A126-S153-H141 Electric Transmission Line Structure Replacements

Stratham and Greenland, New Hampshire

PREPARED FOR

EVERSOURCE

Public Service Company of NH
d/b/a Eversource Energy
c/o Kurt Nelson
13 Legends Drive
Hooksett, NH 03106
603.634.3256

PREPARED BY

2 Bedford Farms Drive
Suite 200
Bedford, NH 03110
603.391.3900

March 21, 2023

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Cover Letter

www.vhb.com

March 20, 2023

Ref: 52973.00

Mr. Ridgely Mauck
NHDES - Alteration of Terrain Bureau
29 Hazen Drive
Concord, NH 03302-0095

Re: A126-H141-S153 Electric Transmission Line Structure Replacements
Stratham and Greenland, NH

Dear Mr. Mauck,

On behalf of Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource), VHB respectfully submits for your consideration the attached Alteration of Terrain Application for the proposed structure replacements along the existing A126, H141, and S153 Electric Transmission Lines. The A126, H141, and S153 lines are 115kV lines that share a managed right-of-way (ROW) corridor across various towns throughout the state. The A126 line originates in Brentwood and culminates in Portsmouth, the H141 line originates in Chester and culminates in Stratham, and the S153 line originates in Stratham and culminates in Portsmouth. The permitting of these lines has been broken down by town, with the focus of this application being limited to the towns of Stratham and Greenland. It should be noted that the A126 and H141 lines share the ROW west of Great Bay Substation in Stratham, and the A126 and S153 lines share the ROW east of Great Bay Substation in Greenland.

Eversource has identified the need to conduct routine maintenance work along the A126, H141, and S153 Transmission Lines due to the age and condition of the structures resulting from woodpecker damage, insect damage, and pole rot. The proposed project involves the replacement of ten (10) existing wooden electric transmission line structures on the H141 line, twenty one (21) existing structures on the A126 line, and sixteen (16) existing structures on the S153 line with new weathered steel structures in accordance with current construction methods and materials. Weathered steel structures are more resilient to insect and woodpecker damage and pole rot and can further withstand typical New Hampshire storms and severe weather events.

Most of the replacement structures will be installed within 10-15 feet of the existing structure footprints (back or forward on-line), however there is one instance in Greenland where a structure would require replacement approximately 50 feet from the existing structure footprint. Replacement structures are connected to the existing overhead circuit prior to the removal of the existing structures. The proposed project is part of Eversource's ongoing Asset Condition Replacement program conducted to ensure reliable electric service for their customers. The Eversource 115-kV transmission system is an integral part

Engineers | Scientists | Planners | Designers

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of the regional power system delivering electricity to customers throughout New England. It is critical that the 115-kV system remain operational without interruption from preventable outages.

The total land disturbance for the project was calculated to be approximately 5.53 acres. The disturbance area was conservatively calculated based upon the total length of access roads, assuming a typical 16-foot width, and the total area for construction work pads. The largest work pad to be established around proposed replacement structures will be limited to approximately 100'x100' in size.

In association with this application, the following documents are enclosed

- Unbound signed application form, application fee and color USGS maps.
- Alteration of Terrain Application Package.

Please feel free to contact me if there are any questions or comments regarding this project or the enclosed materials.

Sincerely,

Dave Fenstermacher

Director of Land Development

Vanasse Hangen Brustlin, Inc.

cc: Kurt Nelson – Eversource
Sherrie Trefry - VHB

Application Form & Checklist

ALTERATION OF TERRAIN PERMIT APPLICATION

Water Division/ Alteration of Terrain Bureau/ Land Resources Management
Check the Status of your Application: www.des.nh.gov/onestop

RSA/ Rule: RSA 485-A:17, Env-Wq 1500

Administrative Use Only	Administrative Use Only	Administrative Use Only	File Number:
			Check No.
			Amount:
			Initials:

1. APPLICANT INFORMATION (INTENDED PERMIT HOLDER)		
Applicant Name: PSNH d/b/a Eversource Energy	Contact Name: Kurt Nelson	
Email: kurt.nelson@eversource.com	Daytime Telephone: (603) 714-3031	
Mailing Address: 13 Legends Drive		
Town/City: Hooksett	State: NH	Zip Code: 03106
2. APPLICANT'S AGENT INFORMATION If none, check here: ☐		
Business Name: VHB	Contact Name: Sherrie Trefry	
Email: strefry@vhb.com	Daytime Telephone: (603) 391-3951	
Address: 2 Bedford Farms Drive, Suite 200		
Town/City: Bedford	State: NH	Zip Code: 03110
3. PROPERTY OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)		
Applicant Name: Same	Contact Name:	
Email:	Daytime Telephone:	
Mailing Address:		
Town/City:	State:	Zip Code:
4. PROPERTY OWNER'S AGENT INFORMATION If none, check here: ☐		
Business Name: Same as Applicant's agent	Contact Name:	
Email:	Daytime Telephone:	
Address:		
Town/City:	State:	Zip Code:
5. CONSULTANT INFORMATION If none, check here: ☐		
Engineering Firm: VHB	Contact Name: Sherrie Trefry	
Email: strefry@vhb.com	Daytime Telephone: (603) 391-3951	
Address: 2 Bedford Farms Drive, Suite 200		
Town/City: Bedford	State: NH	Zip Code: 03110

6. PROJECT TYPE

☐ Excavation Only ☐ Residential ☐ Commercial ☐ Golf Course ☐ School ☐ Municipal
☐ Agricultural ☐ Land Conversion ☒ Other: Utility

7. PROJECT LOCATION INFORMATION

Project Name: A126, H141, S153 Electric Transmission Line Structure Replacements

Street/Road Address: Existing Electric Transmission Line Right-of-Way (ROW)

Town/City: Stratham and Greenland, NH | County: Rockingham County

Tax Map: N/A | Block: N/A | Lot Number: N/A | Unit: N/A

Location Coordinates: 43.013832°, -70.929499° ☒ Latitude/Longitude ☐ UTM ☐ State Plane

Post-development, will the proposed project withdraw from or directly discharge to any of the following? If yes, identify the purpose.

1. Stream or Wetland Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge
2. Man-made pond created by impounding a stream or wetland Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge
3. Unlined pond dug into the water table Purpose:	☐ Yes ☒ No	☐ Withdrawal	☐ Discharge

Post-development, will the proposed project discharge to:

- A surface water impaired for phosphorus and/or nitrogen? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen**
- A Class A surface water or Outstanding Resource Water? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen**
- A lake or pond not covered previously? ☒ No ☐ **Yes - include information to demonstrate that project will not cause net increase in phosphorus in the lake or pond**

Is the project a High Load area? ☐ Yes ☒ No
If yes, specify the type of high load land use or activity: _____

Is the project within a Water Supply Intake Protection Area (WSIPA)? ☐ Yes ☒ No
Is the project within a Groundwater Protection Area (GPA)? ☒ Yes ☐ No
Will the well setbacks identified in Env-Wq 1508.02 be met? ☒ Yes ☐ No

Note: Guidance document titled "*Using NHDES's OneStop WebGIS to Locate Protection Areas*" is available online. For more details on the restrictions in these areas, read Chapter 3.1 in Volume 2 of the NH Stormwater Manual.

Is any part of the property within the 100-year floodplain? ☐ Yes ☒ No
If yes: Cut volume: N/A cubic feet within the 100-year floodplain
Fill volume: N/A cubic feet within the 100-year floodplain

☐ Project **IS** within **¼ mile of a designated river** Name of River:
☒ Project is **NOT** within ¼ mile of a designated river

☒ Project **IS** within **a Coastal/Great Bay Region community** - **include info required by Env-Wq 1503.08(l) if applicable**
☐ Project is **NOT** within a Coastal/Great Bay Region community

8. BRIEF PROJECT DESCRIPTION (PLEASE DO NOT REPLY "SEE ATTACHED")

The proposed project involves the replacement of ten (10) existing wooden electric transmission line structures on the H141 line, twenty one (21) existing structures on the A126 line, and sixteen (16) existing structures on the S153 line with new weathered steel structures in accordance with current construction methods and materials. The existing structures need to be replaced due to the age and condition of the poles resulting from woodpecker damage, insect damage, and pole rot. Weathered steel structures are more resilient to insect and woodpecker damage and pole rot and can further withstand typical New Hampshire storms and severe weather events. The proposed project is part of PSNH's ongoing Asset Condition Replacement program conducted to ensure reliable electric service for their customers.

9. IF APPLICABLE, DESCRIBE ANY WORK STARTED PRIOR TO RECEIVING PERMIT

Not Applicable

10. ADDITIONAL REQUIRED INFORMATION

A. Date a copy of the application was sent to the municipality as required by Env-Wq 1503.05(e)[1]: __/__/____. **TBD**
(Attach proof of delivery)

B. Date a copy of the application was sent to the local river advisory committee if required by Env-Wq 1503.05(e)[2]: __/__/____. **TBD**
(Attach proof of delivery)

C. Type of plan required: ☐ Land Conversion ☒ Detailed Development ☐ Excavation, Grading & Reclamation ☐ Steep Slope

D. Additional plans required: ☐ Stormwater Drainage & Hydrologic Soil Groups ☐ Source Control ☐ Chloride Management

E. Total area of disturbance: 241,427 square feet

F. Additional impervious cover as a result of the project: 0* square feet (use the "-" symbol to indicate a net reduction in impervious coverage).
Total final impervious cover: 0 square feet
*Due to the linear nature of these types of utility replacement projects, the presence of existing, unquantified, gravel access roads and in association with the waiver request realted to stormwater calculations impervious cover is considered to be di minimis.

G. Total undisturbed cover: 5,036,212 quare feet {= total right-of-way area between Stratham municipal boundary and Moulton Avenue, Greenland (5,277,639 SF) - area of disturbance (241,427 SF)}

H. Number of lots proposed: 0

I. Total length of roadway: 0 linear feet

J. Name(s) of receiving water(s): Winnicut River

K. Identify all other NHDES permits required for the project, and for each indicate whether an application has been filed and is pending, or if the required approval has been issued provide the permit number, registration date, or approval letter number, as applicable.

Type of Approval	Application Filed?	Status	
		Pending	If Issued:
1. Water Supply Approval	☐ Yes ☐ No ☒ N/A	☐	Permit number:
2. Wetlands Permit	☐ Yes ☒ No ☐ N/A	☐	Permit number:
3. Shoreland Permit	☐ Yes ☐ No ☒ N/A	☐	Permit number:
4. UIC Registration	☐ Yes ☐ No ☒ N/A	☐	Registration date:
5. Large/Small Community Well Approval	☐ Yes ☐ No ☒ N/A	☐	Approval letter date:
6. Large Groundwater Withdrawal Permit	☐ Yes ☐ No ☒ N/A	☐	Permit number:
7. Other:	☐ Yes ☐ No	☐	Permit number:

L. List all species identified by the Natural Heritage Bureau as threatened or endangered or of concern: See NHB Letters included

M. Using NHDES's Web GIS OneStop program (www2.des.state.nh.us/gis/onestop/), with the Surface Water Impairment layer turned on, list the impairments identified for each receiving water. If no pollutants are listed, enter "N/A."
Winnicut River: E. coli and dissolved oxygen

N. Did the applicant/applicant's agent have a pre-application meeting with AOT staff? ☐ Yes ☒ No
If yes, name of staff member:

[1] Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the governing body of each municipality in which the project is proposed.

[2] Env-Wq 1503.05(c)(6), requires proof that a completed application form, checklist, plans and specifications, and all other supporting materials have been sent or delivered to the Local River Advisory Committee, if the project is within ¼ mile of a designated river.

O. Will blasting of bedrock be required? ☐ Yes ☒ No If yes, estimated quantity of blast rock: _____ cubic yards
If yes, standard blasting BMP notes must be placed on the plans, available at:
http://des.nh.gov/organization/commissioner/pip/publications/wd/documents/wd-10-12.pdf

NOTE: If greater than 5,000 cubic yards of blast rock will be generated, a groundwater monitoring program must be developed and submitted to NHDES. Contact AOT staff for additional detail.

11. CHECK ALL APPLICATION ATTACHMENTS THAT APPLY (SUBMIT WITH APPLICATION IN ORDER LISTED)

LOOSE:

- ☒ Signed application form: des.nh.gov/organization/divisions/water/aot/index.htm (with attached proof(s) of delivery)
- ☒ Check for the application fee: des.nh.gov/organization/divisions/water/aot/fees.htm
- ☒ Color copy of a USGS map with the property boundaries outlined (1" = 2,000' scale)
- ☒ If Applicant is not the property owner, proof that the applicant will have a legal right to undertake the project on the property if a permit is issued to the applicant.

BIND IN A REPORT IN THE FOLLOWING ORDER:

- ☒ Copy of the signed application form & application checklist (des.nh.gov/organization/divisions/water/aot/index.htm)
- ☒ Copy of the check
- ☒ Copy of the USGS map with the property boundaries outlined (1" = 2,000' scale)
- ☒ Narrative of the project with a summary table of the peak discharge rate for the off-site discharge points
- ☒ Web GIS printout with the "Surface Water Impairments" layer turned on - http://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
- ☒ Web GIS printouts with the AOT screening layers turned on - http://www4.des.state.nh.us/onestopdatamapper/onestopmapper.aspx
- ☒ NHB letter using DataCheck Tool – www.nhdfl.org/about-forests-and-lands/bureaus/natural-heritage-bureau/
- ☒ The Web Soil Survey Map with project's watershed outlined – websoilsurvey.nrcs.usda.gov
- ☒ Aerial photograph (1" = 2,000' scale with the site boundaries outlined)
- ☒ Photographs representative of the site
- N/A ☐ Groundwater Recharge Volume calculations (one worksheet for each permit application): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- N/A ☐ BMP worksheets (one worksheet for each treatment system): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- N/A ☐ Drainage analysis, stamped by a professional engineer (see Application Checklist for details)
- N/A ☐ Riprap apron or other energy dissipation or stability calculations
- N/A ☐ Site Specific Soil Survey report, stamped and with a certification note prepared by the soil scientist that the survey was done in accordance with the Site Specific Soil Mapping standards, *Site-Specific Soil Mapping Standards for NH & VT, SSSNNE Special Publication No. 3*.
- N/A ☐ Infiltration Feasibility Report (example online) [Env-Wq 1503.08(f)(3)]
- N/A ☐ Registration and Notification Form for Storm Water Infiltration to Groundwater (UIC Registration-for underground systems only, including drywells and trenches): (http://des.nh.gov/organization/divisions/water/dwgb/dwspp/gw_discharge)
- N/A ☐ Inspection and maintenance manual with, if applicable, long term maintenance agreements [Env-Wq 1503.08(g)]
- N/A ☐ Source control plan

PLANS:

- ☒ One set of design plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details)
- N/A ☐ Pre & post-development color coded soil plans on 11" x 17" (see Application Checklist for details)
- N/A ☐ Pre & post-development drainage area plans on 34 - 36" by 22 - 24" white paper (see Application Checklist for details)

100-YEAR FLOODPLAIN REPORT:

- ☒ All information required in Env-Wq 1503.09, submitted as a separate report.

ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE

- ☒ N/A See Checklist for Details

☒ **REVIEW APPLICATION FOR COMPLETENESS & CONFIRM INFORMATION LISTED ON THE APPLICATION IS INCLUDED WITH SUBMITTAL.**

12. REQUIRED SIGNATURES

ST By initialing here, I acknowledge that I am required by Env-Wq 1503.20(e) to submit a copy of all approved documents to the department in PDF format on a CD within one week after permit approval.

By signing below, I certify that:

- The information contained in or otherwise submitted with this application is true, complete, and not misleading to the best of my knowledge and belief;
- I understand that the submission of false, incomplete, or misleading information constitutes grounds for the department to deny the application, revoke any permit that is granted based on the information, and/or refer the matter to the board of professional engineers established by RSA 310-A:3 if I am a professional engineer; and
- I understand that I am subject to the penalties specified in New Hampshire law for falsification in official matters, currently RSA 641.

☐ **APPLICANT** ☒ **APPLICANT'S AGENT**:

Signature: Sherrie Trefry Date: 3/22/2023

Name (print or type): Sherrie Trefry Title: Energy Market Leader

☒ PROPERTY OWNER ☐ PROPERTY OWNER'S AGENT:

Signature: Date: 3/22/2023

Name (print or type): Kurt Neslon Title: Supervisor, Licensing and Permitting

ATTACHMENT A:
ALTERATION OF TERRAIN PERMIT APPLICATION CHECKLIST

Check the box to indicate the item has been provided or provide an explanation why the item does not apply.

DESIGN PLANS

☒ Plans printed on 34 - 36" by 22 - 24" white paper

N/A ☐ PE stamp Engineered design is limited to the electrical infrastructure and can be provided upon request.

☒ Wetland delineation

☒ Temporary erosion control measures

N/A ☐ Treatment for all stormwater runoff from impervious surfaces such as roadways (including gravel roadways), parking areas, and non-residential roof runoff. Guidance on treatment BMPs can be found in Volume 2, Chapter 4 of the NH Stormwater Management Manual.

☒ Pre-existing 2-foot contours

N/A ☐ Proposed 2-foot contours

N/A ☐ Drainage easements protecting the drainage/treatment structures

☒ Compliance with the Wetlands Bureau, RSA 482- A http://des.nh.gov/organization/divisions/water/wetlands/index.htm. Note that artificial detention in wetlands is not allowed.

☒ Compliance with the Comprehensive Shoreland Protection Act, RSA 483-B. http://des.nh.gov/organization/divisions/water/wetlands/cspa

N/A ☐ Benches. Benching is needed if you have more than 20 feet change in elevation on a 2:1 slope, 30 feet change in elevation on a 3:1 slope, 40 feet change in elevation on a 4:1 slope.

N/A ☐ Check to see if any proposed ponds need state Dam permits. http://des.nh.gov/organization/divisions/water/dam/documents/damdef.pdf

DETAILS

N/A ☐ Typical roadway x-section

N/A ☐ Detention basin with inverts noted on the outlet structure

N/A ☐ Stone berm level spreader

N/A ☐ Outlet protection – riprap aprons

☒ A general installation detail for an erosion control blanket

☒ Silt fences or mulch berm

N/A ☐ Storm drain inlet protection. Note that since hay bales must be embedded 4 inches into the ground, they are not to be used on hard surfaces such as pavement.

N/A ☐ Hay bale barriers

☒ Stone check dams

☒ Gravel construction exit

N/A ☐ Temporary sediment trap

N/A ☐ The treatment BMP's proposed

N/A ☐ Any innovative BMP's proposed

CONSTRUCTION SEQUENCE/EROSION CONTROL

☒ Note that the project is to be managed in a manner that meets the requirements and intent of RSA 430:53 and Chapter Agr 3800 relative to invasive species.

☒ Note that perimeter controls shall be installed prior to earth moving operations.

☒ Note that temporary water diversion (swales, basins, etc) must be used as necessary until areas are stabilized.

☒ Note that ponds and swales shall be installed early on in the construction sequence (before rough grading the site).

☒ Note that all ditches and swales shall be stabilized prior to directing runoff to them.

☒ Note that all roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.

☒ Note that all cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade

☒ Note that all erosion controls shall be inspected weekly AND after every half-inch of rainfall.

☒ Note the limits on the open area allowed, see Env-Wq 1505.02 for detailed information.

Example note: The smallest practical area shall be disturbed during construction, but in no case shall exceed 5 acres at any one time before disturbed areas are stabilized.

☒ Note the definition of the word "stable"

Example note: An area shall be considered stable if one of the following has occurred:

- Base course gravels have been installed in areas to be paved.
- A minimum of 85 percent vegetated growth has been established.
- A minimum of 3 inches of non-erosive material such stone or riprap has been installed.
- Or, erosion control blankets have been properly installed.

☒ Note the limit of time an area may be exposed
Example note: All areas shall be stabilized within 45 days of initial disturbance.

☒ Provide temporary and permanent seeding specifications. (Reed canary grass is listed in the Green Book; however, this is a problematic species according to the Wetlands Bureau and therefore should not be specified)

☒ Provide winter construction notes that meet or exceed our standards.

Standard Winter Notes:

- All proposed vegetated areas that do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events.
- All ditches or swales which do not exhibit a minimum of 85 percent vegetative growth by October 15, or which are disturbed after October 15, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions.
- After October 15, incomplete road or parking surfaces, where work has stopped for the winter season, shall be protected with a minimum of 3 inches of crushed gravel per NHDOT item 304.3.

N/A ☐ Note at the end of the construction sequence that "Lot disturbance, other than that shown on the approved plans, shall not commence until after the roadway has the base course to design elevation and the associated drainage is complete and stable." – This note is applicable to single/duplex family subdivisions, when lot development is not part of the permit.

N/A **DRAINAGE ANALYSES**

Please double-side 8 ½" × 11" sheets where possible but, **do not** reduce the text such that more than one page fits on one side.

☐ PE stamp

☐ Rainfall amount obtained from the Northeast Regional Climate Center- http://precip.eas.cornell.edu/. Include extreme precipitation table as obtained from the above referenced website.

☐ Drainage analyses, in the following order:

- Pre-development analysis: Drainage diagram.
- Pre-development analysis: Area Listing and Soil Listing.
- Pre-development analysis: Node listing 1-year (if applicable), 2-year, 10-year and 50-year.
- Pre-development analysis: Full summary of the 10-year storm.
- Post-development analysis: Drainage diagram.
- Post-development analysis: Area Listing and Soil Listing.
- Post-development analysis: Node listing for the 2-year, 10-year and 50-year.
- Post-development analysis: Full summary of the 10-year storm.

☐ Review the Area Listing and Soil Listing reports

- Hydrologic soil groups (HSG) match the HSGs on the soil maps provided.
- There is the same or less HSG A soil area after development (check for each HSG).
- There is the same or less "woods" cover in the post-development.
- Undeveloped land was assumed to be in "good" condition.
- The amount of impervious cover in the analyses is correct.

Note: A good check is to subtract the total impervious area used in the pre analysis from the total impervious area used in the post-analysis. For residential projects without demolition occurring, a good check is to take this change in impervious area, subtract out the roadway and divide the remaining by the number of houses/units proposed. Do these numbers make sense?

☐ Check the storage input used to model the ponds.

☐ Check to see if the artificial berms pass the 50-year storm, i.e., make sure the constructed berms on ponds are not overtopped.

☐ Check the outlet structure proposed and make sure it matches that modeled.

☐ Check to see if the total areas in the pre and post analyses are same.

☐ Confirm the correct NRCS storm type was modeled (Coos, Carroll & Grafton counties are Type II, all others Type III).

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N/A **PRE- AND POST-DEVELOPMENT DRAINAGE AREA PLANS** (See attached waiver request)

☐ Plans printed on 34 - 36" by 22 - 24" on white paper.

☐ Submit these plans separate from the soil plans.

☐ A north arrow.

☐ A scale.

☐ Labeled subcatchments, reaches and ponds.

☐ Tc lines.

☐ A clear delineation of the subcatchment boundaries.

☐ Roadway station numbers.

☐ Culverts and other conveyance structures.

N/A **PRE AND POST-DEVELOPMENT COLOR-CODED SOIL PLANS** (See attached waiver request)

☐ 11" × 17"sheets suitable, as long as it is readable.

☐ Submit these plans separate from the drainage area plans.

☐ A north arrow.

☐ A scale.

☐ Name of the soil scientist who performed the survey and date the soil survey took place.

☐ 2-foot contours (5-foot contours if application is for a gravel pit) as well as other surveyed features.

☐ Delineation of the soil boundaries and wetland boundaries.

☐ Delineation of the subcatchment boundaries.

☐ Soil series symbols (e.g., 26).

☐ A key or legend which identifies each soil series symbol and its associated soil series name (e.g., 26 = Windsor).

☐ The hydrologic soil group color coding (A = Green, B = yellow, C= orange, D=red, Water=blue, & Impervious = gray).

N/A **Please note that excavation projects (e.g., gravel pits) have similar requirements to that above, however the following are common exceptions/additions:**

☐ Drainage report is not needed if site does not have off-site flow.

☐ 5 foot contours allowed rather than 2 foot.

☐ No PE stamp needed on the plans.

☐ Add a note to the plans that the applicant must submit to the Department of Environmental Services a written update of the project and revised plans documenting the project status every five years from the date of the Alteration of Terrain permit.

☐ Add reclamation notes.

See NRCS publication titled: *Vegetating New Hampshire Sand and Gravel Pits* for a good resource, it is posted online at: http://des.nh.gov/organization/divisions/water/aot/categories/publications.

ADDITIONAL INFORMATION RE: NUTRIENTS, CLIMATE

N/A ☐ If project will discharge stormwater to a surface water impaired for phosphorus and/or nitrogen, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.

N/A ☐ If project will discharge stormwater to a Class A surface water or Outstanding Resource Water, include information to demonstrate that project will not cause net increase in phosphorus and/or nitrogen.

N/A ☐ If project will discharge stormwater to a lake or pond not covered previously, include information to demonstrate that project will not cause net increase in phosphorus in the lake or pond.

N/A ☐ If project is within a Coastal/Great Bay Region community, include info required by Env-Wq 1503.08(l) if applicable.

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Application Fee Calculation & Copy of Check

Project **A126-H141-S153 Structure Replacements** Project # **52973.00**

Location **Stratham and Greenland, New Hampshire**

Calculated by **A. Mahoney** Date **3/14/2023**

Title **NHDES Alteration of Terrain Permit Fee Calculation**

Computations

Make check payable to: "**Treasurer State of New Hampshire**"

Total Disturbance Area:

241,427 SF
5.53 AC

The disturbance area was calculated from GIS data based on a combination of typical 16 foot wide access roads and stone work pads shown on the attached plan set.

Fee Schedule:

Area of Disturbance in square feet	Fee
< 100,000	$500 + 0.005/SF
100,000 to 199,999	$3,125
200,000 to 299,999	$4,375
300,000 to 399,999	$5,625
400,000 to 499,999	$6,875
500,000 to 599,999	$8,125
600,000 to 699,999	$9,375
700,000 to 799,999	$10,625
800,000 to 899,999	$11,875
900,000 to 999,999	$13,125
1,000,000 to 1,099,999*	$14,375

*For each additional 100,000 SF, add $1,250 to the fee

Total Fee = $4,375

Alteration of Terrain
Permit Application Fee Schedule

The permit application fee is based upon the proposed area of disturbance, in square feet. The following tables illustrate the fee structure.

Fee schedule for projects not in the Protected Shoreland	
Area of disturbance in square feet (sf)	**Fee**
< 100,000	$500 + $0.005/sf
100,000 to 199,999	$3,125
200,000 to 299,999	$4,375
300,000 to 399,999	$5,625
400,000 to 499,999	$6,875
500,000 to 599,999	$8,125
600,000 to 699,999	$9,375
700,000 to 799,999	$10,625
800,000 to 899,999	$11,875
900,000 to 999,999	$13,125
1,000,000 to 1,099,999	$14,375
***For each additional 100,000 sf, add $1,250 to the fee.**	

Fee schedule for projects in the Protected Shoreland:	
Area of disturbance in square feet (sf)	**Fee**
< 50,000	$500 + $0.005/sf
50,000 to 199,999	$3,125
200,000 to 299,999	$4,375
300,000 to 399,999	$5,625
400,000 to 499,999	$6,875
500,000 to 599,999	$8,125
600,000 to 699,999	$9,375
700,000 to 799,999	$10,625
800,000 to 899,999	$11,875
900,000 to 999,999	$13,125
1,000,000 to 1,099,999	$14,375
*For each additional 100,000 sf, add $1,250 to the fee.	

Fee schedule for request to amend a permit that requires plan review
$500 + $0.10/square feet of disturbance

Please make checks payable to: "Treasurer State of New Hampshire."

377976

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

CHECK DATE

March 22, 2023

AMOUNT

Four Thousand Three Hundred Seventy Five and 00/100

$4,375.00

Treasurer State of New Hampshire
NHDES - Wetlands Bureau
29 Hazen Drive
P.O. Box 95
Concord, NH 03302-0095

AUTHORIZED SIGNATURE

Security Check features included. Details on back.

⑈377976⑈ ⑆211070175⑆ 113016137⑈

VANASSE HANGEN BRUSTLIN, INC.
101 WALNUT STREET • PO BOX 9151
WATERTOWN, MASSACHUSETTS 02471

EMILY BUSINESS FORMS 800.392.6018 VISION

377976

Check Date: 3/22/2023

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Alteration 23	3/15/2023	1447505	$4,375.00			$4,375.00
Treasurer State of New Hampshire		TOTAL	$4,375.00			$4,375.00
Citizens	83	0009232				

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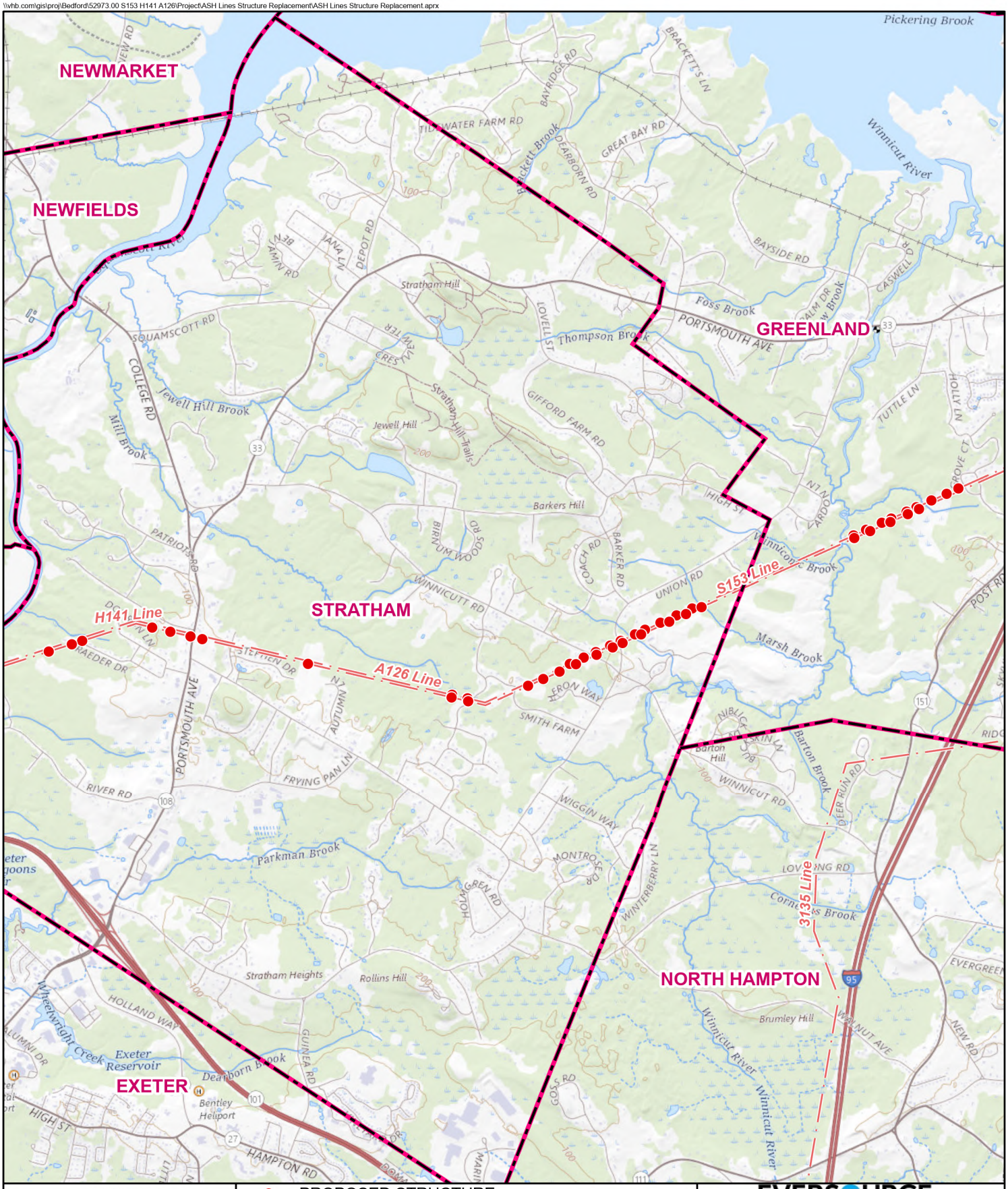
USGS Site Location Map

\\vhb.com\gis\proj\Bedford\52973.00 S153 H141 A126\Project\ASH Lines Structure Replacement\ASH Lines Structure Replacement.aprx



EVERSOURCE ENERGY

A126, H141, S153 Structure Replacements Project
USGS Locus Map
Stratham and Greenland, NH

Date: March 21, 2023

vhb

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Project Narrative

Project Narrative

On behalf of the Public Service Company of New Hampshire d/b/a Eversource Energy (Eversource), this Alteration of Terrain Permit Application was prepared by VHB pursuant to the New Hampshire Revised Statutes Annotated (RSA) Chapter 485-A:17, Terrain Alteration, and the Alteration of Terrain Bureau Code of Administrative Rules, Chapters Env-Wq 1500.

Site Description and Existing Conditions

The proposed project involves the replacement of forty-seven (47) structures along the existing and maintained A126, H141, and S153 Electric Transmission Line Right-of-Way (ROW), which ranges in width from approximately 150 to 200 feet. The A126, H141, and S153 lines are 115kV lines that share a managed right-of-way (ROW) corridor across various towns throughout the state. The A126 line originates in Brentwood and culminates in Portsmouth, the H141 line originates in Chester and culminates in Stratham, and the S153 line originates in Stratham and culminates in Portsmouth. The permitting of these lines has been broken down by town, with the focus of this application being limited to the towns of Stratham and Greenland. It should be noted that the A126 and H141 lines share the ROW west of Great Bay Substation in Stratham, and the A126 and S153 lines share the ROW east of Great Bay Substation in Greenland. Previous disturbances along the ROW include clearing and construction of structures and associated ROW access trails. The ROW is comprised of emergent and scrub-shrub wetland, a perennial stream, and upland vegetation that is routinely maintained on a three to five-year cycle to achieve vertical clearance requirements between ground vegetation and overhead transmission lines. Additional existing disturbances include portions of residential properties and driveways which intersect the ROW, as well as active agricultural fields.

The ROW is comprised of Eversource owned-property or Eversource controlled easements on privately or publicly held property. Land use adjacent to the ROW is primarily made up of residential properties and undeveloped forest with some agricultural activity present. The project is bisected by a portion of the Winnicut River; however, the project does not propose to traverse the river. The ROW is further intersected by public roadways and state routes, including Raeder Drive, Doe Run Lane, Portsmouth Avenue, Trisha's Way, Muirfield Drive, Grace Lane, Winnicutt Road, and Moulton Avenue.

Natural Resource Review

According to the NHDES Wetlands Permit Planning Tool, one Priority Resource Area (PRA) identified as a wetland adjacent to a Tier 3 stream intersects the ROW corridor in Greenland, immediately adjacent to the Winnicut River. As no proposed work locations intersect this wetland immediately adjacent to the Winnicut River, project activity is not expected to impact this resource. Additionally, one PRA identified

as peatland intersects the ROW corridor between Great Bay Substation and Muirfield Drive in Stratham. However, no proposed work locations intersect this peatland area and thus project activity is not expected to impact this resource. No other PRAs (sand dunes, prime wetlands and their buffers, or tidal waters or wetlands) intersect or abut the project ROW.

Utility Statutory Permit by Notification (SPN) Applications will also be filed (one per town – Stratham and Greenland) with the NHDES Wetlands Bureau to cover temporary impacts resulting from work within jurisdictional wetlands as further described in detail below.

Delineated Natural Resources

Jurisdictional wetlands and surface waters along the length of the A126, H141, and S153 ROW were originally delineated by GZA Wetland Scientists in support of past projects along the ROW. These delineations will be field reviewed and reflagged in early spring by VHB Wetland Scientists prior to any work commencing. Wetland field review and reflagging will be performed in accordance with procedures and standards outlined in the *1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, Version 2.0 (January 2012). Wetland review will also rely upon the *Field Indicators for Identifying Hydric Soils in the United States*, Version 8.2, published by the Natural Resource Conservation Service and the *Field Indicators for Identifying Hydric Soils in New England*, Version 4.0, published by the New England Interstate Water Pollution Control Commission in April 2019. Dominant wetland vegetation was assessed using the *2018 National Wetland Plant List* published by the U.S. Army Corps of Engineers.

The A126, H141, S153 ROW will also be assessed for potential vernal pools by VHB Wetland Scientists in early spring, as defined by the NHDES Administrative Rules Env-Wt 103.64 and 104.15. Vernal pool assessments will be conducted in accordance with the *Identification and Documentation of Vernal Pools in New Hampshire*, Third Edition (2016) published by the NH Fish and Game Department.

There are thirty-four (34) wetlands and four intermittent streams that directly intersect the proposed access trails and/or work pads associated with the proposed structure replacements. Additionally, the Winnicut River and associated delineated top-of-bank is located to the east of A126 Structure 99 and S153 Structure 84 in Greenland, but no project activity is proposed to intersect the 250 ft shoreland zone of the river. Delineated wetlands intersecting the proposed project area exhibit characteristics typically found within a cleared and periodically maintained electric utility ROW setting.

Proposed Project Description

Eversource proposes to replace forty-seven (47) wooden utility structures along the existing A126, H141, S153 115-kV Electric Transmission Line from the Stratham municipal boundary with Exeter to Moulton Avenue in Greenland. This involves the replacement of ten (10) existing wooden utility structures on the H141 line, twenty-one (21) existing structures on the A126 line, and sixteen (16) existing structures on the S153 line. Structures proposed for replacement have been recently identified by project engineers as deficient due to weathering, internal rot, and/or woodpecker damage. The 47 wooden utility structures will be replaced with weathered steel in the same configuration in accordance with current utility standards. Weathered steel structures are more resilient to insect and woodpecker damage, pole rot, and can further withstand typical New Hampshire storms and severe weather events. The proposed project is part of Eversource's ongoing maintenance program conducted to ensure reliable electric service for their customers. The Eversource transmission system is an integral part of the regional power

system delivering electricity to customers throughout New England. It is critical that this system remains operational without interruption from preventable outages. Contingent upon permit approvals, work is planned to commence in June 2023 and continue through December 2023.

Of the 47 structures to be replaced, thirty-three (33) of the proposed structure replacements are located in Stratham, while fourteen (14) of the proposed structures are located in Greenland. Most of the replacement structures will be installed within 10-15 feet of the existing structure footprints (back or forward on-line), however there is one instance in Greenland where a structure would require replacement approximately 50 feet from the existing structure footprint. Replacement structures will be connected to the existing overhead circuit prior to the removal of the existing structures. The height of the new structures will generally increase between 5 and 25 feet to gain compliance with current regulatory standards, meet safety clearance requirements, accommodate the site topography, and minimize environmental impacts.

Proposed work will be contained within the existing cleared utility ROW, and no additional tree clearing or widening of the ROW is proposed. Some vegetation mowing within the limits of the existing cleared ROW might be required along the proposed access roads and structural work pads to permit clear and safe crew access. Work crews will access structures targeted for replacement from existing public roadways that intersect the transmission line ROW and will travel within the limits of the existing cleared ROW corridor to reach the structures.

Timber matting will be utilized to cross wetlands and streams within the ROW to access the structures targeted for replacement. Timber mats disperse the weight of construction equipment, minimize soil disturbance, and eliminate rutting. An off-site marshalling yard in a previously disturbed or developed area is expected to be secured by the selected contractor. The yard will contain the field office and will be used for material storage and parking. The yard will be inspected by a qualified environmental scientist prior to use to ensure no impacts to natural resources are required.

Access

Access points to the project ROW originate from public roadways (Raeder Drive, Doe Run Lane, Portsmouth Avenue, Trisha's Way, Muirfield Drive, Grace Lane, Winnicutt Road, and Moulton Avenue) that run parallel to, or perpendicularly intersect the ROW in various locations along the corridor. Additionally, an off-ROW access location has been identified by Eversource for utilization off of Stephen Road in Stratham. Eversource will work with the appropriate landowners to secure permission to utilize this access. VHB is currently pursuing access approvals from the NH Department of Transportation and host municipalities as required for work directly off of these public roadways. Improvements to existing ROW access roads will be required in upland areas to provide a safe and stable travel way during construction and for future maintenance and repair activities. The preferred access routes which minimize impacts to natural resources to the extent practicable were selected over the course of a field visit by the Eversource Project Manager, Licensing and Permitting Specialist, Project Engineer, Construction Representatives, and Project Services personnel.

Timber mats will be used at unavoidable wetland and stream crossings and surrounding structure installations that are within or near natural resources. **Total ground disturbance was calculated at 241,427 square feet**, assuming 16-foot wide roads. Ground disturbance and grading within upland areas will be kept to a minimum during the structure replacements, and the largest work pad to be established around proposed replacement structures will be limited to approximately 100'x100' in size.

Construction Methods and Best Management Practices

Ground-based crews will approach each structure targeted for replacement utilizing the proposed access as indicated on the plans provided in **Appendix B**. Where the proposed access or the 100'x100' structural work pads intersect wetlands and/or streams, timber mats (typically with dimensions of 16 feet wide by 4 feet long) will be installed in order to safely stage equipment and crews while minimizing soil disturbance and rutting within these resources. Some work pads may need to be two-tiered or off-set due to site topography or to avoid wetland impacts. Any construction laydown areas required for equipment and material staging while the replacement work is carried out will be situated in upland areas along the existing ROW corridor. These areas are typically confined to the structural work pads or upland areas along the existing ROW near primary access points from public roadways.

Once access and work pads are established, the new steel poles will be installed through direct embedment. Traditional auguring and installation procedures will be used. No structures are proposed to be installed within the bed and/or banks of any stream or river along the ROW.

Prior to accessing the ROW with construction equipment, crews will install wildlife friendly erosion and sediment control barriers in accordance with permitting plans and details, New Hampshire Department of Environmental Services (NHDES) conditions, and the *Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire* (or "Utility BMP Manual," March 2019), published by the New Hampshire Department of Natural and Cultural Resources (NHDNCR). Selected erosion and sediment control barriers may include silt sock, silt fence, and/or wood chip/compost berms/tubes. Additional Best Management Practices (BMPs) such as stabilized construction exits, water bars, and erosion control blankets will also be utilized along proposed access ways and adjacent to structure locations in order to manage stormwater run-off, reduce erosion and stabilize soils. During project construction, control of the spread of invasive plant species that are currently found within the project ROW will also be managed in accordance with plan notes, NHDES permit conditions and the Utility BMP Manual.

Installed erosion controls and other installed utility BMPs will be inspected daily by the contractor crews and weekly by a qualified environmental monitor, hired by Eversource, to ensure proper functionality and maintenance. Erosion and sediment control barriers will not be removed until project work is complete, and all project areas are stabilized in accordance with NHDES guidance.

As soon as possible after the completion of the structure replacement work, timber matting and all construction debris will be removed from the project ROW and properly disposed of off-site. Timber matting will not remain in place for longer than one growing season. Stabilization and restoration of disturbed areas/exposed soils will be initiated as soon as possible once timber mats are pulled and structural work is completed. Due to the use of timber mats, it is anticipated that minimal restoration within the wetlands will be required, and that natural vegetative re-colonization of impacted areas will occur during summer vegetative growth periods in 2023 and 2024. VHB will visit the project ROW post-construction to assess conditions, provide guidance to work crews on restoration, and to determine whether or not additional promotion of vegetation (seeding) is required. If necessary, an appropriate native upland and/or wetland seed mix will be applied to any areas where cover is slow to develop. Additionally, straw or weed-free hay will be applied in conjunction with seed. In accordance with Env-Wt 307.12(f), if the temporarily impacted areas do not have at least 75% revegetation after two growing seasons, replanting, or reseeding would occur in those areas.

Refer to the plans provided in **Appendix B** for the location of existing wetlands and surface waters, utility structures, proposed access routes, construction work pads, laydown areas, and timber matting.

Floodplains and Floodways

The project ROW is intersected by FEMA mapped 1% Annual Chance Flood Hazard Zones (100-year floodplains) in one location along the ROW corridor associated with the Winnicut River in accordance with the effective Flood Insurance Rate Map (FIRM), Map No. 33015C0265F dated January 28, 2021. No proposed work will be occurring within this area; therefore, the project is not expected to cause or increase flooding. Refer to the figure provided in **Appendix C** for a detailed FEMA map of the project area.

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Transmittal Documentation to Municipalities

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Waiver Requests

ALTERATION OF TERRAIN WAIVER REQUEST FORM

R.S.A. 485-A:17
Department of Environmental Services - Water Division
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

Application Date: March 20, 2023 File Number (DES use): _____

A126-H141-S153 Transmission Line Structure Replacement Project
Name of Project

Stratham and Greenland
Location of Project (town)

Rockingham
County

Utility Replacement
Project Type

1. Owner Information

Public Service Company of NH dba Eversource Energy
Name

kurt.nelson@eversource.com
Email address (optional)

Kurt Nelson
Contact Name

(603) 714-3031
Telephone Number

13 Legends Drive
Mailing Address

Hooksett
City/Town

NH
State

03106
Zip Code

2. Person Requesting Waiver(s)

VHB
Name

strefry@vhb.com
Email address (optional)

Sherrie Trefry
Contact Name

(603) 391-3951
Telephone Number

2 Bedford Farms Drive; Suite 200
Mailing Address

Bedford
City/Town

NH
State

03110
Zip Code

3. Waiver Request(s)

Env-Wq 1504.09	Stormwater Drainage Report, Site Specific Soil Mapping and Plans
Rule	Brief Description of Rule

Explanation of Request:	A waiver is requested from the requirements to prepare a Stormwater Drainage Report, Drainage Area Plans and Site Specific Soil Mapping as the project is a linear utility maintenance project and the disturbance areas are disconnected and are not concentrated to an individual site or watershed. The proposed project is primarily for the maintenance of an existing transmission line and there will be negligible new impervious area and therefore stormwater detention and treatment practices are not proposed.
Permanent or Temporary:	Permanent
Explanation of Alternative:	Not Applicable
Compliance with Env-Wq:	The proposed project involves the replacement of existing transmission line infrastructure. The land disturbance is associated with ground improvements for vehicle access and work pads at the structure replacement locations. Site specific soil mapping and drainage analysis calculations will provide no benefit to the public or the environment due to the disconnected nature of the work. NRCS web soil survey data will be used to provide a general understanding of the types of soils that may be encountered during construction activities so that the appropriate erosion control BMPs can be implemented. Given that the site has been previously disturbed by the existing transmission line facilities and other land uses, the NRCS web soil survey data, topographic information, and results of field analyses are anticipated to provide an adequate level of information necessary to construct the project without impacting water quality as compared to strict compliance with the rule.

4. Signature(s) Required

(1) The information provided is true, complete, and not misleading to the knowledge and belief or the signer; and

(2) The signer understands that any waiver granted based on false, incomplete, or misleading information shall be subject to revocation.

3/22/2023	Kurt Nelson
Signature (owner) and Date	Name (owner)
Sherrie Trefry 3/22/2023	Sherrie Trefry
Signature (person requesting waiver) and Date	Name (person requesting waiver)

ALTERATION OF TERRAIN WAIVER REQUEST FORM

R.S.A. 485-A:17
Department of Environmental Services - Water Division
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

Application Date: March 20, 2023 File Number (DES use): _____

A126-H141-S153 Transmission Line Structure Replacement Project
Name of Project

Stratham and Greenland
Location of Project (town)

Rockingham
County

Utility Replacement
Project Type

1. Owner Information

Public Service Company of NH dba Eversource Energy
Name

kurt.nelson@eversource.com
Email address (optional)

Kurt Nelson
Contact Name

(603) 714-3031
Telephone Number

13 Legends Drive
Mailing Address

Hooksett
City/Town

NH
State

03106
Zip Code

2. Person Requesting Waiver(s)

VHB
Name

strefry@vhb.com
Email address (optional)

Sherrie Trefry
Contact Name

(603) 391-3951
Telephone Number

2 Bedford Farms Drive; Suite 200
Mailing Address

Bedford
City/Town

NH
State

03110
Zip Code

3. Waiver Request(s)

Env-Wq 1503.21(c)(2)	Pertinent to deviations from approved plans
Rule	Brief Description of Rule

Explanation of Request:	A waiver is requested from the requirements to prepare as-built drawings, stamped by a qualified engineer, and a detailed description of all deviations from the approved plans. The potential for various minor changes to access roads and work pad configuration are likely to be executed in the field by the civil crew during construction based on field conditions (e.g., slope, presence of ledge, previous disturbance, stonewalls, etc.) and needs of the line crew to allow for ease of access.
Permanent or Temporary:	Permanent
Explanation of Alternative:	As an alternative to submitting the plans and description required under 1503.21(c)(2), a plan reflecting the changes to access that have been made will be provided following the completion of the project. Changes to work pad configuration are generally within the 100' x 100' designated disturbance area and are, therefore, not included on the plans.
Compliance with Env-Wq 1509.04:	The proposed project involves the replacement of existing transmission line infrastructure. The land disturbance is associated with ground improvements for vehicle access and work pads at the structure replacement locations. Changes to the access road and work pad configurations do not require an amended permit or a new permit and will still maintain compliance with Env-Wq 1507.02 relative to permanent methods of protecting water quality. Total project disturbance will not exceed the total disturbance calculations identified in the permit. Modifications have not and will not result in any changes to wetlands or protected shoreland impacts and will not decrease any buffers required by law or established by a permit or other approval.

4. Signature(s) Required

(1) The information provided is true, complete, and not misleading to the knowledge and belief or the signer; and

(2) The signer understands that any waiver granted based on false, incomplete, or misleading information shall be subject to revocation.

 3/22/2023	Kurt Nelson
Signature (owner) and Date	Name (owner)
 3/22/2023	Sherrie Trefry
Signature (person requesting waiver) and Date	Name (person requesting waiver)

ALTERATION OF TERRAIN WAIVER REQUEST FORM

R.S.A. 485-A:17
Department of Environmental Services - Water Division
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

Application Date: March 20, 2023 File Number (DES use): _____

A126-H141-S153 Transmission Line Structure Replacement Project
Name of Project

Stratham and Greenland, NH
Location of Project (town)

Rockingham
County

Utility Replacement
Project Type

1. Owner Information

Public Service Company of NH dba Eversource Energy
Name

kurt.nelson@eversource.com
Email address (optional)

Kurt Nelson
Contact Name

(603) 714-3031
Telephone Number

13 Legends Drive
Mailing Address

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City/Town

NH
State

03106
Zip Code

2. Person Requesting Waiver(s)

VHB
Name

strefry@vhb.com
Email address (optional)

Sherrie Trefry
Contact Name

(603) 391-3951
Telephone Number

2 Bedford Farms Drive; Suite 200
Mailing Address

Bedford
City/Town

NH
State

03110
Zip Code

3. Waiver Request(s)

Rule	Brief Description of Rule
Env-Wq 1503.12 (d)(1&2)	Measurement of Contiguous Area Disturbed; Inclusion in Plans

Explanation of Request:

A waiver is requested by PSNH d/b/a Eversource Energy for including past terrain disturbance in the measurement of contiguous disturbed area included in this 307 Transmission Line Alteration of Terrain Application. No known future disturbance, beyond the scope of the A126-H141-S153 Transmission Line Maintenance Project described in this application, is known at this time.

Permanent or Temporary:

Permanent

Proposed Alternative:

Existing terrain alteration associated with past transmission line maintenance within the A126-H141-S153 Transmission Line right-of-way (ROW) is minimal. Any existing trails or access roads that may have been created within the last 10 years will be utilized and/or improved as part of this project and have been included in the current calculations within this application. Future structure maintenance may occur within the A126-H141-S153 ROW. Eversource, through consultation with NHDES, will evaluate whether future terrain disturbances within the A126-H141-S153 ROW will be permitted with an amendment to this application or subject to a new, separate application.

Compliance with Env-Wq:

The project proposes to improve access routes and work pads around utility structures for the purpose of maintaining existing utility infrastructure. This project is necessary to maintain the safety and reliability of the electrical infrastructure. Proposed disturbances anticipated for 2023 within the A126-H141-S153 ROW is included in this application and shown on the Project Plans. Project disturbances included in this application and subsequent permit approvals will be considered if future structure maintenance is proposed within the A126-H141-S153 ROW. Eversource respectfully requests a waiver from including past disturbance in this application. Future disturbances within the A126-H141-S153 ROW will be evaluated and discussed with NHDES and permit amendments or new permit applications will be submitted, if necessary.

4. Signature(s) Required

(1) The information provided is true, complete, and not misleading to the knowledge and belief or the signer; and

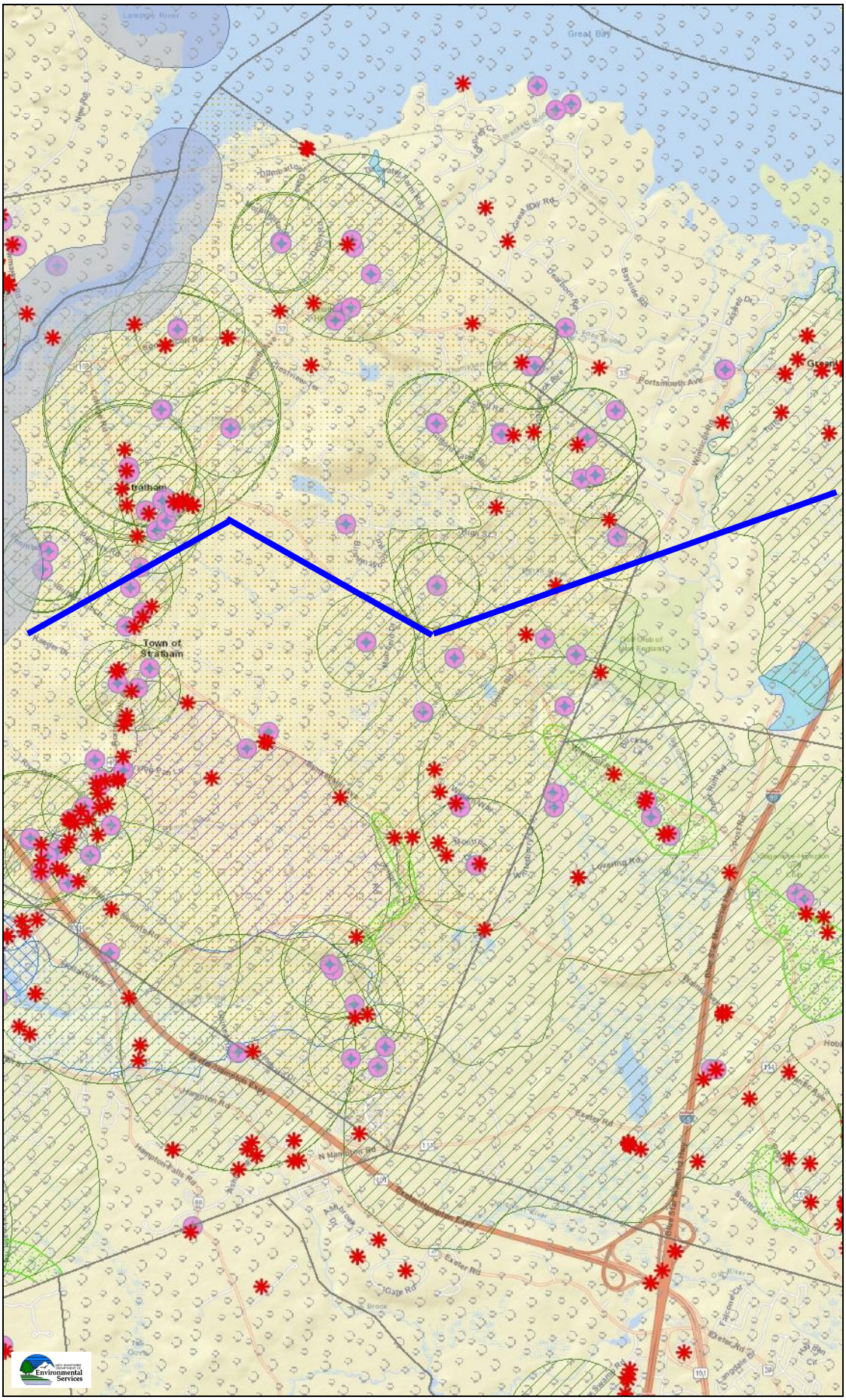
(2) The signer understands that any waiver granted based on false, incomplete, or misleading information shall be subject to revocation.

Signature (owner) and Date	Name (owner)
3/22/2023	Kurt Nelson
Signature (person requesting waiver) and Date	Name (person requesting waiver)
3/22/2023	Sherrie Trefry

Appendix A – Support Data

- **Web GIS Printout with Water Impairments and AOT Screening Layers**
- **NHB Data Check Letters and Correspondence**
- **Web Soil Survey Maps**
- **Aerial Photograph**
- **Site Photographs**

NHDES Web GIS Printout AoT Screening Layer - A126, H141, S153 Lines



Legend

- Surface Waters with Impairn 2022 with Quarter Mile Buffe
- Remediation Sites
- Coastal and Great Bay Regi Communities
- Designated Rivers Quarterm Buffer
- Public Water Supply Wells
- Groundwater Classification / GA1
- Groundwater Classification / GA2
- Water Supply Intake Protect Areas
- Wellhead Protection Areas
- Class A Lakes with a Quarte Buffer
- Class A - All Features
- All Lakes, with a Quarter Mil Buffer
- Outstanding Resource Wate Watersheds
- Watersheds with Chloride Impairments

Map Scale

1: 51,953

Map Generated: 3/15/2023

Notes

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

To: Andrew Mahoney, VHB
2 Bedford Farms Drive Suite 200
Bedford, NH 03103

From: NHB Review, NH Natural Heritage Bureau
Date: 12/22/2022 (valid until 12/22/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-3860** Town: Stratham and Greenland Location: S153 ROW
Description: Eversource Energy (Eversource) has proposed structure replacement maintenance work on the S153 115 kV Line in Stratham and Greenland, New Hampshire
cc: NHFG Review

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Please provide proposed plans and representative photos during the growing season of any proposed impact areas. Please indicate proposed project timing.**
F&G: Please refer to NHFG consultation requirements below. Please coordinate with Kat for review. Please specify project timing.

Natural Community	**State[1]**	**Federal**	**Notes**
Alder - dogwood - arrowwood alluvial thicket*	--	--	Threats to this community include changes to the wetland's hydrology either through damming or increasing drainage. Significant increases in nutrients and pollutants from stormwater runoff could also have a deleterious effect on the wetland.
Tall graminoid meadow marsh*	--	--	The primary threat would be changes to local hydrology. Increased input of nutrients and pollutants from surface runoff would also be a concern.

Plant species	**State[1]**	**Federal**	**Notes**
great bur-reed (*Sparganium eurycarpum*)*	T	--	Threats to aquatic species include changes in water quality, e.g., due to pollution and stormwater runoff, and significant changes in water level.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

greater fringed-gentian (*Gentianopsis crinita*)	T	--	Vulnerable to shading by invading trees and to disturbances that destroy plants or impede their ability to reproduce (such as mowing in the mid-summer while the plants are in bloom).

Vertebrate species	**State[1]**	**Federal**	**Notes**
American Eel (*Anguilla rostrata*)	SC	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

Disclaimer: A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

IMPORTANT: NHFG Consultation

If this NHB Datacheck letter DOES NOT include ANY wildlife species records, then, based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

If this NHB Datacheck letter includes a record for a threatened (T) or endangered (E) wildlife species, consultation with the New Hampshire Fish and Game Department under Fis 1004 may be required. To review the Fis 1000 rules (effective February 3, 2022), please go to https://wildlife.state.nh.us/wildlife/environmental-review.html. All requests for consultation and submittals should be sent via email to NHFGreview@wildlife.nh.gov or can be sent by mail, and **must include the NHB Datacheck results letter number and "Fis 1004 consultation request" in the subject line.**

If the NHB DataCheck response letter does not include a threatened or endangered wildlife species but includes other wildlife species (e.g., Species of Special Concern), consultation under Fis 1004 is not required; however, some species are protected under other state laws or rules, so coordination with NH Fish & Game is highly recommended or may be required for certain permits. While some permitting processes are exempt from required consultation under Fis 1004 (e.g., *statutory permit by notification, permit by rule, permit by notification, routine roadway registration, docking structure registration, or conditional authorization by rule)*, coordination with NH Fish & Game may still be required under the rules governing those specific permitting processes, and it is recommended you contact the applicable permitting agency. For projects not requiring consultation under Fis 1004, but where additional coordination with NH Fish and Game is requested, please email: Kim Tuttle *kim.tuttle@wildlife.nh.gov* with a copy to NHFGreview@wildlife.nh.gov, and include the NHB Datacheck results letter number and "review request" in the email subject line.

Department of Natural and Cultural Resources
Division of Forests and Lands
(603) 271-2214 fax: 271-6488

DNCR/NHB
172 Pembroke Rd.
Concord, NH 03301

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

Please note: portions of this document are confidential.
Maps and NHB record pages are confidential and should be redacted from public documents.

Contact NH Fish & Game at (603) 271-0467 with questions.

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Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

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To: Andrew Mahoney, VHB
2 Bedford Farms Drive Suite 200
Bedford, NH 03103

From: NHB Review, NH Natural Heritage Bureau
Date: 12/29/2022 (valid until 12/29/2023)
Re: Review by NH Natural Heritage Bureau
Permits: NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-3861** Town: Stratham and Greenland Location: A126/H141 Right of Ways
Description: Eversource Energy has proposed structure replacement maintenance work on the H141 and A126 115 kV Lines in Stratham and Greenland, New Hampshire
cc: NHFG Review

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments **NHB: Please provide proposed plans and representative photos during the growing season of any proposed impact areas. Please indicate proposed project timing. Please indicate if there are any proposed impacts to the wetland on the west end of the proposed project area. F&G: Please refer to NHFG consultation requirements below. Please coordinate with Kat Wadiak for review. Please specify project timing.**

Natural Community	State[1]	Federal	Notes
Alder - dogwood - arrowwood alluvial thicket*	--	--	Threats to this community include changes to the wetland's hydrology either through damming or increasing drainage. Significant increases in nutrients and pollutants from stormwater runoff could also have a deleterious effect on the wetland.
Brackish riverbank marsh system*	--	--	
High brackish riverbank marsh*	--	--	
Low brackish riverbank marsh*	--	--	
Subtidal system	--	--	Threats to these communities are primarily alterations to the hydrology of the wetland (such as alterations that might affect the sheet flow of tidal waters across the intertidal flat) and increased input of nutrients and pollutants in storm runoff.

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Tall graminoid meadow marsh*	--	--	The primary threat would be changes to local hydrology. Increased input of nutrients and pollutants from surface runoff would also be a concern.

Plant species	**State[1]**	**Federal**	**Notes**
great bur-reed (*Sparganium eurycarpum*)*	T	--	Threats to aquatic species include changes in water quality, e.g., due to pollution and stormwater runoff, and significant changes in water level.
greater fringed-gentian (*Gentianopsis crinita*)	T	--	Vulnerable to shading by invading trees and to disturbances that destroy plants or impede their ability to reproduce (such as mowing in the mid-summer while the plants are in bloom).

Vertebrate species	**State[1]**	**Federal**	**Notes**
American Eel (*Anguilla rostrata*)	SC	--	Contact the NH Fish & Game Dept (see below).
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Marsh Wren (*Cistothorus palustris*)	--	--	Contact the NH Fish & Game Dept (see below).
Spotted Turtle (*Clemmys guttata*)	T	--	Contact the NH Fish & Game Dept (see below).

[1]Codes: "E" = Endangered, "T" = Threatened, "SC" = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

For all animal reviews, refer to 'IMPORTANT: NHFG Consultation' section below.

Disclaimer: A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.

IMPORTANT: NHFG Consultation

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NHB DataCheck Results Letter

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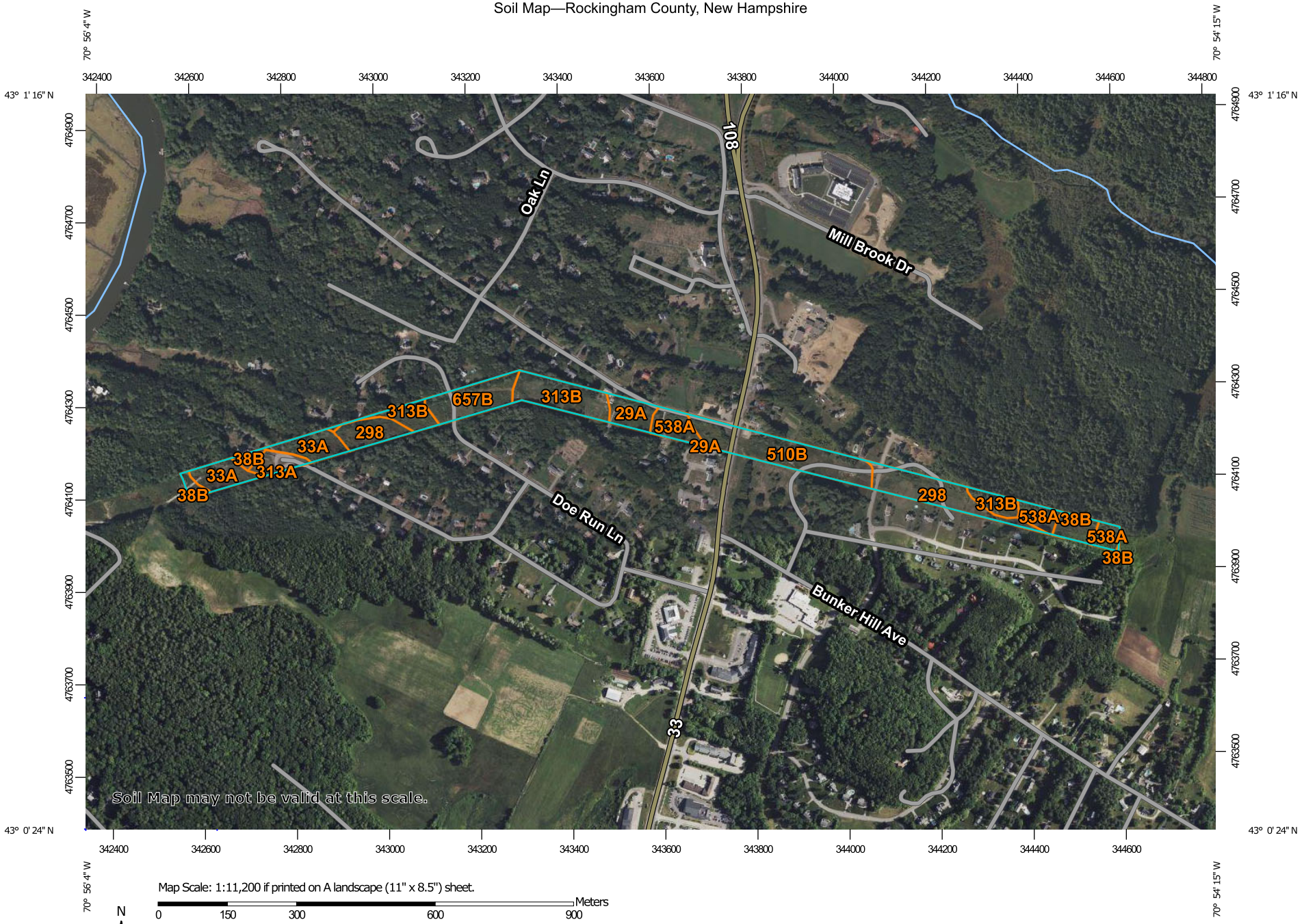

Map Scale: 1:11,200 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 150 300 600 900

Feet
0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 25, Sep 12, 2022

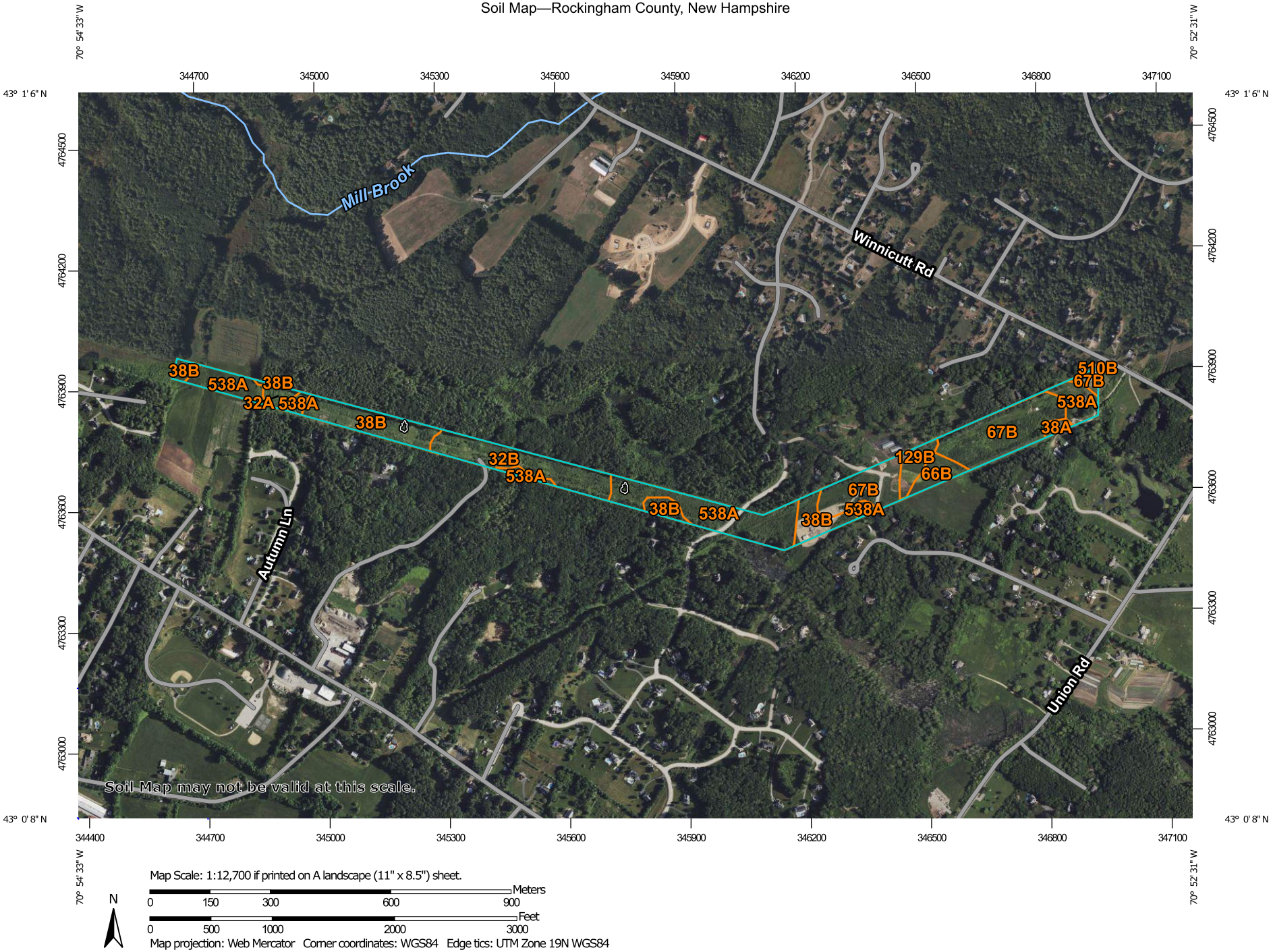
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
29A	Woodbridge fine sandy loam, 0 to 3 percent slopes	1.5	4.9%
33A	Scitico silt loam, 0 to 5 percent slopes	3.2	10.6%
38B	Eldridge fine sandy loam, 3 to 8 percent slopes	1.9	6.4%
298	Pits, sand and gravel	5.5	18.0%
313A	Deerfield loamy fine sand, 0 to 3 percent slopes	1.1	3.6%
313B	Deerfield loamy fine sand, 3 to 8 percent slopes	5.5	18.0%
510B	Hoosic gravelly fine sandy loam, 3 to 8 percent slopes	5.6	18.5%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	3.0	10.1%
657B	Ridgebury fine sandy loam, 3 to 8 percent slopes, very stony	3.0	9.9%
Totals for Area of Interest		**30.3**	**100.0%**



Map Scale: 1:12,700 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
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- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

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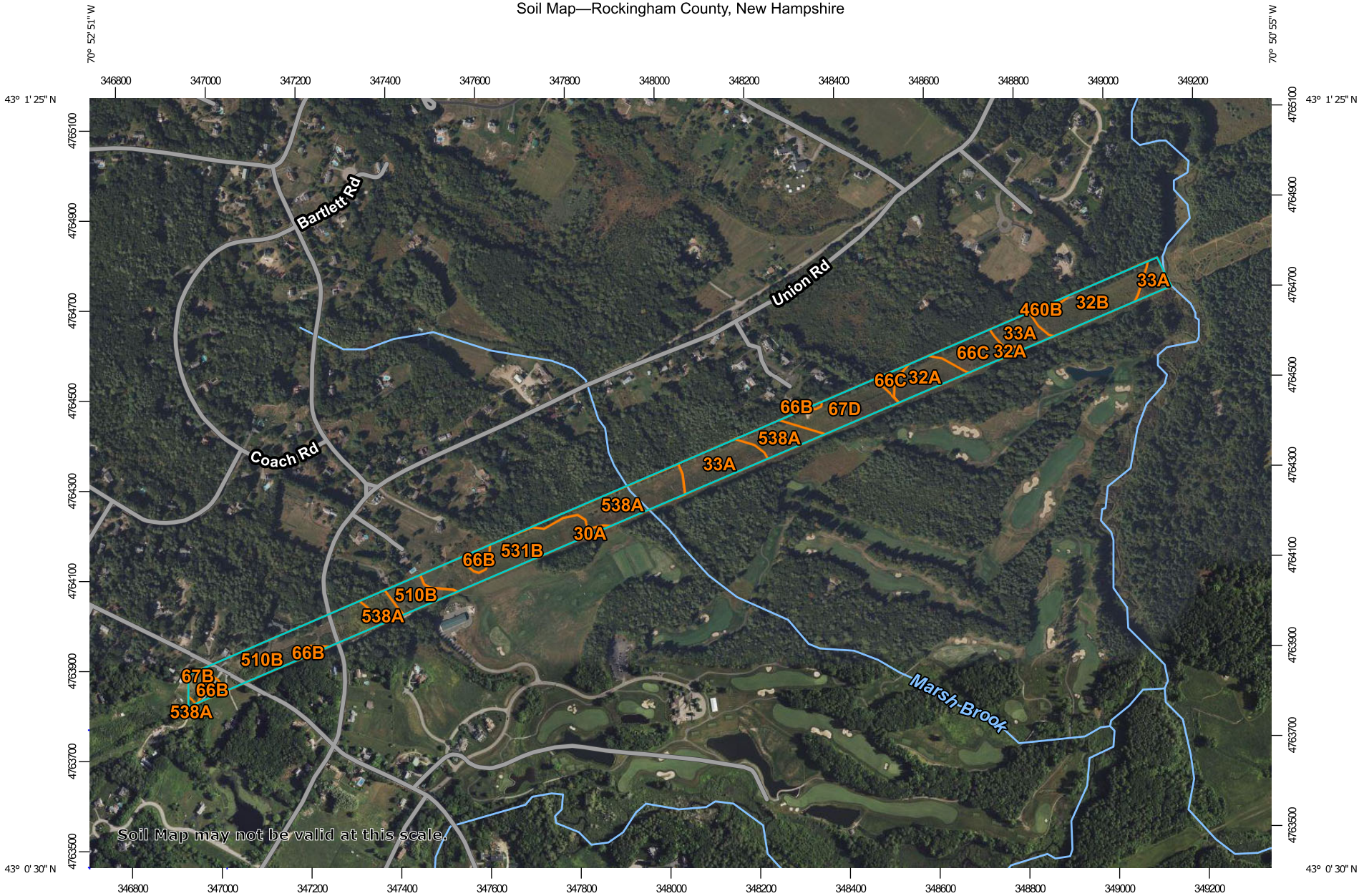
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
32A	Boxford silt loam, 0 to 3 percent slopes	1.0	2.1%
32B	Boxford silt loam, 3 to 8 percent slopes	6.7	14.4%
38A	Eldridge fine sandy loam, 0 to 3 percent slopes	0.5	1.0%
38B	Eldridge fine sandy loam, 3 to 8 percent slopes	8.8	18.9%
66B	Paxton fine sandy loam, 3 to 8 percent slopes	1.7	3.8%
67B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	12.8	27.6%
129B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	1.7	3.6%
510B	Hoosic gravelly fine sandy loam, 3 to 8 percent slopes	0.0	0.0%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	13.2	28.5%
Totals for Area of Interest		**46.4**	**100.0%**



Map Scale: 1:12,000 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 150 300 600 900

Feet: 0 500 1000 2000 3000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
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Special Point Features

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- Clay Spot
- Closed Depression
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- Saline Spot
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- Sinkhole
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- Sodic Spot
- Spoil Area
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- Wet Spot
- Other
- Special Line Features

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- Streams and Canals

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- US Routes
- Major Roads
- Local Roads

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- Aerial Photography

MAP INFORMATION

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Map Unit Legend

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30A	Unadilla very fine sandy loam, 0 to 3 percent slopes	0.1	0.3%
32A	Boxford silt loam, 0 to 3 percent slopes	2.4	5.9%
32B	Boxford silt loam, 3 to 8 percent slopes	4.2	10.5%
33A	Scitico silt loam, 0 to 5 percent slopes	5.4	13.5%
66B	Paxton fine sandy loam, 3 to 8 percent slopes	1.2	3.0%
66C	Paxton fine sandy loam, 8 to 15 percent slopes	2.4	6.1%
67B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	0.6	1.5%
67D	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	3.5	8.7%
460B	Pennichuck channery very fine sandy loam, 3 to 8 percent slopes	0.2	0.4%
510B	Hoosic gravelly fine sandy loam, 3 to 8 percent slopes	7.7	19.2%
531B	Scio very fine sandy loam, 0 to 5 percent slopes	5.1	12.8%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	7.2	17.9%
Totals for Area of Interest		**40.0**	**100.0%**

Map Scale: 1:5,390 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 50 100 200 300

Feet
0 250 500 1000 1500

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

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- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

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Map Unit Legend

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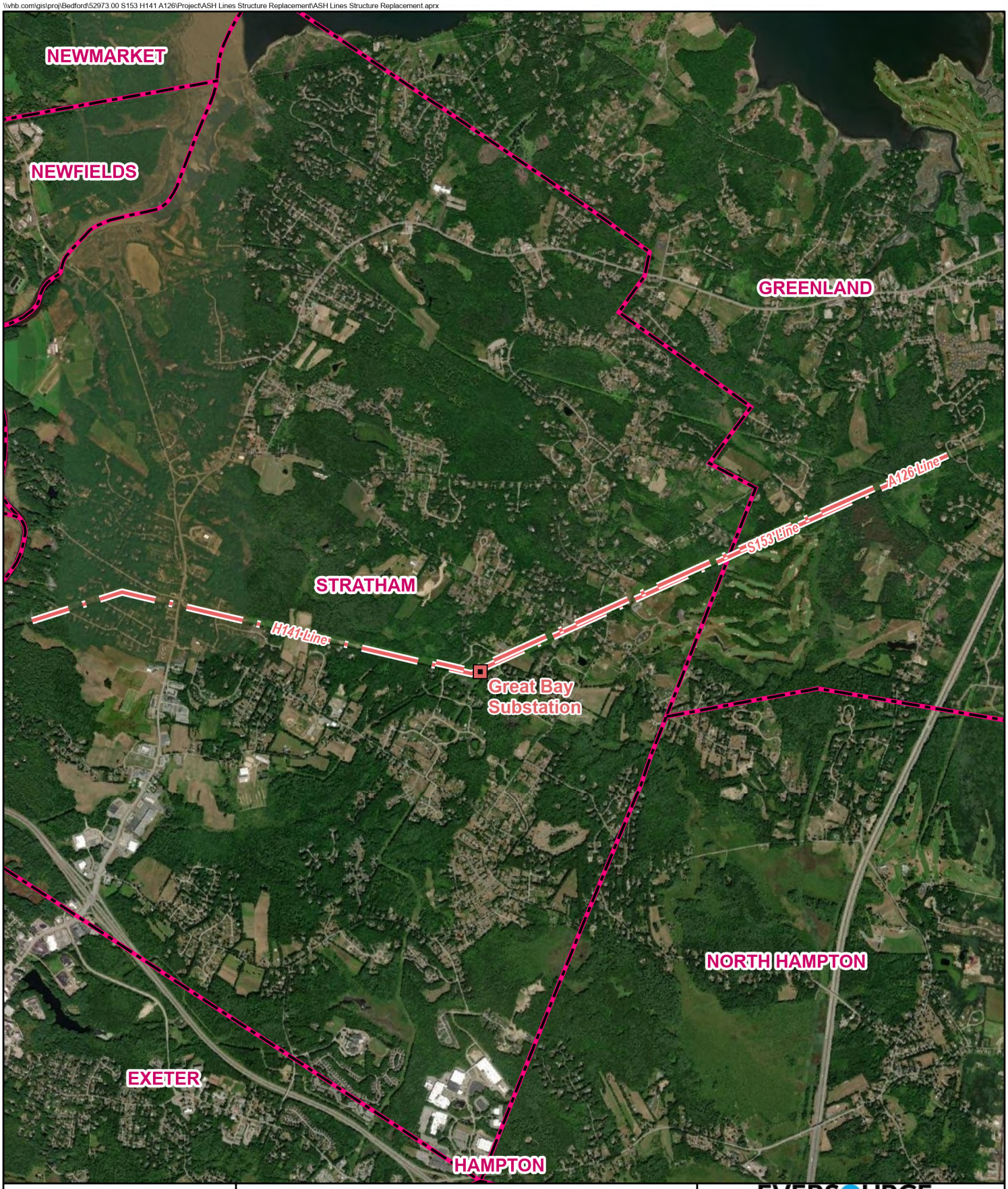
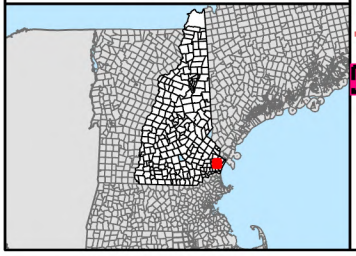
32B	Boxford silt loam, 3 to 8 percent slopes	5.3	29.9%
33A	Scitico silt loam, 0 to 5 percent slopes	0.0	0.0%
38A	Eldridge fine sandy loam, 0 to 3 percent slopes	3.2	17.9%
460B	Pennichuck channery very fine sandy loam, 3 to 8 percent slopes	6.3	35.9%
510B	Hoosic gravelly fine sandy loam, 3 to 8 percent slopes	2.1	11.8%
538A	Squamscott fine sandy loam, 0 to 5 percent slopes	0.8	4.4%
Totals for Area of Interest		**17.6**	**100.0%**

\\vhb.com\gis\proj\Bedford\52973.00 S153 H141 A126\Project\ASH Lines Structure Replacement\ASH Lines Structure Replacement.aprx



INDEX MAP



SUBSTATIONS

OVERHEAD EVERSOURCE LINE

MUNICIPAL BOUNDARY

N

0 1,000 2,000 Feet

EVERSOURCE ENERGY

A126-H141-S153 Structure Replacements Project
Aerial Overview Map
Greenland and Stratham, New Hampshire

Date: March 16, 2023

vhb

Representative Site Photographs – 3/21/23
A126, H141, and S153 Lines Structure Replacement Project – Stratham, NH

Photo 1: View west along transmission line ROW at the base of Structure 132 with Structure 150 in the background.

Photo 2: View east along transmission line ROW of Structure 131.

Representative Site Photographs – 3/21/23
A126, H141, and S153 Lines Structure Replacement Project – Stratham, NH

Photo 3: View east along transmission line ROW at the base of Structure 124 with Structures 124 and 141 in the background.

Photo 4: View west along transmission line ROW at the base of Structure 135.

Representative Site Photographs – 3/21/23
A126, H141, and S153 Lines Structure Replacement Project – Stratham, NH

Photo 5: View east along transmission line ROW of Structure 118 with Structures 134 and 117 in the background.

Photo 6: View west along transmission line ROW of Structures 108 and 125 from Muirfield Drive.

Photo 7: View east along transmission line ROW at the base of Structure 114 with Structure 113 in the background.

Photo 8: View east along transmission line ROW of Structures 112 and 97.

Photo 9: View west along transmission line ROW of Structures 82 and 96.

Photo 10: View west along transmission line ROW of Structure 93 and adjacent wetland.

Representative Site Photographs – 3/21/23
A126, H141, and S153 Lines Structure Replacement Project – Stratham, NH

Photo 9: View west along transmission line ROW at the base of Structure 78 with Structures 92 and 93 in the background.

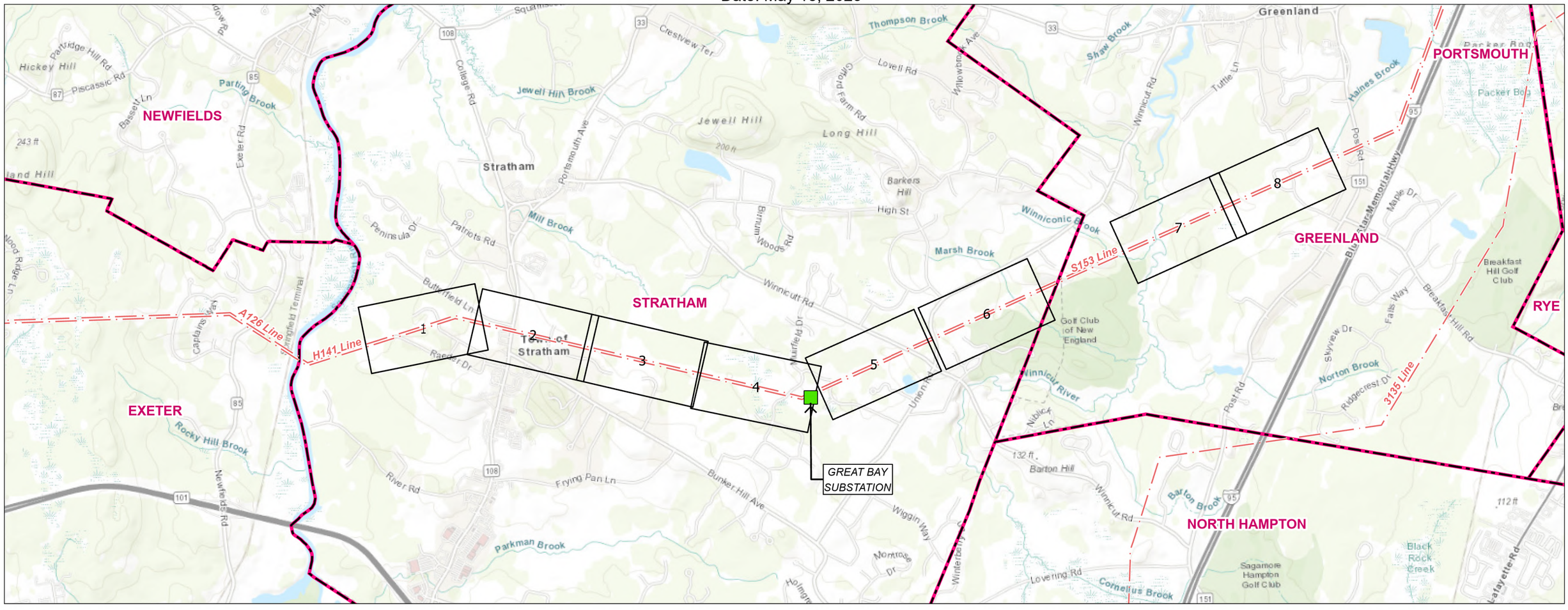
Photo 10: View west at Structure 91 and ROW access from Moulton Avenue.

Appendix B – Alteration of Terrain Permitting Plans

A126, H141, S153 Lines Structure Replacements Project

Greenland and Stratham, NH
Environmental Resources Map

Date: May 18, 2023



Legend

- Substation
- Overhead Eversource Line
- Map Sheet

N

0 0.5 1 Miles

INDEX OF FIGURES

Title Sheet / Index Map
Map Sheet 1-8

NO.	DATE	REVISIONS

PREPARED FOR:

EVERSOURCE ENERGY

13 Legends Drive
Hooksett, NH 03106

PREPARED BY:

vhb

2 Bedford Farms Drive, Suite 200
Bedford, NH 03110

Construction Requirement Notes

Date Issued: May 18, 2023

General Notes:

1. This plan set is intended to show the proposed replacement of some existing transmission line support structures on the A126-H141-S153 electric transmission lines in the towns of Stratham and Greenland, New Hampshire.
2. Temporary stone stabilized construction exits will be used at points of construction ingress/egress from public and private roadways.
3. Erosion control and temporary stormwater control measures shall comply with the New Hampshire Stormwater Manual Volume 3 – Erosion and Sediment Control During Construction December 2008 and the New Hampshire Department of Natural and Cultural Resources Best Management Practices Manual Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire, March 2019.
4. VHB Certified Wetlands Scientists will review and confirm previously delineated wetlands along the shared PSNH A126-H141-S153 ROW in spring 2023. Potential vernal pools identified in the project area will also be field reviewed in the spring of 2023.
5. Wetland delineations will be performed to the standards in the Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0 (January 2012).
6. Elevations are based on contours derived from NH GRANIT LIDAR (Coastal New Hampshire 2015)
7. Proposed construction limits of disturbance are approximate. Contractor is responsible for minimizing earth disturbance, as much as practicable.
8. The environmental controls shown on these plans may need to be supplemented due to season of work or work methods proposed. Refer to BMP manuals and additional guidance documents, as needed.
9. Erosion and sedimentation control measures shall be installed prior to start of work, shall be maintained, and shall remain in place during construction until all disturbed surfaces are stabilized. Following stabilization, erosion and sedimentation control measures that are not compostable shall be removed and properly disposed of off-site.
10. Erosion and sedimentation controls shall be appropriate to the size and nature of the project and to the physical characteristics of the site, including slope, soil type, vegetative cover, and proximity to wetlands or surface waters. The type and installation method of erosion and sediment controls shall be in accordance with the BMP Manual. (NHDNCR, 2019).
11. The selected contractor is responsible for street sweeping at points of ingress/egress from public and private roadways.
12. Timber matting shown on the plans represents the square footage and alignment of matting which is required and has been approved by the regulators. Additional layers of mats may be required at certain locations. Any increase in the number, change in alignment, or decision not to use swamp mats must be approved by the Permittee or an authorized representative of the Permittee(s) and, as appropriate, regulators.
13. Any excavated material shall be placed outside of jurisdictional areas or removed from the site.
14. If dewatering is required, dewatering basins shall be placed in uplands areas and discharge water into upland areas.
15. Areas of soil disturbance shall be stabilized following construction in accordance with the BMP Manual.

Construction Sequence

1. Prior to construction crew mobilization, wetland limits will be flagged with pink neon vinyl ribbons tied to vegetation and visible to the crews.
2. Proposed pole locations will be staked in the field with numbered grade stakes.
3. Crews will be provided with approved plans depicting work areas and required matting and erosion controls to be used to avoid and minimize jurisdictional impacts.
4. Civil crews will mobilize to the project vicinity. It is anticipated that the Contractor will secure a marshalling yard outside of the ROW in a previously disturbed or developed area that will be used for delivery of materials, field office and parking.
5. Crews will establish construction track pads, where appropriate, as access is established from public roads into the ROW. Traffic control will be implemented, as required, by DOT or local access approvals.
6. Erosion and sediment control BMPs will be installed prior to land disturbing activities.
7. Civil crews will begin removing topsoil and establishing gravel access roads along designated routes.
8. Timber matting will be laid down across wetland crossings and around existing pole locations that are in or adjacent to wetlands.
9. Once access is established, line crews will mobilize to start drilling activities associated with pole replacements.
10. New steel poles will be installed. Existing conductors and static wire will be transferred to new steel poles.
11. Old poles, insulators, and any other type of construction debris will be removed from the site and properly disposed.
12. Work pad restoration will begin following line construction completion. Work pads will be covered with topsoil, seeded, and mulched. A portion of each work pad will be maintained for future access.
13. Timber matting will be removed from wetland areas. Care shall be taken to remove any pieces of matting that break off during mat removal.
14. If required, wetland areas will be smoothed, seeded with an appropriate wetland seed mix, and mulched to ensure revegetation.
15. Access roads will be pulled back from wetland areas by a minimum of 25 feet.
16. Civil crews should ensure that appropriate water diversion BMPs implemented for the access roads are functioning prior to demobilizing from the ROW.
17. Sediment and erosion controls should remain in place until areas are stabilized and then be removed and properly disposed. If sediment and erosion controls can fully decompose, then erosion controls can remain in place after demobilization.
18. Wetland areas will be assessed by a qualified environmental monitor to ensure wetland vegetation is re-established within impacted areas prior to releasing the contractor.

Invasive Species Control Plan

1. Workers who will be operating equipment in areas that may contain invasive plant species will be trained in the identification and modes of dispersal and spread of common, highly-prolific terrestrial invasive plant species that are commonly found within the utility ROW.
2. In locations where invasive infestations exist, the contractor shall minimize contact with invasive species by choosing access routes and staging areas that are outside areas of infestation to the greatest extent practicable.
3. The contractor will be responsible for certifying that all equipment on the project is clean of invasive species prior to arriving onsite. The contractor will also be responsible for cleaning equipment as it is moved within the project to reduce the risk of spreading invasive plant seeds and fragments.
4. Clean vehicles, equipment, materials, gear, footwear or clothing of all visible soil and plant material on site in the infested area, or as near as practical to the infested area, prior to leaving the project site.
5. Cleaning methods can include:
    a. Use a brush, broom or hand tools to manually clean.
    b. Clean debris off equipment such as construction matting by shaking or dropping mats in a controlled manner to dislodge attached soil and debris.
    c. Compressed air.
    d. Using low-or high-pressure wash stations provided containment is in compliance with wastewater discharge regulations.
6. Do not decontaminate equipment next to streams or water bodies that could potentially transport seeds or propagules.
7. Decontaminate equipment and materials that may be contaminated by aquatic plant materials adjacent to the surface water they were exposed to prior to use in another surface water body.
8. Do not transport water withdrawn from a surface water body and discharge it to another water body.
9. Stabilize disturbed soils as soon as possible by seeding and/or using mulch, straw or gravel that is free of invasive plant material.
10. Where possible, when excavating soils, top layers of soil containing plant material and roots should be segregated from sub soils and left on site.
11. Do not transport fill and material containing invasive plant material onto a project site.
12. If fill and materials containing invasive species must be transported off site, cover soil and other material containing invasive plant material during transport and do not reuse. Stockpile or dispose of these materials in such a manner that would not promote the spread of invasive plants.

Erosion Control

1. The project shall be managed in a manner that meets the requirements and intent of RSA 430:53 and chapter AGR 3800 relative to invasive species.
2. Prior to starting any earth moving operations, the contractor shall notify appropriate agencies and shall install erosion control measures as shown on the plans, and as identified in federal, state, and local approval documents pertaining to this project and as field conditions dictate.
3. Temporary water diversion (swales, basins, etc.) must be used as necessary until areas are stabilized.
4. Diversion swales and other temporary BMP's shall be installed early on in the construction sequence.
5. All ditches, swales, and drainage basins shall be stabilized prior to directing runoff to them.
6. All roadways shall be stabilized within 72 hours of achieving finished grade.
7. All cut and fill slopes shall be loamed and seeded within 72 hours of achieving finished grade.
8. Contractor shall inspect and maintain erosion control measures and remove sediment therefrom on a weekly basis and within twelve hours after each storm event (0.5" of rainfall or greater) and dispose of sediments in an upland area such that they do not encumber other drainage structures and protected areas.
9. The smallest practical area shall be disturbed during construction and shall be in conformance with the requirements of Env-Wq 1505.03 for Maximum Open Area Allowed.
10. An area shall be considered stable if one of the following has occurred:
    A. Base course gravels have been installed in areas to be paved.
    B. A minimum of 85% vegetated grownt has been established.
    C. A minimum of 3 inches of non-erosive material such as stone or rip-rap has been installed.
    D. Or, erosion control blankets have been properly installed.
11. Areas remaining unstabilized for a period of more than 45 days shall be temporarily seeded and mulched. Straw mulch shall be applied at a minimum rate of 1-1/2 tons/acre.
12. Soils to be stockpiled for a period of more than 45 days shall be temporarily seeded and mulched. Contractor shall install silt fencing along downhill side of stockpiles. Contractor shall provide temporary sedimentation basins to control sedimentation and stormwater runoff during the construction period. The contractor shall submit proposed basin locations, designs, etc. to the Engineer for review prior to construction. Temporary sedimentation basins shall meet NHDES requirements.
13. Contractor shall be fully responsible to control construction such that sedimentation shall not affect regulatory protected areas, whether such sedimentation is caused by water, wind, or direct deposit.
14. Contractor shall perform construction sequencing such that earth materials are exposed for a minimum of time before they are covered, seeded, or otherwise stabilized to prevent erosion.
15. Dust shall be controlled through the use of water.
16. Contractor shall provide necessary erosion control measures to ensure that surface water run-off from unstabilized areas does not carry silt, sediment, and other debris outside of the limits of work.
17. Permanent seeding shall occur between April 1 and June 1, and/or between August 15 and October 15. All seeding from September 15 on shall be straw mulched.

18. All Permanent and temporary seeding shall be as follows (unless otherwise noted):

Permanent Seeding	Proportion	Germination (min.)	Purity (min.)
Lawns:			
Creeping Red Fescue	50%	85%	95%
Kentucky Bluegrass	40%	85%	90%
Manhattan Perennial Rye	10%	90%	95%

Temporary Seeding*	% Weight	Germination (min.)
Winter Rye	80% min.	85%
Red Fescue (creeping)	4% min.	80%
Perennial Rye Grass	3% min.	90%
Red Clover	3% min.	90%
Other Crop Grass	0.5% max.	
Noxious Weed Seed	0.5% max.	
Inert Matter	1.0% max.	

* Temporary seed for lawns shall only be planted when permanent grasses cannot be planted due to the growing season.

19. No-mow planting mix (for areas indicated on the plan or as directed) the no-mow planting mix" shall be the "New England Conservation Wildlife Mix" as manufactured by New England Wetland Plants, Inc. or approved equivalent.

20. Erosion control blankets shall be installed on all disturbed slopes that are steeper than 3-ft horizontal and 1-ft vertical (3:1). Erosion control blankets shall be north American Green SC150BN, or approved equivalent.

Winter construction

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized. Stabilization methods shall include seeding and installing erosion control blankets on slopes greater than 3:1 and seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting, elsewhere. the installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or frozen ground and shall be completed in advance of thaw or spring melt events.

2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be temporarily stabilized with stone or erosion control blankets appropriate for the design flow conditions.

3. After October 15th, incomplete access road or work area surfaces, where work has stopped for the winter season, shall be protected with a minimum of 3 inches of crushed gravel (NHDOT 304.3).

Wildlife conservation measures:

- The Project has limited its wetland impacts to those that are unavoidable due to the placement of construction matting for the structure replacements.
- Wherever possible, the Project is also avoiding all areas around identified vernal pools by establishing 50-foot buffers around them.
- Areas disturbed during construction will be reseeded and stabilized.
- Erosion controls will be employed around all wetland areas adjacent to proposed work areas.
- Wildlife-friendly erosion controls shall be used, such as those made from woven organic materials or other biodegradable materials, rather than those that use welded plastic netting or polypropylene;
- Please ensure there are appropriate sediment and erosion controls in place to avoid secondary impacts to potential rare plant locations.
- If appropriate in sensitive areas, exclusion fencing or other physical barrier around the limit of work to prevent migration of animals into the active work zone;
- If it is possible, have a Qualified Botanist survey the areas of concern prior to placement of temporary matting to flag any plant occurrences which has a similar vegetative growth form to the rare plants NHB has requested surveys for. This could potentially limit the amount of impact to these species by slightly shifting proposed access if necessary. Please contact NHB if there are any plants of similar vegetative growth, provide their approximate locations on the plans, and provide photographs.
- As timber mats will be in place for the month of June, which is directly within the growing season, it is encouraged to have any timber mats removed as promptly as possible to ensure growth of the rare plants is not inhibited. If possible, please attempt to have this matting removed by the beginning of July.
- Use of bridge matting and/or elevation of access road timber matting to provide more space between the mat and the ground in areas where there is potential for rare plants. This gap will provide the plants beneath with more sunlight upon emergence to aid in photosynthesis. When possible, please utilize perpendicular placement of the 16ft wide mats to minimize the footprint.
- Please ensure all work pads have been minimized to the greatest possible extent.

New Hampshire Fish and Game Permit Conditions (3/31/23):

1. Blanding's turtle (state endangered) and spotted turtle (state threatened) occur within the vicinity of the project area. All operators and personnel working on or entering the site shall be made aware of the potential presence of these species and shall be provided flyers that help to identify these species, along with NHFG contact information. Rare species information (e.g. identification, observation and reporting of observations, when to contact NHFG immediately and NHFG contact information) shall be posted on site at all times and communicated during morning tailgate meetings prior to work commencement.
2. Turtles may be attracted to disturbed ground during nesting season. Turtle nesting season occurs approximately May 15th – June 30th. Nesting areas may include work pads and access roads that are not hard pack gravel and other sandy/gravel work areas. All turtle species nests are protected by NH laws. Be aware of the potential to encounter nesting wildlife in these areas.
3. If a nest is observed or suspected, operators shall contact Melissa Winters (603-479-1129) or Josh Megyesy (978-578-0802) at NHFG immediately for further consultation. The nest or suspected nest shall be marked (surrounding roped off or cone buffer) and avoided; this shall be communicated to all personnel onsite. Site activities shall not occur in the area surrounding the nest or suspected nest until further guidance is provided by NHFG.
4. Vernal pools and potential vernal pools shall be flagged prior to work, and impacts shall be avoided. No disturb vegetative buffers of 50' shall be maintained. Provide location of vernal pools on plan sheets to NHFG.
5. All matting which will be placed in waterbodies deemed suitable for hibernating rare turtles will be placed prior to the start of the inactive season (October 16-March 31) so as to prevent accidental placement atop hibernating turtles. Immediately prior to matting placement in these wetlands, the area shall be swept by a qualified biologist or herpetologist. They shall watch for signs that turtles are being disturbed in the area (ex. Heads coming above water, animals moving in water). Contact NHFG if biologist/herpetologist sees or suspects turtles in matting areas. Areas identified as suitable hibernation habitat shall be identified on plan sheets and provided to NHFG at least two weeks prior to beginning work. Biologist qualifications shall be provided to NHFG.
6. Immediately prior to the placement of matting in wetlands during the active season (April 1-October 15), the areas shall be cleared by a trained individual. A trained individual shall be defined as any contractor who has gone through project-species protection education conducted by the qualified biologist on rare wildlife species at the site.
7. Searches and sweeps shall be conducted by trained individuals immediately before the start of work and movement of equipment in order to minimize the chance of animals entering an area between the sweep and work. A trained individual shall be defined as any contractor who has gone through project-species protection education conducted by the qualified biologist on rare wildlife species at the site.
8. All work activities shall be restricted to the defined roads, construction areas, and staging areas, with no equipment or materials staged or stored outside of the defined areas as shown on plan sheets.
9. Work, pull pads, and access shall be minimized to the greatest extent possible.
10. Works pads shall be reduced post-construction to 30' x 60' and restored with a native vegetation seed mix.
11. All manufactured erosion and sediment control products, with the exception of turf reinforcement mats, utilized for, but not limited to, slope protection, runoff diversion, slope interruption, perimeter control, inlet protection, check dams, and sediment traps shall not contain plastic, or multifilament or monofilament polypropylene netting or mesh with an opening size of greater than 1/8 inches;
12. All observations of threatened or endangered species on the project site shall be reported immediately to the NHFG nongame and endangered wildlife environmental review program by phone at 603-271-2461 and by email at NHFGreview@wildlife.nh.gov, with the email subject line containing the NHB DataCheck tool results letter assigned number, the project name, and the term Wildlife Species Observation;
13. Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHFG in digital format at the above email address for verification, as feasible;
14. In the event a threatened or endangered species is observed on the project site during the term of the permit, the species shall not be disturbed, handled, or harmed in any way prior to consultation with NHFG and implementation of corrective actions recommended by NHFG.
    a. Site operators shall be allowed to relocate wildlife encountered if discovered within the active work zone and if in direct harm from project activities. Wildlife shall be relocated in close proximity to the capture location but outside of the work zone and in the direction the individual was heading. NHFG shall be contacted immediately if this action occurs.
15. The NHFG, including its employees and authorized agents, shall have access to the property during the term of the permit.

Additional Recommendations:

1. There are known records of marsh wren in the vicinity of the Squamscott River. If birds are observed to display nesting behavior (for example: calling, swooping, agitated/territorial behavior), contact the Wildlife Division at 603-271-2461 or NHFGReview@wildlife.nh.gov. Provide NHB number and Project name. Migratory bird nests are protected under NH and federal laws.
2. There are known records of American eel (state species of special concern) in the project area. Manage sediment properly to prevent it from entering waterbodies to minimize impacts to this species.

PLEASE REPORT OBSERVATIONS OF RARE TURTLES

The NH Fish & Game Department is requesting observations of the following turtle species

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Blanding's turtle

(State Endangered)

Large, dark/black domed shell with lighter speckles.

Distinct yellow throat/chin.

Aquatic but often moves on land.

Spotted turtle

(State Threatened)

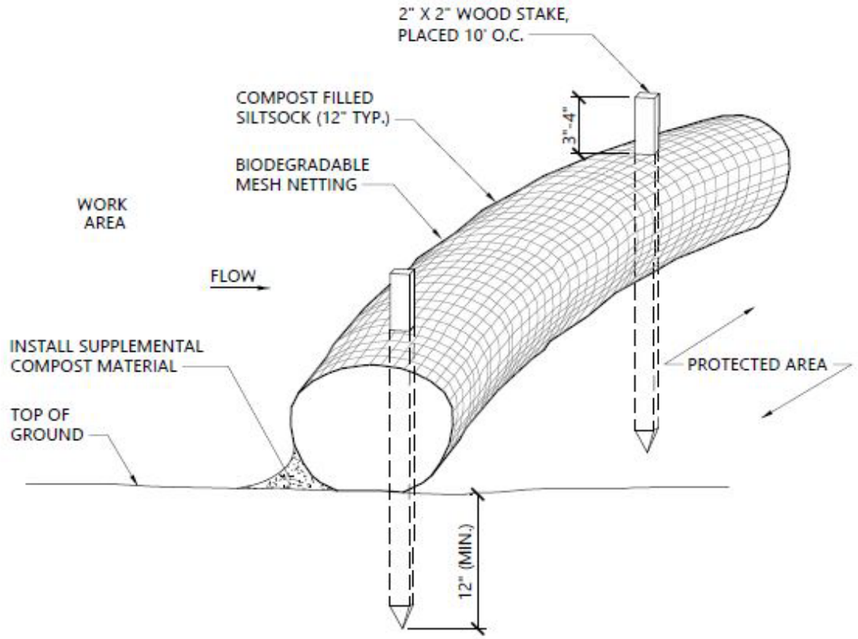
Small, mostly aquatic with black or dark brown with yellow spots.

Fairly flat shell compared to Blanding's turtle.

Spots vary in color and number.

Report sightings immediately to NHFG Wildlife Division at 603-271-2461 (M-F 8-4) or to NHFG Wildlife Biologist Melissa Winters 603-479-1129 (cell) anytime.

Please report promptly, noting specific location and date – Photographs strongly encouraged



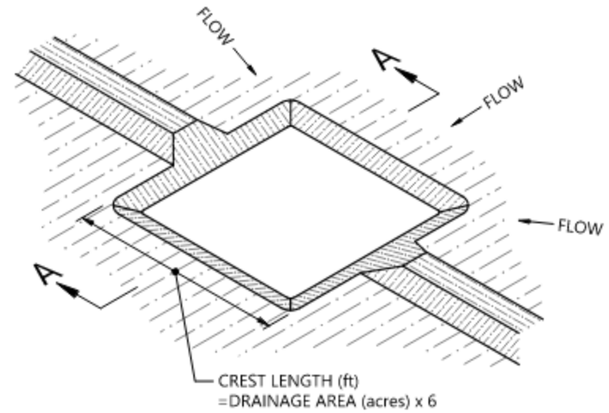
NOTES

1. SILTSOCK SHALL BE FILTREXX SILTSOXX WITH SILTSOXX NATURAL ORIGINAL OR NATURAL PLUS+ COMPOST FILL.
2. SILTSOCKS SHALL OVERLAP A MINIMUM OF 12 INCHES.
3. SILTSOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

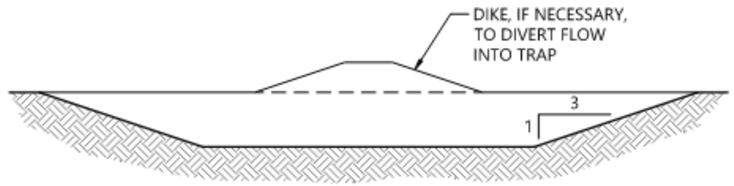
Siltsock - Erosion Control Barrier

1/16

N.T.S. Source: VHB REV LD_658



ISOMETRIC VIEW



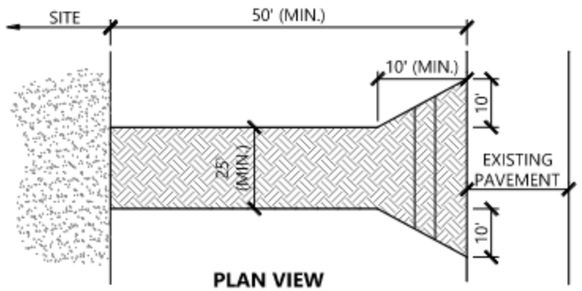
SECTION A-A

NOTES

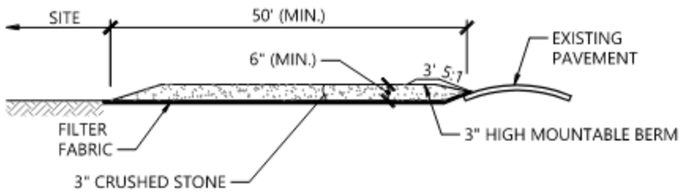
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA OR SOURCE OF SEDIMENT AS POSSIBLE .
2. THE MAXIMUM CONTRIBUTING DRAINAGE AREA TO THE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. THE SIDE SLOPES OF THE TRAP SHALL BE 3:1 OR FLATTER, AND SHALL BE STABILIZED IMMEDIATELY AFTER THEIR CONSTRUCTION.
5. THE OUTLET OF THE TRAP SHALL BE A MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP AND SHALL DISCHARGE TO A STABILIZED AREA.
6. THE TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. THE MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.

Temporary Sediment Trap

N.T.S. Source: NH Stormwater Manual



PLAN VIEW



CROSS-SECTION

NOTES

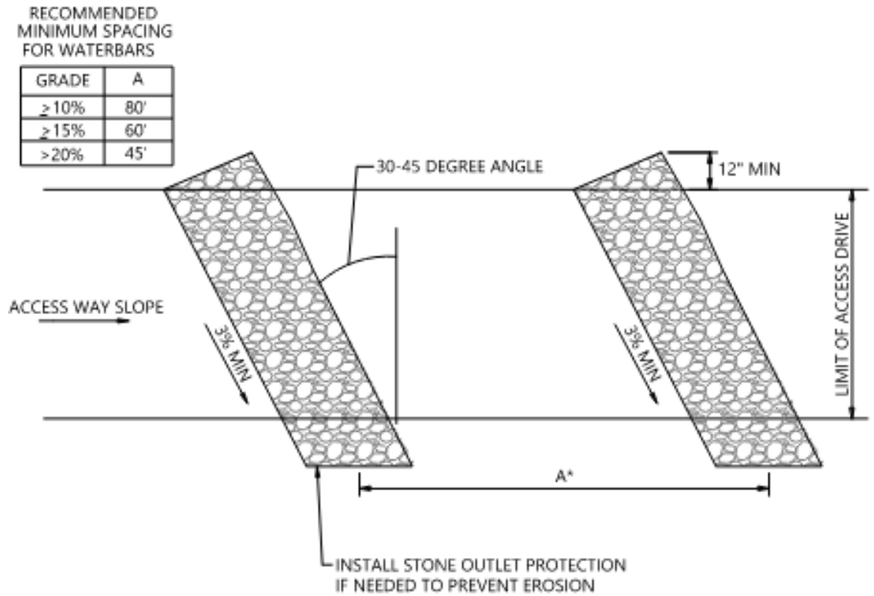
1. EXIT WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION EXIT SHALL BE REMOVED PRIOR TO FINAL FINISH MATERIALS BEING INSTALLED.

Stabilized Construction Exit 5/17

N.T.S. Source: VHB LD 682-NH

RECOMMENDED MINIMUM SPACING FOR WATERBARS

GRADE	A
≥10%	80'
≥15%	60'
>20%	45'



NOTES

1. WATERBARS SHOULD BE INSTALLED IN SECTIONS WITH SLOPES GREATER THAN OR EQUAL TO 10%.
2. CONTRACTOR TO OBSERVE THE CLEARINGS DURING A RAINSTORM TO DETERMINE IF ADDITIONAL WATERBARS OR ADJUSTMENTS TO WATERBARS ARE NEEDED.
3. WATERBAR DESIGN AND SPACING PROVIDED FOR GUIDANCE TO CONTROL EROSION ALONG CROSS-COUNTRY CLEARINGS. THE CONTRACTOR SHALL DETERMINE IF OTHER APPROPRIATE MEASURES ARE REQUIRED TO CONTROL RUNOFF AND EROSION IN CLEARING AREAS.
4. FOR WIDER LIMITS OF CLEARING MULTIPLE LOG LENGTHS MAY BE REQUIRED.

Waterbars (Alternative) - For Utility Access Areas 11/15

N.T.S. Source: VHB LD_

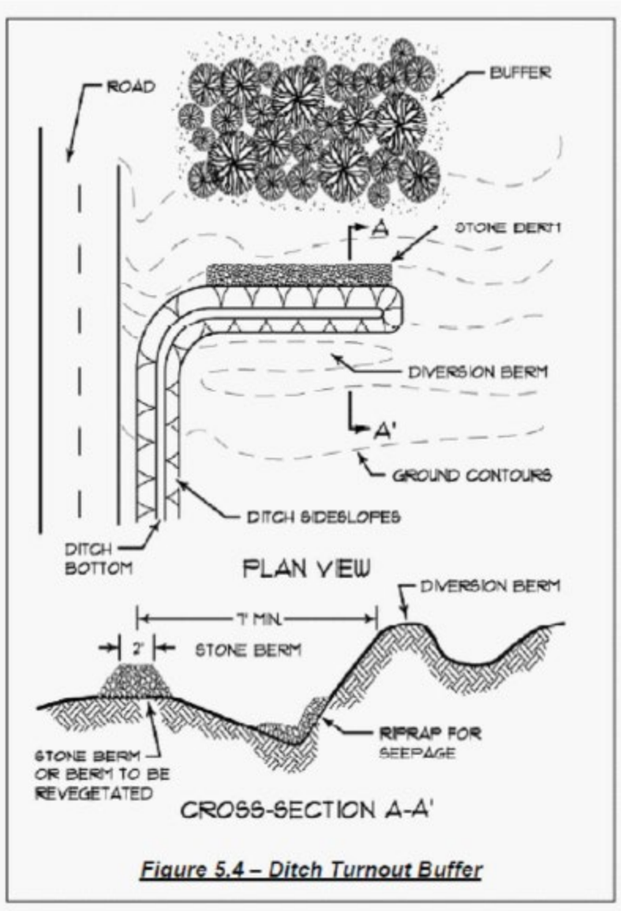
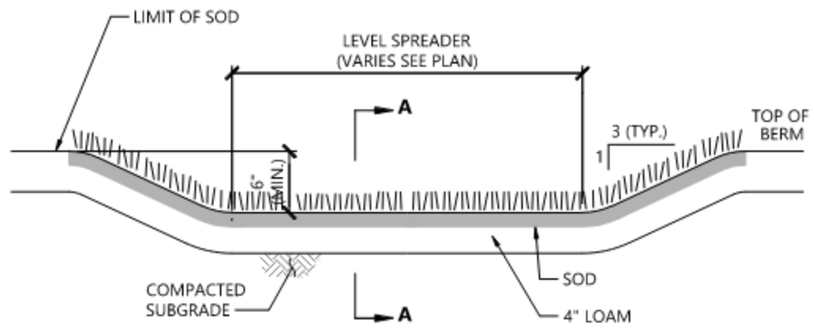


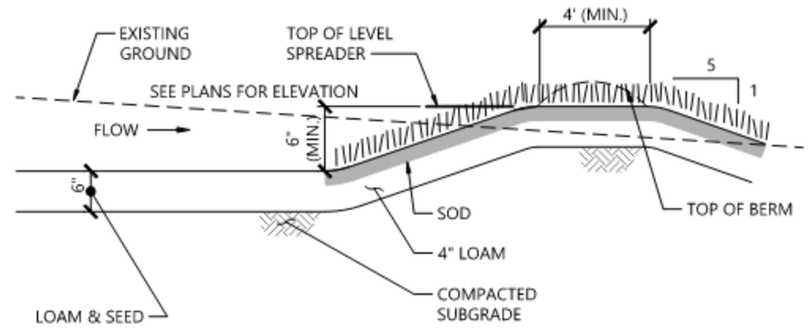
Figure 5.4 – Ditch Turnout Buffer

- *Stone Berm Specifications:* The stone berm to which the ditch turn-out delivers the runoff must be at least 20 feet in length and must be constructed along the contour. It must be at least one- foot high and two feet across the top with 2:1 side slopes.
- *Stone Size:* The stone must be coarse enough that it will not clog with sediment. Stone for stone bermed level lip spreaders must consist of sound durable rock that will not disintegrate by exposure to water or weather. Fieldstone, rough quarried stone, blasted ledge rock or tailings may be used. The rock must be well graded with a median size of approximately 3 inches and a maximum size of 6 inches. See Table 5.4 above.

Ditch Turnout

N.T.S. Source: MDEP



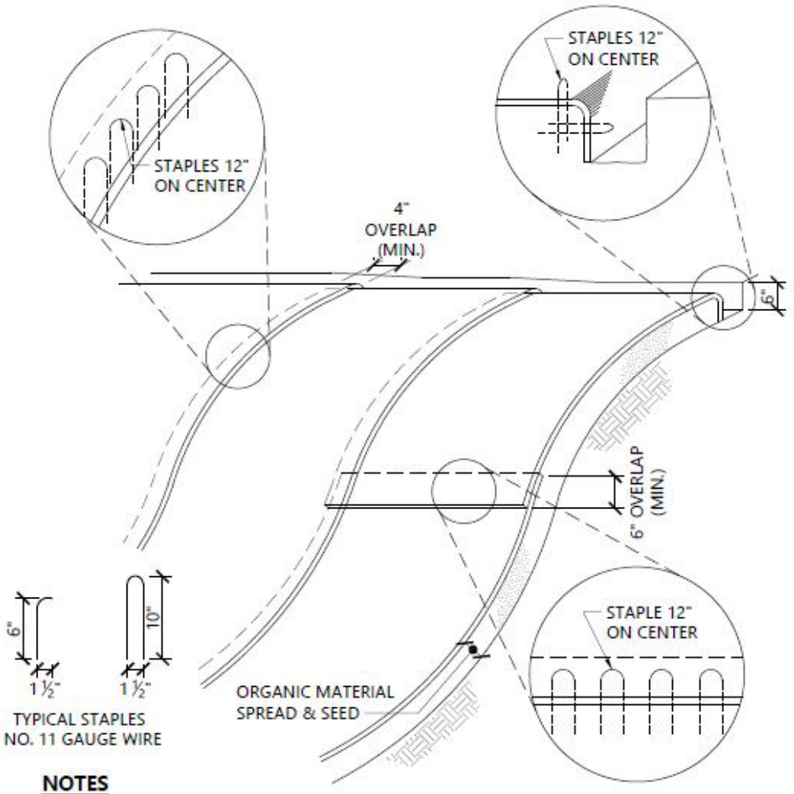


SECTION A-A

Level Spreader Detail

1/16

N.T.S. Source: VHB LD 172



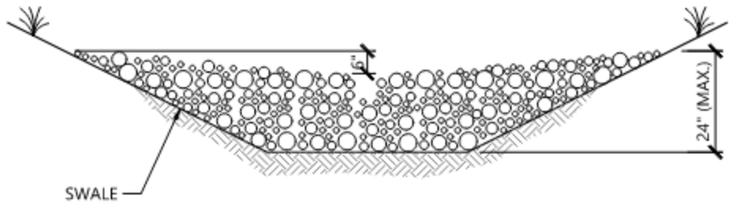
NOTES

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH 6 INCH (MIN.) OVERLAP AND STAPLE BOTH TOGETHER.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. EROSION CONTROL BLANKETS SHALL BE USED IN ALL AREAS WHERE SLOPES EXCEED 3:1.
7. EROSION CONTROL BLANKETS SHALL NOT CONTAIN WELDED PLASTIC, PLASTIC MULTI-FILAMENT OR MONO-FILAMENT POLYPROPYLENE NETTING OR MESH.

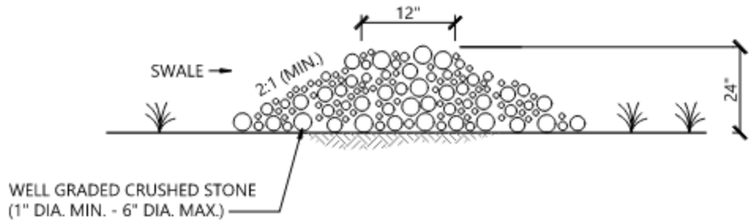
Erosion Control Blanket Slope Installation

1/16

N.T.S. Source: VHB REV LD_680



ELEVATION



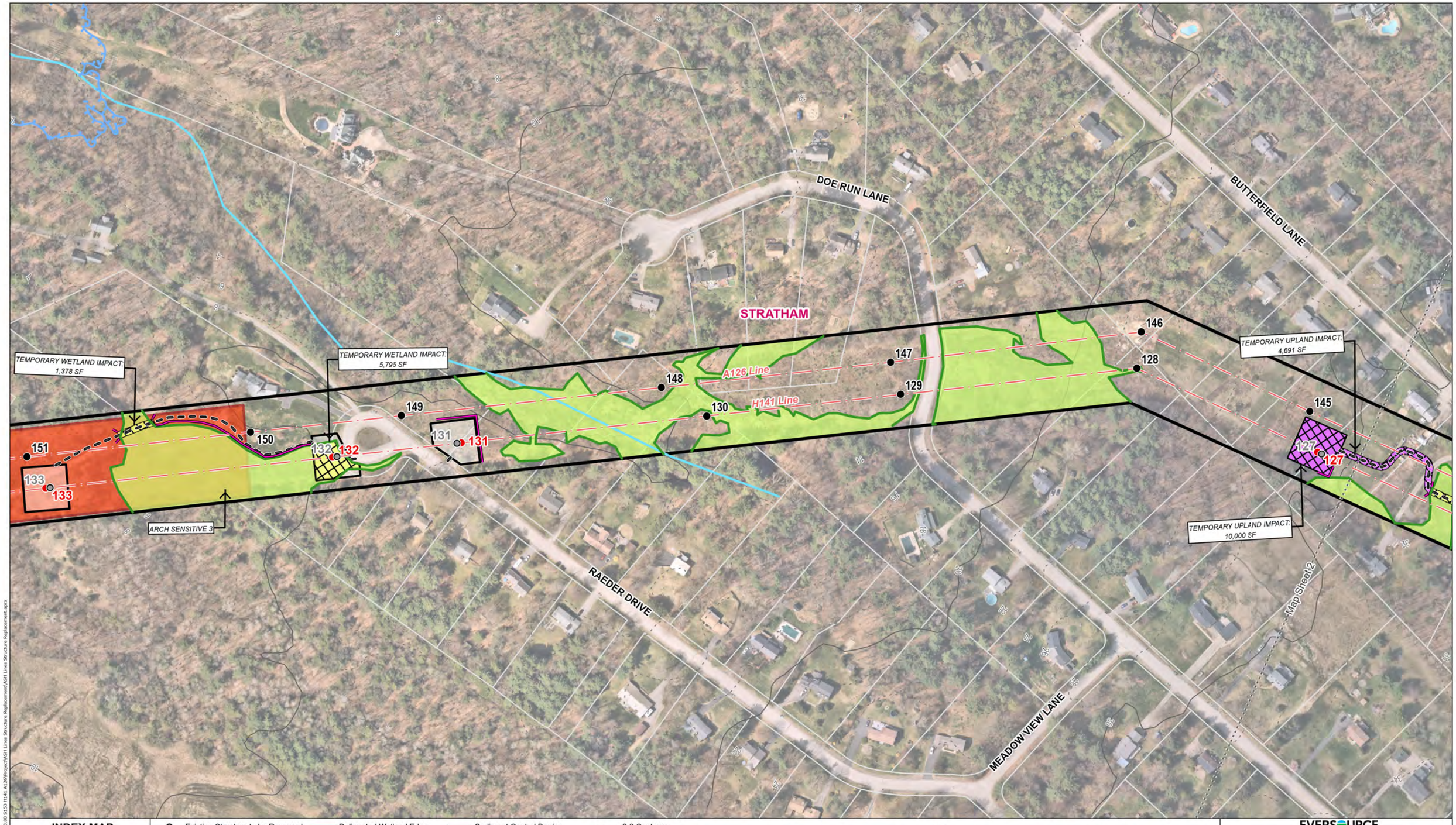
CROSS-SECTION

NOTES

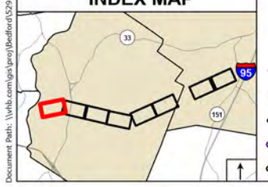
1. TOP OF DOWNGRADIENT CHECKDAM AND BOTTOM OF UPGRADIENT CHECKDAM TO BE SET AT THE SAME ELEVATION.
2. STONE CHECKDAMS MAY BE REMOVED WHEN 90% OF THE VEGETATIVE COVER IS ESTABLISHED.

Temporary Stone Checkdam

N.T.S. Source: VHB REV



INDEX MAP



- Existing Structure to be Removed
- Existing Structure
- Proposed Structure
- Eversource Overhead Line
- Approximate Right-of-Way (ROW)
- Existing Access
- Off ROW Access
- Alternative Access
- Delineated Wetland Edge
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- Temporary Upland Matting
- Work Pad
- Environmentally Sensitive Areas
- FEMA 100-year Floodplain
- 2-ft Contours
- 10-ft Contours
- Map Sheet Matchline
- Eversource Owned Property
- Parcel Boundary
- Municipal Boundary

N

1:2,400

0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Stratham, NH	MAP SHEET 1 of 8
Date: March, 2023	vhb

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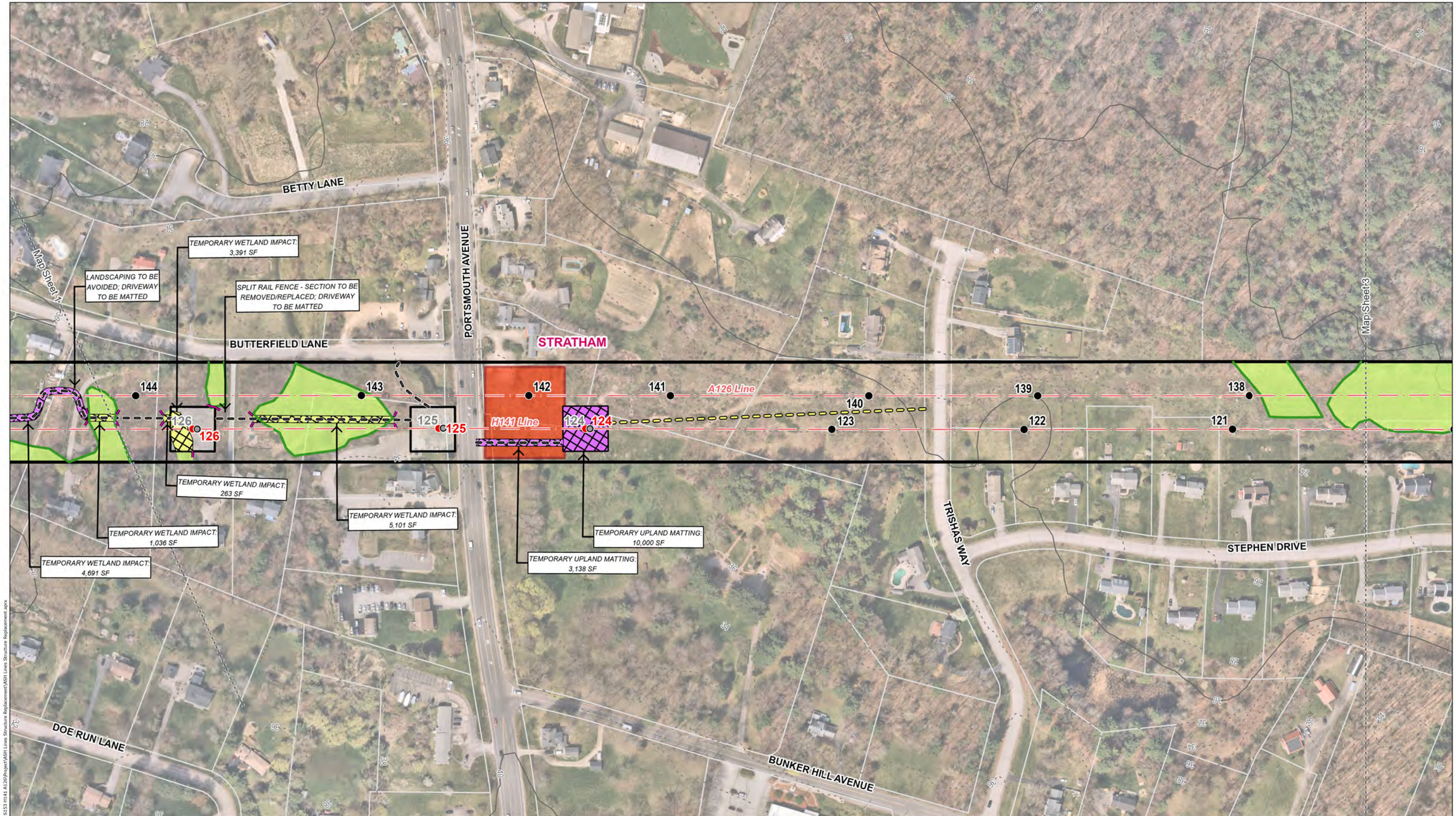
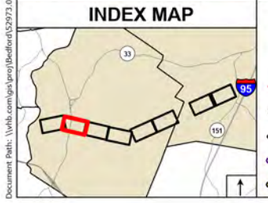


INDEX MAP



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0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Stratham, NH	MAP SHEET 2 of 8
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STRATHAM

TEMPORARY UPLAND MATTING: 2,464 SF

TEMPORARY WETLAND IMPACT: 567 SF

TEMPORARY UPLAND MATTING: 7,765 SF

TEMPORARY WETLAND IMPACT: 1,097 SF

TEMPORARY WETLAND IMPACT: 1,841 SF

TEMPORARY WETLAND IMPACT: 2,409 SF

OFF ROW ACCESS; PERMISSION REQUIRED

RESTORE TO 4FT WIDE GRAVEL PATH

STEPHEN DRIVE

AUTUMN LANE

A126 Line

H141 Line

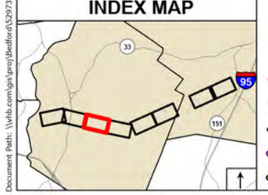
137 136 135 134 133 132 131

120 119 118 117 116 115 114

Map Sheet 2

Map Sheet 4

INDEX MAP



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0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Stratham, NH	MAP SHEET 3 of 8
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STRATHAM

ROBY JEWELL LANE

MUIRFIELD DRIVE

JUNIPER DRIVE

GREAT BAY SUBSTATION

USE OF BRIDGE MATTING AND/OR ELEVATION OF ACCESS ROAD TIMBER MATTING TO PROVIDE MORE SPACE BETWEEN THE MAT AND THE GROUND REQUIRED ON SHEET 4. WHEN POSSIBLE, PLEASE UTILIZE PERPENDICULAR PLACEMENT OF THE 16FT WIDE MATS TO MINIMIZE THE FOOTPRINT.

TEMPORARY WETLAND IMPACT: 12,537 SF

TEMPORARY WETLAND IMPACT: 14,951 SF

TEMPORARY WETLAND IMPACT: 5,630 SF

A126 Line

H141 Line

130 129 128 127 126 125 124 123 122 121 120 119 118 117 116 115 114 113 112 111 110 109 108 107

Map Sheet 3

Map Sheet 5

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0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Stratham, NH	MAP SHEET 4 of 8
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USE OF BRIDGE MATTING AND/OR ELEVATION OF ACCESS ROAD TIMBER MATTING IN WETLANDS TO PROVIDE MORE SPACE BETWEEN THE MAT AND THE GROUND REQUIRED WEST OF WINNICUTT ROAD. WHEN POSSIBLE, PLEASE UTILIZE PERPENDICULAR PLACEMENT OF THE 16FT WIDE MATS TO MINIMIZE THE FOOTPRINT.

TEMPORARY UPLAND IMPACT: 3,929 SF

TEMPORARY WETLAND IMPACT: 2,355 SF

TEMPORARY WETLAND IMPACT: 1,479 SF

TEMPORARY UPLAND IMPACT: 8,884 SF

TEMPORARY WETLAND IMPACT: 1,115 SF

TEMPORARY WETLAND IMPACT: 837 SF

TEMPORARY WETLAND IMPACT: 5,381 SF

TEMPORARY UPLAND IMPACT: 2,043 SF

TEMPORARY UPLAND IMPACT: 10,000 SF

TEMPORARY UPLAND IMPACT: 2,759 SF

TEMPORARY WETLAND IMPACT: 4,140 SF

TEMPORARY WETLAND IMPACT: 1,351 SF

TEMPORARY WETLAND IMPACT: 431 SF

TEMPORARY WETLAND IMPACT: 1,544 SF

TEMPORARY UPLAND IMPACT: 18,448 SF

ROBY JEWELL LANE

GRACE LANE

WINNICUTT ROAD

SMITH FARM ROAD

HERON WAY

UNION ROAD

STRATHAM

A126 Line

S153 Line

122 121 120 119 118 117 116 115 104 103 102 101 100 99

Map Sheet 6

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- Municipal Boundary

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1:2,400

0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Stratham, NH	MAP SHEET 5 of 8
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USE OF BRIDGE MATTING AND/OR ELEVATION OF ACCESS ROAD TIMBER MATTING IN WETLANDS TO PROVIDE MORE SPACE EETWEEN THE MAT AND THE GROUND REQUIRED ON SHEET 6. WHEN POSSIBLE, PLEASE UTILIZE PERPENDICULAR PLACEMENT OF THE 16FT WIDE MATS TO MINIMIZE THE FOOTPRINT.

TEMPORARY UPLAND MATTING: 8,074 SF

TEMPORARY UPLAND MATTING: 2,232 SF

TEMPORARY UPLAND MATTING: 10,000 SF

TEMPORARY WETLAND MATTING: 1,030 SF

TEMPORARY UPLAND MATTING: 10,000 SF

TEMPORARY WETLAND MATTING: 10,000 SF

TEMPORARY WETLAND MATTING: 8,086 SF

TEMPORARY WETLAND MATTING: 1,427 SF

TEMPORARY WETLAND MATTING: 2,334 SF

BRIDGED MATTING

TEMPORARY UPLAND MATTING: 706 SF

TEMPORARY UPLAND MATTING: 10,000 SF

TEMPORARY UPLAND MATTING: 2,539 SF

TEMPORARY UPLAND MATTING: 2,021 SF

TEMPORARY UPLAND MATTING: 10,000 SF

TEMPORARY WETLAND MATTING: 1,146 SF

TEMPORARY WETLAND MATTING: 1,885 SF

TEMPORARY WETLAND MATTING: 10,000 SF

TEMPORARY WETLAND IMPACT: 3,706 SF

TEMPORARY WETLAND IMPACT: 1,931 SF

TEMPORARY UPLAND MATTING: 896 SF

UNION ROAD

STANDREWS WAY

ANNAS WAY

ARNOLD PALMER DRIVE

Marsh Brook

STRATHAM

GREENLAND

A126 Line

S153 Line

Map Sheet 5

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1:2,400

0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
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Stratham, NH	MAP SHEET 6 of 8
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VARDON LANE

GRAVEL WORK AREAS WITHIN 25-FEET OF WETLANDS IN GREENLAND SHOULD BE RESTORED BY SCARIFYING GRAVEL SURFACE, SEEDING AND MULCHING.

RESTORE AREAS OF IMPACT WITHIN WETLAND BUFFER

USE OF BRIDGE MATTING AND/OR ELEVATION OF ACCESS ROAD TIMBER MATTING IN WETLANDS TO PROVIDE MORE SPACE BETWEEN THE MAT AND THE GROUND REQUIRED ON SHEET 7. WHEN POSSIBLE, PLEASE UTILIZE PERPENDICULAR PLACEMENT OF THE 16FT WIDE MATS TO MINIMIZE THE FOOTPRINT.

TEMPORARY WETLAND IMPACT: 11,730 SF

TEMPORARY WETLAND IMPACT: 4,248 SF

TEMPORARY WETLAND IMPACT: 2,992 SF

TEMPORARY WETLAND IMPACT: 4,263 SF

GREENLAND

A126 Line

S153 Line

101 100 86 85 99 99 84 84 98 98 83 83 97 97 96 96 82 82 95 95 81 81 94 94 80 80

TEMPORARY WETLAND IMPACT: 17,916 SF

TEMPORARY WETLAND IMPACT: 4,369 SF

TEMPORARY WETLAND IMPACT: 2,679 SF

TEMPORARY WETLAND IMPACT: 5,576 SF

Winniconic Brook

Winnicut River

Map Sheet 8

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- Municipal Boundary

N

1:2,400

0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Greenland, NH	MAP SHEET 7 of 8
Date: March, 2023	vhb

GRAVEL WORK AREAS WITHIN 25-FEET OF WETLANDS IN GREENLAND SHOULD BE RESTORED BY SCARIFYING GRAVEL SURFACE, SEEDING AND MULCHING.

RESTORE AREAS OF IMPACT WITHIN WETLAND BUFFER

USE OF BRIDGE MATTING AND/OR ELEVATION OF ACCESS ROAD TIMBER MATTING IN WETLANDS TO PROVIDE MORE SPACE BETWEEN THE MAT AND THE GROUND REQUIRED ON SHEET 8. WHEN POSSIBLE, PLEASE UTILIZE PERPENDICULAR PLACEMENT OF THE 16FT WIDE MATS TO MINIMIZE THE FOOTPRINT.

TEMPORARY WETLAND IMPACT: 4,263 SF

TEMPORARY WETLAND IMPACT: 4,272 SF

TEMPORARY WETLAND IMPACT: 10,000 SF

TEMPORARY WETLAND IMPACT: 3,178 SF

TEMPORARY WETLAND IMPACT: 5,325 SF

TEMPORARY WETLAND IMPACT: 500 SF

GREENLAND

MOULTON AVENUE

GROVE STREET

Haines Brook

BROWN AVENUE

LANE AVENUE

A126 Line

S153 Line

Map Sheet 7

94 80 93 92 91 79 78 90 77 89 76 88 75

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N

1:2,400

0 100 200 Feet

EVERSOURCE ENERGY

A126, H141, S153 Lines
Structure Replacements Project

Greenland, NH	MAP SHEET 8 of 8
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Appendix C – FEMA Floodplain Map

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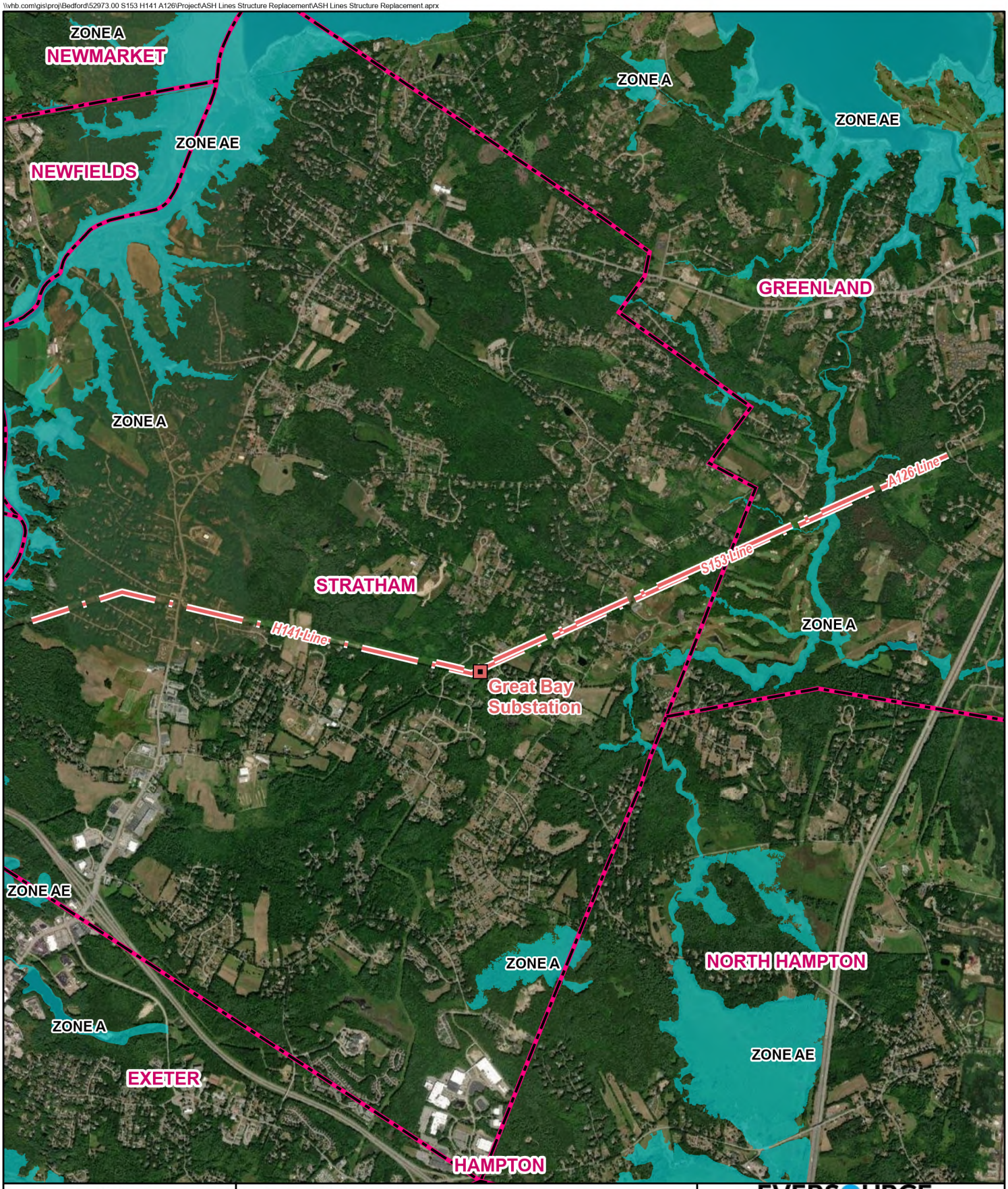

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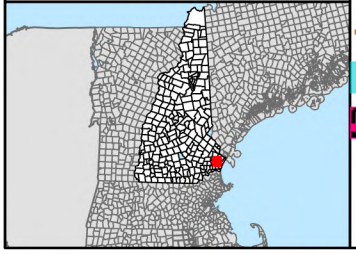

- SUBSTATIONS
- OVERHEAD EVERSOURCE LINE
- FEMA 100-YEAR FLOODPLAIN
- MUNICIPAL BOUNDARY

N

0 1,000 2,000 Feet

EVERSOURCE ENERGY

A126-H141-S153 Structure Replacements Project
Floodplain Map
Greenland and Stratham, New Hampshire

Date: March 16, 2023

vhb

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