



March 13, 2020

Ref: 52664.00

Mr. Mark Avery
 Madbury Planning Board Chair
 Town Offices
 13 Town Hall Road
 Madbury, NH 03823

Re: Town of Madbury Conditional Use Permit Application
 G128/307 Line Structure Replacements, Madbury, NH

Dear Mr. Avery:

On behalf of Public Service Company of New Hampshire d/b/a Eversource Energy (PSNH), VHB is submitting this Conditional Use Permit Application to the Town of Madbury Planning Board for proposed utility maintenance on the existing G128, 115 kV transmission line and the 307, 345 kV transmission line in Madbury, NH. This Conditional Use Permit is being submitted in accordance with *Article IX, Section 4(C)* of the Town’s Land Use Regulations. A Conditional Use Permit is required for the proposed maintenance work to allow temporary impacts to wetlands and streams and wetland buffers protected under the Wet Areas Conservation Overlay District.

Project Description

PSNH intends to replace six (6) structures along the G128 Transmission Line and three (3) structures along the 307 Transmission Line in the Town of Madbury. The G128 and 307 Transmission Lines share the same maintained right-of-way (ROW) corridor. The eight structures to be replaced consist of two-pole or three-pole wood structures that will be replaced with weathered steel to meet current industry standards. Most of the structures will be installed within 10 feet of the original structure location with the exception of Structure 8 on the G128 line that will move 25 feet and Structure 94 on the 307 line that will move 15 feet. Generally, adjustments are made to structure locations to move structures out of wetland resources or for access during construction. Only Structure 7 on the G128 line is moving 10 feet farther into a wetland that could not be avoided. Please see the table below for proposed pole height increases on the G128 Line.

Structure	G128 - 4	G128 - 5	G128 - 6	G128 - 7	G128 - 8	G128 - 9
Existing Height	52'	52'	56.5'/61'	56.5'	52'/56.5'	47.5'/52'/52'
Proposed Height	65.5'	70'	65.5'	70'	70'	56.5'

Pole increases are necessary to maintain minimum clearance safety standards and balance line sag.

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

Engineers | Scientists | Planners | Designers



Project Need

The existing structures have been identified for replacement during Eversource annual maintenance inspections. The most common reason wooden structures need replacement is woodpecker damage and internal rot. The proposed replacement work is part of PSNH's on-going maintenance program conducted to ensure reliable electric service for their customers.

Project Execution

Prior to construction, Eversource contractors will install erosion control and sediment control barriers in accordance with permitting plans, the New Hampshire Department of Environmental Services (NHDES) conditions, and the *Best Management Practices Manual for Utility Maintenance in and Adjacent to Wetlands and Waterbodies in New Hampshire* ('Utility BMP Manual,' March 2019), published by the New Hampshire Department of Natural and Cultural Resources (NHDNCR). Selected BMPs may include silt sock, silt fence, or wood chip/compost berms/tubes. Wetland and stream resources, previously delineated by environmental consultants working for Eversource, have been recently verified by VHB and the wetland boundaries have been reflagged to assist crews. Construction crews will utilize existing established access (where present) within the limits of the ROW corridor off Madbury Road to reach the structures targeted for replacement.

Construction crews will utilize timber matting to gain access across a number of wetlands and streams within the vicinity of the proposed replacement work. Timber mats will also be set up around the base of the structures if the work pad around the structure intersects wetlands. The timber mats provide a stable work area to stage crews and equipment. The use of timber mats is a routine practice that reduces the impact of heavy equipment on saturated wetland soils by dispersing the equipment weight, preventing the formation of ruts, and minimizing soil erosion. Stream crossings will be bridged by timber mats (from bank to bank) in order to avoid direct stream impacts and to not obstruct stream flow.

Traditional augering and installation procedures will be used. All excavated spoils will be spread within an upland area of the project ROW (outside of NHDES jurisdiction) or will be trucked off-site and properly disposed of. Construction laydown areas used to store materials and equipment along the project ROW will be in upland areas. Contingent upon permit approval, work is proposed to commence later this month.

Erosion controls will be inspected daily by the crews and weekly by an environmental monitor to ensure that the BMPs are maintained throughout the duration of the project. Matting and other construction debris will be removed upon completion of the proposed work. Erosion controls will not be removed until project work is complete, and the project area is stabilized in accordance with NHDES guidance. Due to the use of timber mats, it is anticipated that minimal restoration within the ROW will be needed and that natural vegetative re-colonization of impacted areas will occur during summer vegetative growth periods. VHB will revisit the ROW during this time period to confirm vegetative regrowth. If necessary, an approved upland and/or wetland seed mix outlined in NHDES guidance manuals, will be applied to any areas where cover is slow to develop. Additionally, straw or weed-free hay will be applied in conjunction with seed.



NH Department of Environmental Services Notification

In accordance with NH RSA 482-A:3, XV, routine utility maintenance work is exempt from the standard wetland permitting process at the state level. However, Eversource is required to submit a Utility Maintenance Statutory Permit By Notification (SPN) to NHDES to cover the temporary wetland impact associated with use of timber matting within wetlands required to complete the replacement work on the G128 line. VHB is currently assisting Eversource with this filing. As part of the NHDES SPN process, The Town of Madbury will receive a copy of this filing. A SPN has already been filed for the 307 Line Work.

Conditional Use Permit Procedures and Requirements

Madbury Zoning Ordinances provide that Conditional Use Permit (CUP) applications can be approved for limited and regulated uses by the Planning Board if it is found that the use is consistent with the ordinances and do not have an adverse impact on the wet areas. A CUP may be issued in accordance with the approval criteria within Article IV, Section 9.

1. The site is suitable for the proposed use.

The site is an existing maintained utility corridor suitable for power transmission. PSNH holds an easement for overhead transmission line on the affected properties. The easement area currently contains three transmission lines. The project proposes maintenance activities on two of the existing transmission lines in the corridor. The proposed work will not change the spatial orientation of the lines within the ROW or the use of the site. Access roads will be built to temporarily access the work sites. The use does not require permanent access, public services or utilities.

2. The impacts of the proposed use on abutting properties and the neighborhood shall be no greater than the impacts of adjacent existing uses or other uses permitted in the zone.

The impacts of the proposed use on abutting properties and the neighborhood will not exceed the impacts of adjacent existing uses because there is no change in use. The proposed project includes the replacement of nine existing wood pole structures with 9 weathered steel structures. The structure replacements will not result in any increase in noise, odor, vibrations, or lighting. The poles will be slightly taller, as described above, and will have a darker brown appearance than the existing wood pole structures. Crews will operate during daytime hours (7am – 7 pm during the week).

3. Character of the site development shall be compatible with the established character of the neighborhood and shall mitigate any external impacts of the use on the neighborhood.

As discussed above, the proposed use is limited to the maintenance of existing transmission structures that are compatible with the established character of the neighborhood. The proposed project will not change the nature of the existing site as a transmission line corridor. Transmission structures will be constructed in proximity to the existing structures with moderate differences in visual appearance and height of the structures.

4. Preservation of the natural, cultural, historic, and scenic resources.

The proposed structure replacement requires temporary impact to wetlands and stream for access to structures and for the establishment of work pads to stage construction equipment and work crews. No permanent wetland or stream impact is proposed. The project has been carefully designed following a site



visit to avoid and minimize impacts to jurisdictional resource areas to the maximum extent practicable. Eversource is currently pursuing an agreement to allow access from Durham to the ROW in order to eliminate the access matting from Madbury Road.

Within the Town of Madbury, approximately **27,166 sq. ft.** of temporary wetland impacts is required for the placement of timber matting. Access will also result in approximately temporary wetland buffer impact. All work will be completed in accordance with the Best Management Practices for Utility Maintenance in New Hampshire (Utility BMPs).

Certified Wetland Scientist's Report

A portion of the proposed project will take place within the Town of Madbury Wet Areas Conservation Overlay District. The District includes all areas identified as wetland, as defined by the State, poorly drained and very poorly drained soils, and vernal pools as identified in *Article IX, Section 2*. Under *Section 3*, the provisions of *Article IX* apply to all wet areas and adjacent buffers except isolated, non-tidal wet areas with a contiguous surface area of less than 3,000 square feet. Wetland setbacks and buffers are defined in *Section 5*. Building and septic setbacks do not apply to this project, but a 25-foot wetland buffer does apply to jurisdictional wetlands within the proposed project area.

Wetlands within the G128/307 ROW were previously delineated in support of past Eversource maintenance work. Previously delineated wetlands were field verified by VHB Senior Environmental Scientist, Kristopher Wilkes (NH CWS #288), on February 19, 2020. Wetland verification was performed in accordance with the procedures and standards outlined in the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0* (January 2012). Wetland delineation also relied upon the *Field Indicators for Identifying Hydric Soils in New England, Version 4.0*, published by the New England Interstate Water Pollution Control Commission, and the *Field Indicators for Identifying Hydric Soils in the United States, Version 8.1* (published by the Natural Resources Conservation Service). Dominant wetland vegetation was assessed using the Northcentral and Northeast Regional Wetland Plant List published by the U.S. Army Corps of Engineers. Wetlands were classified using the USFWS methodology *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979, revised 1985). Wetland functions and values were also assessed using the *U.S. Army Corps of Engineers Highway Methodology Workbook Supplement* (September 1999). Site observations and field data collected during wetland and surface water verification field work is further summarized below.

A majority of the wetlands within the ROW are palustrine scrub shrub wetlands, sometimes interspersed with palustrine emergent cover types. The vegetation along the ROW is periodically mechanically cut to maintain a safe distance from the existing transmission lines, thus maintaining a shrub habitat. No vernal pools or floodplain wetlands were identified within the project area. Species typically found in these wetlands may include tree species, which are not permitted to grow beyond a sapling growth stage, including red maple, white pine (*Pinus strobus*), poplar, and species of birch (*Betula* spp.). Common dominant shrub species found within these wetlands include meadowsweet, glossy buckthorn, maleberry (*Lyonia ligustrina*), winterberry, speckled alder, and species of willow (*Salix* spp.). Palustrine emergent portions of these wetlands are typically dominated by New England aster (*Symphotrichum novae-angliae*), woolgrass (*Scirpus cyperinus*), interrupted fern (*Osmunda claytoniana*), sensitive fern, and bristly



dewberry. The majority of the wetlands provide limited functions and values due to their size and landscape position. The ROW corridor provides wildlife habitat and browsing opportunities that are different than the surrounding forests.

A large Palustrine, Scrub-Shrub, Broad-leaved Deciduous, Seasonally Flooded/Saturated wetland (PSSIE) wetland is adjacent to Madbury Road. One small perennial streams flow through the wetland that is classified as Riverine, Unknown Perennial, Unconsolidated Bottom, Sand (R5UB2). The principal functions and values of this wetland include floodflow alteration in the larger wetland due to the wetland's landscape position and its association with a perennial watercourse. Existing dense vegetation and the wetland's proximity to a road is likely contribute to the wetland's function for sediment/toxicant retention, however this function is less prevalent. Lastly, the large wetland holds some wildlife habitat value due to its vegetative composition and location with an existing ROW corridor.

The proposed project will not negatively impact the existing wetlands. Some temporal loss of wetland function as wildlife habitat is expected during construction. However, use of timber mats reduces the timeframe of impact by minimizing impact to the root structure of the plants so that revegetation happens faster.

Property Ownership and Abutters

All proposed work will occur within the limits of an existing electric utility ROW that is held as easement by the Public Service Company of NH. All owners of parcels where impacts to the WSWC District are to occur, as well as owners of parcels who abut or are located across the street from these properties will be notified of the proposed project in accordance with the Town of Madbury's Conditional Use Permit application process. The list of owners and abutters and the associated tax maps are attached.

Please do not hesitate to contact me if you have any questions at (603) 391-3951 or strefry@vhb.com.

Sincerely,

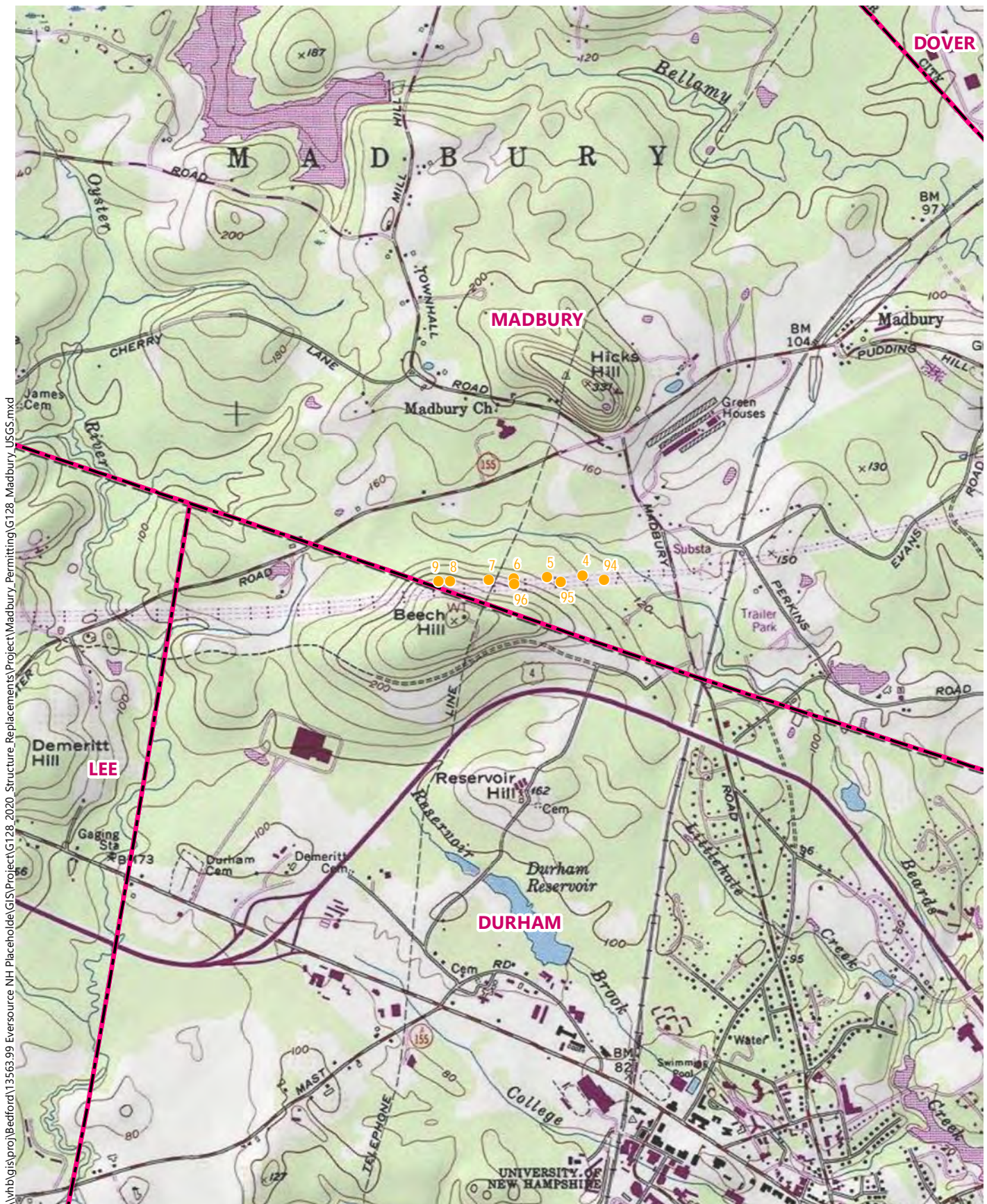
A handwritten signature in black ink that reads "Sherrie Trefry".

Sherrie Trefry, CSS
Director of Energy and Environmental Services

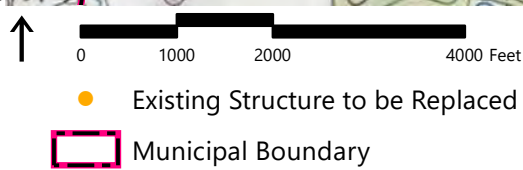
cc: Jeni Menendez, Eversource

Attachments:

- Town of Madbury Conditional Use Permit Application Form
- Figure 1&2 – Project Plans
- Abutters List & Madbury/Durham Tax Maps



\\vhb\gis\pro\bedford\13563.99 Eversource NH Placeholder\GIS\Project\G128_2020 Structure_Replacements\Project\Madbury_Permitting\G128_Madbury_USGS.mxd

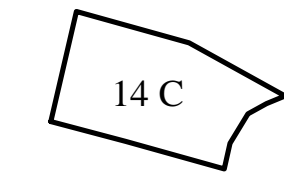
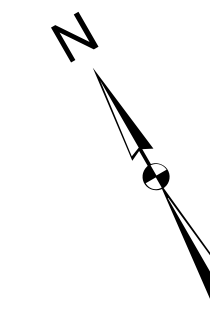


**2020 Structure Replacements
G128 Line**

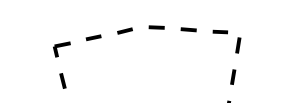
Madbury,
New Hampshire
**USGS Site
Location Map**

Source: VHB, Eversource, Arcgis Online

Town of Madbury, New Hampshire
Tax Parcel Map 8



Tax Parcel [lot subplot]



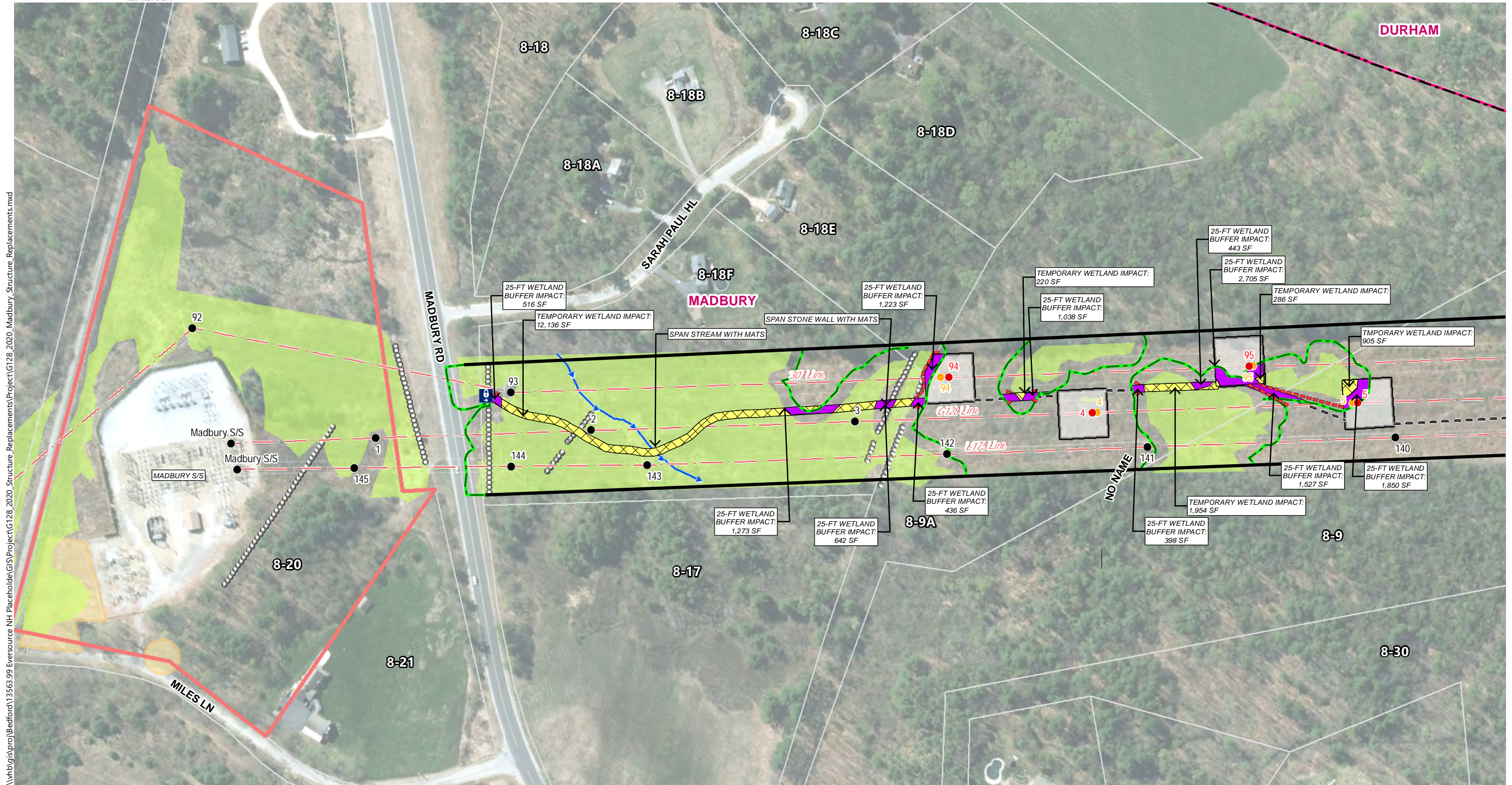
Adjacent Map tax parcels



Surface water and railroad features from NH GRANIT GIS database.

Revised 10/2018





\\vhb\gis\proj\Bedford\13563.99 Eversource NH Placeholder\GIS\Structure_Replacements\Project\G128_2020_Madbury_Structure_Replacements.mxd

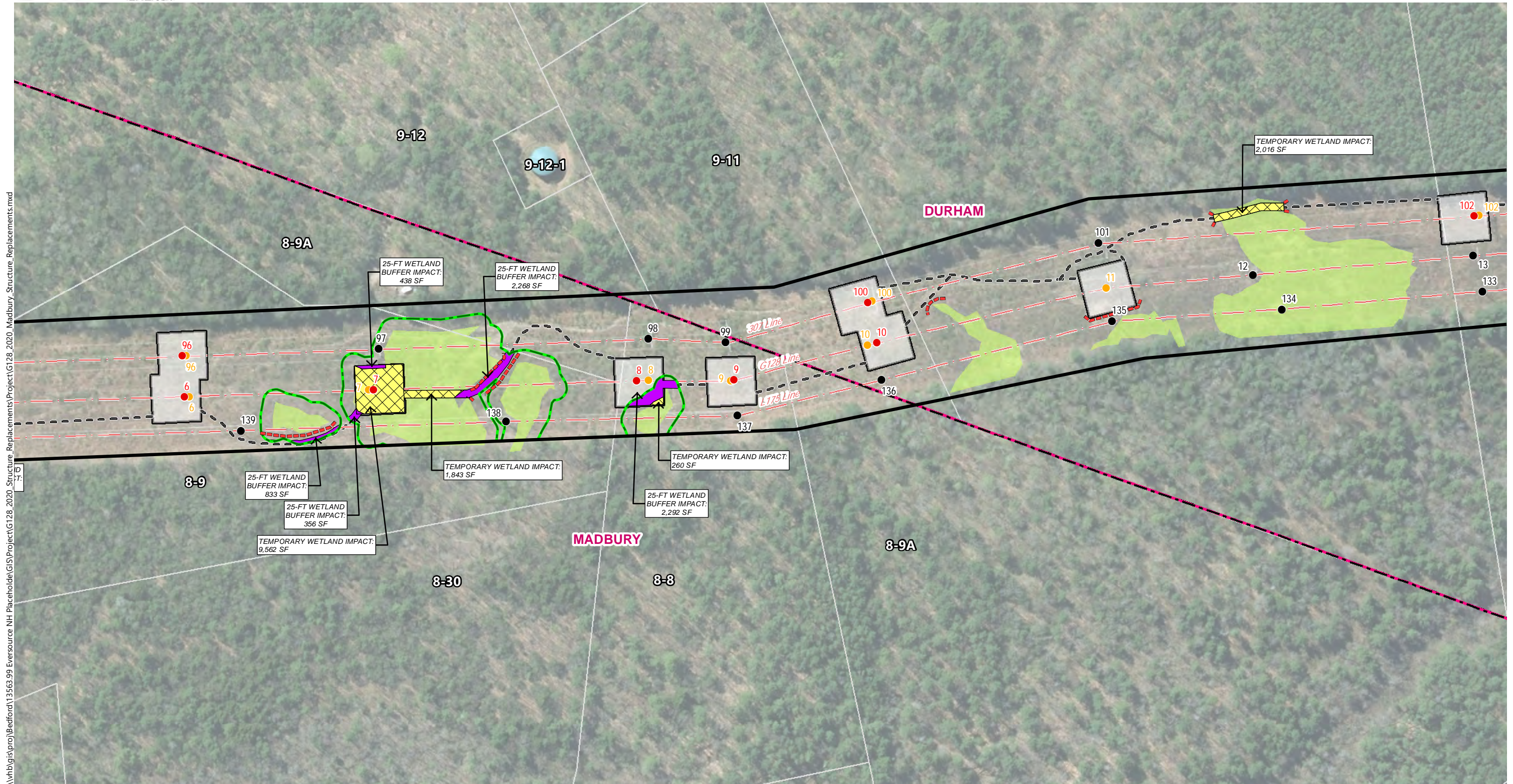


- | | | | | |
|-------------------------------------|------------------------------------|------------------|----------------------------------|---|
| ● Existing Structure | — Delineated Perennial Watercourse | Ⓜ Gate | --- Erosion Control | — Existing Approximate Right-of-Way (ROW) |
| ● Existing Structure to be Replaced | ■ Field Delineated Wetland | ○○○○ Stonewall | □ Work Pad 100x100' | ■ Eversource Owned Parcel |
| ● Proposed Replacement Structure | ■ 25-ft Wetland Buffer | ×-×-× Fence | ■ Temporary Construction Matting | □ Parcel Boundary |
| --- Overhead Eversource Line | ■ Phase 1A Area | — 10-ft Contours | ■ 25-ft Wetland Buffer Impact | □ Municipal Boundary |
| — Alternative Access | | | | |
| --- Existing Access | | | | |

**2020 Structure Replacements
G128 Line**

Madbury, New Hampshire

Permitting Plans



**2020 Structure Replacements
G128 Line**

Madbury, New Hampshire

- Existing Structure
- Existing Structure to be Replaced
- Proposed Replacement Structure
- - - Overhead Eversource Line
- - - Alternative Access
- - - Existing Access
- ▬ Delineated Perennial Watercourse
- ▬ Field Delineated Wetland
- ▬ 25-ft Wetland Buffer
- ▬ Phase 1A Area
- Gate
- Stonewall
- ×-×-× Fence
- 10-ft Contours
- - - Erosion Control
- ▭ Work Pad 100x100'
- ▨ Temporary Construction Matting
- ▭ 25-ft Wetland Buffer Impact
- ▬ Existing Approximate Right-of-Way (ROW)
- ▭ Eversource Owned Parcel
- ▭ Parcel Boundary
- ▭ Municipal Boundary

Permitting Plans

Source: NHGRANIT, VHB, Eversource