



City of Keene, New Hampshire

CONSERVATION COMMISSION

Tuesday, February 16, 2021

4:30 PM

ZOOM

Commission Members

Alexander Von Plinsky, IV, Chair
Eloise Clark, Vice Chair
Kenneth Bergman
Art Walker
Andrew Madison

Councilor Robert Williams
Brian Reilly, Alternate
Thomas P. Haynes, Alternate
Steven Bill, Alternate
John Therriault, Alternate

- This meeting will be conducted using the online meeting platform, Zoom. The public may view the meeting online by visiting www.zoom.us/join and enter the Meeting ID: **868 3840 7352**.*
- More info on how to access this meeting is available on the Conservation Commission webpage at <https://ci.keene.nh.us/conservation-commission>
- If you encounter any issues accessing this meeting, please call **(603) 209-4697** during the meeting.

1. Call to Order
2. Approval of Meeting Minutes – January 19, 2020
3. Communication and Notifications
4. Informational
 - a. Subcommittee reports
 - Outreach Subcommittee
 - Arm Fund Subcommittee
 - b. NHACC Legislative Update 2021
 - www.nhacc.org
5. Discussion Items
 - a. Planning Board referral re Surface Water Ordinance – Eversource
SWP-CUP-01-21 -- Structure Replacement Project D108 Transmission Line
SWP-CUP-02-21 -- Structure Replacement Project L163 Transmission Line
 - b. Continued discussion – Greater Goose Pond Forest Management Plan Stewardship Committee
 - [Greater Goose Pond Stewardship Plan Adopted 5/2/2019](#)
 - c. Update – Bee City designation
 - d. Discussion -- Garlic Mustard Challenge
6. New or Other Business
7. Adjournment – Next meeting date **Monday, March 15, 2021**

**In Emergency Order #12, issued by the Governor pursuant to Executive Order #2020-04, which declared a COVID-19 State of Emergency, the requirement that a quorum of a public body be physically present at the meeting location under RSA 91-A:2, III(b), and the requirement that each part of a meeting of a public body be audible or otherwise discernible to the public at the meeting location under RSA 91-A:2, III(c), have been waived. Public participation may be provided through telephonic and other electronic means.*

Page intentionally left blank

1 **City of Keene**
2 **New Hampshire**

3
4
5 **CONSERVATION COMMISSION**
6 **MEETING MINUTES**
7

8 **Tuesday, January 19, 2021**

4:30 PM

Remote Meeting via Zoom

Members Present:

Alexander Von Plinsky, IV, Chair
Eloise Clark, Vice Chair
Councilor Bobby Williams
Ken Bergman
Art Walker
Andrew Madison
Brian Reilly, Alternate (Non-Voting)
John Therriault, Alternate (Voting)

Staff Present:

Rhett Lamb, Community Development
Director/Assistant City Manager
Andy Bohannon, Director of Parks,
Recreation & Facilities
Corinne Marcou, Administrative Assistant

Members Not Present:

Thomas Haynes, Alternate

9 **1) Call to Order**
10

11 Chair Von Plinsky called the meeting to order at 4:30 PM and read the Executive Order
12 authorizing a remote meeting: Emergency Order #12, issued by the Governor of the State of New
13 Hampshire pursuant to Executive Order #2020-04. Pursuant to this order, members present stated
14 their locations and whether calling alone. Steven Bill, Alternate, was participating in this meeting
15 as a member of the public having not yet sworn his oath.
16

17 **2) Vote for Chair and Vice Chair 2021**
18

19 Mr. Walker nominated Sparky Von Plinsky to continue serving as Chairman of the Conservation
20 Commission for the 2021 calendar year, which Councilor Williams seconded, and the
21 nomination passed with a unanimous roll call vote in favor
22

23 Chair Von Plinsky nominated Eloise Clark to continue serving as the Vice Chair of the
24 Conservation Commission for the 2021 calendar year, which Mr. Therriault seconded, and the
25 nomination passed with a unanimous roll call vote in favor.
26

27 **3) Approval of Meeting Minutes – December 21, 2020**
28

29 Vice Chair Clark moved to approve the minutes of December 21, 2020, which Mr. Walker
30 seconded, and the motion passed with a unanimous roll call vote in favor.

31

32 **4) Communication and Notifications**

33 **a. NHACC Donation Request – December 1, 2020**

34

35 Mr. Lamb explained that no actual request for donation was made at this time but rather this was
36 a notice that they would begin issuing requests for donations soon; the Commission usually
37 received formal donation requests during the spring. The Chairman stated his preference to wait
38 to make the donation until spring regardless, particularly to ensure sufficient funds would be
39 available in case individuals want to be sponsored to attend the NH Invasives Academy, as
40 discussed at the previous meeting.

41

42 Vice Chair Clark noted that Mr. Lamb should have received a communication from the Ashuelot
43 River Local Advisory Committee sharing their annual report. Mr. Lamb would share the report
44 with the Commission.

45

46 **5) Informational**

47 **a. Subcommittee Reports**

48 **i. Outreach Subcommittee**

49

50 Vice Chair Clark recalled that she had been sending "Nature Nuggets" to Ms. Marcou regularly
51 for posting on the City website and Community Development Department social media. Mr.
52 Bohannon noted that he shares those posts as well to the Parks and Recreation social media and
53 stated that they are among their most popular.

54

55 **ii. ARM Fund Subcommittee**

56

57 Chair Von Plinsky and Mr. Bergman hoped to meet and discuss ideas before the February
58 meeting. Mr. Lamb recalled discussion at the previous meeting about seeking ARM Funds for
59 Japanese knotweed management on the west bank of Beaver Brook across from the Russell Park
60 redesign, which the Chairman would keep in mind during subcommittee discussions.

61

62 **6) Discussion Items**

63 **a. Continued Discussion – Invasive Species Management**

64

65 Mr. Bohannon shared that he was contacted by an individual experienced in forestry and
66 invasives management who moved to Keene recently from the Midwest and he shared
67 information about this Commission's focus on invasives as well as that of the Ashuelot River
68 Park Advisory Board (ARPAB). This individual also registered for the NH Invasives Academy
69 and had submitted an application to join either this Commission or the ARPAB as an alternate
70 member. Chair Von Plinsky offered his contact information and willingness to share information
71 about this Commission with the individual should Mr. Bohannon want to share it. Mr. Bohannon

72 stated that he has agendized invasives and pollinators for the ARPAB's foreseeable meetings. A
73 member of his Staff is also interested in attending the NH Invasives Academy should the
74 Commission have funds for sponsorship.
75

76 The Chairman stated that he reviewed the Russell Park Master Plan, which he said looked like a
77 great opportunity for ARM funding. He asked when the next round of ARM funding would be.
78 Mr. Lamb thought that applications were solicited typically when funds are available and
79 assigned to different regions. The Chairman had spoken with someone from the NH Department
80 of Environmental Services on this matter and would inquire again. Vice Chair Clark stated that
81 when inquiring about the cemetery project last year she was informed that there is a set schedule
82 for proposals beginning in early spring, and so now would be the time to begin acting.
83

84 Mr. Bergman stated that he also reviewed the Master Plan for Russell Park, which cited a study
85 prepared by Jeff Littleton titled Natural Resource Inventory of Stream Riparian Buffers –
86 Conservation and Priority Plan for Keene, NH, and Mr. Bergman thought that plan might be
87 useful for the Commission to review. Mr. Lamb stated that the study was prepared during 2008-
88 2010 approximately, that it was included as background research for the Russell Park project,
89 and that some of Mr. Littleton's ideas were included in the Russell Park Master Plan. Mr. Lamb
90 would make it available to the Commission. Mr. Bohannon added that an aforementioned grant
91 application for Russell Park – Soak Up the Rain NH, provided through the Water Management
92 Bureau – had no funding available at this time.
93

94 Councilor Williams recalled a discussion at the December 2020 meeting about the Garlic
95 Mustard Challenge and suggested that now would be the time to establish an event. Following
96 questions on when the plant blooms most commonly, Vice Chair Clark confirmed that garlic
97 mustard does not bloom until the end of April or into May. The Chairman and Mr. Lamb would
98 agendize the matter as a priority item for the February meeting to establish a foundational plan.
99 Councilor Williams would reach out to the NH Garlic Mustard Challenge coordinator for ideas.
100

101 **b. Continued Discussion – Greater Goose Pond Forest Stewardship Plan**

102

103 Mr. Lamb continued the discussion that began at the previous meeting about establishing a
104 stewardship committee for the Greater Goose Pond Forest Stewardship Plan. He recalled that the
105 Commission agreed that the stewardship committee should report directly to City Council and
106 include representatives from the Conservation Commission. He and Mr. Bohannon sought
107 further input from the Commission at this meeting on the committee's make-up and charge – a
108 two/three sentence statement of the committee's priorities and objectives so Council knows what
109 they are assigning people to do. To begin, Mr. Lamb shared an email from Mr. Haynes that
110 proposed a main group of seven committee members with the following stakeholders:

- 111 1. Representative from Parks & Recreation – possibly Mr. Bohannon
- 112 2. Representative from Conservation Commission to perhaps act as the Chair
- 113 3. Ecologist/Biologist – Ideas include Mr. Littleton and Mr. Bergman

- 114 4. Forester – perhaps from the Forest Preservation Society, which holds the
115 property's easements.
116 5. Representative from the mountain biking community
117 6. An abutter to the property
118 7. Outreach coordinator – someone to promote and oversee educational
119 opportunities
120 a. If members of the Conservation Commission wanted Mr. Haynes to
121 serve on the stewardship committee, he felt he would fit best in this role.
122

123 Mr. Haynes' email concluded mentioning that he liked the Chairman's idea to have openings on
124 the committee for interested Antioch and Keene State College (KSC) students, providing them
125 an opportunity for hands-on learning. He suggested that a member of the Antioch Bird Club
126 could help potentially with bird surveys or studies. Mr. Lamb thought that Mr. Haynes'
127 suggestions were a great start and built well upon the broader stakeholder ideas discussed in
128 December 2020.
129

130 The Chairman recalled the goal for this meeting to establish recommendations on the
131 stewardship committee's proposed membership so that Mr. Lamb and Mr. Bohannon could draft
132 a charge for the committee, which the Commission to vote on in February and forward to
133 Council. He thought that having one or two Conservation Commission representatives would be
134 feasible due to the passion within this group, he thought that it would be easy to recruit a
135 member of the New England Mountain Bike Association (NEMBA) as well as an abutting
136 property owner, recalling that City Councilor Kate Bosley is an abutter. The Chairman thought it
137 logical to have staff from the Parks & Recreation Department attend the meetings but not be a
138 member of the committee. He said he and Mr. Lamb agreed this would be more appropriate than
139 staff being a voting member. He was hesitant to have so strong a focus on
140 ecologists/biologists/foresters should it not be easy to recruit these busy professionals. Finally,
141 the Chairman stated support for including students.
142

143 Vice Chair Clark recalled that a local forester, Tad Lacey, served on the original committee that
144 developed the Stewardship Plan and stated that there are professionals available in the area.
145

146 Consensus was reached on Mr. Haynes' proposed composition of the stewardship committee and
147 so Mr. Lamb and Mr. Bohannon would draft a charge and motion to pass this recommendation
148 along to Council. The Chairman would contact KSC and Antioch to gauge interest from students
149 and professors.
150

151 Mr. Bill noticed that a Keene City Planner served on the original stewardship plan committee
152 and asked if that would be an important role to include. Mr. Lamb thought that City Staff can
153 attend to advise the committee and recommended against staff listed in the membership. Mr. Bill
154 questioned whether a member of a local hiking group should be included if NEMBA would be
155 represented. The Chairman was unaware of a local hiking group as organized as NEMBA. Mr.
156 Lamb thought it was a good point given that there are multiple trail uses in the greater Goose

157 Pond Forest and potential for conflict exists, for which it would be prudent to create balance on
158 the stewardship committee if possible. The Chairman suggested including a few open slots on
159 the committee for general public users of the park.
160

161 Regarding the inclusion of students, Mr. Bergman stated that Antioch students are at the graduate
162 level, usually older, and more mature and experienced in topics related to this Stewardship Plan.
163 Though he said it could be possible to find highly motivated KSC undergraduate students.
164

165 **c. Continued Discussion – Bee City Designation**
166

167 Mr. Therriault explained that following the previous meeting, he worked with Mr. Lamb to draft
168 a resolution that included necessary details about Keene and the standard language of Bee City
169 USA proclamations nationwide that the organizing agency – The Xerces Society – seeks for
170 continuity. Mr. Therriault submitted the draft resolution to the Xerces Society and received
171 approval. Next, the resolution would be presented to City Council for approval, at which time
172 Mr. Therriault would submit the requisite fee to the Xerces Society. Mr. Lamb thought the
173 resolution would be presented to Council at their February 7 meeting.
174

175 **7) New or Other Business**
176

177 Vice Chair Clark reminded all that the NH Invasives Academy would begin March 4 and run
178 through April 8 on Thursdays from 4:00 PM-5:30 PM. Mr. Lamb would review the budget to
179 determine how many individuals could have their \$35 registration fees sponsored by the
180 Conservation Commission; he would follow-up via email.
181

182 Mr. Bergman asked whether the program is interactive. Councilor Williams recalled attending
183 the Academy previously, said it was interactive, and that he thought there would be good
184 discussions still despite limitations of a virtual format.
185

186 The Chairman stated his intention to attend. Vice Chair Clark offered to lead a more hands-on
187 tour of local invasives after the classes conclude to supplement interactivity that might be lacking
188 with a virtual format.
189

190 **8) Adjournment – Next Meeting Date: TUESDAY, February 16, 2021**
191

192 There being no further business, Chair Von Plinsky adjourned the meeting at 5:18 PM.
193

194 Respectfully submitted by,
195 Katie Kibler, Minute Taker
196 January 25, 2020

From: NHACC <Barbara@nhacc.org>
Sent: Wednesday, February 10, 2021 2:27 PM
To: Corinne Marcou
Subject: NHACC Legislative Update

Legislative Update December 2019.

[View this email in your browser](#)



New Hampshire Association of Conservation Commissions

Legislative Update 2021

At NHACC, we work in the legislature and on state committees to ensure conservation commissions are represented. We are keeping an eye on proposed legislation and tracking proposed bills that would affect conservation commissions or natural resources in NH. Please review the links to the general court website and let me know if you have any concerns or comments on these proposed bills.

[HB 82](#) This bill proposes language that amends RSA 477:46 to allow a governmental body and a landowner to change the terms of an established conservation easement. NHACC plans to testify in opposition to this bill because we feel this bill is not necessary and could have a negative

system by removing municipalities local control. It would remove the potential for net metering options for local producers that help save on energy costs, increase resilience, and generate more renewable energy. The NHACC Legislative Committee recommends we sign in opposition to this bill.

HB 426 This bill requires an assessment study for certain septic systems prior to the sale of certain developed waterfront properties. This recommendation came out of the Shoreland Septic Study Commission that NHACC sat on last year. The Commission made several recommendations including the requirement of a site assessment and septic system evaluation before a property is sold or transferred, for properties within 250 feet of shoreland. NHACC supports this bill and provided written testimony to the House Resources, Recreation and Development Committee.

HB 621 This bill will impact money going to LCHIP by allowing registers of deeds to retain a portion of the land and community heritage investment program surcharge. LCHIP is funded by a modest \$25 deed registration fee. It has funded many exceptional land conservation projects in NH and it is the only state source of funding for land protection. Diverting funds from this small fee would result in fewer projects being funded through this program. NHACC opposes this bill and will provide written testimony at the committee public hearing.

SB 48 This bill provides that the formula used by the department of revenue administration and current use board to determine current use tax rates shall not be considered confidential and shall be available to the public. It was voted ought to pass in committee. NHACC has not taken a position on this bill but we will continue to watch it and keep our members informed.

Additional bills of interest: RSA 91 –A Right-to-Know laws

HB108 AN ACT relative to minutes and decisions in nonpublic sessions under the right-to-know law. This bill requires that for meetings in a nonpublic session where the minutes or decisions were determined not be subject to public disclosure, a list shall be kept which shall include certain information. The list shall be made available for public disclosure.

Conditional Use Permit Application
Eversource Energy
D108 Transmission Line Structure Replacement Project



Known for excellence.
Built on trust.

GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION
MANAGEMENT

5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com



February 4, 2021
File No. 04.0190999.29

City of Keene
Planning Board
Attn: Chris Cusack, Chairman
3 Washington Street
Keene, New Hampshire 03431

Re: Conditional Use Permit Application
Eversource Energy
2020 D108 Transmission Line Structure Replacement Project
Keene, New Hampshire

Dear Chairman Cusack:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for the D108 Transmission Line Structure Replacement Project (see attached **Figure 1, Locus Plan**). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Keene Surface Water Protection Overlay District.

The overall proposed project includes the permanent removal of two utility structures and replacement of 17 utility structures along the existing D108 Transmission Line in Keene, New Hampshire. Additionally, OPGW is proposed to be installed to replace existing static wire which will improve the transmission line by serving to shield conductor wires below it from lightning and also serve as a telecommunications path for internal and third party communications. The D108 Transmission Line ROW is approximately 1.3 miles in length, beginning at the North Keene Substation and ending at the Emerald Street Substation, and has a width of approximately 270 feet. See **Figure 3 – Access and Permitting Plans** for a depiction of the proposed project. The Site crosses through residential, commercial, and rural properties, as well as five public roads including NH Route 12, NH Route 9, West Street, Island Street and Emerald Street. Natural cover within the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 79,114 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed



project also requires 126,244 sq. ft. of temporary buffer impact in uplands for access and work pad placement. A summary of wetland and buffer impacts is provided in the table below.

Table 1 – Summary of Wetland and Surface Water Buffer Impacts

Wetland ID	Classification	Temporary Wetland Impact	Temporary Upland Buffer Impact
KW-1	PSS1E		-
KW-2	R2UB		18,337
KW-3	PEM1Ex		82,277
KW-4	R2UB	11,358	
KW-5	PSS1E	43	
KW-6	PSS1E	667	
KW-7	R2UB	9,894	
KW-8	PSS1E	86	
KW-9	PEM1E/PSS1Fg	51,950	
KW-10	PSS1E/PEM1Fg		
KW-11	PEM1E	7	15,550
KW-12	PEM1E	1,357	
KW-13	PSS1E/PEM1E		-
KW-14	PSS1Ex		10,080
KW-15	PSS1E/PEM1E		
KW-16	PSS1E/PEM1E	3,752	
KW-17	PSS1E		
Total		79,114	126,244

Key to classifications:

- P = palustrine wetland system
 - UB = unconsolidated bottom
 - SS = scrub-shrub, 1 = broad-leaved deciduous
 - EM = emergent, 1= persistent

- R = riverine
 - 2 = lower perennial
 - UB = unconsolidated bottom
 - SB = stream bed

- Modifiers
 - E = nontidal, seasonally flooded/saturated
 - F = nontidal, semi permanently flooded
 - g = organic soil
 - x = excavated

The proposed project is necessary in order to support current and future electricity demands in the region. The proposed structure replacements were selected based on a line load modeling evaluation. When modeled with OPGW wire replacement specifications, it was determined that these structures needed to be replaced in order to meet current electrical standards. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW or construction of new lines associated with this project.



In addition to this Conditional Use Permit, Eversource will also be filing a Statutory Permit by Notification (SPN) with the Department of Environmental Services (DES); Wetlands Bureau. A Shoreland Permit by Notification will also be filed for impacts to the protected shoreland adjacent to the Ashuelot River.

Wetlands were delineated by GZA in 2016 in accordance with the United States Army Corps of Engineers (ACOE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the ACOE. GZA photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in October 2020. GZA classified wetlands in accordance with the "Classification of Wetlands and Deepwater Habitats of United States" (Federal Geographic Committee, 2013). The area of evaluation included approximately 1.4 miles of ROW.

In accordance with Section 102-1488 of the Keene Zoning Ordinance, a conditional use permit (CUP) issued by the Planning Board shall be required for a proposed use listed in Section 102-1489 when the proposed use is located on land within the Surface Water Overlay Protection District. The proposed D108 Transmission Line Replacement Project includes the installation of replacement structures and creation and/or improvement of existing dirt/gravel access roads and work pads in the Surface Water Overlay Protection District, and would thus fall under 102-1489 (b) "*Construction of a new structure or expansion of an existing structure that expands the footprint of that structure within the Surface Water Protection Overlay District.*," and 102-1489 (c) "*Construction of new roads, driveways for non-residential uses, and parking lots within the Surface Water Protection Overlay District.*" In accordance with the Surface Water Protection Conditional Use Permit (SWP CUP) Application form, the following criteria are addressed below.

- A. Why proposed use or activity cannot be placed outside of Overlay District.** The proposed work area is located within the existing cleared D108 Transmission Line ROW which is generally bordered by mature forest communities, as well as residential and commercial properties. Many of the proposed structure replacements are located in remote stretches of ROW that are 0.5 miles or more from the nearest access point. Due to these various site constraints, some travel through the Surface Water Overlay District is required. Additionally, some structure replacements and associated work pads must be located in the Surface Water Overlay District due to span requirements, which are required to meet electrical safety standards. Wherever possible, structure replacements, work pads, and access roads are proposed to be outside of wetlands and the Surface Water Overlay District.
- B. How encroachment into buffer zone has been minimized to maximum extent possible.** The project area is an existing ROW and therefore there are inherent limitations to significant changes in work locations. However, Eversource and the project team analyzed alternative structure replacement locations and access routes in order to minimize buffer impacts to the extent practicable. Where possible, access is designed at existing trails in the ROW. To the extent practicable, buffer zone impacts were avoided by a careful design of the project. Specifically, impacts related to structure replacements were avoided in Wetlands KW-1, KW-2, KW-10, KW-11, KW-13, and KW-14. Impacts were minimized to the extent practicable by utilizing existing access roads and avoiding permanent impacts to wetlands by placing structures outside of the wetland and buffer zone where possible. Best Management Practices (BMP) will be implemented along work areas in the ROW to reduce/limit potential effects.



- C. *How proposed use was designed to avoid adverse impacts to surface water resources.*** The least impacting alternative is to utilize the existing Eversource ROW to the greatest extent possible, which was accomplished by utilizing an existing ROW. The project has been designed to utilize existing access routes along the ROW, where possible, to minimize impacts to wetlands. Where temporary wetland impacts are proposed, the contractor will use wetland matting to minimize impacts. Disturbed wetland and upland areas will be graded and seeded with an appropriate seed mix, as necessary. The utility structures have been sited to avoid direct impacts to wetlands to the extent practicable. Utility structures 4, 5, 6, 10, and 11 have been sited to be replaced outside of wetlands in order to minimize wetland impact to the greatest extent practicable.
- D. *How the buffer will be maintained in a natural state.*** The proposed project will maintain the natural state of surface water buffers to the extent practicable. The majority of proposed impact is temporary, and permanent impact is limited to small areas associated with the installation of utility structures. Access roads installed within the surface water buffer and within the City of Keene floodplain overlay shall be restored by removing gravel temporarily placed for access and work pads. In addition, existing topsoil will be regraded to original contours to the greatest extent practicable. Seed and mulch will be applied to promote vegetation growth of disturbed areas. During construction, appropriate siltation prevention measures will be implemented along with additional BMPs such as perimeter controls (straw wattle, silt fence, etc.), stabilized construction entrances, check dams, water bars, sediment traps, and restoration methods such as seeding with native seed mixes, and mulching, as necessary, to prevent sedimentation and siltation impacts to surface waters and wetlands within the project area. The project includes the preparation of a Storm Water Pollution Prevention Plan and associated erosion control monitoring during and after construction, to monitor the progress of restoration. GZA is currently retained to provide erosion control monitoring, and advise Eversource on the installation and maintenance of erosion control measures during construction and restoration.
- E. *Location and connectivity of surface water in relation to surrounding watershed.*** The project area is located in the Middle Ashuelot River watershed. The majority of wetlands in the ROW are large scrub-shrub and scrub-shrub/emergent systems. Wetlands in the project area typically drain in a southerly direction into the Ashuelot River, which ultimately drains to the Connecticut River.
- F. *Extent to which buffer serves as wildlife habitat.*** The buffers in the proposed work area are located within the existing cleared Eversource ROW and are scrub-shrub/early successional dominated due to vegetation maintenance practices. This cover type provides wildlife habitat for a variety of bird, mammal, amphibian, and reptile species. The project is not converting any large cover type areas. As a result, the project is not expected to impact wildlife utilization in the larger landscape. The ROW will continue to provide early successional habitat to a variety of wildlife. Early successional habitat provides important breeding, foraging, and overwintering habitat to a variety of declining songbird species. As a result, the ROW will continue to provide important habitat components. The Natural Heritage Bureau (NHB) determined that although there are NHB records of rare wildlife, plant, and/or natural communities present in the vicinity of the D108 ROW, it is not anticipated that there will be impacts as a result of the proposed structure replacement project.



The project will include rare species BMPs as requested by the New Hampshire Fish and Game Department (NHFG). Prior to daily construction activities, timber matting will be reviewed by a monitor trained in wildlife identification and observed turtles and snakes will be safely relocated out of the active work zone, in similar nearby habitat. Observed turtles and snakes will be moved off of construction access roads to limit and prevent mortality to turtles and snakes during construction and will be reported to NHFG. Erosion control matting, if utilized, will consist of jute matting. Matting with plastic mesh will be avoided to limit unintentional mortality to snakes. In addition, common nighthawk (*Chordeiles minor*) was identified within the vicinity of the project site. Common nighthawks are ground nesting birds that typically nest in exposed gravelly soils. GZA has coordinated with NHB and NHFG and photos of common nighthawk will be incorporated into construction plans. Observations of common nighthawk on the project site will be reported to New Hampshire Fish and Game. At the conclusion of the project, a summary report of any rare species observations will be provided to the NHFG Nongame Program.

If you have additional questions, please contact Ms. Lindsey White at 603-232-8753 or at lindsey.white@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Lindsey White, WSA, SSA
Assistant Project Manager

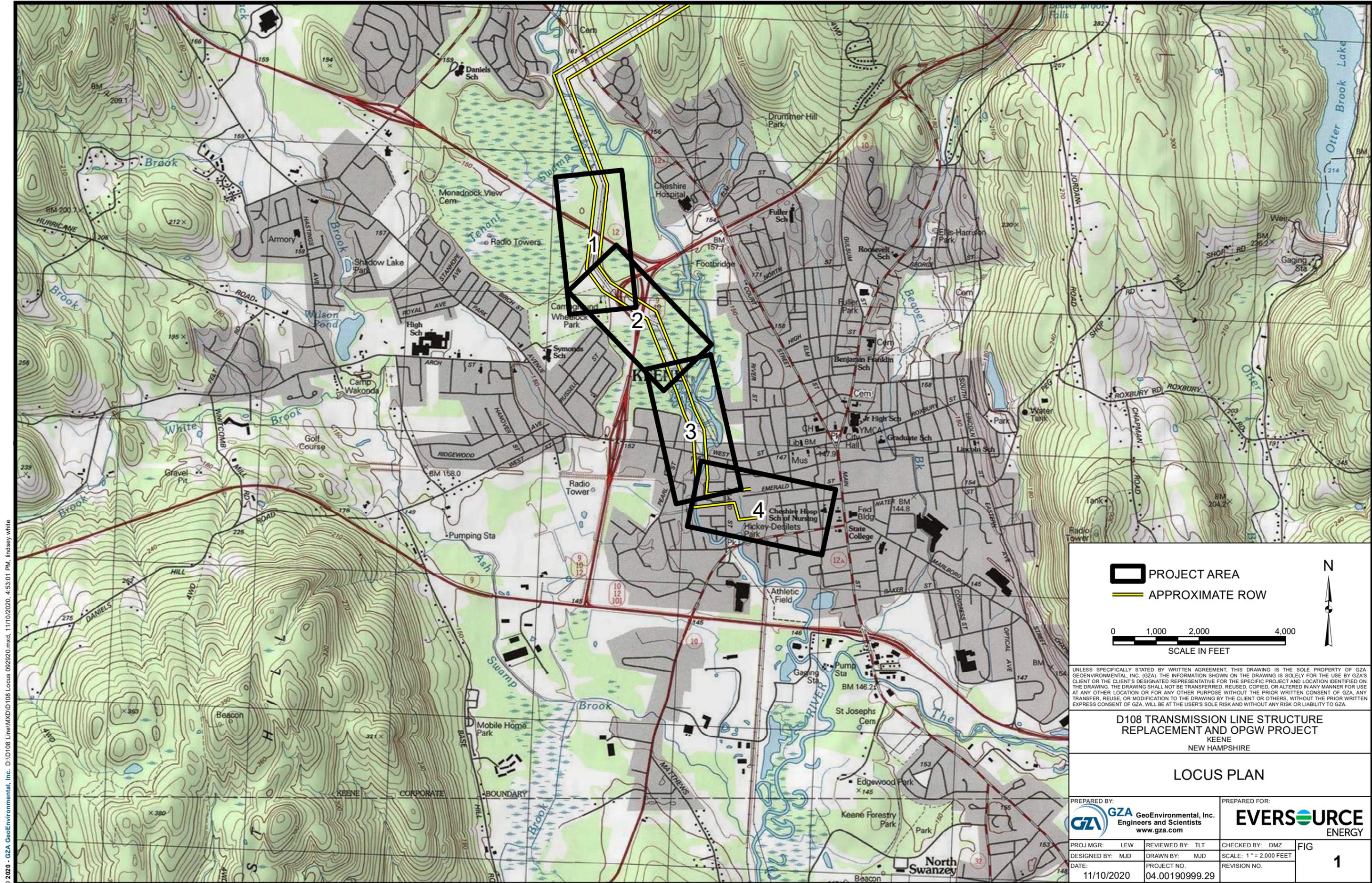
Deborah M. Zarta-Gier
Consultant/Reviewer

Tracy L. Tarr, CWS, CESSWI
Associate Principal

LEW/TLT/DMZ: jc

\\GZABEDFORD\JOBS\04\JOBS\01909005\04.0190999.00 - EE SITING PERMITTING 2019-2022\04.0190999.29 - D108 TRANSMISSION LINE REBUILD AND OPGW PROJECT\WORK\LOCAL PERMITTING\KEENE CUP\FINAL D108 STRUCTURE REPLACEMENTS KEENE CUP NARRATIVE 01182021.DOCX

- Attachments: Conditional Use Permit Application Form
List of Abutters
Photo Log
Figure 1 – Locus Plan
Figure 2 – Access and Permitting Plans
Application Fee



 PROJECT AREA
 APPROXIMATE ROW



UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

**D108 TRANSMISSION LINE STRUCTURE
 REPLACEMENT AND OPGW PROJECT**
 KEENE
 NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:
 **GZA** GeoEnvironmental, Inc.
 Engineers and Scientists
 www.gza.com

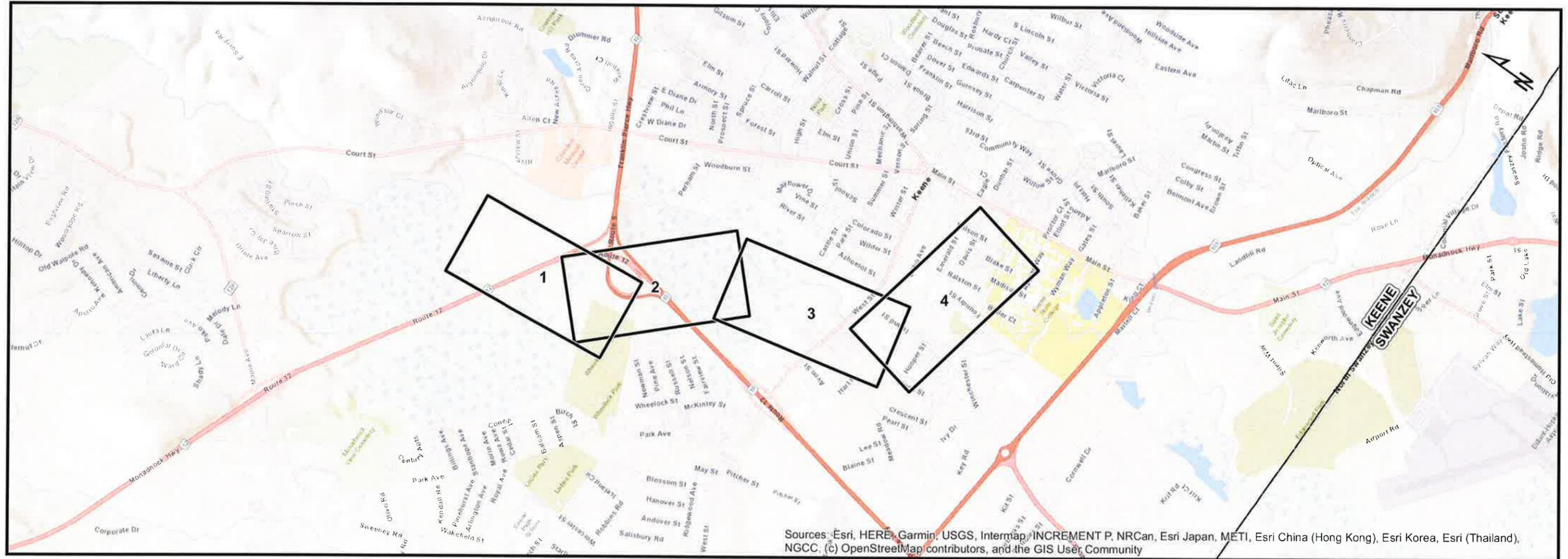
PREPARED FOR:
 **EVERSOURCE**
 ENERGY

PROJ MGR: LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	FIG 1
DESIGNED BY: MJD	DRAWN BY: MJD	SCALE: 1" = 2,000 FEET	
DATE: 11/10/2020	PROJECT NO: 04.00190999.29	REVISION NO.	

DRAFT

D108 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

**KEENE,
NEW HAMPSHIRE
ACCESS AND PERMITTING PLANS
2/4/2021**



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

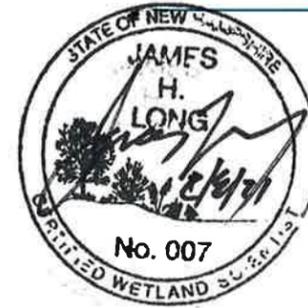
PREPARED FOR



INDEX OF FIGURES

1 inch = 1,865 feet

- T1: TITLE SHEET**
- 1-4: MAP SHEETS**
- S1: NOTES**
- S2: DETAILS**

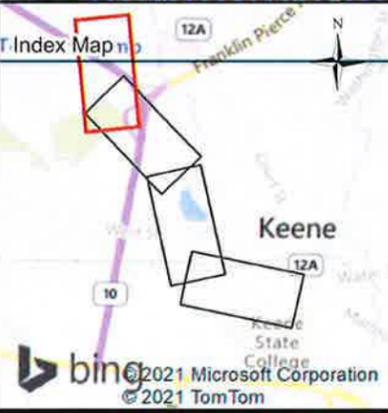


PREPARED BY

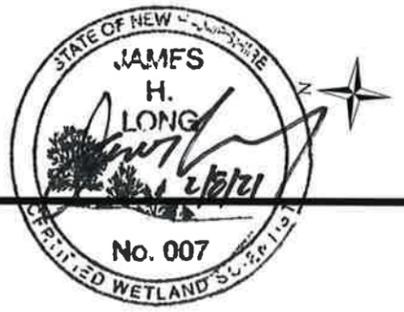


GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

DRAFT



<ul style="list-style-type: none"> PROPOSED STRUCTURE EXISTING STRUCTURE TO BE REPLACED OR RENUMBERED EXISTING STRUCTURE TO BE REMOVED 75-FT WETLAND BUFFER (IMPACT AREAS TO BE RESTORED) TEMPORARY WETLAND IMPACT UPLAND RESTORATION AREA PARCEL BOUNDARY EVERSOURCE OWNED PARCEL NHD FLOWLINE NHDOT ROAD WORK PAD PULL PAD PRIMARY ACCESS ROUTE SECONDARY ACCESS ROUTE EXISTING TRANSMISSION LINE FENCE 	<ul style="list-style-type: none"> POTENTIAL VERNAL POOL WETLAND BOUNDARY APPROXIMATE ROW 2FT ELEVATION CONTOURS EROSION CONTROL EXISTING RAIL TRAIL FLOODPLAIN AREA
---	---



Current Town: Keene

NOTES

- AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE AND IS DATED 2015.
- STRUCTURE AND TRANSMISSION LINE DATA WAS PROVIDED BY EVERSOURCE ENERGY.
- "NHD FLOWLINE," "NHDOT ROADS," "PEATLANDS," "RAILROAD," AND "PARCEL BOUNDARY" WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
- WETLANDS WERE DELINEATED BY GZA IN 2016 AND SURVEY LOCATED BY DOUCET SURVEY, INC. IN 2016.
- APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
- POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
- FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
- 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.

0 100 200 400 Feet

D108 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

ACCESS AND PERMITTING PLANS
FEBRUARY 04, 2021

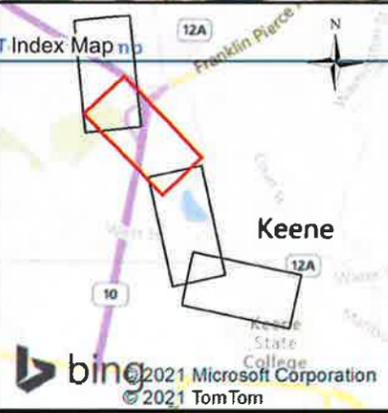
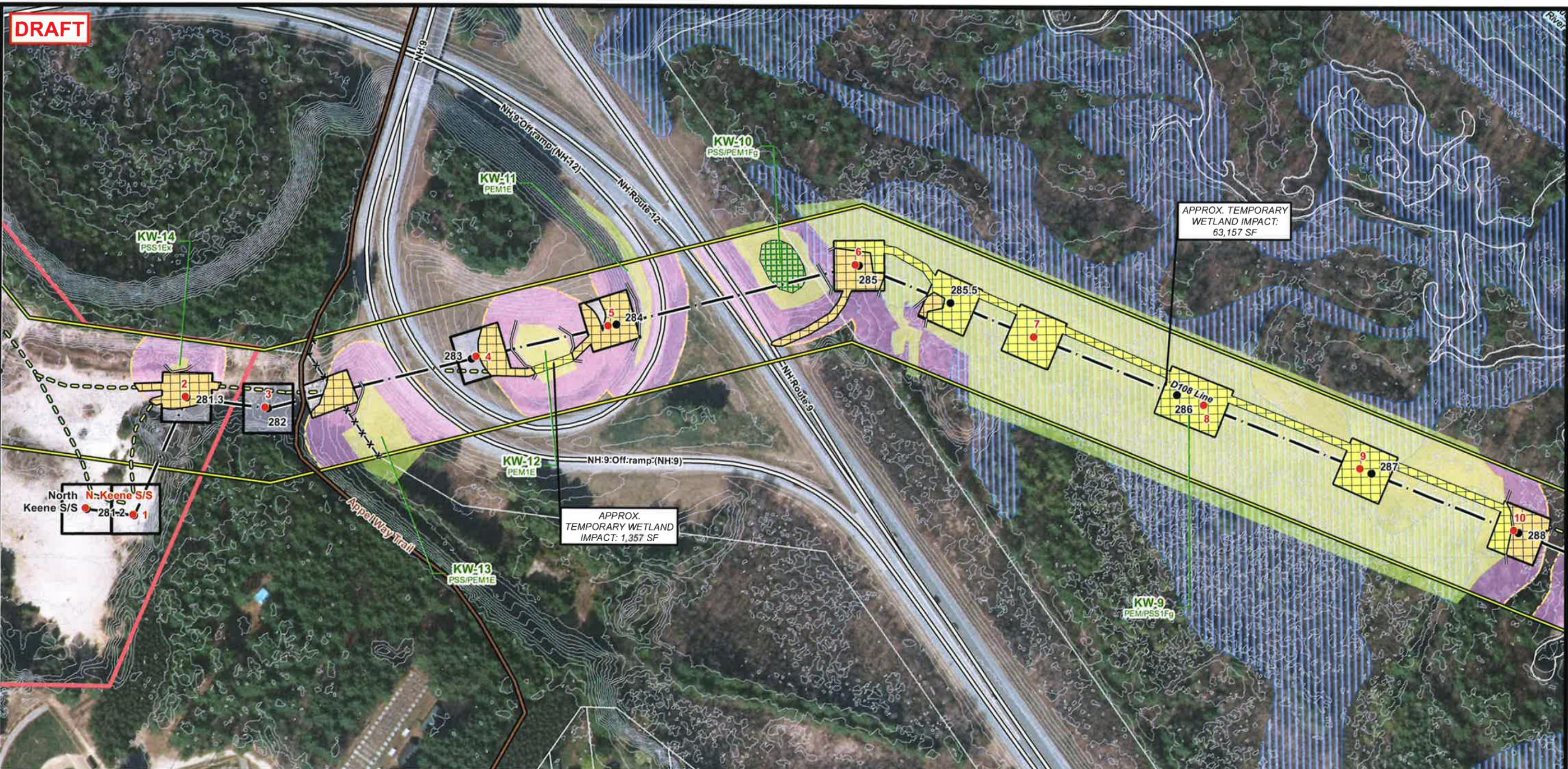
KEENE
NEW HAMPSHIRE
PAGE 1 OF 4

04.0190999.29

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

1 inch = 200 feet



Current Town: Keene

● PROPOSED STRUCTURE	⊠ POTENTIAL VERNAL POOL
● EXISTING STRUCTURE TO BE REPLACED OR RENUMBERED	— WETLAND BOUNDARY
● EXISTING STRUCTURE TO BE REMOVED	— APPROXIMATE ROW
— 75-FT WETLAND BUFFER (IMPACT AREAS TO BE RESTORED)	— 2FT ELEVATION CONTOURS
— TEMPORARY WETLAND IMPACT	— EROSION CONTROL
— UPLAND RESTORATION AREA	— EXISTING RAIL TRAIL
— PARCEL BOUNDARY	— FLOODPLAIN AREA
— EVERSOURCE OWNED PARCEL	
— NHD FLOWLINE	
— NHDOT ROAD	
— WORK PAD	
— PULL PAD	
— PRIMARY ACCESS ROUTE	
— SECONDARY ACCESS ROUTE	
— EXISTING TRANSMISSION LINE	
— FENCE	



NOTES

1. AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE AND IS DATED 2015.
2. STRUCTURE AND TRANSMISSION LINE DATA WAS PROVIDED BY EVERSOURCE ENERGY.
3. "NHD FLOWLINE," "NHDOT ROADS," "PEATLANDS," "RAILROAD," AND "PARCEL BOUNDARY" WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
4. WETLANDS WERE DELINEATED BY GZA IN 2016 AND SURVEY LOCATED BY DOUCET SURVEY, INC. IN 2016.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.

0 100 200 400 Feet

D108 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

ACCESS AND PERMITTING PLANS
FEBRUARY 04, 2021

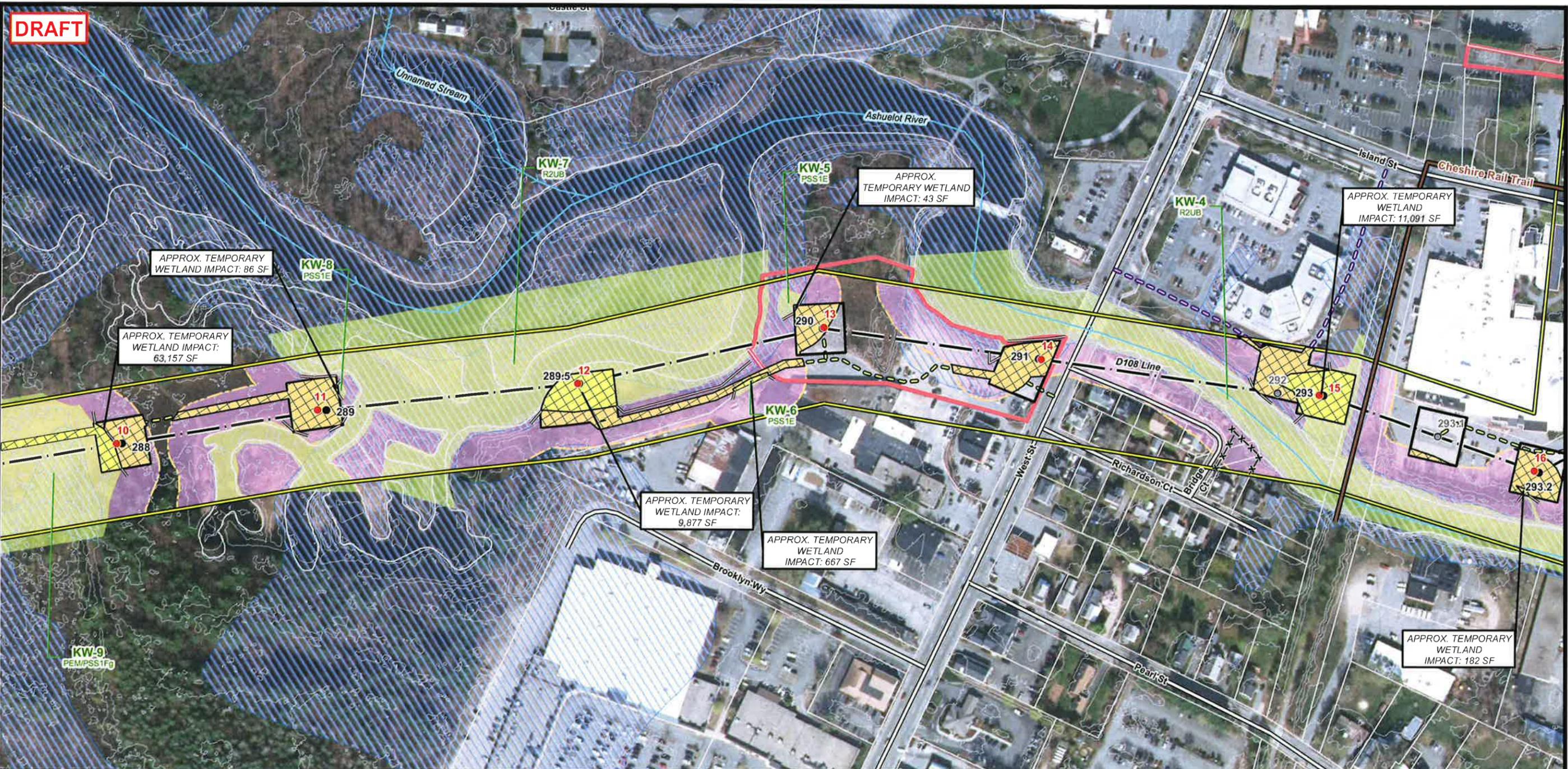
KEENE
NEW HAMPSHIRE
PAGE 2 OF 4

04.0190999.29

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

1 inch = 200 feet



Current Town: Keene

<ul style="list-style-type: none"> ● PROPOSED STRUCTURE ● EXISTING STRUCTURE TO BE REPLACED OR RENUMBERED ○ EXISTING STRUCTURE TO BE REMOVED 75-FT WETLAND BUFFER (IMPACT AREAS TO BE RESTORED) TEMPORARY WETLAND IMPACT UPLAND RESTORATION AREA PARCEL BOUNDARY EVERSOURCE OWNED PARCEL NHD FLOWLINE NHDOT ROAD WORK PAD PULL PAD PRIMARY ACCESS ROUTE SECONDARY ACCESS ROUTE EXISTING TRANSMISSION LINE FENCE 	<ul style="list-style-type: none"> POTENTIAL VERNAL POOL WETLAND BOUNDARY APPROXIMATE ROW 2FT ELEVATION CONTOURS EROSION CONTROL EXISTING RAIL TRAIL FLOODPLAIN AREA
---	---

NOTES

1. AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE AND IS DATED 2015.
2. STRUCTURE AND TRANSMISSION LINE DATA WAS PROVIDED BY EVERSOURCE ENERGY.
3. "NHD FLOWLINE," "NHDOT ROADS," "PEATLANDS," "RAIL ROAD," AND "PARCEL BOUNDARY" WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
4. WETLANDS WERE DELINEATED BY GZA IN 2016 AND SURVEY LOCATED BY DOUCET SURVEY, INC. IN 2016.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.

0 100 200 400 Feet

D108 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

ACCESS AND PERMITTING PLANS
FEBRUARY 04, 2021

KEENE
NEW HAMPSHIRE
PAGE 3 OF 4

04.0190999.29

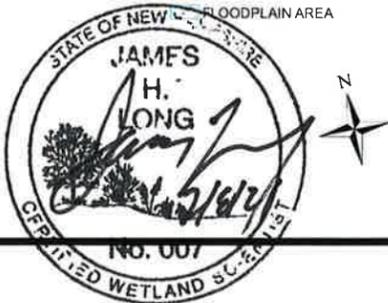
EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

1 inch = 200 feet



- Current Town: Keene**
- PROPOSED STRUCTURE
 - EXISTING STRUCTURE TO BE REPLACED OR RENUMBERED
 - EXISTING STRUCTURE TO BE REMOVED
 - 75-FT WETLAND BUFFER (IMPACT AREAS TO BE RESTORED)
 - TEMPORARY WETLAND IMPACT
 - UPLAND RESTORATION AREA
 - PARCEL BOUNDARY
 - EVERSOURCE OWNED PARCEL
 - NHD FLOWLINE
 - NHDOT ROAD
 - WORK PAD
 - PULL PAD
 - PRIMARY ACCESS ROUTE
 - SECONDARY ACCESS ROUTE
 - EXISTING TRANSMISSION LINE
 - FENCE
 - POTENTIAL VERNAL POOL
 - WETLAND BOUNDARY
 - APPROXIMATE ROW
 - 2FT ELEVATION CONTOURS
 - EROSION CONTROL
 - EXISTING RAIL TRAIL
 - FLOODPLAIN AREA



- NOTES**
- AERIAL IMAGERY WAS OBTAINED FROM NH GRANIT CLEARINGHOUSE AND IS DATED 2015.
 - STRUCTURE AND TRANSMISSION LINE DATA WAS PROVIDED BY EVERSOURCE ENERGY.
 - "NHD FLOWLINE," "NHDOT ROADS," "PEATLANDS," "RAILROAD," AND "PARCEL BOUNDARY" WERE OBTAINED FROM NH GRANIT CLEARINGHOUSE.
 - WETLANDS WERE DELINEATED BY GZA IN 2016 AND SURVEY LOCATED BY DOUCET SURVEY, INC. IN 2016.
 - APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
 - POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
 - FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
 - 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.
- 0 100 200 400 Feet

D108 TRANSMISSION LINE STRUCTURE REPLACEMENT PROJECT

ACCESS AND PERMITTING PLANS
FEBRUARY 04, 2021

KEENE
NEW HAMPSHIRE
PAGE 4 OF 4

04.0190999.29

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

1 inch = 200 feet

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 1	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed access within wetland KW-16.			

Photo No. 2	Date: 10/7/20		
Direction Photo Taken: Northwest			
Description: View of proposed access adjacent to L163 Structure 281.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 3	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of Structure 282, proposed for replacement.			

Photo No. 4	Date: 10/7/20		
Direction Photo Taken: South			
Description: View of Structure 283 and wetland KW-12.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 5	Date: 10/7/20		
Direction Photo Taken: North			
Description: View of wetland KW-12 and area of proposed access between Structure 283 & 284.			

Photo No. 6	Date: 10/7/20		
Direction Photo Taken: West			
Description: View of Structure 285 and proposed impacts within wetland KW-9.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 7	Date: 10/7/20		
Direction Photo Taken: Northeast			
Description: View of Structure 285 within wetland KW-9.			

Photo No. 8	Date: 10/7/20		
Direction Photo Taken: Northeast			
Description: View of Structure 285.5 within wetland KW-9.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 9	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed access between Structure 285.5 and 286.			

Photo No. 10	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed access between Structure 286 and 287.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 11	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed work pad at Structure 287.			

Photo No. 12	Date: 10/7/20		
Direction Photo Taken: North			
Description: View of proposed work pad at Structure 288.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 13	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed work pad at Structure 289 adjacent to the Ashuelot River.			

Photo No. 14	Date: 10/7/20		
Direction Photo Taken: Northeast			
Description: View of proposed work pad at Structure 289.5.			

Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 15	Date: 10/7/20		
Direction Photo Taken: Southeast			
Description: View of proposed work pad at Structure 290.			

Photo No. 16	Date: 10/7/20		
Direction Photo Taken: West			
Description: View of proposed work pad at Structure 292 within wetland KW-4.			

Client Name: Eversource Energy	Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
--	--	-------------------------------------

Photo No. 17	Date: 10/7/20
Direction Photo Taken: South	

Description:
View of proposed work pad at Structure 293.1.



Photo No. 18	Date: 10/7/20
Direction Photo Taken: Southeast	

Description:
View of proposed work pad at Structure 293.2.



Client Name: Eversource Energy		Site Location: D108 Transmission Line Keene, New Hampshire	Project No. 04.0190999.29
Photo No. 19	Date: 10/7/20		
Direction Photo Taken: South			
Description: View of proposed work pads between Structures 296 and 297 adjacent to an unnamed stream and the Emerald Street Substation.			

Photo No. 20	Date: 10/7/20		
Direction Photo Taken: South			
Description: View of the Emerald Street Substation.			

Conditional Use Permit Application

Eversource Energy

L163 Transmission Line Copperweld Replacement Project



Known for excellence.
Built on trust.

GEOTECHNICAL

ENVIRONMENTAL

ECOLOGICAL

WATER

CONSTRUCTION
MANAGEMENT

5 Commerce Park North
Suite 201
Bedford, NH 03110
T: 603.623.3600
F: 603.624.9463
www.gza.com



February 4, 2021
File No. 04.0190999.36

City of Keene
Planning Board
Attn: Chris Cusack, Chairman
3 Washington Street
Keene, New Hampshire 03431

Re: Conditional Use Permit Application
Eversource Energy
2020 L163 Transmission Line Copperweld Replacement Project
Keene, New Hampshire

Dear Chairman Cusack:

This letter transmits a Conditional Use Permit Application on behalf of Public Service Company of New Hampshire doing business as Eversource Energy (Eversource), for the L163 Transmission Line Structure Replacement Project (see attached **Figure 1, Locus Plan**). On behalf of Eversource, GZA GeoEnvironmental, Inc. (GZA) is requesting consideration of a Conditional Use Permit Application for required impacts within the City of Keene Surface Water Protection Overlay District.

The overall proposed project includes the replacement of 14 utility structures along the existing L163 Transmission Line in Keene, New Hampshire. Additionally, copperweld fiber wire is proposed to be replaced by optical ground wire which will improve the transmission line by serving to shield conductor wires below it from lightning and also serve as a telecommunications path for internal and third party communications. The copperweld fiber replacement requires bucket truck access to 8 utility structures and 3 pull pad locations for equipment. The L163 Transmission Line ROW is approximately 13 miles in length, beginning at the Tuttle Hill Substation in Antrim and ending at the North Keene Substation in Keene, and has a width of approximately 270 feet. See **Figure 3 – Access and Permitting Plans** for a depiction of the proposed project. The Site crosses through residential and rural properties, as well as five public roads. The natural cover in the ROW includes upland shrublands and wetland emergent and scrub-shrub habitats.

In total, the proposed project requires approximately 58,639 sq. ft. of temporary wetland impact for equipment access and work pad placement. The proposed



project also requires 97,789 sq. ft. of buffer impact in uplands for access and work pad placement. A summary of wetland and buffer impacts is provided in the table below.

Table 1 – Summary of Wetland and Surface Water Buffer Impacts

Wetland ID	Classification	Temporary Wetland Impact	Temporary Upland Buffer Impact
KW-15	PSS/PEM1E	-	9,318
KW-16	PSS/PEM1E	5,492	
KW-17	PSS1E	15,838	7,157
KW-18	PSS/PEM1E	1,878	
KW-20	R2UB	-	379
KW-21	PSS1B	1,773	11,970
KW-22	PSS1E	3,440	9,889
KW-23	PEM1F/PFO1F	1,832	2,603
KW-24	PEM/PSS1G	868	2,946
KW-25	PEM1G/R3UB1	-	
KW-26	PUB4Hb/PEM1G	3,530	7,159
KW-27	PEM/PSS1E	4,497	12,236
KW-28	PEM1E	7,166	4,873
KW-29	PSS1E/PFO1/4E	-	
KW-30	PSS1E	-	3,808
KW-31	PSS1E/F/PFO1/4E	-	3,434
KW-32	PSS1E/PFO1/4E	2,184	3,637
KW-33	PSS1E	361	3,923
KW-34	PFO1/4E/PEM/PSS1E	-	859
KW-37	PSS1E	-	-
KW-38	PFO1/4E/PSS/PEM13	9,297	8,977
KW-51	PSS1E	-	-
KW-52	PSS1E	366	4,621
KW-53	PEM1Ex	117	
KW-54	PEM1Ex	-	-
Total		58,639	97,789

Key to classifications:

P = palustrine wetland system
 UB = unconsolidated bottom
 SS = scrub-shrub, 1 = broad-leaved deciduous
 EM = emergent, 1= persistent

R = riverine
 2 = lower perennial
 UB = unconsolidated bottom
 SB = stream bed

Modifiers
 E = nontidal, seasonally flooded/saturated
 F = nontidal, semi permanently flooded
 g = organic soil
 x = excavated



The proposed project is necessary in order to support current and future electricity demands in the region. The proposed structure replacements were selected based on a line load modeling evaluation. When modeled with copperweld wire replacement specifications, it was determined that these structures needed to be replaced in order to meet current electrical standards. The existing wood structures will be replaced with wood equivalent steel structures in order to increase the long-term reliability of the line. There are no proposed expansions to the ROW or construction of new lines associated with this project.

In addition to this Conditional Use Permit, Eversource will also be filing a Statutory Permit by Notification (SPN) with the Department of Environmental Services (DES); Wetlands Bureau. Shoreland Permits by Notification will also be filed for impacts to protected shoreland adjacent to the Ashuelot River.

Wetlands were delineated by GZA in 2016 in accordance with the United States Army Corps of Engineers (ACOE) Wetlands Delineation Manual using the Routine Determinations Method, and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual as required by the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the ACOE. GZA photographed resources and recorded data relevant to functions and values provided by these natural resources within the ROW in September 2019. GZA classified wetlands in accordance with the "Classification of Wetlands and Deepwater Habitats of United States" (Federal Geographic Committee, 2013). The area of evaluation included approximately 4 miles of ROW.

In accordance with Section 102-1488 of the Keene Zoning Ordinance, a conditional use permit (CUP) issued by the planning board shall be required for a proposed use listed in Section 102-1489 when the proposed use is located on land within the Surface Water Overlay Protection District. The proposed L163 Transmission Line Replacement Project includes the installation of replacement structures and creation and/or improvement of existing dirt/gravel access roads and work pads in the Surface Water Overlay Protection District, and would thus fall under 102-1489 (b) "*Construction of a new structure or expansion of an existing structure that expands the footprint of that structure within the Surface Water Protection Overlay District.*," and 102-1489 (c) "*Construction of new roads, driveways for non-residential uses, and parking lots within the Surface Water Protection Overlay District.*" In accordance with the Surface Water Protection Conditional Use Permit (SWP CUP) Application form, the following criteria are addressed below.

- A. Why proposed use or activity cannot be placed outside of Overlay District.** The proposed work area is located within the existing cleared L163 Transmission Line ROW which is generally bordered by mature forest communities, as well as residential, commercial, and industrial properties. The ROW is approximately 270 feet wide and has limited access points off five public roads in the City of Keene including Route 12, Court Street, Old Gilsum Road, Route 10 and Ferry Brook Road. Many of the proposed structure replacements are located in remote stretches of ROW that are 0.5 miles or more from the nearest access point. Due to these various site constraints, some travel through the Surface Water Overlay District is required. Additionally, some structure replacements and associated work pads must be located in the Surface Water Overlay District due to span requirements, which are required to meet electrical safety standards. Wherever possible, structure replacements, work pads, and access roads are proposed to be outside of wetlands and the Surface Water Overlay District.



- B. *How encroachment into buffer zone has been minimized to maximum extent possible.*** The project area is an existing ROW and therefore there are inherent limitations to significant changes in work locations. However, Eversource and the project team analyzed alternative structure replacement locations and access routes in order to minimize buffer impacts to the extent practicable. Where possible, access is designed at existing trails in the ROW. To the extent practicable, buffer zone impacts were avoided by a careful design of the project. Specifically, impacts related to structure replacements were avoided in wetlands KW-15, KW-26, and KW-3. Impacts were minimized to the extent practicable by utilizing existing access roads and avoiding permanent impacts to wetlands by placing structures outside of the wetland and buffer zone where possible. Best Management Practices (BMP) will be implemented along work areas in the ROW to reduce/limit potential effects.
- C. *How proposed use was designed to avoid adverse impacts to surface water resources.*** The least impacting alternative is to utilize the existing Eversource ROW to the greatest extent possible, which was accomplished by utilizing an existing ROW. The project has been designed to utilize existing access routes along the ROW, where possible, to minimize impacts to wetlands. Where temporary wetland impacts are proposed, the contractor will use wetland matting to minimize impacts. Disturbed wetland and upland areas will be graded and seeded with an appropriate seed mix, as necessary. The utility structures have been sited to avoid direct impacts to wetlands to the extent practicable.
- D. *How the buffer will be maintained in a natural state.*** The proposed project will maintain the natural state of surface water buffers to the extent practicable. The majority of proposed impact is temporary, and permanent impact is limited to small areas associated with the installation of utility structures and the construction of the gravel access road. Access roads installed within the surface water buffer and within the City of Keene floodplain overlay shall be restored by removing gravel temporarily placed for access and work pads. In addition, existing topsoil will be regraded to original contours to the greatest extent practicable. Seed and mulch will be applied to promote vegetation growth of disturbed areas. During construction, appropriate siltation prevention measures will be implemented along with additional BMPs such as perimeter controls (straw wattle, silt fence, etc.), stabilized construction entrances, check dams, water bars, sediment traps, and restoration methods such as seeding with native seed mixes, and mulching, as necessary, to prevent sedimentation and siltation impacts to surface waters and wetlands within the project area. The project includes the preparation of a Storm Water Pollution Prevention Plan and associated erosion control monitoring during and after construction, to monitor the progress of restoration.
- E. *Location and connectivity of surface water in relation to surrounding watershed.*** The project area is located in the Middle Ashuelot River and The Branch watershed. The majority of wetlands in the ROW are large scrub-shrub and scrub-shrub/emergent systems. Wetlands in the project area typically drain in a southerly direction into the Ashuelot River, which ultimately drains to the Connecticut River.
- F. *Extent to which buffer serves as wildlife habitat.*** The buffers in the proposed work area are located within the existing cleared Eversource ROW and are scrub-shrub/early successional dominated due to vegetation maintenance practices. This cover type provides wildlife habitat for a variety of bird, mammal, amphibian and reptile species. The project is not converting any large cover type areas. As a result, the project is not expected to impact wildlife utilization in the larger landscape. The ROW will continue to provide early successional habitat to a variety of wildlife. Early successional habitat



provides important breeding, foraging, and overwintering habitat to a variety of declining songbird species. As a result, the ROW will continue to provide important habitat components. The Natural Heritage Bureau (NHB) determined that although there are NHB records of rare wildlife, plant, and/or natural communities present in the vicinity of the L163 ROW, it is not anticipated that there will be impacts as a result of the proposed structure replacement project.

The project will include rare species BMPs as requested by the New Hampshire Fish and Game Department (NHFG). Prior to daily construction activities, timber matting will be reviewed by a monitor trained in wildlife identification, and observed turtles and snakes will be safely relocated out of the active work zone, in similar nearby habitat. Observed turtles and snakes will be moved off of construction access roads to limit and prevent mortality to turtles and snakes during construction, and will be reported to NHFG. Erosion control matting, if utilized, will consist of jute matting. Matting with plastic mesh will be avoided to limit unintentional mortality to snakes.

We anticipate this submittal addresses the requirements of the CUP review. Should you have any questions, please contact Conor Madison at 603-232-8784 or at conor.madison@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Conor Madison, CPESC, CESSWI
Scientist I

Deborah M. Zarta-Gier, CNRP
Consultant/Reviewer

Tracy L. Tarr, CWS, CESSWI
Associate Principal

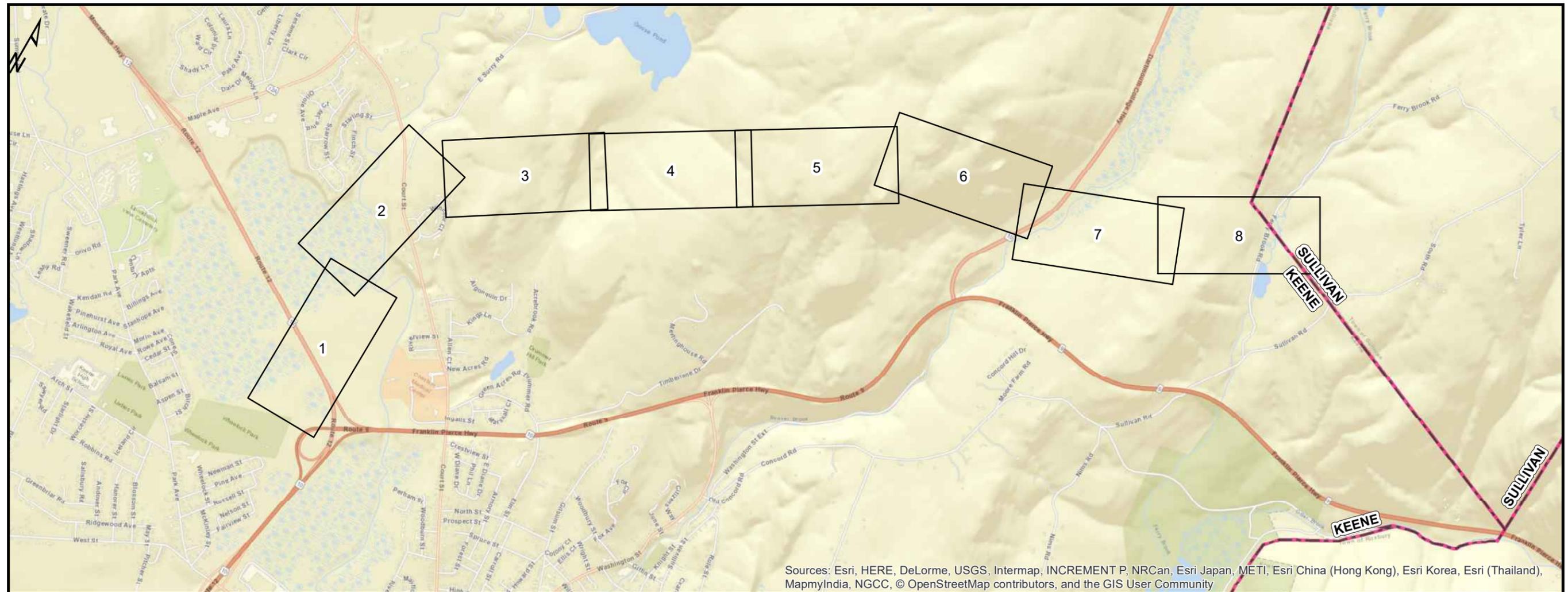
CEM/TLT/DMZ: jc

P:\04\JOBS\0190900S\04.0190999.00 - EE SITING PERMITTING 2019-2022\04.0190999.36 - L163 COPPERWELD RETIREMENT\WORK\LOCAL PERMITTING\KEENE\CUP\DRAFT L163 STRUCTURE REPLACEMENTS KEENE CUP NARRATIVE.DOCX

- Attachments: Conditional Use Permit Application Form
- List of Abutters
- Photo Log
- Figure 1 – Locus Plan
- Figure 2 – Access and Permitting Plans
- Application Fee

L163 TRANSMISSION LINE COPPERWELD RETIREMENT PROJECT

**KEENE,
NEW HAMPSHIRE
2/8/2021**



PREPARED FOR



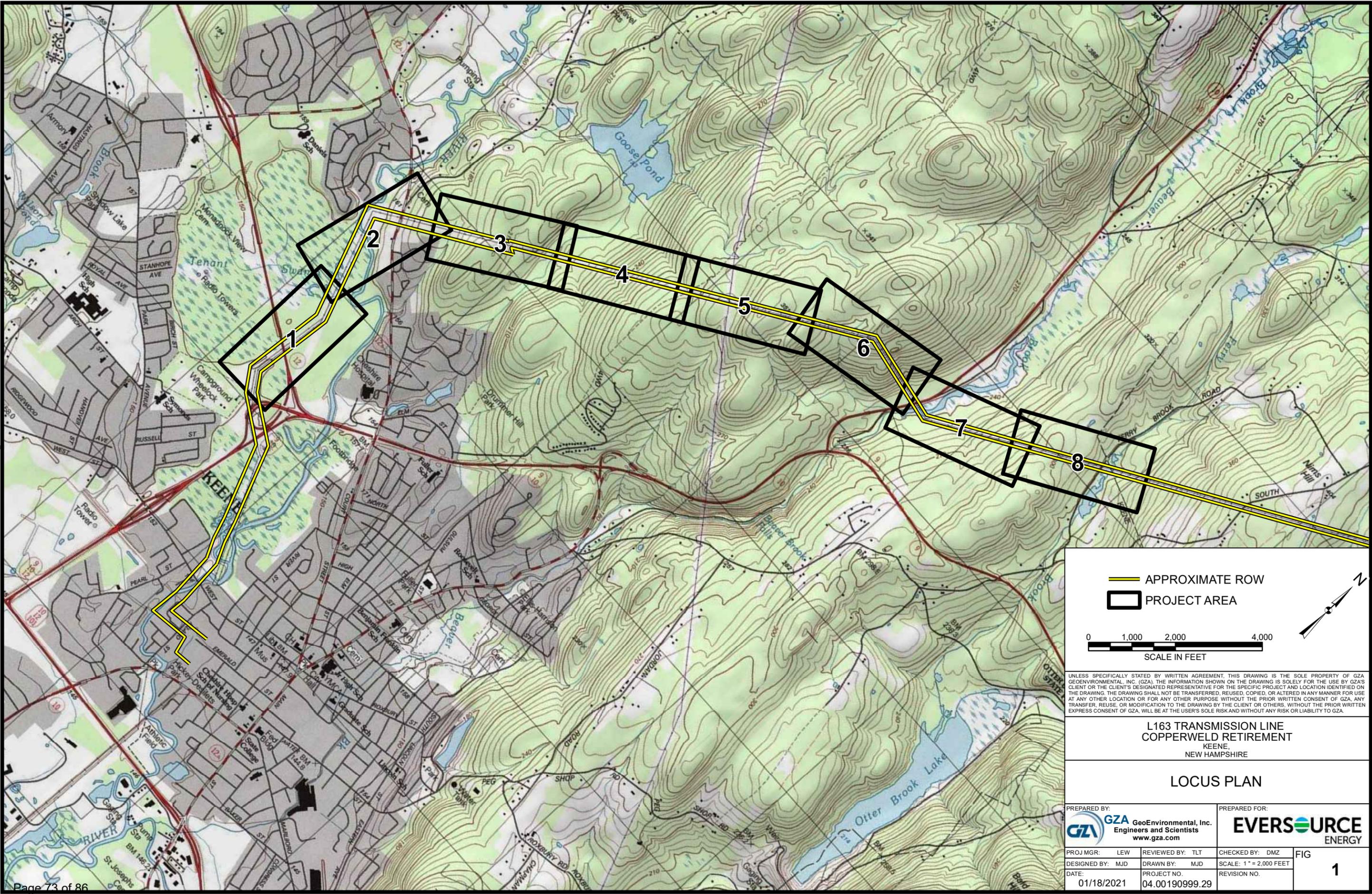
INDEX OF FIGURES

1 inch = 2,083 feet

- T1: TITLE SHEET**
- 1-8: MAP SHEETS**
- S1: NOTES**
- S2: DETAILS**

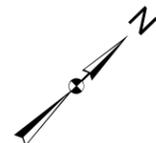
PREPARED BY





— APPROXIMATE ROW

▭ PROJECT AREA



UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

L163 TRANSMISSION LINE
COPPERWELD RETIREMENT
KEENE,
NEW HAMPSHIRE

LOCUS PLAN

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

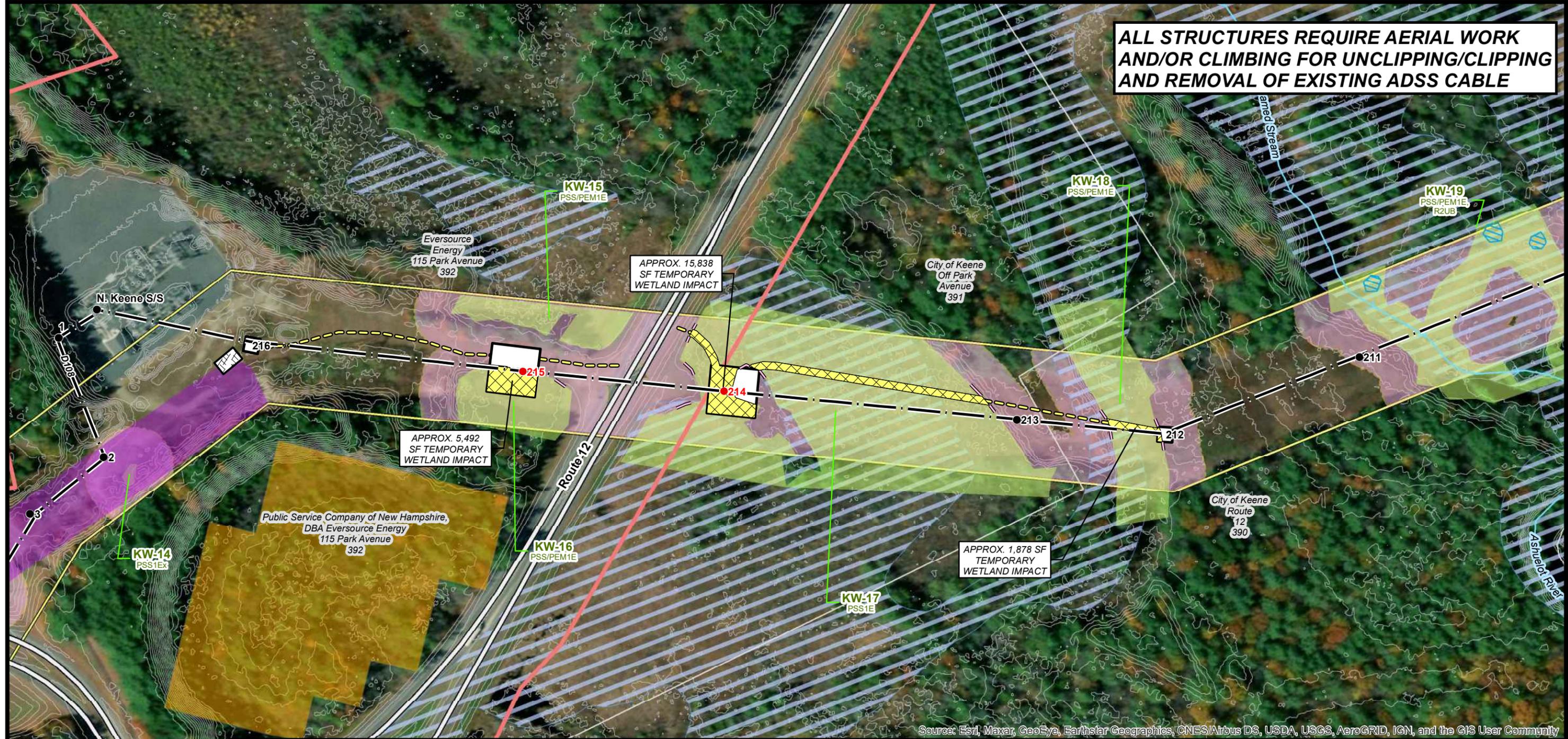
PREPARED FOR:
EVERSOURCE
ENERGY

PROJ MGR: LEW
DESIGNED BY: MJD
DATE: 01/18/2021

REVIEWED BY: TLT
DRAWN BY: MJD
PROJECT NO.: 04.00190999.29

CHECKED BY: DMZ
SCALE: 1" = 2,000 FEET
REVISION NO.

FIG
1



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Current Town: Keene	
● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	— NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	— STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



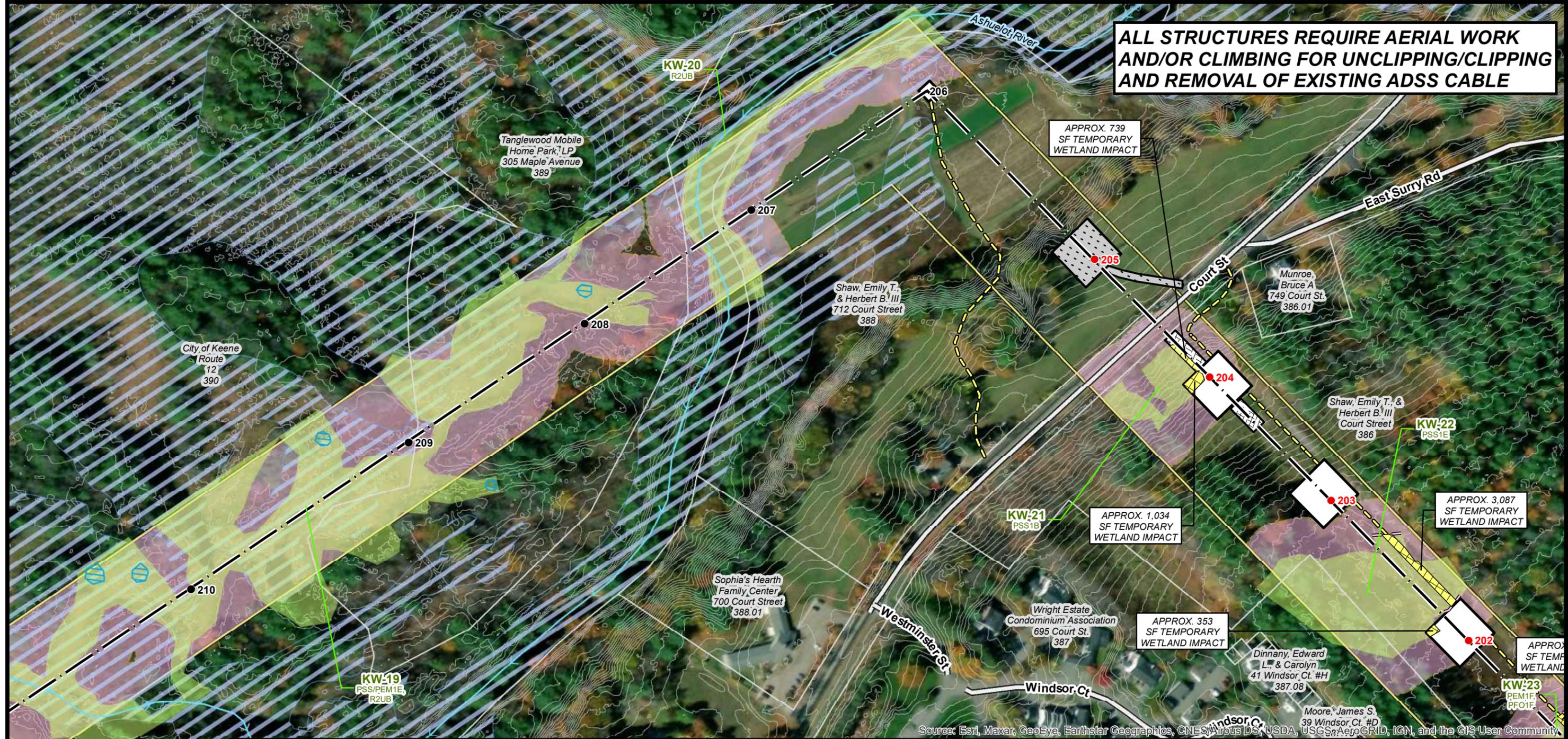
**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

KEENE,
NEW HAMPSHIRE
PAGE 1 OF 8

Project No.: 04.0190999.36 1 inch = 200 Feet

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	— NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	— STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2 FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

KEENE,
NEW HAMPSHIRE
PAGE 2 OF 8

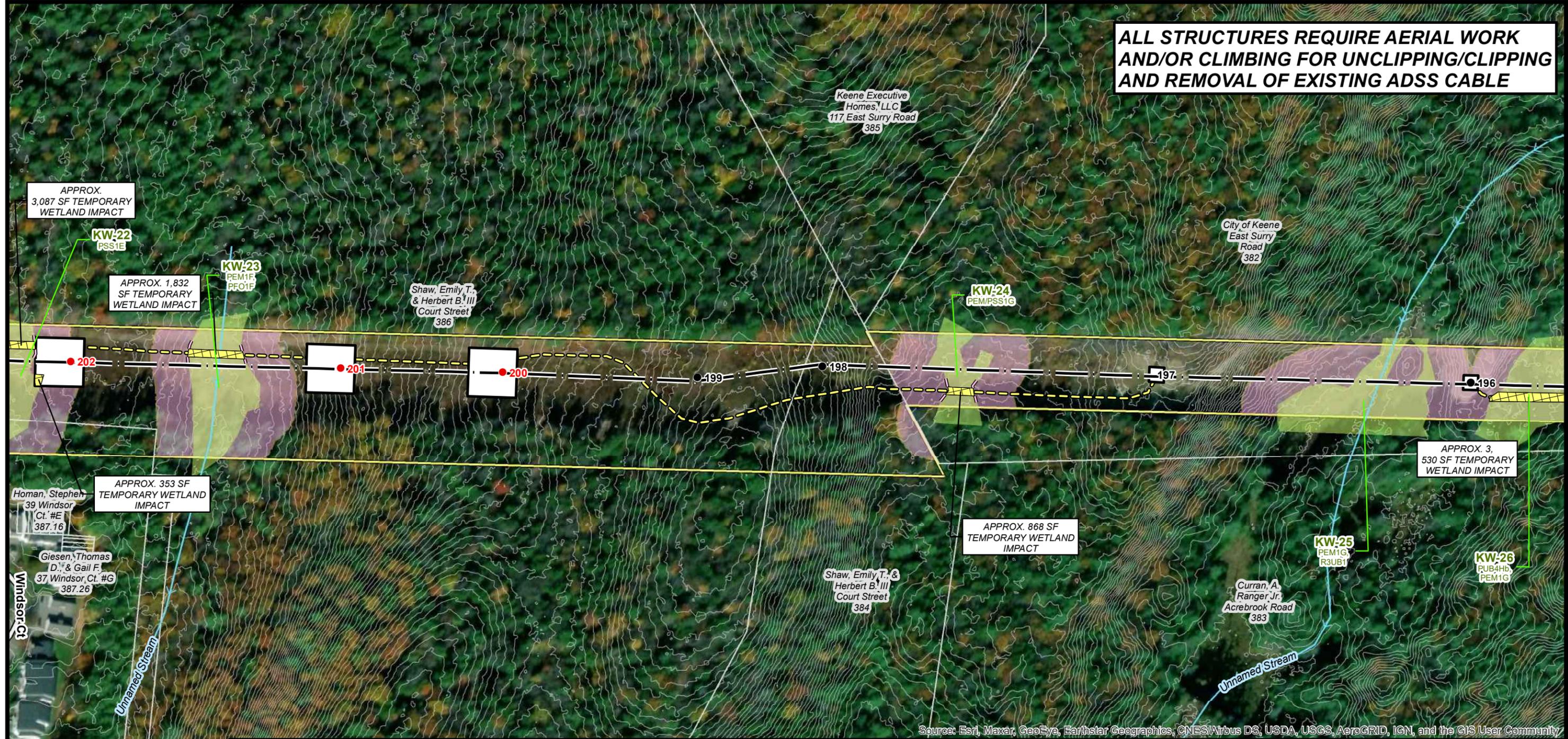
Project No.: 04.0190999.36

1 inch = 200 Feet

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

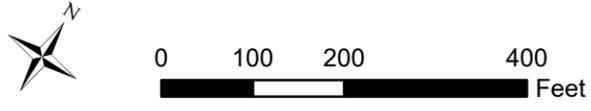


Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	→ NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	○ ○ ○ ○ STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

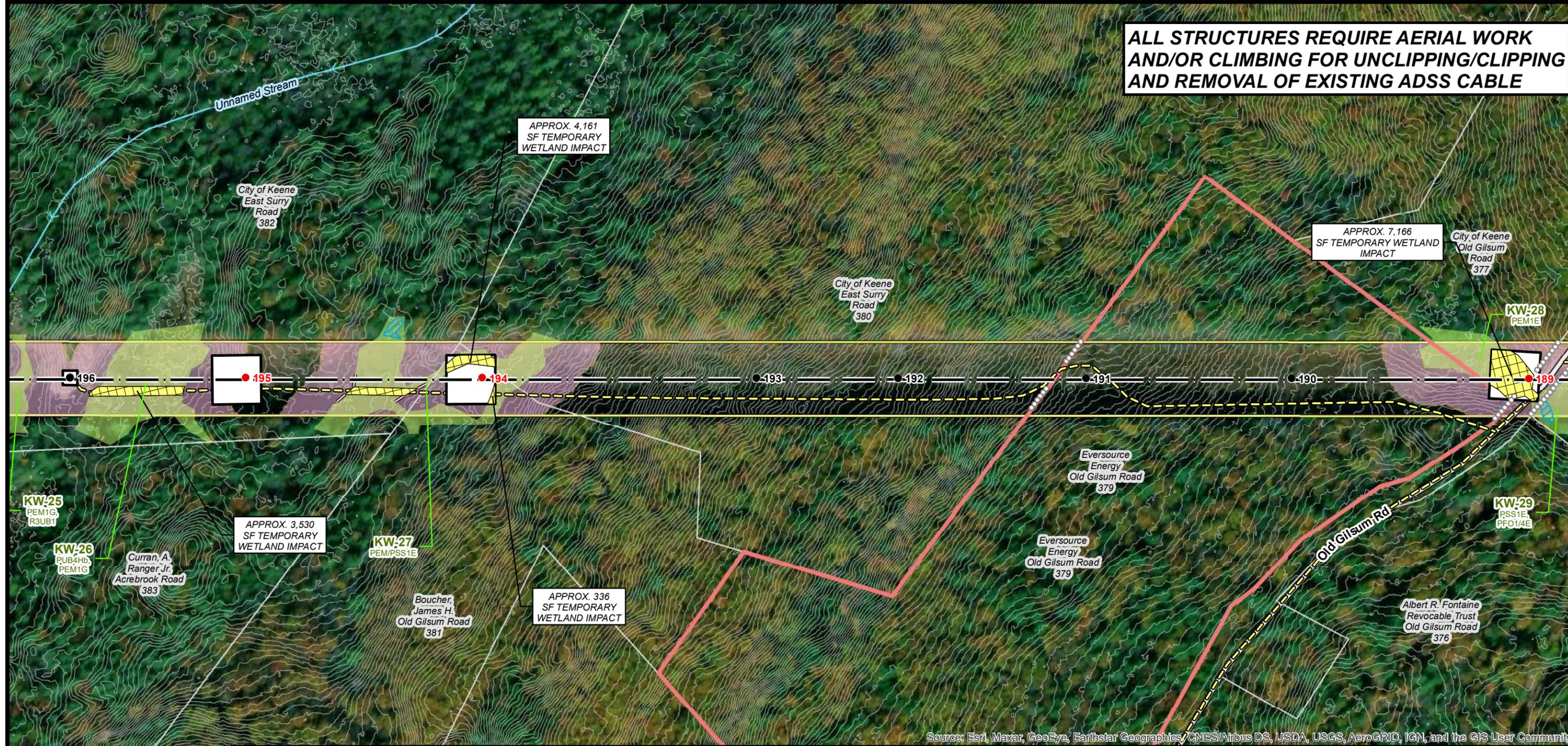
KEENE,
NEW HAMPSHIRE
PAGE 3 OF 8

Project No.: 04.0190999.36

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

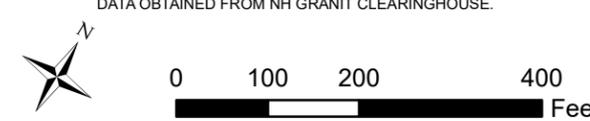


Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	→ NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	○○○○ STONE WALL
— FLOODPLAIN AREA	WETLAND
— PEATLAND	▨ POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	▨ ABUTTER PARCEL
▨ UPLAND MATTING	▨ EVERSOURCE OWNED PARCEL
▨ UNDERGROUND CONDUIT ALIGNMENT	▨ STATE OWNED PARCEL
▨ PROPOSED ACCESS	▨ TOWN BOUNDARY
▨ EXISTING ACCESS	▨ RARE SPECIES
▨ TEMPORARY WETLAND IMPACT	
▨ PULL PAD	
▨ WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

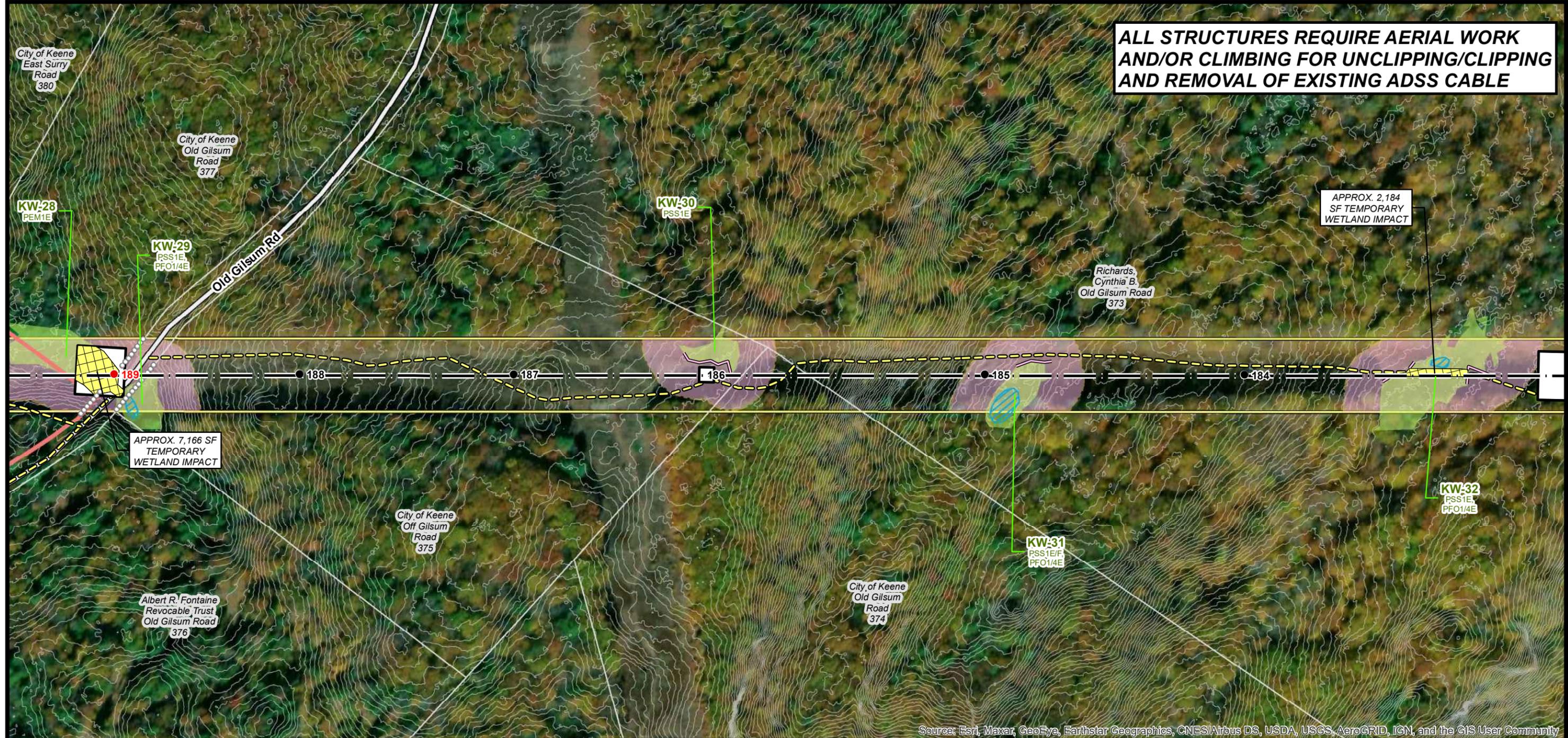
KEENE,
NEW HAMPSHIRE
PAGE 4 OF 8

Project No.: 04.0190999.36

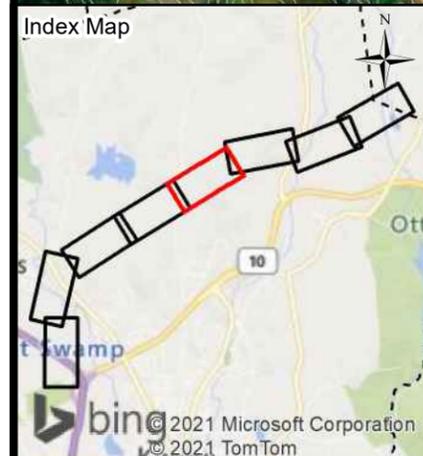
EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	→ NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	○ ○ ○ ○ STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

**ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021**

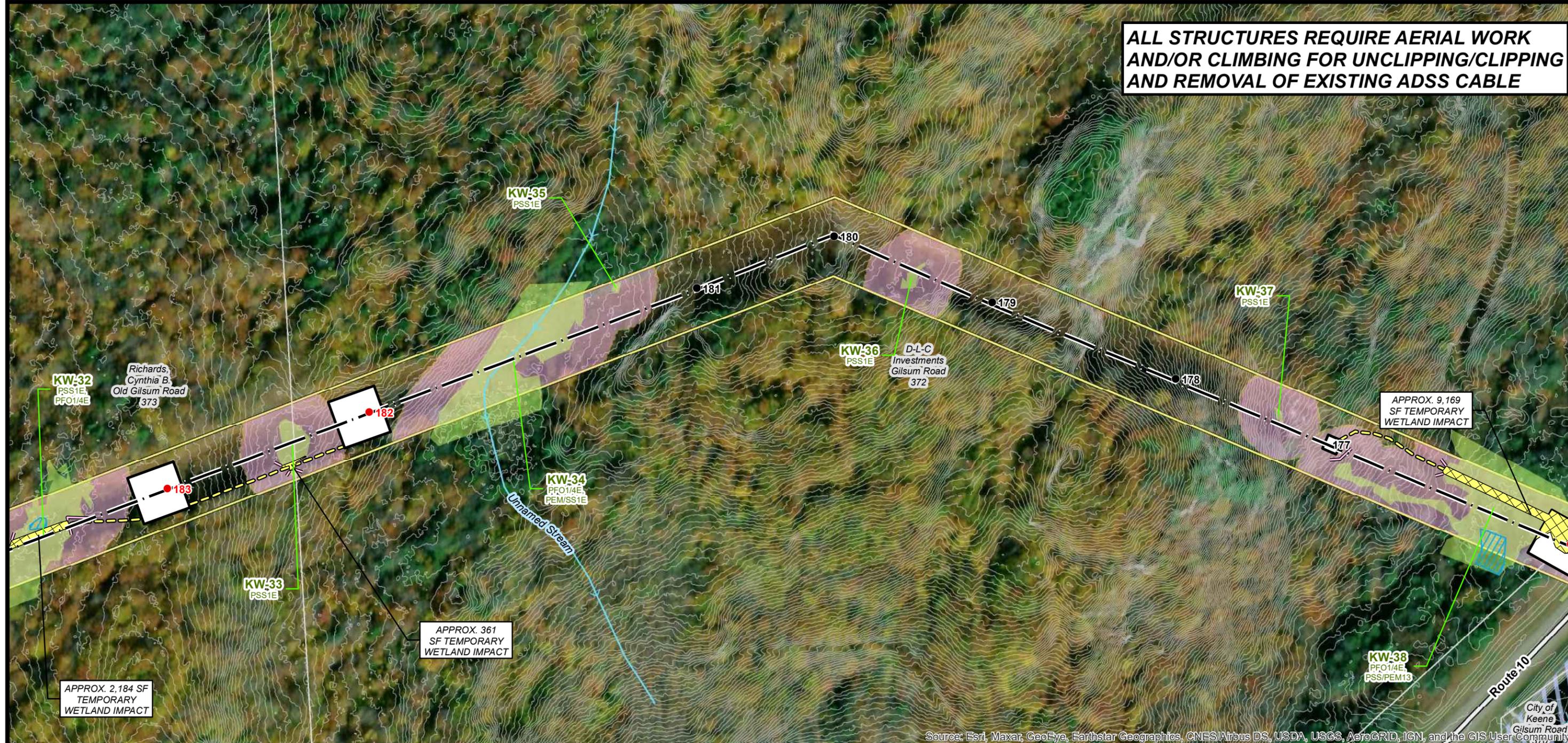
KEENE,
NEW HAMPSHIRE
PAGE 5 OF 8

Project No.: 04.0190999.36 1 inch = 200 Feet

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

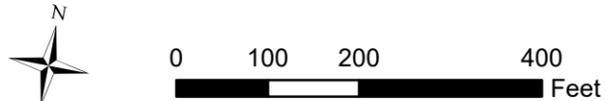


Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	— NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	○ ○ ○ ○ ○ STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

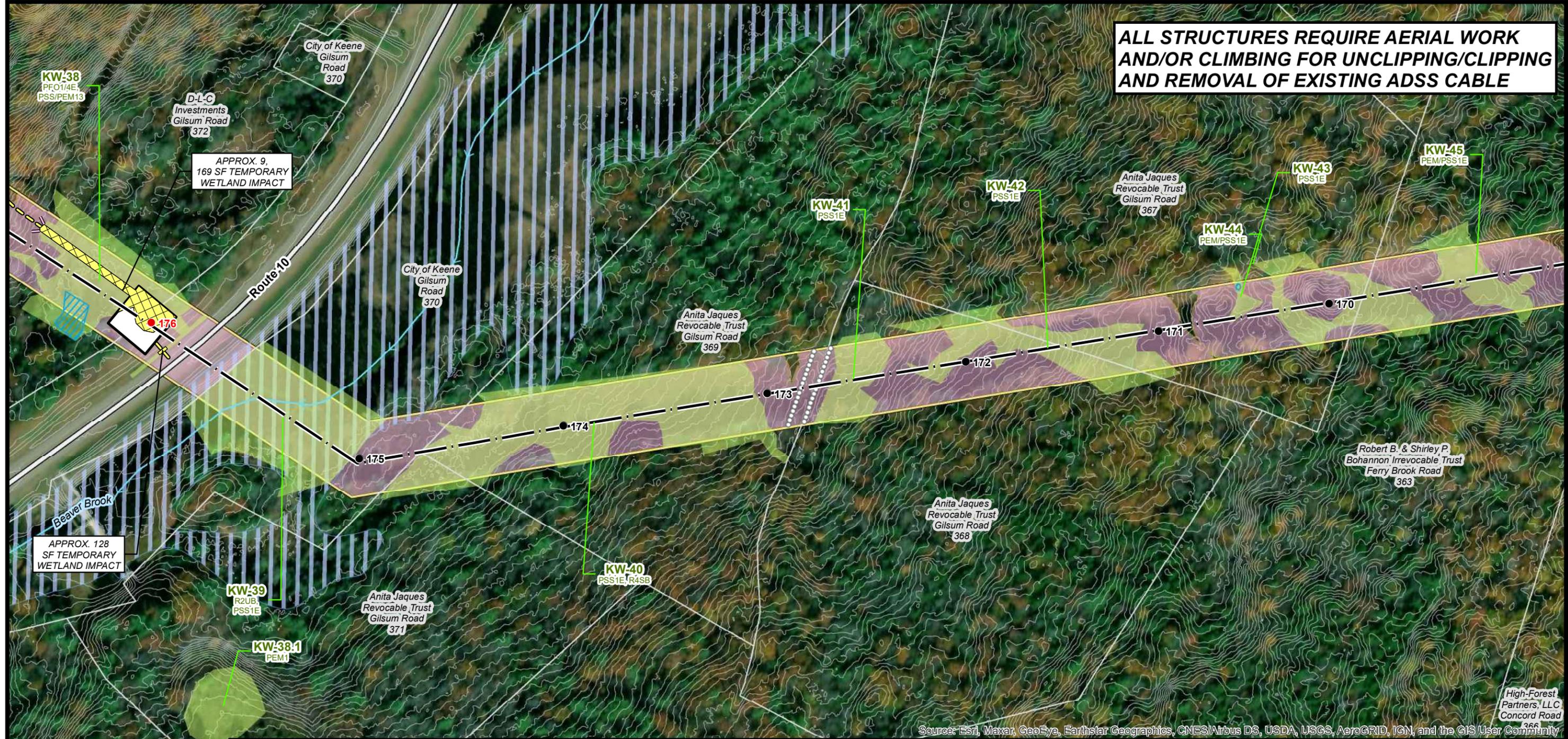
ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

KEENE,
NEW HAMPSHIRE
PAGE 6 OF 8

Project No.: 04.0190999.36 1 inch = 200 Feet

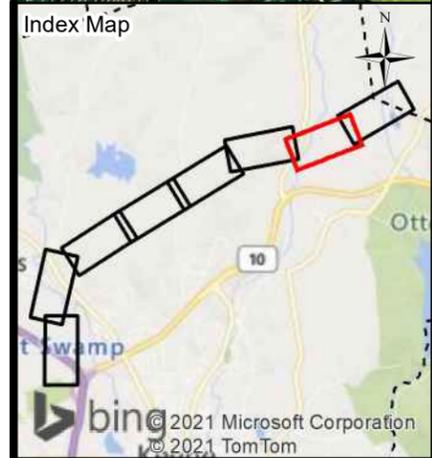
EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



ALL STRUCTURES REQUIRE AERIAL WORK AND/OR CLIMBING FOR UNCLIPPING/CLIPPING AND REMOVAL OF EXISTING ADSS CABLE

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

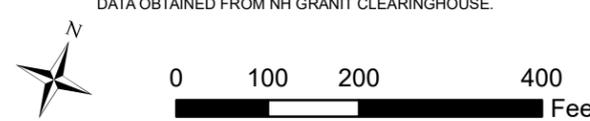


Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	— NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	— STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

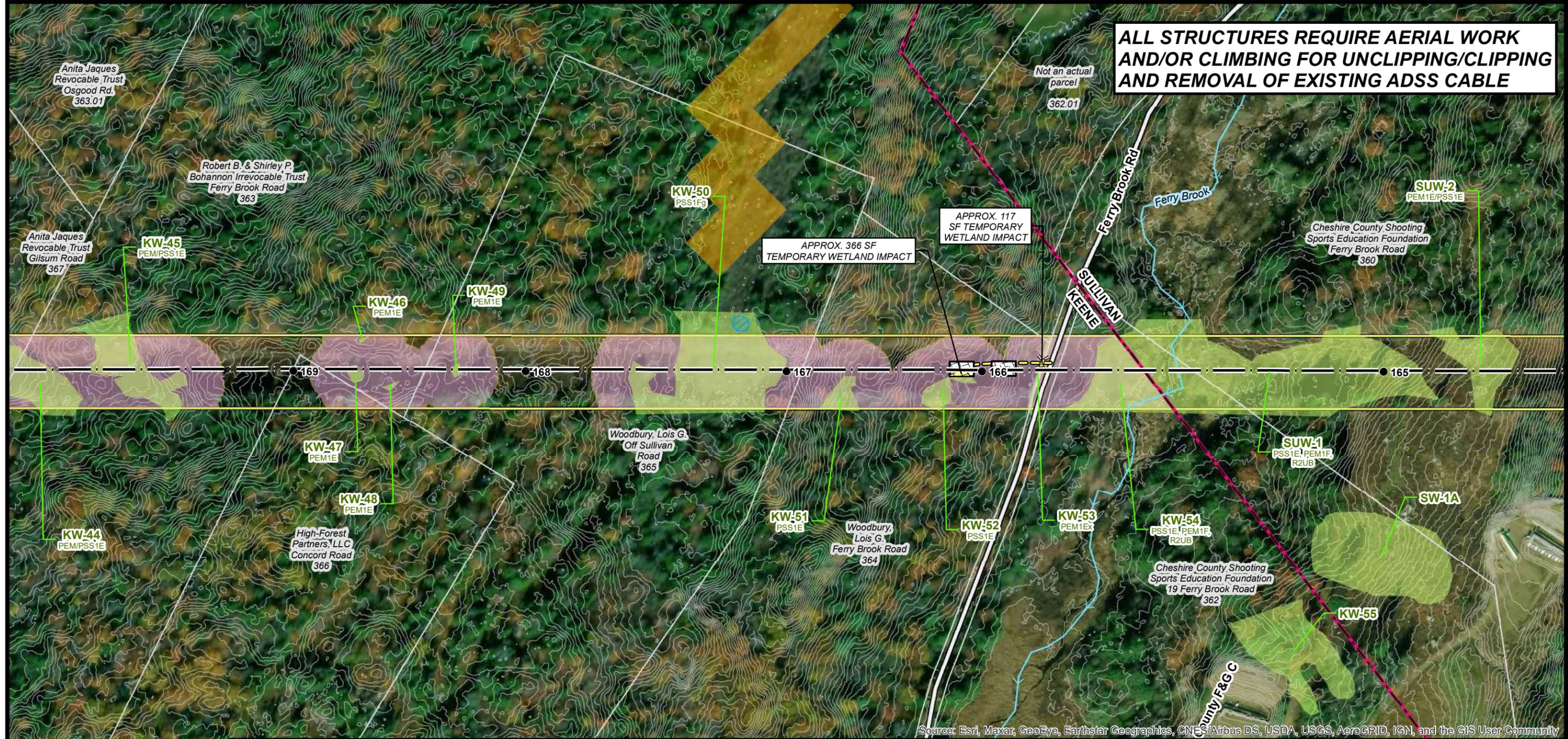
ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

KEENE,
NEW HAMPSHIRE
PAGE 7 OF 8

Project No.: 04.0190999.36

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

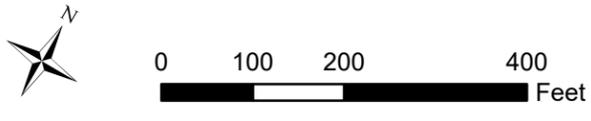


Current Town: Keene

● EXISTING STRUCTURE	— APPROXIMATE ROW
● STRUCTURE REPLACEMENT	— DOT ROADS
— TRANSMISSION LINE	— NHD FLOWLINE
— EROSION AND SEDIMENT CONTROLS	— STONE WALL
— FLOODPLAIN AREA	— WETLAND
— PEATLAND	— POTENTIAL VERNAL POOL
— 75-FT WETLAND BUFFER TO BE RESTORED	— ABUTTER PARCEL
— UPLAND MATTING	— EVERSOURCE OWNED PARCEL
— UNDERGROUND CONDUIT ALIGNMENT	— STATE OWNED PARCEL
— PROPOSED ACCESS	— TOWN BOUNDARY
— EXISTING ACCESS	— RARE SPECIES
— TEMPORARY WETLAND IMPACT	
— PULL PAD	
— WORK PAD	
— 2 FT GROUND SURFACE ELEVATION CONTOUR	

NOTES:

1. AERIAL IMAGERY WAS OBTAINED FROM UNH GRANIT AND DATED TO 2015.
2. THE LAYERS TITLED "NHD FLOWLINE", "DOT ROADS", "PARCEL BOUNDARY", AND "TOWN BOUNDARY" WERE OBTAINED FROM UNH GRANIT.
3. THE LAYER TITLED "WETLAND" WAS DELINEATED BY GZA, GEOENVIRONMENTAL, INC. IN 2016 AND SURVEYED BY DOUCET SURVEY, INC. IN 2016.
4. EXISTING STRUCTURE, L163 TRANSMISSION LINE, AND PARCEL DATA WAS PROVIDED BY EVERSOURCE ENERGY.
5. APPROXIMATE ROW WAS APPROXIMATED USING MILESHEETS PROVIDED BY EVERSOURCE ENERGY.
6. POTENTIAL VERNAL POOLS WERE IDENTIFIED BY GZA IN 2016.
7. FENCE AND STONEWALL DATA WAS APPROXIMATED BASED ON FIELD OBSERVATIONS.
8. 2FT ELEVATION CONTOURS WERE GENERATED USING LIDAR DATA OBTAINED FROM NH GRANIT CLEARINGHOUSE.



**L163 TRANSMISSION LINE
COPPERWELD RETIREMENT PROJECT**

ACCESS AND PERMITTING PLANS
FEBRUARY 08, 2021

KEENE,
NEW HAMPSHIRE
PAGE 8 OF 8

Project No.: 04.0190999.36 1 inch = 200 Feet

EVERSOURCE ENERGY

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 1	Date: 1/18/20		
Direction Photo Taken: Southeast			
Description: View of proposed access (right) and Wetland KW-16 (left) towards Structure 215 to be replaced.			

Photo No. 2	Date: 1/18/20		
Direction Photo Taken: Northwest			
Description: View of proposed access and work pad through Wetland KW-17 towards Structure 214 to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 3	Date: 1/18/20		
Direction Photo Taken: Southwest			
Description: View of Structure 205, proposed for replacement.			

Photo No. 4	Date: 1/18/20		
Direction Photo Taken: East			
Description: View of proposed access (left) and wetland KW-21 (right) towards Structure 284 to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 5	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access (left) and Structure 203 (right) to be replaced.			

Photo No. 6	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-22 towards Structure 202 to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 7	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-23 towards Structure 201 to be replaced.			

Photo No. 8	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access (left) and Structure 200 (right) to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 9	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-24 towards Structure 197.			

Photo No. 10	Date: 1/18/20		
Direction Photo Taken: Southwest			
Description: View of proposed access through Wetland KW-27 towards Structure 195 to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 11	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-27 towards Structure 194 to be replaced.			

Photo No. 12	Date: 1/18/20		
Direction Photo Taken: Southwest			
Description: View of proposed access towards Structure 192.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 13	Date: 1/18/20		
Direction Photo Taken: South			
Description: View of proposed access (left) for Structure 189 to be replaced in Wetland KW-28 (right).			

Photo No. 14	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access towards Structure 186.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 15	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-32 towards Structure 183 to be replaced.			

Photo No. 16	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access through Wetland KW-33 towards Structure 182 to be replaced.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 17	Date: 1/18/20		
Direction Photo Taken: Northeast			
Description: View of proposed access and work pad for Structure 182 to be replaced.			

Photo No. 18	Date: 1/18/20		
Direction Photo Taken: West			
Description: View of Structure 176 to be replaced within Wetland KW-38.			



Photographic Log

Client Name: Eversource Energy		Site Location: L163 Transmission Line Keene, New Hampshire	Project No. 04.0190999.36
Photo No. 19	Date: 1/18/20		
Direction Photo Taken: Northwest			
Description: View of proposed access through Wetland KW-38 towards Structure 177.			

Photo No. 20	Date: 1/18/20		
Direction Photo Taken: Southwest			
Description: View proposed access through Wetland KW-53 towards Structure 166.			

Garlic Mustard Challenge in Keene

Topics for discussion – Conservation Commission – 16 February 2021

Prospective Timeline

Feb 16 – Conservation Commission meeting

Feb 22-28 – Invasive Species Awareness Week

March 15 – Conservation Commission meeting

April – Early publicity

April – Acquire supplies

April 19 – Conservation Commission meeting

April 22 – Earth Day

April 24 (Saturday) – Volunteer training

May 1 (Saturday) – Location scouting and flagging. Garlic Mustard Challenge begins!

May 3 (Monday) – Publish map

May 6 (Thursday) – City Council meeting – Mayoral proclamation?

May 16 (Sunday) – Garlic Mustard Challenge ends

Partners

Conservation Commission – Project oversight

Keene City Staff – Operational support

Mayor, City Council – Publicity

UNH Cooperative Extension – Training materials

Nature Groupie – Volunteer recruitment support

Local schools and service organizations

Local restaurants and merchants

Town of Hanover, NH

Ideas

From [Nature Groupie](#):

“Hanover has been working on Garlic mustard management on Town lands and with neighborhood groups on private property since 2010. Nature Groupie is excited to highlight their innovated approach to managing garlic mustard!

After a wide ranging educational effort, the town's Biodiversity Committee has begun to focus on an innovative management approach: neighborhood efforts coordinated by neighborhood leaders. Along trails and roads with Garlic mustard infestations, “pulling stations” were established to promote pulling by individual volunteers. These stations were stocked with educational materials, a movable "PULL HERE" sign post and bags to promote anonymous walkers to pull. Trained volunteers then check all the sites and removed full bags to the landfill.”

From Malin Clyde, UNH Cooperative Extension

1. Share information from Nature Groupie's Garlic Mustard Challenge webpage: <https://naturegroupie.org/resources/garlic-mustard-challenge-new-england> including fact sheet, the interactive map above, the pesto recipe, etc.
2. Look for Nature Groupie's ID videos on Facebook (we'll be sharing them again this spring during the garlic mustard season) and share them on your town's page.
3. You could plan to host a training in the spring to show a few key volunteers how to ID the plant (it's easy during the right season, and I'm sure there are folks in garden clubs or at Keene State or the conservation commission that know the plant). The trained folks could then go out and look for populations in parks or conserved lands. When you have a few key areas identified, you could either encourage people to go pull on their own (and report their bags to you), or you could have the trained volunteers host some small workdays, and submit their # of bags pulled on the [Garlic Mustard Challenge website](#) (reporting form)
4. With either of these options, Nature Groupie can help spread the word if you post their training OR the volunteer workdays on the Nature Groupie Calendar, using our "[Add an Experience](#)" form. It's free and easy.
5. Wondering when to schedule your workdays or pulls? Check out the interactive map above and look in your region for when other people pulled the plant. To me it looks like early or mid-May is a good time in your region - although it might vary depending on the weather or snowmelt.

Resources

Garlic Mustard Challenge New England:

<https://naturegroupie.org/resources/garlic-mustard-challenge-new-england>

Garlic Mustard Challenge Map

<https://unhcoopext.maps.arcgis.com/apps/Shortlist/index.html?appid=50feda4697984b38b77b9347b1d87d49>

Hanover NH Garlic Mustard Website

<https://www.hanovernh.org/biodiversity-committee/pages/garlic-mustard-has-invaded-hanover>

Least Wanted Plants of the Upper Valley

https://www.hanovernh.org/sites/g/files/vyhlf3226/f/uploads/a_guide_to_invasive_plants.pdf

Poster:

https://www.hanovernh.org/sites/g/files/vyhlf3226/f/uploads/least_wanted_-_garlic_mustard-reduced.pdf