DRAFT

Petition No. 1535
The Connecticut Light and Power Company d/b/a Eversource Energy
Ledyard Junction to Mystic Substation Upgrade Project
Ledyard, Groton and Stonington, Connecticut

Staff Report
December 16, 2022

Introduction

On August 11, 2022, the Connecticut Siting Council (Council) received a petition (Petition) from The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the Ledyard Junction to Mystic Substation Upgrade Project (Project) within existing Eversource electric transmission line right-of-way (ROW) in the Towns of Ledyard, Groton and Stonington (Towns).

The Project consists of replacement of electric transmission line structures on the #1280 115-kilovolt (kV) Line along approximately 12.8 miles of existing ROW from Ledyard Junction through Whipple Junction in Ledyard to the Groton Town Line and from Whipple Junction through Mystic Junction in Stonington to Mystic Substation in Stonington, and related transmission line and substation improvements.

On August 9, 2022, in compliance with Regulations of Connecticut State Agencies (RCSA) §16-50j-40, Eversource provided notice of the proposed Project to the Towns and abutting property owners.

On August 15, 2022, the Council sent correspondence to the Towns stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by September 10, 2022. No comments were received.

Under RCSA §16-50j-40, neither Eversource nor the Council is required to provide notice to the state agencies listed in CGS §16-50j(g) when a petition for a declaratory ruling for modifications to an ***existing facility*** is submitted to the Council. On August 25, 2022, the Council on Environmental Quality submitted comments on the Project regarding Eversource's Best Management Practices.[1] On September 9, 2022, the Department of Public Health submitted comments on the Project regarding water resources.[2]

Under CGS §16-50x, the Council retains exclusive jurisdiction over the existing electric transmission line and substation facility sites. Under RCSA §16-50j-2a(29), "site" means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. The Council cannot delegate its statutory authority over any site to any other entity and it is not required to abide by comments from state agencies.[3]

The Council submitted interrogatories to Eversource on November 9, 2022 and December 1, 2022. Eversource submitted responses to the interrogatories on November 22, 2022 and December 13, 2022, respectively.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take action on a petition within 60 days of receipt. On September 29, 2022, pursuant to CGS §4-176(e), the

[1] https://portal.ct.gov/-/media/CSC/3_Petitions-medialibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1535/ProceduralCorrespondence/PE1535-CEQ-CommentsRecd.pdf
[2] https://portal.ct.gov/-/media/CSC/3_Petitions-medialibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1535/ProceduralCorrespondence/PE1535-DPH-CommentsRecd.pdf
[3] *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

Council voted to set the date by which to render a decision on the Petition as no later than February 7, 2023, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

The purpose of the proposed Project is to improve system reliability on the #1280 Line by replacing electric transmission line structures that are at the end of their service life and to meet National Electrical Safety Code (NESC) standards, including, but not limited to, conductor clearance requirements. The Project also entails structure replacements and reinforcements associated with installation of new optical ground wire (OPGW) in coordination with Groton Utilities (GU).[4]

The design of the Project is dependent upon the design of the GU project.

Municipal and Abutter Notice

In May 2022, Eversource initiated outreach to property owners along the project route. All abutting property owners were notified of the Project and provided information on how to obtain additional information, as well as how to submit comments to the Council. Three abutters contacted Eversource with concerns, including, but not limited to, 24-hour advance notice before commencing construction be provided, a gate at a new access road be installed, a tree at the edge of the ROW be removed and construction matting be reduced. Eversource was in contact with each of the three abutters to discuss their concerns. Eversource plans to provide 24-hour advance notice to abutters before commencing construction and is amenable to limiting construction matting in the area of concern; installing a security gate at the new access drive; and surveying to determine if the tree is within Eversource's ROW.

In May 2022, Eversource consulted with representatives of the Towns to brief them on the proposed Project. The Towns did not express any concerns.

Existing Project Area

The existing Project area includes approximately 12.8 miles of existing Eversource ROW that extends through undeveloped and residential areas between Ledyard Junction in Ledyard and the Groton Town Line, and from Whipple Junction in Ledyard to Mystic Junction and Mystic Substation in Stonington. The ROW from Ledyard Junction to the Groton Town Line was established in 1950 and expanded from 125 feet to 200 feet in 1965. The ROW from Whipple Junction to Mystic Substation was established in 1963.

Eversource's easement for the existing ROW grants Eversource rights to, *"a perpetual easement, privilege, and right of way for electric lines for the transmission of electric currents of any character necessary or convenient from time to time in the conduct of the grantee's business and the right at any and all times and from time to time to erect, inspect, operate, use, patrol and permanently maintain the said electric lines ... Said electric lines may consist of poles, towers, other supporting structures (which may be substituted one for the other at any time) circuits, cables, wires crossarms, guy wires, anchors, guy stubs and other overhead and underground appurtenances and fixtures, any or all of which constituent parts of said electric lines may be erected, relocated, replaced, repaired or changed in number, size or type from time to time."*

The ROW is approximately 125 feet to 200 feet wide with a variable maintained width. No expansion of the ROW is proposed.

Proposed Project

The Project is proposed to address identified asset condition deficiencies through replacement of deteriorated structures on the #1280 Line. Certain existing structures require replacement due to age-related degradation; limited structural capacity to support new OPGW; and compliance with new conductor clearance requirements.

[4] Council Petition No. 1436.

The Project entails replacement of 22 single-circuit wood H-frame structures and 12 single-circuit wood monopole structures with weathering steel structures. Of the 34 structures to be replaced, 25 are due to age-related asset condition issues; 5 are due to a change from a delta conductor configuration to a vertical configuration to align with the asset condition replacement structures and meet NESC clearance requirements; and 4 are due to the proposed structural loading associated with upgrading the OPGW. In addition to the replacement structures, 2 new weathering steel structures would be necessary to support all dielectric self-supporting (ADSS) fiber optic cable at Mystic Junction.

The Project requires taller structures to comply with NESC standards, including, but not limited to, conductor clearance requirements. The NESC is the authoritative code for ensuring the continued practical safeguarding of persons and utility facilities during the installation, operation and maintenance of electric power and communications utility systems, including substations, overhead lines and underground lines.

NESC clearance requirements for conductor sag factored into transmission line design include vertical clearance standards to ground, water bodies, road and utility crossings, and objects routinely found in ROWs. Conductor sag can occur as a result of ice loading or maximum operating temperature. Conductor uplift typically occurs in spans where structures are located at different ground levels and the lowest point of the conductor sag may be outside the span. Eversource conductor sag clearances are based on NESC criteria, with the application of an additional buffer that is based on clearance to vehicles traveling in a ROW.

The Project is identified in the 2022 Eversource Forecast of Loads and Resources Report and in the June 2022 ISO-NE Regional System Plan Asset Condition List.[5] A new electric distribution line will also be built in conjunction with construction of the Project.

Structure Replacements and OPGW Upgrade of the 115-kV #1280 Line

The #1280 Line consists of 556 kcmil aluminum conductor steel reinforced (ACSR) conductors supported by structures from Whipple Junction to the Groton Town Line. The conductors were installed in 1973. The #1280 Line consists of 795 ACSR conductors supported by structures from Whipple Junction to Mystic Substation. The conductors were installed in 1963. No conductor upgrades/replacements are proposed at this time because of all of the existing conductors in the Project ROW have at least 10 years of useful life remaining.

Project work consists of the following:

a) Replace 9 single-circuit wood H-frame structures with 9 single-circuit weathering steel H-frame structures due to asset condition issues;
b) Replace 4 single-circuit wood H-frame structures with 2 double-circuit weathering steel H-frame structures due to asset condition issues;
c) Replace 5 single-circuit wood three-pole structures with 5 single-circuit weathering steel three-pole structures due to asset condition issues;
d) Replace 7 single-circuit wood monopole structures with 7 single-circuit weathering steel monopole structures due to asset condition issues;
e) Replace 4 single-circuit wood H-frame structures with 4 single-circuit weathering steel H-frame structures due to structural loading associated with proposed OPGW;
f) Reinforce 11 single-circuit wood H-frame structures by replacing wood cross braces with steel cross braces, installing steel cross braces or adding guy wires due to structural loading issues associated with proposed OPGW;
g) Replace 5 single-circuit wood monopole structures with 5 single-circuit weathering steel monopole structures to accommodate a configuration change from delta to vertical; and
h) Replace existing 7/8 Alumoweld shield wire on the #1280 Line with OPGW and associated hardware and insulators.

[5] https://portal.ct.gov/CSC/Forecast/Forecast2022

Substation and Junction Modifications

a) Replace 61-foot tall 3-way tap Structure No. 8387 with a 66-foot tall structure on the #1280 Line at Whipple Junction; and
b) Install two new steel poles (Structure Nos. 8443-1 and 8443-2) with heights of 22 feet and 30 feet, respectively, to facilitate the fiber optic path through Mystic Junction.

No modifications are proposed at Ledyard Junction or Mystic Substation.

Cost

The total estimated cost of the Project is approximately $19.73M. The entire Project cost would be eligible for regional cost allocation as it is associated with Pool Transmission Facilities[6]. Pending a final determination from ISO-NE, total costs are expected to be allocated[7] as follows:

Eversource Connecticut ratepayers[8]	19.1%	($3.77M)
Other Connecticut ratepayers[9]	5.9%	($1.16M)
Other New England ratepayers[10]	75.0%	($14.8M)
Cost Total	100%	($19.73M)

While no conductors are proposed to be replaced or upgraded for the Project, such an upgrade would increase the total cost by approximately $9.6M.

Project Construction and Work Procedures

Eversource would utilize staging areas for the Project at 82 Depot Road in Montville and 54 Military Highway in Preston. These staging areas are currently being utilized by Eversource for general transmission system maintenance work. The staging areas would contain Project equipment, storage containers, office trailers, and vehicles.

Appropriate erosion and sedimentation (E&S) controls would be installed and maintained at the staging areas until completion of construction in accordance with Project permitting and Eversource's April 2022 Best Management Practices Manual for Massachusetts and Connecticut (BMPs).[11]

Eversource would utilize existing ROW access roads to the extent possible during construction. Where existing access roads are not present, new permanent gravel roads would be established. Construction matting would be utilized to install temporary access roads through wetland areas.

Eversource would obtain a Department of Transportation Encroachment Permit for ROW entry from three state-maintained roadways (Rt. 117, Rt. 184, and Rt. 234).

[6] ISO-NE defines Pool Transmission Facilities as facilities rated 69-kV or above owned by the participating transmission owners over which ISO-NE has operating authority in accordance with the terms set forth in the Transmission Operating Agreements.
[7] These allocations are estimates based on 2021 actual loads.
[8] Electrical service customers of Eversource and located within Connecticut.
[9] Electrical service customers located within Connecticut but outside of Eversource's service territory.
[10] Electrical service customers located within New England but outside of Connecticut.
[11] Eversource Best Management Practices MA_CT

Construction areas would be isolated by establishing E&S controls in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* and Eversource's BMPs. Typical E&S control measures include, but are not limited to, straw blankets, hay bales, silt fencing, gravel anti-tracking pads, soil and slope protection, water bars, check dams, berms, swales, plunge pools, and sediment basins.

A project-specific Stormwater Pollution Control Plan (SWPCP) would be developed for registration under a Department of Energy and Environmental Protection (DEEP) General Permit. The General Permit requires the designing qualified professional to conduct the SWPCP Implementation Inspection that confirms compliance with the General Permit and the initial implementation of all SWPCP control measures for the initial phase of construction. The SWPCP also requires a qualified inspector to inspect the work areas at least once per week and within 24-hours after a rain event that meets certain permit criteria.

The Project is eligible for certification through the US Army Corps of Engineers (USACE)/DEEP Self-Verification Notification process in regard to wetland impact. The self-verification notification forms and required accompanying materials were submitted to USACE and DEEP, and an authorization letter was received by Eversource on September 20, 2022.

At each transmission line structure location, a work pad would be constructed to stage material for final on-site assembly and/or removal of structures, to pull conductors and to provide a safe, level work base for construction equipment. Work pads for the project would typically range from 100 feet by 100 feet and up to 110 feet by 120 feet depending on specific site conditions. For areas where machinery is needed for pulling conductors through an angled structure, 130-foot by 80-foot work/pull pads would be established. Most of the work pads would be composed of gravel. Temporary work pads would be used in sensitive areas such as wetlands, lawns/meadow and identified cultural resource locations.

The proposed structures would have either drilled (caisson) foundations or direct embed foundations.

Foundation installation work would require the use of equipment such as drill rigs, pneumatic hammers, augers, and dump trucks. If groundwater is encountered, pumping trucks or other equipment would be utilized. The water would then be discharged in accordance with local, state and federal requirements.

New structure sections, components and hardware would be delivered by flatbed truck to the structure locations for assembly by crane and bucket trucks. After assembly, the area around the direct embed structures would be backfilled with processed gravel. Counterpoise would also be installed after structures are constructed.

After structure installation is complete, the transfer of conductor from the existing structures to the new structures would occur utilizing equipment such as cranes, bucket trucks and tensioning rings. The removal of existing Alumoweld shield wire and replacement with OPGW would require equipment such as reels, pulling and tensioning rigs, and bucket trucks. The removal of the existing shield wire would take place during the active installation of the OPGW because the existing shield wire would be used as pulling lines, if possible. Helicopters may also be used to install initial pulling lines for OPGW installation. The existing structures would be removed after the conductor transfer and OPGW installation are performed.

After the new and replacement structures are installed, the conductors are transferred to the new structures and the existing shield wire is replaced with OPGW, the existing structures would be removed, and ROW restoration activities would commence. Restoration work includes the removal of construction debris, signage, flagging, temporary fencing, and construction mats and work pads that are designated for removal. Affected areas would be re-graded as practical and stabilized via revegetation or other measures before removing temporary E&S controls. ROW restoration would be performed in accordance with Eversource BMPs and in consultation with affected property owners.

Upon completion of the project, access roads and work pads located in uplands would be left in place to facilitate future transmission line maintenance. If a property owner requests their removal, Eversource would work with such property owner regarding mitigation options.

Project-related traffic would be expected to be temporary and highly localized in the vicinity of ROW access points along public roads and at the staging area. Due to the phasing of construction work, project-related traffic is not expected to significantly affect transportation patterns or levels of service on public roads. Traffic management procedures would be developed, if necessary.

Environmental Effects and Mitigation Measures

Work would occur within a maintained ROW (125 to 200 feet wide). However, tree removal/vegetation management would be required in select areas to accommodate work site access, work pad installation and improvements, removal of incompatible vegetative species and where conductor clearances need to be improved to meet current clearance standards. Outside of the ROW, some tree removal/vegetation management would be required to facilitate improvements to existing off-ROW access roads.

Vegetation removal/tree trimming would be accomplished using mechanical methods using flat-bed trucks, brush hogs or other types of mowing equipment, skidders, forwarders, bucket trucks for canopy trimming, and chippers. Vegetation removal activities would be performed in accordance with Eversource BMPs.

The Project would result in a total permanent conversion of approximately 2.2 acres of upland forest habitat to scrub-shrub or herbaceous habitat areas. Thus, no significant adverse impact to forested habitat is expected. Furthermore, additional shrubland and early successional habitat along the ROW or access roads would be beneficial for many species of wildlife.

A total of 55 wetland areas and 19 watercourses occur along the ROW or in off-ROW areas that would be impacted by the Project (access roads). Six structures that are within wetlands would be replaced with weathering steel structures with similar configurations to the existing structures. One structure would be relocated from an upland area to a wetland area to meet clearance requirements. Thus, seven Project structures would be installed within wetlands. To minimize disturbance to wetlands, the existing wood structures would be cut above grade and left in place.

The Project would result in 880 square feet (sf) of permanent wetland/watercourse impacts associated with the replacement of 7 structures and 26,920 sf of permanent wetland/watercourse impacts associated with selective tree removal. Temporary wetland impacts related to construction matting for work pads and/or temporary access total approximately 4.42 acres. Per Eversource's BMPs, temporary mats would be cleaned to prevent the introduction of invasive species into wetlands.

Construction activities within wetlands and over watercourses would be conducted in accordance with Eversource's BMPs.

Eversource could utilize helicopters for OPGW installation to reduce temporary wetland impacts in the vicinity of six structures and one access road location. This would result in a total reduction in temporary wetland impacts by approximately 12,156 sf by reducing the need for work pads and access. The net additional cost would be approximately $440k.

Alternatively, Eversource could utilize helicopters for OPGW installation to minimize ground disturbance (both upland and wetland) for the entire Project. This would eliminate the need for approximately 113,675 sf of matting and 34,150 sf of gravel for work pads and access roads associated with OPGW installation. The net additional cost would be approximately $180k.

Seventeen vernal pools were identified near the Project area. No new structures or construction matting would be located within a vernal pool. Vegetation removal would occur within the vernal pool envelope (100 feet from the edge of the vernal pool) of one of the vernal pools (VP3) and within one vernal pool depression (VP6). Vernal pool survey results recommended protection measures to reduce the potential for impacts to vernal pool envelopes and vernal pool species using E&S controls, matting, reduced vegetation clearing, and avoidance of clearing (as practicable) during periods of peak vernal pool species breeding and migration. Eversource plans to implement the recommended protection measures for vernal pools.

The Project ROW extends across the 100-year Federal Emergency Management Agency-designated flood zone in the vicinity of Great Brook; Haley's Brook; West Branch Red Brook; Red Brook; and Whitford Brook. 500-year flood zones are located in the Project ROW in the vicinity of Wetlands 27 and 55, and the Mystic River. Approximately 440 sf of permanent impacts to the 100-year flood zone would be associated with the installation of Structure Nos. 8430 and 8431. These permanent impacts are not expected to affect flood storage. Approximately 1.12-acres and 0.23-acre of temporary matting would be required for construction within the 100-year and 500-year flood zones, respectively.

There are no DEEP-designated Aquifer Protection Areas within or proximate to the Project ROW. The Project ROW is proximate to and/or passes through the following Public Water Supply Watersheds: Morgan Pond Reservoir; Buddington Pond; Ledyard Reservoir; and Dean's Mill Reservoir. Eversource would conduct work in accordance with its BMPs. Provisions are included for proper storage, secondary containment, and handling of diesel fuel, motor oil, grease and other lubricants, to protect water quality.

A portion of the Project is within DEEP NDDB areas. Eversource would implement DEEP recommended species-specific protection measures during construction. Protective measures include, but are not limited to, contractor training; time-of-year-specific BMPs; monitoring; and exclusion fencing.

Eversource also consulted with the U.S. Fish & Wildlife Service's (USFWS) Information, Planning and Consultation (IPaC) service regarding federally-listed species that may be present within the project area. The IPaC report identified two federally-listed Threatened Species (that are also state-listed Endangered Species): the northern long-eared bat (NLEB) and the small whorled pogonia, a perennial orchid. There are no known NLEB maternity roost trees within 150 feet of the Project area, and the nearest known NLEB hibernaculum is located approximately 36 miles away in the Town of North Branford. Thus, no impacts to the NLEB are expected to result from the Project. Since the small whorled pogonia was not identified by the DEEP NDDB Determination, it is presumed to not be present at the site, and thus, no impacts to this species are expected.

The Project ROW traverses a New England Cottontail (NEC) focus area, established by DEEP, USFWS and other conservation groups to preserve NEC habitat. Gravel work pads located in the NEC focus area would be reduced in size where feasible to minimize potential effects to NEC habitat. Post-construction, gravel pads would be covered with soil and reseeded with a native wildflower mix. Shrubland would be maintained in the ROW to provide habitat for the NEC.

No properties/districts listed on the National Register of Historic Places (NRHP) would be affected by the Project. A Phase 1A Cultural Resources Assessment (Phase 1A) of the Project area determined that 28 work locations possessed a potential for moderate to high archaeological sensitivity. A subsequent Phase 1B Cultural Resources Reconnaissance Survey (Phase 1B Survey) found one location, the proposed (in ROW) access road for Structure No. 8434, as retaining research potential that meets NRHP criteria. The Phase 1B Report recommended that this area be avoided during construction, or, alternatively, BMPs such as the use of timber matting be used during construction to avoid impacts.

The Project ROW traverses Route 234, a state-designated scenic roadway. No structure replacements are proposed at this location. Only temporary matted work areas and access roads associated with the proposed OPGW work is located in the vicinity of this scenic roadway. Thus, no adverse effects to this resource are expected. There are no locally-designated scenic roads in the Towns.

A portion of the Project ROW traverses or is adjacent to several public recreational resource areas including Groton Open Space Association in Groton, Avalonia Land Conservancy in all the Towns and Mystic Aquarium in Stonington. Eversource would coordinate with property owners to develop and implement measures to protect the public at these recreational resources during construction. The Project area is not located proximate to any Blue Blazed hiking trails maintained by the Connecticut Forest and Parks Association.

The replacement structures would require increases in structure heights to meet NESC clearance requirements[12] within the existing ROW. Existing structures on the lines range from 52 to 86 feet above ground level. The replacement structures on the lines would range from 57 feet to 98 feet above ground level, with an average height increase of approximately 9 feet.

Due to the increase in structure heights to comply with NESC clearance criteria, there would be some changes to the visual character of the line. The use of weathering steel replacement structures would resemble the appearance of existing wood structures within the ROW and would match the surrounding landscape. Thus, the extent of the changes in visual character are not expected to be significant.

Public Safety

There would be no permanent changes to existing ROW sounds levels after completion of the Project. Notwithstanding, any construction-related noise would be short-term and localized in the vicinity of work sites.

Notice to the Federal Aviation Administration (FAA) would not be required for any of the proposed structures and none of the proposed structures require FAA marking and/or lighting.

Electric fields (EF) are produced whenever voltage is applied to electrical conductors and equipment. Electric fields are typically measured in units of kilovolts/meter (kV/m). As the weight of scientific evidence indicates that exposure to electric fields, beyond levels traditionally established for safety, does not cause adverse health effects, and as safety concerns for electric fields are sufficiently addressed by adherence to the NESC, as amended, health concerns regarding Electric and Magnetic Fields (EMF) focus on MF rather than EF. The International Commission on Non-Ionizing Radiation Protection (ICNIRP) has established a guideline of 4.2 kV/m.

The Project route contains an existing transmission line that emits magnetic fields (MF). In the United States, no state or federal exposure standards for 60-Hertz MF based on demonstrated health effects have been established, nor are there any such standards established worldwide. However, the ICNIRP has established a level of 2,000 milliGauss (mG), based on extrapolation from scientific experimentation, and the International Committee on Electromagnetic Safety (ICES) has calculated a guideline of 9,040 mG for exposure to workers and the general public, and recognized in the Council's *Electric and Magnetic Field Best Management Practices for the Construction of Electric Transmission Lines in Connecticut.*

Eversource reviewed EMF levels associated with the Project. Pre- and post-construction EMF are presented in the table below:

Groton Town Line (Structure 127) - Whipple Junction (Average Loads)		West ROW Edge	Max in ROW	East ROW Edge
Magnetic Field (mG)	Existing	3.35	15.07	4.36
	Proposed	6.02	25.72	8.49
Electric Fields (kV/m)	Existing	0.20	0.49	0.04
	Proposed	0.42	0.70	0.03

[12] A safety buffer is included in the structure heights (above the minimum NESC clearance requirements) to ensure that NESC clearances are met at all times and under a variety of conditions.

All EF and MF values would be below the ICNIRP exposure guidelines of 4.2 kV/m and 2,000 mG, respectively.

Construction Schedule

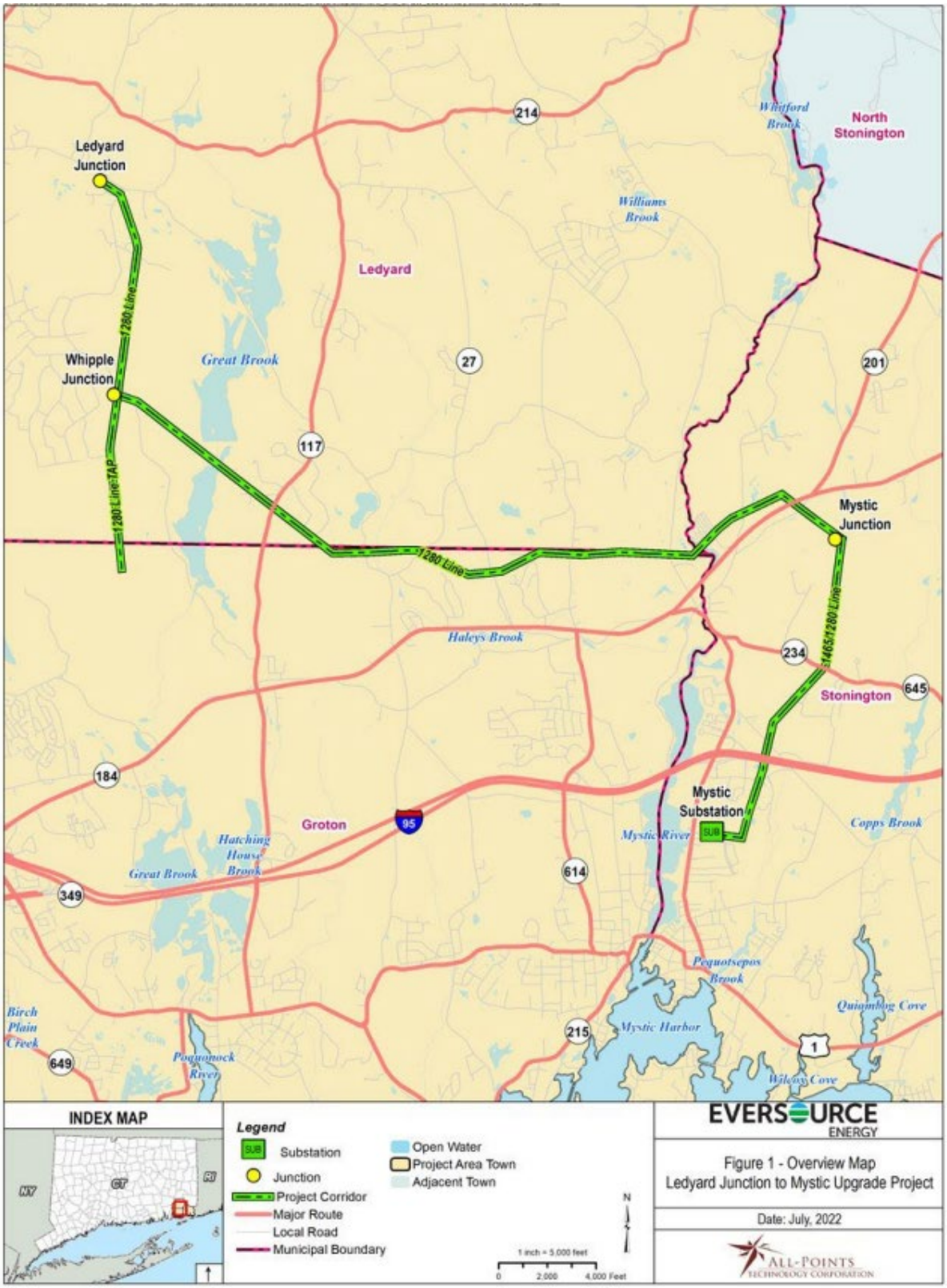
Construction work hours would be Monday through Saturday from 7:00 a.m. to 7:00 p.m. Sunday work hours may be necessary due to delays caused inclement weather and/or outage constraints.

Conclusion

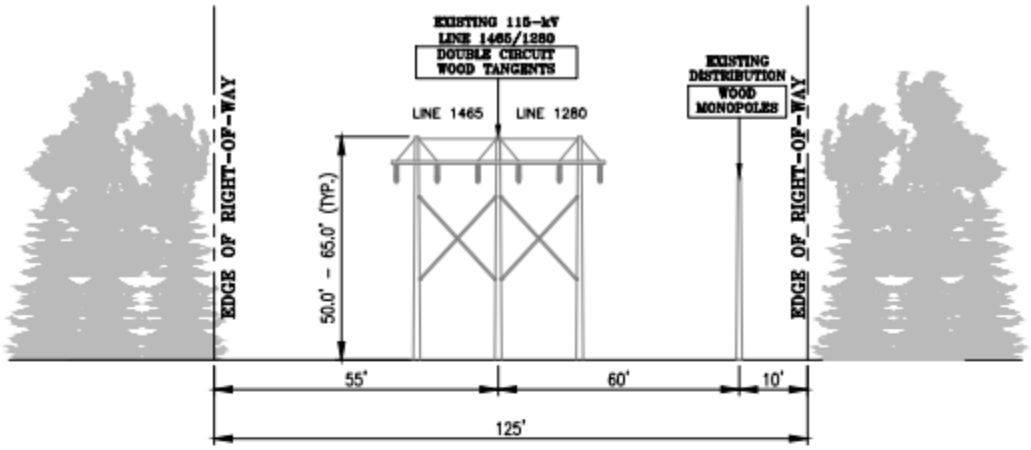
If approved, staff recommends the following conditions:

1) Approval of any project changes be delegated to Council staff;
2) Incorporation of pollinator habitat in the restoration of disturbed areas consistent with CGS §16-50hh, where feasible;
3) An environmental monitor shall oversee construction activities in sensitive resource areas; and
4) Compliance with the state ban on the use of Class B firefighting foam containing perfluoroalkyl or polyfluroralkyl substances (PFAS) under Public Act 21-191.

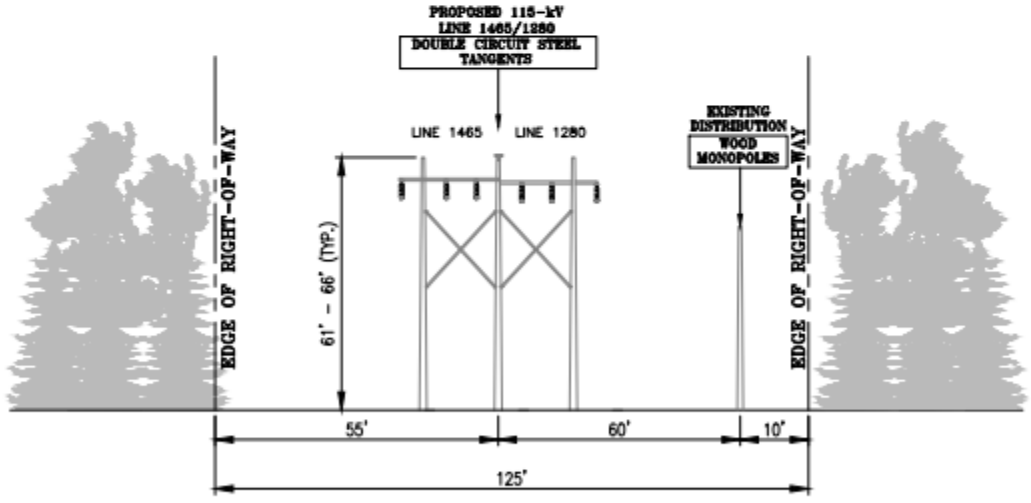
Project Location



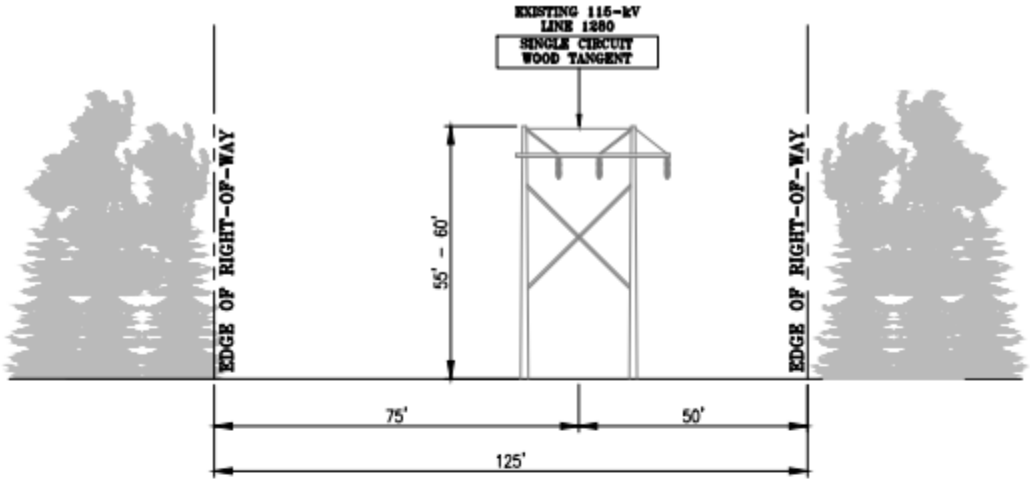
Project ROW Profiles



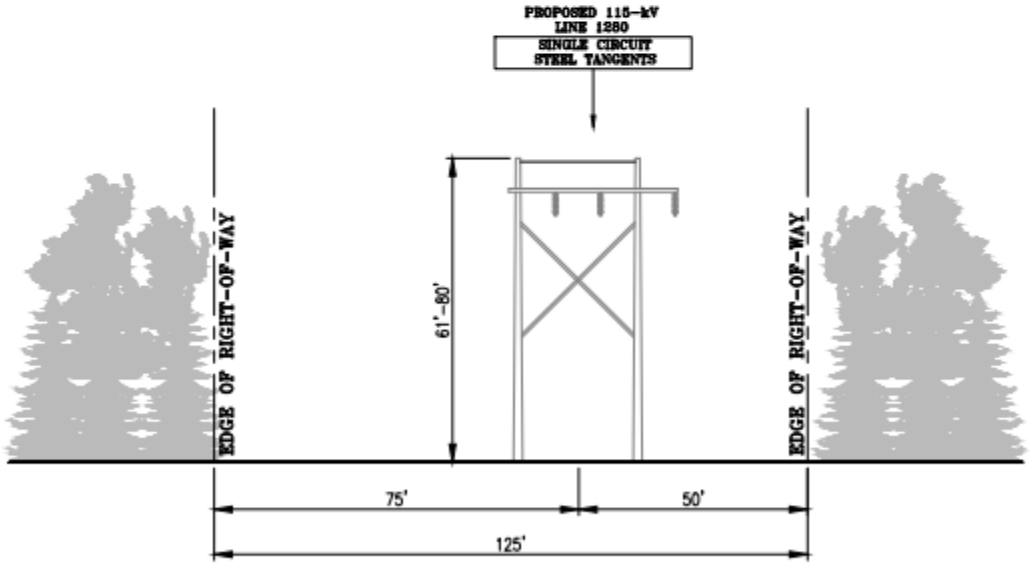
EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT WOOD TANGENTS
LOOKING FROM MYSTIC SUBSTATION TO MYSTIC JCT
SUBSTATION IN THE TOWN OF STONINGTON, CT
4.6 MILES STR. 8467-8442



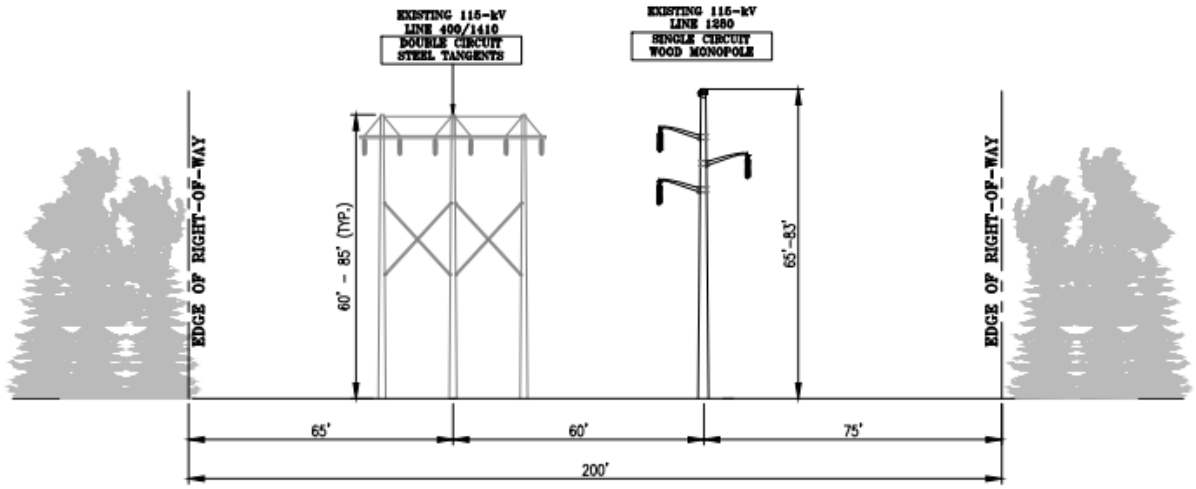
PROPOSED R.O.W. CONFIGURATION
DOUBLE CIRCUIT STEEL TANGENTS
LOOKING FROM MYSTIC SUBSTATION TO MYSTIC JCT
IN THE TOWN OF STONINGTON, CT
4.6 MILES STR. 8467-8442



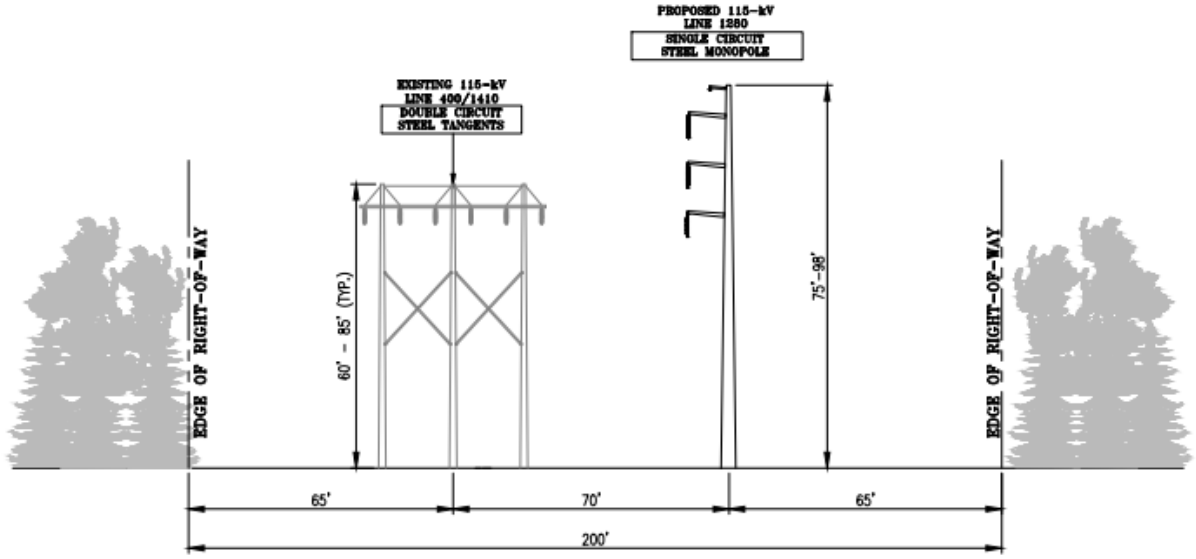
EXISTING R.O.W. CONFIGURATION
SINGLE CIRCUIT HORIZONTAL DESIGN
LOOKING FROM MYSTIC JCT TO WHIPPLE JCT
IN THE TOWN OF STONINGTON, GROTON, & LEDYARD, CT
6.4 MILES BETWEEN STR. 8442 - 8387



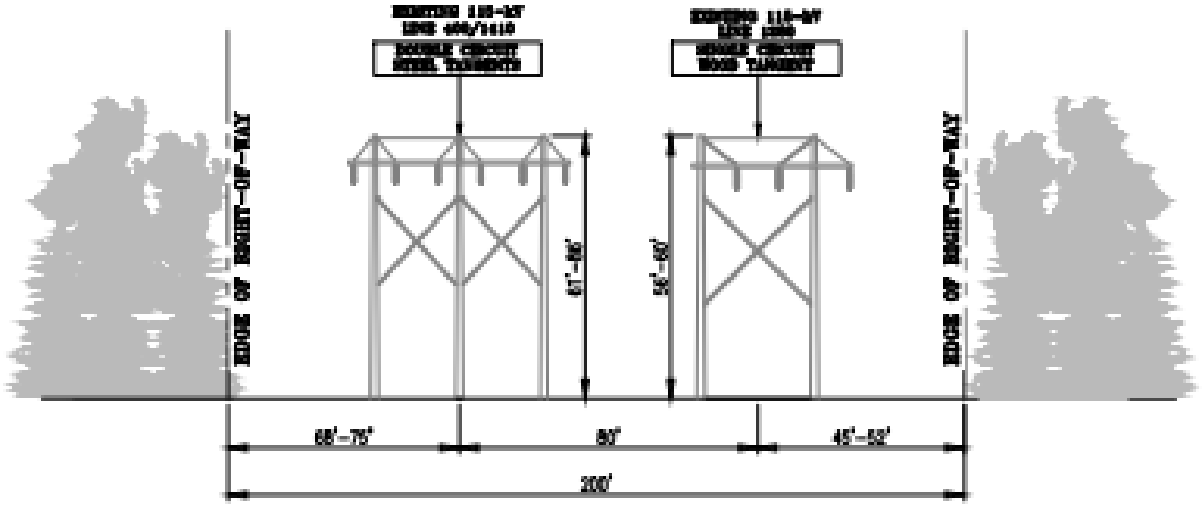
PROPOSED R.O.W. CONFIGURATION
SINGLE CIRCUIT HORIZONTAL DESIGN
LOOKING FROM MYSTIC JCT TO WHIPPLE JCT
IN THE TOWN OF STONINGTON, GROTON, & LEDYARD, CT
6.4 MILES BETWEEN STR. 8442 - 8387



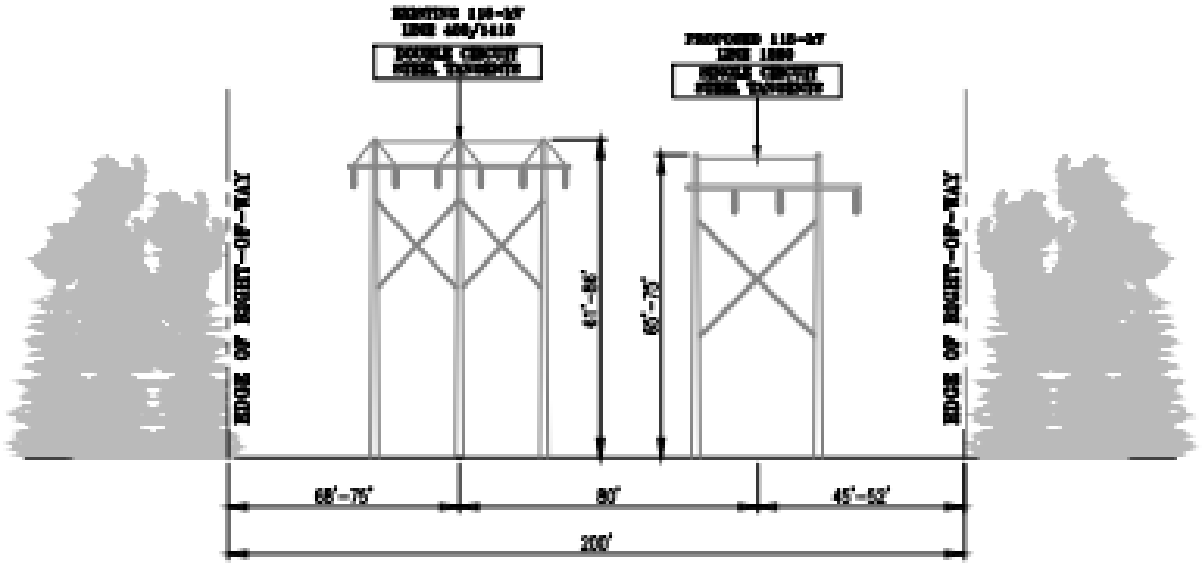
EXISTING R.O.W. CONFIGURATION
DOUBLE CIRCUIT WOOD TANGENTS
SINGLE CIRCUIT WOOD MONOPOLE
LOOKING FROM BUDDINGTON S/S TO WHIPPLE JCT
IN THE TOWN OF LEDYARD, CT
1.1 MILES STR. 127-8387



PROPOSED R.O.W. CONFIGURATION
DOUBLE CIRCUIT WOOD TANGENTS
SINGLE CIRCUIT STEEL MONOPOLE
LOOKING FROM BUDDINGTON S/S TO WHIPPLE JCT
IN THE TOWN OF LEDYARD, CT
1.1 MILES STR. 127-8387



EXISTING R.O.W. CONFIGURATION
SINGLE CIRCUIT HORIZONTAL DESIGN
LOOKING FROM WHIPPLE JCT TO LEDYARD JCT
IN THE TOWN OF LEDYARD, CT
1.5 MILES BETWEEN STR. 8387 - 8370



PROPOSED R.O.W. CONFIGURATION
NO ADDITIONAL RIGHT-OF-WAY REQUIRED
SINGLE CIRCUIT HORIZONTAL DESIGN
LOOKING FROM WHIPPLE JCT TO LEDYARD JCT
IN THE TOWN OF LEDYARD, CT
1.5 MILES BETWEEN STR. 8387 - 8370