

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: February 28, 2022

AT (OFFICE): NH Dept. of Energy

FROM: Michael Soucy *MRS*
Utility Analyst IV – Division of Enforcement

SUBJECT: CRE 2022-004 Eversource Energy
Petition for License and License Amendments to Construct and Maintain Electric Lines Over and Across State Owned Land, and Public Waters in Bow, Concord and Pembroke New Hampshire.

Division of Enforcement, **Safety Bureau Recommendation**

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

CC: Thomas Frantz, Director of Regulatory Support Division
Paul Kasper, Director, Enforcement Division
Elizabeth Nixon, Director-Electric Regulatory Support Division

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

- Petition contents, replacement 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 February 15, 2022, 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 P145 Line, which is an existing 115kV transmission line that crosses public land and public waters in Bow, Concord and Pembroke New Hampshire. The original constructed date of the P145 Line is believed to have been circa 1966.

The proposed project for the P145 encompasses structure replacement and reconductoring. All 8 structures at the State owned land crossing span will be renumbered and replaced with weathering steel equivalents. The project also includes replacement and renumbering of 11 structures supporting four public water crossing spans. The replacement structures will be replaced with weathering steel and renumbered as detailed under the Structure Table submitted.

The proposed project also encompasses reconductoring the three existing conductors with three new ACSS 1272KCMIL 54/19 conductors and, both existing pole top mounted shield wires will be replaced with (2) 48F 0.0646" OPGW cables.

New and renumbered Structures 38, 39, 48, 49, 65 to 71, 125, 126, and 128 will be installed within 10 feet of the existing locations: New and renumbered Structure 63 will be moved approximately 100 feet north, and new Structure 64 will be moved approximately 20 feet south to account for the permanent removal of existing Structures 65 and 67, both of which are currently located on State owned land. Additionally, new and renumbered Structure 72 is being moved 20 feet north to move away from steep slopes for ease and safe construction and future maintenance; new and renumbered Structure 127 is being moved 20 feet north to minimize impacts to adjacent wetlands during construction and future maintenance; new and renumbered Structure 29 is being moved 20 feet south to avoid potential impacts to nearby sensitive environmental resources during construction and future maintenance.

The four public water crossing and one State owned land crossing spans that are the subject of this petition were depicted on Exhibit 1 as a high-level perspective of the locations. Additional site location descriptions of the span location are as follows:

Exhibit 2 submitted by ES shows that the P145 Line crosses the Merrimack River in the Towns of Bow and Concord between new Structures 38 and 39, which span commences near the end of Garvins Falls Road in the Town of Bow, approximately 265 feet south of where Garvins Falls Road crosses the existing Pan Am railroad and extending east approximately 579 feet to the east bank of the Merrimack River, to Structure 39. That end of the span is approximately 1,500 feet west from where the P145 Line crosses Garvins Falls Road, which is approximately 1.65 miles southeast from the intersection of Garvins Falls Road and Manchester Street (State Route 3).

Exhibit 3 submitted by ES shows that the P145 Line crosses the Suocook River in Concord and Pembroke between new Structures 48 and 49, which span commences approximately 2,100 feet from where the P145 line crosses Garvins Falls Road in Pembroke, which is approximately 1.65 miles southeast from the intersection of Garvins Falls Road and Manchester Street (State Route 3). The crossing extends 53 feet east to the east and ends at the east bank of the Suocook River, which is approximately 3,100 feet southwest from the P145 Line crosses Pembroke Street (State Route 3), which is approximately 1,300 feet northwest from the intersection of Pembroke Street (State Route 3) and Sheep Davis Road (State Route 106).

Exhibit

Exhibits 4, 5 and 6 submitted by ES shows that the P145 Line crosses a State-owned land parcel associated with NH National Guard Facility in the Town Pembroke between new Structures 63 and 72, which span starts approximately 3,500 feet northeast from where the P145 Line crosses Pembroke Street (State Route 3), which is approximately 1,300 feet northwest from the intersection of Pembroke Street (State Route 3) and Sheep Davis Road (State Route 106). The State owned land span extends approximately 3,591 feet north to the State owned land boundary, which coincides with the southern bank of the Suocook River, which is approximately 2,100 feet south from where the P145 Line crosses Chenell Drive, which is approximately 750 feet west from the intersection of Chenell Drive and Sheep Davis Road (State Route 106).

Exhibits 5 and 6 submitted by ES shows that the P145 Line crosses the Suocook River in the Town of Pembroke between new Structures 71 and 72, which span commences approximately 7,200 feet northwest from the intersection of Pembroke Street (State Route 3) and Sheep Davis Road (State Route 106). The public water crossing extends approximately 111 feet to the northern bank of the Suocook River, which is approximately 2,075 feet south from where the P145 Line crosses Chenell Drive, which is approximately 750 feet west from the intersection of Chenell Drive and Sheep Davis Road (State Route 106).

Exhibits 7, 8 and 9 submitted by ES shows that the P145 Line crosses Turtle Town Pond in the City of Concord between new Structures 125 and 129, which span begins approximately 1,700 feet northwest from where the P145 Line crosses Appleton Street, which is approximately 3,100 feet east from the intersection of Appleton Street and Shawmut Street. The public water crossing extends northwest approximately 1,816 feet and ends approximately 100 feet northwest of where the P145 Line crosses Oak Hill Road, which is approximately 850 feet northeast from the intersection of Oak Hill Road and Irving Drive.

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

Dept. of Energy Safety Bureau Summary Table

EXHIBIT 10 – P145 LINE REBUILD STRUCTURE TABLE

Eversource P145 Line Rebuild - DOE State Land and Waterbody Crossing Details								
Existing Structure #	New Structure #	Structure Type	Height Change (feet)	Span (Pole to Pole)	Span Distance (feet)	Minimum NESC Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESC Table 232-1 (Y/N)
40	38	74.5' steel 3 pole, ADS, CLH3	5	38-39	897	30.1	40.0	Y
41	39	70.0' steel 3 pole, ADS, CLH3	0					
50	48	52.0' steel 2 pole, T, CLH1	10	48-49	464	18.6	47.5	Y
51	49	70.0' steel 2 pole, T, CLH1	25					
65	PERMANENT REMOVAL							
66	63	65.5' steel 3 pole, ADS, CLH3	25	63-64	648	20.1	27.1	Y
67	PERMANENT REMOVAL							
68	64	65.5' steel 2 pole, T, CLH1	25	63-64	648	20.1	27.1	Y
69	65	52.0' steel 2 pole, T, CLH1	10	64-65	421	20.1	33.1	Y
70	66	52.0' steel 2 pole, T, CLH1	10	65-66	347	20.1	25.5	Y
71	67	52.0' steel 2 pole, T, CLH1	10	66-67	403	20.1	24.6	Y
72	68	52.0' steel 2 pole, T, CLH1	10	67-68	325	20.1	27.0	Y
73	69	70.0' steel 2 pole, T, CLH1	25	68-69	402	20.1	29.2	Y
74	70	61.0' steel 2 pole, T, CLH1	20	69-70	346	20.1	43.2	Y
75	71	52.0' steel 3 pole, ADS, CLH1	10	70-71	590	20.1	30.8 35.4	54.8
76	72	52.0' steel 3 pole, ADS, CLH1	10	71-72	754	20.1		
131	125	61.0' steel 2 pole, T, CLH1	0	125-126	497	36.1	42.4	Y
132	126	88.0' steel 2 pole, T, CLH3	0					
133	127	88.0' steel 2 pole, T, CLH3	0	126-127	688	36.1	40.4	Y
134	128	74.5' steel 2 pole, T, CLH1	30	127-128	619	36.1	39.1	Y
135	129	56.5' steel 3 pole, ADS, CLH1	15	128-129	447	36.1	56.2	Y

2. New Hampshire statute referenced in petition

371:17 Licenses for New Poles. – Whenever it is necessary, in order to meet the reasonable requirements of service to the public, that any public utility should construct a pipeline, cable, or conduit, or a line of poles or towers and wires and fixtures thereon, over, under or across any of the public waters of this state, or over, under or across any of the land owned by this state, it shall petition the department of energy for a license to construct and maintain the same. For the purposes of this section, "public waters" are defined to be all ponds of more than 10 acres, tidewater bodies, and such streams or portions thereof as the department of energy may prescribe. Every corporation and individual desiring to cross any public water or land for any purpose herein defined shall petition the department of energy for a license in the same manner prescribed for a public utility.

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 water in Manchester.

The Merrimack River crossing between new Structure 38 and 39 (old Structures 40 and 41) was licensed in a batch petition in docket DE 76-22 pursuant to Order 12,219, and the public water crossing over Turtle Town Pond between new Structures 125 to 129 (old Structures 131 to 135) is licensed in a batch petition in docket DE 94-272 pursuant to Order 21,817. The remaining crossings that are the subject of this petition comprising State owned land in Pembroke and two spans across the Suncook River have not been previously licensed likely owing to oversight.

In Bow, Concord and Pembroke, the Merrimack River and the Soucook Rivers are listed under the category "Public Rivers and Streams" in the Official List of Public Waters (OLPW). The entire list of public waters can be accessed through the following web link:

<https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/olpw.pdf>

Eversource asserts that this maintenance project on the P145 will require a New Hampshire Department of Environmental Services (NHDES) Statutory Permit Notification (SPN) permit for temporary impacts to wetlands associated with the construction and installation of new structures, including those that are the subject of this petition in the Towns of Bow, Concord and Pembroke. Also, a Shoreland Permit by Notification (PBN) is needed for temporary impacts within the shoreland buffer of the Merrimack River, the Suncook River, and Turtle Town Pond. Those permits will be obtained prior to commencement of construction of the P145 project.

4. Review of land ownership of proposed pole structures

In its petition, Eversource specifies that the licensed and unlicensed structures to be replaced pursuant to this petition, cross public land and public waters in Bow, Concord and Pembroke 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 P145 Line is an integral part of Eversource's existing electric transmission system in New Hampshire. The crossing locations identified in the petition are in the Towns of Bow, Concord and Pembroke, New Hampshire. The Company asserts in its petition that the existing crossings will be exercised without substantially affecting public rights in the identified State land and public waters in New Hampshire.

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

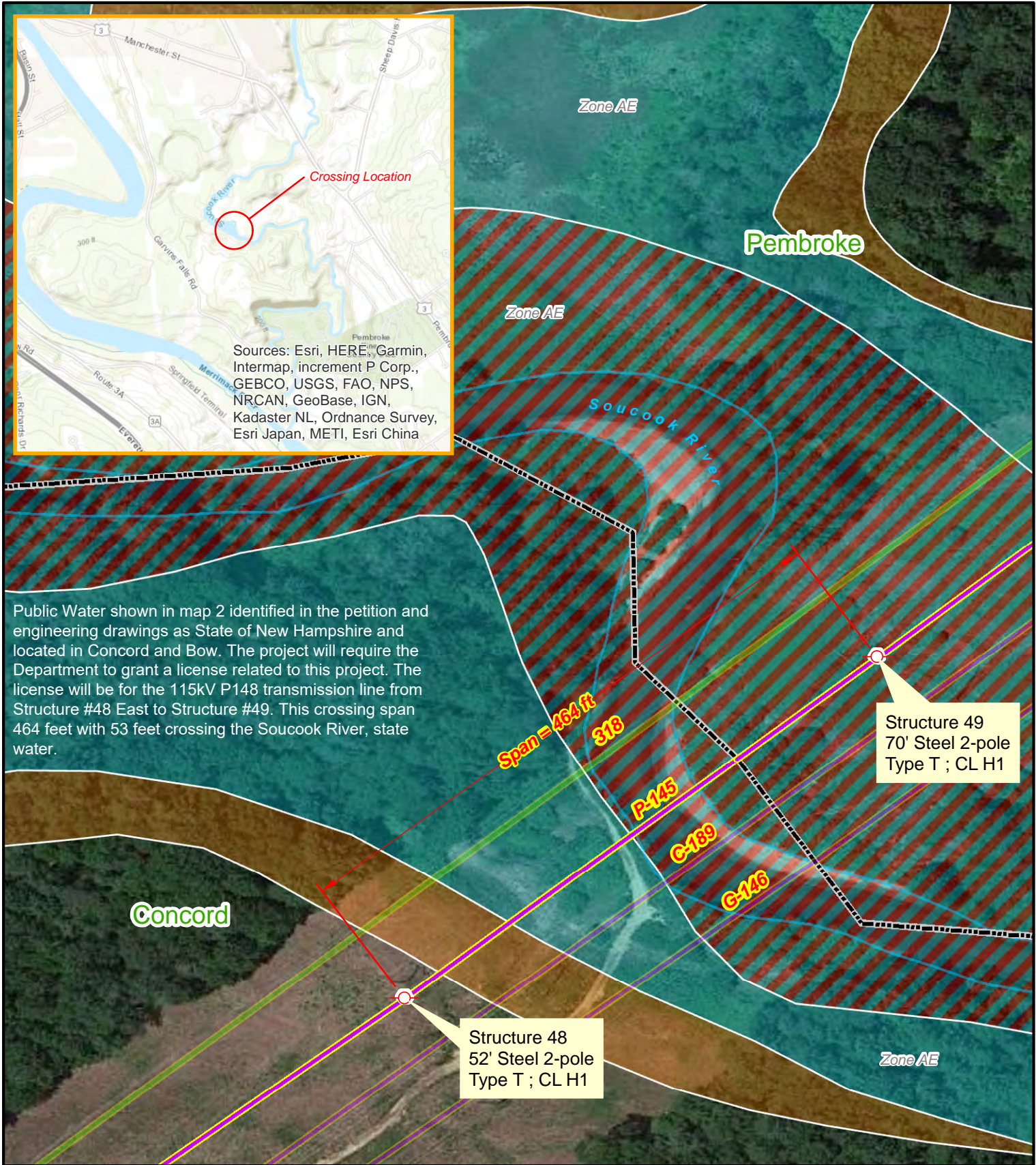
7. Safety Bureau Recommendation:

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

- 1) Find that the license Eversource requests in this docket may be exercised without substantially affecting the public rights in State owned land and public waters; and
- 2) Grant Eversource 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 and public water in the Towns of Bow, Concord and Pembroke New Hampshire as specified in the petition.

Attachments

Soucook River - CRE 2022-004 Eversource Crossing - Map 2



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

Public Water shown in map 2 identified in the petition and engineering drawings as State of New Hampshire and located in Concord and Bow. The project will require the Department to grant a license related to this project. The license will be for the 115kV P148 transmission line from Structure #48 East to Structure #49. This crossing span 464 feet with 53 feet crossing the Soucook River, state water.

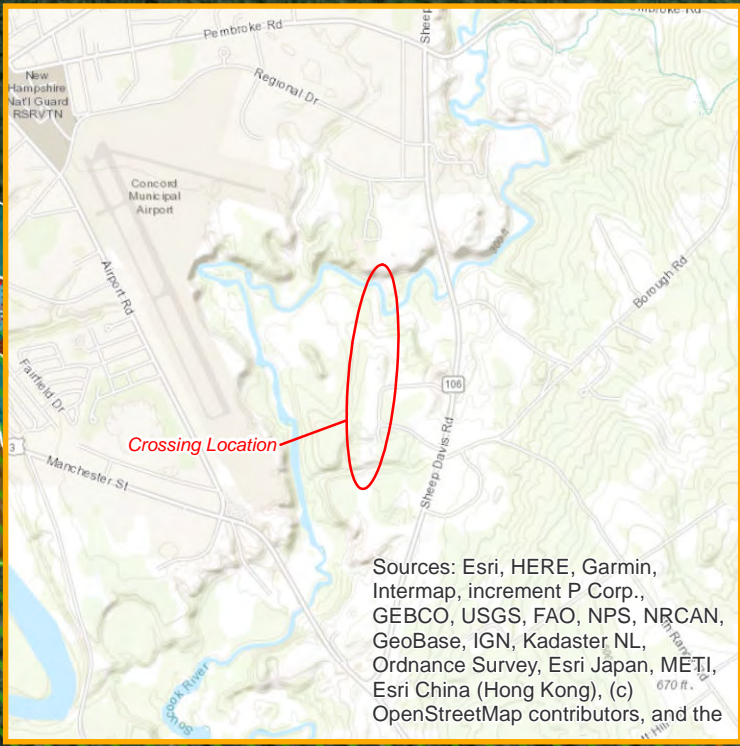
	Utility Structure	Flood Hazard Zones
	115 kV Line	Regulatory Floodway
	34.5 kV Lines	1% Annual Chance Flood Hazard
		0.2% Annual Chance Flood Hazard



Prepared by:
NH Department of Energy ; Enforcement Division
Safety Bureau

Feet

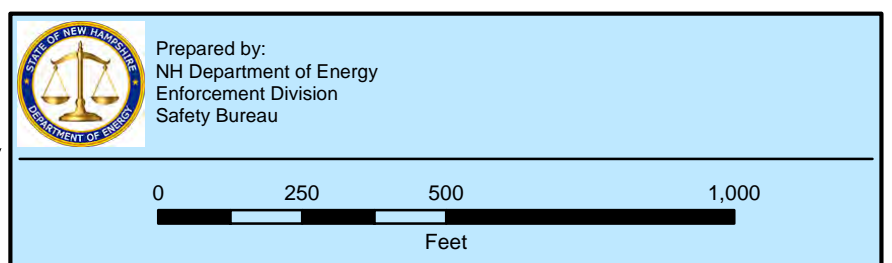
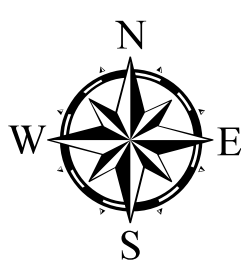
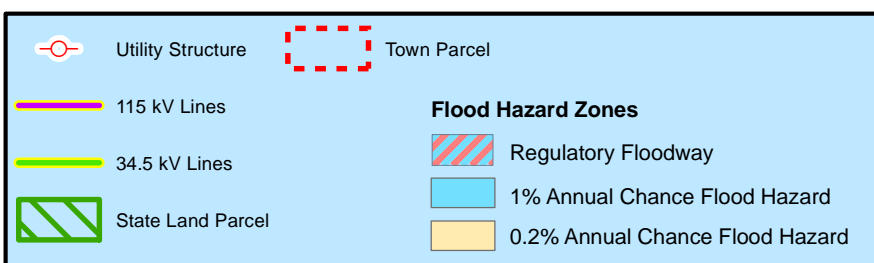
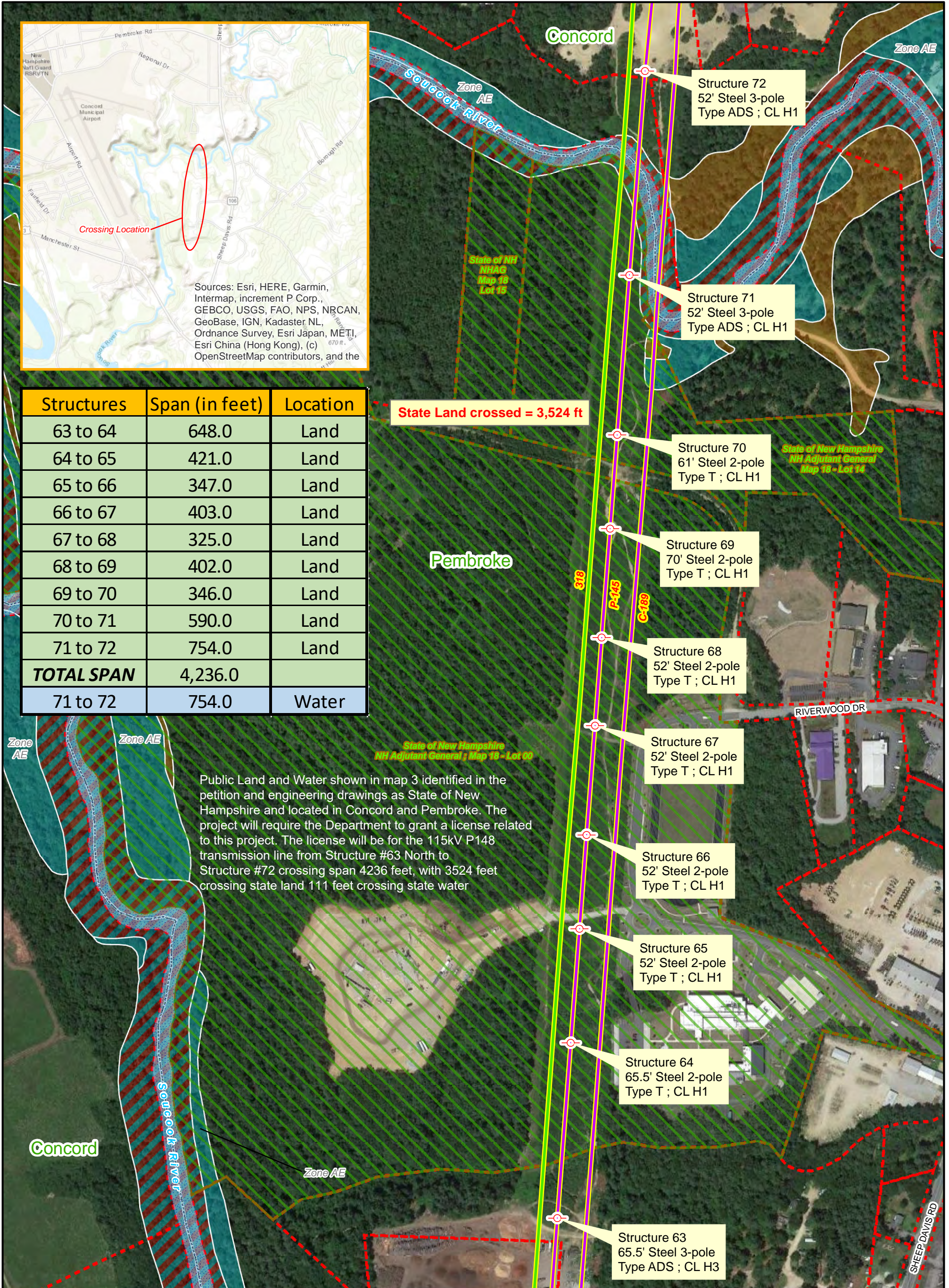
Soucook River and State Land (NHAG) - CRE 2022-004 Eversource Crossing - Map 3



Structures	Span (in feet)	Location
63 to 64	648.0	Land
64 to 65	421.0	Land
65 to 66	347.0	Land
66 to 67	403.0	Land
67 to 68	325.0	Land
68 to 69	402.0	Land
69 to 70	346.0	Land
70 to 71	590.0	Land
71 to 72	754.0	Land
TOTAL SPAN	4,236.0	
71 to 72	754.0	Water

State Land crossed = 3,524 ft

Public Land and Water shown in map 3 identified in the petition and engineering drawings as State of New Hampshire and located in Concord and Pembroke. The project will require the Department to grant a license related to this project. The license will be for the 115kV P148 transmission line from Structure #63 North to Structure #72 crossing span 4236 feet, with 3524 feet crossing state land 111 feet crossing state water

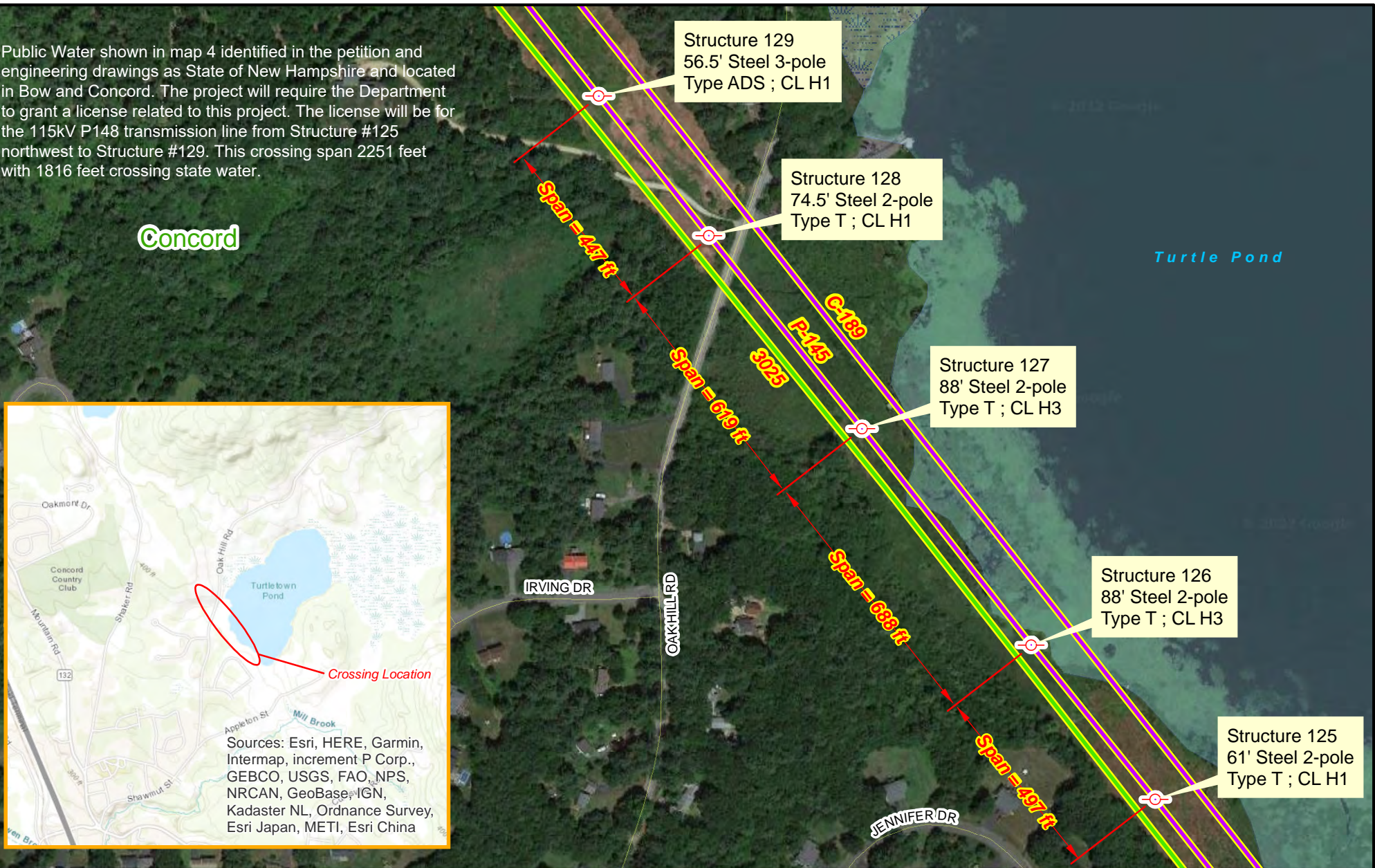
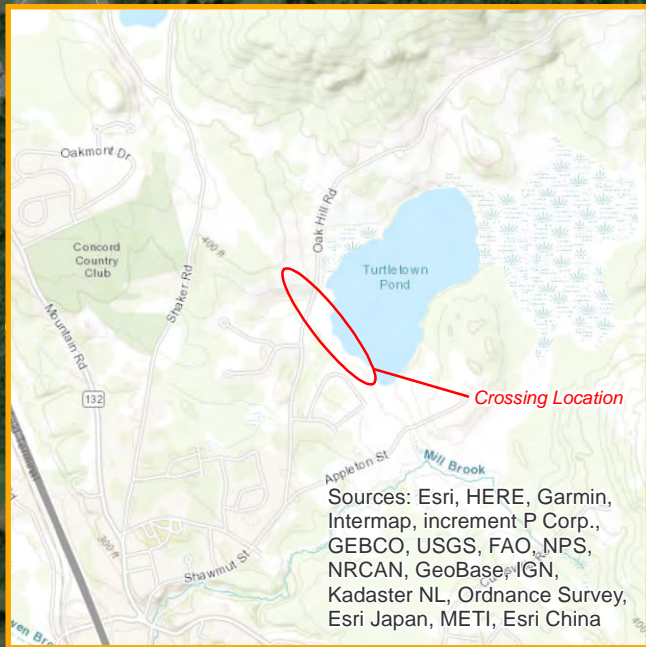


Turtle Pond - CRE 2022-004 Eversource Crossing - Map 4

Public Water shown in map 4 identified in the petition and engineering drawings as State of New Hampshire and located in Bow and Concord. The project will require the Department to grant a license related to this project. The license will be for the 115kV P148 transmission line from Structure #125 northwest to Structure #129. This crossing span 2251 feet with 1816 feet crossing state water.


Concord

Turtle Pond



-  Utility Structure
-  115 kV Lines
-  34.5 kV Lines





Prepared by:
NH Department of Energy
Enforcement Division
Safety Bureau

