

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: January 23, 2023

AT (OFFICE): NH Dept. of Energy

FROM: Gary Raymond GMR
Utility Analyst IV – Division of Enforcement

SUBJECT: CRE 2023-003 Eversource Energy
Application for License to Construct and Maintain Electric Lines Over and Across Public Waters and State-Owned Land in the Towns of Merrimack and Litchfield, New Hampshire
Staff 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
Andrew Harmon, Hearings Examiner, Enforcement Division

Review by the Division of Enforcement (DOE) of the above application consisted of the following elements:

- Application contents, replacement application contents, and history;
- Applicable State statutes;
- 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. Application contents and history.

On January 18, 2023, Public Service New Hampshire d/b/a Eversource Energy (Eversource, ES or the Company) filed an application for a license pursuant to RSA 371:17 to construct and maintain the Eversource H123 Line, an existing 115 kV transmission line, over and across public waters and state-owned land in the towns of Merrimack and Litchfield, New Hampshire.

The proposed project for the H123 encompasses a static wire to optical ground wire (OPGW) replacement project. The structures at the crossing locations are steel with the specification depicted and noted in the Structure Details of Exhibits 2 through 4.

The conductor cable clearance requirements pursuant to the National Electrical Safety Code (NESC) based on the design conditions at 285 deg F. have been met. This scenario was the governing condition which yielded the greatest sag and lowest clearance. Pursuant to NESC, the minimum clearance for a 115kV line is 30.1 feet for water areas suitable for sailboating including lakes, ponds, reservoirs, tidal waters, rivers, streams, and canals with an unobstructed surface area of 20 to 200 acres and 20.1 feet clearance for other areas traversed by vehicles such as cultivated, grazing, forest and orchard lands, industrial sites, commercial sites, etc. The actual minimum heights over the public waters and state-owned land are depicted in Exhibits 2 to 4 submitted by ES and exceed the respective minimum requirements. Staff verified the computed sags of the phase conductors with SAG 10 commercial software using inputs as stated in the application.

Wire specifications and loading conditions to establish maximum sag for the crossing spans that are the subject of this application are as indicated on the Profile View and Cable Schedule of Exhibits 2 to 4 submitted by ES. The water clearances are taken from the projected 100-year flood levels. This is more conservative than the 10-year flood levels allowed by the NESC (note 18 to Table 232-1). The 100-year flood elevations for the subject portions of the Merrimack River were derived from FEMA's National Flood Hazard Layer Firmette, 09/25/2009.

The location of the public water crossings and state-owned land that is the subject of this application is depicted on the Overview Map attached hereto as Exhibit 1 submitted by ES, and the DOE Maps attached to this recommendation.

Exhibit 2 – The H123 Line crosses the Merrimack River in the towns of Merrimack and Litchfield between Structures 155 and 156, which span begins approximately 1,500 feet southeast of the Reeds Ferry Substation, which is located southwest of Front Street, south of a strip mall located at 515 Daniel Webster Highway, Merrimack, and northeast from Twin Bridge Road. The public water crossing extends southeast approximately 540 feet to the west bank of the river, which is approximately 850 feet northeast from where the line crosses Naticook Ave, which is approximately 625 feet northeast to the intersection of Naticook Ave and Midway Ave.

Exhibit 3 – The H123 Line crosses the state-owned land in the town of Litchfield between Structures 181 to 184, which span begins approximately 2,200 feet north from where the H123 Line crosses Pinecrest Road. The crossing span extends south approximately 868 feet to the boundary of Map 12, Lot 11 in Litchfield, which is approximately 1,070 north from where the H123 Line crosses Pinecrest Road, which crossing location is itself approximately 236 feet east to the intersection of Pinecrest Road and Brickyard Drive.

Exhibit 4 – The H123 line crosses the Merrimack River in the towns of Litchfield and Merrimack between Structures 201 and 202, which span commences approximately 1,900 feet west from where the H123 Line crosses Charles Bancroft Highway in Litchfield, which crossing location is approximately 275 feet north from the intersection of Charles Bancroft Highway and Cummings Drive in Litchfield. The crossing continues approximately 814 feet west to the west bank of the

Merrimack River, at a point that is approximately 2,500 feet east from where Eversource’s 93195 Line) crosses US Route 3 (Daniel Webster Highway) in Merrimack, which Rte. 3 crossing location is between BEST Energy Services located at 237 Daniel Webster Highway, Merrimack to the south and the entrance to Spraying Systems Co. located at 243 Daniel Webster Highway, Merrimack, to the north. The H123 turns northerly just west of Structure 202 (see Exhibit 1) and does not cross any notable landmarks in proximity to the subject span on the westerly side of the Merrimack River.

The location of Structures 155 to 156 in this application creates a total span of 700.2 feet with a span of 539.9 feet crossing the Merrimack River.

The location of Structures 181 to 184 in this application creates a total span of 1,214.6 feet with a span of 868.9 feet crossing state-owned land.

The location of Structures 201 to 202 in this application creates a total span of 813.9 feet with a span of 556.1 feet crossing the Merrimack River.

The following table provides the summary of this application with the crossing to include structure numbers, types, spans, ES design criteria, and NESC compliance.

Department of Energy Enforcement Division Summary Table

Eversource H123 Line – State-Owned Land and Public Water Crossing Details						
Structures	Structure Type	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)
155	Type ADS Steel, Class-H1	155-156	700.2	30.1	36.6	Y
156	Type ADS Steel, Class-H1					
181	Type T Steel, Class-H1	181-182	426.3	20.1	23.3	Y
182	Type T Steel, Class-H1	182-183	420.3	20.1	20.5	Y
183	Type T Steel, Class-H1	183-184	368	20.1	28.1	Y
184	Type T Steel, Class-H1					
201	Type T Steel, Class-H1	201-202	813.9	30.1	40.3	Y
202	Type SRAX Steel, Class-H1					

2. New Hampshire statute referenced in application (as modified by N.H. House Bill 1258 on August 22, 2022).

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, modify a previously licensed installation, or license a previously constructed installation, it shall apply to 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 apply to the department of energy for a license in the same manner prescribed for a public utility. The department of energy may condition any license issued under this paragraph in any manner necessary to assure that the license may be exercised without substantially affecting the public rights in public waters or state-owned lands. Using a non-adjudicative process, the department of energy may reject incomplete or improperly filed applications, and shall, also using non-adjudicative process, issue or deny the license within 90 days of receiving a complete application and all information subsequently requested of an applicant.

371:17 Licenses for New Poles (eff. Aug. 20, 2022)

3. Review of existing license(s) and permissions previously granted by the PUC for this location over and across public waters and state-owned land in the towns of Merrimack and Litchfield, New Hampshire.

The public water crossings at the Merrimack River and state-owned land that are the subject of this application were previously licensed under Order 26,290 (DE 19-028) and CRE2022-014.

From the Bedford/Merrimack Town line to the New Hampshire/Massachusetts state line, in Merrimack and Litchfield, the Merrimack River is 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 due to the nature of the wire replacement and installation work to be done primarily by a helicopter, there will be no ground impacts associated with the project at the crossing locations, and thus neither a New Hampshire Department of Environmental Services (NHDES) Statutory Permit by Notification (SPN) nor a Shoreland Permit Notification (PBN) is required.

The U.S. Army Corps of Engineers (ACOE) does regulate the subject portion of the Merrimack River as navigable waters in these locations and the scope of work discussed in this application at the subject crossing location will be licensed via Self-Verification under the ACOE New Hampshire Programmatic General Permit #4 and this licensing will be accomplished prior to commencement of the within described project.

4. Review of land ownership of proposed pole structures.

In its application, Eversource specifies that the structure replacement work will be accomplished within existing right-of-way easements, thereby mitigating impacts and concerns of property owners affected by the project scope.

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

The Enforcement Division staff reviewed the specifications related to the static wire replacement and OPGW installation work of this crossing project as described in the application, 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 H123 Line is an integral part of Eversource's existing electric transmission system in New Hampshire. The crossing locations identified in the application are in the towns of Merrimack and Litchfield, New Hampshire. The Company asserts in its application that the existing crossing will be exercised without substantially affecting public rights in the identified public waters and state-owned land in New Hampshire.

The Enforcement Division staff verified that minimum safe line clearances above the public water will be maintained at all times and determined that public use and enjoyment of the public water will not be diminished in any material respect as a result of the proposed project.

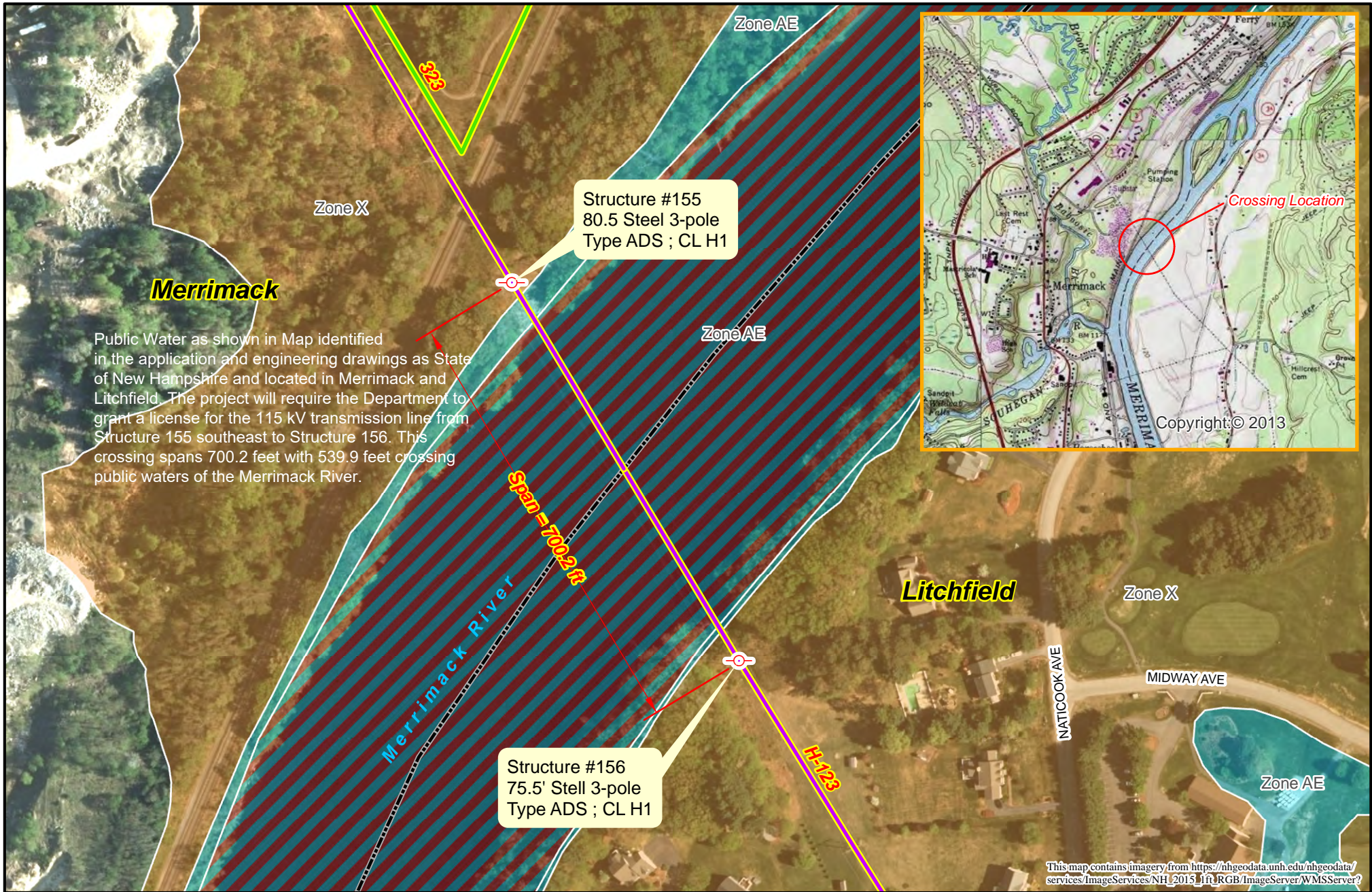
7. Enforcement Division Recommendation:

Based on the results of its review of the application, attachments, and all other supporting documents, the Enforcement Division recommends that the Department:

- 1) Find that the license Eversource requests in this docket may be exercised without substantially affecting the public rights in public waters and state-owned land; and
- 2) Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and Puc 306.01, over and across public waters and state-owned land in the towns of Merrimack and Litchfield, New Hampshire as specified in the application.

Attachments:

Merrimack River - CRE 2023-003 Eversource Crossing - Map 1



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

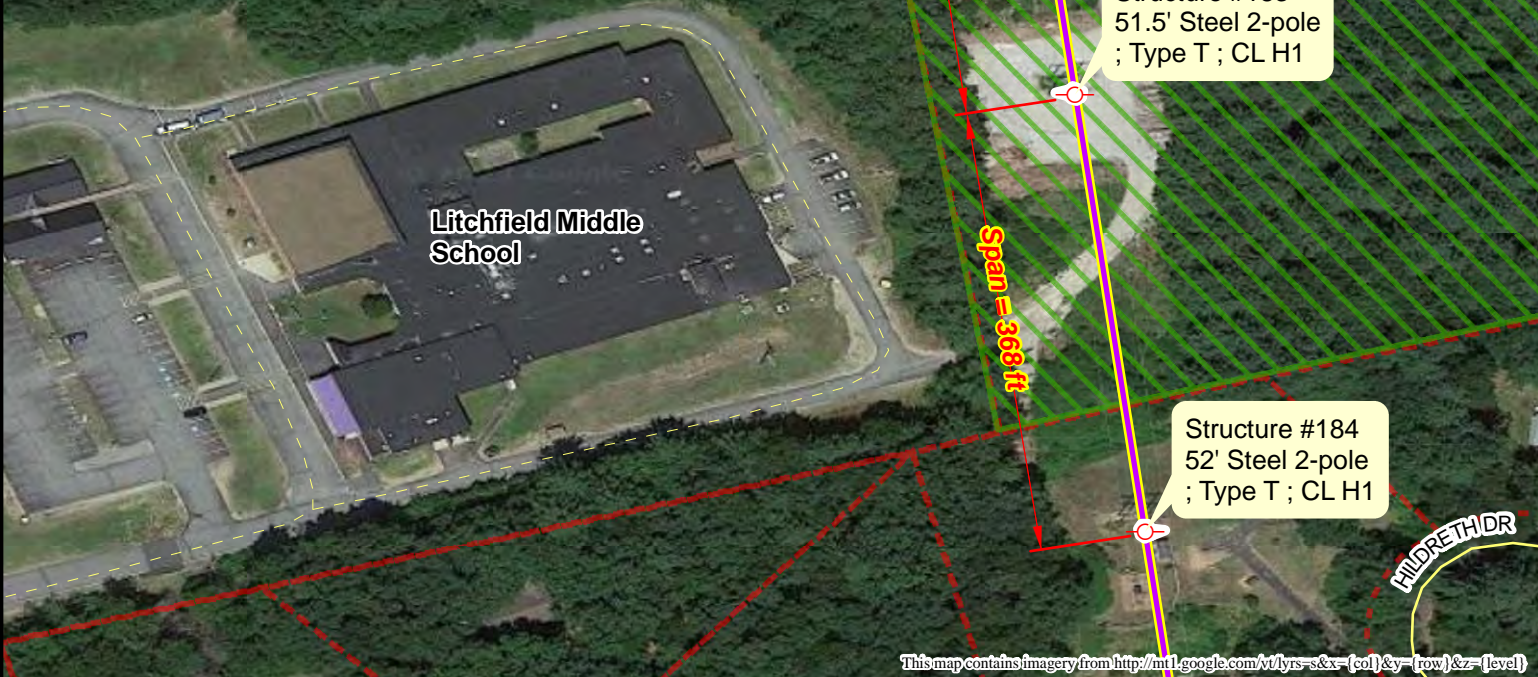


	Prepared by: NH Department of Energy Enforcement Division	

State Land (NHDES) - CRE 2023-003 Eversource Crossing - Map 2



State-owned Land as shown in Map identified in the application and engineering drawings as State of New Hampshire and located in Litchfield. The project will require the Department to grant a license for the 115 kV transmission line from Structure 181 south to Structure 184. This crossing spans 1,214.6 feet with 868.9 feet crossing State-owned land.

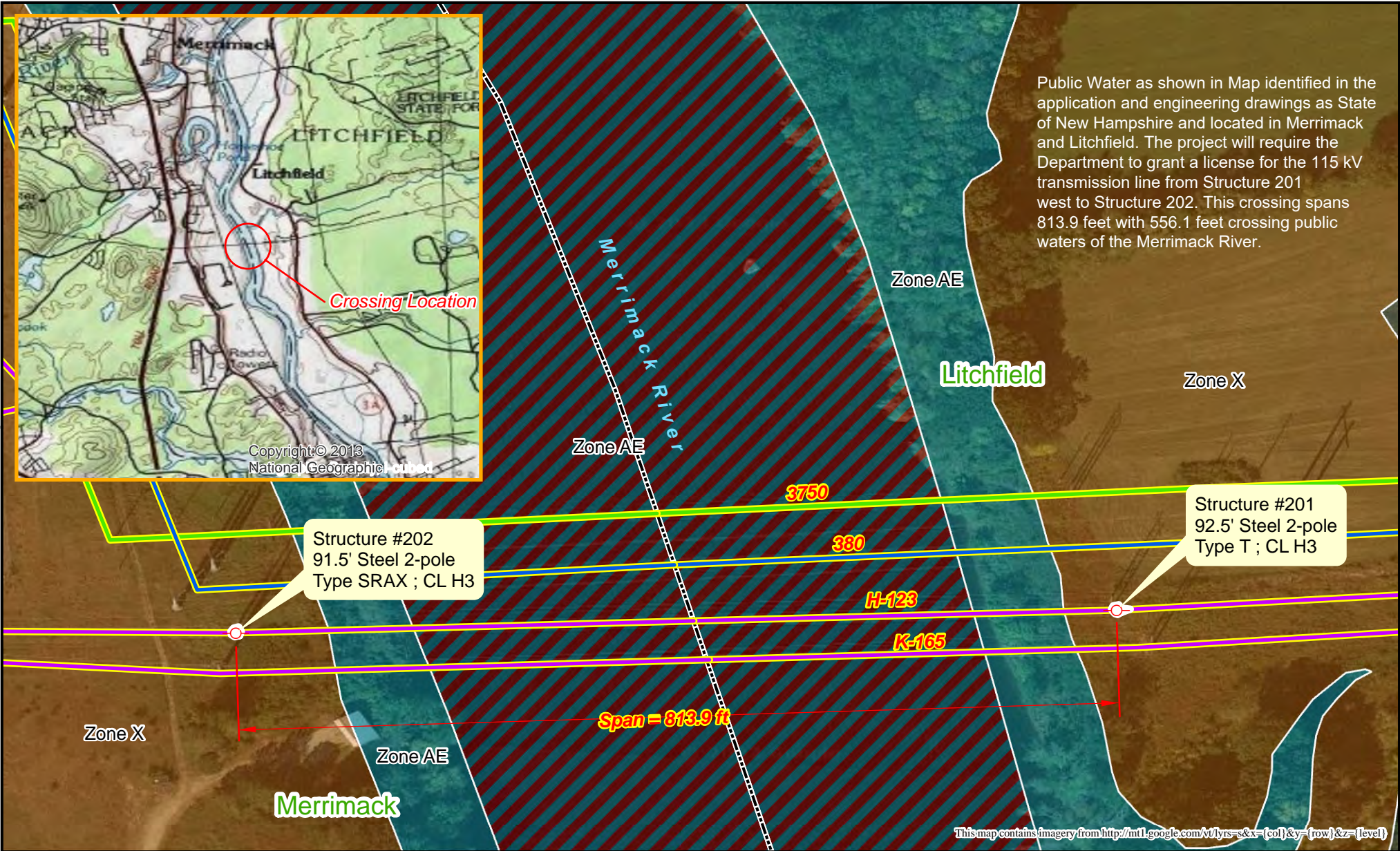


	Utility Structure		Town Parcel
	115 kV Line		State Land Parcel



Prepared by:
NH Department of Energy
Enforcement Division

Merrimack River - CRE 2023-003 Eversource Crossing - Map 3



345 kV Lines	Utility Structure	Flood Hazard Zones
115 kV Lines		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

