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June 1, 2023

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Frost Bridge to Noera Rebuild Project

Dear Ms. Bachman:

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource") is requesting a Declaratory Ruling from the Connecticut Siting Council ("Council") that no Certificate of Environmental Compatibility and Public Need is required for the Frost Bridge to Noera Rebuild Project ("Project"), which proposes modifications to the existing 1163 and 1550 lines, in the Towns of Watertown, Thomaston, Plymouth and City of Waterbury ("Petition").

Prior to submitting this Petition, Eversource representatives briefed municipal officials about the Project and provided written notice to all abutters of the proposed work and also of the filing of this Petition with the Council. Maps and line lists identifying the notified property owners are provided in the Petition as Attachment A: Frost Bridge to Noera Rebuild Project – Aerial Maps.

Eversource is submitting this filing electronically and will deliver an original and 15 copies along with a check in the amount of $625 for the required filing fee.

Sincerely,

Deborah Denfeld

Deborah Denfeld

cc: Honorable Jonathan Ramsay, Chairman, Town of Watertown
Honorable Neal O'Leary, Mayor, City of Waterbury
Honorable Edmond Mone, First Selectman, Town of Thomaston
Honorable Joseph Kilduff, Mayor, Town of Plymouth

THE CONNECTICUT LIGHT AND POWER COMPANY

doing business as

EVERSOURCE ENERGY

PETITION TO THE CONNECTICUT SITING COUNCIL
FOR A DECLARATORY RULING OF
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT
FOR THE PROPOSED MODIFICATIONS TO THE EXISTING
1163 and 1550 LINES IN THE TOWNS OF WATERTOWN, THOMASTON, PLYMOUTH
AND CITY OF WATERBURY, CONNECTICUT

1. Introduction

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") hereby petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g et seq. of the Connecticut General Statutes for proposed modifications to the 1163 and 1550 115-kilovolt ("kV") transmission lines located within an existing transmission right-of-way ("ROW") in the Town of Watertown, the Town of Thomaston, the Town of Plymouth and the City of Waterbury, Connecticut, as described herein as the Frost Bridge to Noera Rebuild Project (the "Project"). Eversource submits that a Certificate is not required because the proposed modifications would not have a substantial adverse environmental effect.

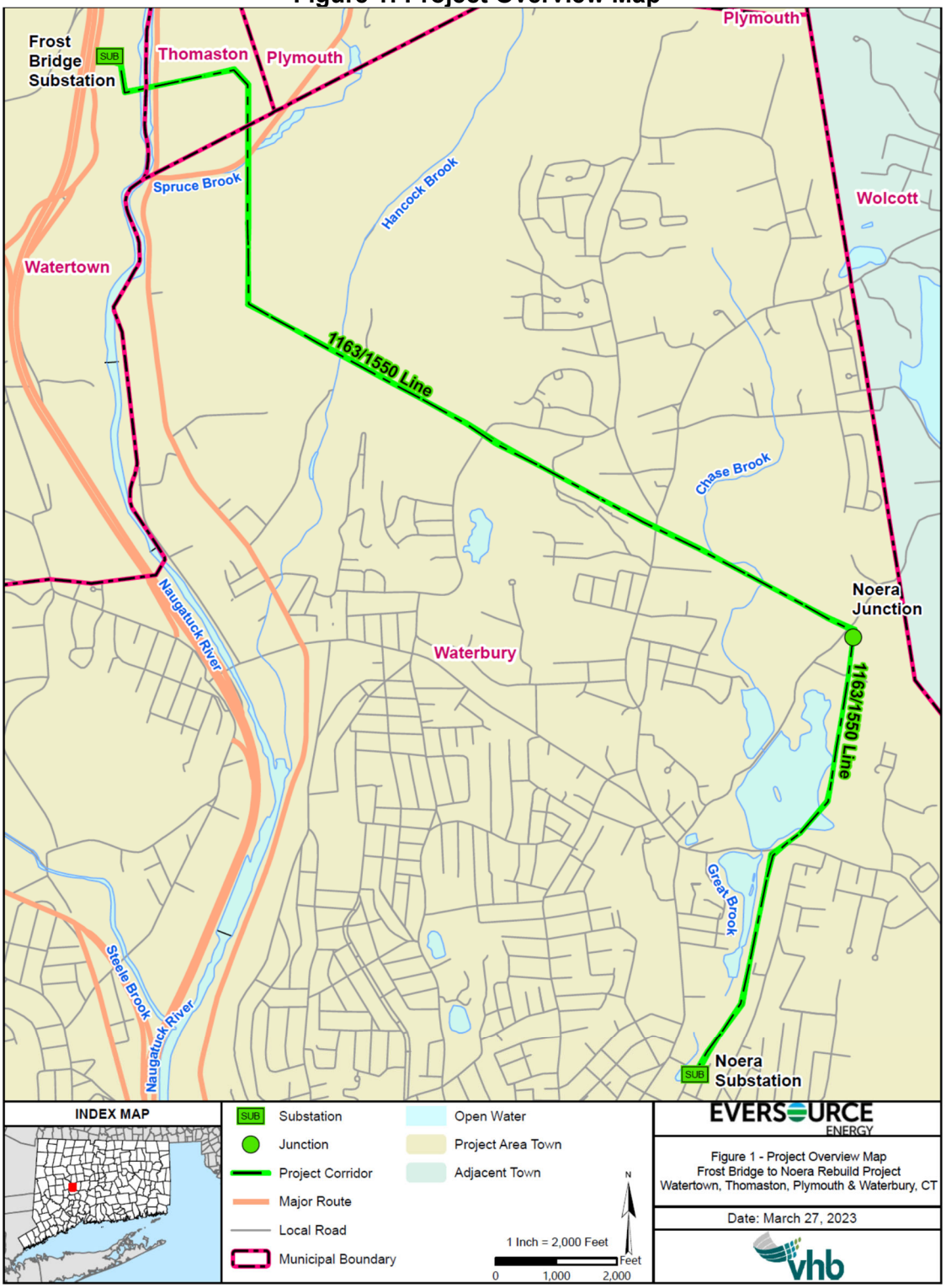
2. Purpose of the Project

The purpose of the Project is to replace structures and reconductor approximately 5 miles of the 1163 and 1550 lines entirely within the ROW that connects Frost Bridge Substation, located at Frost Bridge Road, Watertown, to Noera Junction in Waterbury and to Noera Substation, located at 1 Foote Street, Waterbury.

The 1163 and 1550 lines within the Project area are primarily supported on double-circuit lattice tower transmission structures, most of which are between 65 to 74 years old. Eversource has identified the existing copper conductor and copperweld shield wire as obsolete and susceptible to failure due to thermal rating and environmental degradation and need to be replaced. Eversource has determined that the existing lattice tower structures require replacement due to their inability to physically support the new conductor. In addition, many of the existing lattice structures are also displaying age-related degradation (corrosion, bent and deteriorated frame members, rusted critical structure members and attachment plates). See attachment H: Photographs.

Figure 1 illustrates the general location of the proposed Project.

Figure 1: Project Overview Map



3. Existing Project Area

As shown on Attachment A, Frost Bridge to Noera Rebuild Project – Aerial Map, the existing Project area is located in the ROW that extends approximately 5 miles from Frost Bridge Substation ("Frost Bridge") to Noera Junction to Noera Substation ("Noera"). The ROW between Frost Bridge and Noera was established in 1923 and contains the 1163 and 1550 lines, which are supported by double-circuit structures. The 1163 and 1550 lines were originally built around 1949 (Noera Substation to Noera Junction) and 1958 (Frost Bridge Substation to Noera Junction). Structure 691 (near Noera Junction) was rebuilt in 2014[1]. From Frost Bridge Substation to Noera Substation, the 1163 and 1550 lines are supported on a total of 41 structures (38 double-circuit steel lattice towers, one double-circuit steel lattice tap tower, one double-circuit wood H-frame, one double-circuit steel pole).

The width of the ROW within the Project area varies from approximately 115 feet to 280 feet and is mostly maintained edge to edge of ROW, except between Frost Bridge to Noera Junction where some clearing will be required. No expansion of the ROW is proposed.

The ROW traverses residential properties, public recreational trails and conservation lands, including the Mattatuck State Forest in Waterbury. The ROW also crosses the Naugatuck River, Hancock Brook, Great Brook Reservoir, CSX Railroad, Naugatuck Railroad, Route 262 and local roads.

[1] CSC Sub-Petition No. 1000-WY-01

4. Project Description

The Project scope consists of conductor, static wire and structure replacements on the 1163 and 1550 lines for approximately 5 miles between Frost Bridge Substation and Noera Substation. The Project requires the replacement of 38 double-circuit steel lattice towers, one double-circuit steel lattice tap tower, one double-circuit wood H-frame, and one double-circuit steel pole structure with 41 new single-circuit and 21 new double-circuit weathering steel monopole structures. The Project will also require the installation of two additional weathering steel monopoles on Eversource property to maintain conductor vertical clearance to ground and conductor phase-to-phase clearance into Noera Substation, for a total of 64 replacement/new structures. The proposed modifications will involve the following:

- Replacement of 18 existing double-circuit steel lattice structures with 36 new single-circuit weathering steel monopoles.
- Replacement of 20 existing double-circuit steel lattice structures with 20 new double-circuit weathering steel monopoles.
- Replacement of one double-circuit steel lattice tap structure [2] with three new single-circuit weathering steel monopoles.
- Replacement of one existing double-circuit wood H-frame structure with two new single-circuit weathering steel monopoles.
- Replacement of one double-circuit steel pole structure with one double-circuit weathering steel monopole.

[2] The Noera Junction tap structure is routing the 1163 and 1550 lines to three substations (Frost Bridge SS, Noera SS and Todd SS).

- Installation of two new single-circuit weathering steel monopoles.
- Replacement of approximately 3.5 miles of existing 795 aluminum conductor steel-reinforced conductor ("ACSR") with 1272-kcmil aluminum conductor steel-supported ("ACSS") conductor.
- Replacement of approximately 1.5 miles of existing 4/0 copper conductor with 1272-kcmil ACSS conductor.
- Replacement of the existing 3/8-inch copperweld shield wire with optical ground wire ("OPGW").
- Installation of underground all-dielectric self-supporting ("ADSS") fiber optic cable between two structures at Noera Junction.

Most of the existing double-circuit steel lattice structures on the 1163 and 1550 lines are proposed for replacement with single-circuit steel monopole structures for each line in a "tangent" insulation configuration. The tangent structures are located primarily to keep the conductors aligned within the ROW while maintaining appropriate clearances.

At proposed locations where the existing double-circuit lattice structures are to be replaced with single-circuit monopoles, these configurations are considered "dead-end" or "angle" structures. The "dead-end" structures are configured at ROW angle points and to allow room to create a safe, level working area for construction of the line. "Dead-end" structures are designed to fully support the unbalanced loads from the wires without compromising the sag and tension characteristics of the wires. Eversource's standard practice is to replace a double-circuit dead-end structure with single-circuit dead-end structures, one structure for each circuit.

The height of the existing structures to be replaced ranges from 53 feet to 94 feet. The new and replacement structures would range in height from 79 feet to 122 feet. The proposed structure height increases of the replacement structures range from

approximately 4 feet to 54 feet above the corresponding existing structures. Three structures would have height increases that are over 40 feet. The height increases are required to comply with the latest NESC clearance requirements and Eversource design standards. The change in structure heights is also prompted by considerable variations in topography, such as side sloping terrain and river crossings. Four replacement structures would have slightly reduced heights, as compared with the corresponding existing structures. The majority of the replacement structures would be positioned more than 15 feet from the existing structure location.

In addition to the work described above, new lightning arrestors would be installed on approximately every fifth structure as well as new hardware and insulators on all structures and counterpoise, as needed.

Attachment A: Aerial Maps, depict the locations of existing and proposed structures, as well as the approximate location and configuration of work pads and pull pads to be used for the Project, access roads, and other Project elements. The cross-section drawings, provided in Attachment B: Frost Bridge to Noera Rebuild Project Right-of-Way Cross Sections, depict typical views along the ROW of typical existing and proposed structures. Attachment C: List of Structure Replacements provides more specific information on the heights of the existing and proposed structures.

5. Environmental Effects and Mitigation

The Project would be constructed entirely within the ROW between Frost Bridge Substation to Noera Substation. No physical expansion of the ROW is proposed for the Project. The Project would not have a substantial adverse environmental effect, for the reasons explained more fully below.

5.1 Land Use

Land uses adjacent to the Project Area consist of a mix of rural, residential, recreational, commercial, railroads, transportation corridors (state, and local roadways) and undeveloped lands, such as forested areas. The ROW traverses the Mattatuck State Forest, Lakewood Park/Great Brook Reservoir (City of Waterbury), and Bucks Hill Park (City of Waterbury). The ROW also crosses the CSX and Naugatuck railroads in Watertown and Waterbury. Though the Project would be traversing through some of these areas, it will not impact adjacent land uses.

5.2 Clearing and Vegetation Removal

The maintained ROW ranges in width from 115 to 280 feet. The majority of the proposed work would be located within the maintained ROW and would require mowing and brush removal within work pad areas and along access roads. Due to recent vegetation management activities within the ROW, Eversource anticipates that the removal of mature vegetation and pruning of side vegetation would be limited. However, in some areas where additional clearance is required, approximately 2.5 acres of tree clearing in total is anticipated. Converting forestland to shrubland, or emergent vegetation along the ROW would modify, but not adversely affect, habitat. The creation of additional shrubland and early successional habitat (and the preservation of such existing habitat) along the ROW would provide a long-term benefit for many wildlife species because shrubland habitat is otherwise declining in New England. There is no anticipated tree clearing within wetlands.

Vegetation management work would be conducted mainly using tracked mowers and bucket trucks. Limited amounts of hand cutting of non-compatible vegetation in wetland areas may be necessary and climbing crews for tree trimming and danger tree removal or hazard tree removal would be necessary in inaccessible areas.

The tree clearing work would be completed by mechanical means or ground crews using chainsaws where access is difficult. Mechanical trimming equipment and bucket trucks along with climbing crews would be utilized to trim and prune branches. Chipped material would be hauled off-site unless approved by Eversource, as applicable.

Eversource would require the vegetation clearing contractor to use low-impact tree clearing means and methods in all areas where impacts are to be minimized. Low-impact tree clearing incorporates a variety of approaches, techniques, and equipment to minimize site disturbance and to protect wetlands, watercourses, vernal pools, and threatened and endangered species and their habitats.

No adverse impacts are anticipated, as all work would be conducted in accordance with Eversource's April 2022 Best Management Practices Manual for Massachusetts and Connecticut ("BMPs") and Eversource's vegetation clearing contract would contain relevant specifications for access, vegetation removal methods, listed species protection, and maintenance of site stability for soil erosion.

5.3 Scenic, Recreational and Cultural Resources

The Project is not anticipated to have a substantial adverse impact to scenic, recreational, or cultural resources for the reasons explained below:

No portion of the ROW traverses a locally or state designated scenic roadway[3].

Public open space and hiking trails that may be impacted during construction were identified through a desktop review of GIS data available from the Connecticut Department

[3] Connecticut Department of Transportation (CTDOT), December 31, 2020 Connecticut State Scenic Roads. Available URL: https://portal.ct.gov/DOT/Programs/Connecticut-Scenic-Roads.

of Energy and Environmental Protection ("CT DEEP")[4], Connecticut Forest and Park Association ("CFPA")[5], and Mattatuck State Forest. Recreational opportunities within and adjacent to the Project area include hiking, biking, hunting, and fishing. Eversource will continue to correspond with the managers of these public recreational areas regarding the Project and would develop and implement measures to maintain public safety during Project construction, while also avoiding or minimizing short-term impacts to recreational users. Fine processed gravel would be used for access road construction where a trail overlaps with the access road rather than coarse aggregate to maintain trail comfort for hikers. Work pad restoration activities within these recreational areas would entail placing available stockpiled soil and/or processed stone with native warm-season seed mix and mulched. Eversource would continue to coordinate with the resource managers to develop and implement mutually acceptable restoration measures, as needed, that would maintain or enhance the recreational, scenic, and wildlife habitat value of these areas.

A Phase 1A cultural (archaeological and historical) resource assessment of the proposed Project was conducted by Heritage Consultants, LLC ("Heritage") in November 2020. It consisted of an initial desktop review and pedestrian survey ("Phase 1A Cultural Resource Assessment" or "Phase 1A").

The Phase 1A desktop evaluation determined that no documented National Register of Historic Places, state or locally listed properties or historic districts are located within 500 feet of the ROW. Additionally, based upon the presence of qualifying criteria (i.e., identification of areas that are likely to contain and/or retain archaeological deposits), the

[4] Connecticut Department of Energy and Environmental Protection, GIS Data URL: https://portal.ct.gov/DEEP/GIS-and-Maps/Data/GIS-DATA

[5] Connecticut Forest & Park Association URL: https://www.ctwoodlands.org/

Phase 1A identified five locations within the ROW as having a moderate to high potential for archaeological sensitivity. Upon completion of the pedestrian survey, all five locations were reclassified as having no/low sensitivity and no further archaeological investigation was recommended.

The results of the Phase 1A desktop and pedestrian surveys have been provided to the State Historic Preservation Office ("SHPO") and the Tribal Historic Preservation Offices ("THPO") of the Connecticut Tribe of Mohegan Indians, Wampanoag Tribe of Gay Head and the Mashantucket Pequot Tribal Nation for their review and concurrence. A letter received from SHPO, dated November 22, 2022, concurred that "...*the proposed project is not likely to impact significant archaeological resources and no additional investigations are warranted. Based on the information provided to our office, it is SHPO's opinion that no historic properties will be affected by the proposed activities.*" Any written replies received from the THPO will be provided to the Council.

5.4 Water Resource Areas

Eversource conducted delineations of wetlands and water resources in the Project area in 2020 and 2021. Wetland boundaries were modified as needed during additional field inspections conducted in 2022 (see Attachment D: Wetland Delineation Report, and Attachment E: Vernal Pool Survey Report). Water resources within the Project area include inland wetlands, watercourses (perennial and intermittent streams), ponds, vernal pools, and Federal Emergency Management Agency ("FEMA") Flood Zones. All work within or near these areas would be conducted in accordance with the BMPs and with the conditions of applicable regulatory permit conditions and approvals. In addition, wetland and watercourse protections are addressed in the Stormwater Pollution Control Plan ("SWPCP") and the BMPs. Details on each of these resource areas are provided below.

5.5 Wetlands

Wetlands located within the Project area were identified and delineated in accordance with industry standard methodology. A total of 36 wetlands were identified within or proximate to the Project area.

There are no existing structures located within wetlands. However, the Project would install one monopole (structure 690) within a wetland area on Eversource property, resulting in approximately 50 square feet of permanent wetland effects.

The Project will also result in approximately 1.5 acres of temporary effects to wetlands, associated with the temporary use of construction mats for access roads, pull pads, and work pads. All construction mats will be promptly removed upon Project completion and wetland areas will be restored in accordance with Eversource's BMPs.

For these wetland impacts, self-verification notification forms will be submitted to the Army Corps of Engineers ("ACOE") prior to start of construction.

5.6 Watercourses and Waterbodies

A total of 20 watercourses have been identified and delineated within or proximate to the Project area. These include five perennial watercourses and 15 intermittent watercourses. Named perennial watercourses include the Naugatuck River, Hancock Brook, Spruce Brook, Chase Brook, and Great Brook Reservoir. Existing culverted watercourse crossings will be used along access roads at various locations throughout the Project area. No replacement of culverts is currently anticipated but may be required during road improvements. In addition, a total of 12 temporary watercourse crossings would be required during construction. These 12 watercourse crossing locations would be temporarily spanned using construction mats, which would be placed to not impede the flow of water. All construction mats will be promptly removed upon Project completion and

wetland areas will be restored in accordance with Eversource's BMPs. Additional protection measures would be implemented through the Project's SWPCP as it will be subject to the CT DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit").

Table 1 provides a summary of Project effects to wetlands and watercourses.

Table 1: Summary of Project Effects to Wetlands and Watercourses

Wetland/ Watercourse ID	Wetland/Watercourse Effects (± square feet [sf]/acres [ac])	
	Temporary (Matting)	Permanent (Activity)
W2	1,444 sf / .03 ac	0
W3	1,882 sf / .04 ac	0
W10 (may not occur if SUL is obtained)	1,183 sf / .03 ac	0
W12/S3	111 sf / 0.003 ac	0
W13/S3	120 sf / 0.003 ac	0
W18/S8	8,534 sf / 0.19 ac	0
W19	4,636 sf / 0.11 ac	0
W21	17,490 sf / 0.40 ac	0
W22A/S12/S13	5,072 sf / 0.12 ac	0
W25/S11/S13	20,334 sf / 0.47 ac	50 sf /0 .001 ac
W26/S14	4,364 sf / 0.1 ac	0
W29/S19	615 sf / 0.001 ac	0
W30	73 sf / 0.002 ac	0
Totals	65,808 sf / 1.5 ac	50 sf / 0.001 ac

5.6.1 Vernal Pools

The Project area was surveyed for potential vernal pools on various dates in late 2020 and early 2021 and again in early 2022. Potential vernal pools were identified in late 2020 based primarily on the presence of suitable hydrology (i.e., evidence of seasonally to permanently flooded wetlands), with consideration for the presence of other indicators such as concave and unvegetated surfaces. Early 2021 and 2022 survey methods included visual surveys to identify adults, larvae and egg masses, audial surveys of amphibian chorusing, and dip-net surveys to identify vernal pool species larvae.

A total of seven vernal pools were identified and delineated within the ROW. Vernal pools and vernal pool envelopes (areas within 100 feet of a vernal pool depression) are shown in Attachment A: Frost Bridge to Noera Rebuild Project Aerial Maps. The vernal pool survey results are provided in Attachment E: Vernal Pool Survey.

There would be no temporary or permanent effects to vernal pools due to the Project. Proposed effects to 100-foot vernal pool envelopes would be minimized to the greatest extent practical through avoidance, minimization, and implementation of recommended protection measures in accordance with the 2002 Connecticut Guidelines for Erosion and Sediment Control (“Connecticut Guidelines”), the Project’s SWPCP, Eversource’s BMPs and additional methods detailed in Attachment E – Vernal Pool Survey.

5.6.2 FEMA Flood Zones

The Project area extends into FEMA-designated 100-year flood zones associated with Naugatuck River, Spruce Brook, Hancock Brook, and Great Brook Reservoir. No new transmission structures are proposed within FEMA flood zones and there would be no temporary or permanent fill within the FEMA flood zones.

5.6.3 Water Supply

Based on Aquifer Protection Areas ("APA") mapping maintained by the CT DEEP there are no APAs located within the Project area. The Project area is not within a public water supply watershed and does not cross any public water supply reservoirs or public water supply wells.

5.7 Wildlife and Habitat

The Project area extends through a variety of habitats that support vegetation and wildlife common to such areas. Habitats include upland and wetland shrubland and meadow, riparian corridors, and unvegetated or sparsely vegetated ledge outcroppings.

Eversource reviewed the current CT DEEP Natural Diversity Database ("NDDB") mapping for known or potential occurrences of state-listed endangered, threatened, or special concern species in the vicinity of the Project area. In mid-August 2022, Eversource submitted a NDDB State-listed Species Review request to the CT DEEP for the proposed activities within the NDDB-mapped habitat areas. Eversource received a response letter from CT DEEP on September 15, 2022 and will adhere to the recommendations and protection strategies detailed within the letter.

In addition to coordinating with CT DEEP for the protection of state-listed species, Eversource consulted with the U.S. Fish and Wildlife Service Information, Planning, and Consultation ("IPaC") service regarding federal-listed species that may be present within the Project area. The IPaC report indicated one federally listed threatened species, Northern Long-eared Bat ("NLEB"), and one candidate species, monarch butterfly, may potentially be affected in this geographic location. Based on the IPaC submission, including an effects determination using the available NLEB range-wide determination

key, the Project would have "No Effect" on the NLEB. Therefore, no impacts to this species are anticipated.

For gravel work pads within NDDB areas and within the Mattatuck State Forest, Eversource is proposing to restore the pads using stockpiled soil and/or processed stone with a native conservation seed mix, which can provide habitat benefiting pollinator species, such as bees, moths and butterflies.

Invasive species exist within the ROW. The Project would adhere to Eversource's BMPs to minimize the disturbance and spread of soil and/or plant matter as specified in the BMP Manual, including the following additional actions to control the potential spread of invasive species:

- Clean vehicles, equipment, materials (including matting), gear, footwear or clothing of all visible soil and plant material on site in the infested area, or as near as practical to the infested area, prior to leaving the Project site.
- Cleaning may be accomplished using a brush, broom, or hand tools, by shaking or dropping mats in a controlled manner to dislodge attached soil and debris, or compressed air.

5.8 Visual Effects

The 1163 and 1550 lines are located within the ROW and have been part of the landscape viewshed for approximately 65 to 74 years. Though the Project would result in changes to the visual character of the line, Eversource does not believe that these would result in a significant environmental effect. Replacement structures would be located close to the existing structures. The change in design and the increase in the number of structures would result in some change to the visual character of the line; however, the proposed weathering steel monopole structures would resemble the appearance of wood structures and would blend in with the predominantly wooded surrounding landscape, as well as present a more streamlined appearance.

Due to the height increases associated with some of the proposed structures, the Project would change some views from select locations along the ROW. It is not expected that the height increases would result in a detrimental change to the existing visual character of the lines from nearby residences and publicly accessible land within proximity to the Project.

5.9 Noise

The Project would result in short-term and localized noise from construction activities. The temporary increase in noise would likely raise localized ambient sound levels immediately surrounding the work areas during periods of construction work due to the operation of standard types of construction equipment (e.g., backhoe, bulldozer, drill rig, excavator mounted rock hammer, crane, trucks, etc.). Upon completion of construction and during operation, the proposed Project would not have any effect on ambient noise levels.

5.10 Air Quality

Short-term, localized effects on air quality may result, primarily from fugitive dust and equipment emissions, from the Project work. To minimize the amount of dust generated by construction activities, the extent of exposed/disturbed areas at any one time would be minimized. Vehicle emissions will be limited by requiring contractors to properly maintain construction equipment and vehicles, and by minimizing the idling time of equipment and vehicles, including diesel construction equipment, in accordance with Connecticut regulatory requirements. Temporary gravel tracking pads would be installed at points of construction vehicle ingress/egress to minimize the potential for equipment to track dirt onto local roads. To further minimize dust, water may be used to wet down disturbed soils or work areas with heavy tracking, as needed.

6. Transportation and Traffic Management

Construction-related vehicular and equipment movements would utilize public roads in the Project area to access the ROW. However, the Project-related traffic is generally expected to be temporary and highly localized in the vicinity of the ROW access points and at the staging area described in the following Construction Sequence section. Due to phasing of construction work, these Project-related traffic movements are not expected to significantly affect transportation patterns or levels of service on public roads.

To safely move construction vehicles and equipment onto and off the ROW while minimizing disruptions to vehicular traffic along public roads, the construction contractor typically would be responsible for posting and maintaining construction warning signs along public roads near work sites and for coordinating the use of flaggers or police personnel to direct traffic, as required.

Construction vehicles and equipment associated with the work would include, but would not be limited to, pickup trucks, bucket trucks, flat-bed trucks, excavators, concrete trucks, drill rigs, front loaders, reel trailers, bulldozers, woodchippers, brush hogs/mower, forklifts, side booms, dump trucks and cranes. Pullers and tensioners would be used for the line work.

7. Construction Sequence

Project construction would include the following activities:

7.1 Establishing Staging Area/Laydown Yard

Eversource would select temporary staging areas from available parcels in the vicinity of the Project area that would also be used to store construction equipment and materials, (including tools, and supplies) conductor, insulators, hardware, poles and construction

mats, for the Project. Office trailers may also be located at a staging area, and transmission line components removed during the work (structure steel, conductor, hardware and insulators) may be temporarily accumulated and stored at a staging area prior to removal off-site for salvage and/or disposal. The staging areas may also be used by construction crew members for parking personal vehicles as well as for construction vehicles, and for performing minor maintenance, when needed, on construction equipment. An environmental review of each potential staging area location would be completed, and Eversource would consult with the local municipal officials and provide notice to the Council when the staging areas are identified.

Figure 2: Proposed Staging Area/Laydown Yard

7.2 Soil Erosion and Sediment Control Installation

Project construction would conform to best management practices for erosion and sedimentation ("E&S") control, including those provided in the Connecticut Guidelines and Eversource's BMPs. This includes development of a Project specific SWPCP and registration under CT DEEP's General Permit.

Typical E&S control measures include, but are not limited to, biodegradable blankets, straw bales, silt fencing, rock construction entrances, soil and slope protection, water bars, check dams, berms, swales, and plunge pools. Silt fence would be installed as needed to intercept and retain sediment and/or construction materials from disturbed areas and minimize the potential for sedimentation outside of the Project and staging areas.

Temporary E&S control measures would be maintained and inspected for the duration of the Project to ensure their integrity and effectiveness and for compliance with the General Permit. SWPCP inspections would be performed in accordance with the General Permit requirements. Following the construction, seeding and/or mulching would be completed to permanently stabilize the areas disturbed by the construction activities. The temporary E&S control measures would remain in place until the Project work is complete and all disturbed areas are stabilized.

7.3 Access Roads and Work Pads

Access to each existing and proposed structure location would be required during Project construction. Some gravel access roads are already established and Eversource would utilize these existing access roads to the extent possible. However, some new gravel access roads would be required within the ROW. Typically, the maximum travel surface of an access road is approximately 16 feet wide, with additional width that may be needed at turning or passing locations. All existing or new gravel access roads would be in upland

areas. Any wetland crossings for access will utilize temporary timber matting and small streams or drainage ditches will be spanned using timber mats.

It should be noted that the following proposed access roads, as shown on Map Sheets 1 and 2, would not be used if Eversource obtains from the CT DEEP Land Management Division a Special Use License ("SUL") for access to structures 4 through 7. The SUL would also eliminate a temporary wetland impact (1,183 square feet) associated with Wetland 10.

Existing access roads may need to be improved (graded, widened, and/or reinforced) with additional stone material (gravel) to accommodate the safe passage of construction vehicles and equipment, except as previously stated in areas where access roads cross existing trails. E&S controls would be installed as necessary before the commencement of any improvements to or development of access roads.

At each transmission line structure location, a work pad is required to stage material for final on-site assembly and/or removal, and to provide a safe, level work base for the construction equipment. The work pads for the Project would range from approximately 110 feet by 135 feet to 150 feet by 150 feet and may be used for both installation of new structures and removal of existing structures. However, due to the existing terrain, a few select pads would require larger footprints, the largest being approximately 150 feet by 255 feet. Pull pads would have dimensions of approximately 60 feet by 80 feet. Work pads would be graveled where practical. Temporary matting would be installed to protect sensitive areas (i.e., regulated wetlands and watercourses, lawn areas, agricultural lands, etc.). To facilitate future transmission line maintenance, gravel access roads, work pads and pull pads would be left in place, where feasible. Gravel work pads within NDDB areas would be revegetated with a native conservation seed mix. If an individual property owner

requests restoration measures, Project representatives will work with the property owner on restoration options.

The approximate locations and configuration of the work pads, as determined based on the environmental field studies and constructability reviews, are shown on Attachment A.

7.4 Foundation Installation

Structures will have either concrete or direct-embed foundations. Seventeen structures would have direct-embed foundations and forty-seven structures would have drilled shaft foundations.

The foundation installation work would require the use of equipment such as mechanical excavators (drill rigs), pneumatic hammers, augers, drill rigs, dump trucks, concrete trucks, grapple trucks and light duty trucks. If groundwater is encountered, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas. The water would then be discharged in accordance with applicable local, state, and federal requirements.

Excavated soils that are generated during construction activities would be stored or spread in an upland area within the ROW, to the extent practicable, or disposed of in accordance with applicable regulations.

7.5 Structure Installation

Structure sections, structure components and hardware would be delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane, bucket trucks and excavator.

Depending on site-specific soil conductivity, supplemental grounding (counterpoise, in uplands only) would be installed. A quad “ditch-witch” plow-cable trencher, or

equivalent/similar type of equipment, would be used to install the counterpoise after the proposed structures are constructed.

7.6 Conductor Installation

The installation of the new conductors and OPGW would occur after the new structures have been erected. The equipment required for these activities would include conductor reels, compressors, conductor pulling and tensioning rigs, guard trucks or structures and bucket trucks. Helicopters may also be used to install the pulling lines for the conductors and OPGW. Conductor dead-ending and splicing will be accomplished with full tension compression hardware.

7.7 Structure Removal

Following the installation of the replacement/new structures, the existing structures, would be removed.

7.8 Federal Aviation Administration

Eversource utilized the Federal Aviation Administration's ("FAA") online Notice Criteria Tool for the airports and heliports in the vicinity of the Project to screen proposed structure locations and heights. The results of the tool determined that notification to the FAA is not required due to the new structure locations and heights.

Eversource evaluated the horizontal spans between structures 1/1A-2, 6/6A-7/7A, and 12/12A 13/13A as these spans traverse steep terrain. Portions of these spans are expected to approach or exceed 200 feet of clearance to ground, which is a threshold where the FAA may require installation of marker balls along the spans. Specifically, the spans between structures 6/6A and 7/7A exceed this threshold. Eversource will file an application with the FAA for this span to

determine whether obstruction marking and lighting to mitigate the span's impact to airspace are required.

7.9 Restoration

Once the new structures are erected, the line is energized, and the existing structures have been dismantled and removed, ROW restoration activities would commence. Restoration activities would include the removal of construction debris, signage, flagging, and temporary fencing, as well as the removal of construction mats and work pads that are designated for removal. Areas affected by construction would be re-graded as practical and stabilized by an application of CT DEEP approved pollinator friendly seed mixture, mulching or other measures before removing temporary E&S controls. Eversource would perform ROW restoration in accordance with the protocols specified in Eversource's BMPs, permit approvals and in consultation with affected property owners. Eversource is proposing to apply fine processed gravel and seed gravel work pads in NDDB areas following construction.

7.10 Waste Management

Waste materials, such as structure components (i.e., steel from the removed structures, conductor, shield wire, associated hardware, etc.) and any other construction debris would be reclaimed through the Eversource recycle and/or disposed of in accordance with Eversource's BMPs, applicable regulations or recycled consistent with applicable rules and regulations and Eversource policies.

8. Construction Schedule and Work Hours

Construction work hours would typically be between 7:00 AM and 7:00 PM, six days per week (Monday through Saturday). Construction workers may arrive and leave the staging

area/laydown yard outside of these times. In addition, during winter, snow plowing and de-icing activities will typically commence, when necessary, prior to 7:00 AM to ensure a safe environment for construction personnel prior to the start of the workday.

On occasion, Sunday work hours are anticipated to be required from 7 AM to 7 PM. The towns of Watertown, Thomaston, Plymouth, and city of Waterbury and abutters would be provided advance notice of the proposed Sunday work hours.

9. Electric and Magnetic Fields

Eversource prepared calculations of the existing and post-Project Electric and Magnetic fields ("EMF"). The calculations were based on average annual loading conditions, as these are most representative of typical operating conditions. The calculations are made relative to the centerline of the proposed, modified transmission lines.

Tables 3-5[6] below summarize the calculated electric and magnetic fields at the ROW edges before and after the modifications.

Table 3 – Frost Bridge to Structure 16 and Structure 20 to Noera Junction

Frost Bridge - Structure 16, Structure 20-Noera Junction (AAL)		North ROW Edge	Max in ROW	South ROW Edge
Magnetic Fields (mG)	Existing	3.0	75.2	32.3
	Proposed	5.6	78.0	11.8
Electric Fields (kV/m)	Existing	0.05	1.78	0.08
	Proposed	0.08	1.96	0.13

[6] Table 4 depicts the location where the ROW narrows from 250 feet to 160 feet.

Table 4 – Structure 16 to Structure 20

Structure 16 - Structure 20 (Annual Average Loads)		North ROW Edge	Max in ROW	South ROW Edge
Magnetic Fields (mG)	Existing	9.2	75.2	32.3
	Proposed	10.5	78.0	31.7
Electric Fields (kV/m)	Existing	0.11	1.78	0.08
	Proposed	0.12	1.96	0.06

Table 5 – Noera Junction to Noera Substation

Noera Junction- Noera Substation (Annual Average Loads)		East ROW Edge	Max in ROW	West ROW Edge
Magnetic Fields (mG)	Existing	4.6	8.5	2.0
	Proposed	4.4	8.7	2.3
Electric Fields (kV/m)	Existing	0.19	1.54	0.12
	Proposed	0.19	1.96	0.12

The results of the calculations show that the proposed modifications would not substantially increase electric or magnetic fields. In locations between Frost Bridge and Noera Junction, magnetic fields at the southern/western edges of the ROW will significantly decrease. Electric fields are expected to increase slightly throughout the ROW, due to the increased conductor diameter. See Attachment F: EMF Graphs.

9.1 Comparison of Calculated Fields to International Guidelines

The anticipated fields from the proposed transmission lines are well below the internationally established exposure limits for 60-Hz electric and magnetic fields, specifically, the limits identified by the International Council on Electromagnetic Safety ("ICES") and the International Council on Non-Ionizing Radiation Protection ("ICNIRP"). These standards are summarized below in Table 6.

Table 6 – International Guidelines for EMF Exposure

	Magnetic Field (mG)	Electric Field (kV/m)
ICNIRP	2000	4.2
ICES	9040	5 (in General)
		10 (on ROW)

10. Municipal and Property Owner Outreach

Eversource consulted with the towns of Plymouth, Watertown and Thomaston and the City of Waterbury in January 2023. In addition to providing a written notice of the Project, Eversource provided municipal officials with a copy of the letter that was sent to abutting property owners. Eversource will continue to communicate with municipal officials throughout the Project.

Eversource initiated outreach to property owners in the first quarter of 2022. Eversource conducted door-to-door outreach to property owners located along the ROW in the third quarter of 2022. Abutting property owners were mailed Project introduction letters in January 2023, which included a Hotline # 1-800-793-2202 and email ProjectInfo@eversource.com so that property owners can reach out to a project representative at their convenience. To date there has been only one concern from a property abutter regarding access to a structure. Eversource worked with the property owner and found an amicable resolution that satisfied both parties.

Eversource representatives will continue to be in contact with abutting property owners to provide advance notification on the start of construction activities and will update property owners throughout Project construction and restoration.

11. Conclusion

Based on the foregoing, Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment, nor would they damage existing scenic, historical, or recreational values. Accordingly, Eversource requests that the Council issue a declaratory ruling that the proposed modifications would have no substantial adverse environmental effect.

Communications regarding this Petition for a Declaratory Ruling should be directed to:

Deborah Denfeld
Lead – Transmission Siting
Eversource Energy
PO Box 270
Hartford, CT 06141-0270
Telephone: (860) 728-4654

By: _____
Deborah Denfeld

List of Attachments

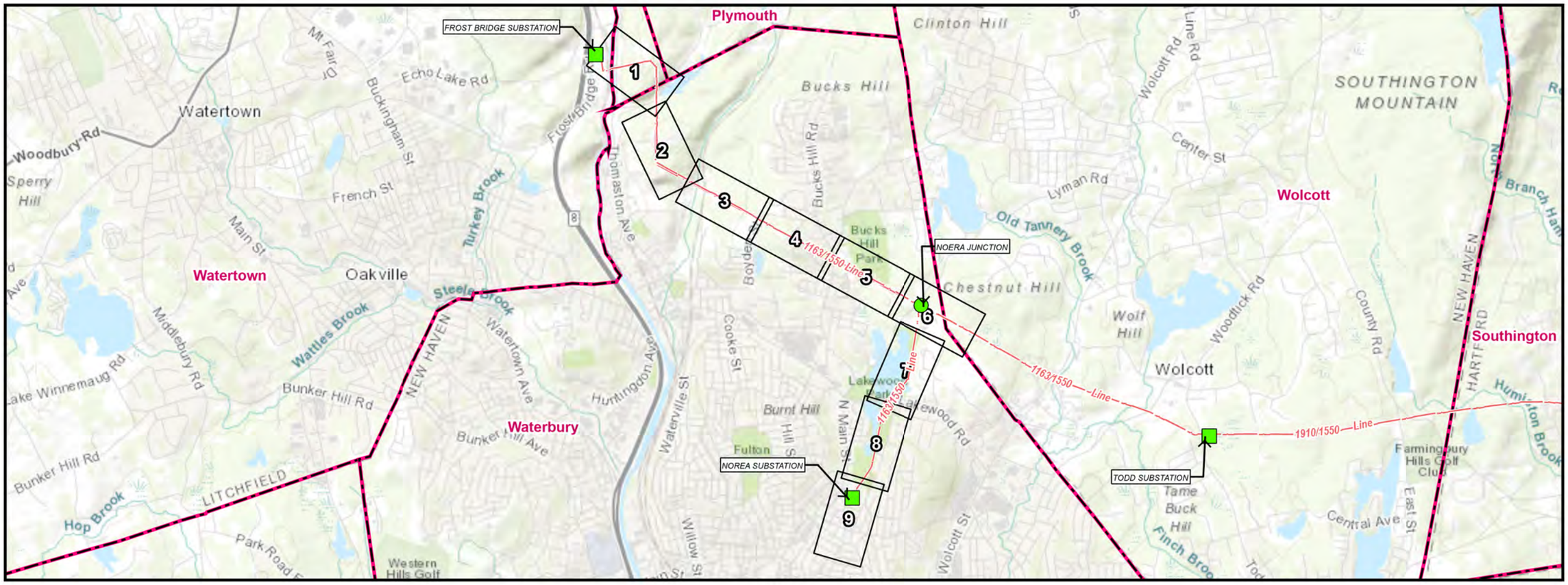
Attachment A: Frost Bridge to Noera Rebuild Project– Aerial Maps
Attachment B: Frost Bridge to Noera Rebuild Project– Right-of-Way Cross Sections
Attachment C: List of Structure Replacements
Attachment D: Wetlands Delineation Report
Attachment E: Vernal Pool Survey
Attachment F: EMF Graphs and Tables
Attachment G: Letter to the Abutters and Affidavit
Attachment H: Photographs

Attachment A: Frost Bridge to Noera Rebuild Project– Aerial Maps

Frost Bridge to Noera Rebuild Project

Watertown, Thomaston, and Waterbury, CT
Petition Map Set

Date: May 18, 2023



LEGEND

Substation | Overhead Eversource Line | Map Sheet | Municipal Boundary

0 1 2 4 Miles

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INDEX OF FIGURES

Title Sheet / Index Map
Abutter Tables and Map Sheets 1-9

PREPARED FOR:
EVERSOURCE ENERGY
107 Selden Street
Berlin, CT 06037

PREPARED BY:
vhb
100 Great Meadow Road
Suite 200
Wethersfield, CT 06109

Mapsheet 1 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 0-6A
Towns of Thomaston, Watertown, Plymouth and City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas

o Undeveloped, Forest
o Natural Diversity Database Area
o Eversource Owned Property
o Eversource Owned Property - Frost Bridge Substation
o CTDOT Naugatuck Railroad Company Railroad Line
o Naugatuck River
o Rifle Range Pond
o 100-Year Flood Zone of Rifle Range Pond
o Mattatuck State Forest

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-007	STATE PARK & FOREST COMMISSION		SPRUCE BROOK RD	WATERBURY	CT
204A-008	STATE PARK & FOREST COMMISSION		SPRUCE BROOK RD	WATERBURY	CT
204A-010	MATTATUCK STATE FOREST	C/O DONALD	SPRUCE BROOK RD	WATERBURY	CT
281C-001	CONNECTICUT LIGHT AND POWER COMPANY	ATTENTION TAX DEPT	FROST BRIDGE RD	WATERTOWN	CT
281C-005	CONNECTICUT DEPARTMENT OF TRANSPORTATION		FROST BRIDGE RD	WATERTOWN	CT
281C-009	STATE OF CONNECTICUT - MATTATUCK STATE FOREST		2058 WATERBURY RD	THOMASTON	CT

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas

o Maintained ROW
o Natural Diversity Database Area at Str. 0 to Str. 1 and Str. 4/4A to Str. 5/5A
o Railroad (CTDOT Naugatuck Railroad Company Railroad Line) Adjacent to Str. 1/1A
o Eversource Owned Property 1163/1550 Str. 0-1
o Naugatuck River Between Str. 1/1A and Str. 2
o Rifle Range Pond Between Str. 6/6A and the Pull Pad Location
o Mattatuck State Forest to the East of Str. 6/6A and West of Spruce Brook Road

Water Resources

o Wetland - W-1, W-2, W-3, W-4, W-5, W-6, W-7, W-8, W-9, W-10, W-11, W-12, W-13, W-14
o Wetland Cover Type - Scrub-Shurb, Emergent, Forested
o Watercourse - S-1, S-3A (Intermittent), S-2, S-3 (Perennial), Spruce Brook
o Vernal Pool - W-7, W-8, W-9

Wetland and Watercourse Crossing

o W-1/W-3 - Str. 1/1A Timber Mat Construction Pad
o W-10 - Timber Mat Access Road from Str. 4/4A to Str. 5/5A
o W-12/W-13/S3 Spruce Brook - Crossing for Access Road from Spruce Brook Road to Pull Pad Location

Right-of-Way Vegetation

o Forest
o Scrub-Shrub

Access

o Existing Access from Frost Bridge Road
o Existing Access from Spruce Brook Road

Road Crossings

o Waterbury Road
o Spruce Brook Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing

o Maintained Corridor is approximately 280 feet from Str.1 to Str.4 / 16,735 square feet
o Maintained Corridor is approximately 250 feet at Str.4 / 64,440 square feet

TEMPORARY WETLAND IMPACT:
+/- 1,183 SF

PREFERRED ACCESS IF
SUL IS OBTAINED

PREFERRED ACCESS IF
SUL IS OBTAINED

TEMPORARY WETLAND IMPACT:
+/- 1,444 SF

TEMPORARY WETLAND IMPACT:
+/- 1,822 SF

TEMPORARY WETLAND IMPACT:
+/- 111 SF

TEMPORARY WETLAND IMPACT:
+/- 120 SF

FROST BRIDGE
SUBSTATION

SPAN STREAM

Watertown

Plymouth

Waterbury

Thomaston

Mattatuck
State Forest

NDDB AREA

NAUGATUCK RIVER

WATERBURY ROAD

SPRUCE BROOK ROAD

RIFLE RANGE POND

SPRUCE BROOK

FROST BRIDGE
ROAD

281C-005

281C-001

281C-009

204A-010

204A-007

204A-008

1163/1550 Line

1550 Line

1163 Line

Map Sheet 2

W-1 W-2 W-3 W-4 W-5 W-6 W-7 W-8 W-9 W-10 W-11 W-12 W-13 W-14

S1 S2 S3 S3A

0 0A 1 1A 2 3 4 4A 5 5A 6 6A

3079

262

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- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
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- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source:
2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet
0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Watertown, Thomaston, Plymouth & Waterbury, CT

vhb

Map Sheet 1 of 9

Mapsheet 2 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 7-12A
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas
o Undeveloped, Forest
o Natural Diversity Database Area
o Mattatuck State Forest

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Natural Diversity Database Area at Str. 7
o Mattatuck State Forest at Str. 7/7A, 8, 9/9A, 10, 11 and 12/12A

Water Resources
o Wetland - W-15
o Wetland Cover Type - Scrub-Shrub, Forested
o Watercourse - None
o Vernal Pool - W-15 (three VPs)

Wetland and Watercourse Crossing
o W-15 - Existing Access Road

Right-of-Way Vegetation
o Forest
o Scrub-Shrub

Access
o Existing Access from Spruce Brook Road
o Existing Access from Sheffield Street

Road Crossings
o None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 250 feet / 5,595 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-010	MATTATUCK STATE FOREST	C/O DONALD	SPRUCE BROOK RD	WATERBURY	CT
204A-014	LEVEL DEVELOPMENT CORPORATION		SHEFFIELD ST	WATERBURY	CT

NDDB AREA

ACCESS FROM SPRUCE BROOK ROAD

ALTERNATIVE PROPOSED ACCESS IF SUL IS NOT OBTAINED

Map Sheet 1

204A-010

Mattatuck State Forest

S4 HANCOCK BROOK

ACCESS FROM SHEFFIELD ST

W-16

W-14

7

7A

8

PULL PAD LOCATION

1550 Line

1163/1550 Line

Waterbury

12

12A

1163 Line

Map Sheet 3

11

W-15

10

9

9A

204A-014

NDDB AREA

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- Stone Work Pad
- Exisitng Gravel
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- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source: 2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet

0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 2 of 9

Mapsheet 3 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 13-15A
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas

o Residential
o Commercial
o Undeveloped, Forest
o Hancock Brook
o 100-Year Flood Zone of Hancock Brook
o Mattatuck State Forest
o CSX Railroad

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas

o Maintained ROW
o Commercial Area Adjacent to ROW and to the West of Off-ROW Access Road
o Mattatcuk State Forest to the West of Str. 13/13A
o CSX Transportation Railroad Line to the West of Str. 13/13A

Water Resources

o Wetland - W-16, W-17, W-18
o Wetland Cover Type - Riverine, Scrub-Shrub, Forested
o Watercourse - S-4 (Perennial) S-5, S-6, S-7, S-8 (Intermittent)
o Vernal Pool - None

Wetland and Watercourse Crossing

o W-18/S-8 - Timber Mat Construction Pad at Pull Pad Location Between Str. 14 and Str. 15/15A
o W-18 - Timber Mat Construction Pad at Str. 15/15A

Right-of-Way Vegetation

o Forest
o Scrub-Shrub

Access

o Existing Access from Sheffield Street
o Existing Access from Boyden Street

Road Crossings

o None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing

o Maintained Corridor is approximately 250 feet / 9,368 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-010	MATTATUCK STATE FOREST	C/O DONALD	SPRUCE BROOK RD	WATERBURY	CT
204A-014	LEVEL DEVELOPMENT CORPORATION		SHEFFIELD ST	WATERBURY	CT
204A-015	CITY OF WATERBURY		SHEFFIELD ST	WATERBURY	CT
204A-016	CSX TRANSPORTATION		N/A	WATERBURY	CT
204A-019	ZASLOW DENISE,CATHLEEN EARNHARDT & MARK	DAINIAK TRUSTEES & DAVIA LEHN	BOYDEN ST	WATERBURY	CT
204A-022	CONNECTICUT LIGHT AND POWER COMPANY		BOYDEN ST	WATERBURY	CT
204A-023	FARMWOOD DEVELOPMENTS LLC		636 BOYDEN ST	WATERBURY	CT
204A-024	FARMWOOD DEVELOPMENTS LLC		BOYDEN ST	WATERBURY	CT

Mattatuck State Forest
204A-010
HANCOCK BROOK
204A-016
GUARD STRUCTURE PAD
W-17
S7
S6
S4
1163 Line
1163/1550 Line
1550 Line
13
13A
14
SPAN STREAM
S8
W-18
15
15A
1163 Line
Map Sheet 2
W-16
S5
TREE CLEARING NEEDED. CUT AND REMOVE VEGETATION. NO CROSSING NEEDED. TREES CAN BE REACHED FROM EAST SIDE.
PULL PAD LOCATION
TEMPORARY WETLAND IMPACTS: 5,033 SF
PULL PAD LOCATION
TEMPORARY WETLAND IMPACTS: +/- 3,501 SF
204A-019
Map Sheet 4
204A-022
204A-023
BOYDEN STREET
204A-024
Waterbury
204A-014
204A-015
SHEFFIELD STREET

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- Stone Work Pad
- Exisitng Gravel
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- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
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- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source: 2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet

0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 3 of 9

Mapsheet 4 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 16-20A
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas
o Residential
o Commercial
o Eversource Owned Property
o Undeveloped, Forest

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Residential Properties Adjacent to Str. 17, 18 and 19
o Eversource Owned Property at Str. 16/16A

Water Resources
o Wetland - W-19
o Wetland Cover Type - Scrub-Shrub, Forested
o Watercourse - None
o Vernal Pool - None

Wetland and Watercourse Crossing
o W-19 - Timber Mat Construction Pad at Str. 16/16A

Right-of-Way Vegetation
o Maintained Residential Lawns
o Forest
o Scrub-Shrub

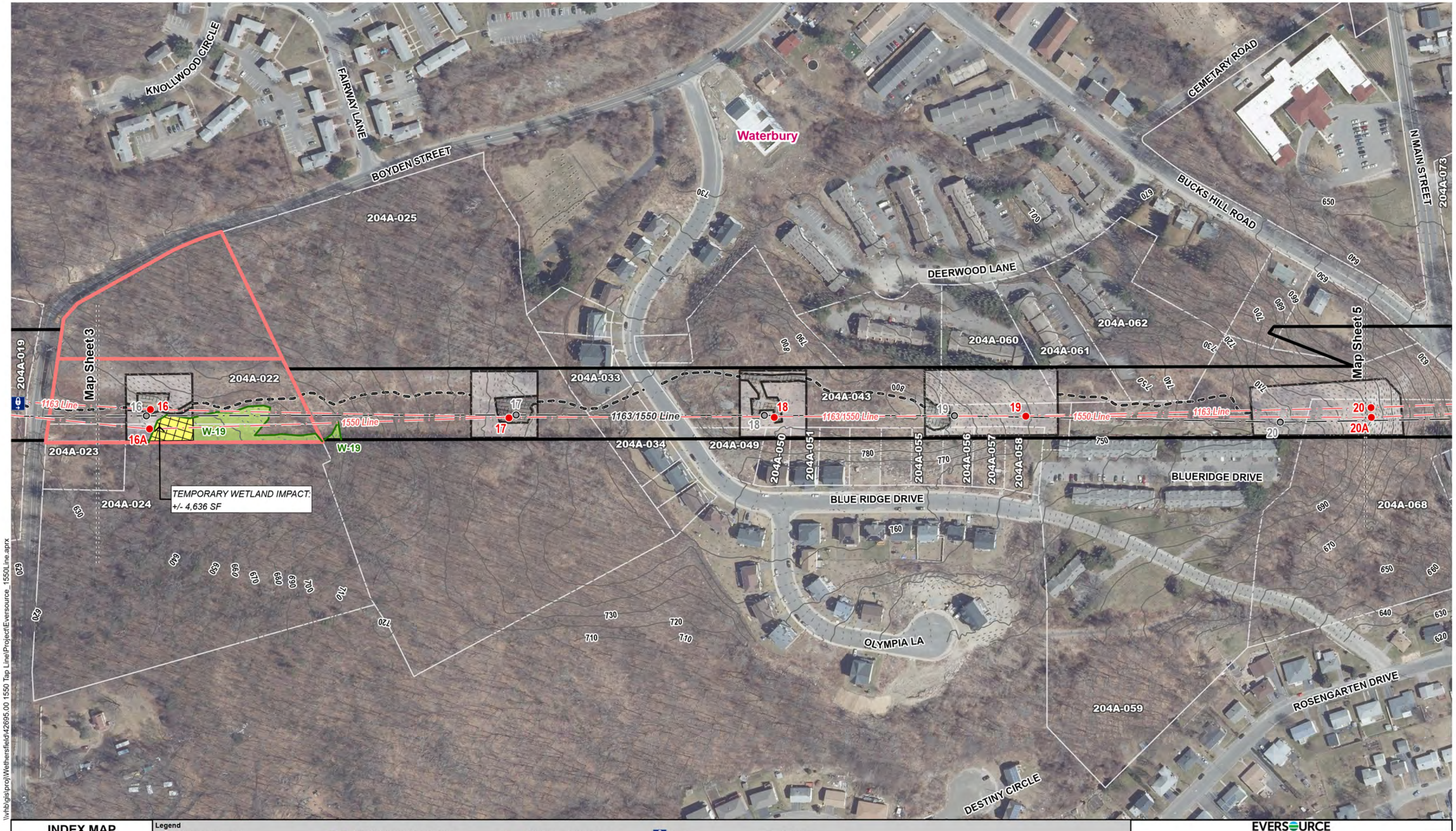
Access
o Existing Access from Boyden Street
o Existing Access from Blue Ridge Drive

Road Crossings
o Blueridge Drive

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 160 feet from Str. 16 to Str. 20 / 0 square feet
o Maintained Corridor is approximately 250 feet at Str. 20 / 0 feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-019	ZASLOW DENISE,CATHLEEN EARNHARDT & MARK	DAINIAK TRUSTEES & DAVIA LEHN	BOYDEN ST	WATERBURY	CT
204A-022	CONNECTICUT LIGHT AND POWER COMPANY		BOYDEN ST	WATERBURY	CT
204A-023	FARMWOOD DEVELOPMENTS LLC		636 BOYDEN ST	WATERBURY	CT
204A-024	FARMWOOD DEVELOPMENTS LLC		BOYDEN ST	WATERBURY	CT
204A-025	FARMWOOD DEVELOPMENTS LLC		BOYDEN ST	WATERBURY	CT
204A-033	TEFILLAH CONG SHAREI		70 BLUE RIDGE DR EXT	WATERBURY	CT
204A-034	LAZARUS GABRIEL	JUDY ROSENFELD SURV	92 BLUE RIDGE DR EXT	WATERBURY	CT
204A-043	BAIS DEVELOPMENT LLC		BLUE RIDGE DR EXT	WATERBURY	CT
204A-049	BAIS DEVELOPMENT LLC		BLUE RIDGE DR EXT	WATERBURY	CT
204A-050	BAIS DEVELOPMENT LLC		117 BLUE RIDGE DR EXT	WATERBURY	CT
204A-051	BAIS DEVELOPMENT LLC		127 BLUE RIDGE DR EXT	WATERBURY	CT
204A-055	BAIS DEVELOPMENT LLC		157 BLUE RIDGE DR EXT	WATERBURY	CT
204A-056	BAIS DEVELOPMENT LLC		165 BLUE RIDGE DR EXT	WATERBURY	CT
204A-057	BAIS DEVELOPMENT LLC		173 BLUE RIDGE DR EXT	WATERBURY	CT
204A-058	BAIS DEVELOPMENT LLC		183 BLUE RIDGE DR EXT	WATERBURY	CT
204A-059	DEERWOOD HILLS CONDOMUNIUM ASSOCIATION, INC.		24 BLUE RIDGE DR EXT	WATERBURY	CT
204A-060	DEERWOOD HILLS CONDOMUNIUM ASSOCIATION, INC.		45 DEERWOOD LN	WATERBURY	CT
204A-061	DEERWOOD HILLS CONDOMUNIUM ASSOCIATION, INC.		35 DEERWOOD LN	WATERBURY	CT
204A-062	DEERWOOD HILLS CONDOMUNIUM ASSOCIATION, INC.		25 DEERWOOD LN	WATERBURY	CT
204A-068	SANTA MARIA JOSEPH		NORTH MAIN ST	WATERBURY	CT
204A-073	CITY OF WATERBURY	REGAN SCHOOL	2780 NORTH MAIN ST	WATERBURY	CT



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- Off-ROW Access Pending Rights
- Temporary Construction Matting
- Stone Work Pad
- Exisitng Gravel
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source: 2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet

0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 4 of 9

Mapsheet 5 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 21-23
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas
o Residential
o Commercial
o Undeveloped, Forest
o 100-Year Flood Zone of Chase Brook
o Chase Brook
o Undeveloped Residential Subdivision
o Bucks Hill Park

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Undeveloped Residential Subdivision Adjacent to Str. 22 and 23

Water Resources
o Wetland - W-20, W-21, W-22
o Wetland Cover Type - Scrub-Shrub, Forested, Riverine
o Watercourse - S-9, S-10 (Intermittent)
o Vernal Pool - W-22

Wetland and Watercourse Crossing
o W-21 - Timber Mat Access Road and Construction Pad at Str. 21/21A
o W-21 - Timber Mat Construction Pad at Pull Pad Location

Right-of-Way Vegetation
o Forest
o Scrub-Shrub

Access
o Existing Access and Access Roads to be Improved from North Main Street

Road Crossings
o North Main Street

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 250 feet / 0 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-059	IMAGINEERS LLC		24 BLUE RIDGE DR EXT	WATERBURY	CT
204A-068	SANTA MARIA JOSEPH		NORTH MAIN ST	WATERBURY	CT
204A-073	CITY OF WATERBURY	REGAN SCHOOL	2780 NORTH MAIN ST	WATERBURY	CT
204A-074	EAST WATERBURY CONGREGATION OF JEHOVAHS WITNESSES INC		2670 NORTH MAIN ST	WATERBURY	CT
204A-075	CITY OF WATERBURY	BUCKS HILL PARK	88 MONTOE RD	WATERBURY	CT
204A-076	FARMWOOD DEVELOPMENTS LLC		MONTOE RD	WATERBURY	CT
204A-077	FARMWOOD DEVELOPMENTS LLC		NORTH MAIN ST	WATERBURY	CT
204A-078	FARMWOOD DEVELOPMENTS LLC		FARMWOOD RD	WATERBURY	CT
204A-092	MUCCIARO NICHOLAS JR		FARMWOOD RD	WATERBURY	CT

Waterbury

204A-073
204A-075
204A-076
204A-077
204A-078
204A-092
204A-059
204A-068
204A-074
BUCKS HILL PARK

TEMPORARY WETLAND IMPACT:
+/- 7,395 SF

TEMPORARY WETLAND IMPACT:
+/- 985 SF

PULL PAD LOCATION

PULL PAD LOCATION
TEMPORARY WETLAND IMPACT:
8,369 SF

SPAN STREAM

SPAN STREAM
TEMPORARY WETLAND IMPACT:
+/- 741 SF

CHASE BROOK

S9
S10
S10
W-20
W-21
W-22

20
20A
21
21A
22
23

1163 Line
1550 Line
1163/1550 Line

Map Sheet 4
Map Sheet 6

N MAIN STREET
ROSENGARTEN DRIVE
KIMBLE AVENUE
CARNATION LANE

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- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source:
2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet
0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 5 of 9

Mapsheet 6 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 24-26 and 691
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas
o Residential
o Commercial Maintained Lawns and Driveway
o Eversource Owned Property
o Undeveloped, Forest
o Undeveloped Residential Subdivision

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Eversource Owned Property at Str. 25/25A/690/691
o Undeveloped Residential Subdivision Adjacent to Str. 24/24A

Water Resources
o Wetland - W-21A,W-22A, W-23, W-24, W-25, W-26
o Wetland Cover Type - Scrub-Shrub, Forested, Riverine
o Watercourse - S-11, S-12, S-13, S-14 (Intermittent)
o Vernal Pool - W-24

Wetland and Watercourse Crossing
o W-21A/W-22A/W-25 - Timber Mat Construction Pad at Str. 25/25A/690
o W-26 - Timber Mat Access Road and Construction Pad at Str. 691
o S-11/S-12/S-13 - Timber Mat Construction Pad at Str. 25/25A/690
o S-14 - Timber Mat Access Road and Construction Pad at Str. 691

Right-of-Way Vegetation
o Forest
o Scrub-Shrub
o Maintained Lawn

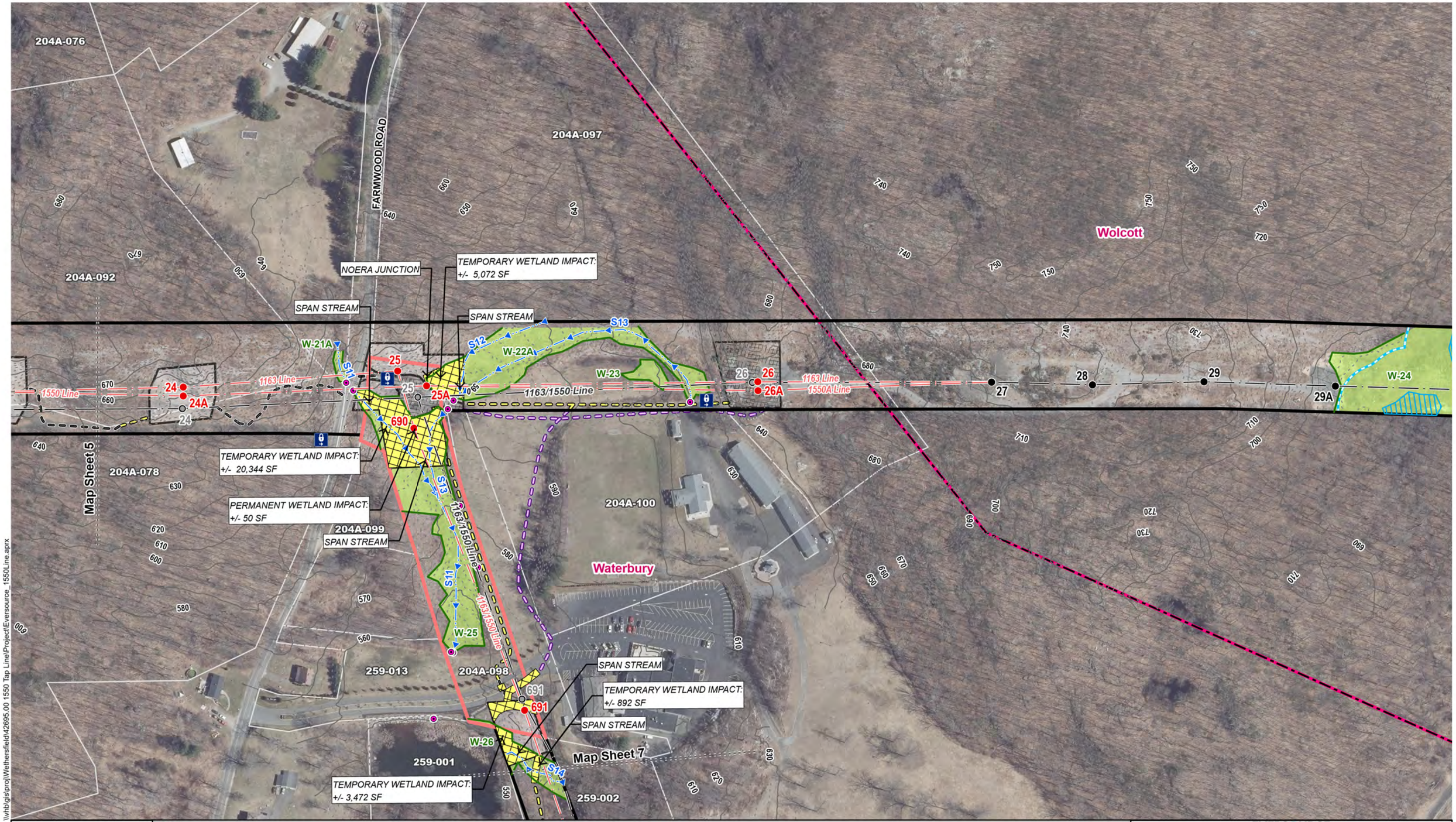
Access
o Existing Access from Farmwood Road

Road Crossings
o Farmwood Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 250 feet from Str. 24 to Str. 26 / 0 square feet
o Maintained Corridor is approximately 115 feet from Str. 690 to Str. 691 / 0 feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-076	FARMWOOD DEVELOPMENTS LLC		MONTOE RD	WATERBURY	CT
204A-078	FARMWOOD DEVELOPMENTS LLC		FARMWOOD RD	WATERBURY	CT
204A-092	MUCCIARO NICHOLAS JR		FARMWOOD RD	WATERBURY	CT
204A-097	DIPRIMIO JOHN T, EDWARD C	ROBERT C & JANICE M TEN-COM	FARMWOOD RD	WATERBURY	CT
204A-098	CONNECTICUT LIGHT AND POWER COMPANY		FARMWOOD RD	WATERBURY	CT
204A-099	TROSAN MEGHAN C		436 FARMWOOD RD	WATERBURY	CT
204A-100	PONTELANDOLFO COMMUNITY OF WATERBURY INC		380 FARMWOOD RD	WATERBURY	CT
259-001	EAST FARMWOOD LLC	C/O NICK RINALDI,PONTELANDOLFO CLUB	FARMWOOD RD	WATERBURY	CT
259-002	PONTELANDOLFO COMMUNITY OF WATERBURY INC		FARMWOOD RD	WATERBURY	CT
259-013	PONTELANDOLFO COMMUNITY OF WATERBURY INC		FARMWOOD RD	WATERBURY	CT



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- Stone Work Pad
- Exisitng Gravel
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source:
2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet
0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 6 of 9

Mapsheet 7 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 692-698A
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas

o Residential
o 100-Year Flood Zone of Great Brook Reservoir
o Great Brook Reservoir
o Undeveloped, Forest
o Lakewood Park

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas

o Maintained ROW
o 100-Year Flood Zone of Great Brook Reservoir Between Str. 693 and Str. 696
o Great Brook Reservoir Between Str. 693 and Str. 696

Water Resources

o Wetland - W-27, W-29
o Wetland Cover Type - Scrub-Shrub, Forested, Riverine, Lacustrine
o Watercourse - S-15, S-16, S-17, S-18. S-19 (Intermittent)
o Vernal Pool - None

Wetland and Watercourse Crossing

o W-27 - Timber Mat Construction Pad at Str. 693
o W-29 - Timber Mat Construction Pad at Str. 698/698A
o W-29 - Timber Mat Access Road from Lakewood Road
o S-15 - Timber Mat Access Road for Str. 692

Right-of-Way Vegetation

o Forest
o Scrub-Shrub

Access

o Existing Access from Farmwood Road
o Existing Access from Lakewood Road

Road Crossings

o Lakewood Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing

o Maintained Corridor is approximately 115 feet / 0 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
204A-097	DIPRIMIO JOHN T, EDWARD C	ROBERT C & JANICE M TEN-COM	FARMWOOD RD	WATERBURY	CT
259-001	EAST FARMWOOD LLC	C/O NICK RINALDI,PONTELANDOLFO CLUB	FARMWOOD RD	WATERBURY	CT
259-002	PONTELANDOLFO COMMUNITY OF WATERBURY INC		FARMWOOD RD	WATERBURY	CT
259-003	CITY OF WATERBURY	LAKEWOOD PARK	129 LAKEWOOD RD	WATERBURY	CT
259-004	STEPONAITIS LOUIS	STEPONAITIS MARY LOU SURV	355 LAKEWOOD RD	WATERBURY	CT
259-005	CITY OF WATERBURY	LAKEWOOD PARK	LAKEWOOD RD	WATERBURY	CT
259-006	CITY OF WATERBURY		LAKEWOOD RD	WATERBURY	CT
259-014	LONGO FRANK A	LONGO CHRISTINE SURV	377 LAKEWOOD RD	WATERBURY	CT
259-052	FRANK A	LONGO	LAKEWOOD RD	WATERBURY	CT
259-053	LOUIS	STEPONAITIS	LAKEWOOD RD	WATERBURY	CT

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- Delineated Perennial Watercourse
- Delineated Wetland Boundary Outline
- Ordinary High Water Mark
- Field Delineated Wetland
- Open Water
- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
- FEMA 100-Year Flood Zone
- Gate
- Culvert
- 10' Contour Line
- 2' Contour Line
- Fence
- Hiking Trail
- Railroad
- Map Sheet Match Line
- Parcel Boundary
- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source: 2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet

0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 7 of 9

Mapsheet 8 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 699-703
City of Waterbury, Connecticut

AREA OF DESCRIPTION

Existing Land Use & Resource Areas
o Residential
o 100-Year Flood Zone of Great Brook Reservoir
o Great Brook Reservoir
o Undeveloped, Forest
o City Mills Park

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Residential Properties Adjacent to Str. 702/702A
o 100-Year Flood Zone of Great Brook Reservoir south of Str. 700
o Great Brook Reservoir south of Str. 700

Water Resources
o Wetland - W-30, W-31, W-33, W-34
o Wetland Cover Type - Scrub-Shrub, Forested, Riverine, Lacustrine
o Watercourse - S-20
o Vernal Pool - None

Wetland and Watercourse Crossing
o W-29/W-33 - Timber Mat Access Road for Str. 700
o W-30 - Timber Mat Construction Pad for Str. 699

Right-of-Way Vegetation
o Forest
o Scrub-Shrub

Access
o Existing Access from Lakewood Road
o Existing Access from Noera Street

Road Crossings
o None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 115 feet / 0 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
259-003	CITY OF WATERBURY	LAKEWOOD PARK	129 LAKEWOOD RD	WATERBURY	CT
259-005	CITY OF WATERBURY	LAKEWOOD PARK	LAKEWOOD RD	WATERBURY	CT
259-006	CITY OF WATERBURY		LAKEWOOD RD	WATERBURY	CT
259-007	CITY OF WATERBURY	CITY MILLS PARK	42 CITY MILLS LN	WATERBURY	CT
259-016	RINALDI JOHN L	ELAINE RICHARD	CONNECTICUT AVE	WATERBURY	CT
259-031	DEFILIO ANDREW		CONNECTICUT AVE	WATERBURY	CT
259-032	RINALDI JOHN A ELAINE RICHARD	JOHN RINALDI	CONNECTICUT AVE	WATERBURY	CT
259-035	RUBBO LEONARDO		CONNECTICUT AVE	WATERBURY	CT
259-051	CITY OF WATERBURY		CONNECTICUT AVE	WATERBURY	CT

SPAN STREAM
TEMPORARY WETLAND IMPACT:
615 SF

TEMPORARY WETLAND IMPACT:
+/- 73 SF

SPAN STREAM

SPAN STREAM

ACCESS FROM
NOERA STREET

PULL PAD LOCATION

RHODE ISLAND AVENUE
NICOLA STREET
SAMUEL STREET
SANTORO STREET
DELFORD ROAD
LAMONT STREET
CARDEN HILL CIRCLE
TRANSIT STREET
BENEFIT STREET
HOPE STREET
N WALNUT STREET
OHIO AVENUE
Map Sheet 7
Map Sheet 9
259-005
259-051
259-016
259-035
259-031
259-032
259-007
259-006
259-003
Waterbury
GREAT BROOK RESERVOIR
CITY MILLS PARK
LAKEWOOD ROAD
HAMDEN AVENUE
LANZAERI STREET
SIMSBURY STREET
BELLEVUE STREET
WINCHESTER STREET
CITY MILLS LANE
N MAIN STREET
PLATT STREET

W-29 W-30 W-31 W-33 W-34
S-19 S-20
698 698A 699 700 701 702 702A 703
1163 Line 1550 Line 1163/1550 Line

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- Delineated Perennial Watercourse
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- Potential Vernal Pool Extent
- 100' Vernal Pool Envelope
- Rare Species (NDDB December 2022)
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- Culvert
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- 2' Contour Line
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- Railroad
- Map Sheet Match Line
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- Eversource Owned Parcel
- State Owned Property
- Area of Tree Clearing
- Municipal Boundary

Base Map Source:
2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet
0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

Date: May 18, 2023

Waterbury, CT

vhb

Map Sheet 8 of 9

Mapsheet 9 of 9
Frost Bridge to Noera Rebuild Project
1163/1550 Line Structure 704
City of Waterbury, Connecticut

AREA OF DESCRIPTION
Existing Land Use & Resource Areas
o Residential
o Commercial
o Eversource Owned Property
o Undeveloped, Forest
o City Mills Park

RIGHT-OF-WAY DESCRIPTION
Right-of-Way Land Use & Resource Areas
o Maintained ROW
o Utility Substation - Noera Substation east of Str. 704A

Water Resources
o Wetland - W-32
o Wetland Cover Type - Forested
o Watercourse - None
o Vernal Pool - None

Wetland and Watercourse Crossing
o None

Right-of-Way Vegetation
o Forest
o Scrub-Shrub

Access
o Existing Access from Noera Road

Road Crossings
o None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
o Maintained Corridor is approximately 115 feet / 0 square feet

ABUTTERS TO PROJECT RIGHT-OF-WAY

Abutter Number	Owner First Name	Owner Last Name	Parcel Address	Town	State
259-007	CITY OF WATERBURY	CITY MILLS PARK	42 CITY MILLS LN	WATERBURY	CT
259-008	CONNECTICUT LIGHT AND POWER COMPANY		NOERA ST	WATERBURY	CT
259-009	CONNECTICUT LIGHT AND POWER COMPANY		NOERA ST	WATERBURY	CT

BENEFIT STREET
ARLINGTON AVENUE
DRAKE STREET
HOPE STREET
RUMFORD STREET
DIVISION STREET
LONG HILL ROAD
BEECH STREET
OAK STREET
CARPMILL STREET
IRION STREET
IVES STREET
N WALNUT STREET
FOOTE STREET
Map Sheet 8
BASSETT STREET
Waterbury
VIOLET STREET
WALNUT STREET
703
1163/1550 Line
704A
704
705A
1550 Line
1163' Line
705
259-008
259-009
259-007
CITY MILLS PARK
W-32
NOERA SUBSTATION
NOERA ROAD
BRANCH STREET
GRIGGS STREET
ST PAUL STREET
E FARM STREET
LOCUST STREET
WARD STREET
N MAIN STREET
GRANT STREET
ROBINSON STREET
PLATT STREET
EASTON AVENUE
TUDOR STREET

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Base Map Source: 2019 Aerial Imagery (CTDEP)

1 Inch = 200 feet

0 100 200 Feet

EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project

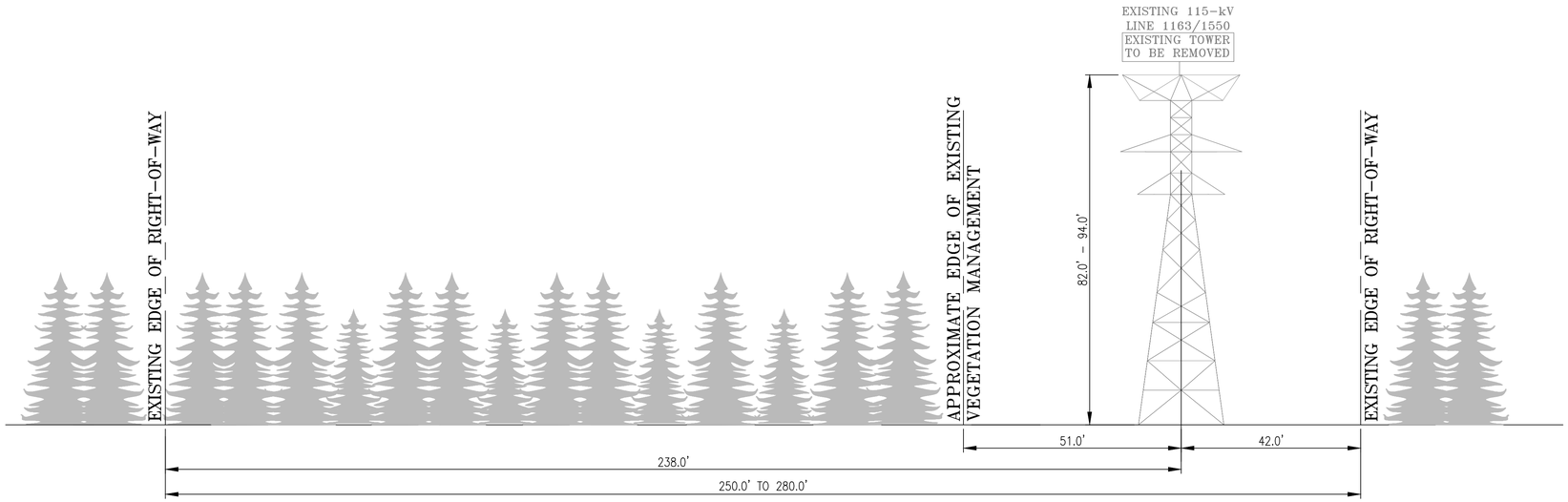
Date: May 18, 2023

Waterbury, CT

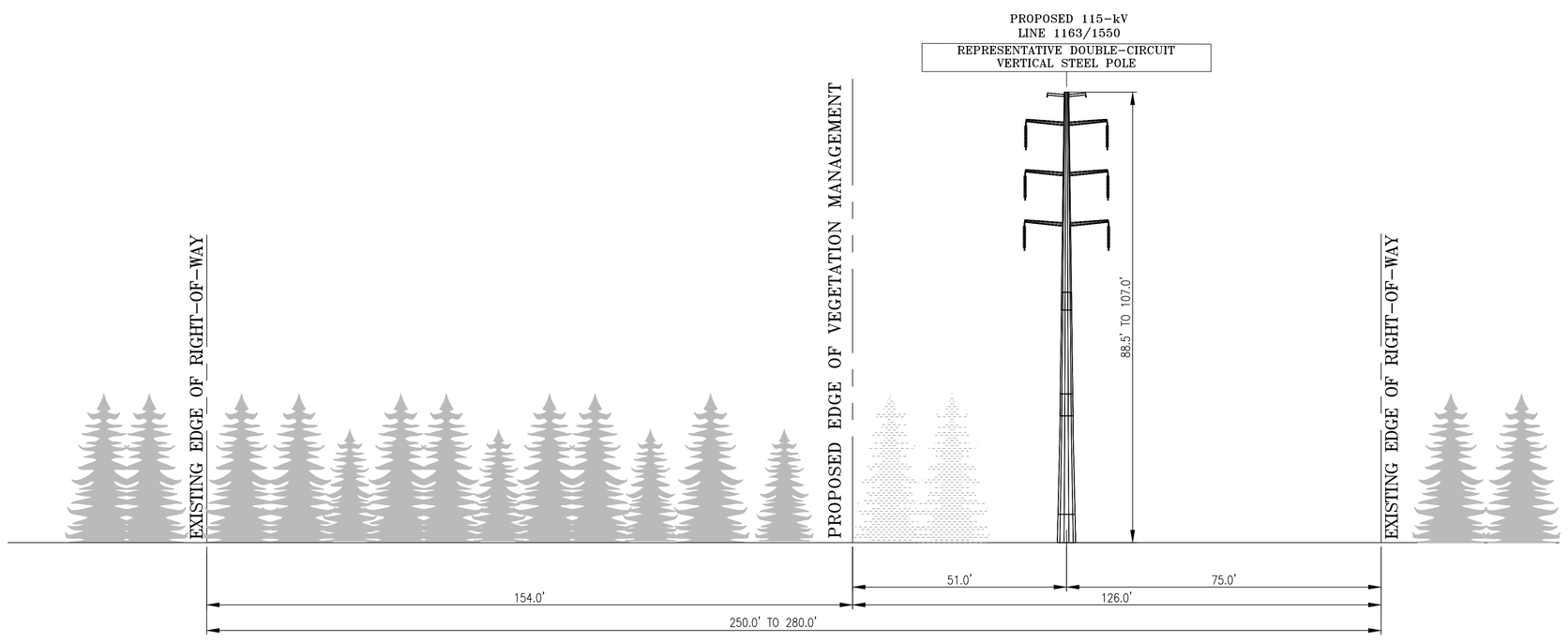
vhb

Map Sheet 9 of 9

Attachment B: Frost Bridge to Noera Rebuild Project– Right-of-Way Cross Sections



EXISTING R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL LATTICE TOWER
LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION
IN THE TOWNS OF WATERTOWN & THOMASTON, CT



PROPOSED R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL POLE DESIGN
LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION
IN THE TOWNS OF WATERTOWN & THOMASTON, CT

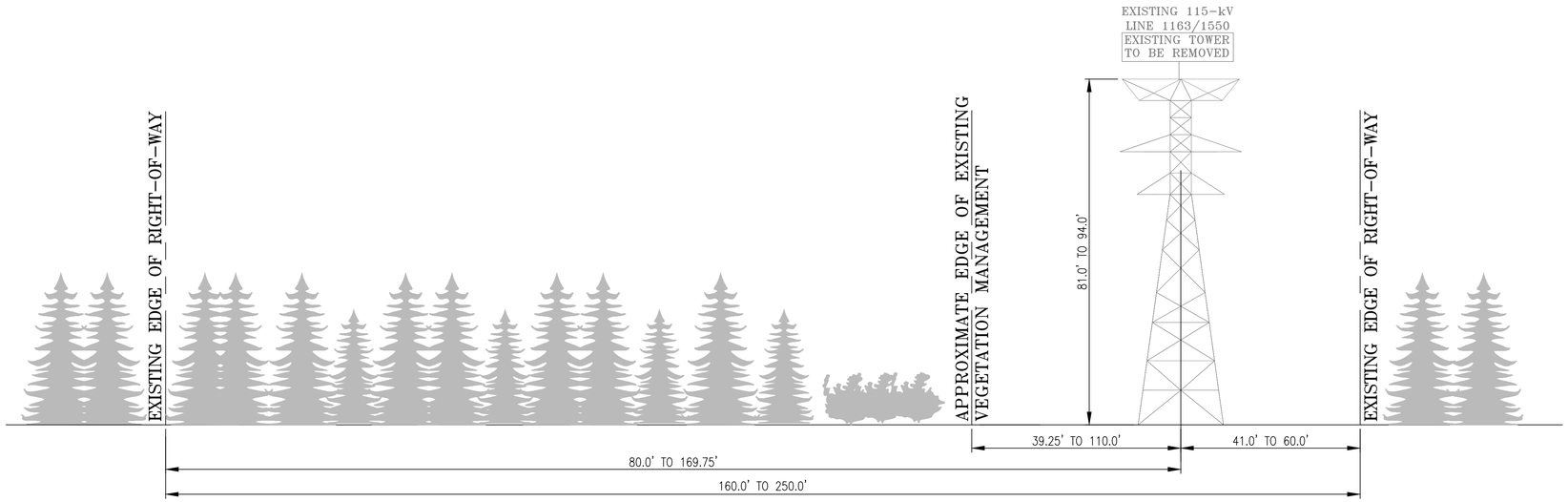
NOTE:
LINE ARRESTERS TO BE ADDED AS REQUIRED.
CROSS SECTIONS ARE TYPICAL OF SEGMENT.
VARIATIONS ALONG SEGMENT MAY OCCUR.

XS-1

EVERSOURCE ENERGY

TITLE
Frost Bridge to Noera Rebuild Project
115-kV Cross Section (Typical)
Watertown and Thomaston

BY	RMK/PJF	CHKD	IOH/PJF	APP	JSS/ES	APP	JM/ES
DATE	3/3/23	DATE	3/3/23	DATE	3/3/23	DATE	3/3/23
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER	40519401			DWG NO.	01115-85005p001		

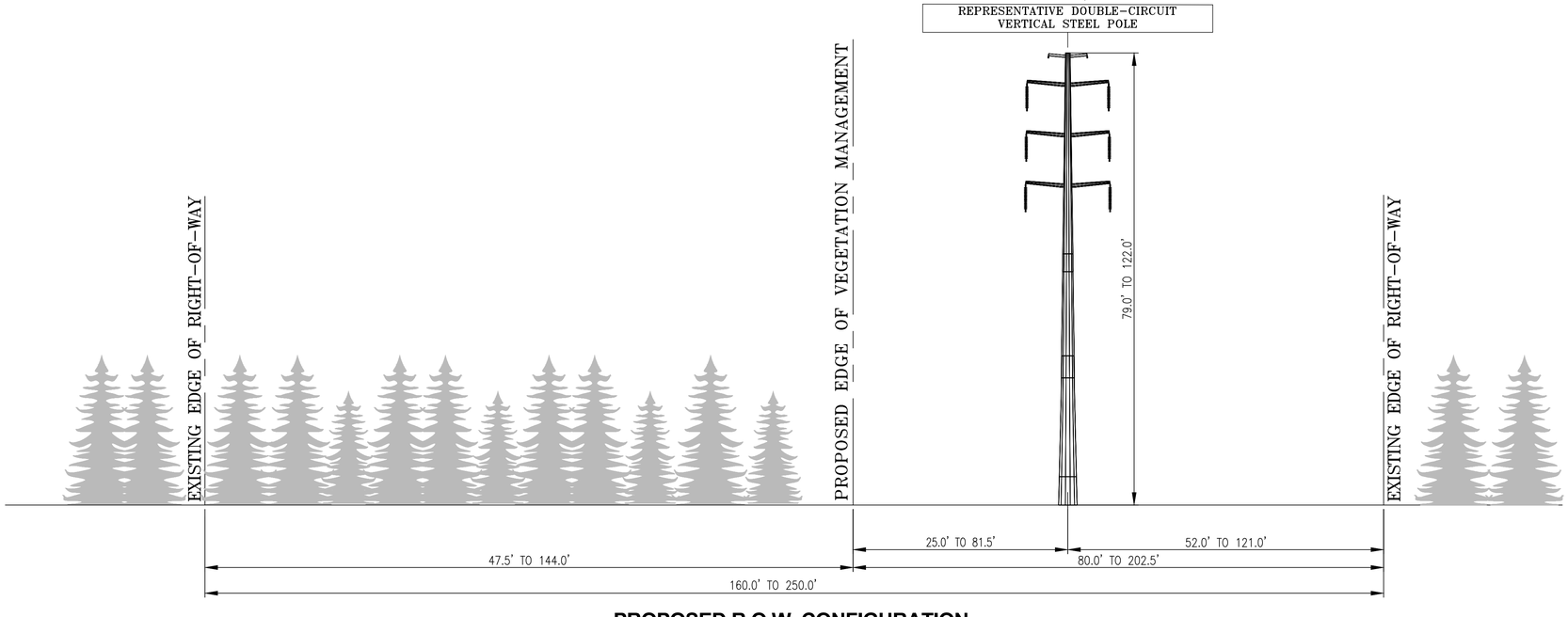


EXISTING R.O.W. CONFIGURATION

DOUBLE-CIRCUIT STEEL LATTICE TOWER

LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION

IN THE TOWN OF THOMASTON & CITY OF WATERBURY, CT



PROPOSED R.O.W. CONFIGURATION

DOUBLE-CIRCUIT STEEL POLE DESIGN

LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION

IN THE TOWN OF THOMASTON & CITY OF WATERBURY, CT

NOTE:
LINE ARRESTERS TO BE ADDED AS REQUIRED.
CROSS SECTIONS ARE TYPICAL OF SEGMENT.
VARIATIONS ALONG SEGMENT MAY OCCUR.

XS-2

EVERSOURCE ENERGY

TITLE: **Frost Bridge to Noera Rebuild Project**
115-kV Cross Section (Typical)
Thomaston and Waterbury

BY	RMK/PJF	CHKD	IOH/PJF	APP	JSS/ES	APP	JM/ES
DATE	2/23/23	DATE	2/23/23	DATE	2/23/23	DATE	2/23/23
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER	40519401			DWG NO.	01115-85005p002		

ES VER: 05/2015

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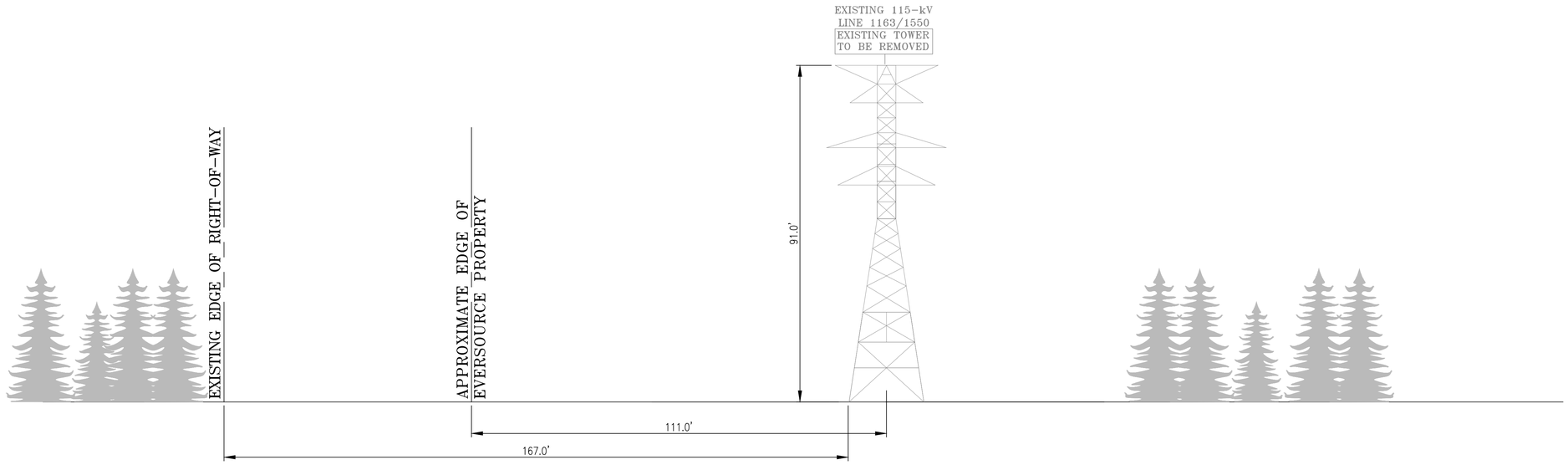
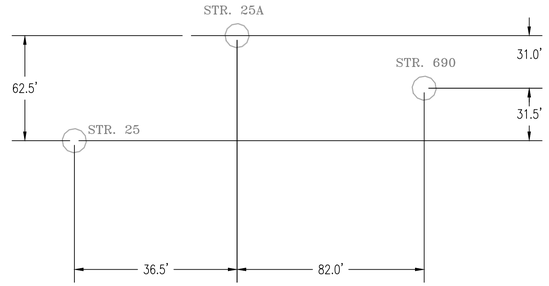
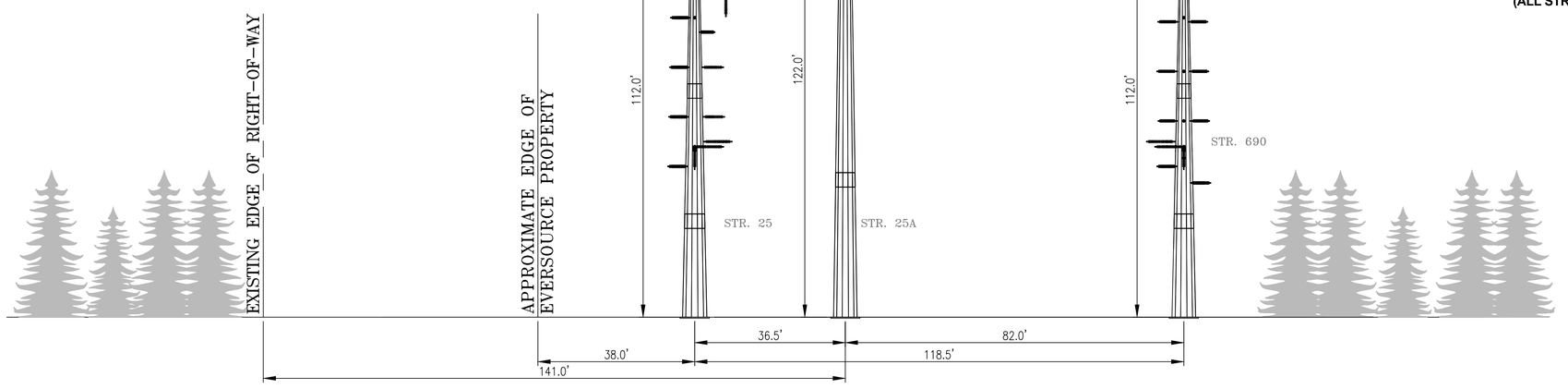


EXISTING R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL TAP LATTICE TOWER
LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION
IN THE CITY OF WATERBURY, CT



PLAN VIEW
(ALL STRUCTURES ON EVERSOURCE PROPERTY)



PROPOSED R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL TAP POLE DESIGN
LOOKING FROM FROST BRIDGE SUBSTATION TO NOERA JUNCTION
IN THE CITY OF WATERBURY, CT

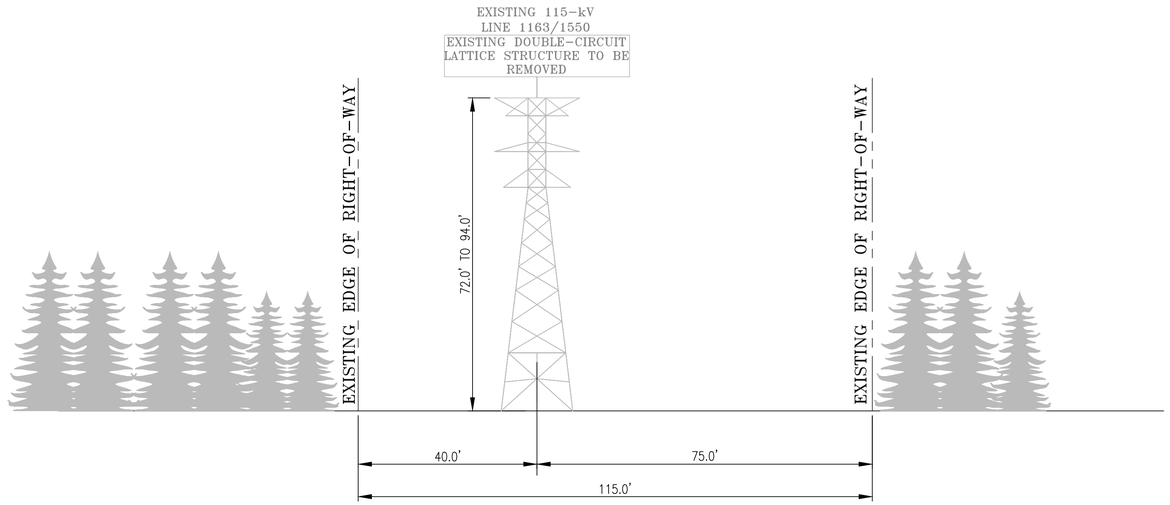
NOTE:
LINE ARRESTERS TO BE ADDED AS REQUIRED.
CROSS SECTIONS ARE TYPICAL OF SEGMENT.
VARIATIONS ALONG SEGMENT MAY OCCUR.

XS-3

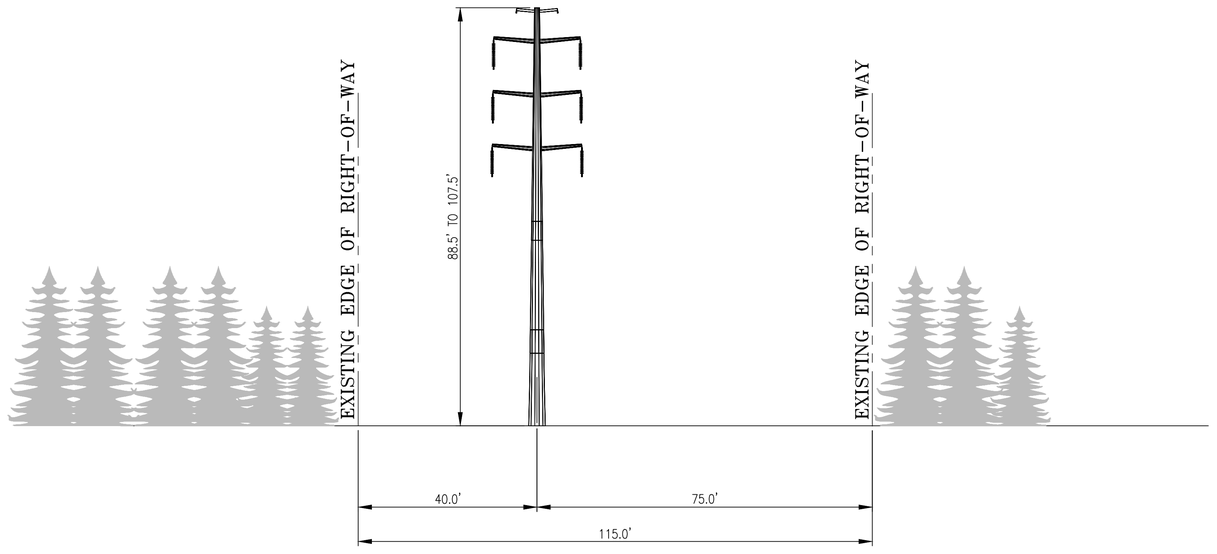
EVERSOURCE ENERGY

TITLE	**Frost Bridge to Noera Rebuild Project** **115-kV Cross Section (Typical)** **Watertown and Thomaston**

BY	RMK/PJF	CHKD	IOH/PJF	APP	JSS/ES	APP	JM/ES
DATE	2/23/23	DATE	2/23/23	DATE	2/23/23	DATE	2/23/23
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER		40519401		DWG NO.	01115-85005p003		



EXISTING R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL LATTICE TOWER
LOOKING FROM NOERA JUNCTION TO NOERA SUBSTATION
IN THE CITY OF WATERBURY, CT



PROPOSED R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL POLE DESIGN
LOOKING FROM NOERA JUNCTION TO NOERA SUBSTATION
IN THE CITY OF WATERBURY, CT

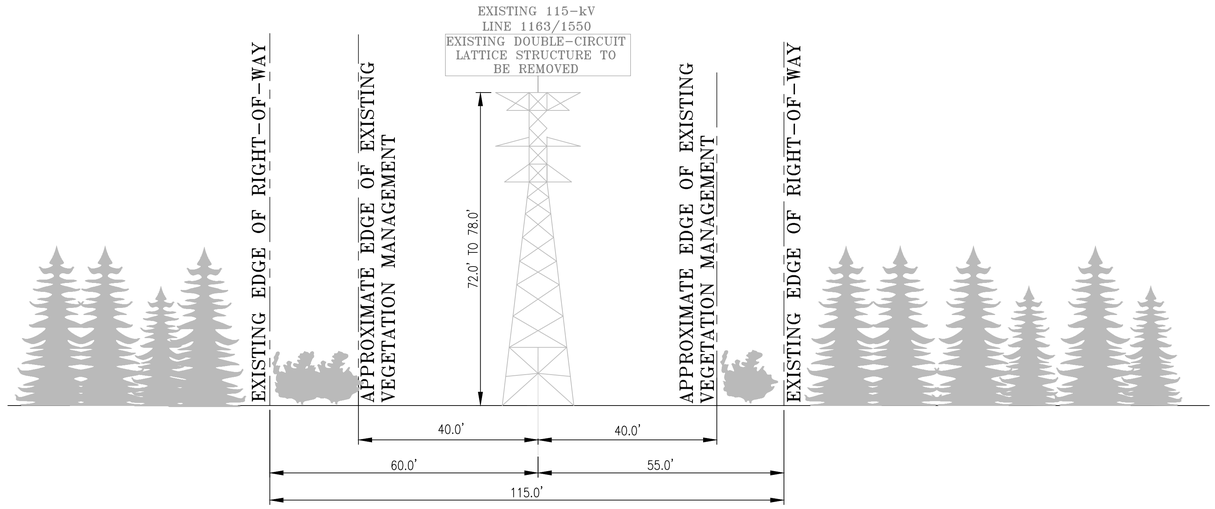
NOTE:
LINE ARRESTERS TO BE ADDED AS REQUIRED.
CROSS SECTIONS ARE TYPICAL OF SEGMENT.
VARIATIONS ALONG SEGMENT MAY OCCUR.

XS-4

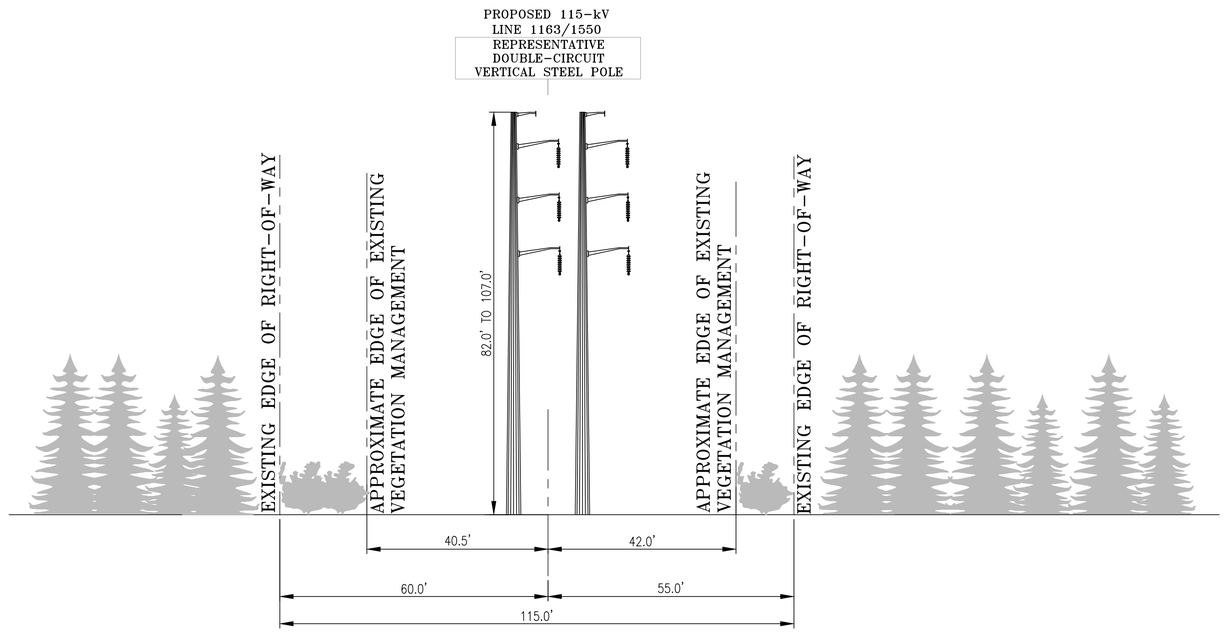
EVERSOURCE ENERGY

TITLE
Frost Bridge to Noera Rebuild Project
115-kV Tap Cross Section
Waterbury

BY	RMK/PJF	CHKD	IOH/PJF	APP	JSS/ES	APP	JM/ES
DATE	2/23/23	DATE	2/23/23	DATE	2/23/23	DATE	2/23/23
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK # PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER		40519401		DWG NO.		01115-85005p004	



EXISTING R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL LATTICE TOWER
LOOKING FROM NOERA JUNCTION TO NOERA SUBSTATION
IN THE CITY OF WATERBURY, CT



PROPOSED R.O.W. CONFIGURATION
DOUBLE-CIRCUIT STEEL POLE DESIGN
LOOKING FROM NOERA JUNCTION TO NOERA SUBSTATION
IN THE CITY OF WATERBURY, CT

NOTE:
LINE ARRESTERS TO BE ADDED AS REQUIRED.
CROSS SECTIONS ARE TYPICAL OF SEGMENT.
VARIATIONS ALONG SEGMENT MAY OCCUR.

XS-5

EVERSOURCE ENERGY

TITLE: **Frost Bridge to Noera Rebuild Project**
115-kV Cross Section (Typical)
Waterbury

BY	RMK/PJF	CHKD	IOH/PJF	APP	JSS/ES
DATE	2/23/23	DATE	2/23/23	DATE	2/23/23
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES	
V-SCALE	N.T.S.	V.S.		R.E. DWG	
R.E. PROJ. NUMBER	40519401			DWG NO.	01115-85005p005

Attachment C: List of Structure Replacements

Attachment C: Structure List - 1163/ 1550 Lines

KEY: SCSP - Single-circuit Steel Pole, DCSP Double-circuit Steel Pole, DCLT - Double-circuit Lattice Structure

1163/1550 Lines	Circuit(s) on New Structure(s)	Existing Structure #	New Structure #	Existing Type	Proposed Type	Existing Height (ft)	Proposed Height (ft)	Height Increase (ft)
FROST BRIDGE SUBSTATION								
	1163	0	**0**	**DCLT**	**SCSP**	94	**102**	*8*
	1550		**0A**	**NEW**	**SCSP**		**102**	*8*
	1163	1	**1**	**DCLT**	**SCSP**	82	**107**	*25*
	1550		**1A**	**NEW**	**SCSP**		**107**	*25*
	1163/1550	2	**2**	**DCLT**	**DCSP**	82	**88.5**	*7*
	1163/1550	3	**3**	**DCLT**	**DCSP**	82	**88.5**	*7*
	1163	4	**4**	**DCLT**	**SCSP**	83	**92**	*9*
	1550		**4A**	**NEW**	**SCSP**		**92**	*9*
	1163	5	**5**	**DCLT**	**SCSP**	83	**92**	*9*
	1550		**5A**	**NEW**	**SCSP**		**92**	*9*
	1163	6	**6**	**DCLT**	**SCSP**	82	**92**	*10*
	1550		**6A**	**NEW**	**SCSP**		**87**	*5*
	1163	7	**7**	**DCLT**	**SCSP**	82	**122**	*40*
	1550		**7A**	**NEW**	**SCSP**		**122**	*40*
	1163/1550	8	**8**	**DCLT**	**DCSP**	86	**97**	*11*
	1163	9	**9**	**DCLT**	**SCSP**	93	**87**	*-6*
	1550		**9A**	**NEW**	**SCSP**		**87**	*-6*
	1163/1550	10	**10**	**DCLT**	**DCSP**	82	**79**	*-3*
	1163/1550	11	**11**	**DCLT**	**DCSP**	82	**98**	*16*
	1163	12	**12**	**DCLT**	**SCSP**	83	**87**	*4*
	1550		**12A**	**NEW**	**SCSP**		**82**	*-1*
	1163	13	**13**	**DCLT**	**SCSP**	82	**102**	*20*
	1550		**13A**	**NEW**	**SCSP**		**102**	*20*
	1163/1550	14	**14**	**DCLT**	**DCSP**	82	**88.5**	*7*
	1163	15	**15**	**DCLT**	**SCSP**	82	**102**	*20*
	1550		**15A**	**NEW**	**SCSP**		**102**	*20*
	1163	16	**16**	**DCLT**	**SCSP**	82	**122**	*40*
	1550		**16A**	**NEW**	**SCSP**		**122**	*40*
	1163/1550	17	**17**	**DCLT**	**DCSP**	82	**107.5**	*26*
	1163/1550	18	**18**	**DCLT**	**DCSP**	81	**107.5**	*27*
	1163/1550	19	**19**	**DCLT**	**DCSP**	83	**107.5**	*25*
	1163	20	**20**	**DCLT**	**SCSP**	94	**122**	*28*
	1550		**20A**	**NEW**	**SCSP**		**122**	*28*
	1163	21	**21**	**DCLT**	**SCSP**	84	**97**	*13*
	1550		**21A**	**NEW**	**SCSP**		**97**	*13*
	1163/1550	22	**22**	**DCLT**	**DCSP**	82	**98**	*16*
	1163/1550	23	**23**	**DCLT**	**DCSP**	82	**93.5**	*12*
	1163	24	**24**	**DCLT**	**SCSP**	82	**92**	*10*
	1550		**24A**	**NEW**	**SCSP**		**97**	*15*
NOERA JUNCTION								
	1163/1550	25	**25**	**DCLT TAP**	**SCSP**	91	**112**	*21*
	1550		**25A**	**NEW**	**SCSP**		**122**	*31*
	1163		**690**	**NEW**	**SCSP**		**112**	*21*
	1163	26	**26**	**WOOD H-FRAME**	**SCSP**	53	**107**	*54*
	1550		**26A**	**NEW**	**SCSP**		**107**	*54*
	1163/1550	691	**691**	**DCSP**	**DCSP**	94	**92**	*-2*
	1163/1550	692	**692**	**DCLT**	**DCSP**	74	**88.5**	*15*
	1163/1550	693	**693**	**DCLT**	**DCSP**	73	**93.5**	*21*
	1163/1550	694	**694**	**DCLT**	**DCSP**	73	**88.5**	*16*
	1163	695	**695**	**DCLT**	**SCSP**	74	**107**	*33*
	1550		**695A**	**NEW**	**SCSP**		**107**	*33*
	1163/1550	696	**696**	**DCLT**	**DCSP**	73	**102**	*29*
	1163/1550	697	**697**	**DCLT**	**DCSP**	73	**88.5**	*16*
	1163	698	**698**	**DCLT**	**SCSP**	78	**102**	*24*
	1550		**698A**	**NEW**	**SCSP**		**82**	*4*
	1163/1550	699	**699**	**DCLT**	**DCSP**	75	**97**	*22*
	1163/1550	700	**700**	**DCLT**	**DCSP**	75	**97**	*22*
	1163/1550	701	**701**	**DCLT**	**DCSP**	73	**97**	*24*
	1163	702	**702**	**DCLT**	**SCSP**	77	**102**	*25*
	1550		**702A**	**NEW**	**SCSP**		**92**	*15*
	1163/1550	703	**703**	**DCLT**	**DCSP**	72	**107.5**	*35.5*
	1163	704	**704**	**DCLT**	**SCSP**	72	**97**	*25*
	1550		**704A**	**NEW**	**SCSP**		**92**	*20*
	1163	-	**705**	**NEW**	**SCSP**		**88.5**	*-*
	1550	-	**705A**	**NEW**	**SCSP**		**88.5**	*-*
NOERA S/S								

Attachment D: Wetlands Delineation Report

December 30, 2022

Ref: 42695.00

Mr. Jeffrey Bolton
Eversource Energy
107 Shelton Street
Berlin, CT 06037

Re: Wetland & Watercourse Delineation Report
Frost Bridge to Noera Rebuild Project
Watertown, Thomaston, Plymouth, and Waterbury CT

Mr. Bolton,

As requested and authorized, qualified soil scientists from VHB and certified wetland scientists completed an on-site investigation to determine the presence or absence of wetlands and/or watercourses within Eversource's Right-of-Way (ROW) along the 1163/1550 Line for the Frost Bridge to Noera Rebuild Project (Herein referred to as 'the Project'). The Project area is located along the 1163/1550 ROW from the Frost Bridge Substation in Watertown, CT to the Noera Substation in Waterbury, CT, with portions of the Project also located in Thomaston and Plymouth, as depicted in the attached USGS figure (Figure 1). Vernal pools identified and delineated during this delineation are noted below but are documented and discussed in further detail under a separate report.

This investigation was completed by a qualified soil scientist and conducted in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) Soil Survey Manual (1993). The soil classification system of the National Cooperative Soil Survey was used in this investigation to identify the soil map units present on the Project site. This report includes descriptions of site conditions and photographic documentation (Appendix A) and Wetland Characteristic Summary Forms (Appendix B).

REGULATORY COMPLIANCE

Wetlands and watercourses are regulated by both state and federal law each with different definitions and regulatory requirements. Accordingly, the State may regulate waters that fall outside of federal jurisdiction; however, where federal jurisdiction exists concurrent State jurisdiction is almost always present.

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Wethersfield, Connecticut 06109
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State Regulation

Wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. *Watercourses* are defined as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." *Intermittent watercourse* determinations are made based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus, (2) the presence of standing or flowing water for a duration longer than a particular storm incident, and (3) the presence of hydrophytic vegetation. (See Inland Wetlands and Watercourses Act §22a-38 CGS.)

Federal Regulation

Federal wetlands were delineated in accordance with the *Corps of Engineers Wetlands Delineation Manual (January 1987)* in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, January 2012)*. In accordance with this method, the presence of three parameters must be satisfied for an area to be mapped as a wetland, which include: 1) wetland soils, 2) hydrophytic vegetation, and 3) wetland hydrology.

INVESTIGATION

The Project site was investigated on the following days: October 23, 2020, November 3, 2020, November 6, 2020, December 3, 2020, December 5, 2020, December 15, 2020 and January 29, 2021, with supplemental photographs taken on December 15, 2022. The temperature during the time of delineation ranged from 67°F and 38°F from October to December and was 19°F on January 29, 2021.

VHB's delineation was completed in accordance with both state and federal regulations, as noted above.

Soil types are identified by observing soil morphology (soil texture, color, structure, etc.). Soil morphology is evaluated through numerous test pits and/or hand borings (generally to a depth of at least two feet). If a wetland and/or watercourse were determined to be present, their boundaries are identified with flags and hung from vegetation or small wire stakes if in fields or grass communities. For wetlands, these flags are labeled "Wetland Delineation" and generally spaced a maximum of approximately 50 feet apart. For watercourses, these flags are blue and generally spaced a maximum of 50 feet apart. If the boundary between a wetland and a watercourse were found to be within 10 feet of each other, a single line is delineated. It is important to note that flagged wetland and watercourse boundaries are subject to change until verified by local, state, or federal regulatory agencies. All wetland and watercourse flag locations were field located using a Trimble R1 GNSS Receiver capable of sub-meter accuracy.

WETLAND AND WATERCOURSE SITE DESCRIPTION

As shown in Figure 2, the Project site is located within an Eversource utility ROW spanning from the Frost Bridge Substation in Watertown, CT, through Thomaston and Plymouth (access only), and ending at the Noera Substation in Waterbury. The ROW currently contains multiple lattice and monopole utility structures supporting overhead transmission wires, as well as multiple existing construction and maintenance work pads surrounding each structure, and access roads. Otherwise, the ROW is primarily undeveloped, consisting of forests and scrub-shrub environments. Adjacent to the ROW, multiple residential neighborhoods and commercial/industrial properties are present, but the majority of the ROW is surrounded by forests including the Mattatuck State Forest. Please refer to Appendix A for photographs of current conditions onsite.

Wetland classifications used to identify the type of wetland(s) occurring on the Project site are based on guidance from the U.S. Fish and Wildlife Service (USFWS) (Cowardin et.al. 1979). These are further qualified with the Hydrogeomorphic Method of wetland classification (Brinson, 1993).

A total of 36 wetlands and 20 watercourses (15 intermittent and 5 perennial) were delineated within the Project site and are summarized in Table 1, below, which includes the wetland number, vegetation type, and observed hydrology.

Wetlands consist predominantly of groundwater slope wetlands and groundwater depression wetlands situated in glacial till. The predominate wetland hydrology observed was seasonally saturated. Wetlands with a seasonally saturated hydrology have a substrate that is saturated for extended periods during the growing season, but standing water is rarely present. Wetlands with vernal pools have a seasonally flooded hydrology. Wetlands with a seasonally flooded hydrology are flooded for extended periods during the growing season, but usually no surface water by the end of the growing season. Wetlands with intermittently flooded hydrology are located within the flood plain of a perennial stream and are periodically flooded during bank-full conditions.

The dominant vegetative cover type across the Project area is palustrine scrub-shrub (PSS), due to the fact that the ROW is maintained to exclude trees in favor of low woody shrubs and herbaceous vegetation. Dominant PSS species throughout the Project area include: speckled alder (*Alnus incana*), gray birch (*Betula populifolia),* silky dogwood (*Cornus amomum*), white meadowsweet (*Spiraea alba*), glossy buckthorn (*Frangula alnus*), Japanese barberry (*Berberis thunbergii*), Japanese knotweed (*Reynoutria japonica*), Canada goldenrod (*Solidago canadensis*), wrinkle-leaf goldenrod (*Solidago rugosa*), sensitive fern (*Onoclea sensibilis*), cinnamon fern (*Osmundastrum cinnamomeum*), woolgrass (*Scirpus cyperinus*), and common rush (*Juncus effusus*).

Several wetlands continue beyond the maintained ROW, where they are typically palustrine forested (PFO) communities. Dominant PFO species throughout the Project area include: red maple (*Acer rubrum*), swamp white oak (*Quercus bicolor*), and eastern cottonwood (*Populus deltoides*). Due to the biogeography of the Project area along the northerly limits of the Coastal Zone, wetlands are predominantly headwater wetlands,

many of which include 1st order perennial streams draining to coastal streams and rivers. The remainder of the wetlands are small locally isolated groundwater depression wetlands.

Table 1 Delineated Wetlands and Watercourses within the Project Area

Wetland Number[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Water Courses[3]	Associated Vernal Pool[4]
1	PSS	-	Seasonally Flooded	Stream 1 – (Intermittent)	-
2	PFO	-	Seasonally saturated	Stream 1 – (Intermittent)	-
3	PSS	PFO	Seasonally saturated	-	-
4	PSS	-	Intermittently flooded	Stream 2 – Naugatuck River (Perennial)	-
5	PFO	-	Intermittently flooded	Stream 2 – Naugatuck River (Perennial)	-
6	PFO	-	Seasonally saturated	-	-
7	PSS	-	Seasonally flooded	-	VP-1
8	PFO	-	Seasonally flooded	-	VP-2
9	PFO	-	Seasonally flooded	-	VP-3
10	PSS	-	Seasonally saturated	-	-
11	PSS	-	Seasonally saturated	-	-
12	PSS	PFO	Intermittently flooded	Stream 3 – Spruce Brook (Perennial)	-
13	PSS	PFO	Intermittently flooded	Stream 3 – Spruce Brook (Perennial)	-

Wetland Number[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Water Courses[3]	Associated Vernal Pool[4]
14	PSS	PFO	Seasonally saturated	Stream 3A – UNT to Spruce Brook (Perennial)	
15	PSS	PFO	Seasonally flooded	-	VP-4, VP-5, VP-6
16	PSS	PFO	Intermittently flooded	Stream 4 – Hancock Brook (Perennial); and Stream 5 – UNT to Hancock Brook (Perennial)	-
Stream only (not associated with a mapped wetland within the ROW)				Stream 6 – UNT to Hancock Brook (Intermittent)	-
17	PSS	PFO	Intermittently flooded	Stream 7 – UNT to Hancock Brook (Perennial)	-
18	PSS	PFO	Intermittently flooded	Stream 8 – UNT to Hancock Brook (Perennial)	-
19	PSS	PFO	Seasonally saturated	-	-
20	PSS	-	Seasonally saturated	Stream 9 – UNT to Chase Brook (Intermittent)	-
21	PSS	PFO	Intermittently flooded	Stream 10 – Chase Brook (Perennial)	-
22	PSS	-	Seasonally flooded	-	VP-7
21A	PSS	-	Seasonally saturated	Stream 11 (Intermittent)	-
22A	PSS	-	Intermittently flooded	Streams 12 and 13 (Perennial)	-
23	PSS	PEM	Seasonally saturated	-	-

Wetland Number[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Water Courses[3]	Associated Vernal Pool[4]
25	PSS	-	Intermittently flooded	Stream 11 (Intermittent); Stream 13 (Perennial)	-
26	PSS	-	Permanently saturated	Stream 14 (Intermittent)	-
Stream only (associated with a wetland located outside of the ROW to the east)				Stream 15 – UNT to Great Brook Reservoir (intermittent)	-
27	OW (Great Brook Reservoir)	PSS/ PFO	Lacustrine (Permanently flooded)	Streams 16 and 17 – UNTs to Great Brook Reservoir (Intermittent)	-
28	PSS	-	Seasonally saturated	Stream 18 (Intermittent)	-
29	PSS	PFO	Seasonally saturated	Stream 19 – UNT to Belleview Lake (Intermittent)	-
30	PFO	-	Seasonally saturated	-	-
31	OW (Belleview Lake)	PFO	Lacustrine (Permanently flooded)	-	-
32	PFO	-	Intermittently flooded	Great Brook - located off-ROW (Perennial)	-
33	PSS	PFO	Seasonally saturated	Stream 20 – UNT to Belleview Lake (Intermittent)	-
34	PFO	-	Seasonally saturated	-	-

1 – Note that the delineated Wetland 24 (and associated buffer) is located outside of the work area so was not included in the Table above.

SOIL MAP TYPES

A brief description of each soil unit identified on the Project site is presented below including information from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil descriptions. Soils onsite were predominately disturbed. For further information on these and other soils, please refer to the internet site at http://soils.usda.gov/technical/classification/osd/index.html).

Upland Soils

Hollis-Chatfield-Rock outcrop complex

Hollis Soils

The Hollis series consists of well drained and somewhat excessively drained soils formed in a thin mantle of till. They are shallow to bedrock. They are nearly level to very steep upland soils on bedrock-controlled hills and ridges. Slope ranges from 0 through 60 percent. Saturated hydraulic conductivity is moderately high or high. Depth to hard bedrock ranges from 25 to 50 cm. The O horizon, where present, ranges from slightly decomposed to highly decomposed plant material. The A horizon has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3. It is sandy loam, fine sandy loam, or loam in the fine-earth fraction. Consistence is friable or very friable. Some pedons have a BA horizon with colors similar to the A horizon and other properties similar to the Bw horizon. The Bw horizon commonly has hue of 10YR or 2.5Y and includes 7.5YR when a high ratio of ammonium oxalate extractable iron to dithionite-citrate extractable iron (greater than 0.15) exists, value of 4 or 5, and chroma of 4 through 8. It is sandy loam, fine sandy loam, or loam in the fine-earth fraction. The Bw horizon has granular or subangular blocky structure. Consistence is friable or very friable. Some pedons have a thin BC or C horizon with color like the Bw horizon, except it includes hue of 5Y. Texture, structure, and consistence are similar to the Bw horizon. Some pedons have a thin 2Cr horizon that is typically weathered schist and moderately cemented.

Chatfield Soils

The Chatfield series consists of well drained soils formed in loamy melt-out till. They are moderately deep to bedrock. They are nearly level to very steep soils on bedrock-controlled hills and ridges. Slope ranges from 0 to 70 percent. Crystalline bedrock is at depths of 50 to 100 cm. Saturated hydraulic conductivity is moderately high or high in the mineral soil. The O horizon has hue of 5YR to 2.5Y, value of 2 or 3, and chroma of 0 to 2. It is slightly, intermediately, and/or highly decomposed plant material. Reaction ranges from extremely acid to moderately acid. The A, or Ap horizon where present, has hue of 7.5YR to 2.5Y, value of 2 to 4, and chroma of 1 to 4. Dry value is 6 or higher. Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine-earth fraction. Structure is granular. Consistence is friable or very friable. Reaction ranges from extremely acid to moderately acid, unless limed. The AB or BA horizon, where present, has hue of 7.5YR to 2.5Y, value of 3 or 4, and chroma of 2 to 4. Texture is similar to the A horizon. The Bw horizon commonly has hue of 10YR or 2.5Y, and includes 7.5YR when a high ratio of ammonium oxalate extractable iron to dithionite-citrate extractable iron (greater than 0.15) exists, value of 3 to 6, and chroma of 4 to 6. Texture is similar to the A horizon. The Bw horizon has subangular blocky or granular

structure and is friable or very friable. Reaction ranges from very strongly acid to moderately acid. Some pedons have a BC horizon with color and texture similar to the C horizon. The C horizon, where present, has hue of 7.5YR to 5Y, value of 4 or 5, and chroma of 2 to 4, and the 7.5YR hue is limited to horizons having a high ratio of ammonium oxalate extractable iron to dithionite-citrate extractable iron (> 0.15). Texture is sandy loam, fine sandy loam, very fine sandy loam, loam, or silt loam in the fine-earth fraction and may have lenses or pockets of loamy sand. It is massive and may have plate-like divisions. It is friable or firm. Reaction ranges from very strongly through moderately acid. The 2R horizon is dominantly schist, granite, or gneiss bedrock. In places it is massive, but it dominantly has vertical and horizontal fractures in the upper 30 to 76 cm.

Charlton-Chatfield complex

Charlton Soils

The Charlton series consists of very deep, well drained soils formed in loamy melt-out till. They are nearly level to very steep soils on moraines, hills, and ridges. Slope ranges from 0 to 60 percent. Saturated hydraulic conductivity is moderately high or high. The O horizon, where present, ranges from slightly decomposed to highly decomposed plant material. The A horizon has hue of 7.5YR or 10YR, value of 2 or 3, and chroma of 1 to 3. Disturbed pedons have an Ap horizon with value of 3 or 4 and chroma of 2 to 4. The A or Ap horizon is sandy loam, fine sandy loam, or loam in the fine-earth fraction. It has weak or moderate granular structure and is friable or very friable. Some pedons have a thin AE or E horizon below the O horizon or a thin E horizon below the A horizon. It has hue of 10YR or 2.5Y, value of 4 to 6, and chroma of 1 to 3. Texture, structure, and consistence are like the A horizon. The upper part of the Bw horizon has commonly hue of 7.5YR or 10YR, and includes 7.5YR when a high ratio of ammonium oxalate extractable iron to dithionite-citrate extractable iron (greater than 0.15) exists, and value and chroma of 4 to 6. The lower part of the Bw horizon has hue of 10YR or 2.5Y and value and chroma of 4 to 6. Texture of the Bw horizon is loam, fine sandy loam, or sandy loam with less than 65 percent silt plus very fine sand in the fine earth fraction. It has weak granular or subangular blocky structure. Consistence is friable or very friable. Some pedons have a BC horizon with value and chroma like the lower part of the Bw horizon, but includes hue of 5Y. The BC horizon commonly has texture, structure, and consistence like the Bw horizon but the range includes geologically derived structure appearing in the form of thin plates. The C horizon has hue of 10YR to 5Y, value of 4 to 6, and chroma of 2 to 6. Texture is loam, fine sandy loam, or sandy loam in the fine-earth fraction, with pockets or thin lenses of loamy sand. The horizon is massive or has plates of geogenic origin. Consistence commonly is very friable or friable but in some pedons includes firm.

Canton and Charlton fine sandy loams

Canton Soils

The Canton series consists of very deep, well drained soils formed in a loamy mantle underlain by sandy till. They are on nearly level to very steep moraines, hills, and ridges. Slope ranges from 0 to 45 percent. Saturated hydraulic conductivity is moderately high or high in the solum and high or very high in the substratum. The O horizons, where present, consist of slightly, moderately, and/or highly decomposed

organic material. The A horizon has hue of 7.5YR or 10YR, value of 2 to 4, and chroma of 1 to 3. Texture is sandy loam, fine sandy loam, loam, or very fine sandy loam in the fine-earth fraction. Some pedons have an Ap horizon with properties similar to the A horizon. It is up to 20 cm thick. Some pedons have a thin E or AE horizon that has hue of 7.5YR or 10YR, value of 3 to 5 and chroma of 1 or 2 with similar textures to the A horizon. It is up to 8cm thick. The upper Bw horizons commonly have hue of 10YR, and includes 7.5YR when a high ratio of ammonium oxalate extractable iron to dithionite-citrate extractable iron (greater than 0.15) exists, value of 4 or 5, and chroma of 4 to 8. The lower Bw horizons have hue of 10YR or 2.5Y, value of 4 to 7, and chroma of 4 to 8. Texture of the fine-earth fraction of the Bw horizons is commonly fine sandy loam and less commonly sandy loam, loam, and very fine sandy loam. Structure of the Bw horizons is granular or subangular blocky. Some pedons have a Bs, Bh, or BC horizon with texture similar to the Bw horizons. The 2C horizon typically has hue of 2.5Y or 5Y, value of 5 to 7, and chroma of 2 or 3. In some pedons hue is 10YR with chroma of 4 to 6. The texture of the fine-earth fraction is loamy fine sand or coarser. It is single grain or massive. Consistence is friable, very friable or loose. Thin lenses or small pockets of firm or very firm finer textured material are common below 91 cm.

Ur—Urban land (306)

This unit consists of areas where urban structures cover more than 85 percent of the surface. Examples of such structures are roads, parking lots, shopping and business centers, and industrial parks. Most areas are in the towns of Bridgeport, Danbury, Fairfield, Norwalk, Shelton, Stamford, and Stratford. The areas are commonly rectangular and range from 5 to 500 acres. Slopes range from 0 to 8 percent but are dominantly less than 5 percent. Included with this unit in mapping are small areas of Udorthents and areas of excessively drained Hinckley soils; somewhat excessively drained Hollis soils; well-drained Agawam, Charlton, and Paxton soils; and moderately well drained Ninigret and Sutton soils. Included areas make up about 15 percent of this map unit. This unit requires onsite investigation and evaluation for most uses.

Wetland Soils

Ridgebury, Leicester, and Whitman soils, 0-8 percent slopes, extremely stony

Ridgebury Soils

The Ridgebury complex is a very deep poorly drained soil that includes poorly drained Leicester, and very poorly drained Whitman soils formed in till derived mainly from granite, gneiss, and schist. Ridgebury soils on the landscape are in slightly concave areas and shallow drainageways of till uplands with slopes that range from 0-8 percent. Depth to the perched seasonal high water table from November to May, or longer, is perched above the densic materials. The soils diagnostic horizons include an ochric epipedon (0 to 5 inches (A horizon)), aeric feature 100 percent of the zone from 5 to 9 inches (Bw1 horizon), and a cambic horizon (5 to 18 inches (Bw and Bg horizons)). Densic contact root limiting material begins at 18 inches (Cd). Endosaturation occurs within the zone from 9 to 18 inches and is saturated above the densic contact (Bw2 horizon).

Leicester Soils

The Leicester series consists of very deep, poorly drained loamy soils formed in friable till. They are nearly level or gently sloping soils in drainage ways and low-lying positions on hills. Slope ranges from 0 to 8 percent. Permeability is moderate or moderately rapid in the surface layer and subsoil and moderate to rapid in the substratum. The horizons and features recognized in this pedon are an ochric epipedon in the zone from 1 to 7 inches (A horizon) and a cambic horizon in the zone from 7 to 23 inches (Bg and BC horizons). There is also an aquic moisture regime as indicated by chroma of 2 in Bg horizon but with chroma too high within 30 inches (chroma 3 in BC horizon) to qualify for Typic Endoaquepts. This series also contains an endoadquepts subgroup based on saturation to a depth of 200 cm from the mineral soil surface. There is an aeric great group based on matrix color and a chroma of 3 or more in one subhorizon between the Ap and 75 cm. (BC horizon) and the particle-size class in control section ranges from 10 to 40 inches and is considered coarse loamy type of soil.

Whitman Soils

The Whitman series consists of very deep, very poorly drained soils formed in glacial till derived mainly from granite, gneiss, and schist. They are shallow to a densic contact. These soils are nearly level or gently sloping soils in depressions and drainageways on uplands. Permeability is moderate or moderately rapid in the solum and slow or very slow in the substratum. The diagnostic horizons and features in this pedon include an umbric epipedon in the zone from the soil surface to a depth of 10 inches (Ap horizon) and a cambic horizon in the zone from 10 to 18 inches (Bg horizon). This soil also has aquic conditions as evidenced by a chroma of 1 in the Bg horizon. A densic contact is also present with the root limiting layer beginning at 18 inches. Whitman soils are considered to have a shallow depth class because the depth to the densic contact is less than 20 inches (Cd1 is at 18 inches.)

Scarboro muck soils, 0-3 percent slopes

Scarboro Soils

The Scarboro series consists of very deep, very poorly drained soils in sandy glaciofluvial deposits on outwash plains, deltas, and terraces. They are nearly level soils in depressions. Slope ranges from 0 through 3 percent. Saturated hydraulic conductivity is high or very high. The O horizon is commonly mucky peat or muck, but the range includes thin layers of peat at the surface. The O horizon is neutral or has hue 5YR through 10YR, value of 2 or 3, and chroma of 0 through 3.

The A horizon where present is neutral or has hue of 5YR through 2.5Y, value of 2 through 3, and chroma of 0 through 2. It is fine sandy loam, sandy loam, loamy fine sand, loamy sand, fine sand, sand or their mucky analogues in the fine-earth fraction. This horizon commonly is 5 through 14 inches (13 through 36 centimeters) thick, but in some places may be less than 5 inches (13 centimeters) thick or absent. The upper part of the Cg horizon is neutral or has hue of 10YR through 5Y, value of 3 through 7, and chroma of 0 through 3. Some pedons have few or common fine through coarse redoximorphic features. Texture is fine sandy loam, sandy loam, loamy fine sand, loamy coarse sand, loamy sand, fine sand, or sand in the fine-earth fraction. The lower part of the C horizon is neutral or has hue of 10YR through 5Y or 5GY, value of 3

through 6, and chroma of 0 through 4. Redoximorphic features range from none through many and are fine through coarse. Texture is loamy fine sand, loamy sand, fine sand, sand, loamy coarse sand, or coarse sand in the fine-earth fraction. The C horizon is structureless and loose, very friable, or friable. It is often stratified.

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2. Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe, 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service. Washington, D.C. FWS/OBS-79/31.

3. United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil descriptions. Internet site: http://soils.usda.gov/technical/classification/osd/index.html).

CLOSING

Thank you for the opportunity to work with you on this Project. Please contact Jeffrey Shamas at 860-807-4388 if you have any questions or require additional assistance.

Sincerely,

Vanasse Hangen Brustlin, Inc.

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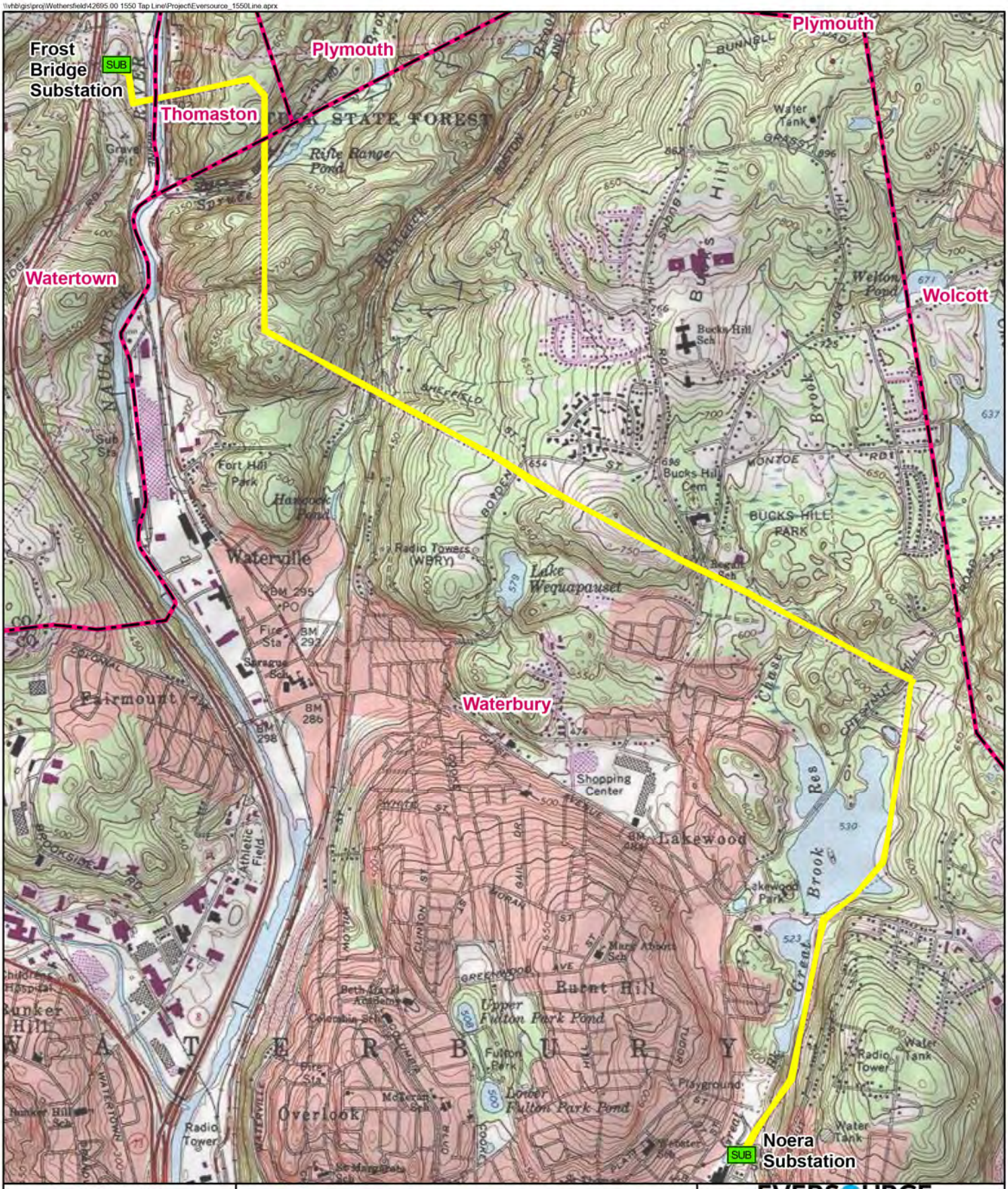
Attachments:

Figure 1 – USGS Site Location Map
Appendix A – Site Photograph Log
Appendix B – Wetland Characteristic Summary Forms

FIGURES

FIGURE 1

USGS OVERVIEW MAP



EVERSOURCE ENERGY

Frost Bridge to Noera Rebuild Project
Figure 1 - USGS Site Location Map
Watertown, Thomaston. Plymouth & Waterbury, CT

Date: December 12, 2022

vhb

APPENDIX A

SITE PHOTOGRAPH LOG

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Watertown, CT	**Project No**: 42695.00

Photo No.: 1 **Date:** 10/23/20

Description: View facing northeast, looking down at Wetland 1, which is a depressional wetland at the base of a hillside slope.

Note the train tracks in the background seperating Wetland 1 from Wetland 4, which are connected via culvert under the tracks.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Watertown, CT	**Project No**: 42695.00

Photo No.: 2 **Date:** 10/23/20

Description: View facing southwest of Wetland 2 located along a steep hillside slope.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Watertown, CT	**Project No**: 42695.00

Photo No.: 3	**Date:** 10/23/20

Description: View facing east of Stream 2 where it exits Wetland 2 and flows downhill to Wetland 1 (in background).

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Watertown, CT	**Project No**: 42695.00

Photo No.: 4	**Date:** 10/23/20

Description: View facing southeast of Wetland 3.

Note that the portion in the ROW had been recently maintained (with PSS cover type) and off-ROW portion is a PFO cover type.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Watertown, CT	**Project No**: 42695.00

Photo No.: 5	**Date:** 12/15/22

Description: View facing northeast of Wetland 4 located along the western bank of the Naugatuck River (Stream 2) in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 6	**Date:** 10/23/20

Description: View facing southwest of Wetland 5 located along the eastern bank of the Naugatuck River (Stream 2) in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 7	**Date:** 10/23/20

Description: View facing northeast of Wetland 6, which is located on a steep hillside slope.

Note the groundwater seep eminating from the bedrock outcrop in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 8	**Date:** 12/15/22

Description: View facing east of Wetland 7 and Vernal Pool 1.

Note lattice Structure 4 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 9	**Date:** 11/03/20

Description: View facing northeast of Wetland 8 and Vernal Pool 2.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 10	**Date:** 10/23/20

Description: View facing northwest of Wetland 9 and Vernal Pool 3.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 11	**Date:** 11/03/20

Description: View facing southeast of Wetland 10.

Note lattice Structure 4 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 12	**Date:** 11/03/20

Description: View facing north of Wetland 11.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 13 **Date:** 12/15/22

Description: View facing southeast of the existing access road crossing at Stream 3 (Spruce Brook).

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 14 **Date:** 12/15/22

Description: View facing southwest of Wetland 12 along the western bank of Spruce Brook. Spruce Brook Road in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 15 **Date:** 12/15/22

Description: View facing northwest of Wetland 13, located along the eastern banks of Spruce Brook. Spruce Brook Road in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 16 **Date:** 12/15/22

Description: View facing southeast of Wetland 14 and Stream 3A, which are located along a steep hillside slope (Lattice Structure 7 is just out of sight, over the hilll in background).

Note that a groundwater seep is eminating from bedrock located just below the top of the slope in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 17 **Date:** 11/06/20

Description: View facing north of Wetland 15 and Vernal Pool 4.

Note that this portion of Wetland 15 is forested and located outside of the cleared portion of right-of-way, to the north of the existing access road.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 18 **Date:** 11/06/20

Description: View facing northeast of Wetland 15 and Vernal Pool 6.

Note that this portion of Wetland 15 is scrub shrub and located within the cleared portion of right-of-way, to the south of the existing access road.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 19	**Date:** 12/15/22

Description: View facing southeast, looking down at Wetland 16 and Stream 4 (Hancock Brook).

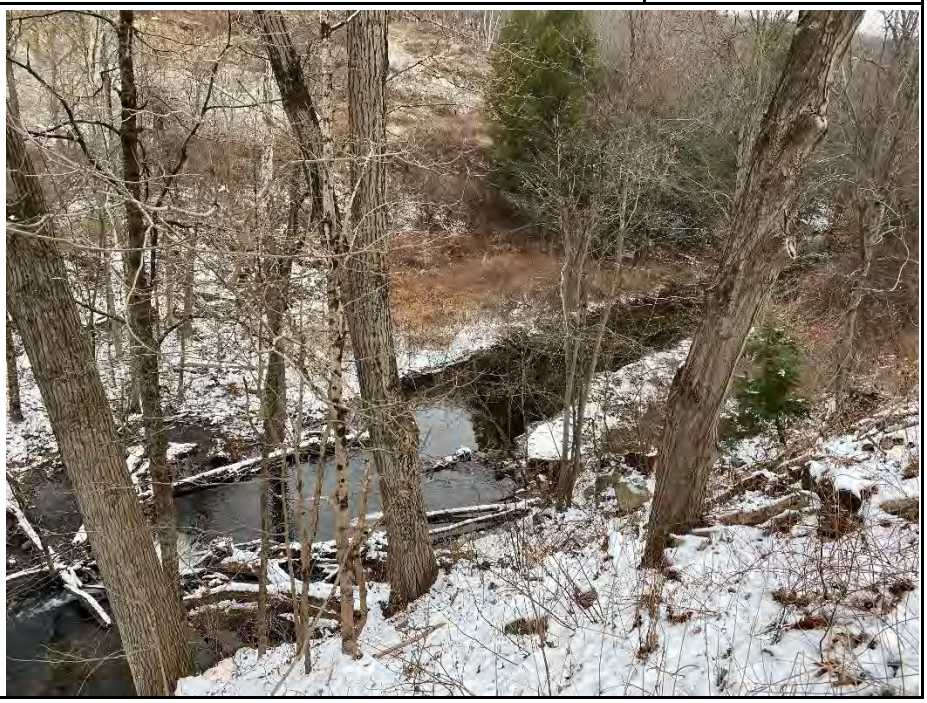
Note lattice Structure 13 in the far background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 20	**Date:** 12/15/22

Description: View facing northwest, looking down at Stream 4 (Hancock Brook) and Wetland 16 in background.



PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 21 **Date:** 11/06/20

Description: View facing northeast of the forested portion of Wetland 16 and Stream 4 (Hancock Brook in background), located to the south of the cleared right-of-way.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 22 **Date:** 11/06/20

Description: View facing northeast of Wetland 17 and Stream 7 (Unnamed Tributary to Hancock Brook).

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 23	**Date:** 12/15/22

Description: View facing northeast from the access road crossing of Stream 8 located within Wetland 18.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 24	**Date:** 11/06/20

Description: View facing northwest of Wetland 18, south of the existing access road.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 25	**Date:** 11/06/20

Description: View facing southeast of Wetland 19.

Note lattice Structure 16 on the left.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 26	**Date:** 11/06/20

Description: View facing northeast of Stream 9, and Wetland 20.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 27 **Date:** 11/06/20

Description: View facing southeast of Stream 10 where it enters into the right-of-way and Wetland 21 in the northwestern corner.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 28 **Date:** 12/15/22

Description: View facing northwest of Wetland 21 and Stream 10.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 29	**Date:** 11/06/20

Description: View facing southeast of Wetland 22 and Vernal Pool 7.

Note lattice Structure 23 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 30	**Date:** 12/02/20

Description: View facing north of Wetland 21A and Stream 11, which are located on a moderately steep slope before flowing into a culvert under Farm Wood Road (far right of photo) and into Wetland 25.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 31	**Date:** 12/15/22

Description: View facing east of Wetland 22A.

Note lattice Structure 26 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 32	**Date:** 12/02/20

Description: View facing north of Stream 13 inside the eastern side of Wetland 22A.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 33	**Date:** 12/15/22

Description: View facing northeast of Stream 12 inside of Wetland 22A in the far southwestern corner where it flows into a culvert under the existing access road and into Wetland 25.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 34	**Date:** 12/02/20

Description: View facing northeast of Wetland 23.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 35	**Date:** 12/02/20

Description: View facing north of Wetland 25.

Note lattice Structure 25 on the right.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 36	**Date:** 12/15/22

Description: View facing south where Stream 11 (right) converges with Stream 13 (center) inside Wetland 25.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 37	**Date:** 12/10/20

Description: View facing northeast of Wetland 26 and Stream 14.

Note monopole Structure 691 in the background and lattice Structure 25 in far background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 38	**Date:** 12/15/22

Description: View facing west of Stream 15, which drains an upslope PFO wetland located outside of the right-of-way.

Note the base of lattice Structure 692 in the background and Great Brook Reservoir in far background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 39	**Date:** 12/10/20

Description: View facing west of Stream 16, located within Wetland 27.

Note Great Brook Reservoir in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 40	**Date:** 12/10/22

Description: View facing northwest of Stream 16, located within Wetland 27.

Note Great Brook Reservoir in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 41	**Date:** 12/15/22

Description: View facing north of Wetland 27. Wetland 27 at this location is part Open Water (Great Brook Reservoir) and PSS cover type.

Note lattice Structure 693 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 42	**Date:** 12/10/20

Description: View facing south of Wetland 27. Wetland 27 at this location is part Open Water (Great Brook Reservoir) and PSS cover type.

Note lattice Structure 694 in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 43 **Date:** 12/02/20

Description: View facing north of second crossing of Wetland 27 (Great Brook Reservoir), all Open Water at this location.

Note lattice Structure 695 in foreground and Structure 696 in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 44 **Date:** 12/15/20

Description: View facing north of Stream 10 and Wetland 28 located in the PFO portion of the wetland to the east of the cleared right-of-way.

Note Great Brook Reservoir in background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 45	**Date:** 01/29/21

Description: View facing northwest of Stream 19 inside Wetland 29, located in the PFO portion of the wetland to the east of the cleared right-of-way.

Note Belleview Lake in the background.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 46	**Date:** 12/15/22

Description: View facing east of Stream 19 in side Wetland 29, located within the cleared right-of-way.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 47	**Date:** 12/15/20

Description: View facing northwest of Wetland 30, located east of the cleared ROW adjacent to unimproved access road.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 48	**Date:** 12/15/20

Description: View facing southeast of Wetland 34, located east of the cleared ROW adjacent to unimproved access road.

Note that Wetland 34 is connected to Wetland 30 via culvert under the existing unimproved access road.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 49	**Date:** 12/15/20

Description: View facing southeast of Stream 20 within the cleared right-of-way.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 50	**Date:** 12/15/22

Description: View facing east of Wetland 33 and Stream 20 located along the unimproved access road to the east of the cleared right-of-way.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 51	**Date:** 12/15/20

Description: View facing north of Wetland 31, which is Open Water (Belleview Lake).

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 52	**Date:** 12/15/22

Description: View facing north of Wetland 32, which is Open Water (Belleview Lake).

APPENDIX B

WETLAND CHARACTERISTIC SUMMARY FORMS

Wetland Characteristics Summary Form

Wetland I.D.:	Wetland 1

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☒	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage ☑	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent ☐	Scrub-shrub ☑	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☑	Ephemeral ☐
Watercourse Name: Stream 1 (Unnamed Watercourse) hydrologically connects Wetlands 2 into Wetland 1.		
Comments: Wetland 1 is in the flood plain of the Naugatuck River (Stream 2)		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types: Scarboro, Timakwa, Walpole, Deerfield

DOMINANT PLANTS:

*Japanese knotweed (Reynoutria japonica)	sensitive fern (Onoclea sensibilis)
Canada goldenrod (Solidago canadensis)	
deer-tongue (Dichanthelium clandestinum)	
*Japanese barberry (Berberis thunbergii)	
red maple (Acer rubrum)	
gray birch (Betula populifolia)	

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Depressional wetland located at the base of a hillside slope and appears to be groundwater fed. Hydrologically connected with Wetland 4 via box culvert (located in the southeastern corner) under existing railroad tracks to the east.

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

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DOMINANT PLANTS:

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Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
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SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
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WETLAND SOIL TYPE (s):

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DOMINANT PLANTS:

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Wetland Characteristics Summary Form

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WETLAND TYPE:

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Comments: None		

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Emergent	Scrub-shrub	Forested ☐
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Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
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Watercourse Name:		
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Watercourse Name:		
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Comments:	

WETLAND SOIL TYPE (s):

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Watercourse Name:		
Comments:		

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Watercourse Name:		
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Watercourse Name:		
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Watercourse Name:		
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Watercourse Name:		
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Comments: None		

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Comments:		

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Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
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Comments: None		

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Comments:		

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Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
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WETLAND SOIL TYPE (s):

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Wetland Characteristics Summary Form

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Comments: None		

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Comments:		

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Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
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Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
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WETLAND SOIL TYPE (s):

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Comments: None		

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Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments:		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Wetland Characteristics Summary Form

Wetland I.D.:	

WETLAND HYDROLOGY:

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated/seepage	Seasonally Saturated/perched ☐
Comments: None		

WETLAND TYPE:

Emergent	Scrub-shrub	Forested ☐
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments:		

WATERCOURSE TYPE:

Perennial ☐	Intermittent	Ephemeral ☐
Watercourse Name:		
Comments:		

SPECIAL AQUATIC HABITAT:

Vernal Pool : Yes ☐ No ☐ Potential ☐	Other ☐
Vernal Pool Habitat Type:	
Comments:	

WETLAND SOIL TYPE (s):

Soil Types:

DOMINANT PLANTS:

** denotes Connecticut Invasive Species Council invasive plant species*

GENERAL COMMENTS:

Attachment E: Vernal Pool Survey

May 17, 2023

Ref: 42695.00

Mr. Jeffrey Bolton
Eversource Energy
107 Shelton Street
Berlin, CT 06037

Re: Vernal Pool Survey Report
Frost Bridge to Noera Rebuild Project
Watertown, Thomaston, Plymouth, and Waterbury CT

Mr. Bolton,

As requested and authorized, VHB completed an on-site investigation to determine the presence or absence of vernal pools within Eversource's Right-of-Way (ROW) along the 1163/1550 Line for the Frost Bridge to Noera Rebuild Project (Herein referred to as 'the Project'). The Project area is located along the 1163/1550 ROW from the Frost Bridge Substation in Watertown, CT to the Noera Substation in Waterbury, CT, with portions of the Project also located in Thomaston and Plymouth (access only), as depicted in the attached USGS figure (Figure 1).

Vernal pools identified were further surveyed for the presence/absence of indicator species, the results of which are documented in this report. This report includes descriptions of site conditions, and photographic documentation (Appendix A).

GEOGRAPHICAL SETTING AND CURRENT CONDITIONS

The ROW currently contains multiple lattice and monopole utility structures supporting overhead transmission wires, as well as multiple existing construction and maintenance work pads surrounding each structure, and access roads. Otherwise, the ROW is primarily undeveloped, consisting of forests and scrub-shrub environments. Adjacent to the ROW, multiple residential neighborhoods and commercial/industrial properties are present, but the majority of the ROW is surrounded by forests including the Mattatuck State Forest. Please refer to Appendix A for photographs of current conditions onsite.

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Wethersfield, Connecticut 06109
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VERNAL POOL DEFINITION

Although Connecticut's municipal inland wetlands agencies regulate vernal pools, the Connecticut Department of Energy and Environmental Protection (CT DEEP) does not provide a formal definition of vernal pools (CT DEEP 2020). Acknowledging the lack of an official definition for vernal pools in Connecticut, in a technical paper addressing vernal pool considerations for site development, Calhoun and Klemens (2002) note that vernal pools generally occupy less than 2 acres and recommend following guidance provided by Donahue (1996), which includes the following factors:

a) presence of one or more obligate species,
b) water for approximately 2 months during the growing season,
c) a confined depression that lacks a permanent outlet stream,
d) no fish, and
e) dries out in most years.

In addition, the Connecticut Association of Wetland Scientists (CAWS) Vernal Pool Monitoring webpage (CAWS 2020) cites the following vernal pool definition:

> *"Vernal pool means a seasonal watercourse in a defined depression or basin, that lacks a fish population and supports or is capable of supporting the breeding and development of amphibian or invertebrate species recognized as obligate to such watercourses. These species include spotted salamander, Jefferson salamander complex, marbled salamander, wood frog, and fairy shrimp."*

These criteria are similar, although the CAWS does not require the pool to dry in most years. The common and specific names for Connecticut species considered by Calhoun and Klemens (2002) to be obligate biological indicators of vernal pool habitat are listed in Table 1, below.

Table 1 Obligate Vernal Pool Species

Common Name	Scientific Name
Jefferson Salamander	*Ambystoma jeffersonianum*
Blue-spotted Salamander complex	*Ambystoma laterale*
Spotted Salamander	*Ambystoma maculatum*
Marbled Salamander	*Ambystoma opacum*
Wood Frog	*Lithobates sylvaticus*
Eastern Spadefoot Toad	*Scaphiopus holbrookii*
Fairy Shrimp	*Eubranchipus spp.*

Furthermore, because vernal pool-breeding amphibians depend on terrestrial habitats as well as aquatic breeding habitats for survival, Calhoun and Klemens (2002) emphasize the importance of considering the

surrounding upland areas, up to 750 feet from breeding pools. One hundred feet from the edge of the pool is considered the "vernal pool envelope" and the zone between 100 feet to 750 feet has been termed "critical upland habitat." The authors go on to provide a ranking methodology to assess the quality of each breeding area based on biological indicators and surrounding land use. This tool- a one-page form titled "Vernal Pool Assessment Sheet"- is specifically intended to be used for development planning purposes. Therefore, the purview of Connecticut's municipal inland wetlands agencies encompasses wetland vernal pool habitat and surrounding upland areas. Vernal Pools Assessment Sheets for the Project are included in Appendix B.

VERNAL POOL SURVEY METHODS

One VHB biologist investigated the Project area for vernal pool indicators throughout two breeding seasons, on April 8, 2021, and April 20, 2022. During the investigations, the biologist targeted those wetlands that were identified as containing Potential Vernal Pools during the wetland and watercourse delineation, conducted by VHB from October 2020 through January 2021, which included Wetlands 7, 8, 9, 15, and 22. A wading survey was conducted within the inundated depressions within the target wetlands while wearing polarized glasses. A dip net was used to sample for biological indicators within the inundated area as well. Discretion was used during dipnet sweeps, such that small, shallow areas containing obligate vernal pool indicators were not substantially disrupted (i.e., silting up of areas containing egg masses or spermatophores). Field notes and supporting photographs were taken for areas that were found to meet the vernal pool criteria presented above. Blue plastic flags were hung around the extent of onsite vernal pool-breeding habit based on the maximum observed extent of flooding. Flag locations were recorded using a Trimble R1 global positioning device. Geographic information system (GIS) tools and aerial imagery were used to determine land use surrounding breeding areas and calculate percentages of functional habitat.

VERNAL POOL SURVEY RESULTS

A total of seven (7) cryptic vernal pools were identified through the Project area, located in Wetlands 7, 8, 9, 15, and 22, and are described in detail below. Table 2 summarizes obligate indicators observed within each vernal pool.

Table 2 Obligate Vernal Pool Species Indicators and Observations

Cryptic VP ID	Wetland Number	Survey Season	Wood Frog Egg Masses	Total Egg Mass Count	Wood Frog Larvae*	Other amphibians
VP 1	Wetland 7	2021	8	15	None	Spotted Salamander egg masses (7 in 2021 and 11 in 2022)
		2022	7	18	None	
VP2	Wetland 8	2021	12	20	30+	Spotted Salamander egg masses (8 in 2021 and 10 in 2022)
		2022	15	25	100+	
VP3	Wetland 9	2021	30-40	50-70	None	Spotted Salamander egg masses (20-30 in 2021 and 20-30 in 2022)
		2022	30-40	50-70	1000+	

Table 2 Obligate Vernal Pool Species Indicators and Observations

Cryptic VP ID	Wetland Number	Survey Season	Wood Frog Egg Masses	Total Egg Mass Count	Wood Frog Larvae*	Other amphibians
VP4	Wetland 15	2021	20-30	20-30	None	None
		2022	15-25	15-25	200+	
VP5	Wetland 15	2021	None	None	None	None
		2022	10-20	10-20	100+	None
VP6	Wetland 15	2021	1	1	None	None
		2022	None	None	None	None
VP7	Wetland 22	2021	14	20	100+	Spotted Salamander egg masses (6 in 2021 only) and Fairy Shrimp (30-40 in 2021 only)
		2022	None	None	200+	

Notes:
** The overall amount of wood frog larvae is estimated.*

Vernal Pool 1

Wetland 7 is a palustrine scrub-shrub (PSS) wetland located within the maintained portion of the ROW and was found to contain one (1) cryptic vernal pool breeding area (see Photos 1-4). Obligate vernal pool species were observed during two breeding seasons (Spring 2021 and Spring 2022) as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses (see Photos 5 and 7) and spotted salamander (*Ambystoma maculatum*) egg masses (see Photos 6 and 8). No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits soft, leafy, silty bottom and flood depths within the breeding area at approximately 1-2 feet on average, and approximately 3 feet at the deepest spot. The vernal pool (VP) 1 breeding area consists of two main bodies connected by a thin band (approximately 3-feet wide). The pool on the northeast side is deeper and contains the majority of the observed egg masses. The pool is approximately 60-feet long and 20-feet wide, and its area accounts for the majority of Wetland 7.

Woody and herbaceous hydrophytic vegetation was present within the pool, which included white meadowsweet (*Spiraea alba*) and woolgrass (*Scirpus cyperinus*) located within and adjacent to the shallower lobe to the southwest and fowl manna grass (*Glyceria striata*) in the deeper lobe to the northeast, and the entire pool surrounded by speckled alder (Alnus incana), river birch (Betula nigra) and mountain-laurel (*Kalmia latifolia*) along the perimeter. The pool contained a moderate number of woody debris and snags throughout, including felled trees. As noted in Table 2, a similar amount of wood frog and spotted salamander egg masses were observed within the vernal pool during both the 2021 and 2022 breeding seasons. Based on the depth of the pool in the northeast corner, it is not clear if this portion of the pool completely dries out on an annual basis. During the Project wetland delineation (in early November 2020), the pool was observed to contain standing water at that time. Given the presence of OBL plant species, it

appears likely that the pool may occasionally dry down completely, but likely experiences only partial drying during most years (i.e., semi-permanent).

Vernal Pool 2

Wetland 8 is a palustrine forested (PFO) wetland located adjacent to the maintained portion of the ROW and was found to contain one (1) cryptic vernal pool breeding area (see Photos 9-11). Obligate vernal pool species were observed during two breeding seasons (Spring 2021 and Spring 2022) as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses and larvae (see Photo 13) and spotted salamander (*Ambystoma maculatum*) egg masses (see Photo 12). No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 1-2 feet on average. The vernal pool (VP) 2 breeding area is approximately 30-feet long and 15-feet wide and its area accounts for the large majority of Wetland 8.

Herbaceous hydrophytic vegetation was present within the pool, which included red maple (*Acer rubrum*), sweet birch (*Betula lenta*), silky dogwood (*Cornus amomum*), sensitive fern (*Onoclea sensibilis*), and cinnamon fern (*Osmundastrum cinnamomeum*), and mountain-laurel (Kalmia latifolia) along the perimeter. The pool contained a moderate number of woody debris and snags throughout, including felled trees. As noted in Table 2, a similar amount of both wood frog and spotted salamander egg masses were observed within the vernal pool during both the 2021 and 2022 breeding seasons. During the course of the wetland delineation site work on November 3, 2020, the pool was observed to be completely dried out (see Photo 11). Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

Vernal Pool 3

Wetland 9 is a PFO wetland located adjacent to the maintained portion of the ROW and was found to contain one (1) cryptic vernal pool breeding area (see Photos 14-15). Obligate vernal pool species were observed during two breeding seasons (Spring 2021 and Spring 2022) as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses and larvae (see Photos 17 and 18) and spotted salamander (*Ambystoma maculatum*) egg masses (see Photos 16 and 19). No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 1-2 feet on average. The vernal pool (VP) 3 breeding area is approximately 160-feet long and 150-feet wide (at its widest spot) and encompasses the majority of Wetland 9.

Herbaceous hydrophytic vegetation was present within the pool, which included red maple, sweet birch, silky dogwood, sensitive fern, and cinnamon fern . The pool contained a large number of woody debris and snags throughout, including felled trees. As noted in Table 2, a similar amount of both wood frog and spotted salamander egg masses were observed within the vernal pool during both the 2021 and 2022 breeding seasons. During the course of the wetland delineation site work on November 3, 2020, the pool

was observed to be completely dried out (see Photo 15). Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

Vernal Pool 4

Wetland 15 is a combination PSS and PFO wetland located both within and adjacent to the maintained portion of the ROW and was found to contain three (3) cryptic vernal pool breeding areas, which includes Vernal Pool 4 (see Photos 20-21). The pool is located within the PFO portion of Wetland 15, located north of the existing access road, outside of the maintained ROW. Obligate vernal pool species were observed during two breeding seasons (Spring 2021 and Spring 2022) as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses and larvae (see Photos 22-24) and spotted salamander (*Ambystoma maculatum*) egg masses. No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 1 foot on average. The vernal pool (VP) 4 breeding area is approximately 60-feet long and 54-feet wide (at its widest spot).

Herbaceous hydrophytic vegetation was present within the pool, which included red maple, sweet birch, swamp white oak (*Quercus bicolor*), silky dogwood, glossy buckthorn (*Frangula alnus*), fowl manna grass (*Glyceria striata*) and cinnamon fern . The pool contained a moderate amount of woody debris and snags throughout. As noted in Table 2, a similar amount of both wood frog and spotted salamander egg masses were observed within the vernal pool during both the 2021 and 2022 breeding seasons. During the course of the wetland delineation site work on November 3, 2020, the pool was observed to be completely dried out (see Photo 21). Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

Vernal Pool 5

Vernal Pool 5 is located within the scrub-shrub portion of Wetland 15, located south of, and immediately adjacent to, the existing access road, inside of the maintained ROW (see Photos 25-26). Obligate vernal pool species were observed during the 2022 breeding season (Spring 2022), as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses and larvae (see Photos 27). No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 1-2 feet. The vernal pool (VP) 5 breeding area is a small pool, which is approximately 6-feet long and 6-feet wide.

Herbaceous hydrophytic vegetation within the pool was present, which included sweet birch, silky dogwood, fowl manna grass (*Glyceria striata*) and cinnamon fern. The pool contained a small number of woody debris and snags. As noted in Table 2, wood frog larvae were observed in Spring 2022 only. During the Spring 2021 vernal pool investigation and during the wetland delineation site work on November 6, 2020, the pool was observed to be completely dried out (see Photo 21). Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

Vernal Pool 6

Vernal Pool 6 is located within the scrub-shrub portion of Wetland 15, located along the southern side of the maintained ROW (see Photos 28-30). Obligate vernal pool species were observed during the 2021

breeding season (Spring 2021), as noted in Table 2, which included one wood frog (*Lithobates sylvaticus*) egg mass (see Photos 31). No fairy shrimp, marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 0.5-1 foot. The vernal pool (VP) 6 breeding area is approximately 30-feet long and 25-feet wide.

Herbaceous hydrophytic vegetation within the pool was present, which included white meadowsweet (*Spiraea alba*), fowl manna grass, sweet birch, and cinnamon fern, with mountain-laurel along the perimeter. The pool contained a minimal number of woody debris and snags. As noted in Table 2, only one wood frog egg mass was observed in Spring 2021 only. During the Spring 2022 vernal pool investigation, standing water was present within the pool but no obligate species were observed. During the wetland delineation in November 2020, the pool was observed to be dried out. Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

Vernal Pool 7

Vernal Pool 7 is located within the scrub-shrub portion of Wetland 22, located along the southern side of the maintained ROW (see Photos 32-34). Obligate vernal pool species were observed during two breeding seasons (Spring 2021 and Spring 2022) as noted in Table 2, which included wood frog (*Lithobates sylvaticus*) egg masses and larvae (see Photos 36, 37, and 39), spotted salamander (*Ambystoma maculatum*) egg masses (see Photo 38) and fairy shrimp (*Anostraca sp*.). No marbled salamander, or state-listed vernal pool breeding amphibians were observed. The vernal pool area exhibits a soft, leafy, silty bottom and flood depths within the breeding area at approximately 2-3 feet. The vernal pool (VP) 7 breeding area is approximately 65-feet long and 40-feet wide.

Herbaceous hydrophytic vegetation within the pool was present, which included white meadowsweet, woolgrass (*Scirpus cyperinus*) and winterberry (*Ilex verticillata*). The pool contained a moderate number of woody debris and snags. As noted in Table 2, wood frog egg masses were observed in Spring 2021 only and larvae in 2022. A similar amount of spotted salamander eggs masses were observed in 2021 and 2022 and fairy shrimp were only observed in 2021. During the wetland delineation in November 2020 as well as during a site visit on December 15, 2022, the pool was observed to mostly dried out (with a saturated surface). Based on that observation and the depth of the pool, it is likely that the pool dries out during most years (i.e., temporarily inundated).

TERRESTRIAL (UPLAND) CURRENT CONDITIONS

Each vernal pool has a 100-foot "vernal pool envelope" and a 750-feet "critical upland habitat" surrounding vernal pool breeding area. GIS aerial imagery were used to determine the land uses surrounding the breeding areas and GIS analysis were used to quantify potential habitat areas within 750 feet of the pool. Table 3 presents land use percentages for each habitat zone. As shown on the table, habitat for each of the vernal pools varies. Upland forest totals within the 100-foot vernal pool envelope for VP-2, 3 and 4 are 76-percent, 73-percent, and 55-percent respectively; while the totals for VP-1, 5, 6 and 7 are 19-percent, 27-percent, 33-percent, and 31-percent. VP-2, 3 and 4 have more quality habitat within the 100-foot envelope due to their location within the forested area adjacent to the ROW. VP- 1, 5, 6, and 7 are located either

within or immediately adjacent to the maintained ROW and thus have a higher percentage of disturbed habitat. Despite the fact that the maintain ROW is disturbed habitat, the level of disturbance is significantly lower compared to other habitat types and the majority of the ROW contains a large amount scrub-shrub uplands, adjacent to the forested uplands outside the ROW. Given that the majority of the ROW surrounding the vernal pools is made up of mostly of forested uplands, the percentage of 750-foot critical upland habitat for all 7 vernal pools has a high percentage of forested upland: VP-1 (78-percent); VP-2 (77-percent); VP-3 (80-percent); VP-4 (86-percent); VP-5 (85-percent); VP-6 (81 percent); and VP-7 (81-percent).

The observation of wood frog egg masses and salamander species in VP-1, VP-2, VP-3, and VP-4 during 2021 and 2022 field investigations, within the utility ROW appears to indicate a habitat suitable for more edge or generalist species. VP-5, VP-6, and VP-7 did not consistently support species, and did not result in a diversity of species during field investigations. Therefore, it is anticipated that these pools are not suitable for edge or generalist species. For the 7 vernal pools, the attached Vernal Pool Assessment Sheets (Calhoun and Klemens 2002) present biological values, habitat conditions, and tier rankings for the 7 vernal pools; Table 4 below, lists square footage for the breeding area and summarizes vernal pool criteria; and tier rankings according to the Calhoun and Klemens (2002) Vernal Pool Assessment Sheet.

Table 3 Upland Vernal Pool Habitat Percentages

Habitat Zone	Development Category	VP 1	VP 2	VP3	VP4	VP5	VP6	VP7
Vernal Pool Envelope (0-100 ft)	Deciduous Forest	*9,864*	*30,343*	*67,031*	*29,076*	*9,735*	*13,940*	*15,757*
	Forested Wetland	*5*	*555*	*14,627*	*2,098*	*2,100*	-	-
	Maintained ROW (Utility)*	*41,332*	*9,062*	*10,143*	*21,477*	*24,680*	*27,839*	*34,736*
Critical Terrestrial Habitat (100-750 ft)	Deciduous Forest	*1,292,668*	*1,142,227*	*1,367,490*	*1,593,665*	*1,499,002*	*1,445,298*	*1,491,334*
	Coniferous Forest	*153,824*	*228,615*	*263,080*	-	-	-	-
	Forested Wetland	*22,525*	*21,975*	*7,903*	-	-	-	-
	Maintained ROW (Utility)*	*384,408*	*395,249*	*405,882*	*264,940*	*268,279*	*347,705*	*353,952*

KEY: * ROW = right-of-way

Table 4 Summary of Onsite Vernal Pool Indicators

VP ID	Approx. Breeding Area (sf)	Permanent Outlet	Hydrology	Obligate Species	Fish Present	VP Classification	Tier Classification*
VP1	1,204	no	temporary	wood frog spotted salamander	no	cryptic	II
VP2	328	no	temporary	wood frog spotted salamander	no	cryptic	I
VP3	11,581	no	temporary	wood frog spotted salamander	no	cryptic	I
VP4	1,813	no	temporary	wood frog	no	cryptic	II
VP5	160	no	temporary	wood frog	no	cryptic	III
VP6	517	no	temporary	wood frog	no	cryptic	III
VP7	2,030	no	temporary	wood frog spotted salamander fairy shrimp	no	cryptic	II

*Tier ratings are determined via completing Vernal Pool Assessment Sheets (Calhoun and Klemens 2002), however, Tier ratings do not accurately reflect habitat conditions (see Terrestrial Vernal Pool Habitat Section).

RECOMMENDATIONS AND CONCLUSION

During the Spring 2021 and 2022 seasons, VHB identified seven (7) vernal pools within the Project area occupying approximately 0.4 acres (17,633 square feet) and:

- documented as providing a breeding habitat for one obligate vernal pool species,
- appeared to exhibit suitable hydrology for full larval development and metamorphosis of obligate vernal pool-breeding species,
- lacked a permanent stream outlet, in that the current outlet is restricted (i.e., perched above the ground), which allows for the ponding of water within Wetland 1,
- does not contain fish, and
- appears to partially dry down each year.

The land uses surrounding the seven vernal pools indicate that the Site and surrounding areas provide habitat for obligate vernal pool species. Actual habitat use is presumed to be throughout the majority of the ROW and surrounding upland forests.

The following measures are recommended to avoid or minimize impacts during construction:

1. Active construction within the VPE should be avoided during the amphibian breeding season (approximately March 1 – June 1).

2. Vegetation removal within the VPE should be avoided to the maximum extent practicable during the amphibian breeding season (March 1 – June 1).

3. Permanent alteration of habitat should be avoided within the VPE. This includes road construction or permanent habitat alteration, or any activities that could alter drainage patterns.

4. Minimize the removal of low growing vegetation within 25′ of the vernal pool depression. During vegetation removal, compatible species within the VPE should be protected to the maximum extent practicable. If vegetation must be removed it should be done selectively either by hand or with equipment that can reach in and cut and remove it. Cut vegetation may be left in place within the VPE.

5. Install and maintain erosion and sedimentation controls as necessary to protect water quality and to limit the potential for soil deposition into the vernal pool.

Thank you for the opportunity to work with you on this Project. Please contact Jeffrey Shamas at 860-807-4388 if you have any questions or require additional assistance.

Sincerely,

Vanasse Hangen Brustlin, Inc.

Eric A. Olson, PWS, CPESC
Senior Environmental and Wetland Scientist
eolson@vhb.com

Jeffrey R. Shamas, CSS, PWS, CE
Director, Energy & Natural Sciences
Jshamas@vhb.com

Attachments:

Appendix A – Site Photograph Log
Appendix B – Vernal Pool Assessment Sheets

REFERENCES

Calhoun, A. J. K. and M. W. Klemens. 2002. Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States. MCA Technical Paper No. 5, Metropolitan Conservation Alliance, Wildlife Conservation Society, Bronx, New York.

Connecticut Association of Wetland Scientists (CAWS). 2020. Vernal Pool Monitoring webpage: http://www.ctwetlands.org/vpmonitoring.html; last accessed 4/23/2020.

Connecticut Department of Energy and Environmental Protection (CT DEEP). 2020. Vernal Pools webpage: https://portal.ct.gov/DEEP/Water/Wetlands/Vernal-Pools; last accessed 4/23/2020.

Donahue, D. F. 1996. A guide to the identification and protection of vernal pool wetlands in Connecticut. University of Connecticut Cooperative Extension Program.

Klemens, M. W. 1993. Amphibians and reptiles of Connecticut and adjacent regions. State Geological and Natural History Survey of Connecticut, Bulletin No. 112, Connecticut Department of Environmental Protection, Hartford, CT.

APPENDIX A

SITE PHOTOGRAPH LOG

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 1	**Date:** 04/08/21

Description: View facing northeast of Vernal Pool 1, located inside Wetland 7.

2021 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 2	**Date:** 04/08/21

Description: View facing northwest of Vernal Pool 1, located inside Wetland 7.

2021 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 3	**Date:** 04/20/22

Description: View facing southwest of Vernal Pool 1, located inside Wetland 7.

2022 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 4	**Date:** 04/20/22

Description: View facing southwest of Vernal Pool 1, located inside Wetland 7.

2022 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 5	**Date:** 04/08/21

Description: View in Vernal Pool 1 (located within Wetland 7) of a wood frog (*Lithobates sylvaticus*) egg mass.

2021 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 6	**Date:** 04/08/21

Description: View in Vernal Pool 1 (located within Wetland 7) of spotted salamander (*Ambystoma maculatum*) egg masses.

2021 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 7	**Date:** 04/20/22

Description: View in Vernal Pool 1 (located within Wetland 7) of wood frog (*Lithobates sylvaticus*) eggs developing into larvae.

2022 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 8	**Date:** 04/20/22

Description: View in Vernal Pool 1 (located within Wetland 7) of spotted salamander (*Ambystoma maculatum*) eggs developing into larvae.

2022 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Thompson, CT	Project No: 42695.00

Photo No.: 9	Date: 04/08/21

Description: View facing southwest of Vernal Pool 2 located inside Wetland 8.

2021 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Thompson, CT	Project No: 42695.00

Photo No.: 10	Date: 04/20/22

Description: View facing northeast of Vernal Pool 2 located inside Wetland 8.

2022 VP Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 11	**Date:** 11/03/20

Description: View facing northeast of Vernal Pool 2, observed to be dried out during the wetland delineation in November 2020.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 12	**Date:** 04/08/22

Description: View in Vernal Pool 2 (located within Wetland 8) of spotted salamander (*Ambystoma maculatum*) egg masses.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 13	**Date:** 04/20/21

Description: View in Vernal Pool 2 (located within Wetland 8) of a wood frog (*Lithobates sylvaticus*) eggs developing into larvae.

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 14	**Date:** 04/20/22

Description: View facing northeast of Vernal Pool 3 located within Wetland 9.

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 15 **Date:** 04/08/21

Description: View facing northwest of Vernal Pool 3, observed to be dried out during the wetland delineation in November 2020.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 16 **Date:** 04/08/21

Description: View in Vernal Pool 3 (located within Wetland 9) of spotted salamander (*Ambystoma maculatum*) egg massess.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 17	**Date:** 04/08/21

Description: View in Vernal Pool 3 (located within Wetland 9) of a wood frog (*Lithobates sylvaticus*) larvae developing inside an egg mass.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Thompson, CT	**Project No**: 42695.00

Photo No.: 18	**Date:** 04/08/21

Description: View in Vernal Pool 3 (located within Wetland 9) of many wood frog (*Lithobates sylvaticus*) egg masses containing developing larvae.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Thompson, CT	Project No: 42695.00

Photo No.: 19	Date: 04/20/22

Description: View in Vernal Pool 3 (located within Wetland 9) of wood frog (*Lithobates sylvaticus*) egg mass.

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Thompson, CT	Project No: 42695.00

Photo No.: 20	Date: 04/08/21

Description: View facing northwest of Vernal Pool 4 located inside the forested portion of Wetland 15 to the north of the existing access road (in foreground).

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 21 **Date:** 11/06/20

Description: View facing northwest of Vernal Pool 4, observed to be dried out during the wetland delineation in November 2020.

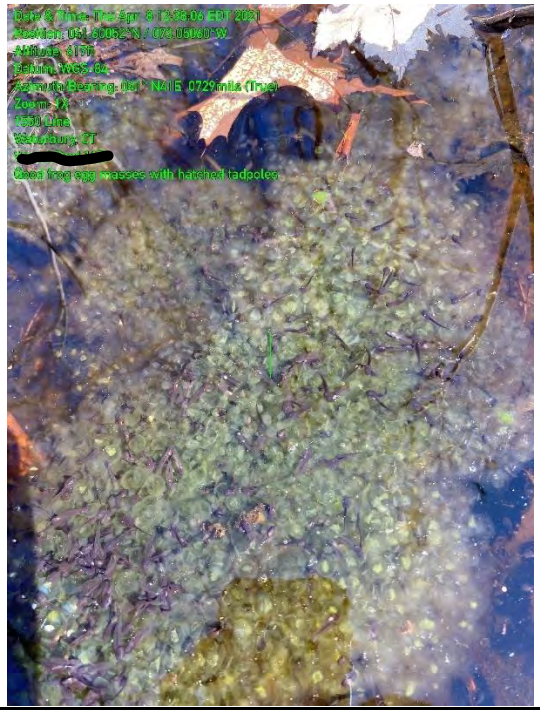
PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 22 **Date:** 04/08/21

Description: View within Vernal Pool 4 (located within Wetland 15) of wood frog (*Lithobates sylvaticus*) egg masses with hatching larvae.

2021 Vernal Pool Survey



PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 23	**Date:** 04/08/21

Description: View within Vernal Pool 4 (located within Wetland 15) of wood frog (*Lithobates sylvaticus*) egg masses with hatching larvae.

2021 Vernal Pool Survey

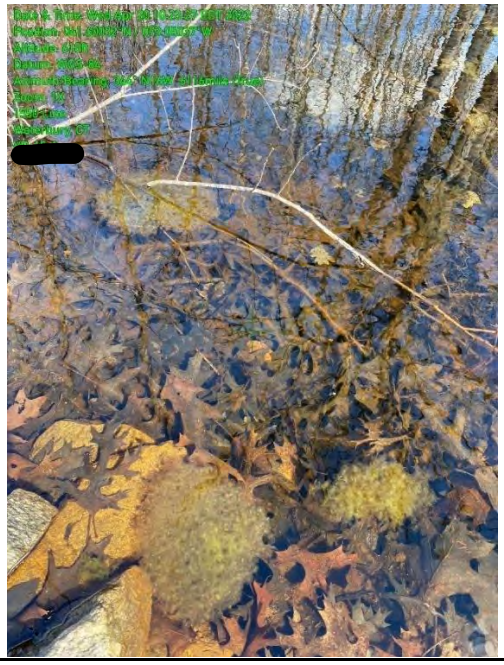
PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 24	**Date:** 04/20/22

Description: View within Vernal Pool 4 (located within Wetland 15) of wood frog (*Lithobates sylvaticus*) egg masses with hatching larvae.

2022 Vernal Pool Survey



PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 25	**Date:** 04/20/22

Description: View facing southeast of Vernal Pool 5 located inside the scrub shrub portion of Wetland 15 to the south of the existing access road (in foreground).

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 26	**Date:** 11/06/20

Description: View facing northwest of Vernal Pool 5, observed to be dried out during the wetland delineation in November 2020.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 27	**Date:** 04/20/22

Description: View within Vernal Pool 5 (located within Wetland 15) of spent wood frog (*Lithobates sylvaticus*) egg masses (green) and hatched larvae.

2022 Vernal Pool Survey

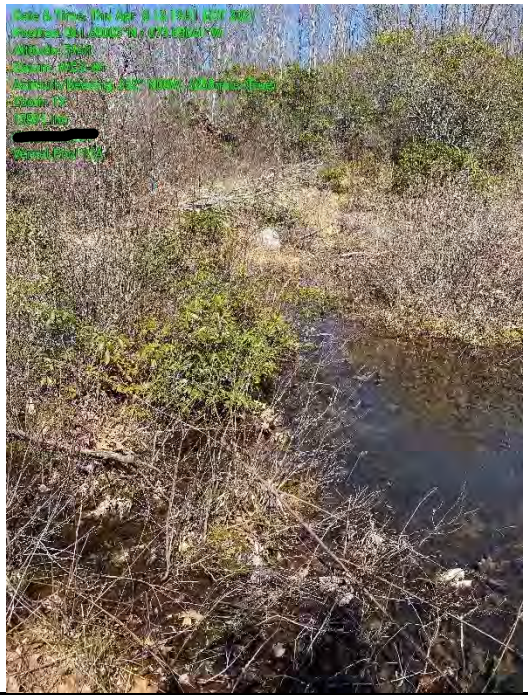
PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 28	**Date:** 04/08/21

Description: View facing northwest of Vernal Pool 6 located within the PSS potion of Wetland 15, south of the existing access road.

2021 Vernal Pool Survey



PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 29	**Date:** 04/20/22

Description: View facing northwest of Vernal Pool 6 located within the PSS potion of Wetland 15, south of the existing access road.

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 30	**Date:** 04/08/21

Description: View facing northeast of Vernal Pool 6, observed to be dried out during the wetland delineation in November 2020.

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 31	Date: 04/08/21

Description: View within Vernal Pool 6 (located within Wetland 15) of wood frog (*Lithobates sylvaticus*) egg masses with developing larvae.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	Site Location: Waterbury, CT	Project No: 42695.00

Photo No.: 32	Date: 04/08/21

Description: View facing northwest of Vernal Pool 7 located within the Wetland 22. Lattice Structure 22 in background.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 33	**Date:** 04/20/22

Description: View facing southeast of Vernal Pool 7 located within the Wetland 22. Lattice Structure 23 in background.

2022 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 34	**Date:** 11/06/20

Description: View facing southeast of Vernal Pool 7, observed to be dried out during the wetland delineation in November 2020.

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 35	**Date:** 04/08/21

Description: View within Vernal Pool 7 (located in Wetland 22) of a fairy shrimp (*Eubranchipus sp.*).

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 36	**Date:** 04/08/21

Description: View within Vernal Pool 7 (located in Wetland 22) of a wood frog (*Lithobates sylvaticus*) egg mass.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 37	**Date:** 04/08/21

Description: View within Vernal Pool 7 (located in Wetland 22) of wood frog (*Lithobates sylvaticus*) egg masses with developing larvae.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 38	**Date:** 04/08/21

Description: View within Vernal Pool 7 (located in Wetland 22) of a spotted salamander (*Ambystoma maculatum*) egg mass.

2021 Vernal Pool Survey

PHOTOGRAPHIC LOG

Client Name: Eversource	**Site Location:** Waterbury, CT	**Project No**: 42695.00

Photo No.: 39	**Date:** 04/20/22

Description: View within Vernal Pool 7 (located in Wetland 22) of hatched wood frog (*Lithobates sylvaticus*) larvae.

2022 Vernal Pool Survey

APPENDIX B

VERNAL POOL ASSESSMENT SHEETS

VERNAL POOL ASSESSMENT SHEET (VP-1)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__x__

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes__x__ No_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes_____ No__x__

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes_____ No__x__

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__x__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-2)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__x__

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes__x__ No_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes__x__ No_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes__x__ No_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__x__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-3)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__x__

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes__x__ No_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes__x__ No_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes__x__ No_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__x__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-4)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__X_____

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes_____ No__X_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes__X__ No_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes_____ No__X_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__X__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-5)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__X_____

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes_____ No__X_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes_____ No__X_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes_____ No__X_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__X__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-6)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__X_____

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes_____ No__X_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes_____ No__X_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes_____ No__X_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__X__ No_____

NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

VERNAL POOL ASSESSMENT SHEET (VP-7)

A. Biological Value of the Vernal Pool

(1) Are there *any* state-listed species (Endangered, Threatened, or Special Concern) present or breeding in the pool?
Yes_____ No__X_____

(2) Are there two or more vernal pool indicator species breeding (i.e., evidence of egg masses, spermatophores [sperm packets], mating, larvae) in the pool?
Yes__X__ No_____

(3) Are there 25 or more egg masses (regardless of species) present in the pool by the conclusion of the breeding season?
Yes_____ No__X_____

B. Condition of the Critical Terrestrial Habitat

(1) Is at least 75% of the vernal pool envelope (100 feet from pool) undeveloped?
Yes_____ No__X_____

(2) Is at least 50% of the critical terrestrial habitat (100-750 feet) undeveloped?
Yes__X__ No_____

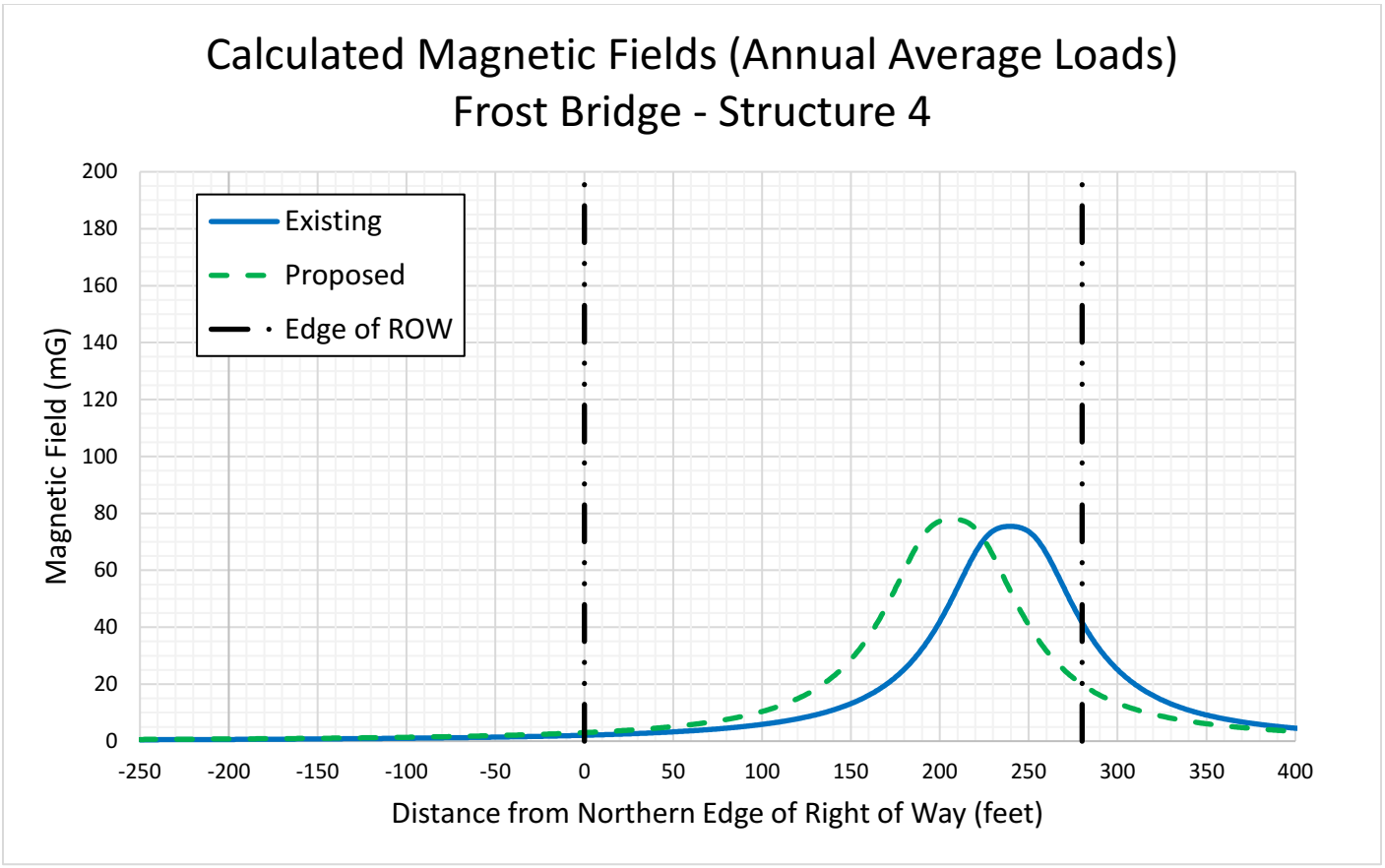
NOTE: For these purposes, "undeveloped" means open land largely free of roads, structures, and other infrastructure. It can be forested, partially forested, or open agricultural land.

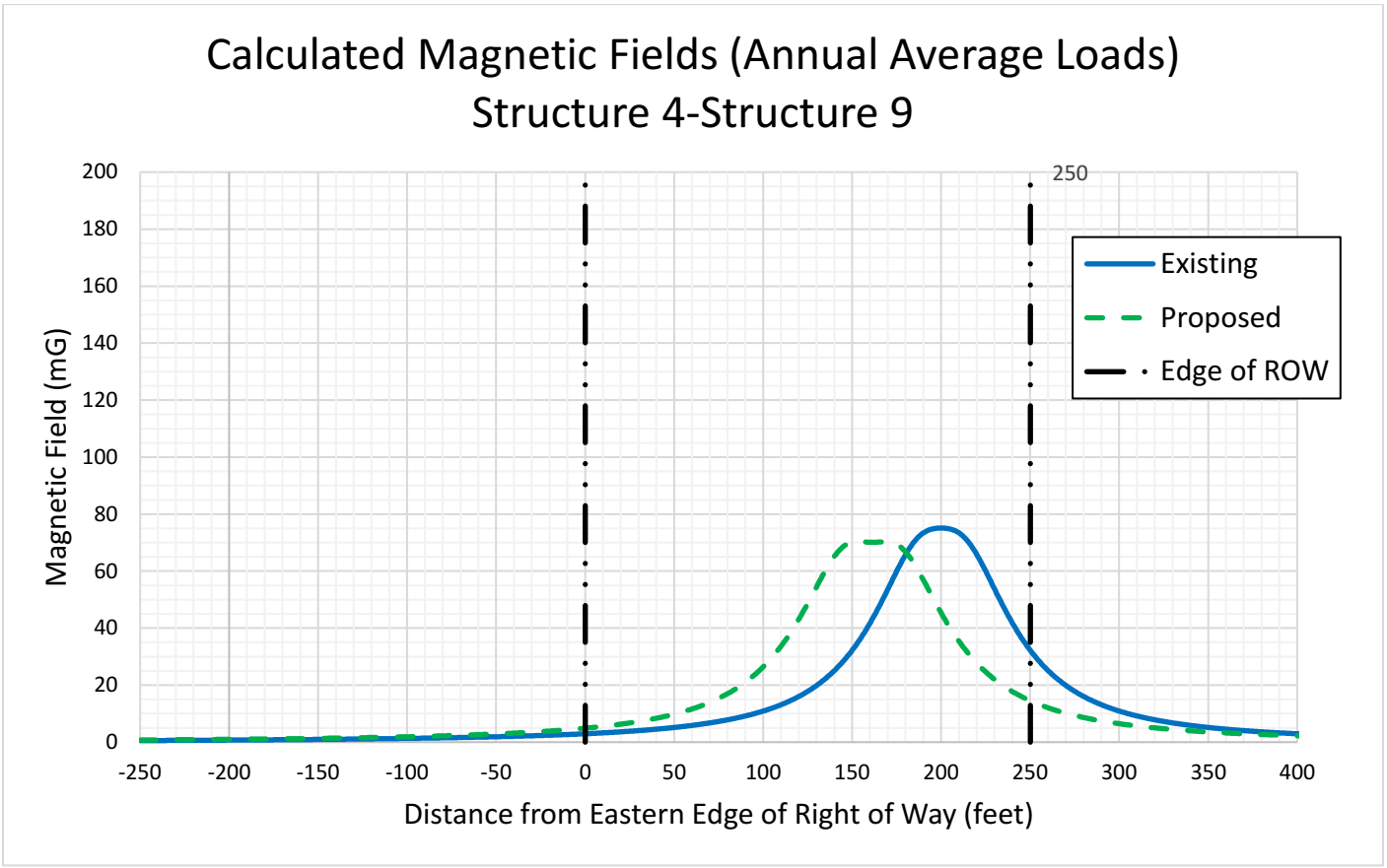
Cumulative Assessment

Number of questions answered YES in category A	Number of questions answered YES in category B	Tier Rating
1-3	2	Tier I
1-3	1	Tier II
0	1-2	Tier III
1-3	0	Tier III

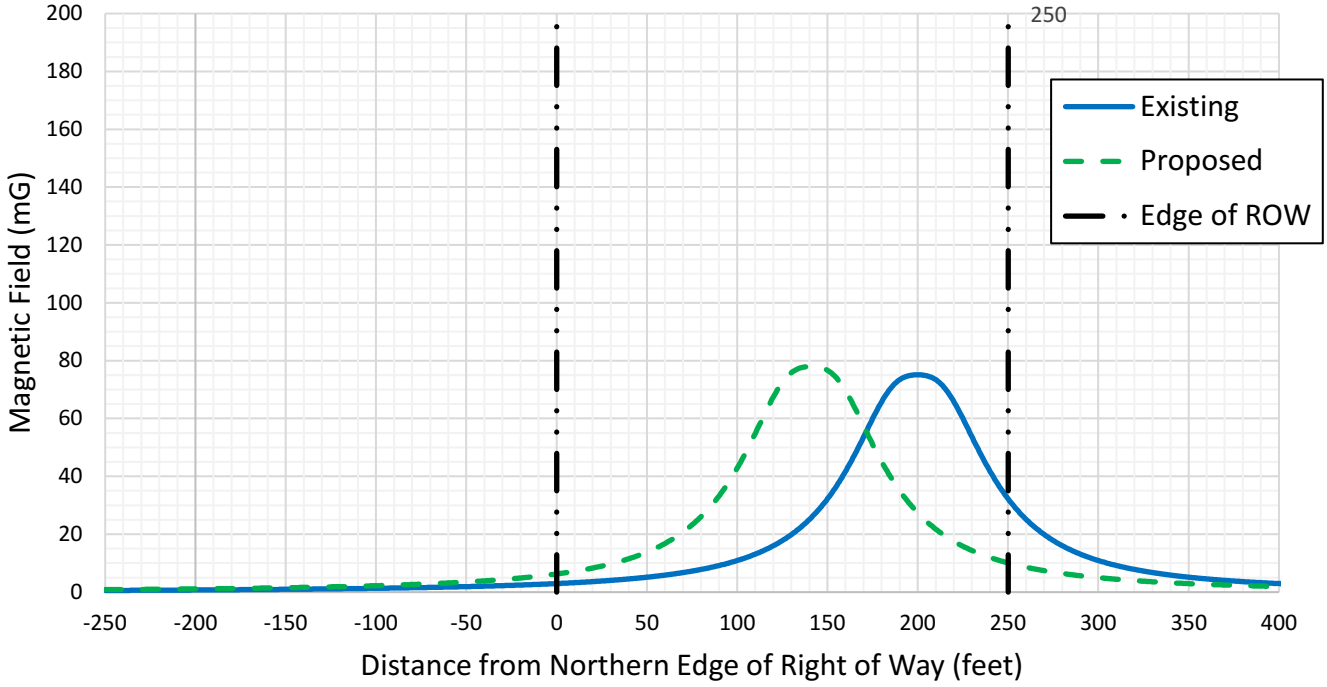
CAUTION! *This rating system is designed strictly as a planning tool, not as an official assessment tool.* It will enable you to determine the relative ecological value of pools within your community. A Tier I rating—which will most likely apply to only a minority of sites—denotes exemplary pools; Management Recommendations should be applied at these sites. For pools rated as Tier II, proceed with care; you need more information! Tier II pools will probably constitute the majority of your vernal pool resources; Management Recommendations should be applied at these sites to the maximum extent practicable. Tier II pools might also be likely candidates for restoration efforts (e.g., reforestation of the critical terrestrial habitat).

Attachment F: EMF Graphs and Tables

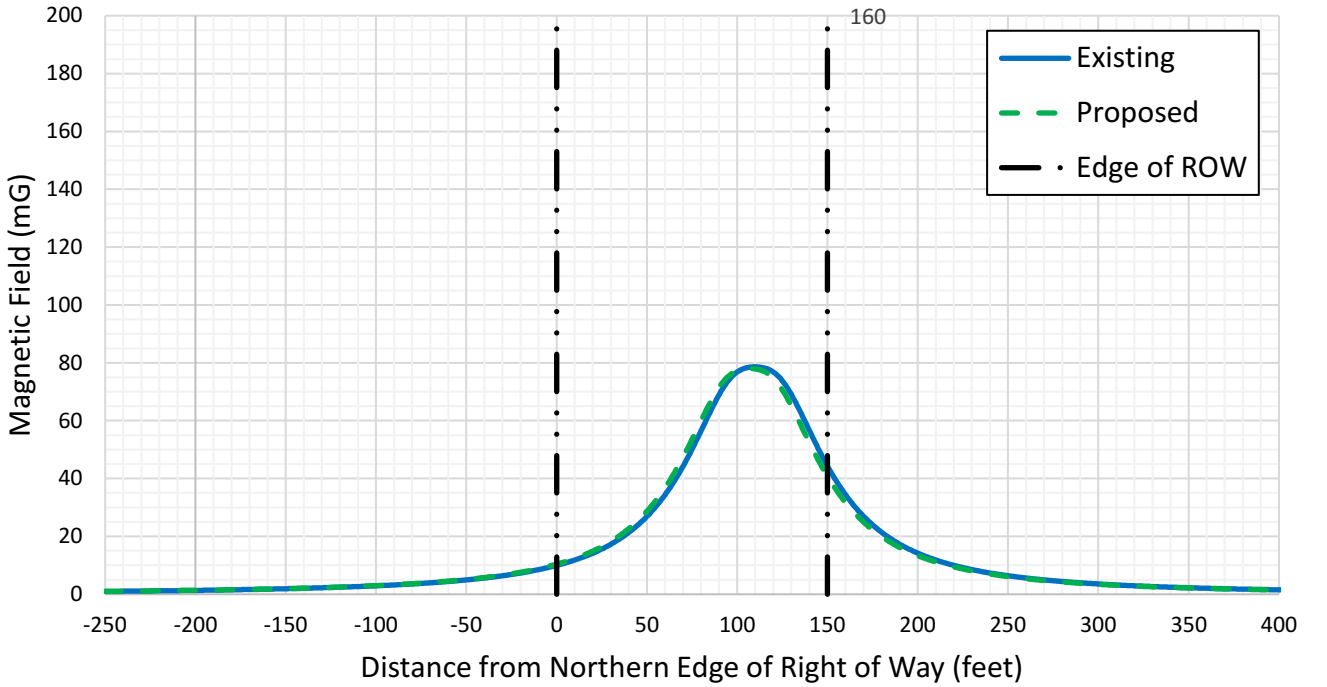

Calculated Magnetic Fields (Annual Average Loads)
Frost Bridge - Structure 4
Existing
Proposed
Edge of ROW
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Northern Edge of Right of Way (feet)

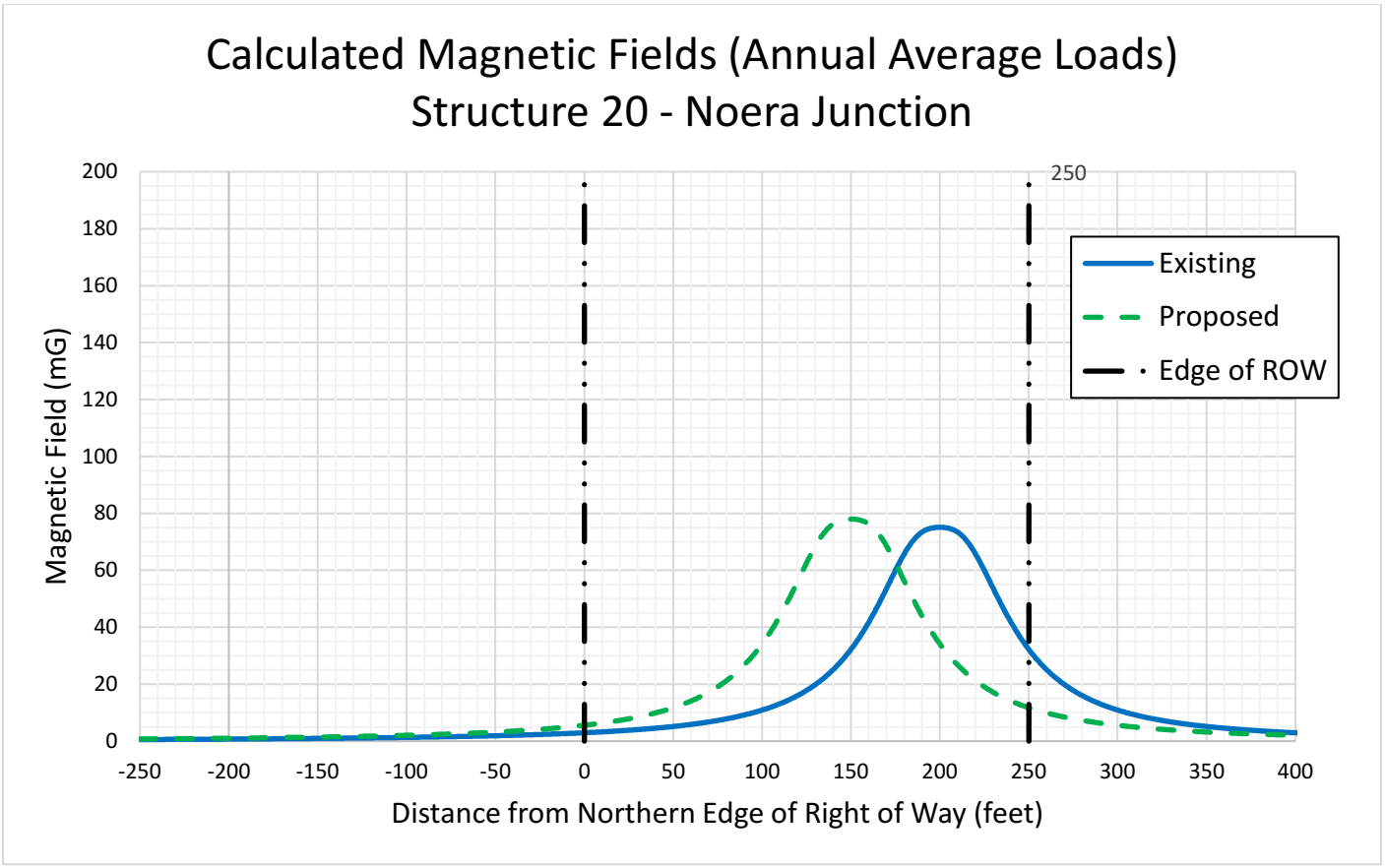

Calculated Magnetic Fields (Annual Average Loads)
Structure 4-Structure 9
250
Existing
Proposed
Edge of ROW
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Eastern Edge of Right of Way (feet)

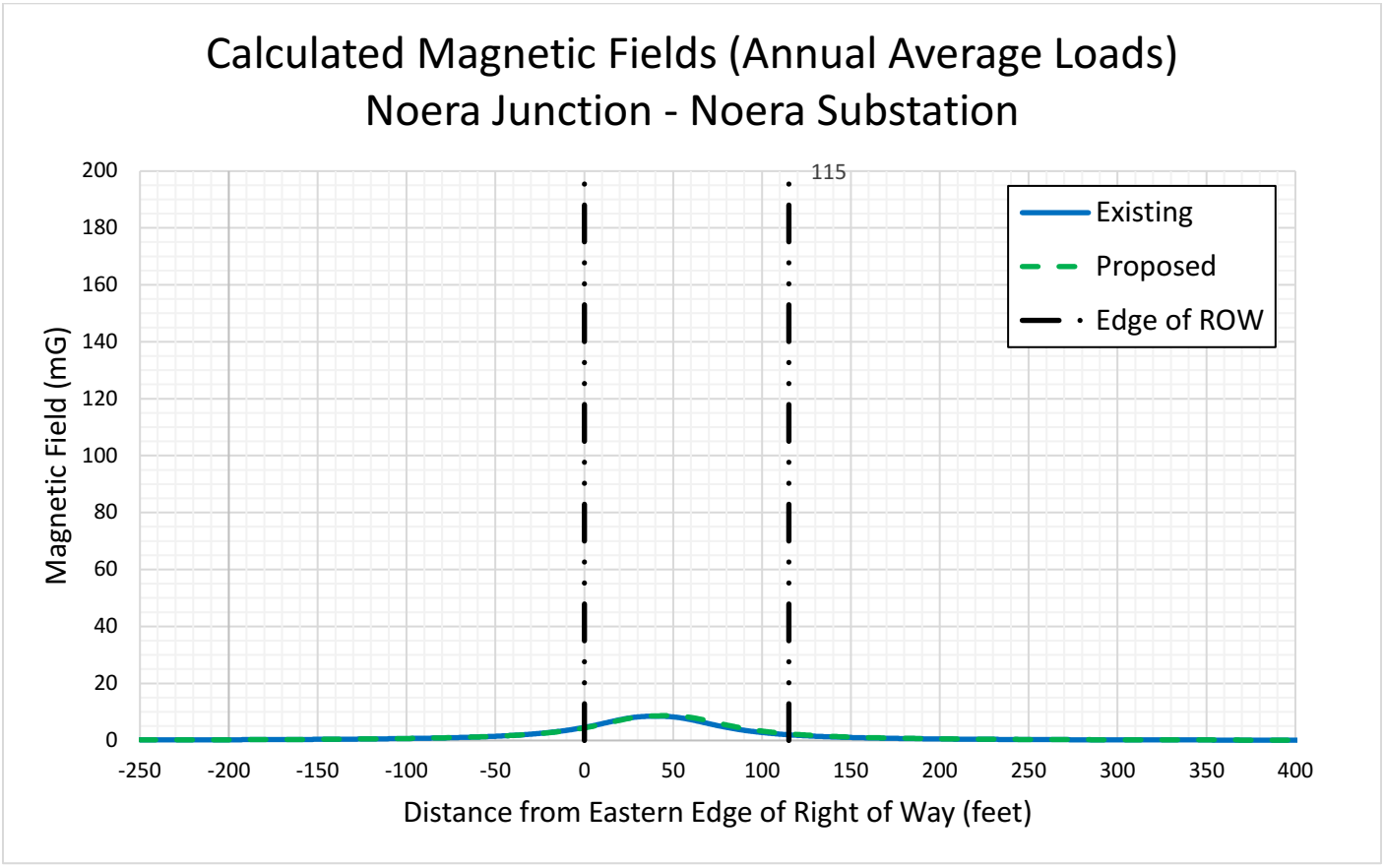
Calculated Magnetic Fields (Annual Average Loads)
Structure 9-Structure 16

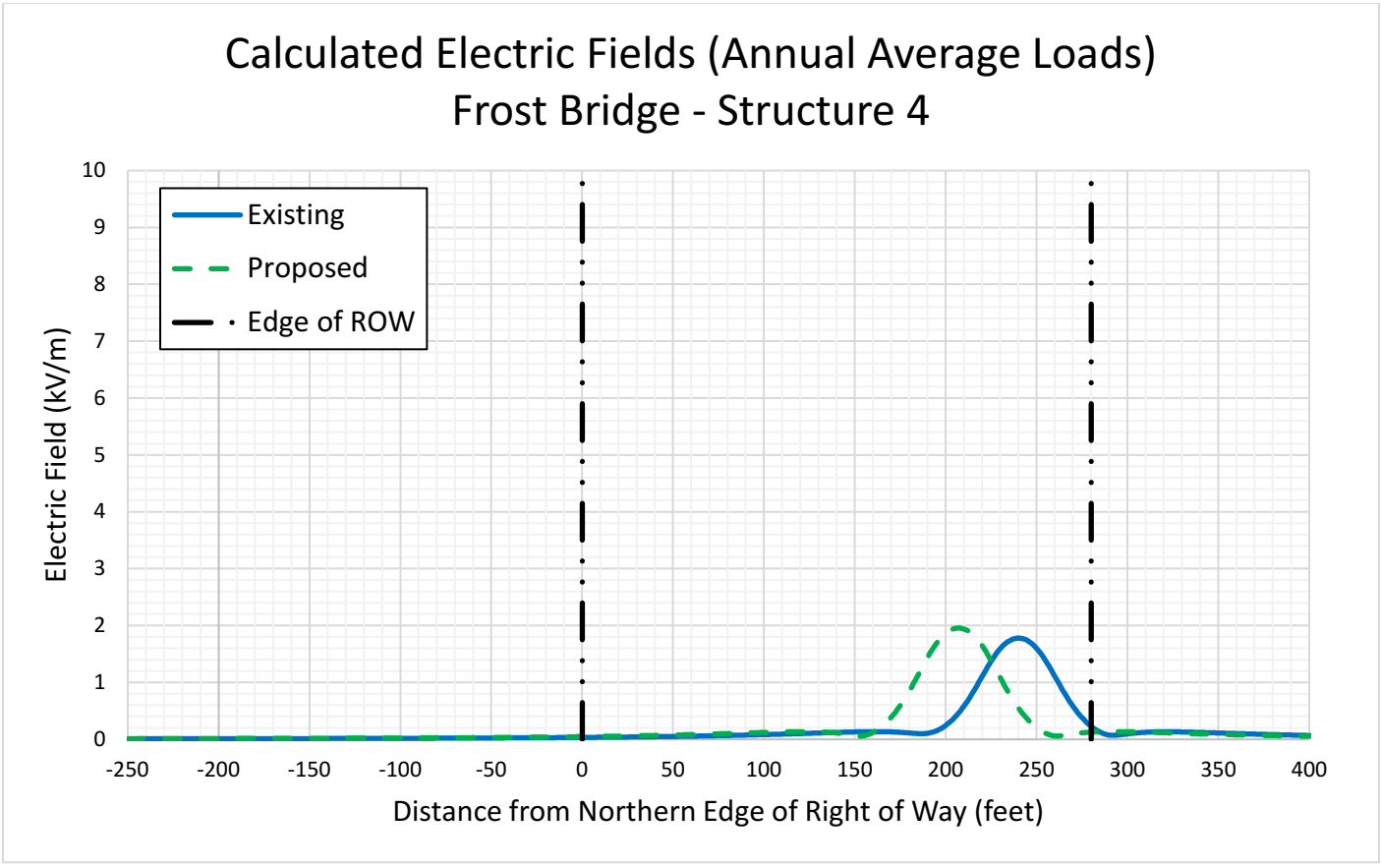


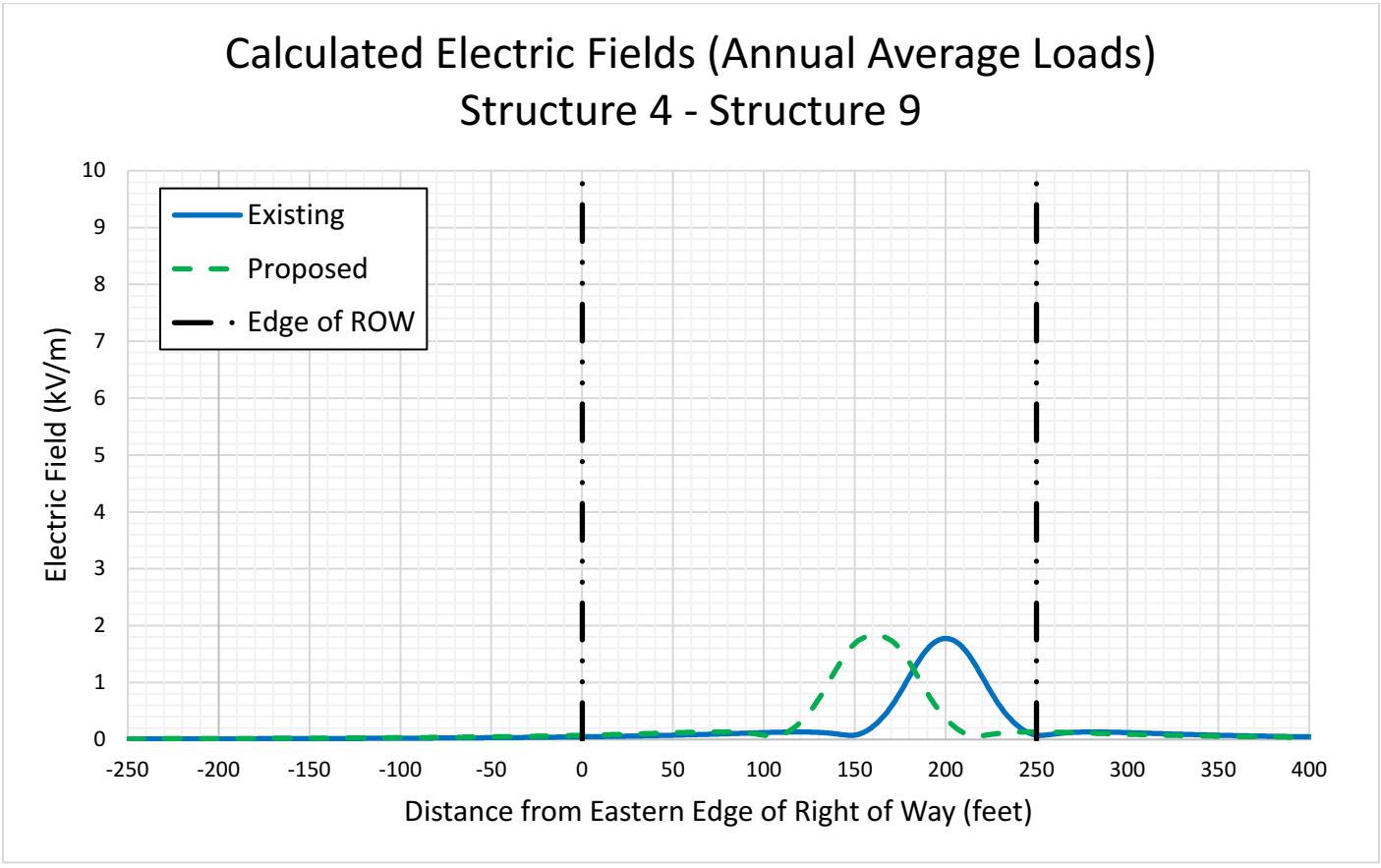
Calculated Magnetic Fields (Annual Average Loads)
Structure 16- Structure 20



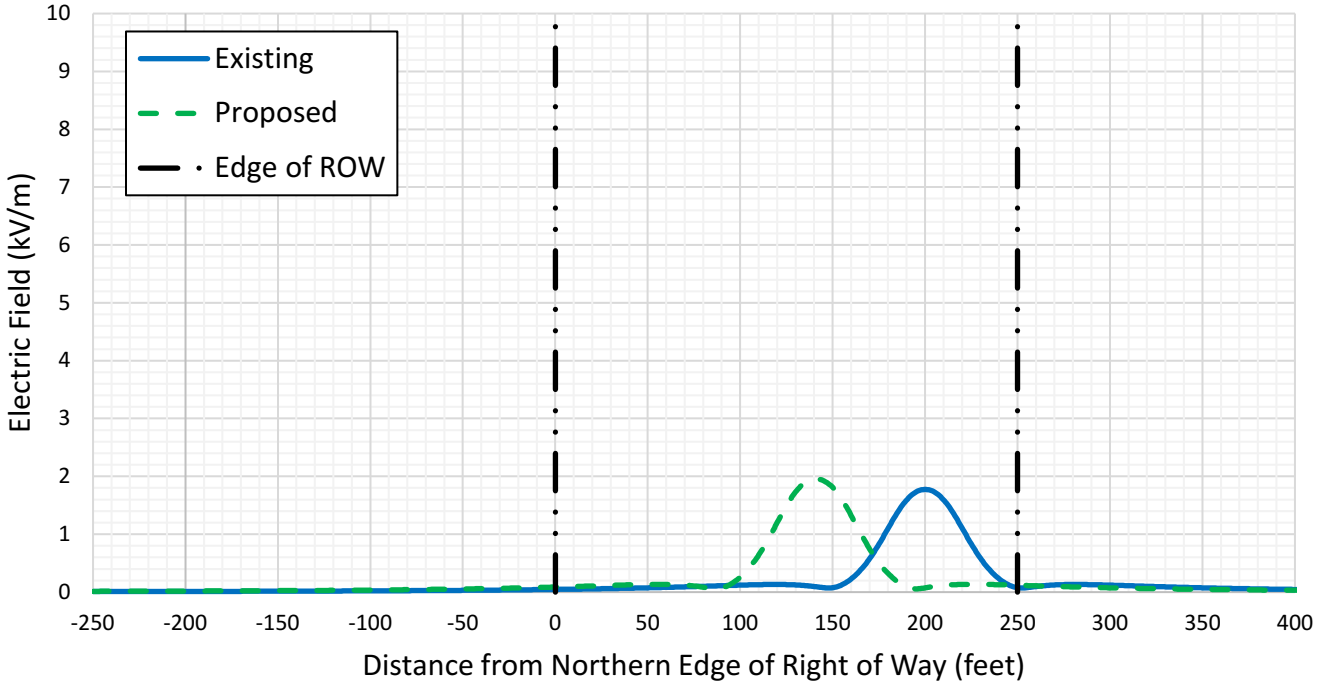

Calculated Magnetic Fields (Annual Average Loads)
Structure 20 - Noera Junction
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
250
Existing
Proposed
Edge of ROW
Distance from Northern Edge of Right of Way (feet)


Calculated Magnetic Fields (Annual Average Loads)
Noera Junction - Noera Substation
Magnetic Field (mG)
200
180
160
140
120
100
80
60
40
20
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
115
Existing
Proposed
Edge of ROW
Distance from Eastern Edge of Right of Way (feet)

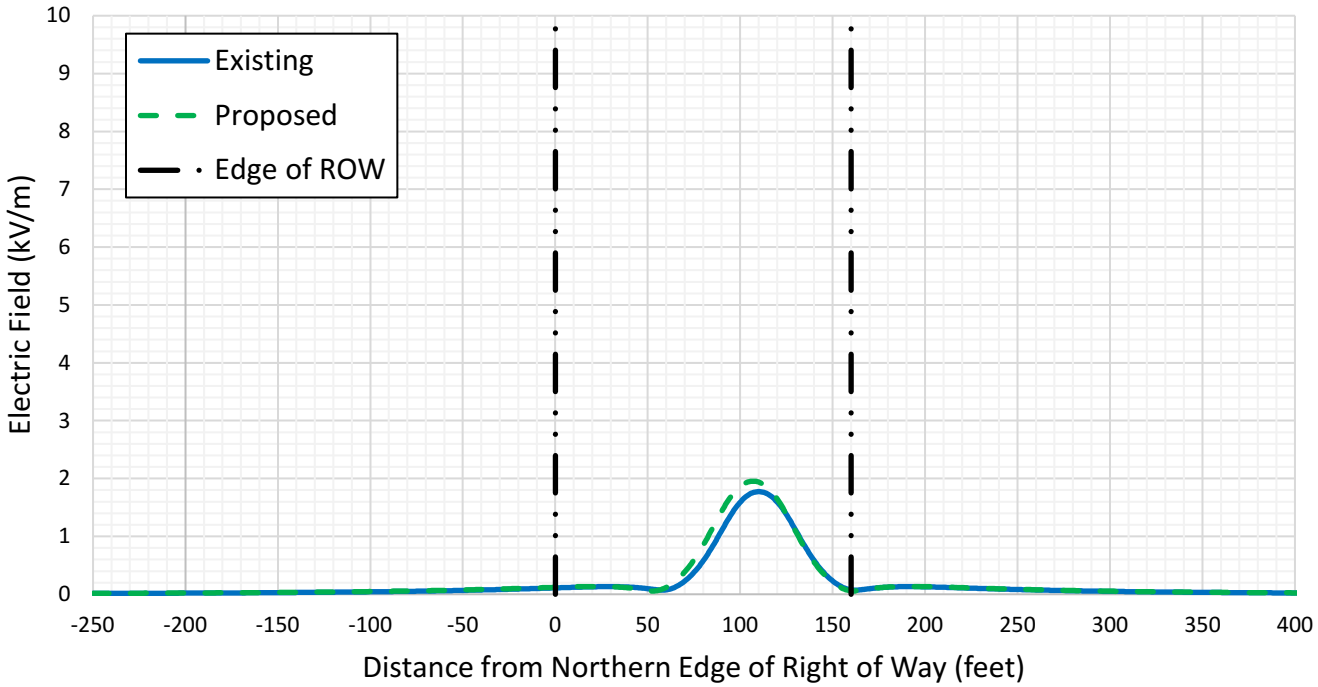

Calculated Electric Fields (Annual Average Loads)
Frost Bridge - Structure 4
Existing
Proposed
Edge of ROW
Electric Field (kV/m)
0
1
2
3
4
5
6
7
8
9
10
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Northern Edge of Right of Way (feet)

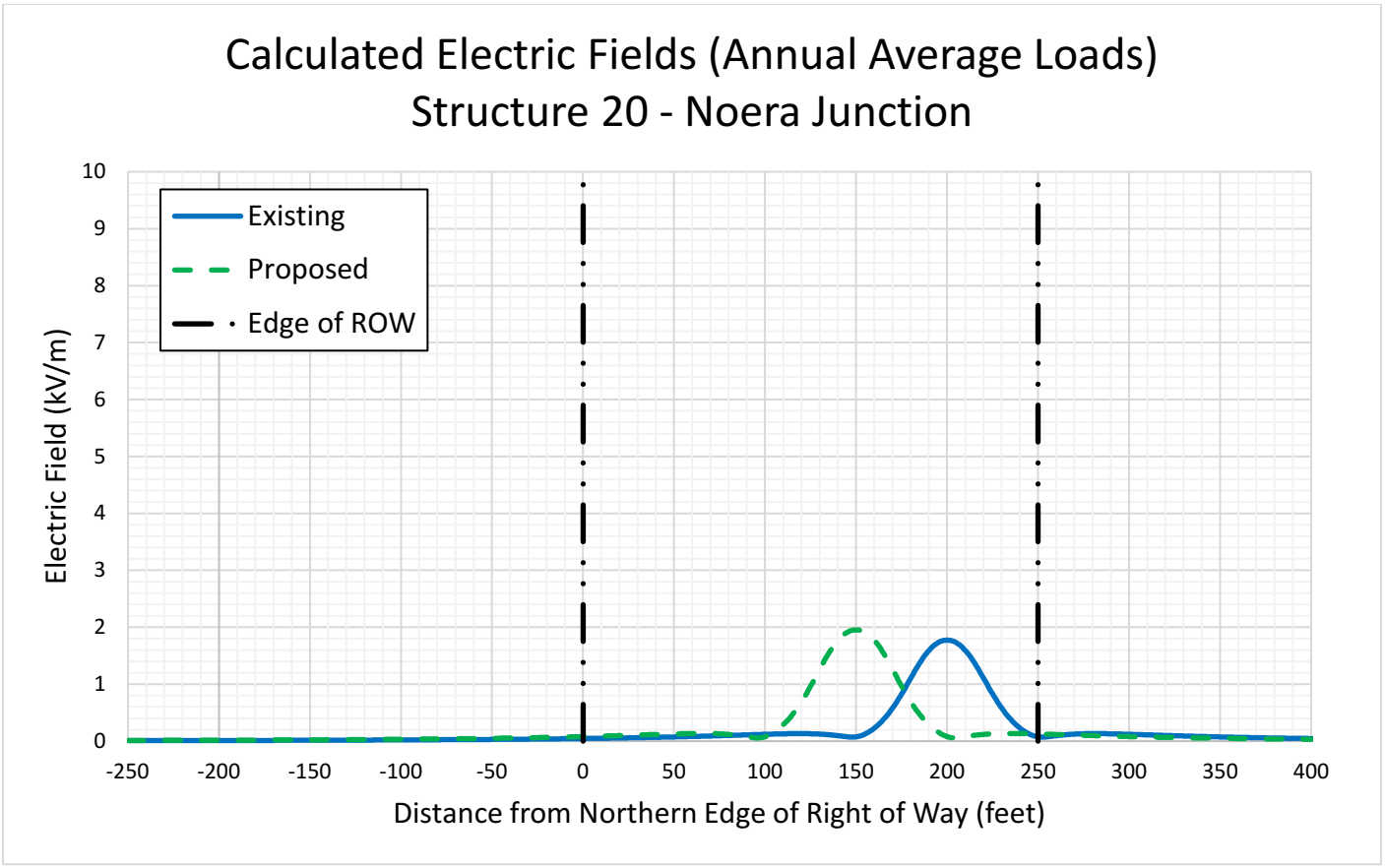

Calculated Electric Fields (Annual Average Loads)
Structure 4 - Structure 9
Existing
Proposed
Edge of ROW
Electric Field (kV/m)
0
1
2
3
4
5
6
7
8
9
10
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Eastern Edge of Right of Way (feet)

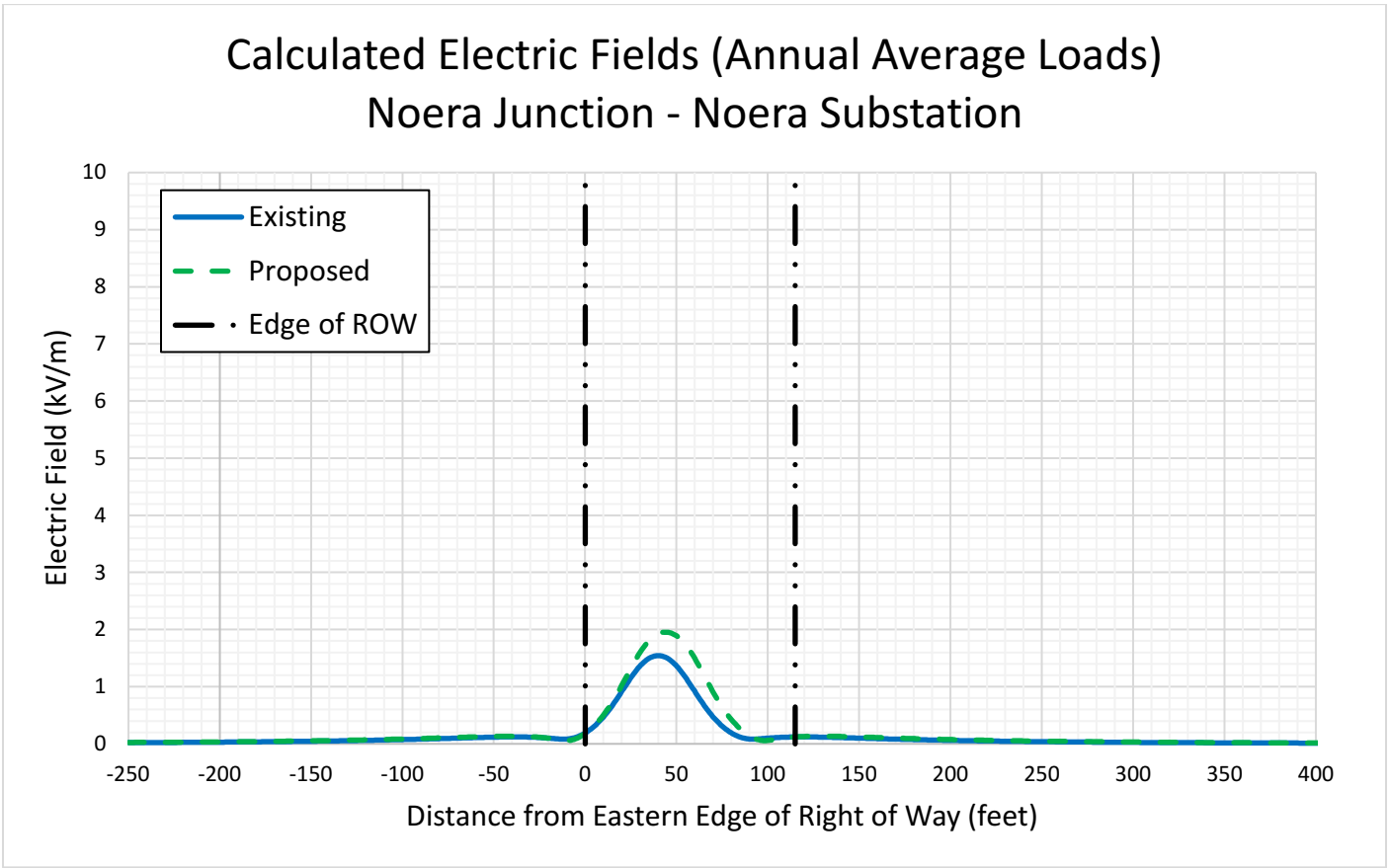
Calculated Electric Fields (Annual Average Loads)
Structure 9 - Structure 16



Calculated Electric Fields (Annual Average Loads)
Structure 16 - Structure 20




Calculated Electric Fields (Annual Average Loads)
Structure 20 - Noera Junction
Existing
Proposed
Edge of ROW
Electric Field (kV/m)
10
9
8
7
6
5
4
3
2
1
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Northern Edge of Right of Way (feet)


Calculated Electric Fields (Annual Average Loads)
Noera Junction - Noera Substation
Existing
Proposed
Edge of ROW
Electric Field (kV/m)
10
9
8
7
6
5
4
3
2
1
0
-250
-200
-150
-100
-50
0
50
100
150
200
250
300
350
400
Distance from Eastern Edge of Right of Way (feet)

Attachment G: Letter to the Abutters and Affidavit

EVERSOURCE ENERGY

P.O.Box 270
Hartford, CT 06141-0270

May 30, 2023

Dear Neighbor,

At Eversource, we're always working to serve you better. We are submitting a petition to the Connecticut Siting Council (CSC) for a proposed transmission line rebuild project in your area.

Proposed Project Information

The Project, called the **Frost Bridge to Noera Rebuild Project**, will take place within the existing transmission right of way (powerline corridor) on or near your property in Waterbury, Watertown, Thomaston and Plymouth, CT. The proposed project includes:

- Replacing the existing steel lattice towers, a wood H-Frame structure, and a double-circuit steel monopole with 62 new weathering steel monopole structures along an approximate 5-mile section of the right of way between Frost Bridge Substation located on Frost Bridge Road in Watertown and Noera Substation located on Noera Road in Waterbury.
- Installing two additional weathering steel monopoles on Eversource property located just outside of Noera Substation.
- Replacing the existing static wire (top-most wire) with Optical Ground Wire (OPGW). The new wire will improve the electric reliability by enabling communication between substations.
- Removing select trees and vegetation within the right-of-way as needed for construction and to comply with electric safety standards.
- Build or improve gravel roads and work pads to provide access to structure locations and to create a stable work area for equipment. Temporary construction matting will be used in and around environmentally sensitive areas (e.g., wetlands).

What You Can Expect

Pending all necessary approvals for this proposed work, construction is expected to begin in the 4th quarter of 2023. We anticipate completing construction, including restoration of affected areas, by mid-2024.

For More Information

Eversource is committed to being a good neighbor and doing our work with respect for you and your property. For more information, please call our projects hotline at **800-793-2202** or email to **ProjectInfo@eversource.com**.

If you would like to send comments regarding Eversource's petition to the CSC, please send them via email to siting.council@ct.gov or send a letter to the following address: Melanie Bachman, Executive Director, Connecticut Siting Council, Ten Franklin Square, New Britain, CT 06051.

Sincerely,

Chelsey Kovacs

Chelsey Kovacs
Project Manager on behalf of Eversource Energy Transmission

AFFIDAVIT OF SERVICE OF NOTICE

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Sec. 16-50j-40 of the Regulations of Connecticut State Agencies ("RCSA") provides that proof of notice to the affected municipalities, property owners and abutters shall be submitted with a petition for declaratory ruling to the Connecticut Siting Council. In accordance with that RCSA section, I hereby certify that I caused notice of The Connecticut Light and Power Company doing business as Eversource Energy's proposed modifications of existing transmission lines to be served by mail upon the following municipal officials:

Municipal Officials:

Honorable Jonathan Ramsay
Town Council Chair
61 Echo Lake Rd
Watertown, CT 06795

Honorable Neil O'Leary
235 Grand Street 2nd Floor
Waterbury, CT 06702

Honorable Edmond Mone
158 Main Street
Thomaston, CT 06787

Honorable Joseph Kilduff
80 Main Street
Terryville, CT 06786

I also certify that I caused notice of the proposed modifications to be served by mail upon 26 owners of abutting properties shown on the maps in Attachment A to the Petition.

Helen Taylor
Project Siting Specialist

On this the 31st day of May, 2023, before me, the undersigned representative, personally appeared, Helen Taylor, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that she executed the same for the purposes therein contained.

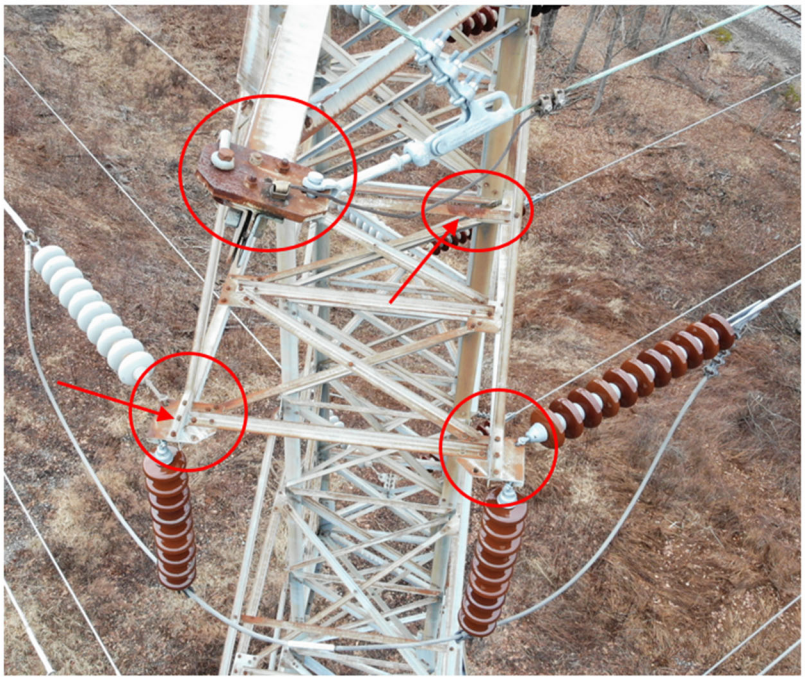
In witness whereof, I hereunto set my hand and official seal.

Officer of the Superior Court
~~Notary Public~~
~~My Commission expires:~~
Juris No. 413393

Attachment H: Photographs

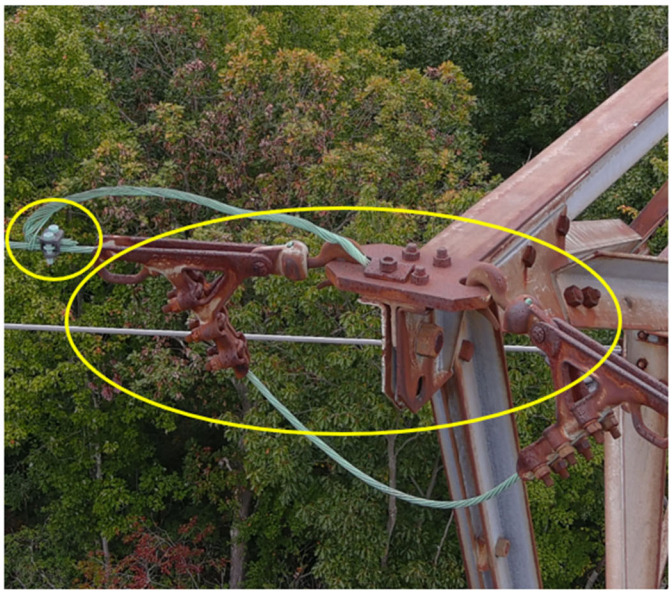
Structure 01

- Rusted/pitted attachment plates
- Rusted bolts
- Bent and Rusted structure members



Structure 05

- Corrosion on attachment plate and hardware



Structure 07

- Rusted/corroded/pitted attachment plates members, hardware, and bolts

Structure 08

- Rusted/pitted attachment plates + hardware
- Rusted bolts
- Rusted structure members
- Deteriorated Foundations