



The State of New Hampshire
Department of Environmental Services



Robert R. Scott, Commissioner

August 19, 2022

Eversource Energy
Attn: Ashley Friend
13 Legends Drive
Hooksett, New Hampshire 03106

RE: V182 Transmission Line Structure Replacements
Franklin and Canterbury, NH

Permit: AoT-2209

Dear Applicant:

Based upon the plans and application, approved on August 19, 2022, we are hereby issuing RSA 485-A:17 Alteration of Terrain Permit AoT-2209. As part of the processing of this application, DES granted approval to waiving specific requirements of Env-Wq 1503.22(c)(3 - 8) and Env-Wq 1504.09, finding that granting the waivers would not have an adverse impact on the environment, public health, public safety, or abutting properties, and that granting the requests is consistent with the intent and purpose of the rules waived. Additional documentation relative to the waivers requested is contained within the file. This permit is subject to the following conditions:

PROJECT SPECIFIC CONDITIONS:

1. Plans by Vanasse Hangen Brustlin, Inc. entitled "V182 Line - Structure Replacement Project", dated May 13, 2022, latest revision dated August 18, 2022 and supporting documentation in the permit file are a part of this approval.
2. **This permit expires on August 19, 2027.** No earth moving activities shall occur on the project after this expiration date unless the permit has been extended by the Department. If an extension is required, the request must be received by the department before the permit expires. The Amendment Request form is available at: <https://www.des.nh.gov/land/land-development>
3. The Permittee shall comply with all recommendations by the New Hampshire Fish and Game Department related to state or federally listed threatened or endangered species, as incorporated into the project plans as *Wildlife Conservation Measures* (Page C1.3 of approved plan set).

GENERAL CONDITIONS:

1. Activities shall not cause or contribute to any violations of the surface water quality standards established in Administrative Rule Env-Wq 1700.
2. You must submit revised plans for permit amendment prior to any changes in construction details or sequences. You must notify the Department in writing within ten days of a change in ownership.
3. You must notify the Department in writing prior to the start of construction and upon completion of construction. Forms can be submitted electronically at: <https://www.des.nh.gov/land/land-development> . Paper forms are available at the referenced web address.
4. This permit does not relieve the applicant from the obligation to obtain other local, state or federal permits that may be required (e.g., from US EPA, US Army Corps of Engineers, etc.). Projects disturbing over 1 acre may require a federal stormwater permit from EPA. Information regarding this permitting process can be obtained at: <https://www.epa.gov/npdes/epas-2017-construction-general-permit-cgp-and-related-documents>.

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
(603) 271-3503 • Fax: 271-2867 TDD Access: Relay NH 1-800-735-2964

5. **Upon completion of construction, a written notice signed by the permit holder and a qualified engineer shall be submitted to the Department, in accordance with Env-Wq 1503.21(c)(1), stating that the project was completed in accordance with the approved plans and specifications.** If deviations were made, the permit holder shall review the requirements in Env-Wq 1503.21(c)(2).
6. No activity shall occur in wetland areas until the applicable permit is obtained from the Department. Issuance of this permit does not obligate the Department to approve a Wetlands Permit for this project
7. This project has been screened for potential impact to known occurrences of protected species and exemplary natural communities in the immediate area. Since many areas have never been surveyed, or only cursory surveys have been performed, unidentified sensitive species or communities may be present. This permit does not absolve the permittee from due diligence in regard to state, local or federal laws regarding such communities or species. This permit does not authorize in any way the take of threatened or endangered species, as defined by RSA 212-A:2, or of any protected species or exemplary natural communities, as defined in RSA 217-A:3

Sincerely,



Ridgely Mauck, P.E.
Alteration of Terrain Bureau

cc: Franklin Planning Board
Canterbury Planning Board

ec: Vanasse Hangen Brustlin, Inc.

From: [Sherrie Trefry](#)
To: "[Mauck, Ridgely](#)"; [Friend, Ashley C](#)
Subject: RE: [External] RE: V182 AoT Permit Application- 20220613-115
Date: Thursday, August 18, 2022 11:00:47 AM
Attachments: [V182 Compiled AOT Plans.pdf](#)
[image001.jpg](#)

Hi Ridge,

I have added a revision note to the cover page and revised the Construction Requirement Notes plan sheet date to reflect 8/17/22.

Thanks, Sherrie

Sherrie Trefry, CSS
Energy Market Leader

P [603.391.3951](tel:603.391.3951)

www.vhb.com

From: Mauck, Ridgely <Addison.R.Mauck@des.nh.gov>
Sent: Thursday, August 18, 2022 9:54 AM
To: Sherrie Trefry <STrefry@VHB.com>; Friend, Ashley C <ashley.friend@eversource.com>
Subject: RE: [External] RE: V182 AoT Permit Application- 20220613-115

Sherrie,

To make sure recent revisions can be distinguished from earlier documents, please, at a minimum, revise the issued date on the *Construction Requirement Notes* plan sheet. Alternatively you could revise all plan set reference dates to the current date.

Thanks,
Ridge

From: Sherrie Trefry <STrefry@VHB.com>
Sent: Wednesday, August 17, 2022 3:31 PM
To: Friend, Ashley C <ashley.friend@eversource.com>; Mauck, Ridgely <Addison.R.Mauck@des.nh.gov>
Subject: RE: [External] RE: V182 AoT Permit Application- 20220613-115

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Good afternoon,

Please see the attached AOT Plans. Looks like all the note pages were not attached to the plans at the time of filing. The notes below have been incorporated under the Wildlife conservation measure notes. Thanks, Sherrie

Sherrie Trefry, CSS
Energy Market Leader

P [603.391.3951](tel:603.391.3951)

www.vhb.com

From: Friend, Ashley C <ashley.friend@eversource.com>

Sent: Wednesday, August 17, 2022 9:02 AM
To: Mauck, Ridgely <Addison.R.Mauck@des.nh.gov>
Cc: Sherrie Trefry <STrefry@VHB.com>
Subject: [External] RE: V182 AoT Permit Application- 20220613-115

Thanks Ridge! We'll amend the plans and get those back to you.

Thanks,
Ashley

ASHLEY FRIEND

Specialist - Licensing & Permitting



13 Legends Drive, Hooksett, NH 03106

603-634-2992

Ashley.Friend@Eversource.com

From: Mauck, Ridgely <Addison.R.Mauck@des.nh.gov>
Sent: Wednesday, August 17, 2022 8:12 AM
To: Friend, Ashley C <ashley.friend@eversource.com>
Cc: Sherrie Trefry <STrefry@VHB.com>
Subject: RE: V182 AoT Permit Application- 20220613-115

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Ashley,

Thanks for the reminder. Not having NHFG involvement, this fell off my radar.

Per Env-Wq 1504.18, all plans must contain the following wildlife protection notes:

(1) All observations of threatened or endangered species on the project site shall be reported immediately to the NHF&G 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;

(2) Photographs of the observed species and nearby elements of habitat or areas of land disturbance shall be provided to NHF&G in digital format at the above email address for verification, as feasible;

(3) 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 NHF&G and implementation of corrective actions recommended by NHF&G, if any, to assure the project does not appreciably jeopardize the continued existence of threatened and endangered species as defined in Fis 1002.04; and

(4) The NHF&G, including its employees and authorized agents, shall have access to the property during the term of the permit.

I have no other comments.

Regards,
Ridge

From: Friend, Ashley C <ashley.friend@eversource.com>
Sent: Tuesday, August 16, 2022 8:57 PM
To: Mauck, Ridgely <Addison.R.Mauck@des.nh.gov>
Cc: Sherrie Trefry <STrefry@VHB.com>
Subject: V182 AoT Permit Application- 20220613-115

EXTERNAL: Do not open attachments or click on links unless you recognize and trust the sender.

Hey Ridge,

I wanted to check in on the AoT application for the V182 Structure Replacement Project and confirm you have everything required for your review.

The file number is 20220613-115 and received completeness on 6/13.

Please let me know if there's anything else you need. We did not have any NHB records on this project.

Thanks,
Ashley

ASHLEY FRIEND

Specialist - Licensing & Permitting

13 Legends Drive, Hooksett, NH 03106

603-634-2992

Ashley.Friend@Eversource.com

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V182 Electric Transmission Line Rebuild

Franklin, and Canterbury, New Hampshire

PREPARED FOR

EVERSOURCE

Public Service Company of NH (PSNH)
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

June 1, 2022

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Cover Letter



June 6, 2022

Ref: 52893.00

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

Re: V182 Electric Transmission Line Structure Replacements
Franklin and Canterbury, New Hampshire

Dear Mr. Mauck,

On behalf of Public Service Company of New Hampshire d/b/a Eversource Energy (PSNH), VHB respectfully submits for your consideration the attached Alteration of Terrain Application for routine maintenance and repair activities along the existing V182 Electric Transmission Line corridor in the towns of Franklin and Canterbury, NH. Maintenance work includes the replacement of thirteen (12) existing wood poles in Franklin and one (1) existing wood utility pole in Canterbury. The need for the project was identified as during recent line inspections. New weathered steel structures will replace existing poles in accordance with current construction methods and materials. The right-of-way (ROW) contains Eversource V182 and F139 115 kV transmission lines.

The most common reasons wooden structures are replaced include internal rot and/or woodpecker damage. The proposed work is part of Eversource's on-going asset condition refurbishment conducted to ensure reliable electric service for their customers. All proposed work will occur within the limits of an existing cleared and maintained overhead electric utility right-of-way (ROW). No tree clearing or widening of the ROW is proposed as part of this project. Work is scheduled to commence in July of 2022. Timber matting will be utilized to gain access down the right-of-way across wetlands and streams in order to reach replacement structures. Additionally, timber mats will be set up around the base of structures where the work pad intersects wetlands to provide a stable work area to stage crews and equipment.

The total land disturbance for the project was calculated to be approximately 4.76 acres (207,563 SF). The disturbance was conservatively calculated based upon the total length of access roads (not including contingency access) times a typical 16-foot width and the total area for pole 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

2 Bedford Farms Drive
Suite 200
Bedford, New Hampshire 03110
P 603.391.3900
F 603.518.7495

Engineers | Scientists | Planners | Designers

V182 Alteration of Terrain Application
Ref: 52893.00
June 6, 2022
Page 2



- 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,

A handwritten signature in black ink that reads "Sherrie Trefry". The signature is written in a cursive, flowing style.

Sherrie Trefry, CSS

Vanasse Hangen Brustlin, Inc.

cc: Ashley Friend – PSNH
Sherrie Trefry - VHB

Application Form & Checklist

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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: Ashley Friend	
Email: ashley.friend@eversource.com		Daytime Telephone: 603-634-2992	
Mailing Address: 13 Legends Drive			
Town/City: Hooksett		State: NH	Zip Code: 03106
2. APPLICANT'S AGENT INFORMATION If none, check here: <input type="checkbox"/>			
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 as Applicant		Contact Name:	
Email:		Daytime Telephone:	
Mailing Address:			
Town/City:		State:	Zip Code:
4. PROPERTY OWNER'S AGENT INFORMATION If none, check here: <input type="checkbox"/>			
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: <input type="checkbox"/>			
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: V182 Transmission Line Structure Replacements

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

Town/City: Franklin and Canterbury

County: Merrimack

Tax Map: N/A

Block: N/A

Lot Number: N/A

Unit: N/A

Location Coordinates:

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:	<input type="checkbox"/> Yes	<input type="checkbox"/> Withdrawal	<input type="checkbox"/> Discharge
	<input checked="" type="checkbox"/> No		
2. Man-made pond created by impounding a stream or wetland Purpose:	<input type="checkbox"/> Yes	<input type="checkbox"/> Withdrawal	<input type="checkbox"/> Discharge
	<input checked="" type="checkbox"/> No		
3. Unlined pond dug into the water table Purpose:	<input type="checkbox"/> Yes	<input type="checkbox"/> Withdrawal	<input type="checkbox"/> Discharge
	<input checked="" type="checkbox"/> No		

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: _____ cubic feet within the 100-year floodplain

Fill volume: _____ 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(I) if applicable

Project is NOT within a Coastal/Great Bay Region community

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

The project includes proposed maintenance work on the existing V182 115 kV electric transmission line. The work includes the replacement of eighteen (12) existing wood utility poles in Franklin and one (1) existing wood utility pole in Canterbury. New weathered steel structures will replace existing poles in accordance with current construction methods and materials.

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

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: / / .
(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: / / . N/A
(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: 207,563 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 related to stormwater calculations impervious cover is considered to be di minimis.

G. Total undisturbed cover: 1,202,209 square feet {= total right-of-way area in project ROW area (1,409,772 SF) - area of disturbance (207,563 SF)}

H. Number of lots proposed: 0

I. Total length of roadway: 0 linear feet

J. Name(s) of receiving water(s): Shaw Brook, Merrimack 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	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
2. Wetlands Permit	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
3. Shoreland Permit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
4. UIC Registration	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Registration date:
5. Large/Small Community Well Approval	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Approval letter date:
6. Large Groundwater Withdrawal Permit	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<input type="checkbox"/>	Permit number:
7. Other:	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/>	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."
N/A

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

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.

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.

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.nhdfi.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

See Checklist for Details

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

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 1/2" x 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).

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" x 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(I) if applicable.

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Application Fee Calculation & Copy of Check

Project V182 Structure Replacements Project # 52893.00
 Location Franklin and Canterbury, New Hampshire
 Calculated by S. Trefry Date 6/1/2022
 Title NHDES Alteration of Terrain Permit Fee Calculation



Computations

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

Total Disturbance Area: **207,563 SF**
 4.76 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:

<u>Area of Disturbance in square feet</u>	<u>Fee</u>
< 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.	

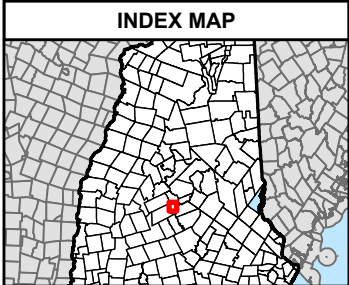
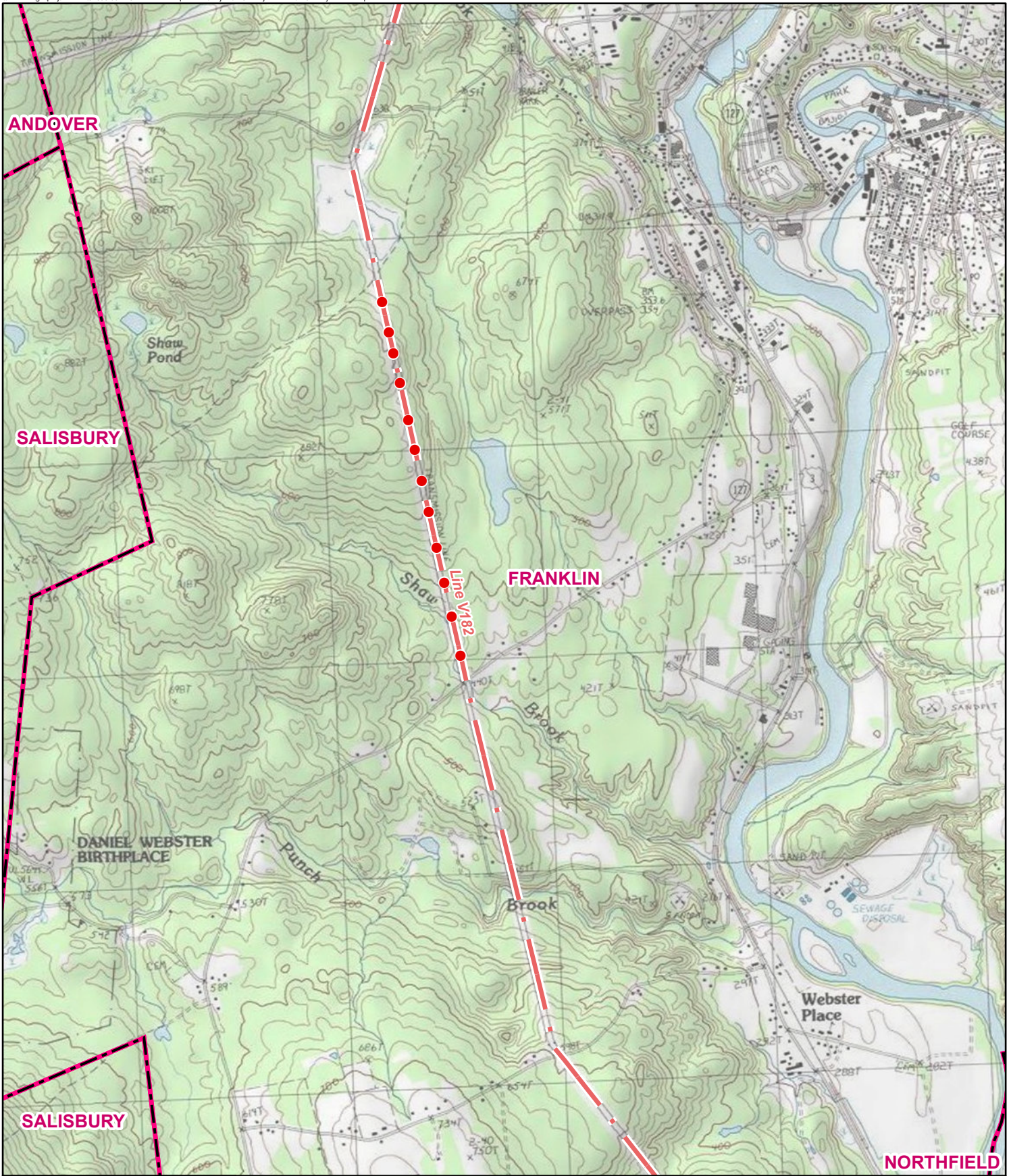
Fee schedule for projects in the Protected Shoreland:	
Area of disturbance in square feet (sf)	Fee
< 50,000	\$500 + \$0.005/sf
50,000 to 199,999	\$3,125
200,000 to 299,999	\$4,375
300,000 to 399,999	\$5,625
400,000 to 499,999	\$6,875
500,000 to 599,999	\$8,125
600,000 to 699,999	\$9,375
700,000 to 799,999	\$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."

USGS Site Location Maps

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- Proposed Structure
- Overhead Eversource Lines
- Municipal Boundary

N
↑

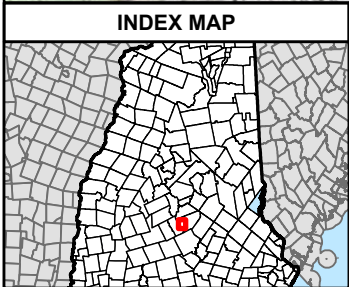
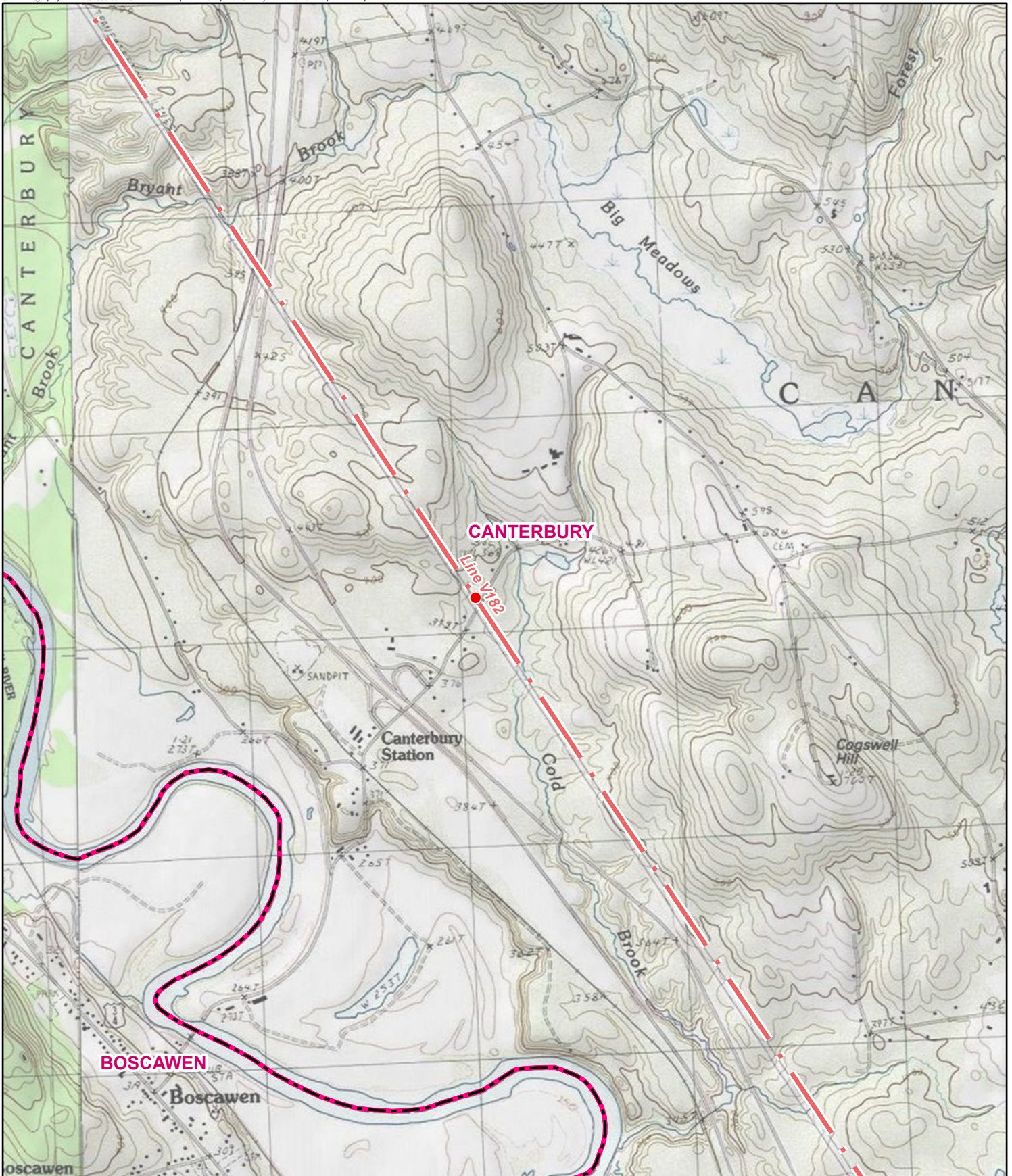
1 Inch = 5,000 feet

0 1,000 2,000 Feet

EVERSOURCE
ENERGY

USGS Locus Map
V182 Line Structure Replacement Project
Franklin, NH

Date: May 16, 2022



- Proposed Structure
- Overhead Eversource Lines
- Municipal Boundary

N
↑
1 Inch = 5,000 feet
0 1,000 2,000 Feet

EVERSOURCE
ENERGY

USGS Locus Map
V182 Line Structure Replacement Project
Canterbury, NH

Date: May 16, 2022

Project Narrative

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Project Narrative

On behalf of the Public Service Company of New Hampshire d/b/a Eversource Energy (PSNH), 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 project involves a portion of the maintained 200-foot electric transmission line corridor in Franklin and Canterbury, NH (refer to the USGS Site Location Maps attached). The corridor contains two PSNH 115 kV lines, the F139 and V182. The ROW is comprised of PSNH owned-property or PSNH controlled easements on privately or publicly-held property. The ROW is intersected by public roadways and state routes, including Flaghole Road, Montgomery Road, and Salisbury Road (Route 127) in Franklin and West Road in Canterbury. The ROW is comprised of dense emergent and scrub-shrub wetland, swamp peatland, and upland vegetation that is maintained (cut) on a three to five-year cycle to achieve vertical clearance requirements between ground vegetation and overhead transmission lines. Surrounding land use is largely forested with some residential properties.

Natural Resource Review

According to the NHDES Wetlands Permit Planning Tool, there are no Priority Resource Areas (PRAs) such as sand dunes, prime wetlands and their buffers, tidal waters or wetlands, or documented occurrences of protected species or their habitat that intersect or abut the project ROW.

While the ROW runs parallel to the Merrimack River, the ROW corridor is outside of the Designated River 1/4 mile buffer and, therefore, does not require coordination with a Local Advisory Committee. The ROW also does not intersect water supply intake protection areas, well head protection areas, Class A water resources, outstanding resource waters or surface waters with impairments.

Delineated Natural Resources

Jurisdictional wetlands and surface waters within the project site were redelineated by VHB Wetland Scientists in April of 2022. The wetland delineation was performed in accordance with the 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) using alpha-numerically coded pink flagging tape. Wetland delineation also relied 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. Wetlands were classified using the USFWS methodology *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979, revised 1985). A wetland functional assessment was performed in accordance with the *Corps Highway Methodology Workbook* dated 1993, together with the *Corps New England District Highway Method Workbook Supplement*, dated 1999.

The portion of the ROW that is the subject of this application site contains fourteen (14) wetlands, two perennial streams and one intermittent. The streams within this portion of the ROW are contained within bordering wetlands. The wetlands are not designated as floodplain wetlands adjacent to Tier 3 streams within the NHDES Wetlands Permit Planning Tool. In addition, none of the FEMA-mapped 100-year floodplains intersect the portion of the project ROW.

Proposed Project Description

PSNH proposes to maintain the existing V182 115-kV Electric Transmission Line from the Flaghole Road to Salisbury Road in Franklin, NH and north of West Road in Canterbury, NH. The project includes the replacement of 13 existing wood utility poles with new weathered steel structures and existing ceramic conductors with glass conductors in accordance with current construction methods and materials.

The most common reasons wooden structures are replaced include internal rot and/or woodpecker damage. The proposed work is part of Eversource's on-going asset condition refurbishment conducted to ensure reliable electric service for their customers. All proposed work will occur within the limits of an existing cleared and maintained overhead electric utility right-of-way (ROW). No tree clearing or widening of the ROW is proposed as part of this project. Work is scheduled to commence in July of 2022. Timber matting will be utilized to gain access down the right-of-way across wetlands and streams in order to reach replacement structures. Additionally, timber mats will be set up around the base of structures where the work pad intersects wetlands to provide a stable work area to stage crews and equipment.

Structure replacement work is planned to commence in mid-2022 and be completed by the end of 2022. The existing wooden H-frame structures are proposed to be replaced with weathered steel H-frame structures to meet the current industry standard. 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 replacement structures will be installed within 10-15 feet of the existing structure footprints (back or forward on-line). Replaced structures would be connected to the existing overhead circuit prior to the removal of the existing structures. The height of the new structures will be increased by fifteen (15) feet or less for all of the structures. The purpose of the height increases is to gain compliance with current regulatory standards, meet safety clearance requirements, accommodate the site topography, and minimize environmental impacts.

The proposed work will occur within the existing, cleared transmission rights-of-way (ROW) and no additional widening of the ROW is proposed. 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. Crews will utilize established off-ROW access if granted permission from landowners during the proposed maintenance work.

Timber matting will be utilized to cross wetlands and streams within the ROW to access the structures targeted for replacement and minimize soil disturbance by avoiding rutting. Utility Statutory Permit by Notification (SPN) Applications will be filed with the NHDES Wetlands Bureau for the work within jurisdictional resource areas. These areas will be situated in upland areas along the existing ROW corridor and are represented within the site plans. Ground disturbance and grading 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 an approximately 100'x100' in size. 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.

Erosion controls will be inspected daily by the contractor crews and weekly by a qualified environmental monitor, hired by PSNH, to ensure that the controls are maintained and are properly functioning

throughout the duration of the project. Erosion controls will not be removed until project work is complete, and the project area is stabilized in accordance with NHDES guidance. Due to the use of timber mats, it is anticipated that minimal restoration within the ROW will be required, and that natural vegetative re-colonization of impacted areas will occur during summer vegetative growth periods. If necessary, an approved upland and/or wetland seed mix will be applied to any areas where cover is slow to develop, as outlined in NHDES guidance manuals. Additionally, straw or weed-free hay will be applied in conjunction with seed. All construction activities will follow the Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire (BMP Manual) (March 2019), published by the New Hampshire Department of Natural and Cultural Resources.

Access

Proposed access routes to and within the existing ROW were selected during field visits by the PSNH Project Manager, Licensing and Permitting Specialist, Project Engineer, Construction Representatives, and Siting and Construction Services personnel. 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. Access points to the ROW originate from public roadways that run parallel to, or perpendicularly intersect the ROW in various locations along the corridor. VHB is pursuing access approvals from the NH Department of Transportation and host municipalities as may be required. Additional off-ROW access is being pursued by PSNH to minimize land disturbance and avoid wetlands where feasible.

Access points and exact access routes within the ROW were designed to avoid and minimize wetland impacts to the maximum extent practical. Timber mats will be used at unavoidable wetland crossings and surrounding structure installations that are within or near natural resources.

Construction Methods and Best Management Practices

No anticipated tree clearing or widening of the ROW is proposed as part of this project, but minor vegetative clearing might be necessary to access structure locations.

Civil crews will install erosion and sediment control barriers in accordance with the BMP manual and as depicted on the plan set during road and work pad construction. Selected BMPs may include straw wattles, silt fence, wood chip/compost berms/tubes, water bars, stabilized construction exits, erosion control blankets and/or other approved BMPs.

Ground-based crews will approach each new structure location along the proposed V182 Line utilizing the proposed access as indicated on the plans provided in **Appendix B**. Construction timber mats, also called swamp mats, typically with dimensions of 16 feet wide by 4 feet long, will be used as necessary in areas where wetlands will be crossed to gain access to each structure location, depending on seasonal ground conditions. Smaller perennial or intermittent stream channels located along the ROW that cannot be avoided may be spanned with mats from beyond the jurisdictional banks.

Construction work pads (100'x100') comprised of temporary matting will be placed around structure replacement locations within wetland areas to accommodate necessary equipment. Some work pads need to be two-tiered or off-set due to adjacent steep topography and to avoid wetland impacts.

Once access is gained to each new structure location, poles will be installed either through direct embedment or constructed in caisson foundations that would be backfilled with gravel. 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. Contingent upon permit approval, work is proposed to commence mid-2022.

Construction laydown areas used to store structure and line components and equipment will be located in upland areas within the ROW outside of jurisdictional areas. During construction, control of the spread or introduction of invasive species will be managed in accordance with the BMP manual and the invasive species control plan indicated on the plans provided in **Appendix B**.

Matting and other construction debris will be removed upon completion of the proposed work. Stabilization of the surrounding area and restoration of disturbed areas will be completed as soon as possible. It is anticipated that minimal restoration will be needed and that natural re-colonization of wetlands within the ROW will occur during the next vegetative growth period. VHB will revisit the ROW during this time to assure restoration. 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, surface waters, vernal pools, utility structures, proposed new structure and removal locations, proposed access routes, proposed pulling/tensioning sites, construction work pads and laydown areas, and temporary natural resource crossings.

Floodplains and Floodways

The project ROW does not intersect FEMA mapped 1% Annual Chance Flood Hazard Zones (100-year floodplains) along the project corridor in accordance with the effective Flood Insurance Rate Map (FIRM), Map No. 33013C01158E, 33013C0166E, and 33013C0330E effective 4/19/10 (refer to the figure provided in **Appendix C**).

Transmittal Documentation to Municipalities

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Waiver Requests

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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: June 1, 2022

File Number (DES use): _____

V182 Electric Transmission Line Structure Replacements

Name of Project

Franklin and Canterbury

Location of Project (town)

Merrimack

County

Utility Maintenance

Project Type

1. Owner Information

Public Service Company of NH dba Eversource Energy

Name

ashley.friend@eversource.com

Email address (optional)

Ashley Friend

Contact Name

(603) 634-2992

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

Ashley Friend

Signature (owner) and Date

Ashley Friend

Name (owner)

Sherrie Trefry

Signature (person requesting waiver) and Date

Sherrie Trefry

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: June 1, 2022

File Number (DES use): _____

V182 Electric Transmission Line Structure Replacements

Name of Project

Franklin and Canterbury

Location of Project (town)

Merrimack

County

Utility Maintenance

Project Type

1. Owner Information

Public Service Company of NH dba Eversource Energy

Name

ashley.friend@eversource.com

Email address (optional)

Ashley Friend

Contact Name

(603) 634-2992

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 1503.22 (c)

Rule

Pertinent to deviations from approved plans

Brief Description of Rule

Explanation of Request:

A waiver is requested from the requirement for an amended permit to allow field deviations up to the thresholds outlined in Env-Wq 1503.22 (c), including potential adjustments to the roadway centerline which may be greater than 20 feet but not more than 100 feet. 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 a permit amendment, 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 of the signer; and
- (2) The signer understands that any waiver granted based on false, incomplete, or misleading information shall be subject to revocation.

Ashley Friend

Signature (owner) and Date

Ashley Friend

Name (owner)

Sherrie Trefry

Signature (person requesting waiver) and Date

Sherrie Trefry

Name (person requesting waiver)

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

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V182 Structure Replacements, Franklin, NH



Legend

- * Remediation Sites
- Coastal and Great Bay Regional Communities
- Designated Rivers Quarter Mile Buffer
- Public Water Supply Wells
- Groundwater Classification / GA1
- Groundwater Classification / GA2
- Water Supply Intake Protection Areas
- Wellhead Protection Areas
- Class A Lakes with a Quarter Mile Buffer
- Class A - All Features
- All Lakes, with a Quarter Mile Buffer
- Outstanding Resource Water Watersheds
- Surface Waters with Impairment 2016 with Quarter Mile Buffer
- Watersheds with Chloride Impairments 2016

Map Scale

1: 25,977

© NH DES, <http://des.nh.gov>

Map Generated: 5/11/2022
















Notes

AOT Screening Layers

V182 Structure Replacements, Canterbury, NH



Legend

- * Remediation Sites
-  Coastal and Great Bay Regi Communities
-  Designated Rivers Quarter Buffer
-  Public Water Supply Wells
-  Groundwater Classification / GA1
-  Groundwater Classification / GA2
-  Water Supply Intake Protect Areas
-  Wellhead Protection Areas
-  Class A Lakes with a Quarter Buffer
-  Class A - All Features
-  All Lakes, with a Quarter Mil Buffer
-  Outstanding Resource Water Watersheds
-  Surface Waters with Impairn 2016 with Quarter Mile Buffe
-  Watersheds with Chloride Impairments 2016

Map Scale

1: 6,494

© NH DES, <http://des.nh.gov>

Map Generated: 5/11/2022



Notes

AOT Screening Layers

New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

To: Larissa Robinov
2 Bedford Farms Drive Suite 200
Bedford, NH 03110

From: NH Natural Heritage Bureau

Date: 3/29/2022 (This letter is valid through 3/29/2023)

Re: Review by NH Natural Heritage Bureau of request dated 3/29/2022

Permit Type: Utility Statutory Permit by Notification (SPN)

NHB ID: NHB22-1210

Applicant: Larissa Robinov

Location: Franklin
Tax Map: NA, Tax Lot: NA
Address: Existing electric transmission line ROW

Proj. Description: Eversource Energy intends to conduct routine maintenance/repair activities along the existing V182 Transmission Line in Franklin, New Hampshire. Proposed work includes the replacement of 18 existing wood utility poles with new weathered steel structures. Proposed structure replacement work will occur within the limits of an existing cleared and maintained overhead electric utility right-of-way (ROW) with no tree clearing or widening of the ROW proposed. Timber matting will be utilized to gain access across wetlands and streams or around the base of structures located in wetlands to provide a stable work area. All project work will be conducted in accordance with the utility maintenance BMPs. Work is scheduled to commence in late summer of 2022.

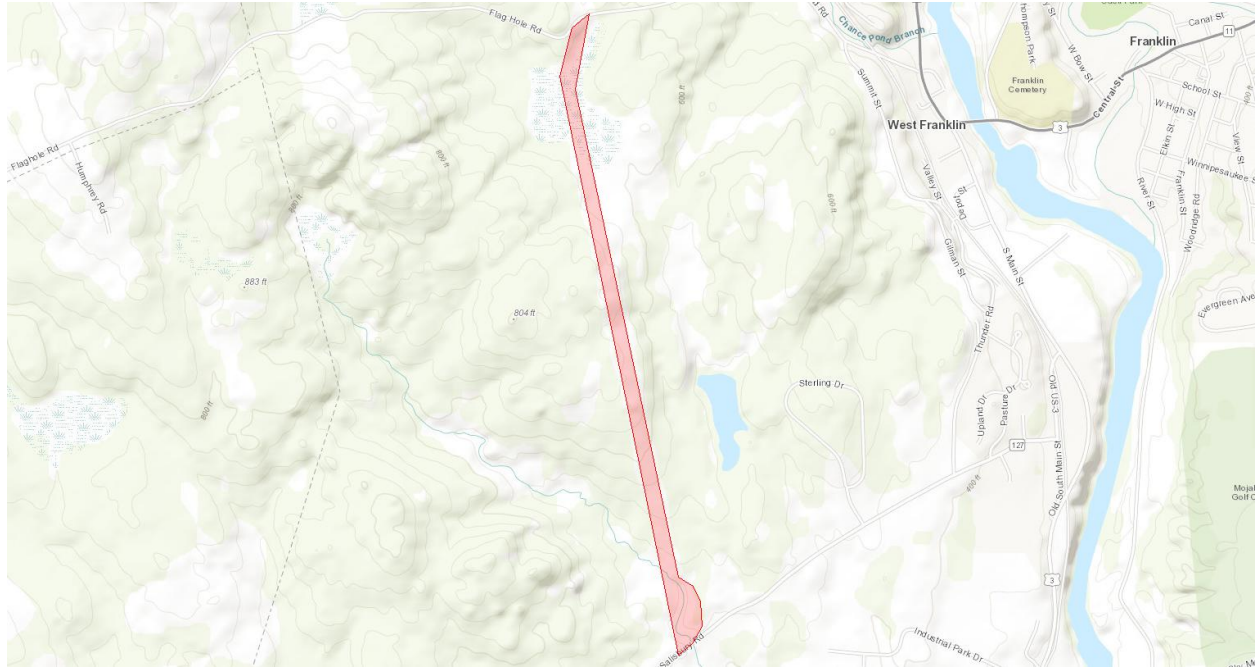
The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

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.

Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: NHB22-1210



New Hampshire Natural Heritage Bureau NHB DataCheck Results Letter

To: Larissa Robinov
2 Bedford Farms Drive Suite 200
Bedford, NH 03110

From: NH Natural Heritage Bureau

Date: 3/29/2022 (This letter is valid through 3/29/2023)

Re: Review by NH Natural Heritage Bureau of request dated 3/29/2022

Permit Type: Utility Statutory Permit by Notification (SPN)

NHB ID: NHB22-1211

Applicant: Larissa Robinov

Location: Canterbury
Tax Map: NA, Tax Lot: NA
Address: Existing electric transmission line ROW

Proj. Description: Eversource Energy intends to conduct routine maintenance/repair activities along the existing V182 Transmission Line in Canterbury, New Hampshire. Proposed work includes the replacement of 1 existing wood utility pole with a new weathered steel structure. Proposed structure replacement work will occur within the limits of an existing cleared and maintained overhead electric utility right-of-way (ROW) with no tree clearing or widening of the ROW proposed. Timber matting will be utilized to gain access across wetlands and streams or around the base of structures located in wetlands to provide a stable work area. All project work will be conducted in accordance with the utility maintenance BMPs. Work is scheduled to commence in late summer of 2022.

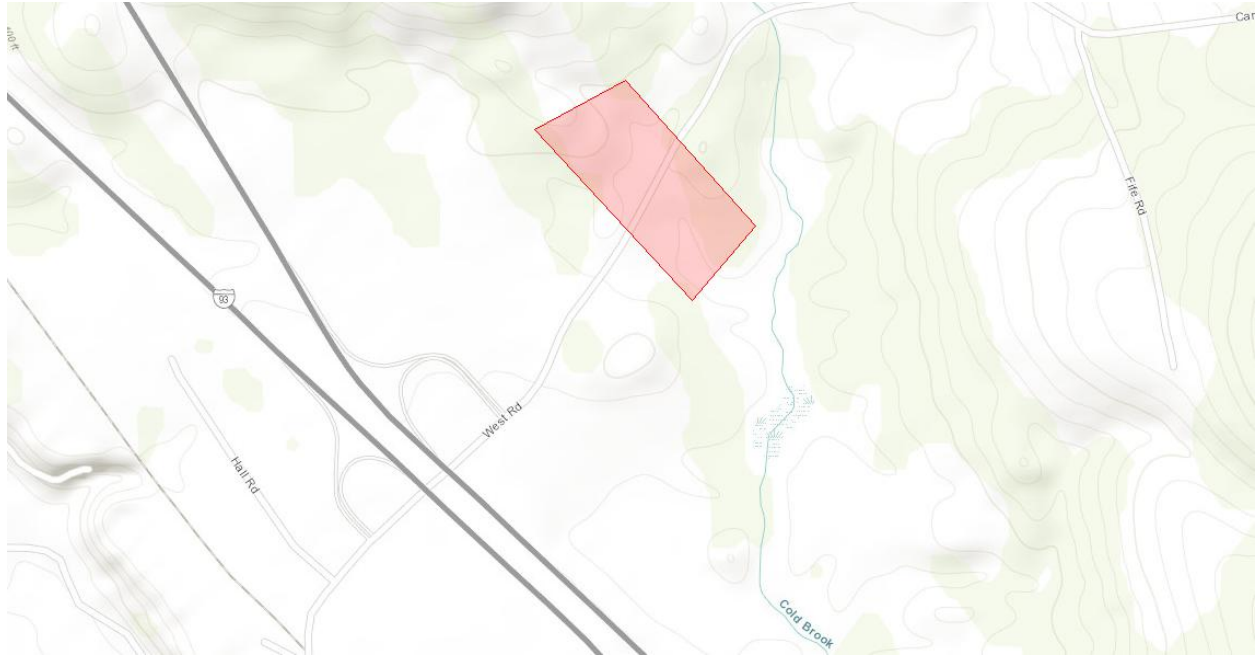
The NH Natural Heritage database has been checked for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government. We currently have no recorded occurrences for sensitive species near this project area.

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.

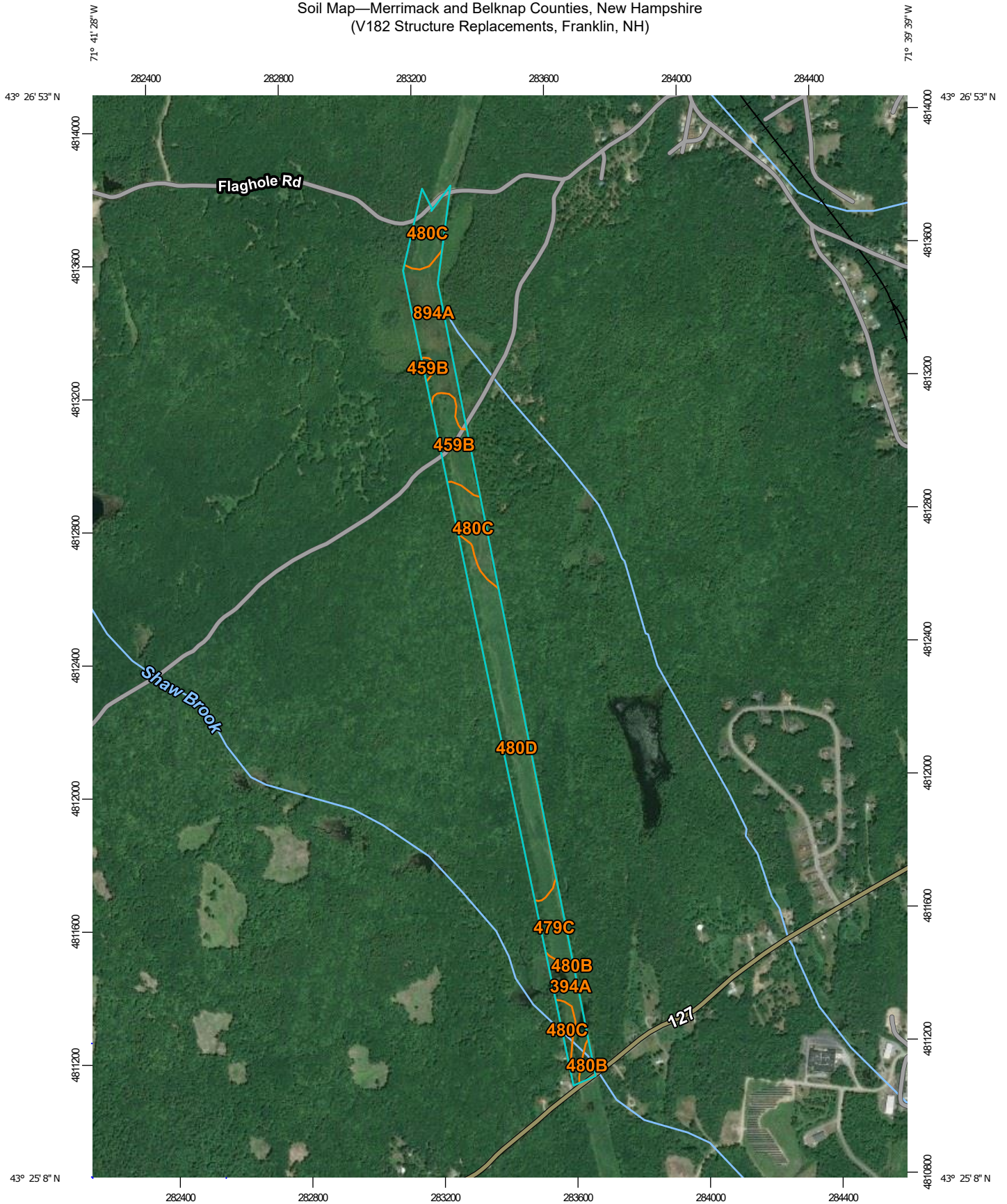
Based on the information submitted, no further consultation with the NH Fish and Game Department pursuant to Fis 1004 is required.

New Hampshire Natural Heritage Bureau
NHB DataCheck Results Letter

MAP OF PROJECT BOUNDARIES FOR: NHB22-1211



Soil Map—Merrimack and Belknap Counties, New Hampshire
(V182 Structure Replacements, Franklin, NH)



Map Scale: 1:15,800 if printed on A portrait (8.5" x 11") sheet.



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



Natural Resources
Conservation Service


Web Soil Survey
National Cooperative Soil Survey

5/11/2022
Page 1 of 3

Soil Map—Merrimack and Belknap Counties, New Hampshire
(V182 Structure Replacements, Franklin, NH)


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
-  Rock Outcrop
-  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


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.

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: Merrimack and Belknap Counties, New Hampshire
Survey Area Data: Version 27, Aug 31, 2021

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

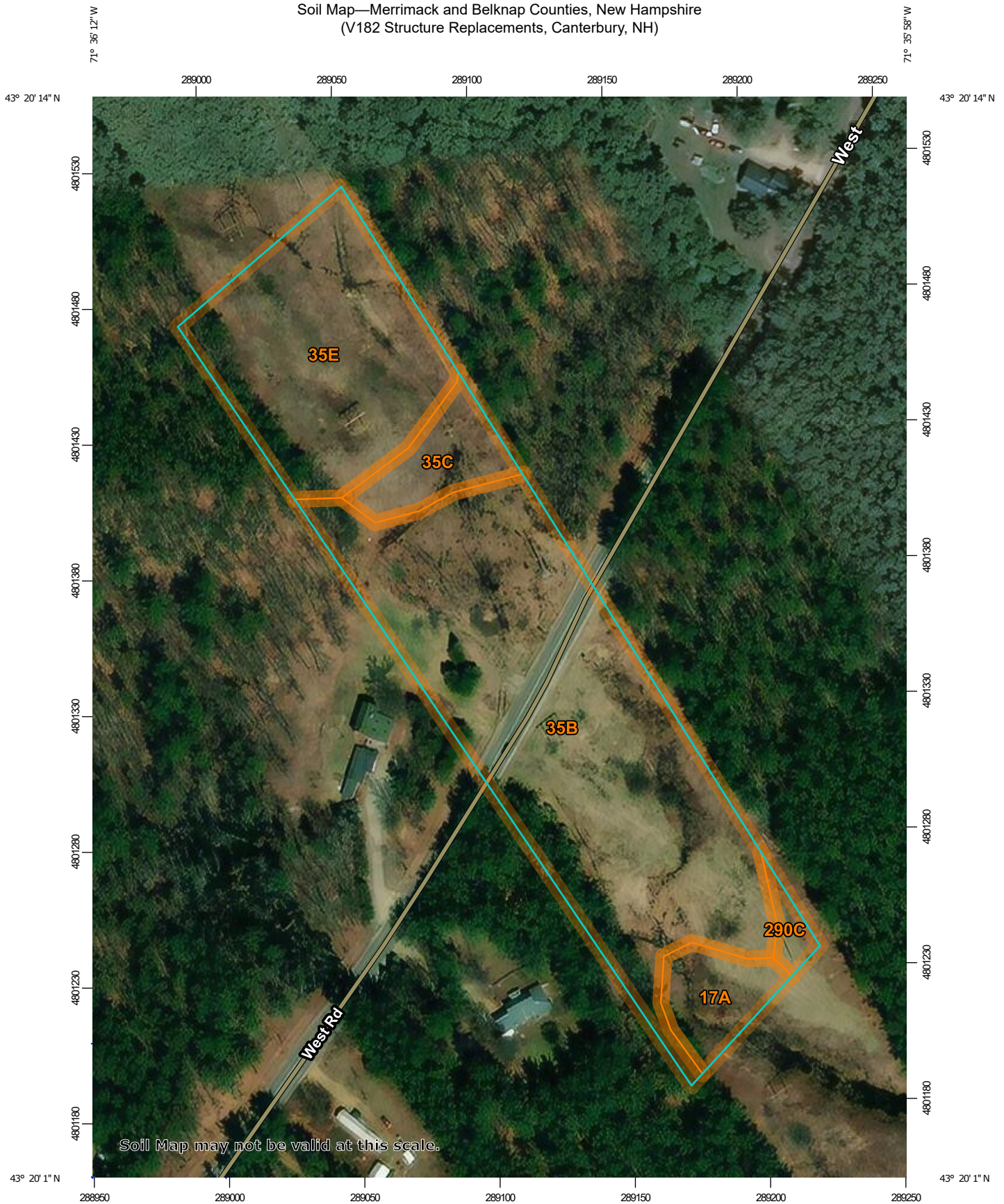
Date(s) aerial images were photographed: May 31, 2019—Aug 29, 2019

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.

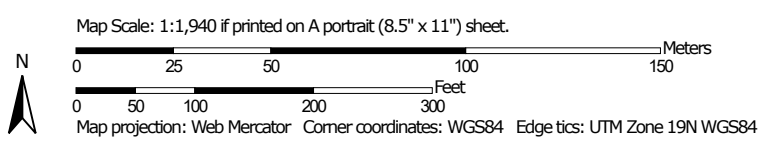
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
394A	Chocorua mucky peat, 0 to 1 percent slopes	4.3	7.6%
459B	Metacomet fine sandy loam, 3 to 8 percent slopes, very stony	6.2	11.0%
479C	Gilmanton fine sandy loam, 8 to 15 percent slopes, very stony	3.8	6.8%
480B	Millsite-Woodstock-Henniker complex, 3 to 8 percent slopes, very stony	0.9	1.6%
480C	Millsite-Woodstock-Henniker complex, 8 to 15 percent slopes, very stony	11.2	19.9%
480D	Millsite-Woodstock-Henniker complex, 15 to 25 percent slopes, very stony	20.6	36.3%
894A	Meadowsedge peat, 0 to 1 percent slopes	9.5	16.8%
Totals for Area of Interest		56.6	100.0%

Soil Map—Merrimack and Belknap Counties, New Hampshire
(V182 Structure Replacements, Canterbury, NH)



Soil Map may not be valid at this scale.



Soil Map—Merrimack and Belknap Counties, New Hampshire
(V182 Structure Replacements, Canterbury, NH)

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
-  Rock Outcrop
-  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


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: Merrimack and Belknap Counties, New Hampshire
Survey Area Data: Version 27, Aug 31, 2021

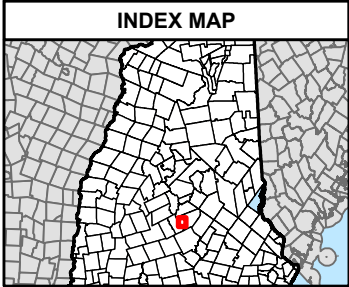
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 28, 2015—Aug 29, 2019

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
17A	Searsport-Chocorua-Naumburg complex, 0 to 1 percent slopes	0.3	5.5%
35B	Champlain loamy fine sand, 3 to 8 percent slopes	3.6	59.6%
35C	Champlain loamy fine sand, 8 to 15 percent slopes	0.4	6.1%
35E	Champlain loamy fine sand, 15 to 60 percent slopes	1.7	27.3%
290C	Champlain-Woodstock complex, 8 to 15 percent slopes	0.1	1.5%
Totals for Area of Interest		6.1	100.0%



- Proposed Structure
- Overhead Eversource Lines
- Municipal Boundary

1 Inch = 2,000 feet

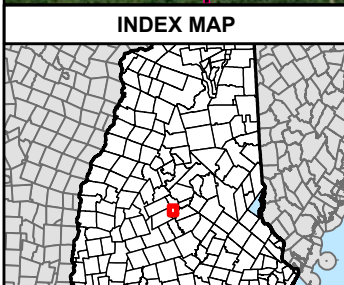
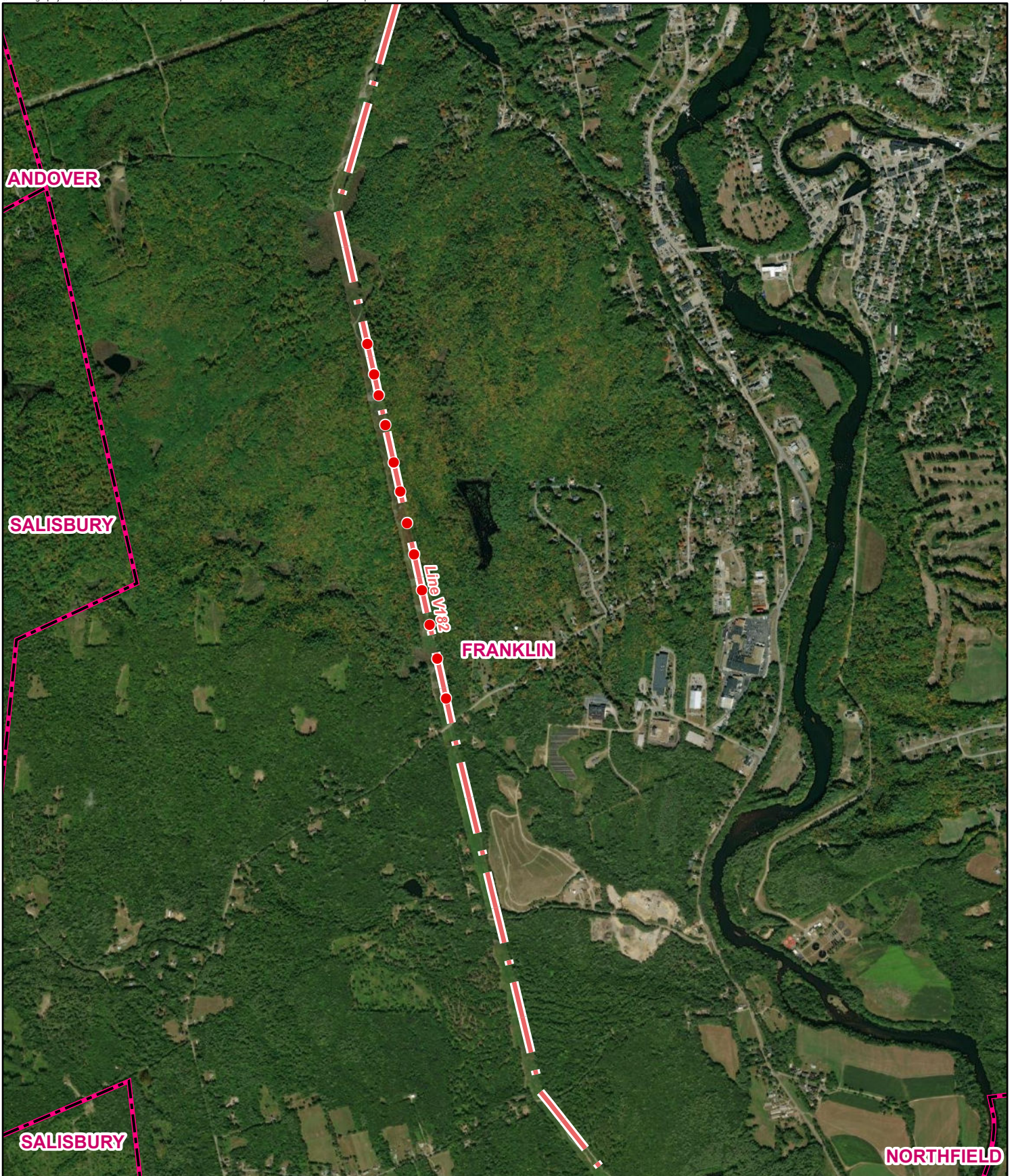
0 1,000 2,000 Feet

EVERSOURCE
ENERGY

Aerial Overview Map
V182 Line Structure Replacement Project
Canterbury, NH

Date: May 16, 2022

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- Proposed Structure
- Overhead Eversource Lines
- Municipal Boundary

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1 Inch = 2,000 feet
0 1,000 2,000 Feet

EVERSOURCE ENERGY

Aerial Overview Map
V182 Line Structure Replacement Project
Franklin, NH

Date: May 16, 2022

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 1: View north of the existing access road with Structure 254 in the background (red arrow) in Franklin.



Photo 2: View south of the existing access road at the base of Structure 253 (red arrow) with Structure 252 in the background (orange arrow) in Franklin.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 3: View south of the existing off-right-of-way (ROW) access road in Franklin located west of the ROW.



Photo 4: View southeast of the stone wall that runs adjacent to Structure 251 in Franklin. This photo was taken in front of Structure 251, with Structure 252 in the background (red arrow).

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 5: View north of the existing off-ROW access road wetland/intermittent stream crossing in Franklin.



Photo 6: View northwest of Wetland 7 in the foreground and Structure 251 in the background (red arrow) in Franklin.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 7: View north of the access road in the foreground and Structure 250 in the background (red arrow) in Franklin.



Photo 8: Representative view southeast of the utility ROW with V182 Line Structures 247 (red arrow) and 246 (orange arrow) in the background in Franklin.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 9: View southeast of Structure 246 with the existing access road in the foreground and proposed work pad area in the background in Franklin.



Photo 10: View east of the existing off-ROW access road at its intersection with the project ROW in Franklin.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 11: View north of the existing access road and numerous V182 Line structures to the right, starting with Structure 245 in Franklin.



Photo 12: View south of the existing access road in the foreground and Structures 244 (red arrow) and 243 (orange arrow) in the background in Franklin.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



Photo 13: View southwest (towards the ROW) of the stone wall in the forested area east of the project ROW in Franklin. Note that this wall does not intersect the project ROW.



Photo 14: View northeast of Structure 164 in Wetland 12 in Canterbury.

Representative Site Photographs – April 4, 2022
Eversource V182 Transmission Line Structure Replacements – Franklin and Canterbury, NH



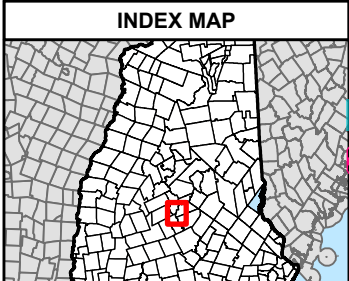
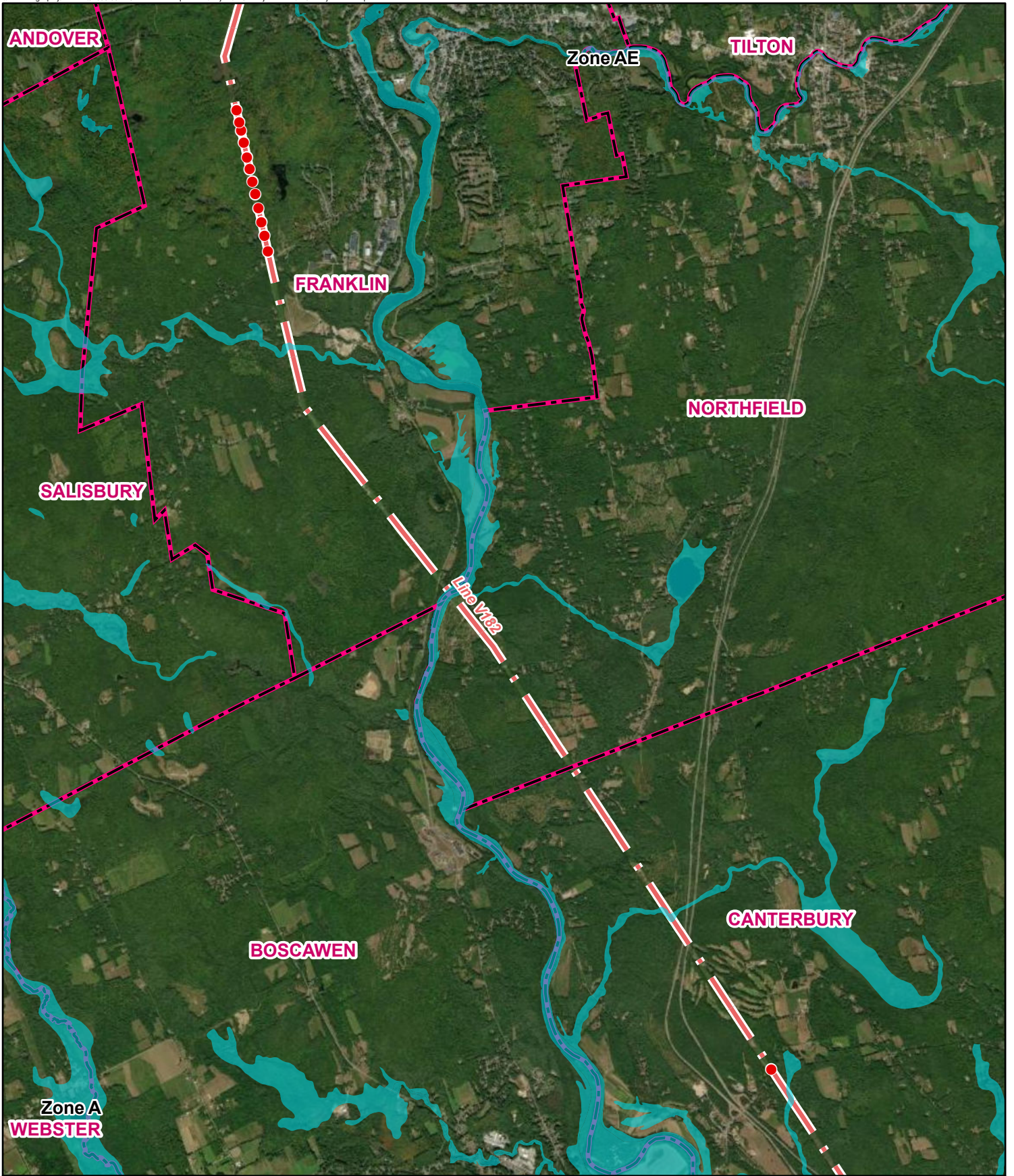
Photo 15: View south of Structure 164 in Wetland 12 in Canterbury.

Appendix B – Alteration of Terrain Permitting Plans

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Appendix C – FEMA Floodplain Map

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- Proposed Structure
- Overhead Eversource Lines
- FEMA 100-Year Flood Zone
- Municipal Boundary

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1 Inch = 5,000 feet
Feet
0 2,500 5,000

EVERSOURCE
ENERGY

Aerial Overview Map
V182 Line Structure Replacement Project
Franklin and Canterbury, NH

Date: May 16, 2022

vhb

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