

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: October 21, 2021

AT (OFFICE): NH Dept. of Energy

FROM: Kenneth Walsh *KGW*
Utility Analyst IV – Division of Enforcement

SUBJECT: CR2021-06 Eversource Energy
Petition for License to Construct and Maintain Electric Lines Over and Across
State Owned Land in Merrimack and Bedford, New Hampshire
Division of Enforcement, **Safety Bureau Recommendation**

TO: Jared Chicoine, Interim Commissioner, Department of Energy
Christopher Ellms, Jr., Deputy Commissioner, Department of Energy

CC: Thomas Frantz, Director of Regulatory Division
Richard Chagnon, Regulatory Division
Lynn Fabrizio, Division of Enforcement
Randall Knepper, Division of Enforcement
Paul Kasper, Division of Enforcement

The Division of Enforcement’s review of the above petition consisted of the following elements:

- Petition contents, resubmitted petition contents, and history;
- Applicable State statute;
- Review of the existing crossing(s) previously licensed by the PUC, if any;
- Review of land ownership of existing pole structures;
- Review of NESC code requirements as described in Puc 300;
- Review of public need and public impact, including applicability of other State regulations; and
- Conclusions and Recommendations.

1. Petition contents and history

On July 28, 2021, Public Service New Hampshire d/b/a Eversource Energy (Eversource, or the Company) filed a petition for a license pursuant to RSA 371:17 to construct and maintain the Eversource V191 Line, which is an existing 115kV transmission line with a 34.5 kV distribution line known as the 323 Line underbuilt that crosses State land in Merrimack and Bedford.

On September 20, 2021, Eversource Energy resubmitted exhibits due to errors as identified by Safety Bureau Staff.

On October 15, 2021, Eversource Energy resubmitted the petition with exhibits due to errors in their September 20, 2021 submittals as identified by Safety Bureau Staff.

The State owned land crossing was not previously licensed for unknown reasons, according to the petition.

This proposed project is to replace (6) existing laminated wood structures with weathered steel structures. The (3) existing transmission conductors, (1) existing OPGW communications wire, (3) existing distribution conductors, and (1) existing neutral wire will be transferred to the new structures.

Common to all these noted structures, existing transmission conductors (V191 Line) consist of (3) ACSR 1590 45/7 kcmil conductors and (1) existing 24 Fiber OPGW communications wire will be transferred with the OPGW wire being vertically attached above the conductors. The existing distribution underbuilt (323 Line) consists of (3) ACSR 477 26/7kcmil conductors with (1) 4/0 ACSR 6/1 neutral wire with the neutral wire being the lowest attached wire.

The conductor cable clearance requirements were met using the National Electrical Safety Code (NESC) based on the design conditions for all crossings within this petition. This scenario was the governing condition, which yielded the greatest sag and lowest clearance. Only 18.5 feet clearance for 34.5 kV conductor and 15.5 feet clearance for neutral is required by the NESC Table 232-1 for areas traversed by vehicles, such as cultivated, grazing, forest, and orchard lands, industrial sites, and commercial sites. Staff verified the computed sags with SAG 10 commercial software using inputs as stated in the petition.

The scope of this project begins in Bedford at Structure #18 where the V191 Line crosses the Raymond Wiczorek Drive just west of where the road crosses the Merrimack River with the V191 Line heading south to Structure #11.

The following table provides the summary of this petition with all crossings to include structure numbers, types, spans, ES design criteria, and NESC compliance:

Eversource V191 Line - PUC State Land Crossings						
Structure	Type	Span (Pole to Pole)	Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
11	70.0' steel single pole, ST-2-UB, CLH9	11-12	326.1	15.5	19.5	Y
12	70.0' steel single pole, ST-2-UB, CLH9					
13	70.0' steel single pole, ST-2-UB, CLH9	12-13	293.7	15.5	18.3	Y
14	70.0' steel single pole, ST-2-UB, CLH9	13-14	326.3	15.5	21.1	Y
15	66.0' steel single pole, SA-1-UB, CLH9	14-15	287.7	15.5	18.2	Y
16	75.0' steel single pole, ST-2-UB, CLH9	15-16	333.4	15.5	18.6	Y
17	91.8' steel single pole, DE Custom,	16-17	362.4	15.5	27	Y
17.5	106' steel single pole, DE Custom,	17-17.5	184.8	15.5	46.8	Y
18	106' steel single pole, DE Custom,	17.5-18	306.7	15.5	23.4	Y

2. New Hampshire statute referenced in petition (as modified by N.H. House Bill 2 on June 3, 2021)

371:17 Licenses for New Poles (2021, 91:260, eff. July 1, 2021)

3. Review of existing license(s) and permissions previously granted by the PUC for these locations of the State owned land in Merrimack and Bedford.

The State owned land crossing span in Merrimack and Bedford was not previously licensed.

Eversource Energy asserts that environmental impacts from this project will require permits from the NH Department of Environmental Services and that the Company will obtain these before commencing work.

4. Review of land ownership of proposed pole structures

In its petition, Eversource Energy specifies that the structures and wires pursuant to this petition cross State owned land in Merrimack and Bedford, New Hampshire.

5. Review of NESC code requirements as described in Puc 300

The Safety Bureau reviewed the specifications related to the design and re-construction of this crossing project as described in the petition, attachments, and all supplemental support documents and corrections filed by the Company, and found them to be in conformance with N.H. Admin. Rule Puc 306 and applicable sections of NESC C2-2012.

6. Review of public need and public impact

The V191 transmission line is an integral part of Eversource Energy's existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in Merrimack and Bedford. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State owned land.

The Safety Bureau verified that minimum safe line clearances above the land will be maintained at all times, and determined that public use and enjoyment of the State owned land will not be diminished in any material respect as a result of the proposed overhead line crossings.

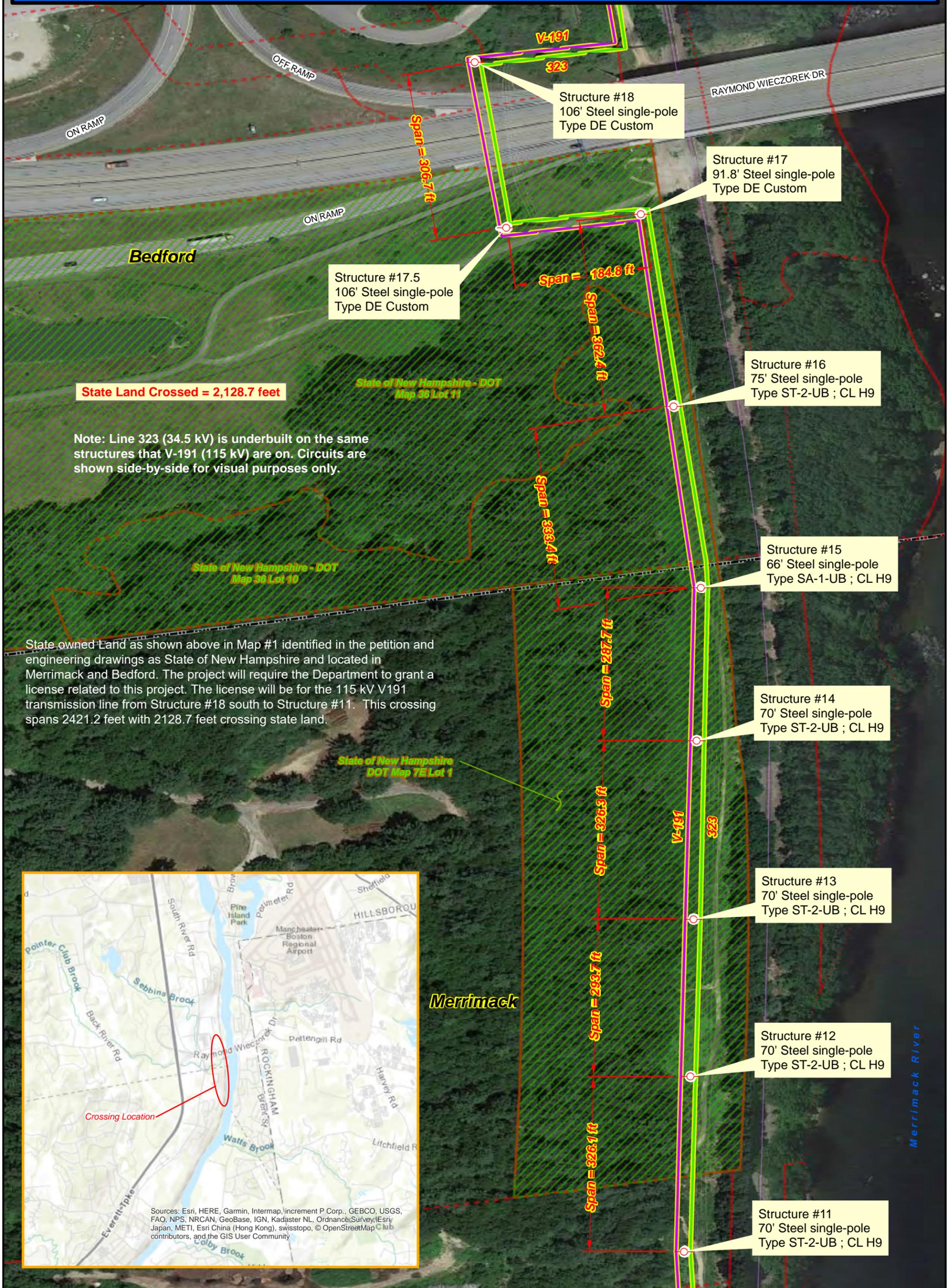
Safety Bureau Recommendation:

Based on the results of its review of the petition, attachments, and all other supporting documents filed to this docket, the Safety Bureau recommends that the Department:

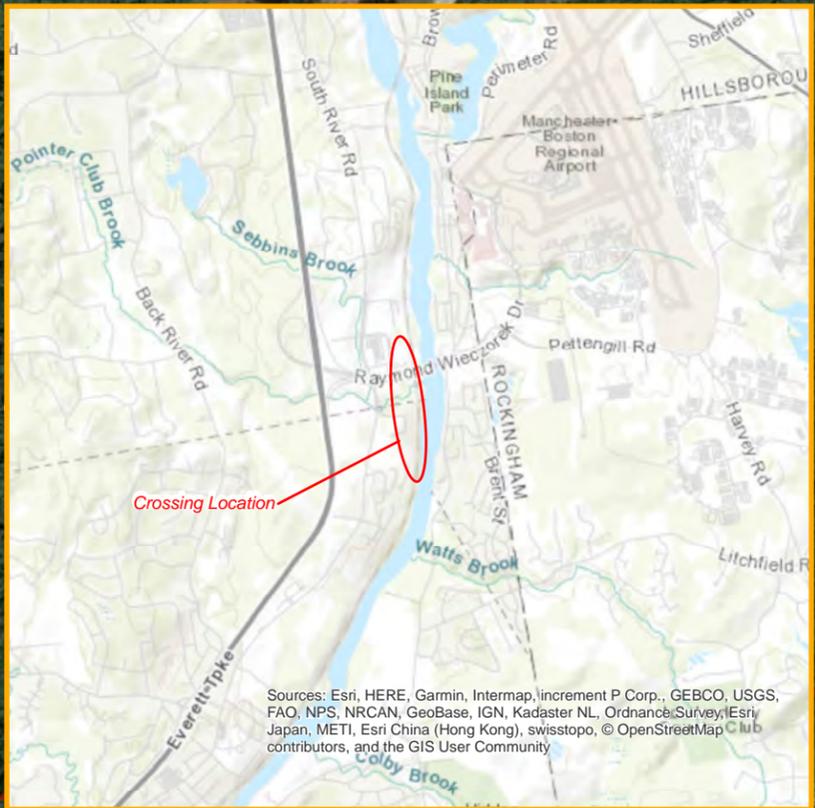
- 1) Find that the license Eversource Energy requests in this petition may be exercised without substantially affecting the public rights in State owned land; and
- 2) Grant Eversource Energy a license to construct, install, operate, and maintain electric lines and communication cables pursuant to RSA 371:17 and Puc 306.01, over and across State owned land in Merrimack and Bedford, New Hampshire, as specified in the petition.

Attachments

State Land (NH DOT) - CR2021-06 Eversource Crossing



State owned Land as shown above in Map #1 identified in the petition and engineering drawings as State of New Hampshire and located in Merrimack and Bedford. The project will require the Department to grant a license related to this project. The license will be for the 115 kV V191 transmission line from Structure #18 south to Structure #11. This crossing spans 2421.2 feet with 2128.7 feet crossing state land.



	Utility Structure		Parcel
	115 kV Lines		State Land Parcel
	34.5 kV Lines		

Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

0 100 200 400
Feet