NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

September 2, 2022

Mr. Ridgely Mauck, P.E.
Program Supervisor - Permitting
NHDES Land Resources Management
Alteration of Terrain Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302

Re: Alteration of Terrain Permit
P106 Line Structure and OPGW Replacement Project
Goffstown and Manchester, New Hampshire

Dear Mr. Mauck:

On behalf of Public Service Company of New Hampshire dba Eversource Energy (Eversource), Normandeau Associates, Inc. (Normandeau) is submitting this Alteration of Terrain (AoT) Permit Application for the proposed P106 Line Structure and OPGW Replacement Project in accordance with Terrain Alteration Law (RSA 485-A:17), Administrative Rules (Env-Wq 1500), and discussions between the New Hampshire Department of Environmental Services (NHDES) AoT Bureau and Eversource.

The proposed project includes the replacement of 16 existing utility structures on the P106 transmission line that must be replaced because they have reached the end of their service life. The proposed project crosses through portions of Goffstown and Manchester. In addition to the structure replacements, optical ground wire (OPGW) is proposed to be installed on the along the entire P106 transmission line to replace existing static wire, which will improve the transmission line by serving to shield conductor wires below it from lightning. Replacement of the existing utility structures is necessary to maintain the safety and reliability of the system. To more efficiently conduct routine maintenance of the existing P106 Transmission Line, work pad grading, and access road improvements are proposed as part of this project in upland areas. The proposed project will require disturbance subject to AoT permitting through the NHDES as a result of impact areas cumulatively exceeding 100,000 square feet of contiguous disturbance in the project area or 50,000 square feet of contiguous disturbance within the protected shoreland as defined in RSA 483- B.

Included with this submittal is a copy of the application fee check, a completed AoT Permit Application Form, a detailed project overview narrative, required plans and figures, and additional supporting materials. Consultation with NHNHB and NHFG is on-going. In addition, a waiver request for the preparation of a stormwater drainage report, drainage area plans, and hydrologic soil group plans and from amendment requirements for shifting of access roads greater than 20 ft is enclosed as required by Env- Wq 1509.04. The proposed project is scheduled to start in October 2022.

Eversource appreciates the efforts of the Alteration of Terrain Bureau in helping to maintain the anticipated construction schedule, which is dependent on scheduled outages dictated by regional outage planning.

Please feel free to contact William McCloy at 802-855-1246 or at wmccloy@normandeau.com if you have any questions.

Sincerely,

Senior Scientist

Attachments: Alteration of Terrain Permit Application

cc: Town of Goffstown, New Hampshire (USPS)
City of Manchester, New Hampshire (USPS)
Piscataquog River Local Advisory Committee (USPS)

Eversource P106 Line Structure and OPGW Replacement Project

Alteration of Terrain Permit Application

Prepared For
Eversource Energy
13 Legends Drive
Hooksett, NH

Prepared By
Normandeau Associates, Inc.
25 Nashua Road
Bedford, NH 03110
www.normandeau.com

September 2, 2022

Table of Contents

List of Tables

1 Project Background and Purpose

The proposed Eversource P106 Line Structure and Optical Ground Wire (OPGW) Replacement Project (project) involves the replacement of 16 existing P106 Transmission Line structures and OPGW replacement in portions of Goffstown and Manchester, New Hampshire. The proposed replacement structures have reached the end of their service live and must be replaced in order for the transmission line to continue to function safely and reliably. The proposed structure replacements were selected based on site visit evaluations, including pole and equipment condition. Additionally, Eversource plans to install OPGW to replace existing static wire and improve the transmission line by serving to shield conductor wires below it from lightning. Impacts have been minimized and avoided to the greatest extent practicable through site evaluations of access routes and work pad placements.

The project requires approximately 236,324 square feet (sq. ft.) of total ground disturbance. The total disturbance area exceeds the Alteration of Terrain (AoT) threshold (Env-Wq 1500 and RSA 485-A:17).

2 Site Information

2.1 Site Location and Description

The existing Eversource P106 115 kilovolt (kV) transmission line is located within an existing Eversource right-of-way (ROW) that runs between the Rimmon Substation in Goffstown and the Eddy Substation in Manchester. The work area within Goffstown is accessed via an existing access road off Riverview Park Road and is approximately 1,000 linear feet in length. In Manchester, the site will be accessed via Riverview Park Road, Montgomery Street, Coolidge Avenue and the Everett Turnpike; in Manchester the work area covers approximately 1.38 miles of ROW.

The project area passes through a matrix of low vegetation and sandy areas with numerous all-terrain vehicle trails, paths and some residential area encroachments from adjacent homes. There are only two wetlands within the project area and both will be avoided; no streams or vernal pools are present. The majority of ground disturbance resulting from the project will be related to access and work pad improvements.

2.2 Tax Map and Lot(s)

Eversource owns or holds easements across all parcels within the ROW (see Figure 4). In Goffstown, work will occur within one parcel owned by Eversource that is associated with the Rimmon Substation. In Manchester, work will occur across approximately 11 parcels, the majority of which are owned by Eversource. Where easements are present, the easements are considered “subject property” because Eversource is the applicant/owner and only has control

over the easement. These project parcels have been identified and listed on the below in Table 2-1 and in Appendix B.

Table 2–1. Project Parcels by Town

Goffstown Parcels in Project Area	Manchester Parcels in Project Area
3-64A*	777-5*, 777-5A*, 817-25*, 763-15*, 763-14*, 763-15*, 817-5*, 817-6*, 817-7*, 817-8*, NHDOT – Everett Turnpike
* Owned by Eversource	

2.3 Identification of Natural and Cultural Resources

Normandeau Associates, Inc. (Normandeau) has been retained by Eversource to provide professional services on this project that relate to natural and cultural resource identification and assessment as well as permit applications for natural resource and alteration of terrain impacts required to complete the project. Normandeau has conducted field evaluations and has corresponded with the appropriate agencies to identify natural and cultural resources present in the vicinity of the proposed project.

2.3.1 Identification of Jurisdictional Wetlands and Vernal Pools

Wetlands were originally delineated and classified by Normandeau in 2016. GZA confirmed wetland boundaries, photographed resources, completed additional wetland documentation, and recorded data relevant to functions and values provided by these natural resources within the ROW in August and September 2022. Wetlands were delineated in accordance with the United States Army Corps of Engineers (USACE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the USACE. A NH Certified Wetland Scientist (NHCWS) completed the delineations.

Normandeau conducted a potential vernal pool review in 2022 in accordance with "Identification and Documentation of Vernal Pools in New Hampshire," 2016, New Hampshire Fish and Game Department, Nongame and Endangered Wildlife Program. Vernal pool areas exist as confined basins and must exhibit vernal pool criteria outlined in the New Hampshire Code of Administrative Rules, Env-Wt 103.64, 104.15, and 104.44. Since vernal pool observations were conducted in Summer 2022 outside the typical vernal pool breeding season of April through June, dry basin surveys were conducted to the extent possible to identify potential vernal pools. No potential vernal pools were identified within the proposed project area during field data collection. However, it is typical that all potential vernal pools are considered vernal pools for the purposes of impact avoidance and minimization for Eversource

maintenance projects. Therefore, no temporary or permanent impacts are proposed to any potential vernal pools as a result of this project.

2.3.2 Identification of Surface Waters

Surface waters of the State of New Hampshire were delineated by Normandeau in 2016 and reviewed in 2022 in accordance with their definition in RSA 485-A:2 XIV, 482-A:4 II and rule Env-Wt 104.33. Surface waters include wherever freshwater flows or stands and tidal waters. This includes, but is not limited to, rivers, perennial and intermittent streams, lakes, ponds, intertidal zones, and tidal waters.

2.3.3 Identification of Rare, Threatened, and Endangered Species

The Natural Heritage Bureau (NHB) and New Hampshire Fish and Game (NHFG) have identified several records of known RTE wildlife species (including snake and turtle species) and plant species within and near the P106 project area in Goffstown and Manchester. (See Appendix C for the NHB Report and regulatory correspondence).

Normandeau has coordinated with NHB and NHFG and consulted with both agencies. Normandeau will provide flyers of species including snake and turtle species to construction personnel prior to the start of work. Results of the formal consultation are not yet known as the consultations are on-going at this time.

In addition, Normandeau has performed plant surveys at the request of NHB for proposed areas of disturbance. Populations of three targeted species have been identified within the project area, including two state Threatened species and one state Endangered species.

2.3.4 Identification of Cultural and Historical Resources

Normandeau and Independent Archaeological Consulting, LLC (IAC) will be submitting a Request for Project Review (RPR) to the New Hampshire Division of Historical Resources (NHDHR) for the proposed project.

IAC has reviewed prior Phase IA Archeological Assessments for the P106 ROW and will be completing Phase IB Archeological Survey within select archeological sensitivity areas where work is proposed. Results of this work will be submitted to DHR when complete.

3 Existing Conditions

The proposed project is located within the existing and maintained P106 Transmission Line ROW. The proposed project work areas subject to the Alteration of Terrain permit cross through portions of the Town of Goffstown and the City of Manchester. The ROW is accessible by a large network of trails, old roads and sandy paths along with multiple streets. Existing sandy and gravel access routes currently used for access to existing utility structures within the ROW are proposed to be improved using gravel and stone as a part of a routine structure maintenance project. Proposed access road improvements include top-dressing the existing sandy or other substrate to result in an up to 16-foot-wide gravel and stone roads. Based on

NRCS soil mapping, existing upland soils are primarily loamy sands and urban/udipsamments. Slopes are variable and generally range from 0 to 15%, with an average of approximately 8%.

The project area is almost entirely upland located adjacent to dense residential areas and private land including forested areas and a forested park. In uplands, the shrub layer contains gray birch (Betula populifolia), staghorn sumac (Rhus typhina), sweet fern (Comptonia peregrina). Common herbaceous species include goldenrod (Solidago spp.), deer tongue (Dichanthelium clandestinum), bracken fern (Pteridium aquilinum), and grasses (Poaceae spp.).

Existing conditions along the P106 Transmission Line are discussed below by areas subject to jurisdiction under the Alteration of Terrain Law and Rules and consistent with discussions with the AoT Bureau for Eversource Line projects.

3.1 Goffstown and Manchester

3.1.1 Surface and Groundwater Protection

No wetlands or streams will be impacted as part of this project.

The entire project area is located within the Pennichuck Water Works Source Water Protection Area. In addition, all of the project area in Manchester is located within a mapped Groundwater Classification Area (GA2) resource including structures 52 through 70.

Structures 68 through 70 are located within 1/4 -mile of impaired surface waters; specifically, the Merrimack River which is impaired by aluminum and *Escherichia coli*.

The other AoT Screening Layers are not present within the P106 project area, including: "Outstanding Resource Water Watersheds", "Class A Surface Water (RSA 485 A:9) Watersheds," "Watersheds with Chloride Impairments 2016," "All Lakes within a Quarter Mile Buffer," "Wellhead Protection Areas," "Groundwater Classification Areas GA1," "Groundwater Classification Areas GAA," and "Water Supply Intake Protection."

3.1.2 FEMA 100-Year Floodplain, Shoreland and Designated Rivers

No portions of the project area are located within a FEMA 100-year floodplain, or any other FEMA-mapped flood prone areas or floodways.

No portions of the project area are subject to NHDES Shoreland jurisdiction.

The project area in Goffstown and western portions of Manchester, including structures 50 through 55, are located within ¼-mile of the Piscataquog River, a designated river.

4 Project Description

4.1 Structure Replacement

The proposed project includes the replacement of 16 existing utility structures that must be replaced because they have reached the end of their service life. The process for replacing

structures consists of drilling approximately 4-ft diameter holes to install a caisson approximately 7 to 15 ft below the ground surface. New structures will be installed in caissons and backfilled with clean, suitable materials. Spoils produced from drilling will be disposed in approved upland areas at a minimum distance of 100 feet from wetland areas. Upland roads will remain for future maintenance and access to structures in emergencies. There are no wetland impacts associated with this project. Anchors will also be installed to stabilize new structures. Anchors will be installed by excavating trenches, installing the concrete block anchors, and backfilling trenches.

Old structures will be cut at the ground surface. In addition to the removal of old structures, old cross-arms, wires, and accessory equipment will be removed off-Site and disposed. Old structure butts may be dug up and removed depending on field conditions and whether or not the remaining pole butt would impact the structural integrity of new structures.

4.1.1 Access

The proposed structure replacement project utilizes existing access routes within the existing P106 ROW to the greatest extent practicable. The majority of existing access routes are comprised of sand/gravel and are proposed to be improved as part of this project. Proposed access routes are shown on the plans in both Figures 3 and 4. Access into the existing ROW will be obtained from various state and local roadways and private properties where permission has been obtained. Proposed access routes as shown on Figures 3 and 4 were identified to minimize ground disturbance to the greatest extent practicable while providing safe and efficient access to existing utility structures.

Road Construction

Proposed access road improvements include top dressing existing access roads/trails with gravel/stone up to 16-foot-wide. The roads will provide access to existing utility structures for routine maintenance activities. Improved access will provide reliable, permanent, and quick efficient access to utility structures for future maintenance activities and when emergency repairs are required (see Appendix E – Photo Log).

Upland Matting

No wetlands are present within the project area. Upland matting may be used rather than improving access with gravel and stone if access is necessary through maintained property owner lawns or farm fields, near or within archaeological resources and/or where RTE plants are present.

4.1.2 Work Pad Construction

The proposed project includes the construction of 30-foot by 60-foot, 75-foot by 75-foot, or 100-foot by 100-foot gravel work pads to stage construction equipment and vehicles necessary to replace utility structures and/or access an existing structure for OPGW replacement. Work pads will be constructed using clean modified riprap (6- to 8-inch diameter) or equivalent stone. In addition, the work pad will be top-dressed with 1.5- to 3-inch diameter clean stone. Lastly, disturbed areas in proximity to the final work pad configuration will be stabilized with an

upland seed mix. Upon completion of work, work pads will be reduced to a 30-foot by 60- foot gravel maintenance work pad. The restored portions of the larger gravel work pad will be seeded and mulched for restoration.

4.2 Construction Sequence

This proposed project is scheduled to begin October 2022. The work is proposed to be undertaken October, November and/or December 2022 following the receipt of all regulatory approvals. The following is a description of the anticipated construction sequence for this type of routine maintenance work. Once contractor(s) are scheduled, a more finalized sequence and schedule will be determined.

- Install sediment and erosion controls in proposed locations as shown in Figure 4.
- Upgrade access routes and build work pads. Timber matting to be used in uplands as designated by Figure 4.
- Conduct drilling activities including drilling of approximately 4-ft diameter holes for caisson placement approximately 7-15-ft below ground surface.
- Conduct structure replacement activities including installation of new structures, removal of old structures, removal of old wire, and installation of OPGW wire.
- Reduce 100-foot by 100-foot gravel work pads to 30-foot x 60-foot gravel work pads to remain after construction and apply seed and mulch to restored portions of gravel work pad.
- Remove temporary timber matting and stabilized exposed soils within the ROW and restore temporarily disturbed wetland areas with appropriate wetland seed mix.
- Remove erosion and sedimentation controls following stabilization.

4.3 Best Management Practices (BMP)

Work will be conducted in accordance with Eversource's standard Best Management Practices (BMPs) as designated by the NHDES Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire dated March 2019. By implementing these BMPs, impacts to both wetland and upland areas will be minimized and prevented to the greatest extent practicable.

Where necessary, perimeter protective measures consisting of a silt fence, straw wattle, mulch, and straw bales will be installed around the structures to minimize potential impacts to nearby resource areas. All protective measures will be wildlife friendly and not contain openings larger than 1/8-inch square. Water bars will be installed in areas of road improvements with steep slopes as identified by the Contractor. If necessary and based on localized site conditions, a silt fence may be used. Disturbed soil will be seeded and mulched with hay or straw for

stabilization as needed following completion of work. No equipment or material will be stored within wetland areas. Erosion controls will be implemented during construction as detailed in Note sheets 1 through 3 of Figures 3 and 4 to minimize potential impacts during construction (see Figure 3 – Surface Water and Groundwater Overlay Plans and Figure 4 – Alteration of Terrain Permitting Plans).

Timber matting will be used in some upland areas to minimize impacts and provide level work pads. Upon completion of work where timber matting is implemented in upland areas, those upland areas will be restored and stabilized to pre-existing conditions, and areas of exposed soils will be seeded and/or mulched. Additionally, should any removal of BMPs be necessary, it will occur during restoration activities.

5 Regulatory Compliance

5.1 Alteration of Terrain

The NHDES requires an AoT permit whenever a project proposes to disturb more than 100,000 sq. ft. of terrain (50,000 sq. ft. if within a protected shoreland). This NHDES requirement, which is found in Administrative Rule Env-Wq-1500, is intended to protect New Hampshire surface waters by controlling soil erosion and managing stormwater runoff from developed areas. The project proposes to upgrade access roads and work pads totaling more than 100,000 square feet along the P106 Transmission Line ROW based on continuous areas of disturbance. Details on impacts are provided below in Section 5.1.2 Quantification of Impacts Subject to AoT.

5.1.1 Waiver Request: Stormwater Drainage Report; Drainage Area Plan; Hydrologic Soil Group Plans (Env- WQ 15.09)

Per Env-Wq 1509.02, a waiver is being requested from the requirements to prepare a Stormwater Drainage Report, Drainage Area Plans, and Hydrologic Soil Group Plans because of the new impervious surface is limited to the footprint of new transmission line structures. It is not anticipated that the proposed structures will have a significant impact on- Site drainage patterns. Accordingly, stormwater treatment practices are not proposed. A formal waiver request is provided in Appendix F.

5.1.2 Waiver Request: Measurement of Contiguous Area Disturbed; Inclusion of Plans (Env- WQ 1503.12)

Per Env-Wq 1503.12, a waiver is being requested for including past terrain disturbance in the measurement of contiguous disturbed area included in this P106 Line AOT application. Existing terrain alteration associated with past transmission line maintenance within the P106 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 disturbance beyond the scope of P106 structure replacement project described in this application, is not known at this time. 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. Project disturbances included in this application and

subsequent permit approvals will be considered if future structure maintenance is proposed within the ROW. Eversource respectfully requests a waiver from including past disturbance in this application. A formal waiver request is provided in Appendix F.

5.1.3 Waiver Request: Deviation from the Approved Plans and Specifications (Env- WQ 1503.21)

Per Env-Wq 1503.21, a waiver is being requested for deviations from the approved plans without applying for an amended permit or a new permit if shifts in the proposed project layout occur. Changes in the project layout are frequently identified during construction by Eversource and their contractors and may be necessary to safely perform the work. Access shifts would be limited to the extent necessary for safety, would not impact new resources, and access would remain within the existing and maintained ROW. Eversource respectfully requests a waiver from limiting shifts of the project road centerlines and parking areas to 20 feet. A formal waiver request is provided in Appendix F.

5.1.4 Quantification of Impacts

The project proposes approximately 236,324 square feet (sq. ft.) of total disturbance along the P106 Transmission Line ROW that requires an AoT permit in accordance with Env-Wq 1502.58. Specific areas and construction activities that significantly alter the terrain are detailed below. Additional details are shown in Figure 4.

Table 5–1. Summary of Proposed Ground Disturbance by Town

Disturbance Type	Ground Disturbance (Sq. Ft.)		Total (Sq. Ft.)
	Goffstown	Manchester	
New Access Road and Work Pad	52,657	183,667	236,324
• Criteria: Env-Wq 1502.58 (b) (2) "An area that, over a 10-year period, cumulatively exceeds 100,000 square feet of contiguous area or cumulatively exceeds 50,000 square feet of contiguous area if any portion of the disturbance is within the protected shoreland as defined in RSA 483-B" • Work pad dimensions: Up to 100-ft x 100-ft; Access road width: 16-ft			

5.2 Other Regulatory Programs

Other regulatory permits and notifications anticipated for the proposed project are summarized below.

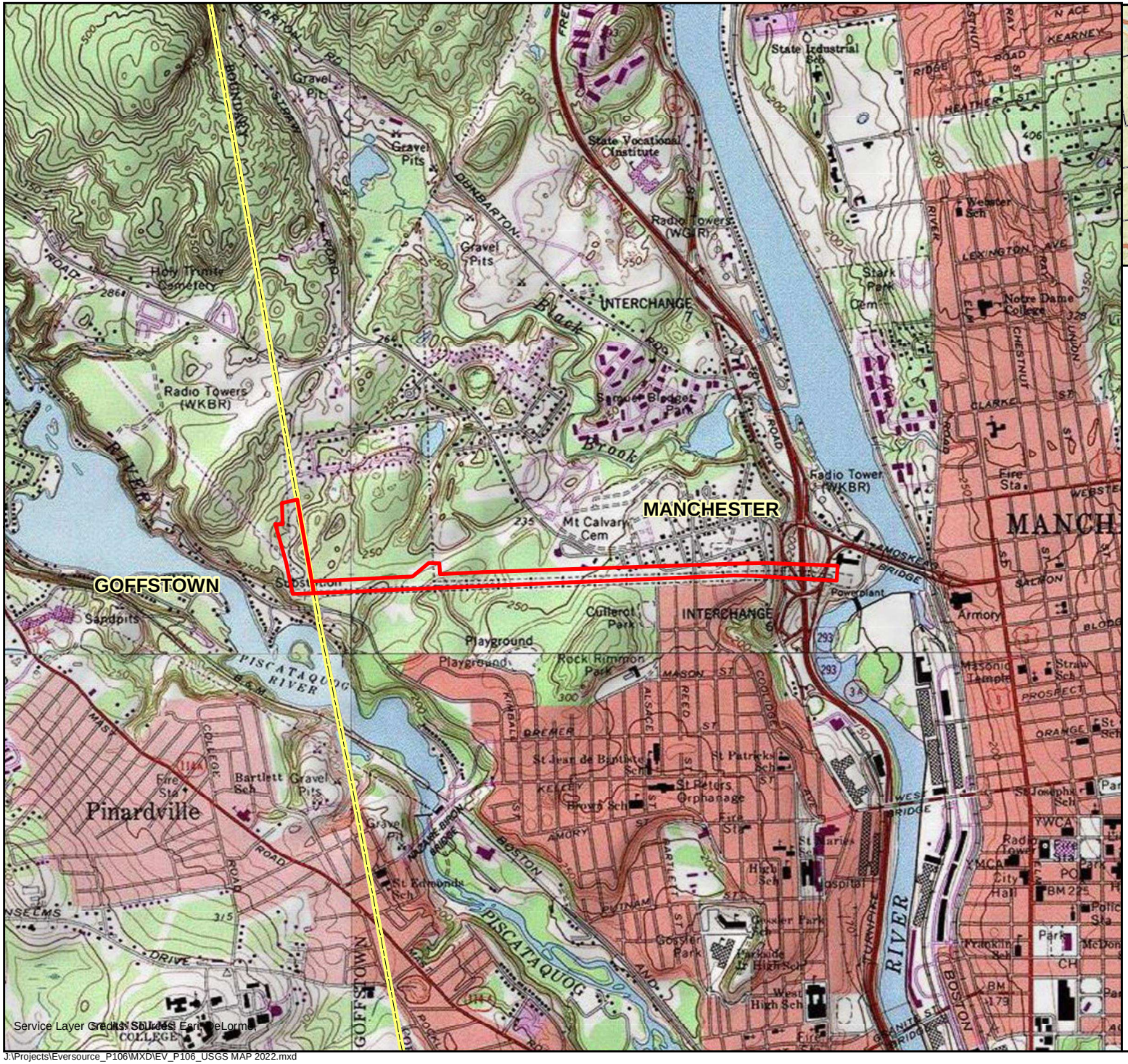
Table 5–2. Summary of Other Anticipated Regulatory Permits Required for Project

Agency	Permit/Notification	Status
Local		
Town of Goffstown	None Required	*N/A*
City of Manchester	ZBA Special Exception	*Pending*
City of Manchester	Driveway Permits	*Pending*
State		
None Required		
Federal		
EPA (Construction General Permit)	Stormwater Pollution Prevention Plan (SWPPP)	*Pending*

The proposed project is necessary for routine maintenance of the P106 Transmission Line and to ensure the long-term safety and reliability of the electrical infrastructure.

6 Figures

6.1 Figure 1. USGS Topo Map



USGS Map
Eversource P106 Line
2022 Structure Replacement Maintenance Project
Goffstown & Manchester, NH

Date: 9/2/2022

Project Area

Town Border

0 1,000 2,000
Feet

1 in equals 0.38 miles

1:24,000

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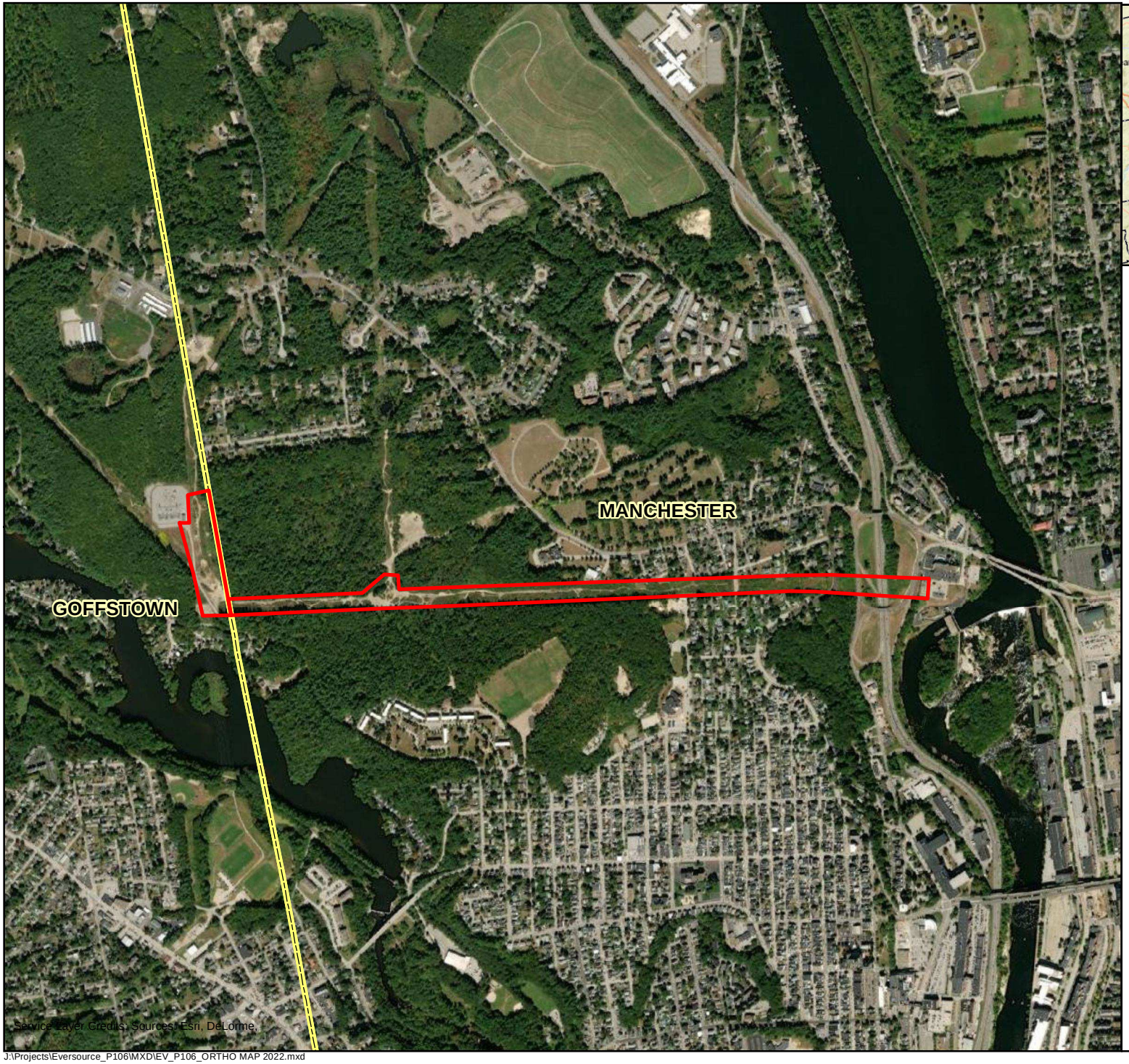
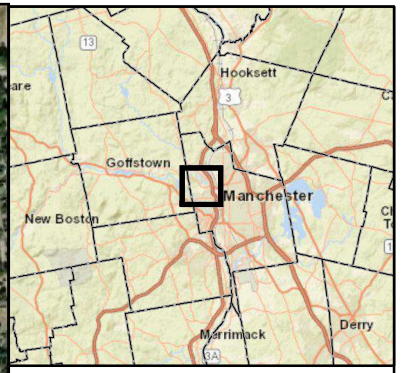
ENVIRONMENTAL CONSULTANTS

J:\Projects\Eversource_P106\MXD\EV_P106_USGS MAP 2022.mxd

6.2 Figure 2. Orthophoto Map





Orthophoto Map
Eversource P106 Line
2022 Structure Replacement Maintenance Project
Goffstown & Manchester, NH

Date: 8/30/2022

Project Area

Town Border

0 750 1,500
Feet

1 in equals 0.28 miles

1:18,000

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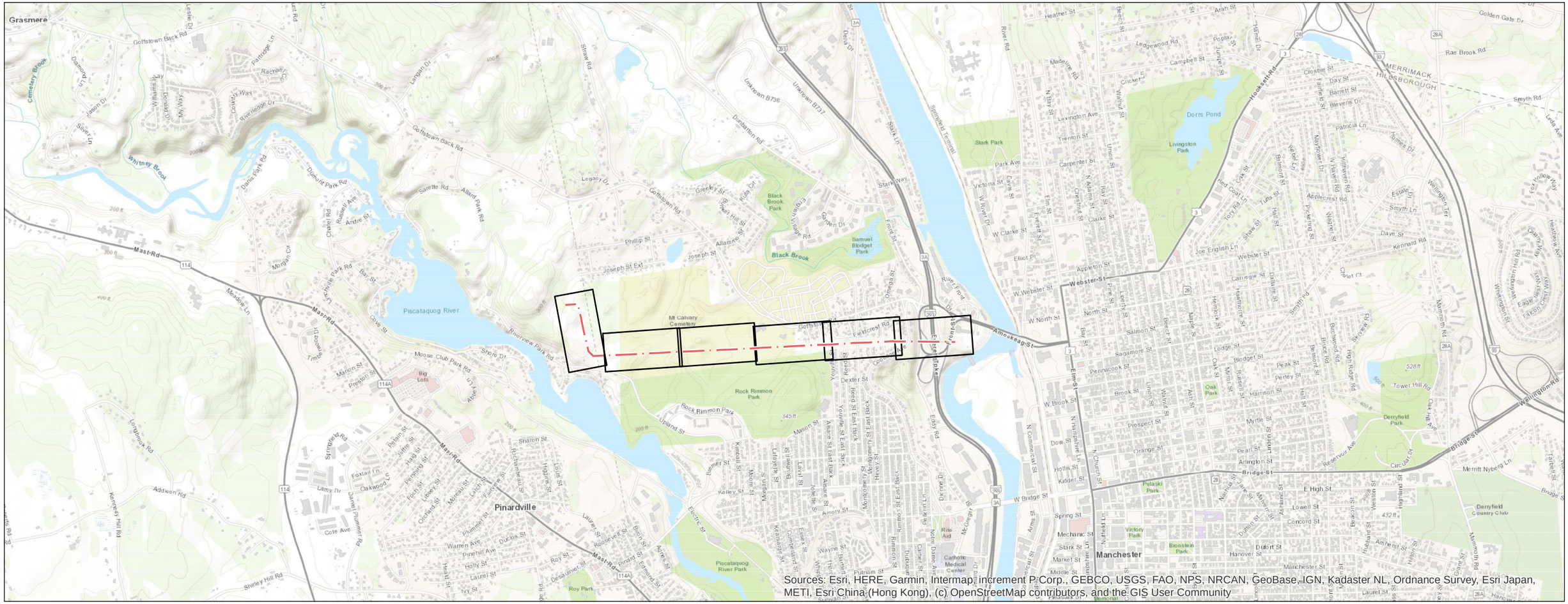
J:\Projects\Eversource_P106\MXD\EV_P106_ORTHO MAP 2022.mxd

6.3 Figure 3. Surface Water and Groundwater Plans

P106 Line - Structure Replacement Project

GOFFSTOWN AND MANCHESTER,
NEW HAMPSHIRE
Surface Groundwater Maps
DRAFT Map Set
Date: September 01, 2022



P106 Transmission Line

3

0 0.25 0.5 1 Miles

PREPARED FOR:

EVERSOURCE

107 Selden Street
Berlin, CT 06037

INDEX OF FIGURES

Title Sheet / Index Map
Map Sheets 1-6

NO.	DATE	REVISIONS

PREPARED BY:

NORMANDEAU ASSOCIATES
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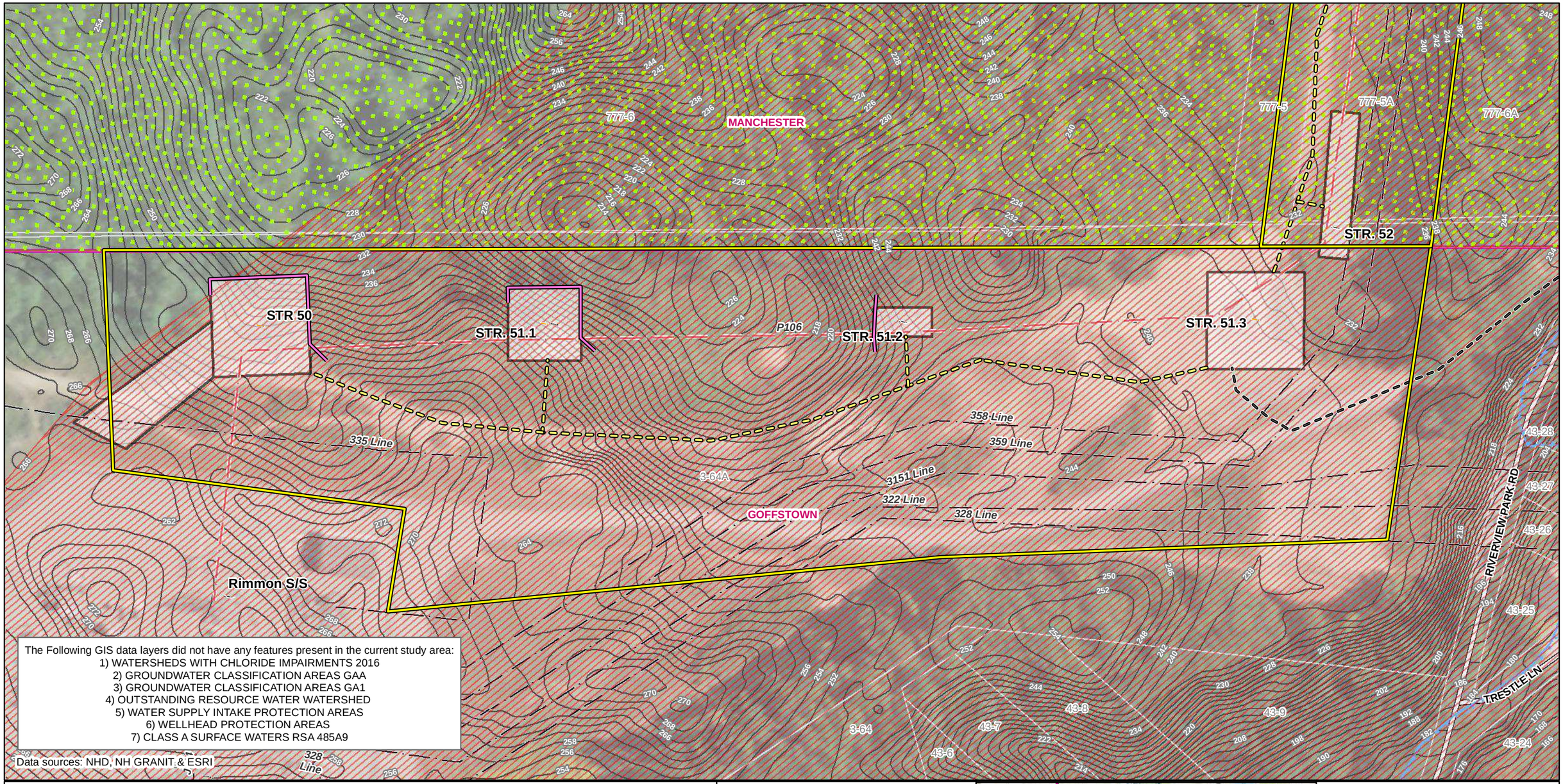

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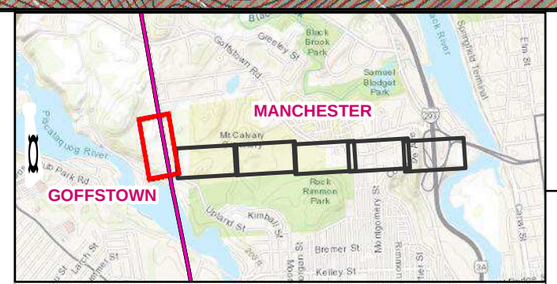
- Existing Structure to be Replaced
- Structure to Remain
- Existing Structures- Other Lines
- Proposed Access Road
- Existing Access Road
- Suggested ESCs
- Transmission Lines
- P106 Transmission Line
- NHD Streams
- Roads (NHDOT)
- 2 Foot Contours
- Field Delineated Wetland
- Upland Matting
- Stone Work Pad
- FEMA Flood Zone
- Right-of-Way
- Designated River Corridor
- Groundwater Classification Areas GA2
- Parcel Boundaries (From NH GRANIT)
- Town Line

Municipality: Goffstown/Manchester

1 inch = 100 feet

0 50 100 200 Feet



Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement
Surface Groundwater Plans

Date: 9/1/2022

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MANCHESTER

777-5

777-6

777-6A

777-6C

D121

P106

358 Line

777-5A 359 Line

STR. 53

STR. 54

STR. 55

STR. 56

The Following GIS data layers did not have any features present in the current study area:
1) WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016
2) GROUNDWATER CLASSIFICATION AREAS GAA
3) GROUNDWATER CLASSIFICATION AREAS GA1
4) OUTSTANDING RESOURCE WATER WATERSHED
5) WATER SUPPLY INTAKE PROTECTION AREAS
6) WELLHEAD PROTECTION AREAS
7) CLASS A SURFACE WATERS RSA 485A9

Data sources: NHD, NH GRANIT & ESRI

- Existing Structure to be Replaced
- Structure to Remain
- Existing Structures- Other Lines
- Proposed Access Road
- Existing Access Road
- Suggested ESCs
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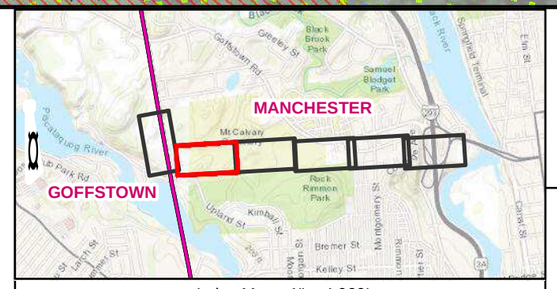
- Right-of-Way
- Designated River Corridor
- Groundwater Classification Areas GA2
- Parcel Boundaries (From NH GRANIT)
- Town Line

Municipality: Manchester

1 inch = 100 feet

0 50 100 200 Feet



Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement
Surface Groundwater Plans

Date: 9/1/2022

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777-6C
777-6
777-5
777-5A
777-6A
MANCHESTER
D121
P106
358 Line
359 Line
MAW05
PEM1F
STR. 57
STR. 58
STR. 59
STR. 60

The Following GIS data layers did not have any features present in the current study area:
1) WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016
2) GROUNDWATER CLASSIFICATION AREAS GAA
3) GROUNDWATER CLASSIFICATION AREAS GA1
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6) WELLHEAD PROTECTION AREAS
7) CLASS A SURFACE WATERS RSA 485A9

Data sources: NHD, NH GRANIT & ESRI

- Existing Structure to be Replaced
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- Existing Structures- Other Lines
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- P106 Transmission Line
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- Roads (NHDOT)
- 2 Foot Contours
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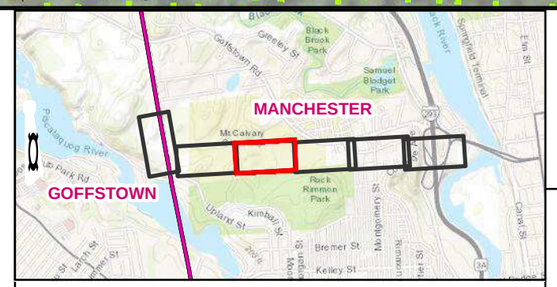
- Parcel Boundaries (From NH GRANIT)
- Town Line

Municipality: Manchester

1 inch = 100 feet

0 50 100 200 Feet



Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement
Surface Groundwater Plans

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Date: 9/1/2022

NORMANDEAU ASSOCIATES
Environmental Consultants

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The Following GIS data layers did not have any features present in the current study area:
1) WATERSHEDS WITH CHLORIDE IMPAIRMENTS 2016
2) GROUNDWATER CLASSIFICATION AREAS GAA
3) GROUNDWATER CLASSIFICATION AREAS GA1
4) OUTSTANDING RESOURCE WATER WATERSHED
5) WATER SUPPLY INTAKE PROTECTION AREAS
6) WELLHEAD PROTECTION AREAS
7) CLASS A SURFACE WATERS RSA 485A9

Data sources: NHD, NH GRANIT & ESRI

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- Structure to Remain
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- Existing Access Road
- Suggested ESCs
- Transmission Lines
- P106 Transmission Line
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- Roads (NHDOT)
- 2 Foot Contours
- Field Delineated Wetland
- Upland Matting
- Stone Work Pad
- FEMA Flood Zone
- Right-of-Way
- Designated River Corridor
- Groundwater Classification Areas GA2
- Parcel Boundaries (From NH GRANIT)
- Town Line

Municipality: Manchester

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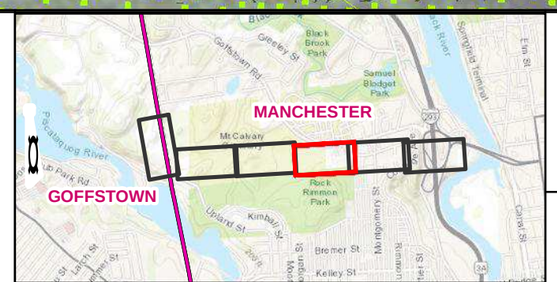
0 50 100 200 Feet



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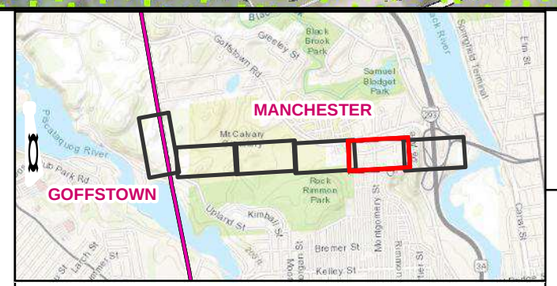

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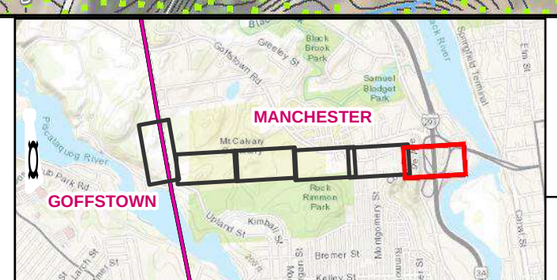

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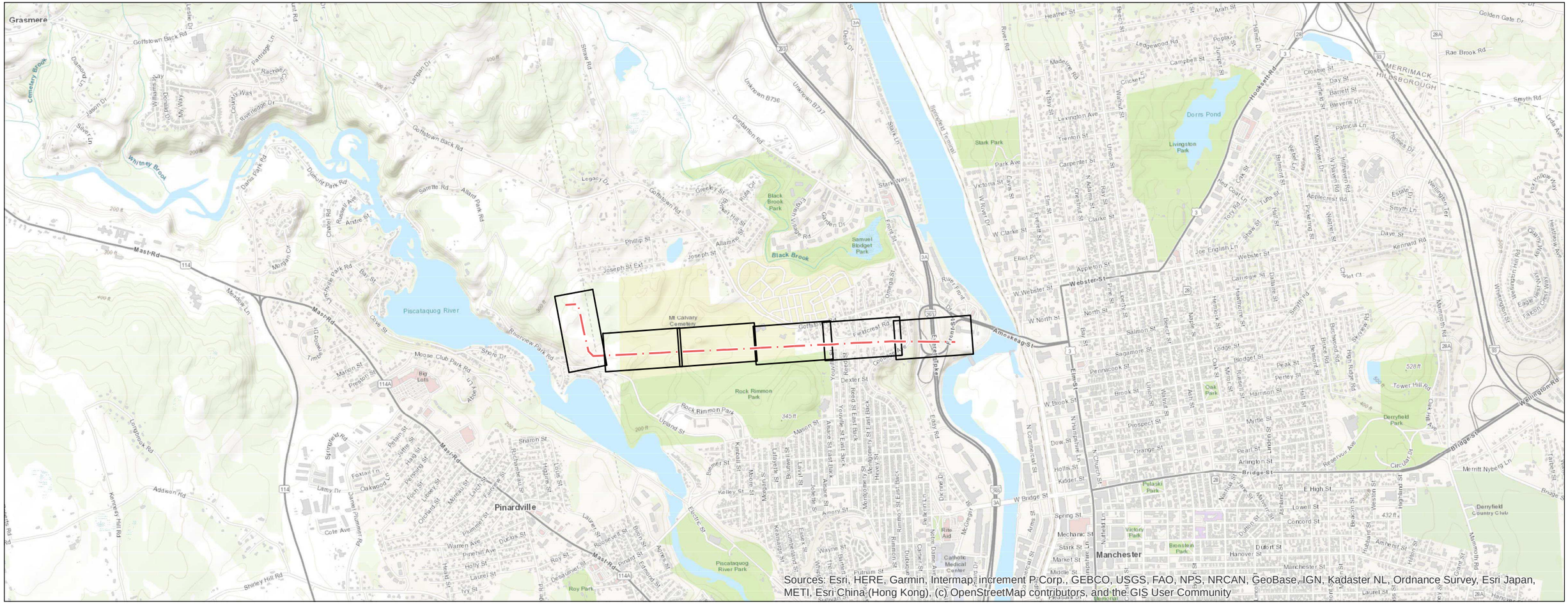
6.4 Figure 4. Alteration of Terrain Permitting Plans

P106 Line - Structure Replacement Project

GOFFSTOWN AND MANCHESTER,
NEW HAMPSHIRE
Alteration of Terrain Maps
DRAFT Map Set
Date: September 01, 2022



P106 Transmission Line

3

0 0.25 0.5 1 Miles

PREPARED FOR:

EVERSOURCE

107 Selden Street
Berlin, CT 06037

INDEX OF FIGURES

Title Sheet / Index Map
Map Sheets 1-6

NO.	DATE	REVISIONS

PREPARED BY:

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Alteration of Terrain - Manchester/Goffstown
Goffstown Stone Access and Work Pad - 52,657 sf
Manchester Stone Access and Work Pad- 183,667 sf
Manchester Upland Matting - 5,536 sf

Data sources: NHD, NH GRANIT & ESRI

STR 50
STR. 51.1
STR. 51.2
STR. 51.3
STR. 52
P106
335 Line
358 Line
359 Line
3151 Line
322 Line
328 Line
MANCHESTER
GOFFSTOWN
Rimmon S/S
777-6
777-5
777-6A
3-64A
3-64
43-6
43-7
43-8
43-9
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43-25
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RIVERVIEW PARK RD
TRESTLE LN

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- Town Line

Municipality: Goffstown/Manchester

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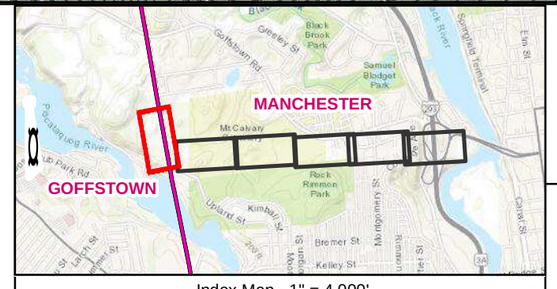

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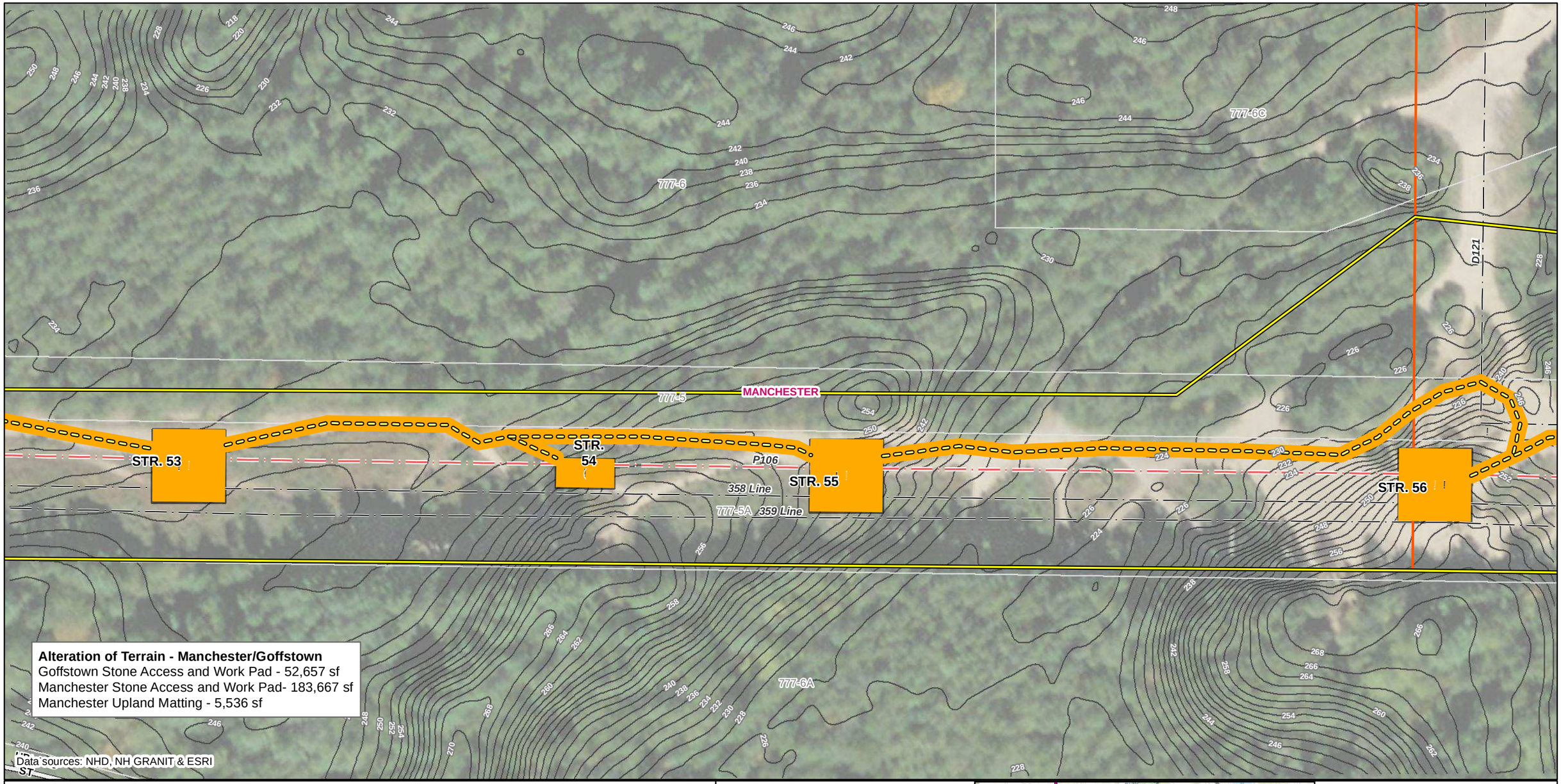

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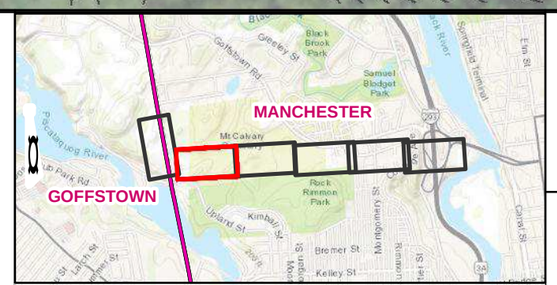

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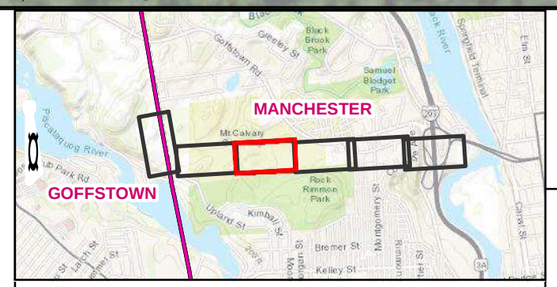

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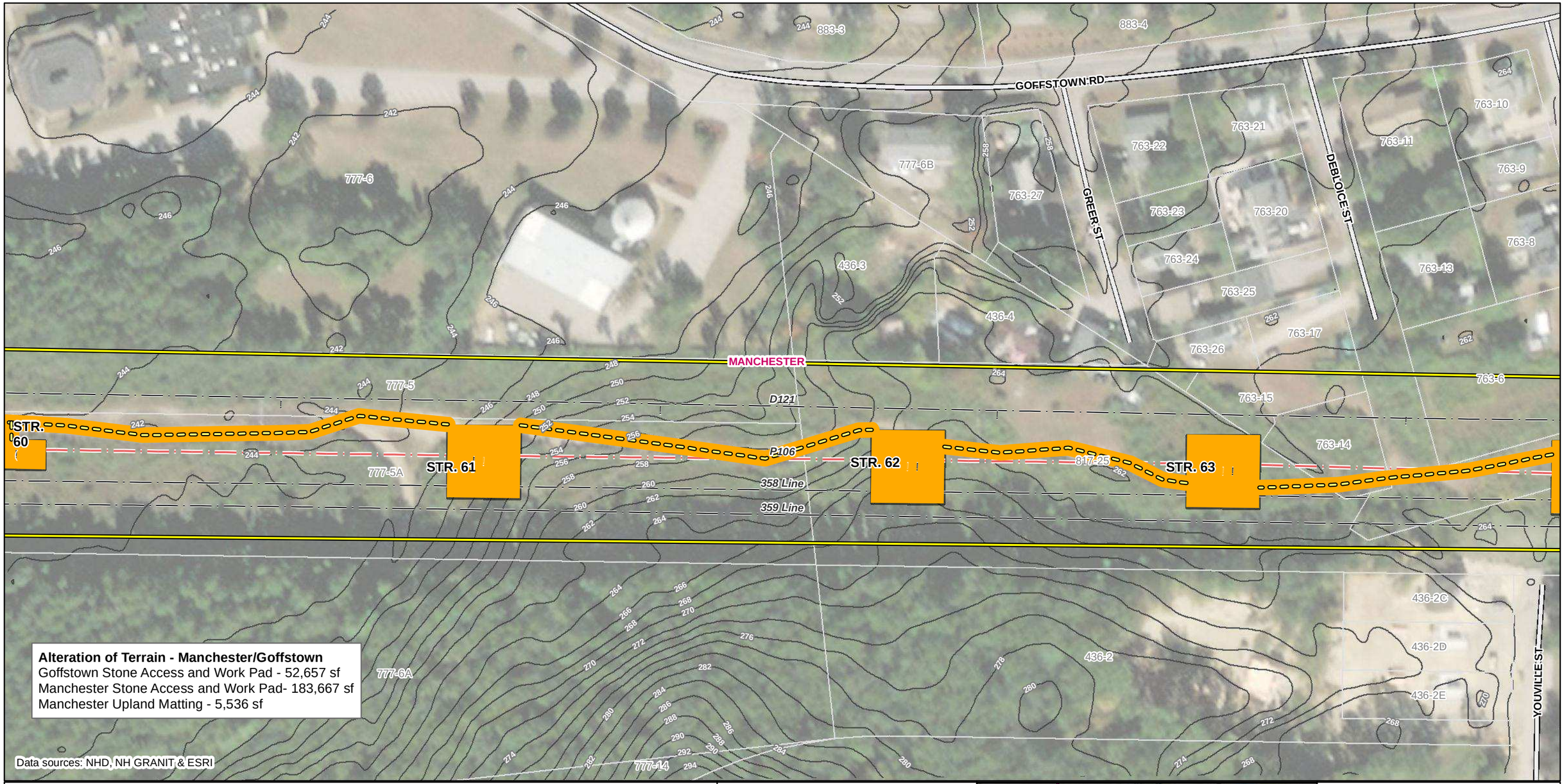

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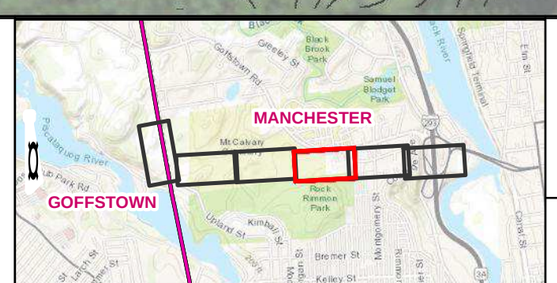

Index Map - 1" = 4,000'

Eversource - P106 Line
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Alteration of Terrain Plans

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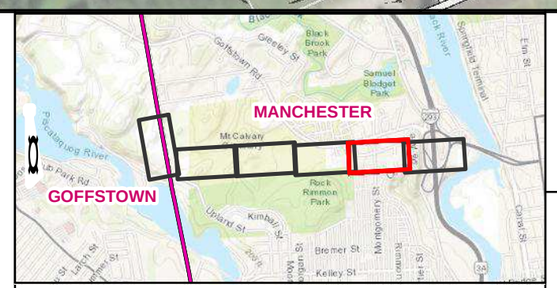

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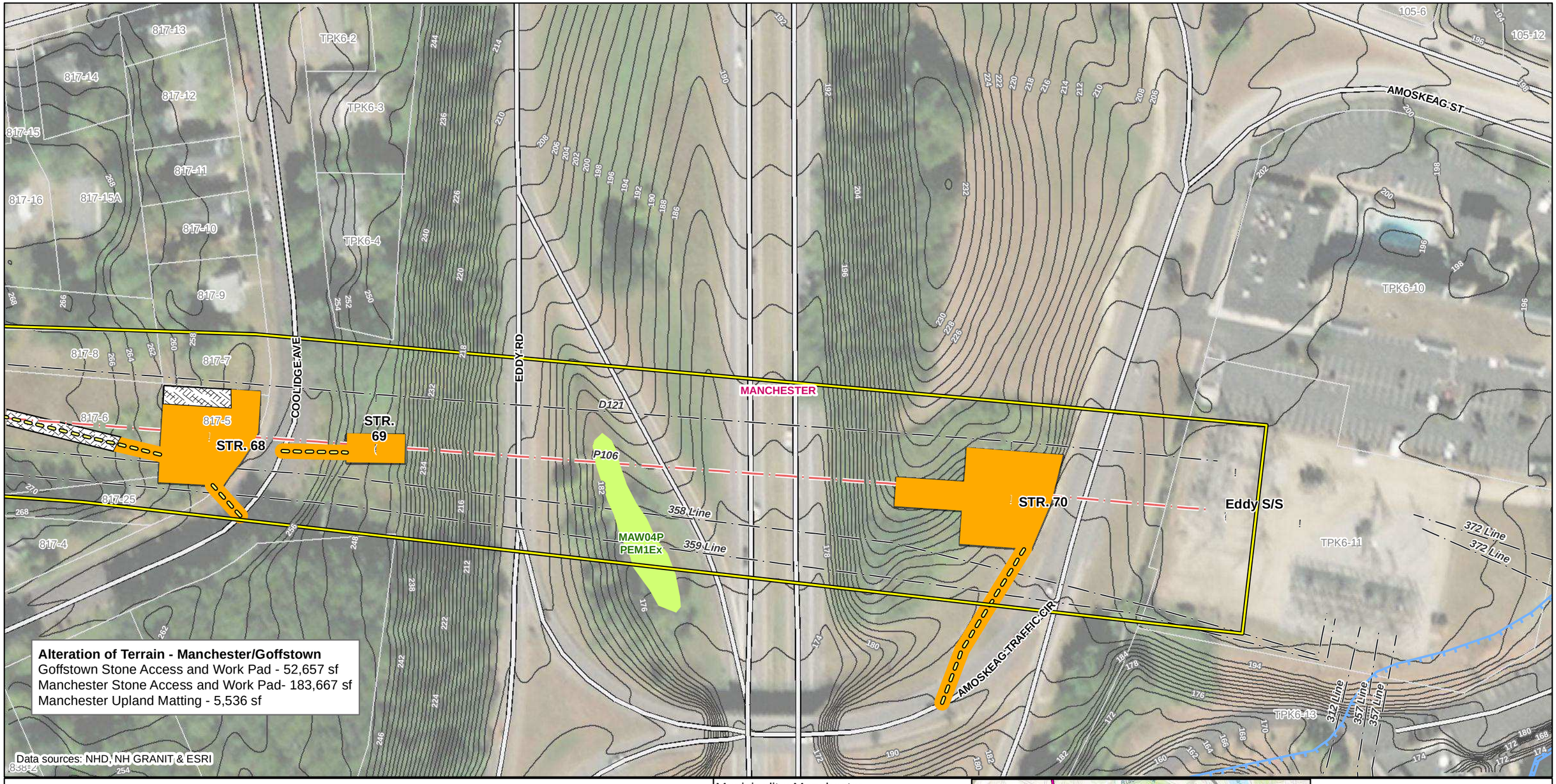

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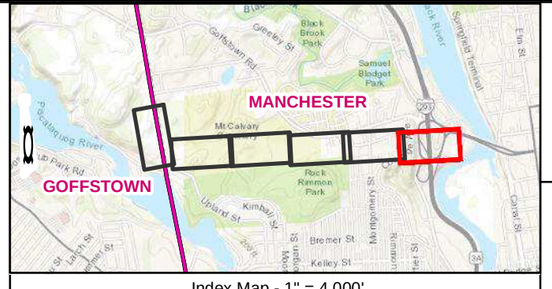

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Transmission Line P106 Structure Replacement (2022)

Construction Notes

Construction Sequence:

1. Wetland boundaries to be clearly marked prior to the start of construction; Wetlands were reviewed/delineated by Normandeau Associates, Inc. Summer 2022. The wetland delineations were completed in accordance with the criteria described in the U.S. Army Corps of Engineers Wetland Delineation Manual Technical Report Y-87-1 (January,1987) and the Regional Supplement for the Northcentral and Northeast Region (January, 2012) and meet the criteria for wetland delineation in accordance with the NH DES administrative rules Env-W t 301.01.
2. MODIFICATIONS IN ACCESS ROUTES, WORK PAD LOCATIONS OR OTHER WETLANDS IMPACT AREAS MUST BE APPROVED BY EVERSOURCE AND IN COMPLIANCE WITH NHDES WETLANDS RULES FOR MINIMUM IMPACT:
   ENV-WT 307 - GENERAL REQUIREMENTS
   ENV-WT 313.03 - AVOIDANCE AND MINIMIZATION
   ENV-WT 521 - UTILITY PROJECT SPECIFIC CONDITIONS
3. Sediment and erosion control measures shall be installed in accordance with the plans and detail provided, as necessary.
4. Wetland impacts associated with wetland crossings are required for access between structures within the right of way. Construction activities shall occur during periods of low flow.
5. Adequate precaution shall be exercised to avoid spillage of fuel oils, chemicals, or similar substances; no fuels, lubricants, chemicals or similar substances shall be stored beneath trees or in the vicinity of any wetlands, river, stream or other body of water; or in the vicinity of natural or man-made channels leading thereto. No power equipment shall be stored, maintained, or fueled in any area adjacent to a wetland, river, stream or other body of water.
6. Remove completely all contamination from any spillage of chemicals or petroleum product with complete rehabilitation of the affected area.
7. Access routes have been selected to prevent degradation of the right-of-way and minimize environmental impact. Operations shall be confined to the specified access routes within the proposed wetland impact area. Access routes shall not exceed a 16 foot-width.
8. Impact to vegetation within wetlands will be limited to the extent necessary to place the timber mats where required.
9. Low growing varieties of vegetation adjacent to wetlands shall be preserved to the extent possible. Stumps and rocks shall not be removed, and there shall be no excavations, fills or grading done adjacent to wetlands, unless minor excavations is needed for access.
10. Timber mats will be used along access routes within and adjacent to wetland areas. These mats are constructed of heavy timbers or composite material, bolted together, and are placed end-to-end in the wetland to support heavy equipment. All timber mats shall be placed and removed so as not to cause any ruts, channels or depressions, or otherwise cause any undue disturbance to wetlands.
11. If timber mat BMP is not sufficient due to high water, additional bmp's may include the placement of geotextile fabric, 3"-4" stone, and gravel to provide a suitable road bed. A temporary culvert may be required in areas of high flow to maintain hydrologic connectivity. All material will be removed from jurisdictional areas after construction completion.
12. No material shall be placed in any location or in any manner so as to impair surface water flow into, through or out of any wetland area. No installation shall create an impoundment that will impede the flow of water or cause flooding.
13. No material shall be taken from the wetlands area except that which must necessarily be removed for the structure or foundation placement or stabilization. All excess material taken from the wetland will be removed from the site.
14. Any proposed support fills shall be clean gravel and stone, free of waste metal products, organic materials and similar debris and shall not exceed the amount permitted. This allowable fill is the only fill that may remain in the wetland after construction. All cut and fills slopes shall be seeded/loamed within 72 hours of achieving finished grade; sooner if heavy rains forecasted.
15. Install new poles in the locations designated on the permitting plans.
16. Cable installation will be performed in a manner so as to avoid, or limit to the maximum extent possible, traversing wetlands with heavy equipment. In some cases, a helicopter may be used during the installation to minimize impacts.
17. Removal of the old pole will occur once the cable has been installed on the new structure. The old structures will be removed from the site. Poles will be cut at the ground surface. Footings will be abandoned in place to minimize impacts.
18. All swamp mats, material, and debris will be removed from the work area upon the completion of construction.
19. Upland disturbed areas shall be restored and stabilized upon completion of construction. Work pad restoration should include reducing the work pad to a 30 by 60 foot area, and reducing slopes to a maximum of 25%. Stockpiled material should be spread to reduce any unnecessary slopes. Gravel work pads and slopes should be scarified to a minimum of 3" before spreading topsoil/loam.
20. All temporary wetland impacts will be re-graded to original contours following construction. New England erosion control/ restoration mix, available through New England wetland plants, Inc., 820 West Street, Amherst, MA 01002, 413-548-8000, or equivalent seed mix shall be applied in wetland areas that are not inundated, as necessary.
21. Sediment and erosion control measures will be evaluated and removed if necessary upon the completion of construction.

Winter Construction Notes:

1. 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 mulch, and installation of 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. 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 November 15th, 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 (NH DOT 304.3).

Erosion Control Notes:

1. Installation of erosion control grindings and/or silt fences shall be complete prior to the start of work in any given area. Erosion controls shall be used during construction and removed when all slopes have a healthy stand of vegetation cover.
2. All areas shall be stabilized within 45 days of initial disturbance
3. An area shall be considered stable if one of the following has occurred: 1) Base course gravels have been installed in areas to be paved, 2) A minimum of 85 percent vegetated growth has been established, 3) A minimum of 3 inches of non-erosive material such stone or riprap has been installed, or 4) erosion control blankets have been properly installed
4. Note that all cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade
5. As required, construct temporary berms, siltation fences, sediment traps, etc. to prevent erosion & sedimentation of wetlands.
6. The work area shall be graded and otherwise shaped in such a manner as to minimize soil erosion, siltation of drainage channels, damage to existing vegetation, and damage to property outside limits of the work area. Erosion control grindings will be necessary to accomplish this end.
7. Any stripped topsoil shall be stockpiled, without compaction, and stabilized with BMPs.
8. Permanent or temporary cover must be in place before the growing season ends. When seeded areas are not mulched, plantings should be made from early spring to May 20 or from August 15 to September 15. No disturbed area shall be left exposed during winter months, plant annual ryegrass prior to October 15th.
9. Erosion controls shall be inspected weekly with the timing of weekly visits adjusted if heavy rains/snow melt are forecasted or have occurred.
10. Timber mats must be removed after one growing season.
11. Any erosion control matting used shall be wildlife friendly. No welded plastic webbing, netting, or other similar form shall be used in erosion/siltation controls to avoid entrapment of snakes and other wildlife within the project area.
12. Unless otherwise authorized by NHDES, the Applicant shall keep a sufficient quantity of erosion control supplies on the site at all times during construction to facilitate an expeditious (i.e., within 24 hour) response to any construction related erosion issues on the site.
13. Discharge from dewatering of work areas shall be to sediment basins that are: a) located in uplands; b) lined with hay bales or other acceptable sediment trapping liners; and c) set back as far as possible from wetlands and surface waters.
14. Mulch used within any wetland/stream bank restoration areas shall be natural straw or equivalent non-toxic, non-seed-bearing organic material.
15. When using an erosion control mix berm, the berm must be a minimum of 12" high, as measured on the uphill side of the barrier, and a minimum of two feet wide at the base.

Plant Protection – General Avoidance and Minimization Measures

1. Limit removal of vegetation to that necessary for construction of the project. Limit tree clearing to the minimum required width to meet safety clearances, leave root systems in place, except over underground installations or where other earthwork must be conducted. Leave herbaceous and shrub vegetation intact wherever practicable.
2. Precautions shall be taken to prevent import or transport of soil or seed stock containing nuisance or invasive species such as Purple Loosestrife, Knotweed, or *Phragmites*. The contractor responsible for work shall appropriately address invasive species in accordance with the NH DOT "Best Management Practices for Roadside Invasive Plants (2008)".
3. To prevent the introduction of invasive plant species to the site, the Applicant's contractor(s) shall clean all soils and vegetation from construction equipment and matting before such equipment is moved to the site.
4. Populations of known rare plants will be fenced where applicable to prevent unauthorized entry and disturbances.

Wildlife Protection – General Avoidance and Minimization Measures

1. Limit the removal of vegetation to that necessary for construction of the project; this will leave associated wildlife habitat as intact as possible.
2. All erosion control materials used will be wildlife-friendly. No welded plastic webbing, netting, or other similar form with openings greater than 1/8-inch shall be used in erosion/siltation controls to avoid entrapment of snakes and other wildlife within the project area.
3. Timber matting will be used in all wetland areas and will remain in place for the shortest duration possible; if possible, passageways will remain open at the wetland crossing to allow for reptiles to cross under the mat-bridge/pathway; matting will remain up to several weeks

4. Timber matting will be used in upland areas at the far eastern portion of the work area near the best habitat for the listed turtles and where NHB22-1136 indicates the most observations of these species; this will limit ground disturbance
5. Daily sweeps by contractors for all turtle and snake species will be performed when work will occur;
6. Any observations of listed species will be reported and no wildlife will be harmed; contact numbers and fliers will be included on the environmental plans
7. Wildlife friendly erosion controls will be used; no welded plastic netting will be used;
8. Erosion controls will be installed, monitored and maintained to protect adjacent upland and wetland areas from sedimentation and degradation; disturbed areas will be temporarily and permanently stabilized and seeded with a native seed mix; the applicable utility maintenance BMPs will be followed

<u>Wildlife Protection – Species-Specific Avoidance and Minimization Measures</u>

1. Avoid Vernal Pools; install EPSC as needed to protect mapped VPs near project work areas. Vernal pools will be flagged and impacts to vernal pools and potential vernal pools will be avoided

2. Box, Spotted, Blanding's or wood turtles may be present within the Project Area

3. Any of the above listed turtle shall be relocated outside the work areas so long as they are not in the process of egg-laying. Once the turtle is relocated to a safe area, it shall be photographed and communicated immediately to Eversource Environmental Licensing and Permitting who will report the finding to NH F&G. Turtles ARE NOT to be moved if they are in the process of laying eggs

4. All contractors shall be made aware of the finding and instructed to be observant so as not to negatively impact turtles during work.

5. IF SPOTTED, WOOD OR BLANDING'S TURTLES ARE FOUND LAYING EGGS IN A WORK AREA, PLEASE CONTACT MELISSA WINTERS (603-479-1129 cell) or JOSH MEGYESY (cell 978-578-0802) FOR FURTHER INSTRUCTIONS. Photograph observations if possible.

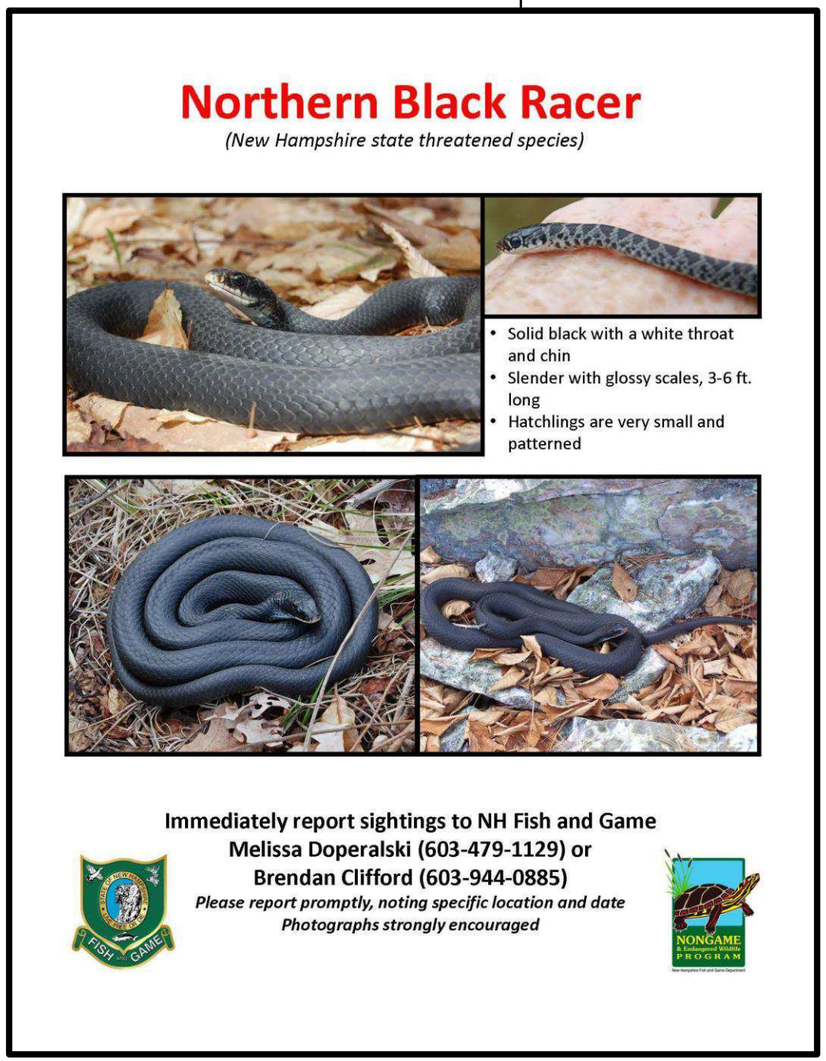
6. Northern black racer and smooth green snakes may be present within the Project Area

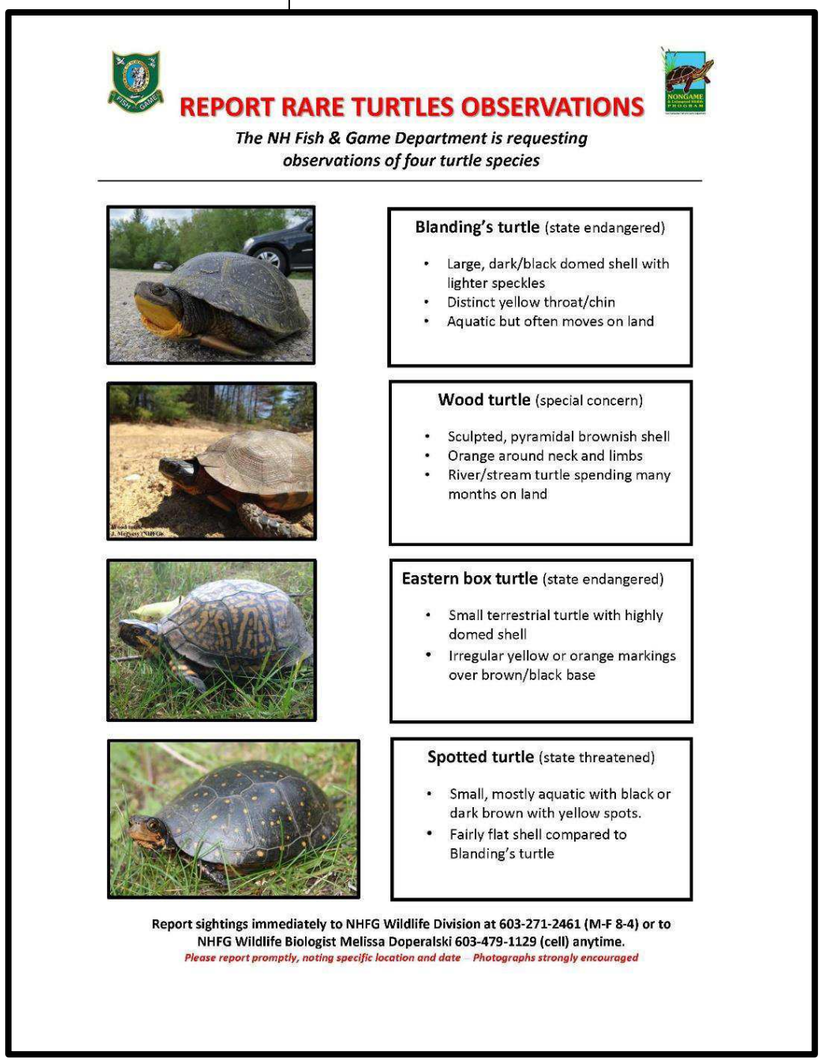
7. ALL OBSERVATIONS OF NORTHERN BLACK RACER SNAKES ENCOUNTERED FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL must be IMMEDIATELY REPORTED to the NHFG Department (Melissa Winters 603-479-1129 (cell) or Brendan Clifford 603-944-0885) as this indicates a potential hibernaculum in the area. Please attempt to photograph this species if possible.

8. ALL OBSERVATION OF EASTERN HOGNOSE SNAKE MUST BE IMMEDIATELY Reported to the NHFG Department (Melissa Winters 603-479-1129 cell or Brendan Clifford 603-944-0885 cell). Please attempt to photograph this species to send to us for verification.

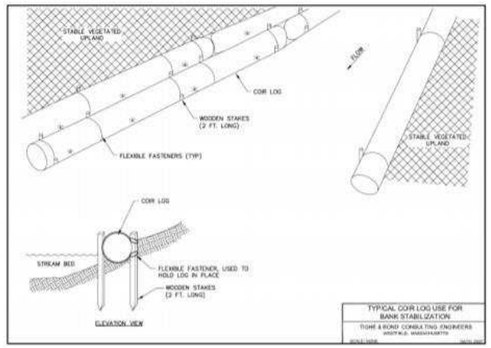
9. Any mortality to listed species will be documented, photographed and the carcass retained and reported immediately to Melissa Winters at 603-479-1129 cell.

a. Smooth green snake should be reported like any other rare reptile and amphibian species with photo documentation by: a) Email details of observation or completed form to RAARP@wildlife.nh.gov; b) Enter your observation online at http://nhwildlifesightings.unh.edu or c) Mail your reporting slip http://www.wildlife.state.nh.us/nongame/documents/raarp-report-form.pdf





Best Management Practice 4: Coir Logs



Description:
Coir logs, straw wattles, fiber rolls, or SiltSoxx™ consist of compressed weed-free straw fiber or other natural material, placed within a photodegradable mesh cylindrical sock.

Applications:

- Streambank, wetland, and slope protection
  - Check dam applications
  - Perimeter and stockpile containment
  - Slope stabilization by shortening slope length, reducing runoff velocity, and trapping mobile soil particles
  - Provides substrate for plant growth upon decay of fiber roll and protects new vegetation growth

Installation:

- For slope stabilization, it is critical that coir logs are installed perpendicular to soil movement and parallel to the slope contour.
- If additional length is needed for application, ends should be overlapping at least 6 inches.
- If used in slope stabilization, construct trenches half the diameter of the log in which to place the roll. Lay the coir log along the trench, snugly fitting it against the soil. Ensure no gaps exist between the soil and the fiber roll.
- Install stakes at least every three feet apart along the length of the roll. Additional stakes may be driven on the downslope side of the trenches on highly erosive or very steep slopes.

Best Management Practice 5: Silt Fence

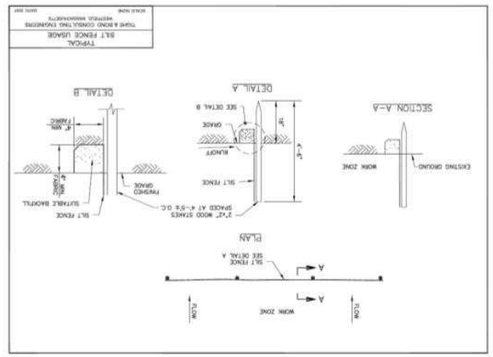
Description:
Silt fence is a temporary sediment barrier consisting of filter fabric attached to supporting posts and entrenched into the soil. This barrier is installed across or at the toe of a slope to intercept and retain small amounts of sediment from disturbed or unprotected areas.

Applications:
Consider using silt fence barriers where:

- Flow to the silt fence from a distributed area occurs as overland sheet flow
- Sedimentation can pollute or degrade adjacent wetlands or watercourses
- Sedimentation will reduce the capacity of storm drainage systems or adversely affect adjacent areas.
- Silt fence should not be used in areas of concentrated flows or across streams, channels, swales, ditches or other drainage ways.

Installation:

- Install silt fence following the contour of the land as closely as possible.
- The height of the barrier shall not exceed 36 inches.
- Posts shall be placed at a maximum of 10 feet apart at the barrier location and driven securely into the ground (minimum of 12 inches).
- A trench shall be excavated approximately 6 inches wide and 6 inches deep along the line of posts and upslope of the barrier in accordance with recommendations
- The filter fabric will extend a minimum of 8 inches into the trench which shall be backfilled and the soil compacted over the filter fabric.
- Fabric barriers shall be removed after the upslope area has been permanently stabilized.
- Filter barriers shall be inspected immediately after each rainfall and at least once daily during prolonged rainfall and any required repairs shall be made immediately.
- Sediment deposits should be removed when they reach approximately one—half the height of the barrier.



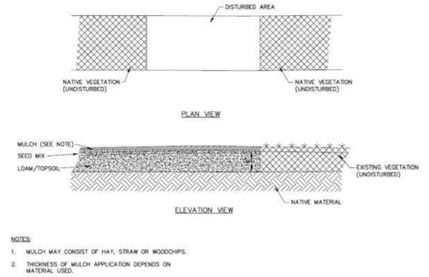
Best Management Practice 16: Temporary or Permanent Mulch

Description:
Temporary mulching is the application of plant residues or other suitable materials to the soil surface. Permanent mulching consists of the application of long-term surface cover such as bark, woodchips or erosion control mix. Permanent mulch can be used as a permanent ground cover, an overwinter stabilization mulch or left to naturalize.

Mulching reduces erosion potential by protecting the exposed soil surface from direct impact by rainfall.

Considerations:

- Apply temporary mulch within 100 feet of streams, wetlands and in lake watersheds within seven days of exposing soil or prior to any storm event.



- Immediately mulch areas that have been temporarily or permanently seeded, following seeding.
- For areas that cannot be seeded within the growing season, mulch for over-winter protection. Seed the area at the beginning of the next growing season.
- Mulch anchoring should be used on slopes with gradients greater than 5% in fall (past September 15), and over-winter (October 15 – May 1).

Installation:

Hay or Straw Mulches:

- Use air-dried organic mulches including weed-free hay and straw free of undesirable seeds and coarse materials.
- Application rate should be two bales (70-90 pounds) per 1,000 square feet or 1.5-2 tons (90-100 bales) per acre to cover 75-90% of the ground surface.
- Anchor hay or straw mulch to prevent displacement by wind or flowing water using jute or biodegradable plastic netting or in some cases, organic tackifier.
- When mulch is applied to provide protection over winter (past the growing season), apply it to a depth of four inches (150-200 pounds of hay or straw per 1,000 square feet, or double standard application rate). Seeding cannot generally be expected to grow up through this depth of mulch and will be smothered. If vegetation is desired, remove mulch in the springtime and seed and re-mulch the area.

Eastern Hognose Snake – NH State Endangered

Know your NH Snakes – This is a native harmless snake and should never be harassed or injured.

Penalties include fines up to $2,000 and a year in jail (RSA 212-A)

Michael Marchand Photographs

Report all sightings of this snake to NHFG at 603-271-2461 or RAARP@wildlife.nh.gov - Photographs encouraged

For more information on New Hampshire's 11 native snakes, see http://www.wildlife.state.nh.us/nongame/snakes.html

REPORT OBSERVATIONS
Smooth Green Snake
(Species of Special Concern)

Report sightings to NHFG Wildlife Division at NHFGReview@wildlife.nh.gov

Reference NHB# and project name if applicable.
Please report promptly, noting specific location and date.
Photographs strongly encouraged.

- Thin, bright green snake
- 10-20 inches long
- White or pale yellow underside
- Found in open or lightly forested habitats such as grassy fields, meadows, blueberry barrens, and forest openings
- Dead individuals turn blue

Best Management Practices (BMP's) for Straw wattles

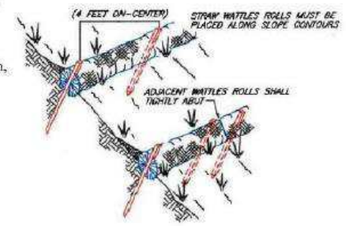
Definition and purpose:
Straw wattles are burlap **rolls** filled with straw that trap sediment and interrupt water flow by reducing slope lengths.

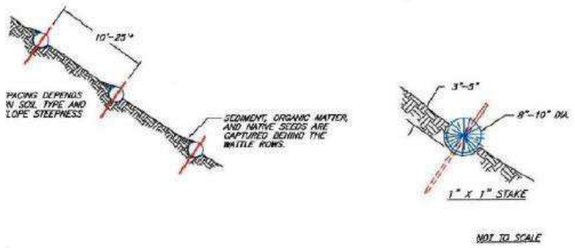
Applications:
* Along erodible or unstablizied slopes
* Spread overland waterflow
* Trap sediment
* Around storm drain inlets to slow water and settle out sediment
* Overlap ends approximately 6 inches

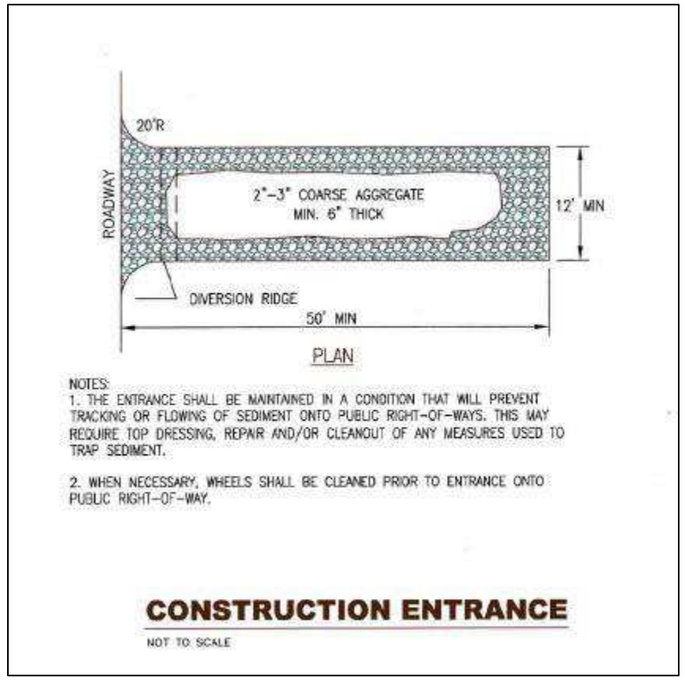
Installation:
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

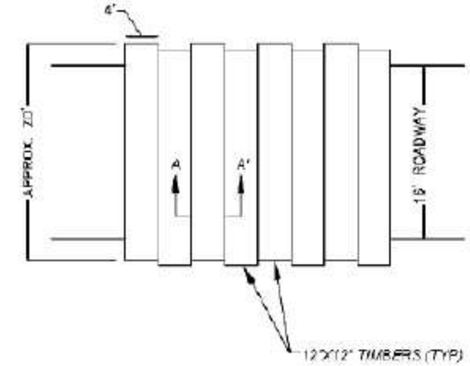
Spacing* - Dependent on slope length, soil steepness and soil type (general range 10 - 25').

Trenching - 2"-5" inch trench
Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)



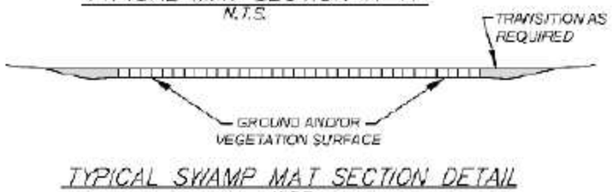




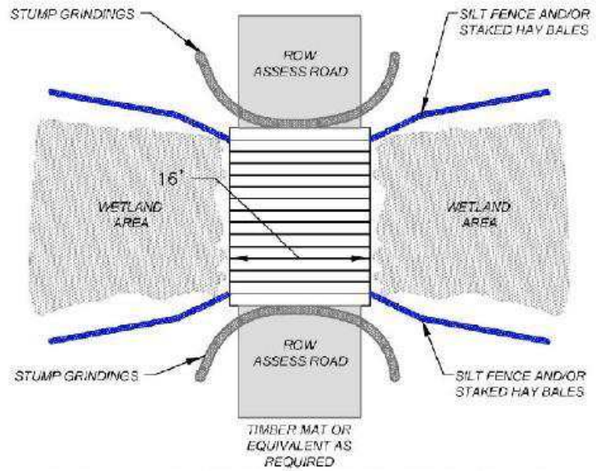


TYPICAL SWAMP MAT PLAN VIEW
N.T.S.

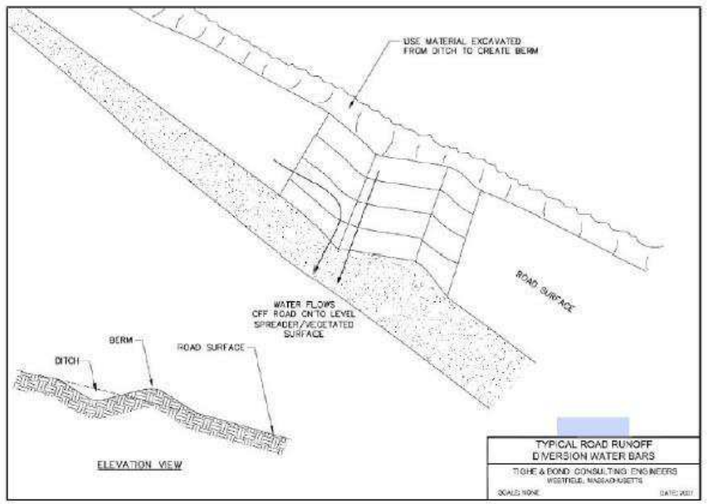
TYPICAL MAT SECTION A–A
N.T.S.

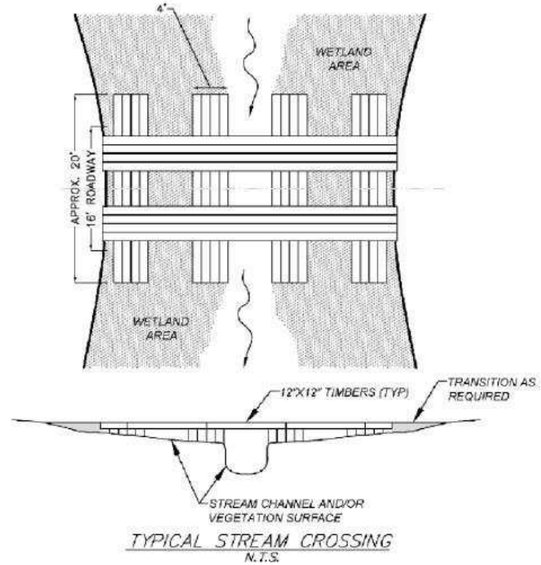


TYPICAL SWAMP MAT SECTION DETAIL
N.T.S.



TYPICAL WETLAND CROSSING
N.T.S.

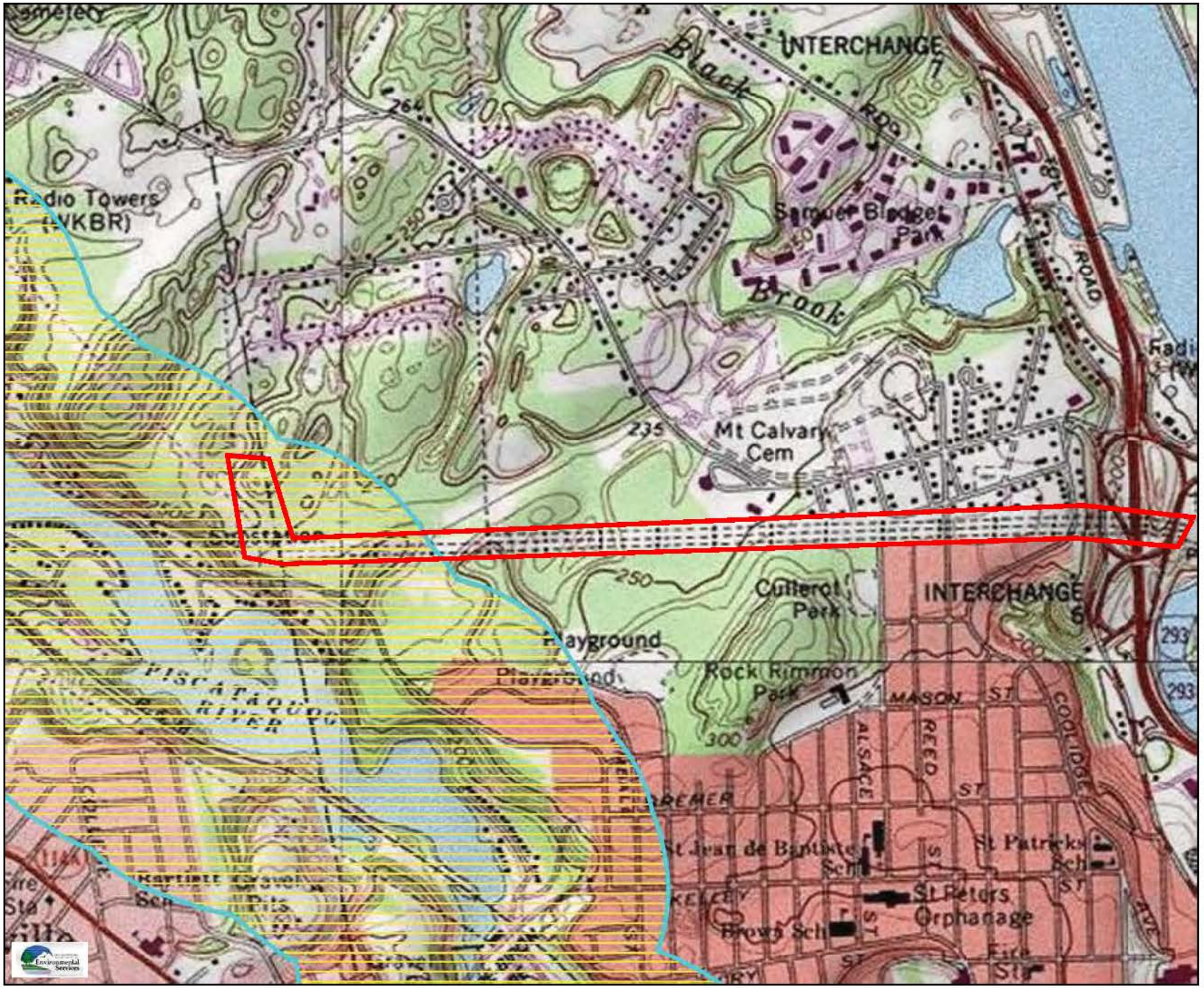




TYPICAL STREAM CROSSING
N.T.S.

6.5 Figure 5. OneStop Maps

Eversource P106



Legend

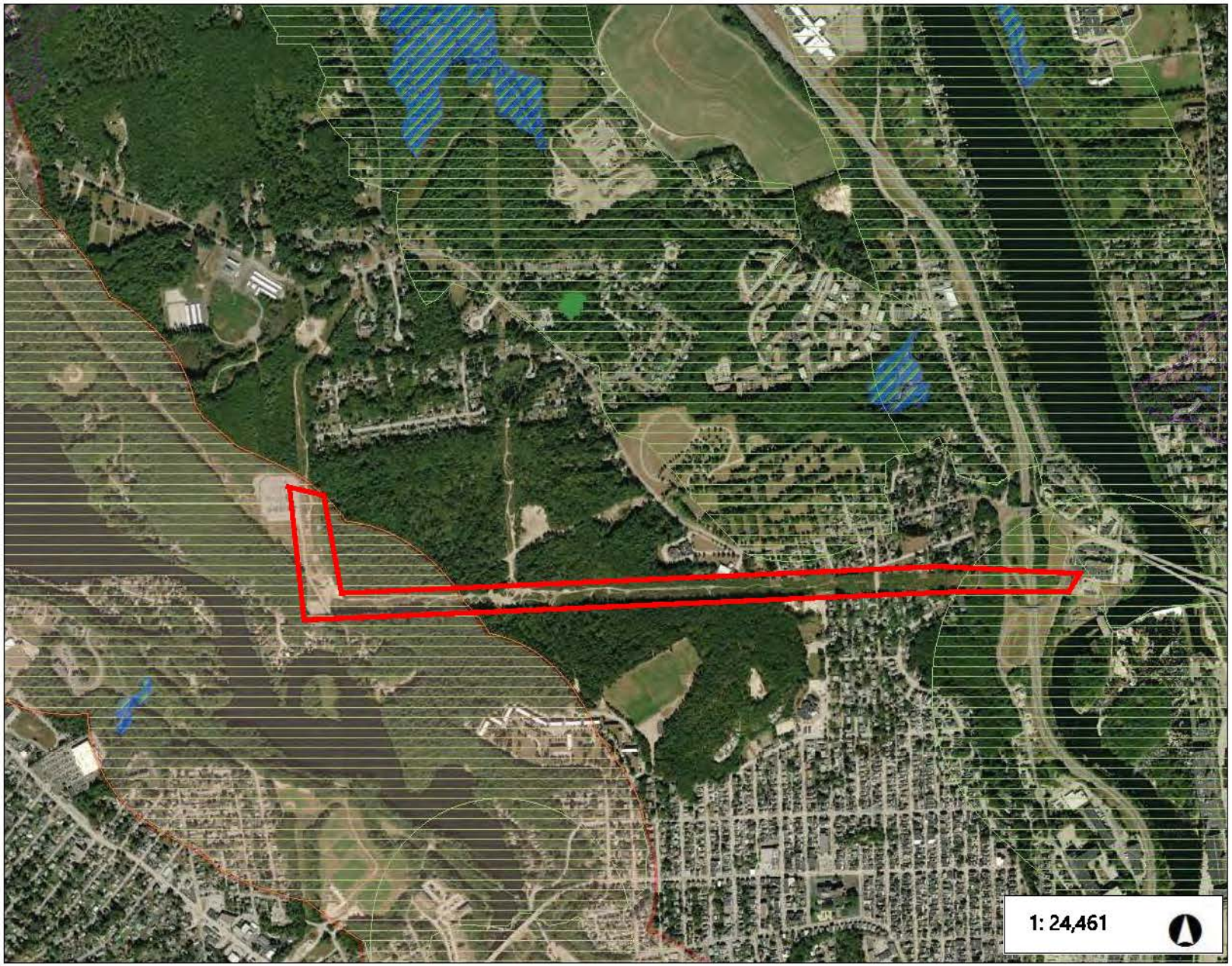
- Designated Rivers Quarterm Buffer

Map Scale
1: 12,988

Map Generated: 8/26/2022

Notes

Your Organization | Map By



Legend

- Wetland_Permits_points
- Parcel Lines
- Flood Plain Wetlands Adjacent
- Prime Wetlands
- Prime Wetlands with 100 ft Bul
- Designated Rivers
  - Subject to SWQPA
  - Not Subject to SWQPA
- Sand Dunes
  - backdune
  - foredune
  - interdune
  - other
- Tidal Waters / Tidal Wetlands
  - Tidal wetland
  - Transitional salt marsh
  - Salt marsh
  - Mud flat
  - Tidal water
- Watersheds with Chloride Impa
- Surface Waters with Impairmer Quarter Mile Buffer
- World Imagery
- Low Resolution 15m Imagery
- High Resolution 60cm Imagery
- High Resolution 30cm Imagery

Notes

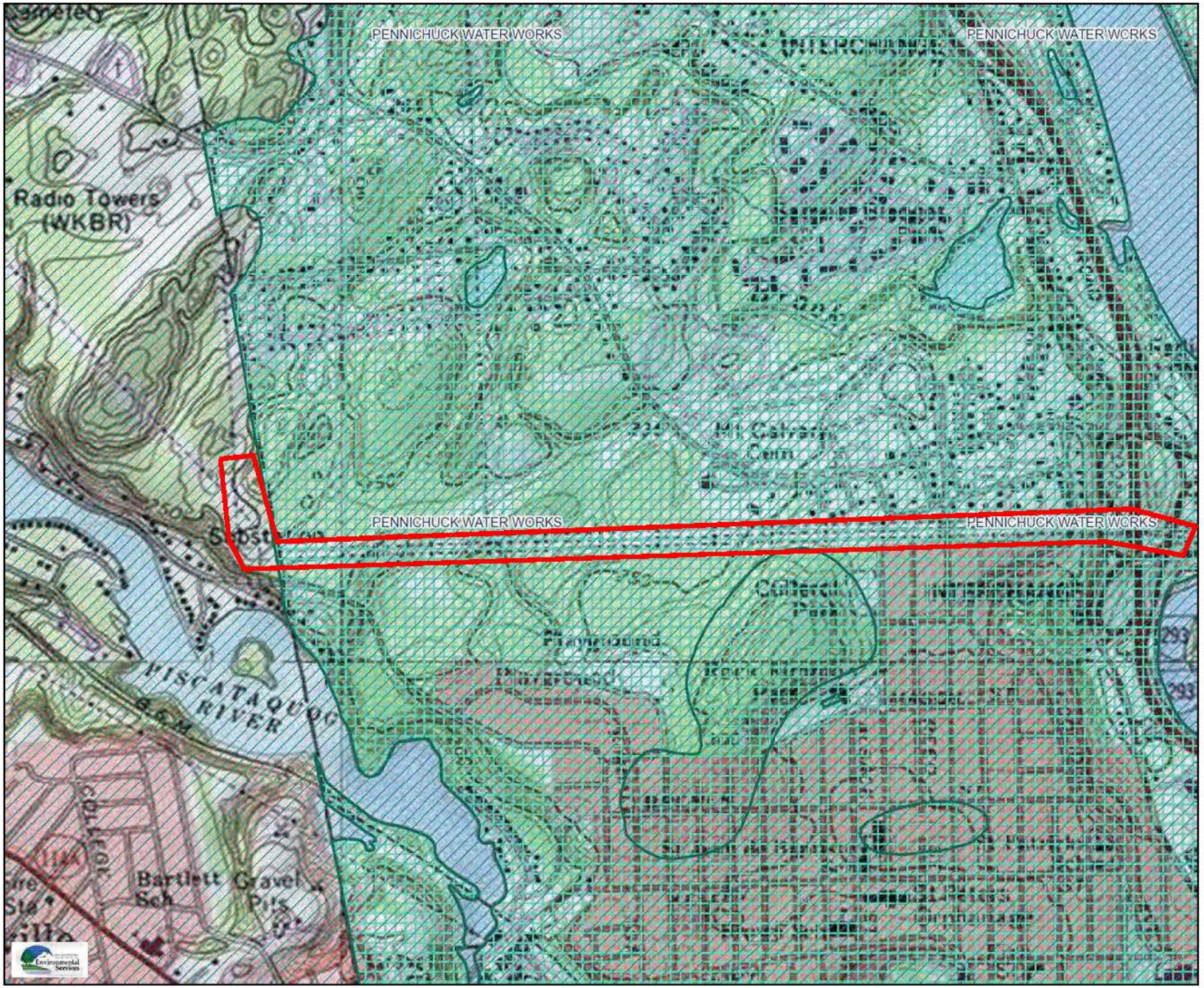
0.8 0 0.39 0.8 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Eversource P106



Legend

- Groundwater Classification / GAA
- Source Water Protection Are
- Groundwater Classification / GA1
- Groundwater Classification / GA2
- Outstanding Resource Wate Watersheds

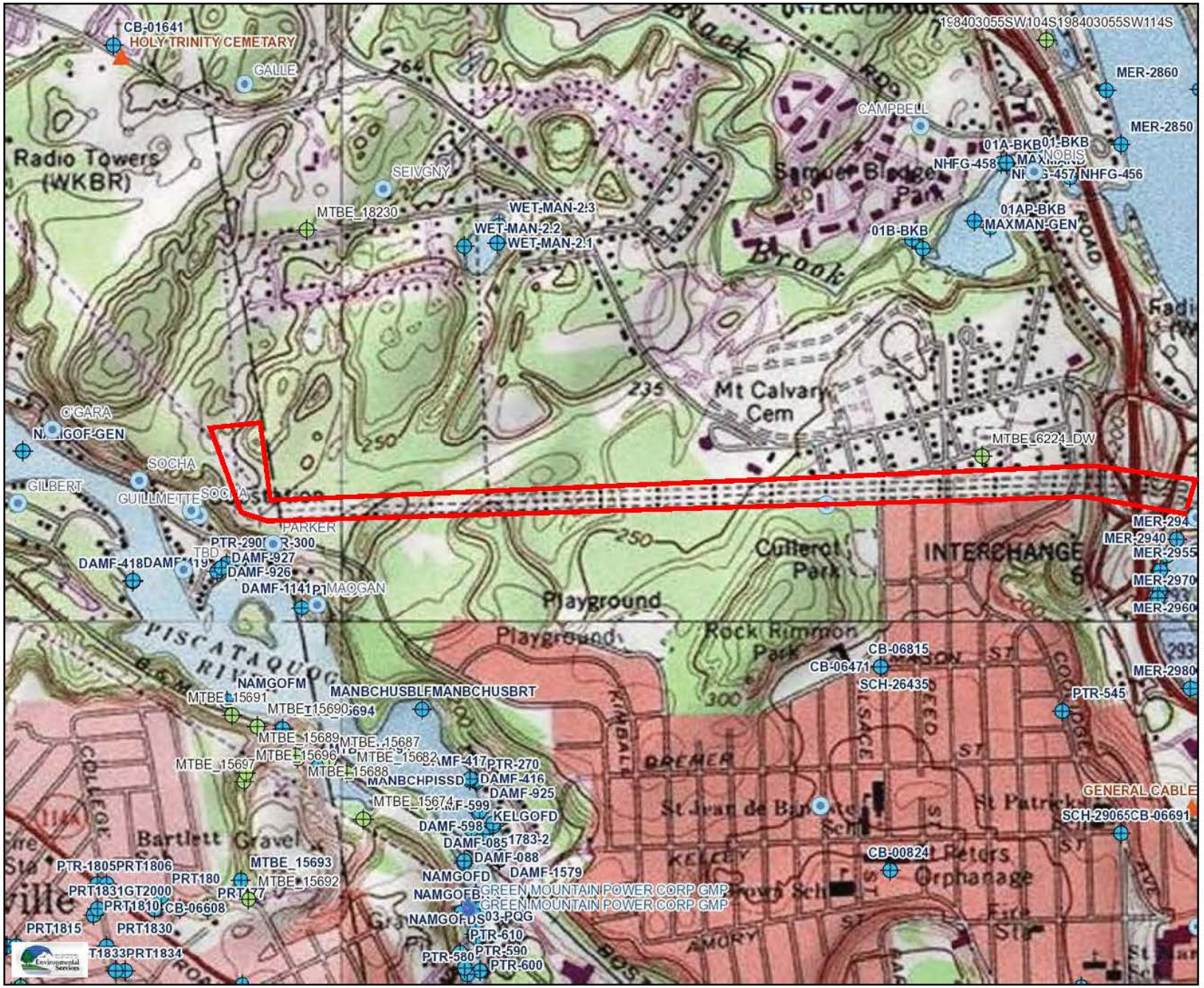
Map Scale

1: 12,988

Map Generated: 8/26/2022

Notes

Eversource P106



Legend

- Wellhead Protection Areas
- Public_Water_Supply_Entiti
- Environmental Monitoring SI Secure
- Public Water Supply Wells
- Registered Water Users
- Water Supply Intake Protect Areas
- Water Well Inventory
- Environmental Monitoring SI Nonsecure
- Local Potential Contaminatic Sources

Map Scale

1: 12,988

Map Generated: 8/26/2022

Notes

7 Appendices

7.1 Appendix A. Alteration of Terrain Permit Application Form

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: Eversource Energy	Contact Name: Ashley Friend		
Email: ashley.friend@eversource.com	Daytime Telephone: 603-604-2992		
Mailing Address: 13 Legends Drive			
Town/City: Hooksett	State: NH	Zip Code: 03106	
2. APPLICANT'S AGENT INFORMATION If none, check here: ☐			
Business Name: Normandeau Associates, Inc.	Contact Name: William McCloy		
Email: wmccloy@normandeau.com	Daytime Telephone: 802-855-1246		
Address: PO Box 205			
Town/City: Rutland	State: VT	Zip Code: 05701	
3. PROPERTY OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)			
Applicant Name: Eversource via ROW Easement/Ownership	Contact Name:		
Email:	Daytime Telephone:		
Mailing Address:			
Town/City:	State:	Zip Code:	
4. PROPERTY OWNER'S AGENT INFORMATION If none, check here: ☒			
Business Name:	Contact Name:		
Email:	Daytime Telephone:		
Address:			
Town/City:	State:	Zip Code:	
5. CONSULTANT INFORMATION If none, check here: ☐			
Engineering Firm: Normandeau Associates, Inc.	Contact Name: William McCloy		
Email: wmccloy@normandeau.com	Daytime Telephone: 802-855-1246		
Address: PO Box 205			
Town/City: Rutland	State: VT	Zip Code: 05701	

6. PROJECT TYPE

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

7. PROJECT LOCATION INFORMATION

Project Name: P106 Transmission Line Optical Ground Wire (OPGW) and Structure Replacement Project

Street/Road Address: Existing Utility ROW, Montgomery Street, Other

Town/City: Goffstown and Manchester | County: Hillsborough

Tax Map: Multiple | Block: | Lot Number: | Unit:

Location Coordinates: 43.00307, -71.49003 ☒ 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: _____ 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: Piscataquog 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 includes the replacement of 16 existing transmission line structures and will exceed AoT thresholds associated with access road and work pad improvements along the existing P106 Transmission Line which is located in Goffstown and Manchester, New Hampshire.

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

No work has started as a part of this project.

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]: 9/2/2022.
(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]: 9/2/2022.
(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: 236,324 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

G. Total undisturbed cover: 0 square feet

H. Number of lots proposed: 0

I. Total length of roadway: 0 linear feet

J. Name(s) of receiving water(s): 0

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: Manchester SE	☒ Yes ☒ No	☒	Permit number: TBD

L. List all species identified by the Natural Heritage Bureau as threatened or endangered or of concern: Multiple, See Appendix C for detailed information/datachecks and Fis 1004 consultation documentation

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." ALUMINUM, ESCHERICHIA COLI

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.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
- ☐ Groundwater Recharge Volume calculations (one worksheet for each permit application): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- ☐ BMP worksheets (one worksheet for each treatment system): des.nh.gov/organization/divisions/water/aot/documents/bmp_worksh.xls
- ☐ Drainage analysis, stamped by a professional engineer (see Application Checklist for details)
- ☐ Riprap apron or other energy dissipation or stability calculations
- ☐ 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*.
- ☐ Infiltration Feasibility Report (example online) [Env-Wq 1503.08(f)(3)]
- ☐ 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)
- ☐ Inspection and maintenance manual with, if applicable, long term maintenance agreements [Env-Wq 1503.08(g)]
- ☐ Source control plan

PLANS:

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

12. REQUIRED SIGNATURES

AF 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: _____ Date: 9/2/22

Name (print or type): Ashley Friend Title: Licensing and Permitting Specialist

☐ PROPERTY OWNER ☐ PROPERTY OWNER'S AGENT:

Signature: _____ Date: _____

Name (print or type): _____ Title: _____

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

☐ PE stamp

☒ Wetland delineation

☒ Temporary erosion control measures

☐ 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

☐ Proposed 2-foot contours

☐ 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

☐ 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.

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

DETAILS

☐ Typical roadway x-section

☐ Detention basin with inverts noted on the outlet structure

☐ Stone berm level spreader

☐ Outlet protection – riprap aprons

☒ A general installation detail for an erosion control blanket

☒ Silt fences or mulch berm

☐ 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.

☒ Hay bale barriers

☐ Stone check dams

☐ Gravel construction exit

☐ Temporary sediment trap

☐ The treatment BMP's proposed

☐ 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.

☐ 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.

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).

.

PRE- AND POST-DEVELOPMENT DRAINAGE AREA PLANS

☐ 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.

PRE AND POST-DEVELOPMENT COLOR-CODED SOIL PLANS

☐ 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).

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

☐ 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.

☐ 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.

☐ 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.

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

NORMANDEAU ASSOCIATES, INC.
25 Nashua Road, Bedford, NH 03110-5527
(603) 472-5191 (603) 472-7052 fax

CITIZENS BANK
MASSACHUSETTS
5-7017/2110

115326

CHECK DATE
September 2, 2022

PAY Four Thousand Three Hundred Seventy Five and 00/100 Dollars

AMOUNT
4,375.00

TO Treasurer, State of New Hampshire
ATT: NHDES
P.O. Box 95
Concord, NH 03302-0095

Security Check features included Details on back.

[redacted]

TWO SIGNATURES REQUIRED OVER $5000.00

EMILY BUSINESS FORMS 800.392.6018 VISION

NORMANDEAU ASSOCIATES, INC. 25 Nashua Road, Bedford, NH 03110-5527
115326

Check Date: 9/2/2022

Invoice Number	Date	Voucher	Amount	Discounts	Previous Pay	Net Amount
Eversource P106 AoT	8/31/2022	2461368	4,375.00			4,375.00
Treasurer, State of New Hampshire		TOTAL	4,375.00			4,375.00
Citizens MA Checking	45	70697				

7.2 Appendix B. Project Parcel List

Goffstown Parcels in Project Area	Manchester Parcels in Project Area
3-64A*	777-5*, 777-5A*, 817-25*, 763-15*, 763-14*, 763-15*, 817-5*, 817-6*, 817-7*, 817-8*, NHDOT – Everett Turnpike
* Owned by Eversource	

7.3 Appendix C. NHNHB Report and Correspondence

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: William McCloy, Normandeau Associates
P.O. Box 205
Rutland, VT 05701

From: NHB Review, NH Natural Heritage Bureau
Date: 8/3/2022 (valid until 08/03/2023)
Re: Review by NH Natural Heritage Bureau
Permits: MUNICIPAL POR - Goffstown, NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-2488** Town: Goffstown Location: Eversource ROW
Description: Eversource will be replacing existing structures, in kind, at/very near their existing locations. Access to the work areas will be via existing roads/trails where possible and will be confined to ROW unless utilizing an existing trail or road; temporary matting may be used and some new access roads may be established in upland areas. No tree clearing is proposed. Some brush and shrubs may need to be mowed in work areas. Work areas at each structure will be up to 100x100 feet centered on the structure to be replaced. All areas in wetlands will be temporarily timber matted and restored following construction activities - timber matting will be removed as soon as possible. Utility Maintenance BMPs will be followed and wildlife friendly controls will be used.

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: NHB recommends surveys for Long-spined sandbur and Wild lupine. These species both occur in open, distrubed, sandy areas and could occur in the proposed project area. Lupine can be identified by its flowers. This species flowers from mid-May to mid-July, however it can also be identified vegetatively.**

Long-spined sandbur must be in fruit to be identified. Survyes should be conducted in late August to early September.

Please email survey results and photos to NHB as soon as completed so that NHB may determine any impact avoidance/minimization/mitigation measures, as needed.
F&G: Please include job timing and please contact Kat Wadiak for review.

Plant species	State[1]	Federal	Notes

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

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long-spined sandbur (*Cenchrus longispinus*)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
wild lupine (*Lupinus perennis ssp. perennis*)	T	--	

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	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

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

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

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results letter number and “review request” in the email subject line.

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

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

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Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

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To: William McCloy, Normandeau Associates
P.O. Box 205
Rutland, VT 05701

From: NHB Review, NH Natural Heritage Bureau
Date: 8/3/2022 (valid until 08/03/2023)
Re: Review by NH Natural Heritage Bureau
Permits: MUNICIPAL POR - Manchester, NHDES - Alteration of Terrain Permit, NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-2489** Town: Manchester Location: Eversource ROW
Description: Eversource will be replacing existing structures, in kind, at/very near their existing locations. Access to the work areas will be via existing roads/trails where possible and will be confined to ROW unless utilizing an existing trail or road; temporary matting may be used and some new access roads may be established in upland areas. No tree clearing is proposed. Some brush and shrubs may need to be mowed in work areas. Work areas at each structure will be up to 100x100 feet centered on the structure to be replaced. All areas in wetlands will be temporarily timber matted and restored following construction activities - timber matting will be removed as soon as possible. Utility Maintenance BMPs will be followed and wildlife friendly controls will be used.

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 send representative photos of the proposed project area. Please send an aerial overlaid with the proposed limits of disturbance including staging areas for equipment.**
F&G: Please provide job timing and contact Kat Wadiak for review.

Natural Community	**State[1]**	**Federal**	**Notes**
Pitch pine - Appalachian oak - heath forest	--	--	Threats to this community type are primarily logging or development that substantially remove canopy trees or alter the understory.
Temperate ridge - cliff - talus system	--	--	Development

Plant species	**State[1]**	**Federal**	**Notes**

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clasping milkweed (*Asclepias amplexicaulis*)	T	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
clustered sedge (*Carex cumulata*)	T	--	This species occurs on rocky ridges/woodlands (below subalpine), cliffs/ledges, and sandplains/disturbed openings. Threats would primarily be direct destruction of plants, e.g., from recreational activities.
golden heather (*Hudsonia ericoides*)*	E	--	Probably sensitive to trampling. Shade-intolerant.
licorice goldenrod (*Solidago odora ssp. odora*)	T	--	
lion's-foot rattlesnake-root (*Nabalus serpentarius*)*	E	--	Threats to this understory species would be activities that impacted its habitat (dry forests and thin woods), such as logging and development.
long-spined sandbur (*Cenchrus longispinus*)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
lopsided rush (*Juncus secundus*)*	E	--	Occurs on talus slopes, cliffs/ledges, sandplains/disturbed openings, and dry forests/thin woods. Threats would include recreational or development activities that would trample the plants or disturb their habitat.
narrow-leaved white-topped-aster (*Sericocarpus linifolius*)*	E	--	This species occurs in dry forests, thin woods, sandplains, and disturbed openings. Threats would include development of its habitat or recreational use that directly impacted the plants.
smooth slender crabgrass (*Digitaria filiformis var. laeviglumis*)*	E	--	This species occurs in peaty depressions on granitic ledges. Threats would primarily be recreation or other activities that could trample the plants or disturb their habitat.
wild lupine (*Lupinus perennis ssp. perennis*)	T	--	

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	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

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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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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.

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

Department of Natural and Cultural Resources
Division of Forests and Lands
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EVERSOURCE ENERGY

DATE August 22, 2022

TO: NH Fish & Game Department
NHFGreview@wildlife.nh.gov
NH Natural Heritage Bureau
nhbreview@dncr.nh.gov

FROM: Ashley Friend, Specialist - Licensing & Permitting
Eversource Energy

CC: Melissa Winters, NHF&G
Kathleen Wadiak, NHF&G
Michelle Ford, Eversource
William McCloy, Normandeau Associates

SUBJECT: NH F&G and NHB Consultation Request
NHB ID: NHB22-2488 & NHB22-2489
Eversource P106 Transmission Line Structure Replacement Project

---

The following information is being provided on behalf of Public Service Company of New Hampshire dba Eversource Energy Services Company (herein Eversource) in accordance with "Part Fis 1004.03(c) Information Required for Consultation,":

(1) A copy of the department of natural and cultural resources NHB DataCheck tool results letter.

See Attachment A for copy of DataCheck Reports: NHB22-2488 & NHB22-2489

(2) – (4) *The applicant's full name, mailing address, telephone number and email:*

Eversource Energy
c/o Ashley Friend
13 Legends Drive, Hooksett, NH 03106
603-634-3396
Ashley.Friend@Eversource.com

(5) – (6) *Person who will respond to requests for information on behalf of the applicant;*

Eversource Energy
c/o Ashley Friend
13 Legends Drive, Hooksett, NH 03106
603-634-3396
Ashley.Friend@Eversource.com

(7) *Description of the proposed action:*

To ensure continued system reliability, Eversource Energy (Eversource) is proposing select structure

replacement and maintenance activities within the P106 Transmission Line Right-of-Way (ROW) in the municipalities of Manchester and Goffstown, New Hampshire.

The proposed work involves replacement of sixteen existing overhead transmission line structures (STRs 50, 51.1, 51.3, 53, 55, 56, 58, 59, 61-66, 68 & 70) and the replacement of existing static wire with overhead optical ground wire (OPGW) between the existing Rimmon and Eddy Substations. The existing wood structures would be replaced with weathering steel monopoles with heights generally +/- 10' taller than existing structure heights to meet current National Safety Electrical Code Standards. Structure replacement activities would occur along an approximately 1.6-mile length of existing transmission line ROW. Work areas would be accessed via existing roads and paths, with select access improvements required. Project construction is anticipated to start in October 2022 and take approximately 6 months to complete.

Work areas would be accessed via existing roads and paths, with select access improvements required. Work pads (generally approx. 30' x 60', 75' x 75' or up to 100' x 100') and access roads would typically consist of improved gravel areas. Timber construction matting or composite matting would be used when work is in or proximate to sensitive receptors (e.g. wetlands, watercourses, etc.) and at manicured lawn areas. Though implementation of the best management practices (BMPs) outlined below, Eversource anticipates that impacts to state listed species will be appropriately avoided and minimized.

The NHB DataChecks NHB22-2488 & NHB22-2489 have identified the project is located within potential or known habitat for the following species and comments:

Plant Species:

- long-spined sandbur (Cenchrus longispinus) – State Endangered
- Wild lupine (*Lupinus perennis ssp. perennis*) – State Threatened
- clasping milkweed (Asclepias amplexicaulis) – State Threatened
- clustered sedge (Carex cumulata) – State Threatened
- golden heather (Hudsonia ericoides)* – State Endangered
- licorice goldenrod (Solidago odora ssp. odora) – State Threatened
- lion's-foot rattlesnake-root (Nabalus serpentarius)* – State Endangered
- lopsided rush (Juncus secundus)* – State Endangered
- narrow-leaved white-topped-aster (Sericocarpus linifolius)* – State Endangered
- smooth slender crabgrass (Digitaria filiformis var. laeviglumis)* – State Endangered

Natural Community:

- Pitch pine - Appalachian oak - heath forest
- Temperate ridge - cliff - talus system

Vertebrate Species:

- Blanding's turtle (*Emydoidea blandingii*) – State Endangered
- Northern black racer (*Coluber constrictor constrictor*) – State Threatened

Comments:

NHB:

- NHB recommends surveys for Long-spined sandbur and Wild lupine. These species both occur in open, disturbed, sandy areas and could occur in the proposed project area. Lupine can be identified by its flowers. This species flowers from mid-May to mid-July, however it can also be identified vegetatively.
- Long-spined sandbur must be in fruit to be identified. Surveys should be conducted in late August to early September.
- Please email survey results and photos to NHB as soon as completed so that NHB may determine any impact avoidance/minimization/mitigation measures, as needed.
- Please send representative photos of the proposed project area. Please send an aerial overlaid with the proposed limits of disturbance including staging areas for equipment.

F&G:

- Please include job timing and please contact Kat Wadiak for review.

Eversource proposes the following conservation measures to avoid, minimize and/or mitigate potential harm to threatened and endangered species and habitat determined to be critical:

Plant Species:

a) long-spined sandbur (Cenchrus longispinus) – State Endangered
    - NHB recommended a survey for long-spined sandbur in late August to early September and Normandeau will review the site, including suitable habitat, for this species at this time and will email results to NHB when completed
b) Wild lupine (*Lupinus perennis ssp. perennis*) – State Threatened
    - NHB recommended a survey for wild lupine when possible to identify any species vegetatively. Normandeau will review the site, including suitable habitat, for this species at this time and will email results to NHB when completed.
    - Locate and flag individual plant locations prior to P106 project construction. Lupine typically flower in April through July; project construction is anticipated in fall, outside of the inflorescence window. Efforts will be made to avoid lupine where possible, including those plants flagged and field-recorded earlier in the growing season.
    - Remove the access road matting immediately upon the completion of work.
    - If present in/near work areas, utilize an environmental monitor during access road placement at the site. Avoid mat placement atop the previously flagged individual wild lupine plants wherever possible. Though not anticipated, use bridge matting to mat over and around identified plants if required and as feasible. If the population of plants is greater than feasible to utilize bridge matting, additional coordination with NHB is required.
    - If present in/near work areas, complete weekly monitoring during construction to assure potential impact to the wild lupine population is limited.
    - If present in/near work areas, monitoring to ensure removal of work pads completely and promptly upon completion
c) clasping milkweed (Asclepias amplexicaulis) – State Threatened
    - This species is mapped within the P106 corridor, and is noted to be located "on the north edge of the corridor, directly abutting the side of the house at 864 Leyte Street."

This area will be avoided as it is located between Str 66 and 67 and the P106 line and proposed access routes are to the south side of the ROW. No surveys for this species are proposed at this time.

d) clustered sedge (Carex cumulata) – State Threatened
   - This species is known to exist in a pitch pine rocky ridge natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

e) golden heather (Hudsonia ericoides)* – State Endangered
   - This species is known to exist in sandy, open alluvial deposits of river bank below Amoskeag Falls in the Merrimack River approximately 1,000 feet east of the project area. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

f) licorice goldenrod (Solidago odora ssp. odora) – State Threatened
   - This species is known to exist in an Appalachian oak – pine rocky ridge natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

g) lion's-foot rattlesnake-root (Nabalus serpentarius)* – State Endangered
   - This species is associated with the Pitch pine - Appalachian oak – heath forest and/or Temperate ridge – cliff – talus system natural communities located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

h) lopsided rush (Juncus secundus)* – State Endangered
   - This species is associated with the Temperate ridge – cliff – talus system natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. It was last seen in a “peaty depression on granite” in 1931. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

i) narrow-leaved white-topped-aster (Sericocarpus linifolius)* – State Endangered
   - This species is associated with the Oak-pine rocky summit woodland natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

j) smooth slender crabgrass (Digitaria filiformis var. laeviglumis)* – State Endangered
   - This species is associated with the Temperate ridge – cliff – talus system natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. It was last seen in a “peaty depression on granite” in 1931. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

Natural Community:

a) Pitch pine - Appalachian oak - heath forest
    - This natural community is located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW due to long-term, ongoing vegetation management by Eversource and therefore the natural community is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.
b) Temperate ridge - cliff - talus system
    - This natural community is located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW due to long-term, ongoing vegetation management by Eversource and therefore the natural community is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

Vertebrate Species:

a) Blanding's turtle (*Emydoidea blandingii*) – State Endangered
    - Prior to the start of construction, a qualified biologist shall educate site operators who will be informed of the potential presence of this species and shall be provided with the NH Fish and Game listed species flyer for Blanding's turtle. The NHFG flyers contain information to identify this species and provide NHFG contact information.
    - Known habitat (only one wetland present within the ROW; completely avoided) is limited within the ROW/Project Area. Minimize work in known habitat during the active season (April - October) to the greatest extent practicable. Work is proposed only at the end of and mostly outside the active season.
    - If work must occur during the active season, contractors working within the ROW will be trained by a qualified biologist on the identification and response protocols for Blanding's turtle.
    - During Inactive Period (Approximately October 16 - March 31), all contractors working within known habitat will be trained by a qualified biologist on the identification and response protocols for spotted turtles.
    - Prior to the start of construction within known habitat, trained contractors will search the work area. If a Blanding's turtle is discovered, the animal shall be photographed and either relocated (in the direction of travel) or allowed to migrate on its own outside the work area. The observing individual will then immediately contact the project Environmental Licensing & Permitting specialist from Eversource who will contact NH F&G for further information, as follows:
        i. Josh Megyesy 978-578-0802; or
        ii. Melissa Winters 603-479-1129.
        iii. c) If NHF&G staff are unable to be reached, contact the Wildlife Administrator at 603- 271-2461.
    - Prior to daily construction activities, timber matting shall be reviewed for snakes and turtles. An environmental addendum shall be added to the contractor's daily tailboards to include guidance on protocols for snakes and provide identification for turtles and snakes.

- At the conclusion of the project, a summary report of any rare species observations shall be provided to the NHFG Nongame Program.

b) Northern black racer (*Coluber constrictor constrictor*) – State Threatened
   - Site operators shall be informed of the potential presence of this species and shall be provided with the NH Fish and Game listed species flyer for northern black racer. The NHFG flyers contain information to identify this species and provide NHFG contact information.
   - Minimize work in known habitat during the active season (April 1 - October 31) to the greatest extent practicable.
   - If work must occur during the active season, contractors working within the ROW will be trained by a qualified biologist on the identification and response protocols for northern black racers.
   - Prior to the start of construction within known habitat, trained contractors will search the work area. If a northern black racer is discovered, the snake shall be photographed and either relocated (typically in the direction of travel) or allowed to migrate on its own outside the work area. The observing contractor will then immediately contact the project Environmental Licensing & Permitting specialist from Eversource who will contact NH F&G as follows:
     i. Brendan Clifford 603-944-0885; or
     ii. Melissa Winters 603-479-1129.
     iii. c) If NHF&G staff are unable to be reached, contact the Wildlife Administrator at 603- 271-2461.
   - Prior to daily construction activities, timber matting shall be reviewed for snakes and turtles. An environmental addendum shall be added to the contractor's daily tailboards to include guidance on protocols for snakes and provide identification for turtles and snakes.
   - Erosion control matting (including wattles), if utilized, shall consist of jute matting. In accordance with the NH Department of Natural & Cultural Resources, March 2019 Best Management Practices [BMP] Utility Maintenance in and Adjacent to Wetlands and Waterbodies Manual and Eversource's BMP Manual for Sediment and Erosion Control, all photodegradable and welded plastic mesh shall be prohibited on this project and only E&S controls made of biodegradable, natural materials shall be utilized in order to prevent mortality to wildlife.
   - Observations of northern black racers in the months of April-May and September-October may indicate the potential for a den site on or near the project site. Observations of this species during this timeframe shall be reported immediately to the New Hampshire Fish and Game Department Nongame and Endangered Wildlife Environmental Review Program via the contacts and procedures (including photographs if possible) above. Observations of this species outside of this timeframe can follow general reporting guidance.
   - At the conclusion of the project, a summary report of any rare species observations shall be provided to the NHFG Nongame Program.

Photographs of the project area from August 19, 2022 are provided in Attachment C.

(8) *Description of the project parcel by reference to street address and town, and, if available, a geographical information system defined project boundary.*

The project includes managed right-of-way within the P106 Transmission Line Right-of-Way in municipalities of Manchester and Goffstown, New Hampshire. Project plans depicting the parcel boundaries and work areas are provided in Attachment D.

(9) *A listing of any state or federal permits which have been applied for, have been granted, or which will be necessary for the proposed action to proceed.*

The project is subject to the following permits:

- New Hampshire Alteration of Terrain Permit (TO BE FILED)
- US EPA Construction General Permit/Stormwater Pollution Prevention Plan (TO BE FILED)

If applicable please add the following:

Portions of the project area were subject to prior permits and previously reviewed by [NHB and/or NH F&G] as follows:

Permit Name	Permit Number	Overlap with Proposed Project (Line, Str.)	Date Permit Approved	NHB DataCheck Number(s)
NHDES SPN NHDES AoT	2020-03224 AoT-2002	D121 Structure Replacements & OPGW Project 2021 (Shared corridor from P106 str 56 to Eddy Substation) P106 Structure Replacements (2021)	5/17/2021 8/18/2021	NHB21-0609

(10) *The current condition of the action area prior to any proposed modifications, including a description of known or discernible actions within the preceding 24 months that have altered the site, including but not limited to, timber harvests, significant impact from storms, removal of gravel or stone, or addition or removal of structures;*

The project is located within or adjacent to a somewhat densely populated neighborhoods and exhibits signs of long running use including well established trails and other disturbances. The project is proposed within an existing overhead electric utility ROW with two 34.5 kV distribution lines (359 & 358) and two 115 kV transmission lines (P106 & D121). Periodic routine maintenance occurs within the site bounds. Eversource has recently completed structure replacements on the same P106 line and on the parallel D121 line in this area.

(11) *Any habitat features supporting or that could support threatened and endangered species that have been identified;*

Plant Species:

a) long-spined sandbur (Cenchrus longispinus) – State Endangered
   - The sandbur is known to occur in the area, including the ROW near the junction with the D121 line ROW. These populations are identified as Areas 1 and 2 with Area 1 at top of hill on edge of woods and Area 2 slightly downhill from Area 1. Dominant species include Quercus sp. (Oak), Pinus rigida (pitch pine) and weedy grasses. Associated species include: Ceanothus americanus (eastern New Jersey tea), Trichostema dichotomum (bluecurls), Trifolium arvense (rabbit-foot clover), Erigeron [Conyza] canadensis (horseweed), and invasive Frangula alnus (alder-buckthorn).
   - As noted above, Normandeau will survey the area for this species

b) Wild lupine (*Lupinus perennis ssp. perennis*) – State Threatened
   - Wild lupine can be found both in habitats less disturbed by humans (floodplains, woodlands), and also in human-disturbed habitats (railroads, roadsides, rights-of-way, waste areas). This species prefers anthropogenic (man-made or disturbed habitats), meadows and fields which are present within the project area[1]. No known populations of wild lupine are known in the ROW, however some are noted several thousand feet to the south of the project area.
   - NHB recommended a survey for wild lupine when possible to identify any species vegetatively. Normandeau will review the site, including suitable habitat, for this species at this time and will email results to NHB when completed.

c) clasping milkweed (Asclepias amplexicaulis) – State Threatened
   - This species is mapped within the P106 corridor, and is noted to be located "on the north edge of the corridor, directly abutting the side of the house at 864 Leyte Street." This area will be avoided as it is located between Str 66 and 67 and the P106 line and proposed access routes are to the south side of the ROW. No surveys for this species are proposed at this time.

d) clustered sedge (Carex cumulata) – State Threatened
   - This species is known to exist in a pitch pine rocky ridge natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

e) golden heather (Hudsonia ericoides) – State Endangered
   - This species is known to exist in sandy, open alluvial deposits of river bank below Amoskeag Falls in the Merrimack River approximately 1,000 feet east of the project area. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

f) licorice goldenrod (Solidago odora ssp. odora) – State Threatened
   - This species is known to exist in an Appalachian oak – pine rocky ridge natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not

[1] https://gobotany.nativeplanttrust.org/species/lupinus/perennis/; as of 8/17/22

expected to be present or to be negatively impacted by the project. No surveys for this species are proposed at this time.

g) lion's-foot rattlesnake-root (Nabalus serpentarius)* – State Endangered
   - This species is associated with the Pitch pine - Appalachian oak – heath forest and/or Temperate ridge – cliff – talus system natural communities located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project.

h) lopsided rush (Juncus secundus) – State Endangered
   - This species is associated with the Temperate ridge – cliff – talus system natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. It was last seen in a "peaty depression on granite" in 1931. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project.

i) narrow-leaved white-topped-aster (Sericocarpus linifolius) – State Endangered
   - This species is associated with the Oak-pine rocky summit woodland natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project.

j) smooth slender crabgrass (Digitaria filiformis var. laeviglumis)* – State Endangered
   - This species is associated with the Temperate ridge – cliff – talus system natural community located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. It was last seen in a "peaty depression on granite" in 1931. This habitat is not present within the ROW and therefore the species is not expected to be present or to be negatively impacted by the project.

Natural Community:

c) Pitch pine - Appalachian oak - heath forest
   - This natural community is located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW due to long-term, ongoing vegetation management by Eversource and therefore the natural community is not expected to be present or to be negatively impacted by the project.

d) Temperate ridge - cliff - talus system
   - This natural community is located approximately 1,500 feet south of the P106 ROW in Rock Rimmon Park. This habitat is not present within the ROW due to long-term, ongoing vegetation management by Eversource and therefore the natural community is not expected to be present or to be negatively impacted by the project.

Vertebrate Species:

c) Blanding's turtle (*Emydoidea blandingii*) – State Endangered
   - Blanding's turtles prefer shallow, quiet waters and may be found in ponds, swamps, weedy marshes, sloughs, and backwaters of lakes. These turtles use vernal pools extensively in spring and while traveling through the landscape. They may use slow rivers and streams as mechanisms for dispersal between wetlands. In addition, Blanding's turtles make extensive use of terrestrial habitats for nesting and travel among wetlands[2].

[2] https://www.wildlife.state.nh.us/wildlife/profiles/blandings-turtle.html; as of 8/17/22

- As noted on the NHB DataCheck results letter, this species has been previously observed outside of the project area, approximately 3,500 feet south of the project area near the Piscataquog River in Pinardville. The majority of the project is located upland areas, including residential areas. The single wetland on site, and lack of connectivity to other wetlands or suitable habitat make it unlikely that this species will be present within the project area. Protective measures are described above.

d) Northern black racer (*Coluber constrictor constrictor*) – State Threatened
   - This species is known to utilize large tracts of land consisting of mixed forest and a variety of early successional habitats including old fields, meadows, and forest/swamp/marsh edges. They are also noted to be found in dry brushy pastures, powerline corridors, rocky ledges, and woodlands. Northern black racers typically occur in terrestrial sites but may utilize moist areas including marshes and swamps. New Hampshire populations reported to maintain greater territory sizes than southern populations with a mean home range of over 100 acres. During summer lays 15-20 eggs underground in loose soil or under rotting wood or stumps. During late fall through winter, northern black racers hibernate, sometimes communally, in a variety of places including mammal burrows, rock crevices/caves, stone walls, cisterns/wells, and rotting logs[3],[4]
   - As noted on the NHB DataCheck results letter, a single observation of this species has been previously observed outside of the project area, at Rock Rimmon Park located approximately 1,500 feet south of the project ROW. The project area may provide suitable habitat; however, due to the anticipated project timing (fall and winter 2022), encounters with northern black racers are not anticipated. Protective measures will be implemented, as described above.

(12) *A description of any conservation measures proposed by the applicant to avoid, minimize, or mitigate potential harm to threatened and endangered species and habitat determined to be critical, including but not limited to:*

As stated in Item 7) Description of Proposed Action above, several protection measures will be established to avoid impacts to State-listed species.

In addition, the project will do the following to avoid and minimize impacts:

a) Education and training for construction personnel as to what construction activities have the potential to cause adverse impacts to species
b) Minimizing work pad and access road sizing to the greatest extent practicable and utilization of existing trails and paths where possible.
c) Install signs and/or flag off sensitive areas or populations of listed plant species if identified within the project area; coordination with NHB if plants are identified within the work areas to determine site-specific BMPs
d) Monitor identified species
e) Project has avoided all wetland, stream and vernal pool impacts

[3] https://www.wildlife.state.nh.us/wildlife/profiles/black-racer-snake.html; as of 8/17/22
[4] https://wildlife.state.nh.us/wildlife/profiles/wap/reptile-northernblackracer.pdf; as of 8/17/22

EVERSOURCE ENERGY

Signatures and Certifications

(1) The information contained in or otherwise submitted with the document is true, complete, and not misleading to the best of the signer's knowledge and belief; and
(2) The signer understands that the submission of false, incomplete, or misleading information shall constitute grounds, pursuant to Fis 1004.13, for the department to:
    a. Suspend consultation pending submission of true, complete, and not misleading information;
    b. Terminate consultation
    c. Withdraw any recommendations made to the referring state agency under this part; or
    d. Report the suspension, termination, or withdrawal of recommendations, and the full circumstances of the submission, to the referring state agency for action in the pending or completed request for a permit or other action.

Applicant: _____ Date: 8/22/22

Ashley Friend, Eversource

Attachments:

Attachment A: NHB DataCheck No. NHB22-2488 & NHB22-2489
Attachment B: USGS Location Map
Attachment C: Photographs
Attachment D: Project Plans

Attachment A: NHB DataCheck No. NHB22-2488 & NHB22-2489

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: William McCloy, Normandeau Associates
P.O. Box 205
Rutland, VT 05701

From: NHB Review, NH Natural Heritage Bureau
Date: 8/3/2022 (valid until 08/03/2023)
Re: Review by NH Natural Heritage Bureau
Permits: MUNICIPAL POR - Goffstown, NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-2488** Town: Goffstown Location: Eversource ROW
Description: Eversource will be replacing existing structures, in kind, at/very near their existing locations. Access to the work areas will be via existing roads/trails where possible and will be confined to ROW unless utilizing an existing trail or road; temporary matting may be used and some new access roads may be established in upland areas. No tree clearing is proposed. Some brush and shrubs may need to be mowed in work areas. Work areas at each structure will be up to 100x100 feet centered on the structure to be replaced. All areas in wetlands will be temporarily timber matted and restored following construction activities - timber matting will be removed as soon as possible. Utility Maintenance BMPs will be followed and wildlife friendly controls will be used.

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: NHB recommends surveys for Long-spined sandbur and Wild lupine. These species both occur in open, distrubed, sandy areas and could occur in the proposed project area. Lupine can be identified by its flowers. This species flowers from mid-May to mid-July, however it can also be identified vegetatively.**

Long-spined sandbur must be in fruit to be identified. Survyes should be conducted in late August to early September.

Please email survey results and photos to NHB as soon as completed so that NHB may determine any impact avoidance/minimization/mitigation measures, as needed.
F&G: Please include job timing and please contact Kat Wadiak for review.

Plant species	State[1]	Federal	Notes

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

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long-spined sandbur (*Cenchrus longispinus*)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
wild lupine (*Lupinus perennis ssp. perennis*)	T	--	

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	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

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

Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

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results letter number and “review request” in the email subject line.

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

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

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Memo

NH Natural Heritage Bureau
NHB DataCheck Results Letter

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To: William McCloy, Normandeau Associates
P.O. Box 205
Rutland, VT 05701

From: NHB Review, NH Natural Heritage Bureau
Date: 8/3/2022 (valid until 08/03/2023)
Re: Review by NH Natural Heritage Bureau
Permits: MUNICIPAL POR - Manchester, NHDES - Alteration of Terrain Permit, NHDES - Utility Statutory Permit by Notification (SPN)

NHB ID: **NHB22-2489** Town: Manchester Location: Eversource ROW
Description: Eversource will be replacing existing structures, in kind, at/very near their existing locations. Access to the work areas will be via existing roads/trails where possible and will be confined to ROW unless utilizing an existing trail or road; temporary matting may be used and some new access roads may be established in upland areas. No tree clearing is proposed. Some brush and shrubs may need to be mowed in work areas. Work areas at each structure will be up to 100x100 feet centered on the structure to be replaced. All areas in wetlands will be temporarily timber matted and restored following construction activities - timber matting will be removed as soon as possible. Utility Maintenance BMPs will be followed and wildlife friendly controls will be used.

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 send representative photos of the proposed project area. Please send an aerial overlaid with the proposed limits of disturbance including staging areas for equipment.**
F&G: Please provide job timing and contact Kat Wadiak for review.

Natural Community	**State[1]**	**Federal**	**Notes**
Pitch pine - Appalachian oak - heath forest	--	--	Threats to this community type are primarily logging or development that substantially remove canopy trees or alter the understory.
Temperate ridge - cliff - talus system	--	--	Development

Plant species	**State[1]**	**Federal**	**Notes**

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.

clasping milkweed (*Asclepias amplexicaulis*)	T	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
clustered sedge (*Carex cumulata*)	T	--	This species occurs on rocky ridges/woodlands (below subalpine), cliffs/ledges, and sandplains/disturbed openings. Threats would primarily be direct destruction of plants, e.g., from recreational activities.
golden heather (*Hudsonia ericoides*)*	E	--	Probably sensitive to trampling. Shade-intolerant.
licorice goldenrod (*Solidago odora ssp. odora*)	T	--	
lion's-foot rattlesnake-root (*Nabalus serpentarius*)*	E	--	Threats to this understory species would be activities that impacted its habitat (dry forests and thin woods), such as logging and development.
long-spined sandbur (*Cenchrus longispinus*)	E	--	This species grows in sandplains and disturbed openings, and is sensitive to disturbances that eliminate its habitat.
lopsided rush (*Juncus secundus*)*	E	--	Occurs on talus slopes, cliffs/ledges, sandplains/disturbed openings, and dry forests/thin woods. Threats would include recreational or development activities that would trample the plants or disturb their habitat.
narrow-leaved white-topped-aster (*Sericocarpus linifolius*)*	E	--	This species occurs in dry forests, thin woods, sandplains, and disturbed openings. Threats would include development of its habitat or recreational use that directly impacted the plants.
smooth slender crabgrass (*Digitaria filiformis var. laeviglumis*)*	E	--	This species occurs in peaty depressions on granitic ledges. Threats would primarily be recreation or other activities that could trample the plants or disturb their habitat.
wild lupine (*Lupinus perennis ssp. perennis*)	T	--	

Vertebrate species	**State[1]**	**Federal**	**Notes**
Blanding's Turtle (*Emydoidea blandingii*)	E	--	Contact the NH Fish & Game Dept (see below).
Northern Black Racer (*Coluber constrictor constrictor*)	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

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Maps and NHB record pages are confidential and should be redacted from public documents.

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.

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

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

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172 Pembroke Rd.
Concord, NH 03301

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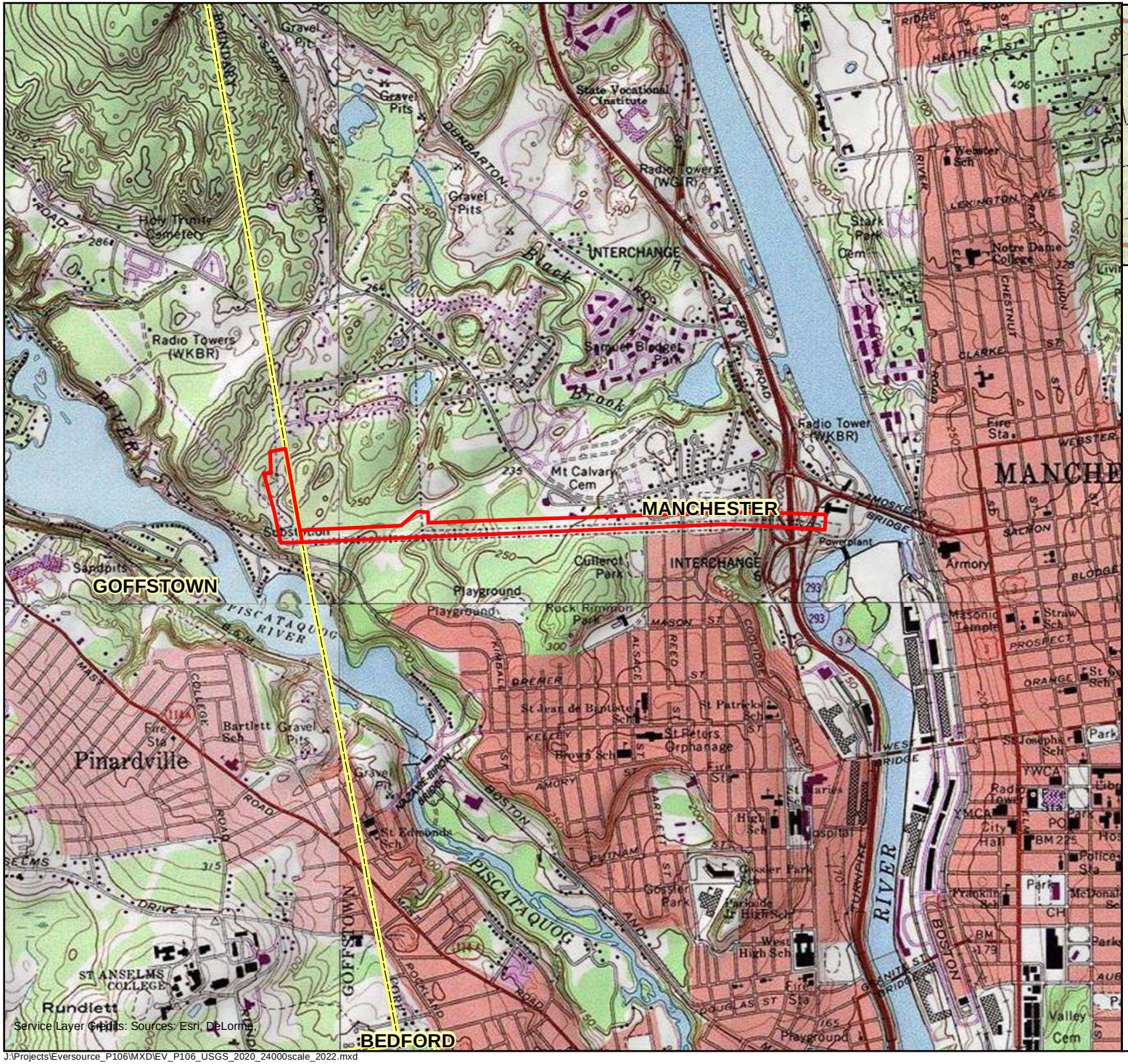
Attachment B: USGS Location Map



USGS Overview Map
Eversource P106 Line
2022 Structure Replacement Maintenance Project
Goffstown & Manchester, NH

Date: 8/18/2022

Project Area

Town Border

0 0.19 0.38
Miles

1 in equals 0.38 miles

1:24,000

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

Service Layer Credits: Sources: Esri, DeLorme,

J:\Projects\Eversource_P106\MXD\EV_P106_USGS_2020_24000scale_2022.mxd

Attachment C: Photographs

Photos:

Photo 1. Str. 50 future work area, viewing northeast.

Photo 2. Str. 51.1 future work area, viewing southeast.

Photo 3. Proposed access road between Strs. 50 and 51.3, viewing south.

Photo 4. Str. 51.2 future work area, viewing northeast.

Photo 5. Proposed access road between Strs. 51.2 and 51.3, viewing south.

Photo 7. Str. 51.3 future work area, viewing south.

Photo 8. Proposed access road between Str. 51.3 and 52, viewing southeast.

Photo 9. Str. 52 future work area, viewing south.

Photo 10. Proposed access road between Str. 52 and 53, viewing east.

Photo 11. Str. 53 work area, viewing southeast.

Photo 12. Proposed access road splits between main road and smaller side road to Str. 54, viewing east.

Photo 13. Str. 54 future work area, viewing northwest.

Photo 14. Side road leading to Str. 54 quickly returns to wider main road, leads to Str. 55, viewing east.

Photo 15. Str. 55 future work area, viewing east. Note ATV path immediately below structure.

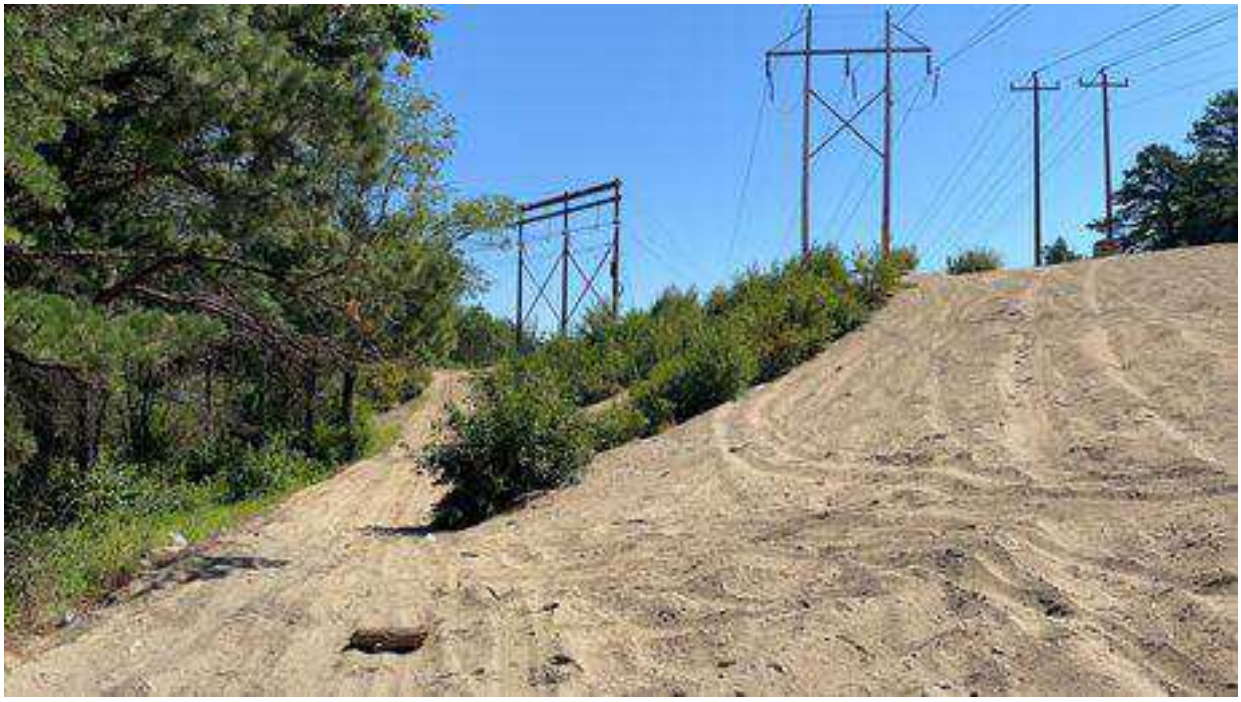


Photo 16. Proposed access road between Str. 55 and 56, close to Str. 56, viewing east.

Photo 17. Str. 56 future work area, viewing east.

Photo 19. Str. 57 future work area, viewing east.

Photo 20. Proposed access road between Strs. 57 and 58, viewing east.

Photo 21. Str. 58 future work area, viewing southeast from proposed access road.

Photo 22. Str. 59 future work area, viewing southeast.

Photo 23. Str. 60 future work area, viewing southeast.

Photo 24. Str. 61 future work area, viewing southeast.

Photo 25. Proposed access road between Strs.61 and 62, viewing east.

Photo 26. Str. 62 future work area, viewing southeast.

Photo 27. Str. 63 future work area, viewing northeast.

Photo 28. Proposed access road between Strs. 63 and 64, viewing east.

Photo 29. Str. 64 future work area, viewing southeast.

Photo 30. Str. 65 future work area, viewing southeast.

Photo 31. Montgomery Street crossing, viewing east. Str. 66 visible in distance.

Photo 32. Str. 66 future work area, viewing northeast.

Photo 33. Proposed access road to Str. 67, viewing east.

Photo 34. Str. 67 future work area, viewing southeast.

Photo 35. Str. 68 future work area, viewing southeast.

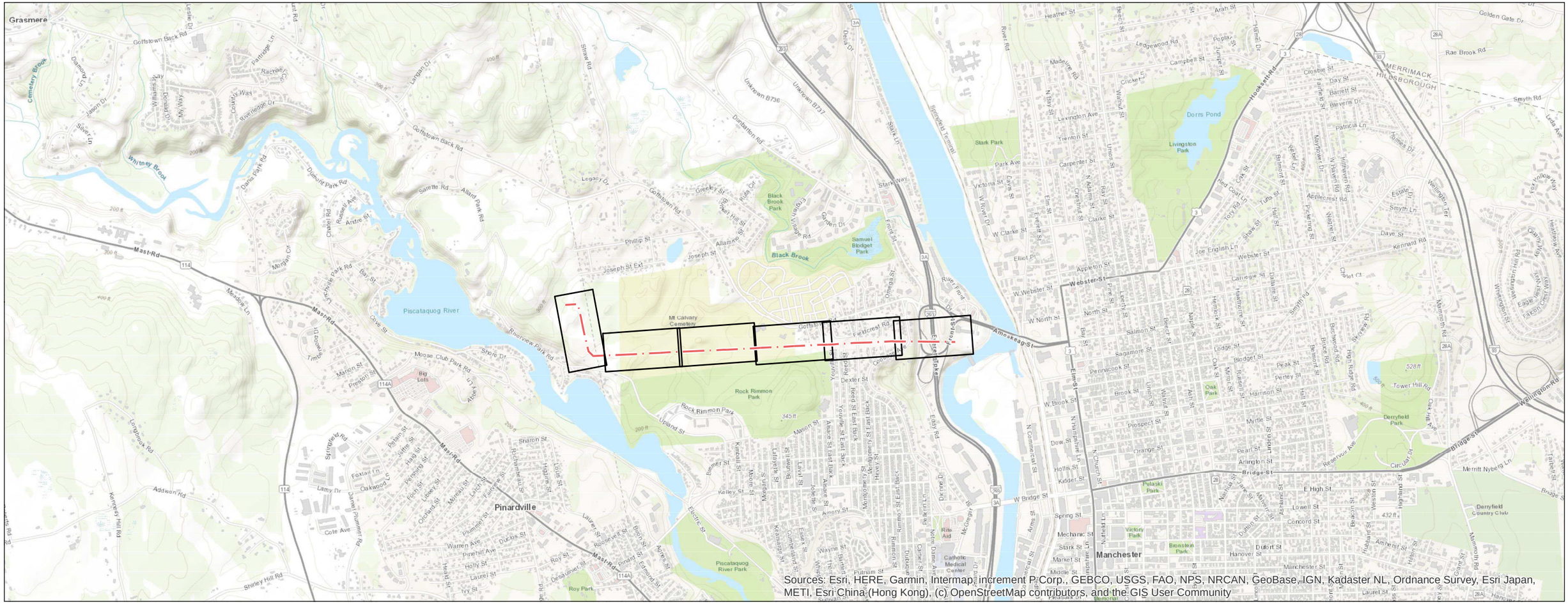
Photo 36. Str. 69 future work area, viewing south.

Photo 37. Str. 70 future work area, viewing from highway.

Attachment D: Project Plans

P106 Line - Structure Replacement Project

GOFFSTOWN AND MANCHESTER,
NEW HAMPSHIRE
Construction Maps
DRAFT Map Set
Date: August 19, 2022



P106 Transmission Line

3

0 0.25 0.5 1 Miles

PREPARED FOR:

EVERSOURCE

107 Selden Street
Berlin, CT 06037

INDEX OF FIGURES

Title Sheet / Index Map
Map Sheets 1-6

NO.	DATE	REVISIONS

PREPARED BY:

NORMANDEAU ASSOCIATES
ENVIRONMENTAL CONSULTANTS

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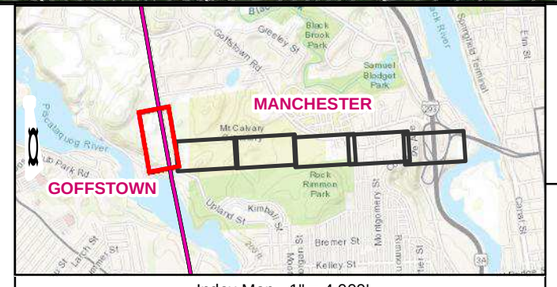
- Existing Structure to be Replaced
- Structure to Remain
- Existing Structures- Other Lines
- Proposed Access Road
- Suggested ESCs
- Transmission Lines
- P106
- NHD Streams
- Roads (NHDOT)
- 2 Foot Contours
- D121_Wetlands
- Upland Matting
- Stone Work Pad
- Right-of-Way
- Parcel Boundaries (From NH GRANIT)
- Town Line

Municipality: Goffstown/Manchester

1 inch = 100 feet

0 50 100 200 Feet



Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement
Construction Plans

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Date: 8/19/2022

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Municipality: Manchester

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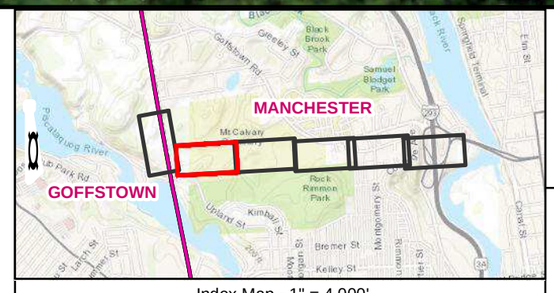

Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement Construction Plans

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Date: 8/19/2022

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777-6C

777-6

MANCHESTER

777-5

D121

STR. 57

P106

MAW05
PEM1F

358 Line

777-5A

359 Line

STR. 58

STR. 59

STR. 60

777-6A

Data sources: NHD, NH GRANIT & ESRI

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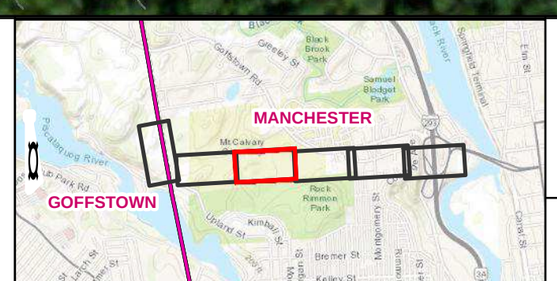
Municipality: Manchester

1 inch = 100 feet

0 50 100 200 Feet



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Eversource - P106 Line

Structure Replacement
Construction Plans

Date: 8/19/2022

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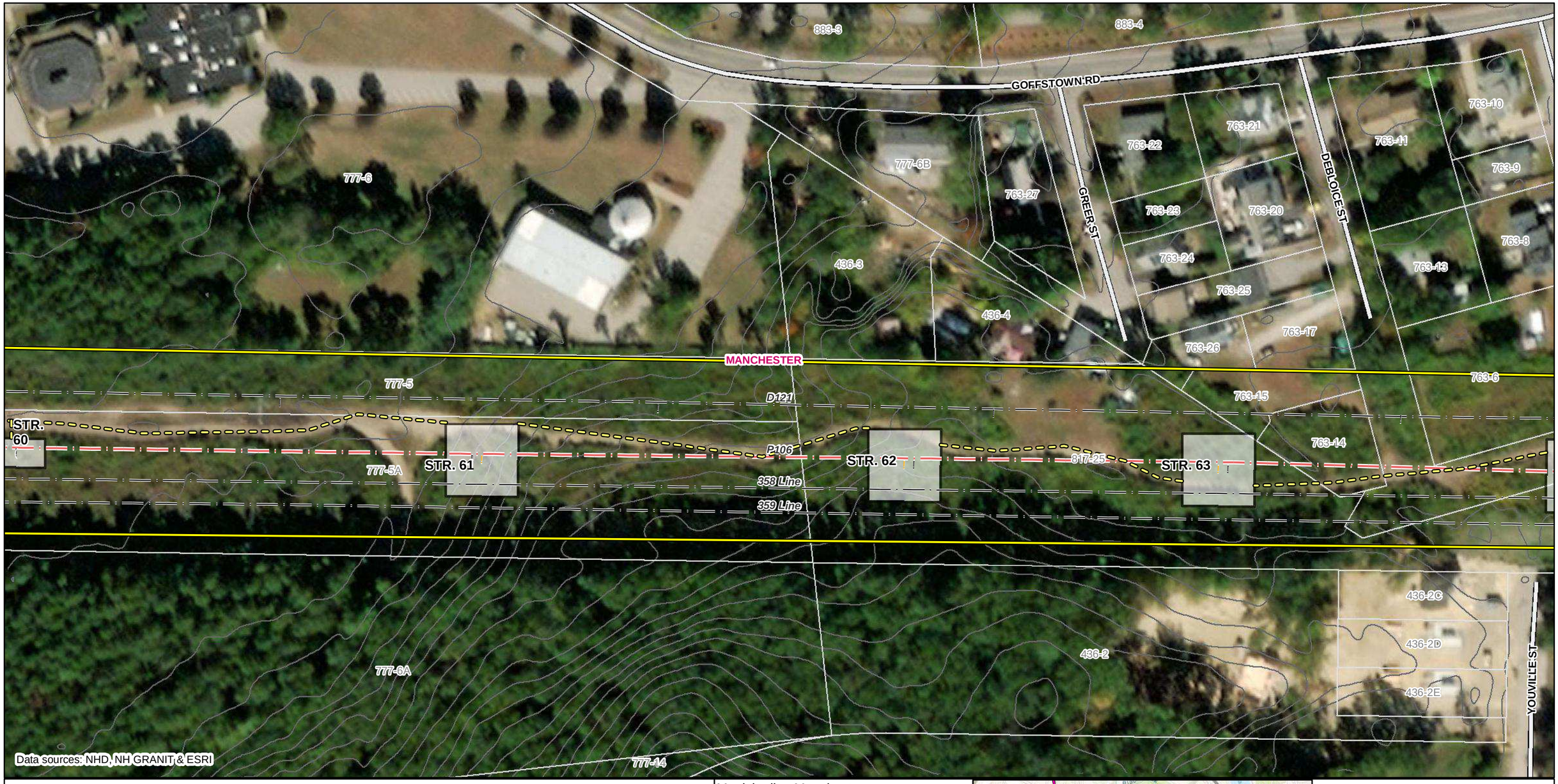

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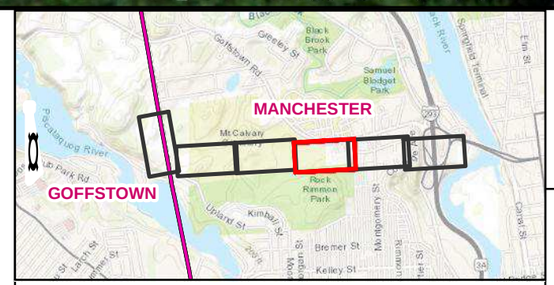

Eversource - P106 Line

Structure Replacement Construction Plans

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Date: 8/19/2022

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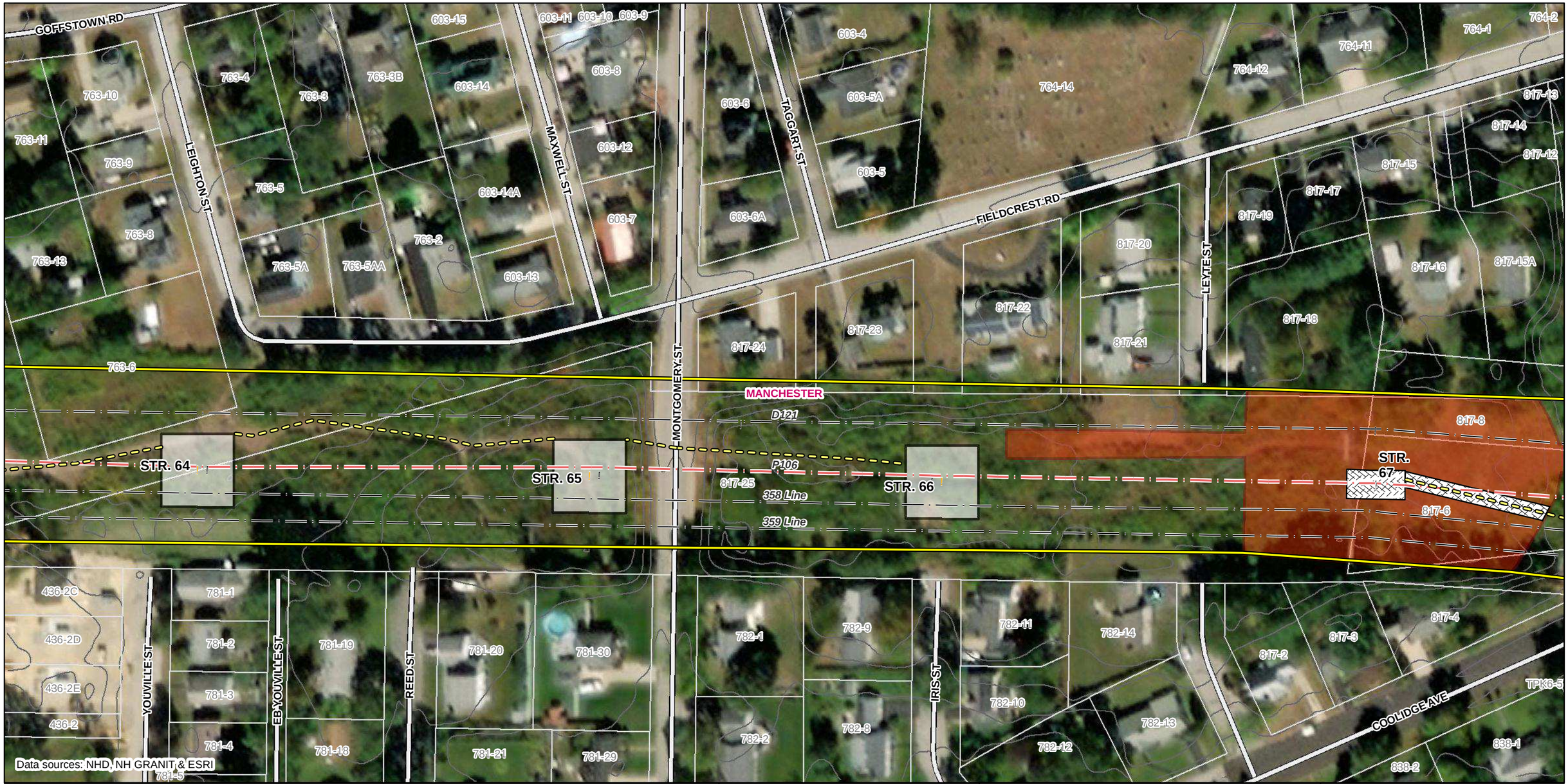

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Municipality: Manchester

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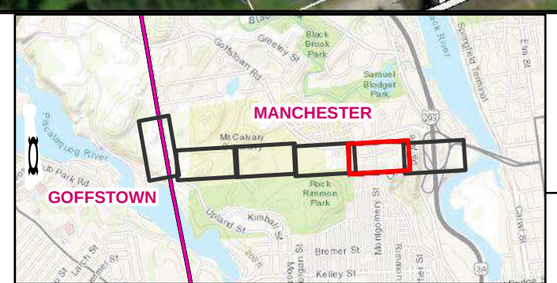
0 50 100 200 Feet



Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement Construction Plans

Date: 8/19/2022

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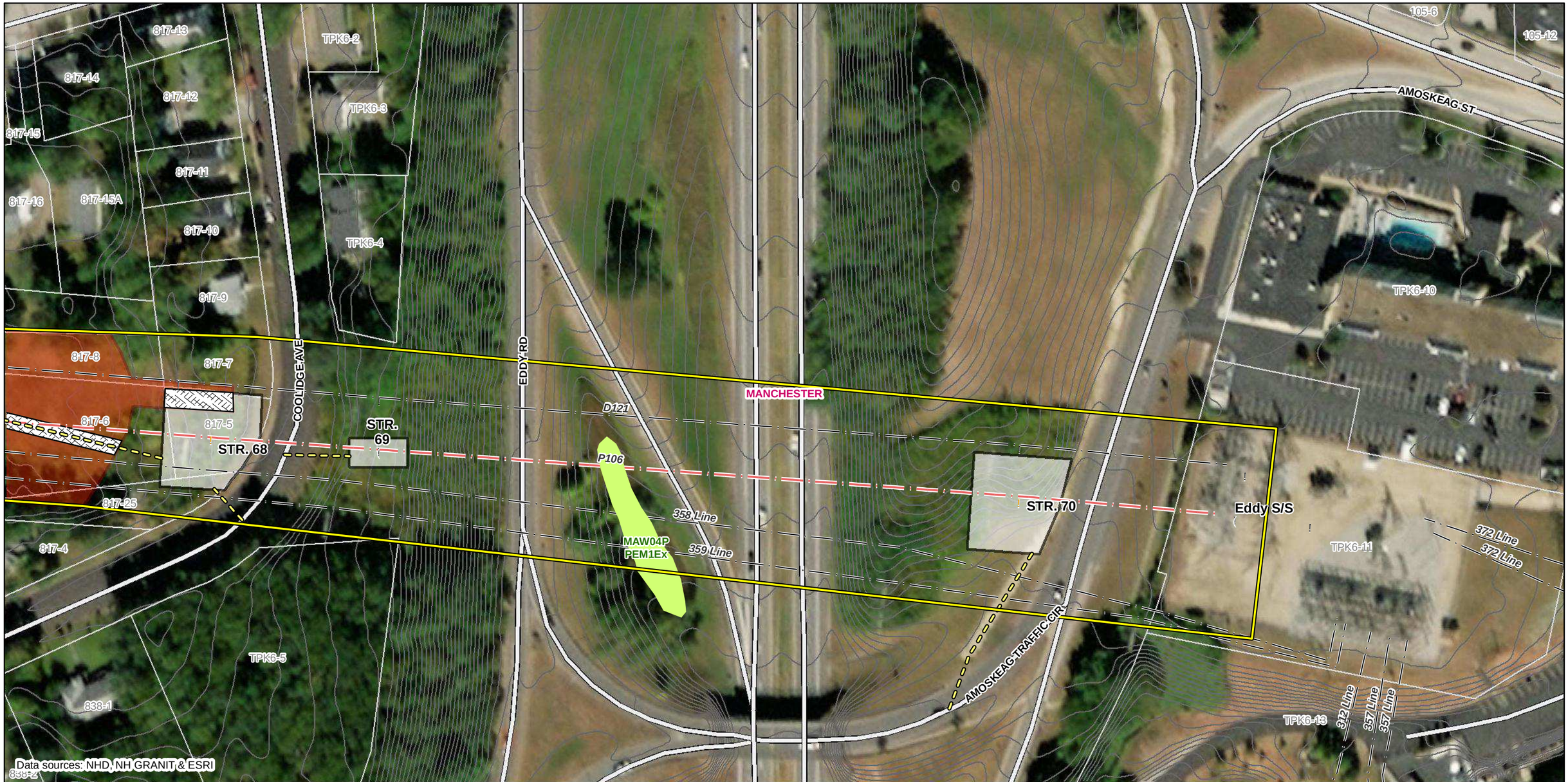

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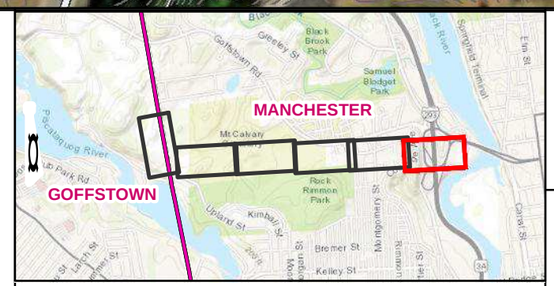


Index Map - 1" = 4,000'

Eversource - P106 Line

Structure Replacement Construction Plans

Date: 8/19/2022

NORMANDEAU ASSOCIATES
Environmental Consultants

7.4 Appendix D. USDA Web Soil Survey Map/Report

United States Department of Agriculture

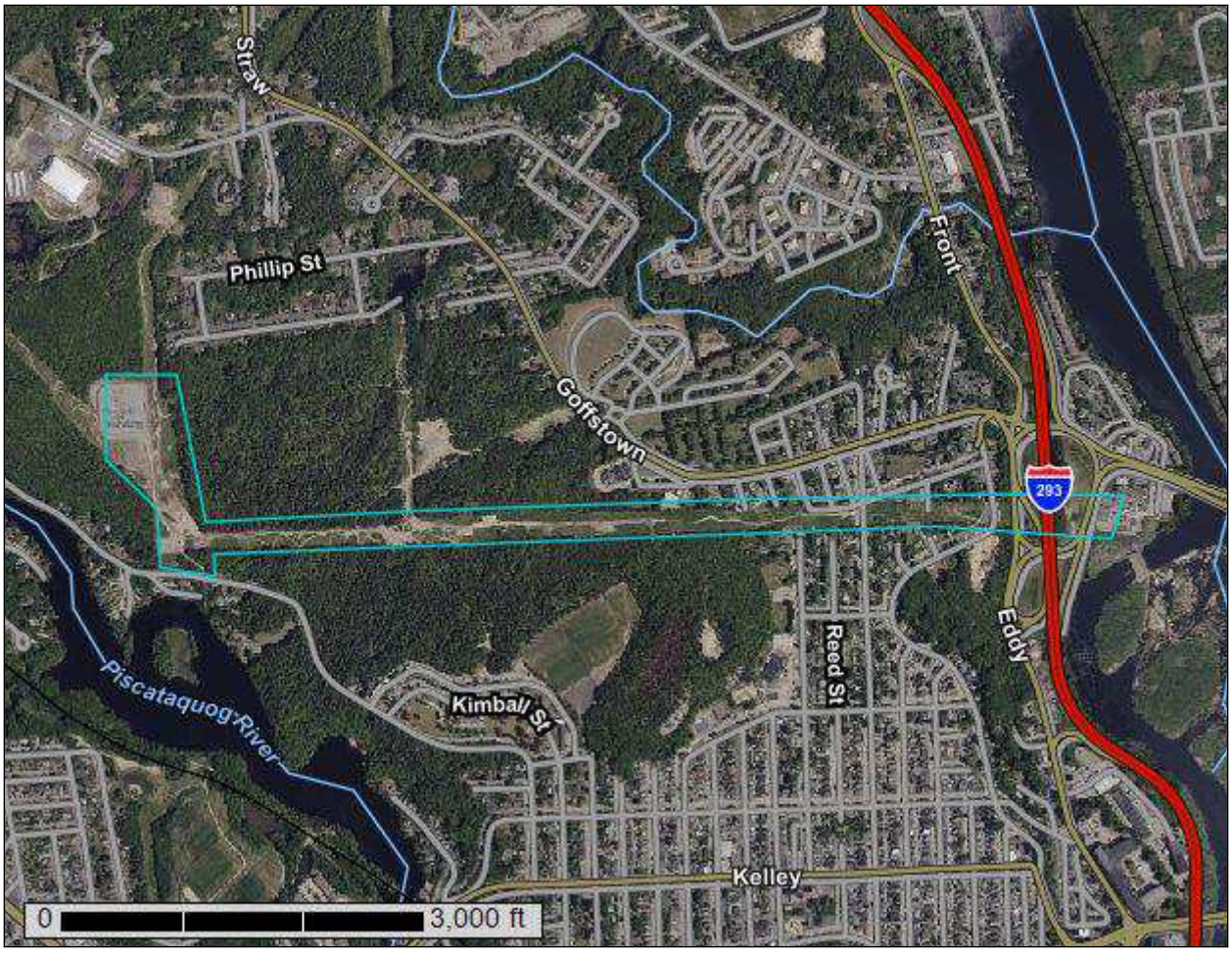
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Hillsborough County, New Hampshire, Eastern Part

Eversource P106 Line



August 26, 2022

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

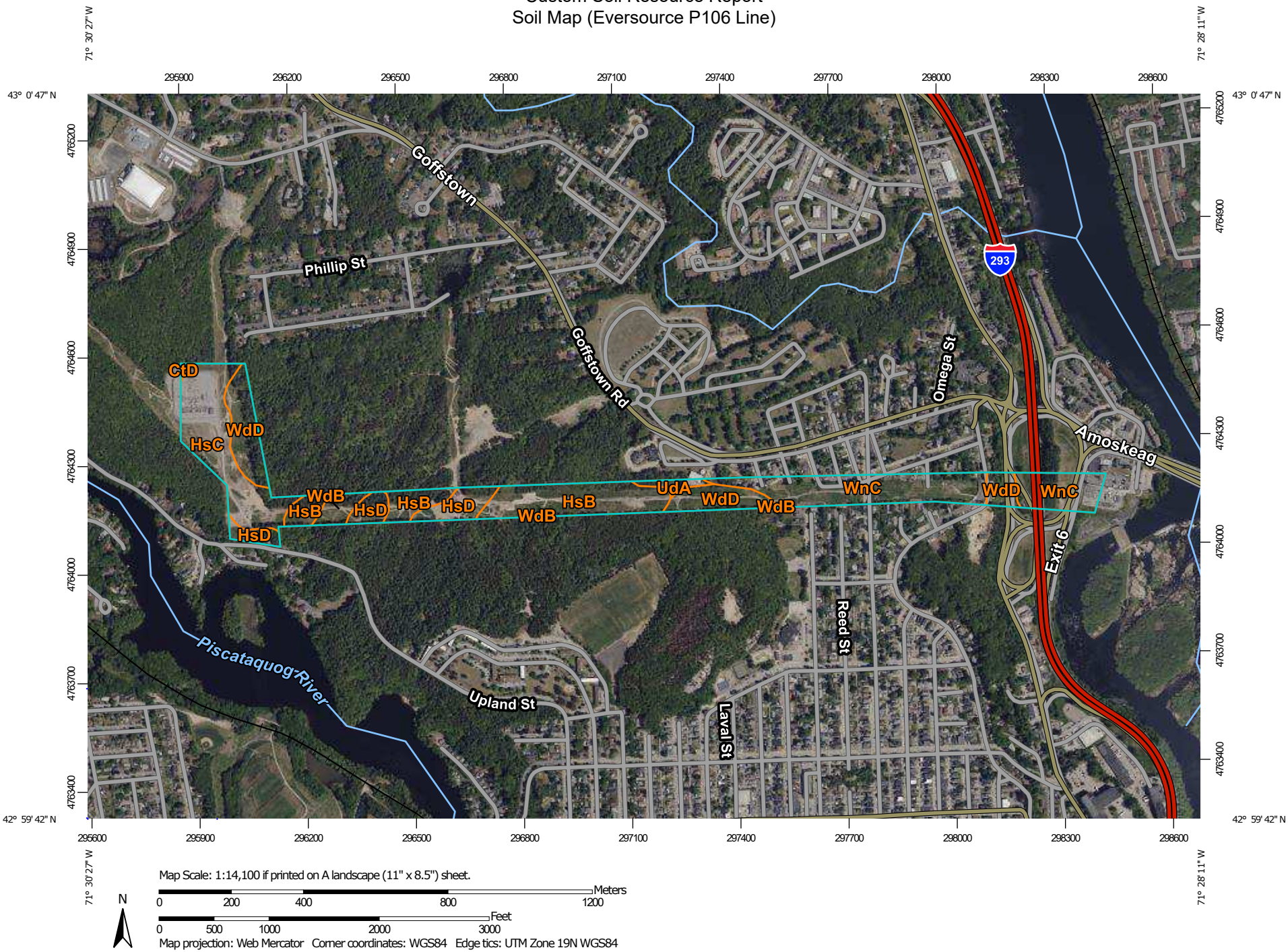
alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Eversource P106 Line)



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 1:20,000.

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: Hillsborough County, New Hampshire, Eastern Part
Survey Area Data: Version 24, 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 22, 2022—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 (Eversource P106 Line)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CtD	Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes	0.1	0.2%
HsB	Hinckley loamy sand, 3 to 8 percent slopes	15.1	21.4%
HsC	Hinckley loamy sand, 8 to 15 percent slopes	14.5	20.5%
HsD	Hinckley loamy sand, 15 to 35 percent slopes	6.6	9.4%
UdA	Udipsamments, nearly level	1.1	1.5%
WdB	Windsor loamy sand, 3 to 8 percent slopes	2.1	2.9%
WdD	Windsor loamy sand, 15 to 35 percent slopes	11.6	16.5%
WnC	Windsor-Urban land complex, 3 to 15 percent slopes	19.4	27.5%
Totals for Area of Interest		**70.5**	**100.0%**

Map Unit Descriptions (Eversource P106 Line)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the

scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Hillsborough County, New Hampshire, Eastern Part

CtD—Chatfield-Hollis-Rock outcrop complex, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2w69h
Elevation: 0 to 1,540 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Chatfield, extremely stony, and similar soils: 35 percent
Hollis, extremely stony, and similar soils: 30 percent
Rock outcrop: 20 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chatfield, Extremely Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 2 inches: fine sandy loam
Bw - 2 to 30 inches: gravelly fine sandy loam
2R - 30 to 40 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 20 to 41 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Ecological site: F144AY034CT - Well Drained Till Uplands

Hydric soil rating: No

Description of Hollis, Extremely Stony

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Nose slope, side slope, crest
Down-slope shape: Convex
Across-slope shape: Linear, convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 7 inches: gravelly fine sandy loam
Bw - 7 to 16 inches: gravelly fine sandy loam
2R - 16 to 26 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Surface area covered with cobbles, stones or boulders: 9.0 percent
Depth to restrictive feature: 8 to 23 inches to lithic bedrock
Drainage class: Somewhat excessively drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: F144AY033MA - Shallow Dry Till Uplands
Hydric soil rating: No

Description of Rock Outcrop

Setting

Landform: Ridges, hills
Parent material: Igneous and metamorphic rock

Typical profile

R - 0 to 79 inches: bedrock

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: 0 inches to lithic bedrock
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)
Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Charlton, extremely stony

Percent of map unit: 7 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Leicester, extremely stony

Percent of map unit: 4 percent
Landform: Ground moraines, hills, drainageways, depressions
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, extremely stony

Percent of map unit: 2 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Paxton, extremely stony

Percent of map unit: 2 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

HsB—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8

Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 8 percent

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Head slope, side slope, base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Nose slope, side slope, base slope, crest, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HsC—Hinckley loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svm9
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces

Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, moraines, outwash plains, kame terraces, outwash terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Kames, outwash plains, outwash terraces, moraines, eskers
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames, outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

HsD—Hinckley loamy sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2svmd
Elevation: 0 to 860 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches

Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 10 percent
Landform: Moraines, eskers, kames, outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Merrimac

Percent of map unit: 3 percent
Landform: Kame terraces, outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash plains, kame terraces, outwash terraces, moraines
Landform position (two-dimensional): Backslope, footslope, toeslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

UdA—Udipsamments, nearly level

Map Unit Setting

National map unit symbol: 9ff9
Elevation: 0 to 1,000 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 140 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Udipsamments and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udipsamments

Setting

Parent material: Outwash

Typical profile

H - 0 to 60 inches: sand

Properties and qualities

Slope: 0 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High to very high (6.00 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Minor Components

Not soil

Percent of map unit: 10 percent
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Hydric soil rating: No

WdB—Windsor loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svkf
Elevation: 0 to 1,210 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of local importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Dunes, outwash plains, deltas, outwash terraces
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash

Hydric soil rating: No

Minor Components

Hinckley, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, crest, side slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

WdD—Windsor loamy sand, 15 to 35 percent slopes

Map Unit Setting

National map unit symbol: 2svl4
Elevation: 0 to 680 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Windsor and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material

A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 15 to 35 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 5 percent
Landform: Outwash plains, outwash terraces, moraines, stream terraces, eskers, kames
Landform position (three-dimensional): Rise
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

WnC—Windsor-Urban land complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svmx
Elevation: 100 to 960 feet
Mean annual precipitation: 36 to 71 inches

Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Windsor and similar soils: 50 percent
Urban land: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor

Setting

Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

A - 0 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Description of Urban Land

Typical profile

M - 0 to 10 inches: cemented material

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 0 inches to manufactured layer
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Available water supply, 0 to 60 inches: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: Unranked

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Head slope, nose slope, side slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Deerfield

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent
Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

References

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7.5 Appendix E. Photo Log

Photos:

Photo 1. Str. 50 future work area, viewing northeast.

Photo 2. Str. 51.1 future work area, viewing southeast.

Photo 3. Proposed access road between Strs. 50 and 51.3, viewing south.

Photo 4. Str. 51.2 future work area, viewing northeast.

Photo 5. Proposed access road between Strs. 51.2 and 51.3, viewing south.

Photo 7. Str. 51.3 future work area, viewing south.

Photo 8. Proposed access road between Str. 51.3 and 52, viewing southeast.

Photo 9. Str. 52 future work area, viewing south.

Photo 10. Proposed access road between Str. 52 and 53, viewing east.

Photo 11. Str. 53 work area, viewing southeast.

Photo 12. Proposed access road splits between main road and smaller side road to Str. 54, viewing east.

Photo 13. Str. 54 future work area, viewing northwest.

Photo 14. Side road leading to Str. 54 quickly returns to wider main road, leads to Str. 55, viewing east.

Photo 15. Str. 55 future work area, viewing east. Note ATV path immediately below structure.

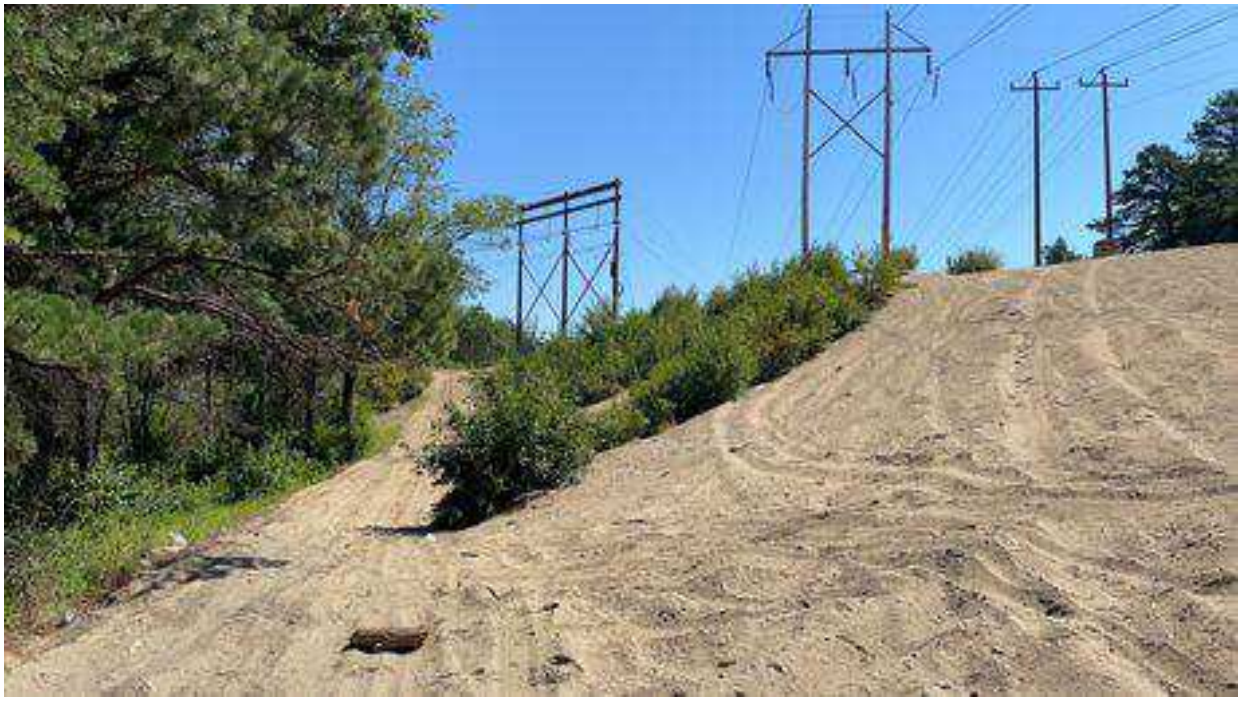

Photo 16. Proposed access road between Str. 55 and 56, close to Str. 56, viewing east.

Photo 17. Str. 56 future work area, viewing east.

Photo 19. Str. 57 future work area, viewing east.

Photo 20. Proposed access road between Strs. 57 and 58, viewing east.

Photo 21. Str. 58 future work area, viewing southeast from proposed access road.

Photo 22. Str. 59 future work area, viewing southeast.

Photo 23. Str. 60 future work area, viewing southeast.

Photo 24. Str. 61 future work area, viewing southeast.

Photo 25. Proposed access road between Strs.61 and 62, viewing east.

Photo 26. Str. 62 future work area, viewing southeast.

Photo 27. Str. 63 future work area, viewing northeast.

Photo 28. Proposed access road between Strs. 63 and 64, viewing east.

Photo 29. Str. 64 future work area, viewing southeast.

Photo 30. Str. 65 future work area, viewing southeast.

Photo 31. Montgomery Street crossing, viewing east. Str. 66 visible in distance.

Photo 32. Str. 66 future work area, viewing northeast.

Photo 33. Proposed access road to Str. 67, viewing east.

Photo 34. Str. 67 future work area, viewing southeast.

Photo 35. Str. 68 future work area, viewing southeast.

Photo 36. Str. 69 future work area, viewing south.

Photo 37. Str. 70 future work area, viewing from highway.

7.6 Appendix F. Waiver Request

Alteration of Terrain Waiver Request

RSA/Rule: RSA 485-A:17, Env – WQ 1500

Water Division / Alteration of Terrain Bureau / Land resources Management
29 Hazen Drive, PO Box 95
Concord, New Hampshire 03302-0095

A. PROJECT INFORMATION		
P106 Line Structure and OPGW Replacement Project Project Name		
Existing P106 Transmission Line Right-of-Way Street Address		
Goffstown and Manchester City/Town		Multiple Zip Code
Multiple – see attached Tax Map/Lot Number		

B. APPLICANT/OWNER INFORMATION		
Ashley First Name		Friend Last Name
Eversource Energy Organization		
13 Legends Drive Street Address		
Hooksett City/Town	New Hampshire State	03106 Zip Code
Ashley.friend@eversource.com Email		603-634-2992 Telephone Number

C. APPLICANT/OWNER AGENT INFORMATION		
William First Name		McCloy Last Name
Normandeau Associates, Inc. Organization		
25 Nashua Road Street Address		
Bedford City/Town	New Hampshire State	03110 Zip Code
wmccloy@normandeau.com Email		802-861-7038 Telephone Number

D. WAIVER REQUESTS	
Env-Wq 1504.09 Rule Section Waiver Request	Stormwater Drainage Report; Drainage Area Plans; Hydrologic Soil Group Plans Name of Rule
Reason for Waiver Request Eversource is requesting a waiver for preparing a Stormwater Drainage Report, Drainage Area Plans and Hydrologic Soil Group Plans for proposed access improvements and work pad grading associated with maintenance of the existing P106 Transmission Line structures. The proposed access and work pad improvements for continued transmission line maintenance work will not result in new impervious surfaces. As a result stormwater treatment practices are not proposed.	
Waiver Timeline Permanent	
Proposed Alternative The proposed access and work pad improvements will not result in new impervious surface. Therefore, there is no proposed alternative to substitute the requirements of Env-Wq 1504.09.	
Compliance with Env- WQ 1509.04 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 in order to maintain the safety and reliability of the electrical infrastructure. Access and work pad improvements will be completed using stone and gravel, and therefore stormwater drainage should not be affected by the proposed project. In addition, it is not anticipated that stormwater drainage area plans would show significant differences between existing and proposed conditions. An NRCS Web Soil Survey report was generated to show general soil information within the project area. Since there is no new impervious surface area proposed and stormwater drainage is not anticipated to be affected by the proposed project, it is not anticipated that soils will be significantly impacted by the project. Best Management Practices will be utilized to protect wetlands from erosion, sedimentation, or other environmental degradation. In addition, gravel work pads will be coated with seed and mulch to allow vegetation growth on the surface, further minimizing and preventing erosion and sedimentation. As a result, Eversource respectfully requests that a Stormwater Drainage Report, Drainage Area Plans, and Hydrologic Soil Group Plans be waived for the purposes of the proposed utility line maintenance project.	

E. SIGNATURES

9/2/22

Applicant/Owner, Ashley Friend,
Eversource Energy

Date

9/2/22

Applicant/Owner Agent, William McCloy,
Normandeau Associates, Inc.

Date

A. PROJECT INFORMATION		
P106 Line Structure and OPGW Replacement Project Project Name		
Existing P106 Transmission Line Right-of-Way Street Address		
Goffstown and Manchester City/Town		Goffstown and Manchester City/Town
Multiple – see attached Tax Map/Lot Number		

B. APPLICANT/OWNER INFORMATION		
Ashley First Name		Friend Last Name
Eversource Energy Organization		
13 Legends Drive Street Address		
Hooksett City/Town	New Hampshire State	03106 Zip Code
Ashley.friend@eversource.com Email		603-634-2992 Telephone Number

C. APPLICANT/OWNER AGENT INFORMATION		
William First Name		McCloy Last Name
Normandeau Associates, Inc. Organization		
25 Nashua Road Street Address		
Bedford City/Town	New Hampshire State	Bedford City/Town
wmccloy@normandeau.com Email		802-861-7038 Telephone Number

D. WAIVER REQUESTS

Env-Wq 1503.12 (d)(1&2) Rule Section Waiver Request	Measurement of Contiguous Area Disturbed; Inclusion in Plans Name of Rule

Reason for Waiver Request

Eversource is requesting a waiver for including past terrain disturbance in the measurement of contiguous disturbed area included in this P106 Line AOT application. Future disturbance, beyond the scope of P106 line structure replacement project described in this application is not known at this time.

Waiver Timeline

Permanent

Proposed Alternative

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 P106 ROWs. Eversource, through consultation with NHDES, will evaluate whether future terrain disturbances within the P106 ROW will be permitted with an amendment to this application or subject to a new, separate application.

Compliance with Env-Wq 1503.12 (d)(1&2)

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 2022 and 2023 within the P106 ROW are included in this application and shown on Figures 3 and 4. Project disturbances included in this application and subsequent permit approvals will be considered if future structure maintenance is proposed within the P106 ROW. Eversource respectfully requests a waiver from including past disturbance in this application. Future disturbances within the P106 ROW will be evaluated and discussed with NHDES and permit amendments or new permit applications will be submitted, if necessary.

E. SIGNATURES

9/2/22

Applicant/Owner, Ashley Friend, Eversource Energy — Date

9/2/22

Applicant/Owner Agent, William McCloy, Normandeau Associates, Inc. — Date

A. PROJECT INFORMATION	
P106 Line Structure and OPGW Replacement Project Project Name	
Existing P106 Transmission Line Right-of-Way Street Address	
Goffstown and Manchester City/Town	Goffstown and Manchester City/Town
Multiple – see attached Tax Map/Lot Number	

B. APPLICANT/OWNER INFORMATION		
Ashley First Name	Friend Last Name	
Eversource Energy Organization		
13 Legends Drive Street Address		
Hooksett City/Town	New Hampshire State	03106 Zip Code
Ashley.friend@eversource.com Email	603-634-2992 Telephone Number	

C. APPLICANT/OWNER AGENT INFORMATION		
William First Name	McCloy Last Name	
Normandeau Associates, Inc. Organization		
25 Nashua Road Street Address		
Bedford City/Town	New Hampshire State	Bedford City/Town
wmccloy@normandeau.com Email	802-861-7038 Telephone Number	

D. WAIVER REQUESTS	
Env-Wq 1503.21 (d)(6&7) Rule Section Waiver Request	Notification; Certification Name of Rule

Reason for Waiver Request

Eversource is requesting a waiver for deviations from the approved plans without applying for an amended permit or a new permit if shifts in the proposed project layout occur. Changes in project layout are frequently identified during construction by Eversource and their contractors and may be necessary to safely perform the work. Access shifts would be limited to the extent necessary for safety, would not impact new resources, and access would remain within the existing and maintained ROW. The need for additional permit applications can impact construction schedules and incur costly delays.

Waiver Timeline

Permanent

Proposed Alternative

Allow for the access road centerlines to be relocated during construction, if necessary, up to a distance equal to the approximate width of the ROW (approximately 200 feet on the P106 Line). Shifts would not create greater than 5% increase in disturbed area along the individual access segment, which is assumed to be the length of the access road between two work pads/structures.

Allow for the center point of the parking area, assumed to be the structure replacement work pads for transmission line projects, to be relocated during construction, if necessary, up to a distance equal to half the approximate width of the ROW (approximately 200 feet on the P106 Line). Shifts would not create greater than 5% increase in disturbed area at each work pad.

This would allow contractors to avoid steep terrain or other hazardous areas, or areas that may require significant grading or earthwork that may not have been identified during initial constructability reviews. Landowners may also request layout changes be made after project permitting is complete. In most cases this shift is done to reduce the amount of disturbed area.

Compliance with Env-Wq 1503.21 (d)(6&7)

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 shown on Figures 3 and 4 are the result of avoidance and minimization measures and constructability reviews. Layout changes and shifts will be limited to the proposed alternative above. A reduction in disturbed area is often the result. As previously mentioned, access shifts would be limited to the extent necessary to safely perform work. Access routes will remain within the existing and maintained ROW and would not disturb new resources. Best Management Practices will be utilized to protect wetlands from erosion, sedimentation, or other environmental degradation as originally proposed. Eversource respectfully requests a waiver from limiting shifts of the project road centerlines and parking areas to 20 feet.

E. SIGNATURES

Applicant/Owner, Ashley Friend,
Eversource Energy

9/2/22
Date

Applicant/Owner Agent, William McCloy,
Normandeau Associates, Inc.

9/2/22
Date

7.7 Appendix G. Mail Receipts

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at www.usps.com®.

Manchester, NH 03101

OFFICIAL USE

Certified Mail Fee $4.00

Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $0.00
- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $9.90

Total Postage and Fees $13.90

Postmark Here
SEP - 2 2022
MANCHESTER NH BEDFORD BRANCH 03110
USPS
01 08 02

09/02/2022

Sent To: City of Manchester, Clerk
Street and Apt. No., or PO Box No.: 1 City Hall Plaza
City, State, ZIP+4®: Manchester, NH 03101

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 6109 2269

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Goffstown, NH 03045

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- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $9.25

Total Postage and Fees $13.25

Postmark Here
SEP 2 2022
MANCHESTER NH BEDFORD BRANCH 03110
USPS
01 08 02

09/02/2022

Sent To: Town of Goffstown
Street and Apt. No., or PO Box No.: 16 Main St.
City, State, ZIP+4®: Goffstown NH 03045

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 6109 2276

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Manchester, NH 03102

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Extra Services & Fees (check box, add fee as appropriate)
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- Return Receipt (electronic) $0.00
- Certified Mail Restricted Delivery $0.00
- Adult Signature Required $0.00
- Adult Signature Restricted Delivery $

Postage $9.90

Total Postage and Fees $13.90

Postmark Here
SEP - 2 2022
MANCHESTER NH BEDFORD BRANCH 03110
USPS
01 08 02

09/02/2022

Sent To: Piscataquog River LAC
Street and Apt. No., or PO Box No.: 609 South Main St.
City, State, ZIP+4®: Manchester, NH 03102

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7021 2720 0000 6109 2252

Redaction Log

Total Number of Redactions in Document: 48

Redaction Reasons by Page

Page	Reason	Description	Occurrences
65	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
66	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
67	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
68	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
69	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
70	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
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79	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
80	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
81	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
82	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
83	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
84	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

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118	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
119	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
120	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

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123	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
124	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
125	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
126	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
127	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
128	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
129	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Page	Reason	Description	Occurrences
130	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
131	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
132	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1
133	CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	1

Redaction Log

Redaction Reasons by Exemption

Reason	Description	Pages (Count)
CONFIDENTIAL DNCR	NH RSA 91-A:5, IV Confidential information. NH Department of Natural and Cultural Resources (DNCR) has asserted a claim of confidentiality. See also NH RSA 212-A, RSA 212-B, RSA 217-A, and/or RSA 227-C:11.	65(1) 66(1) 67(1) 68(1) 69(1) 70(1) 74(1) 75(1) 76(1) 77(1) 78(1) 79(1) 80(1) 81(1) 82(1) 83(1) 84(1) 85(1) 86(1) 87(1) 88(1) 89(1) 90(1) 91(1) 107(1) 108(1) 109(1) 110(1) 111(1) 112(1) 116(1) 117(1) 118(1) 119(1) 120(1) 121(1) 122(1) 123(1) 124(1) 125(1) 126(1) 127(1) 128(1) 129(1) 130(1) 131(1) 132(1) 133(1)