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September 18, 2020

Melanie Bachman, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: 1191 Line Rebuild Project

Dear Ms. Bachman:

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource") is requesting a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the 1191 Line Rebuild Project ("Project"), which proposes modifications to the existing 1191 Line, in the Towns of Watertown, Thomaston, Litchfield, and Harwinton, Connecticut ("Petition").

Prior to submitting this Petition, Eversource representatives briefed municipal officials about the Project and provided written notice to all abutters of the proposed work and also of the filing of this Petition with the Council. Maps and line lists identifying the notified property owners are provided in the Petition as Attachment A: 1191 Line Rebuild Project – Aerial Maps.

Per the Council's instructions in response to COVID-19, Eversource is submitting this filing electronically and will be providing one hard copy for the Council's records. Eversource further understands that the Council will invoice the Company for the requisite $625 filing fee.

Sincerely,

Kathleen M. Shanley

Attachments

cc: Mark A. Raimo, Town Manager, Town of Watertown
Edmond V. Mone, First Selectman, Town of Thomaston
Denise Raap, First Selectman, Town of Litchfield
Michael R. Criss, First Selectman, Town of Harwinton

THE CONNECTICUT LIGHT AND POWER COMPANY

doing business as

EVERSOURCE ENERGY

PETITION TO THE CONNECTICUT SITING COUNCIL
FOR A DECLARATORY RULING OF
NO SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT
FOR THE PROPOSED MODIFICATIONS TO THE EXISTING
1191 LINE IN THE TOWNS OF WATERTOWN, THOMASTON, LITCHFIELD, AND
HARWINTON, CONNECTICUT

1. Introduction

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") hereby petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g et seq. of the Connecticut General Statutes for proposed modifications to the 1191 Line, a 115-kilovolt ("kV") transmission line, located within existing transmission rights-of-way ("ROW") in the towns of Watertown, Thomaston, Litchfield, and Harwinton, Connecticut, as described herein (the "Project"). Eversource submits that a Certificate is not required because the proposed modifications would not have a substantial adverse environmental effect.

2. Purpose of the Project

The purpose of the Project is to reconductor the 1191 Line and replace structures within approximately 10 miles of Eversource's existing ROW that connects the Frost Bridge Substation, located at Frost Bridge Road, Watertown and Campville Substation, located at 420 Wildcat Hill Road, Harwinton.

The 1191 Line was originally built in 1933, primarily on wood H-frame structures, to operate at 27.6kV. In 1957, the 1191 Line was reconfigured as a single 115-kV line. The 1191 Line is

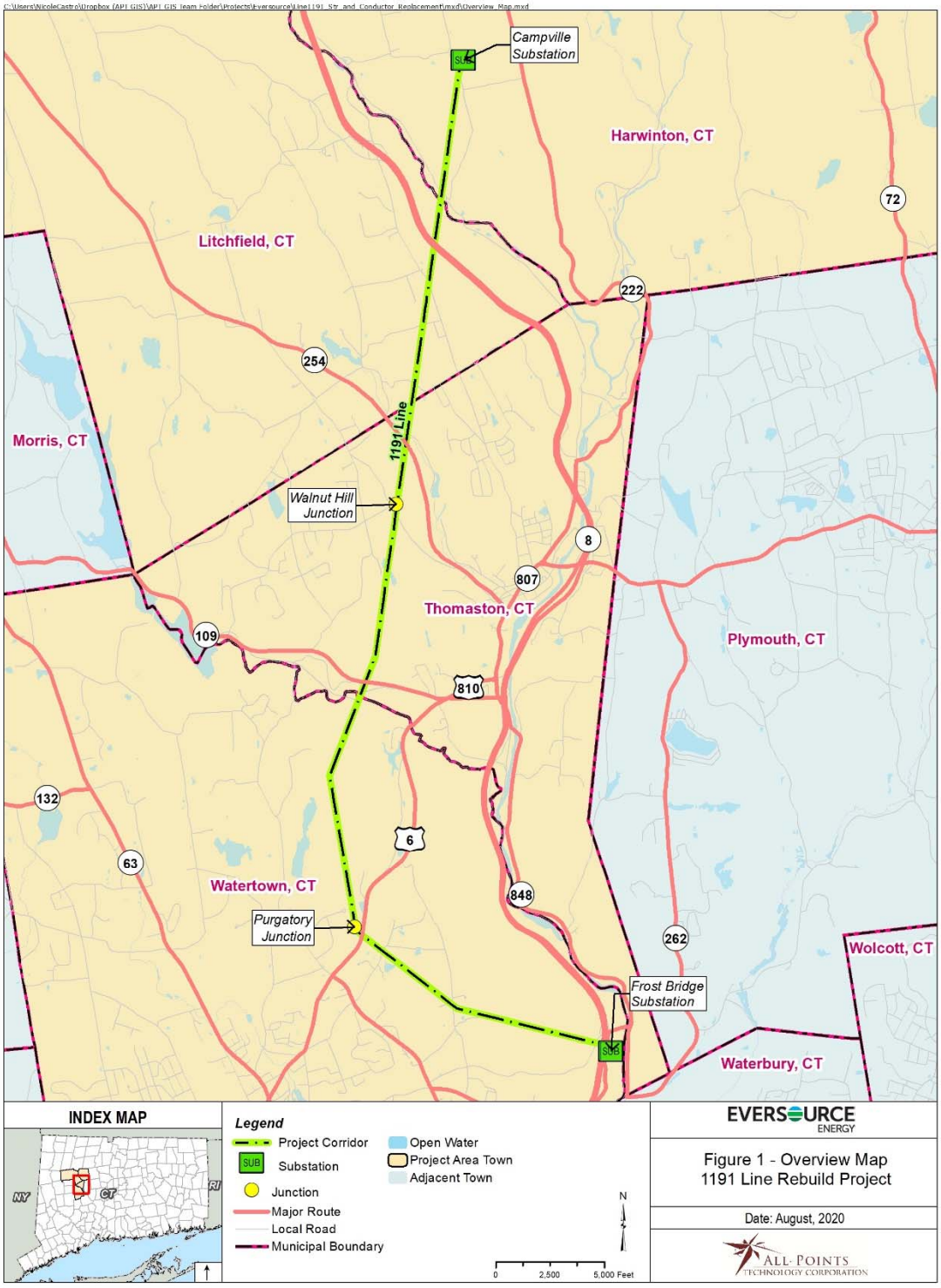
supported on a total of 104 structures as follows: 96 wood H-frame structures, one three-pole wood structure, one galvanized steel lattice tower, three weathering steel monopole structures and three weathering steel H-Frames. The 1191 Line copper conductor has exceeded its planned service life and has experienced a loss of strength, requiring replacement. Eversource has determined that 97 of the 104 structures would require replacement. Ninety-two of the wood H-frame structures and the wood three-pole structure require replacement, due to age-related degradation, cannot support the new conductor. The wood structures were identified as having one or more of the following deficiencies: rotting, cracks, split tops or woodpecker damage. The three existing weathering steel H-Frame structures and the one galvanized steel lattice structure would not be able to support the new larger conductor and so would also require replacement. Four of the existing wood H-Frame structures would be removed.[1]

In addition, in order for the new structures to comply with the applicable conductor blowout requirements in the 2017 National Electrical Safety Code ("NESC") and constructability constraints due to hilly terrain, the replacements for the existing H-frame structures and lattice structure would be new weathering steel monopoles. The existing shield wires would also be replaced with optical ground wire ("OPGW") to increase the communication bandwidth and security.

Figure 1 illustrates the general location of the proposed Project.

[1] With the replacement monopole structures, structures 3085, 3127, 3131, 3153 are no longer required to address conductor sag.

Figure 1: Project Overview Map



3. Existing Project Area

As shown on Attachment A, 1191 Line Rebuild Project – Aerial Map, the existing Project area is an approximately 10-mile portion of Eversource's ROW from Frost Bridge Substation to Campville Substation. The 1191 Line was originally built in 1933. The width of the existing ROW within the Project area varies from approximately 250 feet to 400 feet. The 1191 Line shares the entire ROW with the 115-kV 1854 Line, and shares portions of the ROW with the 1238 and 1921 lines, which operate at 115-kV, and the 352 Line operating at 345-kV. The 1191 Line shares the existing ROW with the 1238 and 352 lines for approximately 2.5 miles from Frost Bridge Substation to Purgatory Junction and the 1921 Line ROW for approximately 4 miles from Walnut Hill Junction to Campville Substation. The majority of the structures supporting the adjacent lines within the same corridor are single-circuit weathering steel monopole structures.

The 1191 Line ROW traverses across public recreational, trails, scenic, open space, and other protected areas, including the Morton Pond, Connecticut Department of Energy and Environmental Protection's ("CT DEEP") Mattatuck State Forest and Black Rock State Park, and federal lands (Black Rock Dam, Thomaston Dam and Northfield Brook Recreational Area) managed by the U.S. Army Corps of Engineers' ("USACE").) The line crosses over Route 8, Route 6, and local roads. The Project is also located within 4 miles of the Waterbury-Oxford Airport in Oxford, Northfield Heliport in Litchfield, Waterbury Airport in Plymouth and the Naugatuck Railroad in Litchfield.

4. Project Description

The Project scope consists of conductor and structure replacements on the 1191 Line for approximately 10 miles from Frost Bridge Substation to Campville Substation. The Project requires the replacement of 93 single-circuit wood structures, three weathering steel H-frames and one galvanized steel lattice tower with new single-circuit weathering steel monopole structures. Seventy-seven structures would have direct-embed foundations and twenty structures would have drilled shaft foundations.

The proposed modifications will involve the following:

- Replacement of 90 existing single-circuit wood H-frame structures with 90 new single-circuit weathering steel monopoles.
- Replacement of two existing single-circuit wood H-frame structures with two three-pole single-circuit weathering steel monopoles.
- Replacement of one three-pole wood structure with one new single-circuit weathering steel monopole.
- Replacement of three existing single-circuit steel H-frame structures with three new single-circuit weathering steel monopoles
- Replacement of one existing lattice tower with one new single-circuit weathering steel monopole.
- Removal of four wood H-frame structures.
- Replacement of approximately two miles of existing 556-kcmil aluminum conductor steel-reinforced (“ACSR”) conductor and approximately eight miles of existing 2/0 copper conductor with 1272-kcmil 54/19 aluminum conductor steel supported (“ACSS”).

- Replacement of the existing 3/8-inch copperweld shield wires with OPGW fiber communication cable.
- Installation of lighting arrestors on approximately every fifth structure, as the area is prone to lightning strikes.
- Installation of new hardware and insulators on all structures and counterpoise, as needed.

In addition to the structure and conductor replacement work described above, all dielectric self-supporting ("ADSS") cable would be installed for one structure span at Purgatory Junction and at Walnut Hill Junction. The existing line taps into the substations would be replaced and underground conduit and upgrades to the control and relay enclosures would also be required.

The height of the existing structures to be replaced ranges from 38 feet to 65 feet above ground level, though the tallest structure on the line is 152 feet[2] above ground level. The replacement structures would range in height from 46 feet to 121 feet above ground level. The proposed structure height increases range from approximately 10 feet to 68 feet above the corresponding existing structures. Five structures will have height increases that are over 50 feet. These height increases are largely due to the structure configuration change from H-Frame to monopole in order to comply with current clearance requirements within the existing ROW. One new structure would slightly reduce in height (by 1.5 feet), as compared with the existing structure. All replacement structures would be positioned approximately 15 feet laterally and 10 to 20 feet longitudinally from the corresponding existing structure locations. The lateral distances are the result of the new structure configuration to maintain sufficient separation between adjacent

[2] The tallest existing structure on the 1191 Line would not be replaced.

lines. In addition, two structures (structures 3095 and 3102) would be relocated to upland areas approximately 50 feet northwest and southeast, respectively, from their current locations to avoid potential impacts to existing wetland resources. The proposed location of structure 3095 would be located approximately 16 feet from the wetland resource while structure 3102 would be approximately 10 feet from the wetland resource.

Based on updates to NESC clearance requirements, Eversource needs to acquire permanent aerial rights to address conductor sway in the event of a blowout. Aerial rights are required between structures 3126 and 3128 and between structures 3151 and 3152. Both of these locations are on USACE property[3].

Attachment A depicts the locations of existing and proposed structures, as well as the approximate location and configuration of work pads and pull pads to be used for the Project, access roads and other Project elements. The cross-section drawings provided in Attachment B: 1191 Line Rebuild Project Right of Way Cross Sections depict typical views along the ROW of the existing and proposed structures. Attachment C: List of Structure Replacements provides more specific information on the heights of the existing and proposed structures.

5. Environmental Effects and Mitigation

The Project would be constructed entirely within the existing transmission ROW between Frost Bridge Substation and Campville Substation. No physical expansion of the existing ROW

[3] Eversource has initiated preliminary discussions with USACE and the request is currently under review. The USACE has provided positive preliminary feedback and does not anticipate any issues with this request.

would be required for the Project. The Project would not have a substantial adverse environmental effect, for the reasons explained more fully below.

Land Use

Land uses adjacent to the Project Area primarily consist of a mix of rural, residential, recreational (state and federal parks, trails, municipal open space, fish and game club, public and private fishing areas, and a public golf course), transportation corridor (federal, state and local roadways), commercial, and industrial developments and undeveloped lands such as forest areas. The ROW also crosses the Naugatuck Railroad on the south side of the Naugatuck River in Litchfield. Though the Project would be traversing through some of these areas, it will not impact adjacent land uses.

Clearing and Vegetation Removal

The existing maintained ROW ranges in width from 250 to 400 feet, with variable maintained cleared widths of 135 to 400 feet. While much of the Project would be located within the maintained ROW, mowing along access roads, selective removal of non-compatible vegetation, hazard tree removal[4] and pruning of side vegetation would be required. Vegetation management work would be conducted mainly using tracked mowers and bucket trucks. Hand cutting of non-compatible vegetation in wetland areas may be necessary and climbing crews for tree trimming and danger tree removal would be necessary in inaccessible areas. Vegetation removal would be required where workspace or access road development is

[4] Hazard trees located in un-managed areas outside of the limits of Project clearing would be removed after identification; prior to the removal of any such trees located off-ROW, Eversource would receive approval from the affected landowner.

necessary for construction of the Project, or to maintain the required safety clearances and/or setbacks from the transmission structures and associated conductors.

During vegetation removal activities, temporary construction mats would be used to provide a stable base for equipment across watercourses or within wetlands where hand clearing work is not feasible. Such temporary support would minimize disturbances to wetland soils, and watercourses. All matting will be removed after all construction activities are complete.

Scenic, Recreational and Cultural Resources

The Project is not anticipated to have a substantial adverse impact to scenic, recreational and cultural resources for the reasons explained below.

No portion of the ROW traverses a locally or state designated scenic roadway[5]. However, the ROW is located proximate to one locally designated scenic road, Hayden Road in Harwinton. The ROW, which runs in a roughly north/south direction, is located approximately 180 feet west of the intersection of Hayden Road and Wildcat Hill Road.

Public open space and hiking trails that may be impacted during construction were identified through a desktop review of the Connecticut Department of Energy and Environmental Protection ("CT DEEP") GIS data and field investigations. These areas, which are detailed below, provide a variety of recreational opportunities including hiking, shooting, fishing, and hunting opportunities. Eversource would coordinate with the owners or managers of these public recreational areas to develop and implement measures to maintain public safety during

[5] Connecticut Department of Transportation (CTDOT), October 1, 2018 Connecticut State Scenic Roads. Accessed June 13, 2020. Available URL: https://portal.ct.gov/DOT/Programs/Connecticut-Scenic-Roads.

Project construction, while also avoiding or minimizing short-term impacts to recreational users.

- Mattatuck State Forest (see Attachment A, Map Sheets 1 – 3, and 10 – 11).
- The Project traverses approximately 1.77 miles of this resource through portions of forest in Watertown (1.50 miles) and Thomaston (0.27 mile). In Thomaston, the Project ROW extends across the forest's largest single parcel (±1,327 acres), which adjoins Black Rock State Park, Jericho-Whitestone Connector Trail, Jericho Trail, and Mattatuck Trail (see Attachment A, Map Sheets 1 – 2, and 9).
- Veterans Memorial Park (See Attachment A, Map Sheet 5):

  The Project ROW extends across the northern boundary of Veterans Memorial Park.
- Black Rock State Park and Black Rock Lake (see Attachment A, Map Sheets 7 – 10):

  The Project ROW traverses approximately 1.06 mile of Black Rock State Park within Watertown, and approximately 0.10 mile of Black Rock State Park in Thomaston.
- Thomaston Fish and Game Club (see Attachment A, Map Sheets 10 – 11):

  A portion of the Project will be located within Eversource's existing 250-foot ROW and will traverse across approximately 0.24 mile of the privately-owned Thomaston Fish and Game Club located off Old Northfield Road in Thomaston.
- Northfield Brook Lake and Recreation Area (see Attachment A, Map Sheet 13 – 14):

  The ROW crosses through approximately 0.07 mile of the northern portion of the recreation area, proximate to the entrance off State Route 254.
- Thomaston Dam and Naugatuck River Greenway (see Attachment A, Map Sheet 17):

  The Project ROW spans approximately 0.4 mile of the Naugatuck River and associated USACE recreational areas.

A cultural (archaeological and historical) resource review of the proposed Project was conducted by Heritage Consultants, LLC ("Heritage") in November of 2015 as a part of Eversource's Frost Bridge to Campville 115-kV Project (Docket No. 466). This review consisted of an initial desktop archaeological and historical resource review and pedestrian survey ("Phase 1A Cultural Resource Assessment" or "Phase 1A").

The Phase 1A determined that no National Register of Historic Places ("NRHP"), state or locally listed properties or historic districts are located within 500 feet of the Project ROW. Additionally, the Phase 1A identified 13 locations within the Project area as having a moderate to high potential for archaeological sensitivity, thus prompting further investigation via the execution of a Phase 1B survey. The Phase 1B consisted of shovel testing in select locations and was initiated in June 2020.

The Phase 1B survey was completed on August 28, 2020 and determined that no additional testing was required in these areas prior to construction. No National or State Registers of Historic Places ("NHRP/SRHP") eligible archaeological resources were identified. The results of the Phase 1B surveys will be provided to the State Historic Preservation Office ("SHPO") and the Tribal Historic Preservation Offices ("THPO") of the Connecticut Tribe of Mohegan Indians and the Mashantucket Pequot Tribal Nation for their review and concurrence.

Water Resource Areas

Eversource conducted delineations of wetlands and water resources in the Project area in 2015 as a part of the now completed Frost Bridge to Campville 115-kV Project (Docket No. 466). Wetland boundaries were confirmed with minor modifications in June 2020 (see Attachment D: Wetland Delineation Report and Attachment E: Vernal Pool Survey and Recommended Protection Measures). Water resources within the Project area include inland wetlands, watercourses (perennial and intermittent streams), ponds, vernal pools, and Federal Emergency Management Agency ("FEMA") Flood Zones. All work within or near these areas would be conducted in accordance with the Eversource's 2016 *Best Management Practices Manual for Massachusetts and Connecticut* ("BMPs") and with the conditions of applicable regulatory permit conditions and approvals. Details on each of these resource areas is provided below.

Wetlands

Wetlands located within the Project area were identified and delineated in accordance with industry standard methodology. A total of 84 wetlands were identified within or proximate to the Project area.

Permanent wetland effects would result from the replacement of four (4) existing structures (3096, 3163, 3168, 3183), which are within wetlands. The replacement of these structures would result in approximately 320 square feet of permanent wetland effects. In order to minimize disturbance to the wetlands, the existing wood H-frame structures will be cut approximately 6 inches above grade and removed, and the pole butts left in place. Two (2) existing structures (3095, 3102) located within wetlands

would be relocated to upland locations. While the relocated structures do not represent a reduction in permanent impacts, since the existing pole butts will remain in the wetland, this movement from wetlands to uplands represents a reduction in future temporary wetland impacts associated with future structure maintenance.

The Project will result in approximately three (3) acres of temporary effects to wetlands, which are associated with the temporary use of construction mats for access roads and work pads. All construction mats will be promptly removed upon Project completion and wetland areas will be restored in accordance with Eversource's BMPs.

Watercourses and Waterbodies

A total of 55 watercourses and waterbodies were delineated within the Project area. These include one (1) river, 11 perennial watercourses, 38 intermittent watercourses, and six (6) ponds. Named watercourses and waterbodies include the Naugatuck River, Branch Brook, Northfield Brook, Jericho Brook Pond and Morton Pond.

No new permanent access road or work pad watercourse crossings will be required. Existing culverted access road crossings will be used at various locations throughout the Project ROW. In addition, a total of 16 temporary watercourse crossings will be required during construction, including nine (9) for work pads and seven (7) for access roads. Each of these crossings will be spanned using temporary construction mats. All construction mats will be promptly removed upon Project completion and wetland areas will be restored in accordance with Eversource's BMPs. The following Table 2 provides a summary of Project effects to wetlands:

Table 2: Summary of Project Effects to Wetlands

Wetland / Watercourse ID	200 Scale Map Sheet	Wetland/Watercourse Effects (± square feet /acres)	
		Temporary (Matting)	Permanent (Structures)
W-A9 / S-A6	03	2,469 / 0.06	0
W-B2	04	4,939 / 0.11	0
W-B6	04, 05	12,614 / 0.29	80
W-B11 / S-B1	05	9,778 / 0.22	0
W-D10	12	4,840 / 0.11	0
W-D12 / S-D9 / S-D10	13	3,635 / 0.08	0
W-E2	14	7,312 / 0.17	0
W-E3	14	995 / 0.02	0
W-E8	15	8,950 / 0.21	0
S-E7	15	100 / 0.002	0
W-E10	15, 16	25,157 / 0.58	80
W-F5 / S-F3 / S-F1	16	2,013 / 0.05	0
W-F7	16	13,819 / 0.32	80
W-F8 / S-F5	16	3,657 / 0.08	0
W-F11 / S-F10	17	870 / 0.02	0
W-F14	19	526 / 0.01	0
W-F15 / S-F12	19	21,491 / 0.49	80
	TOTAL	123,165 / 2.83	320 / 0.007

Vernal Pools

The Project area was originally surveyed for vernal pools in spring 2016. The survey was updated in 2020 by re-inspecting previously identified pools. Methods used included visual surveys to identify adults, larvae and egg masses, audial surveys to record breeding choruses and dip-net surveys to identify amphibian larvae. A total of 18 vernal pools were identified and delineated. Vernal pools and vernal pool envelopes (area within 100 feet of a vernal pool depression) are shown in Attachment A: 1191 Line Rebuild Project Aerial Maps. The survey results and recommended protection measures are provided in Attachment E: Vernal Pool Survey.

Due to the proximity of one vernal pool (VP-B2-1) to the existing structure 3095 which is proposed for replacement, approximately 117 square feet of temporary matting will be required within this vernal pool. This vernal pool is located within a historically disturbed area of the maintained ROW and it appears to be the result of human activity and not a natural feature due to its uniform limits, and abrupt edges within an otherwise level wetland area. To minimize or avoid future impacts to this resource area, Eversource has relocated proposed structure 3095 approximately 75 feet from VP-B2-1 and beyond the limits of its associated wetland (W-B2). Therefore, any future temporary impacts to this vernal pool associated with ongoing maintenance of this structure will likely be avoidable. To minimize potential effects to vernal pools, Eversource has adopted the recommended protection measures detailed in Attachment E.

FEMA Flood Zones

The Project extends across FEMA-designated 100-year flood zones associated with Branch Brook in Watertown, Northfield Brook in Thomaston, and the Naugatuck River in Litchfield and Harwinton. The Project also extends across a 500-year flood zone associated with the Naugatuck River in Litchfield and Harwinton. However, no transmission line structures are proposed within either the 100- or 500-year flood zones. The only work proposed within a designated 100- and 500-year flood zone is associated with temporary matting for a pull pad north of Valley Road in Harwinton.

Water Supply

Based on Aquifer Protection Areas ("APA") mapping maintained by the CTDEEP; the Project area is not located within an APA. The Project area is not within a public water supply watershed and does not cross any public supply reservoirs or public water supply wells. Private wells provide drinking water to most of the Project region.

Wildlife and Habitat

The Project area extends through or over a variety of habitats including managed shrubland, forest edge, pond and riverine (Naugatuck River), and agricultural land. Project area habitat is capable of supporting a variety of wildlife, including shrubland birds typical to the managed ROW.

Eversource has corresponded with staff of CT DEEP Bureau of Natural Resources Wildlife Division Natural Diversity Database ("NDDB") regarding protection of state-listed species within the Project area. Eversource received a determination letter from CT DEEP on July 6,

2020. Eversource will adhere to the additional recommendations and protection strategies that were identified to minimize any potential Project impacts to state-listed species.

In addition to coordinating with the NDDB for the protection of state-listed species, Eversource consulted with the U.S. Fish & Wildlife Service's ("USFWS") Information, Planning, and Consultation ("IPaC") service regarding federal-listed species that may be present within the Project area. The IPaC report indicated one federal-listed species; the Northern Long-eared Bat ("NLEB"), may potentially occur in proximity to the Project area.

NLEB roosts in certain trees in the warmer months of the year and at other times hibernates in caves and mines (bat "hibernacula"). However, according to the NLEB Areas of Concern in Connecticut map (dated February 2016), there are no known roost trees within 150 feet of the Project area; while the nearest hibernacula is approximately 2 miles away in Litchfield. Therefore, no impacts to this species are anticipated.

The Project ROW crosses a New England Cottontail ("NEC") Focus Area from Map Sheets 3-12, and 17–19. Conservation focus areas help biologists and habitat managers concentrate efforts in areas where they will have the greatest effect. Almost all known NEC populations in Connecticut occur within the designated focus areas. In 2015, the USFWS announced that due to ongoing conservation efforts, the NEC would no longer be listed as having threatened or endangered status. However, a critical factor in reaching this decision was that NEC conservation efforts continue. Shrubland habitat, which is maintained by Eversource within transmission line ROWs, provides NEC habitat.

Eversource is proposing to topsoil and seed constructed gravel work pads in NDDB areas following construction. Gravel work pads located in NEC focus areas will be reduced in size

where feasible, to minimize potential effects to NEC habitat in accordance with Eversource's 2020 New England Cottontail Best Management Practices.

Visual Effects

The 1191 Line shares the ROW with several other lines with varying structure types, materials and heights. The Project would result in changes to the visual character of the line, though Eversource does not believe that these would result in a significant environmental effect. Replacement structures would be located as close as possible to the existing structures and rebuilding the line with weathering steel monopoles would present a more streamlined appearance, further minimizing visual impacts to the surrounding areas and allowing them to blend in more easily from views through existing vegetation.

In addition to some design changes, many of the replacement structure heights will be greater than the existing structures and a portion of the proposed height increases of the replacement structures are 50 feet or greater. However, the structures that will have these greater height increases would be equal to or lower in height than the existing structures within the ROW. The abutting land use in this section of the ROW is primarily undeveloped land; accordingly, the replacement structures are not expected to result in visual impacts to abutters. As a result, the Project would have only a minimal change to the existing visual character of the line along the ROW.

Noise

The Project would result in short-term and localized noise from construction activities. The temporary increase in noise would likely raise localized ambient sound levels immediately surrounding the work areas due to the operation of standard types of construction equipment.

(e.g., backhoe, bulldozer, crane, trucks, etc.)[6]. Upon completion of construction and during operation, the proposed Project would not have any effect on ambient noise levels.

Air Quality

Short-term, localized effects on air quality may result, primarily from fugitive dust and equipment emissions, from the Project work. To minimize the amount of dust generated by construction activities, the extent of exposed/disturbed areas at any one time would be minimized. Vehicle emissions will be limited by requiring contractors to properly maintain construction equipment and vehicles, and by minimizing the idling time of equipment and vehicles, including diesel construction equipment, in accordance with Connecticut regulatory requirements. Temporary gravel tracking pads would be installed at points of construction vehicle ingress/egress to minimize the potential for equipment to track dirt onto local roads. To further minimize dust, water may be used to wet down disturbed soils or work areas with heavy tracking, as needed.

6. Transportation and Traffic Management

Construction-related vehicular and equipment movements would utilize public roads in the Project area to access the ROW. However, the Project-related traffic is generally expected to be temporary and highly localized in the vicinity of the ROW access points and at the staging area described in the following Construction Sequence section. Due to phasing of

[6] Construction noise is exempted under the Connecticut regulations for the control of noise, RCSA §22a-69-1.8(g).

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construction work, these Project-related traffic movements are not expected to significantly affect transportation patterns or levels of service on public roads.

To safely move construction vehicles and equipment onto and off the ROW while minimizing disruptions to vehicular traffic along public roads. The construction contractor typically would be responsible for posting and maintaining construction warning signs along public roads near work sites and for coordinating the use of flaggers or police personnel to direct traffic, as required.

Construction vehicles and equipment associated with the work would include, but are not limited to, pickup trucks, bucket trucks, flat-bed trucks, excavator, concrete trucks, drill rigs, front loaders, reel trailers, bulldozers, wood chippers, brush hogs/mower, forklifts, side booms, dump trucks and cranes. Pullers and tensioners would be used for the line work.

Construction Sequence

Project construction would include the following activities:

Establishing Staging Area/Laydown Yard

Eversource is proposing to utilize approximately 7 acres of land for a staging area/laydown yard located at 529 Burlington Road (State Route 4), in Harwinton. Figure 2 illustrates the location of the yard.

The laydown yard would include construction trailers and portable bathroom facilities, as well as areas for equipment and vehicle parking. Electric service will be established to the site, which is expected to be used principally for the following types of construction support activities:

- Storing transmission facility construction materials, equipment, tools, fuel, and supplies;
- Parking construction vehicles, equipment, and the personal vehicles of construction personnel;
- Performing minor maintenance of construction equipment;
- Refueling construction equipment and vehicles;
- Storing and assembling transmission line structure components; and
- Storing materials temporarily prior to appropriate disposition from the Project.

The proposed yard is located on an approximately 15-acre portion of a larger property owned by JRD Properties Harwinton LLC. The property was historically used for aircraft and related operations for Johnny Cake Airport, the runways for which straddled the Harwinton-Burlington boundaries. The yard site is bordered by the airport runway area to the east, wooded areas to the west and south, and two restaurants (the Landing Strip Grille and Countryside Restaurant) adjacent to State Route 4 (Burlington Road) on the north.

A review of historical photographs demonstrates that the entire yard site was extensively disturbed, over decades, as a result of the past airport use. The site is not located within a floodplain; has no potential to contain intact cultural resources (due to extensive past earth disturbance); and is not directly proximate to any residential uses. A review of the CT DEEP NDDB publicly available maps demonstrates that there are no state or federally listed species or significant natural communities near the yard site.

Currently, the site is characterized by former airport buildings, paved and graveled areas used for school bus and other parking, and previously disturbed areas with herbaceous vegetation growth. Some site preparation work, consisting of mowing herbaceous vegetation and adding gravel, will be required to create a level base for material storage

activities on upland portions of the yard site. Erosion and sedimentation controls will be installed and maintained in accordance with Eversource's BMPs.

Eversource's proposed use of the yard will not interfere with the use of other portions of the property for purposes, such as school bus parking. After the completion of Project activities, the yard site will be restored pursuant to Eversource's lease agreement with the landowner.

Figure 2: Staging Area/Laydown Yard

Soil Erosion and Sediment Control Installation

Project construction would conform to best management practices for erosion and sedimentation ("E&S") control, including those provided in the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control* ("*Connecticut Guidelines*") and Eversource's BMPs. This would include the development of a Project specific Stormwater Pollution Control Plan ("SWPCP") and registration under CTDEEP's *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities ("General Permit")*.

Typical E&S control measures include, but are not limited to, straw blankets, hay bales, silt fencing, rock construction entrances, soil and slope protection, water bars, check dams, berms, swales, and plunge pools. Silt fence would be installed as needed to intercept and retain sediment and/or construction materials from disturbed areas and minimize the potential for sedimentation outside of the Project area.

Temporary E&S control measures would be maintained and inspected for the duration of the Project to ensure their integrity and effectiveness and for compliance with the General Permit. SWPCP inspections would be performed in accordance with the General Permit requirements. Following the construction, seeding and/or mulching would be completed to permanently stabilize the areas disturbed by the construction activities. The temporary E&S control measures would remain in place until the Project work is complete and all disturbed areas are stabilized.

Access Roads and Work Pads

Access to each existing and proposed structure location would be required during Project construction. Many access roads are already established and Eversource would utilize these

existing access roads to the extent possible. However, some new access roads would be required within Eversource ROW. The access roads expected to be used for the Project are illustrated on the maps in Attachment A. No new gravel access roads or work pads are proposed in water resource areas.

Existing access roads may need to be improved (graded, widened, and/or reinforced) with additional stone material in order to accommodate the safe passage of construction vehicles and equipment. Typically, a maximum travel surface of an access road is approximately 16 feet wide (additional width may be needed at turning or passing locations). Access roads would normally be graveled. E&S controls would be installed as necessary before the commencement of any improvements to, or development of, access roads.

At each transmission line structure location, a work pad is required to stage material for final on-site assembly and/or removal, and to provide a safe, level work base for the construction equipment. The work pads for the Project would range from approximately 110 feet by 135 feet to 125 feet by 145 feet and may be used for both installation of new structures and removal of existing structures. However, due to the existing terrain, a few select pads would require larger footprints, the largest being approximately 135 feet by 255 feet. Pull pads would have dimensions of approximately 60 feet by 80 feet. Most work pads will be graveled, though some will use temporary matting to protect sensitive resource areas (i.e., lawn, water resource and identified cultural resource areas) and to provide a level and safe working area. To facilitate future transmission line maintenance, gravel access roads, work pads and pull pads

would be left in place. If an individual property owner requests their removal, the Project will work with the property owner on mitigation options[7].

The approximate locations and configuration of the work pads, as determined based on the environmental field studies and constructability reviews, are shown on Attachment A.

Foundation and Direct-embed Installation

Structures will have either concrete or direct-embed foundations. The foundation installation work would require the use of equipment such as mechanical excavator (drill rigs), pneumatic hammers, augers, drill rigs, dump trucks, concrete trucks, grapple trucks and light duty trucks. If groundwater is encountered, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas. The water would then be discharged in accordance with applicable local, state and federal requirements.

Excavated soils that are generated during construction activities would be stored or spread in an upland area within the ROW, to the extent practicable. Materials that cannot be utilized as back fill would be disposed in accordance with applicable regulations.

Structure Installation

Structure sections, structure components and hardware would be delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane, bucket trucks and excavator.

[7] Work pads and pull pads will be removed in NDDB areas then top-soiled and seeded.

Depending on site-specific soil conductivity, supplemental grounding (counterpoise) would be installed. A quad “ditch-witch” plow-cable trencher, or equivalent/similar type of equipment, would be used to install the counterpoise after the proposed structures are constructed.

Conductor and OPGW Installation

The installation of the new conductors and OPGW would occur after the new structures have been erected. The equipment required for these activities would include conductor reels, compressors, conductor pulling and tensioning rigs, guard trucks or structures and bucket trucks. Helicopters may also be used to install the pulling lines for the conductors and OPGW. Conductor dead-ending and splicing will be accomplished with pressed hardware.

Structure, Conductor and Static Wire Removal

The existing 1191 Line structures, conductor and static wire will be removed in conjunction with the installation of the new weathering steel monopoles, as much as possible.

The removal of the existing conductor and shield wire would take place during the active installation of the new conductor and OPGW as the existing conductor and static wire would be used as pulling lines, if possible.

The existing structures would be removed after the new conductor and OPGW is installed.

Federal Aviation Administration (FAA)

Eversource filed Notice of Proposed Construction or Alteration with the Federal Aviation Administration (“FAA”) for the airports and heliport in the vicinity of the Project. The FAA responded that no marker balls or beacon lights are required for this Project.

Restoration

After the existing structures are removed and the lines are energized, the remaining restoration of the ROW would begin and would include the removal of construction debris, signage, flagging, and temporary fencing, as well as the removal of construction mats, and pull pads and structure work pads that are designated for removal. Disturbed areas would be restored as practical and stabilized using revegetation or other measures before removing temporary E&S controls.

Eversource would perform ROW restoration in accordance with the protocols specified in Eversource's BMPs and in consultation with affected property owners. Eversource is proposing to topsoil and seed constructed gravel work pads in NDDB areas following construction. Gravel work pads located in NEC focus areas will be reduced where feasible to minimize potential effects to NEC habitat in accordance with Eversource's 2020 New England Cottontail Best Management Practices.

Waste Management

Waste materials, such as structure components (i.e., wood and steel from the removed structures, conductor, shield wire, associated hardware, etc.) and any other construction debris would be disposed of in accordance with Eversource's BMPs, applicable regulations or recycled consistent with applicable rules and regulations and Eversource policies. As described above, excess soils would be managed in accordance with applicable regulations and disposal facility policies. Dewatering during construction activities would be conducted in accordance with the *Connecticut Guidelines,* Eversource's BMPs and applicable regulations.

7. Construction Schedule and Work Hours

Construction work hours would typically be between 7:00 AM and 7:00 PM, six days per week (Monday through Saturday). Construction workers may arrive and leave the laydown area outside of these times. In addition, during winter, snow plowing and de-icing activities will typically commence, when necessary, prior to 7 AM to ensure a safe environment for construction personnel prior to the start of the workday.

On occasion, Sunday work hours are anticipated to be required from 9 AM to 6 PM. The Towns of Watertown, Thomaston, Litchfield, and Harwinton and abutters will be provided notice of the proposed Sunday work hours.

8. Electric and Magnetic Fields

Eversource prepared calculations of the existing and post-Project Electric and Magnetic fields ("EMF"). The calculations were based on average annual loading conditions, because these are most representative of typical conditions. The calculations are made relative to the centerline of the proposed, modified transmission lines. The calculations apply at one meter (3.28 feet) above grade and assume that the lowest conductor for each 115-kV circuit is 30 feet above grade.

Magnetic field levels are expected to increase slightly on the Western Edge of the ROW from Purgatory Junction towards Campville Substation. Magnetic fields at and beyond the east edge of the ROW would remain essentially unchanged in these locations. Between Frost Bridge Substation and Purgatory Junction, magnetic fields at and beyond the edges of the ROW will remain essentially unchanged.

Electric field levels are projected to decrease slightly at the west edge of the ROW from Purgatory Junction towards Campville Substation. Electric fields at and beyond the east edge of the ROW would remain essentially unchanged in these locations. From Frost Bridge Substation to Purgatory Junction, electric fields at and beyond the edges of the ROW will remain essentially unchanged.

Tables 3 and 4 summarize the calculated electric and magnetic fields at the ROW edges before and after the modifications.

Table 3 – Summary of Calculated Magnetic Fields (with Average Annual Loads)

Calculated Magnetic Fields (Average Annual Loads)

Section		Left Edge of ROW	Max in ROW	Right Edge of ROW
Frost Bridge Substation to Purgatory Junction	Existing	17.9	117.4	19.3
	Proposed	19.8	116.2	20.1
Purgatory Junction to Walnut Junction	Existing	16.6	76.2	7.7
	Proposed	34.8	57.2	6.9
Walnut Junction to Campville Substation	Existing	20.7	87.5	10.0
	Proposed	40.6	64.0	9.1

Table 4 – Summary of Calculated Electric Fields

Calculated Electric Fields

Section		Left Edge of ROW	Max in ROW	Right Edge of ROW
Frost Bridge Substation to Purgatory Junction	Existing	0.25	3.93	0.97
	Proposed	0.25	3.94	0.98
Purgatory Junction to Walnut Junction	Existing	0.87	1.36	0.04
	Proposed	0.13	1.14	0.06
Walnut Junction to Campville Substation	Existing	0.89	1.66	0.03
	Proposed	0.11	1.56	0.04

The results of the calculations show that the proposed modifications would not substantially increase electric or magnetic fields at the edges of the corridor. See Attachment E: EMF Graphs.

Comparison of Calculated Fields to International Guidelines

The anticipated fields from the proposed transmission lines are well below the internationally establish exposure limits for 60-Hz electric and magnetic fields. Specifically, the limits identified by the International Council on Electromagnetic Safety ("ICES") and the International Council on Non-Ionizing Radiation Protection ("ICNIRP"). These standards are summarized below in Table 5.

Table 5 – International Guidelines for EMF Exposure

	EF (kV/m)	MF(mG)
ICES	5	9,040
ICNIRP	4.2	2000

9. Municipal and Property Owner Outreach

In July 2020, Eversource consulted with the Towns of Watertown, Litchfield, Thomaston, and Harwinton and provided a briefing on the proposed Project along with a written notice of the Petition filing in August 2020. From the early Spring through early Summer 2020, Eversource conducted outreach to property owners located along the ROW. In conjunction with the submission of this Petition, all abutting property owners were notified of the filing and provided information on how to obtain additional information on the Project, as well as how to submit comments to the Council. Eversource representatives will continue to be in contact with adjacent property owners to provide advance notification as to the start of construction activities and will continue to update property owners throughout construction and restoration.

10. Conclusion

Based on the foregoing, Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment, nor would they damage existing scenic, historical or recreational values. Accordingly, Eversource requests that the Council issue a declaratory ruling that the proposed modifications would have no substantial adverse environmental effect.

Communications regarding this Petition for a Declaratory Ruling should be directed to:

Kathleen M. Shanley
Manager – Transmission Siting
Eversource Energy
PO Box 270
Hartford, CT 06141-0270
Telephone: (860) 728-4527

By: _____
Kathleen M. Shanley

List of Attachments

Attachment A: 1191 Line Rebuild Project – Aerial Maps
Attachment B: 1191 Line Rebuild Project – Right-of-Way Cross Sections
Attachment C: List of Structure Replacements
Attachment D: Wetlands Delineation Report
Attachment E: Vernal Pool Survey
Attachment F: EMF Graphs and Tables
Attachment G: Letter to the Abutters and Affidavit

Attachment A: 1191 Line Rebuild Project
Aerial Maps

Morris
Watertown
Litchfield
Thomaston
Waterbury
Plymouth
Harwinton
Purgatory Junction
Walnut Hill Junction
Campville Substation
Frost Bridge Substation
SUB
01
02
03
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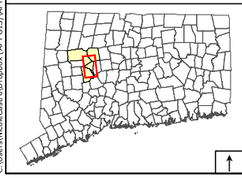
19

INDEX MAP



Legend

- Project Corridor
- Substation
- Junction
- Map Sheet
- Municipal Boundary

N

1:40,000

0 1,250 2,500 Feet

Base Map Source: ESRI USA Topographic Maps

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, Thomaston, Litchfield, Harwinton, CT

Date: September, 2020

Map Author: N. Castro

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 01 OF 19
1191 Line Rebuild Project
Frost Bridge Substation to Structure 3082
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Naugatuck River
- Eversource owned property
- Frost Bridge Substation
- Commercial
- Residential
- Undeveloped, forest
- State owned land (Mattatuck State Forest)
- Hiking trail (Jericho / Whitestone Connector)
- 100-year Flood Zone

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Frost Bridge Substation
- Maintained ROW
- Eversource owned property from structure 3080 to 3082
- Hiking trail (Jericho / Whitestone Connector) north of structures 3080 and 3081

Water Resources
- Wetlands – W-FB1, W-FB2, W-FB3, W-FB4, W-FB5, W-A1, W-A2, W-A3, W-A4, W-MSF3
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-FB1, S-FB2, S-FB3, S-A1, S-A2, S-A3

Wetland and Watercourse Crossings
- None

Right-of-Way Vegetation
- Scrub-shrub

Access
- Structures 3080 to 3082: existing access (portions off-ROW) from Echo Lake Road

Road Crossings
- Frost Bridge Road (Route 262)
- James H Darcey Memorial Highway (Route 8)
- Echo Lake Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
281B-177	THOMASTON ROAD	WATERTOWN	CT	STATE OF CONNECTICUT
281B-224	FROST BRIDGE ROAD	WATERTOWN	CT	STATE OF CONNECTICUT C/O BLACK ROCK STATE PARK
281B-225	FROST BRIDGE ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
281B-226	ECHO LAKE ROAD	WATERTOWN	CT	MATERIALS INNOVATION AND RECYCLING AUTHORITY WATERTOWN TRANSFER STATION
281B-227	ECHO LAKE ROAD	WATERTOWN	CT	WATERTOWN BROWNFIELD LLC
281B-228	ECHO LAKE ROAD	WATERTOWN	CT	MATERIALS INNOVATION AND RECYCLING AUTHORITY WATERTOWN TRANSFER STATION
281B-231	FROST BRIDGE ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)

INDEX MAP

Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

N

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
This mapping product has been created to comply with submittal requirements to obtain certain regulatory approvals and, as such, there is no reliance on the information contained herein for any other purpose.

Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 01 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 02 OF 19
1191 Line Rebuild Project
Structures 3082 to 3085
Town of Watertown, Connecticut

LLN	Parcel Address	City	State	Owner Name
281B-177	THOMASTON ROAD	WATERTOWN	CT	STATE OF CONNECTICUT
281B-224	FROST BRIDGE ROAD	WATERTOWN	CT	STATE OF CONNECTICUT C/O BLACK ROCK STATE PARK
281B-225	FROST BRIDGE ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
281B-227	ECHO LAKE ROAD	WATERTOWN	CT	WATERTOWN BROWNFIELD LLC

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Eversource owned property
- Undeveloped, forest
- State owned land (Mattatuck State Forest)
- Hiking trail (Jericho Trail)
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Eversource owned property at structure 3082
- State owned land (Mattatuck State Forest) from structure 3082 to 3085
- Hiking trail (Jericho Trail) east of structure 3083

Water Resources
- Wetlands – W-A4, W-MSF1, W-MSF2, W-MSF3
- Wetland Cover Types – PFO, PSS
- Watercourse – None
- Vernal Pools – VP-MSF-1, VP-MSF-2

Wetland and Watercourse Crossings
- None

Right-of-Way Vegetation
- Scrub-shrub

Access
- Structures 3082 to 3085: existing access (portions off-ROW) from Echo Lake Road

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 feet / 0 feet

OFF-ROW ACCESS ON STATE-OWNED PROPERTY IS PENDING A SPECIAL USE LICENSE FROM DEEP

LL281B-224

LL281B-225

LL281B-227

8202

4

3082

W-A4

W-MSF3

1913

Map Sheet 02
Map Sheet 01

MATTATUCK STATE FOREST

W-MSF2
VP_MSF-2

UTILIZE EXISTING ACCESS ROAD WITHIN VERNAL POOL ENVELOPE, NO WIDENING OR ALTERATION.

UTILIZE EXISTING ACCESS ROAD WITHIN VERNAL POOL ENVELOPE, NO WIDENING OR ALTERATION.

8201

5

3083

1238 Line

W-MSF1
VP_MSF-1

LL281B-177

OFF-ROW ACCESS ON STATE-OWNED PROPERTY IS PENDING A SPECIAL USE LICENSE FROM DEEP

Jericho Trail

352 Line

1914

1191 Line

1304 Line

8200

ECHO LAKE ROAD

Watertown

Map Sheet 02
Map Sheet 03

1915

3084

6

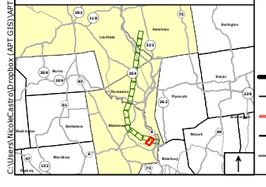
8199

3085

CT NEC Focus Area

W-A6

INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 02 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 03 OF 19
1191 Line Rebuild Project
Structures 3085 to 3089
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Undeveloped, forest
- Agricultural
- State owned land (Mattatuck State Forest)
- Hiking trail (Jericho Trail)
- CT New England Cottontail (NEC) Focus Area
- Turkey Brook

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- State owned (Mattatuck State Forest) from structures 3086 to 3088
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-A5, W-A6, W-A7, W-A8, W-A9, W-A11
- Wetland Cover Types – PSS
- Watercourses – S-A4, S-A5, S-A5.5, S-A6 (Turkey Brook), S-A7

Wetland and Watercourse Crossings
- Wetland W-A5 – construction mats for work pad
- Wetland W-A9 – construction mats for work pad
- Stream S-A5 – construction mats for access road
- Stream S-A5.5 – construction mats for access road
- Stream S-A6 (Turkey Brook) – construction mats for access road and work pad

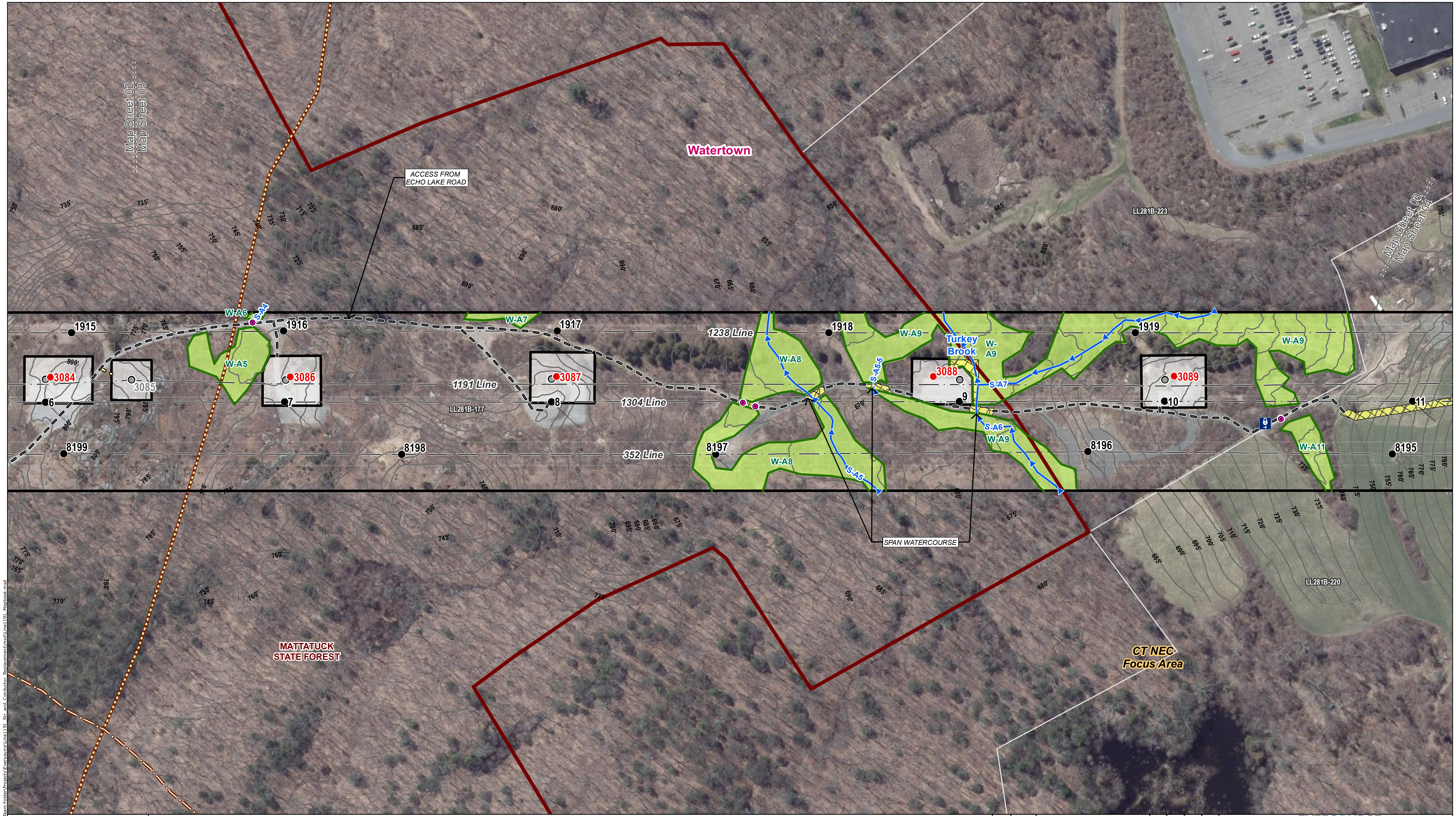
Right-of-Way Vegetation
- Scrub-shrub

Access
- Structures 3085 to 3089: existing access (portions off-ROW) from Echo Lake Road

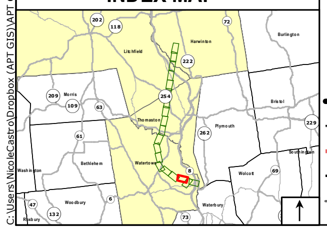
Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
281B-177	THOMASTON ROAD	WATERTOWN	CT	STATE OF CONNECTICUT
281B-220	192 PARK ROAD	WATERTOWN	CT	JOHN P MOSKALUK
281B-223	156 PARK ROAD	WATERTOWN	CT	GLOBAL STEERING SYSTEMS LLC



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
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- Field Delineated CT Only Wetland
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- Map Sheet Matchline

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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 03 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 04 OF 19
1191 Line Rebuild Project
Structures 3090 to 3096
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Agricultural
- Commercial
- Veteran's Memorial Park (Town of Watertown)
- Undeveloped, forest
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Agricultural from structures 3090 to 3093
- Commercial adjacent to structure 3095
- Veteran's Memorial Park (Town of Watertown) west of structure 3096
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-A11, W-B1, W-B2, W-B3, W-B4, W-B5, W-B6
- Wetland Cover Types – PSS, PEM
- Watercourse – None
- Vernal Pools – VP-B2-1, VP-B4-1

Wetland and Watercourse Crossings
- Wetland W-B2 and Vernal Pool VP-B2-1 – construction mats for work pad
- Wetland W-B6 – construction mats for work pad

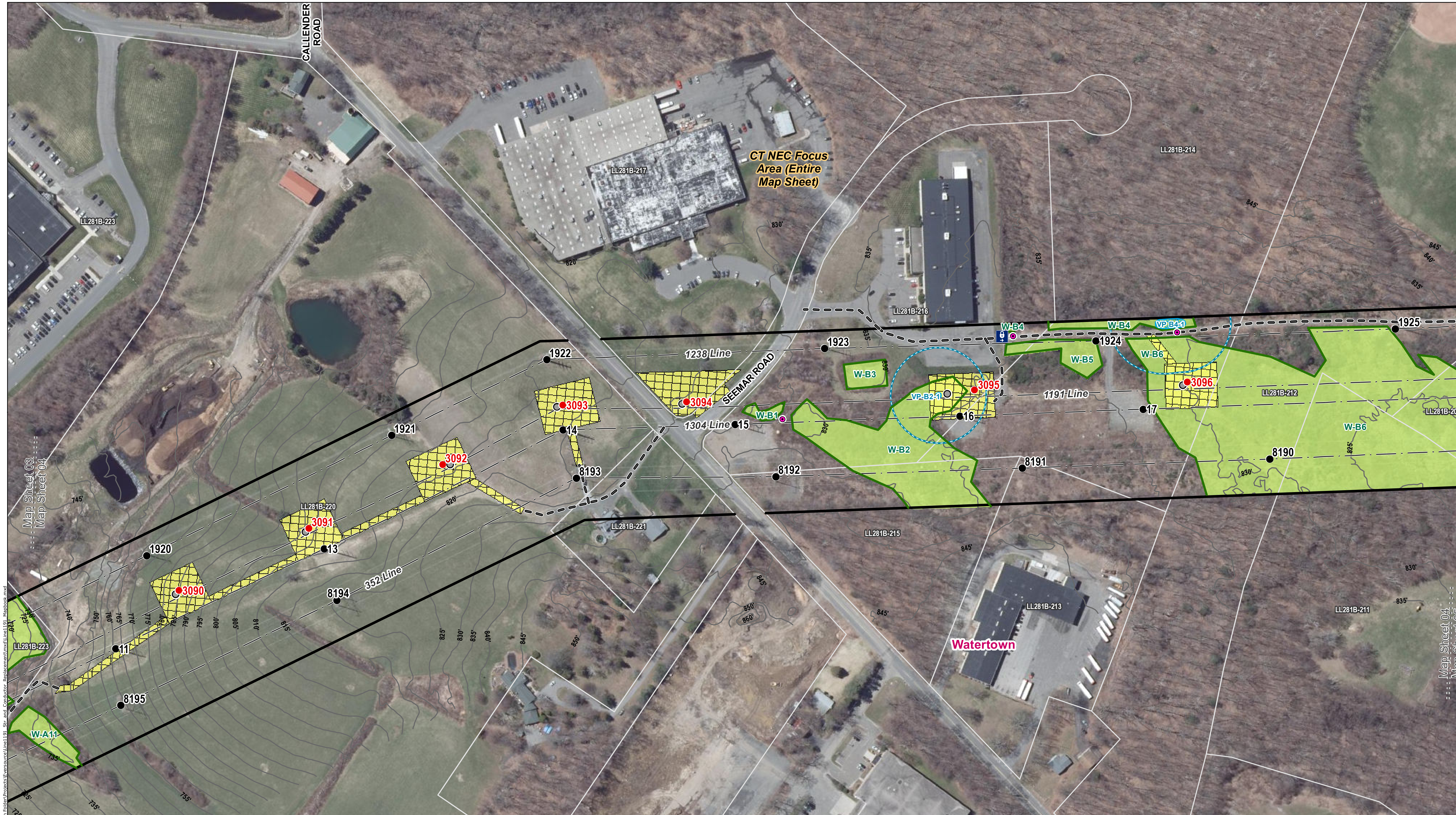
Right-of-Way Vegetation
- Scrub-scrub
- Hayfields
- Landscaping

Access
- Structures 3090 to 3093: existing and proposed access from Park Road
- Structure 3094: from Seemar Road
- Structures 3095 to 3096: existing access from Seemar Road

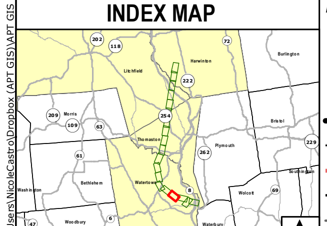
Road Crossings
- Park Road
- Seemar Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
281B-209	NOVA SCOTIA HILL ROAD	WATERTOWN	CT	TOWN OF WATERTOWN
281B-211	210 JERICHO ROAD	WATERTOWN	CT	GARY J & CYNTHIA D LEMAY
281B-212	PARK ROAD	WATERTOWN	CT	TOWN OF WATERTOWN
281B-213	401 PARK ROAD	WATERTOWN	CT	LAND JET INCORPORATED
281B-214	PARK ROAD	WATERTOWN	CT	H&T REALTY LIMITED PARTNERSHIP
281B-215	PARK ROAD	WATERTOWN	CT	LAND JET INCORPORATED
281B-216	50 PARK ROAD	WATERTOWN	CT	SOLLA EYELET PRODUCTS INCORPORATED
281B-217	1 SEEMAR ROAD	WATERTOWN	CT	SEEMAR REAL ESTATE LLC
281B-219	334 PARK ROAD	WATERTOWN	CT	BETH VALE
281B-220	192 PARK ROAD	WATERTOWN	CT	JOHN P MOSKALUK
281B-221	320 PARK ROAD	WATERTOWN	CT	THOMAS MOSKALUK
281B-223	156 PARK ROAD	WATERTOWN	CT	GLOBAL STEERING SYSTEMS LLC



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 04 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 05 OF 19
1191 Line Rebuild Project
Structures 3097 to 3102
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Eversource owned property
- Veteran's Memorial Park (Town of Watertown)
- Residential
- Agricultural
- Undeveloped, forest
- Jericho Brook Pond
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Veteran's Memorial Park (Town of Watertown) from structures 3097 through 3099
- Eversource owned property at structure 3100
- Agricultural (greenhouses) adjacent to structure 3101
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-B6, W-B7, W-B8, W-B9, W-B11
- Wetland Cover Types – PSS, PEM
- Watercourses – S-B1

Wetland and Watercourse Crossings
- Wetland W-B11 – construction mats for work pad
- Stream S-B1 – construction mats for work pad

Right-of-Way Vegetation
- Scrub-shrub

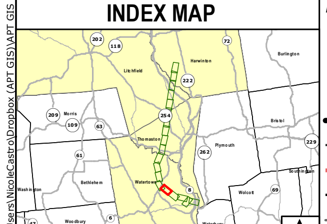
Access
- Structures 3097 to 3099: existing access from Park Road
- Structures 3100 to 3102: existing access from Nova Scotia Hill Road

Road Crossings
- Nova Scotia Hill Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
281B-195	37 OLD HIGHWAY	WATERTOWN	CT	ELVIO & GENTILIA MUSTO
281B-199	6 CHIMNEY ROAD	WATERTOWN	CT	JOHN J & BARBARA A KARAS
281B-200	PECK LANE	WATERTOWN	CT	TIMOTHY R & SONIA A MEYERS
281B-201	625 NOVA SCOTIA HILL ROAD	WATERTOWN	CT	SHEN TRUST
281B-207	30 JERICHO ROAD	WATERTOWN	CT	MARIO GUERRERA
281B-208	NOVA SCOTIA HILL ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
281B-209	NOVA SCOTIA HILL ROAD	WATERTOWN	CT	TOWN OF WATERTOWN
281B-210	96 JERICHO ROAD	WATERTOWN	CT	G & A III LLC
281B-211	210 JERICHO ROAD	WATERTOWN	CT	GARY J & CYNTHIA D LEMAY
281B-212	PARK ROAD	WATERTOWN	CT	TOWN OF WATERTOWN

INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

N

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 05 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 06 OF 19
1191 Line Rebuild Project
Structures 3101 to 3107
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Eversource owned property
- Residential
- State owned land
- Undeveloped, forest
- Unnamed pond
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Agricultural (greenhouses) adjacent to structure 3101
- Unnamed pond north of structure 3102
- Eversource owned property at structures 3103 to 3105
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-B11, W-C1A, W-C2A, W-C1, W-C3
- Wetland Cover Types – PSS, PEM, POW
- Watercourses – S-B1, S-B2, S-B3, S-C1

Wetland and Watercourse Crossings
- Wetland W-B11 – construction mats for work pad
- Stream S-B1 – construction mats for work pad

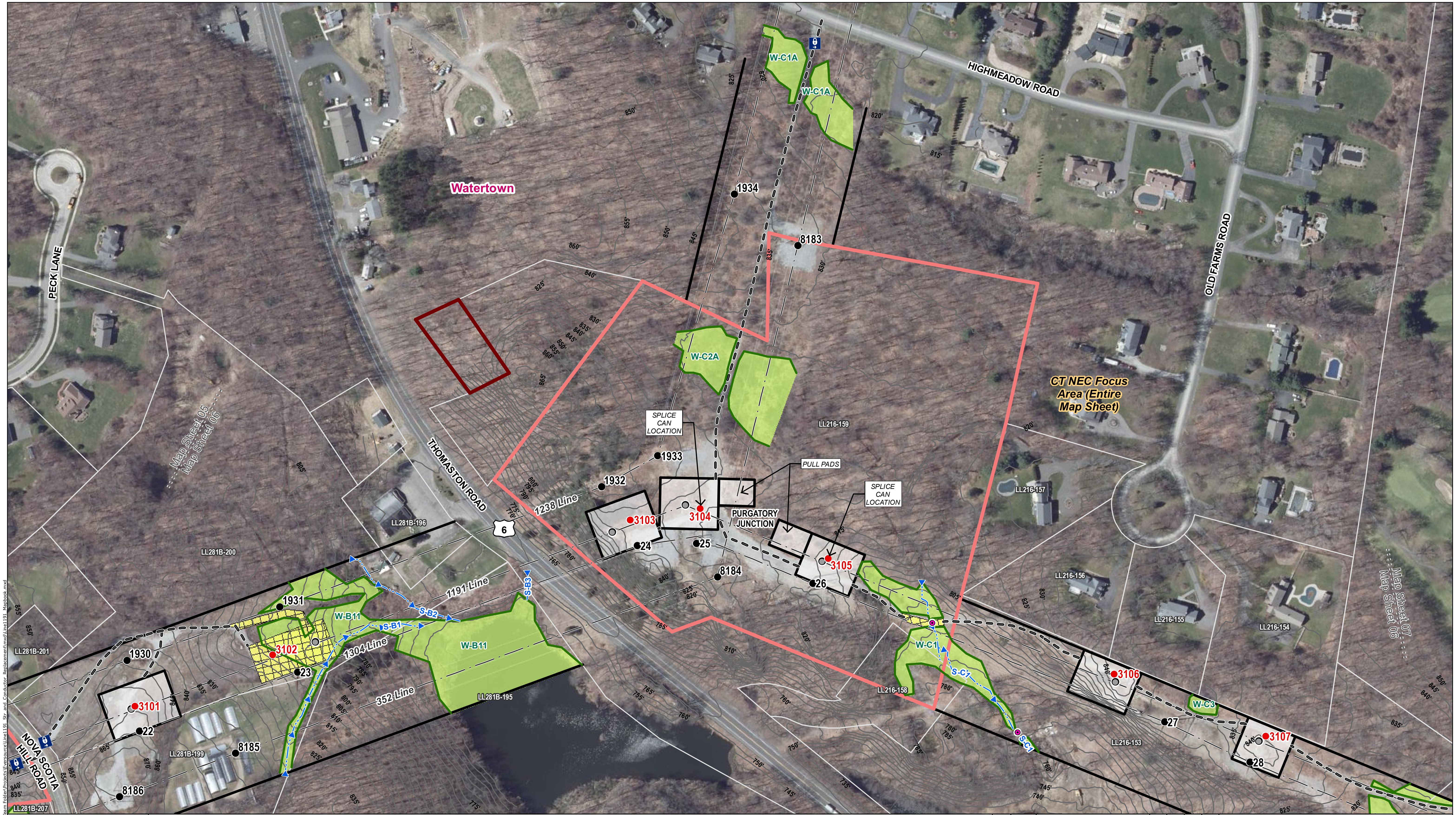
Right-of-Way Vegetation
- Scrub-shrub

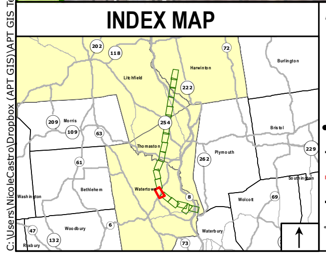
Access
- Structures 3101 to 3102: existing access from Nova Scotia Hill Road
- Structures 3103 to 3107: existing access from Highmeadow Road

Road Crossings
- Thomaston Road (U.S. Route 6)

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 400 / 0 feet (Purgatory Junction south to structure 3101)
- 135 feet / 0 feet (Purgatory Junction north to structure 3107)

LLN	Parcel Address	City	State	Owner Name
216-152	49 HARD ROCK ROAD	WATERTOWN	CT	ASHLEY M PRATT & JUSTIN NEUMANN
216-153	1045 THOMASTON ROAD	WATERTOWN	CT	JOHN POND
216-154	249 OLD FARMS ROAD	WATERTOWN	CT	JANET G DAYTON
216-155	259 OLD FARMS ROAD	WATERTOWN	CT	CHERYL L & THOMAS E GEISE
216-156	256 OLD FARMS ROAD	WATERTOWN	CT	RIMICK TRUST
216-157	246 OLD FARMS ROAD	WATERTOWN	CT	RICHARD A & CONSTANCE M LABBE
216-158	VACANT LOT	WATERTOWN	CT	PER ASSESOR'S OFFICE, OWNER UNKNOWN
216-159	THOMASTON ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
281B-195	37 OLD HIGHWAY	WATERTOWN	CT	ELVIO & GENTILIA MUSTO
281B-196	866 THOMASTON ROAD	WATERTOWN	CT	WATER OAK POST
281B-199	6 CHIMNEY ROAD	WATERTOWN	CT	JOHN J & BARBARA A KARAS
281B-200	PECK LANE	WATERTOWN	CT	TIMOTHY R & SONIA A MEYERS
281B-201	625 NOVA SCOTIA HILL ROAD	WATERTOWN	CT	SHEN TRUST
281B-207	30 JERICHO ROAD	WATERTOWN	CT	MARIO GUERRERA
281B-208	NOVA SCOTIA HILL ROAD	WATERTOWN	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)





Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

Feet: 0 50 100 200

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 06 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 07 OF 19
1191 Line Rebuild Project
Structures 3108 to 3113
Town of Watertown, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Crestbrook Park Golf course
- Residential
- State owned land (Black Rock State Park)
- Undeveloped, forest
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- State owned land (Black Rock State Park) from structures 3111 to 3113
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-C4, W-C6, W-C7, W-C8, W-C10, W-C12, W-C14, W-C15, W-C16
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-C3, S-C4
- Vernal Pools – VP-C10-1, VP-C12-1

Wetland and Watercourse Crossings
- None

Right-of-Way Vegetation
- Scrub-shrub
- Forest

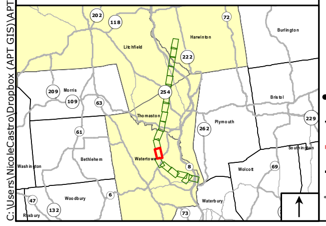
Access
- Structures 3108 to 3113: existing access from Highmeadow Road

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 135 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-142	426 BIDWELL HILL ROAD	WATERTOWN	CT	STATE OF CONNECTICUT
216-145	THOMASTON ROAD	WATERTOWN	CT	RICHARD H DYER JR TRUSTEE C/O HEATHER WOODRING
216-146	131 HARD ROCK ROAD	WATERTOWN	CT	MICHAEL MASAYDA & SUSAN DIGIACOMO
216-149	THOMASTON ROAD	WATERTOWN	CT	GEOFFREY A SCHEURICH
216-150	67 HARD ROCK ROAD	WATERTOWN	CT	MARK J & ELLEN B BISHOP, SR
216-152	49 HARD ROCK ROAD	WATERTOWN	CT	ASHLEY M PRATT & JUSTIN NEUMANN
216-153	1045 THOMASTON ROAD	WATERTOWN	CT	JOHN POND
216-154	249 OLD FARMS ROAD	WATERTOWN	CT	JANET G DAYTON

INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NEC Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 07 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 08 OF 19
1191 Line Rebuild Project
Structures 3114 to 3118
Town of Watertown, Connecticut

LLN	Parcel Address	City	State	Owner Name
216-142	426 BIDWELL HILL ROAD	WATERTOWN	CT	STATE OF CONNECTICUT
216-145	THOMASTON ROAD	WATERTOWN	CT	RICHARD H DYER JR TRUSTEE C/O HEATHER WOODRING

AREA DESCRIPTION

Existing Land Use & Resource Areas
- State owned land (Black Rock State Park)
- Undeveloped, forest
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- State owned land (Black Rock State Park) from structures 3114 to 3118
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-C15, W-C18, W-C20
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-C4, S-C5
- Vernal Pools – VP-C15-1, VP-C20-1

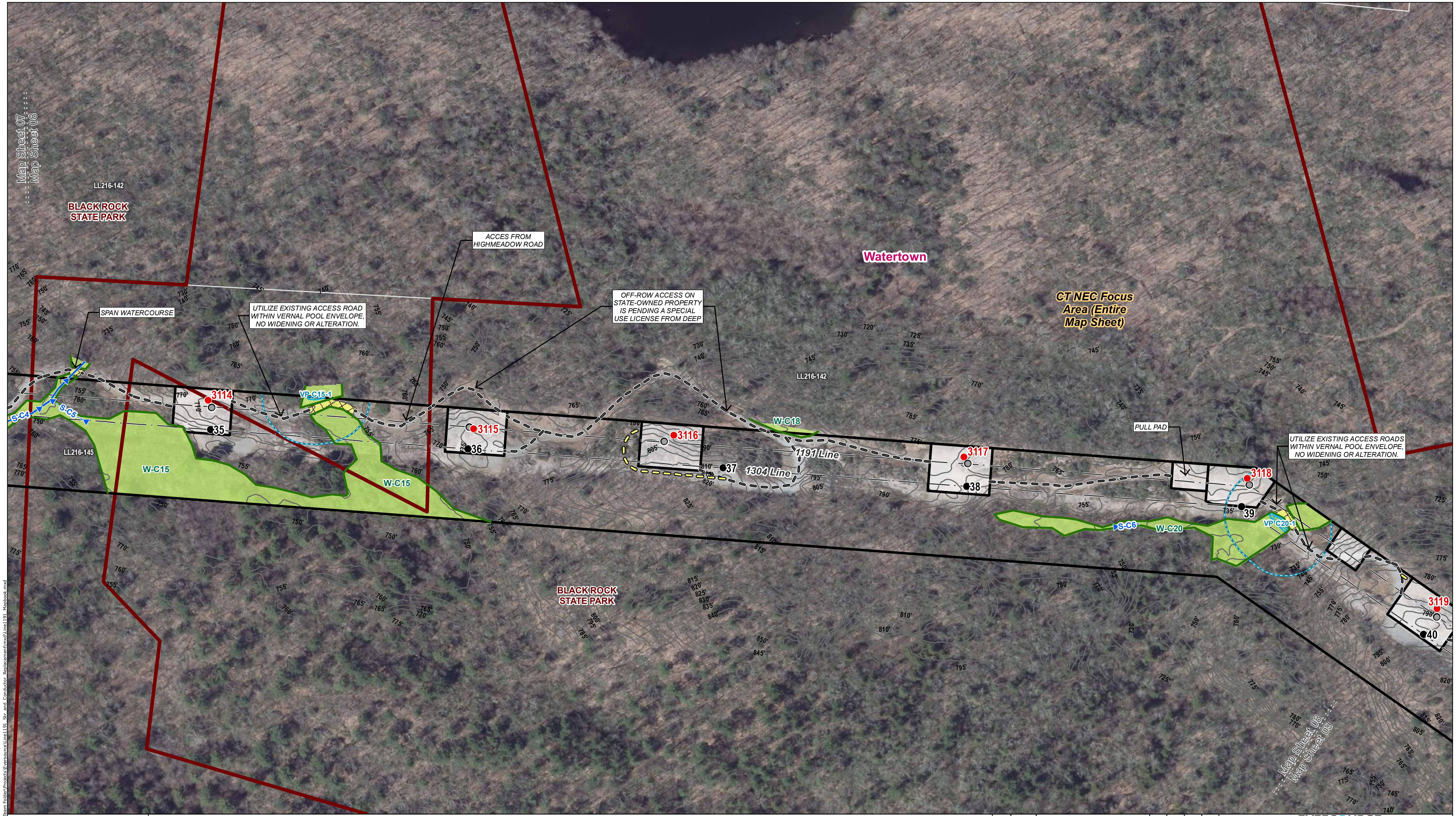
Wetland and Watercourse Crossings
- Stream S-C4 – construction mats for access road

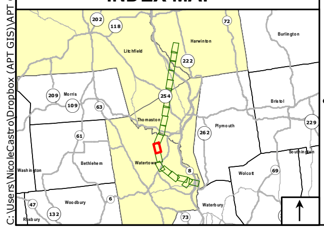
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3114 to 3118: existing access from Highmeadow Road

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 135 feet / 0 feet





Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

N

1 inch = 200 feet

0 50 100 200 Feet

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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 08 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 09 OF 19
1191 Line Rebuild Project
Structures 3119 to 3127
Town of Watertown, Connecticut

LLN	Parcel Address	City	State	Owner Name
216-136	822 BRANCH ROAD	THOMASTON	CT	STATE OF CONNECTICUT
216-142	426 BIDWELL HILL ROAD	WATERTOWN	CT	STATE OF CONNECTICUT

AREA DESCRIPTION

Existing Land Use & Resource Areas
- State owned land (Black Rock State Park)
- Black Rock Dam
- Hiking trails (Mattatuck Trail, and Black Rock Park Trail – Red Loop)
- Undeveloped, forest
- CT New England Cottontail (NEC) Focus Area
- Natural Diversity Database Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- State owned land (Black Rock State Park) from structures 3119 to 3127
- Hiking trails (Mattatuck Trail and Black Rock Park Trail – Red Loop)
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-C21, W-C22
- Wetland Cover Types – PFO, PSS
- Watercourse – S-C7
- Vernal Pools – VP-C21-1

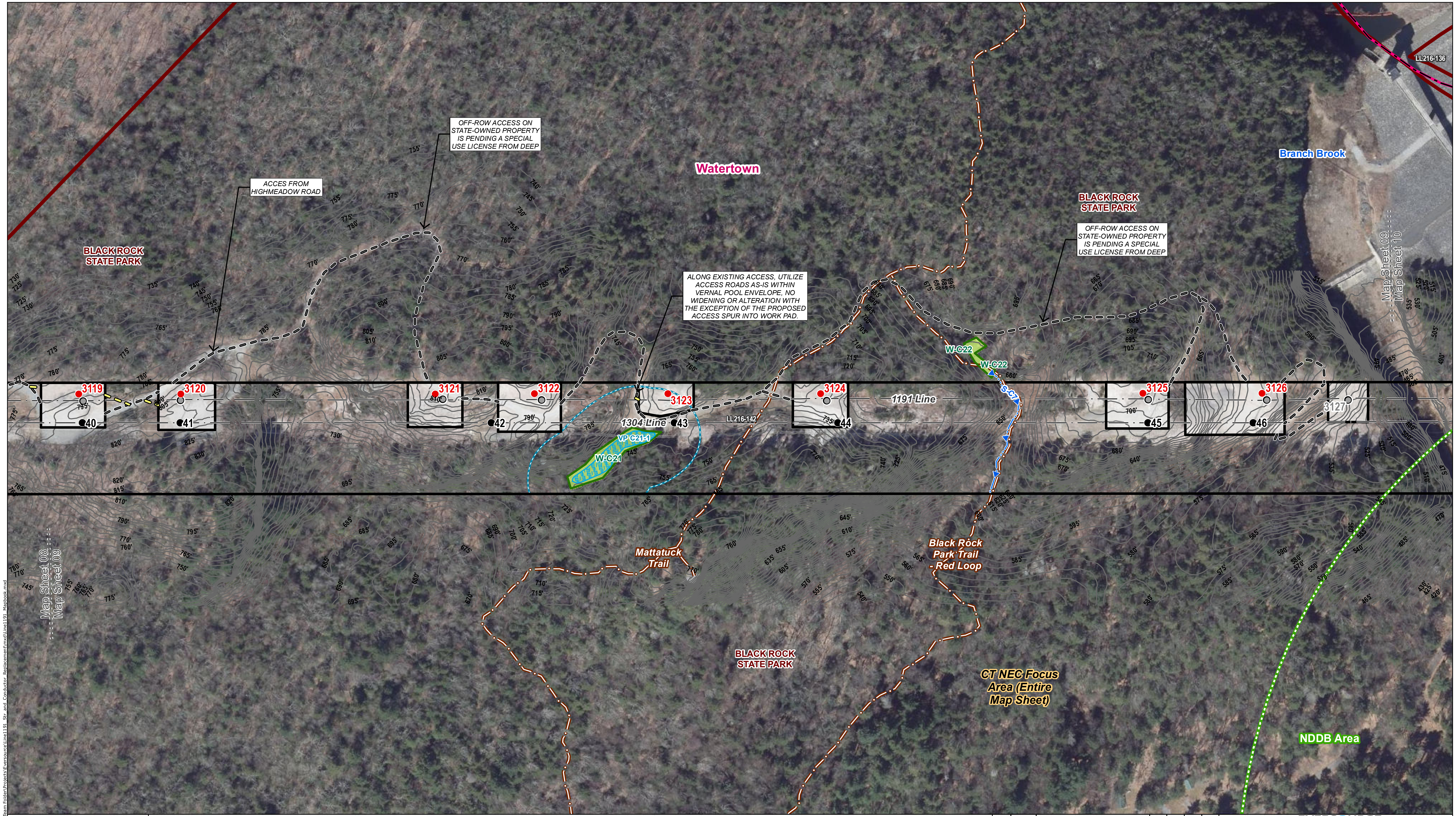
Wetland and Watercourse Crossings
- None

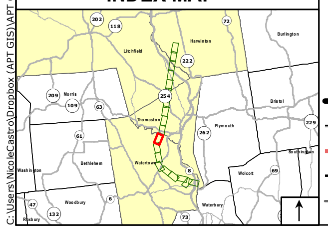
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3119 to 3127: existing access from Highmeadow Road

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 135 feet / 0 feet





Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
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- Field Delineated Wetland
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- Field Delineated CT Only Wetland
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- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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0 50 100 200 Feet

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NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown, CT

Map Sheet 09 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 10 OF 19
1191 Line Rebuild Project
Structures 3128 to 3133
Towns of Watertown and Thomaston, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- State owned land (Black Rock State Park and Mattatuck State Forest)
- Black Rock Dam
- Hiking trails (Mattatuck Trail, and Black Rock Park Trail – Red Loop)
- Thomaston Fish & Game Club
- Undeveloped, forest
- CT New England Cottontail (NEC) Focus Area
- Natural Diversity Database Area
- 100-year and 500-year Flood Zones

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- 100-year and 500-year Flood Zones south of structure 3128
- State owned land (Black Rock State Park) at structure 3128
- State owned land (Mattatuck State Forest) from structures 3129 to 3132
- Thomaston Fish & Game Club north of structure 3132
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-C23, W-D1A, W-D1B, W-D1, W-D2, W-D3
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-C8 (Branch Brook), S-C9, S-D1, S-D2, S-D3

Wetland and Watercourse Crossings
- None

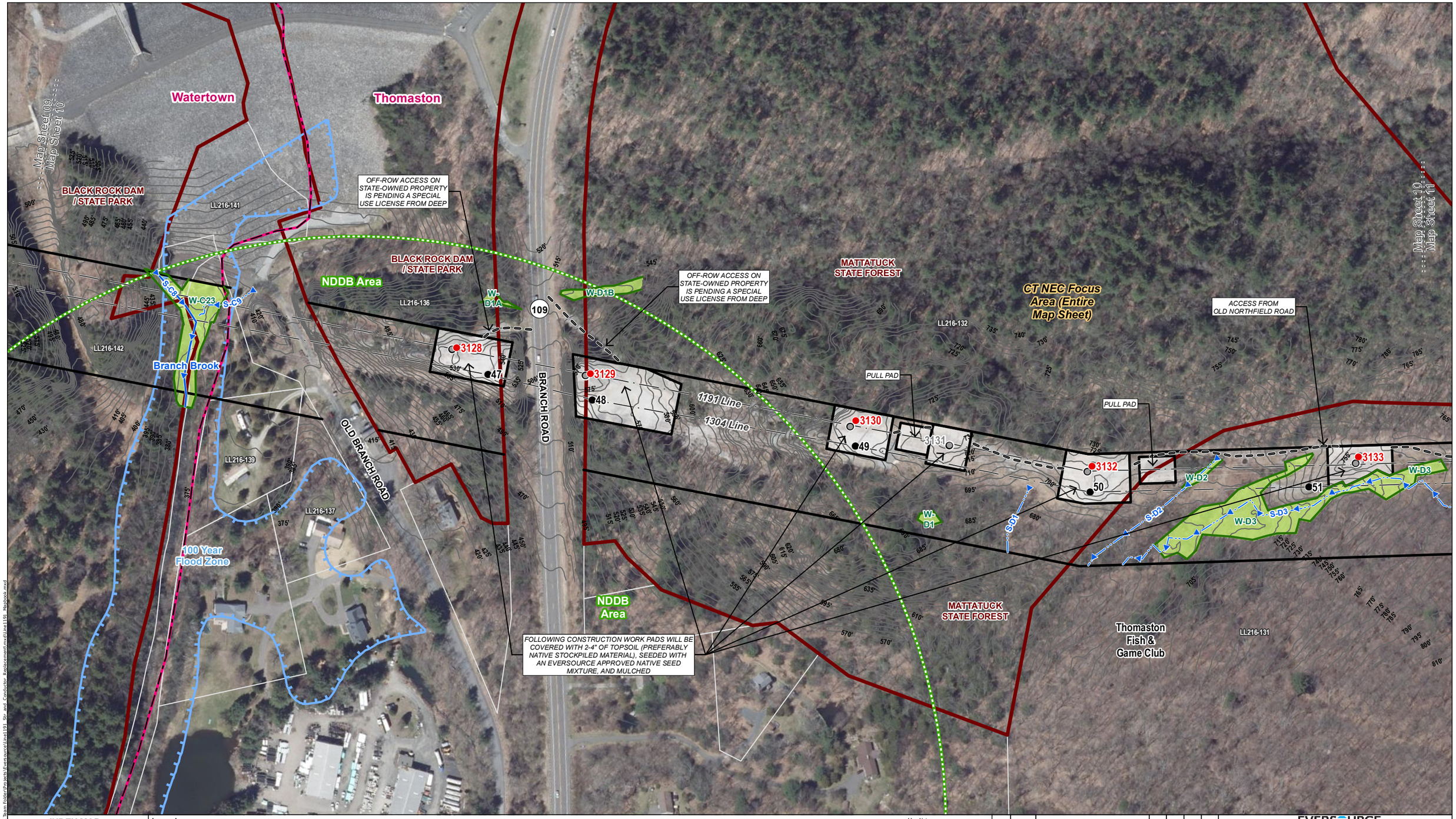
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3128 to 3129: existing off-ROW access from Branch Road (Route 109)
- Structures 3130 to 3133: existing off-ROW access from Old Northfield Road

Road Crossings
- Branch Road (Route 109)

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 135 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-131	270 BRANCH ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-132	326 BRANCH ROAD	THOMASTON	CT	STATE OF CONNECTICUT
216-136	822 BRANCH ROAD	THOMASTON	CT	STATE OF CONNECTICUT
216-137	341 OLD BRANCH ROAD	THOMASTON	CT	ROBERT D & JANET BOTHROYD, JR
216-139	351 OLD BRANCH ROAD	THOMASTON	CT	UNITED STATES OF AMERICA
216-140	371 BRANCH ROAD	THOMASTON	CT	UNITED STATES OF AMERICA
216-141	47 HICKORY HILL ROAD	THOMASTON	CT	MARGARET A QUINN
216-142	426 BIDWELL HILL ROAD	WATERTOWN	CT	STATE OF CONNECTICUT



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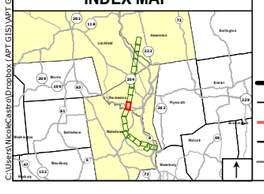
INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
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- Delineated Intermittent Watercourse
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- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Watertown and Thomaston, CT

Map Sheet 10 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 11 OF 19
1191 Line Rebuild Project
Structures 3134 to 3139
Town of Thomaston, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- State owned land (Mattatuck State Forest)
- Eversource owned property
- Thomaston Fish & Game Club
- Undeveloped, forest
- Morton Pond and unnamed pond
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- State owned land (Mattatuck State Forest) south of structure 3134
- Eversource owned property from structures 3134 to 3136
- Thomaston Fish & Game Club from structures 3137 to 3139
- Morton Pond north of structure 3139
- CT New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-D3, W-D4, W-D5, W-D6
- Wetland Cover Types – PFO, PSS, PEM, POW
- Watercourse – S-D3
- Vernal Pools – VP-D4-1, VP-D5-1

Wetland and Watercourse Crossings
- None

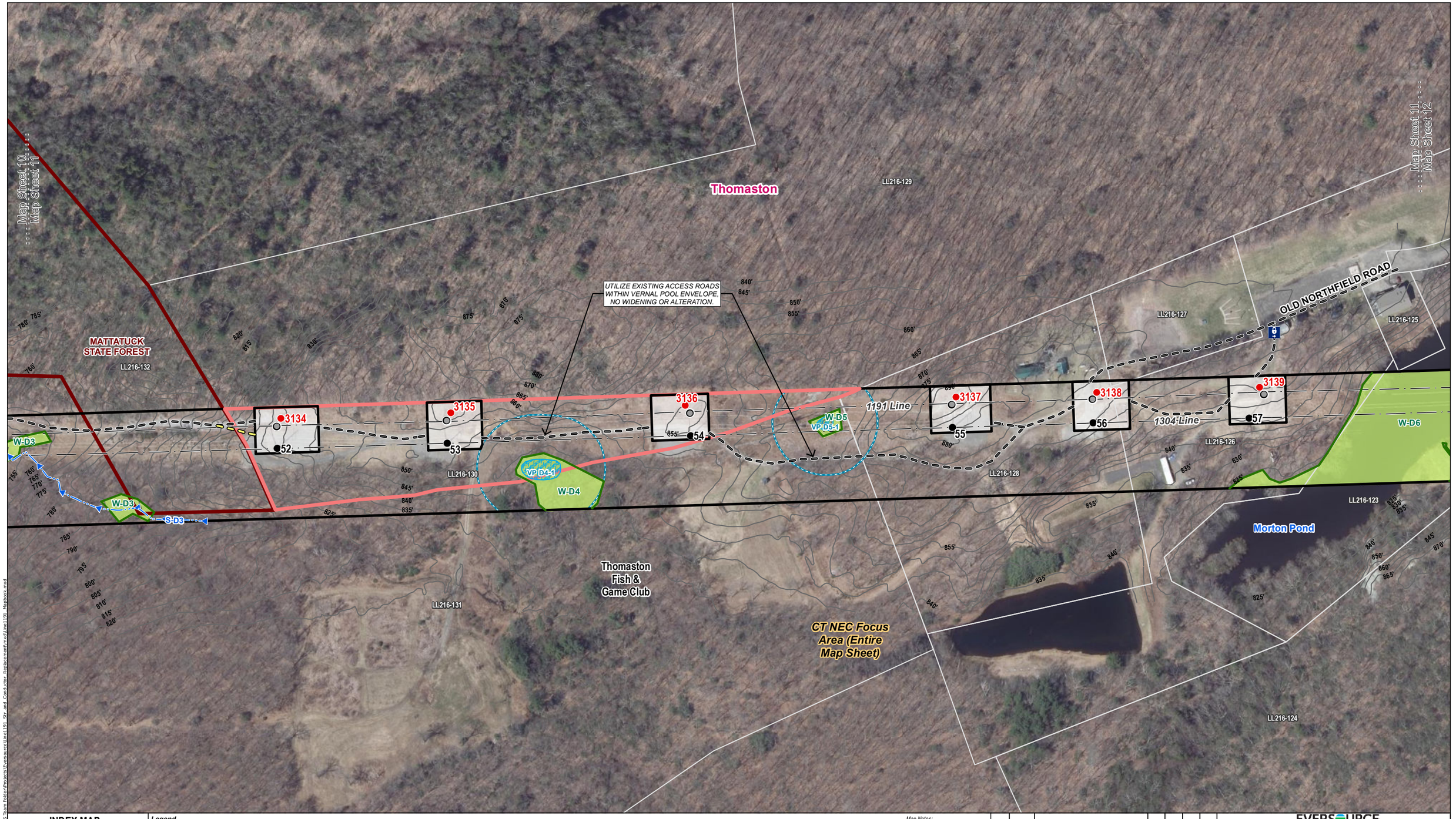
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3134 to 3139: existing off-ROW access from Old Northfield Road

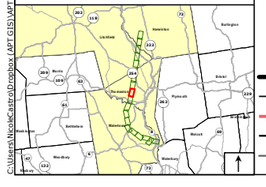
Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 135 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-123	710 OLD NORTHFIELD ROAD	THOMASTON	CT	ROBERT K & JEAN R MORTON
216-124	74 DUG ROAD	THOMASTON	CT	TOWN OF THOMASTON
216-125	730 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-126	730 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-127	728 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-128	726 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-129	600 OLD NORTHFIELD ROAD	THOMASTON	CT	STEVEN H & ANN DUNSKY TRUST STEVEN H & AND P DUNSKY, TRUSTEES
216-130	620 OLD NORTHFIELD ROAD	THOMASTON	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
216-131	270 BRANCH ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-132	326 BRANCH ROAD	THOMASTON	CT	STATE OF CONNECTICUT



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Thomaston, CT

Map Sheet 11 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 12 OF 19
1191 Line Rebuild Project
Structures 3140 to 3145
Town of Thomaston, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- Undeveloped, forest
- Residential
- Morton Pond
- Thomaston Fish & Game Club
- Eversource owned property
- CT New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas

- Maintained ROW
- Morton Pond south of structure 3140
- Thomaston Fish & Game Club between structures 3141 and 3142
- CT New England Cottontail (NEC) Focus Area south of structure 3142
- Residential adjacent to structures 3143 and 3144

Water Resources

- Wetlands – W-D6, W-D7, W-D8, W-D10, W-D11, W-D12, W-D15
- Wetland Cover Types – PFO, PSS, PEM, POW
- Watercourses – S-D5, S-D6, S-D8
- Vernal Pools – VP-D12-1, VP-D15-1

Wetland and Watercourse Crossings

- Wetland W-D10 – construction mats for work pad
- Wetland W-D12 – construction mats for access road

Right-of-Way Vegetation

- Scrub-shrub
- Forest

Access

- Structures 3140 to 3141: existing off-ROW access from Old Northfield Road
- Structures 3142 to 3145: existing off-ROW access from Walnut Hill Road

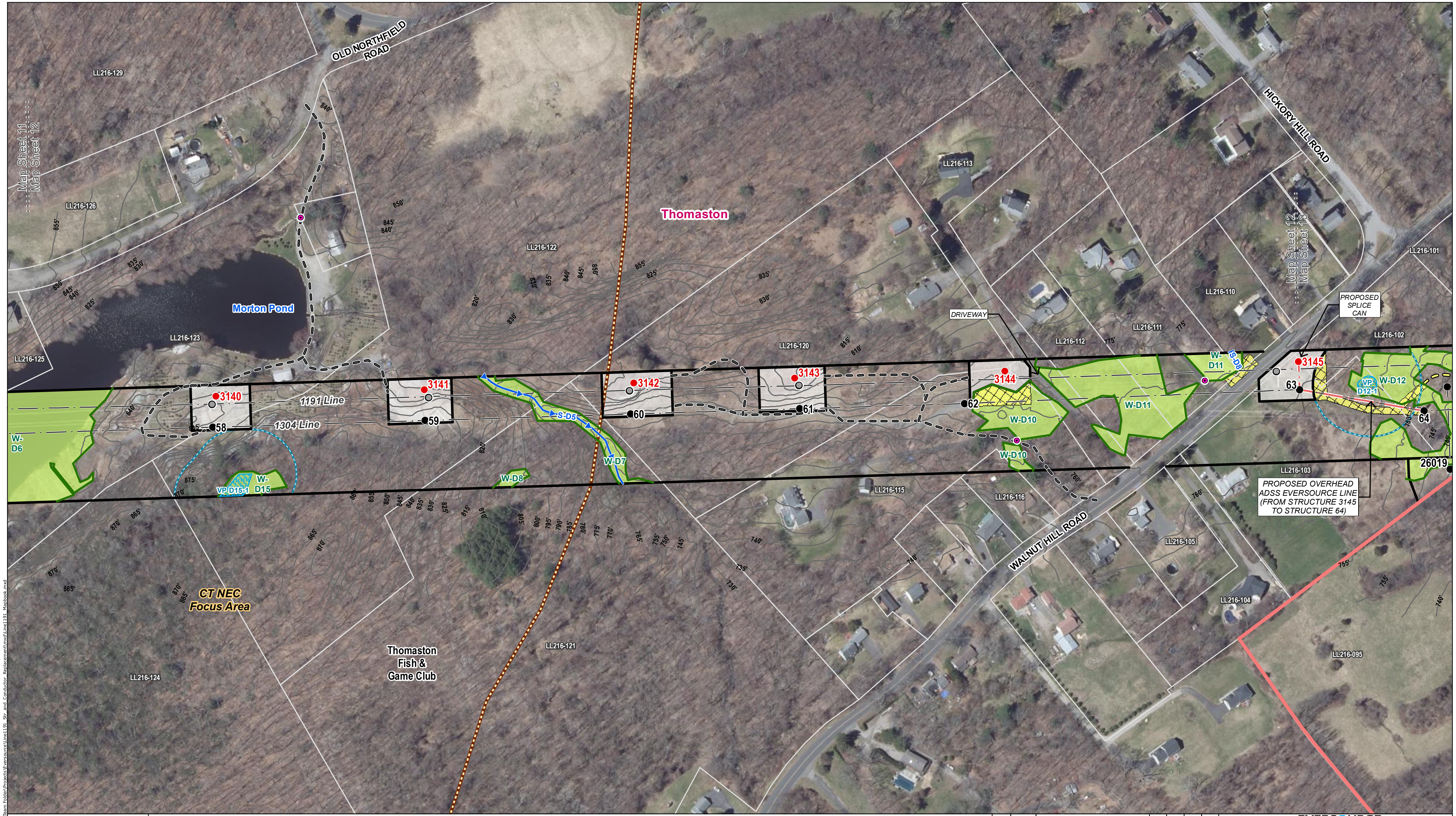
Road Crossings

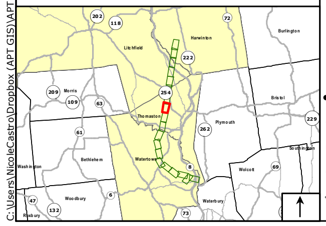
- Walnut Hill Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing

- 135 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-095	500 WALNUT HILL ROAD	THOMASTON	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
216-101	528 WALNUT HILL ROAD	THOMASTON	CT	WILLIAM P & NORMA L KRYZANOWSKI
216-102	496 WALNUT HILL ROAD	THOMASTON	CT	MICHAEL GUARNIERI
216-103	448 WALNUT HILL ROAD	THOMASTON	CT	CHRIS & LORA ANN CANTONI
216-104	438 WALNUT HILL ROAD	THOMASTON	CT	SCOTT M THERIAULT
216-105	428 WALNUT HILL ROAD	THOMASTON	CT	KEITH & BETH LAHEY
216-110	485 WALNUT HILL ROAD	THOMASTON	CT	ASHLEY COTNOIR & MICHAEL SWEENEY
216-111	455 WALNUT HILL ROAD	THOMASTON	CT	RONALD J & CYNTHIA S HAX
216-112	397 WALNUT HILL ROAD	THOMASTON	CT	CAROL A BUELL
216-113	477 WALNUT HILL ROAD	THOMASTON	CT	RICKY & JULISSA CRESPO
216-115	365 WALNUT HILL ROAD	THOMASTON	CT	DANIEL J & ANN D SEABOURNE
216-116	407 WALNUT HILL ROAD	THOMASTON	CT	MICHELE & RAYMOND L WILKENS
216-120	429 WALNUT HILL ROAD	THOMASTON	CT	SEBASTIAN & DONNA VALENTI
216-121	311 WALNUT HILL ROAD	THOMASTON	CT	RICHARD D & CHRIS J GILLAND, JR
216-122	790 OLD NORTHFIELD ROAD	THOMASTON	CT	STEVEN H & ANN DUNSKY TRUST STEVEN H & AND P DUNSKY, TRUSTEES
216-123	710 OLD NORTHFIELD ROAD	THOMASTON	CT	ROBERT K & JEAN R MORTON
216-124	74 DUG ROAD	THOMASTON	CT	TOWN OF THOMASTON
216-125	730 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-126	730 OLD NORTHFIELD ROAD	THOMASTON	CT	THOMASTON FISH & GAME CLUB INCORPORATED
216-129	600 OLD NORTHFIELD ROAD	THOMASTON	CT	STEVEN H & ANN DUNSKY TRUST STEVEN H & AND P DUNSKY, TRUSTEES





Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

N

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Thomaston, CT

Map Sheet 12 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 13 OF 19
1191 Line Rebuild Project
Structures 3145 to 3151
Town of Thomaston, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Undeveloped, forest
- Residential
- Federal owned property (Northfield Brook Lake – USACE)
- Hiking trail (Northfield Brook Lake Trail)
- Northfield Brook
- 100-year Flood Zone

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Eversource owned property east of structure 3146
- Federal owned property (Northfield Brook Lake – USACE) at structure 3151

Water Resources
- Wetlands – W-D12, W-D13, W-D14
- Wetland Cover Types – PFO, PSS, PEM
- Watercourse – S-D9, S-D10, S-D11
- Vernal Pool – VP-D12-1

Wetland and Watercourse Crossings
- Wetland W-D12 – construction mats for work pad and access road
- Stream S-D9 – construction mats for access road
- Stream S-D10 – construction mats for work pad

Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3145 to 3151: existing and proposed access from Walnut Hill Road

Road Crossings
- Walnut Hill Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-091	511 LITCHFIELD STREET	THOMASTON	CT	UNITED STATES OF AMERICA
216-092	611 LITCHFIELD STREET	THOMASTON	CT	UNITED STATES OF AMERICA
216-094	620 WALNUT HILL ROAD	THOMASTON	CT	RUTH LUNDBERG C/O NORMA KRYZANOWSKI
216-095	500 WALNUT HILL ROAD	THOMASTON	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
216-097	598 WALNUT HILL ROAD	THOMASTON	CT	RUTH LUNDBERG C/O NORMA KRYZANOWSKI
216-101	528 WALNUT HILL ROAD	THOMASTON	CT	WILLIAM P & NORMA L KRYZANOWSKI
216-102	496 WALNUT HILL ROAD	THOMASTON	CT	MICHAEL GUARNIERI
216-103	448 WALNUT HILL ROAD	THOMASTON	CT	CHRIS & LORA ANN CANTONI
216-104	438 WALNUT HILL ROAD	THOMASTON	CT	SCOTT M THERIAULT
216-110	485 WALNUT HILL ROAD	THOMASTON	CT	ASHLEY COTNOIR & MICHAEL SWEENEY

HICKORY HILL ROAD

WALNUT HILL ROAD

Thomaston

Northfield Brook Lake (USACE)

Map Sheet 12
Map Sheet 13

Map Sheet 13
Map Sheet 14

PROPOSED SPLICE CAN

OLD PAPER ROAD, NEED RIGHTS REVIEW

WALNUT HILL JUNCTION

LL216-101

LL216-097

LL216-110

LL216-102

LL216-103

LL216-094

LL216-092

LL216-095

LL216-091

3145 3146 3147 3148 3149 3150 3151

3253 3254 3255 3256 3257 3258

63 64 65 66 67 68 69

26019

26018

1191 Line

1304 Line

1921 Line

W-D12 W-D13 W-D14

S-D9 S-D10 S-D11

VP-D12-1

PROPOSED OVERHEAD ADSS EVERSOURCE LINE (FROM STRUCTURE 3145 TO STRUCTURE 64)

NORTHFIELD ROAD

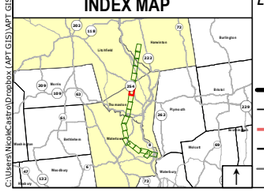
254

100 Year Flood Zone

100 Year Flood Zone

Northfield Brook

INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
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- Open Water
- Field Delineated CT Only Wetland
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- 100' Vernal Pool Envelope
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- FEMA 500 Year Flood Zone
- Parcel Boundary
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- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Thomaston, CT

Map Sheet 13 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 14 OF 19
1191 Line Rebuild Project
Structures 3152 to 3157
Towns of Thomaston and Litchfield, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Federal owned property (Northfield Brook Lake – USACE)
- Hiking trail (Northfield Brook Lake Trail)
- Northfield Brook
- 100-year Flood Zone
- State owned land (Mattatuck State Forest)
- Undeveloped, forest
- Residential
- Unnamed pond

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Federal owned property (Northfield Brook Lake – USACE) south of structure 3152
- Hiking trail (Northfield Brook Lake Trail) south of structure 3152
- Northfield Brook south of structure 3152
- 100-year Flood Zone south of structure 3152
- Residential adjacent to structure 3154

Water Resources
- Wetlands – W-E1, W-E2, W-E3, W-E4
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-E2 (Northfield Brook), S-E3, S-E4, S-E5

Wetland and Watercourse Crossings
- Wetland W-E2 – construction mats for work pad
- Wetland W-E3 – construction mats for work pad
- Stream S-E3 – construction mats for access road

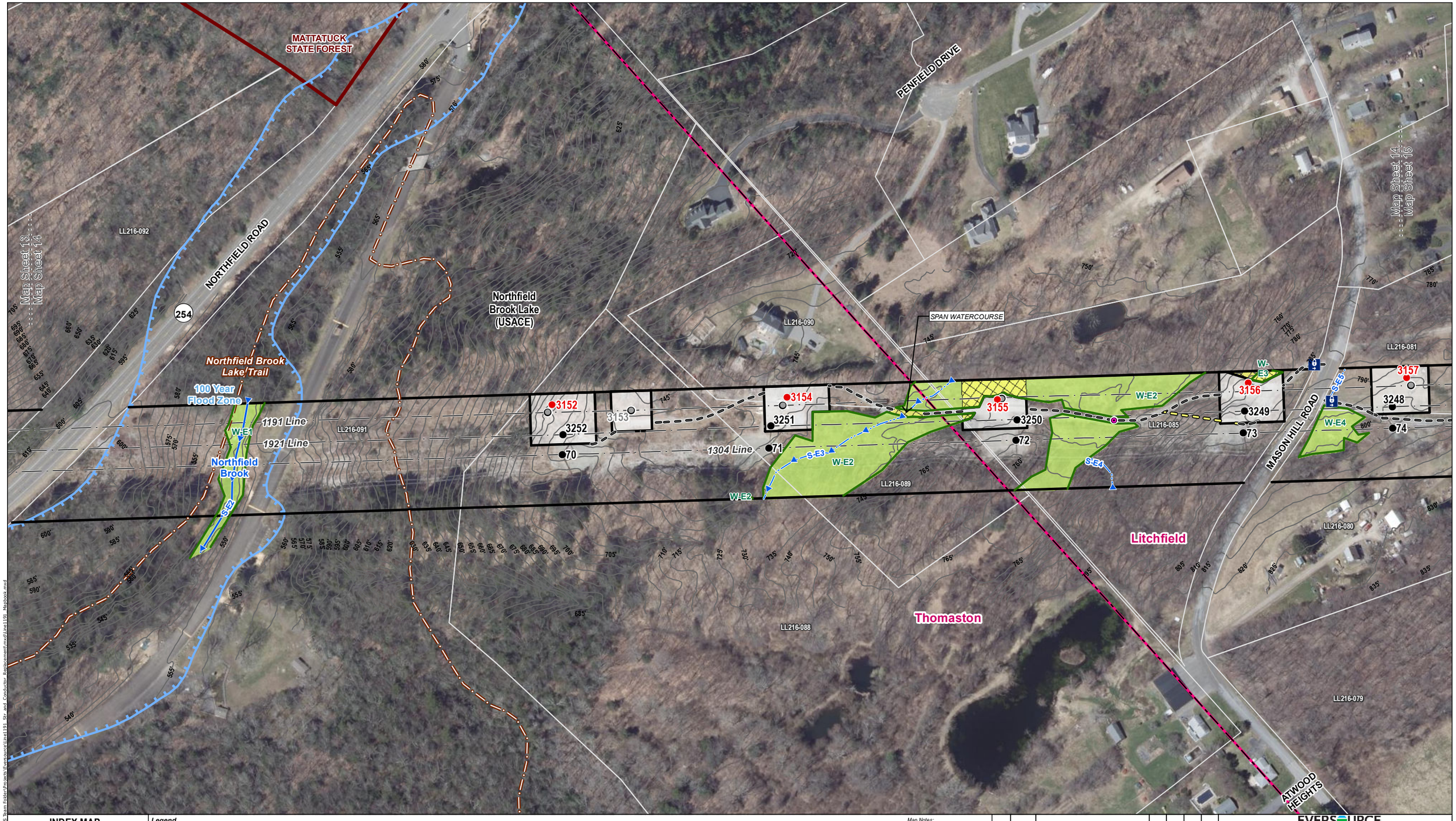
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3152 to 3157: existing access from Mason Hill Road

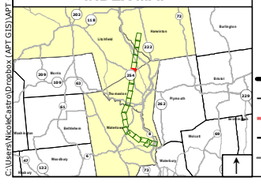
Road Crossings
- Northfield Road (Route 254)
- Mason Hill Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-079	MASON HILL ROAD	LITCHFIELD	CT	JOSEPH D MASI & MARGARET RAYMOND
216-080	282 MASON HILL ROAD	LITCHFIELD	CT	DONALD A & DIANNE G VOLUCKAS
216-081	352 MASON HILL ROAD	LITCHFIELD	CT	MARK VOLUCKAS
216-085	MASON HILL ROAD	LITCHFIELD	CT	JOYCE S WILLIAMS
216-088	76 MASON HILL ROAD	THOMASTON	CT	JOYCE S WILLIAMS
216-089	49 PENFIELD DRIVE	THOMASTON	CT	RONALD VERDOSCI JR
216-090	52 PENFIELD DRIVE	THOMASTON	CT	GREGORY J & ELIZABETH DOBOS
216-091	511 LITCHFIELD STREET	THOMASTON	CT	UNITED STATES OF AMERICA
216-092	611 LITCHFIELD STREET	THOMASTON	CT	UNITED STATES OF AMERICA



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
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- Delineated Perennial Watercourse
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- Delineated Wetland Boundary Outline
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- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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0 50 100 200 Feet

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NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Thomaston and Litchfield, CT

Map Sheet 14 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 15 OF 19
1191 Line Rebuild Project
Structures 3157 to 3162
Town of Litchfield, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Undeveloped, forest
- Residential
- 100-year Flood Zone

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Residential adjacent to structures 3161 and 3162

Water Resources
- Wetlands – W-E6, W-E7, W-E8, W-E9, W-E10
- Wetland Cover Types – PFO, PSS, PEM
- Watercourse – S-E5, S-E7
- Vernal Pool – VP-E9-1

Wetland and Watercourse Crossings
- Wetland W-E8 – construction mats for work pads and access road
- Wetland W-E10 – construction mats for work pad and access road
- Stream S-E7 – construction mats for work pad

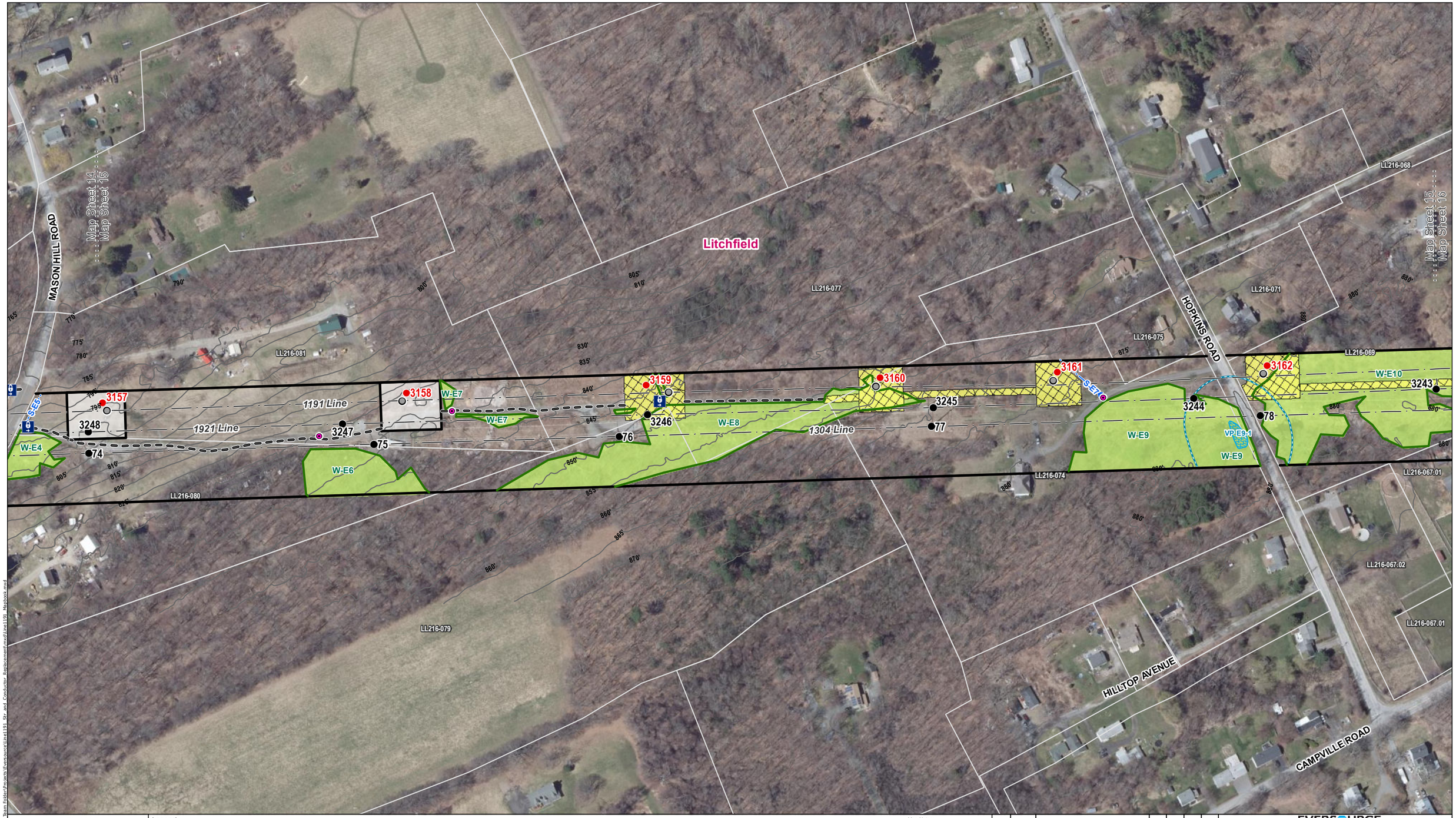
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3157 to 3162: existing access from Mason Hill Road

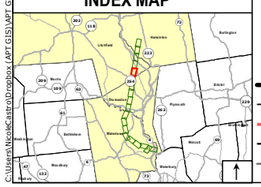
Road Crossings
- Mason Hill Road
- Hopkins Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-067.01	79 CAMPVILLE ROAD	LITCHFIELD	CT	DARLENE G & STEVEN C VANBUREN
216-067.02	101 HOPKINS ROAD	LITCHFIELD	CT	MICHELLE DEZIEL
216-068	85 HOPKINS ROAD	LITCHFIELD	CT	KIM DUFFANY
216-069	83 HOPKINS ROAD	LITCHFIELD	CT	WILLIAM J & DEBORAH L MCKENNA
216-071	87 HOPKINS ROAD	LITCHFIELD	CT	ROBERT P & MARY J MERCHANT
216-074	92 HOPKINS ROAD	LITCHFIELD	CT	SHARON STONE & ROGER J GUILLET
216-075	88 HOPKINS ROAD	LITCHFIELD	CT	BRIAN J & MERCEDES E DEUTH
216-077	78 HOPKINS ROAD	LITCHFIELD	CT	MICHAEL T & KIRSTEN M PETERSON
216-079	MASON HILL ROAD	LITCHFIELD	CT	JOSEPH D MASI & MARGARET RAYMOND
216-080	282 MASON HILL ROAD	LITCHFIELD	CT	DONALD A & DIANNE G VOLUCKAS
216-081	352 MASON HILL ROAD	LITCHFIELD	CT	MARK VOLUCKAS



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
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- Field Delineated CT Only Wetland
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- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Wetlands field delineated by Tighe & Bond in 2015; field reviewed with minor boundary revisions by Davison Environmental in 2020. Parcel and ROW boundaries are approximate. Parcel data provided by Cornerstone (8/2020) and ROW boundary provided by Eversource (8/2020).

Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Litchfield, CT

Map Sheet 15 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 16 OF 19
1191 Line Rebuild Project
Structures 3163 to 3169
Town of Litchfield, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Undeveloped, forest
- Residential
- Natural Diversity Database Area
- State owned land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Residential adjacent to structures 3163 to 3166

Water Resources
- Wetlands – W-E10, W-E11, W-E12, W-E13, W-F1, W-F2, W-F3, W-F4, W-F5 W-F6, W-F7
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-F1, S-F2, S-F3, S-F4, S-F5

Wetland and Watercourse Crossings
- Wetland W-E10 – construction mats for work pad and access road
- Wetland W-F5 – construction mats for work pad
- Wetland W-F7 – construction mats for work pad and access road
- Wetland W-F8 – construction mats for work pad
- Stream S-F3 – construction mats for work pad
- Stream S-F5 – construction mats for work pad

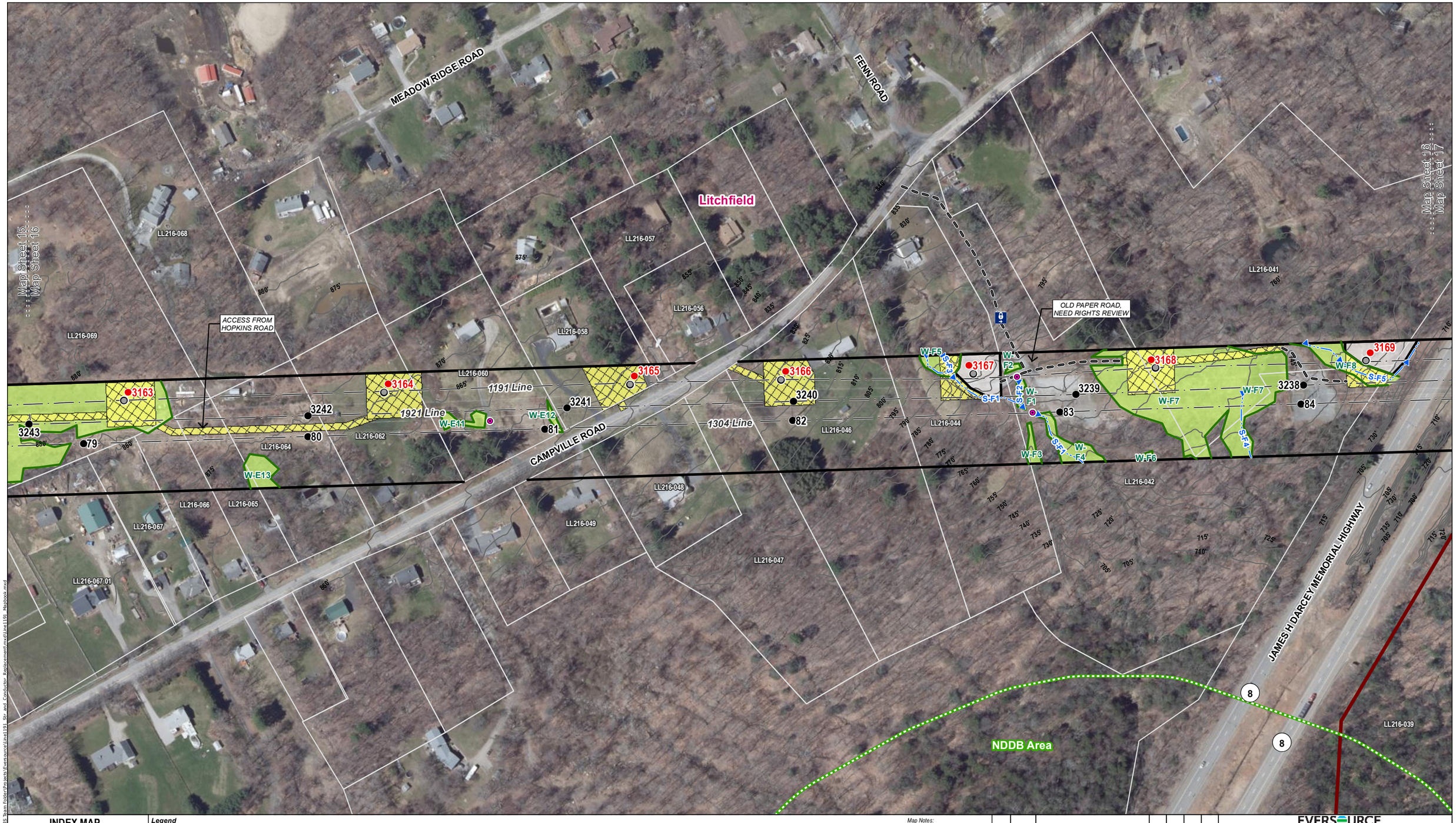
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3163 to 3164: proposed access from Hopkins Road
- Structures 3165 and 3166: proposed access from Campville Road
- Structures 3167 to 3169: existing off-ROW access from Campville Road

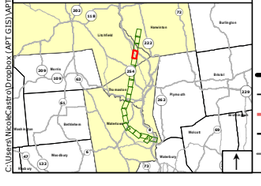
Road Crossings
- Campville Road
- James H Darcey Memorial Highway (Route 8)

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-039	NEW ROUTE 8 SOUTH	LITCHFIELD	CT	STATE OF CONNECTICUT
216-041	154 CAMPVILLE ROAD	LITCHFIELD	CT	JASON P & JAMIE L MARCOUX
216-042	140 CAMPVILLE ROAD	LITCHFIELD	CT	GUY S A & KIM BURNHAM
216-044	134 CAMPVILLE ROAD	LITCHFIELD	CT	MICHAEL C & DENISE D THOMAS
216-046	128 CAMPVILLE ROAD	LITCHFIELD	CT	THOMAS K HLAVATY
216-047	CAMPVILLE ROAD	LITCHFIELD	CT	PETER C BROWN
216-048	116 CAMPVILLE ROAD	LITCHFIELD	CT	SCOTT & AMY NERI
216-049	110 CAMPVILLE ROAD	LITCHFIELD	CT	PATRICK L & MATTHEW T HAPKEN
216-056	123 CAMPVILLE ROAD	LITCHFIELD	CT	MARLENE BENT & ROBERTO ANGUIERA
216-057	119 CAMPVILLE ROAD	LITCHFIELD	CT	ROBERT ANTHONY NEUMANN & JESSICA LYNN GIESEN
216-058	115 CAMPVILLE ROAD	LITCHFIELD	CT	KEVIN L & CLAIRE M KELLEY
216-060	107 CAMPVILLE ROAD	LITCHFIELD	CT	NATHANIEL A & CARRIE K SOUTHARD
216-062	101 CAMPVILLE ROAD	LITCHFIELD	CT	DANIEL FERRARI
216-063	31 MEADOW RIDGE ROAD	LITCHFIELD	CT	SEAN E & JENNIFER FLAHERTY
216-064	97 CAMPVILLE ROAD	LITCHFIELD	CT	RICHARD MINERVINO
216-065	93 CAMPVILLE ROAD	LITCHFIELD	CT	ROBERT PAUL ROURKE
216-066	89 CAMPVILLE ROAD	LITCHFIELD	CT	TIMOTHY J HAYES JR
216-067	87 CAMPVILLE ROAD	LITCHFIELD	CT	TIMOTHY C & SHANNON M ZWICK
216-067.01	79 CAMPVILLE ROAD	LITCHFIELD	CT	DARLENE G & STEVEN C VANBUREN
216-067.02	101 HOPKINS ROAD	LITCHFIELD	CT	MICHELLE DEZIEL
216-068	85 HOPKINS ROAD	LITCHFIELD	CT	KIM DUFFANY
216-069	83 HOPKINS ROAD	LITCHFIELD	CT	WILLIAM J & DEBORAH L MCKENNA



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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0 50 100 200 Feet

Map Notes:

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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Litchfield, CT

Map Sheet 16 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 17 OF 19
1191 Line Rebuild Project
Structures 3170 to 3171
Town of Litchfield and Harwinton, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas

- Eversource owned property
- Federal owned property (Thomaston Dam – USACE)
- Hiking trail (Thomaston Dam OHV Trail)
- State owned land
- Naugatuck River
- 100-year Flood Zone
- Naugatuck Railroad
- New England Cottontail (NEC) Focus Area
- Undeveloped, forest
- Natural Diversity Database Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas

- Maintained ROW
- Eversource owned property north of structure 3170
- Natural Diversity Database Area south of structure 3170 and at structure 3171
- Federal owned property (Thomaston Dam – USACE) north of structure 3171
- 100-year Flood Zone north of structure 3171 to north of Valley Road
- Naugatuck Railroad north of structure 3171
- Naugatuck River north of structure 3171
- New England Cottontail (NEC) Focus Area north of the Naugatuck River

Water Resources

- Wetlands – W-F9, W-F10, W-F11
- Wetland Cover Types – PFO, PSS, PEM
- Watercourse – S-F6, S-F7 (Naugatuck River), S-F8, S-F9, S-F10
- Vernal Pools – VP-F9-1, VP-F10-1

Wetland and Watercourse Crossings

- Wetland W-F11 – construction mats for work pad
- Stream S-F10 – construction mats for work pad

Right-of-Way Vegetation

- Scrub-shrub
- Forest

Access

- Structures 3170 to 3171: existing access from James H Darcey Memorial Highway (Route 8)

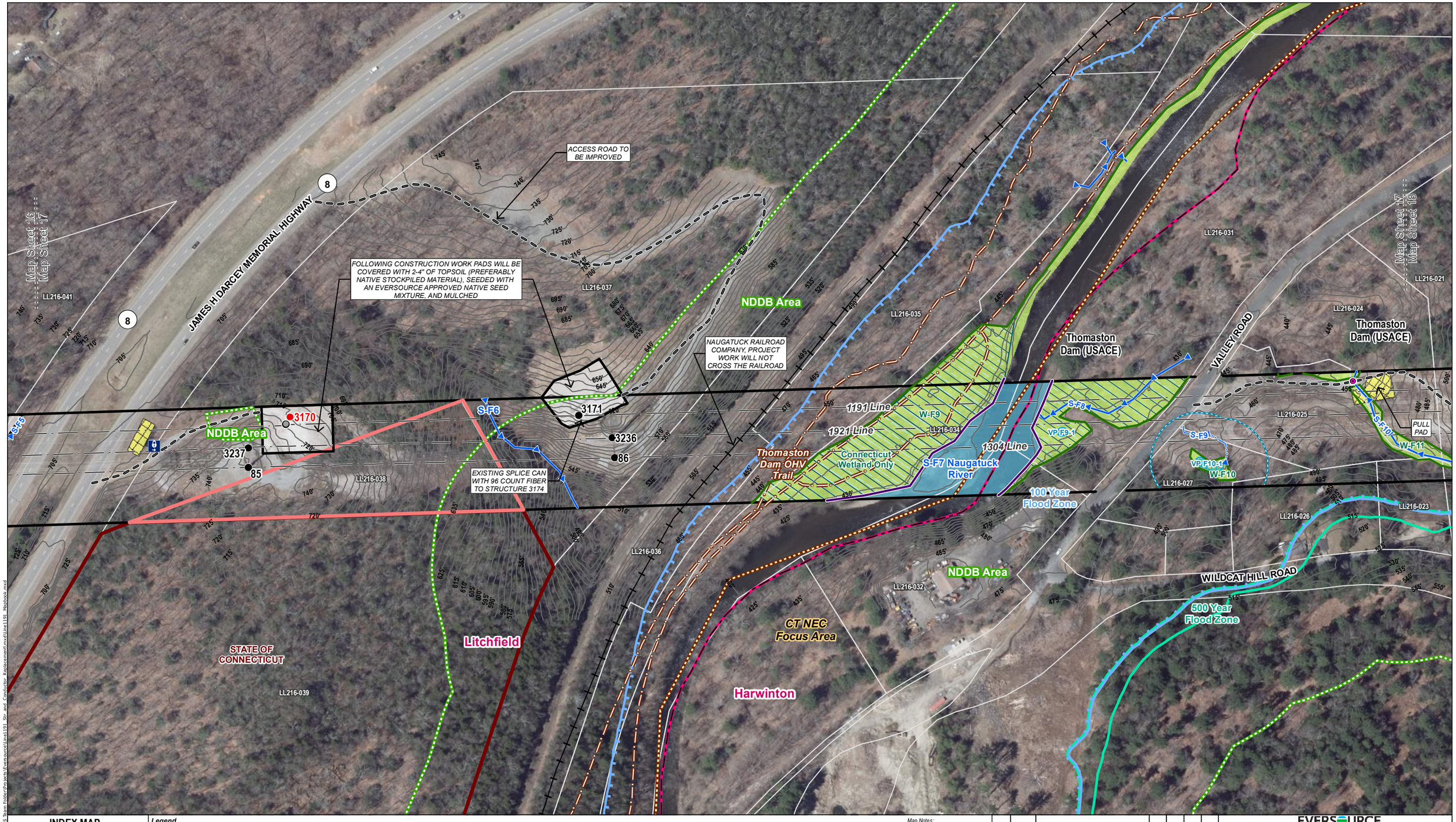
Road Crossings

- James H Darcey Memorial Highway (Route 8)
- Valley Road

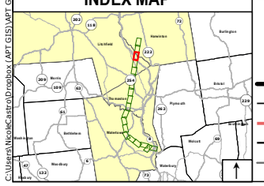
Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing

- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-021	VALLEY ROAD	HARWINTON	CT	TOWN OF HARWINTON
216-023	639 WILDCAT HILL ROAD	HARWINTON	CT	JOSEPH P & ROBIN PEVERI
216-024	VALLEY ROAD	HARWINTON	CT	USA C/O ADMINISTRATIVE OFFICES
216-025	VALLEY ROAD	HARWINTON	CT	VINCENT SHUSTOCK
216-026	649 WILDCAT HILL ROAD	HARWINTON	CT	DAVID R & ANITA R LEVESQUE
216-027	VALLEY ROAD	HARWINTON	CT	VINCENT SHUSTOCK
216-031	VALLEY ROAD	HARWINTON	CT	UNITED STATES OF AMERICA
216-032	389 VALLEY ROAD	HARWINTON	CT	MARY BARTLETT
216-035		LITCHFIELD	CT	NAUGATUCK RAILROAD COMPANY
216-036		LITCHFIELD	CT	NAUGATUCK RAILROAD COMPANY
216-037	CAMPVILLE ROAD	LITCHFIELD	CT	1000 LLC C/O IZHAK MEGER
216-038	THOMASTON ROAD	LITCHFIELD	CT	THE CONNECTICUT LIGHT & POWER COMPANY (EVERSOURCE)
216-039	NEW ROUTE 8 SOUTH	LITCHFIELD	CT	STATE OF CONNECTICUT
216-041	154 CAMPVILLE ROAD	LITCHFIELD	CT	JASON P & JAMIE L MARCOUX



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Litchfield and Harwinton, CT

Map Sheet 17 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

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MAPSHEET 18 OF 19
1191 Line Rebuild Project
Structures 3174 to 3179
Town of Harwinton, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Federal owned property (Thomaston Dam – USACE)
- Undeveloped, forest
- Natural Diversity Database Area
- 100-year Flood Zone
- New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Federal owned property (Thomaston Dam – USACE) south of structure 3174
- Natural Diversity Database Area at structure 3174 and north of structure 3179
- 100-year Flood Zone south of structure 3174
- New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-F11, W-F12, W-F13
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – S-F10, S-F11, S-F12

Wetland and Watercourse Crossings
- None

Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structure 3174: existing access from Valley Road
- Structures 3175 to 3179: existing off-ROW access from Wildcat Hill Road

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-019	260 VALLEY ROAD	HARWINTON	CT	BENTON A. BROWN
216-021	VALLEY ROAD	HARWINTON	CT	TOWN OF HARWINTON
216-022	260 VALLEY ROAD	HARWINTON	CT	BENTON A. BROWN
216-023	639 WILDCAT HILL ROAD	HARWINTON	CT	JOSEPH P & ROBIN PEVERI
216-024	VALLEY ROAD	HARWINTON	CT	USA C/O ADMINISTRATIVE OFFICES
216-025	VALLEY ROAD	HARWINTON	CT	VINCENT SHUSTOCK
216-026	649 WILDCAT HILL ROAD	HARWINTON	CT	DAVID R & ANITA R LEVESQUE
216-031	VALLEY ROAD	HARWINTON	CT	UNITED STATES OF AMERICA

Harwinton

LL216-031

100 Year Flood Zone

VALLEY ROAD

NDDB Area

500 Year Flood Zone

Map Sheet 17
Map Sheet 18

FOLLOWING CONSTRUCTION WORK PADS WILL BE COVERED WITH 2-4" OF TOPSOIL (PREFERABLY NATIVE STOCKPILED MATERIAL), SEEDED WITH AN EVERSOURCE APPROVED NATIVE SEED MIXTURE, AND MULCHED

LL216-021

ACCESS FROM VALLEY ROAD

EXISTING SPLICE CAN WITH 96 FIBER COUNT TO STRUCTURE 3171

Thomaston Dam (USACE)

LL216-024

3174

3235

87

PULL PAD

W-F12

W-F11

S-F11

S-F10

500 Year Flood Zone

LL216-025

LL216-026

LL216-023

LL216-022

NDDB Area

1191 Line

1921 Line

3175

3234

88

3176

3233

1304 Line

3177

S-F12

W-F13

3232

90

3178

3231

91

3179

3230

92

Map Sheet 18
Map Sheet 19

LL216-019

ACCESS FROM WILDCAT HILL ROAD

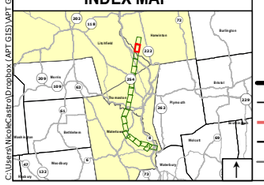
NDDB Area

CT NEC Focus Area (Entire Map Sheet)

WILDCAT HILL ROAD

FOLLOWING CONSTRUCTION WORK PAD WILL BE COVERED WITH 2-4" OF TOPSOIL (PREFERABLY NATIVE STOCKPILED MATERIAL), SEEDED WITH AN EVERSOURCE APPROVED NATIVE SEED MIXTURE, AND MULCHED

INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
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- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
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- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

Harwinton, CT

Map Sheet 18 of 19

September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

MAPSHEET 19 OF 19
1191 Line Rebuild Project
Structures 3180 to Campville Substation
Town of Harwinton, Connecticut

AREA DESCRIPTION

Existing Land Use & Resource Areas
- Undeveloped, forest
- Residential
- Natural Diversity Database Area
- Eversource owned property
- New England Cottontail (NEC) Focus Area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use & Resource Areas
- Maintained ROW
- Natural Diversity Database Area from structures 3181 to 3183
- Eversource owned property at structures 3184 to Campville Substation
- New England Cottontail (NEC) Focus Area

Water Resources
- Wetlands – W-F14, W-F15, W-G1, W-G2, W-G3
- Wetland Cover Types – PFO, PSS, PEM
- Watercourse – S-F12, S-F14, S-G1, S-G2, S-G3
- Vernal Pools – VP-F14-1, VP-F15-1

Wetland and Watercourse Crossings
- Wetland W-F14 – construction mats for work pad
- Wetland W-F15 – construction mats for work pads and access
- Stream S-F12 – construction mats for work pad
- Stream S-G3 – construction mats for access road

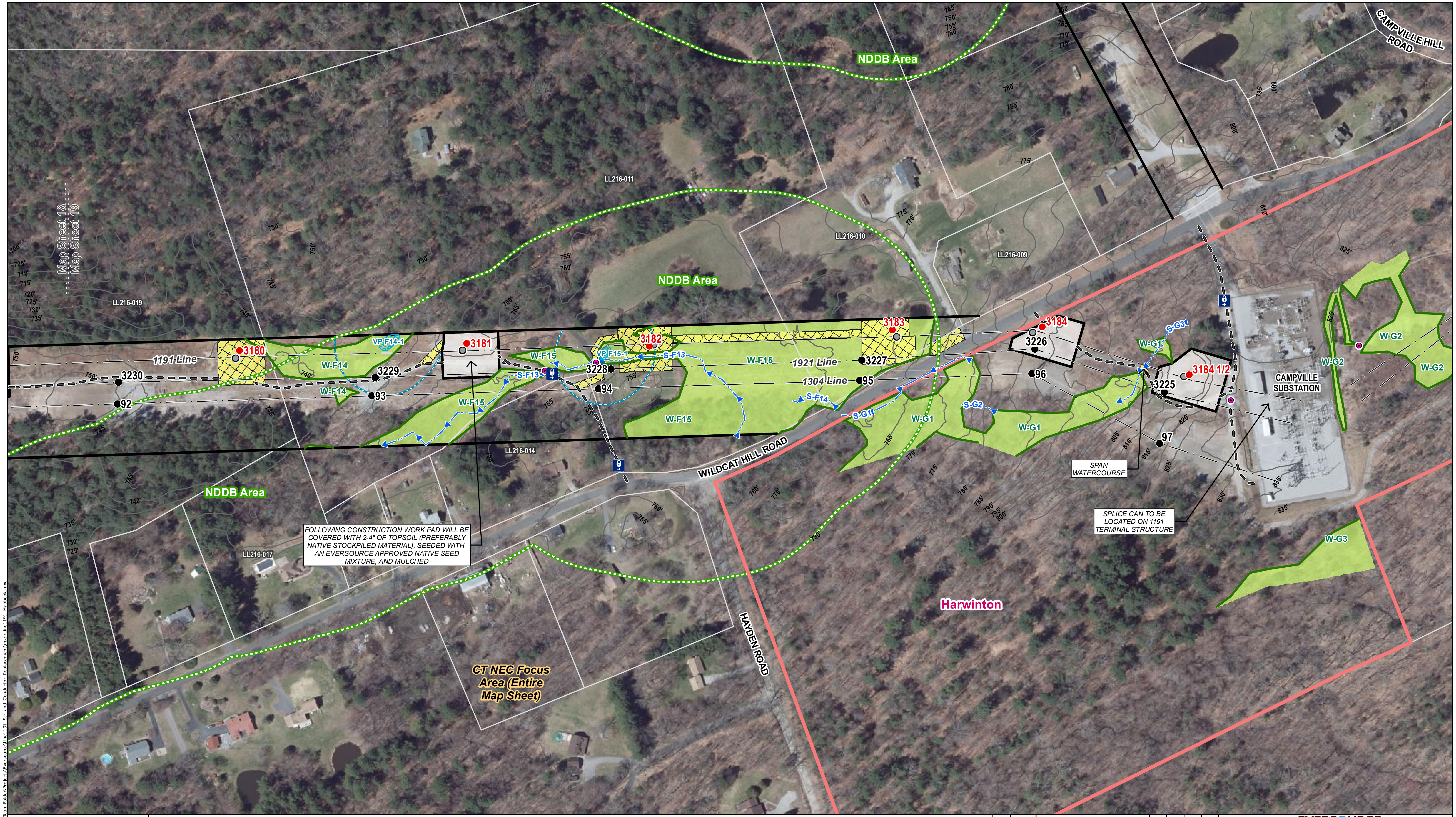
Right-of-Way Vegetation
- Scrub-shrub
- Forest

Access
- Structures 3180 to 3182: existing off-ROW access from Wildcat Hill Road
- Structures 3183 to Campville Substation: existing access from Wildcat Hill Road

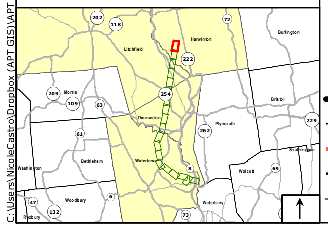
Road Crossings
- Wildcat Hill Road

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 180 feet / 0 feet

LLN	Parcel Address	City	State	Owner Name
216-009	447 WILDCAT HILL ROAD	HARWINTON	CT	JOHN W & BONNIE W FOELLER
216-010	443 WILDCAT HILL ROAD	HARWINTON	CT	JOHN W & BONNIE W FOELLER
216-011	459 WILDCAT HILL ROAD	HARWINTON	CT	GARY R JASCH
216-014	477 WILDCAT HILL ROAD	HARWINTON	CT	JUDY JASCH
216-017	501 WILDCAT HILL ROAD	HARWINTON	CT	GEOFFREY & ANN HOWE
216-019	260 VALLEY ROAD	HARWINTON	CT	BENTON A. BROWN



INDEX MAP



Legend

- Proposed Structure
- Existing Structure to be Removed
- Existing Structure
- Existing Right-of-Way (ROW)
- Overhead Eversource Line
- Proposed Overhead ADSS Eversource Line
- Railroad
- 5' Contour Line
- Gate
- Culvert
- Existing Access
- Proposed Access
- Proposed Alternate Access
- Stone Work Pad
- Temporary Construction Matting
- Delineated Intermittent Watercourse
- Delineated Perennial Watercourse
- Ordinary High Water Mark
- Delineated Wetland Boundary Outline
- Field Delineated Wetland
- Open Water
- Field Delineated CT Only Wetland
- Confirmed Vernal Pool Extent
- 100' Vernal Pool Envelope
- Natural Diversity Database Area (6/2020)
- CT NE Cottontail Focus Area
- FEMA 100-Year Flood Zone
- FEMA 500 Year Flood Zone
- Parcel Boundary
- Eversource Owned Property
- State-Owned Property
- Hiking Trail
- Municipal Boundary
- Map Sheet Matchline

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0 50 100 200 Feet

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Aerial Base Map Source: CTECO 2019

NO.	DATE	REVISIONS	BY	CHK	APP	APP

EVERSOURCE ENERGY

1191 Line Rebuild Project

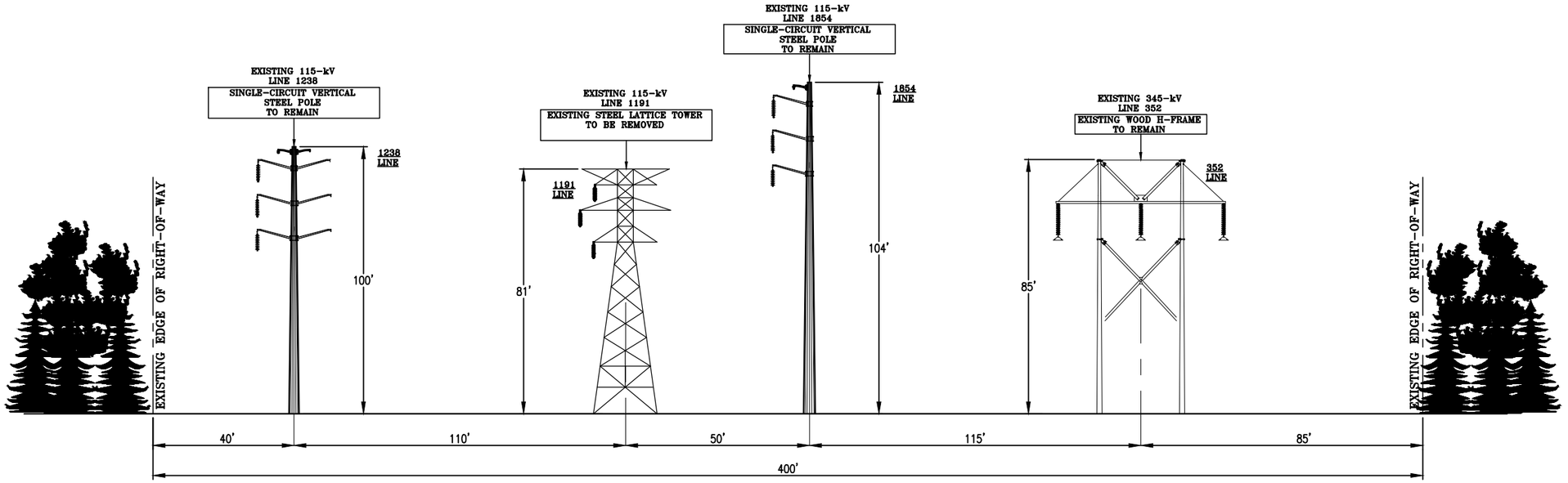
Harwinton, CT

Map Sheet 19 of 19

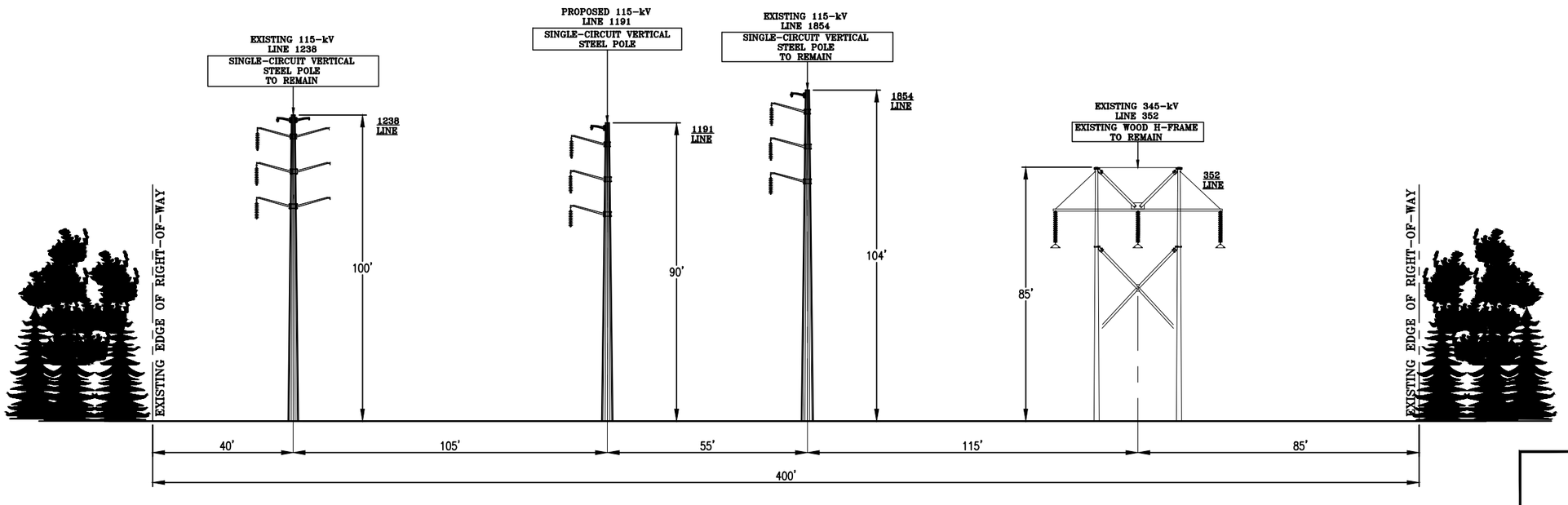
September, 2020

ALL-POINTS TECHNOLOGY CORPORATION

Attachment B: 1191 Line Rebuild Project – Right-of-Way Cross Sections



EXISTING R.O.W. CONFIGURATION
SINGLE-CIRCUIT STEEL LATTICE TOWER
LOOKING WEST AT STR. #3081
IN THE TOWN OF WATERTOWN, CT.



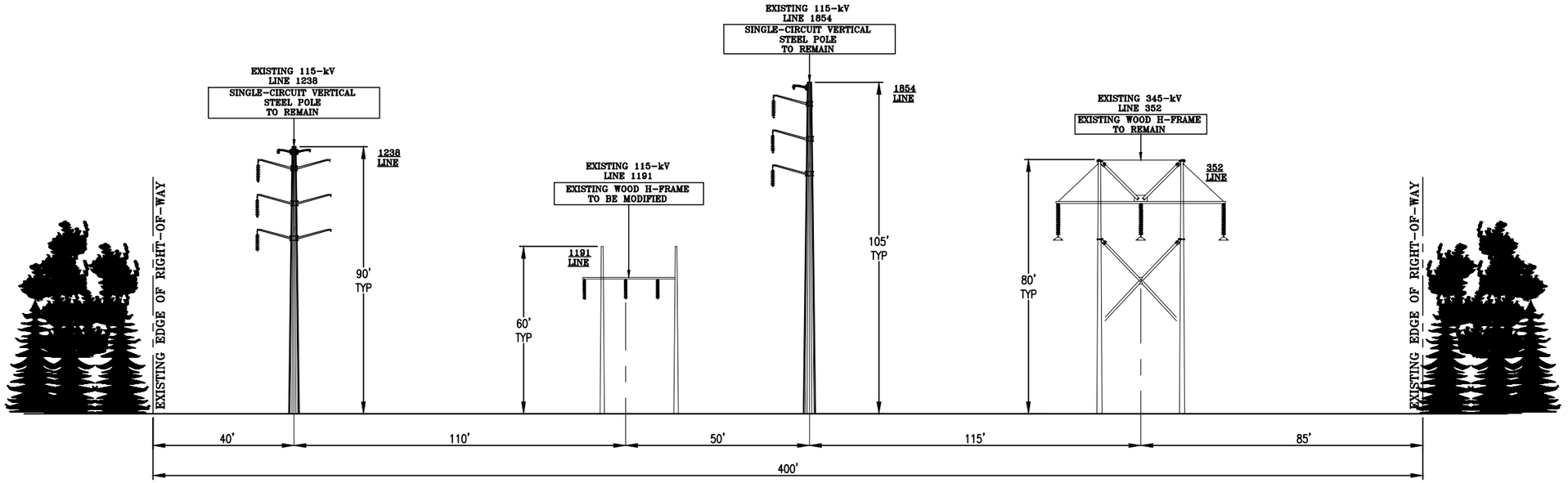
PROPOSED R.O.W. CONFIGURATION
STEEL MONOPOLE
LOOKING WEST AT STR. #3081
IN THE TOWN OF WATERTOWN, CT.

EVERSOURCE ENERGY

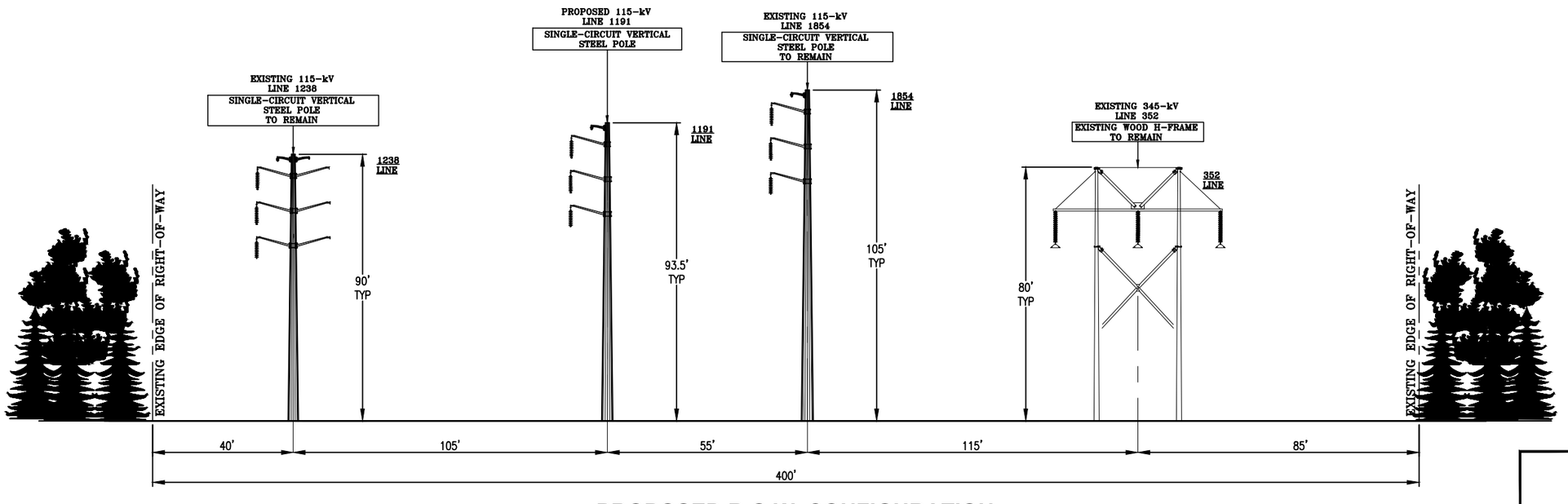
TITLE

1191 LINE REBUILD PROJECT
RIGHT OF WAY CROSS SECTION
WATERTOWN, CONNECTICUT

BY	AMW	CHKD	PRG	APP	TRB	APP	
DATE	8/5/20	DATE	8/5/20	DATE	8/5/20	DATE	
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	W.S.		R.E. DWG			
R.E. PROJ. NUMBER		XXXXXX		DWG NO.		01004-85001p001	



EXISTING R.O.W. CONFIGURATION
SINGLE-CIRCUIT WOOD H-FRAME
LOOKING WEST FROM STR. #3081 TO PURGATORY JUNCTION
IN THE TOWN OF WATERTOWN, CT
2.2 MILES



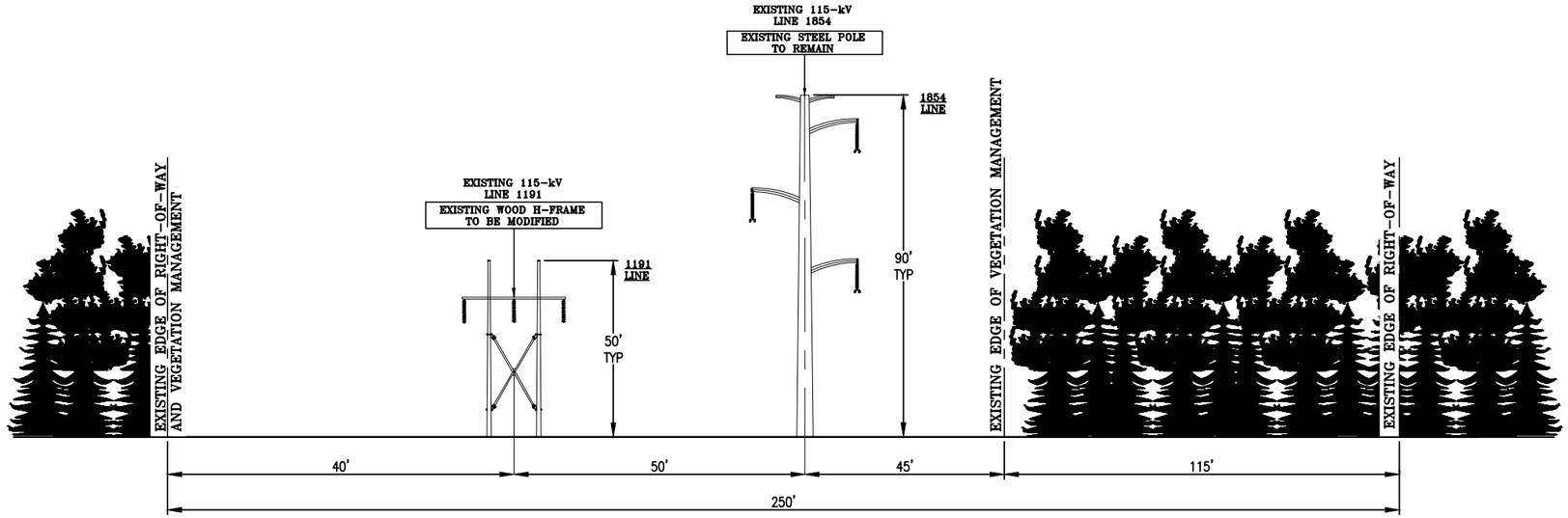
PROPOSED R.O.W. CONFIGURATION
STEEL MONOPOLE
LOOKING WEST FROM STR. #3081 TO PURGATORY JUNCTION
IN THE TOWN OF WATERTOWN, CT
2.2 MILES

EVERSOURCE ENERGY

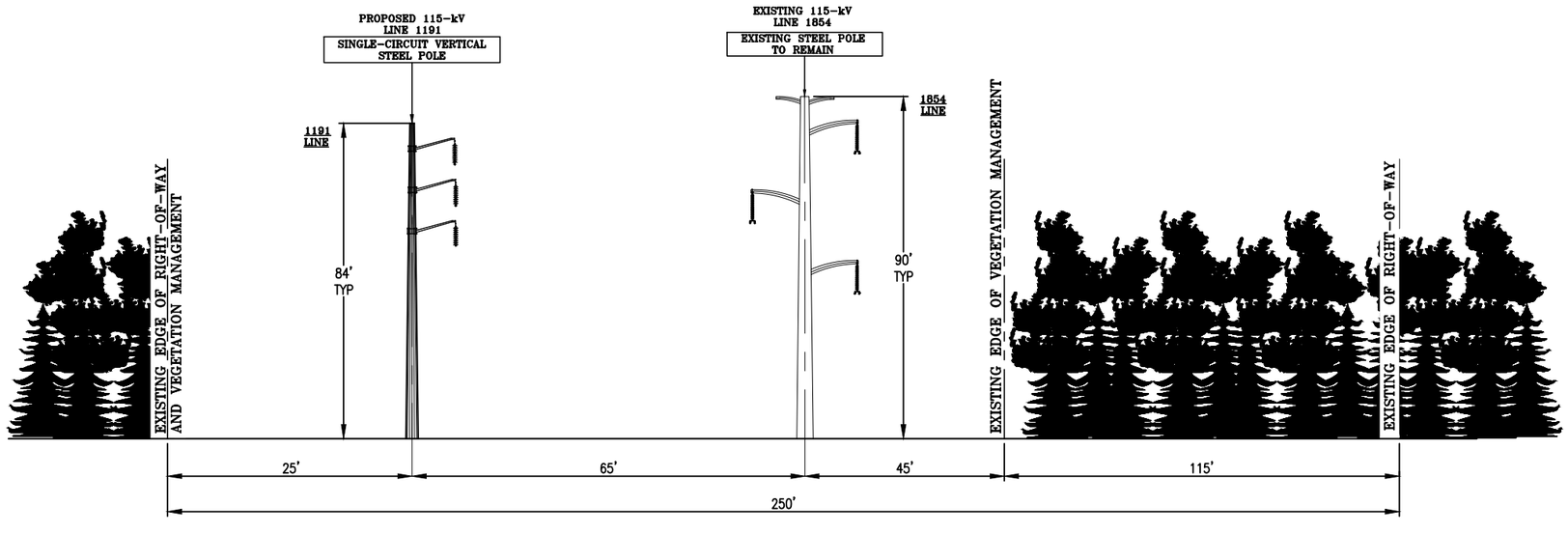
TITLE

1191 LINE REBUILD PROJECT
RIGHT OF WAY CROSS SECTION
WATERTOWN, CONNECTICUT

BY	AMW	CHKD	PRG	APP	TRB	APP	
DATE	8/5/20	DATE	8/5/20	DATE	8/5/20	DATE	
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER		XXXXXX		DWG NO.	01004-85001p002		



EXISTING R.O.W. CONFIGURATION
SINGLE-CIRCUIT WOOD H-FRAME
LOOKING NORTH FROM PURGATORY JUNCTION TO WALNUT HILL JUNCTION
IN THE TOWN OF WATERTOWN & THOMASTON, CT
3.8 MILES



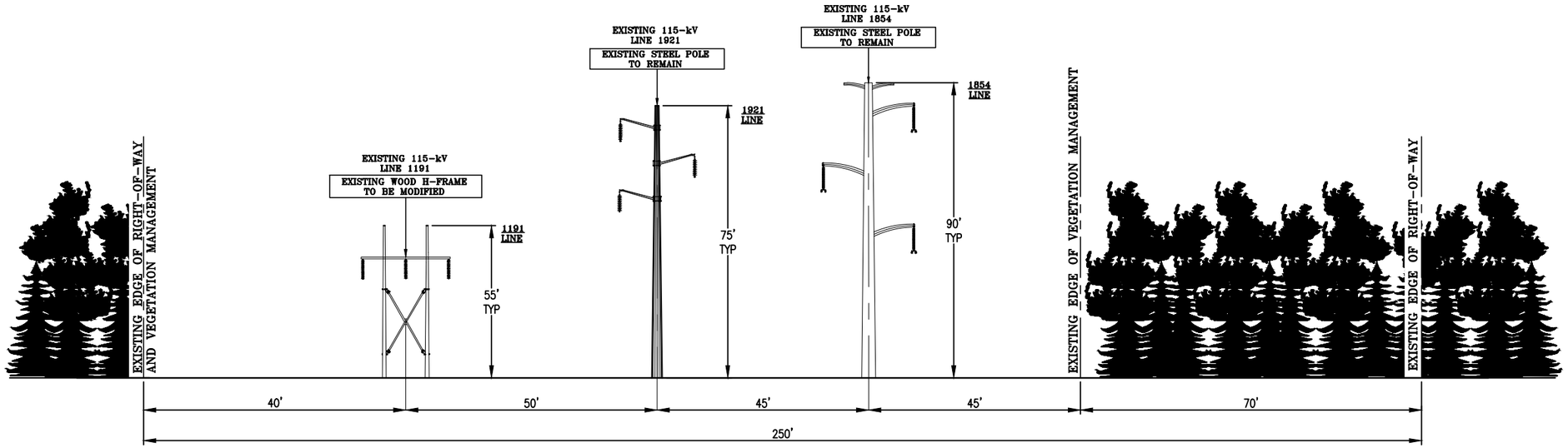
PROPOSED R.O.W. CONFIGURATION
STEEL MONOPOLE
LOOKING NORTH FROM PURGATORY JUNCTION TO WALNUT HILL JUNCTION
IN THE TOWN OF WATERTOWN & THOMASTON, CT
3.8 MILES

EVERSOURCE ENERGY

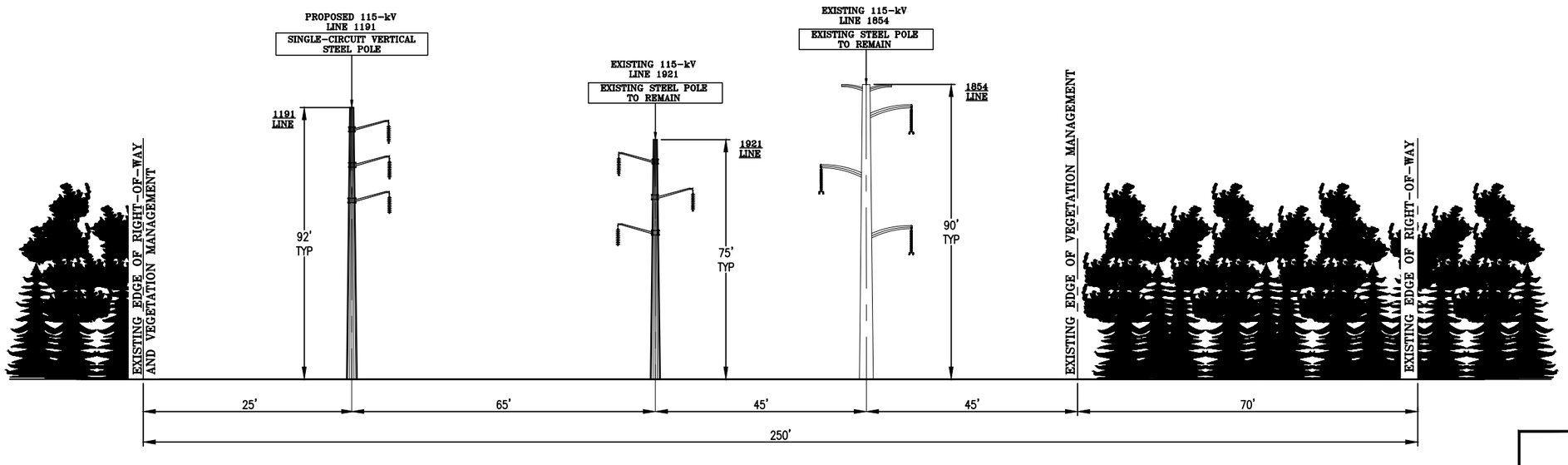
TITLE

1191 LINE REBUILD PROJECT
RIGHT OF WAY CROSS SECTION
WATERTOWN & THOMASTON, CONNECTICUT

BY	AMW	CHKD	PRG	APP	TRB	APP	
DATE	8/5/20	DATE	8/5/20	DATE	8/5/20	DATE	
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER		XXXXXX		DWG NO.	01004-85001p003		



EXISTING R.O.W. CONFIGURATION
SINGLE-CIRCUIT WOOD H-FRAME
LOOKING NORTH FROM WALNUT HILL JUNCTION TO CAMPVILLE S/S
IN THE TOWNS OF THOMASTON, LITCHFIELD, AND HARWINTON, CT
3.98 MILES



PROPOSED R.O.W. CONFIGURATION
STEEL MONOPOLE
LOOKING NORTH FROM WALNUT HILL JUNCTION TO CAMPVILLE S/S
IN THE TOWNS OF THOMASTON, LITCHFIELD, AND HARWINTON, CT
3.98 MILES

EVERSOURCE ENERGY

TITLE
1191 LINE REBUILD PROJECT
RIGHT OF WAY CROSS SECTION
THOMASTON, LITCHFIELD & HARWINTON CONNECTICUT

BY	AMW	CHKD	PRG	APP	TRB	APP	
DATE	8/5/20	DATE	8/5/20	DATE	8/5/20	DATE	
H-SCALE	N.T.S.	SIZE	D	FIELD BOOK & PAGES			
V-SCALE	N.T.S.	V.S.		R.E. DWG			
R.E. PROJ. NUMBER		XXXXXX		DWG NO.	01004-85001p004		

Attachment C: List of Structure Replacements

Attachment C: Structure Heights Above Ground Level (AGL)

EXISTING 115-kV (AGL)			NEW 115-kV (AGL)	
STRUCTURE#	**Existing Type**	**Existing Height**	**Proposed Type**	**Proposed Height**
3080	Steel Monople	152.5	Not replacing	
3081	Lattice	81	Monopole	91
3082	H-frame	57	Monopole	103
3083	H-frame	58	Monopole	93.5
3084	H-frame	53.5	Monopole	84
3085	H-frame	58	Removed	
3086	H-frame	58	Monopole	79
3087	H-frame	53.5	Monopole	84
3088	H-frame	70	Monopole	98
3089	H-frame	70	Monopole	88.5
3090	H-frame	55.5	Monopole	84
3091	H-frame	59	Monopole	84
3092	H-frame	57	Monopole	84
3093	3-pole	56.5	Monopole	91
3094	H-frame	55	Monopole	103
3095	H-frame	70	Monopole	93.5
3096	H-frame	58	Monopole	88.5
3097	H-frame	55.5	Monopole	93.5
3098	H-frame	57	Monopole	84
3099	H-frame	55.5	Monopole	93.5
3100	H-frame	58.5	Monopole	103
3101	H-frame	57.5	Monopole	93.5
3102	H-frame	57	Monopole	121
3103	H-frame	44.7	Monopole	76
3104	H-frame	47.5	3-pole	46
3105	H-frame	45.2	3-pole	56
3106	H-frame	43	Monopole	76
3107	H-frame	42.5	Monopole	75
3108	H-frame	43.5	Monopole	75
3109	H-frame	52	Monopole	84
3110	Steel H-frame	49	Monopole	84
3111	H-frame	51	Monopole	79
3112	H-frame	49	Monopole	84
3113	H-frame	48.5	Monopole	84
3114	H-frame	49.5	Monopole	75
3115	H-frame	40	Monopole	84
3116	H-frame	54	Monopole	79
3117	H-frame	58	Monopole	88.5
3118	H-frame	58.5	Monopole	101
3119	H-frame	49	Monopole	84
3120	H-frame	42.5	Monopole	75
3121	H-frame	47.5	Monopole	84
3122	H-frame	39	Monopole	75
3123	H-frame	42.5	Monopole	75
3124	H-frame	48	Monopole	84
3125	H-frame	51.5	Monopole	93.5
3126	H-frame	53	Monopole	121
3127	H-frame	57	Removed	
3128	H-frame	44.5	Monopole	96
3129	H-frame	48.5	Monopole	91

EXISTING 115-kV (AGL)			NEW 115-kV (AGL)	
STRUCTURE#	Existing Type	Existing Height	Proposed Type	Proposed Height
3130	H-frame	47	Monopole	101
3131	H-frame	44	Removed	
3132	H-frame	49	Monopole	111
3133	H-frame	47	Monopole	93.5
3134	H-frame	47.5	Monopole	79
3135	H-frame	51.5	Monopole	79
3136	H-frame	56	Monopole	88.5
3137	H-frame	42.5	Monopole	88.5
3138	H-frame	43	Monopole	79
3139	H-frame	42.5	Monopole	84
3140	H-frame	54.5	Monopole	88.5
3141	H-frame	50.5	Monopole	84
3142	H-frame	41.5	Monopole	75
3143	H-frame	39	Monopole	75
3144	H-frame	55.5	Monopole	98
3145	H-frame	55.5	Monopole	121
3146	H-frame	54.5	Monopole	103
3147	H-frame	52.5	Monopole	84
3148	H-frame	52.5	Monopole	84
3149	H-frame	52	Monopole	79
3150	H-frame	42.5	Monopole	75
3151	H-frame	55.5	Monopole	91
3152	H-frame	53.5	Monopole	116
3153	H-frame	43	Removed	
3154	H-frame	52	Monopole	88.5
3155	H-frame	52	Monopole	98
3156	Steel H-frame	65.5	Monopole	91
3157	Steel H-frame	65.5	Monopole	111
3158	H-frame	65.5	Monopole	84
3159	H-frame	52.5	Monopole	88.5
3160	H-frame	52	Monopole	79
3161	H-frame	47.5	Monopole	79
3162	H-frame	61	Monopole	98
3163	H-frame	61	Monopole	88.5
3164	H-frame	65.5	Monopole	103
3165	H-frame	52	Monopole	103
3166	H-frame	52	Monopole	93.5
3167	H-frame	47.5	Monopole	84
3168	H-frame	52	Monopole	84
3169	H-frame	61	Monopole	93.5
3170	H-frame	56	Monopole	103
3171	Steel Monople	149	Not replacing	
3174	Steel Monople	149	Not replacing	
3175	H-frame	56.5	Monopole	75
3176	H-frame	38.5	Monopole	75
3177	H-frame	56.5	Monopole	103
3178	H-frame	61	Monopole	93.5
3179	H-frame	51	Monopole	88.5
3180	H-frame	61	Monopole	88.5
3181	H-frame	43	Monopole	88.5
3182	H-frame	56.5	Monopole	98
3183	H-frame	61	Monopole	103
3184	H-frame	52	Monopole	86
3184.5	H-frame	52	Monopole	81

Attachment D: Wetlands Delineation Report

DAVISON ENVIRONMENTAL

Biodiversity Studies • Wetland Delineation & Assessment • Habitat Management • GIS Mapping • Permitting • Forestry

Wetland Delineation

August 24, 2020 **DE Project No.: 2020-28**

Prepared For:	Eversource Energy 56 Prospect Street Hartford, CT 06103 Attn: Mark Pappalardo
Eversource Project Name:	1191 Rebuild Project
Project Location:	Watertown, Thomaston, Litchfield, and Harwinton, Connecticut
Date(s) of Investigations:	June & July 2020
Field Conditions:	Weather: variable**,** 70s to 90s Soil Moisture: dry to moist
Wetland/Watercourse Delineation Methodology[1]:	☒Connecticut Inland Wetlands and Watercourses ☐Connecticut Tidal Wetlands ☐Massachusetts Wetlands ☒U.S. Army Corps of Engineers

The wetlands inspection was performed by[2]:

Davison Environmental, LLC

Matthew Davison
Professional Soil Scientist
Professional Wetland Scientist

[1]*Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.*

[2]*Wetlands were delinetead by Tighe & Bond in 2015, and the boundaries reconfirmed with minor modifications by Davison Environmental Professional Soil Scientist Matthew Davison in 2020.*

Attachments

- Table 1: Delineated Wetlands and Watercourses within the 1191 Line Rebuild Project Area
- Wetland Delineation Field Forms

Table 1: Delineated Wetlands and Watercourses within the 1191 Line Rebuild Project Area

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
1	W-A1	PSS	PEM	Permanently Saturated	S-A1 (Unnamed Perennial)	---
1	W-A2	PSS	PEM	Permanently Saturated	S-A2 (Intermittent)	---
1	W-A3	PEM	PSS	Permanently Saturated	S-A3 (Unnamed Perennial)	---
1, 2	W-A4	PEM	PFO	Seasonally Saturated-seepage	---	---
1, 2	W-MSF1	PFO	PEM	Seasonally Flooded	---	VP-MSF-1
1, 2	W-MSF2	PFO	PEM	Seasonally Flooded	---	VP-MSF-2
1, 2	W-MSF3	PFO	PEM	Seasonally Saturated-seepage	---	---
3	W-A5	PSS	---	Seasonally Saturated-seepage	---	---
3	W-A6	PSS	PEM	Seasonally Saturated-seepage	S-A4 (Intermittent)	---
3	W-A7	PSS	PEM	Seasonally Saturated-seepage	---	---
3	W-A8	PSS	PEM	Permanently Saturated	S-A5 (Unnamed Perennial)	---
3	W-A9	PEM	PSS	Permanently Saturated	S-A5.5 (Intermittent), S-A6 (Turkey Brook), S-A7 (Unnamed Perennial)	---
3, 4	W-A11	PSS	---	Seasonally Saturated-seepage	---	---
4	W-B1	PSS	PEM	Seasonally Saturated-seepage	---	---
4	W-B2	PSS	PEM	Seasonally Saturated-seepage	---	VP-B2-1
4	W-B3	PEM	PSS	Intermittently Flooded	---	---

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
4	W-B4	PSS	PFO	Seasonally Flooded	---	VP-B4-1
4	W-B5	PSS	PEM	Seasonally Saturated-seepage	---	---
4, 5	W-B6	PSS	PEM	Permanently Saturated	---	---
5	W-B7	PSS	PEM	Permanently Saturated	---	---
5	W-B8	PEM	PEM	Permanently Saturated	---	---
5	W-B9	PSS	PEM	Permanently Saturated	---	---
5, 6	W-B11	PSS	POW	Permanently Saturated	S-B1, S-B2, S-B3 (Intermittent)	---
6	W-C1A	PSS	PEM	Seasonally Saturated-seepage	---	---
6	W-C2A	PSS	PEM	Permanently Saturated	---	---
6	W-C1	PSS	PFO	Seasonally Saturated-seepage	S-C1 (Intermittent)	---
6	W-C3	PSS	PFO	Seasonally Saturated-seepage	---	---
7	W-C4	PSS	PFO	Seasonally Saturated-seepage	---	---
7	W-C6	PSS	PFO	Seasonally Saturated-seepage	---	---
7	W-C7	PFO	---	Seasonally Saturated-seepage	---	---
7	W-C8	PFO	---	Permanently Saturated	---	---
7	W-C10	PFO	---	Seasonally Flooded	---	VP-C10-1
7	W-C12	PSS	PEM	Seasonally Flooded	S-C3 (Intermittent)	VP-C12-1

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
7	W-C14	PSS	PEM	Seasonally Saturated-seepage	---	---
7, 8	W-C15	PSS	PEM	Seasonally Flooded	S-C4 (Unnamed Perennial), S-C5 (Intermittent)	VP-C15-1
7	W-C16	PSS	PEM	Seasonally Saturated-seepage	---	---
8	W-C18	PEM	---	Seasonally Saturated-seepage	---	---
8	W-C20	PSS	PFO	Seasonally Flooded	S-C6 (Intermittent)	VP-C20-1
9	W-C21	PFO	---	Seasonally Flooded	---	VP-C21-1
9	W-C22	PEM	PFO	Seasonally Saturated-seepage	S-C7 (Intermittent)	---
10	W-C23	PSS	PEM	Permanently Saturated	S-C8 (Branch Brook), S-C9 (Intermittent)	---
10	W-D1A	PFO	---	Seasonally Saturated-seepage	---	---
10	W-D1B	PFO	---	Seasonally Saturated-seepage	---	---
10	W-D1	POW	---	Seasonally Flooded	---	---
10	---	---	---	---	S-D1 (Intermittent)	---
10	W-D2	PEM	PSS	Seasonally Saturated-seepage	S-D2 (Intermittent)	---
10, 11	W-D3	PFO	PSS	Seasonally Saturated-seepage	S-D3 (Intermittent)	---
11	W-D4	PFO	PSS	Seasonally Flooded	---	VP-D4-1
11	W-D5	PEM	PSS	Seasonally Flooded	---	VP-D5-1
11, 12	W-D6	POW	PEM	Permanently Flooded	---	---

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
12	W-D7	PSS	PFO	Permanently Saturated	S-D5 (Unnamed Perennial)	---
12	W-D8	PFO	---	Seasonally Saturated-seepage	---	---
12	W-10	PSS	PFO	Seasonally Saturated-seepage	---	---
12	W-D11	PSS	PFO	Seasonally Saturated-seepage	S-D8 (Intermittent)	---
12, 13	W-D12	PSS	PEM	Seasonally Flooded	S-D9, S-D10 (Intermittent)	VP-D12-1
12	W-D15	PFO	---	Seasonally Saturated-seepage	---	VP-D15-1
13	W-D13	PSS	PFO	Seasonally Saturated-seepage	S-D11 (Intermittent)	---
13	W-D14	PFO	---	Seasonally Saturated-seepage	---	---
14	W-E1	PFO	PSS	Permanently Flooded	S-E2 (Northfield Brook)	---
14	W-E2	PSS	PFO	Permanently Saturated	S-E3, S-E4 (Intermittent)	---
14	W-E3	PEM	PSS	Seasonally Saturated-seepage	---	---
14	W-E4	PEM	PSS	Seasonally Saturated-seepage	S-E5 (Intermittent)	---
15	W-E6	PFO	---	Seasonally Saturated-seepage	---	---
15	W-E7	PEM	PSS	Seasonally Saturated-seepage	---	---
15	W-E8	PSS	PFO	Seasonally Saturated-seepage	---	---
15	W-E9	PFO	PSS	Seasonally Flooded	S-E7 (Intermittent)	VP-E9-1
15, 16	W-E10	PSS	PEM	Permanently Saturated	---	---

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
16	W-E11	POW	PEM	Permanently Flooded	---	---
16	W-E13	PFO	---	Seasonally Saturated-seepage	---	---
16	W-F1	PSS	---	Seasonally Saturated-seepage	S-F2 (Intermittent)	---
16	W-F2	PSS	---	Seasonally Saturated-seepage	---	---
16	W-F3	PFO	---	Seasonally Saturated-seepage	---	---
16	W-F4	PFO	PSS	Seasonally Saturated-seepage	S-F1 (Intermittent)	---
16	W-F5	PSS	PEM	Seasonally Saturated-seepage	S-F3 (Intermittent)	---
16	W-F6	PFO	---	Seasonally Saturated-seepage	---	---
16	W-F7	PSS	PEM	Seasonally Saturated-seepage	S-F4 (Intermittent)	---
16	W-F8	PSS	PEM	Seasonally Saturated-seepage	S-F5 (Intermittent)	---
17	---	---	---	---	S-F6 (Unnamed Perennial)	---
17	W-F9	POW	PFO	Permanently Flooded	S-F7 (Naugatuck River), S-F8 (Intermittent)	VP-F9-1
17	W-F10	PFO	PEM	Seasonally Flooded	S-F9 (Intermittent)	VP-F10-1
17	W-F11	PSS	PFO	Permanently Saturated	S-F10 (Unnamed Perennial)	---
18	W-F12	PSS	PEM	Seasonally Saturated-seepage	S-F11 (Intermittent)	---
18	W-F13	PEM	PFO	Permanently Saturated	S-F12 (Intermittent)	---
19	W-F14	PSS	PEM	Seasonally Flooded	---	VP-F14-1

Aerial Map Sheet No.	Wetland No.[1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]	Associated Vernal Pool[4]
19	W-F15	PSS	PEM	Seasonally Flooded	S-F13, S-F14 (Intermittent)	VP-F15-1
19	W-G1	PSS	PFO	Seasonally Saturated-seepage	S-G1, S-G2, S-G3 (Intermittent)	---

[1]Wetland No. refers to the number generated during the 2015 field surveys within the 1191 Line ROW. This Wetland No. is keyed to those depicted on the 200 scale Aerial Maps (Attached to the Petition).

[2]Wetlands classified according to Cowardin et al 1979; PEM = Palustrine Emergent Wetland; PFO = Palustrine Forested Wetland; PSS = Palustrine Scrub-Shrub Wetland; POW = Palustrine Open Water.

[3]Associated Watercourse refers to the identification number assigned during the 2015 field surveys to identify watercourses within the 1191 Line ROW.

[4] Vernal pools were identified in 2015 and re-confirmed in 2020 by Davison Environmental

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A1**

Project: CT2591350 Investigator: MED

Date: 4/7/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland Flag Series: W-A1

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN _____X___

FLATS (MINERAL) _____

Slope: _____

Depression: _____

Novitski Class: SW Slope/GW Slope

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☒ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hinckley (38)	☐	☒	☒	☒
Udorthents (306)	☐	☒	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-A1

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 1-2‘ Width 3-4‘ avg. Depth at Center 6“

Est. Riffle/Pool Ratio: N/A (all riffles) Flow Rate ☐ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical (within channel) ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): overhanging/dense shrub layer on stream banks.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, early successional forest

Surficial Geology: Outwash (Hinckley)

Culverts present

(Size & Type) 48" RCP at invert., 48" corrugated metal at outlet (SA1-09) Wildlife Observed:

NOTES:

Delineated area is the bordering wetland of an unnamed perennial watercourse (S-A1). The watercourse enters the wetland at an outlet (48" RCP) on the south side of Echo Lake Road and flows east within a narrow incised channel. This channel exists within a broader drainage channel. The watercourse enters a 48" corrugated metal pipe and flows beneath Route 8. Dominant vegetation includes silky dogwood, winterberry, *Rubus spp.*, reed canary grass, *Spiraea* sp., skunk cabbage. *Lonicera* sp., Japanese barberry, morrow's honeysuckle, arrowwood and sweet fern occupy the upland fringe.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A2**

Project: CT2591350 Investigator: MED

Date: 4/7/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-A2

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X___

FLATS (ORG/MINERAL) ____

Slope: _____

Depression:_____

Novitski Class: SW Slope

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Udorthents – Urban Land (306)	☒	☒	☒	☒
Hinckley gravelly sandy loam 3 –15% (38C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-A2

☐ Intermittent ☒ Ephemeral

Bank Height __6"_____ Width _1-3'_____ Depth at Center 9"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __1:10_____ Flow Rate ☒ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☒ Glides ☐ Pools

Channel Geometry: man-made

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation 20% at ROW

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 1 cfs

Habitat Features (Describe): Developing riparian shrub corridor

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 8

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: alongside Route 8 immediately to east

Surficial Geology: outwash

Culverts present

(Size & Type) Flows to S-A1 Wildlife Observed:

NOTES:

Wetland occurs at toe-of-slope & adjacent to Rte 8 embankment. This wetland is associated with a man-made drainage feature (i.e., the flagged watercourse is a roadside drainage swale).

Wetland vegetation includes soft rush, silky dogwood, *Carex* sp. (Sect. Latifolia), and hardhack (*Spiraea latifolia*)

Adjacent upland with bittersweet, ragweed, Morrow's honeysuckle, burning bush, red cedar and goldenrods.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A3**

Project: CT2591350 Investigator: MED

Date: 4/7/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-A3

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X__ _____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

RPW mapped as USGS blue line.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hinckley gravelly sandy loam (38C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series S-A3

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☒ Perennial

Bank Height: 6-10" Width: 2-5' Depth at Center: 12" bankfull

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 2-5 cfs

Habitat Features (Describe):
Groundwater break out, seeps.

NOTES: Primarily originating from storm drain system at adjacent transfer station, with contribution from GW breakout.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road (East)

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 10+ West

Surrounding Habitat Types:

Surficial Geology: Till outwash contact (toe of slope).

Culverts present

(Size & Type) 4 ft diameter (est.) with conc headwall

Wildlife Observed: none

NOTES:

Culverts present under Echo Lake Road.

Forested wetlands is at toe of D slope with bedrock outcropping (GW breakout).

Transfer Station adjacent to south

Wetland vegetation includes red maple, yellow birch, green ash, spicebush and occasional winged euonymous (*Euonymous alatus*)

Herbaceous spp. include cinnamon fern, sensitive fern, skunk cabbage and wood reedgrass (*Cinna* sp.)

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A4**

Project: CT2591350 Investigator: MED

Date: 4/21/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-A4

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: Headwaters
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES: Headwaters of NHD blue line.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75C)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series N/A

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):
N/A – headwaters of National Hydrography Dataset (NHD) blue line to North (see aerials).

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Upland old field = south; forested = north

Surficial Geology: Till, bedrock outcrops

Culverts present

(Size & Type) N/A

Wildlife Observed: White-tailed Deer (sign)

NOTES:

Diffuse flow from GW breakout (not a defined watercourse)

Some *Phragmites* sp. reed above the GW breakout zone.

Saturated zone w/ *Sphagnum*, *Symplocarpus foetidus, Carex stricta*.

Peripheral zone (seasonally saturated areas) with *Osmunda cinnamomea, Spiraea tomentosa*.

Woody spp. includes *Acer rubrum*, *Sambucus Canadensis, Fraxinus* sp., *Quercus rubra*, *Ilex verticillata*, *Lindera benzoin*.

Upland with *Kalmia latifolia*, *Betula* sp., *Prunus serotina*, *Acer rubrum*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A5-A6**

Project: CT2591350 Investigator: MED

Date: 4/6/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: W-A5, W-A6

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: See Note below
☒ Seasonally saturated	☐	☒	Depression: See Note below
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES: Other NWI classes PEM (minor).

HGM Values: Elements of both Slope & Depression Wetland.

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75C)	☐	☒	☒	☒
Ridgebury, Leicester, and Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-A4

☐ Intermittent ☒ Ephemeral

Bank Height < 6" Width 1-2' Depth at Center < 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation (not flagged)

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):wrack deposits (leaves & sticks)

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10+

Surrounding Habitat Types: Bedrock outcrop & old field (Juniper)

Surficial Geology: Till Ridge

Culverts present

(Size & Type) 16" CMP Wildlife Observed:

NOTES:

Stream channel originates at the outfall of the 16-inch CMP culvert under the ROW access road.

Recent improvements/maintenance to access road associated with refurbishment work.

Wetland plants include winterberry, maleberry, hardhack, sensitive fern, steeplebush, silky dogwood, arrowwood, arrow leaved tearthumb, goldenrods and *Sphagnum* sp. moss

Associated upland with Hazel *Corylus americana*, red cedar, sweet fern, mountain laurel, haircap moss, and goldenrods.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A7**

Project: CT2591350 Investigator: MED

Date: 4/6/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: W-A7

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: _____

Novitski Class: GW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Likely significant nexus w/ RPWs (Hydro-connections)

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☒	☒	☒
Ridgebury Leicester Whitman fsl (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Echo Lake Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Old (Virginia rail) stonewall on west side of wetland to the SE of structure #1238.

Wetland vegetation includes red maple, spicebush, cinnamon fern, jewelweed, sensitive fern and *Sphagnum* sp. moss

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A8**

Project: CT2591350 Investigator: MED

Date: 4/6/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: W-A8

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X__
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (Turkey Brook)
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-A5

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 6-10" Width 4-8' Depth at Center ~4"

Est. Riffle/Pool Ratio: 1:10 Flow Rate ☒ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 10 cfs

Habitat Features (Describe): Occas. boulders.

NOTES: Banks = vertical to slightly undercut

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Old Field w/ well developed

Surficial Geology: Till (Canton & Charlton)

Culverts present

(Size & Type) 2 - 16" CMP across ROW Road

Wildlife Observed: white-tailed deer (sign)

NOTES:

Wetland vegetation includes highbush blueberry, swamp dewberry, cinnamon fern, winterberry, red maple, swamp azalea, skunk cabbage, *Viburnum* sp. *Spiraea* spp., and occasional pussy willow.

Some shallow organic substrates (PEM w/ *Sphagnum* and *Scirpus cyperinus*)

Associated upland vegetation includes hornbeam (*Carpinus* sp.), red cedar, sweet fern, Allegheny blackberry, goldenrod, white birch, hazel, and red oak.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A9**

Project: CT2591350 Investigator: MED

Date: 4/6/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: W-A9

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN Turkey Brook
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: GW discharge (W end)
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD (Wetland A-9)
☒ RPW (S-A6, S-A7)	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-A6, S-A7 (Turkey Brook)

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 3-12” Width 3-7’ typ. Depth at Center to 12” +

Est. Riffle/Pool Ratio: _____ Flow Rate ☒ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology: (some braided diversions @ flood)

☒ Undercut (slight) ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☒ Mud ☒ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Turkey Brook

RIVER/STREAM DATA Stream # and Flag series __S-A5.5

☒ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width __3-4'____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides (lower) ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☒ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): none, armored (hard bottom)

NOTES:

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest & brush land

Surficial Geology: till, alluvium

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Improved access to structures

- Representative wetland vegetation includes alder, red maple, elderberry, winterberry, nannyberry, cinnamon fern, sensitive fern, silky dogwood, pussy willow and skunk cabbage.
- Invasive spp. (*Rosa multiflora, berberis thunbergii, Lonicera morrowii,* and *Euonymous alatus*) common to abundant in this area.
- Cattail marsh on B slope (+/-) west end. Impressive volume of GW discharge from slope below the dump at this location.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-A11**

Project: CT2591350 Investigator: MED

Date: 4/6/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT, Litchfield County

Wetland # & Flag Series: W-A11

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: X_____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	above (basin = ground water depression)

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES: Dominant NWI Class PSS = tall shrubs (*Alnus* dom.)

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (60C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Agricultural – hayfield (mowed)

Surficial Geology: till ridge

Culverts present

(Size & Type) 12" CMP flows to wetland Wildlife Observed:

NOTES:

Historically disturbed area. This area may have been excavated in an attempt to alleviate imperfect drainage in the surrounding farm fields.

PSS = Tall shrub (*Alnus* sp.) dominant, and including *Salix discolor* and *Rosa multiflora*.

Some *Juncus effusus* in adjacent hayfields.

Wetland vegetation includes: purple leaved willow herb, jewelweed, speckled alder and pussy willow.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B1-B2**

Project: CT2591350 Investigator: MED

Date: 4/7/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B1

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW Depression

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☐ NRPW
☐ UPLAND
☐ RPWWD
☒ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (60, 61)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual
☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel
☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub and commercial development

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal beneath access road from B2 to B1, 24" (2) RCP outlets from B1 Wildlife Observed:

NOTES:

Wetlands W-B1 and W-B2 flow from the north ROW boundary to the south ROW boundary. Flows are culverted beneath an existing dirt access road from W-B2 to W-B1 within an 18" corrugated metal culvert. Outflow from this system is beneath Seemar Road (off ROW, serving adjacent business) within 2, 24" RCPs. Vernal Pool B2-1 is located within wetland, appears to be man-made. This wetland has been subject to historic disturbance activities associated with adjacent commercial developments. Dominant vegetation within Wetland W-B2 includes common reed, winterberry, highbush blueberry, silky dogwood, phragmites, swamp azalea, *Lonicera sp*., pussy willow, oriental bittersweet and multiflora rose. Dominant vegetation within Wetland W-B1 includes pussy willow, reed canary grass, morrow's honeysuckle, arrowwood, highbush blueberry, wineberry, and white meadowsweet.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B3**

Project: CT2591350 Investigator: MED

Date: 4/7/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B3

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☒	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☒ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub/emergent (maintained lawn)

Surficial Geology till

Culverts present

(Size & Type) 24" RCP

Wildlife Observed:

NOTES:

Wetland W-B3 is a detention basin. Dominant vegetation includes pussy willow, cattails and common reed. Sweet fern is abundant on the basin banks.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B4**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield, CT

Wetland # & Flag Series: W-B4

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☐	☒	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: hardwood forest/scrub-shrub

Surficial Geology: till

Culverts present

(Size & Type) 12" corrugated metal (outlets beneath access road from B5) Wildlife Observed:
18" corrugated metal (conveys flow beneath access road to B6)

NOTES:

Wetland B4 is a red maple swamp adjacent to a dirt/gravel access road. A vigorous shrub layer is present, dominated by highbush blueberry, mountain laurel at the wetland edges. A portion of this system adjacent to the gravel access road is seasonally ponded (Vernal Pool VP-B4-1), a result of impoundment against the access road and a collapsed culvert outlet on the opposite side of the road (Wetland W-B6).

Dominant vegetation in Wetland W-B4 includes red maple, smartweed and meadowsweet.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B5**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B5

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub and forested wetlands, commercial development

Surficial Geology: till

Culverts present

(Size & Type) 12" corrugated metal (outlets to wetland B4 beneath access road)

Wildlife Observed:

NOTES:

Wetland W-B5 is a portion of a larger system that has been isolated by access roads and subject to disturbance as a result of its accessibility. It is impounded to south by a gravel/dirt access road (culverted to Wetland W-B4) and to the NW by a dirt access road. Dominant vegetation includes highbush blueberry, mountain laurel, speckled alder, winterberry. Reed canary grass, soft rush and tussock sedge are present within emergent areas.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B6**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield, County

Wetland # & Flag Series: W-B6

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) _both__

Slope: _____

Depression: _____

Novitski Class: GW slope, depression

SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Walpole (13)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A___

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Park Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub, forested wetland (off ROW)

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal, (inlets from wetland B4 beneath access road, culvert is collapsed).

Wildlife Observed: Deer, coyote scat observed

NOTES:

Wetland W-B6 is a large system draining from SW to NE. It includes gently sloping groundwater seeps and depressional features. Some emergent areas exist primarily in wetter depressional areas. Dominant vegetation includes highbush blueberry, winterberry, arrowwood, pussy willow, Morrow's honeysuckle- 20% cover, elderberry and white meadowsweet. Common reed, cattails, tussock sedge, and *Sphagnum* dominate seasonally inundated areas. Mountain laurel is abundant around upland fringes.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B7**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B7

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☒ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☒ Semi-permanently flooded	☐	☒
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) both

Slope: _____

Depression: _____

Novitski Class: GW, SW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: N/A

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Scrub-shrub

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) 18" corrugated metal, (inlets from Wetland W-B8 – clogged) Wildlife Observed: beaver activity

NOTES:

Wetland W-B7 drains from SW to NE, beginning at Jericho Brook Pond (primarily off ROW). Beaver activity was noted at SW ROW edge and has clearly altered the hydrology of this system. Maps show a perennial watercourse Jericho Brook) draining from the pond through the wetland interior, however, this was not observed. This may be the result of the beaver activity. Dominant vegetation within scrub-shrub cover types includes highbush blueberry, winterberry, arrowwood, Morrow's honeysuckle- 3% cover and *Rubus* around the periphery. Seasonally inundated areas are dominated by tussock sedge, cattails, lily pads, reed canary grass and open water at the NE extent.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B8**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B8

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW, SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub, emergent wetlands, open-water

Surficial Geology: till

Culverts present

(Size & Type) 18" corrugated metal (clogged-outlets to wetland B7) Wildlife Observed: coyote scat in vicinity, beaver activity

NOTES:

Wetland W-B8 is a small ponded area resulting from seepage from a fill embankment on adjacent Jericho Brook Pond. Seepage is then impounded against the gravel access road to the NE. A culvert within this wetland conveys flow to Wetland W-B7, which is adjacent. The culvert inlet and outlet were obstructed from careful inspection. It was likely installed to try to prevent failure of the adjacent access road. Dominant vegetation includes reed canary grass. Some Glossy Buckthorn is also present- 3%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B9**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B9

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☒ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☒ Semi-permanently flooded	☒	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) both ___

Slope: _____

Depression: _____

Novitski Class: GW depression

SW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types:

Surficial Geology Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-B9 is contiguous with Wetland W-B7 (connecting off ROW). The northeast portion of this wetland is ponded with fringe areas dominated by common reed (phragmites 60%). Cranberry, highbush blueberry, cattails and tussock sedge grow as hummocks dominating the ponded area with some, arrowwood, red maple and willow less abundant on the fringes of the ponded area. *Lonicera* and Japanese knotweed were abundant on the adjacent upland slope.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-B11**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-B11

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☐	☒	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW slope, GW slope
☐ Artificially flooded	☐	☐	SW depression, GW depression

USACE WATERS TYPES:	
☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☒ RPW	☐ RPWWN
☒ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Gloucester (57)	☐	☒	☒	☒
Aquent	☒	☐	☐	☒
Catden and Freetown (18)	☒	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-B1

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width _2-3'_____ Depth at Center _< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): over-hanging/dense vegetation

NOTES:

RIVER/STREAM DATA Stream # and Flag series S-B2

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width ___2-3'_____ Depth at Center __< 6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): excavated drainage feature

NOTES: New culvert in newly excavated drainage ditch created to re-route S-B2 along the toe of slope of Wetland W-B11 and on the edge of the newly expanded parking lot located southwest of Wetland W-B11.

RIVER/STREAM DATA Stream # and Flag series S-B3

☒ Intermittent ☐ Ephemeral

Bank Height ____1'_____ Width ___2-3'_____ Depth at Center _< 6"_____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: __all riffles_____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Stream S=B3 starts at culvert outflow adjacent to Route 6. Appears to have base flow, but a source was not identified. Dominant vegetation includes Japanese knotweed- 100% cover.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Nova Scotia Hill Road, Route 6

Wetland Topography (%slope): 0-10

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub, forest, open water

Surficial Geology: sandy till

Culverts present

(Size & Type) Wildlife Observed: large buck, abundant antler rubs within wetland interior

NOTES:

Wetland W-B11 is characterized as a hillside seep with multiple intermittent watercourses draining northwesterly towards a pond located within and off ROW. This wetland has been subject to historic disturbance activities including filling (road construction) related to maintenance activities. Common reed (phragmites- 10%), cattails, skunk cabbage, multiflora rose- 3%, Japanese knotweed- 3%, winterberry and pussy willow dominate the fringes of the open water located in the northern section of W-B11. The vegetated slope portion of W-B11 located to the south of the open water includes cinnamon fern, mountain laurel, *Solidago*, multiflora rose- 10% as well as upland species typically found on abandoned agricultural land such as Morrow's honeysuckle- 10% as well as emergent hydrophytes (skunk cabbage). Oxi-aquic soil conditions are present within portions of the delineated wetland. This wetland system is hydrologically connected to Purgatory Brook.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C1**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C1

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☒ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Canton and Charlton (62)	☐	☒	☒	☒
Rock outcrop-Hollis complex (76)	☐	☒	☒	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-C1

☒ Intermittent ☐ Ephemeral

Bank Height __1-2’ avg.__ Width ___2-3’ avg._ Depth at Center __< 6”____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☒ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided (small portion) ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation (in portions)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Overhanging vegetation, particularly dense within ROW.

NOTES: Channel is incised where flow rates are moderate. This watercourse is fragmented, with flows generally dissipating where topography levels. An access road bisects watercourse.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Mature oak-hardwood forest, scrub-shrub within ROW clearing

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Culvert conveying flow from west side of wetland under the access road to the east, the stream is also culverted under an existing gravel road at the edge of the ROW.

NOTES:

Wetland W-C1 is a hillside seep that originates on the southwest side of ROW, and drains northerly towards an unnamed pond (impounded portion of Purgatory Brook, off ROW). This wetland includes an intermittent watercourse feature that flows through a culvert under the newly constructed road. Dominant species within forested areas include red maple, red oak, yellow birch, mountain laurel and spicebush. Within the cleared ROW, highbush blueberry, mountain laurel, winterberry, cinnamon fern and *Rubus* spp. dominate.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C3**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C3

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ____N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest (within cleared ROW), scrub-shrub; also, golf course, residential development to north & east

Surficial Geology: Till, bedrock outcroppings

Culverts present (Size & Type)

Wildlife Observed:

NOTES:

This wetland is a bedrock controlled depressional feature. The access road crosses this wetland. Scour was observed from the east tip of the wetland, continuing easterly until the slope drops steeply over ledge down towards the east. This scour did not meet the criteria for an intermittent watercourse (no defined bank and channel). Dominant vegetation includes blueberry, mountain laurel, winterberry and *Rubus*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C4**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C4

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression/GW slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW), residential development, golf course

Surficial Geology: Till, Bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C4 is a hillside seep, with depressional features. Access road crosses this wetland, surface water is draining down access road, with portions inundated. It drains from southwest (off ROW) to northeast towards a residence. Dominant vegetation includes red maple, mountain laurel, spicebush within forested portions. Highbush blueberry, *Rubus*, winterberry dominate areas within the ROW clearing. A newer gravel access road has been installed and hydrology flows over the roadway.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C6**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Cloudy, 40°'s

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C6

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW clearing), golf course

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C6 is a small bedrock controlled depressional feature directly abutting a fill slope associated with the adjacent golf course. Dominant vegetation includes high bush blueberry, mountain laurel, and *Rubus* spp.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C7**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C7

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW slope

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☐ NRPW
☐ UPLAND
☐ RPWWD
☒ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood forest, scrub-shrub (within ROW clearing, development to the east, northeast (Hard Rock Road)

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C7 is a hillside seep draining from southwest to northeast towards a residence on Hard Rock Road. The eastern portion of this system (off ROW) appears to be seasonally inundated (water stained leaves, standing water, and unvegetated). Dominant vegetation includes red maple, highbush blueberry, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C8**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C8

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis Chatfield – Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, dense mountain laurel understory

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland is located along the northeastern portion of the ROW. The wetland is a forested seep draining from west to east towards a residence on Hard Rock Road, and may be connected to Wetland W-C7 off ROW. Dominant vegetation includes red maple, yellow birch, winterberry, spicebush, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C10**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C10

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X_
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW depression
☐ Artificially flooded	☐	☐	SW depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☒ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, dense mountain laurel understory

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C10 is a vernal pool (Vernal Pool VP-C10-1). It is an elongated bedrock controlled depressional feature, with outcroppings rising sharply to the east. Depth within the pool is generally 1' deep or less. The pool is generally unvegetated with dominant vegetation around the fringes including red oak, black birch, paper birch, white oak, spicebush, highbush blueberry, and mountain laurel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C12**

Project: CT2591350 Investigator: MED

Date: 4/8/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C12

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X___

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW depression/GW slope

SW Slope

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock-outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _S-C3_

☒ Intermittent ☐ Ephemeral

Bank Height ___1-2' avg.___ Width __3-4' avg. Depth at Center < 6"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual (rocky)

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Oak-hardwood upland forest, forested wetland, scrub-shrub habitat within cleared ROW

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C12 is a hillside seep with bedrock controlled depressional features. This wetland drains from Vernal Pool VP-C12-1 southwest to the northeast ROW boundaries, and includes scrub-shrub cover types within the cleared ROW and forested areas outside of the ROW clearing. The existing access road crosses this wetland and hydrology currently flows over the roadway. This wetland drains northeast towards an unnamed perennial watercourse off ROW. Dominant vegetation includes red maple, hemlock, highbush blueberry, mountain laurel, spicebush, *Sphagnum,* and tussock sedge.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C14**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series W-C14

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __ ___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield-rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series:

☐ Intermittent ☐ Ephemeral

Bank Height_____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland hardwood forest, scrub shrub (ROW clearing)

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C14 is a bedrock controlled depressional feature along the edge of the existing access road. This wetland is seasonally saturated and currently contains a stone drainage swale. Dominant vegetation includes *Spirea,* mountain laurel, and tussock sedge.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C15**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Weather: Cloudy, rain, 40º's

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series WC15/C15-1 to 27

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIPARIAN __X__

FLATS (ORG/MINERAL) _X__

Slope: _____

Depression: _____

Novitski Class: GW Depression

SW Slope/SW Depression

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Hollis-Chatfield-rock outcrop (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-C4

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☒ Perennial

Bank Height __2-4' avg._____Width __3-4' avg. Depth at Center _< 1' avg.

Est. Riffle/Pool Ratio: __5:1__ Flow Rate ☒ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Flows east to west over ROW from within upland-oak-hardwood forest, mountain laurel understory, channel well defined, rocky.

RIVER/STREAM DATA Stream # and Flag series S-C5

☒ Intermittent ☐ Ephemeral

Bank Height ± 1' avg. Width ± 1' avg. Depth at Center ± 6" avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: scrub-shrub (ROW clearing), large wetland complex (forested, shrub-hummock, emergent), upland hardwood forest

Surficial Geology: Bedrock outcroppings, till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C15 is a large, high quality wetland complex including perennial and intermittent watercourse features. The delineated wetland includes areas of scrub-shrub and emergent habitat. Portions of this wetland are characterized by shrub dominated hummocks and periodic inundation. This wetland drains from east to west. The wetland crosses the newly constructed access route (no culverts) in two locations. Vernal Pool VP-C15-1 occurs on east side of wetland. Dominant vegetation includes red maple, *Spirea*, highbush blueberry, skunk cabbage, and *Sphagnum*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C16**

Project: CT2591350 Investigator: MED

Date: 4/8/09 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series W-C16

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☒ PFO (off-ROW) ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X_
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub (ROW edge), upland oak-hardwood forest

Surficial Geology: Till, bedrock outcropping

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C16 is a bedrock controlled depressional feature. The existing access road confines it to the side of the road. There is a stone riprap swale within the resource. This wetland is seasonally flooded off-ROW. Dominant vegetation includes winterberry, highbush blueberry, *Sphagnum*, tussock sedge, *Rubus* (on fringes).

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C18**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series: W-C18

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield-Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 – Route 109

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Scrub-shrub (ROW clearing), upland oak-hardwood forest

Surficial Geology: Till, bedrock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C18 is a bedrock controlled depressional feature along an existing access road. The existing access route defines the wetland to the west of the roadway. Bedrock outcroppings rise steeply to the east and west (high to the east). This wetland continues off ROW to the southwest. Dominant vegetation includes tussock sedge and soft rush.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C20**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series W-C20

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☐ Seasonally saturated	☐	☐
☒ Saturated	☒	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW Depression

GW Slope

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
Hollis-Chatfield – Rock outcrop complex (75)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-C6

☒ Intermittent ☐ Ephemeral

Bank Height < 1' Width 2' avg. Depth at Center < 1'

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: SC6 is a short linear feature within wetland C20. It is characterized by groundwater breakout at a sloped portion of the wetland system.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 / Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland hardwood forest, scrub-shrub within ROW clearing

Surficial Geology: Rock outcrops

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C20 is primarily a seasonally saturated forested seep within the ROW. The wetland is characterized as a seasonally inundated depressional feature dominated by scrub-shrub habitat. The intermittent watercourse within this wetland (S-C6) originates within the southern lobe of the wetland as a scoured channel, however no obvious source of flow (other than groundwater breakout) was observed. The wetland is seasonally inundated, Vernal Pool VP-C20-1 the result of impoundment against access road. Dominant vegetation within this system includes highbush blueberry, mountain laurel, hemlock, red maple, speckled alder, witch hazel, *Sphagnum*, and winterberry.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C21**

Project: CT2591350 Investigator: MED

Date: 4/10/09 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series W-C21

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☒	☐
☐ Seasonally saturated	☐	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X__

Slope: _____

Depression: _____

Novitski Class: SW Depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Rock outcrop – Hollis complex (76)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height ____Width _____Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 6 –Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland mixed hardwood / hemlock forest, scrub-shrub with ROW clearing

Surficial Geology: Rock outcroppings

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-C21 is a north to south oriented bedrock controlled depressional feature. This wetland is Vernal Pool VP-C21-1. A bedrock outcropping rises steeply (nearly vertical) to the east. This wetland likely drains periodically to south towards a high quality wetland (off ROW) to the southeast. This wetland is unvegetated within the wetland interior. The banks are dominated by eastern hemlock. The access road defines the edge of the wetland to the north.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-C23**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Watertown, CT – Litchfield County

Wetland # & Flag Series W-C23

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	SW Slope

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES: * = removed narrow bordering wetland fringe of Branch Brook

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitmore (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-C8

☐ Intermittent ☐ Ephemeral C8-17 to 24

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☒ Perennial

Bank Height 3-5' avg. Width 20-30' avg. Depth at Center 6" – 2' avg.

Est. Riffle/Pool Ratio: N/A Flow Rate ☐ Slow

☒ Defined bank and channel ☒ Moderate

☒ Sustained Flow ☐ Fast

☒ Hydrophytic Vegetation

☒ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical (armored in places) ☐ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Branch Brook – originates at ACOE spillway. The spillway consists of concrete walls and base – was not flagged due to access constraints (safety). The banks of Branch Brook are armored in portions closer to the spillway. Branch Brook flows through Black Rock State Park and includes fisheries habitat.

RIVER/STREAM DATA Stream # and Flag series __S-C9

☒ Intermittent ☐ Ephemeral

Bank Height _2-3' avg.__ Width ___3' avg.____ Depth at Center _< 6" avg._

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: S-C9 is a man-made conveyance feature with armored banks. This feature originates (source unknown) off ROW and flows beneath An existing access road via twin 30" RCP's.

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Branch Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Development (ACOE office), ACOE dam, hemlock/ hardwood forest

Surficial Geology: Bedrock outcroppings, till

Culverts present

(Size & Type) (2) 30" RCP's Wildlife Observed:

NOTES:

Wetland C23 borders Branch Brook (SC8) and includes intermittent watercourse SC9 which flows through the interior. The portion depicted is an area north of Branch Brook, at the base of the ACOE dam. At the dam base, dominant vegetation includes mowed emergents, reed canary grass, and tussock sedge. Scrub-shrub portions of this wetland along the stream bank are dominated by smooth alder and autumn olive.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D1**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D1

Dominant NWI Class ☐ PFO ☐ PSS ☐ PEM ☒ POW (PUB)

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☒	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: __X__
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis-Chatfield-Rock outcrop	☐	☐	☐	☐
Complex (75E)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109: 1100' South

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Mattatuck State Forest

Surficial Geology: Till-bedrock ridge

Culverts present

(Size & Type) N/A

Wildlife Observed: Crow, chickadees

NOTES:

- No emergent vegetation
- Leaf litter substrate
- Perimeter vegetation includes *Kalmia latifolia* (dominant shrub) with woody overstory of *Acer rubrum*, *Quercus alba*, *Q. rubra*, *Pinus strobus*, and *Tsuga canadensis*.
- Hardwoods = 12 – 16 in (typ.) and to 70 feet height.
- Bedrock outcropping to the west.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D2**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D2

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: X
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW (Wetland D2)
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
73E Charlton Chatfield complex	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D2

☐ Intermittent ☒ Ephemeral

Bank Height _____ Width 2-3 ft. Depth at Center _____

☒ Defined bank and channel
☒ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: highly variable

Habitat Features (Describe):

NOTES: Bank Morphology Vertical = excavated
Substrate Sand = sedimented

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109 = 1500 feet South

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: forest land (Mattatuck State Forest)

Surficial Geology: Till Ridge with bedrock exposure

Culverts present

(Size & Type)

Wildlife Observed: chickadee

NOTES:

- The stream channel is a linear, excavated ditch.
- Old trench/excavation spoils are evident north side of wetland (spoil piles are colonized by hay-scented fern).
- Both the ditch and wetland may have been originally excavated to detain/receive runoff from the access road in the ROW. Both contain a substantial amount of recent sediments from recent roadway work.
- Ditch flows to a perennial watercourse near the edge of the ROW
- Wetland vegetation includes *Sphagnum* sp. moss, cinnamon fern, bracken, swamp dewberry. Shrubs include maleberry, highbush blueberry, and *Spiraea latifolia*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D3**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D3

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: ___X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD (D3)
☒ RPW (S-D3)	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES: Other NWI classes (PSS) = WF D3 flags 32-46

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton & Montauk (84C&D)	☐	☐	☒	☐
Woodbridge (47C)	☒	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D3

☒ Intermittent ☐ Ephemeral

Bank Height 12-16" Width 2-8' Depth at Center 4-12"

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation (Sphagnum moss)

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☒ Undercut (occas.) ☐ Vertical (typ.) ☐ Gradual

☒ Presence of Overhanging Vegetation (moderate)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 5 cfs at lower end

Habitat Features (Describe): Upper perennial to intermittent watercourse flow

NOTES:

- Shrub stratum is moderate to sparse under the tree canopy

WETLAND LOCATION & CROSSING

Nearest Road Crossing: 1500 ft to south to Route 109

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested. Some mesic forest, mostly upland hardwoods.

Surficial Geology: Till/Bedrock outcrops.

Culverts present

(Size & Type)

Wildlife Observed: robin, white-tailed deer

NOTES:

- Stream channel varies from high gradient riffle complex with cobble boulder substrate to moderate gradient watercourse with runs and glides (cobble-sand-gravel). Much groundwater breakout.
- Wetlands are distributed at intervals along the length of the watercourse.
- Red maple, spicebush, *Sphagnum* sp. moss and *Lycopodium obscurum*. Chroma <2 circa 18 inches depth.
- PSS with GW breakout. Winterberry, maleberry, highbush blueberry, *Sphagnum* sp. moss and abundant cinnamon fern. Common sensitive fern and spicebush, and occasional witch hazel.
- PFO with generalized GW breakout. Red maple, yellow birch, spicebush, berberis- 15%, cinnamon fern, skunk cabbage, and *Sphagnum* sp. moss.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D4**

Project: CT2591350 Investigator: MED

Date: 4/14/15 Rev 6-7/2020 Weather: Variable Bank Height ____

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D4

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: ___X_____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☒ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 109 to the south

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forestland – some recent timber stand improvement work.

Surficial Geology: Till/Bedrock Ridge

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Western side of wetland contains vernal pool VP-D4-1
- Seasonally flooded area with red maple, highbush blueberry, *Sphagnum* sp. moss, cinnamon fern
- Area is an isolated shallow topographic depression

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D5**

Project: CT2591350 Investigator: MED

Date: 4/14/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D5

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☒	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: ___X_____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☒ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forest and field

Surficial Geology: Till – common ledge outcrops

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Small, isolated, seasonally flooded topographic depression bounded by ROW access road and stone wall
- Haircap moss = dominant, and including winterberry, *Spiraea* spp., highbush blueberry, tussock sedge and other *Carex* sp.
- Depleted subsoil
- VP-D5-1 limited by short hydroperiod

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D6**

Project: CT2591350 Investigator: MED

Date: 4/14/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D6

Dominant NWI Class	☐ PFO	☐ PSS	☐ PEM	☒ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☒ Permanently flooded	☒	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☐ Seasonally saturated	☐	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) ___X___

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: _____

Novitski Class: SW Depression (impounded)

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☐ NRPW
☐ UPLAND
☐ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Morton Pond (OW)	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, rural residential (Gun club on west bank)

Surficial Geology: Bedrock/Ledge outcrop community

Culverts present

(Size & Type) N/A Wildlife Observed:

NOTES:

- Morton Pond
- South margin of pond with a relatively abrupt to vertical shoreline
- Upland shrubs trending to pond margin (E.g., mountain laurel, highbush blueberry, arrowwood, tree clubmoss, and hay-scented fern)
- Some low topographic plateaus within 3 – 5 ft from water's edge with cinnamon fern, *Sphagnum* sp. moss, and skunk cabbage
- Trees at edge of pond include red maple, red oak, and black birch (occasional winterberry shrubs)
- North margin of pond at ROW crossing is dominated by wet meadow plant species. Species include soft rush, tussock sedge, whoolgrass, cattails, boneset, arrow leaved tearthumb, smartweed, beggarsticks, solidago and white meadowsweet. Invasive plant species include purple loosestrife- 2% and *Phragmites australis*- 1%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D7**

Project: CT2591350 Investigator: MED

Date: 4/15/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D7

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☒ RPWWD (Wetland D7)
☐ TNWW	☐ RPWWN
☒ RPW (Watercourse S/D5)	☒ NRPWW
☒ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury Leicester Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D5

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 6-10" Width 3-8' Depth at Center ~3-6"

Est. Riffle/Pool Ratio: 5:1 Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☒ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Sparse riparian vegetation.

NOTES: Incised channel.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: ~1200 feet north to Walnut Hill Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, rural residential

Surficial Geology: Till

Culverts present

(Size & Type)

Wildlife Observed: Turkey vulture, red-bellied woodpecker, white-tailed deer

NOTES:

- Stream channel flows from Morton Pond. Incised channel w/ moderate gradient in V-shaped riparian wetland valley
- Streambank vegetation includes sugar maple, black birch, red maple, spicebush, skunk cabbage, Joe pye weed, meadowsweet and Christmas fern
- Invasive plants observed on streambank: Japanese *Berberis*- 60%, multiflora rose- 20%, Morrow's honeysuckle- 5% and oriental bittersweet- 3%
- Primarily a surface water system but exhibiting some areas of GW discharge
- Historical impoundment (stone dam ~15' height) creating a small emergent wetland (~ 1/2 acre) under existing transmission lines

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D8**

Project: CT2591350 Investigator: MED

Date: 4/15/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D8

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Udorthents, Smoothed (308)	☒	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D6

☐ Intermittent ☒ Ephemeral

Bank Height __< 6”___ Width __1’____ Depth at Center _< 6”_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Dissipates into overland flow.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland

Surficial Geology: Till, shallow to bedrock

Culverts present

(Size & Type)

Wildlife Observed: Downy woodpecker

NOTES:

- Small groundwater breakout on hillside
- Some windthrow and darkened leaf litter
- Vegetation includes red maple, gray birch, paper birch, black birch, polar, highbush blueberry, winterberry, and Christmas fern.
- Invasive plant species observed: Japanese *berberis*- 15% and multiflora rose- 5%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D10**

Project: CT2591350 Investigator: MED

Date: 4/15/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D10

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☒ RPWWN (Wetland D10)
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width ____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road; 300 ft. north

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Residential, small woodlot

Surficial Geology: Till

Culverts present

(Size & Type) 6" CMP

Wildlife Observed: Goldfinch, tufted titmouse, crow, mourning dove

NOTES:

- Driveway to house crosses wetland (6" culvert under driveway)
- Vegetation observed: red maple, poplar, pussy willow, winterberry, spicebush and *solidago* sp.
- Invasive vegetation species observed: multiflora rose- 60%, Morrow's honeysuckle- 5%, *phragmites*- 8% and burning bush.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D11**

Project: CT2591350 Investigator: MED

Date: 4/15/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D11

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☒ Intermittently flooded	☐	☒
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: ____X_____

Depression: ___X_____

Novitski Class: GW Slope/GW Depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☒ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (61B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D8

☐ Intermittent ☒ Ephemeral

Bank Height __< 6”___ Width _< 1’___ Depth at Center _< 6”_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry: (Excavated)

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☒ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Excavated ditches – leading to culverts @ road.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Adjacent to Walnut Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Rural Residential

Surficial Geology: Till backslope

Culverts present

(Size & Type) 16" CMP

Wildlife Observed: Woodcock, tufted titmouse, starling, cardinal, song sparrow, blue jay, red bellied woodpecker.

NOTES:

- PFO = red maple dominant, and including spicebush, highbush blueberry, arrowwood.
- PSS (under powerline cut) with winterberry, blueberry, silky dogwood, speckled alder, *solidago*, *rubus*, hardhack, sensitive fern, and occasional *Carex stricta*.
- Invasive species observed: multiflora rose- 60% and autumn olive- 5%.
- Wetland is bisected by driveway at 455 Walnut Hill Road.
- 16" CMP under driveway.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D12**

Project: CT2591350 Investigator: MED

Date: 4/16/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D12

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☐	☒	Slope: ____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD (Wetland D12)
☒ RPW (SD9)	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (46B)	☒	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D9

☒ Intermittent ☐ Ephemeral

Bank Height 12-20"+ Width 5-10' Depth at Center <16"

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height __ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☒ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: > 5 cfs

Habitat Features (Describe):

NOTES: 2 Sections of 24" CMP washed out

WETLAND LOCATION & CROSSING

Nearest Road Crossing: 400 ft. south to Walnut Hill Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10+

Surrounding Habitat Types: Forestland, Rural residential

Surficial Geology: Till ridge

Culverts present

(Size & Type)

Wildlife Observed: Woodcock, wood frog (dead), Spring peepers.

NOTES:

- Walnut Hill Junction
- Wetland hydrology from groundwater breakout (multiple locations)
- Abundant *Rosa multiflora* bushes in abandoned field
- VP-D12-1 is small, excavated pond, with estimated 30% cover of Lemna sp. Cattails dominant later in season (ergo: shallow marsh)
- Associated upland (abandoned hayland) with goldenrods (e.g., *Solidago rugosa*), honeysuckle (*L. morrowii*) - 30%, *Rubus allegheniensis*, fox grape and *Rosa multiflora* – 80%.
- Stream channel (S-D9) is incised with steep banks, strongly influenced from stormwater inputs at Walnut Hill Rd. S-D10 is narrow channelized feature flowing from groundwater break-out.
- Typical streambank (S-D9) vegetation including multiflora rose- 50%, shagbark hickory, ash, sugar maple, Joe pye weed with occasional red oak and black birch.
- Sparse shrub understory associated with watercourse in forested area supporting spicebush, pussy willow, autumn olive, silky dogwood, winterberry, with occasional witch hazel.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D13**

Project: CT2591350 Investigator: MED

Date: 4/16/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-D13

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN __X___

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: _____

Novitski Class: SW Slope

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW (S11)
☐ NRPW
☐ UPLAND
☒ RPWWD (Wetland D13)
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury Leicester Whitman (3)	☒	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-D11

☒ Intermittent ☐ Ephemeral

Bank Height __6" – 2'__ Width __2-8'___ Depth at Center 6-16"_

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width ____ Depth at Center_____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (upper section)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 3-5 cfs

Habitat Features (Describe):

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Two culverted crossings provided

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland, some hay land and Christmas trees in power line cut

Surficial Geology: Till (D slopes)

Culverts present

(Size & Type) 18" CMP - 2

Wildlife Observed: Phoebe, junco, chickadee, song sparrow, crow, goldfinch

NOTES:

- The Ridgebury Leicester and Whitman soil mapping unit is not as extensive as indicated on available soils mapping.
- Wetland vegetation includes red maple, sugar maple, spicebush, silky dogwood, speckled alder, pussy willow, *Sphagnum* sp. moss, burning bush- 3% and frequent *Rosa multiflora*- 75%, Morrow's honeysuckle- 60% and *Rubus allegheniensis*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D14**

Project: CT2591350 Investigator: MED

Date: 4/16/09 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT –Litchfield County

Wetland # & Flag Series: W-D14

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: GW Slope
☒ Seasonally saturated	☒	☐	Depression: _____
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis Chatfield Rock-outcrop complex (75#)	☐	☐	☒	☐
Whitman (#3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: N/A

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Spring flow from groundwater seeps coalescing into watercourse east of ROW

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 254 ~ 150 feet east

Wetland Topography (%slope): 10+

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Forestland

Surficial Geology: Till ridge

Culverts present

(Size & Type) Under Route 254, conc. headwall and 30" Pipe Wildlife Observed: Woodpecker, titmouse

NOTES:

- Stony groundwater seep at base of slope flowing east to 30" culvert under Route 254
- Braided groundwater channels coalesce into a watercourse off of ROW
- Wetland with witch hazel, spicebush, winterberry, black oak, sugar maple, red maple, cinnamon fern and frequent Christmas fern
- Adjacent forestland with mixed hardwoods to ~90 feet (70' to 80' canopy, typ.) at 18" – 24" D.B.H. Dominant trees include red oak, white ash, sugar maple, shagbark hickory, black birch and occasional hemlock

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-D15**

Project: CT2591350 Investigator: MED

Date: 4/14/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT –Litchfield County

Wetland # & Flag Series: W-D15

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☒	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: Surface Water
☒ Saturated	☐	☒	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☒ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Hollis Chatfield Rock-outcrop complex (76E)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Ephemeral outflow channel. Leaf litter wrack deposits.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Walnut Hill Road

Wetland Topography (%slope): 0-5 %

Surrounding Topography (%slope): 10 % +

Surrounding Habitat Types: Forestland

Surficial Geology: Bedrock outcrop ridge

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Vernal pool (VP-D15-1) in upland terrain located behind bedrock outcrop.
- Wetland with highbush blueberry, swamp azalea, mountain laurel, winterberry, wild calla (*Calla palustris*), three-square (*Dulichium* sp.), *Sphagnum* sp. moss (and other mosses) and occasional *Nemopanthus mucronatus*.
- Adjacent forested upland with red oak, sassafras and poplar over mountain laurel (typ.) and *Lycopodium obscurum*.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E1**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series W-E1

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X__
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☒ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62D)	☐	☒	☒	☐
Limerick and Lim (107)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-E2

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height ± 10' avg. Width 20-30' avg. Depth at Center 1-3- avg.

Est. Riffle/Pool Ratio: 4:1 Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☒ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation (alder in ROW clearing, hemlock in forested areas)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): S-E2 denotes Northfield Brook, the dominant feature of this wetland system.
NOTES: Overhanging vegetation including hemlock provides shading, riffles and pools – This watercourse appears to provide good fisheries habitat.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 254/ Northfield Dam access road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Upland-mixed hardwood – hemlock forest

Surficial Geology: Till

Culverts present

(Size & Type) 24" RCP – outlets to SE1 Wildlife Observed:

NOTES:

Wetland W-E1 is characterized as a narrow bordering wetland to Northfield Brook (S-E2). The soils within this narrow system consist primarily of poorly drained alluvium (Limerick and Lim). The dominant feature within this system is Northfield Brook. Dominant vegetation includes E. hemlock, red maple, yellow birch, and alder. Other species include black birch, witch hazel and cinnamon fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E2**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series W-E2

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope/SW Slope
☐ Artificially flooded	☐	☐	GW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury-Leicester-Whitman (3)	☒	☐	☒	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-E3

☒ Intermittent ☐ Ephemeral

Bank Height ± 1' avg. Width 3-4' avg. Depth at Center 6"–1' avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Meandering intermittent watercourse feature through incised channel.

RIVER/STREAM DATA Stream # and Flag series S-E4

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' avg.__ Width ___2' avg._____ Depth at Center _<6" avg.

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Stream S-E4 originates as groundwater breakout on a plateau above Wetland W-E3 and drains into W-E3 at the base of a short, steep till slope. Vegetation observed includes: American elm, red maple and spicebush.

RIVER/STREAM DATA Stream # and Flag series ___N/A__

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ___

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest, scrub-shrub (in ROW clearing) residential development.

Surficial Geology: till

Culverts present

(Size & Type) 12" CMP, 15" RCP Wildlife Observed:

NOTES:

Wetland W-E2 includes forested portions on the eastern side of the ROW and scrub-shrub dominated areas within the cleared portion of the ROW. This wetland includes intermittent watercourse S-E3 which flows through from west to east, and intermittent watercourse feature S-E4 which drains off of a short, steep till slope. A culvert within the gravel road conveys flows within the wetland, however its location may not be adequate to fully capture flows (road may be compromised over time). Where Stream S-E3 flows across the gravel access road the gravel has been removed and the channel re-defined. Dominant vegetation within forested areas includes red maple, yellow birch, green ash and spicebush. Within scrub-shrub dominated areas, vegetation includes winterberry, highbush blueberry, speckled alder (stream banks), Spirea, and Rubus, mountain laurel, multiflora rose on the wetland fringes.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E3**

Project: CT2591350 Investigator: MED

Date: 4/9/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-E3

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope, SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Aquent	☒	☐	☐	☒
Udorthent (306)	☐	☒	☐	☒
Charlton-Chatfield complex (73)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-10

Surrounding Habitat Types: Forest, scrub-shrub, disturbed

Surficial Geology: Till

Culverts present

(Size & Type) None observed, but appears that one exists (buried) Wildlife Observed:

NOTES:

Wetland is located at edge of recently constructed gravel access road and pad. This area receives flows from an RCP located upslope and conveying road runoff. Hydric, poorly drained soils not clearly evident as profile has been disturbed. Redoximorphic features present throughout disturbed profile.

Vegetation observed: silky dogwood, pussy willow, multiflora rose- 70% and sensitive fern.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E4**

Project: CT2591350 Investigator: MED

Date: 4/10/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-E4

Dominant NWI Class ☐ PFO ☐ PSS ☒ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope, SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☒	☐	☒	☒
Woodbridge (45)	☐	☒	☒	☐
Paxton and Montauk (84)	☐	☒	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-E5

☒ Intermittent ☐ Ephemeral

Bank Height ___2-3'____ Width __2'_____ Depth at Center _< 6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation in portions

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Sustained Flow ☐ Fast

☐ Defined bank and channel

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☐ Gradual

☒ Presence of Overhanging Vegetation in portions.

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Historic man-made drainage ditches on agricultural land.
Vegetation observed: multiflora rose- 3% growing on banks.

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Maintained agricultural (hay), scrub-shrub – forest patches

Surficial Geology: Till

Culverts present ☒ ☐

(Size & Type) 24" CMP Wildlife Observed:

NOTES:

Hillside seep is part of active agricultural land. Wetland is impounded against gravel access road, drains via swale along road. Dominant species include: Speckled alder, pussy willow, silky dogwood, red maple, tussock sedge, spicebush, white meadowsweet and multiflora rose- 10%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E6**

Project: CT2591350 Investigator: MED

Date: 4/10/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-E6

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) __X__

Slope: _____

Depression: _____

Novitski Class: GW Slope

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☐ NRPW
☐ UPLAND
☐ RPWWD
☒ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge (45)	☐	☒	☐	☒
Ridgebury, Leicester, Whitham (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual
☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel
☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Mason Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, forested wetland, scrub-shrub (ROW)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Forested wetland on till dominated gently sloping land form. Drains from east to west from eastern ROW boundary. Ends at gravel access road. Dominant species include red maple, white ash and spicebush.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E7**

Project: CT2591350 Investigator: MED

Date: 4/10/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-E7

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) _X___
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☒ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk (86)	☐	☒	☒	☐
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A___

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Mason Hill/Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, scrub-shrub (ROW)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Narrow emergent wetland is impoundment against access road, drains via culvert beneath access road to a forested area to west. Dominant vegetation includes soft rush, *Spirea tomentosa*, sensitive fern, silky dogwood, wild raisin and winterberry.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E8**

Project: CT2591350 Investigator: MED

Date: 4/10/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Thomaston, CT – Litchfield County

Wetland # & Flag Series: W-E8

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☐ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X__

Slope: _____

Depression: _____

Novitski Class: GW Slope

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk (86)	☐	☒	☒	☐
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: __N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forest, scrub-shrub (in ROW clearing)

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland W-E8 is a hillside seep and has been subject to historic disturbance activities, drains west and is impounded against access road. Dominant vegetation includes red maple, white ash, spicebush in forested areas. *Spirea*. highbush blueberry, winterberry, *Rubus*, mountain laurel, sensitive fern and cinnamon fern abundant within cleared ROW.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E9**

Project: CT2591350 Investigator: MED

Date: 4/10/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield CT – Litchfield County

Wetland # & Flag Series: W-E9

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	SW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
Paxton and Montauk (86)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-E7

☒ Intermittent ☐ Ephemeral

Bank Height __< 1'_____ Width _1' avg.____ Depth at Center _< 6"_

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Created feature – originates from culvert beneath driveway - Drains wetland E9.

WETLAND LOCATION & CROSSING

Nearest Road Crossing Hopkins Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested wetland, scrub-shrub, residential development

Surficial Geology: Till. Shallow to bedrock

Culverts present

(Size & Type) 12" CPP

Wildlife Observed: Heard wood frogs from Hopkins Rd

NOTES:

PSS in ROW clearing, dominant vegetation includes, blueberry, *Spirea*, sensitive fern, *Lonicera*, multiflora rose- 15%, *Rubus* and *Solidago*. Forested wetland includes red maple, white pine, highbush blueberry and *Cornus alternifolia*. Vernal Pool E9-1 located in this wetland (also potential vernal pool adjacent to yard area). Wetland E9 occurs on a hilltop, within shallow to bedrock surficial geology. Residence and driveway are adjacent. Vernal Pool VP-E9-1 is located adjacent to Hopkins Road. Stream S-E7 is a man-made drainage ditch conveying surface water from Wetland W-E9 beneath driveway to off ROW.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-E10**

Project: CT2591350 Investigator: MED

Date: 5/4/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: W-E10

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (MINERAL) __X__
☒ Seasonally flooded	☐	☒	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☒ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
Woodbridge (45,47)	☐	☒	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ____N/A_____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Hopkins/Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forested wetland, scrub-shrub, residential development

Surficial Geology: Till

Culverts present

(Size & Type) 6" clay

Wildlife Observed:

near pond – off ROW

NOTES:

Wetland W-E10 encompasses much of the ROW north of Hopkins Road. Historic road is present but is wetland (overgrown grade). Wetland drains north to northeast down ROW and ends abruptly at the northeast tip – no hydric soil, surface water connection to other wetlands (likely infiltrates at contact with outwash). Dominant species include, highbush blueberry, winterberry, tussock sedge, soft rush, *Spirea*, red maple, black oak and black tupelo in forested area. Hummock – hollow microtopography.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F1 – F5**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: W-F1, W-F2, W-F3, W-F4

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☒ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Paxton and Montauk fine sandy loam (84B)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F1, S-F2, S-F3

☒ Intermittent ☐ Ephemeral

Bank Height __< 6" – 3'_____Width __1' – 4'_____ Depth at Center _< 1'

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☒ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Intermittent watercourses are all interconnected via culverts

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Rural residential

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

- Wetlands and watercourses have been subject to historic disturbance associated with transmission line activities, access roads. All are interconnected via culverts
- Watercourses are flashy – consistent with observations of erosion upstream
- Wetland W-F3 is adjacent to this riparian system to the south, forming the headwaters of an associated tributary watercourse
- Spicebush, barberry, and green ash are dominant vegetation within forested portion wetland

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F6**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: W-F6

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: ___GW depression

Novitski Class: GW depression

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☐ NRPW
☐ UPLAND
☐ RPWWD
☒ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: _____N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel
☐ Evidence of scour or deposits of recent alluvium or detritus
☐ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual
☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel
☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Route 8 to the north (or) Campville Road to the south

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Small topographic depression with ash, spicebush, winterberry and moss covered stones. Wetland hydrology due to groundwater discharge from Wetland W-F7 to the west.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F7**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: W-F7

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☒ PFO	☐ PSS	☒ PEM	☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☐	☒	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☒	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☐	☒	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW
☒ NRPW (SF4)	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Woodbridge fine sandy loam (45C)	☐	☒	☒	☐
Woodbridge fine sandy loam (47C)	☐	☒	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F4

☐ Intermittent ☒ Ephemeral

Bank Height ___< 6”__ Width __1-2 feet Depth at Center _< 6”

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☒ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual sparse (spicebush)

☐ Presence of Overhanging Vegetation sparse (spicebush)

Substrate:

☐ Muck ☒ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES: Flows from man-made pond easterly off of maintained ROW

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Predominantly forested

Surficial Geology: Till

Culverts present

(Size & Type) Wildlife Observed:

NOTES:

Wetland complex with PSS and PEM dominant (ROW cut), POW (man-made pond), PFO (to east). Representative vegetation includes common reed, spicebush, winterberry, multiflora rose. Common sensitive fern and various goldenrods. Wetland drains easterly. Widespread groundwater seeps at wetland boundary, west side of ROW.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F8**

Project: CT2591350 Investigator: MED

Date: 4/13/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Litchfield, CT – Litchfield County

Wetland # & Flag Series: W-F8

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: GW Slope
☒ Seasonally saturated	☐	☐	Depression: _____
☐ Saturated	☐	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☐ TNW	☐ RPWWD
☐ TNWW	☐ RPWWN
☐ RPW	☒ NRPWW (Wetland F8)
☒ NRPW (SF5)	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F5

☒ Intermittent ☐ Ephemeral

Bank Height < 6” Width < 1’ Depth at Center < 6”

☒ Defined bank and channel (see notes)

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☒ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): Large winterberry shrubs

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):5-10

Surrounding Habitat Types: Forested (typ). Route 8 immediately to North

Surficial Geology: Till

Culverts present

(Size & Type) Crossings required to access structure 3169 Wildlife Observed:

NOTES:

Wetland is heavily disturbed. PSS/PEM with tall shrubs (e.g., *Ilex verticillata, Viburnum cassinoides*) dominant. Also goldenrods, dewberry, sensitive fern, and *Rubus spp*. Stream flows intermittently in a poorly defined channel to a created channel along crest of roadway cut for Route 8.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F9**

Project: CT2591350 Investigator: MED

Date: 4/22/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F9

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☒ Permanently flooded	☒	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE R2UB
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☐ Seasonally saturated	☐	☐	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☒ Intermittently flooded	☐	☒	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:	
☒ TNW	☐ RPWWD
☒ TNWW	☐ RPWWN
☐ RPW	☐ NRPWW
☐ NRPW	☐ ISOLATE
	☐ UPLAND

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Suncook loamy fine sand (100)	☒	☐	☒	☒
Charlton-Chatfield complex (73E)	☒	☒	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F7

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height ~13’ Width 50-100’ Depth at Center unk

Est. Riffle/Pool Ratio: 40:60 Flow Rate ☐ Slow ☒ Moderate ☐ Fast

☒ Defined bank and channel

☒ Sustained Flow

☒ Hydrophytic Vegetation

☐ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☒ Sand ☐ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe): major riverine habitat

NOTES: Naugatuck River; Riverine, Lower Perennial, Unconsolidated bottom: cobble-gravel R2UB1, sand R2UB2

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Campville Bridge to North/West

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Predominantly forestland, some light industry (M. Bart Sand & Gravel Corp.)

Surficial Geology: Alluvial – major floodplain

Culverts present

(Size & Type) culverted at Valley Road (S-F8)

Wildlife Observed: Osprey, Common merganser

NOTES:

- Riverine R2UB1/2 system, major floodplain
- Stream flagging delineates ordinary high water mark (scour zone, typ.)
- Bank top & levee edge about 13 feet higher (gradual to nearly vertical embankment)
- Floodplain vegetation (south side) includes red maple, oaks, shagbark hickory, white pine, black cherry, bigtooth aspen, Morrow's honeysuckle 80% cover, white meadowsweet, spicebush, highbush blueberry, shadblow serviceberry
- Edge of wetland = alluvium contact with colluvium from hill slope on south side – this hill with 30% - 45% slopes
- Upper scour zone vegetation (north side) including hardhack, grey birch, and *Polygonum cuspidatum* (the latter is common on sandy sediments)
- Watercourse S-F8 flows into River from a culvert under Valley Road

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F10**

Project: CT2591350 Investigator: MED

Date: 4/22/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F10

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIVERINE/RIPARIAN ____
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: SW Depression
☐ Saturated	☐	☐	
☒ Temporarily flooded	☒	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☐ RPW
☒ NRPW (SF9)
☐ UPLAND
☐ RPWWD
☐ RPWWN
☒ NRPWW (Wetland F10)
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield complex (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F9

☐ Intermittent ☒ Ephemeral

Bank Height __< 4”__ Width __~ 1’__ Depth at Center _<4”

☒ Defined bank and channel
☒ Evidence of scour or deposits of recent alluvium or detritus
☒ Standing or flowing water for duration longer than a storm event
☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel
☐ Sustained Flow
☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual
☐ Presence of Overhanging Vegetation (no)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel
☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: < 0.5 cfs (seasonal)

Habitat Features (Describe): Originates at small depression, flows to culvert under Valley Road.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Rural residential (east); Woodland

Surficial Geology: Ablation till, colluvium

Culverts present

(Size & Type) 18" square, stone box culvert at road

Wildlife Observed: 5/7/09 – Baltimore oriole, blue-winged warbler, black and white warbler, black-throated green warbler, white-breasted nuthatch, chestnut-sided warbler, American redstart, eastern towhee

NOTES:

- Leaf litter substrate with a few emergent ash (*Fraxinus [pensylvanicus]*), red maple, American elm and adjacent sugar maple trees
- Shrub layer is sparse to non-existent in the immediate area. Trees bordering watercourse include white oak, elm, hemlock, shagbark hickory, and sugar maple
- Seasonal hydrology from storm flowage channel from east. Runoff collects in this wetland then flows out through stream channel S-F9
- Wood frog eggs present in VP-F10-1

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F11**

Project: CT2591350 Investigator: MED

Date: 4/22/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F11

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☒ PFO ☐ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☐ Seasonally flooded	☐	☐	Slope: _____X_____
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW
☐ TNWW
☒ RPW
☐ NRPW
☐ UPLAND
☒ RPWWD
☐ RPWWN
☐ NRPWW
☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Canton and Charlton (62D)	☐	☐	☒	☐
Udorthents, smoothed (308)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F10

☐ Intermittent ☐ Ephemeral

Bank Height ___ Width ____ Depth at Center: ____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☒ Perennial

Bank Height 12-16” Width 6-9’ Depth at Center < 12”

Est. Riffle/Pool Ratio: 1:1 Flow Rate ☐ Slow

☒ Defined bank and channel ☐ Moderate

☒ Sustained Flow ☒ Fast

☐ Hydrophytic Vegetation

☒ Riffles ☒ Runs ☒ Glides ☒ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):good diversity of stream substrates

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 10+

Surrounding Habitat Types: Forestland (hemlock); some residential

Surficial Geology: Bedrock controlled

Culverts present

(Size & Type) CMP 18" (washed out)

Wildlife Observed: bat (species unknown); deer & rabbit (sign), goldfinch, chickadee

NOTES:

- Wetland plant community in seepage area with hemlock, maleberry, cinnamon fern, sensitive fern, steeplebush, spicebush, yellow birch, witch hazel, *Dryopteris intermedia*, Christmas fern, etc.
- Upper part of this wetland is a hemlock ravine community with co-dom white pine, yellow birch, ash. Occasionally with tall shrub to sapling hemlock under sugar maple.
- Invasive plant species % cover: Morrow's honeysuckle 20%, multiflora rose 10%, Japanese berberis 8%.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F12**

Project: 23091543 Investigator: SAR

Date: 6/4/15 Weather: Partly Cloudy, 66º

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: WF12/F12-01 to 15

Dominant NWI Class ☐ PFO ☒ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☐ PSS ☒ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☒ Temporarily flooded	☐	☒
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: ___X_____

Novitski Class: GW Depression

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☒ NRPW

☐ UPLAND ☐ RPWWD ☐ RPWWN ☒ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield (73C)	☐	☐	☒	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F11

☒ Intermittent ☐ Ephemeral

Bank Height __1-2'___ Width __2-4'__ Depth at Center ___<1'____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Valley Road (south and west)

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forestland

Surficial Geology: Colluvium – steep slope to north

Culverts present

(Size & Type)

Wildlife Observed: chickadee

NOTES:

- Historic access road crosses wetland at narrow point
- Representative wetland vegetation includes spicebush, maleberry, red maple, yellow birch, cinnamon fern, woodfern (*Dryopteris* sp.), hardhack, and steeplebush. Various goldenrods (e.g, *Solidago* spp., *Euthamia* sp.) throughout.
- Lower portion of this wetland (PSS, saturated) is a shallow topographic basin with *Sphagnum* sp. moss, woodfern, cinnamon fern, winterberry, silky dogwood, and occasional spicebush.
- Upper portion of this wetland with a small area of emergent wetland (PEM, saturated to seasonally saturated) exhibiting *Sphagnum* sp. moss, sensitive fern, swamp dewberry. Perimeter shrubs in this area include maleberry, hardhack, and occasional shrub honeysuckle and multiflora rose.
- Area with sensitive fern to northwest of wetland flags 11 and 12 - subsoil exhibits chroma 3 matrix

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F13**

Project: CT2591350 Investigator: MED

Date: 4/20/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F13

Dominant NWI Class	☐ PFO	☐ PSS	☒ PEM	☐ POW
Other NWI Classes	☒ PFO	☒ PSS	☐ PEM	☒ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG) __X__
☒ Seasonally flooded	☐	☒	Slope: _____
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☐ Temporarily flooded	☐	☐	
☐ Intermittently flooded	☐	☐	Novitski Class: GW Depression
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

- ☐ TNW
- ☐ TNWW
- ☒ RPW (SF12)
- ☒ NRPW (SF13)
- ☐ UPLAND
- ☒ RPWWD (Wetland F15)
- ☐ RPWWN
- ☐ NRPWW
- ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester Whitman (3)	☒	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F12

☒ Intermittent ☐ Ephemeral

Bank Height _____ Width __4 – 8'__ Depth at Center _____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:0.5 – 1 cfs

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope):

Surrounding Habitat Types: Rural residential and small farm

Surficial Geology:

Culverts present

(Size & Type) 24" CMP; 30" Conc. Box Culvert

Wildlife Observed: phoebe, spring peeper, cottontail, cardinal

NOTES:

- PFO with A. rubrum and spicebush dom. Occas. winterberry to comm.. Sphagnum, skunk cabbage, irregular topography due to boulders (most moss covered)
  - = Seasonally flooded in part
  - = PEM dom. = *Carex stricta,* skunk cabbage, arrow leaved tearthumb, sphagnum hummocks, hardhack, occas. cattail. Some OW area
  - = PSS with winterberry, alder, fox grape, highbush blueberry, speckled alder, multiflora rose (30% cover)
  - = Seasonally saturated PSS w/ winterberry and highbush blueberry dominant. Also maleberry, hardhack, cinnamon fern and occasional alder and pussy willow.
- Excellent structural diversity throughout wetland and good interspersion
- Includes seep near structure 3232 that drains to S-F12

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F14**

Project: CT2591350 Investigator: MED

Date: 4/20/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F14

Dominant NWI Class	☐ PFO	☒ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☐ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☒ Seasonally flooded	☐	☒
☒ Seasonally saturated	☒	☐
☒ Saturated	☐	☒
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (ORG/MINERAL) ____

Slope: _____

Depression: ___GW_____

Novitski Class: GW Depression

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☐ RPWWD
☐ RPW	☐ RPWWN
☐ NRPW	☒ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Ridgebury, Leicester, Whitman (3)	☐	☐	☒	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: ___N/A____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center ___

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Forestland (west); rural residential (east) and north

Surficial Geology: Till plain atop drumloidal ridge

Culverts present

(Size & Type)

Wildlife Observed: chickadee, blue jay, red bellied woodpecker, woodpecker, crow, Cardinal

NOTES:

- Wetland includes VP-F14-1
- Access road across wetland separates out small fragmented wetland area that was once contiguous
- Winterberry and *V. corymb.* = dominant shrubs – Meadowsweet, pussy willow, silky dogwood, pussy willow, steeple bush.
- Sphagnum moss, tussock sedge (occas.) cattail (few) and skunk cabbage.

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-F15**

Project: CT2591350 Investigator: MED

Date: 4/21/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-F15

Dominant NWI Class	☒ PFO	☐ PSS	☐ PEM	☐ POW
Other NWI Classes	☐ PFO	☒ PSS	☒ PEM	☐ POW

WATER REGIME	PRIM.	SEC.	HGM Values
☐ Permanently flooded	☐	☐	FRINGE (Lacust./Est) _____
☐ Intermittently exposed	☐	☐	RIPARIAN __X___
☐ Semi-permanently flooded	☐	☐	FLATS (ORG/MINERAL) ____
☒ Seasonally flooded	☐	☒	Slope: _____~ F20_____
☒ Seasonally saturated	☐	☒	Depression: _____
☒ Saturated	☒	☐	
☒ Temporarily flooded	☐	☒	
☐ Intermittently flooded	☐	☐	Novitski Class: SW Slope/GW Slope
☐ Artificially flooded	☐	☐	

USACE WATERS TYPES:

☐ TNW	☐ UPLAND
☐ TNWW	☒ RPWWD
☒ RPW	☐ RPWWN
☐ NRPW	☐ NRPWW
	☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Charlton-Chatfield (73E)	☐	☐	☒	☐
15-45% slopes	☐	☐	☐	☒
very rocky	☐	☐	☐	☒
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-F13

☒ Intermittent ☐ Ephemeral

Bank Height 6-12" Width 4-8' Depth at Center ~8"

☒ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (minimal)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☒ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate: 3-5 cfs

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series __S-F14_

☒ Intermittent ☐ Ephemeral

Bank Height ____6-10" Width __3-5 ft__ Depth at Center __~6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides (lower) ☐ Pools

Channel Geometry:

☐ Linear ☒ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☒ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

- flows from an 18-inch RCP at Wildcat Hill Road.
- ends in a tussock sedge/alder marsh with diffuse flow.

RIVER/STREAM DATA Stream # and Flag series _____

☐ Intermittent ☐ Ephemeral

Bank Height _____ Width _____ Depth at Center _____

☐ Defined bank and channel

☐ Evidence of scour or deposits of recent alluvium or detritus

☐ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☐ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☐ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☐ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing Access from the north along ROW

Wetland Topography (%slope): 5-10

Surrounding Topography (%slope): 5-10

Surrounding Habitat Types: Forested

Surficial Geology: Till ridge with bedrock outcropping

Culverts present

(Size & Type) 24" CMP (collapsed) at ROW Wildlife Observed:

NOTES:

- Wetland includes Vernal Pool VP-F15-1
- PEM in power line cut. *Sparganium* and tussock sedge with a fringe of mountain laurel
- Existing ROW access road through wetland, culvert is partially collapsed but conveys stream still

ROUTINE WETLAND DELINEATION-DATA FORM **Wetland: W-G1**

Project: CT2591350 Investigator: MED

Date: 4/17/15 Rev 6-7/2020 Weather: Variable

State/Town/County: Harwinton, CT – Litchfield County

Wetland # & Flag Series: W-G1

Dominant NWI Class ☒ PFO ☐ PSS ☐ PEM ☐ POW

Other NWI Classes ☐ PFO ☒ PSS ☐ PEM ☐ POW

WATER REGIME	PRIM.	SEC.
☐ Permanently flooded	☐	☐
☐ Intermittently exposed	☐	☐
☐ Semi-permanently flooded	☐	☐
☐ Seasonally flooded	☐	☐
☒ Seasonally saturated	☒	☐
☐ Saturated	☐	☐
☐ Temporarily flooded	☐	☐
☐ Intermittently flooded	☐	☐
☐ Artificially flooded	☐	☐

HGM Values

FRINGE (Lacust./Est) _____

RIVERINE/RIPARIAN ____

FLATS (MINERAL) _X___

Slope: _____

Depression: _____

Novitski Class: GW Slope/SW Slope

USACE WATERS TYPES:

☐ TNW ☐ TNWW ☐ RPW ☐ NRPW

☐ UPLAND ☐ RPWWD ☒ RPWWN ☐ NRPWW ☐ ISOLATE

NOTES:

MAPPED SOIL TYPES

Soil Series (Map Unit Symbol)	Wet	UP	NRCS Mapped	Field IDD/ Confirmed
Sutton (52)	☐	☒	☒	☒
Canton & Charlton (62)	☐	☒	☒	☒
Ridgebury, Leicester, Whitman (3)	☒	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐

RIVER/STREAM DATA Stream # and Flag series: S-G1

☒ Intermittent ☐ Ephemeral

Bank Height __< 1' avg.__ Width __2' avg.__ Depth at Center __< 6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☐ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow ☐ Moderate ☐ Fast

☐ Defined bank and channel

☐ Sustained Flow

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Habitat Features (Describe):

NOTES:S-G1 originates from stormwater outfall, S-G2 is narrow intermittent surface-water connection, S-G3 is roadside swale

RIVER/STREAM DATA Stream # and Flag series __S-G2_

☒ Intermittent ☐ Ephemeral

Bank Height ____6-10" Width __2-3 ft__ Depth at Center __~6"__

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☒ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☒ Glides (lower) ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation (abundant)

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☒ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):

NOTES:

RIVER/STREAM DATA Stream # and Flag series ____S-G3_____

☒ Intermittent ☐ Ephemeral

Bank Height ____<1'_____Width _____3-5'_____Depth at Center __6"____

☒ Defined bank and channel

☒ Evidence of scour or deposits of recent alluvium or detritus

☒ Standing or flowing water for duration longer than a storm event

☒ Hydrophytic vegetation

☐ Perennial

Bank Height _____ Width _____ Depth at Center _____

Est. Riffle/Pool Ratio: _____ Flow Rate ☐ Slow

☐ Defined bank and channel ☐ Moderate

☐ Sustained Flow ☐ Fast

☐ Hydrophytic Vegetation

☐ Riffles ☐ Runs ☐ Glides ☐ Pools

Channel Geometry:

☒ Linear ☐ Meandering ☐ Braided ☐ Diffuse

Bank Morphology:

☐ Undercut ☐ Vertical ☒ Gradual

☐ Presence of Overhanging Vegetation

Substrate:

☐ Muck ☐ Mud ☐ Sand ☒ Sand & Gravel

☐ Cobbles ☐ Boulders ☐ Artificial ☐ Vegetated

Estimated Flow Rate:

Habitat Features (Describe):.

NOTES:

WETLAND LOCATION & CROSSING

Nearest Road Crossing: Wildcat Hill Road

Wetland Topography (%slope): 0-5

Surrounding Topography (%slope): 0-5

Surrounding Habitat Types: Upland hardwood forest, abandoned agricultural, scrub-shrub

Surficial Geology: Till

Culverts present

(Size & Type) (2)6" clay

Wildlife Observed:

NOTES:

Hillside seep, originates within ROW clearing, where soil disturbance is evident. Wetland originally crossed ROW but historic fill materials obstruct connection. Drains southeast off ROW. Dominant vegetation includes white ash, red maple, sugar maple, yellow birch, slippery elm, spicebush, winterberry, cinnamon fern and trout lily.

Invasive vegetation species found within the cleared section of the ROW include: Japanese knotweed- 40%, autumn olive- 30% and *Lonicera*- 100%.

Attachment E: Vernal Pool Survey

DAVISON ENVIRONMENTAL

Biodiversity Studies • Wetland Delineation & Assessment • Habitat Management • GIS Mapping • Permitting • Forestry

Vernal Pool Survey and Protection Measures

August 25, 2020 **DE Project No.: 2020-28**

Prepared For:	Eversource Energy 56 Prospect Street Hartford, CT 06103 Attn: Mark Pappalardo
Eversource Project Name:	1191 Line Rebuild Project
Project Location:	Watertown, Thomaston, Litchfield, and Harwinton, Connecticut
Date(s) of Investigations:	April - June, 2015 and April - June, 2020
Survey Methodology:	Visual and Audial Survey, and Dip Netting[1]

The vernal pool survey was performed by:

Davison Environmental, LLC

Eric Davison
Wildlife Biologist
Professional Soil Scientist
Professional Wetland Scientist

Matthew Davison
Professional Soil Scientist
Professional Wetland Scientist
Certified Forester

[1] Visual and audial surveys, and dip netting surveys were conducted by Davison Environmental in spring 2015. In spring 2020, Davison Environmental reviewed previously identified vernal pools to confirm that adequate hydrology and hydroperiod were still present.

INTRODUCTION

The following vernal pool assessment details vernal pool investigations conducted by Davison Environmental, LLC ("DE") in support of The Connecticut Light and Power Company doing business as Eversource Energy's ("Eversource") 1191 Line Rebuild Project within an existing transmission line right-of-way ("ROW") in Watertown, Thomaston, Litchfield, and Harwinton, Connecticut ("Project"). This report contains information that was developed by DE in support of Eversource's Frost Bridge to Campville Project which was constructed within the same ROW corridor from 2016 to 2018. This information has been updated based on field investigations conducted in 2020, and Project specific work areas that differ from the Frost Bridge to Campville Project.

VERNAL POOL DEFINITION

Several vernal pool definitions have been developed by both regulatory authorities and conservation organizations. The Connecticut Department of Energy and Environmental Protection (CT DEEP) generally describes vernal pools on its website but cautions that the data provided is informational in nature and should not supplant regulations of municipal inland wetlands agencies. CT DEEP describes vernal pools as *"small bodies of standing fresh water found throughout the spring*" that are "*usually temporary"* and "*result from various combinations of snowmelt, precipitation and high water tables associated with the spring season*".

Calhoun and Klemens (2002) *Best development practices: Conserving pool-breeding amphibians in residential and commercial developments in the northeastern United States* (BDP Manual) provides the following operational definition of vernal pools:

Vernal pools are seasonal bodies of water that attain maximum depths in the spring or fall, and lack permanent surface water connections with other wetlands or water bodies. Pools fill with snowmelt or runoff in the spring, although some may be fed primarily by groundwater sources. The duration of surface flooding, known as hydroperiod, varies depending upon the pool and the year; vernal pool hydroperiods range along a continuum from less than 30 days to more than one year. Pools are generally small in size (<2 acres), with the extent of vegetation varying widely. They lack established fish populations, usually as a result of periodic drying, and support communities dominated by animals adapted to living in temporary, fishless pools. In the region, they provide essential breeding habitat for one or more wildlife species including Ambystomid salamanders (Ambystoma spp., called "mole salamanders" because they live in burrows), wood frogs (Rana sylvatica), and fairy shrimp (Eubranchipus spp.).

Vernal pool physical characteristics can vary widely while still providing habitat for indicator species. "Classic" vernal pools are natural depressions in a wooded upland with no permanent hydrologic connection to other wetland systems. Anthropogenic depressions such as quarry holes, old farm ponds and borrow pits can also provide similar habitat. Often, vernal pools are depressions or impoundments embedded within larger wetland systems. These vernal pool habitats are commonly referred to as "cryptic" vernal pools.

Several species of amphibians depend on vernal pools for reproduction and development. These species are referred to as indicator[2] vernal pool species, and their presence in a temporary wetland during the breeding season helps to identify that area as a vernal pool. Indicator species present in Connecticut include the following:

- Blue-spotted salamander *(Ambystoma laterale)*;
- Wood frog *(Rana sylvatica)*;
- Spotted salamander *(Ambystoma maculatum)*;
- Jefferson salamander *(Ambystoma jeffersonianum)*;
- Marbled salamander *(Ambystoma opacum)*; and
- Fairy shrimp *(Branchiopoda anostraca)*.

Facultative vernal pool species are fauna that utilize but do not necessarily require vernal pools for reproductive success. Examples of facultative species include spotted turtles *(Clemmys guttata)* and four-toed salamander *(Hemidactylium scutatum)*. These species may breed or feed in vernal pools but are also capable of carrying out all phases of their lifecycle in other types of wetlands or water bodies. Evidence of breeding by facultative species alone is not considered indicative of the presence of a vernal pool.

For the purpose of this report, a vernal pool is defined as an area that meets the physical characteristics described above and contains evidence of breeding activity of any of the indicator species listed above, including the presence of egg masses and larvae. This vernal pool assessment also makes an important distinction between wetlands in which indicator species may breed and those wetlands where they breed and successfully develop.

A common phenomenon is for breeding (i.e., mating and egg laying) to occur in bodies of water such as road ruts or temporary puddles where development and metamorphosis of larvae is unsuccessful. Such areas are referred to as "decoy vernal pools" as reproductive efforts are unsuccessful in these areas. In the BDP Manual, Calhoun and Klemens specifically note the negative impact associated with ruts:

"Site clearing can cause water-filled ruts. These ruts intercept amphibians moving toward the vernal pool and may induce egg deposition. Often these ruts do not hold water long enough to allow development of amphibians and therefore acts as "sinks" that result in populations declines".

In addition to road rutting, other anthropogenic activities can create decoy vernal pools, including road crossings that create temporary pools often resulting from undersized or elevated culverts. Unlike "classic" or "cryptic" vernal pools, these areas often suffer recurring disturbance and generally contain little vegetation to which egg masses can be attached. Small numbers of vernal pool obligate species such as wood frog and spotted salamander may breed in these ephemeral pools, though larval survivorship is expected to be low.

[2] Calhoun and Klemens (2002) argue that "indicator" species is a better word than the commonly used "obligate" species, as they will occasionally breed in roadside ditches and small ponds that are not vernal pools.

VERNAL POOL SURVEY

On April 13, 18, 19, 24, 29, May 2 and May 9, 2015, biologist Eric Davison of Davison Environmental, LLC conducted field surveys of the wetlands within the Project area in order to identify vernal pools. Field surveys were conducted to identify both species richness and abundance of indicator species. Survey methods used included visual surveys to identify adults, larvae and egg masses, audial surveys to record breeding choruses and dip-net surveys to identify amphibian larvae. Vernal pools were re-inspected in April, May and June 2020 to confirm that hydrology and hydroperiod remained adequate to support breeding and development. Vernal pools were not dip-netted again, as the data collected in 2015 was deemed suitable for use on the Project.

Field surveys conducted in 2015 began in April, shortly after vernal pool amphibians had emerged from hibernation and were beginning breeding activity. During this period, chorusing wood frogs and spring peepers were heard, spotted salamander spermataphore (a protein capsule containing a mass of spermatozoa) were observed, and adult amphibians were observed in amplexus (the mating position of frogs and toads in which the male clasps the female about the back). A number of pools remained iced covered during early April, particularly those pools that were deeply shaded. At some pools, adult wood frogs were observed hopping across iced covered portions of the pools in search of open water. Surveys continued throughout April and into early May as temperatures began to warm. Multiple visits to each pool were conducted to document breeding productivity via egg mass counts. This was done on sunny days where visual detection of egg masses is optimized. A fine-mesh dipnet was used throughout the survey period to search for larval amphibians and cover searching (turning of rocks, logs and debris) around the margins of the pools was conducted to search for adult amphibians.

To assess these pools qualitatively, the methodology described in the BDP Manual was used. This assessment methodology utilizes a three-tiered rating system, with the tier designation determined by examining the biological value of the pool in conjunction with the condition of the habitat surrounding the pool, which is the area used by vernal pool amphibians during the non-breeding season. The higher the species diversity and abundance coupled with an undeveloped and forested landscape surrounding the pool, the higher the tier rating. Tier 1 pools are considered the highest quality pools, while Tier 3 are the lowest. Analysis of the landscape condition within 750 feet of the pools is required to complete the full BDP analysis, and this was not conducted as it was beyond the scope of this assessment. For this assessment, the potential tier rating was assessed based on the biological value of each pool which considers both species richness and species abundance. Per the BDP Manual, Tier 1 and 2 pools are those pools that meet at least one of the following biological criteria:

1. The presence of a breeding state-listed species;

2. Two or more indicator species breeding; or

3. 25 or more egg masses of a vernal pool indicator species.

A pools tier rating is based on which of the above biological criteria are met coupled with an analysis of the level of development within two landscape management zones surrounding the pools, the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier 1 Pool must meet one of the above biological criteria and have at least 75% undeveloped land within the Vernal Pool Envelope (VPE, 0-100 feet from the pool) and at least 50% undeveloped land within the Critical Terrestrial Habitat (CTH, 100-750 feet from the pool).

A Tier 2 pool must meet one of the above biological criteria along with one of the landscape criteria, either 75% undeveloped land within the VPE or 50% undeveloped land within the CTH.

A Tier 3 pool is a pool that either has high biological value coupled with a high percentage of developed land within the VPE and CTH or low biological value coupled with one of the landscape criteria being met (either 75% undeveloped land within the VPE or 50% undeveloped land within the CTH). Typical, Tier 3 pools exhibit low species diversity and abundance.

RESULTS

Eighteen vernal pools were identified within the Project area (see Table 1). Fifteen of these pools (83%) are potential Tier 1 pools due to the fact that they had significant numbers of egg masses (i.e., >25) or they had two or more indicator species breeding. Three vernal pool indicator species were observed breeding in the Project area, wood frog, spotted salamander, and marbled salamander.

Brief descriptions of the vernal pools observed in each transmission line segment are provided below. Note that an effort is made to distinguish between low value pools and high value pools.

Frost Bridge Substation to Purgatory Junction

Four vernal pools were identified in this section. North of Echo Lake Road in Watertown within Mattatuck State Forest lie pools VP-MSF-1 and VP-MSF-2. These pools lie adjacent to an off-ROW access road from Echo Lake Road into the Project ROW. Pool VP-MSF-1 is a classic vernal pool that lies within a heavily forested landscape protected by Mattatuck State Forest. The pool contained robust populations of wood frog and the largest number of spotted salamander egg masses within the study area (108 masses). VP-MSF-2 is a very small classic pool also located along this existing access road. The pool contained very low numbers of both wood frog and spotted salamander (1 egg mass and two egg masses, respectively). Furthermore, the pool is shallow in depth and was completely dry when surveyed on May 9th. Although this pool can technically meet the criteria of a Tier 1 pool due to the presence of two indicator species, the low population levels and marginal hydrology make this a pool of low significance.

Pools VP-B2-1 and VP-B4-1 lie in close proximity to one another west of Park Road in Watertown. These pools are cryptic pools. Pool VP-B2-1 is a small depression within the maintained ROW, and appears to be a prior excavation. Pool VP-B4-1 is wooded but lies at the edge of the maintained ROW. Its hydrology appears to have been enhanced by the ROW maintenance road which has increased the hydroperiod by impounding water.

Purgatory Junction to Walnut Hill Junction

Eight vernal pools were identified in this section. Several notable classic vernal pools occur in the irregular bedrock-controlled topography typical for this section of the ROW. Of particular note is VP-C21-1, a very productive vernal pool situated in rugged terrain and shaded by a hemlock overstory in Black Rock State Park. This pool contained the largest number of wood frog egg masses in the Project area (293 masses). VP-D4 1, located on land of the Thomaston Fish and Game Club, had several large rafts of wood frog egg masses (totaling 292 masses) and contained larval marbled salamander.

Other notable pools that contained large numbers of both wood frog and spotted salamander include VP-C12-1, VP-C15-1 and VP-D15-1. All pools met the biological criteria of Tier 1 pools. While Pools VP-C12-1 and VP-C15-1 appear to be natural pools, their hydroperiod appears to have been enhanced a result of the water impounding behind the road embankment.

This ROW section also included several low-value vernal pools. Pools C20-1 has hydrologically altered as a result of impounded water from the maintenance road and contained only a small number of egg masses from single indicator species, the wood frog.

Walnut Hill Junction to Campville Substation

This section contained six vernal pools. Notable pools include VP-F14-1 which contained modest numbers of wood frog and spotted salamander egg masses (50 and 15, respectively) and VP-F15-1 which contained a spotted turtle (Clemmys guttata). The spotted turtle is an uncommon facultative vernal pool species which is currently being considered for special concern listing status under the Connecticut Endangered Species Act. VP-E9-1 is a cryptic vernal pool located immediately adjacent to Hopkins Road in Litchfield and only hosted wood frog egg masses (total less than 25), so it was assigned a Tier 3 rating. Vernal Pool VP-F9-1 which is a small borrow pit within the Naugatuck River floodplain

Decoy Vernal Pools

Four vernal pools that were identified as a part of the Frost Bridge to Campville Project were considered decoy vernal pools. All of these pools were associated with on-ROW access road activities that created small ponded areas associated with rutting, culvert inlets (i.e., backwater pool) or culvert outlets (i.e. scour pool). All four of these pools were embedded within larger wetlands. These wetlands in their adjacent undisturbed condition all had a seasonally-saturated (as opposed to seasonally-flooded) hydrology. Therefore, is presumed that these areas were not functioning vernal pools prior to road development. These breeding sites were all areas of enhanced hydroperiod resulting from the above-noted anthropogenic activities.

These decoy pools were removed following the construction of the Frost Bridge to Campville Project, at the request of the Connecticut Siting Council (Docket No. 466). Removal was generally accomplished by installing new road drainage structures, or cleaning existing structures (i.e., culverts) that promoted positive drainage, thereby eliminating the impoundment that provided vernal pool habitat. DE confirmed in spring 2020 that the hydrology in these areas was no longer supportive of vernal pool species.

Additional Species Observed

Other amphibian and reptile species observed within or adjacent to vernal pools include garter snake *(Thamnophis sirtalis)*, spring peeper *(Pseudacris crucifer)*, gray treefrog *(Hyla versicolor)*, bullfrog *(Lithobates catesbeiana)*, green frog *(Lithobates clamitans)*, two-lined salamander *(Eurycea bislineata)*, dusky salamander *(Desmognathus fuscus)*, redback salamander *(Plethodon cinereus)*, red-spotted newt *(Notopthalmus viridescens)*, painted turtle *(Chrysemys picta)* and spotted turtle.

Table 1: 1191 Line Rebuild Project Vernal Pool Summary Table

Pool	Egg Mass Totals		Other Indicator or Facultative species Observed	Highest Potential Tier Status (based on biological value only)	Cover Type	Pool Type	Petition Mapsheet No.
	Wood Frog	Spotted Salamander					
VP-MSF-1	50	108	--	1	PFO	CL	2
VP-MSF-2	1	2	--	1	PFO	CL	2
VP-B2-1	12	0	--	3	PEM	CR	4
VP-B4-1	1	2	--	1	PSS/PFO	CR(A)	4
VP-C10-1	2	0	--	3	PFO	CL	7
VP-C12-1	75	45	--	1	PSS/PFO	CR(A)	7
VP-C15-1	152	28	--	1	PSS	CR(A)	8
VP-C20-1	6	0	--	3	PEM	CR(A)	8
VP-C21-1	293	41	--	1	PFO	CL	9
VP-D4-1	292	23	Marbled Salamander	1	PFO	CR	11
VP-D5-1	4	0	--	3	PEM/PSS	CL	11
VP-D15-1	246	27	--	1	PFO	CL	12
VP-D12-1	33	0	--	1	PEM/PSS	CR(HEX)	13
VP-E9-1	24	0	--	3	PFO	CR	15
VP-F9-1	7	10	--	1	PEM	CR(HEX)	17
VP-F10-1	1	2	--	1	PFO	CR	17
VP-F14-1	50	15	--	1	PSS/PFO	CR	19
VP-F15-1	14	6	Spotted Turtle	1	PSS/PEM	CR(HEX)	19

LEGEND
Tier status as defined by Calhoun and Klemens (2002): The table indicates those pools that had either 25 or more egg masses and/or two or more indicator species present as potential Tier 1 pools. Depending on the landscape condition surrounding these pools, the Tier status could be 1, 2 or 3. The landscape analysis was not performed as part of this assessment. Tier 3 pools are those pools that did not meet any of the biological criteria as discussed in Section 4.0.

Cover Type
PFO – palustrine forested wetland (a.k.a. wooded swamp)
PSS – palustrine scrub-shrub wetland (a.k.a. shrub swamp)
PEM – palustrine emergent wetland (a.k.a. marsh)

Pool Type
CR – cryptic; CL – classic; CR(A) – cryptic with hydroperiod modified by access road; CL(A) – classic with hydroperiod modified by access road; CL(HEX) – classic, historically excavated; CR(HEX) – cryptic, historically excavated

POTENTIAL PROJECT IMPACTS TO VERNAL POOLS AND PROTECTION MEASURES

Based on the proximity of vernal pools to the proposed work, potential impacts to vernal pools may occur during construction. The principal construction activities that could impact vernal pools include:

1. The construction of new, or improvement of existing access roads through vernal pool envelopes (within 100' of vernal pool);

2. The movement of vehicles and equipment through amphibian migratory routes;

3. The potential for erosion and sedimentation into vernal pools;

4. The destruction of fossorial habitat through soil compaction and grading; and

5. The placement of structures or use of equipment within pools that could directly impact egg deposition areas or negatively affect the hydrologic regime of the pool.

Protection Measures

Based on the Project activities proposed in proximity to vernal pools, the following measures are proposed to avoid or minimize impacts on vernal pools during construction:

A. Avoidance and/or minimization of construction activities in vernal pools where feasible;

B. Work in vernal pool VP-B2-1 should be conducted between July and March, outside of the high sensitivity period for spring (e.g., spotted salamander and wood frog) vernal pool indicator species. High sensitivity periods include the migration/breeding period and the metamorph emergence/early dispersal periods;

C. Work pads near vernal pools should be minimized to the greatest extent practicable. Matting should be limited to previously disturbed areas within the maintained ROW;

D. Permanent alteration of habitat should be avoided within vernal pool envelopes. Temporary matting should be utilized for access roads and work pads;

E. If possible, no tree clearing should occur within vernal pool envelopes;

F. Removal of shrub cover associated with work pad and access road construction within 25' of vernal pools should be minimized to the extent practicable. Cut woody debris (slash) should be left in place to provide amphibian cover and promote the development of coarse woody debris and detritus;

G. If necessary, erosion and sedimentation controls should be installed and maintained along existing access roads and work pads near vernal pools as necessary to protect water quality and to limit the potential for soil deposition into vernal pools. Erosion control measures should be designed in a manner that allows unencumbered amphibian access to the vernal pool. Such measures may include, but not be limited to; syncopated silt fencing and/or straw wattles, and aligning erosion and sedimentation controls to avoid bifurcating vernal pool habitat; and

H. Plastic netting, which may be found in a variety of erosion control products (e.g., erosion control blankets, straw wattles, and reinforced silt fence), should not be used. Erosion

and sedimentation control devices should be promptly removed upon final revegetation and stabilization of the ROW.

Attachment:

Photographs of Representative Vernal Pools

Photo 1: MSF-1; classic vernal pool in Mattatuck State Forest

Photo 2: MSF-2 (pool was dry on 5/9/15)

Photo 3: B2-1 is a flooded marsh, pool appears to be a prior excavation

Photo 4: B4-1 (road embankment forms edge of pool)

Photo 5: C4-1 was formed by the maintenance road embankment. This decoy pool has been eliminated by fixing road drainage.

Photo 6: C10-1; classic pool in bedrock-controlled topography

Photo 7: C12-1 hydrology is enhanced by the road embankment

Photo 8: C15-1 is a dense shrub swamp

Photo 9: C20-1 is formed by the maintenance road embankment

Photo 10: C21-1 is a large classic pool in bedrock topography

Photo 11: D4-1 contains marbled salamander

Photo 12: D5-1 is small with a short hydroperiod

Photo 13: D15-1 is deeply ponded in bedrock controlled topography

Photo 14: D12-1 is an old farm pond

Photo 15: E2-1 is created by the road embankment outlet. This decoy pool was eliminated by fixing clogged culvert.

Photo 16: E2-2 is formed by the maintenance road embankment. This decoy pool was eliminated by fixing clogged culvert.

Photo 17: E9-1 lies along Hopkins Road in Litchfield

Photo 18: F9-1 is a borrow pit in the Naugatuck River floodplain

Photo 19: F10-1 lies in an old excavated wetland

Photo 20: F13-1 is a road rut within a headwater stream. This decoy pool was eliminated by grading and improving road outside of VP season.

Photo 21: F14-1 lies at the edge of managed ROW

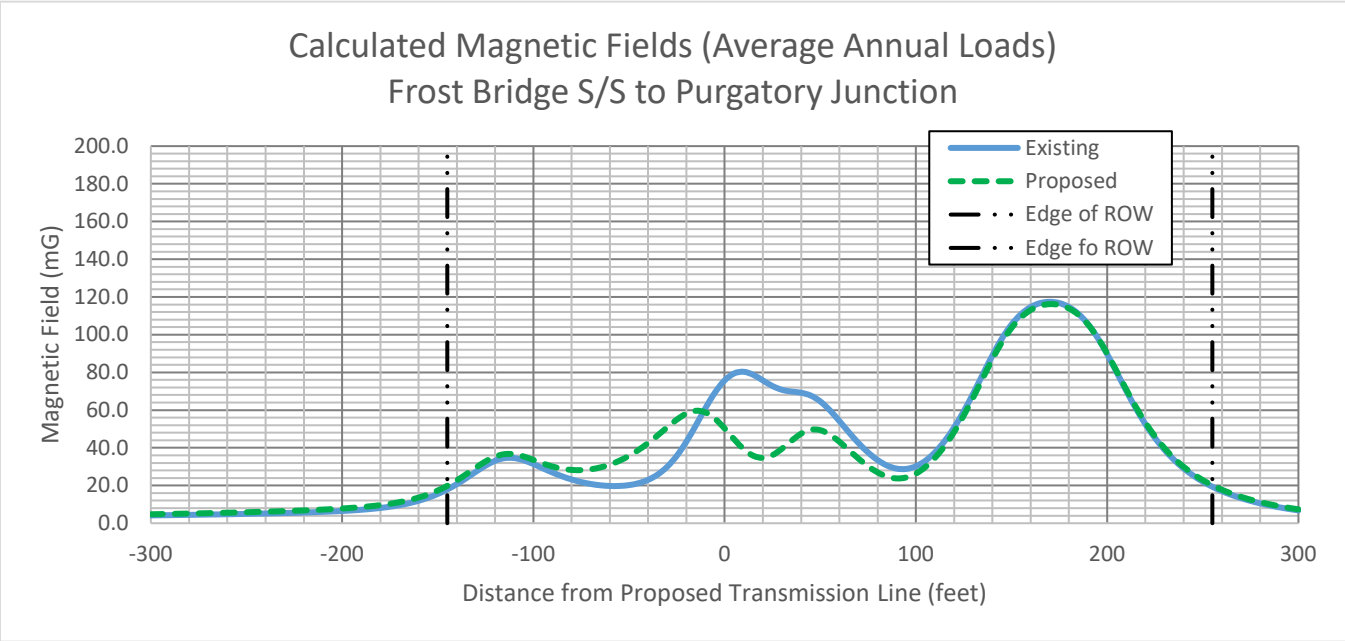
Photo 22: F15-1; note headwall for driveway crossing; a spotted turtle was observed at this location

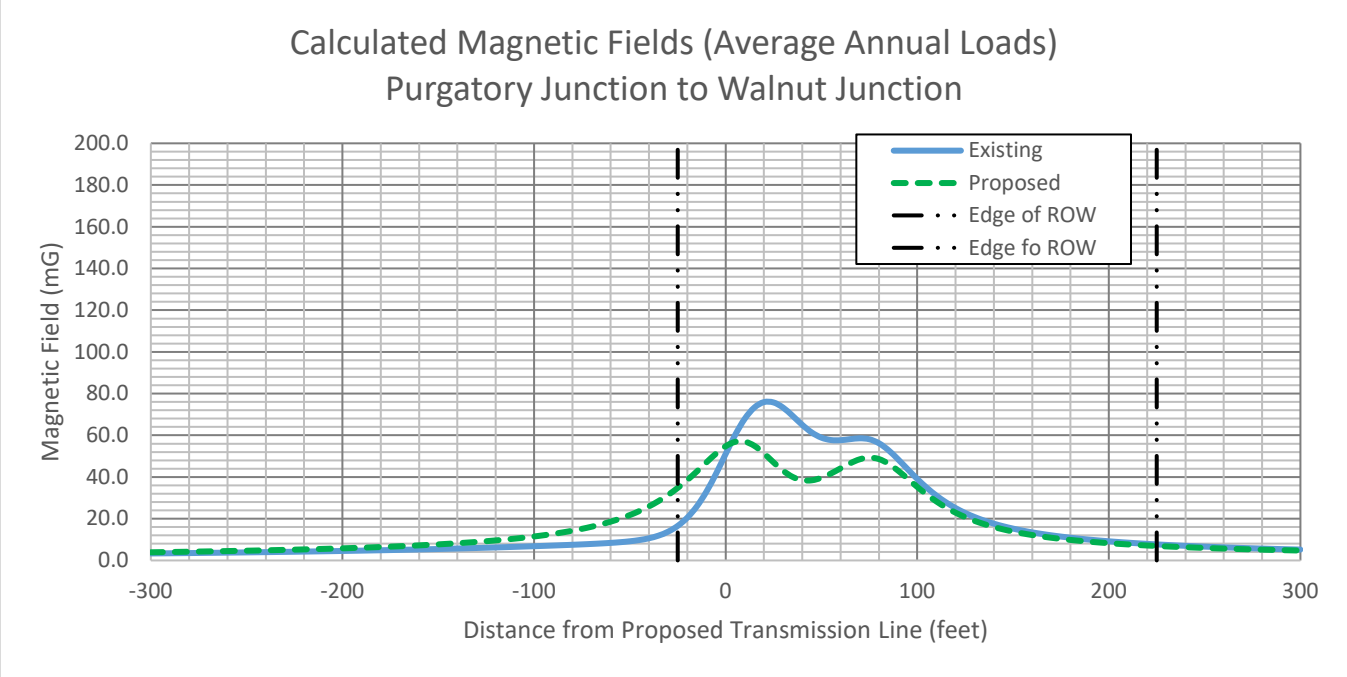
Photo 23: Marbled salamander larvae from D4-1

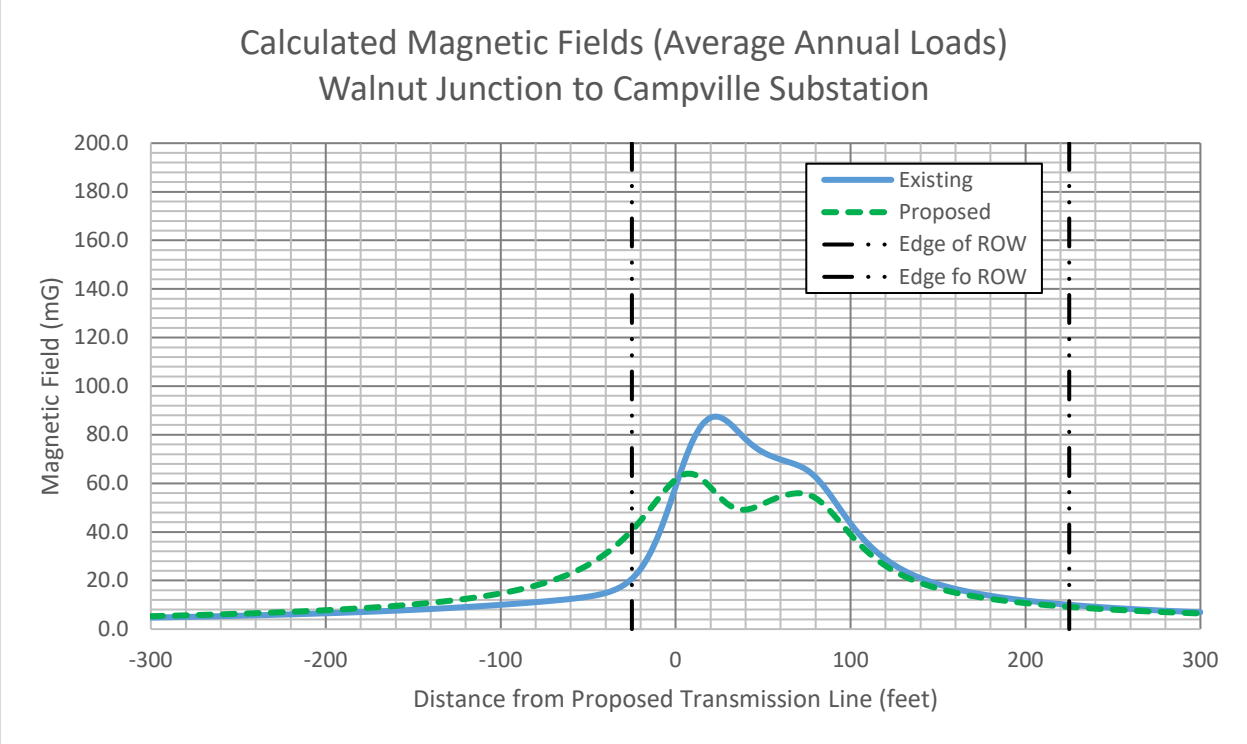
Photo 24: wood frog communal egg mass raft, D4-1

Attachment F: EMF Graphs and Tables

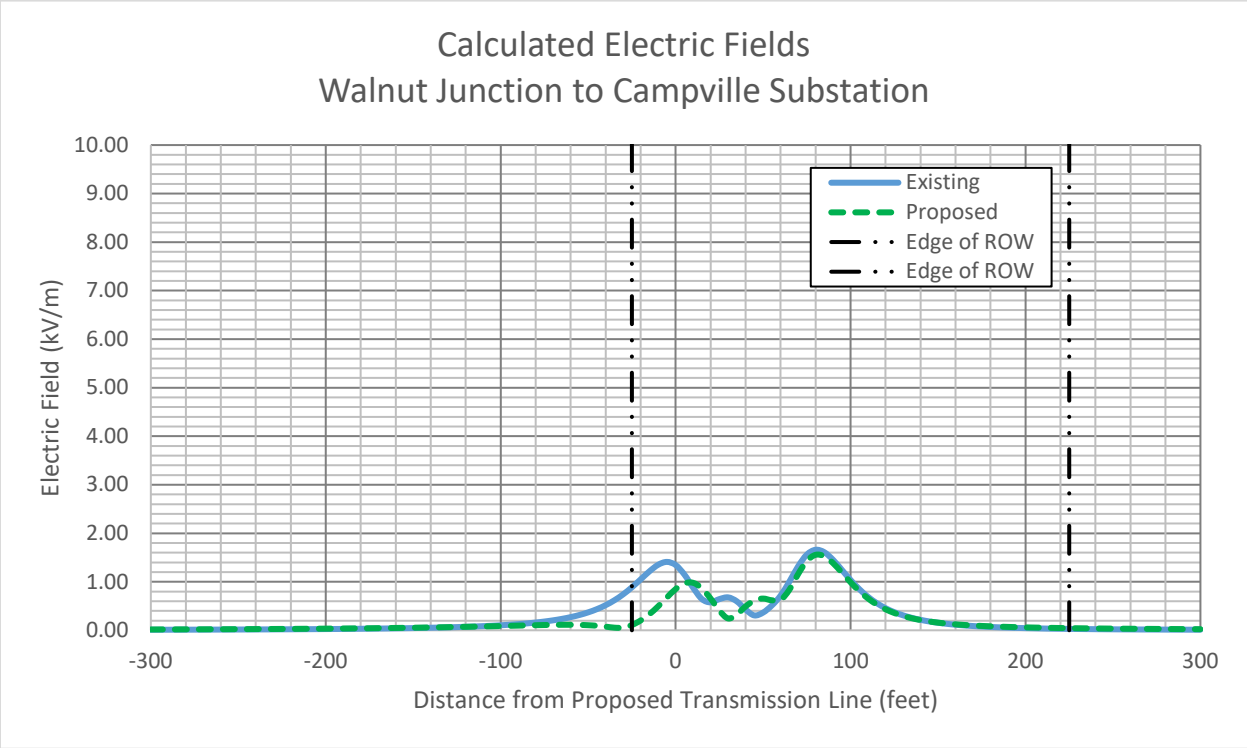
Graphs of Calculated Magnetic Fields







Graphs of Calculated Electric Fields


Calculated Electric Fields
Walnut Junction to Campville Substation
Electric Field (kV/m)
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
0.00
-300
-200
-100
0
100
200
300
Distance from Proposed Transmission Line (feet)
Existing
Proposed
Edge of ROW
Edge of ROW

Attachment G: Letter to the Abutters and Affidavit

EVERSOURCE ENERGY

56 Prospect Street
Hartford, CT 06103

September 17, 2020

Dear Neighbor,

At Eversource, we're always working to serve you better. We are submitting a petition to the Connecticut Siting Council (CSC) for a proposed transmission line (circuit) rebuild project in your area.

Proposed Project Information
A proposed project, called the 1191 Line Rebuild Project, is necessary to ensure the continued reliability, safety, and security of the transmission of electricity throughout the region. This project would include the replacement of ninety-three wood H-frame structures, three steel H-Frames and one (1) existing lattice tower with weathering steel monopoles along the approximately 10 mile right-of-way (powerline corridor) from the Frost Bridge Substation in Watertown to the Campville Substation in Harwinton.

Eversource would also replace the conductors that currently make up the 115-kV 1191 transmission line with a slightly thicker new wire. In addition, the existing ground wire located at the top of the structures would be replaced with new fiber optic communication wire (called OPGW) along the same route. The OPGW improves electric reliability by enabling communication between substations.

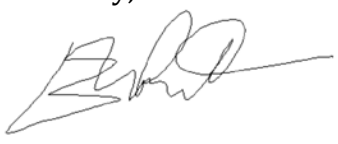
If the CSC approves this proposed work, construction is expected to begin in early 2021. Eversource anticipates restoration of any affected areas will be completed by the second quarter of 2022.

Contact Information
Eversource is committed to being a good neighbor and doing our work with respect for you and your community. For more information please call 1-800-793-2202 or send an email to ProjectInfo@eversource.com.

If you would like to send comments regarding Eversource's petition to the CSC, please send them via email to siting.council@ct.gov or send a letter to the following address: Melanie Bachman, Executive Director, Connecticut Siting Council, Ten Franklin Square, New Britain, CT 06051

Thank you.

Sincerely,



Evan Piacente
Eversource Project Manager

AFFIDAVIT OF SERVICE OF NOTICE

STATE OF CONNECTICUT)
) ss. Berlin
COUNTY OF HARTFORD)

Sec. 16-50j-40 of the Regulations of Connecticut State Agencies ("RCSA") provides that proof of notice to the affected municipalities, property owners and abutters shall be submitted with a petition for declaratory ruling to the Connecticut Siting Council. In accordance with that RCSA section, I hereby certify that I caused notice of proposed modifications of The Connecticut Light and Power Company doing business as Eversource Energy to be served by mail upon the following municipal officials:

Municipal Officials:

Mark A. Raimo
Watertown Town Manager
Watertown Town Hall
61 Echo Lake Road
Watertown, CT 06795

Denise Rapp
Litchfield First Selectwoman
Town of Litchfield
P.O. Box 488
Litchfield, CT 06759

Edmond V. Mone
Thomaston First Selectman
Thomaston Town Hall
158 Main Street
Thomaston, CT 06787

Michael Criss
Harwinton First Selectman
Harwinton Town Hall
100 Bentley Drive
Harwinton, CT 06791

I also certify that I caused notice of the proposed modifications to be served by mail upon 96 owners of abutting properties shown on the maps in Attachment A to the Petition.

Helen Taylor
Project Siting Specialist

On this the __ day of September, 2020, before me, the undersigned representative, personally appeared, Helen Taylor, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that she executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Officer of Superior Court / Juris #

~~Notary Public~~
My ~~Commission expires~~: