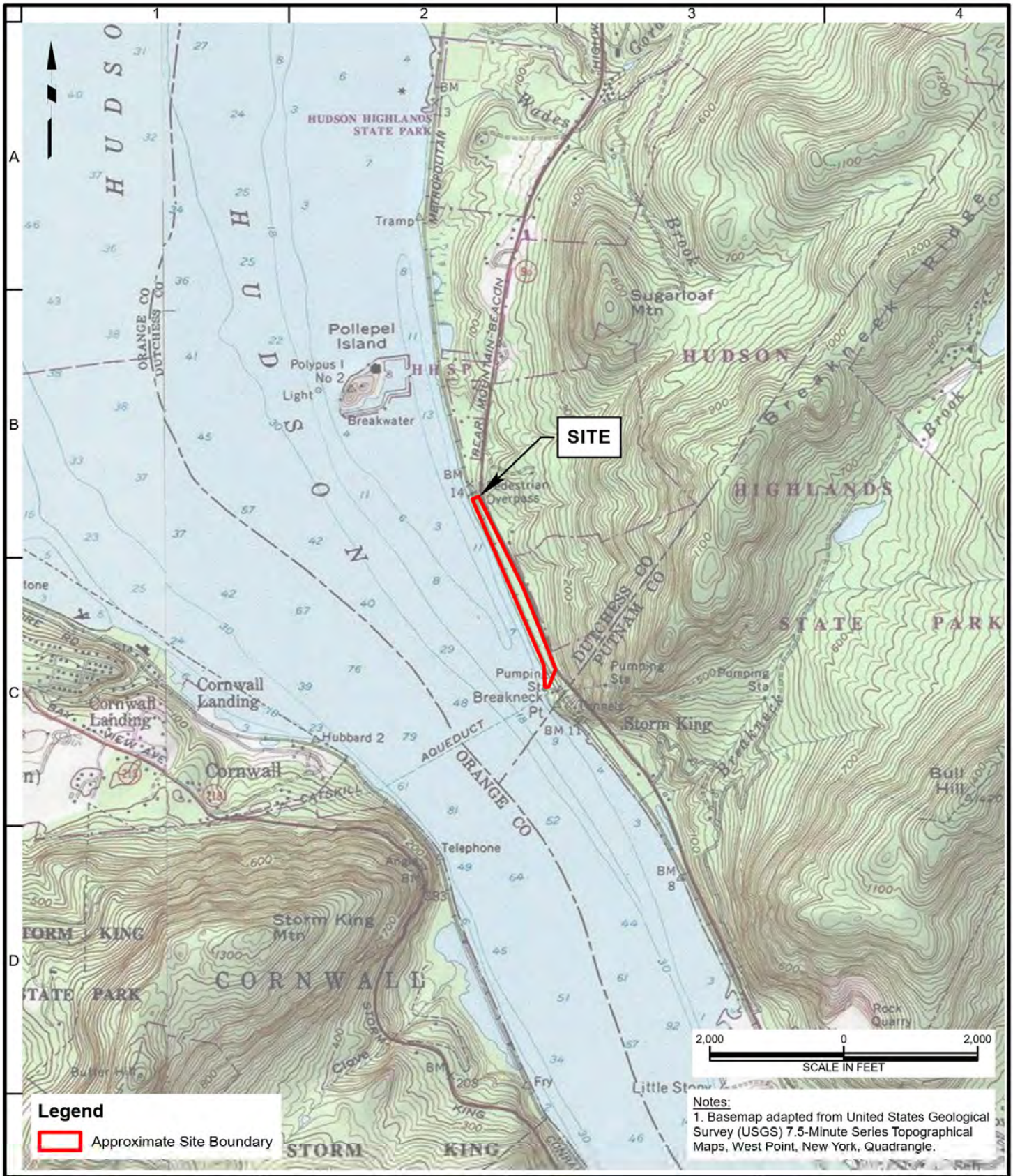
Agency Representative:

Printed Name

Title

Signature

Date



LANGAN
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001-2727
T: 212.479.5400 F: 212.479.5444 www.langan.com

Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
Langan International LLC

Collectively known as Langan

Project
HUDSON HIGHLAND FJORD TRAIL AND BREAKNECK CONNECTOR
BEACON
DUTCHESS COUNTY NEW YORK

Figure Title
USGS SITE LOCATION MAP

Project No.	Figure No.
170553205	1
Date: 4/25/2022	
Scale: 1"=2,000'	
Drawn By: MG	
Submission Date:	

Path: \\langan.com\data\NYC\data2\170553205\Project Data\ArcGIS\APRX\170553205\170553205.aprx Date: 4/25/2022 User: Gsajbel Time: 4:25 PM

Environmental Resource Mapper

The coordinates of the point you clicked on are:

UTM 18	**Easting:**	586030.5633039937	**Northing:**	4587530.457871077
Longitude/Latitude	**Longitude:**	-73.97027587890561	**Latitude:**	41.434745516650636

The approximate address of the point you clicked on is:
3036-3234 RT-9D, Cold Spring, New York, 10516

County: Putnam
Town: Philipstown
USGS Quad: WEST POINT

Significant Natural Communities

Natural Community Name: Oak-tulip tree forest
Location: Breakneck Scofield Fishkill Ridge
Significance: High Quality Occurrence of Rare Community Type

Natural Community Name: Tidal river
Location: Hudson River Estuary
Significance: High Quality Occurrence of Uncommon Community Type

Natural Community Name: Chestnut oak forest
Location: Bull Hill
Significance: High Quality Occurrence

Natural Communities in the Vicinity

Natural Community Name: Pitch pine-oak-heath rocky summit
Location: Breakneck Ridge
Significance: High Quality Occurrence of Uncommon Community Type

Natural Community Name: Pitch pine-oak-heath rocky summit
Location: Bull Hill
Significance: High Quality Occurrence of Uncommon Community Type

Natural Community Name: Chestnut oak forest
Location: Bull Hill
Significance: High Quality Occurrence

Natural Community Name: Oak-tulip tree forest
Location: Breakneck Scofield Fishkill Ridge
Significance: High Quality Occurrence of Rare Community Type

Natural Community Name: Tidal river
Location: Hudson River Estuary
Significance: High Quality Occurrence of Uncommon Community Type

Rare Plants and Rare Animals

This location is in the vicinity of Rare Animals Listed as Special Concern by NYS

This location is in the vicinity of Animals Listed as Endangered or Threatened - Contact NYSDEC Regional Office

This location is in the vicinity of Bats Listed as Endangered or Threatened -- Contact NYSDEC Regional Office

This location is in the vicinity of Shortnose Sturgeon – Listed as Endangered – Contact NYSDEC Regional Office

This location is in the vicinity of Significant Anadromous Fish Concentration Area -- Contact NYSDEC

This location is in the vicinity of Atlantic Sturgeon -- Federally Listed, Contact NYSDEC

Base Flood Elevation Plus 72/75 Inches Sea-level Rise

This area is projected to be inundated during a 100-year flood with 72/75 inches of sea-level rise.

National Wetands Inventory

Attribute: E1UBL6
Type: Estuarine and Marine Deepwater
Acres: 38038.605148425

For more information about the National Wetands Inventory wetlands visit **http://www.fws.gov/wetlands/**

If your project or action is within or near an area with a rare animal, a permit may be required if the species is listed as endangered or threatened and the department determines the action may be harmful to the species or its habitat.

If your project or action is within or near an area with rare plants and/or significant natural communities, the environmental impacts may need to be addressed.

The presence of a unique geological feature or landform near a project, unto itself, does not trigger a requirement for a NYS DEC permit. Readers are advised, however, that there is the chance that a unique feature may also show in another data layer (ie. a wetland) and thus be subject to permit jurisdiction.

Please refer to the "Need a Permit?" tab for permit information or other authorizations regarding these natural resources.

Disclaimer: If you are considering a project or action in, or near, a wetland or a stream, a NYS DEC permit may be required. The Environmental Resources Mapper does not show all natural resources which are regulated by NYS DEC, and for which permits from NYS DEC are required. For example, Regulated Tidal Wetlands, and Wild, Scenic, and Recreational Rivers, are currently not included on the maps.

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

APPLICATION FOR PERMIT
FOR SECTION 401 STATE WATER QUALITY CERTIFICATION

Supplement WQC-1

DEC ID (if known): _____

Applicant Information:

Name of Applicant (from Joint Application Form): Hudson Highlands Fjord Trail Inc., c.o. Amy Kacala			
Email: akacala@hhft.org		Phone: 845-473-4440	
Mailing Address: Street: 85 Civic Center Plaza	City: Poughkeepsie	State: NY	Zip: 12601
Project Location (from Joint Application Form): Trail btwn NYS Rt 9D and MNR tracks from Philipstown to Fishkill			
Town (where property taxes paid): Town of Fishkill		County: Dutchess	
Street Address: n/a	City: Fishkill	State: NY	Zip: 12508

To apply for New York State Section 401 Water Quality Certification, all items below must be completed and the applicant must sign page 2 of this form.

1.	By signing this form, the applicant affirms that the project proponent(s) and a point of contact were accurately identified in the Joint Application for Permit provided with this supplement.
2.	By signing this form, the applicant affirms that the proposed project is accurately and completely identified in the Joint Application for Permit provided with this supplement, and in any supporting plans, photos, reports or other project information.
3.	Identify here the applicable federal license or permit for this request: Clean Water Act Section 404, Section 10 Rivers and Harbors Act If this request relates to a Section 404 Nationwide Permit administered by the US Army Corps of Engineers, please identify the appropriate Nationwide Permit number(s): NWP 14
4.	Please identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters (attached additional information as needed): Temporary shoreline stabilization along approximately 260 linear feet of shoreline comprising 126 cubic yards of riprap armor stone below SHW (106 cubic yards below MHW) placed on top of geotextile. All shoreline stabilization materials below SHW will be removed following construction. No footings or trail components will be below SHW or MHW or within wetlands.
5.	Please provide a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge (attach additional information as needed): Full-length turbidity curtain will be deployed just offshore from the shoreline stabilization area. Riprap armor stone will be placed on top of geotextile to minimize sediment disturbance and facilitate its removal at the completion of construction. The shoreline stabilization will minimize the potential for discharge of sediments into the waterway when equipment is moved between the barges and the upland project site.

6.	Please provide a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received: Consultation and approvals required from NMFS (EFH and ESA Section 7), USFWS (ESA Section 7), and NYSDOS (coastal zone consistency concurrence)

Certification:

In addition to the Joint Application Form provided with this supplement, I hereby submit this form and the attachments indicated to request a Section 401 Water Quality Certification from DEC. The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

Amy Kacala (Apr 4, 2023 11:07 EDT)

Project Applicant/Proponent Signature

April 4, 2023
Apr 4, 2023

Date

ENVIRONMENTAL QUESTIONNAIRE

This is intended to supplement ENG Form 4345, Application for Department of the Army Permit, or the Joint Application for Permit used in the State of New York. Please provide complete answers to all questions below which are relevant to your project. Any answers may be continued on separate sheet(s) of paper to be attached to this form.

PRIVACY ACT STATEMENT

The purpose of this form is to provide the Corps of Engineers with basic information regarding your project. This information will be used to facilitate evaluation of your permit application and for public dissemination as required by regulation. Failure to provide complete information may result in your application being declared incomplete for processing, thereby delaying processing of your application.

GENERAL--APPLICABLE TO ALL PROJECTS

1. Explain the need for, and purpose of, the proposed work.

This Joint Application requests authorization for the Breakneck Connector and Bridge (BNCB) Project (Project), which is an approximately 0.58-mile section of a larger planned 7.5-mile shared-use trail between Beacon and Cold Spring, in the southwestern portion of Dutchess County New York, which is being developed by Hudson Highlands Fjord Trail, Inc. (HHFT). The Project will ultimately connect existing informal and heavily trafficked trails to the Breakneck Ridge Trail and safely separate patrons from NYS Route 9D and the Metro-North Railroad (MNR) tracks within the Project Site. The southern portion of the Project will branch into two trails, one leading to the Breakneck Ridge trailhead and Upper Overlook and the other a continuance of the shared-use trail as a new bridge over the MNR tracks. The Project will include the new bridge over the MNR tracks, parking areas along NYS Route 9D, trail connections to two trailheads within the Hudson Highlands State Park Preserve (HHSPP), two new comfort stations, upgrades to the MNR Breakneck Ridge station and platforms, relocation of the power lines from west to east of NYS Route 9D, installation of a trail steward station, and upgrades to the Upper Overlook area along the Breakneck Ridge Trail. Construction of the bridge and southbound MNR platform will be facilitated by barges on the Hudson River.

In its current state, the project site presents a safety hazard to the general public because it provides limited separation between the train tracks, NYS Route 9D, and hikers arriving at the site by car and accessing the adjacent trailheads of HHSPP. The purpose of the Project is to develop and improve access points to the Breakneck Ridge Trail and along NYS Route 9D to safely accommodate the current amount of traffic that arrives by car, rail, and foot. It will formalize trails that are already in place and currently in use; improve safety where there are dangerous traffic, parking, pedestrian, and cyclist conditions; and enhance access for all persons to this area by building trails and parking areas that meet generally accepted accessibility standards.

2. Provide the names and addresses of property owners adjacent to your work site (if not shown on the application form or project drawings)

The entire project site is on or adjacent to property owned by NYSDOT (Route 9D and right-of-way), Metro-North Rail (rail right-of-way), NYCDEP (Hudson River Drainage Chamber), and the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) (HHSPP trail system).

(Please note that depending upon the nature and extent of your project, you may be requested to provide the names and addresses of additional property owners proximate to your project site to ensure proper coordination.)

3. Photographs of the project site should be submitted. For projects in tidal areas, photographs of the waterway vicinity should be taken at low tide. Using a separate copy of your plan view, indicate the location

and direction of each photograph as well as the date and time at which the photograph was taken. Provide a sufficient number of photographs so as to provide a clear understanding of conditions on and proximate to your project site.

Attachment 2 presents representative photographs of the project site.

4. Provide a copy of any environmental impact statement, or any other environmental report which was prepared for your project.

Attachment 3 is the Negative Declaration and Final Environmental Assessment Form (FEAF) prepared for the BNCB Project.

5. Provide a thorough discussion of alternatives to your proposal. This discussion should include, but not necessarily be limited to, the "no action" alternative and alternative(s) resulting in less disturbance to waters of the United States. For filling projects in waters of the United States, including wetlands, your alternatives discussion should demonstrate that there are no practicable alternatives to your proposed filling and that your project meets with current mitigation policy (i.e. avoidance, minimization and compensation).

The proposed project was selected as the alternative that was most practicable and consistent with the project's purpose and need while minimizing the potential impacts to waters of the U.S. The project will be completed mainly along existing informal trails or in the right-of-way of the MNR tracks and Route 9D, and will involve minimal work resulting in temporary impacts to waters of the U.S. The proposed grading and landscaping in the vicinity of the existing wetlands, described in Attachment 1, is designed to be as minimal as possible and to generally restore the affected wetlands. The project does not include the placement of permanent fill in the Hudson River.

Alternatives to the proposed project are described below.

<u>No Action Alternative</u>
With a No Action alternative, the informal trails would remain in use and access to the Breakneck Ridge Trail at this location would continue to be dangerous for pedestrians and cyclists. A No Action alternative would not meet the purpose of the project to formalize existing trails, improve safety for pedestrians, cyclists, and hikers, and enhance access for all persons by providing a trail that meets general accessibility standards. The No Action alternative was determined to be not practicable.

<u>Design Alternatives</u>
Because the purpose of the project is to formalize existing trails and improve safety and accessibility, and because there is limited space available for the trail alignment, there are few alternatives that would completely avoid impacts to wetlands or waters of the U.S. The proposed project must also meet the existing trails to the south and east of the proposed alignment. The trail cannot be constructed entirely along the Hudson River shoreline or on the east side of NYS Route 9D due to the greater impacts to aquatic and terrestrial resources, more difficult engineering feasibility, and higher cost of each option. Only an elevated trail in the current alignment was considered as a potential design concept.

- ***Elevated Trail Design:*** **The proposed project includes sections of trail raised above the ground elevation. While additional portions of elevated trail were considered, including over the wetland between the MNR tracks and NYS Route 9D, this alternative would have been cost-prohibitive. A raised trail design over the full length of the project would require sufficient area on either side to accommodate low points for drainage, while incorporating reasonable slopes to meet the existing grade along the western edge of the project site at the railroad corridor. The trail must also be compliant with ADA cross-slopes, further limiting the alignment location based on allowable slopes. Due to the additional cost associated with an entirely elevated trail and the spatial requirements for drainage and accessibility, this alternative was determined to be not practicable and was not considered further.**

DREDGING PROJECTS

Answer the following if your project involves dredging.

1. Indicate the estimated volume of material to be dredged and the depth (below mean low water) to which dredging would occur. Would there be overdepth dredging?

Not applicable. No dredging is proposed.

2. You can apply for a ten-year permit for maintenance dredging. If you wish to apply for a ten-year permit, please provide the number of additional dredging events during the ten-year life of the permit and the amount of material to be removed during future events.

Not applicable. No dredging is proposed.

3. Indicate of your drawings the dewatering area (if applicable) and disposal site for the dredged material (except landfill sites). Submit a sufficient number of photographs of the dewatering and disposal sites as applicable so as to provide a clear indication of existing conditions. For ten-year maintenance dredging permits, indicate the dewatering/disposal sites for future dredging events, if known.

Not applicable. No dredging is proposed.

4. Describe the method of dredging (i.e. clamshell, dragline, etc.) and the expected duration of dredging.

Not applicable. No dredging is proposed.

5. Indicate the physical nature of the material to be dredged (i.e. sand, silt, clay, etc.) and provide estimated percentages of the various constituents if available. For beach nourishment projects, grain size analysis data is required.

Not applicable. No dredging is proposed.

6. Describe the method of dredged material containment (i.e. hay bales, embankment, bulkhead, etc.) and whether return flow from the dewatering/disposal site would reenter any waterway. Also indicate if there would be any barge overflow.

Not applicable. No dredging is proposed.

MOORING FACILITIES

Answer the following if your project includes the construction or rehabilitation of recreational mooring facilities.

1. It is generally recommended that any fixed piers and walk ramps be limited to four feet in width, and that floats be limited to eight feet in width and rest at least two feet above the waterway bottom at mean low water. Terminal floats at private, non-commercial facilities should be limited to 20 feet in length. If you do not believe your proposal can meet with these recommendations, please provide the reason(s).

Not applicable. No mooring facilities are proposed.

2. Using your plan view, show to scale the location(s), position(s) and size(s) (including length, beam and draft) of vessel(s) to be moored at the proposed facility, including those of transient vessel(s) if known.

Not applicable. No mooring facilities are proposed.

3. For commercial mooring sites such as marinas, indicate the capacity of the facility and indicate on the plan view the location(s) of any proposed fueling and/or sewage pumpout facilities. If pumpout facilities are not planned, please discuss the rationale below and indicate the distance to the nearest available pumpout station.

Not applicable. No mooring facilities are proposed.

4. Indicate on your plan view the distance to adjacent marine structures, if any are proximate and show the locations and dimensions of such structures.

Not applicable. No mooring facilities are proposed.

5. Discuss the need for wave protection at the proposed facility. Please be advised that if a permit is issued, you would be required to recognize that the mooring facility may be subject to wave action from wakes of passing vessels, whose operations would not be required to be modified. Issuance of a permit would not relieve you of ensuring the integrity of the authorized structure(s) and the United States would not be held responsible for damages to the structure(s) and vessel(s) moored thereto from wakes from passing vessels.

Not applicable. No mooring facilities are proposed.

BULKHEADING/BANK STABILIZATION/FILLING ACTIVITIES

Answer the following if your project includes construction of bulkheading (also retaining walls and seawalls) with backfill, filling of waters/wetlands, or any other bank stabilization fills such as riprap, revetments, gabions, etc.

1. Indicate the total volume of fill (including backfill behind a structure such as a bulkhead) as well as the volume of fill to be placed into waters of the United States. The amount of fill in waters of the United States can be determined by calculating the amount of fill to be placed below the plane of spring high tide in tidal areas and below ordinary high water in non-tidal areas.

Temporary shoreline stabilization will comprise placement of geotextile overlain with approximately 126 cubic yards of riprap armor stone below SHW (106 cubic yards below MHW) over about 260 linear feet of shoreline. The Project will not result in any permanent fill below SHW.

2. Indicate the source(s) and type(s) of fill material.

Fill for the temporary shoreline stabilization comprises geotextile fabric and riprap armor stone.

3. Indicate the method of fill placement (i.e. by hand, bulldozer, crane, etc.). Would any temporary fills be required in waterways or wetlands to provide access for construction equipment? If so, please indicate the area of such waters and/or wetlands to be filled, and show on the plan and sectional views.

The geotextile and stone will be placed using a barge-based crane. Heavy equipment is not permitted to cross the MNR tracks, so the proposed temporary fill is required to provide access for equipment and personnel from the barge to the work site for the bridge construction.

The foregoing requests basic information on the most common types of projects requiring Department of the Army permits. It is intended to obviate or reduce the need for requesting additional information; however, additional information may be requested above and beyond what is requested in this form.

Please feel free to add any additional information regarding your project which you believe may facilitate our review.

Attachment 1

Breakneck Connector and Bridge Project

Project Description

A. INTRODUCTION

This Joint Application requests authorization for the Breakneck Connector and Bridge (BNCB) Project, which is an approximately 0.58-mile section of a larger planned 7.5-mile shared-use trail between Beacon and Cold Spring, in the southwestern portion of Dutchess County New York, which is being developed by Hudson Highlands Fjord Trail, Inc. The Project will ultimately connect existing informal and heavily trafficked trails to the Breakneck Ridge Trail and safely separate patrons from NYS Route 9D and the Metro-North Railroad (MNR) tracks within the Project Site. The southern portion of the Project will branch into two trails, one leading to the Breakneck Ridge trailhead and Upper Overlook and the other a continuance of the shared-use trail as a new bridge over the MNR tracks. The Project includes the new bridge over the MNR tracks, parking areas along NYS Route 9D, trail connections to two trailheads within the Hudson Highlands State Park Preserve (HHSPP), two new comfort stations, upgrades to the MNR Breakneck Ridge station and platforms, relocation of the power lines from west to east of NYS Route 9D, installation of a trail steward station, and upgrades to the Upper Overlook area along the Breakneck Ridge Trail. The construction of the southbound MNR Breakneck Ridge platform and the Breakneck Bridge will be facilitated by barges on the Hudson River.

In its current state, the Project Site presents a safety hazard to the public because it provides limited separation between the train tracks, NYS Route 9D, and hikers arriving at the site by car and accessing the adjacent trailheads of HHSPP. The purpose of the Project is to develop and improve access points to the Breakneck Ridge Trail and along NYS Route 9D to safely accommodate the current amount of traffic that arrives by car, rail, and foot. It will formalize trails that are already in place and currently in use; improve safety where there are dangerous traffic, parking, pedestrian, and cyclist conditions; and enhance access for all persons to this area by building trails and parking areas that meet generally accepted accessibility standards.

B. PROJECT SITE

The Project will be developed within approximately 12 acres of previously disturbed lands along roadways, rail right-of-way, and heavily trafficked trails. The BNCB Project is located midway between Beacon and Cold Spring along NYS Route 9D where there are currently two trailheads (Wilkinson Memorial Trailhead and Breakneck Ridge Trailhead), the Metro-North Railroad (MNR) Breakneck Ridge station, and a gravel parking area and ad hoc street parking that provide access to the HHSPP (**Figures 1 and 2**). The Project Site is generally bounded by Route 9D to the east, the MNR tracks and Hudson River to the west, and the New York City Department of Environmental Protection (NYCDEP) Hudson River Drainage Chamber (HRDC) to the south. MNR added the Breakneck parking lot and roadside parking controls (i.e., jersey barriers) to limit the number of vehicles able to park at the Breakneck Ridge Trailhead to reduce the potential for accidents. MNR also installed a path between the existing station platforms and HHFT installed fencing on MNR property, thereby securing the tracks and providing a clear path from the train

station platforms to NYS Route 9D. Limited vegetation is present within the parking areas and along the informal trails and social paths. The southern portion of the Project Site and the areas between Route 9D and the MNR tracks are dominated by upland and non-wetland vegetative communities including hardwood forested areas with a dense understory of scrub-shrub vegetation. The Hudson River shoreline comprises areas of riprap and scrubby upland woody vegetation. **Attachment 2a** provides photos of the full Project Site collected during site reconnaissance in April 2022.

A wetland delineation for the Project Site conducted in June 2020 by Tim Miller Associates Inc. (TMA) identified four small freshwater wetland areas in the Project Site, labeled as Wetlands A, B, C, and D. **Attachment 2b** provides a figure showing the location of these wetlands as well as photos of the wetland areas obtained during a site visit on December 15, 2021. Wetland A is a linear feature that receives flow through a culvert beneath Route 9D from a wetland and surface water corridor on the east side of the road. Wetlands B, C, and D are hydrologically connected at the surface during storm events and likely connected during dry periods through gravelly subsurface soils. Wetland B receives overflows from Wetlands C and D and conveys the water the Hudson River through a large culvert under the MNR tracks. Wetlands C and D receive runoff from the western slopes of HHSPP through existing culverts that convey water under Route 9D. Vegetation in Wetland A is dominated by cattails (*Typha* sp.) and common reed (*Phragmites australis*). Wetlands B, C, and D contain a combination of native species including sensitive fern (*Onoclea sensibilis*), arrow arum (*Peltandra virginica*), redosier dogwood (*Cornus sericea*), and elderberry (*Sambucus canadensis*), as well as non-native vines and weedy brush like multiflora rose (*Rosa multiflora*), Japanese honeysuckle (*Lonicera japonica*), privet (*Ligustrum* sp.), and oriental bittersweet (*Celastrus orbiculatus*).

C. PROJECT COMPONENTS AND WORK DESCRIPTION

As shown in **Figure 1**, the Project includes the following components:

- A 0.58-mile non-motorized, shared-use, publicly accessible[1] trail that includes:
  - A new 445-linear-foot bridge over the MNR tracks, which will be designed for H-10 vehicles primarily to accommodate use by NYCDEP for access to the HRDC located at the Hudson River shoreline, as needed;
  - Parking areas along NYS Route 9D;
  - Trail connections to the Breakneck Ridge Trail and Wilkinson Memorial Trail within the HHSPP;
  - The addition of two comfort station buildings;
  - Constructed stone trail banks; and
  - Removal of the existing MNR Breakneck Ridge station wooden platforms and replacement with new high-level concrete platforms, each ADA-accessible and measuring about 40 feet by 12 feet with a 30-foot overhead canopy.
- Relocation of the power lines from the west side of NYS Route 9D to the east side.

[1] The trail will meet the U.S. Access Board's accessibility standards for outdoor developed areas under the Architectural Barriers Act (ABA). Improvements located on MNR property, including the connection between the trail and the Breakneck Ridge Station, will meet the Accessibility Standards for Transportation Facilities as adopted by the U.S. Department of Transportation (49 CFR 37.9).

- Upgrades to the Upper Overlook area, including installation of a small steward station (9 feet by 12 feet with an 18-foot by 25-foot canopy) along the Breakneck Ridge Trail, the closing of social paths with restoration of native vegetation, and a scramble reconstruction area.
- Series of vegetated swales for treatment of stormwater runoff prior to discharge to the Hudson River, in accordance with NYSDEC standards.

Most of the Project will be constructed using land-based equipment with materials delivered by truck and do not require authorization under the Clean Water Act. Project activities occurring on the west side of the MNR tracks will be conducted using barge-based equipment to avoid vehicles and equipment crossing the MNR tracks.

Elements of the Project being constructed in or from the Hudson River below the spring high water (SHW) elevation and any activities that could affect waters of the U.S. including the river, streams, or wetlands require authorization from NYSDEC and/or USACE. These project elements include the following which are described in detail below:

- the southbound MNR platform,
- the bridge over the MNR tracks, and
- temporary shoreline stabilization measures to facilitate water-based construction activities.

SOUTHBOUND MNR PLATFORM

The southbound MNR platform will be constructed on the west side of the MNR tracks and will connect to the existing pedestrian bridge at the northern end of the Project Site. Construction will be facilitated from the Hudson River via barges and will take approximately 15 weeks. Personnel will access the site using the existing pedestrian bridge over the tracks, rather than by vessel or barge. At the onset of construction, an equipment barge measuring about 160 feet by 50 feet (**Sheet 1 in Attachment 4a**) will be anchored offshore for about one week to transfer equipment to the upland work site. This will be followed by a materials barge measuring about 160 feet by 50 feet anchored using four 36-inch diameter spud piles and a crane barge using four 36-inch diameter spud piles installed by self-weight (**Sheet 3 in Attachment 4a**). The materials barge will serve as a landing point for equipment delivery while it is anchored. The crane barge will remain onsite for about 6 weeks to move pre-fabricated platform components and heavy materials from the logistics barge to the construction site. A bow ramp or gangway will provide access between the barge and the construction site on shore (**Sheets 1 and 2 in Attachment 4a**). Soil erosion and sediment control measures will be deployed, including a turbidity curtain in the Hudson River. The barge will be demobilized while site preparation activities continue on land. Cleared debris and vegetation will be temporarily stockpiled onsite and protected with erosion and sediment control measures established in accordance with a Stormwater Pollution Prevention Plan (SWPPP) prepared for the Project. The materials barge will deliver materials for construction and remove materials at the completion of construction, including the stockpiled debris and vegetation. Equipment will be demobilized to the materials barge when construction of the platform is complete.

BREAKNECK CONNECTOR TRAIL

The majority of the Breakneck Connector Trail and related amenities (i.e., comfort stations, parking areas, and northbound MNR platform) will be on the east side of the MNR tracks and construction will be facilitated from land. The existing gravel parking area will be used as a staging area, subject to agreement with MNR, and will serve as the southern parking area when the Project

is complete. Materials will be delivered from NYS Route 9D, with one to two trucks anticipated per day. Construction of these components is expected to take about 22 months and does not require in-water work.

A portion of the Breakneck Connector Trail includes minor grading to approximately 0.095 acres of freshwater wetlands located between the MNR tracks and NYS Route 9D (**Drawings WL111 and WL112 in Attachment 4b**). The wetlands are not mapped by NYSDEC but may be under USACE jurisdiction. Work within the wetlands includes grading and plantings to enhance their ecological function and value. The grading will result in a net fill of approximately 59.7 cubic yards and includes well-graded amended native soil from onsite. The proposed fill is less than 3 feet in depth in specific areas identified as grading areas to support drainage. The total area of wetlands with the finished Project will be about 0.29 acres compared to the existing 0.19 acres onsite. The regraded areas will be planted with a variety of native wetland species and will be done in accordance with OPRHP's Native Plant Policy. Invasive species will also be removed from other areas within the wetlands and these areas will be replanted with the same variety of native wetland vegetation as the regraded areas.

BRIDGE

The Project includes a 445-linear-foot bridge over the MNR tracks at the southern end of the Project Site (**Drawing BNB-S-110 in Attachment 4c**). The bridge will be constructed from the Hudson River using barges, except for its eastern abutment on the east side of the MNR tracks which will be constructed using land-based equipment. Waterside construction may use up to four barges at a time including:

1) Logistics/mobilization barge measuring 260 feet by 60 feet for staging for the 24-month duration of bridge construction;
2) Materials barge measuring 200 feet by 50 feet which will moor temporarily to the logistics barge for periodic delivery of materials, estimated at about 10 trips and anchored for one week per trip;
3) Bridge barge measuring 200 feet by 50 feet to deliver and erect major bridge components, in place for about 12 weeks; and
4) Crane barge measuring 260 feet by 60 feet for bridge assembly, in place for about 12 weeks.

A debris scow measuring about 150 feet by 45 feet will also enter and leave the Project Site periodically to remove debris from the work site. The logistics barge will be anchored adjacent to the shoreline by four 36-inch diameter spud piles installed by self-weight throughout the approximately 12-month bridge construction period (**Sheet 1 in Attachment 4d**). While the logistics barge may not be needed continuously during bridge construction, it is conservatively estimated to be in place for the full duration. Compacted stone and steel road plates will be installed for the ramp from the barge to bear upon, and materials, personnel, and equipment will be transferred onshore using the ramp. The barges will be supported by a crew boat or safety boat and 8-foot wide floating transfer docks (**Sheet 4 in Attachment 4d**) for personnel access between the crew boat and the barges.

SHORELINE STABILIZATION

Construction of the bridge will require approximately 260 linear feet of shoreline stabilization starting just upstream from the NYCDEP water tunnel (**Sheet 3 in Attachment 4d**). This will

facilitate crane and other equipment access from the barge to the construction site and will support the upland work occurring close to the shoreline. The shoreline stabilization will comprise clean crushed stone placed atop geotextile on the existing grade of the slope above SHW, which will be topped with 6 inches of compacted crushed stone. Larger riprap armor stone will then be placed on geotextile along the waterward side of the stabilized shoreline at a 1-to-1 slope (**Sheet 5 in Attachment 4d**). Some of the riprap will be below SHW to create a toe, resulting in temporary placement of about 1,100 square feet of armor stone comprising 126 cubic yards below SHW, of which 106 cubic yards will be below MHW. A 54-foot long by 25-foot-wide ramp will be placed across the stabilized shoreline from the crane barge to a concrete weight-bearing footing at the top of the slope to provide access for equipment and personnel from the barge to the work site. The bridge barge will deliver the larger structural components of the bridge to the logistics barge, and materials will be transferred from the logistics barge to the construction site using the ramp. The barge will maintain separation from the river bottom at all times and the ramp will not come into contact with the stone slope (**Sheet 5 in Attachment 4d**). Following construction of the bridge, the temporary stabilization materials (geotextile, stone) will be removed from the landing areas, the soil will be stabilized at pre-construction grade, and native vegetation will be replanted.

SCHEDULE

The work that would be supported with barge-based equipment or deliveries is scheduled to occur approximately between April 2024 and July 2025 in coordination with MNR. Some tree removal may also be supported by barge-based equipment between February and March in either year. Within this timeframe, the southbound MNR platform will be reconstructed over approximately 15 weeks between June and October 2024. Mobilization, implementation of erosion and sediment control measures, and barge-based equipment use for the construction of the bridge abutments and pier supports will take place over about 7 months between May 2024 and June 2025. The temporary shoreline stabilization will be installed over about 4 weeks in June 2024, and the waterside elements of the bridge will be constructed over about 9 months between November 2024 and July 2025. Temporary shoreline stabilization elements will be removed in July 2025. The anticipated schedule for barge-supported work is also shown in the table below.

Anticipated Construction Schedule for Barge-Supported Work

Project Component	Start Date	End Date	Duration
Tree Removal[1]	February 2024/2025	March 2024/2025	n/a
Southbound MNR Platform	June 2024	October 2024	15 weeks
Temporary Shoreline Stabilization[2]	June 2024	July 2024	4 weeks
Bridge Abutments and Pier Supports	May 2024	June 2025	7 months
Waterside Bridge Elements	November 2024	July 2025	9 months

[1] Tree removal may be supported by barge-based equipment in either construction year
[2] Temporary shoreline stabilization will be removed in July 2025

D. MEASURES TO MINIMIZE POTENTIAL ENVIRONMENTAL IMPACTS

Prior to installation of the temporary stone slope, the contractor will install a full-length turbidity curtain just offshore in the Hudson River along the length of shoreline to be stabilized to minimize the potential for impacts from sediment resuspension. The turbidity curtain will remain in place even after the stone is removed, until the bridge is fully constructed and upland work is completed

in this location. All land-based construction activities will implement erosion and sediment control measures in accordance with the SWPPP prepared for the Project. This includes the use of silt fencing around the limit of disturbance, straw bales, temporary pumps, filter bags, and marsh mats or timber mats over wetland soils. Implementation of these measures will minimize the potential for loss of materials to the waterway and subsequent effects on water quality. The crane barge and mobilization/logistics barge used during construction will be secured adjacent to the shoreline by a maximum of 4 36-inch diameter spud piles resulting in a maximum temporary footprint of 28.3 square feet. The piles will be installed hydraulically and under self-weight, thereby avoiding the need for hammering or increases in underwater noise that could affect fish behavior. The debris scow and material/bridge barges will moor directly to the secured crane barge instead of deploying spud piles. All barges and crew vessels will always maintain at least 2 feet of separation from the river bottom. The materials placed over 1,100 sf below SHW in the Hudson River to stabilize the shoreline during construction will be removed when construction is complete, and the Project will not result in permanent impacts to the river.

The Project will not result in permanent loss of waters or wetlands. There will be minor grading of approximately 0.10 acres of freshwater wetland located between the MNR tracks and Route 9D. These areas will be planted with native species to enhance the ecological functions and values of the wetlands, and the Project will ultimately increase the total wetland area in the Project Site by 0.10 acres. The grading will result in a net fill of about 59.7 cubic yards comprising amended native soil from onsite and will include planting of native wetland species following the OPRHP Native Plant Policy. The fill will be less than 3 feet in depth and targeted to specific locations within the wetland area. Invasive species will also be removed from other areas within the wetlands, and these areas will be replanted with the same variety of native species as the regraded areas. The drainage design for the Project intends to maintain existing flow patterns for stormwater runoff and will keep existing culverts that cross under Route 9D and the MNR tracks. Vegetated swales will reduce runoff and promote infiltration through soil improvement prior to discharge of stormwater to the Hudson River. The swales are expected to reduce stormwater impacts and minimize flood impacts to MNR properties and operations and to Route 9D.

E. APPLICABLE REGULATIONS AND COMPLIANCE

FEDERAL

USACE NATIONWIDE PERMIT 14 LINEAR TRANSPORTATION PROJECTS

The Project will need approval by the U.S. Army Corps of Engineers (USACE), likely under Nationwide Permit (NWP) 14 for Linear Transportation Projects. NWP 14 applies to:

> "Activities required for crossings of waters of the United States associated with the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, driveways, airport runways, and taxiways) in waters of the United States…This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the linear transportation project."

The Project activities meet the conditions of this NWP. The temporary bank stabilization is limited to the minimum area necessary to construct the portion of the Project nearest the shoreline. Once construction is complete, the stabilization materials will be removed and the shoreline will be returned to its pre-construction condition. The minor grading of 0.095 acres of freshwater wetland would improve the storage and drainage capabilities of the existing wetland and will ultimately

increase the area of wetlands in the Project Site from 0.19 acres to 0.29 acres. Therefore, the Project will not result in the permanent loss of any waters of the U.S. in accordance with the conditions of this NWP. Construction will incorporate measures to maintain normal downstream flows in the Hudson River, including maintaining clearance between the barges and the river bottom at all times and the implementation of erosion and sediment control measures to minimize potential impacts from stormwater runoff during construction.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT (16 USC §§1801 TO 1883)

Section 305(b)(2)-(4) of the Magnuson-Stevens Fishery Conservation and Management Act outlines the process for the National Marine Fisheries Service (NMFS) and the Regional Fishery Management Councils (in this case, the Mid-Atlantic Fishery Management Council) to comment on activities proposed by federal agencies (issuing permits or funding projects) that may adversely impact areas designated as Essential Fish Habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 USC §1802(10)). Adverse impacts on EFH, as defined in 50 CFR 600.910(A), include any impact that reduces the quality and/or quantity of EFH. Adverse impacts may include:

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

The Mid-Atlantic Fisheries Management Council has designated EFH in the Hudson River in the vicinity of the Project Site. **Attachment 5** to this Joint Application provides a list of species and life stages of fish identified as having EFH within this region, as well as a detailed assessment of the potential for the Project to affect EFH. The EFH assessment concludes that the adverse effect on EFH is not substantial and requests an abbreviated EFH consultation.

ENDANGERED SPECIES ACT OF 1973

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

Aquatic Resources

All life stages except eggs of Atlantic sturgeon (*Acipenser oxyrinchus*; endangered) and shortnose sturgeon (*Acipenser brevirostrum*; endangered) have the potential to be present in the Hudson River in the vicinity of the Project Site (NMFS 2022). Atlantic sturgeon may spawn upstream from the Project Site between April and August, and eggs and larvae can be found during the same time period (Dovel and Berggren 1983, NYSDEC 2014). Post yolk-sac larvae may travel downstream of the spawning grounds with the river currents and could be found in the Project area between April and September. Adult and sub-adult Atlantic sturgeon are expected to occur in the Project area between April and November, and juveniles and young-of-year can be found

year-round (NMFS 2022). Shortnose sturgeon post yolk-sac larvae can be found in the vicinity between March and July (NMFS 2022) as they migrate from spawning areas located upriver (Dovel et al. 1992, Bain 1997, Dovel and Berggren 1983). All other shortnose sturgeon life stages, except eggs which do not occur in the Project vicinity, can be found at any time of year during foraging or migration. Adults may also overwinter in the Project area between September and March (NMFS 2022). Both shortnose and Atlantic sturgeon are expected to occur mainly in the deeper waters of the navigation channel but could be found near the shoreline on a less frequent basis.

Critical habitat for Atlantic sturgeon has been designated for the length of the tidal Hudson River from lower Manhattan to the Federal Dam at Troy (82 FR 39160). The waters of the Project Site are within the critical habitat boundaries. For Atlantic sturgeon, the physical or biological features of critical habitat that are essential to the conservation of the species include certain substrate and water quality conditions conducive to growth and development, as well as sufficient space to provide unimpeded passage and seasonal movements of juvenile and adult life stages.

Shortnose sturgeon and Atlantic sturgeon have the potential to be present in the Hudson River in the vicinity of the Project Site. Except for eggs and spawning adults, all other life stages of both species have the potential to occur offshore from the Project Site. Based on spatial distributions and seasonal movement patterns in the Hudson River summarized in the NMFS Section 7 Mapper Results included in **Attachment 6**, juvenile and young-of-year Atlantic and shortnose sturgeon occur near the Project Site year-round for migrating and foraging behaviors. Adult shortnose sturgeon also migrate and forage in the area year-round and may also overwinter in the area between September and March. Shortnose sturgeon post yolk-sac larvae occur between March and July. Atlantic sturgeon adults and subadults can occur between April and November, and post yolk-sac larvae can occur between April and September. The NMFS NLAA ("not likely to adversely affect") Program Verification Form addressing potential impacts to these species is included in **Attachment 6**.

Terrestrial Resources

Indiana bat (*Myotis sodalis*; endangered), northern long-eared bat (*Myotis septentrionalis*; endangered), and monarch butterfly (*Danaus plexippus*; candidate) were identified by USFWS as having the potential to occur in the Project area. NYNHP identified an additional 6 state-protected species that could occur in the Project area: bald eagle (*Haliaeetus leucocephalus*; state threatened), golden eagle (*Aquila chrysaetos*), eastern wormsnake (*Carphophis amoenus*; state special concern), eastern fence lizard (*Sceloporus undulatus*; state threatened), peregrine falcon (*Falco peregrinus*; state endangered), and timber rattlesnake (*Crotalus horridus*; state threatened). **Attachment 7** includes a Habitat Suitability Assessment conducted by OPRHP for timber rattlesnake and eastern fence lizard. **Attachment 8** provides correspondence with USFWS indicating the potential presence of federally protected species in the vicinity of the Project Site, along with a Biological Assessment prepared through IPaC to evaluate the potential effects of the Project on these species.

Monarch butterflies are primarily found in open meadows, fields with wildflowers, coastal beaches with dunes, and man-made butterfly gardens, none of which occur in the Project Site. However, scattered wildflowers and milkweed that could provide habitat for monarchs may be present within the limits of disturbance. Similarly, the Project Site may offer limited habitat for timber rattlesnake, eastern wormsnake, peregrine falcon, and bald eagles, as these species can be found in a variety of habitats. Appropriate habitat for eastern fence lizard has been observed in the Upper Overlook portion of the Project Site, including at bedrock outcroppings along the

Breakneck Ridge Trailhead (see **Attachment 7**). NYS Route 9D likely inhibits its dispersal west into the portions of the Project Site along the shoreline from occupied habitats in more interior portions of HHSPP, but fence lizards may access the west side of NYS Route 9D and the MNR tracks by moving along Breakneck Ridge over the tunnel. Outside the immediate vicinity of Breakneck Ridge, this area was not considered suitable habitat for eastern fence lizard (**Attachment 7**).

Monarch butterflies are expected to temporarily avoid the Project Site during active construction, but post-construction landscaping of native coastal plants might attract them to the area. All trees cut during January to March will be inspected for nesting birds of prey prior to cutting. While it is unlikely that eastern fence lizard would occur in the Project Site, the Project will incorporate protective measures during construction including the use of an onsite NYSDEC-licensed monitor during construction in the active season, and the development and implementation of an Education and Encounter Plan in coordination with NYSDEC. These measures would also be implemented to minimize the potential impacts of the Project on timber rattlesnake and eastern wormsnake.

Indiana and northern long-eared bats may occur in the Project area during roosting or foraging behaviors in the active season (i.e., spring and summer months), but there are no known hibernacula or maternity colonies for either species within 5 miles of the Project Site. As a precautionary measure, all tree clearing associated with the Project will be limited to the winter hibernation period (November 1 to March 31) where feasible to avoid potential direct impacts to bats during the active season. **Attachment 8** contains the Rangewide Determination Key results for northern long-eared bat dated March 10, 2023, the Northeast Species Determination Key results dated February 9, 2023, and the Biological Assessment generated through the USFWS IPaC consultation package builder which evaluates the potential effects of the Project on Indiana bat, northern long-eared bat, and monarch butterfly. The Biological Assessment concludes that the Project may affect but is not likely to adversely affect these species.

SECTION 106 OF THE NATIONAL HISTORIC PRESERVATION ACT OF 1966

Section 106 mandates that federal agencies consider the effects of actions on properties listed or determined eligible for listing on the National Register of Historic places. It requires consultation with the New York State Historic Preservation Office (SHPO) and federally recognized Native American Tribal Nations that might attach religious and cultural significance to historic properties potentially affected by a project, and with additional consulting parties with a demonstrated interest in the project based on a legal or economic relation to affected properties or on an interest in the project's effects on historic properties. Previous correspondence with SHPO dated April 7, 2022 and with OPRHP dated September 10, 2022 indicate that the Project is not expected to result in adverse impacts to archaeological and/or historic architectural resources. The Structural Archaeological Assessment Form (SAAF) and SHPO consultation materials are included as **Attachment 9**.

STATE

PROTECTION OF WATERS AND 401 WATER QUALITY CERTIFICATION PROGRAMS

The Project will require approval under the NYSDEC Protection of Waters Permit/401 Water Quality Certification programs. The Project is consistent with the standards for issuance of a permit under 6 NYCRR §608.7 in that is has been designed to: minimize adverse effects on aquatic and terrestrial biota, water quality, hydrology, and water course and waterbody integrity; and to

safeguard life and property, to incorporate good engineering design and construction techniques, the safe commercial and recreational use of the Hudson River resources, and the natural resource management objectives and values of the Hudson River. It will not result in significant adverse impacts to: aquatic resources, wetlands, and terrestrial habitats; unique and significant habitats; rare, threatened, or endangered species; or water quality and hydrology of the Hudson River. The construction activities will result in minimal and temporary resuspension of sediments only during installation and removal of the spud piles and shoreline stabilization components. The full-length turbidity curtain deployed just offshore will minimize the potential effects of suspended sediment from the shoreline activities. The barges, which will be located outside the extent of the turbidity curtain, will always maintain separation from the river bottom to minimize the potential for sediment disturbance from vessel use. All Project components below SHW will be removed upon construction completion and the Project will not permanently alter the river bottom. Therefore, the Project is consistent with the standards for issuance of a permit under 6 NYCRR §608.8.

NEW YORK STATE COASTAL MANAGEMENT PROGRAM

Activities that are authorized under a USACE NWP must demonstrate consistency with the New York State Coastal Management Program policies. The Project Site is in the Coastal Zone designated by New York State and is subject to the Coastal Zone management policies of the State Coastal Management Program (CMP). The Project is consistent with the applicable coastal zone management policies. **Attachment 10** to this Joint Application includes the Federal Consistency Assessment Form with relevant policy discussions. The State Consistency Assessment Form is included as an attachment to the EAF in **Attachment 3**.

F. REFERENCES

Bain, M.B. 1997. Atlantic and shortnose sturgeons of the Hudson River: Common and divergent life history attributes. Environmental biology of Fishes 48: 347-358.

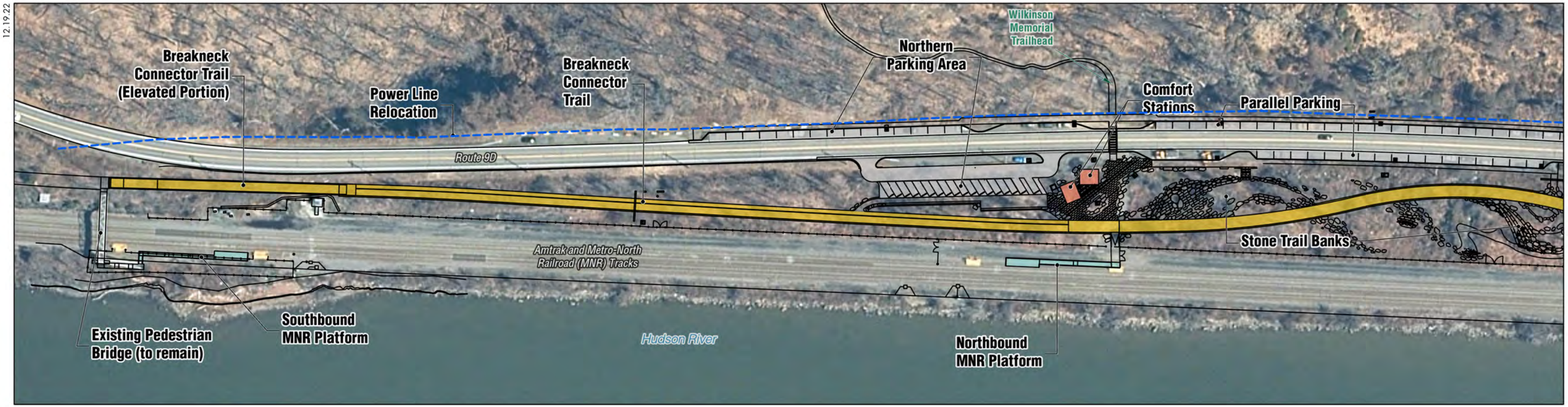
Dovel, W.L., and T.J. Berggren. 1983. Atlantic sturgeon of the Hudson River Estuary, New York. New York Fish and Game Journal 30: 140-172.

Dovel, W.L., A.W. Pedovitch, and T.J. Berggren. 1992. Biology of the shortnose sturgeon (Acipenser brevirostrum Lesueur, 1818) in the Hudson River estuary, New York. In: C.L. Smith (ed.) Estuarine Research in the 1980s, pp. 187-216. State University of New York Press, Albany, New York.

National Marine Fisheries Service (NMFS). 2022. NOAA Fisheries Greater Atlantic Region, Species Information and Maps, ESA Section 7 Mapper. Available at https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper. Accessed December 7, 2022.

New York State Department of Environmental Conservation (NYSDEC). 2014. Personal communication between Dewayne Fox, DSU and Kathy Hattala, NYSDEC. April 2014.

12.19.22



BREAKNECK CONNECTOR-BRIDGE PROJECT

Project Features

Figure 1

12.19.22

Project Site

Work Areas

- Possible Barge Zone
- Bridge Structure
- Metro-North Track Access Area
- Breakneck Connector
- Bridge Landscape
- Upper Overlook
- Scramble Reconstruction Area

0 400 FEET

BREAKNECK CONNECTOR-BRIDGE PROJECT

Construction Work Zones

Figure 2

Attachment 2

Breakneck Connector and Bridge Project

Representative Photographs

Attachment 2a

Breakneck Connector and Bridge Project

Site Photographs

5.13.22

Limits of Disturbance

Proposed Breakneck Connector Trail

Photograph View Direction and Reference Number

BREAKNECK CONNECTOR-BRIDGE PROJECT

Key to Photographs

View from footbridge to train station facing west **1**

Project Site
Photographs

View from northeastern corner facing south **2**

View from north end facing north **3**

NYS Route 9D corridor facing south **4**

NYS Route 9D corridor facing north **5**

Project Site Photographs

View from eastern edge facing south **6**

View from eastern edge facing north **7**

South entrance to train station facing west **8**

View from western edge facing south **9**

Project Site
Photographs

View from western edge facing north **10**

Closed off MNR parking lot facing north **11**

Project Site Photographs

Approximate location of bridge east end facing southwest **12**

Bridge landing area on DEP site facing south **13**

Project Site Photographs

DEP building and trail location facing southeast **14**

Breakneck trailhead facing south **15**

Project Site Photographs

Breakneck trail facing northeast **16**

Attachment 2b

Breakneck Connector and Bridge Project

Wetland Photographs

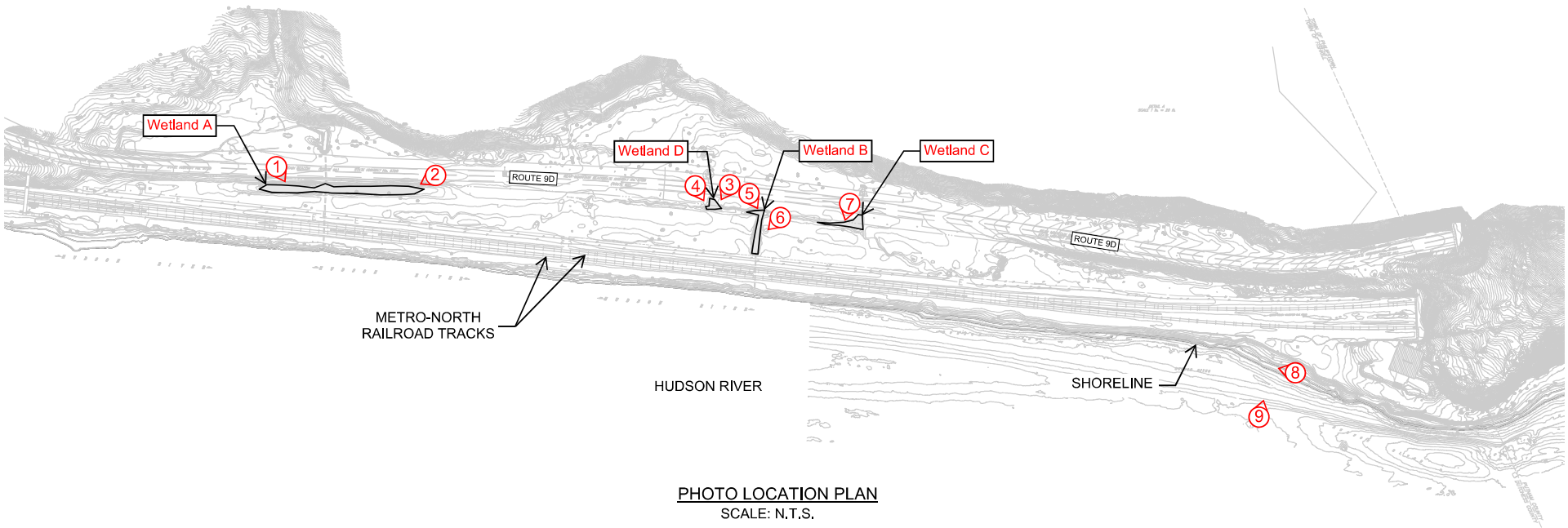


PHOTO LOCATION PLAN

SCALE: N.T.S.

LEGEND:

(#) PHOTO LOG NUMBER, DIRECTION OF PHOTO

NOTE: PHOTOS WERE TAKEN BY LANGAN, IN ACCESSIBLE AREAS, ON 15 DECEMBER 2021.

LANGAN
Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C.
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, NY 10001
T: 212.479.5400 F: 212.479.5444 www.langan.com

Project	HUDSON HIGHLAND FJORD TRAIL AND BREAKNECK CONNECTOR BEACON DUTCHESS COUNTY NEW YORK
Drawing Title	APPENDIX A PHOTO LOCATION PLAN
Project No.	170553205
Date	04/29/2022
Drawn By	AIB
Checked By	SWS
Drawing No.	PH-1
Sheet	1 of 1

Filename: \\langan.com\data\NYC\data2\170553202\Project Data\CAD\02\SheetFiles\BNC Construction Drawings\170553201-WET101-0102.dwg Date: 4/29/2022 Time: 10:24 User: abisram Style Table: Langan.stb Layout: PhotoLocationPlan

Photograph No. 1: View of Wetland Location A (taken from Route 9D, facing southwest).

Photograph No. 2. View of Wetland Location A (taken from Route 9D, facing northwest).

Photograph No. 3: Characteristic view of scrub-shrub vegetation within Wetland Location D (facing west).

Photograph No. 4: Characteristic view of forested/shrub vegetation within Wetland Location D.

Photograph No. 5: Photograph facing south side of Wetland Location B (taken from Route 9D, facing southwest).

Photograph No. 6: Characteristic view of scrub-shrub vegetation within Wetland Location B.

Photograph No. 7: Characteristic view of scrub-shrub vegetation and drainage ditch within Wetland C (facing west).

Photograph No. 8: River bank at proposed area of grading along the shoreline (facing north).

Photograph No. 9: River bank at proposed area of grading along the shoreline (facing east).

Attachment 3

Breakneck Connector and Bridge Project

Environmental Assessment Form

New York State
Parks, Recreation and
Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

December 28, 2022

TO: Representatives of Potentially Involved/Interested Agencies

SUBJECT: State Environmental Quality Review Act – Type I - Negative Declaration

NAME OF ACTION: Breakneck Connector and Bridge Project

LOCATION: Between Metro North Railroad Breakneck Ridge southbound platform and the Breakneck Ridge Trail, Town of Fishkill, Dutchess County and Town of Philipstown, Putnam County, NY

The New York State Office of Parks, Recreation and Historic Preservation (OPRHP) has reviewed the above-mentioned project (a Type I Action) under the State Environmental Quality Review Act (SEQR). As Lead Agency, OPRHP is submitting to you a copy of the Negative Declaration in the form of the Full Environmental Assessment Form Parts 1-3 and attachments.

Please keep the attached for your files. Thank you, and if you have any questions, please contact me at nancy.stoner@parks.ny.gov or 518-339-0204.

Sincerely,

Nancy Stoner

Nancy Stoner
Environmental Analyst, DESP

cc: L. Cooper, S. Calnero, R. Rausch (OPRHP)
A. Kacala (HHFT, Inc.)

Instructions for Completing Part 1

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

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

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

A. Project and Applicant/Sponsor Information.

Name of Action or Project: Breakneck Connector and Bridge Project		
Project Location (describe, and attach a general location map): Between MetroNorthRailroad Breakneck Ridge southbound platform and Breakneck Ridge Trail in Towns of Fishkill/Philipstown, Dutchess/Putnam County		
Brief Description of Proposed Action (include purpose or need): See FEAF Part 1 - Attachment A for Purpose/Need, Project Description and additional project details.		
Name of Applicant/Sponsor: Hudson Highlands Fjord Trail, Inc., C/O Scenic Hudson, Inc.	Telephone: E-Mail:	
Address: One Civic Center Plaza, Suite 200		
City/PO: Poughkeepsie	State: NY	Zip Code: 12601
Project Contact (if not same as sponsor; give name and title/role): Amy Kacala, AICP, Executive Director, HHFT, Inc.	Telephone: 845 473 4440 Ext 276 E-Mail: akacala@hudsonfjordtrail.org	
Address: One Civic Center Plaza, Suite 200		
City/PO: Poughkeepsie	State: NY	Zip Code: 12601
Property Owner (if not same as sponsor): See Attachment A	Telephone: E-Mail:	
Address:		
City/PO:	State: NY	Zip Code:

B. Government Approvals

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

Government Entity	If Yes: Identify Agency and Approval(s) Required	Application Date (Actual or projected)
a. City Counsel, Town Board, or Village Board of Trustees □ Yes □ No		
b. City, Town or Village Planning Board or Commission □ Yes □ No		
c. City, Town or Village Zoning Board of Appeals □ Yes □ No		
d. Other local agencies □ Yes □ No	See Attachment	
e. County agencies □ Yes □ No		
f. Regional agencies □ Yes □ No		
g. State agencies □ Yes □ No		
h. Federal agencies □ Yes □ No		

i. Coastal Resources.

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

ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? □ Yes □ No

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

C. Planning and Zoning

C.1. Planning and zoning actions.

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

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

C.2. Adopted land use plans.

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

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

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

If Yes, identify the plan(s):

Remediaton Sites:546031

Maurice D. Hinchey Hudson River Valley National Heritage Area, Hudson Valley Rive Greenway, Hudson Highlands State Park Preserve

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

If Yes, identify the plan(s):

C.3. Zoning

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance. ☐ Yes ☐ No
If Yes, what is the zoning classification(s) including any applicable overlay district?
In the project area, local zoning requirements are preempted by the State and the New York City Department of Environmental Protection. This precludes the applicability of and the need for the property owners MTA, NYSDOT, NYCDEP, and OPRHP to comply with local zoning ordinances.

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

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

C.4. Existing community services.

a. In what school district is the project site located? Haldane Central School District, Beacon City School District

b. What police or other public protection forces serve the project site?
New York State Police Department, Town of Fishkill Police Department, Cold Spring Village Police

c. Which fire protection and emergency medical services serve the project site?
North Highlands Fire Department, Dutchess Junction Fire Department, Cold Spring Fire Company, NewYork-Presbyterian Hudson Valley Hospital

d. What parks serve the project site?
Hudson Highlands State Park Preserve

D. Project Details

D.1. Proposed and Potential Development

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

b. a. Total acreage of the site of the proposed action? 13.15 acres
b. Total acreage to be physically disturbed? 9.9 acres
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? * acres

* Total acreage owned: 13.15 acres plus lands extended north and south in MNR and DOT ROWs, south in DEP property and surrounding OPRHP property

c. Is the proposed action an expansion of an existing project or use? ☐ Yes ☐ No
i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % 80 Units: acres

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

e. Will the proposed action be constructed in multiple phases? ☐ Yes ☐ No
i. If No, anticipated period of construction: 18 months
ii. If Yes:
- Total number of phases anticipated _____
- Anticipated commencement date of phase 1 (including demolition) _____ month _____ year
- Anticipated completion date of final phase _____ month _____year
- Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: _____

f. Does the project include new residential uses? ☐ Yes ☐ No
If Yes, show numbers of units proposed.

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

g. Does the proposed action include new non-residential construction (including expansions)? ☐ Yes ☐ No
If Yes,
i. Total number of structures 7
ii. Dimensions (in feet) of largest proposed structure: 38 height; 30 width; and 370 length
iii. Approximate extent of building space to be heated or cooled: 800 square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage? ☐ Yes ☐ No
If Yes,
i. Purpose of the impoundment: Stormwater management - see Attachment A.
ii. If a water impoundment, the principal source of the water: ☐ Ground water ☐ Surface water streams ☐ Other specify:
iii. If other than water, identify the type of impounded/contained liquids and their source.
iv. Approximate size of the proposed impoundment. Volume: _____ million gallons; surface area: _____ acres
v. Dimensions of the proposed dam or impounding structure: _____ height; _____ length
vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete):

D.2. Project Operations

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both? ☐ Yes ☐ No
(Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)
If Yes:
i .What is the purpose of the excavation or dredging? See Attachment A.
ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?
- Volume (specify tons or cubic yards): See Attachment A.
- Over what duration of time? TBD

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them.
See Attachment A.
iv. Will there be onsite dewatering or processing of excavated materials? ☐ Yes ☐ No
If yes, describe. Dewatering will likely be required for the comfort station restroom.
v. What is the total area to be dredged or excavated? 9.9 - excavated or graded (physical disturbance) acres
vi. What is the maximum area to be worked at any one time? TBD acres
vii. What would be the maximum depth of excavation or dredging? 5' for bridge abutments feet
viii. Will the excavation require blasting? ☐ Yes ☐ No
ix. Summarize site reclamation goals and plan:
Extensive native plantings are planned for the project area. Planting lists will be reviewed by OPRHP, NYNHP, and NYSDEC.

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area? ☐ Yes ☐ No
If Yes:
i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): A portion of the project is located directly adjacent to the Hudson River (a section of the bridge with four proposed bridge abutments located on the west side of the Metro-North Railroad tracks). There are two small federal wetlands within the project area, located between the MNR tracks and NY State Route 9D.

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

Two of the four proposed bridge abutments on the west side of the MNR tracks require regrading to a maximum 1.5:1 slope to achieve enough elevation to conceal the abutments. The footprint of this area of adjusted grades is approximately 4700 sq. ft and is upland of the mean high water line. The wetlands will be maintained as existing catchment areas; there will be some clearing, minor re-grading and planting.

iii. Will the proposed action cause or result in disturbance to bottom sediments? Yes ☐ No
If Yes, describe: _____

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

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

v. Describe any proposed reclamation/mitigation following disturbance: _____

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

i. Total anticipated water usage/demand per day: 46 to 149 based on events gallons/day

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

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

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

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

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

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

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

vi. If water supply will be from wells (public or private), what is the maximum pumping capacity: 23.3 gallons/minute.

d. Will the proposed action generate liquid wastes? ☐ Yes ☐ No
If Yes:

i. Total anticipated liquid waste generation per day: 40-150 - event based gallons/day

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

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

- Name of wastewater treatment plant to be used: _____
- Name of district: _____
- Does the existing wastewater treatment plant have capacity to serve the project? ☐ Yes ☐ No
- Is the project site in the existing district? ☐ Yes ☐ No
- Is expansion of the district needed? ☐ Yes ☐ No

- Do existing sewer lines serve the project site? □ Yes □ No
- Will a line extension within an existing district be necessary to serve the project? ☐ Yes ☐ No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: _____

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

If Yes:

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

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

Composting: Clivus Multrum foam flush system, Model M35 Automatic.

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

Waste to be collected and temporarily stored in liquid end product tanks located in basement of the two comfort station buildings; waste to be pumped by compost service company.

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

If Yes:

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

_____ Square feet or 2 acres (impervious surface)

_____ Square feet or 13.15 acres (parcel size)

ii. Describe types of new point sources. No new point sources are proposed

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

Stormwater will be directed to a series of swales throughout the project area. The upper swales are used as pretreatment where water is allowed to pond and infiltrate before being piped to 2 lower swales and the existing outlet culverts to the Hudson River.

- If to surface waters, identify receiving water bodies or wetlands: Hudson River
- Will stormwater runoff flow to adjacent properties? □ Yes □ No

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

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

If Yes, identify:

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

Heavy Equipment and vehicles during construction only.

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

N/A

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

N/A

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

If Yes:

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

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

- _____Tons/year (short tons) of Carbon Dioxide (CO_2)
- _____Tons/year (short tons) of Nitrous Oxide (N_2O)
- _____Tons/year (short tons) of Perfluorocarbons (PFCs)
- _____Tons/year (short tons) of Sulfur Hexafluoride (SF_6)
- _____Tons/year (short tons) of Carbon Dioxide equivalent of Hydroflourocarbons (HFCs)
- _____Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

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

If Yes:

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

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

_____

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

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

_____

_____

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

If Yes:

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

ii. For commercial activities only, projected number of truck trips/day and type (e.g., semi trailers and dump trucks): _____

_____

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

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

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

_____

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

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

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

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

If Yes:

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

_____

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

_____

iii. Will the proposed action require a new, or an upgrade, to an existing substation? ☐ Yes ☐ No

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

i. During Construction:

- Monday - Friday: 7 am to 4 pm
- Saturday: TBD
- Sunday: TBD
- Holidays: TBD

ii. During Operations:

- Monday - Friday: Trail open dawn to dusk.
- Saturday: Trail open dawn to dusk.
- Sunday: Trail open dawn to dusk.
- Holidays: Trail open dawn to dusk.

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

If yes:

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

Noise associated with construction may exceed ambient noise levels. Noise will be temporary and will not last beyond construction of the project.

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

Describe: _____

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

If yes:

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

Solar powered, dark sky compliant light fixtures on poles of 14', 22' and 26' will be installed along the trail, in the parking lots, and at gated entrance providing DEP access. Additional outdoor lighting will be provided at the comfort and steward stations and train station platforms.

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

Describe: _____

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

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

Heavy equipment and vehicle exhaust during construction only.

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

If Yes:

i. Product(s) to be stored _____

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

iii. Generally, describe the proposed storage facilities:_____

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

If Yes:

i. Describe proposed treatment(s):

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

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

If Yes:

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

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

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

- Construction: _____
- Operation: _____

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

- Construction: _____
- Operation: _____

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

If Yes:

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

ii. Anticipated rate of disposal/processing:

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

iii. If landfill, anticipated site life: _____ years

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

If Yes:

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

ii. Generally describe processes or activities involving hazardous wastes or constituents: _____

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

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

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

If Yes: provide name and location of facility: _____

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

E. Site and Setting of Proposed Action

E.1. Land uses on and surrounding the project site

a. Existing land uses.

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

☐ Urban ☐ Industrial ☐ Commercial ☐ Residential (suburban) ☑ Rural (non-farm)
☑ Forest ☐ Agriculture ☑ Aquatic ☑ Other (specify): NYSDOT Road/ROW, Metro North Railroad/ROW, NYCDEP Facility

ii. If mix of uses, generally describe:

Area previously disturbed to accommodate construction, operation and maintenance of NYS Rte 9D, Metro North Railroad Hudson Line and NYCDEP siphon facility. There are wetlands on the project site and the Hudson River to the west. Vegetation on site is typical of road and rail ROWs.

b. Land uses and covertypes on the project site.

Land use or Covertype	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces	2.4	4.4	+2.0
• Forested	0.0	0.0	0.0
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)	0.0	0.0	0.0
• Agricultural (includes active orchards, field, greenhouse etc.)	0.0	0.0	0.0
• Surface water features (lakes, ponds, streams, rivers, etc.)	0.0	0.0	0.0
• Wetlands (freshwater or tidal)	0.2	0.2	0.0
• Non-vegetated (bare rock, earth or fill)	0.4	0.6	+0.2
• Other Describe: Vegetated areas along NYS Route 9D and the Railroad ROWs.	10.1	7.9	-2.2

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

i. If Yes: explain: Parking and trailhead for Breakneck Ridge Trail at Hudson Highlands State Park Preserve.

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

If Yes,

i. Identify Facilities:

_____

_____

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

If Yes:

i. Dimensions of the dam and impoundment:

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

ii. Dam's existing hazard classification: _____

iii. Provide date and summarize results of last inspection:

_____

_____

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

If Yes:

i. Has the facility been formally closed? ☐ Yes ☐ No

- If yes, cite sources/documentation: _____

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

_____

_____

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

_____

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

If Yes:

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

_____

_____

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

If Yes:

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

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

☑ Yes – Environmental Site Remediation database Provide DEC ID number(s): 546031

☐ Neither database

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

_____

_____

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

If yes, provide DEC ID number(s): 546031

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

Site Name: Hudson River PCB Sediments. The project site is not within the Hudson River.

_____

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

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

E.2. Natural Resources On or Near Project Site

a. What is the average depth to bedrock on the project site? 0 to > 6.5 feet

b. Are there bedrock outcroppings on the project site? ☐ Yes ☐ No
If Yes, what proportion of the site is comprised of bedrock outcroppings? 5 %

c. Predominant soil type(s) present on project site:

Ud	71 %
Hy	15 %
HrF, HoF	14 %

d. What is the average depth to the water table on the project site? Average: 0 to > 6.5 feet

e. Drainage status of project site soils:

☑	Well Drained:	85 % of site
☐	Moderately Well Drained:	% of site
☑	Poorly Drained	15 % of site

f. Approximate proportion of proposed action site with slopes:

☑	0-10%:	86 % of site
☐	10-15%:	% of site
☑	15% or greater:	14 % of site

g. Are there any unique geologic features on the project site? ☐ Yes ☐ No
If Yes, describe: _____

h. Surface water features.

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

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

If Yes to either *i* or *ii*, continue. If No, skip to E.2.i.

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

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

- Streams: Name Hudson River Classification B
- Lakes or Ponds: Name _____ Classification _____
- Wetlands: Name Federal Waters, Federal Waters, Federal Waters,... Approximate Size 0.2 acres
- Wetland No. (if regulated by DEC) N/A

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

If yes, name of impaired water body/bodies and basis for listing as impaired: _____
Name - Pollutants - Uses:Hudson River (Class B) – Priority Organics – Fish Consumption

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

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

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

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

i. Name of aquifer: Principal Aquifer

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

White-tailed deer, Garter Snake, American Robin, Virginia Opossum, Black Rat Snake
Five-lined Skink (overlook), Gray Catbird, Raccoon, Eastern Cottontail Rabbit
Song sparrow, American Goldfinch, Eastern gray squirrel, Black-capped chickadee

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

If Yes:

i. Describe the habitat/community (composition, function, and basis for designation): Pitch Pine-Oak-Heath Rocky Summit, Chestnut Oak Forest, Rocky Summit Grassland, Oak-Tulip Tree Forest, Appalachian Oak-Hickory ...

ii. Source(s) of description or evaluation: New York Natural Heritage Program Database, NYSDEC EAF Mapper

iii. Extent of community/habitat:

- Currently: 0.0 acres
- Following completion of project as proposed: No change acres
- Gain or loss (indicate + or -): 0.0 acres

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

If Yes:

i. Species and listing (endangered or threatened): Bald Eagle, Peregrine Falcon, Fence Lizard, Atlantic Sturgeon, Timber Rattlesnake, Shortnose Sturgeon

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

If Yes:

i. Species and listing: Eastern Wormsnake

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

If yes, give a brief description of how the proposed action may affect that use: Project Site adjacent to Hudson Highlands State Park Preserve which allows fishing, hiking and hunting. The project will not affect these uses.

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

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

If Yes, provide county plus district name/number:

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

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

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

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

If Yes:

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

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

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

If Yes:

i. CEA name:

ii. Basis for designation:

iii. Designating agency and date:

e. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places? ☐ Yes ☐ No

If Yes:

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

ii. Name: Eligible property:Breakneack Uptake Chamber (aka Hudson River Drainage Chamber)

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

Appears eligible for the National Register under Criterion C for architecture and engineering as a contributing resource of the Catskill Aqueduct.

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

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

If Yes:

i. Describe possible resource(s): _____

ii. Basis for identification: _____

h. Is the project site within fives miles of any officially designated and publicly accessible federal, state, or local scenic or aesthetic resource? ☐ Yes ☐ No

If Yes:

i. Identify resource: Hudson Highlands State Park Preserve, Bannerman's Island Arsenal, Storm King State Park

ii. Nature of, or basis for, designation (e.g., established highway overlook, state or local park, state historic trail or scenic byway, etc.): Scenic Areas of Statewide Significance, Historic Place, undeveloped land.

iii. Distance between project and resource: 0.0, 0.4, 0.6 (respectively) miles.

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

If Yes:

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

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

F. Additional Information

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

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

G. Verification

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

Applicant/Sponsor Name Amy Kacala, Hudson Highlands Fjord Trail, Inc. Date 11.3.21

Signature _____ Title Executive Director

PRINT FORM

EAF Mapper Summary Report

Monday, June 28, 2021 11:33 AM

Disclaimer: The EAF Mapper is a screening tool intended to assist project sponsors and reviewing agencies in preparing an environmental assessment form (EAF). Not all questions asked in the EAF are answered by the EAF Mapper. Additional information on any EAF question can be obtained by consulting the EAF Workbooks. Although the EAF Mapper provides the most up-to-date digital data available to DEC, you may also need to contact local or other data sources in order to obtain data not provided by the Mapper. Digital data is not a substitute for agency determinations.

B.i.i [Coastal or Waterfront Area]	Yes
B.i.ii [Local Waterfront Revitalization Area]	No
C.2.b. [Special Planning District]	Yes - Digital mapping data are not available for all Special Planning Districts. Refer to EAF Workbook.
C.2.b. [Special Planning District - Name]	Remediaton Sites:546031
E.1.h [DEC Spills or Remediation Site - Potential Contamination History]	Yes - Digital mapping data for Spills Incidents are not available for this location. Refer to EAF Workbook.
E.1.h.i [DEC Spills or Remediation Site - Listed]	Yes
E.1.h.i [DEC Spills or Remediation Site - Environmental Site Remediation Database]	Yes
E.1.h.i [DEC Spills or Remediation Site - DEC ID Number]	546031
E.1.h.iii [Within 2,000' of DEC Remediation Site]	Yes
E.1.h.iii [Within 2,000' of DEC Remediation Site - DEC ID]	546031
E.2.g [Unique Geologic Features]	No
E.2.h.i [Surface Water Features]	Yes
E.2.h.ii [Surface Water Features]	Yes
E.2.h.iii [Surface Water Features]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
E.2.h.iv [Surface Water Features - Wetlands Name]	Federal Waters
E.2.h.v [Impaired Water Bodies]	Yes
E.2.h.v [Impaired Water Bodies - Name and Basis for Listing]	Name - Pollutants - Uses:Hudson River (Class B) – Priority Organics – Fish Consumption

E.2.i. [Floodway]	No
E.2.j. [100 Year Floodplain]	Yes
E.2.k. [500 Year Floodplain]	Yes
E.2.l. [Aquifers]	Yes
E.2.l. [Aquifer Names]	Principal Aquifer
E.2.n. [Natural Communities]	Yes
E.2.n.i [Natural Communities - Name]	Pitch Pine-Oak-Heath Rocky Summit, Chestnut Oak Forest, Rocky Summit Grassland, Oak-Tulip Tree Forest, Appalachian Oak-Hickory Forest, Tidal Rive
E.2.n.i [Natural Communities - Acres]	0.0
E.2.o. [Endangered or Threatened Species]	Yes
E.2.o. [Endangered or Threatened Species - Name]	Bald Eagle, Peregrine Falcon, Fence Lizard, Atlantic Sturgeon, Timber Rattlesnake, Shortnose Sturgeon
E.2.p. [Rare Plants or Animals]	Yes
E.2.p. [Rare Plants or Animals - Name]	Eastern Wormsnake
E.3.a. [Agricultural District]	No
E.3.c. [National Natural Landmark]	No
E.3.d [Critical Environmental Area]	No
E.3.e. [National or State Register of Historic Places or State Eligible Sites]	Yes - Digital mapping data for archaeological site boundaries are not available. Refer to EAF Workbook.
E.3.e.ii [National or State Register of Historic Places or State Eligible Sites - Name]	Eligible property:Breakneack Uptake Chamber (aka Hudson River Drainage Chamber)
E.3.f. [Archeological Sites]	Yes
E.3.i. [Designated River Corridor]	No

Breakneck Connector and Bridge Project
Full EAF Part 1 – Attachment A
Revised December 27, 2022

This FEAF Part 1 Attachment A is dated December 27, 2022 and replaces in its entirety the original FEAF Part 1 Attachment A that was issued on the same date as the FEAF Part 1 form (November 3, 2021). Project design and engineering has continued since the FEAF Part 1 was issued a year ago. This revision includes updates and refinements based on the continued Project development. In addition, this revision records safety improvements installed by Metro-North Railroad at the Project Site after the original FEAF Part 1 was issued.

Brief Description of Proposed Action (including Purpose or Need)

Project Location:
The Hudson Highland State Park Preserve (HHSPP) is an 8,900-acre park located in Dutchess, Putnam and Westchester Counties in the Taconic Region of the Office of Parks, Recreation and Historic Preservation (OPRHP). There are over 70 miles of trails in HHSPP, including the well-travelled Breakneck Ridge Trail located on the west side of HHSPP, approximately midway between the City of Beacon and the Village of Cold Spring. The proposed Breakneck Connector and Bridge Project, referred to herein as "the Project", is located on the border of the Town of Fishkill, Dutchess County, NY and the Town of Philipstown, Putnam County, NY along a half-mile portion of NYS Route 9D, just north of the NYS Route 9D vehicular tunnel and adjacent to and on both sides of the MTA Metro-North Railroad (MNR) tracks (the "Project Site"). The Project Sponsor is Hudson Highlands Fjord Trail, Inc. (HHFT, Inc), a subsidiary of Scenic Hudson, Inc.

Brief Description:
The proposed Project consists of the following elements, which will be described in greater detail below: a 0.58-mile publicly-accessible shared-use trail that includes a new bridge (Breakneck Bridge or Bridge) over the MNR tracks, parking areas along NYS Route 9D, trail connections to two different trailheads within HHSPP including the Breakneck Ridge Trail, the addition of two comfort station buildings, upgrades to the MNR Breakneck Ridge station and platforms, relocation of the power lines from the western side of NYS Route 9D to the eastern side, installation of a trail steward station, and upgrades to the Upper Overlook area

along the Breakneck Ridge Trail. The section of the Breakneck Connector shared-use trail from the north end to the intersection with the Bridge measures 2,620 linear feet (LF), the Bridge itself measures 445 LF, and the trail from the Bridge intersection south to the Breakneck Ridge trailhead measures 342 LF. For the purpose of this document, a shared-use trail or path is wide enough to support concurrent use by people traveling in multiple modes of non-motorized movement, including pedestrian and bicycle use, and is accessible for people with disabilities. While the Bridge will be constructed to load H-10 rated vehicles, vehicular use of the Bridge will be prohibited to the general public. Vehicular use of this Bridge will be restricted to H-10 rated vehicles operated by the New York City Department of Environmental Protection (DEP), OPRHP and its designated trail operator, and emergency responders for maintenance and emergency response only.

Purpose and Need:

The scenic Breakneck Ridge Trail (trailhead located at the north end and west side of the NYS Route 9D vehicular tunnel) is one of the most popular hiking destinations in the northeast and has seen a significant and steady increase in visitor use and vehicular traffic over the past decade. On typical weekend days, the Breakneck Ridge Trail sees several hundred, and sometimes thousands of people, who come to tackle its rugged ascent and take in spectacular views of the Hudson River and surrounding mountains. This tremendous increase in vehicular, rail, and foot traffic at Breakneck Ridge over the years has resulted in several safety and capacity issues, specifically: overrun parking areas; significant safety concerns along NYS Route 9D; pedestrians walking along the active railroad right of way; increased instances of lost or injured hikers; difficulty accessing the terrain in search and rescue efforts; impacts to natural resources; and additional demands on park management and local emergency services. While OPRHP is coordinating with partners and developing a Visitor Use Management Plan to address some of these issues, there is an immediate need to develop and improve access points to the Breakneck Ridge Trail and along NYS Route 9D to enable the area to safely accommodate the current amount of traffic that arrives by car, rail and foot.

The Project is being undertaken to address and improve the overrun parking areas along NYS Route 9D and lack of pedestrian and hiker safety at the Project Site. Along NYS Route 9D within the Project Site are existing trailheads to access

HHSPP trails to Bull Hill, Mount Beacon and Breakneck Ridge. In between these trailheads there is limited parking available along NYS Route 9D. Visitors arriving by car will therefore park along the road and walk along or within the NYS Route 9D right-of-way, as there is no separated pedestrian walkway. Existing parking areas are not striped and there are no designated parking spaces along NYS Route 9D nor striped crosswalks. Parking along NYS Route 9D by visitors is often haphazard and can create additional safety issues. HHSPP patrons can also access the trails via Metro-North's Hudson Line service to Breakneck Ridge Station (weekends only). Large numbers of visitors debark/embark the trains at short wooden platforms. These patrons also must cross and/or walk along a narrow stretch of NYS Route 9D to access the trailheads, and many have walked along the railroad right-of-way, which is unsafe and illegal. Existing restroom facilities are comprised of port-o-potties and are not sufficient nor pleasant for the density of visitors here.

The northern portion of the Project will be developed as a shared-use Trail that will safely separate patrons from NYS Route 9D and the railroad tracks/right-of-way within the Project Site. The southern portion of the Project will branch into two paths, one leading to the Breakneck Ridge trailhead and Breakneck Upper Overlook and the other a continuance of the shared-use trail as the new Breakneck Bridge over the MNR railroad tracks. The Breakneck Upper Overlook will be the site of a new trail steward station. Visitors to Breakneck Ridge sometimes come unprepared and are inexperienced for the rugged rock climb that is the ascent of the Breakneck Ridge Trail. For the past few years, OPRHP has partnered with the New York-New Jersey Trail Conference to provide trail stewards at the trailhead to inform visitors of the trail conditions, provide education about the area and its sensitive nature, and direct unprepared visitors to other more appropriate local destinations. Currently, the stewards set up a table at the trailhead and carry in their supplies each day. There is a need for a more formal location and permanent structure to house steward supplies and provide a space for stewards to greet the public.

The proposed Breakneck Bridge will provide additional public benefits, as it will be constructed for pedestrian and non-motorized public use and restricted lightweight vehicle-rated use (H-10) operated by DEP, OPRHP and its designated trail operator, and emergency responders for maintenance and emergency

response only. The new Bridge will provide DEP with safe and convenient vehicular access over the active MNR railroad tracks to DEP's Hudson River Drainage Chamber (HRDC) located on the west side of the tracks along the Hudson River. The HRDC is an integral part of the Catskill Aqueduct, and DEP has a major HRDC repair and renovation project (referred to herein as "the CAT-399 Project") planned for the future. The completion of the Bridge will grant DEP easier, more convenient, lightweight vehicular access to the HRDC both during and after the CAT-399 Project.

Presently, DEP has no vehicular access or safe and convenient pedestrian passage to the HRDC. DEP staff currently access the HRDC by foot following the beginning of the Breakneck Ridge Trail and then climbing over the rock face to the chamber or access it via boat on the Hudson River. Thus, the future Breakneck Bridge will provide DEP with a long-term, safe, and convenient means to access the HRDC for routine maintenance purposes, and it will also support DEP's CAT-399 Project by enabling the transport of employees and light tools and equipment over the MNR tracks via lightweight vehicle.

When the Breakneck Bridge and its shared-use path is opened and accessible to the general public, it will provide the public with safe pedestrian and non-motorized passage over the MNR tracks for visual access to the Hudson River. While the Bridge will be constructed to load H-10 vehicles, vehicular use of the Bridge will be prohibited to the general public. Vehicular use of this Bridge will be restricted to H-10 vehicles operated by DEP, OPRHP and its designated trail operator, and emergency responders for maintenance and emergency response only.

Furthermore, the Project would serve as the foundation and first phase of the potential future Hudson Highlands Fjord Trail (Fjord Trail). The project sponsor and OPRHP hope that future phases of development will extend pedestrian and non-motorized public access on either side (north and south) of the Breakneck Connector and Bridge Project as part of the proposed 7.5-mile Fjord Trail. As proposed, the Fjord Trail runs between NYS Route 9D and the east side of Metro-North's tracks north of the Project and along the Hudson River on the west side of the Metro-North tracks south of the Project's proposed Bridge.

While OPRHP will analyze the entirety of the proposed Fjord Trail under the State Environmental Quality Review Act (SEQR) including its cumulative impacts, the Project's safety improvements and proposed access over the MNR tracks present a stand-alone project that will solve and remediate identified deficiencies with current conditions at the Project Site.

Existing Conditions: MNR's Safety Improvements and Related Measures Installed at the Project Site Between Fall 2021 and March 2022

One of the reasons OPRHP issues this revised Full EAF Part 1 – Attachment A is to reflect changes to existing conditions at the Project Site that have occurred since the original Full EAF Part 1 Form and Attachment A was issued on November 3, 2021. The Project Site contains safety hazards to the general public as there has been limited separation between hikers and the train tracks and between hikers and NYS Route 9D. Since the original Full EAF Part 1 and Attachment A was issued, MNR mitigated some of the more imminently dangerous conditions on a portion of the Project Site.

As background, in late 2019, MNR closed the Breakneck Ridge Train Station due to a pedestrian fatality. To mitigate these emergent site safety concerns for MNR riders and to allow the station to reopen, MNR installed safety improvements on a portion of the Project Site during Fall 2021 and Spring 2022. Notably MNR constructed a path and HHFT, Inc. installed fencing on MNR property, thereby reducing access to the tracks and providing a clear path from the existing train station platforms to NYS Route 9D. In addition, MNR implemented roadside parking controls such as jersey barriers to reduce the number of vehicles able to park at the Breakneck parking areas. MNR's other mitigation measures involved or included the following measures:

- Removal of trees and brush between the northbound platform and MNR pedestrian overpass and along the MNR right-of-way along the entirety of the Project Site;
- Protection of a wetland area;
- Regrading, including riprap for stabilization, to provide a sloped path from the northbound platform to the pedestrian overpass;
- Installation of packed gravel;

- Installation of an 8-foot non-climbable fence along the eastern MNR right-of-way;
- Installation of an 8-foot non-climbable fence around existing platforms;
- Installation of anti-trespass panels between tracks at existing MNR platforms; and
- Installation of temporary wayfinding.

After performing this work and with these safety controls in place, MNR reopened the Breakneck Ridge Station in Spring 2022. While this work addresses some of the immediate safety concerns at the Project Site, this Project will further ensure the safety of pedestrians and hikers in the vicinity of the MNR station and tracks, the Breakneck Ridge Trailhead, and NYS Route 9D.

Previous SEQR Review of a Reduced Project Scope:

Improvements along NYS Route 9D at the Project Site were previously reviewed under SEQR in 2016. The Town of Fishkill, SEQR lead agency at that time, conducted a coordinated SEQR review on the original version of the Breakneck Connector project scope that included the half-mile shared-use trail, parking areas, installation of signage, relocation of utilities, and installation of handrails, fencing and curbs. The project scope did not include the Bridge or upgrades to the Upper Overlook Area. The Town's SEQR review concluded with a Negative Declaration on March 22, 2016.

Due to the Town's changed circumstances and the availability of new sources of funding for the Bridge and overall project, the vision for the project changed. Two additional areas, which were not part of the project reviewed by the Town of Fishkill, are added to the project scope (Upper Overlook and the Bridge) and OPRHP is replacing the Town of Fishkill as lead agency for the revised project scope. OPRHP is serving as lead agency in SEQR, in part, because, except for the MNR Breakneck Ridge Station, OPRHP will have real property interests over the entirety of the Breakneck Connector and Bridge Project lands. OPRHP determined a new SEQR review was warranted in light of the change in project scope and to allow involved and interested agencies an opportunity to review the revised project. Therefore, OPRHP's current Type 1 action coordinated review will supersede and replace the Town's 2016 negative declaration.

Revised Project Description:

The revised Breakneck Connector and Bridge Project involves construction of a 0.58-mile publicly-accessible shared-use trail (distance includes the proposed Bridge spanning over the MNR railroad tracks) with related infrastructure on the west side of NYS Route 9D. The Project will connect the Metro-North Railroad Breakneck Ridge southbound platform to the north, via the existing MNR pedestrian overpass and proposed Connector Trail, with the proposed Bridge over the MNR tracks and with an additional trail connection to the Breakneck Ridge Trailhead to the south. The Bridge will accommodate pedestrian and non-motorized public use and lightweight vehicle (H-10 rated) access. The east side of the Bridge will be located just north of the Breakneck Ridge Trailhead and Breakneck Ridge NYS Route 9D vehicular tunnel and cross over the MNR tracks to the Hudson River shoreline landing just north of the DEP's HRDC. While the Bridge will be constructed to load H-10 rated vehicles, vehicular use of the Bridge will be prohibited to the general public. Vehicular use of this Bridge will be restricted to H-10 rated vehicles operated by DEP, OPRHP and its designated trail operator, and emergency responders for maintenance and emergency response only. The Project includes MNR station and platform upgrades for both north- and south-bound trains.

The shared-use publicly-accessible trail[1] is 3,065 feet in length (including the Bridge) and 14 feet in width with combination compacted gravel and asphalt on-grade sections, an elevated trail section and the Bridge over the railroad tracks. In addition to the trail itself, the Project involves the development of two formal pull-in parking areas and parallel parking along NYS Route 9D (creating 109 standard and 4 ADA parking spaces), connections to the Breakneck Ridge and Wilkinson/Nimham trailheads, two comfort station buildings (with a total of 8 enclosed restrooms), a steward station, and upgrades to the Upper Overlook area along Breakneck Ridge Trail. The pull-in parking areas referenced above are owned by MNR and there will be an easement allowing public use of this area. The Project also involves installation of trail signage and lighting, relocation of existing electric utilities, and installation of handrails, fencing or curbs where the

[1] The trail will meet the US Access Board's accessibility standards for outdoor developed areas under the Architectural Barriers Act (ABA). Where the trail meets the entrances to MNR Breakneck Ridge Station platforms, it will comply with the Americans with Disabilities Act (ADA), as applicable.

trail is elevated, or pedestrian safety is of concern. A segment of elevated trail and grading are necessary to align the proposed trail with the existing MNR pedestrian overpass and walkway grade.

Stormwater management will be incorporated into the project design as a series of 15 swales for water quality treatment prior to discharge to the Hudson River, in accordance with New York State Department of Environmental Conservation (NYSDEC) standards. Stormwater will be allowed to pond and infiltrate within these swales before overflowing through outlet structures to swales further downstream, each set at a progressively lower elevation as the swale network approaches the Hudson River outlet culverts. The total provided storage volume will be about 126,000 cubic feet, more than double the volume provided in the existing swales on site and is expected to reduce stormwater impacts to Metro-North properties and operations and to NYS Route 9D. This drainage design will largely maintain existing flow patterns and existing culverts crossing under both NYS Route 9D and the Metro-North right-of-way.

The MNR platform work will include the removal of two wood platforms (approximately 8'x16') at both the north-bound and south-bound locations. New 40' x 12' steel and concrete platforms will be constructed in their place, along with a 5' wide ADA ramp extending to grade (approximately 90' long at both station locations). Each platform will be equipped with a 30' long overhead canopy, minimal lighting for the safety of MNR's operation, customers, and employees, and electric for MNR ticketing and Public Announcement equipment. A dry plumbing line (for future power washing capability) and electrical conduit will be provided from the platforms to the highway for MNR's future use.

The Upper Overlook is being developed in coordination with OPRHP and the New York-New Jersey Trail Conference. Existing social trail loops will be better defined allowing visitors to move in a more organized fashion around the Upper Overlook and providing visitors with scenic vistas. Portions of the area will be planted with native plant species to restore the existing landscape and to close off social trails that are less desired. A new steward station structure will enhance the visitor experience, providing a structure to house steward supplies and a space for stewards to greet the public.

The proposed Breakneck Bridge will provide lightweight vehicular (H-10 rated) access for DEP maintenance vehicles to the HRDC on the west side of the tracks, to which they currently have no vehicular access. DEP staff currently access the site by foot following the beginning of the Breakneck Ridge Trail and then climbing over the rock face, or via boat on the Hudson River. In addition, the Bridge will provide DEP employees and contractors with daily access to the HRDC during DEP's planned CAT-399 facility upgrade project, which is part of DEP's larger aqueduct upgrade plans. During the CAT-399 Project, DEP will barge larger, heavier equipment to the HRDC site; the use of barges to access the site will help to minimize impacts to railroad operations. The Breakneck Bridge will allow lighter-weight vehicles, tools, and workers to access the area daily. Only DEP and its contractors will be authorized to access the new Breakneck Bridge during the multi-year CAT-399 Project. A non-climbable fence will be installed at the DEP CAT-399 construction site for the duration of the CAT-399 Project to restrict the area from public access. Upon completion of the CAT-399 Project, the Bridge and its shared-use path will be opened to the general public for visual access to the Hudson River. Ultimately, the Bridge would also serve as an essential shared-use connection over the MNR railroad tracks in a proposed 7.5-mile Fjord Trail that would run between NYS Route 9D and the east side of the MNR tracks north of the Project and along the Hudson River on the west side of the MNR tracks south of the proposed Bridge.

The Bridge will be constructed of a weathered steel superstructure, reminiscent of the area's industrial past and the railroad itself. The deck and vehicular rail are comprised of sustainable Glulam materials. The steel side rails will be enclosed by light stainless flexible mesh. Safety fencing will be provided along the Bridge in accordance with criteria in the NYSDOT Bridge Manual and Detailed Sheets for bridges over rail powered by diesel. The Bridge is designed to be as visually quiet as possible; the abutments appear to grow out of the existing landscape and land on either side of the MNR tracks. The structure is proposed to maintain a minimum 20'-6" clearance above the tracks. The project sponsor, through MNR, received a clearance waiver from NYSDOT in September 2022 to reduce the State-required 22'-0" clearance considering clearance is currently restricted by the existing Breakneck Ridge Train Tunnel. NYSDOT approval for the construction of the Bridge was granted in December 2022.

Powerline relocation will be conducted in advance of the trail and Bridge construction. Construction of the Breakneck Connector and Bridge Project areas will be conducted simultaneously. An 8-foot-high non-scalable chain link construction work zone fence with privacy mesh will be installed to secure the site. NYSDOT high density traffic drums with strobes or similar will be used to delineate the work area from the roadway. Construction logistics will be refined by the selected contractors in close coordination with regulatory agencies, NYSDOT, MNR and OPRHP. All design documents and construction means and methods will be under review by MNR, NYSDOT, and DEP prior to construction commencement. Barging will be utilized to construct and perform work on the proposed Bridge.

Permissible Segmentation:

The SEQR regulations, 6 NYCRR Part 617, state that consideration of only a part or segment of an action is contrary to the intent of SEQR. In accordance with §617.3(g)(1), "if a lead agency believes that circumstances warrant a segmented review, it must clearly state in its determination of significance, and any subsequent EIS, the supporting reasons and must demonstrate that such review is clearly no less protective of the environment." Related actions should be identified and thoroughly explained to the extent possible.

The Breakneck Connector and Bridge Project is expected to be one segment of a larger proposed 7.5-mile Fjord Trail which would connect, by a recreational linear park, the Village of Cold Spring in Putnam County to the City of Beacon in Dutchess County. The Fjord Trail is proposed to generally follow the Hudson River shoreline or be located within properties adjacent to the shoreline. The proposed Fjord Trail is currently undergoing a master plan and environmental review process that will take the form of a Generic Environmental Impact Statement (GEIS) for the overall trail and an Environmental Impact Statement (EIS) for the Shoreline Trail segment that is south of the proposed Breakneck Bridge. Besides the Breakneck Connector and Bridge Project, no other section of the proposed Fjord Trail will be constructed until the GEIS has been completed.

OPRHP is serving as lead agency for the environmental review of the entirety of the Fjord Trail, including this review under SEQR of the Breakneck Connector and

Bridge Project. OPRHP determined the Project can be permissibly segmented from the GEIS/EIS referenced above due to several factors discussed below.

The purpose, timing, planning stage, location, funding, independent utility, ownership and control of project lands, and potential impacts of the Breakneck Connector and Bridge Project in relation to the rest of the proposed Fjord Trail are factors that favor permissible segmentation in this circumstance.

The improvements that comprise the Project serve a purpose that is independent and distinct from the rest of the Fjord Trail. The primary purpose of the Project is to address clear and present safety risks that exist at this specific location due to the density of visitors to the Breakneck Ridge Trail and HHSPP that arrive by rail, vehicle and other modes of transportation. The Project will also improve DEP's access to its HRDC facility for maintenance and operational purposes by providing a safer crossing and lightweight vehicular access to the HRDC over the MNR railroad.

In regard to timing, there is an urgent need to address pedestrian safety and congestion issues along this section of NYS Route 9D. These identified safety risks do not exist at the portions of the future Fjord Trail that are north and south of the Breakneck Connector and Bridge Project.

In addition, the planning and design stages of the Breakneck Connector Trail and Bridge have progressed much farther towards completion than the planning and design stages for the rest of the Fjord Trail.

The location of the Project lends itself to permissible segmentation. Physically and functionally, an unimproved version of the Breakneck Connector Trail already exists as the public currently uses NYS Route 9D to access nearby trailheads, just not on separated, improved surfaces intended for this type and level of activity. The extension of the Fjord Trail directly north and south of the Project would be an entirely new set of trails, on which the public does not currently have access. The Breakneck Connector Trail will begin from the north at a natural terminus, which depending on how a visitor arrives, is either at the MNR Breakneck Ridge southbound platform or the proximal parking spaces along NYS Route 9D. The Project will connect various trailheads and will terminate on the western side (or river side) of the new Breakneck Bridge which is another natural terminus. As a result, even if nothing else were ever constructed for the larger Fjord Trail either

north or south of the Project, this section comprising the Breakneck Connector and Bridge is important and essential as a stand-alone project. Furthermore, the Project does not restrict alternatives or commit resources for the design and development of other, future segments of the Fjord Trail.

The funding for the Project will come from multiple sources. Currently, such funding is available or in the final stages of negotiation, whereas the funding for the Fjord Trail is not determined or fully available at this time. As such the Fjord Trail's construction timeline is speculative, and the Project's construction is likely to proceed as planned.

Given the foregoing factors, it is evident that the Breakneck Connector and Bridge Project possesses substantial independent utility because it is physically, functionally, and financially independent from the rest of the Fjord Trail.

Another factor favoring permissible segmentation of the Project is that, except for the MNR Breakneck Ridge Station, OPRHP either owns or is in the process of acquiring the Project Site in fee or as other types of property interests. These acquisitions and other real property interests will allow OPRHP and the project sponsor to construct the Project, provide public access to the entirety of the Breakneck Connector and Bridge Project Site, and to authorize the maintenance and operation of this public resource in the future. While OPRHP will work in the future to acquire real property interests or control over the rest of the Fjord Trail areas for the purpose of operating the 7.5-mile trail, presently these real property interests do not exist and may require a protracted negotiation process to achieve.

As SEQR lead agency, OPRHP recognizes the obligation to demonstrate this review of the Project, when completed, will be no less protective of the environment than if the Project were analyzed as part of the ongoing and future review for the Fjord Trail's GEIS/EIS. OPRHP, the project sponsor, and their consultants are coordinating with all entities as may be required including New York State Department of Transportation, Metro-North Railroad, Metropolitan Transportation Authority, New York City Department of Environmental Protection, New York State Department of Environmental Conservation, New York State Department of State, US Army Corps of Engineers, US Fish and Wildlife Service, and National Marine Fisheries Service to ensure that all potentially

significant adverse impacts to environmental resources are identified and fully addressed through the planning, design, and permitting process. Coordination has and will result in avoiding and minimizing impacts to the greatest degree possible while meeting the Project goal of providing a safe and appropriate recreational pathway between the MNR Breakneck Ridge Station and Breakneck Ridge trailhead and providing a bridge over the MNR tracks for a grade separated access route to the HRDC.

FEAF Part 1 – Additional Information:

Property Owners:
Metropolitan Transportation Authority (on behalf of Metro-North Railroad)
2 Broadway
New York, NY 10004
Contact: John K. Urda
929-314-7098
jurda@mtahq.org

New York State Department of Transportation, Hudson Valley
4 Burnett Boulevard
Poughkeepsie, NY 12569
Contact: Lance Gorney, Regional Permit Engineer
845-437-3325
lance.gorney@dot.ny.gov

New York City Department of Environmental Protection
Bureau of Water Supply|SEQRA Coordination Section
465 Columbus Ave.
Valhalla, NY 10595
Contact: Cynthia Garcia
914-749-5302
cgarcia@dep.nyc.gov

New York State Office of Parks, Recreation & Historic Preservation
9 Old Post Road / PO Box 308
Staatsburg, NY 12580

Linda Cooper, Taconic Regional Director
845-889-3811
Linda.Cooper@parks.ny.gov

Section B. Government Approvals

Table 1:

Agency	**Approval Required**	**Application Date (Actual or Projected)**
Town of Fishkill	Site Plan review (TBD); SWPPP MS4 (TBD)	Projected January 2023
Dutchess County Department of Health	Well Permit; Composting and Sanitary systems Permit	Well Permit received; Composting/Sanitary Permit submitted September 2021
New York City Department of Environmental Protection	Bridge Easement; Land use Permit; Funding; Public Design Committee approval	On-going
New York State Department of Transportation	Highway Work Permit; Utility Permit; Use and Occupancy permit; Bridge Height waiver; Bridge Determination Pursuant to NYS Railroad Law sec. 90	Projected January 2023; Bridge Height waiver received September 2022; Bridge Determination/Approval received December 2022.
New York State Department of Environmental Conservation	Joint Permit Application - Protection of Waters, Water Quality Certification, SPDES/SWPPP	Projected February 2023
New York State Department of State	Coastal Consistency, with federal involvement	Projected February 2023
MTA/Metro-North Railroad	Bridge and Trail Easement; Entry Permits	On-going
OPRHP	DHP (SHPO) Section 14.09/106; Funding	14.09/106 review complete.

US Army Corps of Engineers	Joint Permit Application – Section 10, Section 404, NWP #13 (TBD)	Projected February 2023
US Fish and Wildlife Service	Informal Consultation/ Biological Evaluation	Projected February 2023
National Marine Fisheries Service	Informal Consultation/ Biological Evaluation	Projected February 2023

C.2.b. The Project Site is adjacent to the "Hudson River PCB Sediments" NYSDEC Remediation Site 546031 which is listed under the State Superfund Program and extends from the Battery to Hudson Falls. Additionally, the Project Site is located within or adjacent to the Maurice D. Hinchey Hudson River Valley National Heritage Area, the Hudson Valley River Greenway, and HHSPP.

D.1.b. The acreages have been refined since the FEAF Part 1 was issued a year ago. The updated acreages are as follows:

a. Total acreage of the site of the proposed action? 12.2 acres
b. Total acreage to be physically disturbed? 12.2 acres. The Project Site encompasses the proposed area of disturbance, but some areas within the Project Site would have minimal disturbance—for instance, work along NYS Route 9D would be limited to the shoulders, restriping, and new underground utility connections under the highway; during construction, there will be temporary single-lane closures and a temporary realignment near the eastern Bridge abutment. Disturbance for the Upper Overlook improvements would be primarily contained within the trail footprints and immediately adjacent areas and for installation of a steward station and fencing.
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? 12.2 acres plus lands extended north and south in MNR and NYSDOT rights-of-way (ROW), south in DEP property and surrounding OPRHP property.

D.1.c.i. The Project is an expansion of the existing pathway and parking area. This number is an estimate of the increased amount of land used for the trail and parking.

D.1.e. The initial estimate for duration of construction activities was 18 months (as shown on the FEAF Part 1). With continued design and construction methodology development over the past year, it has been determined that construction activities within each construction area would occur in parallel, as feasible, with the overall construction duration now expected to take approximately 24 to 30 months.

D.1.g. The seven noted structures are the Bridge, the two comfort station buildings, the two train station platforms, the trail steward station, and the elevated trail section. Dimensions of the Bridge have been further refined since the FEAF Part 1 form was completed and now measure at 38' height, 30' width, and 445' length.

D.1.h. The Project includes vegetated swales for stormwater treatment. Stormwater is allowed to pond to a specified elevation and infiltrate in these swales before being piped to lower ponds, each set progressively lower as they work closer to the Hudson River outlet culverts. A SWPPP is being developed for the entire Project.

D.2.a. The Project involves general site preparation and grading with some excavation.

D.2.a.i. Excavation or grading will occur for the comfort station basements, Bridge abutments, trenching for utility pipes and structures such as drainage and power poles, re-grading to meet final elevations, and other footings and foundations site-wide such as piers for the elevated trail, MNR platforms, retaining walls, and planting installation.

D.2.a.ii. and iii. The volume of material to be excavated is preliminarily estimated at 5,100 cubic yards (CY), with an estimated net fill of approximately 18,500 CY on the Project Site; this assumes that the approximately 5,100 CY of excavated material will be able to be re-used on site pending all sampling and regulatory requirements. These estimates are based on cut/fill analysis for the whole Project Site, balancing existing and proposed grades in the 50% design, to get a general sense of volumes. It is not possible at this time to determine how much material will be removed from the Project Site or if all material will be able to remain on site (preferred). From a geotech standpoint, the excavated soil would need to meet the gradation requirements per the earthworks specification to be reused

on site. Based on the borings, and the contractor screening excavated soil for the soil to meet the gradation requirements, reuse of soil onsite is possible. Reuse of soil on site may occur for grading purposes at the comfort station locations and for plantings. Additional fill material, meeting all applicable standards and requirements, will be used where the proposed finished grade is higher than the existing grades, such as, for the banked area at the scramble bank or the mounds at the Bridge abutments. The soil management plan will be shared with MNR, DEP and DOT, and soil re-use and fill will be coordinated with these agencies, as needed.

D.2.a.v. The revised area for physical disturbance is 12.2 acres. The Project Site encompasses the proposed area of disturbance, but some areas within the Project Site would have minimal disturbance—for instance, work along NYS Route 9D would be limited to the shoulders, restriping, and new underground utility connections under the highway; during construction, there will be temporary single-lane closures and a temporary realignment near the eastern Bridge abutment. Disturbance for the Upper Overlook improvements would be primarily contained within the trail footprints and immediately adjacent areas and for installation of a steward station and fencing.

D.2.e.i. The refined acreage is 1.7 acres of new impervious surface with a Parcel Size of 12.2 acres.

D.2.j. The Project is not expected to result in a substantial increase in traffic above present levels. Nevertheless, the Project will address and ameliorate the existing parking conditions and other safety concerns caused by the increased traffic this location has experienced over the last decade. Existing parking areas are not striped and there are no designated parking spaces along NYS Route 9D nor striped crosswalks. Parking along NYS Route 9D by visitors is often haphazard and can create additional safety issues. The Project will formalize parking spaces in parking lots and along NYS Route 9D, as well as formalize an off-road pathway (Breakneck Connector) between the MNR platforms, parking, and trailheads. The Project will bring order and safety to vehicular and pedestrian access at and near HHSPP trailheads.

D.2.k. This question was not answered on the FEAF Part 1, as it is only required to be answered for commercial and industrial projects. The Project is considered recreational.

E.1.b. Land use and Cover Type Table

Revised acreages from the FEAF Part 1 Form:

Land Use or Cover Type	Current Acreage	Acreage after project completion	Change (Acres +/-)
Roads, buildings and other paved or impervious surfaces	2.4	4.1	+1.7
Forested	0	0	0
Meadows, grasslands or brushlands (non agricultural, including abandoned agricultural	0	0	0
Agricultural	0	0	0
Surface water features	0	0	0
Wetlands	0.2	0.2	0
Non-vegetated	0.4	0.6	+0.2
Other: vegetated areas along NYS Route 9D and the Railroad ROWs	9.2	7.3	-1.9
TOTAL:	**12.2**	**12.2**	

The following provides the breakdown of the land uses and covertypes on the Project Site used to calculate the areas included in the E.1.b table.

<u>Roads, buildings, and other paved or impervious surfaces.</u>
Current Acreage: NYS Route 9D, adjacent parking areas, railroad, platforms
Acreage After Project Completion: NYS Route 9D, impervious parking areas, railroad, platforms, main trail, access roads, elevated trail, comfort stations, steward station and Bridge

Non-vegetated (bare rock, earth, or fill).
Current Acreage: Rock outcrops and Upper Overlook trail
Acreage After Project Completion: Rock outcrops, Upper Overlook trail, permeable parking lots and paving around comfort stations, revetment at the Bridge, boulder embankments within the scramble bank and streambed

Other: Vegetated areas along NYS Route 9D and the Railroad ROWs.
Current Acreage: Existing vegetated areas
Acreage After Project Completion: Remaining vegetated areas, all areas with proposed vegetation, re-vegetated trails at the Upper Overlook

E.2.g. Breakneck Ridge is not documented in the State's database of unique geological features and therefore, using NYSDEC's EAF Mapper, the FEAF Part 1, E.2.g. was checked No. Nevertheless, OPRHP acknowledges Breakneck Ridge as a unique and locally significant geological feature on the landscape. It is a major rock promontory along the Hudson River located at HHSPP and across from Storm King State Park. It is the location of the well-traveled and well-known Breakneck Ridge Trail.

E.2.n. Designated Significant Natural Communities

The Project Site is adjacent to the HHSPP and the Hudson River. The New York Natural Heritage Program (NYNHP) has designated significant natural communities in the area. Adjacent or nearby significant natural communities on the east side of the Project Site include Pitch Pine-Oak-Heath Rocky Summit, Appalachian Oak-Hickory Forest, Chestnut Oak Forest, Oak-Tulip Tree Forest, Rocky Summit Grassland, and on the west side of the Project Site is the Tidal Hudson River.

The area adjacent to the east side of NYS Route 9D along the 0.58-mile-long Project Site is Oak-Tulip Tree Forest. The Project entails developing parallel parking along portions of this section as well as moving electric utilities to this east side of NYS Route 9D. Approximately 90 trees (6" dbh or greater) are required to be removed in this area for these Project elements. These removals occur within the proposed parallel parking footprint and/or to accommodate the 30-foot clearance height requirement for the utility lines. All tree removals are within approximately 25 feet of the existing NYS Route 9D pavement along the edge of the significant natural community. As the community is mapped to the

HHSPP boundary in this area, accounting for the NYSDOT ROW, the EAF Mapper has indicated no direct overlap with the significant natural community. As this area is directly along NYS Route 9D, habitat quality is likely lower. The scramble reconstruction area in the Upper Overlook is located on the edge of Pitch Pine-Oak-Heath Rocky Summit, noted as a significant natural community. The work in this area will harden and define the trail tread making it easier to use, with the expectation of reducing the number of visitors wandering along the ridge and protecting more of the habitat. The remainder of the Project does not occur within the footprint of a significant natural community.

E.2.o. and p. Endangered and Threatened Species, Special Concern

The NYNHP database indicates that four federally-listed animal species and five state-listed animal species may potentially occur in or near the Project Site. The NYNHP database also indicates one Special Concern species. The US Fish and Wildlife Service Information for Planning and Consultation (IPaC) Official Species List reports four additional species. See Table 2.

Table 2:

Common Name	**Scientific Name**	**Federal Status**	**NYS Status**	**Source**
Atlantic Sturgeon	*Acipenser oxyrinchus*	Endangered	NYS protected	NYNHP
Bald Eagle	*Haliaeetus leucocephalus*	Protected*	Threatened	NYNHP, IPaC
Eastern Wormsnake	*Carphophis amoenus*		Special Concern	NYNHP
Fence Lizard	*Sceloporus undulatus*		Threatened	NYNHP
Golden Eagle	*Aquila chrysaetos*	Protected*	Endangered	IPaC
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	IPaC
Monarch Butterfly	*Danaus plexippus*	Candidate		IPaC

Northern Long-eared Bat	*Myotis septentrionalis*	Endangered**	Threatened	IPaC
Peregrine Falcon	*Falco peregrinus*	Protected***	Endangered	NYNHP
Shortnose Sturgeon	*Acipenser brevirostrum*	Endangered	Endangered	NYNHP
Timber Rattlesnake	*Crotalus horridus*		Threatened	NYNHP

* Note that although not federally listed, Bald and Golden Eagles and their nests are granted special protections under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act.
** In November 2022, the USFWS published a final rule to reclassify Northern Long-eared Bats from Threatened to Endangered status under the Endangered Species Act. The rule takes effect on January 30, 2023.
*** Protected under the Migratory Bird Treaty Act.

The NYNHP database indicates a number of historical and extant occurrences of rare plant species near the Project Site. In consultation with NYNHP, two of those rare plant species are most likely to be found in the Project Site: stiff flat-topped goldenrod (*Solidago rigida var. rigida*) and one species of prickly pear (*Opuntia spp.*), although the likelihood for either species in this Project Site is very low according to NYNHP.

The Hudson River Mile 44-56, adjacent to the Project Site, is noted as an Anadromous Fish Concentration Area per the NYNHP database.

E.3.e and f. Historic and Cultural Resources

The Project has been reviewed by the OPRHP Division for Historic Preservation (DHP) in accordance with Section 14.09 of the New York Parks, Recreation and Historic Preservation Law. A letter has been issued indicating DHP has "no concerns regarding the potential impacts of the proposed Breakneck Connector segment on archaeological and/or historic architectural resources listed in or eligible for the New York State and National Registers of Historic Places" (Farry, 9/10/2020). A Section 106 letter has also been issued from DHP indicating "it is the SHPO's opinion that this Project will have No Effect upon cultural resources in

or eligible for inclusion in the National Registers of Historic Places” (Farry, 4/7/2022).

Potential Involved/Interested Agencies List
Breakneck Connector and Bridge Project
Updated December 2022

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Agency Use Only [If applicable]

Project : Breakneck Connector and Bridge Project

Date : 2022

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

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

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

Tips for completing Part 2:

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

1. Impact on Land

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site. (See Part 1. D.1)

☐ NO ☑ YES

If "Yes", answer questions a - j. If "No", move on to Section 2.

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

2. Impact on Geological Features

The proposed action may result in the modification or destruction of, or inhibit access to, any unique or unusual land forms on the site (e.g., cliffs, dunes, minerals, fossils, caves). (See Part 1. E.2.g) ☐ NO ☑ YES

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

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

3. Impacts on Surface Water

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes). (See Part 1. D.2, E.2.h) ☐ NO ☑ YES

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

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

l. Other impacts: _____ _____		☐	☐

4. Impact on groundwater

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer. (See Part 1. D.2.a, D.2.c, D.2.d, D.2.p, D.2.q, D.2.t)

☐ NO ☑ YES

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

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

5. Impact on Flooding

The proposed action may result in development on lands subject to flooding. (See Part 1. E.2)

☐ NO ☑ YES

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

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

g. Other impacts: _____ _____		☐	☐

6. Impacts on Air

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

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

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

7. Impact on Plants and Animals

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

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

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

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

8. Impact on Agricultural Resources

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

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

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

9. Impact on Aesthetic Resources

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

☐ NO ☑ YES

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

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

10. Impact on Historic and Archeological Resources

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

☐ NO ☑ YES

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

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

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

11. Impact on Open Space and Recreation

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

☐ NO ☑ YES

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

12. Impact on Critical Environmental Areas

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

☑ NO ☐ YES

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

13. Impact on Transportation

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

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

14. Impact on Energy

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

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

15. Impact on Noise, Odor, and Light

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

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

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

16. Impact on Human Health

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

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

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

17. Consistency with Community Plans

The proposed action is not consistent with adopted land use plans. ☑ NO ☐ YES

(See Part 1. C.1, C.2. and C.3.)

If "Yes", answer questions a - h. If "No", go to Section 18.

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

18. Consistency with Community Character

The proposed project is inconsistent with the existing community character. ☑ NO ☐ YES

(See Part 1. C.2, C.3, D.2, E.3)

If "Yes", answer questions a - g. If "No", proceed to Part 3.

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

PRINT FULL FORM

Full Environmental Assessment Form
Part 3 - Evaluation of the Magnitude and Importance of Project Impacts
and
Determination of Significance

Part 3 provides the reasons in support of the determination of significance. The lead agency must complete Part 3 for every question in Part 2 where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.

Based on the analysis in Part 3, the lead agency must decide whether to require an environmental impact statement to further assess the proposed action or whether available information is sufficient for the lead agency to conclude that the proposed action will not have a significant adverse environmental impact. By completing the certification on the next page, the lead agency can complete its determination of significance.

Reasons Supporting This Determination:
To complete this section:

- Identify the impact based on the Part 2 responses and describe its magnitude. Magnitude considers factors such as severity, size or extent of an impact.
- Assess the importance of the impact. Importance relates to the geographic scope, duration, probability of the impact occurring, number of people affected by the impact and any additional environmental consequences if the impact were to occur.
- The assessment should take into consideration any design element or project changes.
- Repeat this process for each Part 2 question where the impact has been identified as potentially moderate to large or where there is a need to explain why a particular element of the proposed action will not, or may, result in a significant adverse environmental impact.
- Provide the reason(s) why the impact may, or will not, result in a significant adverse environmental impact
- For Conditional Negative Declarations identify the specific condition(s) imposed that will modify the proposed action so that no significant adverse environmental impacts will result.
- Attach additional sheets, as needed.

See Attached Breakneck Connector and Bridge Project, Full EAF Part 3 – Attachment A, for a response to each question in FEAF Part 2 where the impact has been identified as potentially moderate or where there is a need to explain why a particular element of the proposed action may result in a "No" or a "Small" impact.

The following Appendices and Figures are included in support of this FEAF Part 3:

APPENDIX A - Breakneck Connector Drawings
APPENDIX B - Bridge Drawings
APPENDIX C - Steward Station Drawings
APPENDIX D - Construction Logistics Memo
APPENDIX E - Draft SWPPP
APPENDIX F - Bald Eagle Construction Noise Assessment
APPENDIX G - Peregrine Falcon Construction Noise Assessment
APPENDIX H - NYSOPRHP SHPO Letters
APPENDIX I - Coastal Consistency Assessments

FIGURE 1 - Project Features
FIGURE 2 - Construction Work Zones
FIGURE 3 - Key to Photographs
FIGURE 4 - Photographs
FIGURE 5 - 8 - Visual Assessments

Determination of Significance - Type 1 and Unlisted Actions

SEQR Status: ☑ Type 1 ☐ Unlisted

Identify portions of EAF completed for this Project: ☑ Part 1 ☑ Part 2 ☑ Part 3

Upon review of the information recorded on this EAF, as noted, plus this additional support information
as noted above

and considering both the magnitude and importance of each identified potential impact, it is the conclusion of the
New York State Office of Parks, Recreation & Historic Preservation as lead agency that:

☑ A. This project will result in no significant adverse impacts on the environment, and, therefore, an environmental impact statement need not be prepared. Accordingly, this negative declaration is issued.

☐ B. Although this project could have a significant adverse impact on the environment, that impact will be avoided or substantially mitigated because of the following conditions which will be required by the lead agency:

There will, therefore, be no significant adverse impacts from the project as conditioned, and, therefore, this conditioned negative declaration is issued. A conditioned negative declaration may be used only for UNLISTED actions (see 6 NYCRR 617.7(d)).

☐ C. This Project may result in one or more significant adverse impacts on the environment, and an environmental impact statement must be prepared to further assess the impact(s) and possible mitigation and to explore alternatives to avoid or reduce those impacts. Accordingly, this positive declaration is issued.

Name of Action: Breakneck Connector and Bridge Project

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

Name of Responsible Officer in Lead Agency: Linda G. Cooper

Title of Responsible Officer: Regional Director, OPRHP Taconic Region

Signature of Responsible Officer in Lead Agency: Linda G. Cooper Digitally signed by Linda G. Cooper Date: 2022.12.27 11:04:48 -05'00' Date:

Signature of Preparer (if different from Responsible Officer) Nancy Stoner Date: 12/27/2022

For Further Information:

Contact Person: Amy Kacala, AICP, Executive Director, Hudson Highlands Fjord Trail, Inc./ C/O Scenic Hudson, Inc.

Address: One Civic Center Plaza, Suite 200, Poughkeepsie, NY 12601

Telephone Number: 845 473 4440 Ext 276

E-mail: akacala@hudsonfjordtrail.org

For Type 1 Actions and Conditioned Negative Declarations, a copy of this Notice is sent to:

Chief Executive Officer of the political subdivision in which the action will be principally located (e.g., Town / City / Village of)
Other involved agencies (if any)
Applicant (if any)
Environmental Notice Bulletin: http://www.dec.ny.gov/enb/enb.html

PRINT FULL FORM

December 27, 2022
Breakneck Connector and Bridge Project
Full EAF Part 3 – Attachment A

A. PROJECT DESCRIPTION

INTRODUCTION

The proposed action is referred to as the Breakneck Connector and Bridge (BNCB) Project (the "Project"). The Project Sponsor is Hudson Highlands Fjord Trail, Inc. (HHFT, Inc), a subsidiary of Scenic Hudson, Inc. The Project comprises a 0.58-mile publicly-accessible shared-use trail, which is a section of the larger proposed 7.5-mile Hudson Highlands Fjord Trail (proposed Fjord Trail) which would connect Beacon and Cold Spring, New York. The Project is located about midway between Beacon and Cold Spring along NYS Route 9D where there are currently two trailheads (Wilkinson Memorial Trailhead and Breakneck Ridge Trailhead), the Metropolitan Transportation Authority (MTA) Metro-North Railroad (MNR) Breakneck Ridge station, and a gravel parking area and ad hoc street parking that provide access to the Hudson Highlands State Park Preserve (HHSPP). The Project is on the border of the Town of Fishkill, Dutchess County, NY and the Town of Philipstown, Putnam County, NY along a half-mile portion of NYS Route 9D, just north of the NYS Route 9D vehicular tunnel and adjacent to and on both sides of the MNR tracks ("the Project Site").

The proposed Fjord Trail is being evaluated in a Generic Environmental Impact Statement (GEIS) pursuant to the State Environmental Quality Review Act (SEQRA). However, this Project is being advanced independent of the proposed Fjord Trail due to an urgent need to address pedestrian safety and congestion issues along this section of NYS Route 9D. In accordance with SEQRA regulations at §617.3(g)(1), "if a lead agency believes that circumstances warrant a segmented review, it must clearly state in its determination of significance, and any subsequent EIS, the supporting reasons and must demonstrate that such review is clearly no less protective of the environment." Related actions should be identified and thoroughly explained to the extent possible.

The New York State Office of Parks, Recreation, and Historic Preservation (OPRHP), as lead agency, has determined that this Project can be permissibly segmented from the GEIS for the larger proposed Fjord Trail due to the following factors:

- The Project has independent utility to address clear and present safety risks that exist at this specific location due to the density of and lack of capacity to accommodate park users that arrive by rail, vehicle, and other modes of transportation to access the Wilkinson Memorial and Breakneck Ridge Trailheads;
- The Project is independent and distinct from the rest of the proposed Fjord Trail because it will improve New York City Department of Environmental Protection's (DEP) access to its Hudson River Drainage Chamber (HRDC) facility for maintenance and operational purposes by providing a safer crossing and lightweight vehicular access to the HRDC over the MNR railroad.
- The planning and design for the Breakneck Connector and Bridge Project have progressed much further than the rest of the proposed Fjord Trail;
- Physically and functionally, an unimproved version of the Breakneck Connector Trail already exists as the public currently uses NYS Route 9D to access nearby trailheads. But for MNR's emergency improvements discussed below, the rest of the proposed Fjord Trail sections would be entirely new, and this Project is important and essential as a stand-alone project;

- Funding is available for this Project, whereas funding for the proposed Fjord Trail has not yet been fully determined; and
- Except for the MNR Breakneck Ridge Station, OPRHP owns, or is in the process of acquiring, the BNCB Project Site in fee or as other types of property interests for this Project, which will allow OPRHP and HHFT, Inc. to construct this Project, provide public access, and maintain and operate the facility. Whereas the real property interests granting public access to the rest of the proposed Fjord Trail do not yet exist or are under negotiation.

These factors were discussed in more detail in the FEAF Part 1 Revised Attachment A. As demonstrated in the following sections of this document, the Project would not result in any significant adverse impacts. Therefore, evaluating this Project independently from the proposed Fjord Trail would not be any less protective of the environment.

PROJECT ELEMENTS

As shown on **Figure 1**, this Project consists of the following elements:

- a 0.58-mile non-motorized, shared-use, publicly accessible trail[1] that includes:
  - A new Breakneck Bridge (the "Bridge") over the MNR tracks, which will be designed for H-10 vehicles primarily for vehicle use by DEP to access DEP's HRDC located along the Hudson River, as needed;
  - The Bridge also serves as an extension of the shared-use trail and accommodates people traveling in multiple modes of non-motorized movement, including pedestrians and bicyclists;
  - Parking areas along NYS Route 9D;
  - Trail connections to the Breakneck Ridge Trail and Wilkinson Memorial Trail within HHSPP;
  - The addition of two comfort station buildings; and
  - Removal of the existing MNR Breakneck Ridge station wooden platforms and replacement with new platforms (each about 40 feet by 12 feet, with a 30-foot overhead canopy and ADA-accessible).
- Relocation of the power lines from the west side of NYS Route 9D to the east side; and
- Upgrades to the Upper Overlook area, including installation of a small steward station (about 9 feet by 12 feet, with a canopy about 18 feet by 25 feet) along the Breakneck Ridge Trail, the closing of social paths (including restoration of native vegetation), and a scramble reconstruction area.

The section of the Breakneck Connector shared-use publicly accessible trail from the north end to the intersection with the Bridge would measure 2,620 linear feet (LF), the Bridge itself would measure 445 LF, and the trail section from the Bridge intersection south to the Breakneck Ridge Trailhead would measure 342 LF. The Project Site is 12.2 acres in size. See **Figures 1 and 2** for a depiction of the Project Features and the Project Site bounds, respectively. The Project Site encompasses the proposed area of disturbance, but some areas within the Project Site would have minimal disturbance—for instance, work along NYS Route 9D would be limited to the shoulders, restriping, and new underground utility connections under the highway; during construction, there will be temporary single-lane closures

[1] The trail will meet the US Access Board's accessibility standards for outdoor developed areas under the Architectural Barriers Act (ABA). Where the trail meets the entrances to MNR Breakneck Ridge Station platforms, it will comply with the Americans with Disabilities Act (ADA), as applicable.

and a temporary realignment near the eastern Bridge abutment. Disturbance for the Upper Overlook improvements would be primarily contained within the trail footprints and immediately adjacent areas and for installation of a steward station and fencing. Project Drawing Sets and related documentation for the Breakneck Connector, for the Bridge, and for the steward station are included in **Appendices A, B and C**, respectively.

The Project would be developed on previously disturbed lands (i.e., DEP's HRDC land, MNR right-of-way, New York State Department of Transportation [NYSDOT] Route 9D, dirt parking areas, MNR access roads, the MNR Breakneck Ridge station, and a very heavily trafficked Breakneck Ridge Trail) (see **Figures 3 and 4** for existing site conditions) to achieve the following:

- Formalize trails that are already in place and currently in use;
- Improve safety where there are dangerous traffic, parking, pedestrian and bicycle conditions; and
- Enhance access for all persons to this area by building trails and parking that meet generally-accepted accessibility standards.

CONSTRUCTION MEANS AND METHODS

The Project would have several construction work zones, as shown on **Figure 2**. Construction of components west of and over the MNR tracks would be facilitated from the Hudson River via barges, and components east of the MNR tracks would be facilitated from land and accessed via NYS Route 9D. The Project limits (i.e., area of disturbance) would be 12.2 acres. All tree removal would be conducted between November 1 and March 31 to minimize potential impacts to wildlife (see Section 7, "Impact on Plants and Animals"). Construction activities within each construction area would occur in parallel, as feasible, with the overall construction duration taking approximately 24 to 30 months. All design documents and construction means and methods will be reviewed by MNR, NYSDOT and DEP prior to any permit approvals to ensure impacts to the railroad and other infrastructure are minimized. The construction means and methods for the various construction areas are described below and detailed further in **Appendix D**.

POWER LINE RELOCATION

As an early enabling action, overhead power lines that are currently located along the west side of NYS Route 9D in the Project Site would be relocated to the east side of NYS Route 9D. The relocated power lines would be overhead in the northern section of the Project Site and underground in the southern section. This work would involve tree removal and installation of new poles along the east side of NYS Route 9D, and removal of the existing poles and wires on the west side of NYS Route 9D. An underground connection beneath NYS Route 9D would be provided from the relocated power lines to the new comfort stations. At the southern end of the Project Site, the power lines would travel beneath NYS Route 9D to reconnect to the existing underground power lines on the west side of the roadway.

Tree removal would occur for about eight weeks and would require temporary single-lane closures along NYS Route 9D. These activities would occur during weekday off-peak hours to minimize traffic disruptions. Removal of the existing poles on the west side of NYS Route 9D and installation of the new poles on the east side of NYS Route 9D would occur for about nine weeks and would also require temporary single-lane closures along NYS Route 9D. Measures to maintain traffic through the work zone would be coordinated with NYSDOT (see Section 13, "Impact on Transportation" for further discussion).

BREAKNECK CONNECTOR TRAIL AND AMENITIES EAST OF MNR TRACKS

The majority of the Breakneck Connector Trail and related amenities (i.e., comfort stations, parking areas, and northbound MNR platform) would be on the east side of the MNR tracks and construction would be facilitated from land. The existing gravel parking area (the future southern parking area shown on **Figure 1**) would be used as a staging area. Materials would be delivered from NYS Route 9D, with one to two trucks anticipated per day. Construction of these components would take approximately 22 months.

The northern portion of the trail would be an elevated walkway with a glulam deck supported by micro-piles that would connect to the existing pedestrian bridge over the railroad tracks (see **Figure 1**). Erosion and sediment control measures and grading would be implemented as an initial step to stabilize the slope, followed by installation of micro-piles and foundation supports, including pilecaps, concrete walls and abutments. Steel piers, glulam beams, and a pre-fabricated deck would be installed using a crane situated along NYS Route 9D, which would require temporary single-lane closures on the roadway. Measures to maintain traffic through the work zone would be coordinated with NYSDOT (see Section 13, "Impact on Transportation" for further discussion).

In the remaining portion of the Breakneck Connector work zone, site preparation activities would be conducted to construct the at-grade portion of the trail, parking areas, comfort stations, northbound MNR platform, stormwater management practices, and stone trail banks. The site preparation activities include implementing erosion and sediment control measures, tree clearing, grubbing, and grading. Crushed stone would be laid for the trail and the parking areas would be paved. An excavator would be used to create an adjoining basement for the comfort stations to house a composting toilet system. If rock is encountered, hydraulic mounted hammers would be used for removal. For the northbound MNR platform, about 12 to 16 micro-piles would be installed and a pre-fabricated platform would be set in place with a crane. An overhead canopy would then be constructed and related utilities (e.g., lighting) would be installed.

SOUTHBOUND MNR PLATFORM

The southbound MNR platform would be constructed on the west side of the MNR tracks and would connect to the existing pedestrian bridge at the northern end of the Project Site. Construction would be facilitated from the Hudson River via barges and would take approximately 15 weeks. The contractor would be expected to stage off-site operations on private commercial property. Personnel would access the construction site using the existing pedestrian bridge over the MNR tracks.

At the onset of construction, an equipment barge (up to 30 feet by 90 feet) would be anchored offshore using four 36-inch spud piles installed by self-weight and remain in place for about one week. This barge would serve as a landing point for delivery of equipment and to establish soil erosion and sedimentation measures (e.g., silt fence, turbidity curtain) within the area of disturbance for the southbound MNR platform. A temporary ramp would be deployed from the barge to offload equipment. A compacted stone and a steel road plate system would be in place for the ramp to bear upon. The equipment barge would then be demobilized, and site preparation activities would continue, including site clearing, grubbing, and grading. Debris and vegetation would be temporarily stockpiled onsite for eventual removal on the logistics barge. Erosion and sediment control measures would be established around stockpiled material in accordance with the Stormwater Pollution Prevention Plan (SWPPP) prepared for the Project. There would be no shoreline stabilization required for this component of the Project.

Following site preparation, a logistics barge (up to 50 feet by 200 feet) would be anchored offshore with four 36-inch diameter steel piles installed by self-weight and remain in place for about 14 weeks.

The logistics barge would deliver materials for construction and remove materials at the completion of construction. It would have a ramp to deliver and retrieve materials from the construction site. The ramp would have compacted stone and steel road plates to bear upon.

Concrete for the southbound MNR platform foundations would be mixed and pumped on the barge or onsite. No trucks would be mobilized to the site for this portion of construction. About 14 to 18 micro-piles would be installed to support the platform. Equipment would be demobilized to the logistics barge when construction is complete.

A crane barge (up to 100 feet by 200 feet) would be mobilized to the site to move pre-fabricated platform components and heavy materials to land. This crane barge would be mobilized for about six weeks.

BRIDGE

Construction of the eastern abutment of the Bridge (located on the east side of the MNR tracks) would be facilitated from land via NYS Route 9D. Construction of the deck over the MNR tracks and the western abutment of the Bridge would be facilitated from the Hudson River via barges. Construction of the Bridge would take approximately 24 months.

The eastern abutment would be in close proximity to NYS Route 9D. Pending further geotechnical investigation, construction of the foundation of the eastern abutment may require excavation. To facilitate construction, NYS Route 9D would be temporarily realigned with the speed limit reduced to 30 miles per hour (mph) in this section. A temporary single-lane closure on NYS Route 9D would be required to establish temporary pavement for the realignment. Measures to maintain traffic through the work zone would be coordinated with NYSDOT (see Section 13, “Impact on Transportation” for further discussion).

Staging and site access for the eastern abutment would be facilitated through the same staging area used for the Breakneck Connector Trail and related amenities east of the MNR tracks (discussed above), as feasible. Additionally, a staging area immediately adjacent to the eastern abutment would be established on the higher elevation ground surface for construction activities in this area and for site access should the Breakneck Connector Trail staging area be unavailable. A backhoe/excavator would be used to grade land and a mini pile driver would be used to install approximately 20 piles for the eastern abutment. If rock is encountered, it may require removal by hydraulic mounted hammers.

Waterside construction of the Bridge elements would require the use of barges within the Hudson River. Up to four barges may be present at one time:

1) Logistics barge (about 100 feet by 300 feet) for staging for the duration of the Bridge construction (approximately 24 months);
2) Materials barge for periodic delivery of materials (estimated at about 10 trips, anchored for about 1 week at each occurrence), which would moor temporarily to the logistics barge;
3) Bridge barge (about 54 feet by 254 feet) to deliver and erect major Bridge components (in place for about 12 weeks); and
4) Crane barge (up to 100 feet by 300 feet) for Bridge assembly (in place for about 12 weeks).

The logistics barge would be anchored adjacent to the shoreline by four 36-inch diameter steel pipe piles which would be installed by self-weight, throughout the approximately 24-month Bridge construction period. While the logistics barge may not be needed continuously during Bridge construction, the analyses in this document conservatively predicts that it would be in place for the full duration. Compacted stone and steel road plates would be installed for the ramp from the barge to bear upon. Materials, personnel and equipment would be transferred onshore using the ramp.

Two options are being considered for the placement of cranes to assemble the Bridge structure:

- Crane Option 1: A crane would remain on the crane barge and lift Bridge sections into place from its anchored position. The crane barge would be secured in place by four 30 to 36-inch diameter steel piles installed by self-weight. Bridge components would be assembled on the barge and then lifted into place. The anticipated duration for this work would be about 12 weeks.
- Crane Option 2: A land crane would be rolled from the crane barge onto land via a ramp. The land crane would assemble the Bridge components on land and then erect the Bridge sections. The anticipated duration for this work would be about 12 weeks, with the crane barge remaining in place for this period.

Both Crane Options would require shoreline stabilization. Approximately 90 feet of shoreline adjacent to the logistics barge would be cleared and stabilized with two layers of geotextile fabric followed by placement of crushed, compacted limestone, in a stable slope. This shoreline stabilization would result in the placement of sediments below spring high water (SHW) and mean high water (MHW). Under Crane Option 2, the Bridge barge would deliver the large Bridge structural components and moor to the logistics barge. Materials would be transferred to the logistics barge and delivered to the shoreline using the ramp. Following construction of the Bridge structure, the temporary stabilization materials would be removed from the landing areas, the soil would be stabilized, and landscaped with native vegetation.

UPPER OVERLOOK IMPROVEMENTS

As shown on **Figures 1 and 2**, the existing Breakneck Ridge Trailhead leads to the Upper Overlook, an elevated area at the southern end of the Project Site. The Project would upgrade existing informal and unimproved trails (“social trails”) to better define designated trails and would close social trails that are less desired. Upper Overlook trail improvements would be mainly conducted using handheld tools (i.e., picks, shovels, and steel bars for leveraging stone) and would require minimal ground disturbance and tree removal. Materials would be transported using mini skid steers, tracked crawler carriers, and potentially a small excavator. Hand-powered cable rigging would be used to move rocks aside, as needed, and to drag stones when mechanized tracked equipment is not safe or otherwise feasible. Digging and anchoring of fencing would be performed with hand tools, a rotary hammer, and electric or pneumatic drills (with air compressors staged at the parking area).

The Upper Overlook improvements would include construction of a small steward station to serve as storage shed and a place for stewards to greet trail users. Construction would require minimal earthwork, and no utility connections would be required. Solar panels may be installed to support minimal electricity needs. Materials would be moved to the site using the same methods as the trail work (e.g., skid steer loader for unloading trucks, and walk-behind tracked carrier and possibly another mini skid steer up above at the site). Timber components, potential green roof materials, doors and shelving would be carried by hand and/or by using rigging or a walk-behind track carrier. Site clearing and preparation would be done by hand, and the bottom course of the timber structure would be scribed and cut to fit the bedrock. The rest of the timber structure would be assembled, adjusted for final fit, and fastened by hand with assistance of temporary staging. A potential green roof, doors, and shelving would be installed with handheld tools.

An approximately 2,000-square foot scramble reconstruction area is located near the steward station (see **Figure 1**). The work for the scramble reconstruction would include providing tread hardening and definition through the installation of stone steps and a natural boulder wall on the south side of the trail. The steps would be installed to create a naturalistic "rock scramble" character while remaining relatively easy to use and clearly defined. Steps would vary in width from 12 inches to 36 inches and

in rises from 7 inches to 13 inches. When step rises exceed 9 inches, a helper step adjacent to the tall step would be provided. Overall, useable tread width would vary from 36 inches to 60 inches. This work would occur within the existing trail corridor and is similar to what is proposed along trails at the Upper Overlook. Equipment to be used in conducting the reconstruction would include hand tools and hand operated rigging gear. Should sufficient snow cover be present, mechanized narrow-tracked crawler carriers (28 inches wide) may be used to move stones up to the site.

PUBLIC COMMUNICATION

Prior to and during the construction period, HHFT, Inc., in coordination with OPRHP and the contractor, would establish a communication plan to convey pertinent construction information to the public. This would include advanced notifications of potential temporary single-lane closures along NYS Route 9D and temporary trailhead closures. Information would be disseminated via HHFT, Inc.'s website (hhft.org) and social media outlets, as well as local news publications, as needed. Additional notification measures may be implemented in coordination with NYSDOT, such as variable message signs (VMS), to alert motorists of planned lane closures or other temporary changes in travel patterns.

Following construction, HHFT, Inc. would continue to use its website and social media, as well as its monthly newsletters, to inform the public about trail activities and trail access. Additionally, stewards housed at the new steward station would continue to be onsite to provide information to trail users.

B. POTENTIAL IMPACTS

For purposes of Section B of this Attachment A, if there is no discussion of a numbered question included in the FEAF Part 2, the response should be understood to be "no impact" or "not applicable to the Project."

1. IMPACT ON LAND

Proposed action may involve construction on, or physical alteration of, the land surface of the proposed site.

a. Not applicable.

b. The proposed action may involve construction on slopes of 15% or greater.

Impact Level: Small impact.

Description: There would be construction on slopes greater than 15 percent at each end (on the east side of the MNR tracks, and along the Hudson River shoreline on the west side of the MNR tracks) of the proposed Bridge. See sheet BNB-L-300, Design Grading Plan in **Appendix B**. The Project has been designed to consider these constraints through the implementation of construction techniques to limit and manage erosion, including development of an Erosion Sediment Control Plan in compliance with New York State Department of Environmental Conservation (NYSDEC) regulations and guidelines.

If Crane Option 2, land crane, is selected for the Bridge construction, the stabilized shoreline area waterside of the proposed Bridge would accommodate a crane pad for the erection of the structure. This area would be restored to the original or proposed grades per the construction documents when the cranes are demobilized.

The scramble reconstruction area above the Upper Overlook has slopes greater than 15 percent. Most of the work area is covered by rocks and large boulders and is the beginning of the steep ascent of

Breakneck Ridge Trail. The scramble reconstruction work would provide tread hardening and definition through the installation of stone steps and a natural boulder wall on the south side of the trail. These improvements would help prevent future soil erosion by leading visitors along a narrower hardened surface and reducing visitors wandering away from the trail corridor.

The Project would not result in a significant or moderate impact on land with steep slopes due to the limited disturbance, the anticipated construction techniques to limit erosion (Erosion Sediment Control Plan), and slope stabilization plantings to protect slopes and limit erosion long-term. See **Appendix B**.

c. The proposed action may involve construction on land where bedrock is exposed, or generally within 5 feet of existing ground surface.

Impact Level: Small impact.

Description: Construction would take place in areas of exposed and/or shallow bedrock including in and around the Upper Overlook, and likely at the Bridge and around the new comfort station. Roughly five percent of the Project Site comprises bedrock outcroppings, but no blasting is anticipated. The Project would conform to existing natural contours.

The proposed steward station would be a new park amenity on the exposed bedrock of Breakneck Ridge (Upper Overlook). Construction would require minimum vegetation removal and the bottom course of the timber structure would be scribed and cut to fit the bedrock. Impacts resulting from the proposed improvements, including construction of the steward station, would be limited and therefore determined to be "small."

See response to Question 2.a for a discussion of potential impacts to Breakneck Ridge. Refer to Question 9 responses for discussion of potential visual impacts.

d. Not applicable.

e. The proposed action may involve construction that continues for more than one year or in multiple phases.

Impact Level: Small impact.

Description: The anticipated duration of construction on the Project is approximately 24 to 30 months, following the award of construction work to the winning bidder. Because some construction activities are restricted during certain windows of the year to protect wildlife species (see responses to Question 7), construction duration would ultimately depend on specific timing of construction activities.

f. The proposed action may result in increased erosion, whether from physical disturbance or vegetation removal (including from treatment by herbicides).

Impact Level: Small impact.

Description: To address the removal of trees/vegetation (treatment by herbicides is not proposed) and proposed physical disturbance of the ground, a draft SWPPP has been developed for the Project in accordance with NYSDEC requirements. Temporary soil erosion and sediment control measures proposed for the Project are covered in the C series drawings (included in **Appendices A and B**) and within the draft SWPPP (**Appendix E**). Native plantings would be used to permanently restore

disturbed areas. The Project minimizes impervious surfaces through the use of flagstone pavers on crushed stone at the comfort station area, permeable pavers in portions of the parking lots, and crushed stone surfacing for on-grade sections of the trail. Revisions to the Draft SWPPP will be sent to MNR, DEP and NYSDOT for their review and comments.

g. Not applicable.

2. IMPACT ON GEOLOGICAL FEATURES

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

a. Identify the specific land form(s) attached: Breakneck Ridge.

Impact Level: No/Small impact.

Description: Breakneck Ridge is a unique and significant geological feature on the landscape. Although it is not documented in the State's database and was therefore checked as No on the FEAF Part 1, E.2.g. using NYSDEC's EAF Mapper, due to its local significance, it has been included here for analysis. The Project proposes various improvements on Breakneck Ridge (Upper Overlook), including construction of a new steward station and trail improvements. No blasting is anticipated as part of construction. The bottom course of the timber structure of the steward station would be scribed and cut to fit the bedrock. There will be rock steps installed along some sections of the Upper Overlook trails. Trail improvements would be mainly conducted using handheld tools with no to minimal changes to the rocky surface. The major rock promontory that is called Breakneck Ridge will remain unchanged.

b. Not applicable.

3. IMPACTS ON SURFACE WATER

The proposed action may affect one or more wetlands or other surface water bodies (e.g., streams, rivers, ponds or lakes).

a-c. Not applicable.

d. The proposed action may involve construction within or adjoining a freshwater or tidal wetland, or in the bed or banks of any other water body.

Impact Level: Small impact.

Description: As described earlier under "Construction Means and Methods," the Project would result in construction activities along the shoreline of the Hudson River for the southbound MNR platform and the new Bridge. The spud piles that would be used to secure construction barges adjacent to the shoreline would be hollow steel pipe piles or spud piles, which do not constitute fill within Waters of the United States under Section 404 of the Clean Water Act (CWA). Shoreline stabilization activities

adjacent to the logistics barge that would occur under both Crane Options would result in the placement of a minimal amount of temporary fill material (i.e., geotextile and crushed limestone) below SHW and/or MHW. The shoreline stabilization activities would require a CWA Section 404 and Section 10 of the Rivers and Harbors Act permit from the U.S. Army Corps of Engineers (USACE), a Section 401 Water Quality Certification from NYSDEC, and a NYSDEC Protection of Waters Permit.

Minor grading to approximately 0.095 acres of freshwater wetland located between the MNR tracks and NYS Route 9D may also occur and would require a CWA Section 404 permit from USACE if deemed to be under USACE jurisdiction, and a Section 401 Water Quality Certification and Article 24 Freshwater Wetlands Permit from NYSDEC if deemed to be under NYSDEC jurisdiction. Work within the wetlands would include grading and plantings to enhance the ecological functions and values of the wetlands. Proposed regrading in the wetlands would result in a net-fill of about 59.7 cubic yards. Filling would generally include well-graded amended native soil from on-site. Proposed filling is less than three feet in depth at specific areas to support grading for drainage. Total area of wetlands within the finished Project would be approximately 0.29 acres, an approximate increase of 0.10 acres of wetland habitat. Regraded areas would be planted with a diverse palette of native wetland species and would follow the OPRHP Native Plant Policy. In addition, invasive species would be removed from other areas within the wetlands and these areas would be replanted with the same native species palette as the regraded areas.

Measures to further minimize potential impacts to wetlands and other waters of the United States and to New York State surface waters would be explored as the Project design advances to ensure the Project would have no more than a small potential impact on these waterbodies.

e. The proposed action may create turbidity in a waterbody, either from upland erosion, runoff or by disturbing bottom sediments.

Impact Level: Small impact.

Description: Erosion and sediment control measures (e.g., silt fencing, inlet protection, surface stabilization, and dust control) would be implemented in accordance with the SWPPP prepared for the Project as required by the New York State Pollutant Discharge Elimination System (SPDES) General Permit GP-0-20-001 for Stormwater Discharges from Construction Activity (General Permit). Erosion and sediment control measures would minimize the potential for sediments to discharge to the Hudson River during upland construction activities. Refer to the Full EAF Part 1 (Attachment A, Revised Project Description and the response to D.1.h) for additional details on proposed stormwater management practices.

Piles securing the logistics barges would be installed on the river bottom by self-weight. The resulting increase in suspended sediments due to pile installation would be minimal and would be localized. Sediments that become resuspended when the spuds are demobilized would dissipate quickly with the tidal currents of the river and would not result in long term adverse impacts to water quality or aquatic biota. Additionally, barges and any other smaller vessels would maintain a 2-foot separation from the mudline at all times to minimize the potential for sediment resuspension.

Native plantings would be incorporated to restore disturbed areas. The new steward station may incorporate a green roof, which would help reduce runoff. The Project minimizes impervious surfaces to 1.7 acres through the use of flagstone pavers on crushed stone at the comfort station area, permeable pavers in portions of the parking lots, and crushed stone surfacing for on-grade sections of the trail.

f. and g. Not applicable.

h. The proposed action may cause soil erosion, or otherwise create a source of stormwater discharge that may lead to siltation or other degradation of receiving water bodies.

Impact Level: Small impact.

Description: The use of silt barriers or turbidity barriers during shoreline stabilization under both Crane Options, would minimize the potential for sediment re-suspension during placement of the geotextile and crushed limestone that would adversely affect water quality and aquatic biota of the Hudson River. The Project Site is strongly influenced by the tidal currents of the Hudson River and any temporary increase in suspended sediment and localized turbidity that may result from the installation of shoreline stabilization would dissipate shortly after the completion of the sediment disturbing activity.

Erosion and sediment control measures implemented in compliance with the SWPPP, similar to that described in response to 3.e. above, would minimize the potential for soil erosion and discharge of sediments to nearby waterbodies. Stormwater management would be incorporated into the Project design with a series of swales for water quality treatment prior to the stormwater runoff being discharged to the Hudson River, in accordance with NYSDEC standards. The drainage design for the Project intends to largely maintain existing flow patterns and proposes to keep existing culverts crossing under NYS Route 9D and the MNR tracks. The proposed vegetated swales would reduce runoff and promote infiltration through soil improvement and are expected to reduce stormwater impacts and minimize flood impacts to MNR properties and operations and to NYS Route 9D. The swales would treat water prior to discharge into the Hudson River. With these measures in place, potential impacts related to stormwater runoff and erosion during construction and operation of the Project would be minimized.

i. The proposed action may affect the water quality of any water bodies within or downstream of the site of the proposed action.

Impact Level: Small impact.

Description: Erosion and sediment control measures would be incorporated to minimize the potential for discharge into nearby waterbodies, as described in response to 3.e and 3.h, above. The design of stormwater management practices would conform to NYSDEC's New York State Stormwater Management Design Manual, minimizing the potential for upland erosion to result in discharge of sediments to downstream/downgradient surface waters.

Potential increases in suspended sediment in the Hudson River may occur during installation by self-weight of the spud piles securing the logistics barges and during installation of the temporary shoreline. The potential increases in suspended sediment for the installation of the spud piles by self-weight would be minimal, short-term, and localized. The potential increases in suspended sediment resulting from the installation of the temporary shoreline stabilization would be contained within silt barriers or turbidity barriers. Sediments that become resuspended during these activities are expected to dissipate quickly with the tidal currents of the river and would not result in long term adverse impacts to water quality or aquatic biota. Additionally, barges and any other smaller vessels would always maintain a 2-foot separation from the mudline during all tidal cycles to minimize the potential for sediment resuspension.

Post-construction stormwater management measures, such as swales for water quality treatment prior to discharge to the Hudson River, would protect water quality of the Hudson River.

With these measures in place, the Project would result in no more than a small potential impact on water quality.

j. and k. Not applicable.

4. IMPACT ON GROUNDWATER

The proposed action may result in new or additional use of ground water, or may have the potential to introduce contaminants to ground water or an aquifer.

a. The proposed action may require new water supply wells, or create additional demand on supplies from existing water supply wells.

b. Water supply demand from the proposed action may exceed safe and sustainable withdrawal capacity rate of the local supply or aquifer.

Impact Level: Small impact.

Description: A new water supply well would be constructed southwest of the comfort stations. The maximum water demand for the comfort stations is estimated to be 23.3 gallons per minute (gpm). The results of testing have demonstrated that groundwater is available to supply a new well, and that the aquifer would recharge sufficiently. At the well location, a six-inch-inner-diameter steel casing was installed into bedrock to about 40 feet deep, and a 6-inch-diamater well-hole was then drilled into bedrock to about 310-feet deep. A pump test was conducted in the well-hole and proved about 30-gpm of water yield, which would sufficiently accommodate the anticipated water demand. Although the FEAF Part 1 E.2.l., run on the EAF Mapper, indicates a Principal Aquifer at the Project Site, additional mapping resources indicate there are no Sole-Source, Primary, or Principal Aquifers in or near the Project Site.

c. Not applicable.

d. The proposed action may include or require wastewater discharged to groundwater.

Impact Level: No impact.

Description: The comfort stations would use Clivus composting toilets that would not discharge to groundwater. Wastewater would be stored in liquid end tanks that would be pumped out by a service company.

e.- g. Not applicable.

5. IMPACT ON FLOODING

The proposed action may result in development on lands subject to flooding

a. Not applicable.

b. The proposed action may result in development within a 100-year floodplain.

c. The proposed action may result in development within a 500-year floodplain.

Impact Level (for 5.b and 5.c): Small impact.

Description (for 5.b and 5.c): The Project would develop approximately 0.74 acres within the 100-year floodplain located to the west of the MNR tracks within the portion of the Project adjacent to the DEP HRDC. The Project would result in no development within the 500-year floodplain. The Hudson River is tidal, and its water level at the Project Site is controlled mainly by tidal conditions with some influence from freshwater inflow from upriver and smaller tributaries. The Project would result in minimal occupation of the floodplain. The only Project elements in the 100-year floodplain are the retaining wall to the west of the MNR tracks, three Bridge piers, the western Bridge abutment, and the trail southwest of the bridge landing extension. These structures and the trail would occupy a minimal footprint within the floodplain and would not result in significant adverse effects to the floodplain or exacerbate flooding conditions in adjacent areas. Temporary waterfront fill associated with the shoreline stabilization would be removed and the area restored at the end of the Project causing no permanent impacts to the floodplain.

d. The proposed action may result in, or require, modification of existing drainage patterns.

Impact Level: Small impact.

Description: The pre-development (existing) stormwater runoff storage volume between NYS Route 9D and the MNR tracks is approximately 38,400 cubic feet (CF). The Project would increase the runoff storage to approximately 126,000 CF. Therefore, the likelihood of flooding from runoff in the MNR right-of-way from equivalent storms would decrease because of the Project. Expected flow to the MNR culverts from a 2-year storm (and other storms) would be reduced because of the Project (please refer to the Draft SWPPP in **Appendix E**). It should be noted that as the Bridge design has been refined, these numbers have not changed, and current Project level flow calculations are still valid.

Grading around the Bridge would generally preserve existing drainage patterns. The Bridge deck would be a “free draining” structure. Stormwater runoff from the Bridge deck would infiltrate through nominal gaps in the timber members to the steel box girder below. Then the stormwater runoff would drip directly to the ballasted ground surface below on the north and south sides of the Bridge, similar to the current condition within the Bridge footprint during a precipitation event. The 20-foot height of the Bridge above the ground surface affords opportunity to dissipate some of the runoff from the Bridge through dispersal to the air minimizing any potential for erosion of the ground surface below. The ballast below the bridge in the track corridor would be resistant to erosion from the free-draining structure. No additional surface flow would be directed toward the track corridor. Outside the MNR right-of-way, any surface runoff from the Bridge structure would be taken into consideration through the landscape design, such as use of erosion resistant ground surfacing including gravel and/or planting of appropriate vegetation. Therefore, the free draining Bridge structure would not adversely affect

existing drainage patterns. Revisions to the Draft SWPPP will be sent to MNR, DEP and NYSDOT for their review and comments.

e. and f. Not applicable.

6. IMPACTS ON AIR

Not applicable.

7. IMPACT ON PLANTS AND ANIMALS

The proposed action may result in a loss of flora or fauna.

a. The proposed action may cause reduction in population or loss of individuals of any threatened or endangered species, as listed by New York State or the Federal government, that use the site, or are found on, over, or near the site.

Impact Level: Small Impact.

Description: The New York Natural Heritage Program (NYNHP) database indicates that four federally-listed animal species and five state-listed animal species may potentially occur in or near the Project Site. The NYNHP database also indicates one Special Concern species. The U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Official Species List reports four additional species. See Table 2.

Table 2:

Common Name	Scientific Name	Federal Status	NYS Status	Source
Atlantic Sturgeon	*Acipenser oxyrinchus*	Endangered	NYS Protected	NYNHP
Bald Eagle	*Haliaeetus leucocephalus*	Protected*	Threatened	NYNHP, IPaC
Eastern Wormsnake	*Carphophis amoenus*		Special Concern	NYNHP
Fence Lizard	*Sceloporus undulatus*		Threatened	NYNHP
Golden Eagle	*Aquila chrysaetos*	Protected*	Endangered	IPaC
Indiana Bat	*Myotis sodalis*	Endangered	Endangered	IPaC
Monarch Butterfly	*Danaus plexippus*	Candidate		IPaC
Northern Long-eared Bat	*Myotis septentrionalis*	Endangered**	Threatened	IPaC
Peregrine Falcon	*Falco peregrinus*	Protected***	Endangered	NYNHP
Shortnose Sturgeon	*Acipenser brevirostrum*	Endangered	Endangered	NYNHP

Timber Rattlesnake	*Crotalus horridus*		Threatened	NYNHP
* Note that although not federally listed, Bald and Golden Eagles and their nests are granted special protections under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. ** In November 2022, the USFWS published a final rule to reclassify Northern Long-eared Bats from Threatened to Endangered status under the Endangered Species Act. The rule takes effect on January 30, 2023. *** Protected under the Migratory Bird Treaty Act				

To date, the project sponsor has had multiple consultation occurrences (i.e. calls, meetings, on-site visits) with NYSDEC regarding potential impacts to threatened and endangered species and their habitat to inform the impact analysis and mitigation measures identified below. As the Project will require permits from USACE under the CWA and the Rivers and Harbors Act, consultation with USFWS has been conducted through its IPaC system and consultation with the National Marine Fisheries Service (NMFS), with respect to Essential Fish Habitat (EFH) and threatened and endangered species, will be conducted during the permitting process.

Bald Eagle (*Haliaeetus leucocephalus*)

The bald eagle is listed as threatened in New York State and federally protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Throughout their range, bald eagles have shown dramatic generational adaptation to disturbance and development over the past few decades (Johnson 2010, Guinn 2013). This has partly led to the national population more than quadrupling in size in recent times (USFWS 2020).

Concerns for this species are related to potential noise impacts associated mainly with the construction of the Project. The closest known bald eagle nests to the Project Site are on the opposite (western) side of the Hudson River. Eagles from these locations and from nests elsewhere up- or down-river and wintering eagles have the potential to occasionally perch along the shore in the vicinity of the Project Site and occur over the open water of the Hudson River when foraging for fish or perched on ice floes. Wintering eagles commonly occur on the west side of the river, across from Dockside Park to the south and at Denning's Point on the east side of the river to the north. Bald eagles that roost and forage in portions of the Hudson River in the vicinity of the Project Site are tolerant of the high levels of human disturbance currently generated by human recreation, the passage of trains on the MNR and CSX tracks, vehicular traffic on NYS Route 9D, and waterborne vessels on the Hudson River.

A construction noise assessment was conducted to determine the potential for impacts on nesting bald eagles in the vicinity of the Project. This assessment considered the most noise-intensive portions of construction; for example, if pile drilling were to occur at the same time as site clearing and tree removal. The noise assessment also considered the potential use of hydraulic mounted hammers if bedrock is encountered. Noise emission levels and usage factors for specific pieces of construction equipment that would be used during Project construction were determined based on guidance from the Federal Highway Administration's Roadway Construction Noise Model. These were projected to an aggregate construction noise level at the nearest nest, which is approximately 4,900 feet from the Project Site. Details of this noise assessment are included in **Appendix F**. Given that there would be no blasting associated with the Project and that the level of activity would not be significantly different from the existing condition, construction and subsequent use of the Project would not cause significant or long-term displacement of bald eagles from foraging habitat on the Hudson River. Based on the results of the noise assessment, construction of the Project would not have the potential to impact nesting eagles, the closest nest sites of which are on the opposite side of the river. Additionally, the tops of cranes and any other tall construction equipment would be marked with flagging to prevent bald

eagles from landing on them and potentially becoming impinged. Therefore, the Project would have no more than a small potential impact on bald eagles.

Golden Eagle (*Aquila chrysaetos*)

The golden eagle is listed as endangered in New York State and protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The NYNHP does not list golden eagles in the area, however they are included on the USFWS IPaC as being present in the region. Golden eagles winter directly across the river from the project site at Storm King Mountain and may also occur near the Project Site as occasional transients during migration. There are a few wintering sites in Dutchess County, one of which has been used by golden eagles since the 1970s (NYNHP 2022), but all of these sites are outside of NYSDEC's screening distance from the Project Site and no time of year restrictions would be required (NYSDEC 2022). The tops of cranes and any other tall construction equipment would be marked with flagging to prevent golden eagles from landing on them and potentially becoming impinged. Therefore, the proposed action would be expected to have no impact on golden eagles.

Peregrine Falcon (*Falco peregrinus*)

The peregrine falcon is currently listed as endangered in New York State and federally protected under the Migratory Bird Treaty Act. However, peregrine falcons have recovered significantly in New York State since a sharp population decline in the mid-1900s. The Lower Hudson Valley in particular has become a stronghold for peregrine falcons and an epicenter of population recovery in New York State and the Northeast (Loucks 2008). Due to this recovery and population trend, NYSDEC has proposed down-listing peregrine falcon from endangered to a species of special concern in its next revision of the state's list of endangered, threatened, and special concern species (NYSDEC 2019).

Peregrine falcons nest in HHSPP on exposed ledges overlooking the Hudson River. Multiple pairs have nested on ledges on Breakneck Ridge in recent years (Wells 1998; Graham and Kiviat, 2021; OPRHP 2010a, 2021). The proposed steward station and improvements of existing trails for the Upper Overlook on Breakneck Ridge are the closest Project elements to a peregrine falcon nest site on Breakneck Ridge. Specifically, the improvements to the Upper Overlook area's "scramble trail" would be approximately 200 feet from the closest nest. On the Upper Overlook area, the Project considers eliminating one trail and formalizing some existing "social trails" that have been created by people deviating from the officially designated Breakneck Ridge Trail. This improvement is intended to reduce human disturbance to the area that currently results from hikers meandering around the Ridge, off-trail. After construction, this portion of the Project would not result in a substantial difference in current levels of human activity on the heavily trafficked Breakneck Ridge Trail. Equipment to be used for the Upper Overlook work includes hand tools and hand-operated rigging gear. Should sufficient snow cover be present in winter, mechanized narrow tracked crawler carriers (28 inches wide) may be used on the north side of Breakneck Ridge to move stones up to the site.

The portions of the Project Site located along NYS Route 9D, the MNR tracks, and the river's edge are far from high-elevation areas that are known or potential nesting sites for peregrine falcons. Peregrine falcons would not be expected to occur on or along the portion of the Project Site along the shoreline, except infrequent potential occurrences of birds perched for brief periods between hunting bouts.

The Project would not be expected to have any effect on peregrine falcons or their continued use of Breakneck Ridge for nesting given the species' notable ability to habituate to and tolerate human disturbance. Their high tolerance for disturbance is evidenced by their increasing commonness in cities, on bridges, and in other such areas with extremely high levels of noise and human activity (Cade et al. 1996, White et al. 2002). Peregrine falcons have been described as tolerant of almost any level of human

activity, provided they feel their nest is inaccessible (Ratcliffe 1972), and they are notoriously reluctant to abandon nest sites at which they have successfully nested before (Cade et al. 1996, White et al. 2002). As detailed in **Appendix G**, Project construction would result in a negligible change in existing noise levels to which nesting peregrine falcons on Breakneck Ridge are already exposed due to motor vehicle and commuter rail activity below, and other sources. This minor incremental change would not be expected to cause nest site abandonment, behavioral changes, or chronic stress that would result in reduced nesting success. To further minimize the potential for any impacts to this species, any need for work to be performed during the restricted period (Feb 1 through July 31) will be undertaken only after consultation with NYSDEC and in compliance with their required mitigation measures. The tops of cranes and any other tall construction equipment would also be marked with flagging to prevent peregrine falcons from landing on them and potentially becoming impinged. For these reasons, the Project would have no more than a small potential impact on peregrine falcon.

Indiana Bat (*Myotis sodalis*)

The Indiana bat is a federally and state-listed endangered species. Habitats used by Indiana bats outside of their winter hibernation period are varied and include riparian, bottomland/floodplain, and upland forests (Humphrey et al. 1977, Britzke et al. 2006, Watrous et al. 2006), often within agricultural landscapes (Murray and Kurta 2004, Watrous et al. 2006, USFWS 2007a). They typically roost near forest gaps or edges, where trees receive direct sunlight for much of the day (Callahan et al. 1997, Menzel et al. 2002), and forage along forest edges or over fields and other large open habitats. The Indiana bat is listed by the USFWS IPaC System as potentially present in or near the Project Site. NYNHP has records of a hibernaculum and maternity colonies to the east, north, and across the Hudson River to the west of the Project Site, but all of these occurrences are at least five miles away. While Indiana bats have not been documented anywhere within HHSPP (OPRHP 2010a, 2021a), they have not specifically been surveyed for in this area and there is potential habitat within the wooded areas near Breakneck Ridge that could be used for foraging or roosting.

As a precautionary measure, all tree clearing (3-inch diameter at breast height [dbh] or larger) to construct the Project would be limited to the winter hibernation period (November 1–March 31). This would avoid the potential for direct impacts to Indiana bats during the active season. All trees cut during January through March would also be inspected for nesting birds of prey (hawks, eagles, and owls) prior to cutting, to avoid impacts to these federally protected species during their breeding and nesting seasons. With the protection measures described above in place, the Project would have a small potential impact on Indiana bats.

Northern Long-eared Bat (*Myotis septentrionalis*)

The northern long-eared bat is a federally endangered (effective 1/30/2023) and state threatened species. Habitat of the northern long-eared bat generally includes mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes (Owen et al. 2003, Carter and Feldhammer 2005, Ford et al. 2005). The northern long-eared bat is considered a forest-dependent species that is sensitive to fragmentation and requires interior forest for both foraging and breeding (Foster and Kurta 1999, Broders et al. 2006, Henderson et al. 2008). Northern long-eared bats are expected to occur in HHSPP (OPRHP 2010a), which contains a vast tract of preferred forest interior habitat and is within five miles of a hibernaculum on the west side of the river (OPRHP 2021, NYNHP 2022). In contrast, woodland habitat along the Project Site is limited to small fragments with sharp edges along roads, rail tracks, and along the heavily trafficked Breakneck Ridge. Similar to Indiana bats, the NYNHP has records of northern long-eared bat hibernacula and maternity colonies across the Hudson River and to the east of the Project Site, but all of these occurrences are at least five miles away. The occurrence of northern

long-eared bats in the vicinity of the Project Site is expected to be unlikely, particularly considering the abundance of preferred forest-interior habitat available in the eastern portions of HHSPP.

As with the Indiana bat, as a precautionary measure, all tree clearing (3-inch dbh or larger) to construct the Project would be limited to the winter hibernation period (November 1–March 31). This would avoid any potential for direct impacts to northern long-eared bats during the active season. All trees cut during January through March would also be inspected for nesting birds of prey (hawks, eagles, and owls) prior to cutting, to avoid impacts to these federally protected species during their breeding and nesting seasons. With the protection measures described above in place, the Project would have a small potential impact on northern long-eared bats.

Timber Rattlesnake (*Crotalus horridus*)

The timber rattlesnake is a New York State threatened species that once ranged throughout most forested, hilly portions of New York State, but is now limited to remnant, isolated populations in the Hudson Valley, Catskills, Southern Tier, and eastern edge of the Adirondacks. Timber rattlesnakes are typically found in deciduous forests containing thick understory vegetation, large woody debris, and rock outcrops or talus slopes, often near surface waters. They may also occur in edge habitats (Gibbs et al. 2007, Ulev 2008). Winter dens are typically on south-facing, rocky slopes with closed-canopy forest that has nearby gaps or other openings that receive abundant sunlight (Ulev 2008).

The NYNHP has records of timber rattlesnake hibernaculum, gestating/birthing area, basking/shedding area, and foraging area within 1.5 miles of the Project Site. OPRHP staff conducted targeted surveys to determine the potential for these timber rattlesnake habitats to occur within the Project Site (Jaycox 2021, 2022). The Upper Overlook area of the Project Site comprises hardwood forest/rocky summit habitats surrounding the Breakneck Ridge trailhead leading to a small rocky summit community that is characterized by exposed bedrock outcroppings with some scattered rock slabs. These areas contain potential timber rattlesnake habitat suitable for foraging and basking but are likely unsuitable for gestating, birthing, or denning (Jaycox 2022). The woodlands on the east side of NYS Route 9D in this area are also potential foraging habitat for the species (Jaycox 2021). The portion of the Project Site between NYS Route 9D and the MNR tracks is unlikely to support this species; however, its presence cannot be ruled out (Jaycox 2021).

Concerns for this species pertain to habitat removal and direct impact to individuals. While construction activities would be conducted during the active period for timber rattlesnake, they would be conducted by hand and would result in only minimal disturbance. Measures that would be implemented to reduce potential impacts to timber rattlesnakes during construction include tree clearing outside of the active seasons (between November 1 and March 31), using an on-site NYSDEC-licensed monitor during construction activities if during the active season (April 1 to October 31), and developing and implementing an Education and Encounter Plan in coordination with NYSDEC. With these measures in place, the Project would have a small potential impact on timber rattlesnake.

Eastern Fence Lizard (*Sceloporus undulatus*)

The eastern fence lizard is listed as threatened in New York State, which represents the northernmost extent of its geographic range (Gibbs et al. 2007). Eastern fence lizards prefer xeric hardwood and conifer forests with rocky outcrops or talus slopes and can also be found in grasslands and old fields (Mitchell et al. 2006, Gibbs et al. 2007).

The NYNHP has records of eastern fence lizard within 0.5 miles of the Project Site and OPRHP and others have documented individuals of this species in the general area of the Project Site and within

HHSPP (OPRHP 2010a; Graham and Kiviat, 2021). Appropriate habitat for eastern fence lizards occurs on Breakneck Ridge in the Upper Overlook portion of the Project, including at the rocky summit bedrock outcroppings at the Breakneck Ridge Trailhead, where the hardwood forest/rocky summit ecological community, containing dry, open woodland and rocky outcrops and ledges, represents suitable habitat for the species (Jaycox 2021). NYS Route 9D likely inhibits the dispersal of eastern fence lizards west to the portions of the Project Site along the shoreline from occupied habitats in more interior portions of HHSPP, given that the closely related western fence lizard (*S. occidentalis*) is known to avoid roads. This includes two-lane, paved roads similar in size and traffic volume to NYS Route 9D (Brehme et al. 2013). Fence lizards may access the west side of NYS Route 9D and the MNR tracks by moving along Breakneck Ridge where the mountain goes over the highway (over the tunnel); outside the immediate vicinity of Breakneck Ridge, this area was not considered suitable habitat for fence lizards (Jaycox 2021).

As with the timber rattlesnake, construction activities in the Upper Overlook would be conducted by hand and would result in only minimal disturbance. Measures that would be implemented to reduce potential impacts to eastern fence lizard during construction include tree clearing outside of the active seasons, between November 1 and March 31, using an on-site NYSDEC-licensed monitor during construction activities if during the active season, and developing and implementing an Education and Encounter Plan in coordination with NYSDEC. With these measures in place, the Project would have a small potential impact on eastern fence lizards.

Atlantic Sturgeon (*Acipenser oxyrinchus*) and Shortnose Sturgeon (*Acipenser brevirostrum*)

The New York Bight Distinct Population Segment of the Atlantic sturgeon, which includes sturgeon from the Hudson River, is Federally listed as endangered. Atlantic sturgeon spend most of their lives in marine waters along the Atlantic coast. Adults migrate from the ocean upriver to spawn in fresh water above the salt front in the Hudson River from late April to early July. Juvenile Atlantic sturgeon could potentially occur in the study area at any time throughout the year; however, sub-adult and adult Atlantic sturgeon and early life stages occur in the Hudson River seasonally during the late spring to fall months and potentially occur in the study area during those months. The NMFS has designated critical habitat for Atlantic sturgeon along the length of the tidal Hudson River. NYSDEC annual monitoring of juvenile Atlantic sturgeon shows a significant increase in relative abundance in the Hudson River since 2004 but are still at risk of mortality from fisheries bycatch, vessel strikes, and habitat loss and degradation (Pendleton and Adams 2021).

The shortnose sturgeon is a Federally and state-listed endangered species that can occur in riverine, estuarine, and marine environments along the Atlantic coast of North America. Shortnose sturgeon are distributed throughout the Hudson River, though their distribution varies by life stage and time of the year (NMFS 2018). Shortnose sturgeon are also known to occur at a wide range of depths. A minimum depth of 0.6 meters (approximately two feet) is necessary for the unimpeded swimming by adults and they are known to occur at depths of up to 30 meters (98.4 feet) but are generally found in waters less than 20 meters (65.5 feet) (Dadswell et al. 1984; Dadswell 1979). Shortnose sturgeon typically occur in the deepest parts of rivers or estuaries where suitable oxygen and salinity values are present (Gilbert 1989); however, they forage on vegetated mudflats and over shellfish beds in shallower waters when suitable forage is present (NMFS 2018).

Construction of the Project would result in shoreline stabilization that would extend below MHW. This shoreline stabilization would result in the placement of a minimal amount of temporary fill material below SHW and/or MHW, which would require permits from the USACE and NYSDEC. All materials placed along the shoreline would be removed at the completion of construction. The temporary

placement of any fill material would represent a minimal loss of potential foraging habitat for shortnose and Atlantic sturgeon when compared to the amount of similar habitat elsewhere in the Hudson River.

Under Crane Options 1 and 2, up to four construction barges could be present on site at the same time for Bridge construction and up to three barges could be present at the same time for the construction of the southbound MNR platform. The resulting overwater coverage would be about 2 acres. However, it would be temporary and certain barges such as materials barges would arrive intermittently (about 10 times during the construction period) and would remain on site for up to one week at each occurrence, and other barges such as the equipment barge for the southbound MNR platform would only be expected to be at the site for 1 week.

Potential increases in suspended sediment during installation by self-weight of the piles securing the logistics barges and temporary shoreline stabilization activities would be temporary and localized. The use of turbidity barriers during the installation of the temporary shoreline stabilization would further minimize discharge of sediment to the Hudson River. Sediments that become resuspended during these activities are expected to dissipate quickly with the tidal currents of the river and would not result in long term adverse impacts to water quality or aquatic biota. Additionally, barges and any other smaller vessels would always maintain a 2-foot separation from the mudline during all tidal cycles to minimize the potential for sediment resuspension. The area affected by the temporary shoreline stabilization would be restored when the Project is demobilized. Ongoing coordination with NYSDEC, USACE, and NMFS will determine any additional measures required to further minimize impacts to sturgeon. Therefore, the Project would have a small potential impact on Atlantic and shortnose sturgeon.

Rare Plant Species

The NYNHP database indicates a number of historical and extant occurrences of rare plant species near the Project Site. In consultation with NYNHP, two of those rare plant species are most likely to be found in or near the Project Site: stiff flat-topped goldenrod (*Solidago rigida var. rigida*) and one species of prickly pear (*Opuntia spp.*), although the likelihood for either species in the area of the Project Site is very low according to NYNHP. Stiff flat-topped goldenrod (*Solidago rigida var. rigida*) is listed as threatened in New York State. It grows well in successional old fields and other grassland habitats. Its largest threat is development and highway construction as well as invasive species (NYNHP 2022ba). OPRHP stewardship staff conducted a survey for the goldenrod species along the MNR tracks and NYS Route 9D at the Project Site during an appropriate time of year (late August). Very few goldenrod species were seen, and no stiff flat-topped goldenrod were observed in the area of the Project Site during this survey. Additionally, Graham and Kiviat (2021) did not find any stiff flat-topped goldenrod during a site visit at Breakneck Point in September 2021. Although this cannot completely rule out the presence of the species in or near the Project Site, it continues to support the opinion that the likelihood for presence is very low, and it is highly unlikely that the Project would impact this species.

There are two distinct species of prickly pear that grow in New York, both within the *Opuntia* genus. *Opuntia humifusa*, also called Eastern prickly pear or devil's-tongue, is listed as apparently secure in New York State. It is a highly salt-tolerant plant which grows well in sandy, thin fields, sandy maritime areas, woodlands, and rocky summits and outcrops. *Opuntia cespitosa* was more recently recognized as a separate species and is the rarer cacti in New York State (Aboagye 2022). *Opuntia cespitosa* is listed as state endangered and grows in similar habitats to *O. humifusa*, except that it is found more inland and on calcareous rock. The most likely location within the Project Site where prickly pear may be found is the Upper Overlook area. These species would be clearly identified as cacti and have not been identified at this very high-use area by OPRHP staff nor others, including during the same survey period as noted above. In addition, most of the Project work in the Upper Overlook would occur on

existing trails with the exception of the steward station construction (where no cacti have been identified). Therefore, it is highly unlikely that either species would be impacted by this Project.

b. The proposed action may result in a reduction or degradation of any habitat used by any rare, threatened or endangered species, as listed by New York State or the federal government.

Impact Level: Small Impact.

Description:

Bald Eagle

As described above, the closest known bald eagle nests to the Project Site are on the opposite (western) side of the Hudson River. The Project would not be expected to impact bald eagle nesting habitat, as there are no known nests within or near the Project Site and those on the western side of the river would not be expected to be impacted by the construction or use of the trail due to intervening distance and existing, noise-generating uses including traffic on the river, rail lines along the river, and traffic on NYS Route 9D. Individual bald eagles looking for roosting trees at the river's edge may look to other areas of the shoreline during construction of the Project but this would be a temporary condition. Therefore, the Project would have a small potential impact on bald eagle habitat.

Golden Eagle

As noted above, golden eagles are only likely to occur near the Project Site as occasional transients during migration and in winter. There is a wintering site across the Hudson River at Storm King Mountain and at least two sites in Dutchess County, one of which has been used since the 1970s (NYNHP 2022), but all of these sites are outside of NYSDEC's screening distance from the Project Site and no time of year restrictions would be required (NYSDEC 2022). Therefore, the proposed action would not be expected to impact golden eagle habitat.

Peregrine Falcon

Peregrine falcons nest in HHSPP, on exposed ledges overlooking the river, including at Breakneck Ridge (Wells 1998; OPRHP 2010a, 2021). The proposed steward station and improvement of existing trails for the Upper Overlook on Breakneck Ridge would not result in a substantial difference from the existing condition of the currently heavily trafficked Breakneck Ridge Trail. The Project would close/restore some social trails while formalizing other existing trails, which would be expected to reduce the impact resulting from hikers meandering around on the Ridge off designated trails. The portions of the Project Site along NYS Route 9D, MNR tracks, and the Hudson River's edge are far from high-elevation areas that are known or potential nesting sites for peregrine falcons.

As discussed above and in detail in **Appendix G**, the Project would not be expected to have any effect on peregrine falcons or their continued use of Breakneck Ridge for nesting. Peregrine falcons have a notable ability to habituate to and tolerate human disturbance and are notoriously reluctant to abandon nest sites at which they have successfully nested before (Cade et al. 1996, White et al. 2002). Further, Project construction would result in only a negligible change in existing noise levels to which nesting peregrine falcons on Breakneck Ridge are already exposed due to motor vehicle and commuter rail activity below, and other sources (**Appendix G**). This minor incremental change would not be expected to cause nest site abandonment, or behavioral changes or chronic stress that would result in reduced nesting success. As such, the Project would not be expected to adversely impact the peregrine falcon. Any need for work to be performed during the restricted period (Feb 1 through July 31) will be undertaken only after consultation with NYSDEC and in compliance with their required mitigation measures. The tops of cranes and any other tall construction equipment would also be marked with

flagging to prevent peregrine falcons from landing on them and potentially becoming impinged. Therefore, the Project would have a small potential impact on peregrine falcon habitat.

Indiana Bat

Habitats used by Indiana bats outside of their winter hibernation period are varied and include riparian, bottomland/floodplain, and upland forests (Humphrey et al. 1977, Britzke et al. 2006, Watrous et al. 2006), often within agricultural landscapes (Murray and Kurta 2004, Watrous et al. 2006, USFWS 2007a). They typically roost near forest gaps or edges, where trees receive direct sunlight for much of the day (Callahan et al. 1997, Menzel et al. 2002), and forage along forest edges or over fields and other large open habitats. As discussed above, while Indiana bats are not known to occur anywhere within HHSPP, there is potential habitat for them within the wooded areas near Breakneck Ridge that could be used for foraging or roosting.

Most of the tree clearing for the Project would occur directly along NYS Route 9D and the MNR tracks and would occur from November 1 through March 31. Tree clearing in general has the potential to reduce bat habitat. Trees necessary for removal have been specifically identified with some larger trees identified to remain and be protected during construction. The loss of some trees along the Project corridor is not likely to significantly reduce habitat for Indiana bat given the vast tract of preferred forest interior habitat present nearby and given that this area is already heavily trafficked by vehicles, visitors, and trains. The Project would have a small potential impact on Indiana bat habitat.

Northern Long-eared Bat

Habitat of the northern long-eared bat generally includes mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes (Owen et al. 2003, Carter and Feldhammer 2005, Ford et al. 2005). The northern long-eared bat is considered a forest-dependent species that is sensitive to fragmentation and requires interior forest for both foraging and breeding (Foster and Kurta 1999, Broders et al. 2006, Henderson et al. 2008). Northern long-eared bats are expected to occur in HHSPP (OPRHP 2010a), which contains a vast tract of preferred forest interior habitat and is within five miles of a hibernaculum on the west side of the river (OPRHP 2021, NYNHP 2022). In contrast, woodland habitat along the Project Site is limited to small fragments with sharp edges along roads, rail tracks, and the heavily trafficked Breakneck Ridge. Northern long-eared bats are not likely to occur in the vicinity of the Project Site, although their presence is possible.

As with the Indiana bat, most of the tree clearing for the Project would occur directly along NYS Route 9D and the MNR tracks and would occur from November 1 through March 31. Tree clearing in general has the potential to reduce bat habitat. Trees necessary for removal have been specifically identified with some larger trees identified to remain and be protected during construction. The loss of some trees along the Project corridor is not likely to significantly reduce habitat for northern long-eared bat given the vast tract of preferred forest interior habitat present nearby and given that this area is already being heavily trafficked by vehicles, visitors, and trains. The Project would have a small potential impact on northern long-eared bat habitat.

Timber Rattlesnake

Timber rattlesnakes are typically found in deciduous forests containing thick understory vegetation, large woody debris, and rock outcrops or talus slopes, often near surface waters. They may also occur in edge habitats (Gibbs et al. 2007, Ulev 2008). Winter dens are typically on south-facing, rocky slopes with closed-canopy forest that has nearby gaps or other openings that receive abundant sunlight (Ulev 2008). There is habitat for timber rattlesnake within the Upper Overlook portion of the Project Site, but only for foraging and/or basking. The portion of the Project Site between NYS Route 9D and the MNR tracks is unlikely to support this species; however, its presence here cannot be ruled out.

Proposed trail enhancements and the steward station at the Upper Overlook would result in a small reduction of potential habitat for timber rattlesnake. As described above, measures would be implemented to reduce potential impacts to this species during construction of the Project. With these measures in place, the Project would have a small potential impact on timber rattlesnake habitat.

Eastern Fence Lizard

Eastern fence lizards prefer xeric hardwood and conifer forests with rocky outcrops or talus slopes and can also be found in grasslands and old fields (Mitchell et al. 2006, Gibbs et al. 2007). They have been documented within HHSPP (OPRHP 2010a), and the NYNHP has records of the species in the general area of the Project Site. Appropriate habitat for eastern fence lizards occurs on Breakneck Ridge, where there is dry, open woodland, and rocky outcrops and ledges (Jaycox 2021). NYS Route 9D likely inhibits the dispersal of eastern fence lizards west to the portions of the Project Site along the shoreline from occupied habitats in more interior portions of HHSPP, given that the closely related western fence lizard (*S. occidentalis*) is known to avoid roads. This includes two-lane, paved roads similar in size and traffic volume to NYS Route 9D (Brehme et al. 2013). Fence lizards may access the west side of NYS Route 9D and the MNR tracks by moving along Breakneck Ridge where the mountain goes over the highway (over the tunnel); outside the immediate vicinity of Breakneck Ridge, this area was not considered suitable habitat for fence lizards (Jaycox 2021).

Proposed trail enhancements and the steward station at the Upper Overlook would result in a small reduction of potential habitat for eastern fence lizard. The steward station is located directly adjacent to the existing trail which limits new disturbance to a central area. The enclosed structure is designed at less than 100 square feet (approximately 70 square feet) with the roof structure extending for an additional approximately 260 square feet. The existing natural ground surface under the roof extension has no planned new surfacing material and is expected to remain natural surfacing. Trail enhancements would take place along existing trails for the most part to limit new disturbance and would include closure of some existing social trails. These closures and restoration would reduce visitor use of these areas and provide more undisturbed potential fence lizard habitat back on the Project Site. As described above, measures would be implemented to reduce potential impacts to this species during construction of the Project. Consultation between OPRHP and NYSDEC with respect to minimization and mitigation measures for eastern fence lizard is ongoing. With these measures in place, the Project would have a small potential impact on eastern fence lizard habitat.

Atlantic Sturgeon and Shortnose Sturgeon

Juvenile Atlantic sturgeon could potentially occur in the area at any time throughout the year; however, sub-adult and adult Atlantic sturgeon and early life stages occur in the Hudson River seasonally during the late spring to fall months and potentially occur in the study area during those months. Shortnose sturgeon are distributed throughout the Hudson River, though their distribution varies by life stage and time of the year (NMFS 2018). Shortnose sturgeon are also known to occur at a wide range of depths. A minimum depth of 0.6 meters (approximately two feet) is necessary for the unimpeded swimming by adults and they are known to occur at depths of up to 30 meters (98.4 feet) but are generally found in waters less than 20 meters (65.5 feet) (Dadswell et al. 1984; Dadswell 1979). Shortnose sturgeon typically occur in the deepest parts of rivers or estuaries where suitable oxygen and salinity values are present (Gilbert 1989); however, they forage on vegetated mudflats and over shellfish beds in shallower waters when suitable forage is present (NMFS 2018).

Consultation with NYSDEC and USACE with respect to minimization and mitigation measures to protect sturgeon is ongoing. Sturgeon would likely avoid the area during construction activities. Spud piles that would be installed to secure any logistics barges within the Hudson River would not be considered fill within Waters of the United States. Temporary shoreline stabilization activities would

require the placement of a minimal amount of temporary fill below SHW and/or MHW along the Hudson River shoreline; any fill would be removed, and the area restored, once construction is complete. Placement and removal of fill and restoration of the shoreline would be in accordance with conditions issued in USACE and NYSDEC permits for these in-water construction activities. No submerged aquatic vegetation (SAV) is documented within the vicinity of the proposed barge zones. During construction of the southbound MNR platform and the Bridge, in-water activities associated with construction of these elements may cause sturgeon to temporarily avoid the area in the vicinity of the proposed barge zones and any shoreline stabilization, eliminating potential foraging habitat during the in-water construction period. However, the area affected temporarily by in-water construction activities is small compared to the available habitat elsewhere along the Hudson River. The spud piles that secure the logistics barges would be inserted into the sediment by self-weight which would not generate underwater noise. The only underwater noise resulting from the Project would be temporary engine noise from marine vessels. For these reasons, the Project would have a small potential impact on Atlantic and shortnose sturgeon habitat.

Monarch Butterfly (*Danaus plexippus*)

The monarch butterfly is a recently listed candidate species under Section 7 of the Endangered Species Act (ESA). Monarch butterflies are primarily found in open meadows and fields with wildflowers, including milkweed (*Asclepias* spp.), coastal beaches with dunes, and man-made butterfly gardens (NYSDEC 2022, ECOS 2022). While these habitats do not exist within the Project Site, wildflowers and milkweed that could provide habitat for the monarch butterfly may be present. Monarch butterflies would likely avoid the area during construction, but post-construction landscaping of native coastal plants might attract them to the area. For these reasons, the Project would have a small, temporary potential impact on monarch butterfly habitat.

Rare Plant Species

The Project is highly unlikely to reduce existing habitat for stiff flat-topped goldenrod and the state-endangered prickly pear species (*Opuntia cespitosa*). A survey of the potential habitat was conducted for both species in the area of the Project Site during an appropriate time of year (late August) and none were found. Although this cannot completely rule out the presence of the species in or near the Project Site, it continues to support the opinion that the likelihood for presence is very low, and it is highly unlikely that the species will be impacted by the Project.

c. The proposed action may cause reduction in population, or loss of individuals, of any species of special concern or conservation need, as listed by New York State or the federal government, that use the site, or are found on, over, or near the site.

Impact Level: Small Impact.

Description:

Eastern Wormsnake (*Carphophis amoenus*)

The eastern wormsnake's range within New York is limited to a few counties in the southeastern part of the state and on Long Island, as well as Albany County (Gibbs et al. 2007). It is uncommon in New York State relative to other northeastern states (DeGraaf and Yamasaki 2001, Gibbs et al. 2007) and is listed as a species of special concern. Eastern wormsnakes are most closely associated with damp forests with mesic, loose soils into which they can burrow, but they are also found in dry forests and a variety of other woodland habitat types (DeGraaf and Yamasaki 2001, Mitchell et al. 2006, Gibbs et al. 2007), where macrohabitat selection can be highly variable and generalistic (Orr 2006, Diefenbacher

and Pauley 2014). They are not considered highly sensitive to fragmentation, as they can occur in small habitat islands, including in urban areas (Klemens 1993, Russell and Hanlin 1999, Herrera and Cove 2020). Eastern wormsnakes have been documented within HHSPP (OPRHP 2010a) and could occur within the Project Site.

Similar protection measures to those proposed for eastern fence lizards and timber rattlesnakes would be implemented to protect eastern wormsnake, including tree clearing outside of the active season between November 1 and March 31, using an on-site NYSDEC-licensed monitor during construction activities if during the active season, and developing and implementing an Education and Encounter Plan in coordination with NYSDEC. With these measures in place, the Project would have a small potential impact on the eastern wormsnake.

d. The proposed action may result in a reduction or degradation of any habitat used by any species of special concern and conservation need, as listed by New York State or the Federal government.

Impact Level: Small Impact.

Description:

Eastern Wormsnake

Given eastern wormsnake's ability to occur in a variety of habitats, the Project could result in the degradation of habitat for this species. However, the protection measures described above would minimize any potential impact during construction, and plenty of habitat would remain to support eastern wormsnake during operation of the Project. For these reasons, the Project would have a small potential impact on eastern wormsnake habitat.

e. Not applicable.

f. The proposed action may result in the removal of, or ground disturbance in, any portion of a designated significant natural community.

Impact Level: No to Small Impact.

Description:

The Project Site is adjacent to HHSPP and the Hudson River. The NYNHP has designated the following significant natural communities adjacent to or nearby the Project Site: Pitch Pine-Oak-Heath Rocky Summit, Appalachian Oak-Hickory Forest, Chestnut Oak Forest, Oak-Tulip Tree Forest, Rocky Summit Grassland, and on the west side of the Project Site is the Tidal Hudson River.

The area adjacent to the east side of NYS Route 9D along the 0.58-mile-long Project Site is Oak-Tulip Tree Forest. The Project would develop parallel parking along portions of this section and electric utilities would be moved to the east side of NYS Route 9D. Approximately 90 trees (6-inch dbh or greater) would be removed in this area for these Project elements. (Note: 3-inch dbh or greater trees planned for removal have not been counted to date.) All tree removals would occur along the edge of the Oak-Tulip Tree Forest significant natural community, but there would be no direct overlap with the mapped community. As this area is directly along NYS Route 9D, habitat quality is also likely lower.

The scramble reconstruction area in the Upper Overlook is located on the edge of Pitch Pine-Oak-Heath Rocky Summit, noted as a significant natural community. The work in this area will harden and define

the trail tread making it easier to use, with the expectation of reducing the number of visitors wandering along the ridge and protecting more of the habitat. The remainder of the Project does not occur within the footprint of a significant natural community. Therefore, the Project would have no to small potential impact on any designated significant natural community.

g.- i. Not applicable.

8. IMPACT ON AGRICULTURAL RESOURCES

Not applicable.

9. IMPACT ON AESTHETIC RESOURCES

The land use of the proposed action are obviously different from, or are in sharp contrast to, current land use patterns between the proposed project and a scenic or aesthetic resource.

a. Proposed action may be visible from any officially designated federal, state, or local scenic or aesthetic resource.

Impact Level: This has the potential for a moderate impact, as the Project and specifically the new Bridge is within the Hudson Highlands Scenic Area of Statewide Significance (SASS) along a mostly forested section of shoreline/upland.

Description:

Hudson Highlands Scenic Area of Statewide Significance

Scenic resources are a major component of community character, and special landscape features and views contribute to a community's visual quality. To that end, the New York State Department of State (NYSDOS) Office of Planning, Development and Community Infrastructure oversees a scenic assessment program that identifies the scenic qualities of coastal landscapes, evaluates them against criteria for determining aesthetic significance, and recommends areas for designation as SASS.[1]

The Hudson Highlands SASS encompasses a twenty-mile stretch of the Hudson River and its shorelands and varies in width from approximately one to six miles.[2] It is a highly scenic and valued region of the Hudson River Valley, rich in natural beauty, cultural, and historical features. The SASS includes the Hudson River and its east and west shorelands. It extends from its northern boundary, which runs from the northern end between Scofield Ridge and Denning's Point to its southern boundary at Roa Hook (Cortlandt, NY), comprising much of HHSPP and across the Hudson River from the base of Storm King Mountain to the southern limits of Bear Mountain State Park, as well as the eastern areas of Harriman State Park. The Hudson Highlands SASS encompasses the area in which the Project would be constructed.

New York State has formally recognized the value of the area's scenic and recreational resources. For example, the HHSPP, which is under the jurisdiction of OPRHP and most of which is contained in the SASS, is a designated Park Preserve under the Parks, Recreation and Historic Preservation Law

[1] https://dos.ny.gov/scenic-areas-statewide-significance-sass (accessed November 10, 2021).
[2] https://dos.ny.gov/system/files/documents/2020/08/hudson-river-valley-sass.pdf (accessed November 10, 2021).

(Chapter 36-B, Article 20, of the Consolidated Laws of the State of New York).[1] Article 20 recognizes the importance of the natural and historic value of the park preserves, including HHSPP, finding that "[w]ith the loss of natural areas through development, there is a critical need for the creation of a new designation of park land containing wildlife, flora, scenic, historical and archeological sites that are unique and rare in New York State."

Guidance for Evaluating Visual Impacts

NYSDEC has issued guidance (Program Policy DEP-00-2) to assist in the review of visual impacts of projects requiring NYSDEC actions.[2] Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Visual impact occurs when the mitigating effects of perspective do not reduce the visibility of an object to insignificant levels. Thus, while a project may be visible from a certain location, mere visibility is not a threshold of significance. Using NYSDEC's guidance, significance is determined based on the extent to which the visibility interferes with the public's enjoyment or appreciation of a resource. Public viewpoints (vantage points) include open space with potential views of the Project.

To evaluate the potential visual and aesthetic impacts of the Project, this section discusses views of and from the area of the Project.

The Project

The Connector Trail portion of the Project would be 'behind' (on the east side of) the MNR tracks from a Hudson River/western shoreline viewpoint and much of it would have trees and vegetation blocking it. Therefore, the Bridge would be the most visible element of the Project. To minimize the visual impact of the Bridge, from very early in the planning process, alternative bridge designs were considered. The ultimate design chosen is the least obvious and intrusive on the existing landscape. The Bridge is designed to be as visually quiet as possible. The abutments would appear to grow out of the existing landscape and land on either side of the MNR tracks. The Bridge, while maintaining necessary clearances for train traffic, would be visually unobtrusive as the elevation of the Bridge deck would be similar to the existing elevation of NYS Route 9D. In addition, the curvilinear design of the Bridge would conform with the surrounding geological features. Moreover, the materials and colors for the Bridge were intentionally selected to blend into the landscape. Thus, the constructed Bridge would not negatively impact the views of Breakneck Ridge.

Vantage Point Analysis

To further evaluate the potential visual and aesthetic impacts of the Project, a vantage point analysis was performed from various viewpoints, and renderings of how the Project would appear were generated. The viewpoints are from on the Hudson River and from the Breakneck Ridge Upper Overlook.

The first rendering (see **Figure 5**) shows a view from the Hudson River looking east-northeast towards the Project. From this viewpoint, the DEP HRDC is prominent as a manmade structure on the landscape. By contrast, the profile of the Bridge is minimal, and the shape, color, and orientation of the Bridge mimic the surrounding landscape. Per the DEP-00-2 guidance, significance is determined based on the extent to which the visibility interferes with the public's enjoyment or appreciation of a resource. In this case, the Project, and particularly the Bridge component, are not anticipated to interfere with the

[1] https://www.nysenate.gov/legislation/laws/PAR/TCA20 (accessed February 4, 2022).

[2] New York State Department of Environmental Conservation (NYSDEC) Program Policy DEP-00-2 "*Assessing and Mitigating Visual and Aesthetic Impacts,*" dated December 13, 2019. Available at https://www.dec.ny.gov/docs/permits_ej_operations_pdf/visualpolicydep002.pdf.

public's enjoyment of the eastern shoreline of the Hudson River, and mountainous contours of the SASS and HHSPP beyond.

The second rendering (see **Figure 6**) shows a view from the Hudson River looking east-southeast towards the Project. Similar to the view in **Figure 5**, the DEP HRDC is prominent on the landscape. The Bridge blends very well into the surrounding context, with the Bridge decking at an elevation similar to NYS Route 9D, and the curvilinear design evokes the mountaintops beyond. The Bridge and overall Project are not anticipated to interfere with the public's enjoyment of views from the Hudson River looking east.

The third rendering (see **Figure 7**) shows a view looking north, from the Upper Overlook, towards the Project, the DEP HRDC, the MNR tracks, and NYS Route 9D. Compared to the existing infrastructure and improvements on the land, the Project is unintrusive. The low profile of the Bridge helps it blend into its surroundings, and the Project is contextual.

The fourth rendering (see **Figure 8**) shows a view looking north-northwest, from the Upper Overlook, towards the Project, the NYCDEP Hudson River Drainage Chamber, the MNR tracks, and NYS Route 9D. The view is similar to the view shown in **Figure 7** but captures more of the Bridge as it slopes down and along the eastern shoreline of the Hudson River. Given the color, materials, design and clearance over the MNR tracks, the Bridge blends well into the landscape. The remaining elements of the Project, including part of the trail which can be seen in the distance, past the point where the Bridge lands next to NYS Route 9D, also conform to the natural landscape and the existing linear railroad and roadway corridors.

Views from areas west of the Hudson River, including from NYS Route 218, Storm King Mountain, and Donahue Memorial Park, would not be disrupted by the Project.

From the west side of the Hudson River, looking northeast from NYS Route 218 at its closest point to the Hudson River (where the road curves around Storm King Mountain) towards the Project, the Bridge would be visible, but appear small on the landscape, relative to its natural, mountainous surroundings. As the Bridge is designed to evoke the area's natural landscape, both in shape and color, and given its low profile, the distance from which it would be viewed from, and the limited number of people (viewers) affected, an observer would not be expected to perceive the Bridge, and the broader Project, as a uniquely new element on the landscape. The Bridge and associated trail would not impede views of the greater natural context within which it would be situated and would not interfere with the public's enjoyment of the eastern shoreline of the Hudson River.

From the west side of the Hudson River, looking from Donahue Memorial Park in Cornwall-on-Hudson eastward towards the Project, the view would be similar to that of **Figure 6**, but from a significantly farther distance away. From that viewpoint, the DEP HRDC would appear to a viewer as a notably more prominent manmade structure on the landscape than the Project. The profile of Bridge would be minimal, and the shape, color, and orientation of the Bridge would mimic the surrounding landscape. The Project, and particularly the Bridge, would not be anticipated to interfere with the public's enjoyment of the eastern shoreline of the Hudson River, and mountainous contours of the SASS and HHSPP beyond.

From Storm King Mountain on the west side of the Hudson River, the Project would be visible from some viewpoints but not others. For example, a viewer on the northern face of the mountain would not see the Project. From the eastern face of the mountain, the view would be similar to that from NYS Route 218. The Bridge and associated trail would be visible but appear small on the landscape. The view from the peak of Storm King Mountain would be at an even higher elevation than from on NYS Route 218, and thus the Project would appear to be even more on the same plane as the existing

improvements (i.e., the existing MNR tracks and NYS Route 9D) that surround it. Given the design of the Project, distance from which it would be viewed from, and the limited number of people (viewers) affected, an observer would not be expected to perceive the Bridge, and the broader Project, as a uniquely new element on the landscape.

Due to the use of barges, cranes and heavy equipment, there would be temporary visual impacts from the Hudson River and Upper Overlook during construction. While construction activities would be visible to the north from sections of the Upper Overlook, much of the vantage points from the Upper Overlook face southward or westward and would not be impeded by construction activities. For periods during construction, the Breakneck Ridge and Wilkinson Memorial Trailheads may be closed for safety reasons, during which times there would be limited visitors at the Upper Overlook vantage point, further reducing temporary visual impacts. From the Hudson River, barges and heavy equipment would be visible but construction would be temporary (up to about 24 to 30 months) and equipment would move in different areas of the Project boundary over this time. Once the waterside construction is complete, the continuation of landside construction would be less visible due to its location farther upland behind the MNR tracks. These visual impacts would be temporary.

Ultimately, construction and operation of the Project is not anticipated to result in a significant adverse visual impact to the Hudson Highlands SASS. The development of a Bridge and associated trail segment is in keeping with other, similar, recreational resources in the area. Construction of the Project would grant users greater access to the Hudson River shoreline and other natural features of the area, and provide greater connectivity to the nearby trailheads, ultimately enhancing the public's enjoyment of those resources, including the SASS. Furthermore, the materials proposed for the Project, and the proposed alignment selected for the Project, were carefully chosen to integrate the Project with its natural environment, and to blend it into the existing landscape. Finally, the size and scale of the Project, when compared to (and taken in the context of) the overall expanse of HHSPP and the surrounding landscape, support a determination that construction and operation of the Project would not interfere with the public's enjoyment of the SASS, and the other community assets within its boundaries, and that the Project would in fact enhance the public's enjoyment of them.

b. The proposed action may result in the obstruction, elimination or significant screening of one or more officially designated scenic views.

Impact Level: Small impact.

Description: The Project would not obstruct, eliminate, or screen any officially designated scenic views. The new Bridge would likely be visible from the Upper Overlook within HHSPP. However, the DEP HRDC, located at the foot of Breakneck Ridge, is already visible and at a higher elevation than the Bridge would be. As the Bridge is part of a new recreational amenity in this area, it is not a feature that is in sharp contrast to current recreational land uses in the area. The Bridge would follow along and over the alignment of the MNR tracks, so again, it would not be in sharp contrast.

c. The proposed action may be visible from publicly accessible vantage points:
i. Seasonally (e.g., screened by summer foliage, but visible during other seasons)
ii. Year round

Impact Level: Small impact.

Description: See responses to Questions 9.a and 9.b, above. While the Bridge may be visible from viewpoints on the western side of the Hudson River and from the Hudson River itself, in context of the

broader Hudson River shoreline and mountains of the Hudson Highlands SASS and within HHSPP, the Project would construct a relatively small bridge near existing infrastructure (DEP HRDC), NYS Route 9D, and MNR tracks.

d. The situation or activity in which viewers are engaged while viewing the proposed action is:

i. Routine travel by residents, including travel to and from work

ii. Recreational or tourism based activities

Impact Level: Small impact.

Description: See response to Question 9.c, above. The Project would be most visible to those engaging in recreational activities in the area, particularly on the Hudson River (e.g., boating and kayaking). The Project would be visible to some drivers in the area, particularly to those on NYS Route 9D, but many of those drivers would be coming to the area to use the Project's amenities and nearby trails. For drivers passing by the Project, it would only be a temporal impact on their visual experience.

e. The proposed action may cause a diminishment of the public enjoyment and appreciation of the designated aesthetic resource.

Impact Level: Small impact.

Description: See response to Question 9.a, above. The Project would not diminish the public's enjoyment and appreciation of the Hudson Highland's SASS. The Project, and specifically the Bridge component, are designed to blend into the existing landscape. The Bridge would facilitate public access to the Hudson River waterfront and would provide better and safer linkages to area trails.

f. Not applicable.

g. Other impacts:

Impact Level: Beneficial Impacts.

Description: See response to Question 9.a, above. Once constructed and operational, the Project would have a variety of beneficial impacts. The Bridge would provide the public with improved visual access to the Hudson River shoreline in this location. The Project would facilitate better connections to area trails, specifically those in HHSPP. The Project would also provide a variety of safety improvements, including dedicated and formalized parking areas, as well as pedestrian, biker, and hiker protections from vehicles, which would improve the experience for pedestrians, bikers, hikers and motorists alike along this section of NYS Route 9D.

10. IMPACT ON HISTORIC AND ARCHEOLOGICAL RESOURCES

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

a. The proposed action may occur wholly or partially within, or substantially contiguous to, any buildings, archaeological site or district which is listed on the National or State Register of Historical Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places.

Impact Level: No impact.

Description: The DEP HRDC, located near Breakneck Ridge, is eligible to be listed on the National Register of Historic Places. The DEP has been involved in the Project design and layout as it occurs adjacent to the DEP HRDC. There are no direct impacts to the structure itself. The Applicant has a Section 14.09 letter from the OPRHP Division for Historic Preservation (DHP)/State Historic Preservation Office (SHPO) indicating DHP has "no concerns regarding the potential impacts of the proposed Breakneck Connector segment on archaeological and/or historic architectural resources listed in or eligible for the New York State and National Registers of Historic Places" (Farry, 2/10/2020). The Applicant also has a Section 106 letter from DHP indicating "it is the SHPO's opinion that this Project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places" (Farry, 4/7/2022). These letters are included as **Appendix H**. The Project would have no impact on this resource.

b. The proposed action may occur wholly or partially within, or substantially contiguous to, an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory.

Impact Level: No impact.

Description: The area in which the Project would be constructed is noted as being archeologically sensitive in the FEAF Part 1 (see response to E.3.f). The Applicant has received Section 14.09 and Section 106 letters from SHPO, as noted in response to Question 10.a. The letters are included as **Appendix H**. The Project is not expected to have any impact on archeological resources.

c. Not applicable.

11. IMPACT ON OPEN SPACE AND RECREATION

The proposed action may result in a loss of recreational opportunities or a reduction of an open space resource as designated in any adopted municipal open space plan.

a. The proposed action may result in an impairment of natural functions, or "ecosystem services", provided by an undeveloped area, including but not limited to stormwater storage, nutrient cycling, wildlife habitat.

Impact Level: No impact.

Description: The Project would not change undeveloped areas in a manner that would impair natural functions provided by those areas. To the extent the Project makes physical improvements to the area, those improvements include accommodations and mitigation for stormwater and habitat concerns.

b. The proposed action may result in the loss of a current or future recreational resource.
Impact Level: No/small impact.
c. The proposed action may eliminate open space or recreational resource in an area with few such resources.
Impact Level: No/small impact.
d. The proposed action may result in loss of an area now used informally by the community as an open space resource.
Impact Level: No/Small impact.

Description for (b), (c), and (d): The Project would not result in the permanent loss of a current or future recreational resource, eliminate open space, or result in loss of an area now used informally by the community as an open space resource.

In fact, the Project would ultimately provide recreational access to an area which is presently inaccessible and increase safe connections to open space areas.

For example, the Project would provide public access to the foreshore and to lands immediately adjacent to the foreshore or water's edge through the creation of a publicly accessible recreational trail and Bridge connecting to the Hudson River. Provision of this public access would be compatible with the adjoining recreational uses, which include the trail system in and around HHSPP. Additionally, the Project would enhance access for all persons to this area by building a trail and parking areas that meet generally-accepted accessibility standards, including a trail that meets Accessibility Standards for Outdoor Areas and Accessible parking.

A large portion of the Project Site is currently held by the MTA, operator of MNR, and public access is largely restricted due to the proximity to the MNR tracks. The Project would amplify physical barriers to the MNR tracks and make for safe pedestrian and bicycle use of the trail and the Bridge corridor. In addition, upon completion of the Project, MTA intends to grant the applicable permissions for public use of the Breakneck Connector and Bridge. Thus, the Project would create a recreational resource where there currently is none.

While nearby trailheads to the Breakneck Ridge and Wilkinson Memorial Trails may be closed during periods of construction for safety reasons, these recreational resources would remain open and accessible from other points along their lengths during the Project's construction. Thus, the Project would not result in the loss of these recreational resources or access to nearby open space in the HHSPP, which is replete with various other trails. Moreover, the proposed improvements at the Upper Overlook would formalize, define, and make safer an area that is currently used informally as an open space resource.

e. Other impacts: Temporary restriction in access to recreational resources during construction only.

Impact Level: Small impact.

Description: The MNR Breakneck Ridge station would be closed during construction to construct new station platforms and to keep pedestrians away from the work zones, as needed. OPRHP and HHFT, Inc. will coordinate with MNR to determine any periods during construction where the station can be operated safely, as feasible. Existing parallel parking along NYS Route 9D would also be temporarily unavailable during construction. HHFT, Inc. may explore alternative transportation opportunities to allow trail user access from other locations (e.g., the Beacon and/or Cold Spring rail stations) to the Breakneck Ridge and Wilkinson Memorial Trailheads. While OPRHP and HHFT, Inc. would endeavor to maintain access to the Breakneck Ridge and Wilkinson Memorial Trailheads to the extent feasible

during construction, as safety permits, these trailheads may be closed for periods to address possible safety concerns and prevent visitors from accessing the construction site. The access to the trailheads along NYS Route 9D may be temporarily restricted. However, the Breakneck Ridge and Wilkinson Memorial Trails are accessible from other nearby points, including from within HHSPP, and thus would still be accessible by the public during construction of the Project.

As these restrictions are only temporary, the completed Project would ultimately enhance the public's enjoyment of nearby recreational resources. Specifically, the Project is located adjacent to/within HHSPP, allowing better and safer access to parking, the MNR Breakneck Ridge station, and trails within HHSPP. Pedestrian safety would be increased by way of more formalized parking and new pathways. The Bridge would allow for new recreational and visual access to the Hudson River shoreline. The new steward station in the Upper Overlook would allow for better housing of steward staff and equipment and would serve as a more formal introduction area for visitors to HHSPP and the surrounding area.

12. IMPACT ON CRITICAL ENVIRONMENTAL AREAS

Not applicable.

13. IMPACT ON TRANSPORTATION

The proposed action may result in a change to existing transportation systems.

a. – e. Not applicable.

f. Other impacts:

Impact Level: Small short-term (temporary) construction impacts. Long-term beneficial impacts to transportation systems and to pedestrian and driver safety.

Description: Construction of the Project would result in short-term impacts on traffic, limitations on access to and from the MNR Breakneck Ridge station, and temporary closures of the Breakneck Ridge and Wilkinson Memorial Trailheads, as needed to address possible safety concerns (though these trails would still be accessible and accessed from other points in HHSPP). To address temporary single-lane closures along NYS Route 9D, Work Zone Traffic Control (WZTC) Plans would be developed in conjunction with NYSDOT, consistent with their Driver's First Initiative. The WZTC Plans would minimize travel delays for drivers in the vicinity of the work zones. As part of the WZTC Plans, temporary traffic signals could be installed to provide traffic control for alternating traffic flows within the work zones along NYS Route 9D. As noted under "Construction Means and Methods," the traveling public would be kept informed of temporary roadway conditions during construction through various messaging systems. Messaging systems may include HHFT, Inc.'s website and social media, local newspaper notices, and additional measures implemented in coordination with NYSDOT, such as variable message signs (VMS).

Parking along NYS Route 9D would be prohibited during construction. This would eliminate the existing unsafe parking condition whereby vehicles haphazardly park along both sides of NYS Route 9D. The current parking conditions cause delays and congestion along the half-mile stretch of road north of the Breakneck tunnel. At peak hours, as many as 158 cars park along the roadway, with others

arriving and departing throughout the day resulting in unsafe conditions, including vehicle-to-vehicle conflicts and vehicle-to-pedestrian and vehicle-to-bicycle conflicts. As a result of the temporary trailhead closures during construction, it is anticipated that there would be a decline in visitors and vehicular traffic to this area along NYS Route 9D. This would, in turn, reduce vehicle congestion in the area around the Project.

Construction is anticipated to take place over a period of approximately 24 to 30 months, and given the size and scale of the Project, involve an on-site labor force of 15 to 20 workers. Most of the vehicle trips associated with construction would arrive and depart around the construction start and stop work hours. Construction hours are expected to be 7:00AM to 4:00PM, with arrivals generally between 6:45AM and 7:00AM, and departures generally between 4:00PM and 4:15PM. Peak hours for construction activity are expected to be from 8:00AM to 12:00PM and 1:00PM to 3:00PM. This would result in predictable impacts on vehicular traffic.

The increase in construction vehicle trips and equipment during the construction period would be offset by the significant reduction in visitor traffic. Parking for the construction workers and delivery vehicles would be at the current dirt lot north of the Breakneck tunnel (the future southern parking area shown on **Figure 1**) and at off-site locations during construction of the Breakneck Connector portion of the Project. Construction of the Breakneck Connector would require up to about 1 to 2 truck trips per day. Similarly, truck trips for deliveries via NYS Route 9D for the Bridge construction would be limited to about 1 to 2 truck trips per day since larger materials would arrive on barges along the Hudson River shoreline on the west side of the MNR tracks. The expected vehicle trips for construction workers and materials would be further reduced when the waterside construction and Bridge erection tasks are executed. Some workers and most materials and equipment for the Bridge construction and the southbound MNR platform construction would be mobilized by water and not utilize the highways or roads to access the area west of the MNR tracks. A limited number of workers for construction of the southbound MNR platform would arrive to the site via NYS Route 9D and the workers would access the work zone using the existing pedestrian bridge at the northern end of the Project Site. As such, significant impacts to traffic would not result from the construction of the Project. Additionally, implementation of the communication methods described above would provide real-time traffic information, further mitigating impacts on transportation.

The location of the barges to be used during the construction process would be outside of the federally-maintained navigable river channel. There is no expected impact to navigation due to the Project.

Completion of the Project would result in a number of long-term beneficial impacts related to transportation. The Project includes improvements to the bicyclist and pedestrian experience, moving those users off NYS Route 9D and increasing safety. There would be new and improved parking areas (replacing informal and unsafe parking on the narrow NYS Route 9D), which would reduce congestion and improve safety. The MNR station and platform enhancements for riders would increase accessibility and facilitate easier access to nearby trails from the MNR station. Project improvements would also lead to safer and easier access to nearby trailheads. No long-term adverse impacts on transportation are expected from the Project.

14. IMPACT ON ENERGY

Not applicable.

15. IMPACT ON NOISE, ODOR, AND LIGHT

The proposed action may result in an increase in noise, odors, or outdoor lighting.

a. The proposed action may produce sound above noise levels established by local regulation.

Impact Level: No/Small impact.

Description: The Project is located directly adjacent to the MNR tracks, which have high-speed MNR and Amtrak passenger trains as well as slower freight trains passing by multiple times a day that create substantial, albeit, temporary, noise in the immediate vicinity. The loudest noise-producing activities from the Project construction are anticipated to take place generally between 8:00AM and 3:00PM and would entail the installation of drilled piles for the Bridge foundation and the potential use of hydraulic mounted hammers if bedrock is encountered. The spuds for the logistics barges and crane barges would be installed by self-weight and would not generate noise. There would be occasional noise generated from truck deliveries that is not anticipated to exceed acceptable noise thresholds and such noise would be limited to, at most, a few hours each workday. Additionally, there is limited development in proximity to the Project Site that would be affected. Two residences are located about 1,500 feet south of the Project Site, with Breakneck Ridge intervening. The next nearest residences to the Project Site are about 2,000 feet to the north and 1.5 miles to the south.

Given the nature of the Bridge installation portion of the Project, work would be performed during extended working hours between 6:00AM and 5:00PM to maximize flexibility around the Hudson River tides. Further, to minimize impacts to railroad operations, critical-lift erection of the Bridge over the MNR tracks is anticipated to be completed during overnight periods from 11:00PM to 4:00AM the next morning.

b. The proposed action may result in blasting within 1,500 feet of any residence, hospital, school, licensed day care center, or nursing home.

Impact Level: No impact.

Description: No blasting is anticipated as part of the Project.

c. The proposed action may result in routine odors for more than one hour per day.

Impact Level: Small impact.

Description: The Project would produce temporary noise and exhaust during the period of construction only. Thus, these impacts would only be temporary in nature. Furthermore, prolonged construction is not anticipated at any single location. Additionally, contractors would have to comply with environmental controls, as well as worker health and safety protocols. In the instance of dusty conditions, a water tanker would be available to spray and manage dust. If deemed necessary, contractors would be required to implement truck tracking pad and wheel washing stations to ensure roads remain clean and free from construction debris.

The composting comfort stations would emit odors, but any such emissions would dissipate quickly since there are no additional tall buildings or plantings in the immediate area and the stack height would meet manufacturer recommendations.

d. The proposed action may result in light shining onto adjoining properties.

Impact Level: No/Small impact.

Description: Lighting proposed at the parking area, on the trail, near the comfort station, and possibly for signage would be dark sky compliant. There will be areas on MNR lands, especially on the 40-foot platforms on each side of the MNR tracks, where "dark sky compliant" will not be permissible for the safety of MNR's Operation, Customers and Employees. There is the possibility for some light spillage directly around the platforms near the tracks. There are no residential or commercial properties directly adjacent to these facilities; therefore, no impacts are expected. Some dark sky compliant lighting will be added near NYS Route 9D (ex. comfort station). Coordination with NYSDOT and MNR would take place as necessary for lighting details.

e. The proposed action may result in lighting creating sky-glow brighter than existing area conditions.

Impact Level: Small impact.

Description: Lighting proposed at the parking area, on the trail, near the comfort station, and possibly for signage would be dark sky compliant. There will be areas on MNR lands, especially on the 40-foot platforms on each side of the MNR tracks, where "dark sky compliant" will not be permissible for the safety of MNR's Operation, Customers and Employees. As there are no lights on the existing platforms, this will add new lighting to the Breakneck Ridge Station. There is the possibility for some light spillage directly around the platforms near the tracks. To the extent possible, the Project minimizes light pollution by using dark sky compliant fixtures where feasible.

16. IMPACT ON HUMAN HEALTH

The proposed action may have an impact on human health from exposure to new or existing sources of contaminants.

a. – l. Not applicable.

m. Other impacts: Hudson River PCBs.

Impact Level: No/small impact.

Description: The Hudson River is flagged for PCBs, but no impacts are anticipated. During mobilization for the crane and logistics barges, when the spuds enter the river bottom by self-weight, there would be temporary and minor disturbance of the sediments while the spud piles are lowered into position at a controlled rate. No pile driving in the water would be performed. All barges, tugs, and vessels delivering workers, equipment, and materials to the Project Site would maintain at least a 2-foot separation from the mudline at all times. Additionally, the shoreline work that would occur only for barge Option 2, land barge, would be enclosed in turbidity curtains so there would be no

resuspension of sediments in the water column. As such, any disturbance of sediments would be minimized and temporary.

17. CONSISTENCY WITH COMMUNITY PLANS

The proposed action is not consistent with adopted land use plans.

a. – g. Not applicable.

h. other: beneficial impacts; consistent with community plans/adopted land use plans.

Description: The Project is located within or adjacent to the Maurice D. Hinchey Hudson River Valley National Heritage Area (Heritage Area), the Hudson River Valley Greenway, and the HHSPP. The Project is designed to be consistent with community land use plans, including these three plans.

The Heritage Area, designated by Congress in 1996, encompasses ten counties adjacent to the Hudson River, extending across four million acres. According to the National Park Service, the Hudson River Valley is a landscape that defined American history, serving as a political boundary during the early Revolutionary War, a destination on the Underground Railroad, as well as a powerhouse for early industry. The purpose of the Heritage Area is to recognize this historical significance, interpret and protect this heritage, and authorize federal financial and technical assistance. This is largely achieved by linking the many Heritage Sites within the Heritage Area. Construction and operation of the Project is in keeping with other, similar, recreational resources in the Heritage Area, and would grant users greater access to the Hudson River shoreline and other natural features of the area.

The Hudson River Valley Greenway (established under the Hudson River Valley Greenway Act of 1991) is a state sponsored program created to facilitate the development of a regional strategy for preserving scenic, natural, historic, cultural, and recreational resources. The Greenway Act created the Hudson River Valley Greenway Communities Council ("Greenway Communities Council"), tasked with facilitating the goals of the Hudson River Valley Greenway. The Greenway Communities Council works with local and county governments to enhance local planning and carry through the Greenway's guiding principles. These guiding principles include improving public access to the Hudson River, linking historic sites within the Hudson River Valley, and improving public access to the Hudson River. The land uses envisioned by the Project are consistent with these principles.

While most of the Project site is not within HHSPP, it is important to note the Project is located directly adjacent to, and includes trail connections to, HHSPP. HHSPP is an 8,900 acre park preserve that spans Dutchess, Putnam, and Westchester Counties. It is made up of a series of separate parcels along a 16-mile stretch of the eastern shore of the Hudson River and extends eastward up to four miles from the Hudson River's shoreline. HHSPP is a designated Park Preserve under New York State's Parks, Recreation and Historic Preservation Law (Chapter 36-B, Article 20, of the Consolidated Laws of the State of New York).

The HHSPP includes over 70 miles of trails, and within HHSPP, the popular Breakneck Ridge Trail connects with Undercliff Trail, Breakneck Bypass, Notch Trail, Wilkinson Memorial Trail, Nimham Trail, and Casino Trail. The trails in HHSPP offer hiking, hunting access, and birdwatching. OPRHP acts as a steward by protecting the wide variety of habitats located within HHSPP borders. The Project would grant users greater visual access to the Hudson River shoreline and enhanced access to HHSPP resources in the area. Fee title to the Breakneck Ridge Trailhead and Upper Overlook was recently transferred to OPRHP and is now part of HHSPP.

Although a very small portion of the Project Site is located in the HHSPP boundary, due to its proximity and integral connection to HHSPP, OPRHP reviewed the entire Project for consistency with the HHSPP Final Master Plan. OPRHP determined the Project is consistent with many of the goals identified in the HHSPP Master Plan, including natural resource, recreation, cultural, scenic, access, and facility development goals. Regarding the Master Plan's natural resource goals, the work at the Upper Overlook would better define and harden the trail tread and install some barriers to keep visitors in areas with a smaller footprint and protect more natural habitat. In addition, the Project would remove invasive species along the MNR tracks and NYS Route 9D and install new plantings that are consistent with OPRHP's Native Plants Policy (6/1/2017). The Project's consistency with recreation goals includes providing year-round day-use facilities for the public. While OPRHP and HHFT, Inc. would endeavor to maintain access to the Breakneck Ridge and Wilkinson Memorial Trailheads to the extent feasible during construction, as safety permits, these trailheads may be closed for periods to address possible safety concerns and prevent visitors from accessing the construction site. For protection of cultural resources, the planning and design of the Project have been conducted in direct coordination with DEP regarding protection measures for the adjacent DEP HRDC (National Register eligible) and associated infrastructure. The Project has also been reviewed by OPRHP's Division for Historic Preservation (see Question 10).

Regarding the HHSPP Master Plan's scenic resource goals, the Project is consistent by maintaining scenic vistas from the Upper Overlook area and providing a new vista of the Hudson River from the Bridge. Public access goals that are met by the Project include: providing safe access to HHSPP from a local road and across a roadway; providing a non-motorized trail facility that links parking areas to natural and recreational resources; providing enhanced access for emergency response and rescue operations; and providing a new ADA-compliant recreational resource. Lastly, the Project is consistent with the facility development goal of improving parking at Breakneck Ridge and secondarily providing restrooms for an HHSPP trailhead and parking area.

It is again noted that MTA/MNR will retain fee title to most of the Project Site (i.e., the Breakneck Connector and Bridge). Thus, this part of the Project Site would not be appended to HHSPP. Nevertheless, the public would be able to enjoy access to the Breakneck Connector and Bridge through public access permissions that would be granted to OPRHP and HHFT, Inc.

18. CONSISTENCY WITH COMMUNITY CHARACTER

The proposed project is inconsistent with the existing community character.

a. – f. Not applicable.

g. other impacts: beneficial impacts; consistent with community character.

Description: The Project is designed to be consistent with the existing community character of the area. It would not replace or eliminate existing facilities, structures, or areas of historic importance to the community. Rather, it would enhance the area by upgrading existing facilities and add a new trail that connects to HHSPP. The Project would improve trail facilities and provide greater visual access to the Hudson River Shoreline. The shape, color, and orientation of the Bridge are designed to evoke the surrounding landscape. Per the DEP-00-2 guidance, significance is determined based on the extent to which the visibility interferes with the public's enjoyment or appreciation of a resource (see Question 9, above). In this case, the Project, and particularly the Bridge component, given its low profile, would

not be anticipated to interfere with the public's enjoyment of the eastern shoreline of the Hudson River and mountainous contours beyond. The Project would not be perceived as a uniquely new element on the landscape.

The size and scale of the Bridge would also be consistent with the predominant architectural scale and character of other man-made structures in the area, particularly the DEP HRDC, which is greater in size and bulk than the Bridge. The Breakneck Connector component of the Project would be keeping in kind with the linear nature of the existing infrastructure, including the MNR tracks and NYS Route 9D and the recreational use of the area.

The Project would not interfere with the use or enjoyment of officially recognized or designated public resources. Public resources can include parks, playgrounds, public properties and buildings, ball fields, picnic areas, and pedestrian pathways such as hiking and biking trails, among others. When a proposed project interferes with the public use or enjoyment of these resources, quality of life, and thus community character, can be adversely impacted. The Project is expected to improve quality of life for nearby residents, as well as users traveling to the area for its recreational offerings. It would not eliminate any public resources, but rather formalize and enhance the existing resources and add a new one (the Bridge).

Finally, the Project would address the currently overrun parking areas, and the lack of pedestrian and hiker safety that exists along the NYS Route 9D corridor near the MNR Breakneck Ridge station and the Breakneck Ridge Trail. Upgrades to access points to the Breakneck Ridge and Wilkinson Memorial Trails would facilitate a safer connection for those arriving by car, bike, foot, and rail. Separation of vehicular and pedestrian uses, by way of new parking areas and dedicated bike and pedestrian paths and areas, would make the user experience safer. Part of a community's character comes from the community services that are available because those contribute to the residents' sense of community. These include, among others, police, fire, and emergency medical services. As a result of the numerous safety improvements the Project would introduce, the Project would not place additional demand on these emergency services, and could, in fact, help reduce demand.

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View of BNCB Facing East-Northeast from Hudson River

View of BNCB Facing East-Southeast from Hudson River

Figure 6

View 1 Facing North from Upper Overlook

4.7.22

View 2 Facing North from Upper Overlook

BREAKNECK CONNECTOR-BRIDGE PROJECT

Figure 8

APPENDICES

Appendix A
Breakneck Connector Drawings

[Superseded]

Appendix B
Bridge Drawings

[Superseded]

Appendix C
Steward Station Drawings

[Superseded]

Appendix D
Construction Logistics Memorandum

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Memorandum

To:	Amy Kacala (HHFT)
From:	Sandy Collins, Steven Gates
Date:	December 22, 2022
Re:	Breakneck Connector and Bridge—Construction and Design Assumptions for EAF
cc:	Faye Premer, Chelsea Anderson, Frances Felske (ATW)

This memorandum summarizes the design and construction logistics being analyzed for the SEQRA review of the proposed Breakneck Connector and Bridge (BNCB) Project (the "Project"). A summary of the Project elements is provided in the table below, followed by a summary of construction and design assumptions.

Project Elements	
Breakneck Connector Trail	- Approx. 3,100 feet long and 14 feet wide - Elevated walkway with glulam deck (northern segment), on-grade compacted gravel (middle segment) - Stonework at trail banks: scramble bank, stream bank
Bridge	- Southern trail segment over MNR tracks, to accommodate pedestrians and DEP vehicles
MNR Platforms	- Two (2) 40'x12' Metro-North Railroad (MNR) platforms to replace existing platforms (one northbound, one southbound)
Parking	- Two (2) pull-in paved parking areas on west side of NYS Route 9D - Paved parallel parking along east and west sides of NYS Route 9D - Total +/- 109 standard spaces, +/- 4 ADA spaces
Improvements to Surface Hydrology	- Stormwater management
Comfort Stations	- Two (2) restroom facilities adjacent to northern parking area, with adjoining basement areas.
Upper Overlook Improvements	- Formalization of trails and closure of social trails - One (1) steward station (approx. 9'x12' storage shed with approx. 18'x25' green roof/canopy)
Power Lines	- Relocation of overhead wires from west side to east side of NYS Route 9D; northern portion of new wires to be aboveground and southern portion to be underground. - Includes an underground connection beneath NYS Route 9D to Comfort Stations and another underground connection beneath NYS Route 9D to reconnect to existing power lines along west side

CONSTRUCTION AND DESIGN ASSUMPTIONS		
Overall Construction		
General	• Project Site Area/Limit of Disturbance for overall BNCB Project is approximately 12 acres. Construction activities within the Limit of Disturbance include clearing and grubbing, grading, installation of Project elements, and landscaping. • All tree clearing to occur between November 1 and March 31.	
Construction Activities East of MNR Tracks		
Power Line Relocation	• Tree removal along east side of NYS Route 9D, with single-lane closure during off-peak hours on weekdays.	*+/- 8 weeks*
	• Remove existing poles along west side of NYS Route 9D. • Install new poles along east side of NYS Route 9D (including digging holes, installing poles, and fitting with overhead wires); requires single-lane closure on NYS Route 9D. • Construct underground connections beneath NYS Route 9D to comfort stations and to reconnect to existing power lines on west side at southern end of Project Site; requires single-lane closure on NYS Route 9D.	*+/- 9 weeks*
	• Work zone traffic control (WZTC) plan to be prepared for approval by NYSDOT for temporary single-lane closure on NYS Route 9D.	
Breakneck Connector Trail • *Elevated Walkway with Glulam Deck*	• Implement erosion controls and site preparation work at northern end of new trail to grade and stabilize slope. • Install micro-piles and other foundation supports, including pilecaps, concrete walls, and abutments. • Install steel piers, glulam beams, and elevated glulam deck at northern portion of trail using crane situated along NYS Route 9D, requiring single-lane closure. • Install metal railings and finish details - supplied and erected from within construction fence (no road closures). • WZTC plan to be prepared for approval by NYSDOT for temporary single-lane closure on NYS Route 9D.	*+/- 20 weeks*
Breakneck Connector Trail • *On-Grade Trail Section* • *Parking Lots* • *Comfort Stations* • *Trail Banks* • *Improvements to Hydrology* • *Northbound MNR Platform*	• Construction materials delivered from NYS Route 9D (1 to 2 trucks per day anticipated). No lane closures on NYS Route 9D anticipated for this portion of construction. • Existing gravel pull-off area along NYS Route 9D (the future south parking area) to be used for staging all materials and equipment. • Erosion and sediment control measures established, vegetation cleared, land graded and stabilized, and stonework/trail banks installed. • Installation of stormwater drain inlets, outlets, headwalls, and pipe runs. • Crushed stone laid for trail, parking areas paved, and comfort stations constructed. • Excavator to create adjoining basement for the two comfort stations to house the composting toilet system. Any rock encountered may need to be removed by hydraulic mounted hammers. • Land for northbound MNR platform graded with backhoe/excavator and mini pile driver used to install approximately 12 to 16 piles. • Establish landscaping. • Temporary trailhead closures to be coordinated with OPRHP.	*+/- 17 months*

Upper Overlook Improvements	• Social trails to be closed and designated trails to be formalized. • Excavation primarily using hand tools (i.e., picks, shovels, and steel bars for leveraging stone). • Materials to be moved around the site using methods such as: mini skid steers (42" width max), tracked crawler carriers (28" width max), and possibly a micro excavator (36" to 48" wide max). • Hand-powered cable rigging used to move rocks aside, as needed, and to drag stones when mechanized tracked equipment is not safe or otherwise feasible. • Digging and anchoring of fencing performed with hand tools and rotary hammer electric or pneumatic drills (air compressors staged at parking area). • Steward station to require minimal earthwork for construction of a small shed with some storage, a canopy, and benches. No utility connections will be required but may include solar panels for minimal electric service. Materials will be moved to the site using the same methods as the trail work (e.g., skid steer loader for unloading trucks, and walk-behind tracked carrier and possibly another mini skid steer up above at the site). Timber components, green roof materials, doors and shelving will be carried up by hand, and/or use rigging or walk-behind track carrier. Site clearing and preparation will be done by hand, and the bottom course of the timber structure will be scribed and cut to fit the bedrock. The rest of the timber structure will be assembled, adjusted for final fit, and fastened by hand with assistance of temporary staging. Green roof, doors, and shelving would be installed with handheld tools.	*Site Prep: +/- 1 month* *Construction: +/- 6 months*
Bridge • *Eastern Abutment and Superstructure Access*	• Pending further geotechnical investigations, excavation may be required for the eastern bridge foundation. To facilitate construction, NYS Route 9D would be temporarily realigned with the speed limit reduced to 30 mph. A WZTC plan would be prepared for approval by NYSDOT. • WZTC plan would have two key phases: (1) short-term temporary single-lane closure on NYS Route 9D (maximum one month to establish temporary pavement for road realignment) and (2) temporary road realignment with reduced speed limit (~30 mph) for remainder of east abutment construction (+/- 6 months). The realigned roadway may be used again later in construction for access for minor superstructure fit out should the BNC staging area be unavailable. • Construction materials delivered from NYS Route 9D (1 to 2 trucks per day anticipated). • Erosion and sediment control measures established and vegetation cleared. • Two staging areas are assumed for this construction: (1) shared access through Breakneck Connector Trail staging area (i.e., the existing gravel pull-off area and future south parking area along NYS Route 9D) for site access and some laydown for as long as feasible; (2) an elevated staging area immediately adjacent to eastern abutment for use of any higher elevation activities and for access should the BNC staging area be unavailable. • Land for eastern abutment and wall graded with backhoe/excavator, and mini pile driver used to install approximately 20 piles for eastern abutment and wall. If rock is encountered, it may require removal by hydraulic mounted hammers. • Minor superstructure construction (e.g., installation of deck, railing, electrical conduits, lighting, signage, etc.).	*Site Prep: +/- 1 month* *East Abutment and Wall Construction: +/- 6 months* *Access for superstructure construction: +/- 17 months*

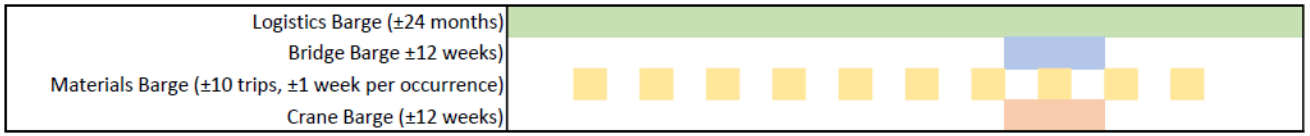
<table>
<tr><td colspan="3">Construction Activities West of MNR Tracks (Waterside)</td></tr>
<tr><td>Bridge
• Deck and Western Abutment</td><td>Construction of Bridge and its western abutment to be largely facilitated by barges, including: (1) logistics barge to be anchored for the duration of construction (about 24 months); (2) bridge barge to transport and erect major structural components (moored for about 12 weeks); (3) materials barges to periodically transport additional materials (estimated at about 10 trips, anchored for about 1 week at each occurrence); and (4) crane barge to transport large crane that would lift structural components into place (moored for about 12 weeks). The image below illustrates how barges may be present concurrently during construction, with further details provided below.
 

Image is illustrative and does not represent specific timeframes.
• <u>Logistics barge</u>:
- Anchored offshore for duration of construction.
- Anchored with four (4) 30 to 36-inch diameter steel piles, which will be installed by self-weight.
- Anticipated size of up to 100 feet by 300 feet.
- Primary barge over which materials, personnel, and equipment will be offloaded and rolled or lifted onto shore.
- Ramp will extend from the barge to the shoreline to offload construction equipment and materials, with compacted stone and steel plates for the ramp to bear upon.
- Will deliver equipment needed to establish erosion and sediment controls (e.g., silt fence, turbidity curtain).
- Will deliver micro-pile equipment, excavation equipment, and preliminary materials for stabilization of shoreline (if needed—see crane Option 2 below) and foundations of the bridge.
- Deep foundations for the bridge spans would be constructed using micro-pile equipment. Cast-in-place concrete will be poured for pilecaps and piers.
• <u>Bridge Barge</u>:
- Once the pilecaps and piers are complete, a bridge barge carrying the major structural deliveries for the bridge would mobilize to the site:
o Major structural materials on the bridge barge would arrive for assembly and erection by the crane barge (see below).
o Bridge barge would be tied to logistics barge for about 12 weeks.
o Anticipated barge size is 54 feet by 200 feet.</td><td>+/- 24 months</td></tr>
</table>

Bridge (cont'd) • *Deck and Western Abutment*	• **<u>Materials Barge</u>:** - Additional materials may be delivered by a materials barge transported by tug. - Potentially about 10 trips of the materials barge would be anticipated throughout construction. - To be moored to the logistics barge for about one week at each occurrence. • **<u>Crane Barge</u>:** - Crane barge to deliver crane for bridge assembly and erection. It would be mobilized concurrently with Bridge barge and materials barge. Two assembly options being considered: o Crane Option 1: Crane remains on the 100-foot by 300-foot crane barge and lifts bridge sections into place from its anchored position. Crane barge will be secured in place by four (4) 30 to 36-inch diameter steel piles installed by self-weight. Bridge components assembled on the barge and then lifted into place. Anticipated duration for this work would be about 12 weeks. o Crane Option 2: Land crane will be rolled from barge onto land via ramp. The land crane would assemble the bridge components on land and then erect the bridge sections. Anticipated duration for this work would be about 12 weeks. Barge delivering crane is assumed to remain for 12 weeks. This option would require shoreline stabilization: - Approximately 90 feet of shoreline adjacent to the logistics barge will be cleared to the extent needed for construction access to the bridge construction site and as a foundation area. Site preparation will include: o Levelling of the area with excavator, backhoe, or bobcat. o Placement of geotextile fabric along the shoreline (2 layers on ground from top of bank to MLW) with an excavator. o Placement of about 450 to 500 cubic yards 6 to 9 inches thick of clean, crushed limestone, which will be compacted to produce a stabilized rock slope. Stone will be delivered to site using 135 by 50 foot stone barge transported by tug, which would be moored to the logistics barge for about 4 weeks. Stone will control vegetation, dust, and minimize erosion. o Placement of crane mats over crushed stone, if needed. • Dredging activity is not anticipated.	

Southbound MNR Platform	Construction of southbound MNR platform to be facilitated by barges, including: (1) **equipment barge** anchored for about 1 week at the onset of construction; (2) **logistics barge** anchored for most of construction (about 14 weeks); and (3) **crane barge** moored for about 6 weeks. Conservatively, up to 3 barges may be present at one time, which could occur simultaneously as the 4 barges in place for Bridge construction, if these activities align. • **Equipment Barge:** - To arrive by tug and be anchored with four (4) 36-inch spud piles installed by self-weight - Anticipated barge size is about 30 feet by 90 feet - To serve as a landing point for delivery of equipment and to establish soil erosion and sedimentation measures (e.g., silt fence, turbidity curtain). - A temporary ramp will be installed in place to offload equipment. Ramp will extend from the barge to the shoreline to offload construction equipment and materials, with compacted stone and steel plates for the ramp to bear upon - Will demobilize once these tasks are complete (about one [1] week). • Site clearing and grubbing would then occur for about one (1) week, with vegetation and debris temporarily stockpiled onsite with erosion and sediment control measures. • **Logistics Barge:** - Following site preparation, logistics barge to be anchored offshore for about 14 weeks with four (4) 36-inch diameter steel piles installed by self-weight. - Anticipated barge size is up to about 50 feet by 200 feet. - Will have ramp to deliver materials to construction site with compacted stone and steel road plates for the ramp to bear upon. - Would deliver materials, and then remove materials, stockpiled debris, and equipment at end of construction. - Concrete for foundations to be mixed and pumped on the barge or on land. All material to be provided from logistics barge; no trucks will be mobilized to the site. Mini pile driver to be used to install 14 to 18 piles. - Tug boat to transport barge to and from site. • **Crane barge:** - Will be mobilized to the site to move pre-fabricated platform components and heavy materials to land. - Anchored with four (4) 36-inch spud piles installed by self-weight - Anticipated barge size is about 200 feet by 100 feet - Crane would lift materials from logistics barge or crane barge to land - In place for up to about 6 weeks. • No shoreline stabilization or work below the top of bank will be required for this operation. • Existing pedestrian bridge over MNR tracks to be used for workers and transporting hand tools to the construction site. Worker parking to be provided on the project site.	*+/- 15 weeks*

Summary of Construction Sequencing and Duration	
Timing: • Majority of work would occur during weekdays from 7 AM – 4 PM, with occasional work on weekends and overnight work for Bridge construction to minimize railroad disruptions. • All tree clearing to occur between November 1 and March 31.	
Sequencing: • The sequencing below shows the construction durations for each Project area, which could overlap.	
Early Enabling Activities (5 months) • Central Hudson power line relocation, including tree removal east of NYS Route 9D (+/-8 weeks) then utility relocation (+/- 9 weeks)	
Upper Overlook (6 Months)	
• Trail Improvements and Steward Station	Months 1-6
Breakneck Connector, including MNR Platforms and Comfort Stations (22 Months)	
• Mobilization & Clearing	Months 1-2
• Foundations (Elevated Walkway, Train Platforms, and Comfort Stations)	Months 3-10
• Construct Breakneck Connector Trail, Trail Banks, Parking Lots, Comfort Stations, Trail Signage and Lighting, Stormwater Management, and MNR Platforms	Months 4-19
• Establish Plantings	Months 16-19
• Demobilization (Remove Fencing and Trailers, and Restore Staging Area)	Month 19
• Ongoing Plantings Deferred to Fall Planting Window, as needed	Months 20-22
Bridge (24 Months)	
• Mobilization & Clearing	Months 1-2
• Foundations for Eastern Abutment	Months 2-7
• Foundations (Western Bridge Abutment), Bridge Delivery & Erection	Months 3-22
• Site Completion, Restoration, and Demobilization	Months 22 through 24
STORMWATER MANAGEMENT OF BRIDGE	
Drainage	**Free draining option will be used:** • Timber deck system is a free draining structure in its entirety. • Stormwater runoff from the bridge would drip through the spaces between the deck timbers, over the steel box, to the ground surface below. Provisions for erosion control measures in zones of more concentrated flow are under review.

Appendix E
Draft Stormwater Pollution Prevention Plan (SWPPP)

[Superseded]

Appendix F
Bald Eagle Construction Noise Assessment

A construction noise assessment was conducted to determine the potential for impacts to nesting bald eagles in the vicinity of the Proposed Project. The assessment consisted of estimating existing ambient noise levels at the location of the nearest bald eagle nest, estimating the level of noise generated by construction of the Proposed Project and evaluating the expected noise level at the bald eagle nest during construction. The analysis considered both the maximum instantaneous noise level (i.e., L_{max}) and equivalent (or average) 1-hour noise level (i.e., L_{eq}).

The primary sources contributing to existing ambient noise levels at the location of the nearest nest are the freight rail line running along the west side of the Hudson River (approximately 475 feet from the nest) and the Metro North commuter rail line running along the east side of the River (approximately 3,800 feet from nest). Existing noise level contributions from each of these sources were estimated using the rail noise analysis methodology contained in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (September, 2018) and Federal Railway Administration CREATE Railroad Noise Mode (2006), assuming a single freight train and six commuter trains passing during a single hour. While other sources (e.g., surrounding roadways, aircraft overflights, etc.) would also contribute to existing ambient noise levels at the nest location, the existing noise levels from only the rail sources were used to represent the existing ambient condition at the nest. This approach is conservative because the use of a lower existing ambient noise level would tend to result in a higher noise level increment from Proposed Project construction.

Noise resulting from construction of the Proposed Project was estimated using construction logistics, schedule, and equipment information from the Project's construction management team. The noise analysis considered the most noise-intensive portions of construction (i.e., simultaneous pile drilling with clearing and tree removal or rock excavation). Noise emission levels and usage factors for specific pieces of construction equipment were determined based on guidance from the Federal Highway Administration's Roadway Construction Noise Model and were projected to an aggregate construction noise level at the nearest nest (approximately 4,900 feet from the construction work area). The details of the construction noise assessment are included in Appendix H. The noise analysis results are summarized in the table below.

Table 1
Eagle's Nest Construction Noise Assessment Summary (in dBA)

Receiver	Existing Condition		Proposed Project Construction	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Nearest Eagle's Nest	47	78	51	56

As shown in **Table 1**, noise levels resulting from construction of the Proposed Project would be comparable to the noise levels created by nearby freight and commuter rail traffic in the existing condition (i.e., would exceed existing noise levels by no more than 4 dB). New York State Department of Environmental Conservation's, "Assessing and Mitigating Noise Impacts", indicates that "[i]ncreases from 3-6 dB may have potential for adverse noise impact only in cases where the most sensitive of receptors are present" and, therefore, that mitigation should not be required. Based on the findings of the noise assessment, construction of the Proposed Project would have little to no potential to impact nesting eagles, the closest nest sites of which are on the opposite side of the river.

Breakneck Connector and Bridge
Bald Eagle Nest Construction Noise Analysis
Construction Noise Analysis Summary

Receiver	Existing		Construction		Increment	
	Leq	Lmax	Leq	Lmax	Leq	Lmax
Eagle Nest	47	78	51	56	4	0

Breakneck Connector and Bridge
Bald Eagle Nest Construction Noise Analysis
Existing Noise Level Estimate

Source	Quantity	SEL	Distance	Leq	Lmax
Commuter line locomotive (diesel)	6	92	3795	17	45
Commuter line rail cars	42	82	3795	25	35
Freight line locomotive	1	97	472	42	73
freight line cars	1	100	472	45	76
			Total	47	78

NOISE SOURCE AND RECEPTOR DETAILS

Summary of Noise Source Reference SELs

Reference SELs at 50 feet and speed coefficients are shown for all moving noise sources in Table 1. These reference SELs are per vehicle except for freight cars and hopper cars, which are based on 2000-feet of cars.

Table 2 shows the reference SELs at 50 feet and coefficients for all stationary noise sources. All of the stationary noise source coefficients are 10; however, the references are different (i.e. duration of pass-bys, trains per locomotive, buses per hour, etc.)

Table 1. Moving Noise Source Reference SELs and Speed Coefficients

Moving Noise Sources	SEL at 50 feet	Speed Coefficient	Reference Speed (mph)
Commuter Electric Locomotive	90	10.0	50
Commuter Diesel Locomotive	92	-10.0	50
Commuter Rail Car	82	20.0	50
RRT/LRT	82	20.0	50
AGT, Steel Wheel	80	20.0	50
AGT, Rubber Tire	78	20.0	50
Monorail	82	20.0	50
Maglev	72	20.0	50
Freight Locomotive	97	10.0	40
Freight Cars*	100	20.0	40
Hopper Cars (empty)*	104	20.0	40
Hopper Cars (full)*	100	20.0	40
Automobile	73	28.1	50
City Bus	84	23.9	50
Commuter Bus	88	14.6	50
* Freight and Hopper Cars+A51 SEL is based on 2000 feet of cars			

Breakneck Connector and Bridge
Bald Eagle Nest Construction Noise Analysis
Construction Noise Level Calculation

Source	RCNM Source Type	Usage Factor	Reference at 50 feet		Distance	At Receiver	
			Leq	Lmax		Leq	Lmax
Crane Barge - 200t Crawler Crane	Crane	16%	77	85	4906	37	45
Tugboat 1	n/a	n/a	74	83	4906	34	43
Crane Liebherr	Crane	16%	77	85	4906	37	45
Air Compressor - 1000cfm	Compressor (air)	40%	76	80	4906	36	40
Tractor	Tractor	40%	80	84	4906	40	44
Crawler/Dozer	Dozer	40%	81	85	4906	41	45
Wood Chipper	Other Equipment	50%	82	85	4906	42	45
Dump Truck	Dump Truck	40%	80	84	4906	40	44
Bauer BG 18H	Auger Drill Rig	20%	78	85	4906	38	45
Dump Truck	Dump Truck	40%	80	84	4906	40	44
Grout Plant	Slurry Plant	100%	78	78	4906	38	38
Concrete mixer truck	Concrete Mixer Truck	40%	81	85	4906	41	45
Tractor	Tractor	40%	80	84	4906	40	44
Pickup Truck	Pickup Truck	40%	51	55	4906	11	15
Excavator	Excavator	40%	81	85	4906	41	45
Tamper	Compactor (ground)	20%	73	80	4906	33	40
					Total	51	56

The RCNM does not include noise emission limits for tugboats, so the noise emission limits specified in the City of New York Marine Transfer Station Service Contract have been used as a conservative estimate of tugboat noise

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors

filename: EQUIPLST.xls
revised: 7/26/05

Equipment Description	Impact Device ?	Acoustical Use Factor (%)	Spec 721.560 Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow) (samples averaged)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5

Breakneck Connector and Bridge
Bald Eagle Nest Construction Noise Analysis
Construction Noise Level Calculation

Source	RCNM Source Type	Usage Factor	Reference at 50 feet		Distance	At Receiver	
			Leq	Lmax		Leq	Lmax
Hydraulic Hammer	Hydra Break Ram	10%	80	90	4906	40	50
15-ton truck mounted crane	Crane	16%	77	85	4906	37	45
Air Compressor - 1000cfm	Compressor (air)	40%	76	80	4906	36	40
Tractor	Tractor	40%	80	84	4906	40	44
Crawler/Dozer	Dozer	40%	81	85	4906	41	45
Wood Chipper	Other Equipment	50%	82	85	4906	42	45
Dump Truck	Dump Truck	40%	80	84	4906	40	44
Bauer BG 18H	Auger Drill Rig	20%	78	85	4906	38	45
Dump Truck	Dump Truck	40%	80	84	4906	40	44
Grout Plant	Slurry Plant	100%	78	78	4906	38	38
Concrete mixer truck	Concrete Mixer Truck	40%	81	85	4906	41	45
Tractor	Tractor	40%	80	84	4906	40	44
Pickup Truck	Pickup Truck	40%	51	55	4906	11	15
Excavator	Excavator	40%	81	85	4906	41	45
Tamper	Compactor (ground)	20%	73	80	4906	33	40
					Total	51	56

The RCNM does not include noise emission limits for tugboats, so the noise emission limits specified in the City of New York Marine Transfer Station Service Contract have been used as a conservative estimate of tugboat noise

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors

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Equipment Description	Impact Device ?	Acoustical Use Factor (%)	Spec 721.560 Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow) (samples averaged)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5

SBI CONSULTANTS, INC.

Construction Environmental Impact Assessment
HHFT BNC
7/18/2022
Exhibit D

				Anticipated Utilization at Peak																		
				Mobilization			Site Preparation			Crane and Bridge Erection (incl. Crane Demobilization)			Bridge Framing/Additional Support			Demobilization			Connector			TOTAL
Description	Fuel Type	Size/ Qnty	Unit	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Total Op Hrs
General Requirements																						
Crane Barge - 200t Crawler Crane, 54'x254' Spud Barge. Tier 3, 331 hp	diesel	254	ft	10	7	70	5	7	35	27	7	189	84	4	336	5	7	35	0	0	0	665
		1	ea																			
Materials Barge: 200'x54'	N/A	200	ft	5	0	0	5	0	0	27	0	0	84	0	0	5	0	0	0	0	0	0
		1	ea																			
Hopper Barge, Stone: 135'50'	N/A	135	ft	0	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
		1	ea																			
Tugboat 1, 800 hp. Tier 2	diesel	800	hp	2	12	24	2	12	24	4	12	48	12	12	144	2	12	24	0	0	0	264
		1	ea																			
Tugboat 2, 2100 hp. Tier 2	diesel	2100	hp	2	12	24	0	0	0	4	12	48	0	0	0	2	12	24	0	0	0	96
		1	ea																			
Crew/Workboat, 35'. Tier 2	diesel	400	hp	2	7	14	5	2	10	27	2	54	84	2	168	5	7	35	0	0	0	281
		1	ea																			
Safety Boat, 20' outboard	Gas	250	hp	21	1	21	5	1	5	27	1	27	84	1	84	5	1	5	0	0	0	142
		1	ea																			
Crane Liebherr LR1750/2. Tier 4	diesel	405	hp	0	0	0	27	4	108	0	0	0	0	0	0	0	0	0	0	0	0	108
		1	ea																			
Crane - Rough Terrain - Tadano GR1000 XXL	diesel	280	hp	0	0	0	0	0	0	0	0	0	84	7	588	0	0	0	0	0	0	588
		1	ea																			
Air Compressor - 1000 cfm	diesel	250	hp	0	0	0	5	1	5	27	2	54	5	1	5	0	0	0	28	2	56	120
		1	ea																			
Clearing & Tree Removal																						
Tractor, brush mowing arm RMB1865-1	diesel	55	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Crawler/Dozer/80 HP	diesel	80	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Hydraulic backhoe, Cat 323FL	diesel	87	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Wood Chipper, Vermeer WC2500TX	diesel	600	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Dump truck, diesel 400 HP, 15' length	diesel	400	hp	1	4	4	27	4	108	27	4	108	84	1	84	5	1	5	28	7	196	505
		2	ea																			
Pile Drilling																						
Bauer, BG 18H, 129,800 Ft-Lb T	diesel			2	4	8	27	4	108	0	0	0	0	0	0	0	0	0	10	4	40	156
		1	EA																			
Dump truck, diesel 400 HP, 15' length	diesel	400	hp	1	4	4	27	4	108	0	0	0	0	0	0	0	0	0	28	7	196	308
		2	ea																			
Grout Plant, D-12, 150 gal Storage Tank Capacity	diesel	50	hp	2	4	8	27	4	108	0	0	0	0	0	0	0	0	0	28	7	196	312
		1	ea																			
Con. mixer truck, 7000 international, 357 Cat engine	diesel	357	hp	2	7	14	5	2	10	0	0	0	0	0	0	2	7	14	20	4	80	118
		2	ea																			

Material Handling/ Installation																								
Tandem axle tractor, trailer 40', 80,000 GVW	diesel	400	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Pick-up/ heavyweight truck	gas	6000	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Forklift, 10,000 lb capacity, LP gas, Toyota 02-5FG45	lp	6000	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		2	EA																			
Excavator, CAT320 LR. Tier 4	diesel	173	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Hydraulic Hammer	hf	2500	ft*lbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	10	10
		1	ea																			
15-Ton Truck Mounted Crane	diesel	500	ho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	16	16
		1	ea																			
Tamper/vibratory	diesel	8.5	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
Road Widening and/or Installation of Barrier on Route 9D																								
Track Asphalt Paver, AP455	diesel	120	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Tandem Roller, BW 154 AP-5	diesel	21,605	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		2	EA																			
Tracked Excavator, I3IX	diesel	74	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Loader, 325G, 9,500 lbs	diesel	74	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Worker Access																								
Vehicles, auto & pick-up, lightweight	gas	3000	lbs	2	4	8	5	7	35	7	7	49	7	7	49	10	7	70	28	7	196	407
		2	EA																			
Vehicles, auto & pick-up, medium-weight	gas	4000	lbs	2	4	8	5	7	35	7	7	49	7	7	49	10	7	70	28	7	196	407
		2	EA																			
Traffic/Utility Company Vehicles																								
Vehicles, auto & pick-up, lightweight	gas	3000	lbs	1	4	4	10	7	70	0	0	0	0	0	0	1	4	4	10	7	70	148
		1	EA																			
Vehicles, auto & pick-up, medium-weight	gas	4000	lbs	1	4	4	10	7	70	0	0	0	0	0	0	1	4	4	10	7	70	148
		2	EA																			

MONDAY - FRIDAY NEW YORK - POUGHKEEPSIE

SCHEDULE EFFECTIVE: MARCH 27, 2022

For more information visit mta.info/mnr

TO NEW YORK

(SENIOR/DISABLED/MEDICARE FARE NOT VALID ON INBOUND PEAK TRAINS) (BICYCLES NOT PERMITTED ON INBOUND AM PEAK TRAINS)

Miles	Station	700	802	702	806	704	810	708	710	814	712	714	716	816	818	416	718	720	830	724
		OFF-PEAK	OFF-PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
74	Poughkeepsie		4 12		4 42		5 12			5 31				5 55	6 13				6 25	
65	New Hamburg		4 22		4 52		5 22			5 41				6 05	6 23				6 35	
59	Beacon		4 29		4 59		5 29			5 48				6 12	6 31				6 43	
52	Cold Spring		4 37		5 07		5 37			5 57				6 21					6 51	
50	Garrison		4 41		5 11		5 41			6 01				6 25					6 56	
41	Peekskill		4 52		5 22		5 52			6 12				6 37					7 08	
38	Cortlandt		4 57		5 27		5 57			6 17				6 43					7 13	
33	Croton-Harmon Ar.																			
33	Croton-Harmon Lv.	4 42	5 06	5 14	5 36	5 24	6 06	5 53	6 11	6 26	6 22	6 36	6 46	6 52				7 08	7 23	7 03
31	Ossining	4 46		5 18		5 28		5 57	6 14		6 26	6 39	6 50					7 12		7 07
30	Scarborough	4 48		5 20		5 30		5 59	6 17		6 28	6 42	6 52					7 15		7 09
27	Philipse Manor	4 52		5 24		5 34		6 03	6 21		6 32	6 46	6 56					7 19		7 13
25	Tarrytown	4 54		5 26		5 36		6 05	6 23		6 34	6 49	6 59				7 08	7 22		7 16
23	Irvington	4 58		5 30		5 40		6 09	6 27		6 38	6 52					7 12			7 20
22	Ardsley-on-Hudson	5 00		5 32		5 42		6 11	6 29		6 40	6 54					7 14			7 22
21	Dobbs Ferry	5 02		5 34		5 44		6 13	6 31		6 42	6 57					7 16			7 24
20	Hastings-on-Hudson	5 04		5 36		5 47		6 16	6 34		6 44	6 59					7 19			7 26
18	Greystone	5 07				5 50		6 19			6 47					7 04	7 22			7 29
16	Glenwood	5 10				5 53		6 22			6 50					7 07				7 33
15	Yonkers	5 12		5 42		5 55		6 24	6 41		6 52	7 05				7 11				7 36
14	Ludlow	5 14				5 57		6 26			6 54					7 14				7 38
13	Riverdale	5 17				6 00		6 29			6 57					7 17				7 41
11	Spuyten Duyvil	5 21				6 04		6 33			7 01					7 21				7 45
10	Marble Hill	5 24		5 50		6 07		6 36			7 04	7 13				7 24				7 47
9	University Heights					6 09		6 38			7 06					7 27				7 50
8	Morris Heights					6 11		6 40			7 08					7 28				7 51
6	Yankees-E. 153rd Street					6 16		6 44			7 13					7 32				7 55
4	Harlem-125th Street	H 5 34	D 5 42	D 6 01	D 6 12	H 6 21	D 6 41	H 6 49	D 6 59	D 7 02	H 7 19	D 7 22	D 7 24	D 7 29	D 7 35	D 7 39	D 7 43	D 7 48	D 7 59	H 8 01
0	Grand Central Terminal	5 46	5 53	6 14	6 23	6 32	6 53	7 00	7 11	7 14	7 32	7 35	7 37	7 42	7 48	7 52	7 56	8 00	8 12	8 14
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM

Miles	Station	832	426	728	834	732	836	434	734	838	436	736	840	440	738	842	740	742	844	744
		AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	OFF-PEAK	OFF-PEAK
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
74	Poughkeepsie	6 42			6 48		7 03			7 10			7 32			7 59			8 29	
65	New Hamburg	6 52			6 58		7 13			7 20			7 42			8 09			8 39	
59	Beacon	7 00			7 06		7 21			7 28			7 50			8 17			8 46	
52	Cold Spring				7 14					7 36			7 58			8 25			8 55	
50	Garrison				7 19					7 40			8 03			8 29			8 59	
41	Peekskill				7 31					7 51			8 17			8 40			9 11	
38	Cortlandt				7 36					7 56			8 22			8 45			9 16	
33	Croton-Harmon Ar.																			
33	Croton-Harmon Lv.			7 32	7 45	7 26	7 51		7 58	8 06		8 11	8 31		8 27	8 54	8 41	8 59	9 26	9 13
31	Ossining			7 36		7 30			8 02			8 15			8 32		8 45	9 03		9 17
30	Scarborough			7 39		7 32			8 04			8 17			8 34		8 47	9 06		9 19
27	Philipse Manor			7 43		7 36			8 08			8 21			8 38		8 51	9 10		9 23
25	Tarrytown			7 46		7 39			8 12			8 24			8 41		8 54	9 13		9 26
23	Irvington		7 35			7 43		8 02				8 27			8 44		8 58	9 16		9 29
22	Ardsley-on-Hudson		7 37			7 45		8 04				8 29			8 46		9 00	9 18		9 32
21	Dobbs Ferry		7 39			7 47		8 06				8 32			8 49		9 02	9 21		9 34
20	Hastings-on-Hudson		7 43			7 49		8 10				8 34			8 51		9 04	9 23		9 36
18	Greystone					7 52		8 13			8 18			8 43			9 07			9 40
16	Glenwood					7 56					8 21			8 46			9 10			9 43
15	Yonkers		7 50			7 59					8 24	8 41		8 49			9 13	9 29		9 45
14	Ludlow					8 01					8 27			8 51			9 15			9 47
13	Riverdale					8 04					8 30			8 54			9 17			9 50
11	Spuyten Duyvil					8 08					8 35			8 58			9 22			9 55
10	Marble Hill					8 10					8 37	8 49		9 00			9 24			9 58
9	University Heights					8 13					8 40			9 02			9 27			10 01
8	Morris Heights					8 14					8 42			9 04			9 28			10 02
6	Yankees-E. 153rd Street					8 19					8 46			9 07			9 33			10 07
4	Harlem-125th Street	D 8 03	D 8 10			D 8 25		D 8 35	D 8 40	D 8 42	H 8 50	D 9 00	D 9 06	H 9 13	D 9 16	H 9 31	H 9 40	H 9 47	H 10 04	H 10 11
0	Grand Central Terminal	8 16	8 23	8 25	8 33	8 38	8 41	8 48	8 53	8 55	9 03	9 13	9 19	9 26	9 29	9 44	9 52	9 59	10 15	10 23
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM

Train 840: STOPS AT MANITOU AT 8:08AM

Miles	Station	4744	846	746	850	750	854	754	858	758	760	862	762	764	866	766	768	870	770	772	874
		OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK
		AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
74	Poughkeepsie		8 55		9 45		10 45		11 45			12 45			1 45			2 49			3 53
65	New Hamburg		9 05		9 55		10 55		11 55			12 55			1 55			2 59			4 03
59	Beacon		9 12		10 02		11 02		12 02			1 02			2 02			3 06			4 11
52	Cold Spring		9 21		10 11		11 11		12 11			1 11			2 11			3 15			4 19
50	Garrison		9 25		10 15		11 15		12 15			1 15			2 15			3 19			4 23
41	Peekskill		9 37		10 27		11 27		12 27			1 27			2 27			3 31			4 34
38	Cortlandt		9 42		10 32		11 32		12 32			1 32			2 32			3 36			4 39
33	Croton-Harmon Ar.																				
33	Croton-Harmon Lv.	9 34	9 52	9 56	10 42	10 55	11 42	11 55	12 42	12 55	1 27	1 42	1 55	2 27	2 42	2 55	3 27	3 46	3 58	4 24	4 48
31	Ossining	9 38	9 56	10 00	10 46	10 59	11 46	11 59	12 46	12 59	1 31	1 46	1 59	2 31	2 46	2 59	3 31	3 50	4 02	4 28	4 52
30	Scarborough	9 40		10 02		11 01		12 01		1 01			2 01			3 01			4 04	4 30	
27	Philipse Manor	9 44		10 06		11 05		12 05		1 05			2 05			3 05			4 08	4 34	
25	Tarrytown	9 47	10 04	10 09	10 54	11 07	11 54	12 07	12 54	1 07	1 38	1 54	2 07	2 38	2 54	3 07	3 38	3 58	4 10	4 36	5 00
23	Irvington	9 50		10 12		11 11		12 11		1 11	1 41		2 11	2 41		3 11	3 41		4 14	4 40	
22	Ardsley-on-Hudson	9 53		10 15		11 13		12 13		1 13			2 13			3 13			4 16	4 42	
21	Dobbs Ferry	9 55		10 17		11 15		12 15		1 15	1 44		2 15	2 44		3 15	3 44		4 18	4 44	
20	Hastings-on-Hudson	9 57		10 19		11 17		12 17		1 17	1 46		2 17	2 46		3 17	3 46		4 20	4 46	
18	Greystone	10 01		10 23		11 20		12 20		1 20			2 20			3 20			4 23	4 49	
16	Glenwood	10 04		10 26		11 23		12 23		1 23			2 23			3 23			4 26	4 52	
15	Yonkers	10 06		10 28		11 26		12 26		1 26	1 52		2 26	2 52		3 26	3 52		4 28	4 55	
14	Ludlow	10 08		10 30		11 28		12 28		1 28			2 28			3 28			4 30	4 57	
13	Riverdale	10 11		10 33		11 30		12 30		1 30	1 56		2 30	2 56		3 30	3 56		4 33	4 59	
11	Spuyten Duyvil	10 16		10 37		11 35		12 35		1 35	2 00		2 35	3 00		3 35	4 00		4 37	5 04	
10	Marble Hill	10 19		10 41		11 38		12 38		1 38	2 03		2 38	3 03		3 38	4 03		4 40	5 07	
9	University Heights	10 22		10 44		11 40		12 40		1 40			2 40			3 40			4 42	5 09	
8	Morris Heights	10 23		10 45		11 42		12 42		1 42			2 42			3 42			4 44	5 11	
6	Yankees-E. 153rd Street	10 28		10 50		11 49		12 49		1 49			2 49			3 49			4 48	5 17	
4	Harlem-125th Street	H 10 33	H 10 35	H 10 54	H 11 26	H 11 56	H 12 26	H 12 56	H 1 26	H 1 56	H 2 17	H 2 26	H 2 56	H 3 17	H 3 26	H 3 57	H 4 18	H 4 29	H 4 55	H 5 22	H 5 29
0	Grand Central Terminal	10 45	10 47	11 06	11 37	12 07	12 37	1 07	1 37	2 07	2 28	2 37	3 07	3 28	3 37	4 08	4 29	4 41	5 08	5 36	5 44
		AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	Station	774	876	776	878	778	880	780	882	782	886	786	890	790	892	792	894 / 794	896 / 796	898 / 798
		OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
74	Poughkeepsie		4 31		4 51		5 33		5 53		6 55		7 53		8 49		C 9 48	C 10 48	C 11 48
65	New Hamburg		4 41		5 01		5 43		6 03		7 05		8 03		8 59		C 9 58	C 10 58	C 11 58
59	Beacon		4 49		5 09		5 51		6 11		7 13		8 11		9 07		C 10 06	C 11 06	C 12 06
52	Cold Spring				5 17				6 19		7 21		8 19		9 16		C 10 14	C 11 14	C 12 14
50	Garrison				5 21				6 23		7 25		8 23		9 20		C 10 18	C 11 18	C 12 18
41	Peekskill		5 08		5 32		6 10		6 34		7 36		8 34		9 32		C 10 29	C 11 29	C 12 29
38	Cortlandt				5 37				6 39		7 41		8 39		9 37		C 10 34	C 11 34	C 12 34
33	Croton-Harmon Ar.																C 10 47	C 11 47	C 12 47
33	Croton-Harmon Lv.	4 58	5 19	5 30	5 46	6 01	6 21	6 31	6 48	6 58	7 50	7 58	8 48	8 55	9 46	9 55	10 55	11 56	12 51
31	Ossining	5 02	5 23	5 34	5 50	6 05	6 25	6 35	6 52	7 02	7 54	8 02	8 52	8 59	9 50	9 59	10 59	12 00	12 55
30	Scarborough	5 04		5 36		6 07				7 04		8 04		9 01		10 01	11 01	12 03	12 57
27	Philipse Manor	5 08		5 40		6 11				7 08		8 08		9 05		10 05	11 05	12 06	1 01
25	Tarrytown	5 10	5 31	5 42	5 58	6 13	6 33	6 42	7 00	7 10	8 02	8 10	9 00	9 07	9 58	10 07	11 07	12 08	1 04
23	Irvington	5 14		5 46		6 17		6 45		7 14		8 14		9 11		10 11	11 11	12 12	1 07
22	Ardsley-on-Hudson	5 16		5 48		6 19				7 16		8 16		9 13		10 13	11 13	12 14	1 09
21	Dobbs Ferry	5 18		5 50		6 21		6 48		7 18		8 18		9 15		10 15	11 15	12 16	1 11
20	Hastings-on-Hudson	5 20		5 52		6 23		6 50		7 20		8 20		9 17		10 17	11 17	12 18	1 14
18	Greystone	5 23		5 55		6 26				7 23		8 23		9 20		10 20	11 20	12 21	1 17
16	Glenwood	5 26		5 58		6 29				7 26		8 26		9 23		10 23	11 23	12 24	1 20
15	Yonkers	5 29		6 01		6 32		6 56		7 29	8 13	8 29	9 11	9 26	10 09	10 26	11 26	12 26	1 23
14	Ludlow	5 31		6 03		6 34				7 31		8 31		9 28		10 28	11 28	12 28	1 26
13	Riverdale	5 33		6 05		6 36		7 00		7 33		8 33		9 30		10 30	11 30	12 31	1 28
11	Spuyten Duyvil	5 38		6 10		6 41		7 05		7 38		8 38		9 35		10 35	11 35	12 35	1 32
10	Marble Hill	5 41		6 13		6 44		7 07		7 41		8 41		9 38		10 38	11 38	12 37	1 36
9	University Heights	5 43		6 15		6 46				7 43		8 43		9 40		10 40	11 40	12 39	
8	Morris Heights	5 45		6 17		6 48				7 45		8 45		9 42		10 42	11 42	12 41	
6	Yankees-E. 153rd Street	5 51		6 23		6 54				7 50		8 51		9 49		10 49	11 49	12 48	
4	Harlem-125th Street	H 5 56	H 6 02	H 6 29	H 6 32	H 6 59	H 7 04	H 7 19	H 7 30	H 7 56	H 8 32	H 8 56	H 9 30	H 9 56	H 10 29	H 10 56	H 11 56	H 12 56	H 1 50
0	Grand Central Terminal	6 10	6 15	6 42	6 45	7 10	7 16	7 31	7 42	8 07	8 43	9 07	9 42	10 07	10 42	11 07	12 07	1 08	2 01
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	AM	AM	AM

TO POUGHKEEPSIE

Miles	Station	703	803	705	805	707	807	709	809	711	713	813	715	717	817	719	721	821	725	825	729	829
			AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	AM PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM
0	Grand Central Terminal	5 35	6 14	6 21	6 46	6 50	7 19	7 23	7 39	7 45	8 15	8 46	9 00	9 20	9 43	9 58	10 20	10 43	11 20	11 43	12 20	12 43
4	Harlem-125th Street	5 45	R 6 25	6 31	R 6 57	7 00	R 7 30	7 33	R 7 50	7 55	8 25	R 8 57	9 10	9 30	R 9 54	10 08	10 30	R 10 54	11 30	R 11 54	12 30	R 12 54
6	Yankees-E. 153rd Street	5 49		6 35		7 04		7 37		7 59	8 30			9 34			10 35		11 35		12 35	
8	Morris Heights	5 52		6 38		7 07		7 40		8 02	8 34			9 38			10 38		11 38		12 38	
9	University Heights	5 54		6 40		7 09		7 42		8 04	8 36			9 40			10 40		11 40		12 40	
10	Marble Hill	5 56	6 33	6 42	7 05	7 11	7 39	7 44	7 59	8 06	8 38		9 20	9 42		10 18	10 42		11 42		12 42	
11	Spuyten Duyvil	5 58		6 44		7 13		7 46		8 08	8 40		9 22	9 44		10 21	10 44		11 44		12 44	
13	Riverdale	6 02		6 48		7 17		7 50		8 12	8 44		9 26	9 48		10 24	10 48		11 48		12 48	
14	Ludlow	6 04		6 50		7 19		7 52		8 14	8 47			9 50			10 50		11 50		12 50	
15	Yonkers	6 07	6 41	6 53	7 13	7 22	7 48	7 55	8 08	8 17	8 50		9 30	9 53		10 28	10 53		11 53		12 53	
16	Glenwood	6 09		6 55		7 24		7 57		8 19	8 52			9 55			10 55		11 55		12 55	
18	Greystone	6 12		6 58		7 27		8 00		8 22	8 55			9 58			10 58		11 58		12 58	
20	Hastings-on-Hudson	6 15		7 01		7 30		8 03		8 25	8 58		9 36	10 01		10 34	11 01		12 01		1 01	
21	Dobbs Ferry	6 18		7 04		7 33		8 06		8 28	9 01		9 39	10 04		10 37	11 04		12 04		1 04	
22	Ardsley-on-Hudson	6 20		7 06		7 35		8 08		8 30	9 03			10 06			11 06		12 06		1 06	
23	Irvington	6 22		7 08		7 37		8 10		8 32	9 05		9 42	10 09		10 41	11 09		12 09		1 09	
25	Tarrytown	6 26	6 52	7 12	7 24	7 41	7 59	8 14	8 21	8 36	9 09	9 23	9 46	10 13	10 22	10 45	11 13	11 22	12 13	12 22	1 13	1 23
27	Philipse Manor	6 28		7 14		7 43		8 16		8 38	9 12			10 15			11 15		12 15		1 15	
30	Scarborough	6 32		7 18		7 47		8 20		8 42	9 16			10 19			11 19		12 19		1 19	
31	Ossining	6 35	7 00	7 21	7 32	7 50	8 07	8 23	8 29	8 45	9 19	9 31	9 53	10 22	10 30	10 52	11 22	11 30	12 22	12 30	1 22	1 31
33	Croton-Harmon Ar.	6 44		7 30		7 59		8 31		8 54	9 28		10 02	10 32		11 01	11 31		12 31		1 31	
33	Croton-Harmon Lv.		7 05		7 37		8 12		8 34			9 36			10 36			11 36		12 36		1 37
38	Cortlandt		7 13		7 45		8 20		8 42			9 44			10 44			11 44		12 44		1 45
41	Peekskill		7 18		7 50		8 25		8 47			9 49			10 49			11 49		12 49		1 50
50	Garrison		7 29		8 01		8 36		8 58			10 00			11 00			12 00		1 00		2 01
52	Cold Spring		7 33		8 05		8 40		9 02			10 04			11 04			12 04		1 04		2 05
59	Beacon		7 41		8 13		8 48		9 11			10 13			11 13			12 13		1 13		2 14
65	New Hamburg		7 49		8 21		8 56		9 19			10 21			11 21			12 21		1 21		2 22
74	Poughkeepsie		8 07		8 38		9 13		9 38			10 38			11 38			12 38		1 38		2 39
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM

Miles	Station	4833	733	833	4735	4835	737	837	739	839	741	841	443	745	843	747	749	847	753
		OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
0	Grand Central Terminal	1 18	1 20	1 43	1 50	2 18	2 20	2 43	2 51	3 18	3 21	3 48	3 51	4 07	4 15	4 19	4 39	4 47	4 52
4	Harlem-125th Street	R 1 29	1 30	R 1 54	2 00	R 2 29	2 30	R 2 54	3 01	R 3 29	3 31	R 3 59	4 01	R 4 17	R 4 26	4 29	R 4 49	R 4 58	5 03
6	Yankees-E. 153rd Street		1 34		2 04		2 34		3 05		3 35		4 05			4 34			5 07
8	Morris Heights		1 38		2 08		2 38		3 09		3 39		4 09			4 38			5 11
9	University Heights		1 40		2 10		2 40		3 11		3 41		4 11			4 39			5 13
10	Marble Hill		1 42		2 12		2 42		3 13		3 43		4 13			4 42			5 15
11	Spuyten Duyvil		1 44		2 14		2 44		3 15		3 45		4 16			4 44			5 18
13	Riverdale		1 48		2 18		2 48		3 19		3 49		4 19			4 48			5 22
14	Ludlow		1 50		2 20		2 50		3 21		3 51		4 22			4 50			5 25
15	Yonkers		1 53		2 23		2 53		3 24		3 54		4 24	H 4 34		4 53	H 5 05		5 28
16	Glenwood		1 55		2 25		2 55		3 26		3 56		4 26			4 55			5 30
18	Greystone		1 58		2 28		2 58		3 29		3 59		4 32			4 58			5 33
20	Hastings-on-Hudson		2 01		2 32		3 01		3 32		4 02			H 4 40		5 01	H 5 11		5 36
21	Dobbs Ferry		2 04		2 35		3 04		3 35		4 05			H 4 43		5 04	H 5 14		5 39
22	Ardsley-on-Hudson		2 06		2 37		3 06		3 37		4 07			H 4 45		5 06	H 5 16		5 41
23	Irvington		2 09		2 40		3 09		3 40		4 09			H 4 47		5 09	H 5 18		5 43
25	Tarrytown		2 13	2 23	2 45		3 13	3 23	3 44		4 13			H 4 51		5 12	H 5 22		5 47
27	Philipse Manor		2 15		2 47		3 15		3 46		4 15			H 4 54		5 15	H 5 25		5 50
30	Scarborough		2 19		2 51		3 19		3 50		4 19			H 4 58		5 19	H 5 29		5 54
31	Ossining		2 22	2 31	2 54		3 22	3 31	3 53		4 22			H 5 01		5 22	H 5 32		5 57
33	Croton-Harmon Ar.		2 31		3 03		3 31		4 02		4 31			5 09		5 31	5 40		6 06
33	Croton-Harmon Lv.	2 07		2 37		3 07		3 37		4 07		4 37			5 04			5 35	
38	Cortlandt	2 14		2 45		3 14		3 45		4 14		4 44			5 11			5 43	
41	Peekskill	2 19		2 50		3 19		3 50		4 19		4 49			5 16			5 48	
50	Garrison	2 31		3 01		3 31		4 01		4 31		5 01			5 27			5 59	
52	Cold Spring	2 35		3 05		3 35		4 05		4 35		5 05			5 32			6 04	
59	Beacon	2 44		3 14		3 44		4 14		4 44		5 14			5 40			6 13	
65	New Hamburg	2 52		3 22		3 52		4 22		4 52		5 22			5 48			6 21	
74	Poughkeepsie	3 09		3 39		4 09		4 39		5 09		5 39			6 04			6 37	
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Trains 4833, 4735 and 4835: WILL OPERATE 5/27, 7/1 & 9/2 ONLY

(BICYCLES NOT PERMITTED ON OUTBOUND PM PEAK TRAINS)

Miles	Station	849	851	755	757	461	853	855	759	761	465	857	765	469	863	865	767	769	771	869
		PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
0	Grand Central Terminal	5 08	5 11	5 16	5 20	5 23	5 29	5 32	5 36	5 39	5 43	5 54	6 00	6 06	6 11	6 15	6 22	6 25	6 28	6 45
4	Harlem-125th Street	R 5 19	R 5 22	R 5 27	5 30	5 33		R 5 43			5 53		R 6 10	6 16	R 6 22	R 6 26			6 38	R 6 56
6	Yankees-E. 153rd Street					5 37					5 57			6 20					6 43	
8	Morris Heights					5 40					6 00			6 23					6 46	
9	University Heights					5 42					6 02			6 25					6 48	
10	Marble Hill				5 40	5 45					6 05			6 28					6 51	
11	Spuyten Duyvil					5 47					6 07			6 30					6 53	
13	Riverdale					5 50					6 10			6 33					6 57	
14	Ludlow					5 53					6 13			6 36					7 00	
15	Yonkers				5 48	5 56					6 16		6 26	6 39				6 50	7 03	
16	Glenwood					5 58					6 18			6 41					7 05	
18	Greystone					6 04				6 08	6 24			6 47					7 08	
20	Hastings-on-Hudson				5 54					6 11			6 32					6 56	7 11	
21	Dobbs Ferry				5 56					6 14			6 35					6 59	7 14	
22	Ardsley-on-Hudson				5 59					6 16			6 37					7 01	7 16	
23	Irvington				6 01					6 18			6 39					7 03	7 18	
25	Tarrytown			H 5 54	6 05				H 6 12	6 22			6 43				H 6 58	7 07	7 22	
27	Philipse Manor			H 5 57	6 08				H 6 16				6 46				H 7 01	7 10	7 25	
30	Scarborough			H 6 02	6 12				H 6 20				6 50				H 7 05	7 14	7 29	
31	Ossining			H 6 05	6 15				H 6 23				6 53				H 7 08	7 17	7 32	
33	Croton-Harmon Ar.			6 13	6 23				6 30	6 35			7 01				7 16	7 25	7 40	
33	Croton-Harmon Lv.		5 57					6 17				R 6 38				7 04				7 31
38	Cortlandt		H 6 05					6 25				6 46				7 11				7 39
41	Peekskill		H 6 10					6 30				6 51				7 16				7 44
50	Garrison		H 6 21					6 41				7 02				7 29				7 55
52	Cold Spring		H 6 26					6 46				7 07				7 34				8 00
59	Beacon	H 6 21	H 6 39				H 6 41	6 54				7 15			H 7 25	7 42				8 09
65	New Hamburg	H 6 29					H 6 49	7 02				7 23			H 7 33	7 50				8 17
74	Poughkeepsie	6 45					7 05	7 18				7 39			7 49	8 06				8 33
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Trains 853 and 863: WILL NOT OPERATE 5/27, 7/1 & 9/2

Train 865: STOPS AT MANITOU AT 7:23PM

Miles	Station	775	875	777	877	781	881	783	883	785	787	887	789	791	891	793	795	895	797	897	799	701 / 801
		PM PEAK	PM PEAK	PM PEAK	PM PEAK	PM PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK	OFF-PEAK
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	AM	AM	AM	AM
0	Grand Central Terminal	6 55	7 22	7 28	7 53	7 59	8 27	8 32	9 04	9 13	9 20	9 47	9 54	10 20	10 47	10 54	11 20	11 47	12 20	12 43	1 00	1 50
4	Harlem-125th Street	7 05	R 7 33	7 38	R 8 04	8 09	R 8 38	R 8 42	R 9 15	R 9 23	9 30	R 9 58	R 10 05	10 30	R 10 58	R 11 05	11 30	R 11 58	12 30	R 12 54	1 10	2 00
6	Yankees-E. 153rd Street	7 10		7 42		8 14		8 47			9 35			10 34			11 35		12 35		1 15	2 05
8	Morris Heights	7 13		7 45		8 17		8 50			9 38			10 38			11 38		H 12 39		H 1 19	2 09
9	University Heights	7 15		7 47		8 19		8 52			9 40			10 40			11 40		H 12 41		H 1 21	2 11
10	Marble Hill	7 18		7 49		8 22		8 54			9 42			10 42			11 42		H 12 43	H 1 04	H 1 23	2 13
11	Spuyten Duyvil	7 20		7 52		8 24		8 56			9 44		H 10 17	10 44		H 11 17	11 44	H 12 10	H 12 45	H 1 06	H 1 25	2 15
13	Riverdale	7 24		7 55		8 28		9 00			9 48		H 10 20	10 48		H 11 20	11 48	H 12 14	H 12 49	H 1 10	H 1 29	2 19
14	Ludlow	7 27		7 58		8 31		9 02			9 50			10 50			11 50		H 12 52		H 1 32	2 22
15	Yonkers	7 30		8 01		8 34		9 05		H 9 40	9 53		H 10 25	10 53		H 11 25	11 53	H 12 17	H 12 55	H 1 14	H 1 35	2 25
16	Glenwood	7 32		8 03		8 36		9 07			9 55			10 55			11 55		H 12 57		H 1 37	2 27
18	Greystone	7 35		8 06		8 39		9 10			9 58			10 58			11 58		H 1 00		H 1 40	2 30
20	Hastings-on-Hudson	7 38		8 10		8 42		9 13		H 9 46	10 01		H 10 31	11 01		H 11 31	12 01	H 12 25	H 1 03	H 1 20	H 1 43	2 33
21	Dobbs Ferry	7 41		8 12		8 45		9 15		H 9 49	10 04		H 10 33	11 04		H 11 33	12 04	H 12 28	H 1 06	H 1 22	H 1 46	2 36
22	Ardsley-on-Hudson	7 43		8 15		8 47		9 18			10 06			11 06			12 06		H 1 08		H 1 48	2 38
23	Irvington	7 45		8 18		8 49		9 20		H 9 53	10 09		H 10 38	11 09		H 11 38	12 09	H 12 32	H 1 11	H 1 26	H 1 51	2 41
25	Tarrytown	7 49		8 23		8 53		9 24		H 9 57	10 13		H 10 42	11 13		H 11 42	12 13	H 12 36	H 1 15	H 1 30	H 1 55	2 45
27	Philipse Manor	7 52		8 26		8 55		9 27			10 15			11 15			12 15		H 1 18		H 1 58	2 48
30	Scarborough	7 56		8 30		8 59		9 31		H 10 02	10 19		H 10 48	11 19		H 11 48	12 19	H 12 42	H 1 22	H 1 37	H 2 02	2 52
31	Ossining	7 59		8 33		9 02		9 34		H 10 05	10 22		H 10 51	11 22		H 11 51	12 22	H 12 45	H 1 25	H 1 40	H 2 05	2 55
33	Croton-Harmon Ar.	8 07		8 39		9 10		9 42		10 12	10 31		10 59	11 31		11 59	12 31		1 35		2 15	3 03
33	Croton-Harmon Lv.		8 10		8 41		9 16		9 53			10 36			11 36			H 12 51		H 1 46		C 3 08
38	Cortlandt		8 16		8 47		9 23		10 00			10 43			11 43			H 12 58		H 1 54		C 3 16
41	Peekskill		8 21		8 52		9 28		10 05			10 48			11 48			H 1 03		H 1 59		C 3 21
50	Garrison		8 32		9 03		9 40		10 17			11 00			12 01			H 1 15		H 2 11		C 3 32
52	Cold Spring		8 37		9 08		9 44		10 21			11 04			12 04			H 1 19		H 2 15		C 3 36
59	Beacon		8 45		9 16		9 53		10 30			11 13			12 13			H 1 28		H 2 24		C 3 44
65	New Hamburg		8 53		9 24		10 01		10 38			11 21			12 21			H 1 36		H 2 32		C 3 52
74	Poughkeepsie		9 09		9 40		10 20		10 58			11 37			12 37			1 56		2 55		C 4 08
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	AM	PM	AM	AM	AM	AM	AM	AM

TRAVEL INFORMATION

General Information:
Schedules & Fares; Lost & Found; Mail&Ride; Group Sales; Parking; Bicycle Permits; Comments, Concerns, and Commendations; and Senior Citizen/Disabled Accessibility
Available daily 6AM - 10PM (Automated info 24/7)....................511
Customers outside New York State dial................877-690-5114
Deaf/Hard of Hearing Customers - Use your preferred relay service provider or the free 711 relay to reach 511.

Other Transit Information
MTA Long Island Rail Road....................511
MTA New York City Transit Subway and Bus....................511
NJ Transit Bus and Rail Information....................973-275-5555
Amtrak....................800-872-7245
Westchester County Bee Line Bus....................914-813-7777
Rockland County Bus....................845-364-3333
Putnam County Bus....................845-878-7433
Dutchess County Bus....................845-473-8424

Train Time

Real-time train status and schedule information to your smartphone or computer.

HELPFUL PHONE NUMBERS

MTA Metro-North Railroad Main Office
420 Lexington Avenue, NY, NY 10170....................511
Customers outside New York State dial....................877-690-5114
MTA Inspector General Hot Line...... 800-MTA-IG4U (800-682-4448)
MTA Police....................212-878-1001
Emergency Only....................888-682-9117
LAZ Parking....................888-682-PARK

OTHER IMPORTANT INFORMATION

Unaccompanied Children:
MTA Metro-North Railroad recommends that children under the age of 8 be accompanied by an adult or a responsible youth (at least 12 years old) when riding its trains. Children age 8 and above may ride alone, but we strongly suggest that they carry identification showing their name, address, home phone number and the name and phone number of the person who will be meeting them. No child should be traveling unaccompanied during late night hours. For further information, please visit our website at **www.mta.info**.

Title VI Statement:
MTA Metro-North Railroad is committed to providing non-discriminatory service to ensure that no person is excluded from participation in, or denied the benefits of, or subjected to discrimination in the receipt of its services on the basis of race, color or national origin as protected by Title VI of the Civil Rights Act of 1964. For more information visit www.mta.info or contact: MTA Metro-North Railroad Office of Diversity and Equal Employment Opportunity, 420 Lexington Avenue, 12th Fl., New York, NY 10170, or call 511. In addition to your right to file a complaint with Metro-North Railroad, you have the right to file a Title VI complaint with the Federal Transit Administration, Office of Civil Rights, Attention: Complaint Team, East Building 5th Floor—TCR, 1200 New Jersey Ave. SE, Washington, DC 20590.

Responsibility
Metro-North Railroad cannot assume responsibility for inconvenience, expense or damage resulting from errors in timetables, delayed trains, failure to make connections, or for changes in or shortage of equipment. The schedules in this timetable are subject to change without notice.

SATURDAY, SUNDAY & HOLIDAYS NEW YORK - POUGHKEEPSIE

SCHEDULE EFFECTIVE: MARCH 27, 2022

For more information visit mta.info/mnr

TO NEW YORK

Miles	To New York	8700	8802	8702 Saturdays Only	8704	8706 Saturdays Only	8808	8708	8710 Saturdays Only	8812	8712	8714 Saturdays Only	8816
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
74	Poughkeepsie		4 30				5 52			6 52			7 52
65	New Hamburg		4 40				6 02			7 02			8 02
59	Beacon		4 48				6 10			7 10			8 10
55	Breakneck Ridge												
52	Cold Spring		4 57				6 19			7 19			8 19
50	Garrison		5 01				6 23			7 23			8 23
46	Manitou												
41	Peekskill		5 13				6 35			7 35			8 35
38	Cortlandt		5 17				6 40			7 40			8 40
33	Croton-Harmon Ar.												
33	Croton-Harmon Lv.	4 56	5 27	5 30	5 56	6 26	6 49	6 56	7 26	7 49	7 56	8 32	8 49
31	Ossining	5 00	5 31	5 34	6 00	6 30	6 53	7 00	7 30	7 53	8 00	8 36	8 53
30	Scarborough	5 02		5 36	6 02	6 32		7 02	7 32		8 02		
27	Philipse Manor	5 06		5 40	6 06	6 36		7 06	7 36		8 06		
25	Tarrytown	5 09	5 39	5 43	6 09	6 39	7 01	7 09	7 39	8 01	8 09	8 43	9 01
23	Irvington	5 12		5 46	6 12	6 42		7 12	7 42		8 12	8 47	
22	Ardsley-on-Hudson	5 14		5 48	6 14	6 44		7 14	7 44		8 14		
21	Dobbs Ferry	5 16		5 50	6 16	6 46		7 16	7 46		8 16	8 50	
20	Hastings-on-Hudson	5 19		5 53	6 19	6 49		7 19	7 49		8 19	8 53	
18	Greystone	5 22		5 56	6 22	6 52		7 22	7 52		8 22		
16	Glenwood	5 25		5 59	6 25	6 55		7 25	7 55		8 25		
15	Yonkers	5 28		6 02	6 28	6 58		7 28	7 58		8 28	8 59	
14	Ludlow	5 31		6 05	6 31	7 01		7 31	8 01		8 31		
13	Riverdale	5 33		6 07	6 33	7 03		7 33	8 03		8 33	9 03	
11	Spuyten Duyvil	5 37		6 11	6 37	7 07		7 37	8 07		8 37	9 07	
10	Marble Hill	5 42		6 16	6 42	7 12		7 42	8 12		8 42	9 11	
9	University Heights	5 44			6 44			7 44			8 44		
8	Morris Heights	5 46			6 46			7 46			8 46		
6	Yankees-E. 153rd Street	5 50			6 50			7 51			8 51		
4	Harlem-125th Street	H 5 58	H 6 14	H 6 29	H 6 58	H 7 25	H 7 36	H 7 58	H 8 25	H 8 36	H 8 58	H 9 26	H 9 36
0	Grand Central Terminal	6 09	6 25	6 40	7 09	7 36	7 47	8 09	8 36	8 47	9 09	9 37	9 47
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM

Miles	To New York	8716	8718	8820	8720	8822 Saturdays Only	8722	8824	8724	8826	8726	8828	8728
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
74	Poughkeepsie			8 52		9 22		9 52		10 22		10 52	
65	New Hamburg			9 02		9 32		10 02		10 32		11 02	
59	Beacon			9 10		9 40		10 10		10 40		11 10	
55	Breakneck Ridge												
52	Cold Spring			9 19		9 49		10 19		10 49		11 19	
50	Garrison			9 23		9 53		10 23		10 53		11 23	
46	Manitou												
41	Peekskill			9 35		10 05		10 35		11 05		11 35	
38	Cortlandt			9 40				10 40				11 40	
33	Croton-Harmon Ar.												
33	Croton-Harmon Lv.	8 56	9 32	9 49	9 56		10 32	10 49	10 56		11 32	11 49	11 56
31	Ossining	9 00	9 36	9 53	10 00		10 36	10 53	11 00		11 36	11 53	12 00
30	Scarborough	9 02			10 02				11 02				12 02
27	Philipse Manor	9 06			10 06				11 06				12 06
25	Tarrytown	9 09	9 43	10 01	10 09		10 43	11 01	11 09		11 43	12 01	12 09
23	Irvington	9 12	9 47		10 12		10 47		11 12		11 47		12 12
22	Ardsley-on-Hudson	9 14			10 14				11 14				12 14
21	Dobbs Ferry	9 16	9 50		10 16		10 50		11 16		11 50		12 16
20	Hastings-on-Hudson	9 19	9 53		10 19		10 53		11 19		11 53		12 19
18	Greystone	9 22			10 22				11 22				12 22
16	Glenwood	9 25			10 25				11 25				12 25
15	Yonkers	9 28	9 59		10 28		10 59		11 28		11 59		12 28
14	Ludlow	9 31			10 31				11 31				12 31
13	Riverdale	9 33	10 03		10 33		11 03		11 33		12 03		12 33
11	Spuyten Duyvil	9 37	10 07		10 37		11 07		11 37		12 07		12 37
10	Marble Hill	9 42	10 11		10 42		11 11		11 42		12 11		12 42
9	University Heights	9 44			10 44				11 44				12 44
8	Morris Heights	9 46			10 46				11 46				12 46
6	Yankees-E. 153rd Street	9 51			10 51				11 50				12 50
4	Harlem-125th Street	H 9 58	H 10 26	H 10 36	H 10 58	H 11 02	H 11 26	H 11 36	H 11 58	H 12 00	H 12 26	H 12 36	H 12 58
0	Grand Central Terminal	10 09	10 37	10 47	11 09	11 13	11 37	11 47	12 09	12 11	12 37	12 47	1 09
		AM	AM	AM	AM	AM	AM	AM	PM	PM	PM	PM	PM

Miles	To New York	8730	8832	8732	8734	8836	8736	8738	8840	8740	8742	8844 (bike)	8744
		PM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
74	Poughkeepsie		11 52			12 46			1 48			2 46	
65	New Hamburg		12 02			12 56			1 58			2 56	
59	Beacon		12 10			1 04			2 06			3 04	
55	Breakneck Ridge												
52	Cold Spring		12 19			1 15			2 17			3 15	
50	Garrison		12 23			1 19			2 21			3 19	
46	Manitou					1 24			2 26			3 24	
41	Peekskill		12 35			1 33			2 35			3 33	
38	Cortlandt		12 40			1 38			2 40			3 38	
33	Croton-Harmon Ar.												
33	Croton-Harmon Lv.	12 32	12 49	12 56	1 32	1 47	1 56	2 32	2 49	2 56	3 32	3 47	3 56
31	Ossining	12 36	12 53	1 00	1 36	1 51	2 00	2 36	2 53	3 00	3 36	3 51	4 00
30	Scarborough			1 02			2 02			3 02			4 02
27	Philipse Manor			1 06			2 06			3 06			4 06
25	Tarrytown	12 43	1 01	1 09	1 43	1 59	2 09	2 43	3 01	3 09	3 43	3 59	4 09
23	Irvington	12 47		1 12	1 47		2 12	2 47		3 12	3 47		4 12
22	Ardsley-on-Hudson			1 14			2 14			3 14			4 14
21	Dobbs Ferry	12 50		1 16	1 50		2 16	2 50		3 16	3 50		4 16
20	Hastings-on-Hudson	12 53		1 19	1 53		2 19	2 53		3 19	3 53		4 19
18	Greystone			1 22			2 22			3 22			4 22
16	Glenwood			1 25			2 25			3 25			4 25
15	Yonkers	12 59		1 28	1 59		2 28	2 59		3 28	3 59		4 28
14	Ludlow			1 31			2 31			3 31			4 31
13	Riverdale	1 03		1 33	2 03		2 33	3 03		3 33	4 03		4 33
11	Spuyten Duyvil	1 07		1 37	2 07		2 37	3 07		3 37	4 07		4 37
10	Marble Hill	1 11		1 42	2 11		2 42	3 11		3 42	4 11		4 42
9	University Heights			1 44			2 44			3 44			4 44
8	Morris Heights			1 46			2 46			3 46			4 46
6	Yankees-E. 153rd Street			1 50			2 50			3 50			4 50
4	Harlem-125th Street	H 1 26	H 1 36	H 1 58	H 2 26	H 2 32	H 2 58	H 3 26	H 3 36	H 3 58	H 4 26	H 4 32	H 4 58
0	Grand Central Terminal	1 37	1 47	2 09	2 37	2 43	3 09	3 37	3 47	4 09	4 37	4 43	5 09
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	To New York	8846	8746	8848 (bike)	8748	8750	8852 (bike)	8752	8754	8856 (bike)	8756	8758	8860 (bike)
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
74	Poughkeepsie	3 22		3 46			4 48			5 50			6 50
65	New Hamburg	3 32		3 56			4 58			6 00			7 00
59	Beacon	3 40		4 04			5 06			6 08			7 08
55	Breakneck Ridge												
52	Cold Spring	3 49		4 15			5 17			6 19			7 19
50	Garrison	3 53		4 19			5 21			6 23			7 23
46	Manitou			4 24			5 26			6 28			7 28
41	Peekskill	4 05		4 33			5 35			6 37			7 37
38	Cortlandt			4 38			5 40			6 42			7 42
33	Croton-Harmon Ar.												
33	Croton-Harmon Lv.		4 27	4 47	4 56	5 27	5 49	5 56	6 32	6 51	6 56	7 32	7 51
31	Ossining		4 31	4 51	5 00	5 31	5 53	6 00	6 36	6 55	7 00	7 36	7 55
30	Scarborough		4 33		5 02	5 33		6 02			7 02		
27	Philipse Manor		4 37		5 06	5 37		6 06			7 06		
25	Tarrytown		4 40	4 59	5 09	5 40	6 01	6 09	6 43	7 03	7 09	7 43	8 03
23	Irvington		4 43		5 12	5 43		6 12	6 47		7 12	7 47	
22	Ardsley-on-Hudson		4 45		5 14	5 45		6 14			7 14		
21	Dobbs Ferry		4 47		5 16	5 47		6 16	6 50		7 16	7 50	
20	Hastings-on-Hudson		4 50		5 19	5 50		6 19	6 53		7 19	7 53	
18	Greystone		4 53		5 22	5 53		6 22			7 22		
16	Glenwood		4 56		5 25	5 56		6 25			7 25		
15	Yonkers		4 59		5 28	5 59		6 28	6 59		7 28	7 59	
14	Ludlow		5 02		5 31	6 02		6 31			7 31		
13	Riverdale		5 04		5 33	6 04		6 33	7 03		7 33	8 03	
11	Spuyten Duyvil		5 08		5 37	6 08		6 37	7 07		7 37	8 07	
10	Marble Hill		5 13		5 42	6 13		6 42	7 11		7 42	8 11	
9	University Heights		5 15		5 44	6 15		6 44			7 44		
8	Morris Heights		5 17		5 46	6 17		6 46			7 46		
6	Yankees-E. 153rd Street		5 21		5 50	6 21		6 50			7 50		
4	Harlem-125th Street	H 5 00	H 5 28	H 5 36	H 5 58	H 6 28	H 6 40	H 6 58	H 7 26	H 7 40	H 7 58	H 8 26	H 8 40
0	Grand Central Terminal	5 11	5 39	5 47	6 09	6 39	6 51	7 09	7 37	7 51	8 09	8 37	8 51
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	To New York	8760	8762	8864	8764	8766 Saturdays Only	8868	8768	8872	8772	8876 / 8776	8898 / 8798
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
74	Poughkeepsie			7 54			8 50		9 45		C 10 54	C 11 48
65	New Hamburg			8 04			9 00		9 55		C 11 04	C 11 58
59	Beacon			8 12			9 08		10 03		C 11 12	C 12 06
55	Breakneck Ridge											
52	Cold Spring			8 21			9 17		10 12		C 11 20	C 12 14
50	Garrison			8 25			9 21		10 16		C 11 24	C 12 18
46	Manitou											
41	Peekskill			8 37			9 33		10 28		C 11 35	C 12 29
38	Cortlandt			8 42			9 38		10 33		C 11 40	C 12 34
33	Croton-Harmon Ar.										C 11 53	C 12 47
33	Croton-Harmon Lv.	7 56	8 32	8 51	8 56	9 32	9 47	9 56	10 42	10 56	11 56	12 51
31	Ossining	8 00	8 36	8 55	9 00	9 36	9 51	10 00	10 46	11 00	12 00	12 55
30	Scarborough	8 02			9 02			10 02		11 02	12 02	12 57
27	Philipse Manor	8 06			9 06			10 06		11 06	12 06	1 01
25	Tarrytown	8 09	8 43	9 03	9 09	9 43	9 59	10 09	10 54	11 09	12 09	1 04
23	Irvington	8 12	8 47		9 12	9 47		10 12		11 12	12 12	1 07
22	Ardsley-on-Hudson	8 14			9 14			10 14		11 14	12 14	1 09
21	Dobbs Ferry	8 16	8 50		9 16	9 50		10 16		11 16	12 16	1 11
20	Hastings-on-Hudson	8 19	8 53		9 19	9 53		10 19		11 19	12 19	1 14
18	Greystone	8 22			9 22			10 22		11 22	12 22	1 17
16	Glenwood	8 25			9 25			10 25		11 25	12 25	1 20
15	Yonkers	8 28	8 59		9 28	9 59		10 28	11 06	11 28	12 28	1 23
14	Ludlow	8 31			9 31			10 31		11 31	12 31	1 26
13	Riverdale	8 33	9 03		9 33	10 03		10 33		11 33	12 33	1 28
11	Spuyten Duyvil	8 37	9 07		9 37	10 07		10 37		11 37	12 37	1 32
10	Marble Hill	8 42	9 11		9 42	10 11		10 42		11 42	12 42	1 36
9	University Heights	8 44			9 44			10 44		11 44	12 44	
8	Morris Heights	8 46			9 46			10 46		11 46	12 46	
6	Yankees-E. 153rd Street	8 50			9 50			10 50		11 51	12 50	
4	Harlem-125th Street	H 8 58	H 9 26	H 9 39	H 9 58	H 10 26	H 10 34	H 10 58	H 11 30	H 11 58	H 12 58	H 1 50
0	Grand Central Terminal	9 09	9 37	9 50	10 09	10 37	10 45	11 09	11 41	12 09	1 10	2 01
		PM	PM	PM	PM	PM	PM	PM	PM	AM	AM	AM

TO POUGHKEEPSIE

Miles	To Poughkeepsie	8705	8805	8707	8807 (bike)	8709 Saturdays Only	8711	8811 (bike)	8713 Saturdays Only	8715	8815	8717 Saturdays Only	8719
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM
0	Grand Central Terminal	6 20	6 45	7 20	7 45	7 49	8 20	8 45	8 49	9 20	9 45	9 49	10 20
4	Harlem-125th Street	6 30	R 6 56	7 30	R 7 56	7 59	8 30	R 8 56	8 59	9 30	R 9 56	R 10 00	10 30
6	Yankees-E. 153rd Street	6 36		7 36		8 05	8 36		9 05	9 36			10 36
8	Morris Heights	6 39		7 39		8 08	8 39		9 08	9 39			10 39
9	University Heights	6 41		7 41		8 10	8 41		9 10	9 41			10 41
10	Marble Hill	6 43		7 43		8 12	8 43		9 12	9 43		H 10 11	10 43
11	Spuyten Duyvil	6 46		7 46		8 15	8 46		9 15	9 46		H 10 13	10 46
13	Riverdale	6 49		7 49		8 18	8 49		9 18	9 49		H 10 18	10 49
14	Ludlow	6 52		7 52		8 21	8 52		9 21	9 52			10 52
15	Yonkers	6 55		7 55		8 24	8 55		9 24	9 55		H 10 23	10 55
16	Glenwood	6 57		7 57		8 26	8 57		9 26	9 57			10 57
18	Greystone	7 00		8 00		8 29	9 00		9 29	10 00			11 00
20	Hastings-on-Hudson	7 03		8 03		8 32	9 03		9 32	10 03		H 10 29	11 03
21	Dobbs Ferry	7 06		8 06		8 35	9 06		9 35	10 06		H 10 31	11 06
22	Ardsley-on-Hudson	7 08		8 08		8 37	9 08		9 37	10 08			11 08
23	Irvington	7 10		8 10		8 39	9 10		9 39	10 10		H 10 35	11 10
25	Tarrytown	7 14	7 24	8 14	8 24	8 43	9 14	9 24	9 43	10 14	10 24	H 10 39	11 14
27	Philipse Manor	7 17		8 17		8 46	9 17		9 46	10 17			11 17
30	Scarborough	7 21		8 21		8 50	9 21		9 50	10 21			11 21
31	Ossining	7 24	7 32	8 24	8 32	8 53	9 24	9 32	9 53	10 24	10 32	H 10 47	11 24
33	Croton-Harmon Ar.	7 34		8 34		9 03	9 34		10 03	10 34		10 57	11 34
33	Croton-Harmon Lv.		7 38		8 38			9 38			10 38		
38	Cortlandt		7 46		8 46			9 46			10 46		
41	Peekskill		7 51		8 51			9 51			10 51		
46	Manitou		7 59		8 59			9 59			10 59		
50	Garrison		8 05		9 05			10 05			11 05		
52	Cold Spring		8 09		9 09			10 09			11 09		
55	Breakneck Ridge												
59	Beacon		8 21		9 21			10 21			11 21		
65	New Hamburg		H 8 27		H 9 27			H 10 27			H 11 27		
74	Poughkeepsie		8 44		9 52			10 52			11 49		
		AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM	AM

Miles	To Poughkeepsie	8819	8721 Saturdays Only	8723	8823	8725	8727	8827	8729	8731	8831	8733	8735
		AM	AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM
0	Grand Central Terminal	10 45	10 49	11 20	11 45	11 49	12 20	12 45	12 49	1 20	1 45	1 49	2 20
4	Harlem-125th Street	R 10 56	R 11 00	11 30	R 11 56	R 12 00	12 30	R 12 56	R 1 00	1 30	R 1 56	R 2 00	2 30
6	Yankees-E. 153rd Street			11 36			12 36			1 36			2 36
8	Morris Heights			11 39			12 39			1 39			2 39
9	University Heights			11 41			12 41			1 41			2 41
10	Marble Hill		H 11 11	11 43		H 12 11	12 43		H 1 11	1 43		H 2 11	2 43
11	Spuyten Duyvil		H 11 13	11 46		H 12 13	12 46		H 1 13	1 46		H 2 13	2 46
13	Riverdale		H 11 18	11 49		H 12 18	12 49		H 1 18	1 49		H 2 18	2 49
14	Ludlow			11 52			12 52			1 52			2 52
15	Yonkers		H 11 23	11 55		H 12 23	12 55		H 1 23	1 55		H 2 23	2 55
16	Glenwood			11 57			12 57			1 57			2 57
18	Greystone			12 00			1 00			2 00			3 00
20	Hastings-on-Hudson		H 11 29	12 03		H 12 29	1 03		H 1 29	2 03		H 2 29	3 03
21	Dobbs Ferry		H 11 31	12 06		H 12 31	1 06		H 1 31	2 06		H 2 31	3 06
22	Ardsley-on-Hudson			12 08			1 08			2 08			3 08
23	Irvington		H 11 35	12 10		H 12 35	1 10		H 1 35	2 10		H 2 35	3 10
25	Tarrytown	11 24	H 11 39	12 14	12 24	H 12 39	1 14	1 24	H 1 39	2 14	2 24	H 2 39	3 14
27	Philipse Manor			12 17			1 17			2 17			3 17
30	Scarborough			12 21			1 21			2 21			3 21
31	Ossining	11 32	H 11 47	12 24	12 32	H 12 47	1 24	1 32	H 1 47	2 24	2 32	H 2 47	3 24
33	Croton-Harmon Ar.		11 57	12 34		12 57	1 34		1 57	2 34		2 57	3 34
33	Croton-Harmon Lv.	11 38			12 38			1 38			2 38		
38	Cortlandt	11 46			12 46			1 46			2 46		
41	Peekskill	11 51			12 51			1 51			2 51		
46	Manitou	11 59						1 59					
50	Garrison	12 05			1 03			2 05			3 03		
52	Cold Spring	12 09			1 07			2 09			3 07		
55	Breakneck Ridge												
59	Beacon	12 21			1 16			2 21			3 16		
65	New Hamburg	H 12 27			H 1 25			H 2 28			H 3 25		
74	Poughkeepsie	12 47			1 41			2 39			3 41		
		PM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	To Poughkeepsie	8835	8737	8739	8839	8741	8841 Saturdays Only	8743	8843	8745	8845	8747	8847
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
0	Grand Central Terminal	2 45	2 49	3 20	3 45	3 49	4 15	4 20	4 45	4 51	5 15	5 20	5 45
4	Harlem-125th Street	R 2 56	R 3 00	3 30	R 3 56	R 4 00	R 4 26	4 30	R 4 56	5 01	R 5 26	5 30	R 5 56
6	Yankees-E. 153rd Street			3 36				4 36				5 36	
8	Morris Heights			3 39				4 39				5 39	
9	University Heights			3 41				4 41				5 41	
10	Marble Hill		H 3 11	3 43		H 4 11		4 43		5 12		5 43	
11	Spuyten Duyvil		H 3 13	3 46		H 4 13		4 46		5 14		5 46	
13	Riverdale		H 3 18	3 49		H 4 18		4 49		5 18		5 49	
14	Ludlow			3 52				4 52		5 21		5 52	
15	Yonkers		H 3 23	3 55		H 4 23		4 55		5 24		5 55	
16	Glenwood			3 57				4 57		5 26		5 57	
18	Greystone			4 00				5 00		5 29		6 00	
20	Hastings-on-Hudson		H 3 29	4 03		H 4 29		5 03		5 32		6 03	
21	Dobbs Ferry		H 3 31	4 06		H 4 31		5 06		5 35		6 06	
22	Ardsley-on-Hudson			4 08				5 08		5 37		6 08	
23	Irvington		H 3 35	4 10		H 4 35		5 10		5 39		6 10	
25	Tarrytown	3 24	H 3 39	4 14	4 24	H 4 39	4 54	5 14	5 24	5 43	5 54	6 14	6 24
27	Philipse Manor			4 17				5 17		5 46		6 17	
30	Scarborough			4 21				5 21		5 50		6 21	
31	Ossining	3 32	H 3 47	4 24	4 32	H 4 47	5 02	5 24	5 32	5 53	6 02	6 24	6 32
33	Croton-Harmon Ar.		3 57	4 34		4 57		5 34		6 03		6 34	
33	Croton-Harmon Lv.	3 38			4 38		5 08		5 38		6 08		6 38
38	Cortlandt	3 46			4 46		5 16		5 46		6 16		6 46
41	Peekskill	3 51			4 51		5 21		5 51		6 21		6 51
46	Manitou												
50	Garrison	4 03			5 03		5 33		6 03		6 33		7 03
52	Cold Spring	4 07			5 07		5 37		6 07		6 37		7 07
55	Breakneck Ridge												
59	Beacon	4 16			5 16		5 46		6 16		6 46		7 16
65	New Hamburg	H 4 23			H 5 25		H 5 55		H 6 25		H 6 55		H 7 25
74	Poughkeepsie	4 43			5 41		6 17		6 41		7 17		7 41
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	To Poughkeepsie	8749	8849	8751	8851	8753	8755	8855	8757	8759	8859	8761	8763
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM
0	Grand Central Terminal	5 51	6 15	6 20	6 45	6 49	7 20	7 45	7 49	8 20	8 45	8 49	9 20
4	Harlem-125th Street	6 01	R 6 26	6 30	R 6 56	R 7 00	7 30	R 7 56	R 8 00	8 30	R 8 56	R 9 00	9 30
6	Yankees-E. 153rd Street			6 36			7 36			8 36			9 36
8	Morris Heights			6 39			7 39			8 39			9 39
9	University Heights			6 41			7 41			8 41			9 41
10	Marble Hill	6 12		6 43		H 7 11	7 43		H 8 11	8 43		H 9 11	9 43
11	Spuyten Duyvil	6 14		6 46		H 7 13	7 46		H 8 13	8 46		H 9 13	9 46
13	Riverdale	6 18		6 49		H 7 18	7 49		H 8 18	8 49		H 9 18	9 49
14	Ludlow	6 21		6 52			7 52			8 52			9 52
15	Yonkers	6 24		6 55		H 7 23	7 55		H 8 23	8 55		H 9 23	9 55
16	Glenwood	6 26		6 57			7 57			8 57			9 57
18	Greystone	6 29		7 00			8 00			9 00			10 00
20	Hastings-on-Hudson	6 32		7 03		H 7 29	8 03		H 8 29	9 03		H 9 29	10 03
21	Dobbs Ferry	6 35		7 06		H 7 31	8 06		H 8 31	9 06		H 9 31	10 06
22	Ardsley-on-Hudson	6 37		7 08			8 08			9 08			10 08
23	Irvington	6 39		7 10		H 7 35	8 10		H 8 35	9 10		H 9 35	10 10
25	Tarrytown	6 43	6 54	7 14	7 24	H 7 39	8 14	8 24	H 8 39	9 14	9 24	H 9 39	10 14
27	Philipse Manor	6 46		7 17			8 17			9 17			10 17
30	Scarborough	6 50		7 21			8 21			9 21			10 21
31	Ossining	6 53	7 02	7 24	7 32	H 7 47	8 24	8 32	H 8 47	9 24	9 32	H 9 47	10 24
33	Croton-Harmon Ar.	7 03		7 34		7 57	8 34		8 57	9 34		9 57	10 34
33	Croton-Harmon Lv.		7 08		7 38			8 38			9 38		
38	Cortlandt		7 16		7 46			8 46			9 46		
41	Peekskill		7 21		7 51			8 51			9 51		
46	Manitou												
50	Garrison		7 33		8 03			9 03			10 02		
52	Cold Spring		7 37		8 07			9 07			10 06		
55	Breakneck Ridge												
59	Beacon		7 46		8 16			9 16			10 14		
65	New Hamburg		H 7 55		H 8 25			H 9 25			H 10 23		
74	Poughkeepsie		8 17		8 41			9 41			10 39		
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM	PM

Miles	To Poughkeepsie	8863	8765 Saturdays Only	8767	8867	8769	8771	8871	8797	8897	8799	8701 / 8801
		PM	PM	PM	PM	PM	PM	PM	AM	AM	AM	AM
0	Grand Central Terminal	9 45	9 49	10 20	10 45	10 49	11 20	11 43	12 20	12 43	1 00	1 50
4	Harlem-125th Street	R 9 56	R 10 00	10 30	R 10 56	R 11 00	11 30	R 11 54	12 30	R 12 54	1 10	2 00
6	Yankees-E. 153rd Street			10 36			11 36		12 35		1 15	2 05
8	Morris Heights			10 39			11 39		H 12 39		H 1 19	2 09
9	University Heights			10 41			11 41		H 12 41		H 1 21	2 11
10	Marble Hill		H 10 11	10 43		H 11 11	11 43		H 12 43	H 1 04	H 1 23	2 13
11	Spuyten Duyvil		H 10 13	10 46		H 11 13	11 46		H 12 45	H 1 06	H 1 25	2 15
13	Riverdale		H 10 18	10 49		H 11 18	11 49		H 12 49	H 1 10	H 1 29	2 19
14	Ludlow			10 52			11 52		H 12 52		H 1 32	2 22
15	Yonkers		H 10 23	10 55		H 11 23	11 55	H 12 12	H 12 55	H 1 14	H 1 35	2 25
16	Glenwood			10 57			11 57		H 12 57		H 1 37	2 27
18	Greystone			11 00			12 00		H 1 00		H 1 40	2 30
20	Hastings-on-Hudson		H 10 29	11 03		H 11 29	12 03	H 12 18	H 1 04	H 1 20	H 1 44	2 34
21	Dobbs Ferry		H 10 31	11 06		H 11 31	12 06	H 12 20	H 1 07	H 1 22	H 1 47	2 37
22	Ardsley-on-Hudson			11 08			12 08		H 1 09		H 1 49	2 39
23	Irvington		H 10 35	11 10		H 11 35	12 10	H 12 24	H 1 12	H 1 26	H 1 52	2 42
25	Tarrytown	10 24	H 10 39	11 14	11 24	H 11 39	12 14	H 12 28	H 1 17	H 1 30	H 1 57	2 47
27	Philipse Manor			11 17			12 17		H 1 20		H 2 00	2 50
30	Scarborough			11 21			12 21	H 12 35	H 1 24	H 1 37	H 2 04	2 54
31	Ossining	10 32	H 10 47	11 24	11 32	H 11 47	12 24	H 12 38	H 1 27	H 1 40	H 2 07	2 57
33	Croton-Harmon Ar.		10 57	11 34		11 57	12 34		1 37		2 17	3 05
33	Croton-Harmon Lv.	10 38			11 38			H 12 44		H 1 46		C 3 08
38	Cortlandt	10 46			11 46			H 12 52		H 1 54		C 3 16
41	Peekskill	10 51			11 51			H 12 57		H 1 59		C 3 21
46	Manitou											
50	Garrison	11 02			12 02			H 1 09		H 2 11		C 3 32
52	Cold Spring	11 06			12 06			H 1 13		H 2 15		C 3 36
55	Breakneck Ridge											
59	Beacon	11 14			12 14			H 1 22		H 2 24		C 3 44
65	New Hamburg	H 11 26			12 21			H 1 30		H 2 32		C 3 52
74	Poughkeepsie	11 39			12 39			1 50		2 55		C 4 08
		PM	PM	PM	AM	PM	AM	AM	AM	AM	AM	AM

BREAKNECK RIDGE CUSTOMER ADVISORY

Breakneck Ridge station is closed temporarily until further notice. Please use Cold Spring or Beacon stations as an alternative. Customers may also check the Metro-North website or call 511 before traveling (from Connecticut call 877-690-5114).

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TICKETS, FARES & PURCHASING OPTIONS

MTA eTix®
Buy your monthly, weekly, ten-trip, one-way, round trip and CityTickets directly from your mobile device using MTA eTix. Download the free App, create your account and enter your credit/debit card information. Don't forget to activate the ticket just before boarding!

Mail&Ride
Sign up online at www.mta.info for Mail&Ride, our monthly ticket-by-mail subscription program. Manage your account online too!

At Stations
Buy any ticket at a ticket office or easy-to-use ticket machine. You can use cash or a major credit or debit card. In the event of a ticket vending machine malfunction, please call our toll-free hotline at 877-886-6677.

On Board the Train
Purchasing your ticket on board the train is the most expensive ticket-buying option, costing between $5.75 and $6.50 more than the regular ticket price. Multiple payment options can be used, including cash, credit cards, pinless debit cards, and Transit Benefit cards. Train crews must charge the higher on-board fare at all times without exceptions. Train crews have no discretion to waive the rule, even if there is no ticket office or working ticket machine at your boarding station.

Ticket Types
One-Way - Good for one ride for 60 days including date of sale. Sold for:

Peak - Weekday trains in the gray shaded areas in this timetable.
Off Peak – All other trains including all day weekends & holidays.
Round-Trip - Good for two rides for 60 days including date of sale. Sold for peak or off-peak travel. Priced at the combination of one way fares selected (peak, off-peak, peak/off-peak, senior both ways, etc.).

Weekly - Unlimited rides Saturday through Friday. On sale the Wednesday before the Saturday that the ticket becomes valid. Non-transferable.

Monthly - Unlimited rides during the calendar month indicated on the ticket. On sale starting on the 20th of the month prior. Non-transferable.

Ten-Trip Tickets - Good for ten one-way rides. Valid for six months from date of sale. Can be shared. Sold for peak, off peak, or intermediate travel. We also sell Senior/People with Disabilities and Medicare Customers Ten-Trips.
20-Trip Tickets - Promotional fare, good for 20 Peak one-way rides. Valid for 60 days from date of sale. Available only through eTix app and at ticket offices. Promotion subject to change, please visit MTA.info for details.
Senior/People with Disabilities and Medicare Customers Half-fare good at all times except weekday AM Peak trains. Seniors must be 65 or older with valid ID; people with disabilities must present MTA ID card. Medicare customers must present valid Medicare card or an MTA Reduced-Fare MetroCard at time of ticket purchase or use to obtain half-fare price. Valid for 60 Days including date of sale.
Children's Fares and Family Fare - Children 5–11 years old ride for 50% of adult fares; children under 5 years old ride free at all times. "Family Fare" is available for off-peak travel; up to four children 5–11 may ride for $1.00 when accompanied by a fare-paying adult 18 years or older. Valid for 60 Days including date of sale.
Other Ticket Types - See the Tickets & Fares brochure, our website, or call for details about other ticket types: CityTicket, School Monthly, Group Rates, Deals & Getaways, etc.

ADDITIONAL LANGUAGE INFORMATION

Información en español está disponible en nuestro sitio web o por teléfono:

Informação em português está disponível em nosso site ou pelo telefone:

Informazione in italiano è disponibile sul nostro sito web o per telefono:

可以在我们的网站，也可以通过致电获取中文资料：

אינפֿאָרמאַציע אין ייִדיש איז בנימצא אין אונדזער וועבזייטל אָדער דורך טעלעפֿאָן:

www.mta.info/mnr OR call (511)

REFERENCE NOTES

- (A) - Connections to/from Amtrak service are available at this station. Contact Amtrak for schedules.
- C - Connecting Service. You must change trains during this trip.
- R - Stops only to receive customers.
- D - Stops only to discharge customers.
- H - Stops primarily to discharge customers. Train may depart up to 5 minutes earlier than the time shown.
- (G) - Guaranteed Ride Home Program (restrictions apply).
- (bus) - Uniticket (combined monthly rail/bus ticket) is available for use on bus service between residential area and this train station.
- (ferry) - Connecting Ferry service.
- (bus/train) - Commuter Connection bus between train station and local work sites. UniTicket available.
- (airplane) - Connecting airport bus service. At Harlem-125th Street, connect to LaGuardia Airport; at Beacon, connect to Stewart International Airport.
- (bike) - "Bike Train". The number of bicycles allowed on this train is 15.
- (no bike) - Bicycles not permitted on this train.
- (ADA) - Full ADA access for persons with disabilities.
- (wheelchair) - Wheelchair access only. For more information about accessibility features at stations, please call 511 or visit our website at www.mta.info for details.

HOLIDAYS

Sunday service will operate on Memorial Day (May 30), Independence Day (July 4), and Labor Day (September 5).

ON YOUR TRAIN

Bicycles:
Generally, bicycles may be brought on off-peak trains only, subject to limits on the number of bicycles on the train. Bicycles are not permitted on inbound AM peak trains and outbound PM peak trains, any train with the (no bike) symbol, or on holidays as indicated in the bicycle regulations. For full rules and regulations please visit our web site at www.mta.info.

MTA Metro-North Railroad is a smoke-free public transportion system. Smoking is prohibited at all times on all trains and in all indoor and outdoor waiting areas, elevators, staircases, ticketing, boarding and platform areas of terminals and stations.

RETURNING TICKETS

Consult Ticket Agent or mail claim to:

Ticket Redemption
MTA Metro-North Railroad
P.O.Box 4117
New York, NY 10163

Refunds are subject to a $10 processing fee per transaction. One-Way, Round-Trip and Ten-Trip tickets, including MTA eTix are refundable within validity period plus 2 years. MTA eTix holders who believe they have an expired ticket that was never used because it is no longer in their wallet, should contact Customer Service with a request for a refund by dialing 511, or from Connecticut 877-690-5114, or visit the Customer Service Window Grand Central Terminal, Main Concourse.

Commutation Tickets – when monthly or weekly commutation tickets are submitted for refund before their expiration, the discount is forfeited, and we must deduct the proper combination of one-way and/or weekly fares for the period the ticket has been in the customer's possession. Details of refund regulations are available for review at any ticket office and at our fares page at mta.info/mnr. Should any questions arise as to proper fare and ticket privileges, please pay the fare requested, obtain receipt, and communicate with us.

SAMPLE FARES

Effective February 25, 2022

On-board fares are indicated in red, Temporary Promotional Fare in green

Miles	between Grand Central Terminal and	Commutation Monthly	Commutation Weekly	10 Trip Peak	10 Trip Off-Peak	One-Way Peak	One-Way Off-Peak	Sr./Disabled Medicare
4	Harlem-125th Street	$186.00 $167.50	$59.50	$82.50	$53.25	$8.25 $14.00	$6.25 $12.00	$4.00 $4.00
6 8 9 10 11 13	Yankees-E. 153rd St. Morris Heights University Heights Marble Hill Spuyten Duyvil Riverdale	$216.00 $194.50	$68.00	$97.50	$61.75	$9.75 $16.00	$7.25 $13.00	$4.75 $4.75
14 15 16 18	Ludlow Yonkers Glenwood Greystone	$248.00 $223.25	$79.25	$115.00	$74.50	$11.50 $18.00	$8.75 $15.00	$5.75 $5.75
20 21 22 23	Hastings-on-Hudson Dobbs Ferry Ardsley-on-Hudson Irvington	$278.00 $250.25	$89.00	$127.50	$83.00	$12.75 $19.00	$9.75 $16.00	$6.25 $6.25
25 27 30 31 33	Tarrytown Philipse Manor Scarborough Ossining Croton-Harmon	$322.00 $289.75	$103.25	$147.50	$95.75	$14.75 $21.00	$11.25 $17.00	$7.25 $7.25
38 41	Cortlandt Peekskill	$383.00 $344.75	$122.50	$175.00	$112.75	$17.50 $24.00	$13.25 $19.00	$8.75 $8.75
46 50 52 55	Manitou Garrison Cold Spring Breakneck Ridge	$437.00 $393.25	$140.00	$200.00	$127.50	$20.00 $26.00	$15.00 $21.00	$10.00 $10.00
59 65	Beacon New Hamburg	$475.00 $427.50	$152.00	$230.00	$148.75	$23.00 $29.00	$17.50 $24.00	$11.50 $11.50
74	Poughkeepsie	$521.00 $469.00	$166.75	$257.50	$163.75	$25.75 $32.00	$19.25 $25.00	$12.75 $12.75

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MTA Metro-North Railroad

Timetable Effective: March 27, 2022

Hudson Line

MTA Metro-North Railroad

- Poughkeepsie
- New Hamburg
- Beacon
- Breakneck Ridge
- Cold Spring
- Garrison
- Manitou
- Peekskill
- Cortlandt
- Croton-Harmon
- Ossining
- Scarborough
- Philipse Manor
- Tarrytown
- Irvington
- Ardsley-on-Hudson
- Dobbs Ferry
- Hastings-on-Hudson
- Greystone
- Glenwood
- Yonkers
- Ludlow
- Riverdale (W. 254 St.)
- Spuyten Duyvil
- Marble Hill (W. 225 St.)
- University Heights (W. 207 St)
- Morris Heights (W. 177 St.)
- Yankees-E. 153rd Street
- Harlem-125th Street
- Grand Central Terminal
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Appendix G
Peregrine Falcon Construction Noise Assessment

CONSTRUCTION NOISE ANALYSIS

A construction noise assessment was conducted to determine the potential for impacts to nesting peregrine falcons in the vicinity of the Proposed Project. The assessment consisted of estimating existing ambient noise levels at the location of the nearest peregrine falcon nest site (approximately 200 feet away), estimating the level of noise generated by construction of the Proposed Project and evaluating the expected noise level at the peregrine falcon nest during construction. The analysis considered both the maximum instantaneous noise level (i.e., L_{max}) and equivalent (or average) 1-hour noise level (i.e., L_{eq}).

The primary sources contributing to existing ambient noise levels at the location of the nearest nest site are the Metro North commuter rail line (approximately 130 feet away) and Route 9D (approximately 50 feet away) running along the east side of the Hudson River. Existing noise level contributions from each of these sources were estimated using the methodology contained in the Federal Transit Administration's Transit Noise and Vibration Impact Assessment Manual (September, 2018) and Federal Railway Administration CREATE Railroad Noise Mode (2006), assuming six commuter trains passing during a single hour, and characterizing Route 9D as a "Major Roadway." While other sources (e.g., hikers, roadways other than Route 9D, aircraft overflights, river vessels etc.) would also contribute to existing ambient noise levels at the nest location, the existing noise levels from only these sources were used to represent the existing ambient condition at the nest. This approach is conservative because the use of a lower existing ambient noise level would tend to result in a higher noise level increment from Proposed Project construction.

Noise resulting from construction of the Proposed Project was estimated using construction logistics, schedule, and equipment information from the Project's construction management team. The noise analysis considered the most noise-intensive portions of construction (i.e., simultaneous pile drilling with clearing and tree removal or rock excavation) occurring simultaneously with the construction activity closest to the nest site (i.e., fence installation at the Upper Overlook using hand tools and associated air compressors). Noise emission levels and usage factors for specific pieces of construction equipment were determined based on guidance from the Federal Highway Administration's Roadway Construction Noise Model and were projected to an aggregate construction noise level at the nearest nest site. Details of the construction noise analysis are provided in **Appendix H**.

Table 1
Construction Noise Assessment Summary (in dBA)

Receiver	Existing Condition		Proposed Project Construction	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Nearest peregrine falcon nest	70	82	72	77

As shown in **Table 1**, noise levels resulting from construction of the Proposed Project would be comparable to the noise levels created by nearby commuter rail and vehicular traffic under the existing condition (i.e., would exceed existing noise levels by no more than 2 dB). The New York State Department of Environmental Conservation's guidance for "Assessing and Mitigating Noise Impacts" indicates that "[i]ncreases ranging from 0-3 dB should have no appreciable effect on receptors" and, therefore, that mitigation should not be required.

POTENTIAL IMPACT TO PEREGRINE FALCONS

Given that construction noise from the Proposed Project would result in a negligible change in the existing noise levels under which peregrine falcons have been nesting on Breakneck Ridge for many years, the Project's construction noise would not be expected to have any effect on peregrine falcons or their continued use of this eyrie. In general, peregrine falcons have a notable ability to habituate to and tolerate human disturbance, as evidenced by their increasing commonness in cities, on bridges, and in other such areas with extremely high levels of noise and human activity (Cade et al. 1996, White et al. 2002). Peregrine falcons have been described as tolerant of almost any level of human activity, provided they feel their nest is inaccessible (Ratcliffe 1972), and they are notoriously reluctant to abandon nest sites at which they have successfully nested before (Cade et al. 1996, White et al. 2002).

Some studies have quantified the degree to which nesting peregrine falcons will tolerate loud forms of human disturbance. For example, in a remote area of Alaska, where peregrine falcons have much lower tolerance thresholds than those in developed landscapes (White et al. 2002), peregrine falcons did not flush or exhibit other adverse flight responses to noises of up to 89 dB SELa from military jets flying 300 meters (984 feet) above and 400 meters (1,312 feet) laterally from their nest (Nordmeyer 1999, Palmer et al. 2003). The birds exhibited more severe reactions to avian and mammalian predators than to the jets or any other type of motorized vehicle in the study (other fixed-wing planes, helicopters, boats) (Nordmeyer 1999). In another study, peregrine falcons nesting in a rock quarry showed no adverse reaction to and successfully fledged young following rock blasting that included 139 dB detonations 100 meters (328 feet) from the nest. This same pair tolerated the dumping and maintenance of an overburden pile with heavy machinery only 10 meters (33 feet) below the nest (Olsen and Allen 1997). Similar reports of peregrine falcons thriving in active rock quarries despite frequent blasting and other forms of intense construction activity are common (e.g., White et al. 1988, Moore et al. 1992, Olsen 1995). Peregrine falcons have also shown a high tolerance for disturbances associated with bridge maintenance and replacement. For example, construction to replace California's Bay Bridge had no observable impact on the peregrine falcon pair nesting on the existing bridge; the pair continued nesting throughout construction of the new bridge, with workers sometimes as close as 100 feet away from the nest (Stewart 2011). On a bridge over the Ohio River, peregrine falcons successfully nested throughout the bridge's replacement, which involved blasting and other loud activities as close as 76 meters (249 feet) from the nest (Slankard et al. 2020). Similarly, in the lower Hudson Valley, peregrine falcons nesting on the former Tappan Zee Bridge tolerated years of construction of a replacement bridge and demolition of the old bridge, before successfully relocating to a nest box on the new bridge (Brum 2018, Kramer 2019). A study of the closely related prairie falcon (*Falco mexicanus*) found they will tolerate construction noise of up to 140 dB as close as 125 m from their nest with no adverse impact (Holthuijzen et al. 1990).

Construction of the Proposed Project would be expected to generate far lesser disturbance than the rock blasting, jet overflights, and the other activities to which these studies have found nesting peregrines to tolerate, especially for the project element closest to the nest site, which would be limited to hand tools and associated air compressors. Moreover, as discussed above and shown in **Table 1**, construction noise from the Project would be minor in the context of existing levels of noise in the vicinity of Breakneck Ridge. Peregrine falcons nesting on Breakneck Ridge would not be expected to adversely react to or experience other impacts from the negligible incremental change in existing noise levels during Project construction.

Project construction would also be expected to generate far less disturbance to peregrine falcons on Breakneck Ridge than the recreational activity of hikers on the Breakneck Trail. Upwards of 1,000 people per day hike on the Breakneck Trail during the busiest seasons (Scenic Hudson 2020), which overlap with the breeding period of peregrine falcons. The presence of people on foot is far more threatening to birds and elicits adverse behaviors much more so than visual and aural disturbances from motorized activities (e.g., motor vehicles, construction) (reviewed by Larson et al. 2016). In addition, peregrine falcons that nest in areas with high existing levels of human activity are most tolerant of new forms of disturbance (Cade et al. 1996, White et al. 2002), suggesting that the peregrine falcons nesting on Breakneck Ridge under these existing conditions would not be impacted by the Project's light construction activity on the Upper Overlook.

For all of these reasons, it is expected that noise from Project construction would not cause nest site abandonment, or behavioral changes or chronic stress that would result in reduced nesting success. As such, the Project would not be expected to adversely impact the peregrine falcon. Nevertheless, to further minimize the potential for any impacts to this species, any need for seasonal work restrictions between February 1 and July 31 would be coordinated with the NYSDEC. The tops of cranes and any other tall construction equipment would also be marked with flagging to prevent peregrine falcons from landing on them and potentially becoming impinged.

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Breakneck Connector and Bridge
Peregrine Falcon Nest Construction Noise Analysis
Construction Noise Analysis Summary

Receiver	Existing		Construction		Increment	
	Leq	Lmax	Leq	Lmax	Leq	Lmax
Peregrine Falcon Nest	70	82	72	77	2	0

Breakneck Connector and Bridge
Peregrine Falcon Nest Construction Noise Analysis
Existing Noise Level Estimate

Source	Quantity	SEL	Distance	Leq	Lmax
Commuter line locomotive (diesel)	6	92	128	54	82
Commuter line rail cars	42	82	128	54	72
Route 9D	n/a	n/a	<50	70	n/a
			Total	70	82

NOISE SOURCE AND RECEPTOR DETAILS

Summary of Noise Source Reference SELs

Reference SELs at 50 feet and speed coefficients are shown for all moving noise sources in Table 1. These reference SELs are per vehicle except for freight cars and hopper cars, which are based on 2000-feet of cars.

Table 2 shows the reference SELs at 50 feet and coefficients for all stationary noise sources. All of the stationary noise source coefficients are 10; however, the references are different (i.e. duration of pass-bys, trains per locomotive, buses per hour, etc.)

Table 1. Moving Noise Source Reference SELs and Speed Coefficients

Moving Noise Sources	SEL at 50 feet	Speed Coefficient	Reference Speed (mph)
Commuter Electric Locomotive	90	10.0	50
Commuter Diesel Locomotive	92	-10.0	50
Commuter Rail Car	82	20.0	50
RRT/LRT	82	20.0	50
AGT, Steel Wheel	80	20.0	50
AGT, Rubber Tire	78	20.0	50
Monorail	82	20.0	50
Maglev	72	20.0	50
Freight Locomotive	97	10.0	40
Freight Cars*	100	20.0	40
Hopper Cars (empty)*	104	20.0	40
Hopper Cars (full)*	100	20.0	40
Automobile	73	28.1	50
City Bus	84	23.9	50
Commuter Bus	88	14.6	50
* Freight and Hopper Cars+A51 SEL is based on 2000 feet of cars			

Breakneck Connector and Bridge
Peregrine Falcon Nest Construction Noise Analysis
Construction Noise Level Calculation

Source	RCNM Source Type	Usage Factor	Reference at 50 feet		Distance	At Receiver	
			Leq	Lmax		Leq	Lmax
Crane Barge - 200t Crawler Crane	Crane	16%	77	85	435	58	66
Tugboat 1	n/a	n/a	74	83	435	55	64
Crane Liebherr	Crane	16%	77	85	435	58	66
Air Compressor - 1000cfm	Compressor (air)	40%	76	80	200	64	68
Tractor	Tractor	40%	80	84	435	61	65
Crawler/Dozer	Dozer	40%	81	85	435	62	66
Wood Chipper	Other Equipment	50%	82	85	435	63	66
Dump Truck	Dump Truck	40%	80	84	435	61	65
Bauer BG 18H	Auger Drill Rig	20%	78	85	435	59	66
Dump Truck	Dump Truck	40%	80	84	435	61	65
Grout Plant	Slurry Plant	100%	78	78	435	59	59
Concrete mixer truck	Concrete Mixer Truck	40%	81	85	435	41	45
Tractor	Tractor	40%	80	84	435	61	65
Pickup Truck	Pickup Truck	40%	51	55	435	32	36
Excavator	Excavator	40%	81	85	435	62	66
Tamper	Compactor (ground)	20%	73	80	435	54	61
					Total	72	77

The RCNM does not include noise emission limits for tugboats, so the noise emission limits specified in the City of New York Marine Transfer Station Service Contract have been used as a conservative estimate of tugboat noise

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors

filename: EQUIPLST.xls
revised: 7/26/05

Equipment Description	Impact Device ?	Acoustical Use Factor (%)	Spec 721.560 Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow) (samples averaged)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	96
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13
Vibrating Hopper	No	50	85	87	1
Vibratory Concrete Mixer	No	20	80	80	1
Vibratory Pile Driver	No	20	95	101	44
Warning Horn	No	5	85	83	12
Welder / Torch	No	40	73	74	5

Breakneck Connector and Bridge
Peregrine Falcon Nest Construction Noise Analysis
Construction Noise Level Calculation

Source	RCNM Source Type	Usage Factor	Reference at 50 feet		Distance	At Receiver	
			Leq	Lmax		Leq	Lmax
Hydraulic Hammer	Hydra Break Ram	10%	80	90	435	61	71
15-ton truck mounted crane	Crane	16%	77	85	435	58	66
Air Compressor - 1000cfm	Compressor (air)	40%	76	80	200	64	68
Tractor	Tractor	40%	80	84	435	61	65
Crawler/Dozer	Dozer	40%	81	85	435	62	66
Wood Chipper	Other Equipment	50%	82	85	435	63	66
Dump Truck	Dump Truck	40%	80	84	435	61	65
Bauer BG 18H	Auger Drill Rig	20%	78	85	435	59	66
Dump Truck	Dump Truck	40%	80	84	435	61	65
Grout Plant	Slurry Plant	100%	78	78	435	59	59
Concrete mixer truck	Concrete Mixer Truck	40%	81	85	435	41	45
Tractor	Tractor	40%	80	84	435	61	65
Pickup Truck	Pickup Truck	40%	51	55	435	32	36
Excavator	Excavator	40%	81	85	435	62	66
Tamper	Compactor (ground)	20%	73	80	435	54	61
					Total	72	77

Table 1. CA/T equipment noise emissions and acoustical usage factors database.

CA/T Noise Emission Reference Levels and Usage Factors

filename: EQUIPLST.xls
revised: 7/26/05

Equipment Description	Impact Device ?	Acoustical Use Factor (%)	Spec 721.560 Lmax @ 50ft (dBA, slow)	Actual Measured Lmax @ 50ft (dBA, slow) (samples averaged)	No. of Actual Data Samples (Count)
All Other Equipment > 5 HP	No	50	85	-- N/A --	0
Auger Drill Rig	No	20	85	84	36
Backhoe	No	40	80	78	372
Bar Bender	No	20	80	-- N/A --	0
Blasting	Yes	-- N/A --	94	-- N/A --	0
Boring Jack Power Unit	No	50	80	83	1
Chain Saw	No	20	85	84	46
Clam Shovel (dropping)	Yes	20	93	87	4
Compactor (ground)	No	20	80	83	57
Compressor (air)	No	40	80	78	18
Concrete Batch Plant	No	15	83	-- N/A --	0
Concrete Mixer Truck	No	40	85	79	40
Concrete Pump Truck	No	20	82	81	30
Concrete Saw	No	20	90	90	55
Crane	No	16	85	81	405
Dozer	No	40	85	82	55
Drill Rig Truck	No	20	84	79	22
Drum Mixer	No	50	80	80	1
Dump Truck	No	40	84	76	31
Excavator	No	40	85	81	170
Flat Bed Truck	No	40	84	74	4
Front End Loader	No	40	80	79	98
Generator	No	50	82	81	19
Generator (<25KVA, VMS signs)	No	50	70	73	74
Gradall	No	40	85	83	70
Grader	No	40	85	-- N/A --	0
Grapple (on backhoe)	No	40	85	87	1
Horizontal Boring Hydr. Jack	No	25	80	82	6
Hydra Break Ram	Yes	10	90	-- N/A --	0
Impact Pile Driver	Yes	20	95	101	11
Jackhammer	Yes	20	85	89	133
Man Lift	No	20	85	75	23
Mounted Impact Hammer (hoe ram)	Yes	20	90	90	212
Pavement Scarafier	No	20	85	90	2
Paver	No	50	85	77	9
Pickup Truck	No	40	55	75	1
Pneumatic Tools	No	50	85	85	90
Pumps	No	50	77	81	17
Refrigerator Unit	No	100	82	73	3
Rivit Buster/chipping gun	Yes	20	85	79	19
Rock Drill	No	20	85	81	3
Roller	No	20	85	80	16
Sand Blasting (Single Nozzle)	No	20	85	96	9
Scraper	No	40	85	84	12
Shears (on backhoe)	No	40	85	96	5
Slurry Plant	No	100	78	78	1
Slurry Trenching Machine	No	50	82	80	75
Soil Mix Drill Rig	No	50	80	-- N/A --	0
Tractor	No	40	84	-- N/A --	0
Vacuum Excavator (Vac-truck)	No	40	85	85	149
Vacuum Street Sweeper	No	10	80	82	19
Ventilation Fan	No	100	85	79	13

SBI CONSULTANTS, INC.

Construction Environmental Impact Assessment
HHFT BNC
7/18/2022
Exhibit D

				Anticipated Utilization at Peak																		
				Mobilization			Site Preparation			Crane and Bridge Erection (incl. Crane Demobilization)			Bridge Framing/Additional Support			Demobilization			Connector			TOTAL
Description	Fuel Type	Size/ Qnty	Unit	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Days	Hrs / Day	Operating Hrs	Total Op Hrs
General Requirements																						
Crane Barge - 200t Crawler Crane, 54'x254' Spud Barge. Tier 3, 331 hp	diesel	254	ft	10	7	70	5	7	35	27	7	189	84	4	336	5	7	35	0	0	0	665
		1	ea																			
Materials Barge: 200'x54'	N/A	200	ft	5	0	0	5	0	0	27	0	0	84	0	0	5	0	0	0	0	0	0
		1	ea																			
Hopper Barge, Stone: 135'50'	N/A	135	ft	0	0	0	5	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
		1	ea																			
Tugboat 1, 800 hp. Tier 2	diesel	800	hp	2	12	24	2	12	24	4	12	48	12	12	144	2	12	24	0	0	0	264
		1	ea																			
Tugboat 2, 2100 hp. Tier 2	diesel	2100	hp	2	12	24	0	0	0	4	12	48	0	0	0	2	12	24	0	0	0	96
		1	ea																			
Crew/Workboat, 35'. Tier 2	diesel	400	hp	2	7	14	5	2	10	27	2	54	84	2	168	5	7	35	0	0	0	281
		1	ea																			
Safety Boat, 20' outboard	Gas	250	hp	21	1	21	5	1	5	27	1	27	84	1	84	5	1	5	0	0	0	142
		1	ea																			
Crane Liebherr LR1750/2. Tier 4	diesel	405	hp	0	0	0	27	4	108	0	0	0	0	0	0	0	0	0	0	0	0	108
		1	ea																			
Crane - Rough Terrain - Tadano GR1000 XXL	diesel	280	hp	0	0	0	0	0	0	0	0	0	84	7	588	0	0	0	0	0	0	588
		1	ea																			
Air Compressor - 1000 cfm	diesel	250	hp	0	0	0	5	1	5	27	2	54	5	1	5	0	0	0	28	2	56	120
		1	ea																			
Clearing & Tree Removal																						
Tractor, brush mowing arm RMB1865-1	diesel	55	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Crawler/Dozer/80 HP	diesel	80	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Hydraulic backhoe, Cat 323FL	diesel	87	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Wood Chipper, Vermeer WC2500TX	diesel	600	hp	1	7	7	5	7	35	0	0	0	0	0	0	0	0	0	28	7	196	238
		1	ea																			
Dump truck, diesel 400 HP, 15' length	diesel	400	hp	1	4	4	27	4	108	27	4	108	84	1	84	5	1	5	28	7	196	505
		2	ea																			
Pile Drilling																						
Bauer, BG 18H, 129,800 Ft-Lb T	diesel			2	4	8	27	4	108	0	0	0	0	0	0	0	0	0	10	4	40	156
		1	EA																			
Dump truck, diesel 400 HP, 15' length	diesel	400	hp	1	4	4	27	4	108	0	0	0	0	0	0	0	0	0	28	7	196	308
		2	ea																			
Grout Plant, D-12, 150 gal Storage Tank Capacity	diesel	50	hp	2	4	8	27	4	108	0	0	0	0	0	0	0	0	0	28	7	196	312
		1	ea																			
Con. mixer truck, 7000 international, 357 Cat engine	diesel	357	hp	2	7	14	5	2	10	0	0	0	0	0	0	2	7	14	20	4	80	118
		2	ea																			

Material Handling/ Installation																								
Tandem axle tractor, trailer 40', 80,000 GVW	diesel	400	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Pick-up/ heavyweight truck	gas	6000	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Forklift, 10,000 lb capacity, LP gas, Toyota 02-5FG45	lp	6000	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		2	EA																			
Excavator, CAT320 LR. Tier 4	diesel	173	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Hydraulic Hammer	hf	2500	ft*lbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	2	10	10
		1	ea																			
15-Ton Truck Mounted Crane	diesel	500	ho	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	16	16
		1	ea																			
Tamper/vibratory	diesel	8.5	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
Road Widening and/or Installation of Barrier on Route 9D																								
Track Asphalt Paver, AP455	diesel	120	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	EA																			
Tandem Roller, BW 154 AP-5	diesel	21,605	lbs	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		2	EA																			
Tracked Excavator, I3IX	diesel	74	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Loader, 325G, 9,500 lbs	diesel	74	hp	5	7	35	7	7	49	4	7	28	7	7	49	5	7	35	28	7	196	392
		1	ea																			
Worker Access																								
Vehicles, auto & pick-up, lightweight	gas	3000	lbs	2	4	8	5	7	35	7	7	49	7	7	49	10	7	70	28	7	196	407
		2	EA																			
Vehicles, auto & pick-up, medium-weight	gas	4000	lbs	2	4	8	5	7	35	7	7	49	7	7	49	10	7	70	28	7	196	407
		2	EA																			
Traffic/Utility Company Vehicles																								
Vehicles, auto & pick-up, lightweight	gas	3000	lbs	1	4	4	10	7	70	0	0	0	0	0	0	1	4	4	10	7	70	148
		1	EA																			
Vehicles, auto & pick-up, medium-weight	gas	4000	lbs	1	4	4	10	7	70	0	0	0	0	0	0	1	4	4	10	7	70	148
		2	EA																			

Appendix H

New York State Office of Parks, Recreation and Historic Preservation (OPRHP) Letters

NEW YORK STATE OF OPPORTUNITY. | Parks, Recreation, and Historic Preservation

ANDREW M. CUOMO
Governor

ERIK KULLESEID
Commissioner

September 10, 2020

Ms. Erin Drost
ORPHP
Taconic Regional Office
9 Old Post Rd
Staatsburg, NY 12580

Re: OPRHP
Hudson Highlands Fjord Trail EPF/PKS 148913
Town of Fishkill, Dutchess County, NY
14PR04481

Dear Ms. Drost:

Thank you for continuing to consult with the Division for Historic Preservation (DHP) of the Office of Parks, Recreation and Historic Preservation. We have reviewed the project in accordance with the New York State Historic Preservation Act of 1980 (section 14.09 of the New York Parks, Recreation and Historic Preservation Law) and the Intra-Agency Protocol for Application of Section 14.09 (HP-PCD-001). These comments are those of the DHP and relate only to historic/cultural resources.

We are in receipt of the 60% design drawings showing the Breakneck Connector, Bridge and Steward Station Upper Overlook. The DHP continues to have no concerns regarding the potential impacts of the proposed Breakneck Connector segment on archaeological and/or historic architectural resources listed in or eligible for the New York State and National Registers of Historic Places.

If further correspondence is required regarding this project, please refer to the DHP Project Review (PR) number noted above. If you have any questions, please do not hesitate to contact me at andrew.farry@parks.ny.gov.

Sincerely,

Andrew Farry, Ph.D.
Scientist/Archaeology

Cc: Dan Seymour, Parks
Nancy Stoner, Parks

NEW YORK STATE OF OPPORTUNITY. Parks, Recreation, and Historic Preservation

KATHY HOCHUL
Governor

ERIK KULLESEID
Commissioner

April 07, 2022

Nancy Stoner
Environmental Analyst
NYS Office of Parks, Recreation & Historic Preservation
Division of Environmental Stewardship and Planning
625 Broadway, 2nd Floor
Albany, NY 12238

Re: USACE
Hudson Highlands SPP/Breakneck Connector and Bridge Project
Town of Fishkill, Dutchess County, NY
22PR01700

Dear Nancy Stoner:

Thank you for consulting with the New York State Historic Preservation Office (SHPO). We have reviewed the project in accordance with Section 106 of the National Historic Preservation Act of 1966. These comments are those of the SHPO and relate only to Historic/Cultural resources. They do not include potential environmental impacts to New York State Parkland that may be involved in or near your project. Such impacts must be considered as part of the environmental review of the project pursuant to the National Environmental Policy Act and/or the State Environmental Quality Review Act (New York Environmental Conservation Law Article 8).

Based on the submitted information, it is the SHPO's opinion that this project will have No Effect upon cultural resources in or eligible for inclusion in the National Registers of Historic Places. Please note this determination applies to the Breakneck connector and bridge component of the larger Hudson Highlands State Park fjord trail project (14PR04481).

If further correspondence is required regarding this project, please refer to the DHP Project Review (PR) number noted above. If you have any questions, please do not hesitate to contact me at 518.268.2185 or andrew.farry@parks.ny.gov.

Sincerely,

Andrew Farry, Ph.D.
Scientist/Archaeology

Appendix I

New York State Department of State (NYSDOS)
Coastal Consistency Assessment Forms

NEW YORK STATE DEPARTMENT OF STATE
COASTAL MANAGEMENT PROGRAM

Coastal Assessment Form

A. INSTRUCTIONS (Please print or type all answers)

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

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

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

B. DESCRIPTION OF PROPOSED ACTION

1. Type of state agency action (check appropriate response):

   (a) Directly undertaken (e.g. capital construction, planning activity, agency regulation, land transaction) X
   (b) Financial assistance (e.g. grant, loan, subsidy) – X
   (c) Permit, license, certification - X

2. Describe nature and extent of action:

The Breakneck Connector and Bridge Project (Project) consists of the following elements: a 0.58-mile publicly-accessible, shared-use trail that includes a new bridge over the MNR tracks, parking areas along NYS Route 9D, trail connections to the Breakneck Ridge Trail and Wilkinson Memorial Trail within the Hudson Highlands State Park Preserve, the addition of two comfort station buildings, removal of the existing MNR Breakneck Ridge station wooden platforms and replacement with new platforms, an MNR Access Drive for railroad maintenance, relocation of the power lines from the west side of NYS Route 9D to the east side, and upgrades to the Upper Overlook area, including installation of a small trail steward station along the Breakneck Ridge Trail and a scramble construction area.

3. Location of action:

Putnam and Dutchess	Towns of Fishkill and Phillipstown	A half mile long project site starting at Breakneck Ridge and heading north
County	City, Town or Village	Street or Site Description

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

(a) Name of applicant: Hudson Highlands Fjord Trail, Inc., C/O Scenic Hudson, Inc.
(b) Mailing address: One Civic Center Plaza, Suite 200, Poughkeepsie, NY 12601
(c) Telephone Number: Area Code 845 473 4440 Ext 276
(d) State agency application number:

5. Will the action be directly undertaken, require funding, or approval by a federal agency?
   Yes **X** No _____ If yes, which federal agency? **USACE**

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

	YES	NO
1. Will the proposed activity be located in, or contiguous to, or have a significant effect upon any of the resource areas identified on the coastal area map:		
(a) Significant fish or wildlife habitats?	X	
(b) Scenic resources of statewide significance?	X	
(c) Important agricultural lands?		X
2. Will the proposed activity have a significant effect upon:		
(a) Commercial or recreational use of fish and wildlife resources?		X
(b) Scenic quality of the coastal environment?	X	
(c) Development of future, or existing water dependent uses?		X
(d) Operation of the State's major ports?		X
(e) Land and water uses within the State's small harbors?		X
(f) Existing or potential public recreation opportunities?	X	
(g) Structures, sites or districts of historic, archeological or cultural significance to the State or nation?		X
3. Will the proposed activity involve or result in any of the following:		
(a) Physical alteration of two (2) acres or more of land along the shoreline, land under water or coastal waters?		X
(b) Physical alteration of five (5) acres or more of land located elsewhere in the coastal area?	X	
(c) Expansion of existing public services of infrastructure in undeveloped or low density areas of the coastal area?		X
(d) Energy facility not subject to Article VII or VIII of the Public Service Law?		X
(e) Mining, excavation, filling or dredging in coastal waters?	X	
(f) Reduction of existing or potential public access to or along the shore?		X
(g) Sale or change in use of state-owned lands located on the shoreline or under water?	X	
(h) Development within a designated flood or erosion hazard area?	X	
(i) Development on a beach, dune, barrier island or other natural feature that provides protection against flooding or erosion?		X
4. Will the proposed action be located in or have a significant effect upon an area included in an approved Local Waterfront Revitalization Program?		X

D. SUBMISSION REQUIREMENTS

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

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

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

New York State Department of State
Office of Coastal, Local Government and Community Sustainability
One Commerce Plaza
99 Washington Avenue, Suite 1010
Albany, New York 12231-0001

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

E. REMARKS OR ADDITIONAL INFORMATION

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

(a) Significant fish or wildlife habitats? [19 NYCRR Part 600.5 Policy (b)(1)/State Coastal Policy 7]

The southern-most portion of the Project would be located adjacent to the Hudson River, which in this location is mapped as the Hudson Highlands Significant Coastal Fish and Wildlife Habitat (SCFWH). The Hudson Highlands SCFWH designation is due largely to a significant concentration of wintering bald eagles, presence of spawning area for striped bass, presence of nursery and summering areas for Atlantic sturgeon, and the presence of migrational routes for both Atlantic and Shortnose sturgeon.

Construction of most of the Bridge (the deck over the MNR tracks and the western abutment) would be constructed from the waterside via barges. Up to four barges may be present at one time: a logistics barge for staging, materials barge for deliveries which would moor temporarily to the logistics barge, a bridge barge to deliver and erect major bridge components, and potentially an up to 100-foot by 300-foot crane barge for Bridge assembly. The Bridge assembly is anticipated to take about 12 weeks. For construction of the southbound MNR platform, up to three barges may be present at one time: an equipment barge at the onset of construction for initial delivery of equipment and materials; a logistics barge for staging; and a crane barge to move heavy materials to land. Construction of the southbound MNR platform would take about 15 weeks. Up to four construction barges could be present on site at the same time for Bridge construction and up to three barges could be present at the same time for the construction of the southbound MNR platform. The resulting overwater coverage would be about 2 acres. However, it would be temporary and certain barges such as materials barge would arrive intermittently (about 10 times during the construction period) and would remain on site for up to one week at each occurrence, and other barges such as the equipment barge for the southbound MNR platform would only be expected to be at the site for 1 week. The logistics barges would be anchored adjacent to the shoreline by four 36-inch diameter steel pipe piles, which will be installed by self-weight, throughout the approximately 24-month Bridge construction and 15-week southbound MNR platform construction. While the Bridge logistics barge may not be needed continuously during Bridge construction, the analyses in this document conservatively assume that it would be in place for the full duration. Compacted stone and steel road plates would be installed for the ramp from the barge to bear upon. Materials, personnel, and equipment would be transferred onshore using the ramp.

Two options are being considered for the placement of cranes to assemble the bridge structure:

Crane Option 1: Crane remains on an up to 100-foot by 300-foot crane barge and lifts bridge sections into place from its anchored position. Crane barge would be secured in place by four 30 to 36-inch diameter steel piles installed by self-weight. Bridge components assembled on the barge and then lifted into place. Anticipated duration for this work would be about 12 weeks.

Crane Option 2: Land crane would be rolled from barge onto land via ramp. The land crane would assemble the bridge components on land and then erect the bridge sections. Anticipated duration for this work would be about 12 weeks. This option would require shoreline stabilization, which would be performed as discussed below. Barge delivering crane is assumed to remain for 12 weeks.

Both Crane Options would require shoreline stabilization. Approximately 90 feet of shoreline adjacent to the logistics barge would be cleared and stabilized followed by placement of crushed, compacted limestone, in a stable slope. This shoreline stabilization would result in the placement of sediments below spring high water (SHW) and mean high water (MHW), which would require permits from the U.S. Army Corps of Engineers (USACE) and NYSDEC. All materials placed along the shoreline would be removed at the completion of construction. The temporary placement of any fill material would represent a minimal loss of potential foraging habitat for shortnose and Atlantic sturgeon when compared to the amount of similar habitat elsewhere in the Hudson River. Under Crane Option 2, a materials barge would deliver large Bridge structural components and moor to the logistics barge. These materials would be transferred to the logistics barge and delivered to the shoreline using the ramp. Following construction of the Bridge structure, the temporary stabilization materials would be removed from the landing areas, and the soil would be stabilized and landscaped with native vegetation.

The southbound MNR platform would be constructed on the west side of the MNR tracks and would be facilitated from the Hudson River via barges. At the onset of construction, an equipment barge (up to 30 ft by 90 ft) would be anchored offshore using four 36-inch spud piles installed by self-weight and remain in place for about one week to serve as a landing point for delivery of equipment and to establish soil erosion and sedimentation measures (e.g., silt fence, turbidity curtain)

within the area of disturbance for the southbound platform. A temporary ramp would be deployed from the barge to offload equipment. A compacted stone and a steel road plate system would be in place for the ramp to bear upon. The equipment barge would then be demobilized, and site preparation activities would be conducted, including site clearing, grubbing, and grading. Debris and vegetation would be temporarily stockpiled onsite for eventual removal on the logistics barge. Erosion and sediment control measures would be established around stockpiled material in accordance with the SWPPP prepared for the Project. There would be no shoreline stabilization required for this component of the Project.

Following site preparation for the southbound MNR platform, a logistics barge (up to 50 ft by 200 ft) would be anchored offshore with four 36-inch diameter steel piles installed by self-weight and remain in place for about 14 weeks. The logistics barge would deliver materials for construction and remove materials at the completion of construction. It would have a ramp to deliver and retrieve materials from the construction site. The ramp would have compacted stone and steel road plates to bear upon. A crane barge (up to 100 feet by 200 feet) would be mobilized to the site for about 6 weeks to move pre-fabricated platform components and heavy materials to land. Equipment would be demobilized to the logistics barge when construction of the southbound MNR platform is complete.

The spud piles that would be used to secure construction barges adjacent to the shoreline would be steel pipe piles or spud piles, which do not constitute fill within Waters of the United States under Section 404 of the Clean Water Act. Shoreline stabilization activities adjacent to the logistics barge would result in the placement of a minimal amount of temporary fill material below SHW and/or MHW which would require a CWA Section 404 and Section 10 of the Rivers and Harbors Act, a Section 401 Water Quality Certification from NYSDEC,) and a NYSDEC Protection of Waters Permit.

Piles securing the logistics barges would be installed on the river bottom by self-weight. The resulting increase in suspended sediment due to pile installation would be minimal and would be localized. Sediments that become resuspended when the spuds are demobilized would dissipate quickly with the tidal currents of the river and would not result in long term adverse impacts to water quality or aquatic biota. Additionally, barges and any other smaller vessels would maintain a 2-foot separation from the mudline at all times to minimize the potential for sediment resuspension. Further, the shoreline stabilization activities would be enclosed in turbidity curtains so there will be no resuspension of sediments in the water column. As such, any disturbance of sediments would be minimized and temporary.

The use of silt barriers or turbidity barriers during shoreline stabilization would minimize the potential for sediment re-suspension during placement of the geotextile and crushed limestone to adversely affect water quality and aquatic biota of the Hudson River. The Project Site is strongly influenced by the tidal currents of the Hudson River and any temporary increase in suspended sediment and localized turbidity would dissipate shortly after the completion of the sediment disturbing activity. The river has substantial width at this location to allow for fish, including sturgeon and striped bass, and other species to avoid the area of the barges. Ongoing coordination with the NYSDEC and USACE will determine the final timing of work to be permitted in the Hudson River. The closest known bald eagle nests to the Project Site are on the opposite (western) side of the Hudson River. The proposed action would not be expected to impact bald eagle nesting habitat, as there are no known nests within or near the Project Site. With the short duration of in water disturbance and adherence to required protection measures, construction of the Project is not expected to have a significant adverse impact on these protected species.

The construction of the proposed trail will require disturbance to four freshwater wetland areas, with a total disturbance within wetlands of 0.095 acres. Work within the jurisdictional and non-jurisdictional freshwater wetlands including grading and planting will enhance the overall ecological functions and values of these wetland areas. Proposed regrading in the wetlands will result in a net-fill of about 59.7 cubic yards. Filling will generally include well-graded amended native soil from on-site. Proposed filling is less than three feet in depth at specific areas to support grading for drainage. Total area of wetlands within the finished project will be approximately 0.29 acres, an approximate increase of 0.10 acres of wetland acreage. Regraded areas will be planted with a diverse palette of native wetland species and will follow the OPRHP Native Plant Policy. In addition, invasive species will be removed from other areas within the wetlands and these areas will be replanted with the same native species palette as the regraded areas.

The Project would utilize erosion and sediment control measures (e.g., silt fencing, inlet protection, surface stabilization, and dust control) that would be implemented in accordance with the SWPPP prepared for the Project as required by the New York State Pollution Discharge Elimination System (SPDES) General Permit GP-0-20-001 for Stormwater Discharges from Construction Activity (General Permit) and would minimize the potential for discharge of sediment to the Hudson River during upland construction activities. Temporary soil erosion and sediment control measures proposed for the Project are covered in the C series drawings (attached as Appendices A and B of the Part 3 FEAF).

Stormwater management would be incorporated into the Project design with a series of swales for water quality treatment prior to stormwater runoff being discharged to the Hudson River, in accordance with NYSDEC standards. The drainage design for the Project intends to largely maintain existing flow patterns and proposes to keep existing culverts crossing under NYS Route 9D and the MNR tracks. The proposed vegetated swales would reduce runoff and promote infiltration through soil improvement and are expected to reduce stormwater impacts and minimize flood impacts to MNR properties and operations, and to NYS Route 9D. The swales would treat water prior to discharge into the Hudson River. With these measures in place, potential impacts related to stormwater runoff and erosion during construction and operation of the Project would be minimized.

The Project would not have a significant adverse effect on significant wildlife habitats for protected species known to be present in the area. Mitigation measures are being developed with NYSDEC that will be employed to minimize project impacts to federally and State listed species and their habitat.

The Project is consistent with this policy.

(b) Scenic resources of statewide significance? [19 NYCRR Part 600.5 Policy (d)(1)/State Coastal Policy 24]

The Project is located within the Hudson Highlands Scenic Areas of Statewide Significance (SASS). Construction and operation of the Project is not anticipated to result in a significant adverse visual impact to the Hudson Highlands SASS. The development of a bridge and associated trail segment is in keeping with other, similar, recreational resources in the area. Construction of the Project would grant users greater access to the Hudson River shoreline and other natural features of the area, and provide enhanced connectivity to HHSPP recreational resources, ultimately enhancing the public's enjoyment of those resources, including the SASS. To minimize the visual impact of the Bridge, from very early in the planning process, alternative bridge designs were considered. The ultimate design chosen is the least obvious and intrusive on the existing landscape. The Bridge is designed to be as visually quiet as possible. The abutments would appear to grow out of the existing landscape and land on either side of the MNR tracks. The Bridge, while maintaining necessary clearances for train traffic, would be visually unobtrusive as the elevation of the bridge deck is similar to the existing elevation of NYS Route 9D. In addition, the curvilinear design of the Bridge conforms with the surrounding geological features. Moreover, the materials and colors for the Bridge were intentionally selected to blend into the landscape. Finally, the size and scale of the Project, when compared to the overall expanse of HHSPP and the surrounding landscape, support a determination that construction and operation of the Project would not interfere with the public's enjoyment of the SASS, and the other community assets within its boundaries, and that the Project would in fact enhance the public's enjoyment of them. The Project is consistent with this policy.

2. Will the proposed activity have a <u>significant effect</u> upon:

(b) Scenic quality of the coastal environment? [19 NYCRR Part 600.5 Policy (d)(2)/State Coastal Policy 25]

Once constructed and operational, the Project would have a variety of <u>beneficial</u> impacts. The bridge would provide the public with improved physical and visual access to the Hudson River shoreline. In addition, the Project would provide visual access to historic resources including the NYCDEP Hudson River Drainage Chamber, which is National Register (NR) eligible, and Bannerman's Island as well as broader views to points north, west and south of the Hudson Highlands Scenic Area of Statewide Significance (SASS).

The Project would not obstruct, eliminate, or screen any officially designated scenic views. The development of a bridge and associated trail segment is in keeping with other, similar, recreational resources in the area. Construction of the Project would grant users greater access to the Hudson River shoreline and other natural features of the area, and provide enhanced connectivity to HHSPP recreational resources, ultimately enhancing the public's enjoyment of those resources. Furthermore, the curvilinear design of the Bridge conforms with the surrounding geological features. Moreover, the materials and colors for the Bridge were intentionally selected to blend into the landscape. Finally, the size and scale of the Project, when compared to the overall expanse of HHSPP and the surrounding landscape, support a determination that construction and operation of the Project would not interfere with the scenic quality of the coastal environment. The Project is consistent with this policy.

(f) Existing or potential public recreation opportunities? [19 NYCRR Part 600.5 Policy (f)(1)/State Coastal Policy 21]

Construction of the Project would result in the temporary closure of the Breakneck Ridge MNR station, and may require temporary closure of the nearby trailheads to the Breakneck Ridge and Wilkinson Memorial Trails, as needed, for safety reasons. However, these recreational resources would still be accessible from other points along their lengths during the

Project's construction, and as such the Project would not result in the loss of access to these recreational resources. Additionally, given the Project's proximity to HHSPP, which is replete with various other trails, the Project would have limited impact on the public's access to, and enjoyment of, the surrounding area by way of trails.

In addition, the Project would ultimately enhance the public's enjoyment of nearby recreational resources. Specifically, the Project is located adjacent to/within HHSPP, allowing better and safer access to parking, the MNR Breakneck Ridge station, and trails within HHSPP. Pedestrian safety would be increased by way of more formalized parking and new pathways. The bridge and trail would allow for new recreational and visual access to the Hudson River shoreline. The new steward station would allow for better housing of steward staff and equipment and would serve as a more formal introduction area for visitors to HHSPP and surrounding area, including the more accessible shoreline.

A large portion of the Project site is held by MTA and public access is largely restricted due to the proximity to the MTA railroad tracks. The Project would amplify physical barriers to the MTA railroad tracks and make for safe pedestrian and bicycle use of the trail and bridge corridor within these public lands. In addition, upon completion of the Project, MTA intends to grant the applicable permissions for public use of the Breakneck Connector and Bridge. Thus, the Project would provide public access where there currently is none and where such access would not be allowed without the Project. The Project is consistent with this policy.

3. Will the proposed activity <u>involve</u> or <u>result in</u> any of the following:
(b) Physical alteration of five (5) acres or more of land located elsewhere in the coastal area? [19 NYCRR Part 600.5 Policies (g)(1), (f)(2), (d)(2), (h)(2), (h)(5), (b)(1), (h)(4)/State Coastal Policies 11, 22, 25, 32, 37, 38]

See the response to 3(h) below regarding 19 NYCRR Part 600.5 Policy (g)(1)/State Coastal Policy 11.

The guidance for 19 NYCRR Part 600.5 Policy (f)(2)/State Coastal Policy 22 states that parks are a type of development that can provide water-related recreation as a multiple use. As outlined in the guidance for 19 NYCRR Part 600.5 Policy (f)(1)/State Coastal Policy 21, water-related recreation includes certain activities which are enhanced by a coastal location and increase the general public's access to the coast such as pedestrian and bicycle trails, scenic overlooks and passive recreation areas that take advantage of coastal scenery, all of which are incorporated into the Project. Furthermore, the Project is fully compatible with reasonably anticipated demand for such activities, given the current use of portions of the site for such recreational uses. Therefore, the Project is fully consistent with 19 NYCRR Part 600.5 Policy (f)(2)/State Coastal Policy 22 by providing water-related recreation.

See the response to 2(b) above regarding 19 NYCRR Part 600.5 Policy (d)(2)/State Coastal Policy 25.

Although the FEAF Part 1, run on the EAF Mapper, indicates a Principal Aquifer in the Project area, additional mapping resources indicate there are no Sole-Source, Primary, or Principal Aquifers in the study area. Regardless, measures would be included to protect the quality of surface and groundwater, such as vegetated swales to provide control of stormwater quality. At the well location, a six-inch-inner-diameter steel casing was installed into bedrock to about 40 feet deep, and a 6-inch-diamater well-hole was then drilled into bedrock to about 310-feet deep. A pump test was conducted in the well-hole which proved about 30-gpm of water yield. The comfort stations would use Clivus composting toilets that would not discharge to groundwater. Wastewater would be stored in liquid end tanks that would be pumped out by a service company.

A draft SWPPP for the Project has been developed in accordance with the New York State Stormwater Management Design Manual. The Project would utilize erosion and sediment control measures (e.g., silt fencing, inlet protection, surface stabilization, and dust control) that would be implemented in accordance with the SWPPP prepared for the Project as required by the SPDES General Permit GP-0-20-001 for Stormwater Discharges from Construction Activity and would minimize the potential for discharges of sediment to the Hudson River during upland construction activities. Temporary soil erosion and sediment control measures proposed for the Project are covered in the C series drawings (attached as Appendices A and B of the Part 3 FEAF).

The Project would include a series of vegetated swales for control and treatment of stormwater prior to discharge to the Hudson River, in accordance with NYSDEC standards. The drainage design for the Project intends to largely maintain existing flow patterns and proposes to keep existing culverts crossing under NYS Route 9D and the MNR tracks. The proposed vegetated swales would reduce runoff and promote infiltration through soil improvement and are expected to reduce stormwater impacts and minimize flood impacts to MNR properties and operations, and to NYS Route 9D. In addition, the Steward Station may include a green roof, which would minimize runoff.

Native plantings would be used to permanently restore disturbed areas that do not support physical improvements. The Project minimizes impervious surfaces using flagstone pavers on crushed stone at the comfort stations, permeable pavers in portions of the parking lots, and crushed stone surfacing for on-grade sections of the trail.

See also the response to 1(a) above. Therefore, the Project is consistent with 19 NYCRR Part 600.5 Policies (h)(2), (h)(4), (h)(5), and (b)(1)/State Coastal Policies 32, 37, and 38.

(e) Mining, excavation, filling or dredging in coastal waters? [19 NYCRR Part 600.5 Policies (g)(2), (b)(7)/Policies 15, 35]

The Project would not involve any mining, excavation, or dredging. Therefore, 19 NYCRR Part 600.5 Policy (g)(2)/State Coastal Policy 15 is not applicable.

The Project would not involve dredging in coastal waters. Minor grading is proposed within less than one-tenth of an acre of wetlands. Proposed regrading in the wetlands will result in a net-fill of about 59.7 cubic yards. Filling would generally include well-graded soil, imported or from on-site. Proposed filling is less than three feet in depth at specific areas to support grading for drainage. This activity would require a CWA Section 404 permit from USACE if deemed to be under USACE jurisdiction, and a Section 401 Water Quality Certification and Article 24 Freshwater Wetlands Permit from NYSDEC if deemed to be under NYSDEC jurisdiction.

The use of silt barriers or turbidity barriers would be used during shoreline stabilization to minimize the potential for sediment re-suspension during placement of the geotextile and crushed limestone. The Project Site is strongly influenced by the tidal currents of the Hudson River and any temporary increase in suspended sediment and localized turbidity that may result from the installation of shoreline stabilization would dissipate shortly after the completion of the sediment disturbing activity. Therefore, the Project is consistent with 19 NYCRR Part 600.5 Policy (b)(1)/State Coastal Policy 35.

(g) Sale or change in use of state-owned lands located on the shoreline or under water? [19 NYCRR Part 600.5 Policy (e)(2)/State Coastal Policy 20]

The Project would provide public access to the foreshore and to lands immediately adjacent to the foreshore or water's edge through the creation of a publicly-accessible recreational trail and bridge connecting to the Hudson River. Provision of this public access would be compatible with the adjoining recreational uses, which include HHSPP and its trail system to which the Project would provide connections. A large portion of the Project site is held by MTA and public access is largely restricted due to the proximity to the MTA railroad tracks. The Project would amplify physical barriers to the MTA railroad tracks and make for safe pedestrian and bicycle use of the trail and bridge corridor within these public lands. In addition, upon completion of the Project, MTA intends to grant the applicable permissions for public use of the Breakneck Connector and Bridge. Thus, the Project would provide public access where there currently is none and where such access would not be allowed without the Project. The Project is consistent with this policy.

(h) Development within a designated flood or erosion hazard area? [19 NYCRR Part 600.5 Policy (g)(1) and (g)(4)/State Coastal Policies 11, 12, and 17]

A portion of the project site is located within the 1 percent annual chance floodplain within Zone AE with a base flood elevation of +7 feet NAVD88. Zone AE is considered to be a special flood hazard area (SFHA). The Project would develop approximately 0.74 acres within the 100-year floodplain located to the west of the MNR tracks within the portion of the Project adjacent to the DEP building and would result in no development within the 500-year floodplain. The Hudson River is tidal, and its water level at the Project Site is controlled mainly by tidal conditions with some influence from freshwater inflow from upriver and smaller tributaries. The Project would result in minimal occupation of the floodplain. The only Project elements in the 100-year floodplain are the retaining wall to the west of the MNR track, three bridge piers, the western bridge abutment and trail. These structures, as well as the shoreline stabilization, and the trail would occupy a minimal footprint within the floodplain and would not result in significant adverse effects to the floodplain or exacerbate flooding conditions in adjacent areas.

On-grade segments may be planted with stabilizing vegetation and supported by boulder edges along the river side to minimize potential damage to the trail resulting from flood waters or associated shoreline erosion. The lower elevation southern-most portion of the Project, which is located adjacent to the Hudson River on the west side of the MNR tracks, is designed to be resilient to flooding through material selection and design practices that allow it to be submerged with little to no damage and easily repaired if necessary. Landscape materials, including planting and trail surfacing, are designed to be resilient under 100-year flood conditions.

The design flood elevation for the project site is el. 8 (NAVD88), also referred to as the 100-year or 1% annual chance flood elevation per effective Flood Insurance Rate Maps. With the exception of the comfort station (first floor at el. 9.25 with dry flood-proofed basement), site features are resilient or are sited above el. 8. Mean high water (MHW) is located at el. 1.73 (NAVD88). The lowest elevation of the bottom of bridge deck is el. 15.75 (NAVD88). This allows for about 7.75 feet of freeboard above the 100-year flood elevation, and MHW plus a 75-inch projection for sea level rise (the high estimate for year 2100).

The Project would include a series of vegetated swales for control and treatment of stormwater runoff prior to discharge to the Hudson River, in accordance with NYSDEC standards. The drainage design for the Project intends to largely maintain existing flow patterns and proposes to keep existing culverts crossing under NYS Route 9D and the MNR tracks. The proposed vegetated swales would reduce runoff and promote infiltration through soil improvement and are expected to reduce stormwater impacts and minimize flood impacts to MNR properties and operations, and to NYS Route 9D. In addition, the Steward Station may include a green roof, which would minimize runoff.

The Project would increase storage capacity for floodwaters. The pre-development (existing) stormwater runoff storage volume between NYS Route 9D and the MNR tracks is approximately 38,400 cubic feet (CF). The Project would increase the runoff storage to approximately 126,000 CF. Therefore, the likelihood of flooding from runoff in the MNR right-of-way from equivalent storms would decrease because of the Project. Expected flow to the MNR culverts from a 2-year storm (and other storms) would be reduced as a result of the Project. The Project is not expected to exacerbate existing flooding or erosion either along the proposed trail or elsewhere.

There are no dunes, barrier islands, or beaches within the vicinity of the Project. Rocky cliffs (i.e., bluffs) that protrude out into the Hudson River are located at Breakneck Ridge at the southern edge of the limit of disturbance of the Project, at the Upper Overlook. The proposed Steward Station would be constructed in this area; this building may include a green roof, which would minimize runoff. No blasting is anticipated and no changes to geological features are expected at the Upper Overlook. The trail in the lower elevation portion of the southern section would be constructed waterward of the bluffs and the NYCDEP Drainage Chamber. In the area south of the NYCDEP Drainage Chamber, the Project would protect the bluffs through inclusion of a boulder edge and stabilizing vegetation to minimize damage from flooding and erosion.

The Project is consistent with these policies.

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Telephone Number: 518-339-0204 Date: 12/22/2022