

September 7, 2022

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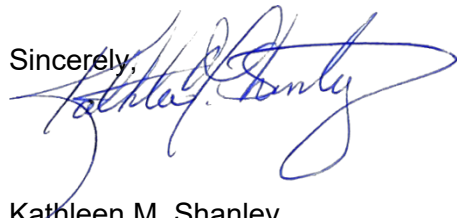
Re: Petition No. 1527 Stevenson to Pootatuck Rebuild Project

Dear Ms. Bachman,

This letter provides an original and 15 copies of the response to the requests for information listed below:

Response to CSC-01 Interrogatories dated August 16, 2022  
Set 01 - Questions 1-28

Sincerely,



Kathleen M. Shanley  
Manager – Transmission Siting

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 1**

What is the total estimated cost of the project? Of this total, what costs would be regionalized, and what costs would be localized? Estimate the percentages of the total cost that would be borne by Eversource ratepayers, Connecticut ratepayers, and the remainder of New England (excluding Connecticut) ratepayers, as applicable.

**Response:**

The total estimated cost of the project is approximately \$87.3 million. Eversource anticipates that the entire cost will be regionalized pending the final determination of ISO-New England's Schedule 12 C review.

The Company anticipates the following overall allocations for the total cost:

- Customers of Eversource: 19.1%
- Other Connecticut customers: 5.9%
- Other New England customers: 75.0%

The estimated allocations are based on 2021 actual loads.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 2**

Is the proposed project identified in any ISO-New England, Inc. (ISO-NE) needs and solutions analyses? Is the proposed project on the ISO-NE Regional System Plan (RSP), Project List and/or Asset Condition List?

**Response:**

The Stevenson to Pootatuck Rebuild Project (the Project) was not identified by an ISO-New England Inc. (ISO-NE) needs and solutions analysis. The Project is associated with the Asset Condition List project numbers 255 and 256.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 3**

Identify all other permits required to perform the proposed work.

**Response:**

Connecticut Department of Energy and Environmental Protection

- General Permit for the Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities
  - Natural Diversity Data Base Determination (permit requirement)
  - State Historic Preservation Office Notification (permit requirement)

Connecticut Department of Transportation

- Right of Entry Permits for routes 108, 110, and 714.

Housatonic Railroad

- Railroad Entry Permit

The Public Utilities Regulatory Authority

- Approval for Method and Manner of Construction

United States Army Corps of Engineers

- Section 404 Clean Water Act – Self Verification under the Connecticut General Permit

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 4**

Has a response been received from the Federal Aviation Administration regarding requirements for marking and/or lighting of the 3 proposed replacement structures referenced on Petition p. 25?

**Response:**

Yes, Eversource received a response from the Federal Aviation Administration for the remaining three structures described in the Petition narrative. None of the structures in this Petition require marking and/or lighting.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 5**

Referencing Petition p. 28, were there any comments from the City of Shelton or Town of Monroe? If so, what were their concerns, and how were these concerns addressed?

**Response:**

Eversource Project representatives (“Eversource”) met with representatives from both the City of Shelton and the Town of Monroe to discuss the proposed project.

**City of Shelton**

Eversource met with the City of Shelton municipal officials and City Trails Committee (“Committee”) on December 1, 2021 and April 6, 2022. Eversource also conducted a Project field walkdown with the Committee on May 12, 2022 to review and discuss proposed construction and restoration activities within Eversource’s right-of-way. Additional follow-up correspondence was transmitted by email following each meeting. The Committee expressed concerns about construction impacts within the Shelton Lakes Greenway (“Greenway”) and French’s Hill open space areas. The Committee’s comments to date have largely entailed requests to change proposed activities to alleviate trail impacts and avoid visual impacts, as well as requests for specific restoration measures to enhance the visual (aesthetic) quality of disturbed areas following construction.

The Committee also requested that Eversource plan and permit permanent impacts to regulated wetlands in the Connecticut Department of Energy and Environmental Protection’s (“CT DEEP”) Natural Diversity Database (“NDDB”) areas that are not required for the proposed Project. Eversource explained to the Committee that their requested permanent impacts are not necessary and would cause additional permanent impacts to wetlands and CTDEEP NDDB areas.

Eversource’s responses to the Committee’s comments/requests have included the following:

- The Committee requested, and Eversource agreed, that the Committee should be actively involved in restoration efforts related to the trails.
- Eversource will provide reasonable restoration measures for access roads and work areas, such as trail restoration and amending gravel work pads with stockpiled topsoil or fine processed material, and use of a native wildflower seed mix, which will promote pollinator habitat and enhance the aesthetic quality of disturbed areas

following construction.

- Where requested by the Committee, Eversource will install reasonable ATV deterrence measures (i.e., gates and boulders), where practical.
- Eversource will provide reasonable safety measures around work areas (e.g., construction advisory signage, spotters, etc.).
- Eversource will provide timely updates to the Committee throughout the phases of Project construction to allow the Committee to make additional public notifications as it sees fit.

Many of the Committee's proposed site-specific mitigation measures and recommendations will need to be addressed with Eversource's civil and electrical contractors. Upon selecting its contractors, Eversource will work with the Committee and contractors to consider reasonable mitigation measures during construction.

### **Town of Monroe**

Eversource briefed the Town of Monroe officials about details of the project on February 28, 2022.

The Town of Monroe representatives requested that abutting property owners be notified ahead of any work. They also expressed the need for coordination with the Town's Parks and Recreational Department on the work planned in Webb Mountain Park ("Park").

On June 15, 2022, Eversource met on-site with the Parks and Recreational Director to discuss the proposed construction plans and structure locations in the Park. The discussion was focused on keeping Old Fish House Road passable during construction activities, when the road will be used for Project access. Eversource committed to maintain access as well as to restore the Park's parking area when the Project is complete and to coordinate for snow plowing during construction, if needed. In addition to meeting these requests, Eversource will install construction advisory signage and barriers as needed to cordon off the work area.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 6**

Referencing Petition p. 29, it states several abutting property owners expressed concerns about the project. What were their concerns, and how were these concerns addressed? What types of “reasonable mitigation options” were discussed?

**Response:**

Several abutting property owners expressed site-specific concerns about proposed structure locations, including direct property impacts, perceived visual impact due to structure proximity and purported decrease in property resale value. Eversource met with each property owner on-site to explain design limitations, engineering standards, evaluate the feasibility of minor structure shifts where requested, and discuss potential visual mitigation such as the installation of plantings and fences.

Eversource committed to the property owners that the team will evaluate work pad limits with the contractors prior to construction to identify any further possible minimization of impacts to manicured lawns and permanent features within Eversource right-of-way such as stone walls. Any further mitigation will first consider safety and constructability concerns. Property impacts that cannot be mitigated will be restored to like or better condition during Project restoration. The potential mitigation measures will continue to be coordinated with each individual property owner until a mutual agreement is reached.



**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 7**

What is the age of the structures and conductors on each line

**Response:**

The 1580 Line lattice towers and 4/0 copper conductors are approximately 98 years old. The existing wood H-frame structure 203A is approximately 52 years old.

The 1560/1808 Line lattice towers and 795 Aluminum Conductor, Steel Reinforced (ACSR) conductor are approximately 60 years old. Structure 1347 was replaced in 2014 and is approximately 8 years old, however, it would be overstressed due to the proposed conductor. Structures 1342A and 1342B (near Pootatuck Substation), which are not being replaced, are approximately 7 and 4 years old respectively.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 8**

Why are larger capacity conductors proposed for each line?

**Response:**

The primary driver for Eversource to propose larger conductors is to minimize conductor displacement under wind conditions, also referred to as blowout. For a linear increase in conductor diameter and wind sail area, conductor weight increases quadratically, reducing the propensity for insulator swing and conductor displacement. In addition, larger diameter conductors are generally capable of withstanding higher tensions. The application of larger conductors for use in relatively narrow corridors has been a routine practice on past Eversource projects, such as the 1990 Line Structure Replacement Project, as referenced in Connecticut Siting Council Petition No. 1058.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 9**

How does this project relate to the United Illuminating (UI) Derby Junction to Ansonia 115-kV Rebuild Project that is the subject of Docket No. 3B?

**Response:**

Eversource's Stevenson to Pootatuck Project will include replacing structure 1364 at Derby Junction connecting the 115-kV United Illuminating's Derby Junction to Ansonia Rebuild Project. United Illuminating (UI) proposes to connect its facilities to Eversource's proposed new structures 19624 and 19624A.

Eversource and UI conducted early coordination at the onset of the Project to ensure that proposed structures, conductors, and static wires are adequate and spaced adequately to simplify construction and achieve operational simplicity.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 10**

What modifications, if any, are necessary at Derby Junction to connect the Eversource circuits to UI-owned and operated facilities?

**Response:**

No modifications are necessary for United Illuminating to connect its conductors to Eversource's new proposed structures at the Derby Junction.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 11**

Is the design of the project dependent upon the design of the UI project? Could any modifications to the proposed project impact the design of the Eversource and/or UI transmission lines beyond Derby Junction?

**Response:**

No, the design of the Project is not dependent upon the design of the UI project. Eversource coordinated with UI for this project. Eversource's proposed modifications would not impact the design of the transmission lines beyond Derby Junction.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 12**

Referring to Petition p. 2, – Explain in detail the NESC clearance requirements for conductor sway due to wind (blow out).

**Response:**

Eversource design criteria for conductor sway (blowout) is primarily based on National Electrical Safety Code (NESC) established horizontal clearance requirements to buildings. Since it is impractical for Eversource to control development activity outside of its rights-of-way (ROW), transmission lines are typically designed with the assumption that a building could be erected at any location along the ROW edge. NESC Rules 234C and 234G result in a calculated clearance requirement of 9.1 feet of clearance to edge ROW for 115-kV conductors displaced by a 6 pounds per square foot (psf) wind. To provide a buffer for construction tolerance, Eversource typically designs transmission corridors to have 11 feet of clearance to the edge of ROW.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 13**

Referring to Petition p. 7, - Explain in detail the NESC ground clearance and blow-out requirements that necessitate the height increases of the structures and repositioning of the structures more than 15 feet from the existing structures.

**Response:**

Please refer to the response for #12 for a discussion of blowout clearance standards. To meet these requirements, some replacement structures are proposed with shifted locations (and new midspan structure locations proposed) to reduce span lengths and maintain required clearances. Please also refer to the response for #14 for information on staggered structures that supports the elimination of significant structure stagger within this congested corridor.

Eversource vertical ground clearance standards to ground, bodies of water, road and utility crossings, and most objects routinely found in rights-of-way are based on prescribed National Electrical Safety Code (NESC) clearance values, with a small additional buffer applied by Eversource to account for design, construction, and survey tolerances. New construction design criteria establish appropriate vertical clearances assuming vehicular traffic underneath the conductors at maximum anticipated conductor sag. Maximum sag conditions can either be the result of loading of the conductor due to ice or maximum operating temperature of the conductor. Vehicular traffic reasonably may be anticipated during Eversource construction/maintenance activities or at road crossings. Eversource's general 115-kV vertical clearance standard is based on clearance to vehicles travelling in a right-of-way, when no other objects, crossings, or bodies of water are present in the span to be analyzed.

Eversource proposes increases in structure heights when compared to the existing structures to accommodate the new conductor at maximum sag conditions, while maintaining safe and appropriate vertical clearances in accordance with Eversource standards.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 14**

Referring to Petition p. 7, - Explain in detail why removing the current staggered structure configuration for all three lines is necessary to “maintain electrical clearances between alignments during maintenance operations and wind events.”

**Response:**

Eversource standards lay out a prescribed approach for 25 feet structure center to center spacing between adjacent 115-kV circuits. Prescribed spacing between 115-kV circuits is based on Eversource Accident Prevention Manual Table 2 (13 feet Minimum Approach Distance *PLUS* aerial bucket corridor of 12 feet *EQUALS* 25 feet).

For this project, Eversource adopted the “minimum” approach for structure spacing to achieve the closest structure spacing to maximize the distance from each structure to the ROW edge. This minimizes the number of new midspan structures needed to maintain blowout clearance; however, this reduced spacing does not permit significant/quarter-span staggered structures due to operational and safety requirements for maintenance. Removing the staggered structure configuration provides maintenance crews the ability to safely work on structures without the adjacent energized line becoming a working clearance concern in typical wind conditions.



**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 15**

Referring to Petition p. 7, provide more information regarding necessary increases in structure heights to comply with current clearance requirements. Are the proposed structure height increases at the absolute minimum to meet these requirements?

**Response:**

No, the proposed structure heights are not at the absolute minimum to meet clearance requirements. As with any Eversource design, there is an additional safety buffer included. When determining design structure heights, the conductor clearances in both the ahead span and back span need to be considered. It is not uncommon to have clearances in one span drive the structure height in the ahead and/or back spans, especially in hilly terrain. Eversource evaluated the design to minimize structure height increases and meet clearance requirements and a safety buffer in accordance with Eversource standards.

Even though the primary driver for structure heights is to meet minimum clearance criteria, the need to mitigate insulator swing and conductor uplift contributed to structure height increases in certain locations. Conductor clearance to the supporting structure must be maintained in certain wind conditions. Lightly loaded spans tend to experience greater insulator swing in wind events. Depending on the elevation and terrain, an increase in structure height provides for more heavily loaded insulator strings, thereby reducing insulator swing.

In addition to insulator swing, conductor uplift is a related and similarly undesirable phenomenon. To maintain tension on suspension insulators and other hardware, a minimal amount of "weight" should be maintained on each insulator string. Eversource analyzes uplift at the coldest reasonably anticipated temperature in its service area (-20 degrees F) when the conductor has minimal sag and maximum uplift would occur. An increase in structure height typically provides a cost-efficient solution to mitigate uplift.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 16**

Explain why double circuit structures cannot be used. Provide specific criteria/standards

**Response:**

The majority of existing double-circuit steel lattice structures on the 1560/1808 Lines will be replaced with double-circuit steel monopole structures in a “tangent” insulation configuration. The tangent structures are located primarily to keep the conductors within Eversource rights-of-way (ROW) while maintaining appropriate clearances.

The proposed double-circuit structures to be replaced with two single-circuit monopoles are considered “deadend” or “angle” structures. Typically, deadend structures are located at right-of-way angle points and at reasonable distances to facilitate construction of the line.

“Deadend” structures are designed to support the full longitudinal tension loads from the wires. To not affect the sag and tension characteristics of the wires, the deadend structures need to be sufficiently rigid and not flexible. The load transfer is most effective when wires are supported by the rigid pole column itself, transferring the loads directly through the pole column, down to the foundation, and into the ground. In a double-circuit configuration there needs to be two single circuit deadends at every deadend location, one structure for each circuit. A monopole structure supporting two circuits in a “strain” on arms configuration would be too flexible and cannot effectively transfer the wire loads without affecting the sag and tension characteristics of the line.

In addition, the existing 1580/1590 Lines double-circuit structures are proposed to be single-circuit structures; the existing de-energized 1590 Line is proposed to be removed. The corridor is too narrow for two double-circuit structures within the existing ROW. The 1580 Line will be supported on single-circuit structures.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 17**

Could the number of additional structures proposed within the existing ROW be reduced by utilization of anti-galloping devices or other design options? Explain.

**Response:**

The additional structures cannot be reduced by utilizing anti-galloping devices or other design options within this narrow right-of-way ("ROW"). The purpose of the additional structures is generally to restrain the conductors and fiber optic ground wire (OPGW) in blowout conditions.

Eversource recognizes this corridor is exceptionally narrow and in sections, traverses through residential areas, with abutters located close to the ROW limits. At the onset of the Project, Eversource thoroughly evaluated, and ultimately selected, higher ("damped") conductor tensions than typically used. Higher conductor tensions reduce conductor blowout; however, they require devices to mitigate wind-induced conductor motion. Eversource is installing "Stockbridge" dampers on the conductors and spiral vibration dampers on the OPGW.

Due to the terrain, galloping is not expected to occur. The Project area has undulating terrain and significant nearby tree cover and vegetation present. Galloping is most commonly observed on transmission lines traversing flat, open areas. Examples include water crossings and fields.

There is no opportunity to further increase tension or add additional devices to reduce the number of structures within the ROW.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 18**

Referring to Attachment C, Structure List – add columns explaining why each midspan structure and new structure is necessary- include a detailed justification for each and the width of the ROW at each location.

**Response:**

See Attachment for the revised Structure List Table.

NOTE: As a result of an additional engineering review since the Petition filing, Eversource has further refined the design and optimized structure locations during the detailed engineering process. The revised design removes two midspan structures at one location (Structures 19255 and 19656) on this approximately 8-mile section of line while meeting required clearance and design parameters.

1560/1808 LINE								
		EXISTING	PROPOSED	Height Increase	Existing HeightAGL	Proposed Height AGL	New Structure Justification	Right-of-Way Width (FT)
Old Str #	New Str #	Type	Type					
Pootatuck (UI)	UI SUBSTATION							
1342B (1808) Exist to remain	19600B	SCSP	To Remain					
1342A (1560) Exist to remain	19600A	SCSP	To Remain					
1342	19601	DCLT	SCSP	14.70	81.50	96.2		
	19601A		SCSP	NEW STR		96	New proposed deadend structure will be single circuit. Please see response to Question 16.	110
1343	19602	DCLT	DCSP	14.75	81.25	96		
1344	19603	DCLT	DCSP	2.75	83.25	86		
1345	19604	DCLT	DCSP	11.00	82.50	93.5		
1346	19605	DCLT	DCSP	10.50	83.00	93.5		
1347	19606	2-pole Steel	DCSP	3.00	98.00	101		
1348	19607	DCLT	DCSP	42.00	84.00	126		
1349	19608	DCLT	DCSP	16.00	85.00	101		
1350	19609	DCLT	SCSP	12.25	83.75	96		
	19609A		SCSP	NEW STR		96	New proposed angle structure will be single circuit. Please see response to Question 16.	110
1351	19610	DCLT	DCSP	19.00	84.00	103		
1352	19611	DCLT	DCSP	4.00	89.50	93.5		
1353	19612	DCLT	SCSP	8.75	82.25	91		
	19612A		SCSP	NEW STR		91	New proposed deadend structure will be single circuit. Please see response to Question 16.	110
1354	19613	DCLT	DCSP	20.00	83.00	103		
1355	19614	DCLT	DCSP	24.00	83.50	107.5		
1356	19615	DCLT	DCSP	17.50	83.50	101		
1357	19616	DCLT	DCSP	22.50	93.50	116		
1358	19617	DCLT	DCSP	28.50	92.50	121		
1359	19618	DCLT	DCSP	42.50	93.50	136		
1360	19619	DCLT	DCSP	9.50	88.50	98		
1361	19620	DCLT	DCSP	-3.50	87.50	84		
1362	19621	DCLT	DCSP	48.50	82.50	131		
Mid Span	19622		DCSP	NEW STR		131	Midspan structure required to maintain clearance in blowout conditions	110
1363	19623	DCLT	DCSP	26.50	81.00	107.5		
1364	19624	DCLT	SCSP	20.10	90.90	111		
	19624A		SCSP	NEW STR		111	Derby Junction. New deadend structure required for existing and proposed tap connection to UI	110
1365	19625	DCLT	DCSP	0.50	83.50	84		
1366	19626	DCLT	SCSP	9.29	87.25	96.54		
	19626A		SCSP	NEW STR		96	New proposed angle structure will be single circuit. Please see response to Question 16.	110
1367	19627	DCLT	DCSP	-3.00	101.00	98		
Mid Span	19628		DCSP	NEW STR		98	Midspan structure required to maintain clearance in blowout conditions	110
1368	19629	DCLT	SCSP	24.75	81.25	106		
	19629A		SCSP	NEW STR		106	New proposed angle structure will be single circuit. Please see response to Question 16.	110
1369	19630	DCLT	DCSP	1.50	82.50	84		
Mid Span	19631		DCSP	NEW STR		136	Midspan structure required to maintain clearance in blowout conditions	110
1370	19632	DCLT	DCSP	-3.50	82.50	79		
1371	19633	DCLT	DCSP	18.50	82.50	101		
Mid Span	19634		DCSP	NEW STR		141	Midspan structure required to maintain clearance in blowout conditions	110
1372	19635	DCLT	DCSP	17.50	93.50	111		
1373	19636	DCLT	DCSP	17.50	83.50	101		
1374	19637	DCLT	DCSP	10.00	83.50	93.5		
1375	19638	DCLT	SCSP	15.00	81.00	96		
	19638A		SCSP	NEW STR		96	New proposed deadend structure will be single circuit. Please see response to Question 16.	110
1376	19639	DCLT	DCSP	14.50	81.50	96		
1377	19640	DCLT	DCSP	43.50	82.50	126		
1378	19641	DCLT	DCSP	30.00	81.00	111		
1379	19642	DCLT	DCSP	5.50	83.00	88.5		
1380	19643	DCLT	DCSP	19.50	83.50	103		

1560/1808 LINE								
		EXISTING	PROPOSED	Height Increase	Existing HeightAGL	Proposed Height AGL	New Structure Justification	Right-of-Way Width (FT)
1381	19644	DCLT	DCSP	24.00	83.50	107.5		
Mid Span	19645		SCSP	NEW STR		94	New proposed deadend structure will be single circuit. Please see response to Question 16. Midspan structure required to maintain clearance in blowout conditions	110
Mid Span	19645A		SCSP	NEW STR		94	New proposed deadend structure will be single circuit. Please see response to Question 16. Midspan structure required to maintain clearance in blowout conditions	110
1382	19646	DCLT	DCSP	0.50	83.50	84		
Mid Span	19647		DCSP	NEW STR	0.00	131	Midspan structure required to maintain clearance in blowout conditions	110
1383	19648	DCLT	DCSP	32.50	83.50	116		
1384	19649	DCLT	DCSP	38.50	82.50	121		
1385	19650	DCLT	DCSP	6.00	82.50	88.5		
1386	19651	DCLT	DCSP	23.50	82.50	106		
Mid Span	19652		DCSP	NEW STR		116	Midspan structure required to maintain clearance in blowout conditions	110
1387	19653	DCLT	DCSP	-3.00	93.00	90		
1388	19654	DCLT	DCSP	5.00	93.00	98		
Mid Span	19655		DCSP	45.50	93.50	139		
	19655A		DCSP	NEW STR		139	New proposed deadend structure will be single circuit. Please see response to Question 16. Midspan structure required maintain clearance during blowout conditions	110
Mid Span	19656		DCSP	NEW STR		121	Since filing, the structure is no longer proposed.	110
1389	19657	DCLT	DCSP	15.00	93.00	108		
1390	19658	DCLT	DCSP	0.00	93.50	93.5		
1391	19659	DCLT	DCSP	15.00	83.00	98		
Mid Span	19660		SCSP	54.50	83.50	138		
Mid Span	19660A	DCLT	SCSP	NEW STR	0.00	138	New proposed deadend structure will be single circuit. Please see response to Question 16. Midspan structure required maintain clearance during blowout conditions	110
1392	19661	DCLT	DCSP	14.50	83.50	98		
1393	19662	DCLT	DCSP	5.00	83.50	88.5		
1394	19663		SCSP	9.75	81.25	91		
	19663A		SCSP	NEW STR		91	New proposed deadend structure will be single circuit. Please see response to Question 16.	110
1395	19664	DCLT	SCSP	6.29	84.71	91		
	19664A		SCSP	NEW STR		91	New proposed deadend structure will be single circuit. Please see response to Question 16.	200
1396	19665	DCLT	SCSP	-12.71	123.71	111		
	19665A		SCSP	NEW STR		111	New proposed deadend structure will be single circuit. Please see response to Question 16.	200
202 (1560 Line only)	19666	DCLT	SCSP	32.75	78.25	111		
201 (L1560 only)	19667	SC Wood Frame	SC Steel H-Frame	8.62	47.88	56.5		

STEVENSON SUBSTATION AREA

Attachment C: Pootatuck to Stevenson Line Rebuild  
Structure List Page 2-Revised 9/7/2022

1580 LINE								
Old Str #	New Str #	EXISTING Type	PROPOSED Type	Height Increase	Existing Height AGL	Proposed Height AGL	New Structure Justification	Right-of-Way Width (FT)
<i>UI SUBSTATION (ADJACENT)</i>								
258	19200	DCLT	SCSP	23.24	77.76	101		
257	19201	DCLT	SCSP	7.49	88.51	96		
256	19202	DCLT	SCSP	7.44	78.56	86		
255	19203	DCLT	SCSP	5.25	88.25	93.5		
254	19204	DCLT	SCSP	12.25	81.25	93.5		
253	19205	DCLT	SCSP	22.35	78.65	101		
252	19206	DCLT	SCSP	47.75	78.25	126		
251	19207	DCLT	SCSP	20.74	82.26	103		
250	19208	DCLT	SCSP	16.50	79.50	96		
249	19209	DCLT	SCSP	24.74	78.26	103		
248	19210	DCLT	SCSP	8.54	79.96	88.5		
247	19211	DCLT	SCSP	11.75	79.25	91		
246	19212	DCLT	SCSP	23.14	79.86	103		
245	19213	DCLT	SCSP	28.24	79.26	107.5		
244	19214	DCLT	SCSP	23.74	79.26	103		
243	19215	DCLT	SCSP	31.50	79.50	111		
242	19216	DCLT	SCSP	32.24	88.76	121		
241	19217	DCLT	SCSP	51.64	79.36	131		
240	19218	DCLT	SCSP	15.24	78.26	93.5		
239	19219	DCLT	SCSP	4.55	79.45	84		
238	19220	DCLT	SCSP	33.25	97.75	131		
Mid Span	19221		SCSP	MID SPAN	0	131	Midspan structure required to maintain clearance in blowout conditions	110
237	19222	DCLT	SCSP	29.64	77.86	107.5		
236	19223	DCLT	SCSP	8.00	93.00	101		
235	19224	DCLT	SCSP	5.49	78.51	84		
234	19225	DCLT	SCSP	19.25	76.75	96		
233	19226	DCLT	SCSP	-0.26	98.26	98		
Mid Span	19227		SCSP	MID SPAN	0.00	98	Midspan structure required to maintain clearance in blowout conditions	110
232	19228	DCLT	SCSP	28.04	77.96	106		
231	19229	DCLT	SCSP	6.25	77.75	84		
Mid Span	19230		SCSP	MID SPAN	0.00	136	Midspan structure required to maintain clearance in blowout conditions	110
230	19231	DCLT	SCSP	1.15	77.85	79		
229	19232	DCLT	SCSP	27.75	78.25	106		
Mid Span	19233		SCSP	MID SPAN	0	141	Midspan structure required to maintain clearance in blowout conditions	110
228	19234	DCLT	SCSP	30.75	80.25	111		
227	19235	DCLT	SCSP	14.50	79.00	93.5		
226	19236	DCLT	SCSP	14.85	78.65	93.5		
225	19237	DCLT	SCSP	17.65	78.35	96		
224	19238	DCLT	SCSP	19.35	78.65	98		
223	19239	DCLT	SCSP	47.44	78.56	126		
222	19240	DCLT	SCSP	32.64	78.36	111		
221	19241	DCLT	SCSP	10.00	78.50	88.5		
220	19242	DCLT	SCSP	24.44	78.56	103		
219	19243	DCLT	SCSP	24.85	78.15	103		
Mid Span	19244		SCSP	MID SPAN	0.00	86	Midspan structure required to maintain clearance in blowout conditions	110
218	19245	DCLT	SCSP	4.75	79.25	84		

Attachment C: Pootatuck to Stevenson Line Rebuild  
Structure List Page 2-Revised 9/7/2022

1580 LINE								
		EXISTING	PROPOSED	Height Increase	Existing Height AGL	Proposed Height AGL	New Structure Justification	Right-of-Way Width (FT)
Mid Span	19246		SCSP	MID SPAN	0.00	116	Midspan structure required to maintain clearance in blowout conditions	110
217	19247	DCLT	SCSP	37.44	78.56	116		
216	19248	DCLT	SCSP	42.74	78.26	121		
215	19249	DCLT	SCSP			88.5		
214	19250	DCLT	SCSP	28.14	77.86	106		
213	19251	DCLT	SCSP	MID SPAN	0.00	116	Midspan structure required to maintain clearance in blowout conditions	110
212	19252	DCLT	SCSP	MID SPAN	0.00	91	Midspan structure required to maintain clearance in blowout conditions	110
211	19253	DCLT	SCSP	19.34	78.66	98		
Mid Span	19254		SCSP	MID SPAN	0.00	136	Midspan structure required to maintain clearance in blowout conditions	110
Mid Span	19255		SCSP	MID SPAN	0.00	116	Since filing, the structure is no longer proposed.	110
210	19256	DCLT	SCSP	29.75	77.75	107.5		
209	19257	DCLT	SCSP	13.99	79.51	93.5		
208	19258	DCLT	SCSP	0.45	97.55	98		
Mid Span	19259		SCSP	MID SPAN	0.00	136	Midspan structure required to maintain clearance in blowout conditions	110
207	19260	DCLT	SCSP	19.50	78.50	98		
206	19261	DCLT	SCSP	8.24	80.26	88.5		
205	19262	DCLT	SCSP	17.50	78.50	96		
204	19263	DCLT	SCSP	17.75	78.25	96		
203	19264	DCLT	SCSP	-8.01	79.01	71		
202A	19265	H-Frame	SCSP	4.30	53.50	57.8		
1397	19266	DCLT	SCSP	-4.71	120.71	116		
	19266A		SCSP			146	New proposed deadend structure will be single circuit. Please see response to Question 16.	200
STEVENSON SUBSTATION AREA								



**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 19**

Referring to Petition p. 7, provide more information on additional easements that would be necessary if new mid span structures were not installed. Where would the new easements be located?

**Response:**

If the mid-span structures were not installed, Eversource would need to acquire an additional, continuous 10 feet of right-of-way ("ROW") along the west edge of the existing ROW. The additional 10 feet of ROW width would make the corridor conform to Eversource current standards for structure maintenance, electrical clearance between adjacent circuits, and blowout for most spans of the proposed Project.

Typical span lengths on most modern Eversource 115-kv lines are 800 feet or less. However, within this corridor there are three existing locations with long span lengths (over 1,000 feet) due to the steep terrain, which would require additional ROW width beyond the beforementioned 10 feet. The locations are identified using the midspan pole structure numbers as follows:

- 19660/19660A and 19259 (Old Fish House Road); Existing span around 1,327 feet.
- 19655 and 19254 (Thoreau Drive); Existing span around 1,312 feet.
- 19634 and 19233 (Leavenworth Road); Existing span around 1,332 feet.

In these existing locations, in order to meet blowout clearance requirements, Eversource would need to acquire approximately 30 feet of additional ROW on the west side of the ROW, and approximately 25 feet of additional ROW along the east edge of the ROW for a total additional 55 feet of additional ROW needed to eliminate the need for mid span structures.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 20**

Map Sheets 3, 6, 8 & 10 depict several structures in close proximity to residential roadways. Can the structures be moved farther away from the roadways? Explain.

**Response:**

Map Sheet 3 depicts proposed midspan structures 19254, 19655, and 19655A near Thoreau Drive. The currently proposed pole locations are approximately 40 feet, 30 feet, and 25 feet, respectively, from the nearest roadway (“curb line”) and are adjacent to two homes on parcels LL300A-316 and LL200A-318. The currently proposed locations reflect the consideration of visual impacts while maintaining a safe distance from the roadway. Shifting the poles to the north up to approximately 50 feet from the currently proposed location would result in an increased visual impact to LL200A-318, as the home has windows on the west face of the house.

Map Sheet 6 depicts proposed Structures 19640 and 19239 near Village Drive. The proposed pole locations are approximately 40 feet from the nearest curb line and are positioned in proximity to wetland W14. Re-locating the proposed structures to the north of the existing 1560/1808 Line Structure 1377 and existing 1580 Line Structure 223 is not preferred due to wetland and landowner access constraints, which would inhibit structure accessibility for future maintenance and repairs. Therefore, it is not preferable to move the poles farther away from Village Drive.

Map Sheet 8 depicts proposed midspan Structures 19230 and 19631 near Meadow Street. The proposed pole locations are approximately 60 feet from the nearest curb line. The elevation of the right-of-way descends approximately seven to eight feet between the currently proposed location and Indian Hole Brook. If the structure were to be moved more than 10 to 20 feet to the north, the structure heights would need to be increased to compensate for shifting the structure locations and maintain currently proposed conductor elevations. Eversource’s design could accommodate a small structure shift of approximately 10 to 20 feet to the north.

Map Sheet 10 depicts proposed Structures 19621 and 19220 near Independence Drive. The proposed pole locations are approximately 35 feet from the nearest curb line. Existing towers 1362 and 238 are located on the south edge of Wetland W23. Proposed structures 19621 and 19220 would also be located on the south edge of Wetland W23. Locating the proposed poles on the north side of the existing structures would increase permanent and temporary wetland impacts. The current proposed locations minimize wetland impacts. For this reason, it is not preferable to move the pole locations farther away from Independence Drive.



**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 21**

Can temporary construction matting be used instead of gravel in the following areas:

- NEC Focus Areas;
- NDDB buffered areas;
- designated open space areas; and
- adjacent to residential properties.

Explain.

**Response:**

As stated in the Petition, temporary construction matting was evaluated to be used to the greatest extent practical in these areas to limit construction impacts within environmentally sensitive areas. A detailed assessment of each proposed work location was conducted with a goal to avoid, minimize, and/or mitigate impacts to these areas, which include recreational areas, protected open space, NDDB areas, NEC areas, and manicured or cultivated portions of residential properties.

Avoidance and minimization were achieved in areas where construction access roads and work pads could be adjusted (i.e., reduced in size and/or relocated) or where temporary matting can be utilized. The permanent access roads shown on the Project maps are proposed where use of temporary matting will not provide the safe and stable access roads and work areas necessary for the Project due to existing site constraints (e.g., steep grades, presence of bedrock and boulders, etc.). Appropriate mitigation measures will be implemented in areas where avoidance and/or minimization (e.g., temporary matting) are not possible or practical.

Mitigation measures will generally include restoration of work pads through application of stockpiled native soil or fine processed gravel, use of a native wildflower seed mix, and installation and maintenance of appropriate sediment and erosion controls until final stabilization has been achieved. Eversource will also work with individual landowners to implement location-specific restoration measures, as appropriate.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 22**

Describe the clearing that will be required within the ROW to facilitate the Project. To what height will vegetation be cut?

**Response:**

The Eversource ROW between the Stevenson and Pootatuck substations is currently maintained. Tree removal is not required for this Project, except for potential hazard or danger trees.

For the construction of permanent access roads and work pads, all vegetation within the limit of disturbance will be removed. For temporary access roads and work pads, the vegetation would be cut to a height of 6-8 inches above existing surface grade within the footprint of the access roads and work pads.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 23**

Are CT DEEP and/or the US Army Corps of Engineers permits required for working within wetlands and vernal pools? If yes, what is the status of such permits?

**Response:**

There are no proposed activities within vernal pools.

Proposed activities within wetlands will result in minimal impacts, meet all applicable terms and conditions of the Connecticut General Permit ("GP"), meet all other requirements of the applicable general conditions, and are eligible for Self-Verification under General Permits 6 and 21 for the State of Connecticut.

Self-Verification Notification Forms and the required accompanying materials will be submitted to the U.S. Army Corps of Engineers - New England District and the Connecticut Department of Energy and Environmental Protection at least two-weeks prior to the start of project construction as required by the GP.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 24**

In addition to Eversource's Best Management Practices, what other specific environmental mitigation measures and/or monitoring would be conducted for construction within environmentally sensitive areas?

**Response:**

In addition to Eversource's Best Management Practices ("BMPs"), the following mitigation measures and monitoring will be conducted within environmentally sensitive areas:

- Measures will be implemented for the protection of state-listed species documented within the Project corridor. Eversource will comply with recommendations detailed within the Connecticut Department of Energy and Environmental Protection ("CTDEEP") Natural Diversity Database ("NDDDB") Determination Letter that was received for this project (NDDDB Determination Number: 202201763, dated March 16, 2022). Protection measures include but are not limited to contractor training and education, time of year best management practices, monitoring, and installation of exclusionary features as directed by qualified individuals.
- Environmental monitoring (inspections) and mitigation measures will be implemented as required by the Connecticut Construction General Permit and the project Stormwater Pollution Control Plan ("SWPCP"). The project SWPCP is currently under review by CTDEEP.
- Work pad restoration mitigation measures will be implemented within environmentally sensitive areas, which will include amendment of the work pad surface with stockpiled topsoil or fine process gravel, application of a native wildflower seed mix, and installation of temporary erosion and sediment controls (e.g., straw mulch, compost filters, biodegradable erosion control blankets, etc.), which will be regularly inspected and maintained until final stabilization has been achieved.
- The Project Vernal Pool Report, submitted with the Petition, includes habitat and species protection measures that will be implemented during construction.
- No archeological resources eligible for listing on the National Register of Historic Places or historic properties will be affected by the proposed project. Therefore, no BMPs are required for protection of cultural resources.





**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 25**

Describe site construction inspections that are required for this project under the DEEP General Permit.

**Response:**

Site construction inspections that are required for this project under the General Permit ("GP") include the following:

- The designing qualified professional shall conduct the Stormwater Pollution Control Plan ("Plan") Implementation Inspection(s) confirming compliance with the GP and proper initial implementation of all control measures designated in the Plan for the initial phase of construction.
- A qualified inspector, as defined in the GP, will be responsible for conducting regular weekly inspections for compliance with the GP, including, but not limited to, compliance with the Plan for the site, until a Notice of Termination is issued.
- A qualified inspector will be responsible for conducting an inspection within 24 hours of the end of a storm that generates a discharge. For storms that end on a weekend, holiday or other time after which normal working hours will not commence within 24 hours, a routine inspection is required within 24 hours only for storms that equal or exceed 0.5 inches. For storms of less than 0.5 inches, an inspection shall occur immediately upon the start of the subsequent normal working hours.
- During each routine inspection the qualified inspector(s) shall, among other things, evaluate the effectiveness of erosion and sediment controls, structural controls, stabilization practices, and any other controls implemented to prevent pollution and determine if it is necessary to install, maintain, or repair such controls and/or practices to improve the quality of stormwater discharge(s). In addition, the site shall be inspected for evidence of, or the potential for, pollutants discharging to waters, or entering the drainage system and impacts to the receiving waters. Locations where vehicles enter or exit the site shall also be inspected for evidence of off-site sediment tracking.
- The qualified inspector conducting routine inspections shall prepare a report of each inspection. The report shall include a statement that, in the judgment of the qualified inspector(s) conducting the site inspection, the site is either in compliance or out of compliance with the terms and conditions of the Plan and permit. If the site inspection indicates that the site is out of compliance, the inspection report shall include a summary of the remedial actions required to bring the site back into compliance. Non-engineered corrective actions shall be implemented on site within 24 hours and incorporated into a

revised Plan within three (3) calendar days of the date of inspection unless another schedule is specified. Engineered corrective actions shall be implemented on site within seven (7) calendar days and incorporated into a revised Plan within ten (10) calendar days of the date of inspection, unless another schedule is specified. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants from the site.

- Inspectors from DEEP may inspect the site to verify compliance with the GP at any time construction activities are ongoing, and upon completion of construction activities, until a Notice of Termination has been issued.
- Once the site has achieved final stabilization for at least one full growing season (April – October) in the year following the end of construction, the site shall be inspected by a qualified inspector to confirm such stabilization is maintained. Compliance with this requirement will be indicated on the Notice of Termination form.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 26**

Could restoration of disturbed areas incorporate habitat for the benefit of pollinator species, such as bees, moths and butterflies?

**Response:**

The Project includes restoration and long-term management practices that promote habitat for pollinator species. Eversource's transmission line corridors that are regularly maintained as early successional habitat provide vital conservation benefits for wild pollinators.

The Project corridor has historically been, and will continue to be, maintained as early successional habitat. Further, restoration within sensitive areas (such as Connecticut Department of Energy and Environmental Protection Natural Diversity Database areas, New England Cottontail areas, and open space areas) will incorporate habitat enhancements for the benefit of pollinator species. These enhancements will include amending gravel work pads with either stockpiled native topsoil or fine process material, application of a native wildflower seed mix, and temporary stabilization with straw and/or biodegradable erosion and sediment controls. Temporary stabilization measures will be regularly inspected and maintained until the Project has achieved final stabilization for at least one full growing season (i.e., April through October) in the year following the cessation of construction activities in accordance with Connecticut's Construction General Permit and the Project Storm Water Pollution Control Plan.

**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 27**

Describe measures that will be taken to ensure the safe use of public recreational trails that cross the ROW.

**Response:**

Please see the measures described below that will be implemented by the Project to ensure the safe use of public recreational trails that cross the ROW:

Pre-Construction:

- Eversource has been periodically coordinating with the Town of Monroe Recreation Department, City of Shelton Parks and Recreation and Connecticut Forest and Park Association (CFPA) trails to discuss the Project scope and schedule. As a part of these coordination efforts, trail closure notifications, detour maps and construction updates will be posted on municipal/other trail websites. Eversource will continue this coordination effort throughout the construction phase of the Project.

During Construction:

- Construction notice signage will be posted at trail crossings within the ROWs, including during routine work hours, weekends, holidays, and if construction hours are atypical to Eversource's routine working hours.
- Flaggers may be utilized when certain activities that pose a greater risk to public safety are occurring, e.g., road construction, drilling, wire pulling activities, etc.
- Steel plates or other temporary measures may be utilized for protection of trails, as needed.
- The Project team has identified the need to relocate segments of certain trails that are bisecting a work pad or fall within the footprint of new mid-span structure locations.
- Temporary fencing will be placed around structures (existing and proposed) and/or work areas where active work is occurring to prevent public access.



**Date Filed:** September 07, 2022

**Request from:** Connecticut Siting Council

**Question: 28**

How will ATVs be discouraged from accessing the ROW from public roads/access points?

**Response:**

Eversource does not grant permission, written or verbal, for use of transmission rights-of-way (ROWs) by persons on ATVs or snowmobiles. However, unauthorized use of Eversource ROWs does occur. Eversource would use one or a combination of the following measures to deter ATV use on the ROWs:

1. Installation of gates and barriers (large boulders, fence).
2. Installation of signage on the ROW perimeter.
3. Installation of barriers at secondary points of ingress that are not off public roads.