EVERSOURCE ENERGY

56 Prospect Street
P.O. Box 270
Hartford, CT 06103

June 20, 2016

Robert Stein, Chairman
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: 1779 Line Reconductoring and Rebuild Project

Dear Chairman Stein:

Attached are an original and fifteen (15) copies of a petition on behalf of The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") requesting a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed modifications to transmission line 1779 in the City of Hartford and the Towns of East Hartford and South Windsor, Connecticut ("Petition").

Prior to submitting this Petition, representatives from Eversource briefed municipal officials in Hartford, East Hartford and South Windsor about the Project and Eversource provided written notice of the proposed work to all abutters and the filing of this Petition with the Council. Maps and line lists identifying the abutting property owners who were notified of the Project are provided in Attachment A: 1779 Line - Reconductoring and Attachment B: 1779 Line- Rebuild Project maps.

A check in the amount of $625 for the required filing fee is also attached.

Sincerely,

Kathleen M. Shanley
Manager – Transmission Siting

Enclosure

cc:

Luke Bronin, Mayor of City of Hartford
David Tanner, City of Hartford Deputy of Public Works
Marcia Leclerc, Mayor of East Hartford
Matt Galligan, Town Manager of South Windsor

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 EXISTING
1779 LINE IN THE TOWNS OF HARTFORD, EAST HARTFORD
AND SOUTH WINDSOR, CONNECTICUT

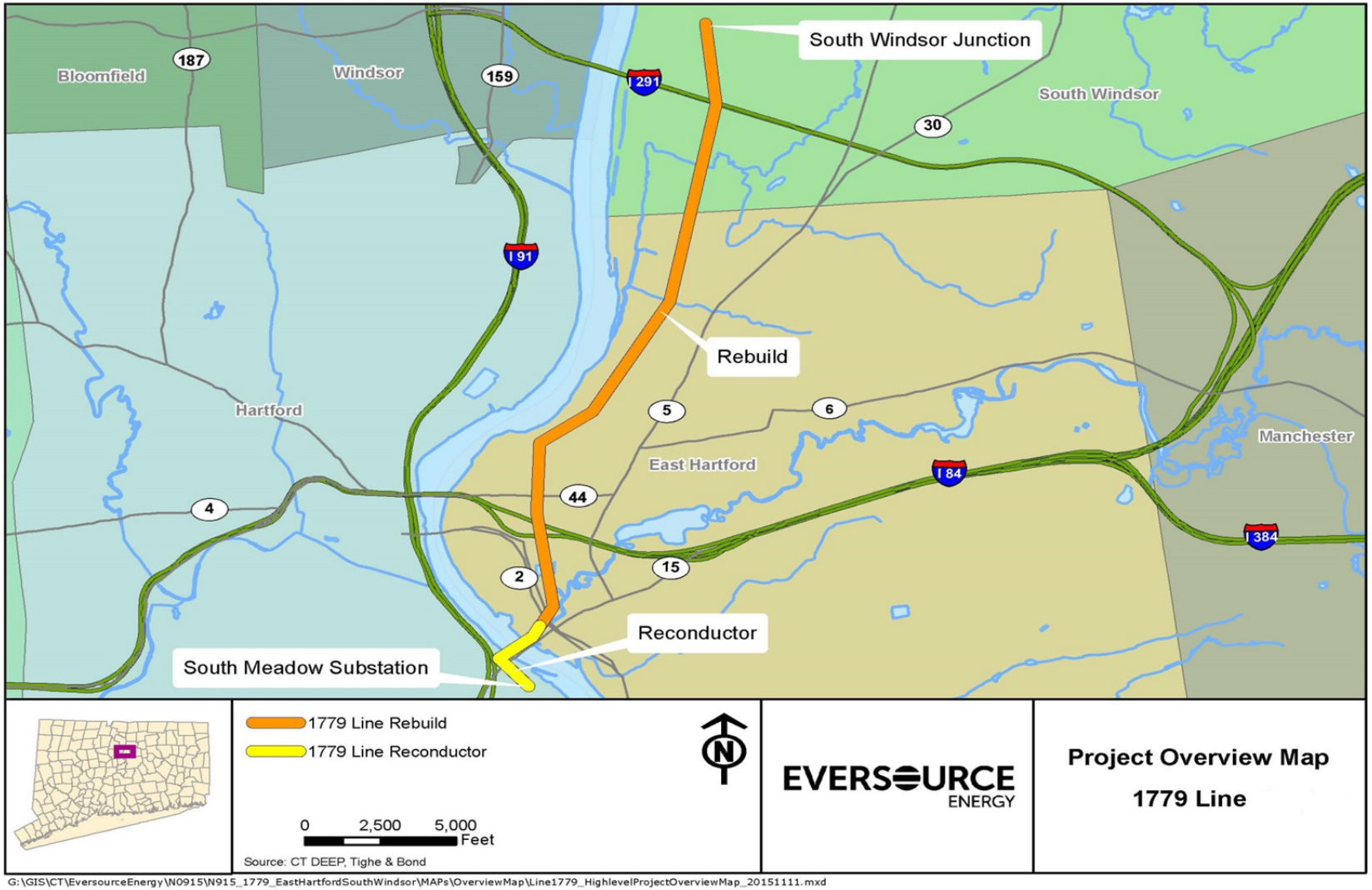
1. The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company") hereby petitions the Connecticut Siting Council ("Council") for a Declaratory Ruling that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required pursuant to Section 16-50g et seq. of the Connecticut General Statutes for the modifications to 1779[1] transmission line within an existing right-of-way ("ROW") in Hartford, East Hartford, and South Windsor (the "Project") that are described herein. Eversource submits that no such Certificate is 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 upgrade an approximately 5.2 mile portion of the 1779 Line located entirely within Eversource's existing ROW between South Meadow Substation and South Windsor Junction. The 1779 Line is exhibiting age-related degradation and is in critical need of replacement. The conductor has significant oxidation, corrosion and loss of tensile strength to the steel core. The existing 115-kV double-circuit lattice towers were originally constructed in the 1920s and 1950s, and have now reached the end of their useful lives, jeopardizing the physical integrity and continued reliability of the 1779 Line under high wind and ice loading conditions. Figure 1 illustrates the general location of the proposed Project.

[1] Note that the designation for the 1779 Line will be changing to the 1873 Line in fall of 2016.

Figure 1: Project Overview Map



3. Project Description

The Project scope includes both reconductoring and rebuild activities. The reconductoring work consists of 0.6 mile of conductor replacement on the 1779 Line between South Meadow Substation in Hartford and the east side of structure 3001 in East Hartford and reinforcement to three existing structures ("Reconductoring").

The rebuild work consists of approximately 4.6 miles of structure replacements along the 1779 Line from structure 3001.5 in East Hartford to South Windsor Junction in East Hartford and South Windsor, along with a conductor upgrade ("Rebuild").

The majority of the existing structures support conductors that are bundled across the phases and operate as one single electric line. Though this arrangement is commonly referred to in the industry as a transmission line in a "double-circuit" structure configuration, it is supporting only one circuit

The proposed modifications for the Reconductoring work are shown in Attachment A. The proposed modifications for the Rebuild work are shown in Attachment B. Cross sections of the ROW for the Rebuild portion are provided in Attachment C.

Detail of the proposed scope of work is provided as follows:

I. <u>Reconductoring the 1779 Line Segment between South Meadow Substation and Structure 3001 (approximately 0.6 mile)</u>

a) Replacement of the existing 556 kcmil 26/7 ACSR (aluminum conductor steel reinforced) and 211.3 kcmil 12/7 ACSR with new 636 T16 ACCR (aluminum conductor, composite reinforced) from South Meadow Substation to structure 3001 for approximately 0.6 mile.

b) In order to support the proposed 1779 Line conductor replacement, three existing structures must be reinforced. These structures include structures 3001A and 3001, which are double-circuit lattice towers ("DCLT"), and one single-circuit lattice tower ("SCLT"), structure 3007A. Reinforcement would consist of installing additional bracing angles in the tower body and arm area.

c) Replacement of the existing shield wire 12/7 ACSR with new optical ground wire ("OPGW") from South Meadow Substation to structure 3001.

II. Rebuild of the 1779 Line Segment from Structure 3003 to South Windsor Junction (approximately 4.6 miles)

The rebuild of the 1779 line requires the removal of approximately 41 existing structures. The existing structures to be removed would include 38 115-kV double-circuit painted steel lattice towers, two 115-kV single-circuit wood pole structure and one 115-kV single-circuit H-frame structure. These 41 structures would be replaced with 39 single-circuit weathering steel pole structures and one single-circuit weathering steel H-frame structure from existing structure 3003 to South Windsor Junction (structure 3046). Structure 3045 at South Windsor Junction would be removed but not replaced. The proposed weathering steel single circuit monopoles would be installed approximately 25 feet laterally to the east, and staggered up to approximately 20 feet longitudinally, from the existing 1779 Line DCLTs.

Direct-embedded structures with storm guys would be utilized for all structures that would be located within the flood zone areas with good soil conditions; self-supported structures on drilled shaft or micropile foundations would be utilized for structures located in the flood zone with poor soil conditions and for all angle structure locations.

The height of the existing structures ranges between 75 to 140 feet above ground level. Most proposed structures (six structures will remain the same height) would be approximately 5 to 35 feet taller than the existing structures and the tallest proposed structure, structure 3021, would have a height of approximately 140 feet above ground level. The reason for the increase in structure heights is to comply with the 2012 National Electric Safety Code ("NESC") clearance requirements after considering the increase in sag from the larger conductor size.

The rebuild work also includes installation of a new 115-kV conductor, 795 kcmil 26/7 ACSS (aluminum conductor steel supported conductor), and OPGW from the east side of existing structure 3001 to proposed structure 3046, for a distance of approximately 4.6 miles.

During construction of the Project, four existing 115-kV double-circuit painted steel pole structures (structures 3001½, 3009, 3010 and 3011) are not proposed to be replaced but would be modified by removing one set of conductor as part of the scope of this Project. See Attachment C: Cross Section XS-2. During construction these structures will be

evaluated again to ensure that in each case their structural integrity continues to comply with Eversource's storm hardening requirements. If the structures do not comply with those requirements, any non-compliant structure components, such as damaged/overstressed structure members (e.g., angle braces, davit arms, cross braces) would be replaced or reinforced, or damaged foundations would be repaired during the Project.

4. Existing Environment, Environmental Effects and Mitigation

The proposed transmission line work described above would not have a substantial adverse environmental effect, for reasons explained more fully below.

The line upgrades would be constructed within Eversource's existing transmission ROW. All work within environmentally sensitive areas, such as water resources or habitat areas identified through the National Diversity Data Base (NDDB) for state-listed species, would be conducted in accordance with required environmental permits and through the implementation of the Company's December *2011 Best Management Practices Manual: Connecticut* (BMPs), and would employ measures to avoid, minimize and/or mitigate potential adverse environmental effects.

Existing Right-of-Way

The transmission lines within the ROW were originally constructed in the 1920s. The existing structure types in the ROW vary and include: steel gray-painted double-circuit lattice structures constructed in the 1920s and 1950s; the double-circuit painted steel poles constructed in the 1980s (which will not be replaced); and wood pole guyed structures constructed in the 1980s. The width of the existing ROW is typically 100 feet with approximately 50 feet of currently maintained ROW. See Attachment C: Existing/Proposed ROW Cross Sections.

Land Use

Adjacent land use in the Project area is a mix of residential, agricultural, commercial, and undeveloped lands and includes suburban residential developments and subdivisions, public open space, recreational areas, hunting clubs, open fields, forest lands, flood control levee system, and maintained lawns of abutting property owners. A portion of the Project area traverses a flood control area in Hartford and East Hartford,

crosses the Connecticut River, and follows major highways, including the Wilbur Cross Parkway, Route 2, Interstate 84, and Route 291.

Clearing and Vegetation Management

Some tree clearing and vegetation removal is required to accommodate the construction and operation of the rebuilt line. Approximately 25 feet of clearing would be required on the east side of the ROW for the Rebuild portion of the work (from structure 3001 to South Windsor Junction). Some vegetation removal would be required to accommodate access road installation or improvements and for installation of work and pull pads.

Clearing is not anticipated to have an adverse environmental impact. Tree clearing within the existing ROW would result in a total forested conversion (to scrub-shrub or herbaceous habitat) area of approximately 0.15 acre (0.10 acre cleared in wetlands). Converting forest (including forested wetland) to shrubland, or emergent vegetation along the transmission line ROW would modify habitat. The creation of additional shrubland and early successional habitat (and the preservation of such existing habitat) along the ROW would represent a long-term benefit for many species because shrubland habitat is otherwise declining in New England.

During vegetation removal, construction mats would be used to provide a stable base for equipment across watercourses or within wetlands and may be utilized in flood plain areas unless dry conditions allow for conventional access for construction. Such temporary support would minimize rutting in wetlands, and mats would be removed after the activities are complete.

Scenic, Recreational and Cultural Resources

No scenic resources were identified within the Project area.

The Project area is located within and adjacent to the Great River Park (East Hartford) and Charter Oak Landing Park (Hartford). These parks consist primarily of paved and lighted river walks and are located across from each other on the banks of the Connecticut River. Eversource is collaborating with East Hartford and Hartford in order to complete the proposed work activities in a manner that would minimize disruption to

the public's use of these parks. During execution of the work, signs will be posted notifying the public of the construction activities and walking paths will be rerouted as necessary. The Project area is also adjacent to and within two private hunting clubs in East Hartford and South Windsor.

The Project area traverses a flood control (levee) system in Hartford and East Hartford, which also provides public recreational opportunities. These areas are explained more fully in the Federal Emergency Management Agency ("FEMA") Flood Zones section below. As a component of the required environmental permit application filings, the proposed work activities within the flood control areas would be coordinated with East Hartford, Hartford, Connecticut Department of Energy and Environmental Protection ("CT DEEP") and the U.S. Army Corps of Engineers ("ACOE") to minimize disruption to their normal maintenance and emergency activities.

A cultural (archaeological and historical) resources review of the proposed line upgrades was initiated by Heritage Consultants, LLC ("Heritage") in October 2015. A comprehensive Phase I cultural resources survey has been initiated using a three-step approach: (1) literature search and records review that focused on the proposed Project area; (2) identification of all previously recorded archaeological sites located in the vicinity of the Project area; and (3) cultural resources reconnaissance survey of the proposed work and pull pads, access roads, and guyed wire locations in the identified archaeological or historically significant areas.

As a result of its initial review, Heritage identified five known archaeological sites within the Project area, and areas of moderate/high archaeological sensitivity for the potential presence of cultural material within the Rebuild section of the Project. When access is required through these areas, ground disturbance would be avoided with the use of construction matting and/or implementing limited improvements to existing access roads. At 18 proposed structure locations, where the avoidance of ground disturbance is not feasible, a resources reconnaissance survey will be conducted prior to construction.

Eversource is currently coordinating with the Connecticut State Historic Preservation Office ("SHPO") and the Tribal Historic Preservation Office ("THPO") to perform the professional archaeological reconnaissance survey in compliance with SHPO's Environmental Review Primer for Connecticut's Archeological Resources. Prior to

construction, Eversource would provide the results of the professional archeological reconnaissance survey to SHPO for review, comment and approval. Eversource would comply with any additional mitigation requirements, if required, as determined by the SHPO.

No known historical resources are present within the Project area. There are, however, four historic districts and three individually listed properties located to the east of the Project ROW. The closest known historical resource is approximately two tenths of a mile away. As all the identified districts and properties are outside the Project area, no direct impacts will occur. Furthermore, indirect impacts associated with material changes to the visual effects of the ROW to any of these resources are not anticipated.

Wetlands, Watercourses, Surface Waters and FEMA Flood Zones

Eversource contracted with the firm Tighe & Bond to identify and delineate water resources in the spring and summer of 2015 (See Attachment D: Wetlands and Watercourses Report). Water resources within the Project area include inland wetlands, watercourses (intermittent and perennial streams and rivers), waterbodies (ponds), and FEMA flood zones. Work in water resource areas would be conducted in accordance with the appropriate Eversource BMPs and in accordance with the applicable regulatory permit/authorization terms and conditions. Regulatory agency coordination is ongoing. Prior to initiating work, Eversource would obtain permit approvals for work in regulated water resources.

Wetlands

Federally-classified and state jurisdictional wetland boundaries were delineated in accordance with applicable federal and state methodologies. Moderately-well to well-drained alluvial soils, which are abundant within the Project area where it traverses floodplains associated with the Connecticut River and its tributaries, are subject to State jurisdiction only. These wetlands have been differentiated on the Project mapping (Attachments A and B), as well as within the descriptions of anticipated Project effects to wetlands, below.

A total of 10 wetlands were identified in or proximate to the Project area. These wetlands are often broad and expansive, and comprised of a complex of federal, Connecticut, and Connecticut only jurisdictional wetlands.

Anticipated Wetland Effects – Reconductoring

No permanent wetland effects would occur as a result of the proposed 0.6 mile Reconductoring portion of the Project. A total of approximately 0.66 acre of temporary effects to wetlands associated with construction matting would be required, as shown in Attachment A. This includes approximately 0.46 acre of temporary effects to Connecticut jurisdictional wetlands, and 0.20 acre to federal and Connecticut jurisdictional wetlands.

Anticipated Wetland Effects – Rebuild

The majority of the ROW along the segment where the Rebuild work will occur contains wetlands. Permanent wetland effects would result from the installation of 36 of the new monopole structures, which will be located within wetlands, resulting in approximately 1,625 square feet (0.037 acre) of permanent fill within federal and Connecticut-only jurisdictional wetlands, and an additional 150 square feet (0.003 acre) of fill within Connecticut jurisdictional wetlands. In addition, one wood pole (structure 3045) located within a wetland would be removed and not replaced. The existing structures proposed to be replaced are predominantly of lattice design. The foundations of these structures are typically fully or partially embedded in sediment, which has been deposited over time during flood events, and thus would be left in place to minimize ground disturbance. Further, it was deemed that removal of these foundations would not result in any meaningful improvement to wetland functions and values. Approximately 0.09 acre of forested wetland would be permanently converted to scrub-shrub or emergent wetlands, representing a long-term cover type change to wetland habitat, but there will not be a net loss of wetlands as result of the forested wetland clearing. Approximately 13.6 acres of temporary wetland effects will result from the Rebuild portion of the Project. This includes approximately 12.3 acres of temporary effects to Connecticut and federal jurisdictional wetlands and 1.3 acres to Connecticut-only jurisdictional wetlands. Temporary effects are limited to

the installation of construction mats within the existing maintained ROW to gain access to the existing and proposed structure locations as shown in Attachment B.

All work within water resources would be conducted in accordance with required environmental permits and through the implementation of Eversource's BMPs.

Watercourse and Waterbodies

There will be no permanent effects to watercourses or waterbodies associated with the proposed Project.

There are a total of 13 unnamed watercourses and 4 named watercourses (Goodwin Brook, Hockanum River, Podunk River and the Connecticut River) identified within the Project area.

In order to access structure locations, Eversource would need to cross the Podunk River, 4 unnamed tributaries of the Podunk River, and an intermittent watercourse using stream-crossing techniques as detailed in Eversource's BMPs. An unnamed perennial watercourse is located in close proximity (approximately 10 feet) to existing and proposed structure 3017. Construction mats will be utilized for the work pad at this location, and placed in a manner that minimizes disruption to the existing flow pattern.

Vernal Pools

Vernal pool surveys were conducted within Project wetland areas in April and May 2015 (see Attachment E: Vernal Pool Survey). Survey methods included visual surveys to identify vernal pool indicator species[1] adults, larvae and egg masses, and dip-net surveys to identify amphibian larvae. No vernal pools were identified during the surveys. Project wetlands are predominantly characterized by active flood zones and riparian corridors and are generally lacking suitable vernal pool hydrology and morphology (seasonally flooded wetland depressions).

[1] Spotted salamander, wood frog, marbled salamander, blue-spotted salamander, Jefferson salamander, eastern spadefoot toad, and fairy shrimp.

FEMA Flood Zones

Portions of the Project are located within the 100-year flood zones and floodways of the Connecticut, Hockanum, and Podunk Rivers and their associated unnamed tributaries.

No new structures are proposed to be located within floodway areas. One existing lattice structure (3036) currently located within the floodway of the Podunk River is proposed to be relocated beyond the floodway limits.

Twenty-seven of the new monopole structures are proposed to replace structures that are currently located within FEMA 100-year flood zone areas. The proposed drilled shaft foundations for the monopole structures would be approximately 8 feet in diameter and would result in a total of approximately 217 cubic yards (0.13 acre) of fill. The installation of these structures is not anticipated to have an adverse effect to the hydraulic characteristics of the flood zones, including flood storage capacity or associated flood elevations, due to the relative size of the flood zones and that minimal net fill is proposed.

Eversource would utilize its BMPs to minimize any impacts in these areas including the use of construction mats for new access roads within flood zones (no new permanent access roads within flood zones are proposed), to ensure that hydrology is not adversely affected. All construction mats would be removed after the Project is complete. Areas of disturbance would be promptly stabilized in order to minimize the potential for soil erosion and the flow of sediments into nearby resource areas. Prior to significant storm events, Eversource will secure the construction mats to impede lateral movement during temporary flooding.

In addition, Eversource has been coordinating with ACOE, the CT DEEP, the City of Hartford and the Town of East Hartford relative to construction of the Project through the flood control area that is part of the Connecticut River Flood Control System.

Water Supply

Based on the October 2015 data maintained by CT DEEP, the Project is not located within any aquifer protection areas. In addition, no public supply reservoirs or public/private water supply wells are located within the vicinity of the Project area.

Wildlife and Habitat

Eversource reviewed the CT DEEP Bureau of Natural Resouces – Wildlife Division, Natural Diversity Database f ("NDDB") for rare species data supplied through a data sharing agreement with Eversource. The result of the review indicates that no state-listed species are present in the Project ROW. However, Eversource did consult with CT DEEP regarding eight state-listed species identified in proximity to the Project area, and an observation of an additional State-listed species that was made during water resource surveys. These consultations also included discussions about Forested Floodplain; a CT DEEP mapped critical habitat area located within, and in proximity to the Project ROW. Eversource and the CT DEEP have agreed upon protection measures for the listed species and critical habitat area as appropriate. Eversource will adhere to the CT DEEP protection measures during construction and will incorporate into the Company's BMPs relative to the listed species.

In addition to coordinating with the CT DEEP for state-listed species, Eversource is consulting with the U.S. Fish and Wildlife Service ("USFWS") regarding federally-listed species as a part of the Section 7 consultation process that is required for the Project's ACOE permit application filing, which Eversource expects to file in the summer of 2016. Eversource would continue to consult with USFWS agency to ensure that appropriate measures are taken to minimize the Project's potential impact to any identified species.

Visual Effects

Visual effects would be limited to the change in structure design and the amount of clearing that would be required to accommodate the rebuilt line. New structures are proposed to be located near existing structure locations. Depending on location, the height of the proposed structures would generally be would be approximately 5 to 35 feet taller than the existing structures and six structures will remain the same height. However, the monopole design of the replacement structures would provide a more streamlined appearance down the ROW then the lattice tower structures.

Sound Levels along the Transmission ROW

There would be no changes to the sound levels along the transmission corridor after completion of the Project.

Radio and Television Interference

No radio or television interference would result from the Project.

5. Traffic, Construction Sequence and Methods

Traffic/Traffic Management

Construction vehicles and equipment associated with the work would include pickup trucks, bucket trucks, concrete trucks, drill rigs, front loaders, reel trailers, bulldozers, wood chippers, cranes, forklifts, side booms, dump trucks and cranes. Pullers, tensioners and helicopters will be used for the line work.

Construction-related vehicular and equipment movements would occur on public roads in the Project area. However, the Project-related traffic is generally expected to be temporary and highly localized in the vicinity of the ROW and staging areas. Due to phasing of 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 of the ROW while minimizing disruptions to vehicular traffic along public roads, Eversource or its Project contractor would, as appropriate, work with representatives of Hartford, East Hartford and South Windsor and/or the Connecticut Department of Transportation (“ConnDOT”) to develop and implement traffic management procedures, as needed. The construction contractor is typically 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 necessary.

Construction Sequence

Preparation of the ROW would include the following activities:

Establishing Staging Areas

Temporary staging areas will be selected from available parcels in the vicinity of the Project area and would be used to store construction materials, equipment, tools, and supplies (including conductors, insulators, hardware, poles and construction mats) for the Project. Office trailers may be located at a staging area, and components removed during the work (structures, conductor, hardware and insulators) may be temporarily accumulated and stored at a staging area prior to removal off-site for salvage and/or disposal. The staging areas may also be used by construction crew members for parking personal vehicles as well as for construction vehicles and equipment storage, and for performing minor maintenance, when needed, on construction equipment. An environmental review of each potential staging area location would be completed and erosion and sedimentation ("E&S") controls would be installed and maintained until Project completion in accordance with Eversource's BMPs.

Eversource would consult with the local municipal officials and provide notice to the Council when staging areas are identified.

Clearing and Vegetation Removal

Clearing would be accomplished using mechanical methods and typically requires the use of flatbed trucks, brush hogs or other types of mowing equipment, skidders, forwarders, bucket trucks for canopy trimming, feller bunchers for mechanical tree cutting, wood chippers, log trucks, and chip vans. Eversource would conduct vegetation removal activities in accordance with its BMPs, applicable federal and state permit requirements.

During vegetation removal, construction mats may be used to provide a stable base for clearing equipment across watercourses or within wetlands. Such temporary support would minimize rutting in wetlands and would be removed after the clearing activities are completed.

Eversource would require the contractor to use low-impact tree clearing methods to remove forested vegetation to protect wetlands, watercourses, threatened and endangered species and their habitats, and cultural resources. Low-impact tree clearing incorporates a variety of approaches, techniques, and equipment to minimize site disturbance. Eversource would require the clearing contractor to use some or all of the following low-impact tree clearing methods, depending on site-specific considerations:

- Take into consideration soil and weather conditions when scheduling vegetation removal activities such as heavy rainfall.
- Maximize the use of uplands for clearing access routes.
- Fell trees directionally (parallel to and within the ROW) to minimize impacts to residual vegetation, where practical.
- Use appropriate tree clearing equipment for the site conditions, as appropriate, to minimize impacts to the extent practicable.
- Cut trees close to the ground, leaving root systems and stumps, where practical, to provide additional soil stability.
- Stockpile cut timber and brush only in uplands.

Soil Erosion and Sediment Control Installation

Project construction would conform to best management practices for E&S control, including those provided in the *2002 Connecticut Guidelines for Soil Erosion and Sediment* ("E&S") *Control* and the Eversource's BMPs.

Typical E&S control measures include, but are not limited to, straw blankets, hay bales, silt fencing, check dams, berms, swales, and sediment basins. Silt fence would be installed prior to construction to demarcate the line of construction and prevent migration of sediment or construction materials into wetlands and watercourses. Temporary E&S control measures would be maintained and inspected throughout the Project to ensure their integrity and effectiveness. Following completion of construction, seeding and mulching would occur to permanently stabilize previously disturbed areas. The temporary E&S control measures would remain in place until the Project work is complete and all disturbed areas have been stabilized.

Access Roads and Work Pads

Access to each proposed transmission structure location is required for Project construction. As a result of the operation and maintenance of the existing transmission lines within this ROW, most access roads are already established. No new, permanent access roads will be required, except timber matting will be necessary to construct temporary access roads through wetland areas to reach certain structure locations. Additionally, existing off-ROW access roads, some requiring improvement, would be utilized to access the Project ROW. The access roads expected to be used for the proposed Project are illustrated on the maps in Attachments A and B.

The existing access roads may need to be graded, widened, and/or reinforced with additional material in order to accommodate the safe passage of construction vehicles and equipment. Access road improvements typically include trimming adjacent vegetation and widening roads as needed to provide a minimum travel surface that is approximately 16 to 20 feet wide (additional width may be needed at turning or passing locations). Access roads would typically be graveled; however, where access roads traverse streams or wetlands, construction mats would be used. 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 site, 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. Typical work pads would be approximately 100 feet by 100 feet.

The preliminary location and configuration of the work pads, as determined based on the environmental field studies and constructability reviews, are shown on Attachments A and B.

A typical (upland) installation of a work pad at a structure location involves several steps, if necessary: (1) removal of vegetation, (2) the work pad site would be graded to create a level work area, and (3) the upper three to six inches of topsoil (which is typically unsuitable to support the necessary construction activities) would be removed. The topsoil would be temporarily stockpiled within the ROW, typically near the work pad. A

rock base, which allows drainage, would be layered on top of filter fabric, if necessary. Additional layers of rock with dirt/rock fines are typically placed over this rock base.

To facilitate transmission line maintenance, structure work pads in uplands would be left in place, unless the property owner requests their removal. New access roads and work pads located within improved areas would typically be removed and the area restored, unless the property owner requests that they remain in place. No new permanent access roads or work pads are proposed in water resource areas.

Foundation Installation

Following the installation of the work pads, foundation installation would occur (for the Rebuild portion of the work). Structure foundation construction would require equipment such as: augers, trucks for hauling reinforcing rebar/rebar cages, drill rigs, cranes, concrete trucks for structures with drilled shaft/micro pile foundations and dump trucks for structures that require crushed rock backfill. When groundwater is encountered, particularly within wetlands, pumping (vacuum) trucks or other suitable equipment would be used to pump water from the excavated areas as the foundation is being installed or the structure is being set. The water would then be discharged in accordance with applicable local, state, and federal requirements.

Depending on site-specific soil conductivity, supplemental grounding (counterpoise) will be installed at this time. A Quad-ditch witch plow-cable trencher would be used to install the counterpoise.

Excavated soils that are generated during construction activities would not be stored or stockpiled inside of a wetland, or adjacent to a watercourse. Materials that could not be utilized as back fill would be disposed of in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control,* the Eversource's BMPs and the applicable regulations.

Structure Assembly

After the foundations have been installed, the new structures would be assembled. Structure sections of the new monopoles, structure components and hardware would be

delivered to the individual structure locations using flat-bed trucks and assembled on-site using a crane and bucket trucks.

Remove Existing Conductor and Shield Wires

For both the Reconductoring and Rebuild work, the existing conductor and shield wire would be removed. For the Reconductoring, the removal of the existing conductor and shield wire would take place during the installation of the new conductor/OPGW since the existing conductor and shield wire will be used as pulling line. For the Rebuild, the removal of the existing conductor and shield wire would take place after the new structures have been erected and the new rebuilt line is energized.

Conductor and Shield Wire Installation

In the Reconductoring section, the installation of the new conductors and OPGW, would be during removal of the old conductor and shield wire. The equipment required for these activities would include conductor reels, conductor pulling and tensioning rigs, and bucket trucks.

In the Rebuild section, the installation of the new conductors and OPGW would be after the new structures have been erected. The equipment required for these activities would include conductor reels, conductor pulling and tensioning rigs, and bucket trucks. Helicopters may be used to install the initial pulling lines on the rebuild section for the conductors or shield wires.

Removal of Existing Structures

Once the new structures are erected and the line is energized, the existing 115-kV steel lattice structures, shield wires, conductors, and other transmission line materials on and between the existing structures would be demolished and removed. The equipment required for these activities would be generally the same as required for installing the new structures, conductors, and OPGW; which is described above. Within the flood zone, the foundations of the existing lattice towers will be left in place and the structure legs will be cut flush with the ground. The legs of the lattice tower structures in uplands will be cut 6 inches below grade. The three existing guyed wood poles at South Windsor Junction will be cut 10 inches above grade and pole-butts left in place.

Restoration

ROW restoration activities would include the removal of construction debris, signage, flagging, and temporary fencing, as well as the removal of construction mats and work pads. Areas affected by construction would be re-graded as practical and stabilized using revegetation or other measures before removing temporary E&S controls.

Waste Management

Waste materials, such as structure components (i.e., steel from the existing lattice structures, conductor, shield wire, associated hardware, excess concrete, 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.

Excess soils would be managed in accordance with the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control,* the Company's BMPs, applicable regulations and disposal facility policies.

Dewatering during construction activities would be conducted in accordance with *2002 Connecticut Guidelines for Soil Erosion and Sediment Control,* the Company's BMPs and the applicable regulations.

Noise

During construction, any impacts to existing noise levels would be short-term and localized in the vicinity of the work sites. There would be no permanent changes to the noise levels along the transmission ROW from the Project.

Construction Schedule and Work Hours

Normal working hours would be Monday through Saturday from 7:00 AM to 7:00 PM. Sunday working hours may be required during transmission line outages. Multiple crews may work concurrently on different sections of the line.

6. Electric and Magnetic Fields

Following the proposed line modifications, electric and magnetic field levels are expected to remain similar to those produced by the existing transmission lines. Eversource's proposed design for the Project is a vertical configuration of three-phase conductors supported on steel monopoles. During Annual Average Load ("AAL") conditions, the magnetic field level would be slightly reduced along the western edge of ROW and result in a small increase at the east edge of and within the ROW.

Inputs for all of the magnetic field calculations included the current from each circuit derived from the power-flow model, the circuit phasing, and the typical midspan line height on the ROW. The conductors of the line were assumed to have a typical midspan height of 30 feet above ground. Away from midspan locations where all of the line conductors are higher, electric and magnetic field levels would be lower than values determined for a midspan conductor height assumption. Electric fields were also calculated assuming a relatively high voltage on each circuit of 121 kV (1.05 per unit) to yield conservatively higher results. All calculation results apply to a height of one meter above ground. The edge of ROW values for the pre- and post- electric and magnetic fields under average annual loading conditions are summarized in Table E-1 Below. This is also depicted graphically in Figures E-1 and E-2.

While there are no state or federal guidelines which govern electric and magnetic fields, the scientific community has identified limits for safe exposure. These limits are identified by the International Council on Non-Ionizing Radiation Protection ("ICNIRP) and the International Council on Electromagnetic Safety ("ICES") and are tabulated in Table E-2. It should be noted that the fields from the proposed project are well below these limits.

Table E-1 - Summary of Calculated Electric and Magnetic Fields

		West ROW Edge	Max in ROW	East ROW Edge
Magnetic Fields	Existing	5.8	15.0	5.8
	Proposed	4.5	19.5	9.7
Electric Fields	Existing	0.07	1.60	0.07
	Proposed	0.08	1.22	0.16

Table E-2 - International Guidelines for EMF Exposure

	Magnetic Field (mG)	Electric Field (kV/m)
ICNIRP	2000	5
ICES	9040	5 (in General)
		10 (On ROW)

Figure E-1 - Calculated Magnetic Fields

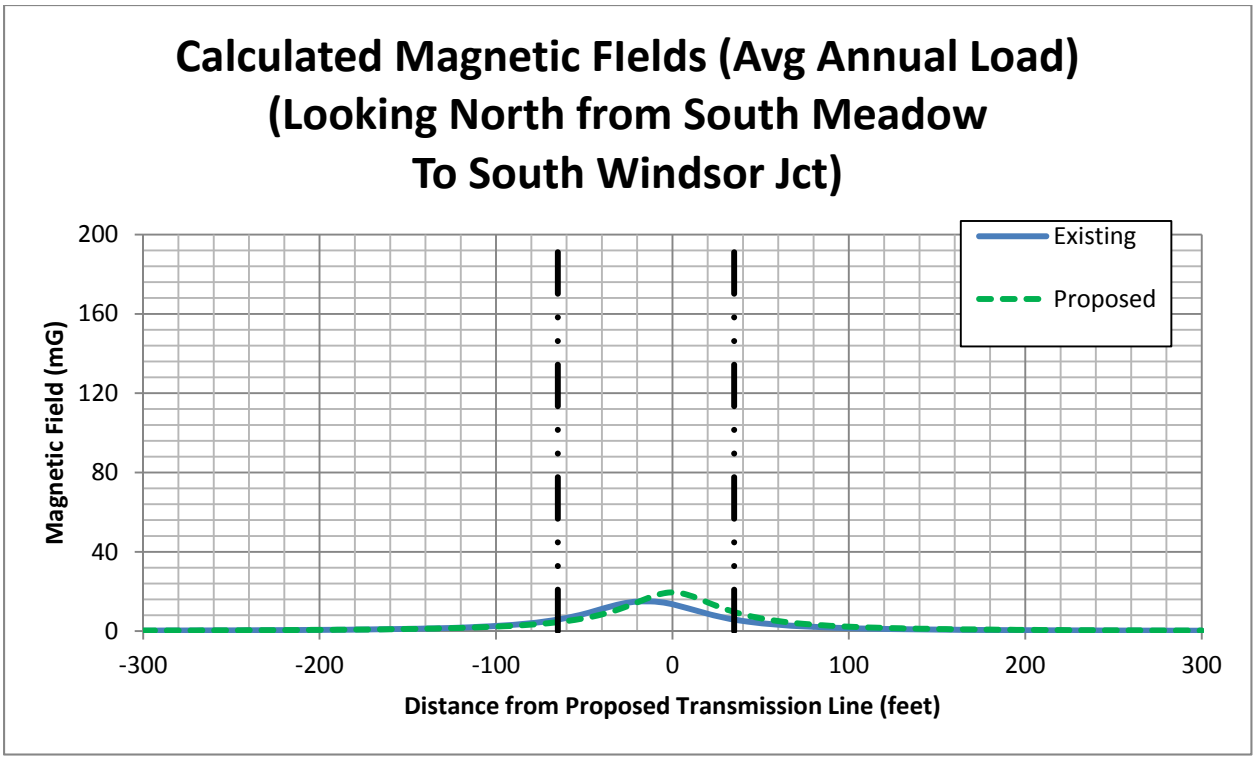
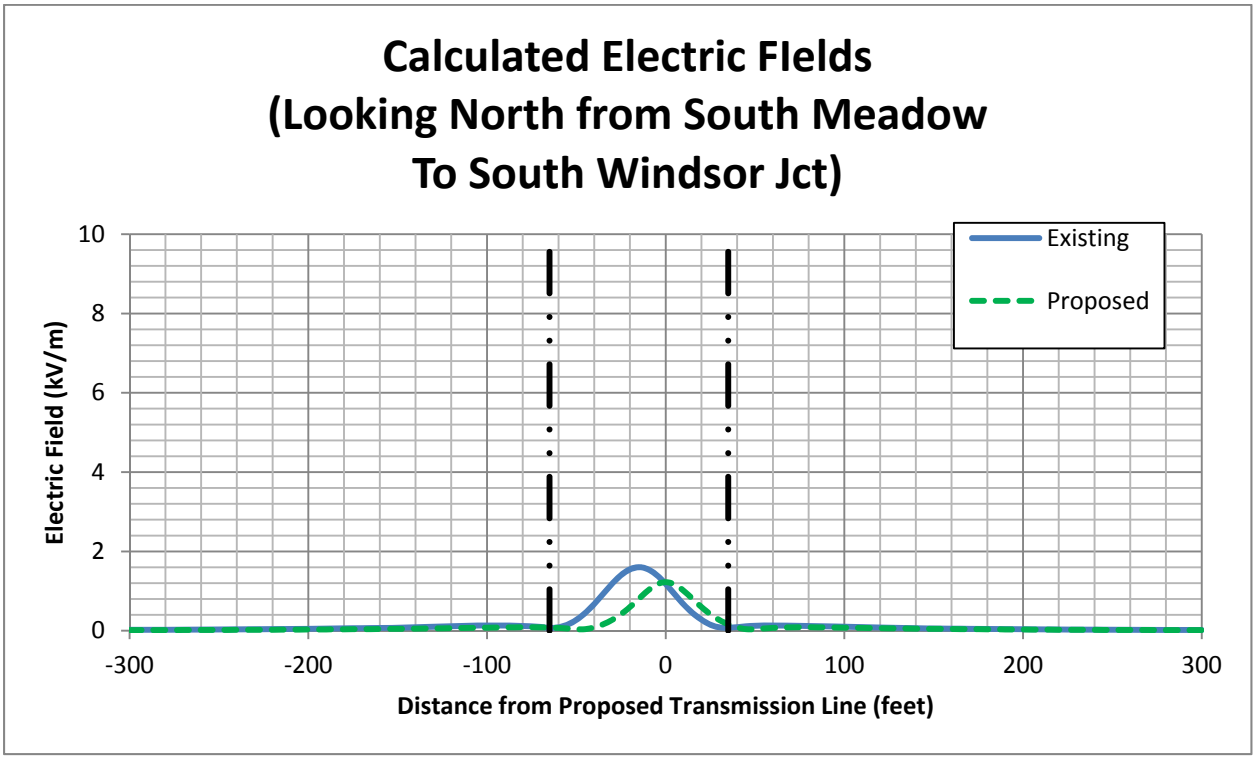


Figure E-2 - Calculated Electric Fields



7. Municipal and Property Owner Outreach

Prior to submitting the Petition, Eversource briefed municipal officials in Hartford, East Hartford, and South Windsor. Eversource presented an overview of the Project, the need for the Project, answered questions, and provided a point of contact to obtain additional information.

The East Hartford Engineering Department had previously requested that Eversource raise the structure heights on structures 3020 and 3021 to accommodate a higher clearance for levy maintenance purposes. Their request has been accommodated during this Rebuild.

Project personnel also met with focus area property owners to brief them on the proposed Project. The Project is committed to continuing to work with abutting land owners throughout the construction and remediation phases of the work.

In addition, two on-site meetings were held in April and May with a property owner in East Hartford regarding a structure 3006 shift on their property. The property owner is concerned with business interruption due to the new structure location. Eversource is working with, and

will continue to work with, the property owner to shift the structure to a more desirable location.

8. Eversource proposes to begin construction during the fall of 2016 for the Reconductoring section and expects that the construction would be completed by the end of 2016. The Rebuild section proposed to begin construction during the spring of 2017 and expects that the construction would be completed by the summer of 2018.

9. Section 16-50k(a) of the Connecticut General Statutes provides that a Certificate of Environmental Compatibility and Public Need is needed for proposed modifications of a facility that the Council determines would have a "substantial adverse environmental effect." Eversource respectfully submits that the proposed modifications would not result in a substantial adverse effect on the environment or ecology, 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 and, therefore, no Certificate is required.

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

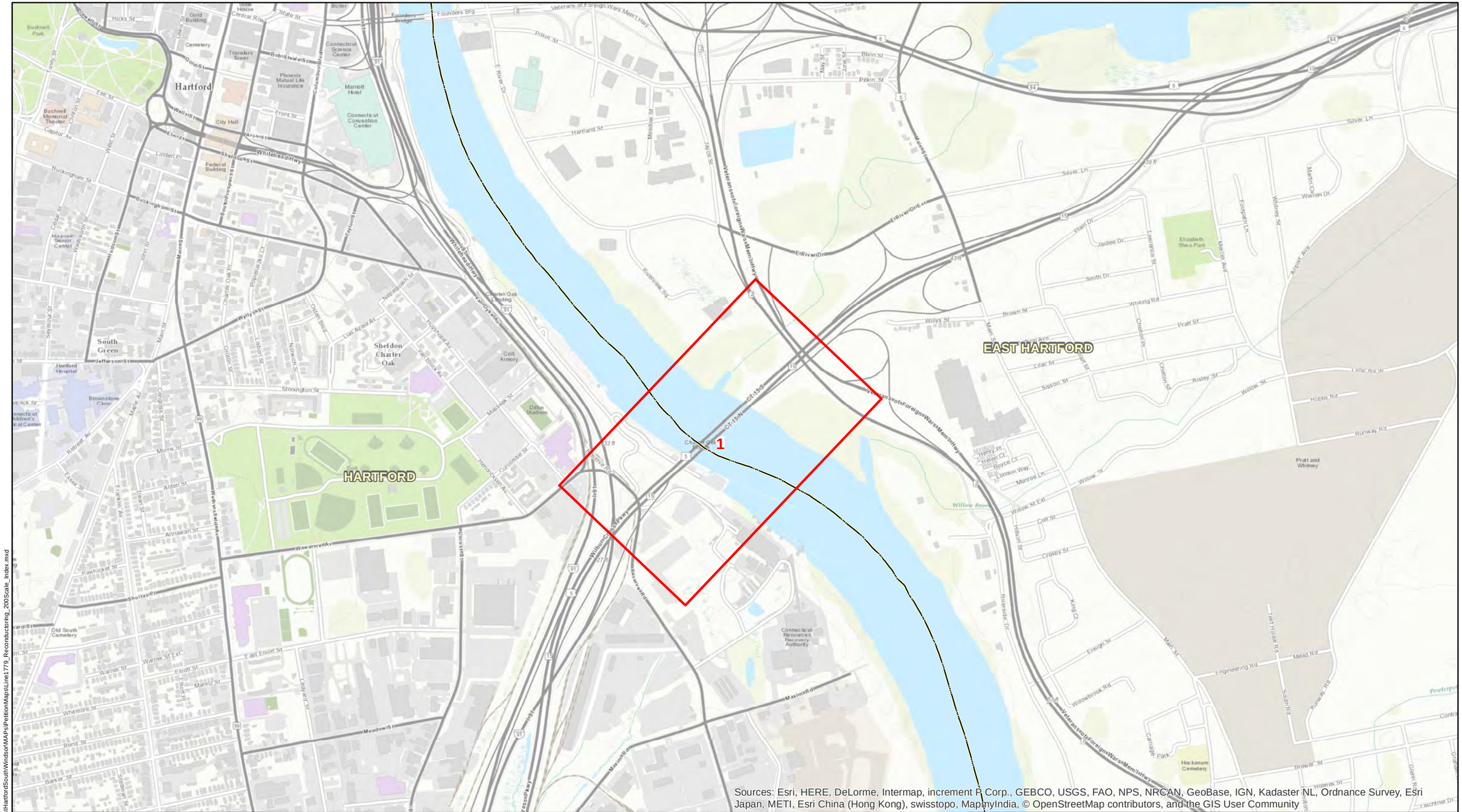
Kathleen M. Shanley
Manager – Transmission Siting
Eversource Energy
PO Box 270
Hartford, CT 06141-0270
Telephone: (860) 728-4527

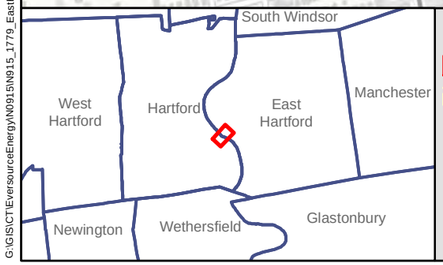
By: _____
Kathleen M. Shanley
Manager – Transmission Siting

List of Attachments

Attachment A: 1779 Line - Reconductoring
Attachment B: 1779 Line - Rebuild
Attachment C: Existing/Proposed ROW Cross Sections
Attachment D: Wetlands and Watercourses Report
Attachment E: Vernal Pool Survey
Attachment F: Letter to the Abutters and Affidavit

ATTACHMENT A





Legend

- Mapsheets
- Municipal Boundary

Feet
0 250 500 1,000

Attachment A

Index Map
1779 Line
Reconductor

Hartford and East Hartford
Connecticut

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Tighe&Bond

June, 2016

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MAPSHEET 1 of 11
1779 Line
Reconductoring
Existing Structures 3001A to 3001
City of Hartford and Town of East Hartford, Connecticut

AREA DESCRIPTION

Existing Land Use
- South Meadow Substation
- Connecticut River
- Commercial development
- Highways (Wilbur Cross Hwy / Routes 5 & 15)

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Substation adjacent to structures 3001A and 3002A
- Maintained lawn adjacent to structure 3003A
- Highway, Charter Oak Landing adjacent to structure 3007A
- Great River Park adjacent to structure 3001

Water Resources
- Wetlands – W-1
- Wetland Cover Types – PFO, PSS, PEM
- Watercourses – Connecticut River (not delineated), S-1 (Hockanum River)
- 100-year floodplain and floodway of Connecticut River

Wetland and Watercourse Crossings
- Wetland W-1 – construction mats for work pads and access road

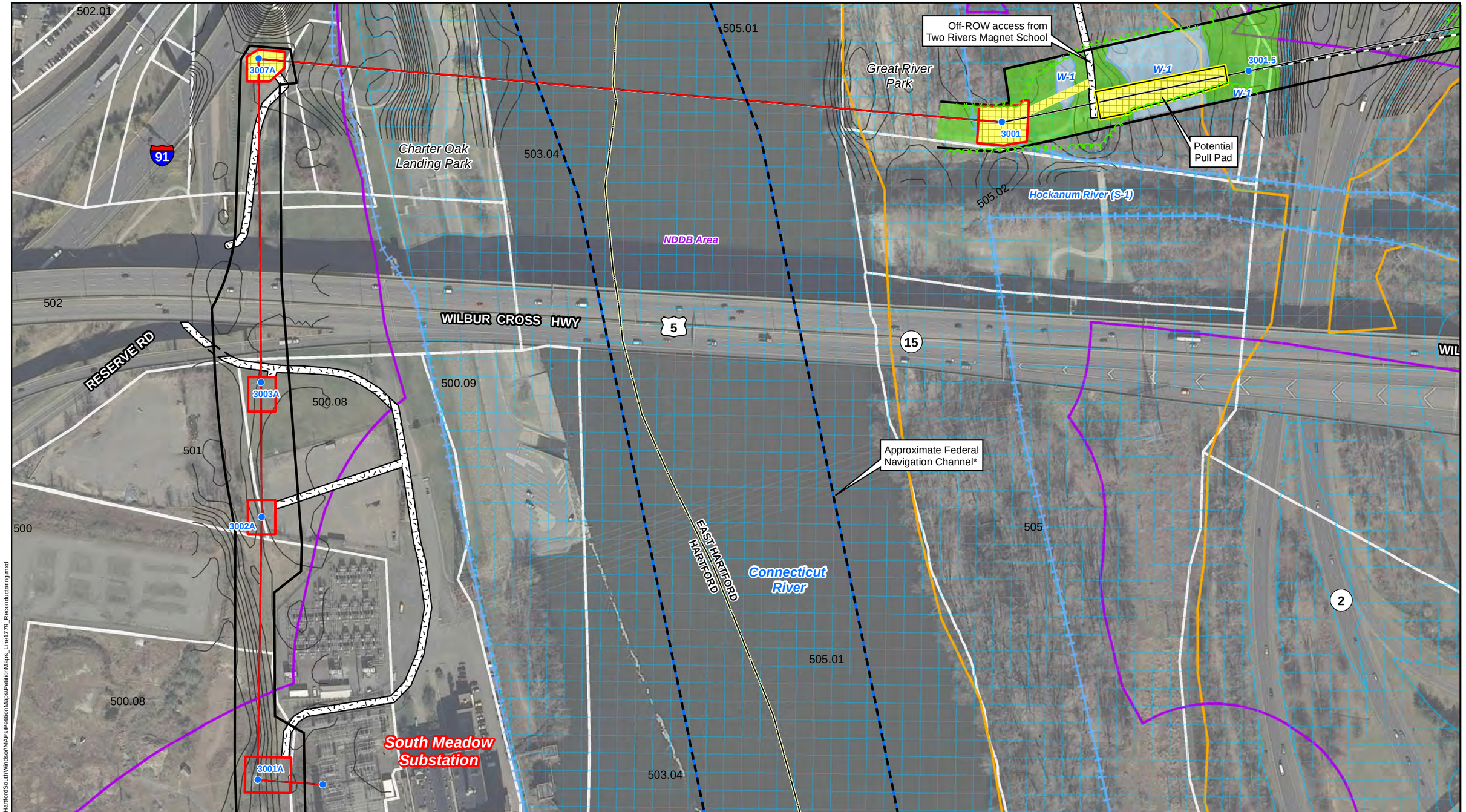
Right-of-Way Vegetation
- Scrub-shrub
- Emergent (lawn)
- Landscape trees
- Floodplain forest

Access
- Existing structures 3001A to 3003A: from substation access road
- Existing structure 3007A: from Charter Oak Landing Park access road
- Existing structure 3001: off-ROW access from Two Rivers Magnet School

Road Crossings
- Wilbur Cross Highway / Routes 5 & 15

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / None

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
500	MATERIALS INNOVATION AND RECYCLING AUTHORITY	100 RESERVE ROAD
500.08	MATERIALS INNOVATION AND RECYCLING AUTHORITY	300 MAXIM ROAD
500.09	CITY OF HARTFORD PUBLIC WORKS STREET DIVISION	10 RESERVE ROAD
500.11	CITY OF HARTFORD FLOOD COMMISSION	239 BRAINARD ROAD
501	CITY OF HARTFORD PUBLIC WORKS	80 RESERVE ROAD
503.04	CITY OF HARTFORD FLOOD COMMISSION	239 BRAINARD ROAD
504	COMMERCE CENTER ASSOCIATION INC C/O EASTFORD ASSOC CHERI BALDUCCI	341 EAST RIVER DRIVE
505	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	28 MEADOW STREET
505.01	TOWN OF EAST HARTFORD	CONNECTICUT RIVER
505.02	LISTED AS PUBLIC AREA ON EAST HARTFORD GIS	



Legend

- Existing Structure to Remain
- Gate
- Transmission Line Reconductor
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Contours
- Delineated Tree Line
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Temporary Matting
- Approximate Federal Navigation Channel*
- Perennial Watercourse (Centerline)
- Ordinary High Water Mark
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- 100 Year Flood Zone (FEMA)
- Floodway
- Critical Habitat
- Natural Diversity Database Area
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:

**Federal Navigation Channel is approximate based on Connecticut River, Below Hartford, Saybrook to Hartford, CT Wethersfield Shoal, Claybanks Bar, Claybanks Upper Bar, & Hartford Bar Condition Survey, 15-Foot Channel, Sheet V-105 from USACE NE District (12/15/2011). Base Map: CT ECO Map Service, Ortho Imagery (2012).*

1779 Line Reconductoring

Hartford & East Hartford, CT

Revised June 16, 2016

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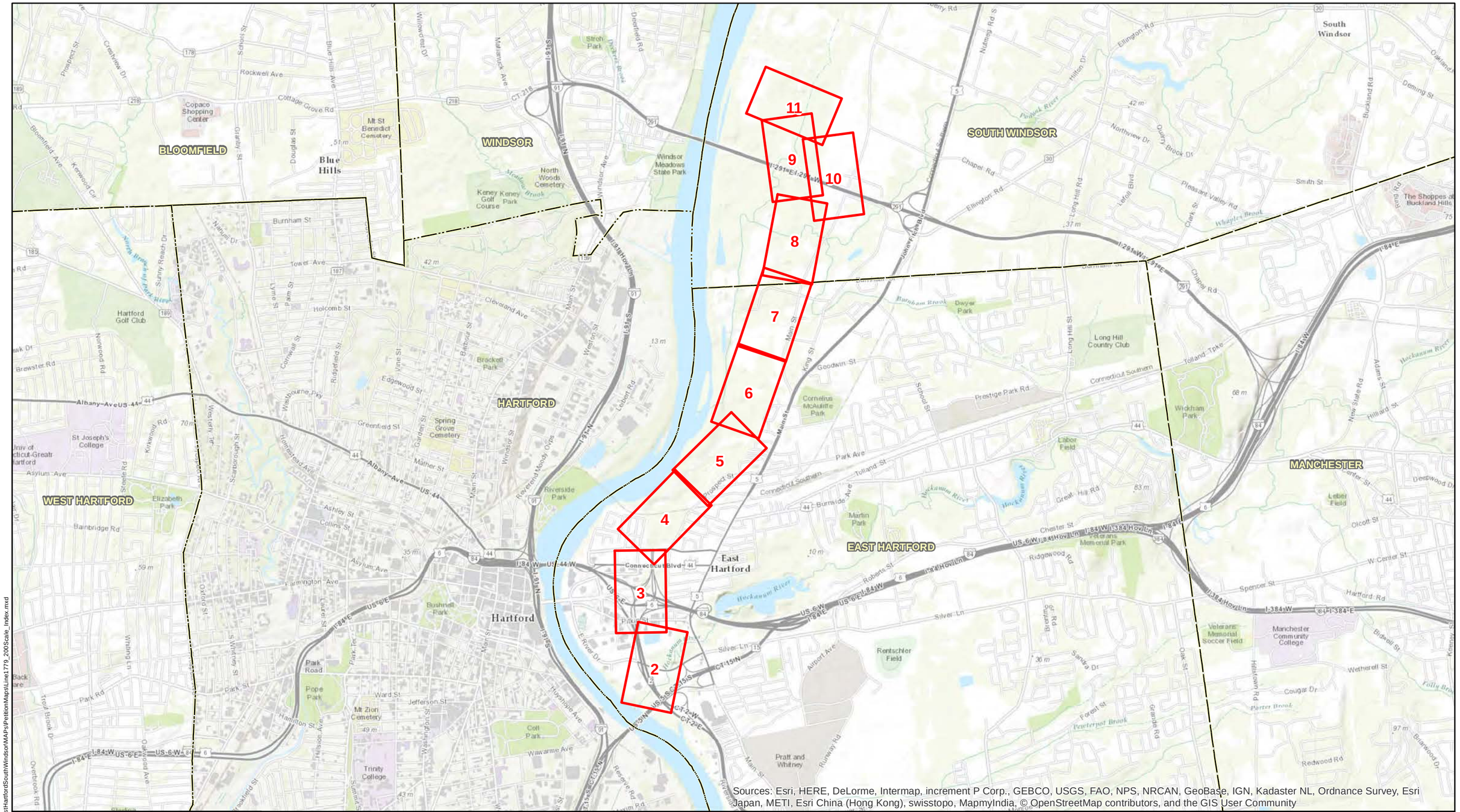
ATTACHMENT B



Legend

- Mapsheets
- Municipal Boundary

N W E S

Feet
0 1,000 2,000 4,000

Attachment B

Index Map
1779 Line
Rebuild

East Hartford & South Windsor,
Connecticut

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June, 2016

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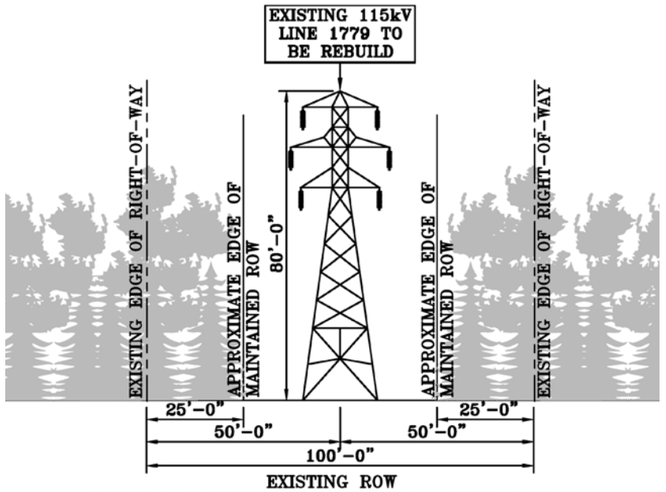
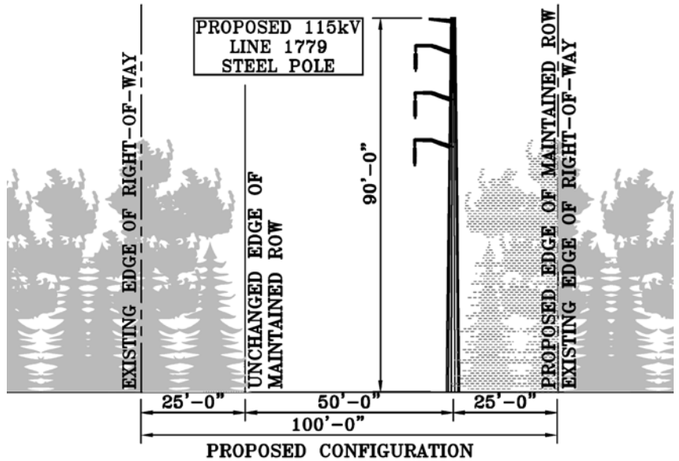
MAPSHEET 2 of 11
1779 Line
Rebuild
Existing Structures 3001.5 to 3005
Town of East Hartford, Connecticut



EXISTING ROW
EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
504	COMMERCE CENTER ASSOCIATION INC C/O EASTFORD ASSOC CHERI BALDUCCI	341 EAST RIVER DRIVE
505.02	LISTED AS PUBLIC AREA ON EAST HARTFORD GIS	
512	TOWN OF EAST HARTFORD - MEADOW HILL PUMP STATION	625 MAIN STREET
513	TOWN OF EAST HARTFORD - BELOW DIKE	625 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Parks (Great River Park)
- School (Two Rivers Magnet)
- Commercial development
- Highways (Route 2)
- Flood control area

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- School and highway adjacent to structure 3001.5
- Scrub-shrub, roadway, river adjacent to structure 3003
- Scrub-shrub, forest adjacent to structure 3004
- Flood control levee and impoundment adjacent to structure 3005

Water Resources
- Wetlands – W-1, W-2, W-3, W-4
- Wetland Cover Types – PSS, PEM, POW, PFO
- Watercourses – S-1 (Hockanum River), S-2
- 100-year floodplain and floodway of Hockanum River

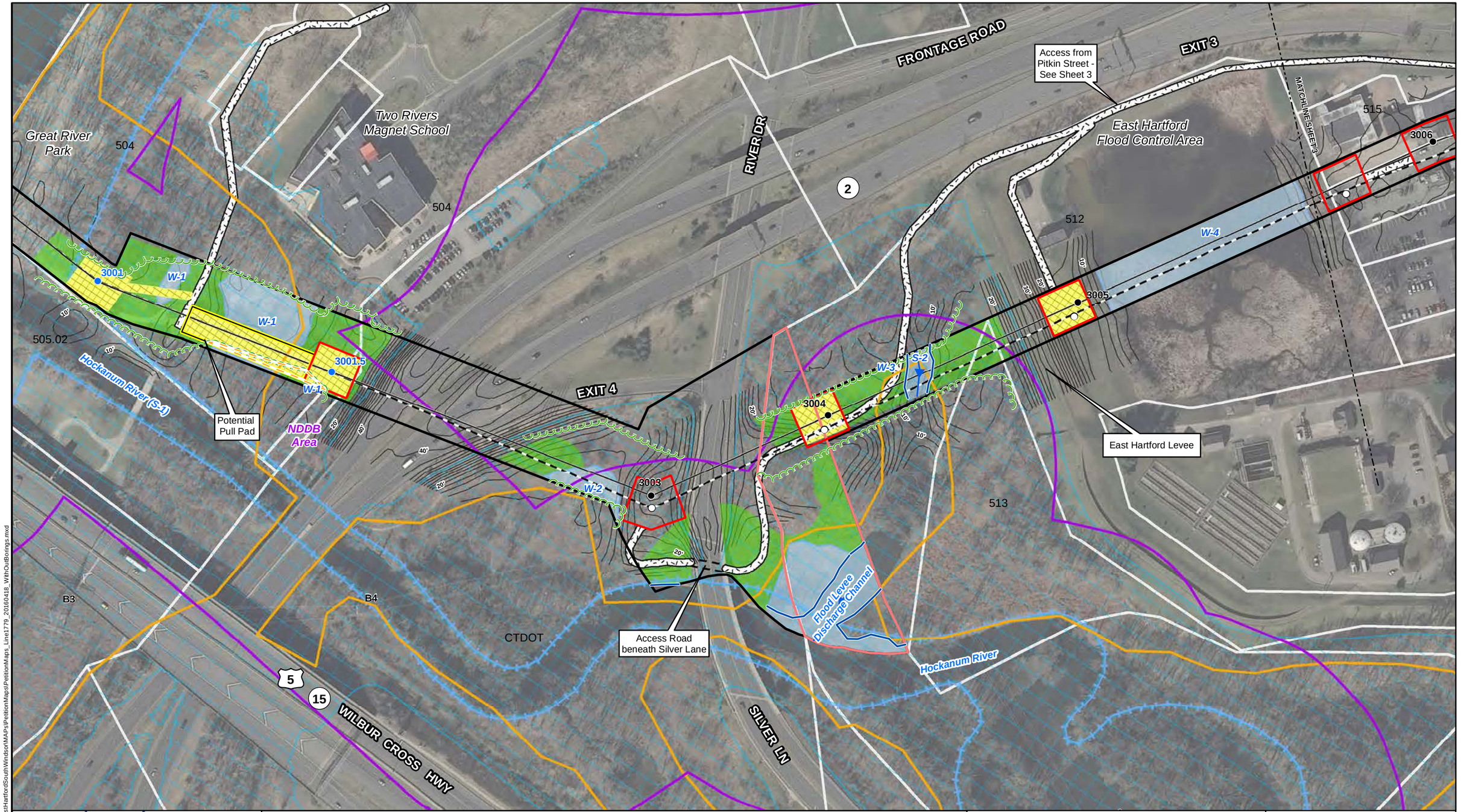
Wetland and Watercourse Crossings
- Wetland W-1 – construction mats for access road and work pads
- Wetland W-3 – construction mats for work pad (in CT wetland only)

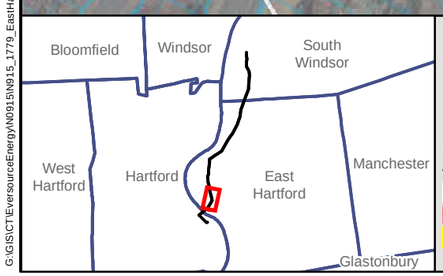
Right-of-Way Vegetation
- Scrub-shrub
- Emergent (lawn)
- Landscape trees
- Floodplain forest

Access
- Structure 3001.5: off-ROW access from Two Rivers Magnet School
- Structures 3003 to 3005: off-ROW access from Pitkin Street

Road Crossings
- Route 2
- Silver Lane

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet





Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

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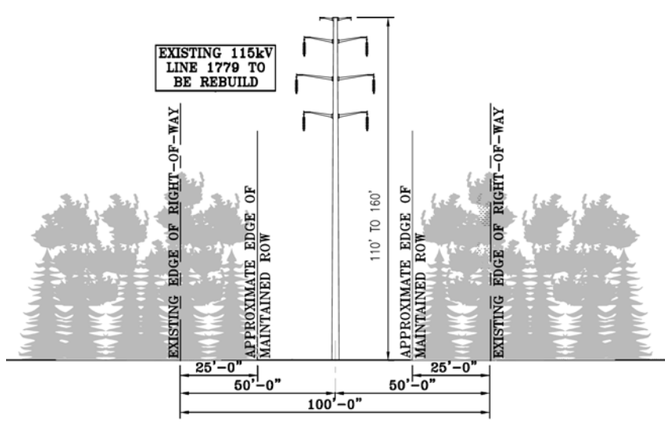
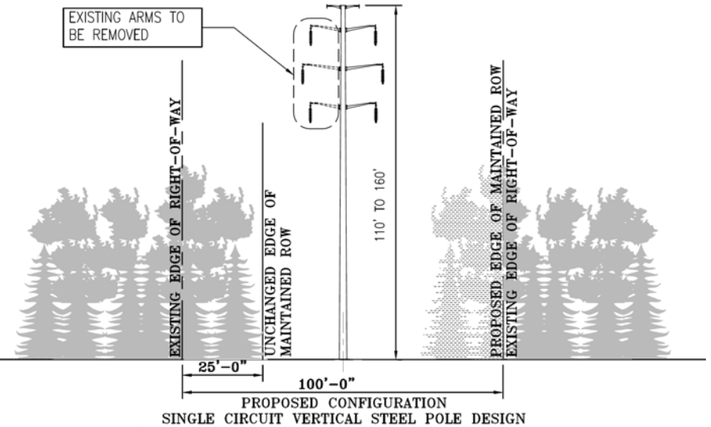
MAPSHEET 3 of 11
1779 Line
Rebuild
Existing Structures 3006 to 3011
Town of East Hartford, Connecticut



EXISTING ROW
EXISTING CONFIGURATION VERTICAL STEEL POLE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWN OF EAST HARTFORD STR. #3001 1/2, #3009, #3010 & #3011.



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL STEEL POLE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWN OF EAST HARTFORD STR. #3001 1/2, #3009, #3010 & #3011 MODIFICATION

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
512	TOWN OF EAST HARTFORD - MEADOW HILL PUMP STATION	625 MAIN STREET
516	MICKEYS DRIVE IN INC	119 PITKIN STREET
519	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	202 PITKIN STREET
520	SILVESTER SPACE SERVICES LIMITED PARTNERSHIP	100 PITKIN STREET
522	ASH REALTY ASSOCIATES LLC	99 ASH STREET
523	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	381 CONNECTICUT BOULEVARD
524	CONN TB & RES DISEASE	45 ASH STREET
525	BENACQUISTA FAMILY REALTY LLC C/O ENTERPRISE RENT A CAR	411 CONNECTICUT BOULEVARD
527	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	268 CONNECTICUT BOULEVARD
528	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	268 CONNECTICUT BOULEVARD
529	M I J I EAST HARTFORD LLC C/O SIMONS REAL ESTATE GROUP INC	400 CONNECTICUT BOULEVARD
530	221 GOVERNOR STREET LLC	221 GOVERNOR STREET

AREA DESCRIPTION

Existing Land Use
- Commercial development
- Highways (Route 6, Route 2, Route 44, Interstate 84)

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Commercial development (restaurant) adjacent to structure 3006
- Roadway / highway adjacent to structure 3007
- Highway ramp adjacent to structure 3008
- Commercial business adjacent to structures 3009 through 3011

Water Resources
- Wetlands – W-5, W-6
- Wetland Cover Types – PSS, PEM, PFO
- Watercourses – None

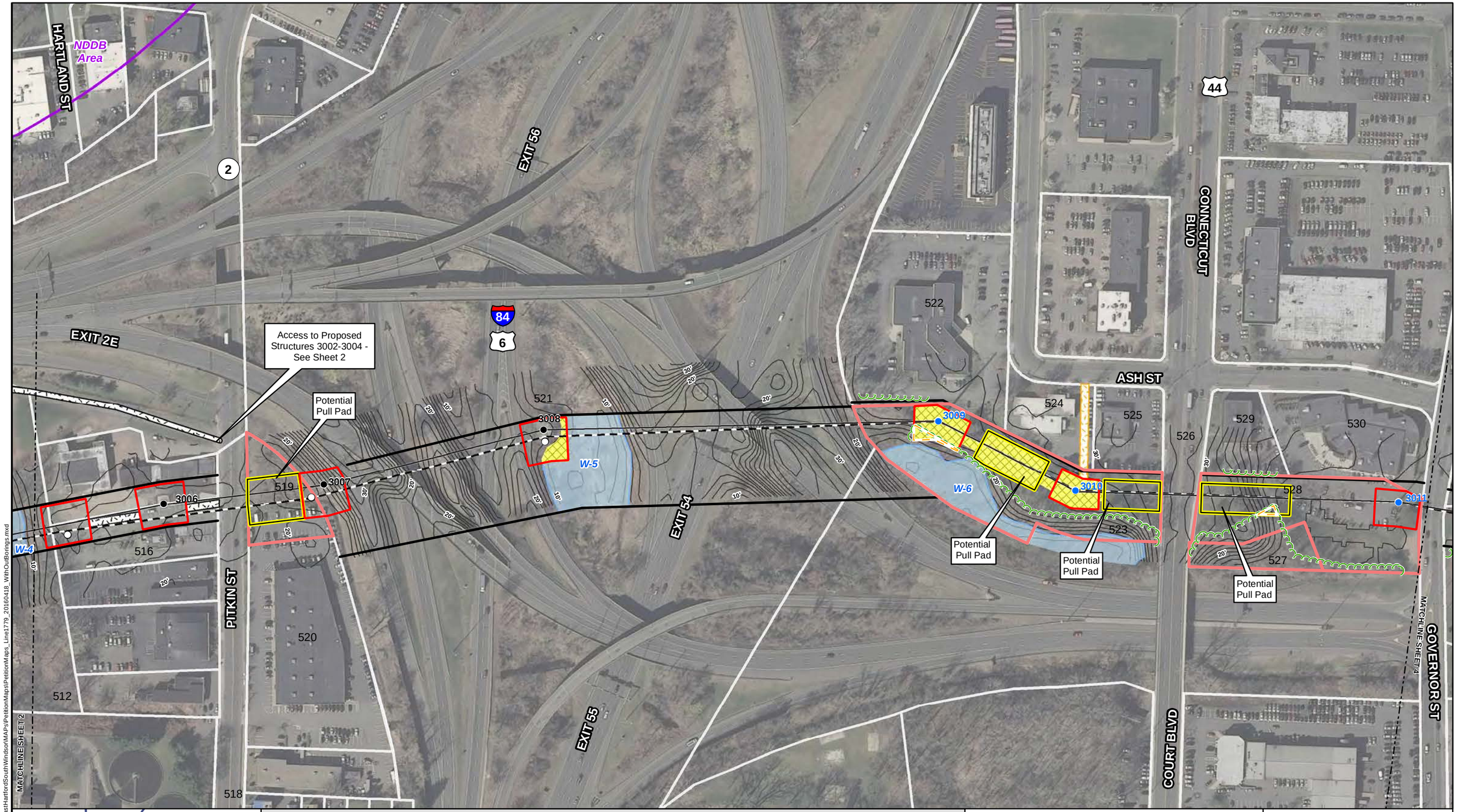
Wetland and Watercourse Crossings
- Wetland W-5 – temporary construction mats for work pad

Right-of-Way Vegetation
- Scrub-shrub
- Emergent (lawn)
- Landscape trees
- Forest

Access
- Structures 3006 and 3007: from Pitkin Street
- Structure 3008: from I-84 on-ramp
- Structures 3009 and 3010: from Connecticut Boulevard (Rte 44)
- Structure 3011: from Governor Street

Road Crossings
- Pitkin Street
- Interstate 84
- Connecticut Boulevard (Route 44)

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet



Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line Rebuild

East Hartford & South Windsor

East Hartford, CT

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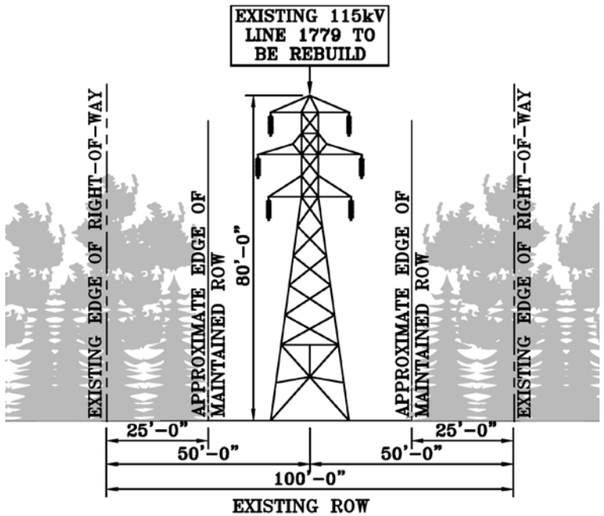
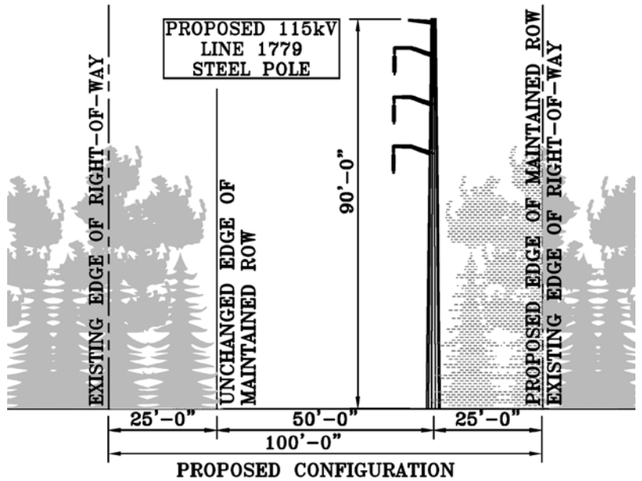
MAPSHEET 4 of 11
1779 Line
Rebuild
Existing Structures 3012 to 3017
Town of East Hartford, Connecticut



EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
527	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	268 CONNECTICUT BOULEVARD
528	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	268 CONNECTICUT BOULEVARD
532	WILLIAM R SMITH & ARTHUR BURNUS	224 GOVERNOR STREET
533	TOWN OF EAST HARTFORD	222 GOVERNOR STREET
535	18 22 THOMAS STREET LLC	22 THOMAS STREET
538	STATE OF CONNECTICUT	246 PROSPECT STREET
540	SILVESTER SPACE SERVICES LIMITED PARTNERSHIP	92 THOMAS STREET
550	CONNECTICUT SOUTHERN RAILROAD	
552	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	236 PROSPECT STREET
554	OLMSTED EDWARD C/O MARY J STEDMAN	150 PROSPECT STREET
557	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	132 PROSPECT STREET

AREA DESCRIPTION

Existing Land Use
- Commercial development
- Flood control levee
- Undeveloped land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Commercial development / undeveloped land adjacent to structures 3012 through 3013
- Undeveloped land adjacent to structures 3014 through 3017

Water Resources
- Wetlands – W-7, W-8
- Wetland Cover Types – PSS, PEM, PFO
- Watercourses – S-3

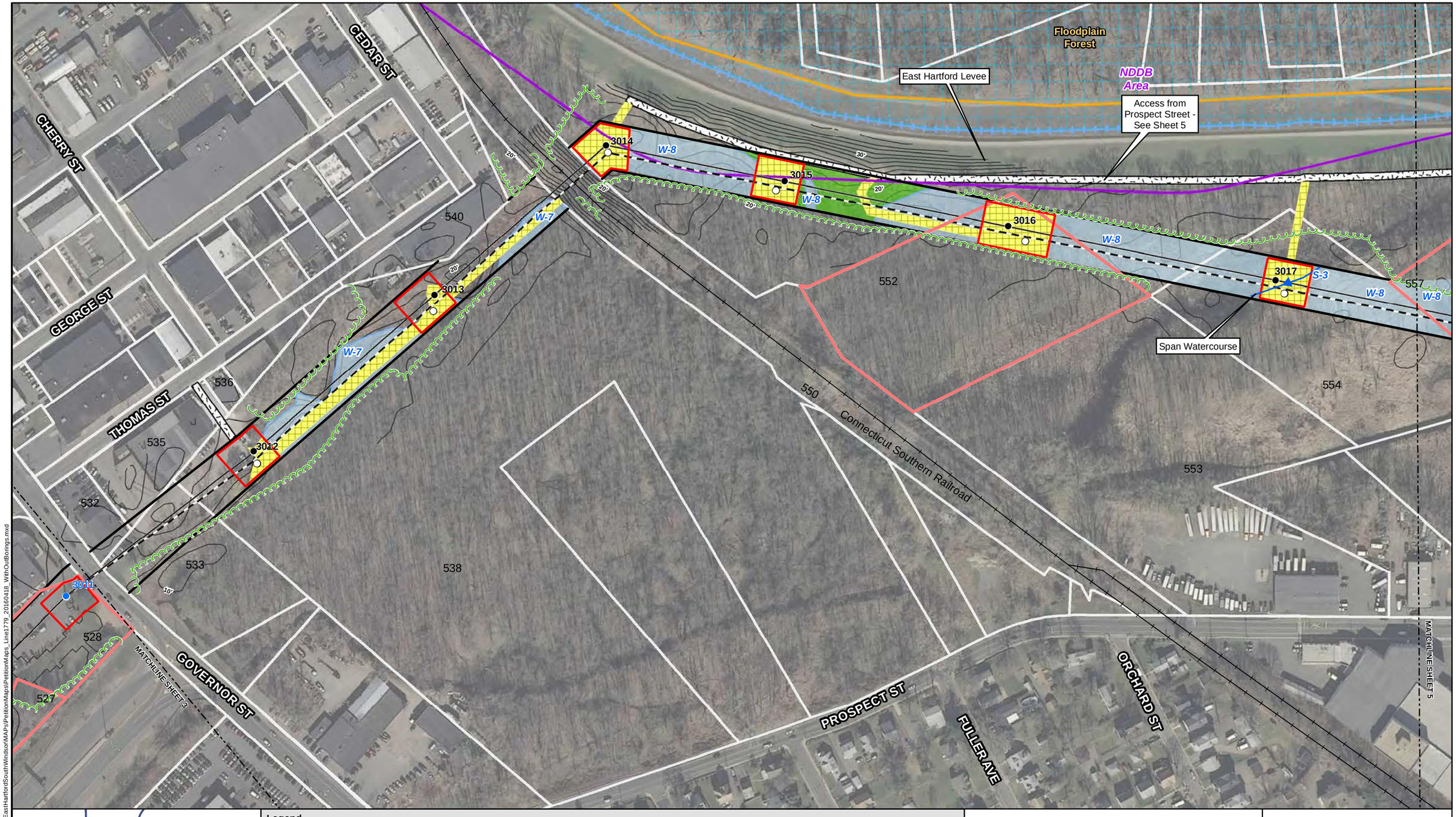
Wetland and Watercourse Crossings
- Wetland W-7 – temporary construction mats for work pads and access road
- Wetland W-8 – temporary construction mats for work pads and access road
- Watercourse S-3 – temporary construction mats for work pad

Right-of-Way Vegetation
- Scrub-shrub
- Emergent (knotweed)
- Forest

Access
- Structures 3012 and 3013: off-ROW access from Thomas Street
- Structures 3014 to 3017: off-ROW access from Prospect Street

Road Crossings
- Governor Street

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet



Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

EVERSOURCE ENERGY

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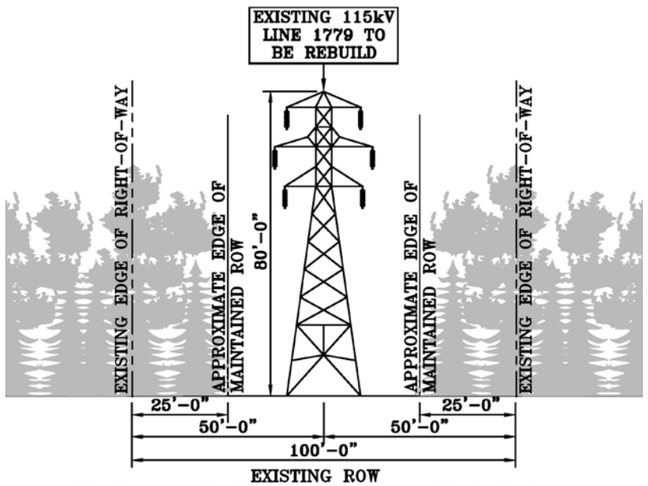
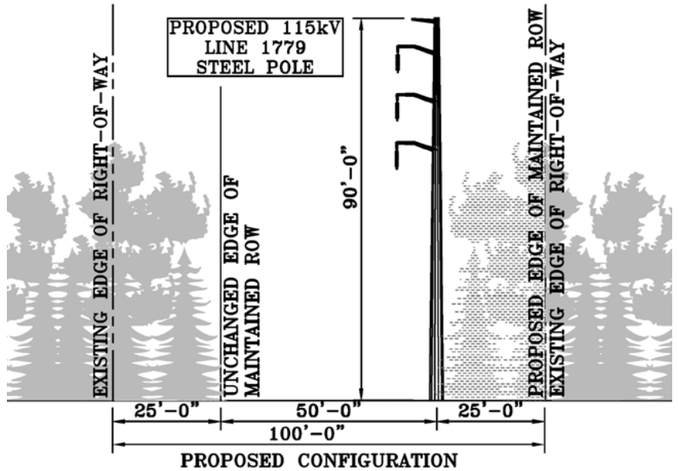
MAPSHEET 5 of 11
1779 Line
Rebuild
Existing Structures 3018 to 3021
Town of East Hartford, Connecticut



EXISTING ROW
EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
551	TOWN OF EAST HARTFORD	TOWN DIKE (FLOOD CONTROL)
554	OLMSTED EDWARD C/O MARY J STEDMAN	150 PROSPECT STREET
557	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	132 PROSPECT STREET
558	BETTY A WIESNER	146 PROSPECT STREET
583	RUTH M POWELL	92-94 PROSPECT STREET
584	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	198 PROSPECT STREET
585	GOODWIN COLLEGE INC	25 VINE STREET
586	TOWN OF EAST HARTFORD	170 NORTH MEADOW LANE

AREA DESCRIPTION

Existing Land Use
- Residential development
- Flood control levee
- Undeveloped land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Undeveloped land adjacent to structures 3018 through 3019
- Undeveloped / flood control levee adjacent to structures 3020 through 3021

Water Resources
- Wetlands – W-8, W-9
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – S-4

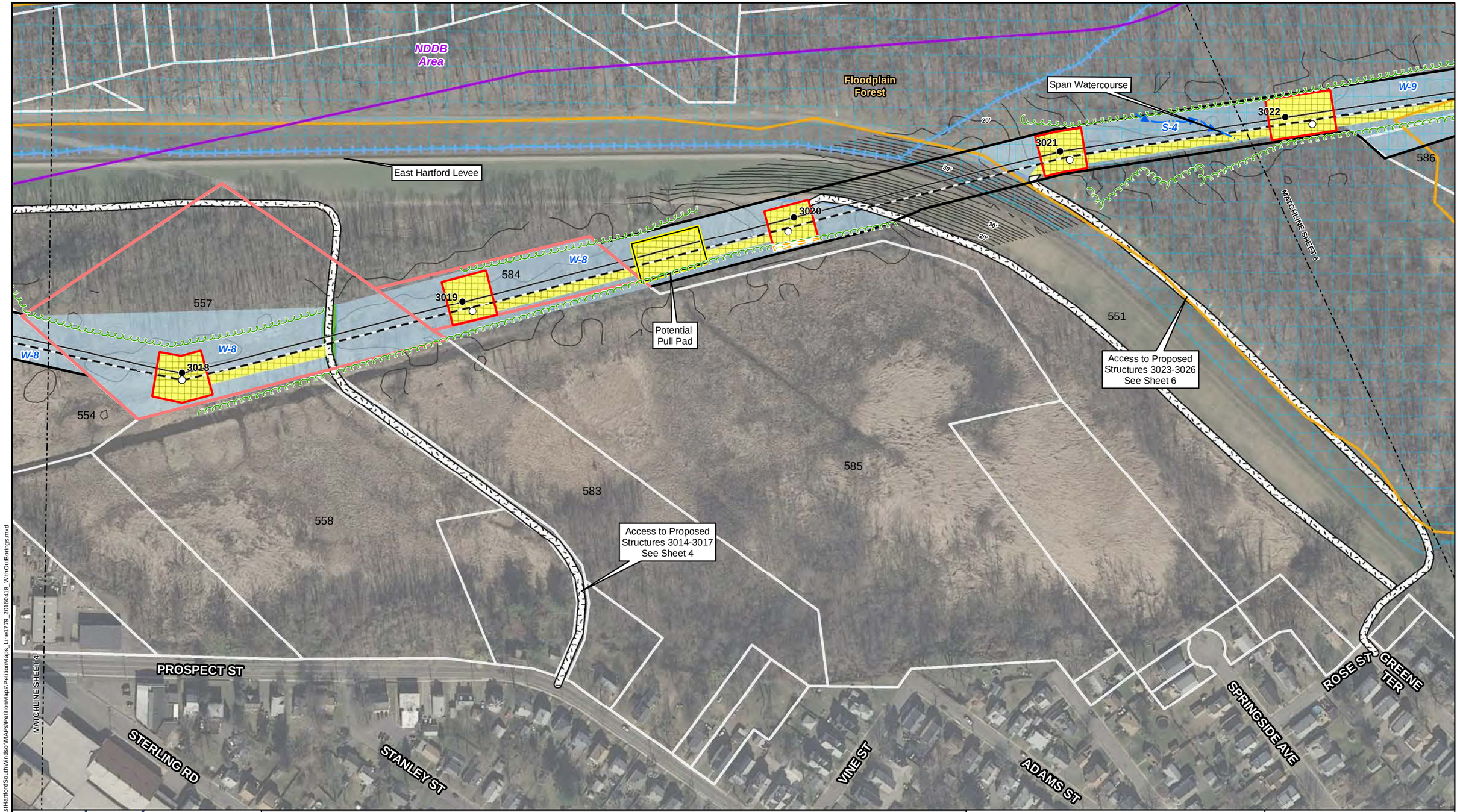
Wetland and Watercourse Crossings
- Wetland W-8 – temporary construction mats for work pads and access road
- Wetland W-9 – temporary construction mats for work pads and access road
- Watercourse S-4 – temporary construction mats for access road

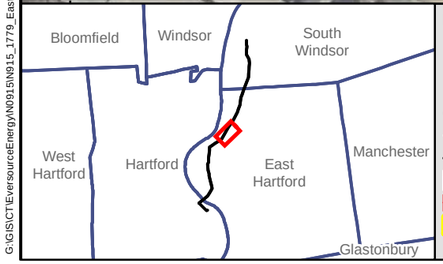
Right-of-Way Vegetation
- Scrub-shrub
- Floodplain forest

Access
- Structure 3018: off-ROW access from Prospect Street
- Structure 3019 to 3021: off-ROW access from Greene Terrace

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet





Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

EVERSOURCE ENERGY

Tighe&Bond

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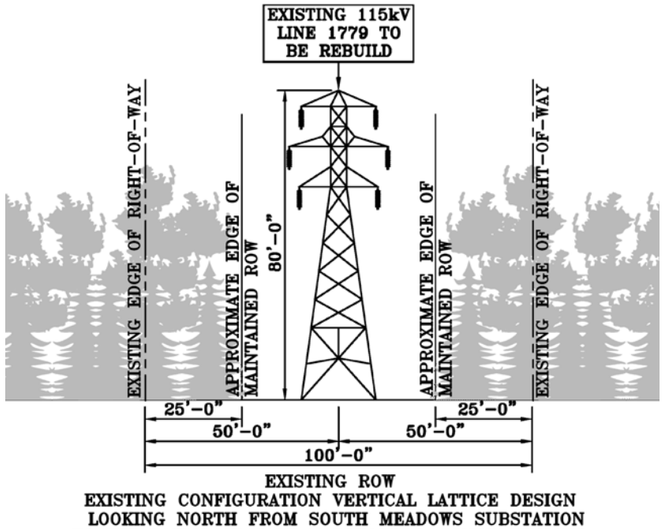
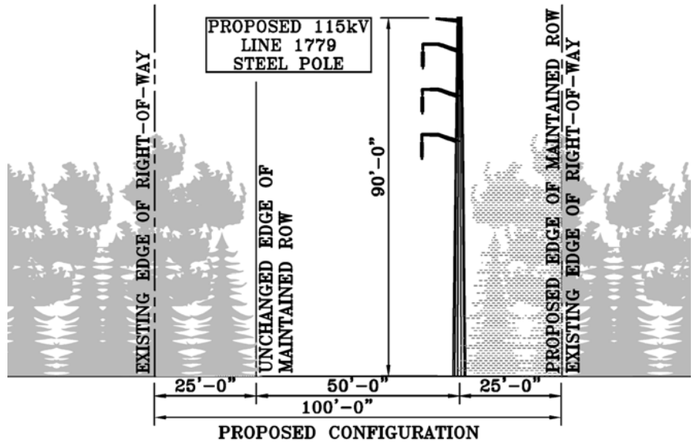
MAPSHEET 6 of 11
1779 Line
Rebuild
Existing Structures 3022 to 3027
Town of East Hartford, Connecticut



EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
551	TOWN OF EAST HARTFORD	TOWN DIKE (FLOOD CONTROL)
586	GOODWIN COLLEGE INC	25 VINE STREET
587	GOODWIN COLLEGE INC	166 NORTH MEADOW LANE
588	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	1801 MAIN STREET
589	JOHN A HICKEY	1793 MAIN STREET
590	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	1753 MAIN STREET
591	TRUTH BAPTIST CHURCH OF HARTFORD COUNTY CONNECTICUT	30 FELLOWS LANE
592	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	72 NORTH MEADOW LANE
593	JOHN A HICKEY	146 NORTH MEADOW LANE
601	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	70 NORTH MEADOW LANE
602	GOODWIN COLLEGE INC	68 NORTH MEADOW LANE
603	THE 1831 BUILDING ASSOCIATION OF EAST HARTFORD INC	1831 MAIN STREET
605	TOWN OF EAST HARTFORD	11 NORTH MEADOW LANE
608	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	19 NORTH MEADOW LANE
609	KEVIN R KEARNS	1859 MAIN STREET
616	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	1863 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Undeveloped floodplain
- Floodplain forest
- Agricultural land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Undeveloped land / forested floodplain adjacent to structures 3022 through 3027

Water Resources
- Wetlands – W-9
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – S-5 (Goodwin Brook)
- 100-year floodplain of Connecticut River

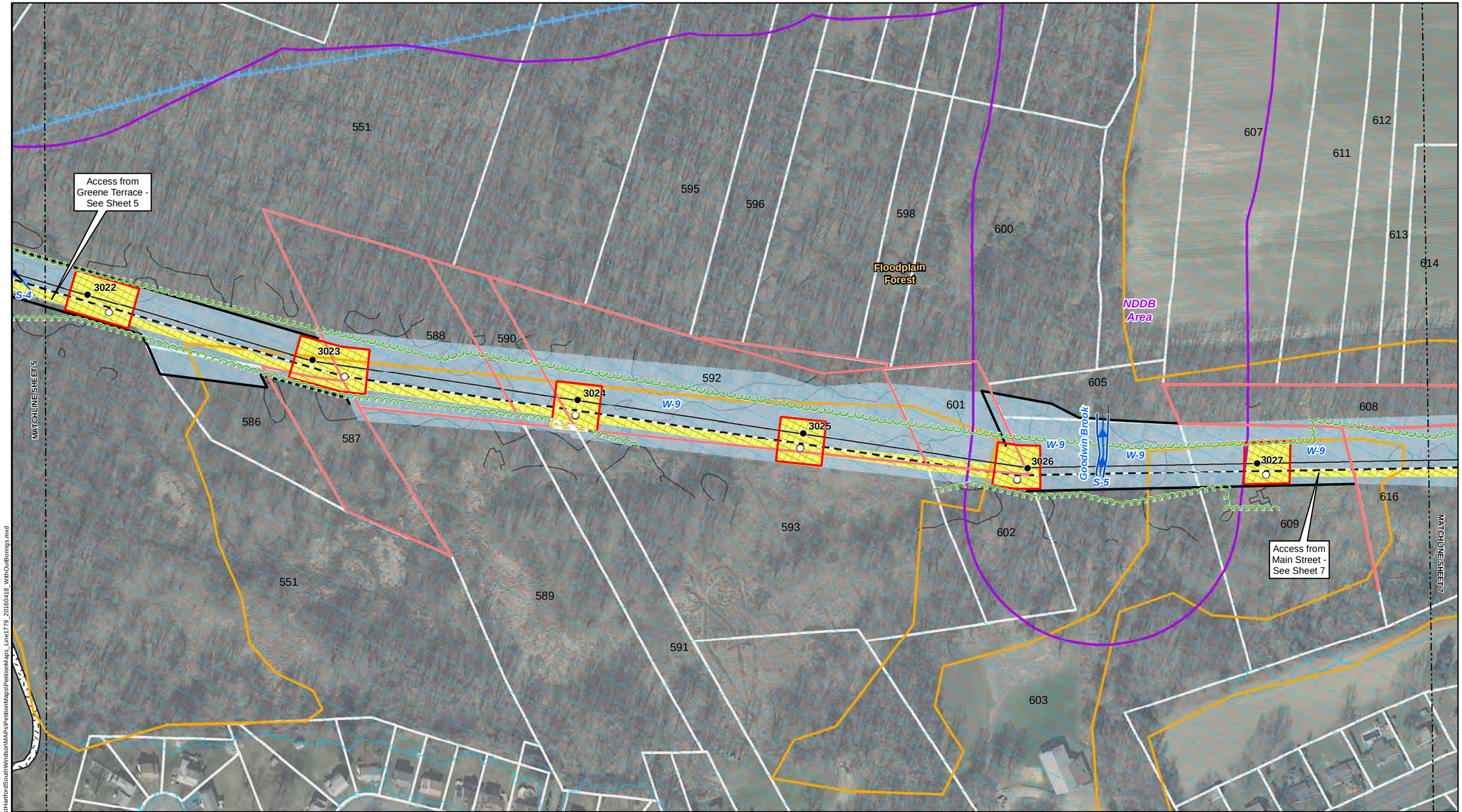
Wetland and Watercourse Crossings
- Wetland W-9 – temporary construction mats for work pads and access road

Right-of-Way Vegetation
- Scrub-shrub
- Emergent (knotweed)
- Floodplain forest

Access
- Structures 3022 to 3026: off-ROW access from Greene Terrace
- Structure 3027: off-ROW access from Main Street

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet



Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

EVERSOURCE ENERGY

Tighe&Bond

Sheet 6 of 11

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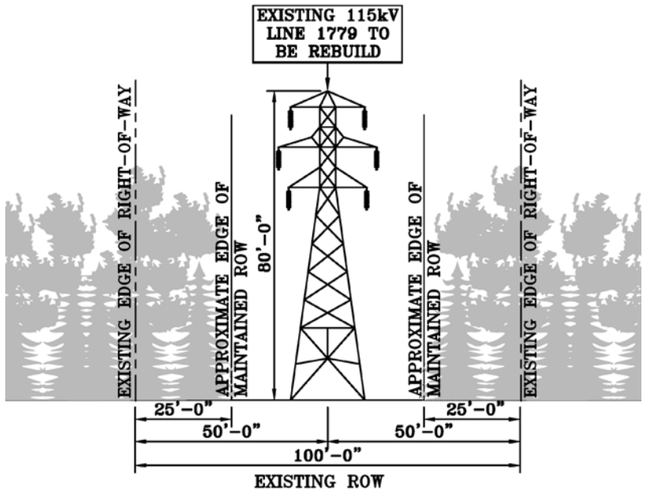
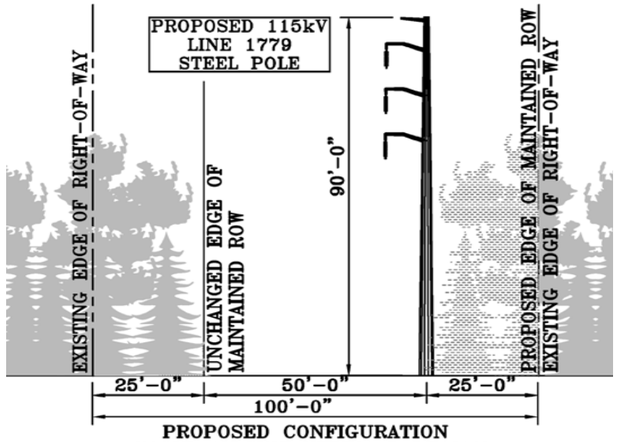
MAPSHEET 7 of 11
1779 Line
Rebuild
Existing Structures 3028 to 3032
Towns of East Hartford and South Windsor, Connecticut



EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
614	GOODWIN COLLEGE INC	20 NORTH MEADOW LANE
615	RESIDUARY TRUSTS FBO MICHAEL & DENNIS & ROBERT & RICHARD BOTTICELLO C/O LABELLE & NAAB PC	62 NORTH MEADOW LANE
616	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	1863 MAIN STREET
617	DONALD K BURNHAM	64 NORTH MEADOW LANE
618	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	58 NORTH MEADOW LANE
619	JAMES H & DONALD J BURNHAM	1895 MAIN STREET
620	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	28 NORTH MEADOW LANE
621	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	28 NORTH MEADOW LANE
622	DONALD KEVIN & DEBRA B BURNHAM	26 NORTH MEADOW LANE
623	BURNHAM BROTHERS INC	1907 MAIN STREET
624	AUSTIN S & ELIZABETH H HARLOW, TRUSTEES	1915 MAIN STREET
625	GOODWIN COLLEGE INC	45 NORTH MEADOW LANE
626	LINDSAY SULLIVAN	1929 MAIN STREET
628	TOWN OF EAST HARTFORD	1919 MAIN STREET
630	GOODWIN COLLEGE INC	24 NORTH MEADOW LANE
631	GOODWIN COLLEGE INC	33 NORTH MEADOW LANE
632	GOODWIN COLLEGE INC	10 NORTH MEADOW LANE
633	GOODWIN COLLEGE INC	13 NORTH MEADOW LANE
635	FRANCES & HAROLD C BURNHAM	1955 MAIN STREET
641	GOODWIN COLLEGE INC	5 NORTH MEADOW LANE
642	GOODWIN COLLEGE INC	9 NORTH MEADOW LANE
643	VILLAGE PARK INC	1 NORTH MEADOW LANE
645	GOODWIN COLLEGE INC	L159 MAIN STREET
646	GOODWIN COLLEGE INC	L161 MAIN STREET
647	MARK E SCHEINBERG	L163 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Undeveloped floodplain
- Floodplain forest
- Agricultural land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Undeveloped land / forested floodplain adjacent to structures 3022 through 3027

Water Resources
- Wetlands – W-9
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – S-6, S-7, S-8, S-9, S-10
- 100-year floodplain of Connecticut River

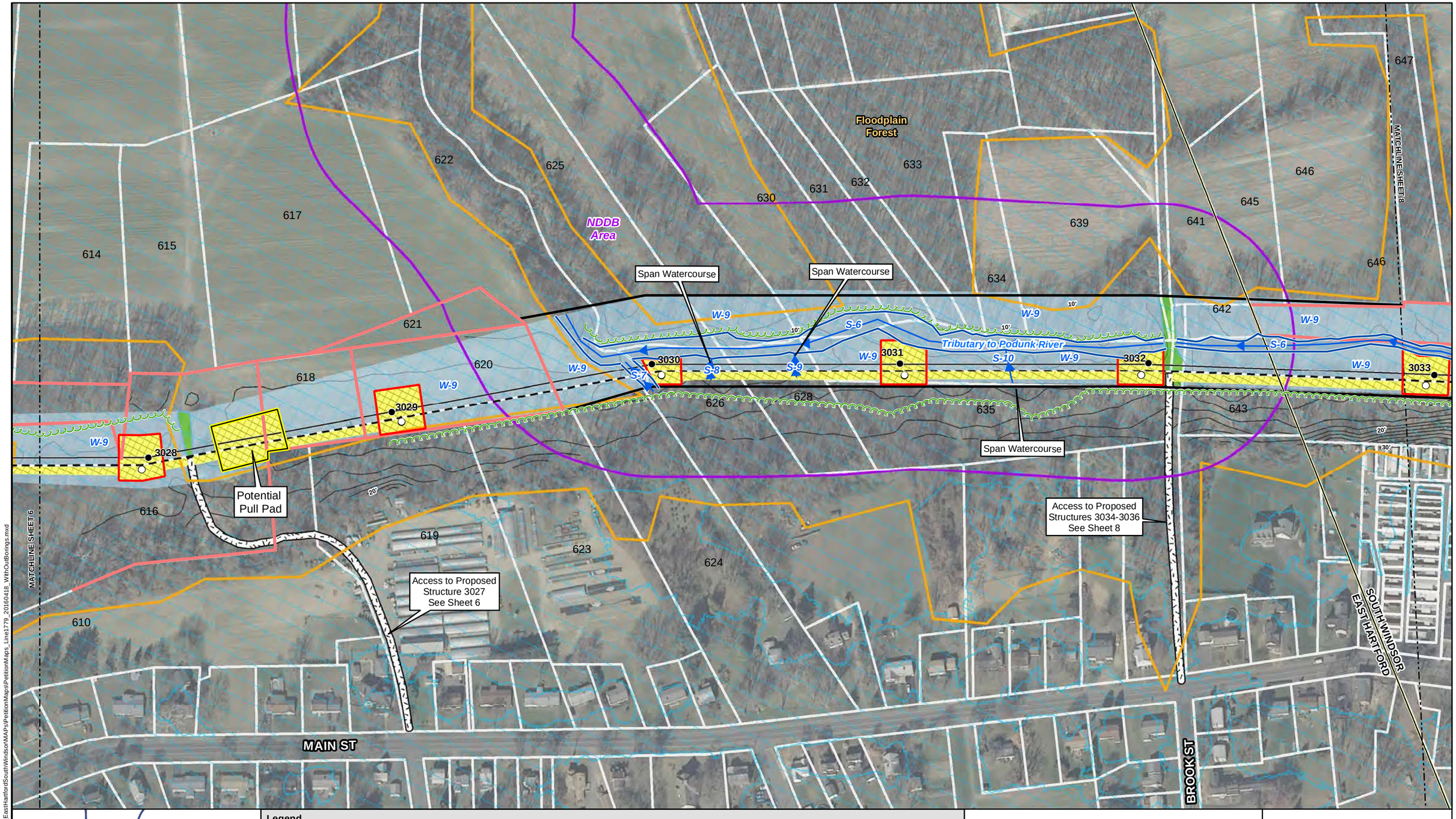
Wetland and Watercourse Crossings
- Wetland W-9 – temporary construction mats for work pads and access road
- Watercourses S-8, S-9, and S-10 – temporary construction mats for access road

Right-of-Way Vegetation
- Scrub-shrub
- Emergent
- Floodplain forest

Access
- Structures 3028 and 3029: off-ROW access from Main Street
- Structures 3030 to 3032: off-ROW access from Main Street

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet



Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet
0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

EVERSOURCE ENERGY

Tighe&Bond

Sheet 7 of 11

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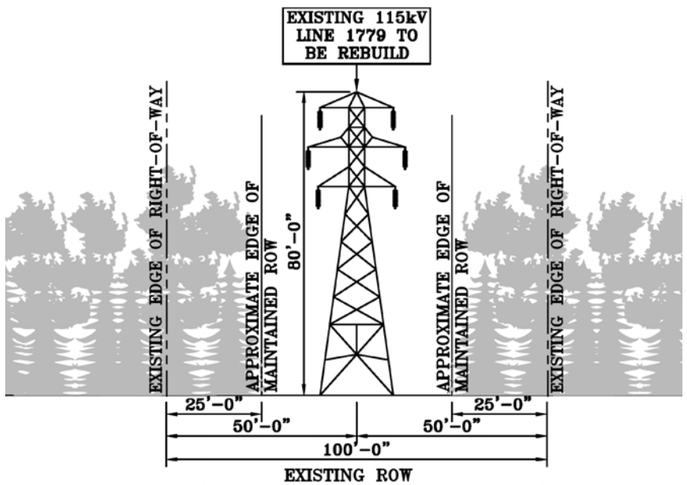
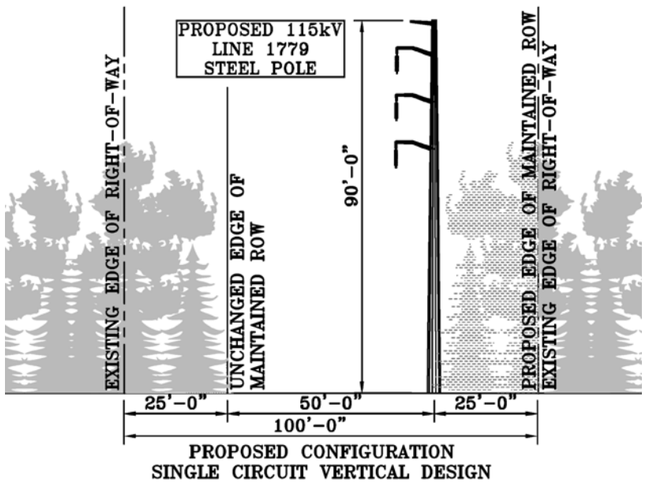
MAPSHEET 8 of 11
1779 Line
Rebuild
Existing Structures 3033 to 3039
Town of South Windsor, Connecticut



EXISTING ROW
EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
647	MARK E SCHEINBERG	L163 MAIN STREET
648	JAMES H & ROBERT H BURNHAM	L164 MAIN STREET
649	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	L160 MAIN STREET
650	VILLAGE PARK INC	L003 MAIN STREET
666	GARY E & JUNE SAMPLE	57 MAIN STREET
667	GOODWIN COLLEGE INC	L165 MAIN STREET
668	CHERYL S COHEN	99 MAIN STREET
670	DONALD K & JAMES H BURNHAM	L172 MAIN STREET
671	MARILYN A GRILLO	L010 MAIN STREET
672	BARBARA O WOODS	L193 MAIN STREET
673	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	L191 MAIN STREET
674	BARBARA O WOODS	L194 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Undeveloped floodplain
- Floodplain forest
- Agricultural land
- Residential development

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Residential adjacent to structures 3033
- Undeveloped land adjacent to structures 3034 through 3039

Water Resources
- Wetlands – W-9
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – S-6, S-10A, S-11 (Podunk River), S-12
- 100-year floodplain of Connecticut River
- 100-year floodplain and floodway of Podunk River

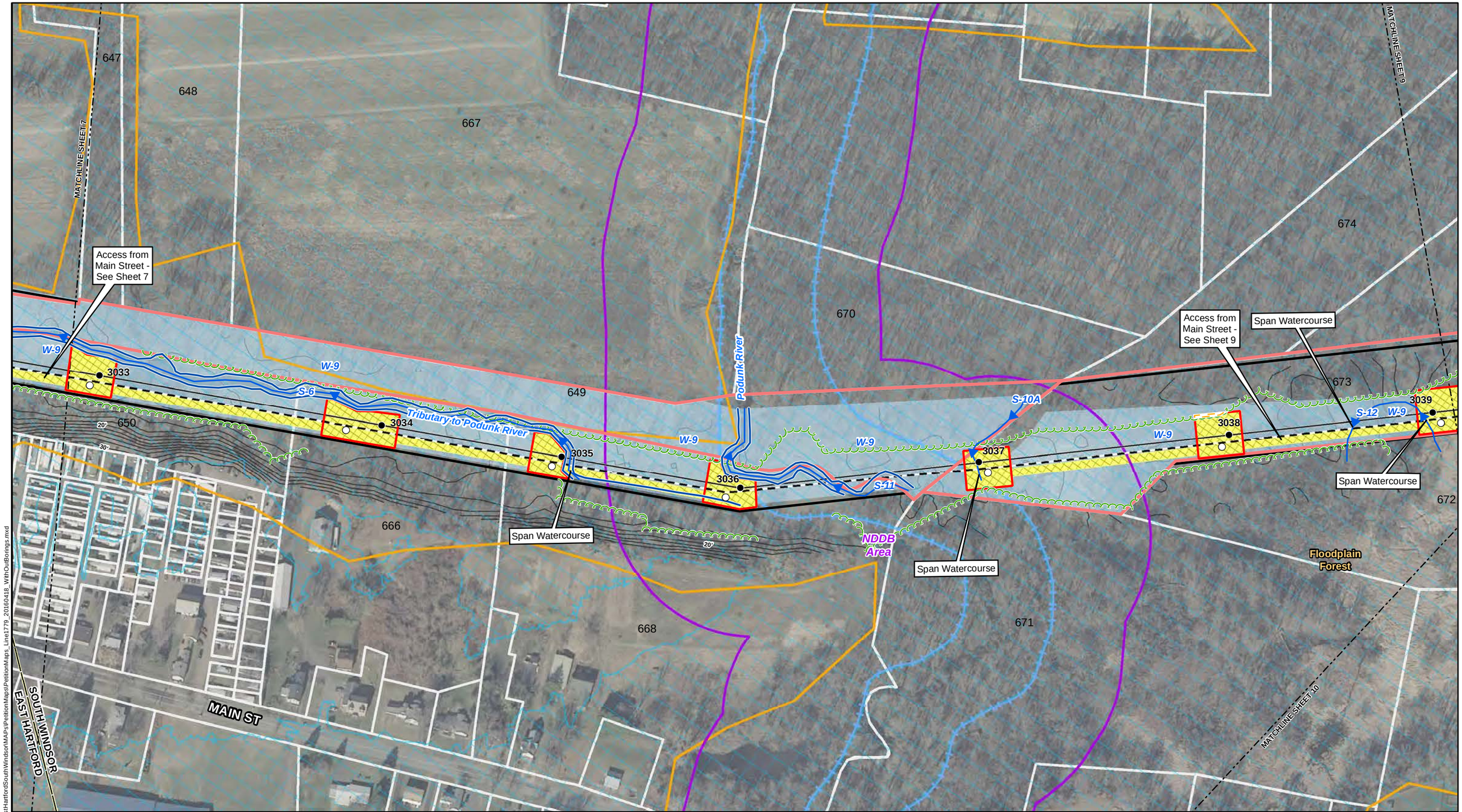
Wetland and Watercourse Crossings
- Wetland W-9 – temporary construction mats for work pads and access road
- Watercourse S-6, S-10, S-12 – temporary construction mats for access road

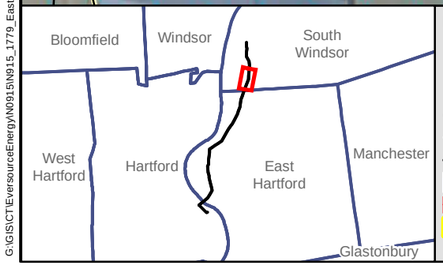
Right-of-Way Vegetation
- Scrub-shrub
- Emergent
- Floodplain forest

Access
- Structures 3033 to 3036: off-ROW access from Main Street
- Structures 3037 to 3039: off-ROW access from Main Street

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet





Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford, CT

EVERSOURCE ENERGY

Tighe&Bond

Sheet 8 of 11

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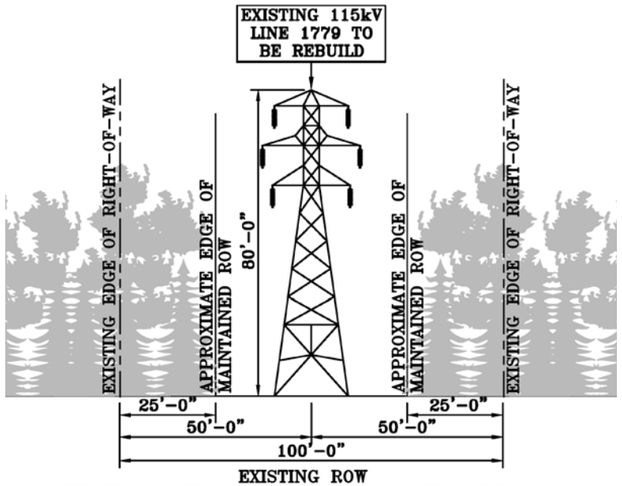
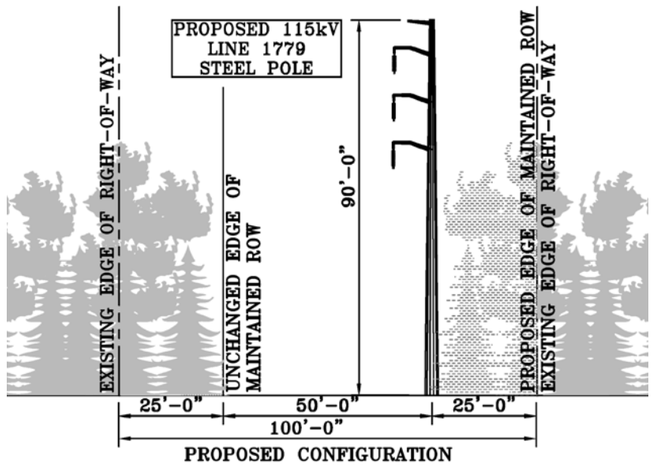
MAPSHEET 9 of 11
1779 Line
Rebuild
Existing Structures 3040 to 3044
Town of South Windsor, Connecticut



EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
675	KATHLEEN A YOUNG	L192 MAIN STREET
677	STATE OF CONNECTICUT	295-297 MAIN STREET
680	STATE OF CONNECTICUT	L011 JOHN FITCH BOULEVARD, I-291
681	BARBARA O WOODS	359 MAIN STREET
682	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	L196 MAIN STREET
685	TOWN OF SOUTH WINDSOR	NORTH KING STREET
686	ITALIAN-AMERICAN SPORTSMEN HUNTING & FISHING CLUB C/O LUIGI GIANSIRACUSA	L198 MAIN STREET
687	THE CONNECTICUT LIGHT & POWER COMPANY DBA EVERSOURCE	L207 MAIN STREET
688	ITALIAN-AMERICAN SPORTSMENS HUNTING & FISHING LLC	L208 MAIN STREET
689	JESSE R & KIMBERLY M CHRISTOPHEL	407 MAIN STREET
694	329 ASSOCIATES LLC	L214 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Undeveloped floodplain
- Floodplain forest
- Agricultural land
- Highway

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Undeveloped land adjacent to structures 3040 through 3044

Water Resources
- Wetlands – W-9, W-10
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – S-12, S-13
- 100-year floodplain of Connecticut River

Wetland and Watercourse Crossings
- Wetland W-9 – temporary construction mats for work pads and access road
- Watercourse S-12 – temporary construction mats for work pad

Right-of-Way Vegetation
- Scrub-shrub
- Emergent
- Floodplain forest

Access
- Structures 3040 to 3044: off-ROW access from Main Street

Road Crossings
- Interstate 291

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet

Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

East Hartford & South Windsor, CT

EVERSOURCE ENERGY

Tighe&Bond

Sheet 9 of 11

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MAPSHEET 10 of 11
1779 Line
Rebuild
Off-ROW Access to Existing Structures 3037 to 3048
Town of South Windsor, Connecticut

AREA DESCRIPTION

Existing Land Use
Adjacent Land Use

- Undeveloped floodplain
- Residential
- Floodplain forest
- Agricultural land

RIGHT-OF-WAY DESCRIPTION

Not Applicable – Off-ROW Access

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
Not Applicable		

MATCHLINE SHEET 8

MATCHLINE SHEET 9

671

672

680

681

686

689

291

MAIN ST

MAIN ST

Access to Proposed Structures 3037-3040 See Sheets 8 & 9

Access to Proposed Structures 3041-3048 See Sheets 9 & 11

NDDB Area

Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line
Rebuild

East Hartford & South Windsor

South Windsor, CT

EVERSOURCE ENERGY

Tighe&Bond

Sheet 10 of 11

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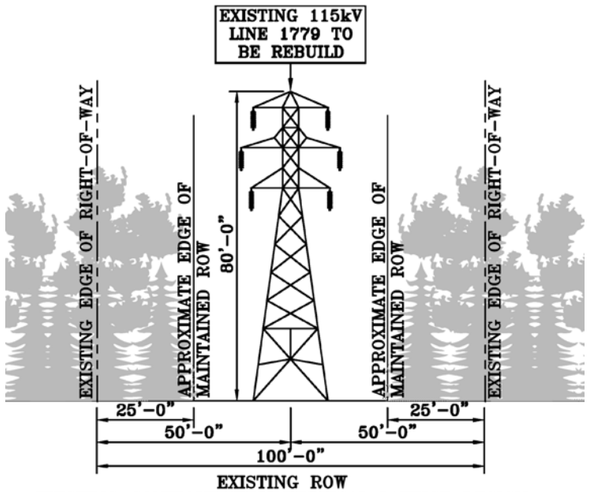
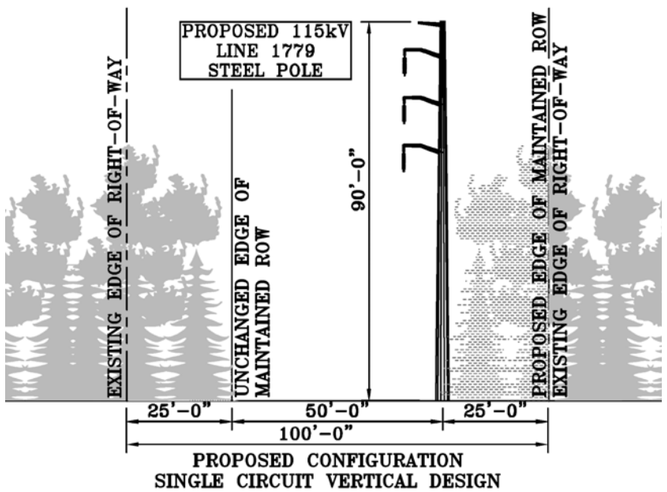
MAPSHEET 11 of 11
1779 Line
Rebuild
Existing Structure 3046
Town of South Windsor, Connecticut



EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

ABUTTERS TO PROJECT RIGHT-OF-WAY		
Line List	**Owner Name (Now or Formerly)**	**Site Address**
689	JESSE R & KIMBERLY M CHRISTOPHEL	407 MAIN STREET
694	329 ASSOCIATES LLC	L214 MAIN STREET
695	THE NUWAY TOBACCO COMPANY	457 MAIN STREET
696	FIVE S GROUP LLC	605 MAIN STREET

AREA DESCRIPTION

Existing Land Use
- Undeveloped floodplain
- Floodplain forest
- Agricultural land

RIGHT-OF-WAY DESCRIPTION

Right-of-Way Land Use
- Undeveloped land adjacent to structures 3046 through 3048

Water Resources
- Wetlands – W-10
- Wetland Cover Types – PSS, PEM, PFO, POW
- Watercourses – Connecticut River (not delineated)
- 100-year floodplain of Connecticut River

Wetland and Watercourse Crossings
- Wetland W-10 – temporary construction mats for work pads and access road

Right-of-Way Vegetation
- Scrub-shrub
- Emergent
- Floodplain forest

Access
- Structure 3046: off-ROW access from Main Street

Road Crossings
- None

Existing Maintained Right-of-Way Width / Proposed Right-of-Way Clearing
- 50 feet / 25 feet

NDDB Area

696

695

694

689

3052

3047

3046

3045

3044

W-10

W-10

20'

20'

20'

Potential Pull Pad

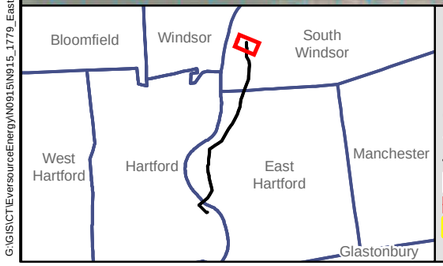
Structure to be removed. It will not be replaced.

Potential Pull Pad

Access from Main Street - See Sheet 10 (Existing Road)

MATCHLINE SHEET 9

G:\GIS\CT\Eversource\Energy\N0915\N915_1779_EastHartfordSouthWindsor\MAPs\PetitionMaps\PetitionMaps_Line1779_20160418_WithOutBorings.mxd



Legend

- Existing Structure to Remain
- Existing Structure to be Replaced
- Proposed Structure
- Proposed Transmission Line
- Existing Transmission Line
- Approximate Right-of-Way
- Limit of Tree Clearing
- Work Pad
- Potential Pull Pad
- Existing Preferred Access Road
- Existing Alternate Access Road
- Temporary Matting
- Culvert
- Gate
- Contours
- Railroad
- Intermittent Watercourse
- Perennial Watercourse
- Ordinary High Water Mark
- Delineated Tree Line
- Wetland Boundary
- Federal Wetlands
- CT Floodplain Wetlands Boundary
- CT Floodplain Wetlands (non-hydric)
- Floodway
- 100 Year Flood Zone (FEMA)
- Natural Diversity Database Area
- Critical Habitat
- Approximate CL&P dba Eversource Energy Owned Property
- Approximate Parcel Boundary
- Municipal Boundary

N W E S

1 inch = 200 feet

0 50 100 200 Feet

Map Notes:
Base Map: CT ECO Map Service, Ortho Imagery (2012).

1779 Line Rebuild

East Hartford & South Windsor

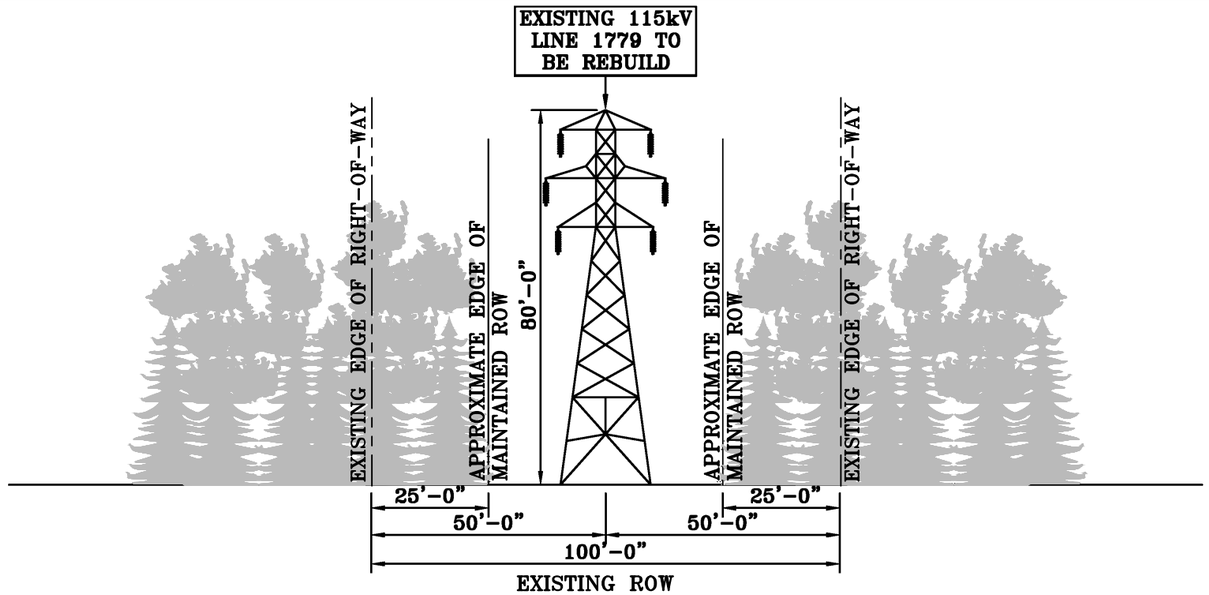
South Windsor, CT

EVERSOURCE ENERGY

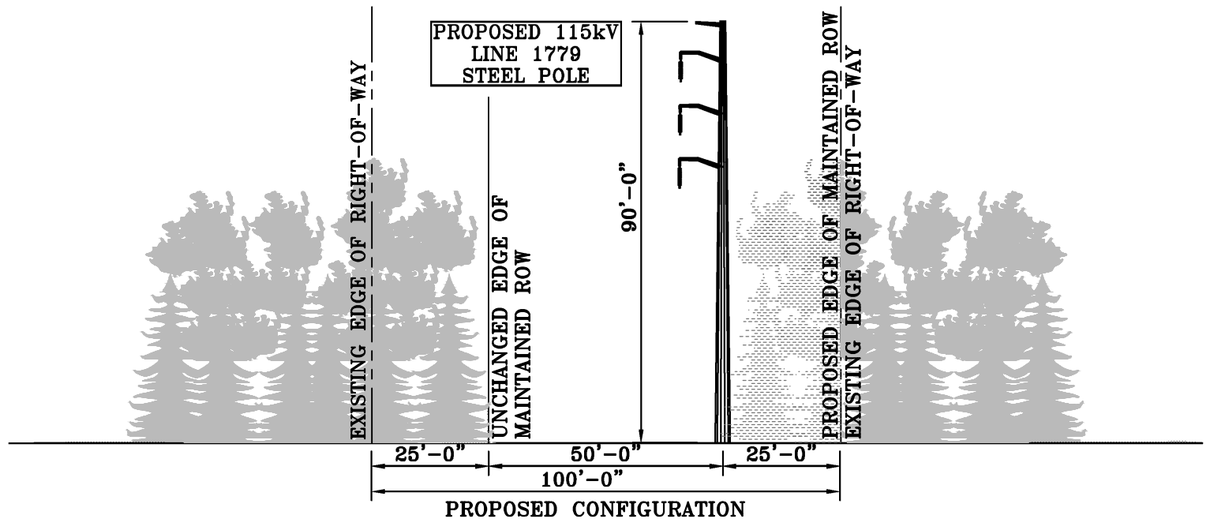
Tighe&Bond

Sheet 11 of 11

ATTACHMENT C



EXISTING ROW
EXISTING CONFIGURATION VERTICAL LATTICE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWNS OF EAST HARTFORD & SOUTH WINDSOR
(BETWEEN STRUCTURES 3003 & 3044)

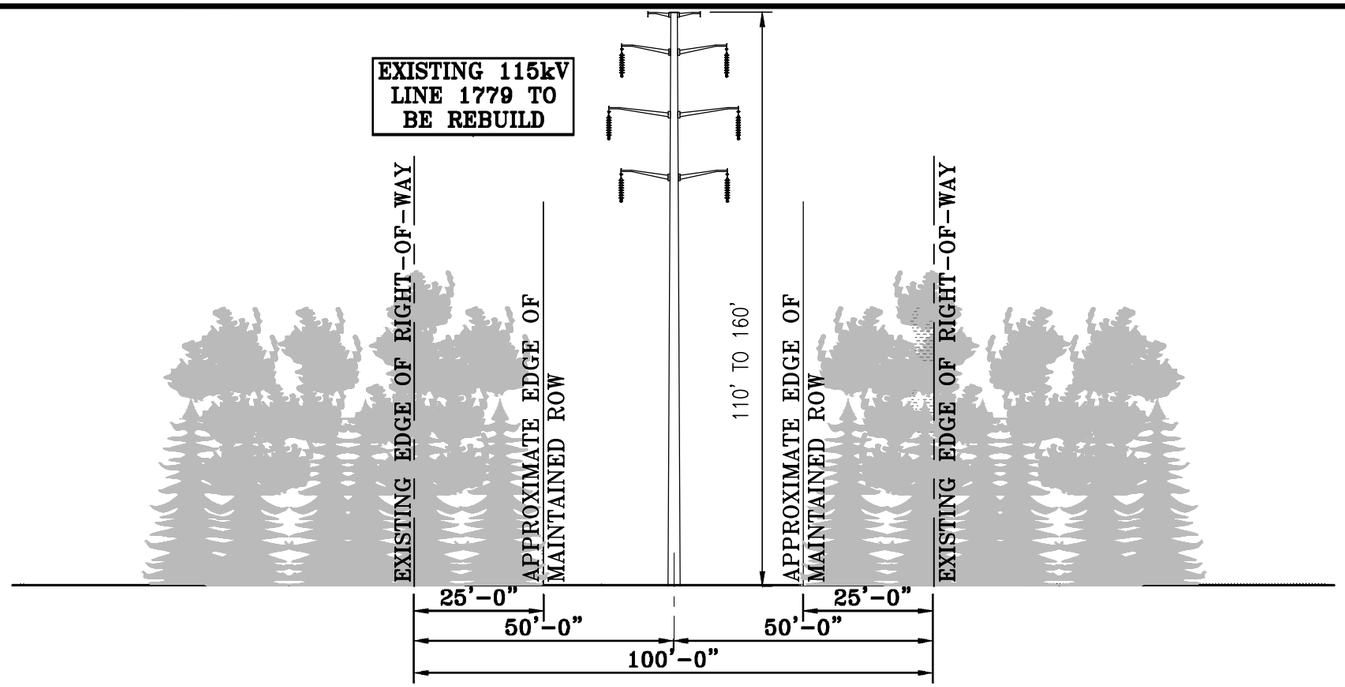
EVERSOURCE ENERGY

TITLE: SOUTH MEADOW S.S. - SOUTH WINDSOR JCT.
LINE 1779
EXISTING/PROPOSED R O W CROSS SECTIONS
EAST HARTFORD, SOUTH WINDSOR, CT.

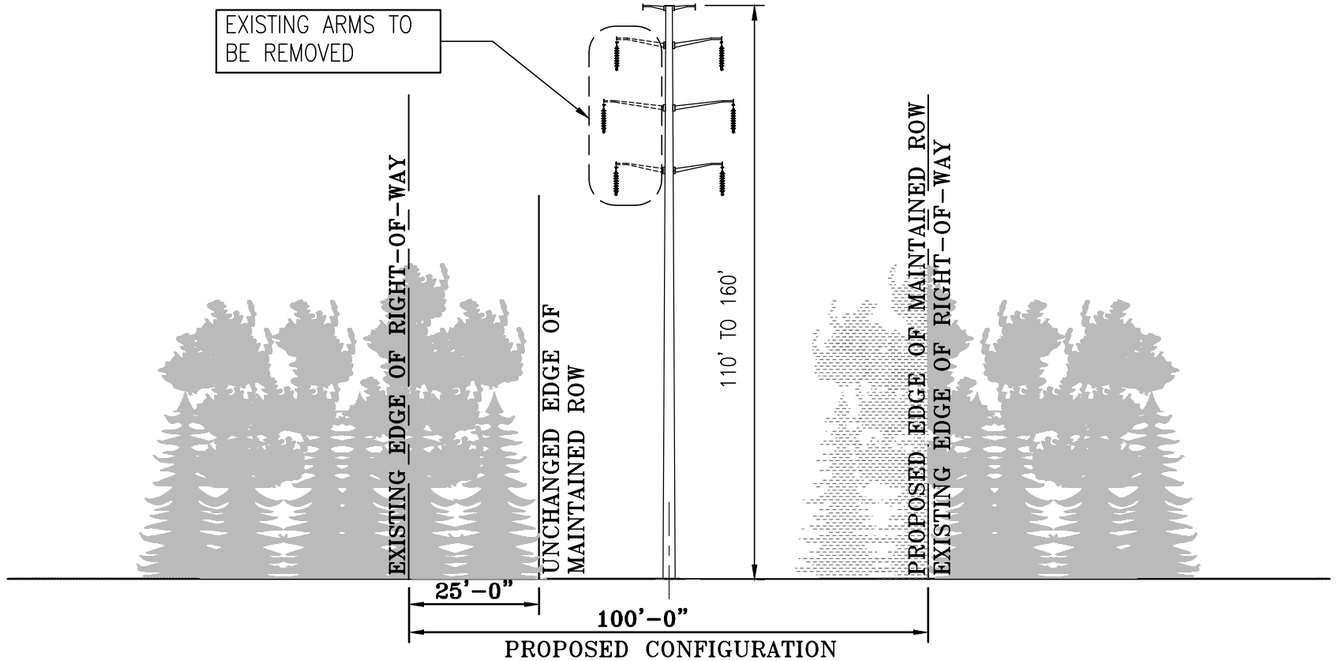
BY RRH	CHKD EQ	APP	APP
DATE 6/13/16	DATE 6/13/16	DATE	DATE
H-SCALE	SIZE B	FIELD BOOK & PAGES	
V-SCALE	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	XS-1

ES VER: 05/2015

11/9/2015 4:55 PM - smsoltis - C:\pw_work\pw_proj\udburney\d0536514\OTRM_023_XS-1.dwg - As Built



EXISTING ROW
EXISTING CONFIGURATION VERTICAL STEEL POLE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWN OF EAST HARTFORD STR. #3001 1/2, #3009, #3010 & #3011.



PROPOSED CONFIGURATION
SINGLE CIRCUIT VERTICAL STEEL POLE DESIGN
LOOKING NORTH FROM SOUTH MEADOWS SUBSTATION
IN THE TOWN OF EAST HARTFORD STR. #3001 1/2, #3009, #3010 & #3011 MODIFICATION

EVERSOURCE ENERGY

TITLE: SOUTH MEADOW - SOUTH WINDSOR JCT.
LINE 1779
EXISTING/PROPOSED ROW CROSS SECTIONS
EAST HARFORD, CT

BY RRH	CHKD EQ	APP	APP
DATE 6/13/16	DATE 6/13/16	DATE	DATE
H-SCALE N.T.S.	SIZE B	FIELD BOOK & PAGES	
V-SCALE N.T.S.	V.S.	R.E. DWG	
R.E. PROJ. NUMBER		DWG NO.	XS-2

ATTACHMENT D

1779 LINE PROJECT

BY

THE CONNECTICUT LIGHT AND POWER COMPANY

DOING BUSINESS AS EVERSOURCE ENERGY

WETLANDS AND WATERCOURSES REPORT

MAY 2016

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Wetlands and Watercourses Report

Prepared For:

The Connecticut Light and Power Company doing business as
Eversource Energy
107 Selden Street
Berlin, CT 06037

Prepared By:

Tighe & Bond
213 Court Street, Suite 1100
Middletown, CT 06457

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Table of Contents

Section 1
Introduction

The Connecticut Light and Power Company d/b/a Eversource Energy ("Eversource") proposes to rebuild an approximate 5.20 mile portion of its existing 115-kV 1779 Line from its South Meadow Substation in the City of Hartford to the South Windsor Junction, in the town of South Windsor ("Project"). This report provides a summary of wetland and watercourse inventories and delineations conducted by Tighe & Bond within the Project area. These delineations were conducted to identify both federal and Connecticut jurisdictional water resources.

1.1 Project Background and Location

The purpose of the Project is to rebuild/replace all of 1924 vintage lattice towers and replace the corroded and strength degraded conductor/shield wire between South Meadow Substation and South Windsor Junction.

The Project consists of two components: (1) reconductoring the 1779 115-kV transmission line (single circuit steel pole and double-circuit river crossing lattice tower structures, .65 miles), between South Meadow Substation and Structure 3001; (2) rebuild of the /1779 115-kV transmission line (double-circuit lattice tower, 4.55 miles), between Structure 3001 and South Windsor Junction. The segment of the 1779 Line which is proposed for rebuild contains a total of 38 structures that were placed in service in 1924.

Desktop analyses, as well as on-site field delineations were employed to determine state and federal wetland boundaries in accordance with applicable state and federal regulations. The desktop and field wetland and watercourse investigations were conducted during the summer of 2015. This report discusses the methods used to identify the wetlands and watercourses encountered in the Project area and summarizes the findings of the surveys.

Tables listing all wetlands and watercourses identified during the surveys are located in Attachment A of this report; the locations of all of the delineated wetlands are depicted on the 200 scale Petition maps (Attachments A and B of the Petition).

1.2 Physiographic and Geologic Overview

According to Dowhan and Craig, the Project area is situated within the North-Central Lowlands physiographic region of Connecticut. This region is characterized by extensive floodplains and lowland areas adjacent to the major rivers and interspersed with prominent north-trending ridge systems.

Bedrock geologic mapping indicates the Project area traverses extensive areas of sedimentary rock (Portland Arkose).[1] The surficial geology of the corridor is characterized by alluvium overlying fines.

[1] Rodgers, J. 1985. Bedrock Geologic Map of Connecticut. Connecticut Geological and Natural History Survey, CT Department of Environmental Protection. Hartford CT. 1[1] CT ECO accessed 3/7/2016

Section 2
Wetland and Watercourse Regulations

Tighe & Bond and Davison Environmental, LLC personnel identified wetlands and watercourses subject to state or federal jurisdiction based upon the Connecticut Inland Wetlands and Watercourses Act (CGS Section 22a-36 through 45) and the Federal Clean Water Act ([CWA]; 33 U.S.C. 1344). The Connecticut River is considered Navigable Waters of the United States and thus subject to jurisdiction under Section 10 of the Rivers and Harbors Act (33 U.S.C. 403). The following wetland and watercourse regulations are applicable to the Project.

2.1 Section 404 – Clean Water Act

Wetlands, springs, and other waters of the United States are regulated under Section 404 of the Federal Clean Water Act (CWA) by the U.S. Army Corps of Engineers (USACE). Federal jurisdictional wetlands include interstate wetlands, wetlands adjacent to waters of the United States, and intrastate wetlands whose degradation or destruction could affect interstate or foreign commerce as per the application of the CWA. The 1987 *Corps of Engineers Wetland Delineation Manual* (1987 Corps Manual) requires a positive wetland indicator for each of the three parameters (vegetation, soils, and hydrology). Indicators for all three of the following parameters must be present for an area to be identified as a wetland:

- Hydrophytic Vegetation: Plants growing in water or in a substrate that is at least periodically deficient in oxygen during a growing season as a result of excessive water content;

- Hydric Soils: Soils that, in an undrained condition, are saturated, flooded, or ponded long enough during a growing season to develop an anaerobic condition that supports the growth and regeneration of hydrophytic vegetation; and,

- Wetland Hydrology: Inundation or saturation by surface or groundwater at a frequency and duration during the growing season sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.

Wetlands satisfying these criteria are subject to federal jurisdiction under Section 404 of the CWA.

In January 2012, the USACE issued a *Regional Supplement to the Corps of Engineers Delineation Manual*[2] (Regional Supplement), which provides further guidance for wetland delineations in the northeastern United States. The Regional Supplement provides wetland indicators, delineation guidance, and other information specific to the Northcentral and Northeast Regions, supplementing the 1987 USACE Manual. Indicators and procedures in the 2012 Regional Supplement are designed to identify wetlands as

[2] Wetlands Regulatory Assistance Program. (2102). *Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast*, U.S. Army Engineer Research and Development Center, Vicksburg, MS

defined jointly by the USACE (33 CFR 328.2) and the U.S. Environmental Protection Agency (40 CFR 230.3) and subject to regulation under Section 404 of the CWA.

2.2 Connecticut Inland Wetlands and Watercourses Act

Connecticut regulates inland wetlands under the Inland Wetlands and Watercourses Act (Section 22a-36 through 22a-45 of the Connecticut General Statutes; The Act). These state statutes are implemented through the Inland Wetlands and Watercourses regulations as administered by the individual municipalities. Under Section 2 of The Act, a wetland is defined as "land, including submerged land…which consists of poorly drained, very poorly drained, alluvial and floodplain soils as defined by the National Cooperative Soils Survey. Such areas may include filled, graded or excavated sites which possess an aquic (saturated) moisture regime as defined by the United States Department of Agriculture (USDA) Cooperative Soil Survey."

Watercourses are defined in The Act as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." The Act defines Intermittent Watercourses as having "a defined permanent channel bed and bank and the occurrence of two of the following: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration of longer than a particular storm incident, or C) the presence of hydrophytic vegetation."

Section 3
Wetland and Watercourse Delineation Procedures

In the summer of 2015, Tighe & Bond and Davison Environmental, LLC soil and wetland scientists delineated wetlands within the Project area. The wetland boundaries were delineated in accordance with USACE Headquarters and New England District guidance, including: 1987 Manual, 2012 Regional Supplement, and *Field Indicators for Identifying Hydric Soils in New England, Version 3*. State jurisdictional wetlands were characterized using Connecticut delineation methodology pursuant to the Connecticut Inland Wetlands and Watercourses Act, C.G.S. §§ 22a-36 through 22a-45 (the Act).

3.1 Pre-Survey Desktop Investigations

Prior to performing an on-site survey and wetland and watercourse delineation, a thorough review of existing Project area information was conducted, including:

- United States Geologic Survey (USGS) 7.5-minute series topographic quadrangle maps;
- Natural Resources Conservation Service (NRCS) Web Soil Survey digital soil information;
- Connecticut Department of Energy and Environmental Protection (CT DEEP) digital wetland information;
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) digital information; and,
- Aerial photographs.

3.2 Field Surveys

The wetland delineation was initiated with an inspection of the ROW to identify soil types, topo-drainage sequences, drainage features, and plant associations that would indicate the potential for jurisdictional wetland classification. The indicator status of dominant plant species in each stratum was evaluated in the field to determine whether a hydrophytic plant association was present. Soils profiles were sampled using a Dutch auger and/or a tile spade to determine if any floodplain, poorly drained, very poorly drained, or hydric soil indicators were present. Indicators of wetland hydrology were also observed. Specific methods for characterizing and evaluating soil, vegetation, and hydrologic indicators are described below.

3.2.1 Soils

Soil profile observations were collected at each sampling location to a depth of at least 20 inches. Typically, a soil pit was dug with an auger or tile spade (sharpshooter) to provide a soil profile for examination. Soils profiles were inspected by identifying horizons and recording the depths to each horizon boundary. For each horizon the soil texture, structure, and moist color (matrix and redoximorphic features) were observed.

Matrix and redoximorphic feature soil colors were identified using a *Munsell® Soil Color Chart.* In addition to color, the kind, size, quantity and contrast of redoximorphic features were evaluated. Hydric soil indicators were field identified using the *Field Indicators for Identifying Hydric Soils in New England.*

3.2.2 Vegetation

Dominant plant species in each vegetation stratum (herbaceous, shrub, sapling, tree, and liana) within the general vicinity of each sampling location were identified. Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present. Plant species within the wetland/upland ecotone were recorded as to their percent cover and wetland indicator status according to the *National Wetland Plant List, Region 1*[3] and the NRCS Plants Database[4]. At each plot, visual estimates of dominant plant species cover was observed to determine the location of a change in plant communities from hydrophytic dominant to upland dominant. Total vegetation dominance for all strata was determined using the "50/20 rule" according to the 1987 Corps Manual.

3.2.3 Hydrology

The term wetland hydrology encompasses all hydrologic characteristics for areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. Corps hydrology criteria consist of inundation, saturation to the surface, or the upper part of the soil for a long or very long duration. The 1987 Corps Manual suggests that this saturation must persist for at least five percent of the growing season in most years. Areas with evident characteristics for wetland hydrology are those where the presence of water has an overriding influence on the characteristics of vegetation and soils. Indicators of wetland hydrology include vegetated hummocks, water marks on tree trunks and other vegetation, evidence of inundation or ponding (e.g., water-stained leaves), morphological adaptations of plants (e.g., buttressed trunks, adventitious roots, shallow rooting), drift lines, and drainage patterns. The depths to saturation and standing water were noted where present within 20 inches of the soil surface. The presence or absence of wetland hydrology indicators was observed at each sampling location.

3.2.4 Wetland and Watercourse Numbering Method

For the purpose of documenting and organizing the water resource information on tables and maps for this Project, wetlands were numbered from 1 to 10 (i.e., W-1 to W-10). Watercourses were numbered independently of the wetlands and prefixed by the letter S (S-1 to S-13). Tables 1 and 2 (Attachment A) list the delineated wetlands and watercourses within the Project area.

During the field investigations, the boundaries of each wetland were identified by sequentially-numbered pink vinyl flagging tied to woody vegetation and spaced at regular intervals. Flags were numbered with the wetland or watercourse number included as a prefix. Watercourses were field-identified by centerline flags, however the

[7] *National Wetland Plant List (Updated July 2013)*. U.S. Army Engineer Research and Development Center, Vicksburg, MS
[4] http://plants.usda.gov/wetland.html

banks of several larger watercourses representing the normal ordinary high water mark (OHWM) were flagged where important.

Wetlands that were considered to be hydraulically connected, including contiguous Connecticut and federal wetlands, were typically included within the same numeric wetland label. Frequently, wetlands that appear to lack direct surface water connectivity (such as those bisected by historic disturbance activities such as road construction) were included under the same wetland label if they were considered to be part of the same hydrologic system.

3.2.5 GPS Mapping

Wetland boundary flags and watercourse centerlines, or in some cases the OHWM were located using a Trimble® Global Positioning System (GPS). A minimum of 30 static measurements with a Precision Dilution of Position (PDOP) no greater than 6.0 were also collected at each survey point to obtain a sub-meter level of accuracy. Real time positions were then post-processed for additional accuracy using static data available at public continuously operating reference stations (CORS) and referenced to the Connecticut State Plane Coordinate System NAD 83.

3.3 Wetland and Watercourse Classification

While in the field, Tighe & Bond wetland scientists classified the various wetlands according to the "Cowardin system", which is a system described in the *Classification of Wetlands and Deepwater Habitats of the United States*. Identified wetlands were classified as Palustrine Forested (PFO), Palustrine Emergent (PEM), Palustrine Scrub-Shrub (PSS) and Palustrine Open Water (POW) and are further described below. In some cases, a wetland complex contained more than one wetland classification type. In those situations, each wetland type is listed and the first classification type represents the more dominant type. For example, within the portions of the ROW that Eversource presently manages in shrub-scrub vegetation compatible with the existing overhead transmission lines, wetlands include PEM, POW, or PSS; in certain locations, the portions of these wetlands that extend into non-managed portions of the ROW are characterized by forested (PFO) vegetation.

3.3.1 Palustrine Forested Wetlands (PFO)

Forested wetlands are characterized by woody vegetation that is six meters (approximately 20 feet) tall or taller and normally includes an overstory of trees, an understory of young trees and/or shrubs, and an herbaceous layer.

3.3.2 Palustrine Scrub-Shrub Wetlands (PSS)

Scrub-shrub wetlands are dominated by woody vegetation less than six meters (approximately 20 feet) tall. Scrub-shrub land types may represent a successional stage leading to a forested wetland and include shrubs, saplings, and trees or shrubs that are small and/or stunted due to environmental conditions.

3.3.3 Palustrine Emergent Wetlands (PEM)

Emergent wetlands are characterized by erect, rooted, herbaceous hydrophytes not including mosses and lichens. These wetlands maintain the same appearance year after year, and are typically dominated by perennial plants that are present for the majority of the growing season.

3.3.4 Palustrine Open Water (POW)

Areas of permanent or semi-permanent open water that border on palustrine systems are referred to as POW. Areas of open water may exist as man-made or natural waterbodies.

3.4 Post-Survey Desktop Analysis

Wetland and watercourse boundaries were plotted on 2012 Aerial Imagery with 0.5-foot resolution and reviewed and confirmed by personnel responsible for the field delineation of wetlands. The aerial photograph based Petition maps show the locations of the delineated resources relative to the limits of the ROW.

Section 4
Results

4.1 Wetlands

A total of 10 wetlands were delineated within Eversource's easements or fee-owned properties in proximity to Project activities. A summary of the delineated wetlands is provided in Table 1 (Attachment A).

Many of the wetlands identified in Project area are characterized by complexes containing both Connecticut (moderately well to excessively-drained alluvial soils) and federal wetlands because much of the Project area is located within floodplains associated with the Connecticut River and associated floodplains.

4.1.1 Wetlands Vegetation

Emergent wetlands within the Project area are frequently dominated by Japanese knotweed *(Polygonum cuspidatum),* an herbaceous invasive species commonly found near streams and rivers. Additional species commonly found within emergent wetlands include common reed *(Phragmites australis),* rice cutgrass *(Leersia oryzoides),* arrow-leaved tearthumb *(Persicaria sagittata),* purple loosestrife *(Lythrum salicaria),* rough-stemmed goldenrod (*Solidago rugosa*), sensitive fern (*Onoclea sensibilis*), joe-pyeweed (*Eupatorium* spp.), marsh fern (*Thelypteris palustris*), hardhack (*Spiraea latifolia*), tussock sedge (*Carex stricta*), woolgrass *(Scirpus cyperinus)*, broad-leaved cattail *(Typha latifolia)*, poison ivy (*Toxicodendron radicans*), and steeplebush (*Spiraea tomentosa)*, skunk cabbage (*Symplocarpus foetidus*), and jewelweed (*Impatiens capensis)*.

Shrub wetlands within the Project area are commonly dominated by winterberry *(Ilex verticillata)*, highbush blueberry (*Vaccinium corymbosum*), spicebush (*Lindera benzoin*), northern arrowwood (*Viburnum recognitum*), silky dogwood (*Cornus amomum*), and support occasional pussy willow (*Salix discolor*).

Forested wetlands are predominantly characterized as forested floodplains. The tree species typical of these communities include silver maple *(Acer saccharinum)* cottonwood *(Populus deltoides)*, and sycamore *(Platanus occidentalis)*. The understory is commonly comprised of sensitive, false nettle *(Boehmeria cylindrical),* and stinging nettle *(Laportea canadensis)*.

4.1.2 Wetland Surficial Geology, Soils, and Hydrology

Soil types within the Project area are predominantly alluvial and associated with the Connecticut, Hockanum, and Podunk River floodplains. They include Hadley silt loam, Winooski silt loam, Limerick and Lim soils, and Saco silt loam.

The most common water regime in the identified wetlands is temporarily flooded. Seasonally saturated and saturated wetland areas are also common.

4.2 Watercourses

A total of 12 perennial watercourses and one intermittent watercourse were delineated[5] within the Project area, including the Hockanum River, Podunk River, and Goodwin Brook. A summary of the delineated watercourses is provided in Table 2 (Attachment A). The majority of the watercourses delineated within the Project area are greater than five feet wide and exhibit a meandering channel with mud and muck substrate with gradual to slightly undercut banks. The Connecticut River is designated as navigable[6] pursuant to Section 10 of the Rivers and Harbors Act. All of these watercourses are presently spanned by Eversource's overhead transmission lines that occupy the existing ROW along which the proposed rebuild would occur.

[5] Figure does not include the Connecticut River, which is located within the Project area but not delineated. There is no work proposed in proximity to the river, and its regulatory boundaries are established by CT DEEP OLISP and based on elevation.

[6] The USACE's general definition of navigable waters of the United States is "those waters subject to the ebb and flow of the tide shoreward to the mean high water mark and/or presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce." Waterways considered to be navigable waters may be subject to regulatory jurisdiction under Section 10 of the Rivers and Harbors Act.

Section 5
References

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APPENDIX A:

TABLE 1:
DELINEATED WETLANDS WITHIN THE PROJECT AREA

TABLE 2:
DELINEATED WATERCOURSES WITHIN THE PROJECT AREA

Table 1: Delineated Wetlands within the Project Area

Town/200 Scale Petition Mapsheet No.	Wetland No. [1]	Dominant NWI Class[2]	Other NWI Classes	Dominant Water Regime	Associated Watercourse[3]
East Hartford					
2	W-1	PEM	PSS	Temporarily flooded	S-1
2	W-2	PEM	PSS	Temporarily flooded	S-1, S-2
2	W-3	PEM	PSS	Temporarily flooded	S-2
2	W-4	POW	PEM	Permanently flooded	
3	W-5	PEM	PSS	Saturated	
3	W-6	PFO		Saturated	
4	W-7	PEM	PSS	Seasonally saturated	
4, 5	W-8	PEM	PSS	Saturated	S-3
East Hartford/South Windsor					
5, 6, 7, 8, 9	W-9	PEM	PSS	Temporarily flooded	S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, S-12, S-13
South Windsor					
9, 11	W-10	PEM	PSS	Temporarily flooded	

[1] Wetland No. refers to the number generated during the 2015 field surveys to identify wetlands within the Project area. This Wetland No. is keyed to those depicted on the 200 scale Petition maps (Attachments A and B of 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 generated during the 2015 field surveys to identify watercourses within the Project area.

Table 2: Delineated Watercourses within the Project Area

Town/200 Scale Petition Mapsheet No.	Watercourse No.[1]	Watercourse Name	Flow Regime	Water Quality Classification[2]	Associated Wetland
East Hartford					
2	S-1	Hockanum River	Perennial	B	W-1
2	S-2	Tributary to Hockanum River	Perennial	B	W-2, W-3
4	S-3	Tributary to Hockanum River	Perennial	B/A	W-8
5	S-4	Tributary to Connecticut River	Intermittent	B/A	W-9
6	S-5	Goodwin Brook	Perennial	B/A	W-9
7	S-6	Tributary to Podunk River	Perennial	B/A	W-9
7	S-7	Tributary to Podunk River	Perennial	B/A	W-9
7	S-8	Tributary to Podunk River	Perennial	B/A	W-9
7	S-9	Tributary to Podunk River	Perennial	B/A	W-9
7	S-10	Tributary to Podunk River	Perennial	B/A	W-9
South Windsor					
8	S-11	Podunk River	Perennial	A	W-9
8	S-12	Tributary to Podunk River	Perennial	B/A	W-9
9	S-13	Tributary to Podunk River	Perennial	B/A	W-9

[1] Watercourse No. refers to the number generated during the 2015 field surveys to identify watercourses identified within the Project area. This Wetland No. is keyed to those depicted on the 200 scale Petition maps (Attachments A and B of the Petition).

[2] Water Quality Classifications were obtained from CTECO accessed March 2016, and are intended for use in documenting compliance with Connecticut's Water Quality Standards.

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APPENDIX B:

REPRESENTAIVE WETLAND PHOTOGRAPHS

Photo 1 – 3/19/2016: View facing south of Wetland W-1. Existing structure 3001 is in background.

Photo 2 – 3/19/2016: View facing northeast of Wetland W-1. Existing structure 3002 is in background.

Photo 3 – 3/19/2016: View facing south of Wetland W-4. Existing structure 3005 and the East Hartford Flood Control Levee are in the background.

Photo 4 – 3/19/2016: View facing southeast of Wetland W-6 from the maintained ROW adjacent to existing structure 3010.

Photo 5 – 3/19/2016: View facing east of Wetland W-7 and existing structure 3013.

Photo 6 – 3/19/2016: View facing southwest of Wetland W-8 from existing access road. Existing structure 3018 is in the background.

Photo 7 – 8/6/2015: View facing north of existing structure 3025 in Wetland W-9.

Photo 8 – 8/7/2015: View facing north of Wetland W-9 and existing structure 3031. Stream S-8 is in the foreground.

Photo 9 – 8/7/2015: View facing south of Wetland W-9 and existing structure 3034.

Photo 10 – 8/7/2015: View facing south of Wetland W-9 and existing structure 3035. The stream in foreground is S-6, an unnamed perennial tributary to the Podunk River (beyond view to the left).

Photo 11 – 12/11/2015: View facing west of the unnamed perennial tributary to the Podunk River (S-6) and existing structure 3035.

ATTACHMENT E

1779 Line Project – Vernal Pool Surveys

TO: Eversource Energy

FROM: Matthew Davison, Tighe & Bond

COPY: Chris Fritz, Burns & McDonnell

DATE: May 9, 2016

INTRODUCTION

The following memorandum details vernal pool surveys conducted by Tighe & Bond in the spring of 2015. This work was conducted in support of The Connecticut Light and Power Company doing business as Eversource Energy's ("Eversource") petition to the Connecticut Siting Council for modifications to the 1779 transmission line within an existing right-of-way (ROW) in Hartford, East Hartford, and South Windsor (the "Project").

VERNAL POOL DEFINITION

A number of 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 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[1] 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*);
- Eastern spadefoot toad (*Scaphiopus holbrookii*);
- 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 memorandum, a vernal pool is defined as an area that meets the physical characteristics described above, contains evidence of breeding activity of any of the indicator species listed above including the presence of egg masses and larvae, and provides suitable hydrology for their successful development.

EXISTING WETLANDS ALONG THE PROJECT ROW

Project wetlands are predominantly characterized by active flood zones and riparian corridors, and are generally lacking suitable vernal pool hydrology and morphology (seasonally flooded wetland depressions). Wetland hydrology within Project wetlands is typically characterized by short duration, early season flooding; or permanent flooding. These hydrologic regimes are not conducive to providing productive vernal pool habitat.

Many of the Project wetlands are subject to short duration flooding events. These wetlands typically lack defined depressions, active micro-topography, and are often underlain by coarse-textured soils which promote surface-water infiltration. These characteristics limit the potential for an extended hydroperiod capable of supporting indicator species such as spotted salamander and wood frog. In some cases these areas were found to provide habitat for species such as American toad *(Bufo a. americanus)* which can complete breeding and development in short-hydroperiod systems.

Permanently flooded wetland areas (e.g. Wetlands W-4, and portions of W-8, and W-10), while possessing a sufficient hydroperiod to support indicator species, are often inhabited by

[1] 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.

predatory species such as fish, green frog *(Lithobates clamitans),* and American bullfrog *(Lithobates catesbeianus)* which can limit the productivity of these areas.

VERNAL POOL SURVEYS

Vernal pool surveys were conducted within the Project area by Tighe & Bond Wetland Scientists Matthew Davison and Devleena Ghosh-Brower on April 29, May 1, and May 4 through 8, 2015. Survey methods included visual surveys to identify vernal pool indicator species adults, larvae and egg masses, and dip-net surveys to identify amphibian larvae.

All wetlands were visually evaluated for potential vernal pool habitat, and surveys were conducted in Wetlands W-2, W-3, W-4 (accessible fringes), W-6, W-7, W-8, W-9, and W-10 where evidence of periodic, shallow surface-water inundation was present. No indicator species were identified during the surveys.

Amphibian and reptile species observed within Project wetlands include American bullfrog, green frog, American toad, leopard frog *(Lithobates pipiens),* and painted turtle *(Chrysemys picta)*. Leopard frog is a State-listed Special Concern species. No records exist at the location of observation and as such, a Special Animal Survey Form was completed to CT DEEP detailing this finding.

ATTACHMENT F

EVERSOURCE
ENERGY

56 Prospect Street
Hartford, CT 06103

June 16, 2016

Dear Neighbor,

As part of its everyday effort to deliver reliable energy and superior service to its customers, Eversource Energy ("Eversource") is submitting a petition to the Connecticut Siting Council ("CSC") for a proposed transmission line upgrade in your area.

The upgrade, called the 1779 Line Reconductoring and Rebuild Project ("Project"), is necessary due to aging infrastructure that was originally constructed in the 1920s and 1950s and is reaching the end of its useful life. This upgrade is crucial to ensure the continued reliability of the transmission line.

The Project would be located entirely on Eversource property or within Eversource's existing rights-of-way between South Meadow Substation in Hartford and South Windsor Junction in South Windsor. The proposed Project includes upgrading the existing 1779 115-kV transmission line for approximately 4.6 miles between the Route 2/Charter Oak Overpass in East Hartford and South Windsor Junction (Main Street). The line upgrade in this area would consist of replacing the existing lattice structures with new monopole structures and installing new wire of the same voltage on the new structures. The Project scope also includes installing new line of the same voltage on five existing 1779 Line structures along a 0.6 mile section of right-of-way from South Meadow Substation in Hartford to the Route 2/Charter Oak Overpass in East Hartford.

Pending CSC approval of this proposed work, construction is expected to begin between South Meadow Substation and the Route 2/Charter Oak Overpass in the fall of 2016 followed by the remaining transmission line work in 2017. Completion of the proposed Project and restoration of any affected areas is anticipated by summer 2018.

For more information about this Project, please call the Eversource Transmission Information Line at 1-800-793-2202, or send an email to TransmissionInfo@eversource.com.

If you would like to send comments regarding Eversource's petition to the CSC, please send them via e-mail to siting.council@ct.gov or a letter to the following address:

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

Thank you.

Sincerely,

Chris Runde

Chris Runde
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 ("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 or courier upon the following municipal officials:

Municipal Officials:

The Honorable Marcia Leclerc
East Hartford Town Hall
740 Main Street
East Hartford, CT 06108

Matt Galligan, Town Manager
South Windsor Town Hall
1540 Sullivan Avenue
South Windsor, CT 06074

The Honorable Luke Bronin
Hartford City Hall
550 Main Street #1
Hartford, CT 06103

I also certify that I caused notice of the proposed modifications to be served by mail or courier upon 52 owners of abutting properties shown on the maps in Attachment A and B to the Petition.

Chris Runde
Project Manager

On this the 17th day of June, 2016, before me, the undersigned representative, personally appeared, Chris Runde, 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.

Gina M. Leo

Notary Public
My Commission expires:

GINA M. LEO
NOTARY PUBLIC
MY COMMISSION EXPIRES FEB. 28, 2021