

STATE OF NEW HAMPSHIRE

Intra-Department Communication

DATE: June 9, 2023

AT (OFFICE): NH Dept. of Energy

FROM: Michael Soucy *MRS*
Administrator III – Division of Enforcement

SUBJECT: CRE 2023-011 Eversource Energy
Application for License to Construct and Maintain Electric Lines over and across public waters and State-owned land in Litchfield, Merrimack, Amherst and Milford, 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 May 24, 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 W157 Line, over and across public water and State-owned land in Litchfield, Merrimack, Amherst and Milford, New Hampshire.

The Eversource W157 Line is a 115kV overhead transmission line, which was originally built in 1967 between the Milford Tap in Litchfield, and South Milford Substation in Milford.

The proposed project for the W157 Line encompasses replacing the existing two shield wires with two optical ground wires at the pole top position and structure replacements from wood to weathering steel at eight locations. Structures 18 through 22, 26, 34, and 93 will be replaced. Structures 16, 17, 25, 33, 92, 112 and 113 are in good functional condition and will remain as wood. Structures 7 and 8, at the Merrimack River crossing were replaced from wood to steel in 2016 without a license owing to oversite and will be licensed as a result of this application. The 3 existing phase conductors will not be changed and have the characteristics noted in the Cable Schedule of Exhibits 2 through 8 submitted by ES+

The specifications and loading conditions to establish maximum sag for the crossing spans that are the subject of this application were indicated on the Profile View and Cable Schedule of Exhibits 2 through 8 submitted by ES. The conductor clearance requirements pursuant to the 2012 NESC, based on the design conditions at 285 deg F, ground elevation, the 10-year flood level for the Merrimack River and the 100-year flood level of the Souhegan River and Beaver Brook have been met. The 100-year level is more stringent than the 10-year flood level. Staff verified the depicted sag clearances using Sag10 commercial software with the data inputs as stated in the application.

The location of the public water crossings and State-owned land that are the subject of this application are depicted on the Overview Map as Exhibit 1 submitted by ES, and the DOE Maps attached to this recommendation. Exact locations of the structures are expressed with Latitude and Longitude on Exhibits 2 through 8 submitted by ES and a detailed description are as follows:

The W157 Line crosses the Merrimack River between Litchfield and Merrimack, New Hampshire between Structures 7 and 8, which span begins approximately 2,470 feet southwest from where the W157 Line crosses Charles Bancroft Highway (aka NH Route 3A), which is at the intersection of Hilcrest Rd and Charles Bancroft Highway (aka NH Route 3A). The span extends southwest approximately 400 feet to the west bank of the Merrimack River, which is approximately 1,390 feet east from where the W157 Line crosses Daniel Webster Highway (aka NH Route 3) in Merrimack, which is at the intersection of E. Chamberlain Road and Daniel Webster Highway (aka NH Route 3).

- The location of Structures 7 to 8 in this application creates a total span of 589 feet with a span of 400.2 feet crossing public water in the Towns of Litchfield and Merrimack.

The W157 Line crosses the Souhegan River between Structures 16 and 17 in the Town of Merrimack. The span begins approximately 1,200 feet east from where the W157 Line crosses Daniel Webster Highway (aka NH Route 3), which is at the intersection of E Chamberland Rd and Daniel Webster Highway (aka NH Route 3). The crossing extends approximately 264 feet to the northwest bank of the Souhegan River.

- The location of Structures 16 to 17 in this application creates a total span of 475.3 feet with a span of 264.6 feet crossing public water in the Town of Merrimack.

The W157 Line crosses the state-owned land operated by the Department of Transportation between Structures 18 and 22 in the Town of Merrimack. The crossing commences where the W157 line crosses the western edge of the Everett Turnpike, which is approximately 3,800 feet south from where Baboosic Lake Road overpasses the Everett Turnpike. The crossing extends north-westerly over the state-owned land approximately 1,082 feet to where the state-owned property ends at the property boundary with Map 5C, Lot 658, which is located approximately 1,400 feet east from the next described crossing of the Souhegan River.

- The location of Structures 18 to 22 in this application creates a total span of 1423 feet with a span of 1082.9 feet crossing State-owned land in the Town of Merrimack.

The W157 Line crosses the Souhegan River between Structures 25 and 26 in the Town of Merrimack, which span commences approximately 2,360 feet west from where the W157 Line crosses the western edge of the Everett Turnpike, which is approximately 3,800 feet south from where the Baboosic Lake Road overpasses the Everett Turnpike. The crossing extends approximately 145 feet west to the western bank of the Souhegan River, which is approximately 1,300 feet east from where the line crosses Iris Drive, which is approximately 700 feet northeast from the intersection of Iris Drive and Turkey Hill Road.

- The location of Structures 25 and 26 creates a total span of 489.4 feet with a span of 145.1 feet crossing public water in the Town of Merrimack.

The W157 Line crosses the Souhegan River between Structures 33 and 34 in the Town of Merrimack, which span commences approximately 125 feet east from where the W157 Line crosses Turkey Hill Road, which is approximately 150 feet southeast from the intersection of Cota Road and Turkey Hill Road. The crossing extends approximately 95 feet to the western bank of the Souhegan River, which is approximately 2,400 feet east from where the line crosses Wilson Hill Drive, which is approximately 630 feet south of the intersection of Wilson Hill Road and Old Blood Road.

- The location of Structures 33 and 34 creates a total span of 518.8 feet with 95.4 feet crossing public water in the Town of Merrimack.

The W157 Line crosses Beaver Brook between Structures 92 and 93 in the Town of Amherst, which span commences approximately 40 feet southwest from where the W157 Line crosses Corduroy Road and at the intersection of Corduroy Road and Boston Post Road. The crossing extends approximately 15 feet to the western bank of the Beaver Brook, which is approximately 640 feet northeast from where the line crosses the intersection of NH Route 122 and the NH Route 101 west-bound on-ramp.

- The location of Structures 92 and 93 creates a total span of 439.9 feet with 15.6 feet crossing public water in the Town of Amherst.

The W157 Line crosses the Souhegan River between Structures 112 and 113 in the Town of Amherst and Milford, which span commences approximately 2,000 feet south from where the W157 Line crosses Merrimack Street, which is approximately 550 feet east from the intersection of Fox Run

Road and Merrimack Street. The crossing extends approximately 123 feet to the southern bank of the Souhegan River, which is approximately 1,030 feet northeast from where the line crosses the intersection of Nashua Road (aka NH Route 101A) and Kelly Park Lane in Milford.

- The location of Structures 112 and 113 creates a total span of 267.8 feet with 123.8 feet crossing public water in the Towns of Amherst and Milford.

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

Department of Energy, Enforcement Division Summary Table

Eversource W157 Line - State Land and Waterbody Crossing Details					
Structures	Type	Span Distance (feet)	Minimum NESCS Table 232-1 Clearance (ft.)	ES Vertical Design Clearance (ft.)	Complies with NESCS Table 232-1 (Y/N)
7-8	7 – Steel Type SDA-1 Class ENG 8 – Steel Type SRAX Class H1	589	30.1	31.7	Y
16-17	16 – Wood Type T Class H1 17 – Steel Type DA Class 3	475.3	18.6	20.9	Y
18-19	18 – Steel Type T Class H1 19 – Steel Type T Class H1	339.8	20.1	49	Y
19-20	20 – Steel Type T Class H1	369.9	20.1	36	Y
20-21	21 - Steel Type T Class H1	355.6	20.1	30.1	Y
21-22	22 - Steel Type T Class H1	357.7	20.1	27.4	y
25-26	25 – Steel Type T Class H1 26 – Wood Type A Class 3	489.4	18.6	31.6	Y
33-34	33 – Wood Type A2 Class 3 34 – Steel Type T Class H1	518.8	18.6	34	Y
92-93	92 – Wood Type A Class 3 93 – Steel Type T Class H1	439.9	18.6	43	Y
112-113	112 – Wood Type A Class 3 113 - Wood Type A Class 3	267.8	18.6	36.1	Y

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 water and State-owned land in Litchfield, Merrimack, Amherst and Milford, New Hampshire.

The public water crossings at the Merrimack River at Structures 7 and 8 and the Souhegan River at Structures 16 and 17, that are the subject of this application were both licensed in 1976 under DE 76-22 (Order # 12,219), copies of which were included with this application submission. The other public water crossings at the Souhegan River between Structures 25 and 26, 33 and 34, and 112 to 113, and Beaver Brook between Structures 92 and 93, and the state-owned land between Structures 18 and 22, that are also the subject of this application, were not previously licensed owing to oversight, or that the waterbodies were not designated as public waters, or the state did not have ownership at the time the W157 Line was built. The W157 Line in New Hampshire will be licensed in its entirety as a result of this application.

The Merrimack River in Litchfield is listed under the category “Public Rivers and Streams” in the Official List of Public Waters (OLPW), from the Juncture of Pemigewasset & Winnepesaukee Rivers in Franklin. The Souhegan River is listed under the category “Public Rivers and Streams” in the OLPW, from the Juncture of South and West Branches of the Souhegan River in New Ipswich. Beaver Brook in Amherst is listed under the category “Public Rivers and Streams” in the OLPW, from juncture of Caesar Brook. 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 a New Hampshire Department of Environmental Services (NHDES) Statutory Permit by Notification (SPN), and Shoreland Permit Notification (PBN) will be required for temporary impacts associated with the structure replacements described in this application and will be obtained prior to commencement of construction.

Eversource also asserts that the U.S. Army Corps of Engineers (ACOE) does regulate the Merrimack River as navigable waters 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 which licensing will be accomplished prior to commencement of the maintenance project. The Souhegan River and Beaver Brook crossing locations are not regulated by ACOE as navigable waters.

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 structure replacement work of this crossing project as described in the application, attachments, and all supplemental support documents 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 W157 Line is an integral part of Eversource's existing electric transmission system in New Hampshire. The crossing locations identified in the application are in Litchfield, Merrimack, Amherst and Milford, 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 and State-owned land will be maintained at all times and determined that public use and enjoyment of the public water and State-owned land 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:

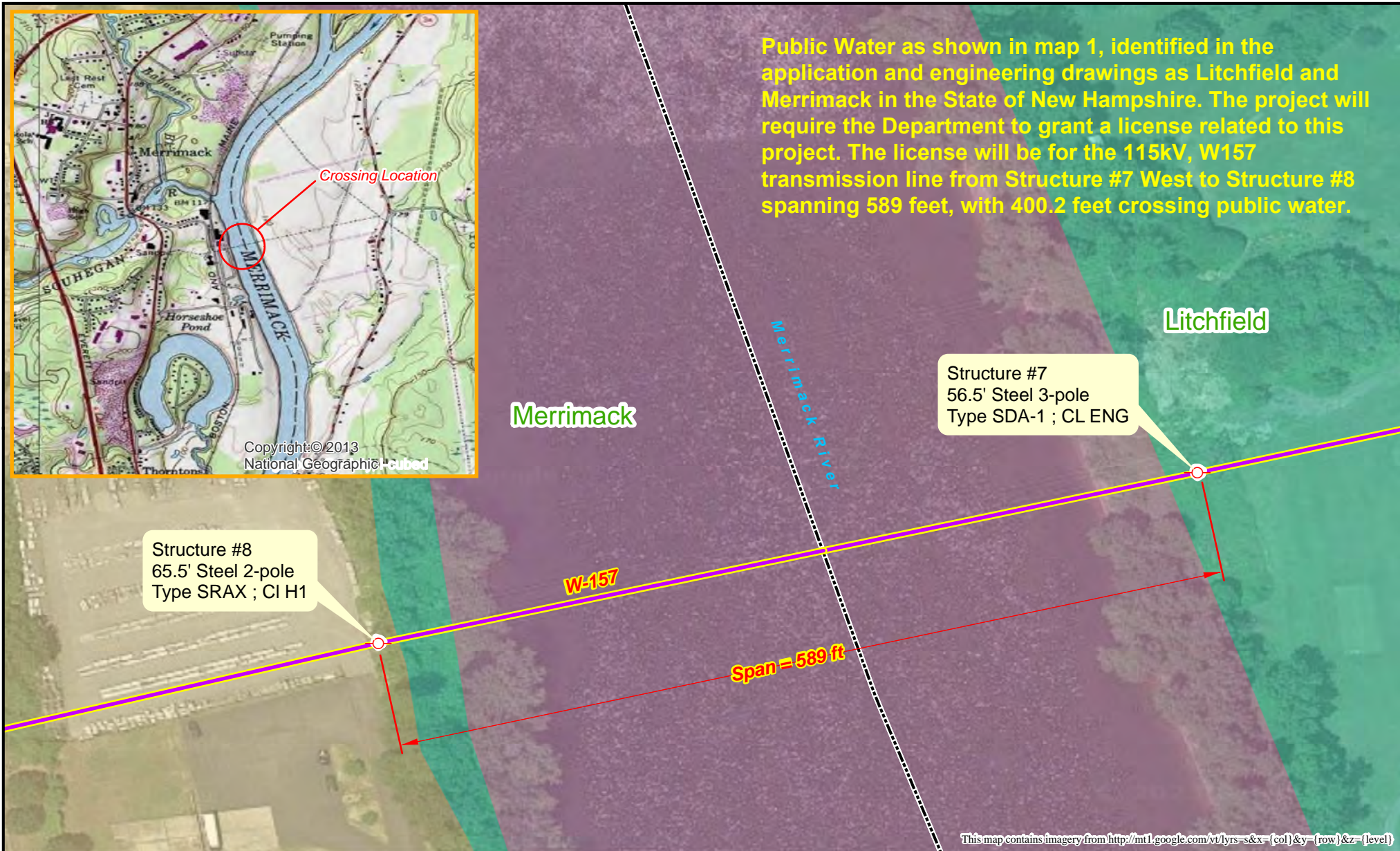
- 1) Find that the license Eversource requests in this application may be exercised without substantially affecting the public rights in public waters and State-owned land; and
- 2) Grant Eversource a license to construct and maintain electric lines pursuant to RSA 371:17 and Puc 306.01, over and across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

Attachments:

Merrimack River - CRE 2023-011 Eversource Crossing - Map 1



Public Water as shown in map 1, identified in the application and engineering drawings as Litchfield and Merrimack in the State of New Hampshire. The project will require the Department to grant a license related to this project. The license will be for the 115kV, W157 transmission line from Structure #7 West to Structure #8 spanning 589 feet, with 400.2 feet crossing public water.

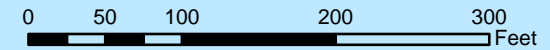


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 Utility Structure	Flood Hazard Zones
 115 kV Line	 Regulatory Floodway
	 1% Annual Chance Flood Hazard
	 0.2% Annual Chance Flood Hazard



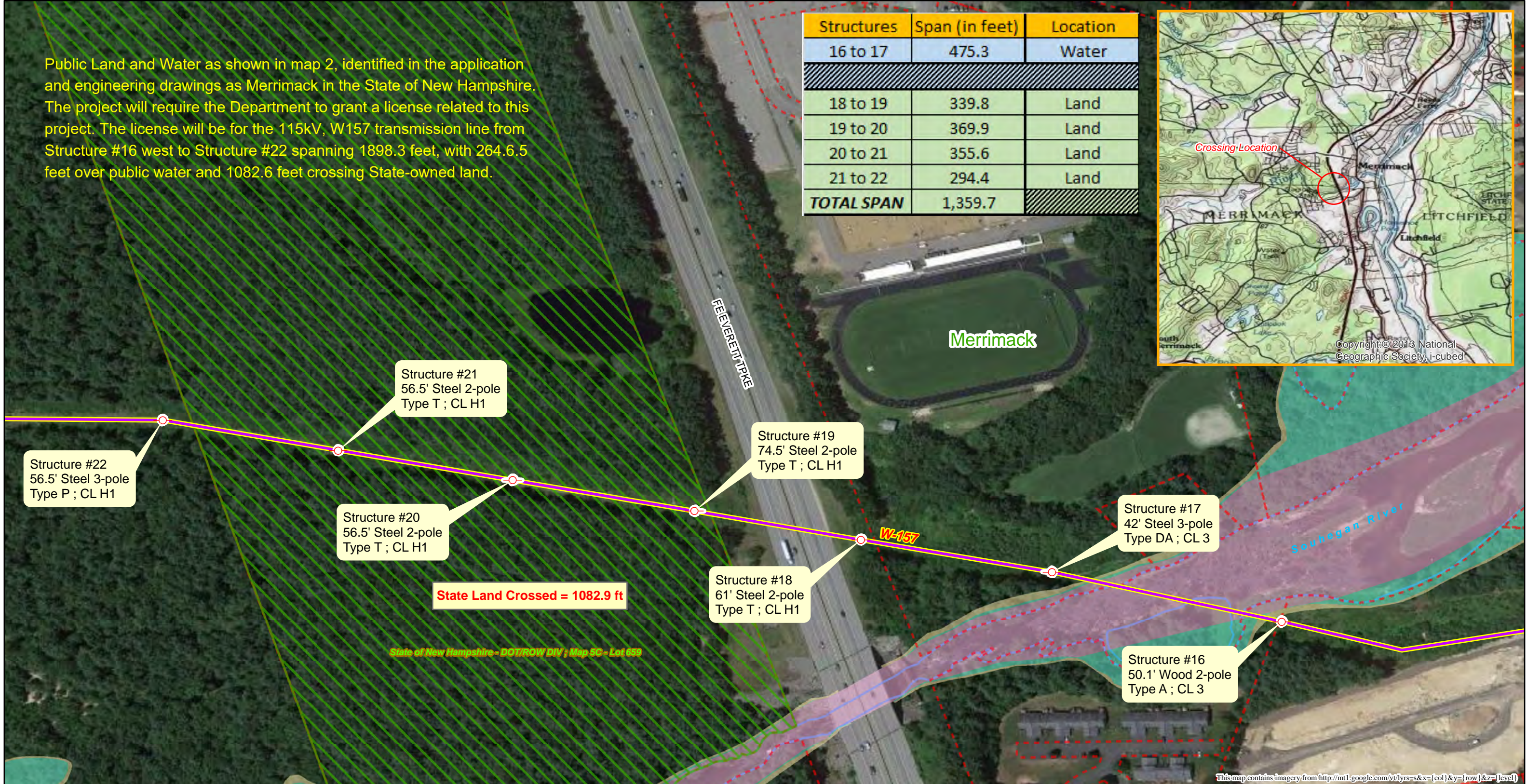
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Enforcement Division



State Land (NHDOT) & Souhegan River - CRE 2023-011 Eversource Crossing - Map 2

Public Land and Water as shown in map 2, identified in the application and engineering drawings as Merrimack in the State of New Hampshire. The project will require the Department to grant a license related to this project. The license will be for the 115kV, W157 transmission line from Structure #16 west to Structure #22 spanning 1898.3 feet, with 264.6.5 feet over public water and 1082.6 feet crossing State-owned land.

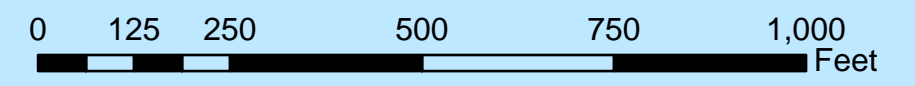
Structures	Span (in feet)	Location
16 to 17	475.3	Water
18 to 19	339.8	Land
19 to 20	369.9	Land
20 to 21	355.6	Land
21 to 22	294.4	Land
TOTAL SPAN	1,359.7	



Utility Structure	State Land Parcel	Flood Hazard Zones
115 kV Line	Town Parcel	Regulatory Floodway
		1% Annual Chance Flood Hazard
		0.2% Annual Chance Flood Hazard



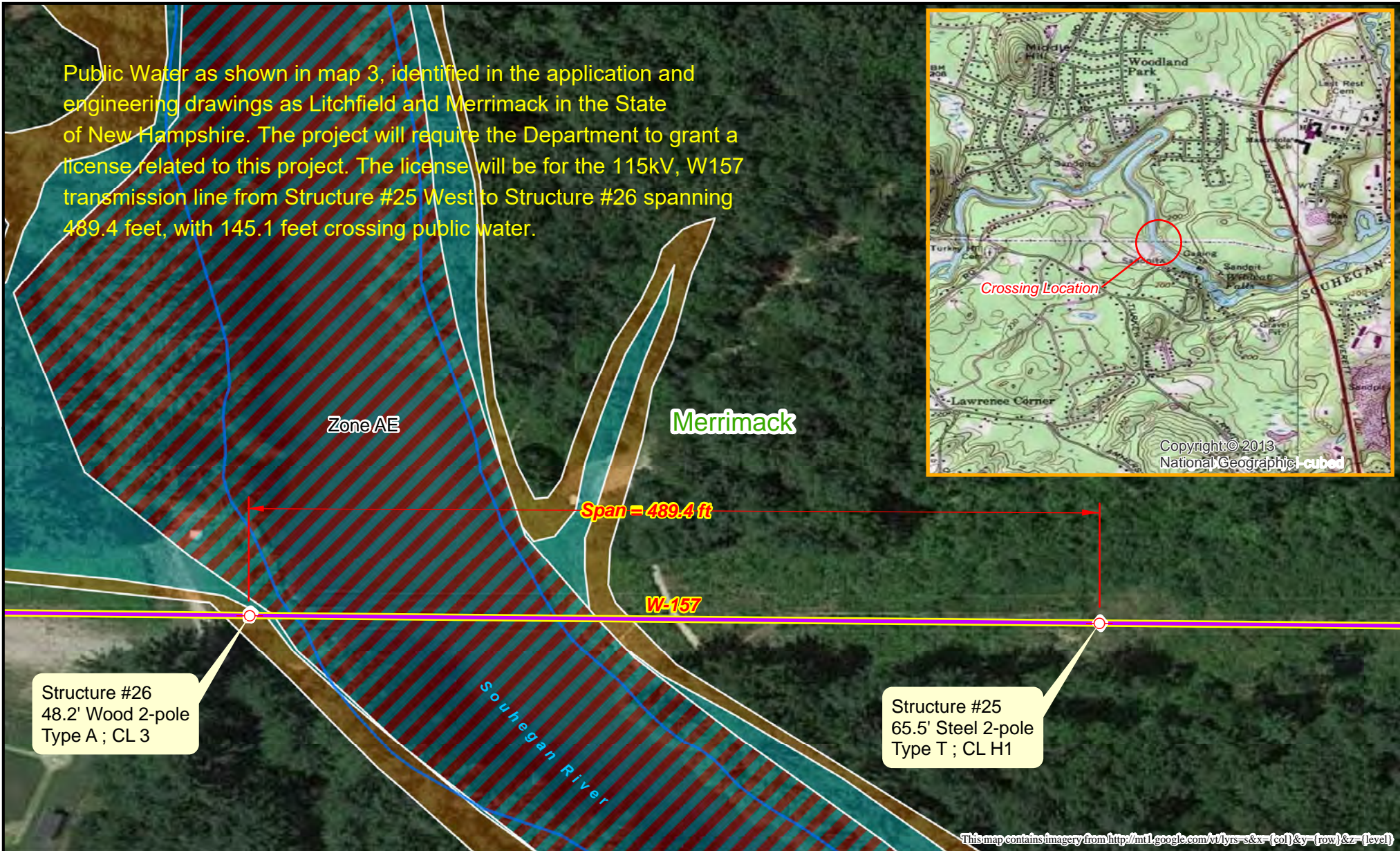
Prepared by:
NH Department of Energy
Enforcement Division



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Souhegan River - CRE 2023-011 Eversource Crossing - Map 3

Public Water as shown in map 3, identified in the application and engineering drawings as Litchfield and Merrimack in the State of New Hampshire. The project will require the Department to grant a license related to this project. The license will be for the 115kV, W157 transmission line from Structure #25 West to Structure #26 spanning 489.4 feet, with 145.1 feet crossing public water.



Structure #26
48.2' Wood 2-pole
Type A ; CL 3

Structure #25
65.5' Steel 2-pole
Type T ; CL H1

This map contains imagery from <http://mtl.google.com/vt/lyrs=s&x={col}&y={row}&z={level}>

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

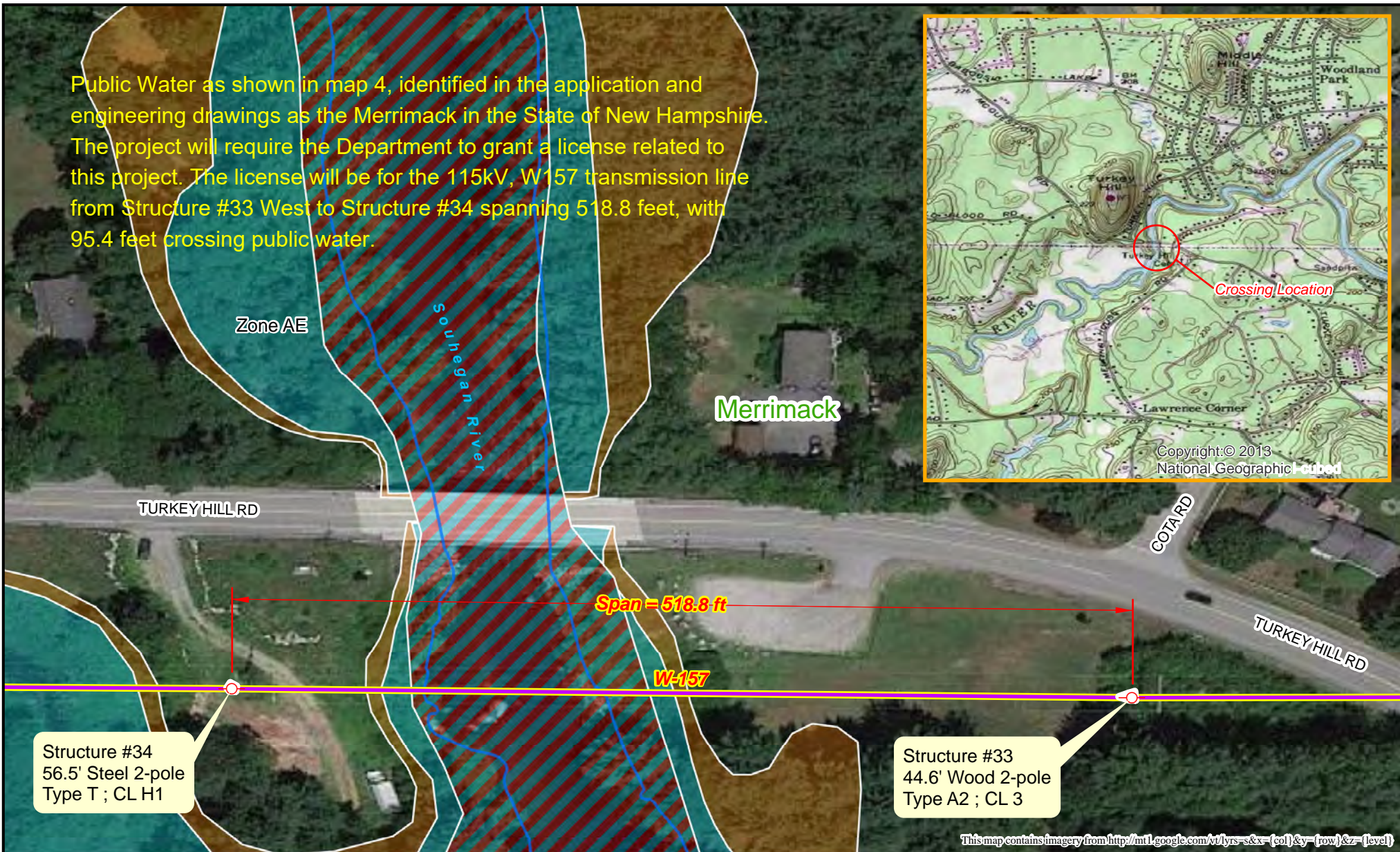


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Souhegan River - CRE 2023-011 Eversource Crossing - Map 4

Public Water as shown in map 4, identified in the application and engineering drawings as the Merrimack in the State of New Hampshire. The project will require the Department to grant a license related to this project. The license will be for the 115kV, W157 transmission line from Structure #33 West to Structure #34 spanning 518.8 feet, with 95.4 feet crossing public water.



Structure #34
56.5' Steel 2-pole
Type T ; CL H1

Structure #33
44.6' Wood 2-pole
Type A2 ; CL 3

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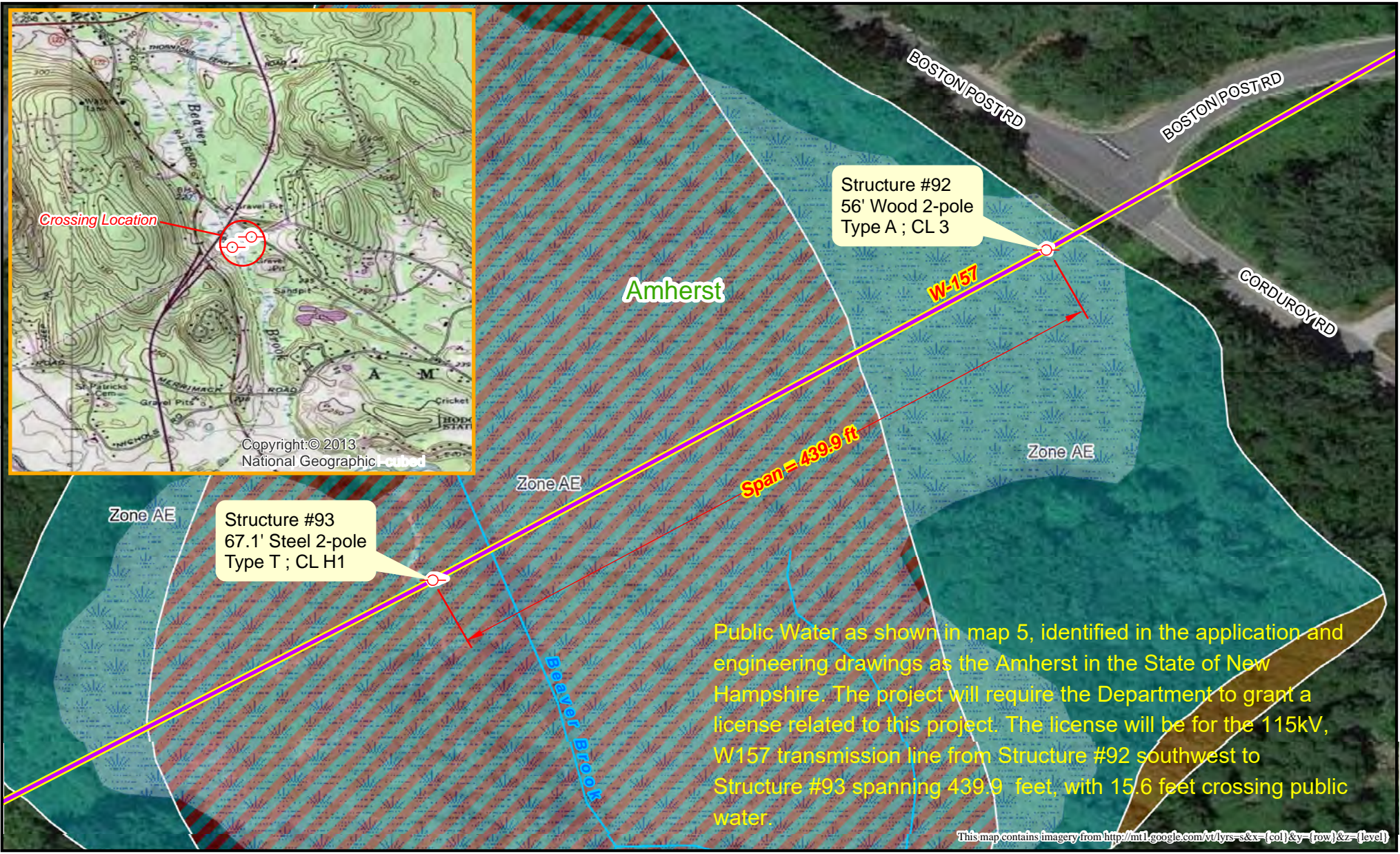
 Utility Structure	Flood Hazard Zones
 115 kV Line	 Regulatory Floodway
	 1% Annual Chance Flood Hazard
	 0.2% Annual Chance Flood Hazard



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Beaver Brook - CRE 2023-011 Eversource Crossing - Map 5



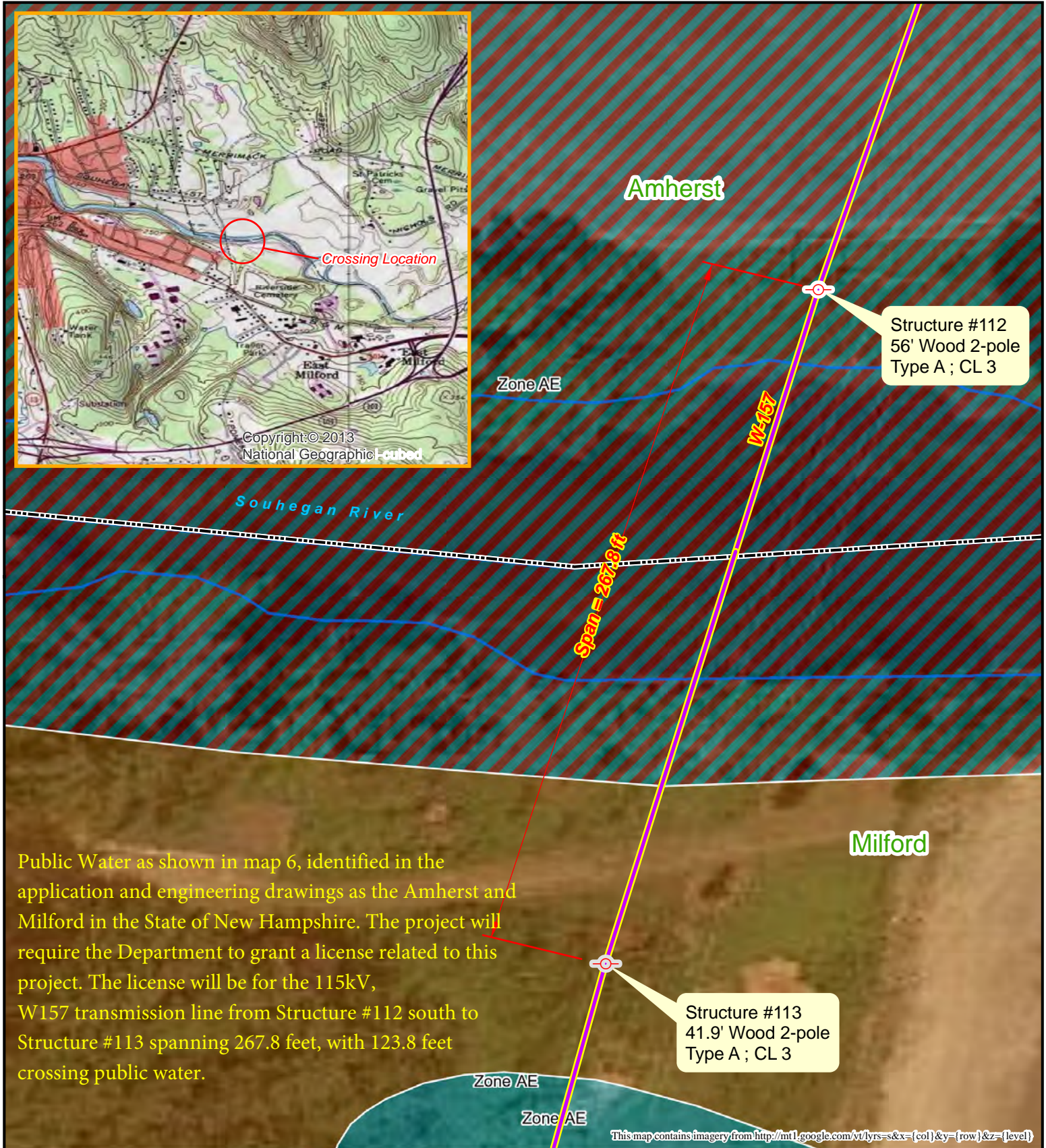
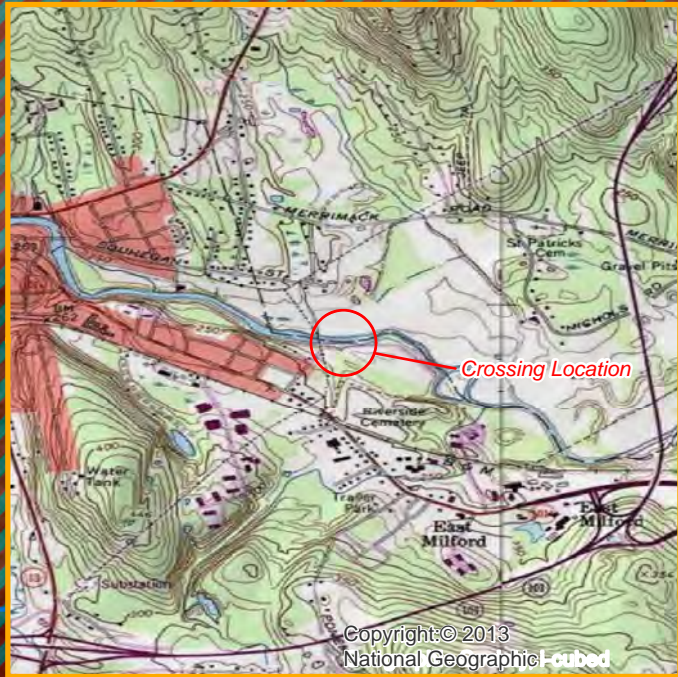
	Utility Structure		Swamp/Marsh
	115 kV Line	Flood Hazard Zones	
			Regulatory Floodway
			1% Annual Chance Flood Hazard
			0.2% Annual Chance Flood Hazard



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Souhegan River - CRE 2023-011 Eversource Crossing - Map 6

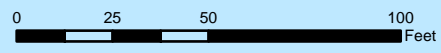


Public Water as shown in map 6, identified in the application and engineering drawings as the Amherst and Milford in the State of New Hampshire. The project will require the Department to grant a license related to this project. The license will be for the 115kV, W157 transmission line from Structure #112 south to Structure #113 spanning 267.8 feet, with 123.8 feet crossing public water.

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



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NH Department of Energy
Enforcement Division



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