EVERSOURCE ENERGY

56 Prospect Street
P.O. Box 270
Hartford, CT 06141-0270

Kathleen M. Shanley
Manager - Transmission Siting
Tel: (860) 728-4527

September 8, 2016

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

Dear Chairman Stein:

The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource") submits the attached original and fifteen (15) copies of a Petition requesting a determination that no Certificate of Environmental Compatibility and Public Need is required for the proposed replacement of an existing wooden pole with a steel lattice tower in the Town of East Hampton, Connecticut.

Also, attached is a check for the filing fee in the amount of $625.

The Town Manager of the Town of East Hampton and the abutting property owners have been informed of the Petition.

Sincerely,

Kathleen M. Shanley
Manager – Transmission Siting

Attachment: Petition
Notice to Property Owners

cc: Michael Maniscalco, Town Manager, Town of East Hampton

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 on September 12, 2016, I caused notice of proposed modifications ("Project") of Eversource to be served by mail or courier upon the Town of East Hampton and property owners indicated below.

I. Abutters in the Town of East Hampton on the following streets:

- East High Street
- Main Street
- Belvin Boulevard

II. City Official

- Town of East Hampton, 20 East High Street, East Hampton, CT 06424

Steven Florio
Telecommunications Engineer

On this the 12th day of September, 2016, before me, the undersigned representative, personally appeared, Steve Florio, known to me (or satisfactorily proven) to be the person whose name is subscribed to the foregoing instrument and acknowledged that he executed the same for the purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Notary Public
My Commission expires:

My Commission Expires
March 31, 2019

EVERSOURCE

107 Seldon Street
Berlin, CT06037

September 2016

Dear Neighbor,

As part of its everyday effort to delivery reliable energy and superior custom service, Eversource is planning to replace an existing, 70-foot telecommunications structure at the Eversource Area Work Center in East Hampton We plan to replace the wood structure with a 120-foot communication tower. This work will help maintain reliability of the electrical system serving our state, including restoration work during a power outage.

Since your property is located adjacent to the Eversource facility at 22 East High Street, East Hampton, Connecticut, we are committed to keeping you informed of our proposed plans and construction activities.

Reliability Improvements in Your Neighborhood

New, modern communication devices, including antennas and microwave dishes, will be attached to the new tower, which is located entirely within the fenced area at the East Hampton work center. This structure is needed to support communication system devices essential to electric system operations. These new communication systems will aid in customer restoration efforts. Because of the tower's strategic location, it will also provide communications to Eversource work centers across the state.

What You Can Expect

This month, Eversource plans to submit its petition to the Connecticut Siting Council (CSC). Pending approval from the CSC, we expect work to begin in October and to be completed later this year.

The work includes:

- Excavation and construction of foundations for the new tower structure
- Construct the new tower, and attach all the new equipment, including antennas, microwave dishes and wave guides
- Install new fencing around the new tower area, and new filter fabric and stone inside the enclosure
- Remove old pole and any construction debris from the site

Our Commitment to You

Keeping the lines of communication open is an important part of our work in your community. If you have questions about this work, please contact Steven Florio at 866-665-5611 or send an email to steven.florio@eversource.com

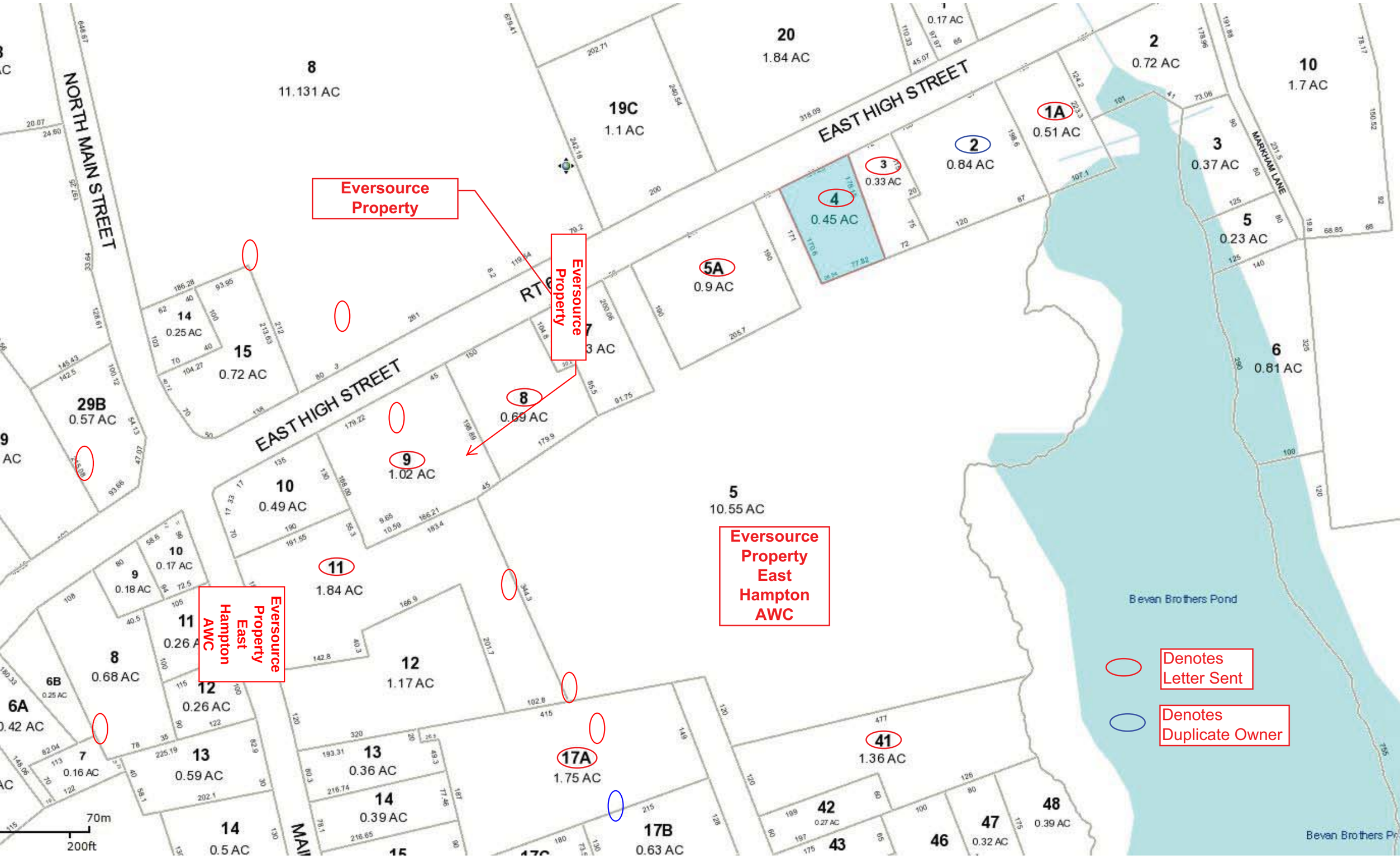
If you would like to send comments regarding Eversource's petition to the CSC, please send them via email to siting.council@ct.gov or a letter to the following address:

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

Sincerely,

Steve Florio

Steven J. Florio
Eversource Project Engineer


Eversource Property
Eversource Property
Eversource Property East Hampton AWC
Eversource Property East Hampton AWC
EAST HIGH STREET
EAST HIGH STREET
NORTH MAIN STREET
MARKHAM LANE
RT 6
8
11.131 AC
19C
1.1 AC
20
1.84 AC
0.17 AC
2
0.72 AC
10
1.7 AC
1A
0.51 AC
2
0.84 AC
3
0.37 AC
3
0.33 AC
4
0.45 AC
5A
0.9 AC
5
0.23 AC
6
0.81 AC
14
0.25 AC
15
0.72 AC
29B
0.57 AC
8
0.69 AC
9
1.02 AC
10
0.49 AC
9
0.18 AC
10
0.17 AC
11
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11
0.26 AC
8
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12
0.26 AC
12
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6B
0.25 AC
6A
0.42 AC
7
0.16 AC
13
0.59 AC
13
0.36 AC
14
0.39 AC
14
0.5 AC
17A
1.75 AC
17B
0.63 AC
5
10.55 AC
41
1.36 AC
42
0.27 AC
43
46
47
0.32 AC
48
0.39 AC
Bevan Brothers Pond
Bevan Brothers Pond
Denotes Letter Sent
Denotes Duplicate Owner
70m
200ft

EVERSOURCE
East Hampton AWC 22 East High St, East Hampton, Ct
CSC Filing Mailing List
Updated: 9/9/2016

Owner Name	Site Address	Site Town	State	Mailing Address	Mailing Town	Mailing State	Zip Code	Map	Block	Lot	Date Mailed
FRANCIS DMELLO	26 EAST HIGH STREET	EAST HAMPTON	CT	567 BALLFALL ROAD	MIDDLETOWN	CT	06457	05A	62	4	09/08/16
GENERAL EQUITIES	EAST HIGH STREET	EAST HAMPTON	CT	P O BOX 7318	KENSINGTON	CT	06037	05A	62	3	09/08/16
GENERAL EQUITIES	34 EAST HIGH STREET	EAST HAMPTON	CT	P O BOX 7318	KENSINGTON	CT	06037	05A	62	2	Duplicate
B & H LALA LLC	36 EAST HIGH STREET	EAST HAMPTON	CT	7 NUTMEG LANE	EAST HAMPTON	CT	06424	05A	62	1A	09/08/16
MAIN STREET VENTURE LLC	3 MAIN STREET	EAST HAMPTON	CT	24 CEDAR STREET	NEW BRITAIN	CT	06052	05A	62	11	09/08/16
ARC CBEHNCTOO1 LLC	8 EAST HIGH STREET	EAST HAMPTON	CT	PO BOX 460049	HOUSTON	TX	77056	05A	62	9	09/08/16
DAVID B PURPLE	14 EAST HIGH STREET	EAST HAMPTON	CT	14 EAST HIGH STREET	EAST HAMPTON	CT	06424	05A	62	8	09/08/16
THE CONNECTICUT LIGHT & POWER COMPANY (NOW EVERSOURCE) (LOCUS)	22 EAST HIGH STREET	EAST HAMPTON	CT	22 EAST HIGH STREET	EAST HAMPTON	CT	06424	05A	62	5	N/A
EVA K WEBER	29 BEVIN BLVD	EAST HAMPTON	CT	29 BEVIN BLVD	EAST HAMPTON	CT	06424	05A	62	17A	09/08/16
STEPHEN H & CAROL G KARNEY	32A BEVIN BLVD	EAST HAMPTON	CT	32A BEVIN BLVD	EAST HAMPTON	CT	06424	05A	62	41	09/08/16
THE CONNECTICUT LIGHT & POWER COMPANY (NOW EVERSOURCE)	16 EAST HIGH STREET	EAST HAMPTON	CT	22 EAST HIGH STREET	EAST HAMPTON	CT	06424	05A	62	7	N/A
TOWN OF EAST HAMPTON	20 EAST HIGH STREET	EAST HAMPTON	CT	20 EAST HIGH STREET	EAST HAMPTON	CT	06424	05A	62	5A	09/08/16

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 REPLACEMENT OF AN EXISTING
WOODEN POLE WITH A STEEL LATTICE TOWER IN THE
TOWN OF EAST HAMPTON, CONNECTICUT

A. Introduction

Pursuant to Sections 16-50j-38 and 16-50j-39 of the Regulations of Connecticut State Agencies ("R.C.S.A."), The Connecticut Light and Power Company doing business as Eversource Energy ("Eversource" or the "Company"), hereby petitions the Connecticut Siting Council (the "Council") for a declaratory ruling ("Petition") that no Certificate of Environmental Compatibility and Public Need ("Certificate") is required under Section 16-50k(a) of the Connecticut General Statutes ("C.G.S.") to replace an existing 70-foot tall wooden pole with a new 120-foot steel lattice tower on the same property as described herein (the "Project" or "Proposed Facility").

B. Background

Eversource currently owns and operates a telecommunications installation located at 22 East High Street in East Hampton, Connecticut (the "Property"). The Property is an approximately 11-acre parcel owned by the Company and is used as a service center and maintenance yard. See Figure 1, *Site Location Map*. The Company has an existing 70-foot wooden pole in the southern portion of the Property with one 12-foot tall whip antenna mounted at the top, raising the total height to approximately 82 feet above ground level ("AGL"). See Figure 2, *Site Schematic*.

The existing antenna was installed to facilitate Eversource communications with its field personnel. Eversource has sought to verify that the antenna placement was approved by the Town of East Hampton, but the Town's records do not have any information regarding the antenna placement[1].

Eversource is in the process of consolidating its service centers throughout the State of Connecticut, which requires the reconfiguration of its communications system. In East Hampton, this reconfiguration includes removing the existing wooden pole and associated whip antenna and replacing the wooden pole with a new self-supporting steel lattice tower that will allow for future technology upgrades. The existing installation's age, height, and structural nature make it impractical to support the proposed equipment upgrades and allow for future expansion.

The proposed facility would provide critical radio communications for Eversource field crews that operate in East Hampton and the surrounding areas, paging services for local employees, and load management[2]. The replacement installation will also serve as a microwave hub in the future to provide the backhaul (the intermediate wireless link to the control center or core network[3]) for a number of remote locations for the Company.

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[1] The Company's records indicate that the existing pole and radio communications equipment were installed in the early 1980s without Council review of the installation and issuance of a Certificate under C.G.S. § 16-50k. This circumstance was likely attributable to uncertainty at that time regarding whether the Council's jurisdiction included this type of radio communications equipment installation, which was not a component of a cellular system and would not be used to provide communications services to commercial customers, but instead would be used to maintain communications with the Company's field personnel in the surrounding area. See *Sprint Spectrum LP v. Connecticut Siting Council*, 274 F.3d 674 (2001). In that case, the U.S. Court of Appeals, 2nd Circuit, affirmed a 2001 ruling of U.S. District Court (Connecticut) that overturned the Council's ruling that "towers used to provide PCS [personal communications services] do not come within the scope of a fair interpretation of any of the categories in the statutory definition of 'facility.'" 274 F.3d 674 at 675. In its 1997 petition, Sprint Spectrum had requested that the Council rule on whether Sprint Spectrum's towers and associated equipment used for its PCS constitute "facilities" as defined in C.G.S. § 16-50i(a)(6). Id. See also *Town of Westport v. Connecticut Siting Council*, 47 Conn. Supp. 382 (2001), affirmed by *Town of Westport v. Connecticut Siting Council*, 260 Conn. 266 (2002), in which the Superior Court considered whether the Siting Council had exclusive jurisdiction over a tower to be built in Wesport that would be shared by both cellular and noncellular carriers, including Sprint Spectrum and Omipoint Communications, Inc. for their respective PCS equipment, and Nextel Communications of Mid-Atlantic for enhanced mobile radio service equipment . 47 Conn. Supp. at 385. The Superior Court ruled that the Council's jurisdiction was broad enough to cover such noncellular equipment placed on a cellular tower and the Council had exclusive jurisdiction to regulate such a tower. 47 Conn. Supp. at 396, 398-399.

[2] This includes System Control and Data Acquisition (SCADA) systems for both electric and gas Distribution operations to allow control and monitoring of switching devices from a remote location.

[3] Wireless backhaul is the use of wireless communications systems to get data from an end user to a node in the company's network. In a hierarchical telecommunications network the backhaul portion of the network comprises the intermediate links between the core network, or backbone network and the small subnetworks at the "edge" of the entire hierarchical network. The term can also refer to the transmission of network data over an alternative wireless route when the normal route is unavailable or overtaxed. The most common method of wireless backhaul involves microwave systems.

C:\GIS\Projects\Eversource\East_Hampton\mxd\Figure1_Topo.mxd

Legend

- Site
- Municipal Boundary

Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps, Middle Haddam and Moodus, CT (1984)
Site is located on the Middle Haddam, CT Quadrangle
Map Date: March 2016

1,000 500 0 1,000 Feet

Figure 1
Site Location Map

East Hampton Tower Replacement
22 East High Street
East Hampton, Connecticut

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C:\GIS\Projects\Eversource\East_Hampton\mxd\Figure2_SiteSchematic.mxd

Legend

- Existing Wood Pole (to be removed)
- Proposed Lattice Tower Location
- Subject Property
- Proposed Concrete Foundation with Chain Link Fence
- Approximate Parcel Boundary (CTDEEP)

Base Map: 2012 Aerial Photograph (CTECO)
Map Scale:1 inch = 125 feet
Map Date: July 2016

N
W E
S

125 62.5 0 125 Feet

Figure 2
Site Schematic

East Hampton Tower Replacement
22 East High Street
East Hampton, Connecticut

EVERSOURCE ENERGY

ALL POINTS TECHNOLOGY CORPORATION

C. Description of the "Project"

The Company proposes to remove the existing installation, a 70-foot, self-supporting wooden pole with a 12-foot whip antenna, and replace it with a 120-foot, three-legged self-supporting steel lattice tower on a 25-foot by 25-foot concrete pad surrounded by a six-foot high chain link security fence with one locked entrance. Eversource would install new antennas, a microwave dish and coaxial cables on the lattice tower to meet its system needs. Two top-mounted whip antennas would extend approximately 20 feet above the proposed 120-foot tower, raising the total height of the proposed facility to approximately 140 feet AGL.

The replacement installation would be erected on the Property and located approximately 15 feet southwest of the location of the existing wooden pole. See Attachment 1, *Project Plans*. The ground elevation in this portion of the Property is similar to the existing installation location at approximately 484 feet above mean sea level.

Eversource would own the replacement tower. After the new tower is constructed and operative, the existing installation would be removed.

In addition to the two (2) new 20-foot whip antennas, the Company proposes to install four (4) omnidirectional antennas and one (1) microwave dish at various levels on the replacement tower. Specifications for the Company's new antennas are included in Attachment 2, *Antenna Specifications*. The Company would maintain its radio equipment and electrical power supply connections inside the existing service center building. The proposed facility would use an existing, diesel-powered, emergency standby generator located on the south side of the service center for back-up power.

Table 1, *Antenna Schedule* summarizes the antenna types and vertical locations proposed on the new tower.

TABLE 1 - ANTENNA SCHEDULE

Antenna Type	Antenna Make/Model	Antenna Center Line Elevation (ft. AGL)	Comments	Frequency
20-ft. Dual Omni w/TTA	DB-DS9A09F36D-N	130'-0"	DSCASA	900 MHz
20-ft. Omni	Sinclair SC331-SF2LDF	130'-0"	EDACS	450 MHz
15-ft. Omni	Kreco CO-41H-AN	127'-0"	Operations	48.38 MHz
6-ft. Dish w/Radome	RFS-PADX6-U57AC	117'-0"	Goose Hill - 10.9miles	6004.5 Vert 6256.54 Vert
5-ft. Omni	Telewave ANT150-F2	105'-0"	Paging	154 MHz
15-ft. Omni	Kreco CO-41H-AN	103'-6"	Operations	49.1 MHz
15-ft. Omni	Kreco CO-41H-AN	87'-6"	Operations	49.28 MHz

A structural loading analysis has been performed to ensure that the proposed self-supporting lattice tower and foundation would be structurally capable of supporting the loading from the proposed antenna systems. A review of the design and structural analysis for the proposed tower is included in Attachment 3: *Independent Structural Engineer's Review*, which was completed by Centek Engineering on June 3, 2016.

D. Environmental Discussion

The proposed installation would not have a substantial adverse environmental effect because:

1) Wetlands and Watercourses

There are no wetlands or watercourses located on or near the proposed facility location. Two wetland areas, previously delineated by others in 2014, are located in the eastern portion of the Property. An All-Points Technology Corp. ("APT") soil scientist inspected the Property on March 31, 2016 and found the previous delineation of wetlands to be substantially correct. Both wetland areas consist of forested habitats that either border on or are located proximate to Pocotopaug Creek, which flows south along the east Property boundary. The proposed replacement installation is located within an existing developed area of the service center and maintenance yard approximately 240 feet west of the nearest wetland area. Proper erosion and sedimentation controls will be installed and maintained during construction and the Project would not have an adverse effect on wetlands or watercourses. For additional details regarding the wetland boundaries, please refer to the report provided in Attachment 4, *Wetlands Boundary Review*.

2) Soil Erosion, Sediment Control, and Soil Remediation

To the extent needed during construction activities associated with the Project, the Company would apply soil erosion and sediment control measures pursuant to Eversource's best management practices and the *2002 Connecticut Guidelines for Soil Erosion and Sediment Control*. Stormwater runoff in proximity to the proposed facility would be captured by the closed drainage system located in the adjoining bituminous parking lot, which would discharge into the wetland area in the eastern portion of the Property. As a result of this discharge route that leads to a wetland resource area, erosion controls to be employed during construction will include fitting catch basins in the parking lot with filter fabric to trap any potential sediment release and avoid possible impact to wetlands.

3) Wildlife and Vegetation

The Project would not have a significant adverse effect on wildlife or vegetation because the Project's construction work would be confined to a developed portion of the Property within the service center and maintenance yard. The only vegetation in the area currently consists of a maintained lawn located between one of the service center buildings and a bituminous parking lot. The Project area does not support any substantive wildlife habitat characteristics and no adverse impact to wildlife species is anticipated.

No migratory bird species are anticipated to be impacted by the Project. The Proposed Facility is not proximate to any Important Bird Area; the nearest Important Bird Area, Station 43 in South Windsor, is located approximately 18.3 miles to the northwest. Further, the design and siting of the proposed facility would comply with the U.S. Fish and Wildlife Service ("USFWS") guidelines for minimizing potential impacts to migratory birds. A complete evaluation of avian resources proximate to the Property and how the proposed facility would not result in a likely adverse impact to bird species is provided in the Avian Resources Evaluation report in Attachment 5.

According to the available Connecticut Department of Energy & Environmental Protection ("CTDEEP") Wildlife Division Natural Diversity Data Base ("NDDB") maps, the east side of the Property just encroaches into a NDDB buffer area (the Project area itself lies outside this area). Eversource submitted a review request with respect to this Project to confirm that no known populations of Federal or State Endangered, Threatened or Special Concern Species occur at or near the Project site. The CTDEEP responded on April 19, 2016 indicating the agency does not anticipate negative impacts to State-listed species resulting from the Project (see Attachment 6, *NDDB Letter*).

One federally-listed threatened species is known to occur in the vicinity of the Property documented as the northern long-eared bat ("NLEB"; *Myotis septentrionalis*). Northern long-eared bat's range encompasses the entire State of Connecticut. Consultations with CTDEEP Wildlife Division revealed that the Property is not within 150 feet of a known occupied maternity roost tree and is not within 0.25 mile of a known NLEB hibernaculum. The nearest NLEB habitat resource to the proposed activity is a hibernaculum located in North Branford ±19 miles to the southwest of the Project. Based on this information, it is APT's opinion that the Project is not likely to adversely affect NLEB. However, in order

to satisfy Federal Communications Commission ("FCC") rules implementing the National Environmental Policy Act ("NEPA") and Section 7 of the Endangered Species Act, a NLEB streamlined consultation form was submitted to the USFWS. The USFWS did not respond to the consultation form within the requisite 30 days and, as such, it is presumed that no adverse effect would occur to NLEB from the Project[4].

4) Noise

No noise audible to exterior locations would be emitted by the proposed facility. Electrical components and other supporting telecommunication equipment will be internally installed within the service center building. As a result, noise emissions would be consistent with present day levels.

5) Safety and Health

The proposed installation would not create any safety or health hazards to persons or property. The service center Property is a secured location with locked, gated access. Eversource does not anticipate the need for specific traffic control measures during construction on the Property or equipment and materials delivery. Subsequent to completion of construction, the proposed installation would not generate any additional traffic to the area other than continued periodic maintenance visits.

Radio-signal emissions from the proposed equipment after installation on the Property would not exceed the total radio-frequency ("RF") electromagnetic power density level permitted by the FCC. To ensure compliance with the applicable standard, the Company commissioned C Squared Systems to conduct RF power density calculations for the proposed installation using Project-specific data and the methodology prescribed by the FCC's Office of Engineering and Technology Bulletin No. 65, Edition 97-01 (August 1997). The calculations indicate that the cumulative power density level for the proposed installation would be well below the FCC Standard for public exposure to RF emissions (16.29% of the FCC General Population/Uncontrolled limit). Please refer to Attachment 7, *Calculated Radio Frequency Emissions Report*, dated March 11, 2016, for a copy of the

[4] If the USFWS does not respond within 30 days from submittal of the Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form, it is presumed that the USFWS concurs with the consultant's determination of no adverse effect and project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled in accordance with the USFWS January 5, 2016 intra-Service Programmatic Biological Opinion (BO).

methodology and calculations.

6) Visual

The Project would not have a significant adverse visual impact on the environment or character of the community. Relatively dense development and vegetative cover throughout the general area will result in few unobstructed near-views of the lattice tower once beyond the Property limits. The size and style of the proposed facility would result in a change in the character of most near views. However, the majority of views from nearby residential streets are obscured by intervening trees, minimizing direct lines of sight of the entire tower. Remaining views are at distances of nearly one mile and beyond where only the upper portion of the 120-foot tall replacement tower might be seen (the whip antennas will not be visible beyond the immediate area of the Property). For a visual comparison of the existing and proposed tower, please refer to Attachment 8, *Visibility Analysis*.

7) Historical and Archaeological Resources

A review of relevant historic and archaeological information was conducted to determine whether the Project area holds potential historical and/or archaeological significance. No Historic Properties[5] previously listed or deemed eligible for the National Register of Historic Places were identified within the Area of Potential Effect (APE - 0.5 mile) for Direct Effects, and one (1) Historic Property previously listed or deemed eligible for the National Register of Historic Places was identified within the APE for Visual Effects. The latter consists of the Belltown National Register Historic District (NR# 85003543), which is located adjacent to the Property. The uppermost portions of the replacement installation will be visible from some areas within the historic district.

A review of cultural resources on file with the Connecticut State Historic Preservation Office ("SHPO") revealed that no previously recorded archaeological sites have been identified on the Property or within the APE. It is evident that the Project area has been thoroughly disturbed and no intact soils remain. Thus, this area retains no potential to yield intact prehistoric or historic period cultural deposits.

[5] The Nationwide Programmatic Agreement defines a "Historic Property" as "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or NHO that meet the National Register criteria."

APT submitted historic/cultural information to SHPO for agency review and comment. The submission included a determination by an architectural historian that the Project would have no adverse effect on historic properties. Similarly, an archaeologist provided a professional determination that the Project area has low archaeological potential and no additional research of the Project area is recommended prior to construction. The SHPO did not respond within 30 days of submittal of this information and the determination of no adverse effect. As outlined in the Nationwide Programmatic Agreement ("NPA") pursuant to the National Environmental Policy Act ("NEPA") as it relates to communication towers, this establishes a presumption that SHPO concurs with this determination of No Adverse Effect. As mandated in the NPA, APT forwarded the SHPO submittal to the FCC electronically, stating that SHPO has not responded. Fifteen days have elapsed since that time with no response from the FCC, allowing the assumption of concurrence. As such, the proposed facility is in compliance with applicable NEPA regulations. As of the filing of this Petition, Eversource has not received a determination from SHPO.

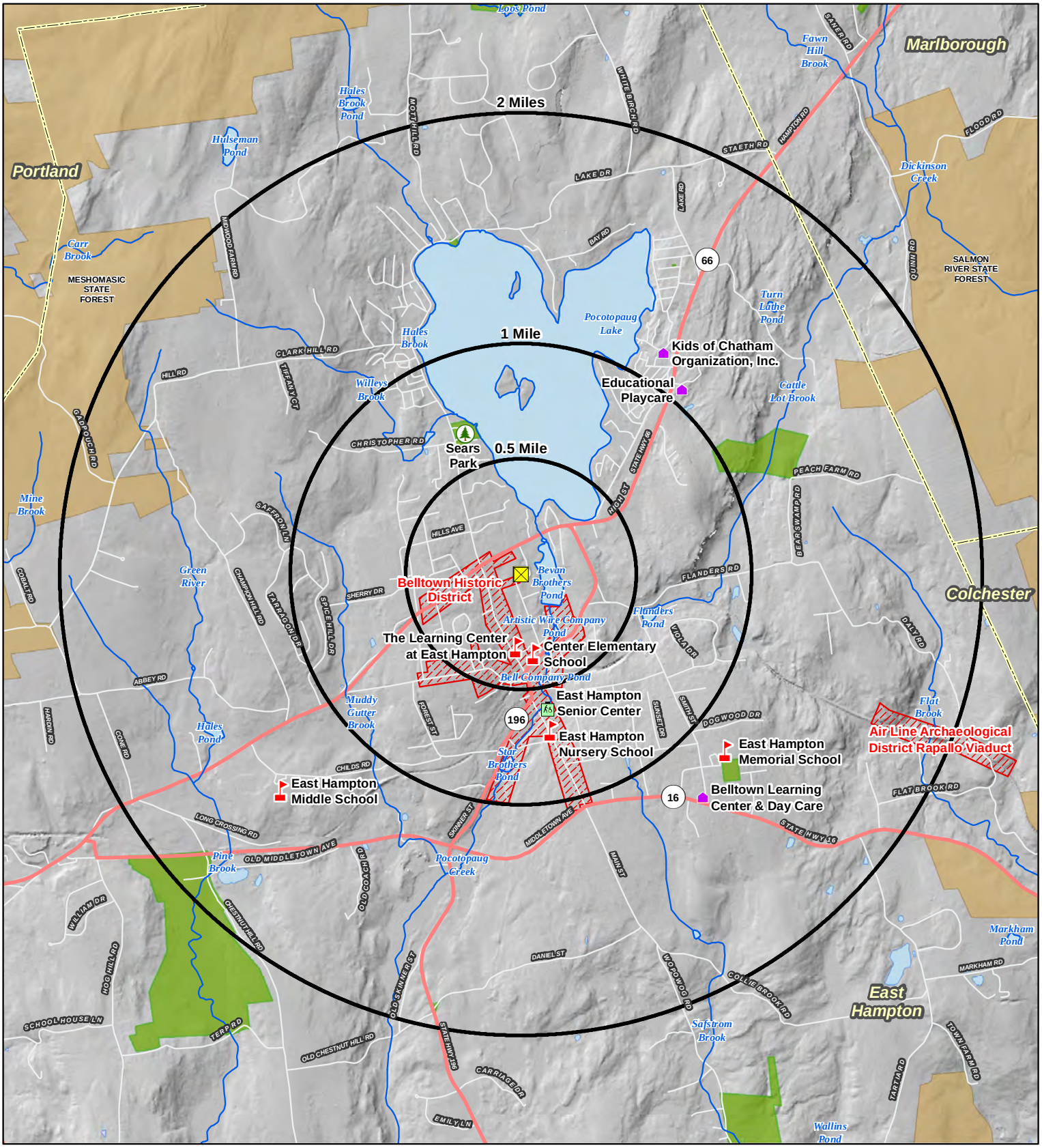
A copy of the SHPO submittal is included in Attachment 9. If the SHPO provides a determination at later date, Eversource will forward a copy of the letter to the Council for its records.

8) Forests and Parks, Scenic Areas and Other Surrounding Features

The Property contains no areas of recreation or public interest administered by any federal, state, local, or private agencies. No State or locally-designated scenic roads or other scenic areas are located proximate to the Property. Sears Park is located 0.65-mile northwest of the Property but has no direct line of site of the proposed facility. The locations of non-residential development and other resources within two miles of the Project area are listed in Table 2 and depicted on Figure 3, Surrounding Features Map.

Table 2: Surrounding Features within 2 Miles of the Site

Resource Type	Name	Address in East Hampton, CT	Distance from Site
Daycare			
	Belltown Learning Center & Day Care	3 Smith St	1.2 miles SW
	Educational Playcare	140 E High St	1.1 miles NE
	Kids of Chatham Organization, Inc.	151 E High St	1.14 miles NE
Community Center	None		
Senior Center			
	East Hampton Senior Center	105 Main St	0.60-mile S
Hospital	None		
School			
	Center Elementary School	7 Summit St	0.31 miles S
	East Hampton Memorial School	20 Smith St	1.16 miles SE
	East Hampton Middle School	19 Childs Rd	1.4 miles SW
	East Hampton Nursery School	111 Main St	0.66-mile S
	The Learning Center at East Hampton	55 Main St	0.31-mile SW
Recreational / Park			
	Sears Park	Sears Lane	0.65 mile NW
National Register of Historic Places			
	Belltown Historic District		Site adjacent to district
	Air Line Railroad Archaeological District - Rapallo Viaduct		1.65 miles SE
Youth Camp	None		



Legend

- Site
- 0.5-2-Mile Radii
- National Register of Historic Places District
- Municipal and Private Open Space
- State Forest/Park
- Open Water
- Municipal Boundary

Surrounding Features

- Licensed Child Day Care
- Public School
- Recreation / Park
- Senior Center

N W E S

3,000 1,500 0 3,000 Feet

Base Map Source: ESRI & CTECO Shaded Relief
Map Scale:1 in = 3,000 ft Map Date: March 2016

Figure 3
Surrounding Features Map

East HamptonTower Replacement
22 East High Street
East Hampton, Connecticut

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9) Physical Environmental Effects

Eversource respectfully submits that the construction and operation of its proposed replacement installation, approximately 15 feet to the southwest of the existing wooden pole, would not involve a significant alteration in the physical or environmental characteristics of the Property or the surrounding area. Two existing temporary storage containers will need to be relocated to accommodate the Project construction; however, no significant earthwork or re-grading would be necessary for development of the replacement installation. In addition, no trees or vegetation would need to be removed to accommodate Project construction. Interconnections for coaxial cables would be elevated, approximately 12 feet, and run from the replacement installation into the existing service center building. Vehicular access to the Company's service center would not change in any way.

10) Federal Aviation Administration ("FAA") Registration

The proposed facility's coordinates, height, and structure type were submitted to TOWAIR, an FCC website, to determine if it requires FAA registration for lighting or marking. Based on the results of the TOWAIR check of the replacement tower information provided, registration with the FAA is not required (see Attachment 10, *TOWAIR Determination*).

11) Location of Nearest Residence

The Property is located in the primary business district of East Hampton. The Property is accessed from Route 66 (East High Street) which is densely developed with retail and commercial businesses. Residential development is present to the south and farther north, across Route 66, along Lake Pocotopaug. The nearest residential property to the Property is located approximately 200 feet to the south at 32A Bevin Boulevard.

E. Schedule

Construction of this facility would begin as soon as practical after issuance of the requested declaratory ruling by the Council and would be approximately three months in duration. Eversource anticipates that construction would be completed in 2016. Removal of the existing wood pole would be completed as soon as practical following the completion of the installation of all antenna systems onto the replacement installation.

C:\GIS\Projects\Eversource\East_Hampton\mxd\Figure4_NearestResidence.mxd

Legend

- Subject Property
- Proposed Tower Location
- Proposed Concrete Foundation with Chain Link Fence
- Nearest Residential Property
- Approximate Parcel Boundary (CTDEEP)

N
W E
S

250 125 0 250
Feet

Base Map: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 250 feet
Map Date: June 2016

Figure 4
Nearest Residence

East Hampton Tower Replacement
22 East High Street
East Hampton, Connecticut

EVERSOURCE ENERGY

ALL POINTS TECHNOLOGY CORPORATION

F. Conclusion

Connecticut General Statutes Section 16-50k(a) indicates that a Certificate of Environmental Compatibility and Public Need is needed for a proposed installation of a facility that the Council determines may have a "substantial adverse environmental effect." Based on an evaluation of the environmental effects of the proposed replacement installation, Eversource respectfully submits that this Project would not result in a substantial adverse effect on the environment or ecology, nor would it damage existing scenic, historical or recreation values.

Accordingly, Eversource requests that the Council issue a declaratory ruling that no Certificate is required because the proposed installation would not have a substantial adverse environmental effect.

G. Communications with Company

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

Kathleen M. Shanley
Manager – Transmission Siting
Eversource Energy
56 Prospect Street
Hartford, CT 06103
Telephone: (860) 728-4527

EVERSOURCE ENERGY by:

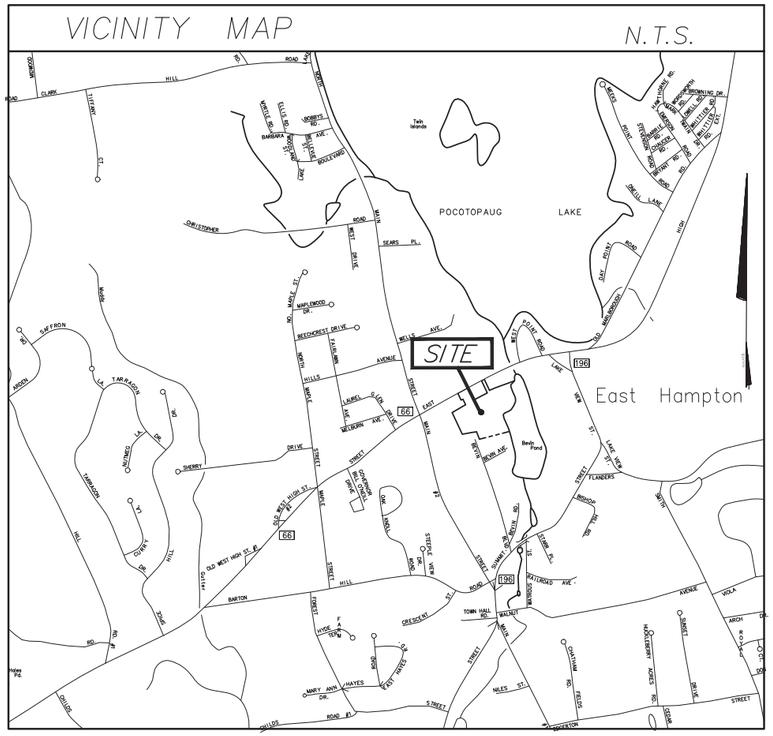
Kathleen M. Shanley
Manager – Transmission Siting

Attachment 1 – Project Plans

EAST HIGH STREET MICROWAVE SITE

22 EAST HIGH STREET
EAST HAMPTON, CONNECTICUT

VICINITY MAP N.T.S.



SITE DIRECTIONS

FROM BERLIN:

1. Head toward Berlin Tpke on Selden St Go for 485 ft/
2. Turn left onto Berlin Tpke (US-5) Go for 1.8 mi/
3. Take ramp toward CT-9 S Go for 0.3 mi/
4. Take ramp onto CT-9 Go for 7.5 mi/
5. Turn slightly right onto St Johns Sq (CT-17 N) toward CT-66 E/Portland/Willimantic Go for 0.2 mi/
6. Turn right onto CT-17/CT-66 Go for 0.9 mi/
7. Turn right onto Marlborough St (CT-17/CT-66) Go for 2.0 mi/
8. Continue on Portland Cobalt Rd (CT-66) Go for 6.2 mi/
9. Arrive at E High St (CT-66). Your destination is on the right.

APPROVALS

CONSTRUCTION_____	DATE: _____
LEASING_____	DATE: _____
RF_____	DATE: _____
ZONING_____	DATE: _____
QC_____	DATE: _____
NETWORK ENG_____	DATE: _____
OWNER_____	DATE: _____

PROJECT SUMMARY

SITE NAME:	*EAST HIGH STREET MICROWAVE SITE #*
SITE ADDRESS:	*22 EAST HIGH STREET* *EAST HAMPTON, CT*
CONTACT PERSON:	107 SELDEN STREET STEVE FLORIO OFFICE: (860) 665-5611 FAX. (860) 665-5585
GOVERNING CODE:	CONNECTICUT STATE BUILDING AND LIFE SAFETY CODE
APPLICANT:	*EVERSOURCE ENERGY* 107 SELDEN STREET BERLIN, CT. 06037
ARCHITECT:	*EVERSOURCE ENERGY* 107 SELDEN STREET BERLIN, CT. 06037
M/E/P ENGINEER:	*EVERSOURCE ENERGY* 107 SELDEN STREET BERLIN, CT. 06037
TOWN SITE ID#	

PROJECT DESCRIPTION

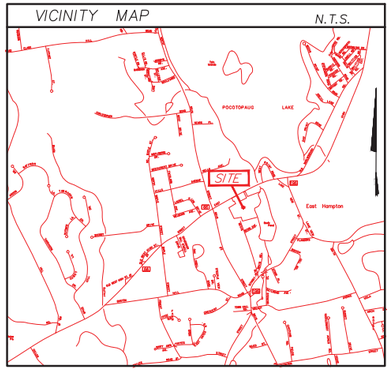
THE SCOPE OF THIS PROJECT INCLUDES THE CONSTRUCTION OF A 120' HIGH SELF SUPPORTING LATTICE TOWER LOCATED ON LAND OWNED BY EVERSOURCE ENERGY.

SHEET INDEX

PLANS PRESENTED BY
SARGIS ASSOCIATES, INC.
ENGINEERING AND SURVEYING

VICINITY MAP

N.T.S.



MAP REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC SURVEY RELATIVE TO IMPROVMENTS AT NO. 22 EAST HIGH STREET EAST HAMPTON, CONNECTICUT PROPERTY OF CONNECTICUT LIGHT AND POWER COMPANY DATE: 3-2014 SCALE: 1"=40' SARGIS ASSOCIATES, INC.

NOTES

DEEDS DESCRIBING ORIGINAL PROPERTIES INCLUDE:
VOL 67 P 56 WALSH TO CLP
VOL 102 P 318 WALSH TO CLP
VOL 99 P 519 JACOBS TO CLP
VOL 69 P 69 GRIGGS TO CLP
VOL 110 P 444 PURPLE TO CLP

LOT AREA IS 480,995± Sq. Feet (11.0± ACRES)

VERTICAL DATUM FROM CGS BENCHMARK 808 (1988 NAVD)

HORIZONTAL DATUM BASED ON DOT ROW MAP NO. 41-02 SHEET 1 OF 3 REV. TO 10-22-1965 BASELINE MONUMENT COORDINATES, CONVERTED TO 1983 NAD WITH CORPSCON.

SUBJECT PROPERTIES IN "C" ZONE (COMMERCIAL)

WETLANDS FIELD DELINEATED BY ERIC DAVISON, CSS IN MARCH 2014.

THE PURPOSE OF THIS PLAN IS TO DEPICT EXISTING CONDITIONS AS OF THE DATE OF SURVEY. BEARINGS AND ELEVATIONS SHOWN ARE CONNECTICUT STATE PLANE NAD83 AND NAVD88 RESPECTIVELY BASED ON FIELD SURVEY BY SARGIS ASSOCIATES IN 2014.

LEGEND

MONITOR WELL	LIGHTING
200 CONTOUR	IRON PIN/PIPE
PROPERTY LINE	MERESTONE
BLDG. SETBACK	+125.67 SPOT GRADE
EASEMENT LINE	TREE
WATERCOURSE	MONITOR WELL FROM RECORD
STONEWALL	MONITOR WELL FOUND
TREELINE	POWER POLE
FENCE	GAS GATE
WATER LINE	WATER GATE
WETLANDS LIMIT	HYDRANT
E UNDERGROUND ELEC	WATER WELL
T UNDERGROUND TELE	ROAD SIGN
SAN. MANHOLE	
STORM MANHOLE	
CATCH BASIN	
G GASLINE	

This map has been prepared pursuant to the Regulations of Connecticut State Agencies sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the state of Connecticut" as adopted by the Connecticut Association Of Land Surveyor's Inc. on September 26, 1996;

The type of survey performed is asite improvement survey and is intended to show existing/proposed conditions.

Boundary determination/opinion is a resurvey and is based upon locating physical evidence, map references and deed descriptions; and

This survey conforms to Class A-2/T-2 surveys.

To my knowledge and belief this map is substantially correct as noted hereon.

JOHN L. THOMSON, L.S.
CT L.S. 8507

This map is not valid without the live signature and impression type seal of the surveyor whose name appears hereon.

UTILITIES SHOWN ON THIS MAP ARE LOCATED FROM THE BEST AVAILABLE MAPS AND MARK-OUTS AND ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED. PLEASE CALL BEFORE YOU DIG, 1-800-922-4455. ALL UTILITIES MAY NOT BE SHOWN.

TITLE	EXISTING CONDITIONS SURVEY EVERSOURCE SERVICE CENTER 22 EAST HIGH STREET EAST HAMPTON, CT		
BY	CHKD	APP	APP
DATE 9-24-15	DATE 9-24-15	DATE	DATE
H-SCALE 1"=40'	SIZE ARCH D	SURVEY JOB #	
V-SCALE n/a	V.S.	R.E. DWG	
RE PROJ NUMBER		NUSCO	SH 2

north

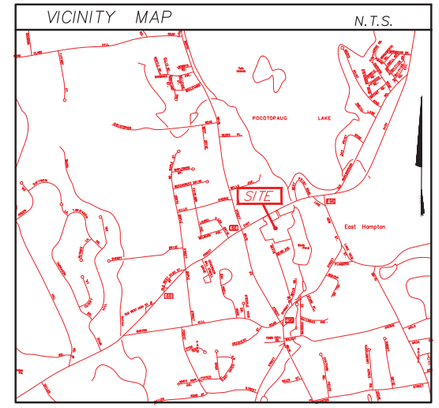
GENERAL SEDIMENTATION AND EROSION CONTROL NOTES

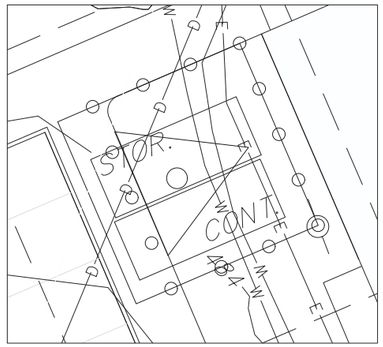
1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATIONS OF THE STATE OF CT. DEP "BULLETIN 34, CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL DATED 2002"
3. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM; RESTABILIZATION SHALL BE CARRIED OUT AS SOON AS FINE GRADING HAS TAKEN PLACE.
4. ALL EROSION CONTROL MEASURES ARE TO BE INSPECTED AND MAINTAINED ON A REGULAR BASIS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED LAND HAS BEEN STABILIZED BY VEGETATION OR PAVING. THE MINIMUM REQUIREMENT IS FOR DAILY INSPECTION PLUS INSPECTION IMMEDIATELY BEFORE AND AFTER ALL STORMS.
5. RESPONSIBILITY FOR THE EROSION AND SEDIMENTATION CONTROL PLAN RESTS WITH THE CONTRACTOR. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES INVOLVED IN SITE CONSTRUCTION OF THE PLAN'S OBJECTIVES AND REQUIREMENTS, NOTIFYING THE MIDDLEBURY ZONING ENFORCE-MENT OFFICER OF ANY TRANSFER OF THIS RESPONSIBILITY.
6. MAINTENANCE OF CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR. SEDIMENT REMOVED FROM CONTROL FACILITIES SHALL BE DISPOSED OF AT A LOCATION APPROVED BY THE ENGINEER THAT WILL NOT CAUSE ADDITIONAL SEDIMENTATION PROBLEMS TO THE SURROUNDING AREA.
7. NO REFUELING, SERVICING OR OVERNIGHT STORAGE OF VEHICLES OR MACHINERY SHALL BE ALLOWED WITHIN 50 FEET OF ANY WATERCOURSE. REFUELING WILL BE DONE ON AN IMPERVIOUS SURFACE. ABSORBENT SPILL BLANKETS SHALL BE PLACED NEXT TO THE REFUELING ACTIVITY TO BE USED TO CONTAIN AND REMOVE ANY POTENTIAL SPILLAGE.
8. NO STORAGE OF OIL, GASOLINE, PAINT, OR OTHER HAZARDOUS MATERIALS SHALL BE ALLOWED WITHIN 50 FEET OF ANY WATERCOURSE.
9. CATCH BASINS IN PAVED AREAS RECEIVING SILT-LADEN RUNOFF SHALL BE PROTECTED BY WRAPPING THE GRATE WITH FILTER FABRIC.

NOTE
EXISTING STORAGE CONTAINERS IN AREA OF ANTENNA PAD TO BE REMOVED.

UTILITIES SHOWN ON THIS MAP ARE LOCATED FROM THE BEST AVAILABLE MAPS AND MARK-OUTS AND ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED. PLEASE CALL BEFORE YOU DIG. 1-800-922-4455. ALL UTILITIES MAY NOT BE SHOWN.

VICINITY MAP N.T.S.



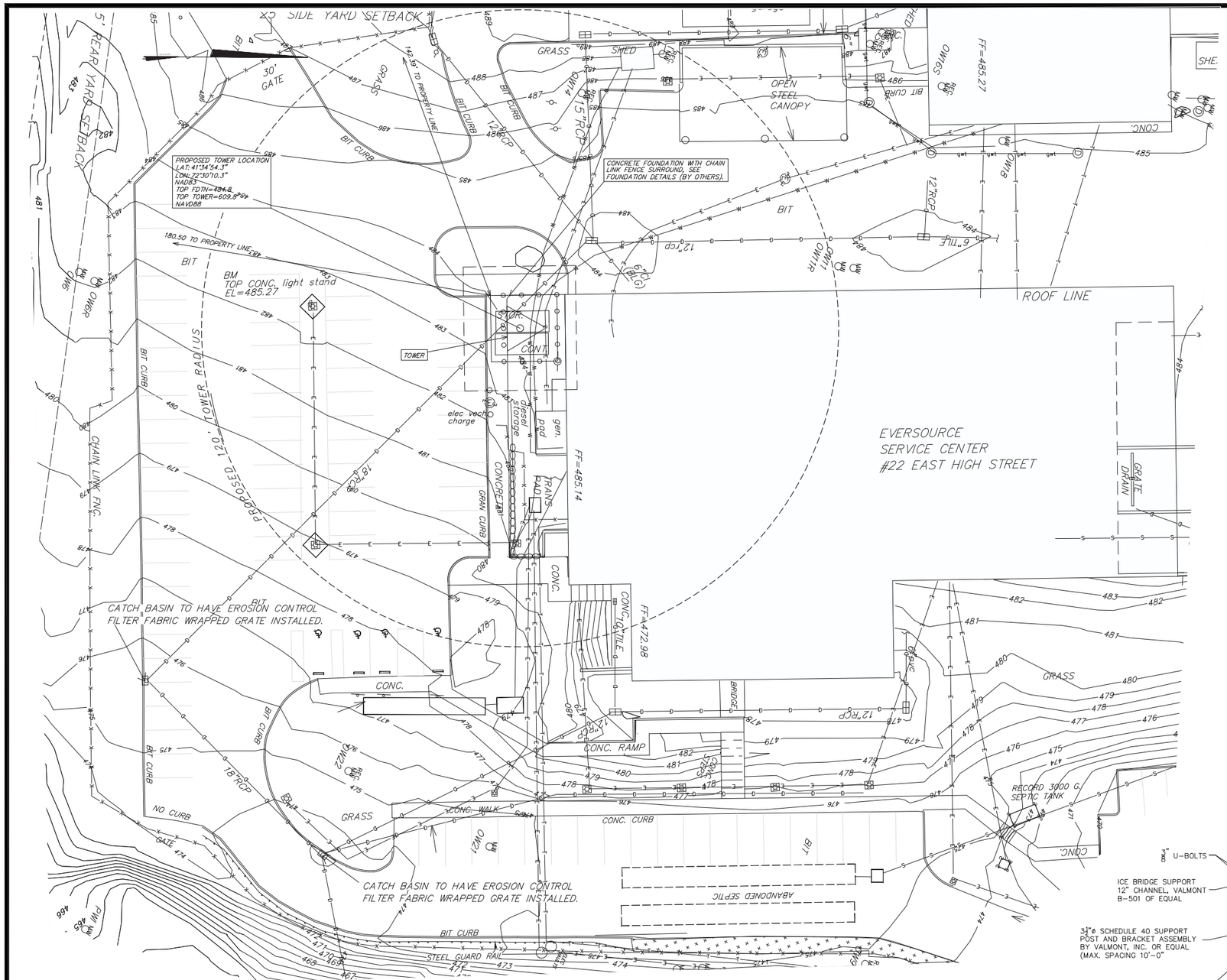


DETAIL "A" N.T.S.

ZONE C

TITLE	SITE PLAN NOTES AND DETAILS MICROWAVE TOWER 22 EAST HIGH STREET EAST HAMPTON, CT		
BY	CHKD	APP	APP
DATE 9-24-15	DATE 9-24-15	DATE	DATE
H-SCALE 1"=40'	SIZE ARCH. D	SURVEY JOB #	
V-SCALE n/a	V.S.	R.E. DWG	
RE PROJ NUMBER		NUSCO	SH 3

1 INCH = 40 FEET


25' SIDE YARD SETBACK
5' REAR YARD SETBACK
30' GATE
142.59' TO PROPERTY LINE
PROPOSED TOWER LOCATION
LAT: 41°34'54.3"
LONG: 72°30'10.3"
NAD83
TOP FDTN=484.8
TOP TOWER=609.8
NAVD88
CONCRETE FOUNDATION WITH CHAIN LINK FENCE SURROUND, SEE FOUNDATION DETAILS (BY OTHERS).
180.50 TO PROPERTY LINE
BM
TOP CONC. light stand
EL=485.27
TOWER
PROPOSED 120' TOWER RADIUS
CHAIN LINK FNC.
EVERSOURCE
SERVICE CENTER
#22 EAST HIGH STREET
ROOF LINE
OPEN STEEL CANOPY
GRASS SHED
FF=485.27
FF=485.14
FF=472.98
CONC.
BIT
BIT CURB
GRAN CURB
CONC. CURB
CONC. RAMP
CONC. WALK
NO CURB
GRASS
GATE
elec veh charge
diesel storage
gen. pad
TRANS PAD
GRATE DRAIN
RECORD 3000 G. SEPTIC TANK
ABANDONED SEPTIC
STEEL GUARD RAIL
CATCH BASIN TO HAVE EROSION CONTROL FILTER FABRIC WRAPPED GRATE INSTALLED.
CATCH BASIN TO HAVE EROSION CONTROL FILTER FABRIC WRAPPED GRATE INSTALLED.
15"RCP
12"RCP
18"RCP
6"TILE
OHW1
OHW2
OHW3
OHW4
OHW5
OHW6
OHW7
OHW8
OHW9
OHW10
OHW11
OHW12
OHW13
OHW14
OHW15
OHW16
OHW17
OHW18
OHW19
OHW20
OHW21
OHW22
OHW23
OHW24
OHW25
OHW26
OHW27
OHW28
OHW29
OHW30
OHW31
OHW32
OHW33
OHW34
OHW35
OHW36
OHW37
OHW38
OHW39
OHW40

Attachment 2 – Antenna Specifications

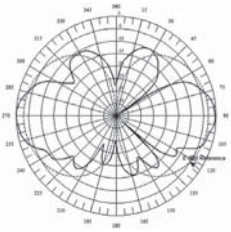
dbSpectra

900 MHz Omni Antennas (890-960 MHz)

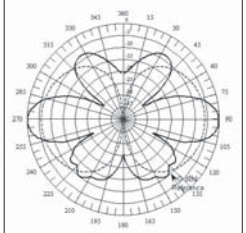
		890-960 MHz															
	Model Number	**DS9A03F36U-N**	**DS9A03F36U-D**	**DS9A06F36U-N**	**DS9A06F36U-D**	**DS9A09F36U-N**	**DS9A09F36U-D**	**DS9A10F36U-N**	**DS9A10F36U-D**	**DS9A12F36U-N**	**DS9A12F36U-D**	**DS9A03F36D-N**	**DS9A03F36D-D**	**DS9A06F36D-N**	**DS9A06F36D-D**	**DS9A09F36D-N**	**DS9A09F36D-D**	**DS9A06F36T-N**	**DS9A06F36T-D**
	Input Connector	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN
	Type	Single		Single		Single		Single		Single		Dual		Dual		Dual		Triple	
ELECTRICAL	**Bandwidth**, MHz	70		70		70		70		70		70		70		70		70	
ELECTRICAL	**Power**, Watts	500		500		500		500		500		350		350		350		250	
ELECTRICAL	**Gain**, dBd	3		6		9		10		12		3		6		9		6	
ELECTRICAL	**Horizontal Beamwidth**, degrees	360		360		360		360		360		360		360		360		360	
ELECTRICAL	**Vertical Beamwidth**, degrees	30		16		8		6		3		30		16		8		16	
ELECTRICAL	**Beam Tilt**, degrees	0		0		0		0		0		0		0		0		0	
ELECTRICAL	**Isolation (minimum)**, dB	N/A		N/A		N/A		N/A		N/A		40		40		45		40	
MECHANICAL	**Number of Connectors**	1		1		1		1		1		2		2		2		3	
MECHANICAL	**Flat Plate Area**, $ft^2(m^2)$	0.24 (0.02)		1.28 (0.12)		2.26 (0.21)		3.25 (0.3)		4.33 (0.4)		1.38 (0.13)		2.27 (0.21)		3.83 (0.36)		3.47 (032)	
MECHANICAL	**Lateral Windload Thrust**, lbf(N)	11 (48)		48 (214)		85 (377)		122 (543)		163 (723)		31 (139)		85 (374)		144 (641)		87 (385)	
MECHANICAL	**Survival Wind Speed**																		
MECHANICAL	**without ice**, mph(kph)	437 (703)		250 (402)		150 (241)		105 (169)		75 (121)		379 (610)		150 (241)		90 (145)		136 (219)	
MECHANICAL	**with 0.5" radial ice**, mph(kph)	319 (513)		225 (362)		127 (204)		88 (142)		60 (97)		294 (473)		125 (201)		75 (121)		106 (171)	
MECHANICAL	**Mounting Hardware** included	DSH2V3R		DSH2V3R		DSH3V3R		DSH3V3N		DSH3V3N		DSH2V3R		DSH3V3R		DSH3V3N		DSH3V3N	
DIMENSIONS	**Length**, ft(m)	2.9 (0.9)		6.7 (2)		11.4 (3.5)		16.3 (5)		21.8 (6.6)		8 (2.4)		11.4 (3.5)		19.2 (5.9)		15.3 (4.7)	
DIMENSIONS	**Radome O.D.**, in(cm)	2 (5.1)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)		3 (7.6)	
DIMENSIONS	**Mast O.D.**, in(cm)	2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		2.5 (6.4)		3.2 (8.13)	
DIMENSIONS	**Net Weight** w/o bracket, lb(kg)	5.5 (2.5)		18 (8.2)		30 (13.6)		45 (20.4)		52 (23.6)		21 (9.5)		31 (14.1)		50 (22.7)		40 (18.1)	
DIMENSIONS	**Shipping Weight**, lb(kg)	9.6 (4.4)		28 (12.7)		60 (27.2)		75 (34)		82 (37.2)		51 (23.1)		61 (27.7)		80 (36.3)		50 (22.7)	

VERTICAL PATTERNS

DS9A03F36U-N
DS9A03F36U-D



DS9A06F36U-N
DS9A06F36U-D



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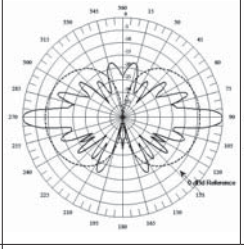
DS9A09F36U-D



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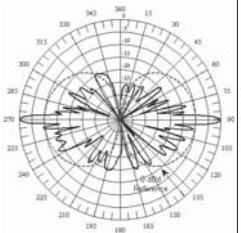
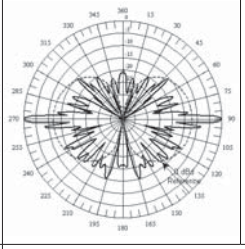
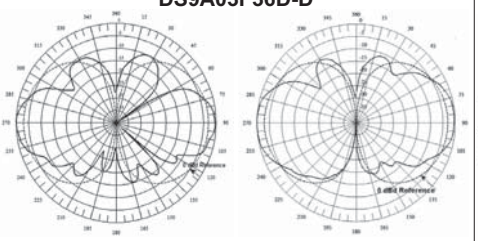


DS9A12F36U-N
DS9A12F36U-D

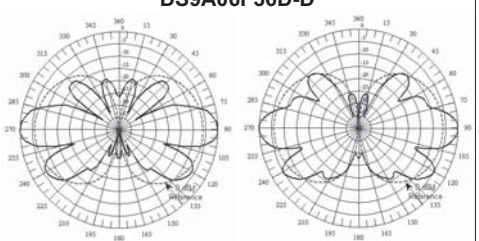


DS9A03F36D-N
DS9A03F36D-D



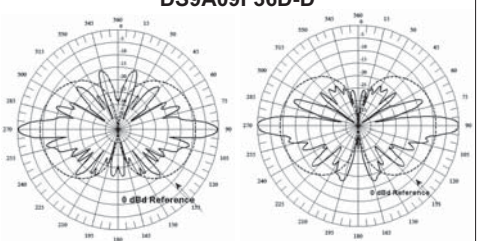
Top Bottom

DS9A06F36D-N
DS9A06F36D-D



Top Bottom

DS9A09F36D-N
DS9A09F36D-D



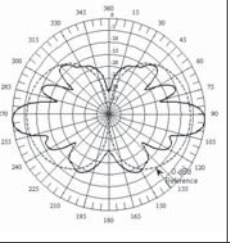
Top Bottom

900 MHz Omni Antennas (890-960 MHz)

		890-960 MHz					
	Model Number	**DS9A06F36U3N**	**DS9A06F36U3D**	**DS9A06F36U6N**	**DS9A06F36U6D**	**DS9A10F36U3N**	**DS9A10F36U3D**
	Input Connector	N(F)	7/16 DIN	N(F)	7/16 DIN	N(F)	7/16 DIN
	Type	Beamtilt		Beamtilt		Beamtilt	
ELECTRICAL	**Bandwidth**, MHz	70		70		70	
	Power, Watts	500		500		500	
	Gain, dBd	6		6		10	
	Horizontal Beamwidth, degrees	360		360		360	
	Vertical Beamwidth, degrees	16		16		6	
	Beam Tilt, degrees	3 Down		6 Down		3 Down	
	Isolation (minimum), dB	N/A		N/A		N/A	
MECHANICAL	**Number of Connectors**	1		1		1	
	Flat Plate Area, $ft^2(m^2)$	1.28 (0.12)		1.28 (0.12)		2.5 (0.23)	
	Lateral Windload Thrust, lbf(N)	48 (214)		48 (214)		122 (543)	
	Survival Wind Speed **without ice**, mph(kph) **with 0.5" radial ice**, mph(kph)	 250 (402) 225 (362)		 250 (402) 225 (362)		 105 (169) 88 (142)	
	Mounting Hardware included	DSH2V3R		DSH2V3R		DSH3V3N	
DIMENSIONS	**Length**, ft(m)	6.7 (2)		6.7 (2)		16.3 (5)	
	Radome O.D., in(cm)	3 (7.6)		3 (7.6)		3 (7.6)	
	Mast O.D., in(cm)	2.5 (6.4)		2.5 (6.4)		2.5 (6.4)	
	Net Weight w/o bracket, lb(kg)	18 (8.2)		18 (8.2)		45 (20.4)	
	Shipping Weight, lb(kg)	28 (12.7)		28 (12.7)		75 (34)	

VERTICAL PATTERNS

DS9A06F36U3N
DS9A06F36U3D



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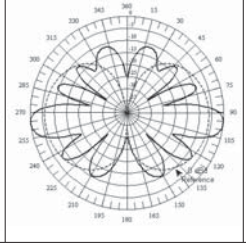

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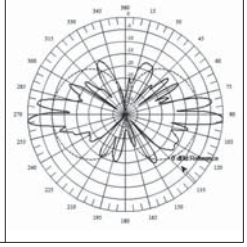


SC331-SF2LDF Collinear omni, 10 dBd, straight radome, low PIM, 450-460 MHz

- Rugged fiberglass radome
- 10 dBd gain, 10 MHz minimum bandwidth with 1.5:1 VSWR, low PIM design
- Designed to withstand severe environmental conditions
- Side mount kit recommended for offset mount

Side mount kit recommended for offset mount.

Sinclair Technologies' NEW SC331-L antenna line provides a powerful and economic alternative to our popular SC320-L Antenna. The SC331-L series provides identical electrical performance, and comparable mechanical performance to the SC320-L Series.

The new SC331-L Antenna is constructed in the same fashion as the SC320-L, replacing the tapered white radome with an attractive light blue straight radome.

The SC331-L is also high-performance low PIM collinear omni's which use industry-leading designs that offer high gain, excellent bandwidth and high reliability.

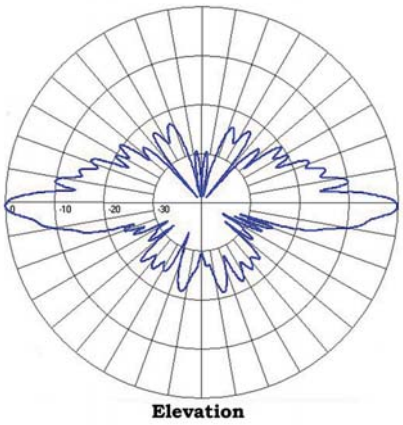
Sinclair's new SC331-L series of antennas have been specifically designed for UHF applications requiring rugged performance and superior electrical and mechanical specifications. This rugged fiberglass radome allows the withstanding of severe environmental conditions.

Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com

Electrical Specifications		
Frequency Range	MHz	450 to 460
Bandwidth	MHz	10
Connector		7/16 DIN-Female
Gain (nominal)	dBi (dBd)	12.1 (10)
VSWR (max)		1.5:1
Polarization		vertical
Impedance	Ω	50
Pattern		Omni- directional
Vertical beamwidth (typ)	degrees	6
Average Power Input (max)	W	250
Passive intermod. (2x20W, 3rd ord.)	dBc	-150
Lightning protection		DC ground

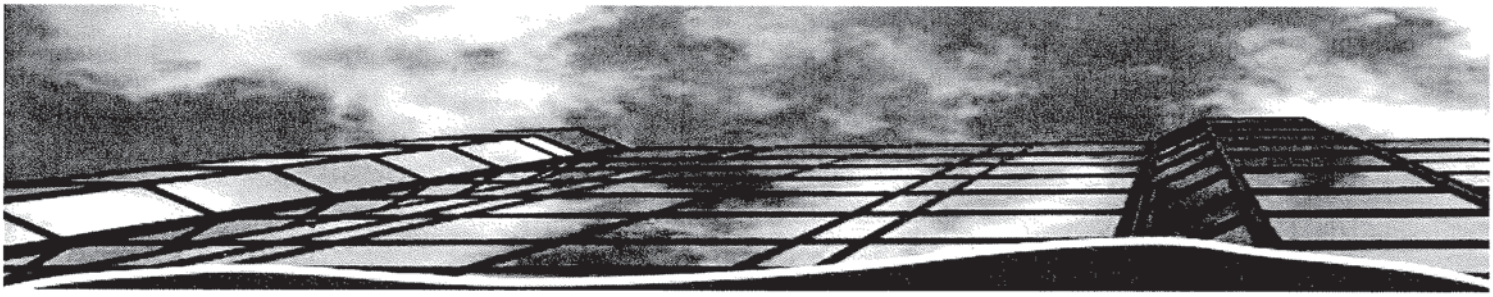
Mechanical Specifications		
Width	mm (in)	318 (12.5)
Depth	mm (in)	318 (12.5)
Length/ Height	mm (in)	6140 (241.75)
Base pipe diameter	mm (in)	73 (2.88)
Base pipe mounting length	mm (in)	508 (20)
Radome material		fiberglass (UV protected)
Weight	kg (lbs)	17.93 (39.5)
Weight iced (1/2" ice)	kg (lbs)	42.68 (94)
Actual shipping weight	kg (lbs)	33.6 (74)
Shipping dimensions	mm (in)	6756x152x152 (266x6x6)

Environmental Specifications		
Temperature range	°C (°F)	-40 to +60 (-40 to +140)
Wind Loading Area (Flat Plate Equivalent)	m² (ft²)	0.29 (3.11)
Wind Loading Area (1/2" ice)	m² (ft²)	0.43 (4.66)
Rated wind velocity (no ice)	km/h (mph)	217 (135)
Rated wind velocity (1/2" radial ice)	km/h (mph)	185 (115)
Lateral thrust (100 mph No Ice)	N (lbs)	529.3 (119)
Torsional moment (100 mph No Ice)	Nm (ft-lbs)	178.2 (132)
Bending moment (100 mph No Ice)	Nm (ft-lbs)	1335.2 (989)
Tip deflection (100 mph No Ice)	degrees	5.9



Elevation

Kreco Antennas



Heavy Duty Shunt Fed Co-Axial Antennas

Model CO-41H

By these antennas internally the entire external surfaces are at ground potential. The vertical radiator is aluminum pipe which extends down inside the skirt and inside the support pipe. Thus there is double pipe inside the skirt and down to the bottom end of the mounting pipe.

Vertical Radiator: 1" Pipe
Mounting Pipe: 1 1/4" Pipe
Support Pipe is Stainles Steel
Skirt: 2 5/8" Tube
Power Rating: 1 KW
Unity Gain - Omni Directional
Choice of UHF or type N F/M Connector
The Lower End Of The Mounting Pipe.
Pipe Is Part Of The Antenna

Frequency Range	Weight
30 - 50 MHz	40 lbs
50 - 100 MHz	30 lbs

RADIO FREQUENCY SYSTEMS
The Clear Choice®

TrunkLine Antenna, Standard (FCC 101, Cat A) , Dual Polarized, 6 ft

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 24 GHz. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 12 ft (3.7m) diameters. Antennas from 4ft up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.

Antenna

FEATURES / BENEFITS

- Field-proven reliability and long life
- Withstanding winds up to 200 km/h (125 mph), an optional sway bar is available for added assurance in case mistakes are made during installation
- A single-piece configuration and compact packaging to reduce transportation costs
- Frequencies ranging from 4 GHz to 15 GHz with support for two wideband frequency ranges (5.725-6.875 and 7.125-8.5 GHz) to reduce antenna requirements and simplify logistics

Technical Features

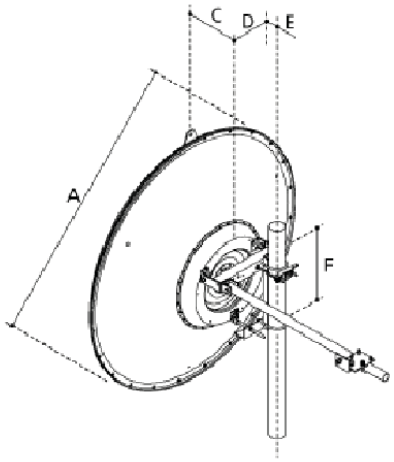
GENERAL SPECIFICATIONS		
Product Type		Point to point antennas
Profile		TrunkLine
Performance		Improved Performance
Polarization		Dual
Antenna Input		CPR137G
Reflector		1-part
Radome		Optional
Antenna color		White RAL 9010
Swaybar		1: (2.0 m x Ø60 mm)
ELECTRICAL SPECIFICATIONS		
Frequency	GHz	5.725 - 7.125
3dB beamwidth	degrees	1.7
Low Band Gain	dBi	37.9
Mid Band Gain	dBi	38.9
High Band Gain	dBi	39.8
F/B Ratio	dB	55
XPD	dB	30
IPI	dB	35
Max VSWR / R L	VSWR / dB	1.15 (23.1) @5.925 - 7.125 GHz 1.5 (14) @5.725 - 5.85 GHz
Regulatory Compliance		FCC Category A
MECHANICAL SPECIFICATIONS		
Diameter	ft (m)	6 (1.8)
Elevation Adjustment	degrees	± 5
Azimuth Adjustment	degrees	± 5
Polarization Adjustment	degrees	± 5
Mounting Pipe Diameter minimum	mm (in)	114 (4.5)
Mounting Pipe Diameter maximum	mm (in)	114 (4.5)
Approximate Weight	kg (lb)	65 (141)
Survival Windspeed	km/h (mph)	200 (125)
Operational Windspeed	km/h (mph)	190 (118)
STRUCTURE		
Radome Material		Fiberglass
FURTHER ACCESSORIES		
optional Swaybar		1: SMA-SK-60-2000A (2.0 m x Ø60mm)
Further Accessories		SMA-SKO-UNIVERSAL-L : Universal sway bar fixation kit

RADIO FREQUENCY SYSTEMS
The Clear Choice®

TrunkLine Antenna, Standard (FCC 101, Cat A) , Dual Polarized, 6 ft

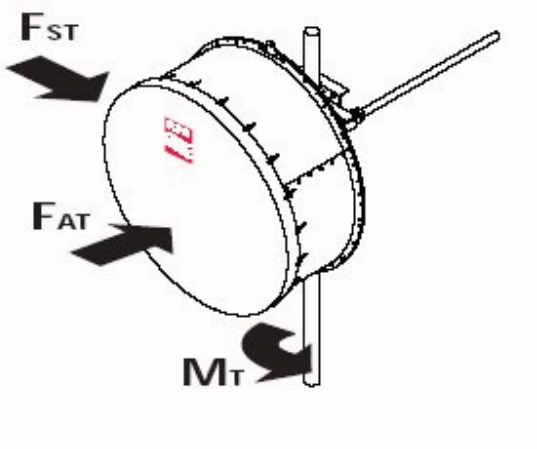
Mount Outline

Dimension A	mm (in)	2000 (79)
Dimension B	mm (in)	()
Dimension C	mm (in)	364 (14.3)
Dimension D for 219mm (8.5in) Pipe	mm (in)	not applicable
Dimension D for 114mm (4.5in) Pipe	mm (in)	175 (6.9)
Dimension D for 89mm (3.5in) Pipe	mm (in)	not applicable
Dimension D for 51mm (2.0in) Pipe	mm (in)	not applicable
Dimension E	mm (in)	283 (11.1)
Dimension F	mm (in)	590 (23.2)
Dimension G	mm (in)	not applicable
Dimension H	mm (in)	not applicable



Wind Load

FST Side force max. @ survival wind speed	N (lb)	2910 (651)
FAT Axial force max. @ survival wind speed	N (lb)	9900 (2217)
MT Torque maximum @ survival wind speed	Nm (lb ft)	3055 (2270)



External Document Links

Complete Antenna installation

RPE (IQ-Link format)

RPE (PDF format)

RPE (Pathloss format)

Notes

Only available in North America

TELEWAVE, INC.®

148 - 174 MHz

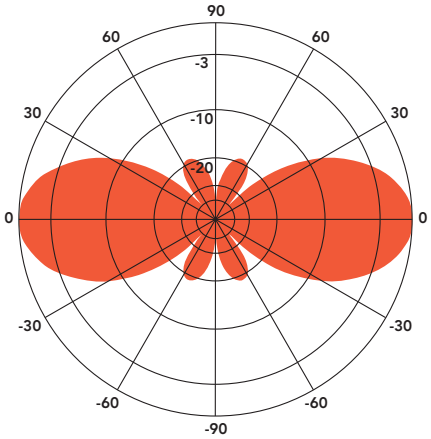
ANT150F2

FIBERGLASS COLLINEAR ANTENNA 2.5 dBd

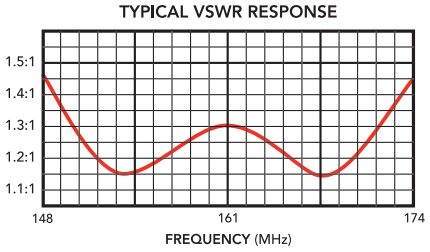
The Telewave ANT150F2 is an extremely rugged collinear antenna, with moderate gain and wide vertical beamwidth. This compact antenna produces 2.5 dBd gain, and is designed for operation in all environmental conditions. The antenna is constructed with brass and copper elements, with a path to DC ground for lightning impulse protection.

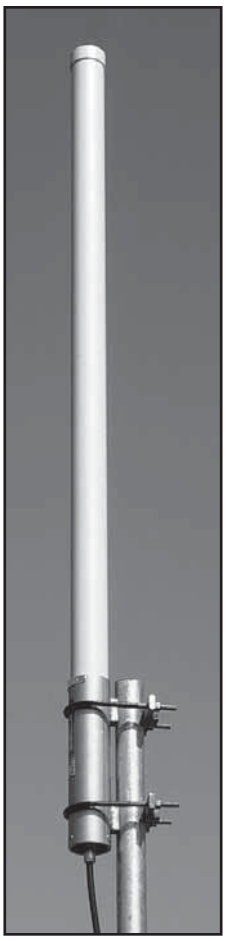
All junctions are fully soldered to prevent RF intermodulation, and each antenna is completely protected within a rugged, high-tech radome to ensure survivability in the worst environments. The "Cool Blue" radome provides maximum protection from corrosive gases, ultraviolet radiation, icing, salt spray, acid rain, and wind blown abrasives.

The ANT150F2 includes the ANTC485 dual clamp set for mounting to a 1.5" to 3" O.D. support pipe, and a 24" removable RG-213 N-Male jumper.



ANT150F2 156 MHz
Vertical Plane
Gain = 2.55 dBd





SPECIFICATIONS			
Frequency (continuous)	148-174 MHz	**Dimensions (L x base diam.) in.**	60 x 2.75
Gain	2.5 dBd	**Tower weight (antenna + clamps)**	12 lb.
Power rating (typ.)	500 watts	**Shipping weight**	16 lb.
Impedance	50 ohms	**Wind rating / with 0.5" ice**	200 / 150 MPH
VSWR	1.5:1 or less	**Maximum exposed area**	1.3 ft.²
Pattern	Omnidirectional	**Lateral thrust at 100 MPH**	50 lb.
Vertical beamwidth	38°	**Bending moment at top clamp**	67 ft. lb.
Termination	Recessed N Female 7-16 DIN-F opt.	**(100 MPH, 40 PSF flat plate equiv.)**	

Attachment 3 - Independent Structural Engineer's Review

CENTEK engineering

Centered on Solutions℠

June 3, 2016

Mr. Glen LeConche
Building Official
Town of East Hampton
20 East High Street
East Hampton, CT 06424

Re: Independent Structural Engineer's Review
Eversource – Site Ref: East High Street Microwave
22 East High Street
East Hampton, CT 06424

Centek Project No. 16057.00

Dear Mr. LeConche,

Centek Engineering, Inc., has been authorized by Eversource to perform an independent structural review and evaluation of the proposed 120-ft tall self-supporting lattice tower, to be located at the above referenced communications facility. Specifically, structural design calculations prepared by Sabre Industries; Job No. 142140, dated 5/05/2016 signed and sealed by Robert E. Beacom, PE (CT PE License No. 28396) were reviewed for compliance with the requirements of the 2005 Connecticut State Building Code, inclusive of the 2005 Connecticut Supplement to the 2005 CSBC and the 2009, 2011 & 2013 amendments and Northeast Utilities Substation Standard 090.

This review was conducted as stipulated in Section 106.1 of the 2005 Connecticut State Building Code and Section 29-276b of the Connecticut General Statue for independent structural analysis and evaluation.

APPROACH

The calculation and design documents referenced above were reviewed for compliance with Section 3108.0 of the International Building Code (IBC) and the 2005 Connecticut State Building Code as amended by the 2005 Connecticut State Supplement and subsequent amendments and Northeast Utilities Substation Standard 090. The applicable design standard for loading and analysis of steel antenna towers is ANSI/TIA-222-G entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". The tower structure was also reviewed for compliance with the requirements of the ANSI/TIA/EIA-222-F standard currently in effect within the State of Connecticut.

Specifically, the following key items were considered:

- Construction Materials
- Tower Loading
- Material Design Strength
- Foundation and Anchors

CONSTRUCTION MATERIALS

IBC 2003/2005 CSBC Section 3108.3 is satisfied - the steel used is of corrosion resistant construction *[Bolts galvanized per ASTM A153 (hot dipped) or ASTM 695 (mechanical); all other structural materials hot dipped galvanized per ASTM A123]*.

Table 5-1 of the TIA-222-G standard is satisfied - *steel grades are as follows: pipe tower legs - ASTM A500-50; steel angle – ASTM A72 Grade 50, misc plates - ASTM A36, connection bolts ASTM A325; anchor bolts ASTM F1554 grade 105*.

TOWER LOADING

Tower loading is determined by the basic wind speed as applied to projected surface areas with modification factors per TIA-222-G, gravity loads of the tower structure and its components, and the application of 0.75" radial ice. The analysis prepared by Sabre was conducted utilizing the requirements of the ANSI/TIA-222-G standard. The tower structure was also reviewed for compliance with the requirements of the ANSI/TIA/EIA-222-F standard currently in effect within the State of Connecticut. The wind speed requirements for the TIA/EIA-222-F and TIA-222-G standards are provided below.

Basic Wind Speed:	Middlesex County; v = 85 mph (fastest mile)	*[Section 16 of TIA/EIA-222-F-1996]*
	Middlesex County; v = 100-120 mph (3 second gust)	*[Annex B of TIA-222-G]*
	East Hampton; v = 105 mph (3 second gust) equivalent to v = 85 mph (fastest mile)	*[Appendix K of the 2005 CT Building Code Supplement]*
Load Cases Used:	Load Case 1; 120 mph wind speed w/ no ice plus gravity load (Class III Structure Type, Exposure Category C)	*[Annex B of TIA-222-G-2005]*
	Load Case 2; 50 mph wind speed w/ 0.75" radial ice plus gravity load (Class III Structure Type, Exposure Category C)	*[Annex B of TIA-222-G-2005]*
	Load Case 3; Seismic – not checked	*[Section 1614.5 of 2005 CT State Bldg. Code] does not control in the design of this structure type*

MATERIAL DESIGN STRENGTH

The maximum tower steel usage was calculated as **0.996** (**99.6%**) utilizing the ANSI TIA-222-G design standard which is less than the maximum ratio of 1.00, as required by Section 9.4 of the ANSI/TIA-222-G standard.

FOUNDATION AND ANCHORS

The proposed foundation consists of three (3) 2.5-ft dia x 3.0-ft. long reinforced concrete piers and one (1) 25.0-ft square x 1.5-ft thick pad. The sub-grade conditions used in the design of the foundation were obtained from the geotechnical soils report prepared by Dr. Clarence Welti dated 12/31/2015. The tower is connected to the foundation by means of six (6) 1.00" dia. ASTM F1554-GR105 anchor bolts embedded approximately 3.75-ft. into the concrete foundation structure.

Review of the foundation and anchor bolt design consisted of verification of the applied loads obtained from the Sabre tower design calculations and code checks of the available strength:

- The tower anchor bolts were found to be within allowable limits.
- The foundation was found to be within allowable limits.

CONCLUSION

Based on our review of structural analysis provided, it is our opinion that the proposed installation was engineered in conformance with the applicable structural requirements of the 2003 International Building Code (IBC); 2005 Connecticut State Building Code as amended by the 2005 Connecticut State Supplement and subsequent amendments, ANSI TIA/EIA 222-F, ANSI TIA-222-G. It is noted that our review does not constitute a design, nor is it all-inclusive; the responsibility for the structural design remains with the Structural Engineer of Record.

This completes the independent structural engineering review for this project. Should you have any questions, please do not hesitate to contact us.

Respectfully Submitted by:

Timothy J. Lynn, PE
Structural Engineer

STATE OF CONNECTICUT
TIMOTHY J. LYNN
No. 29336
LICENSED
PROFESSIONAL ENGINEER

Cc: Steve Florio - Eversource (via email)

Attachment 4 – Wetlands Boundary Review

ALL-POINTS TECHNOLOGY CORPORATION

WETLAND BOUNDARY REVIEW

April 8, 2016 **APT Project No.: CT259180**

Prepared For: Eversource Energy
56 Prospect Street
Hartford, CT 06103

Project Name: East High Street Microwave Site

Site Address: 22 East High Street
East Hampton, Connecticut

Wetland Boundary Review Performed On: March 31, 2016

Wetlands Identified on Subject Property:	Yes ☒ No ☐	
Work Proposed in Wetland Resource Area:	Wetland ☐ Watercourse ☐ Buffer Zone ☐ None ☒	
Previous Delineation Performed By:	Eric Davison, RSS	Date: 3/22/2014
Previous Wetland Report Prepared By:	Davison Environmental	Date: 3/31/2014
Existing Conditions Survey Plan Prepared By:	Sargis Associates, Inc.	Date: 9/24/2015
Municipal Upland Review Area:	**Wetlands:** 100 feet	**Watercourses:** 100 feet

Conclusion/Recommendation:

The wetland boundaries previously delineated on the subject property were field reviewed and found to be substantially correct and did not include any wetland resource area omissions. Therefore, no revisions to the wetland boundaries depicted on the referenced existing conditions survey plan are required.

This document is provided as a review of a previous wetland delineation performed by others. This analysis is based on a field review of wetland boundary survey flags relying upon the referenced existing conditions survey plan and wetland delineation report to determine if the previous wetland delineation is substantially correct, does not include ommissions of undelineated wetland resource areas and the existing conditions survey plan generally represents the locations of wetland jurisdictional boundaries on the subject property.

The wetland boundary review was performed by*:

Matthew Gustafson, Registered Soil Scientist

Enclosures: Wetland Inspection Field Forms & Existing Conditions Survey

** All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.*

Attachments

- Wetland Inspection Field Forms
- Existing Conditions Survey

Wetland Delineation Review Field Form

APT's Wetland I.D.:	Wetland 1
Previous Flag #'s:	WF 1-01 to 1-38; majority of wetland flags found intact

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☒	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☐	Seasonally Saturated - perched ☒
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☒	Intermittent ☐	Tidal ☐
Watercourse Name: Pocotopaug Creek		
Comments: River is located along the eastern property boundary of the subject parcel.		

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Spicebush (Lindera benzoin)
American Elm (Ulmus americana)	Skunk Cabbage (Symplocarpus foetidus)
Tussock Sedge (Carex stricta)	Japanese Barberry* (Berberis thunbergii)
Reed Canarygrass* (Phalaris arundinacea)	Specked Alder (Alnus rugosa)
Sphagnum moss (Sphagnum spp.)	Multiflora Rose* (Rosa multiflora)
Silky Dogwood (Cornus amomum)	

* denotes Connecticut Invasive Species Council invasive plant species

Wetland Delineation Review Field Form

APT's Wetland I.D.:	Wetland 2
Previous Flag #'s:	WF 1-39 to 1-56; majority of wetland flags found intact

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☐	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☒
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☐	Tidal ☐
Watercourse Name: None		
Comments: None		

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

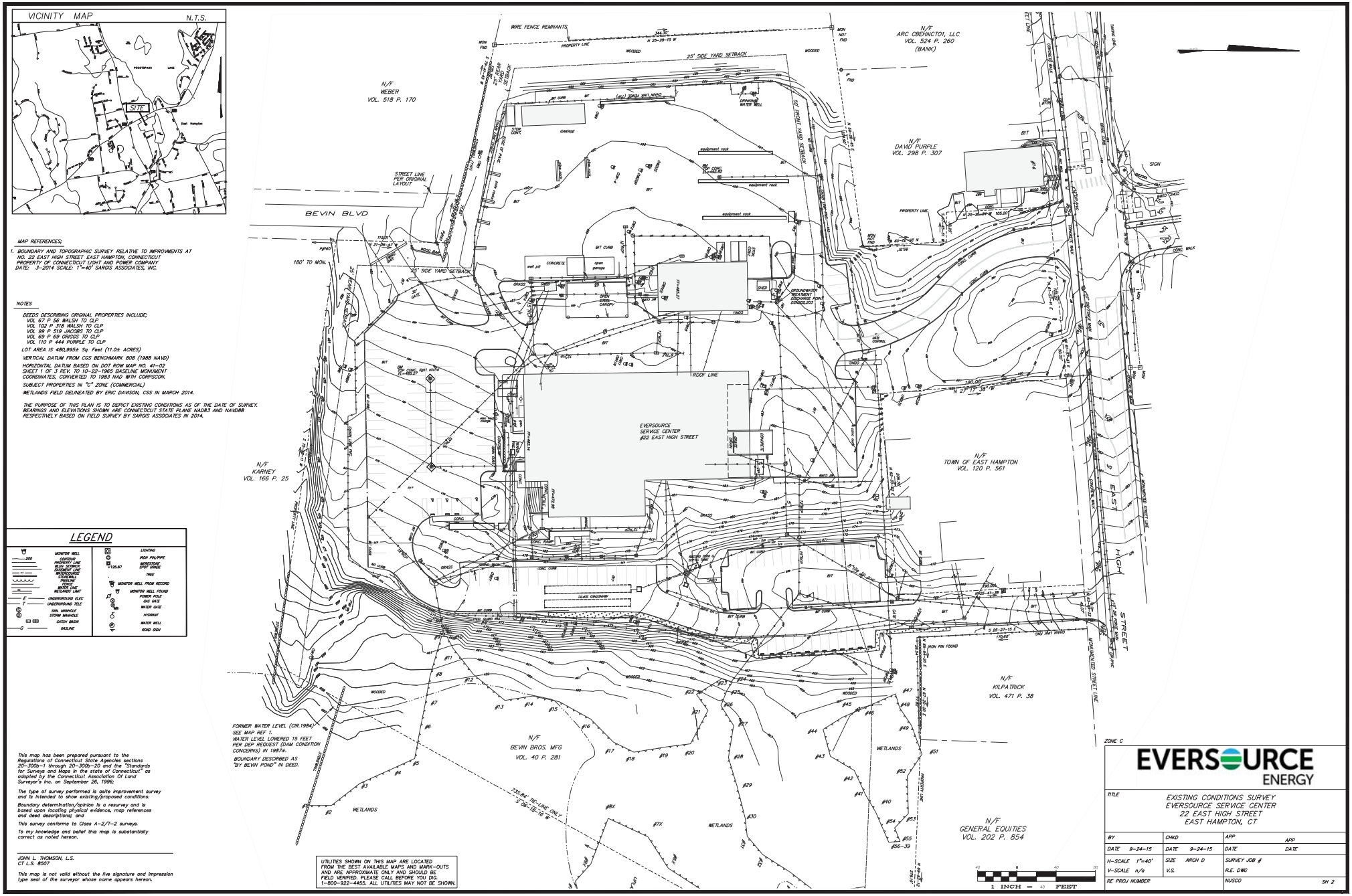
SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Red Maple (Acer rubrum)	Sensitive Fern (Onoclea sensibilis)
Fox Grape (Vitis labrusca)	Sweet Pepperbush (Clethera alnifolia)
Spicebush (Lindera benzoin)	Skunk Cabbage (Symplocarpus foetidus)
Multiflora Rose* (Rosa multiflora)	

* denotes Connecticut Invasive Species Council invasive plant species



MAP REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC SURVEY RELATIVE TO IMPROVEMENTS AT NO. 22 EAST HIGH STREET EAST HAMPTON, CONNECTICUT PROPERTY OF CONNECTICUT LIGHT AND POWER COMPANY DATE: 3-2014 SCALE: 1"=40' SARGIS ASSOCIATES, INC.

NOTES

DEEDS DESCRIBING ORIGINAL PROPERTIES INCLUDE:
VOL 67 P 56 WALSH TO CLP
VOL 102 P 318 WALSH TO CLP
VOL 99 P 519 JACOBS TO CLP
VOL 69 P 69 GRIGGS TO CLP
VOL 110 P 444 PURPLE TO CLP

LOT AREA IS 480,955± Sq. Feet (11.04± ACRES)

VERTICAL DATUM FROM CGS BENCHMARK 808 (1988 NAVD)

HORIZONTAL DATUM BASED ON DOT ROW MAP NO. 41-02 SHEET 1 OF 3 REV. TO 10-22-1965 BASELINE MONUMENT COORDINATES, CONVERTED TO 1983 NAD WITH CORPSCON.

SUBJECT PROPERTIES IN "C" ZONE (COMMERCIAL)

WETLANDS FIELD DELINEATED BY ERIC DAVISON, CSS IN MARCH 2014.

THE PURPOSE OF THIS PLAN IS TO DEPICT EXISTING CONDITIONS AS OF THE DATE OF SURVEY. BEARINGS AND ELEVATIONS SHOWN ARE CONNECTICUT STATE PLANE NAD83 AND NAVD88 RESPECTIVELY BASED ON FIELD SURVEY BY SARGIS ASSOCIATES IN 2014.

LEGEND

MONITOR WELL
CONTOUR
BUILDING LINE
BLDG SETBACK
EASEMENT LINE
WATERCOURSE
STONEWALL
FENCE
TREELINE
WATER LINE
WETLANDS LIMIT
UNDERGROUND ELEC
UNDERGROUND TELE
SANI. MANHOLE
STORM MANHOLE
CATCH BASIN
GASOLINE
LIGHTING
IRON PIN/PIPE
MONUMENT
SPOT GRADE
TREE
MONITOR WELL FROM RECORD
MONITOR WELL FOUND
POWER POLE
GAS GATE
WATER GATE
HYDRANT
WATER WELL
ROAD SIGN

This map has been prepared pursuant to the Regulations of Connecticut State Agencies sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the state of Connecticut" as adopted by the Connecticut Association Of Land Surveyor's Inc. on September 26, 1996;

The type of survey performed is suite improvement survey and is intended to show existing/proposed conditions.

Boundary determination/opinion is a resurvey and is based upon locating physical evidence, map references and deed descriptions; and

This survey conforms to Class A-2/T-2 surveys.

To my knowledge and belief this map is substantially correct as noted hereon.

JOHN L. THOMSON, L.S.
CT L.S. 8507

This map is not valid without the live signature and impression type seal of the surveyor whose name appears hereon.

UTILITIES SHOWN ON THIS MAP ARE LOCATED FROM THE BEST AVAILABLE MAPS AND MARK-OUTS AND ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED. PLEASE CALL BEFORE YOU DIG. 1-800-922-4455. ALL UTILITIES MAY NOT BE SHOWN.

ZONE C

EVERSOURCE ENERGY

TITLE
EXISTING CONDITIONS SURVEY
EVERSOURCE SERVICE CENTER
22 EAST HIGH STREET
EAST HAMPTON, CT

BY	CHKD	APP
DATE 9-24-15	DATE 9-24-15	DATE
H-SCALE 1"=40'	SIZE ARCH D	SURVEY JOB #
V-SCALE n/a	V.S.	R.E. DWG
RE PROJ NUMBER		NUSCO SH 2

Attachment 5 – Avian Resources Evaluation

AVIAN RESOURCES EVALUATION

April 9, 2016

Eversource Energy
56 Prospect Street
Hartford, Connecticut 06103

APT Project No.: CT259180

Re: Proposed East High Street Microwave Facility
22 East High Street
East Hampton, Connecticut

Eversource Energy ("Eversource") proposes to construct a new wireless telecommunications Facility at 22 East High Street in East Hampton, Connecticut (the "host Property"). The host Property consists of an approximately 11-acre Eversource service center parcel. The area proposed for the Facility is located in the central portion of the host Property in an area that is currently comprised of a developed and disturbed area associated with the existing Eversource Service Center. Eversource proposes to install a 120-foot tall self-supporting lattice tower within a 31-foot by 31-foot gravel compound area surrounded with a chain link fence ("Facility"). Access to the Facility is provided by the existing paved access that serves the Eversource service center.

The purpose of this evaluation is to document the proposed Facility's proximity to avian resource areas and its compliance with recommended guidelines of the United States Fish and Wildlife Service ("USFWS") for minimizing the potential for telecommunications towers to impact bird species.

All-Points Technology Corporation, P.C. ("APT") reviewed several publicly-available sources of avian data for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed development. This desktop analysis and attached graphics identify avian resources and their proximities to the host Property. Information within an approximate 3-mile radius of the host Property is graphically depicted on the attached Avian Resources Map. Some of the avian data referenced herein are not located in proximity to the host Property and are therefore not visible on the referenced map due to its scale. However, in those cases the distances separating the host Property from the resources are identified in the discussions below.

Proximity to Important Bird Areas

The National Audubon Society has identified 27 Important Bird Areas ("IBAs") in the state of Connecticut. IBAs are sites that provide essential habitat for breeding, wintering, and/or migrating birds. To achieve this designation, an IBA must support species of conservation concern, restricted-range species, species

vulnerable due to concentration in one general habitat type or biome, or species vulnerable due to their occurrence at high densities as a result of their congregatory behavior[1]. The closest IBA to the Host Property is Station 43 in South Windsor located approximately 18.3 miles to the northwest. Station 43 is an approximately 10-acre reserve owned by the Hartford Audubon Society. It consists of a pond and associated fresh water wetland complex. For over 100 years Station 43 has been recognized as one of the most important habitats for birds in the Hartford area and for birds migrating along the Connecticut River corridor. Due to its distance from the site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility.

Supporting Migratory Bird Data

Beyond Audubon's IBAs, the following analysis and attached graphics also identify several additional avian resources and their proximities to the host Property. Although these data sources may not represent habitat indicative of important bird areas, they may indicate possible bird concentrations[2] or migratory pathways.

Critical Habitat

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state. It represents a compilation of ecological information collected over many years by state agencies, conservation organizations and individuals. Critical habitats range in size from areas less than one acre to areas that are tens of acres in extent. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection but may not necessarily be indicative of habitat for bird species. The nearest Critical Habitat to the proposed Facility is an estuarine beachshore area associated with the Connecticut River located approximately 3.4 miles to the southwest. Based on the distance separating this resource from the proposed Facility, no adverse impacts are anticipated.

Avian Survey Routes and Points

Breeding Bird Survey Route

The North American Breeding Bird Survey is a cooperative effort between various agencies and volunteer groups to monitor the status and trends of North American bird populations. Routes are randomly located to sample habitats that are representative of an entire region and do not necessarily represent concentrations of avifauna or identification of critical avian habitats. Each year during the height of the avian breeding season (June for most of the United States) participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is approximately 24.5 miles long and contains 50 stops located at 0.5-mile intervals. At each stop, a three-minute count is conducted. During each count, every bird seen or heard within a 0.25-mile radius is recorded. The resulting data is used by conservation managers, scientists, and the general

[1] http://web4.audubon.org/bird/iba/iba_intro.html

[2] "bird concentrations" is related to the USFWS *Revised Voluntary Guidelines for communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning* (September 27, 2013) analysis provided at the end of this document

public to estimate population trends and relative abundances and to assess bird conservation priorities. The nearest survey route to the Host Property is the Mid Haddam Survey Route (Route #18014) located approximately 0.16 mile to the west. This ±26-mile long bird survey route begins at the Salem/East Haddam town line near Lake Hayward and generally winds its way northwest through Haddam and East Hampton before terminating in Portland. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects, including the proposed Facility.

Hawk Watch Site

The Hawk Migration Association of North America ("HMANA") is a membership-based organization committed to the conservation of raptors through the scientific study, enjoyment and appreciation of raptor migration. HMANA collects hawk count data from almost 200 affiliated raptor monitoring sites throughout the United States, Canada and Mexico, identified as "Hawk Watch Sites." In Connecticut, Hawk Watch Sites are typically situated on prominent hills and mountains that tend to concentrate migrating raptors. The nearest Hawk Watch Site, Beelzebub Street, is located in South Windsor, approximately 16 miles to the north of the proposed Facility. Based on the distance separating this possible raptor migratory route from the proposed Facility, no adverse impacts are anticipated.

Most hawks migrate during the day (diurnal) to take advantage of two theorized benefits: (1) diurnal migration allows for the use of updrafts or rising columns of air called thermals to gain lift without flapping thereby reducing energy loss; and, (2) day migrants can search for prey and forage as they migrate. Therefore, no adverse impacts to migrating hawks are anticipated with development of the Facility, based on the ±16-mile separation distance to the nearest Hawk Watch Site and hawk migration behavior occurring during the daytime under favorable weather conditions when thermals form.

Bald Eagle Survey Route

Bald Eagle Survey Routes consist of locations of midwinter Bald Eagle counts from 1986 to 2005 with an update provided in 2008. This survey was initiated in 1979 by the National Wildlife Federation. This database includes information on statewide, regional and national trends. Survey routes are included in the database only if they were surveyed consistently in at least four years and where at least four eagles were counted in a single year. The nearest Bald Eagle Survey Route is the Connecticut River Survey Route Number 1 located in the towns East Hampton and Middletown along the Connecticut River approximately 3.5 miles southwest of the host Property.

Bald eagle migration patterns are complex, dependent on age of the individual, climate (particularly during the winter) and availability of food.[3] Adult birds typically migrate alone and generally as needed when food becomes unavailable, although concentrations of migrants can occur at communal feeding and roost sites. Migration typically occurs during the middle of day (10:30–17:00) as thermals provide

[3] Buehler, David A. 2000. Bald Eagle (*Haliaeetus leucocephalus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/506 [Accessed 09/09/13].

for opportunities to soar up with limited energetic expense; Bald Eagle migration altitudes are estimated to average 1,500–3,050 m by ground observers. [4] Four adults tracked by fixed-wing aircraft in Montana averaged 98 km/d during spring migration and migrated at 200–600 m above ground (McClelland et al. 1996).[5]

In addition, the USFWS's *National Bald Eagle Management Guidelines* (May 2007) recommends a 660 foot buffer to bald eagle nests if the activity will be visible from the nest with an additional management practice recommendation of retaining mature trees and old growth stands, particularly within 0.5 mile from water. No known bald eagle nests occur in the vicinity of the host Property.

Therefore, no adverse impacts to migrating Bald Eagle are anticipated with development of the Facility. This conclusion is based on the short (120-foot) height of the Facility, eagle migration patterns during the daytime under favorable weather conditions when thermals form and compliance with USFWS bald eagle management guidelines.

Flyways

The Host Property is located in Middlesex County, approximately 21 miles north of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional primary migratory bird flyways (Mississippi, Central and Pacific being the others). This regional flyway is used by migratory birds travelling to and from summering and wintering grounds. The Atlantic Flyway is particularly important for many species of migratory waterfowl and shorebirds, and Connecticut's coast serves as vital stopover habitat. Migratory land birds also stop along coastal habitats before making their way inland. Smaller inland migratory flyways ("secondary flyways") are often concentrated along major riparian areas as birds use these valuable stopover habitats to rest and refuel as they make their way further inland to their preferred breeding habitats. The Connecticut Migratory Bird Stopover Habitat Project (Stokowski, 2002)[6] identified potential flyways along the Housatonic, Naugatuck, Thames, and Connecticut Rivers. This study paralleled a similar earlier study conducted by the Silvio O. Conte National Fish & Wildlife Refuge (Neotropical Migrant Bird Stopover Habitat Survey[7]), which consisted of collection of migratory bird data along the Connecticut River and the following major Connecticut River tributaries: Farmington, Hockanum, Scantic, Park, Mattabesset, Salmon, and Eight Mile Rivers. Of these potential flyways, the nearest to the Host Property is the Salmon River, located approximately 3.3 miles to the southwest. The Pocotopaug Creek riparian corridor, located 0.08 mile west of the Host Property is not identified as a potential flyway but potentially forms a secondary flyway as birds move northward from the Salmon River corridor during

[4] Harmata, A. R. 1984. Bald Eagles of the San Luis valley, Colorado: their winter ecology and spring migration. Ph.D. Thesis. Montana State Univ. Bozeman.

[5] Mcclelland, B. R., P. T. McClelland, R. E. Yates, E. L. Caton, and M. E. McFadden. 1996. Fledging and migration of juvenile Bald Eagles from Glacier National Park, Montana. J. Raptor Res. 30:79-89.

[6] Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

[7] The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey http://www.science.smith.edu/stopoverbirds/index.html

the spring migration. These major riparian corridors may provide secondary flyways as they likely offer more food and protection than more exposed upland sites, particularly during the spring migration[8].

Siting of tower structures within flyways can be a concern, particularly for tall towers and even more particularly for tall towers with guy wires and lighting. The majority of studies on bird mortality due to towers focuses on very tall towers (greater than 1000 feet), illuminated with non-flashing lights, and guyed. These types of towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)[9]. The proposed Facility is not this type of tower, being an unlit, unguyed self-supporting lattice structure only 120 feet in height. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds[10]. Studies of mean flight altitude of migrating birds reveal flight altitudes of 410 meters (1350 feet), with flight altitudes on nights with bad weather between 200 and 300 meters above ground level (656 to 984 feet)[11].

No adverse impacts to migrating bird species are anticipated with development of the Facility, based on its design (unlit and unguyed) and relatively short (120-foot) height, and the distances separating the Host Property from the potential Salmon River flyway. The design and height of the proposed Facility would also mitigate the potential for migratory bird impacts should the Pocotopaug Creek be used as a secondary flyway.

Waterfowl Focus Areas

The Atlantic Coast Joint Venture ("ACJV") is an affiliation of federal, state, regional and local partners working together to address bird conservation planning along the Atlantic Flyway. The ACJV has identified waterfowl focus areas recognizing the most important habitats for waterfowl along the Atlantic Flyway. Connecticut contains several of these waterfowl focus areas. The nearest waterfowl focus area to the host Property is the Connecticut River and Tidal Wetlands Complex area, located approximately 3.3 miles to the west. Please refer to the attached Connecticut Waterfowl Focus Areas Map. Based on the distance of this waterfowl focus area to the host Property, no impact to migratory waterfowl would result from development of the proposed Facility.

CTDEEP Migratory Waterfowl Data

The Connecticut Department of Energy and Environmental Protection ("CTDEEP") created a Geographic Information System ("GIS") data layer in 1999 identifying concentration areas of migratory waterfowl at specific locations in Connecticut. The intent of this data layer is to assist in the identification of migratory waterfowl resource areas in the event of an oil spill or other condition that might be a threat to waterfowl

[8] The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey. http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html

[9] Manville, A.M. II. 2005. Bird strikes and electrocutions at power lines, communications towers, and wind turbines: state of the art and state of the science - next steps toward mitigation. Bird Conservation Implementation in the Americas: Proceedings 3rd International Partners in Flight Conference 2002. C.J. Ralph and T.D. Rich, editors. USDA Forest Service General Technical Report PSW-GTR-191. Pacific Southwest Research Station, Albany CA. pp. 1-51-1064.

[10] Kerlinger, P. 2000. Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology. Prepared for U.S. Fish and Wildlife Service Office of Migratory Bird Management.

[11] Mabee, T.J., B.A. Cooper, J.H. Plissner, D.P. Young. 2006. Nocturnal bird migration over an Appalachian ridge at a proposed wind power project. Wildlife Society Bulletin 34:682-690.

species. This data layer identifies conditions at a particular point in time and has not been updated since 1999.

The nearest migratory waterfowl area, the Pine Brook Marsh in East Hampton, is located approximately 1.75 miles to the southwest of the Host Property. The associated species are identified as American Black, Mallard, Green Wing teal, and wood ducks. Based on the distance of this migratory waterfowl area to the host Property, no impact to migratory waterfowl would result from development of the proposed Facility.

CTDEEP Natural Diversity Data Base

CTDEEP's Natural Diversity Data Base ("NDDB") program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state's biodiversity. State agencies are required to ensure that any activity authorized, funded or performed by a state agency does not threaten the continued existence of endangered or threatened species. Maps have been developed to serve as a pre-screening tool to help applicants determine if there is a potential impact to state listed species.

The NDDB maps represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CTDEEP staff, scientists, conservation groups, and landowners. In some cases an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowner's rights whenever species occur on private property.

According to the available NDDB maps, although the proposed Facility is located not within a shaded NDDB buffer area the east side of the host Property just encroaches into a NDDB buffer area. Therefore, the proposed project could potentially conflict with a listed rare species. As a result, APT has submitted a review request with respect to this project to confirm that no known populations of Federal or State Endangered, Threatened or Special Concern Species occur on this property. A response from CTDEEP is currently pending and will be forwarded upon receipt.

USFWS Communications Towers Compliance

In 2013, the USFWS prepared its *Revised Voluntary Guidelines for communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning*[12] which recommends the 13 voluntary guidelines below. These voluntary guidelines are designed to assist tower companies in developing their communication systems in a way which minimizes the risk to migratory birds and threatened and

[12] Manville, A.M., Ph.D., C.W.B. Suggestions Based on Previous USFWS Recommendations to FCC Regarding WT Docket No. 03-187, FCC 06-164, Notice of Proposed Rulemaking, "Effects of Communication Towers on Migratory Birds" (2007), Docket No. 08-61, FCC's Antenna Structure Registration Program (2011), Service 2012 Wind Energy Guidelines, and Service 2013 Eagle Conservation Plan Guidance. September 27, 2013.

endangered species. APT offers the following responses to each of the USFWS recommendations which are abridged from the original document.

1. *Collocation of the communications equipment on an existing communication tower or other structure (e.g., billboard, water and transmission tower, distribution pole, or building mount) is strongly recommended. Depending on tower load factors and communication needs, from 6 to 10 providers should collocate on an existing tower or structure.*

   Collocation opportunities on existing towers, buildings or non-tower structures are not available in the area while achieving the required radio frequency ("RF") coverage objectives of Eversource.

2. *If collocation is not feasible and a new tower or towers are to be constructed, it is strongly recommended that the new tower(s) should be not more than 199 feet above ground level ("AGL"), and that construction techniques should not require wires. Such towers should be unlighted if Federal Administration ("FAA") regulations and lighting standards permit. If lighting is required, no red-steady lights should be used. USFWS considers towers that are unlit, unguyed, monopole or lattice, and less than 200 feet AGL to be the environmentally preferred "gold standard".*

   The proposed Facility would consist of a 120-foot self-supporting lattice structure which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard".

3. *If constructing multiple towers, the cumulative impacts of all the towers to migratory birds – especially to Birds of Conservation Concern[13] and threatened and endangered species, as well as the impacts of each individual tower, should be considered during development of a project.*

   Multiple towers are not proposed as part of this project.

4. *The topography of the proposed tower site and surrounding habitat should be clearly noted, especially in regard to surrounding hills, mountains, mountain passes, ridge lines, rivers, lakes, wetlands, and other habitat types used by raptors, Birds of Conservation Concern, and state and federally listed species, and other birds of concern. Active raptor nests, especially those of Bald Eagles, should be noted, including known or suspected distances from proposed tower sites to nest locations.*

   The topography of the proposed tower site and surrounding habitat is provided in the attached Avian Resources Map. No Bald Eagle nests, foraging areas or roost sites are known to be located within 660 feet of the proposed tower site.[14] A Bald Eagle survey route associated with Connecticut River, portions of which likely provide foraging and roosting habitat and potential nesting habitat, is located approximately 3.5 miles southwest of the host Property.

5. *If at all possible, new towers should be sited within existing "antenna farms" (i.e., clusters of towers), in degraded areas (e.g., strip mines or other heavily industrialized areas), in commercial agricultural lands, in Superfund sites, or other areas where bird habitat is poor or marginal. Towers should not be sited in or near wetlands, or other known bird concentration areas (e.g., state or Federal refuges,*

[13] U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA. 85 pp. http://www.fws.gov/migratorybirds/>

[14] U.S. Fish and Wildlife Service. 2007. National Bald Eagle Management Guidelines. United States Department of Interior, Fish and Wildlife Service, 23 pp. http://www.fws.gov/southdakotafieldoffice/NationalBaldEagleManagementGuidelines.pdf

staging areas, rookeries, and Important Bird Areas), in known migratory or daily movement flyways, areas of breeding concentration, in habitat of threatened or endangered species, or key habitats for Birds of Conservation Concern. Additionally, towers should not be sited in areas with a high incidence of fog, mist, and low ceilings.

There are no existing "antenna farms", degraded or commercial areas in the vicinity of the proposed tower site that would satisfy the RF coverage objectives. The proposed Facility is not within wetlands, known bird concentration area, migratory or daily movement flyway, habitat of threatened/endangered species or result in fragmentation of a core forest habitat that could potentially provide habitat for Birds of Conservation Concern. The proposed Facility would be located within a developed and disturbed area associated with the Eversource service center which does not support habitat for wildlife, including state or federal threatened or endangered avian species or state special concern avian species.

In Connecticut, seasonal atmospheric conditions can occasionally produce fog, mist and/or low ceilings. However, high incidences of these meteorological conditions, relative to the region, are not known to exist in the vicinity of the host Property.

6. *If taller (>199 feet AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used. The use of solid (non-flashing) warning lights at night should be avoided to minimize bird fatalities.*

   The proposed Facility height (120 feet AGL) is less than 199 feet and would not require any aviation safety lighting.

7. *Tower designs using guy wires for support, which are proposed to be located in known raptor or waterbird concentration areas, daily movement routes, major diurnal migratory bird movement routes, staging areas, or stopover sites, should have daytime visual markers or bird deterrent devices installed on the wires to prevent collisions by these diurnally moving species.*

   The proposed Facility would be free-standing and would not require guy wires or visual marking.

8. *Towers and appendant facilities should be sited, designed and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint." However, a larger tower footprint is preferable to the use of guy wires in construction. Road access and fencing should be minimized to reduce or prevent habitat fragmentation, disturbance, and the creation of barriers, and to reduce above ground obstacles to birds in flight.*

   The proposed Facility is sited, designed, and would be constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible. The Facility would be located within the development footprint associated with the Eversource service center use of the host Property and therefore will not result in habitat fragmentation or the creation of barriers or excessive disturbance.

9. *If, prior to tower design, siting and construction, it has been determined that a significant number of breeding, feeding, or roosting birds, especially of Birds of Conservation Concern, state or federally-listed bird species, and eagles are known to habitually use the proposed tower construction area, relocation to an alternate site is highly recommended. If this is not an option, seasonal; restrictions*

on construction may be advisable in order to avoid disturbance, site and nest abandonment, especially during breeding, rearing and other periods of high bird activity.

Significant numbers of breeding, feeding, or roosting Birds of Conservation Concern, state or federally-listed bird species, or eagles are not known to habitually use the proposed tower construction areas at the host Property.

10. *Security lighting for on-ground facilities, equipment and infrastructure should be motion- or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination, but still allow for safe nighttime access to the site.*[15][16]

    The Eversource service center, located adjacent to Route 66, includes existing parking lot lighting. Security lighting for proposed Facility would not appreciably add to the existing nighttime illumination associated with parking lot lighting and Route 66.

11. *Representatives from the USFWS or researchers from the Research Subcommittee of the Communication Tower Working Group ("CTWG") should be allowed access to the site to evaluate bird use; conduct dead-bird searches; place above ground net catchments below the towers; and to perform studies using radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment, as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.*

    With prior written notification to and approval by Eversource, USFWS or CTWG research personnel would be allowed access to the proposed Facility to conduct evaluations.

12. *Towers no longer in use, not re-licensed by the FCC for use, or determined to be obsolete should be removed within 12 months of cessation of use.*

    If the proposed Facility was no longer in use, not re-licensed by the FCC for use, or determined to be obsolete, it would be removed within 12 months of cessation of use.

13. *In order to obtain information on the usefulness of these guidelines in preventing bird strikes and better understanding impacts from habitat fragmentation, please advise USFWS personnel of the final location and specifications of the proposed tower, and which measures recommended in these guidelines were implemented.*

    The location and specification of the proposed Facility have been provided in this report and accompanying maps. A detailed review of implemented measures recommended in the *Revised Voluntary Guidance for Communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning* (September 27, 2013) are provided herein. The proposed Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to birds being an unlit, unguyed self-supporting lattice structure only 120 feet in height. APT recommends that a copy of this report be submitted to USFWS if the proposed Facility is constructed.

[15] Manville, A.M., II. 2011. Comments of the U.S. Fish and Wildlife Service's Division of Migratory Bird Management Filed Electronically on WT Docket No. 08-61 and WT Docket No. 03-187, Regarding the Environmental Effects of the Federal Communication's Antenna Structure Registration Program. January 14, 2011. 12 pp.

[16] U.S. Fish and Wildlife Service. 2012. U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines. March, 82 pp.

Should the final location and specification of the proposed Facility be modified as part of the siting process, this report will be updated accordingly.

Summary and Conclusions

Based on the results of this desk-top evaluation, no migratory bird species are anticipated to be impacted by Eversource's proposed development. The proposed Facility is not proximate to an Important Bird Area and would comply with the USFWS guidelines for minimizing the potential impacts to bird species.

Figures

- Avian Resources Map
- Connecticut Waterfowl Focus Areas Map

Avian Resources Map

Proposed Telecommunications Facility
East Hampton Tower Replacement Tower
22 East High Street
East Hampton, Connecticut

Legend

- Proposed Facility
- Hawk Watch Site*
- Important Bird Area*
- Bald Eagle Survey Route
- Breeding Bird Survey Route
- Natural Diversity Database (CTDEEP, 9/2015)
- Critical Habitat (CTDEEP, 07/2009)
- Migratory Waterfowl (CTDEEP, 1999)
- Preserved Open Space (CTDEEP, 1997)
- Federal Open Space (CTDEEP, 2004)

CT DEP Property (CT DEEP, 12/2010)

- State Forest
- State Park
- DEP Owned Waterbody
- State Park Scenic Reserve
- Historic Preserve*
- Natural Area Preserve
- Fish Hatchery*
- Flood Control*
- State Park Trail
- Water Access
- Wildlife Area
- Wildlife Sanctuary*
- Other*
- Open Water
- Town Boundary

*None within mapped extents

Avian Source Information:
Bald Eagle Sites: U.S. Geological Survey, National Biological Information Infrastr, 2008, Midwinter Bald Eagle Counts, 1986-2005 (update 2008).
Hawk Watch Sites: Hawk Migration Association of North America (HMANA), Hawk Count website: http://hawkcount.org/sitesel.php?country=USA&stateprov=Connecticut
Migratory Waterfowl: CTDEEP GIS, 1999
Important Bird Sites/Areas: National Audubon Society, Audbon Connecticut
http://ct.audubon.org/BirdSci_IBAs.html
Breeding Bird Survey Routes: Patuxent Wildlife Research Center of the U.S. Geological Survey and the Canadian Wildlife Service's National Wildlife Research Centre
http://www.nationalatlas.gov/mld/bbsrtsl.html

Base Map Source: 2012 aerial photograph (CTECO map service)

Map Date: March 2016

N W E S

0.5 0.25 0 0.5 Miles

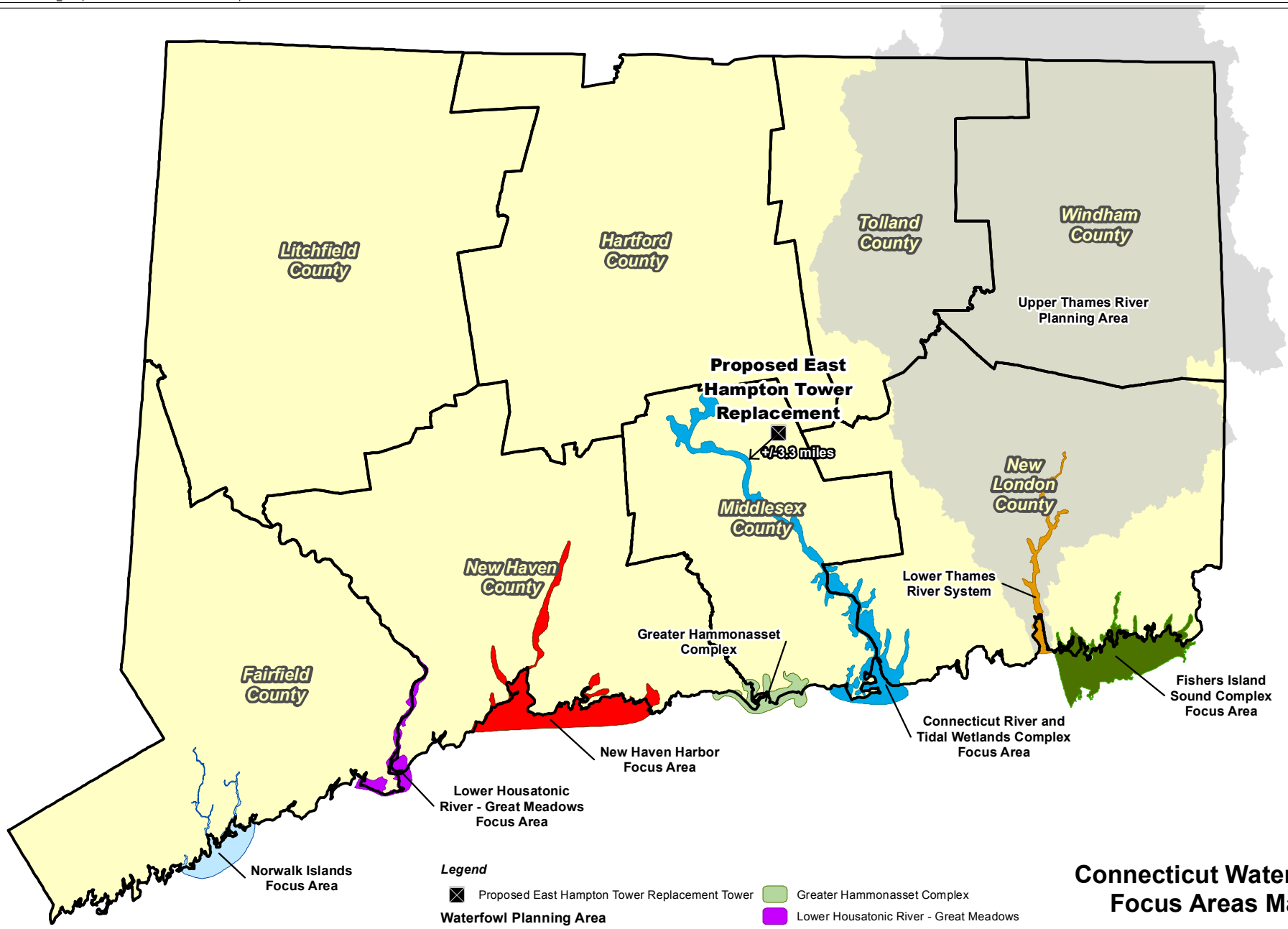
ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

C:\GIS\Projects\Eversource\East_Hampton\mxd\Avian_Resources Shaded Relief.mxd

Meshomasic State Forest
Meshomasic Mountain 869.2' AMSL
Town Open Space (Grace Lane)
Town Open Space (White Birch Estates)
Saner Road Open Space
Hickory Road Open Space
Carter Hill 629.76' AMSL
Dickinson Road Open Space
Strong Pond
Loos Pond
Rolling Ridge Tennis Court
Reeves Lot Natural Area Preserve
Town Forest (Old Marlborough Turnpike)
Buck Brook
Portland Reservoir Dam
Cabin Lot Natural Area Preserve
Raccoon Hill 747.84' AMSL
Webb Swamp
Cox Lot Natural Area Preserve
Cranberry Bog
Hulseman Pond
Lindquist Airport
MARLBOROUGH
Fawn Hill Brook
Cattle Lot Brook
Lyman Brook
Strickland Hill 357.52' AMSL
Kelseys Pond Dam
Gulf Hill 577.28' AMSL
MID HADDAM
Hales Brook
Terramaugus Island
Scraggy Island
Markham Bay
Millstone Drive Open Space
Fawn Brook
Rankl Field
PORTLAND
Clark Hill 790.48' AMSL
Salmon River State Forest
Twin Islands
Sears Park/tennis Courts
Collins Hill 341.12' AMSL
Baker Hill 669.12' AMSL
Town Open Space/Landfill
Somers Field
Larson Hill 521.52' AMSL
Pocotopaug Lake Dam
Town Open Space (Culver Lane)
Penfield Hill 514.96' AMSL
Great Hill 728.16' AMSL
Proposed East Hampton Tower Replacement
Bear Swamp
Somers Field
Bull Hill 544.48' AMSL
Rattlesnake Brook
Great Hill Pond Dam
Bevins Pond
Cranberry Meadow
Jeremy River
Barton Hill 410' AMSL
EAST HAMPTON
Jobs Pond
Hales Pond
Green River
Airline State Park Trail (Southern Section)
Town Open Space (Crescent Street)
Wolf Brook
COLCHESTER
Gate Hill 426.4' AMSL
Supples Pond
Grist Mill Lane & Old Middletown Road
Town Open Space (Pine Brook)
Muddy Gutter Brook
Day Pond Brook
Salmon River Water Access
Day Pond State Park
Dickinson Creek
Day Pond
Chestnut Hill 524.8' AMSL
Great Hill Pond Brook
Keighley Pond
Dart Island
Dart Island State Park Scenic Reserve
Mine Brook
Town Open Space (Young Street)
Flat Brook
Conservation Showcase
MIDDLETOWN
Cockaponset State Forest
CONNECTICUT RIVER SURVEY ROUTE NUMBER 1
Hog Hill 537.92' AMSL
Blackduck / Mallard / Gw Teal / Woodduck
Pickerel Lake Water Access
Pickerel Lake
Hubbard Pond Dam
Connecticut Valley Railroad State Park Trail
Hurd State Park
Wopowog Wildlife Area
EAST HADDAM
Pickerel Lake Dam
Hubbard Brook
Pocotopaug Creek
66
2
16
151
196
149

C:\GIS\Projects\Eversource\East_Hampton\mxd\Waterfowl Focus Areas Map.mxd



Legend

- Proposed East Hampton Tower Replacement Tower

Waterfowl Planning Area

- Upper Thames River

Waterfowl Focus Areas

- Connecticut River and Tidal Wetlands Complex
- Fishers Island Sound Complex
- Greater Hammonasset Complex
- Lower Housatonic River - Great Meadows
- Lower Thames River System
- New Haven Harbor
- Norwalk Islands

Connecticut Waterfowl Focus Areas Map

Proposed Telecommunications Facility
East Hampton Tower Replacement Tower
22 East High Street
East Hampton, Connecticut

N W E S

10 5 0 10 Miles

Waterfowl Data Source: Atlantic Coast Joint Venture Partnership
Map Date: March 2016

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

Attachment 6 – NDDB Letter

Connecticut Department of

ENERGY &
ENVIRONMENTAL
PROTECTION

April 19, 2016

Dean Gustafson
All-Points Technology Corporation, P.C.
30 Bogg Ln
Lebanon, CT 06249
dgustafson@allpointstech.com

Project: Lattice Tower Replacement Facility at the East High Street Microwave Site Located at 22 East High Street in East Hampton
NDDB Determination No.: 201604844

Dear Dean Gustafson,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed Lattice Tower Replacement Facility at the East High Street Microwave Site Located at 22 East High Street in East Hampton, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for one year. Please re-submit an NDDB Request for Review if the scope of work changes or if work has not begun on this project by April 19, 2017.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3

Attachment 7 – Calculated Radio Frequency Emissions Report

C Squared Systems, LLC
65 Dartmouth Drive
Auburn, NH 03032
(603) 644-2800
support@csquaredsystems.com

Calculated Radio Frequency Emissions Report

East Hampton

22 East High Street, East Hampton, Connecticut

March 11, 2016

Table of Contents

List of Tables

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1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for Eversource Energy's (formerly Northeast Utilities) proposed new lattice tower to be located at 22 East High Street in East Hampton, Connecticut. The proposed 120' self-support will be replacing an existing 75-foot wood pole and associated antennas. The coordinates of the tower are: 41° 34' 54.3" N, 72° 30' 10.3" W.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm^2). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment B of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{1.6^2 \times EIRP}{4\pi \times R^2} \right) \text{x Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

Ground reflection factor of 1.6

Off Beam Loss is determined by the selected antenna pattern

These calculations assume that the antennas are operating at 100 percent capacity and power, and that all channels are transmitting simultaneously. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final site configuration.

4. Calculation Results

Table 1 below outlines the power density information for the site. The radiation patterns of the proposed Eversource Energy's antennas cause the majority of the RF power to be focused out towards the horizon, with respect to the vertical plane. As a result, there will be less RF power directed below the antenna relative to the horizon, and consequently lower power density levels around the base of the tower. Please refer to Attachment C for the vertical patterns of the proposed Eversource Energy antennas. The calculated results for Eversource Energy in Table 1 include a nominal 10 dB off-beam pattern loss for the 450 MHz, 900 MHz and 6000 MHz antennas to account for the lower relative gain below the antennas.

Carrier	Antenna Height (Feet)	Operating Frequency (MHz)	Number of Trans.	ERP Per Transmitter (Watts)	Power Density (mw/cm^2)	Limit	%MPE
Eversource	130	900	1	240	0.0005	0.6000	0.09%
Eversource	130	450	1	1,000	0.0021	0.3000	0.71%
Eversource	127	48.38	1	100	0.0022	0.2000	1.11%
Eversource	117	6004.5	1	14,125	0.0371	1.0000	3.71%
Eversource	117	6256.54	1	14,125	0.0371	1.0000	3.71%
Eversource	105	154	1	180	0.0059	0.2000	2.94%
Eversource	103.5	49.1	1	100	0.0034	0.2000	1.68%
Eversource	87.5	49.28	1	100	0.0047	0.2000	2.35%
						Total	16.29%

Table 1: Carrier Information

5. Conclusion

The above analysis verifies that RF emissions from the site will be below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed and existing transmit antennas is below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at ground level is **16.29% of the FCC General Population/Uncontrolled limit**.

As noted previously, obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the final site configuration.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

March 11, 2016
Date

Daniel L. Goulet
C Squared Systems, LLC

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure[1]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

(B) Limits for General Population/Uncontrolled Exposure[2]

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $|E|^2$, $|H|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	($180/f^2$)*	30
30-300	27.5	0.073	0.2	30
300-1500	-	-	f/1500	30
1500-100,000	-	-	1.0	30

f = frequency in MHz * Plane-wave equivalent power density

Table 2: FCC Limits for Maximum Permissible Exposure (MPE)

[1] Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

[2] General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

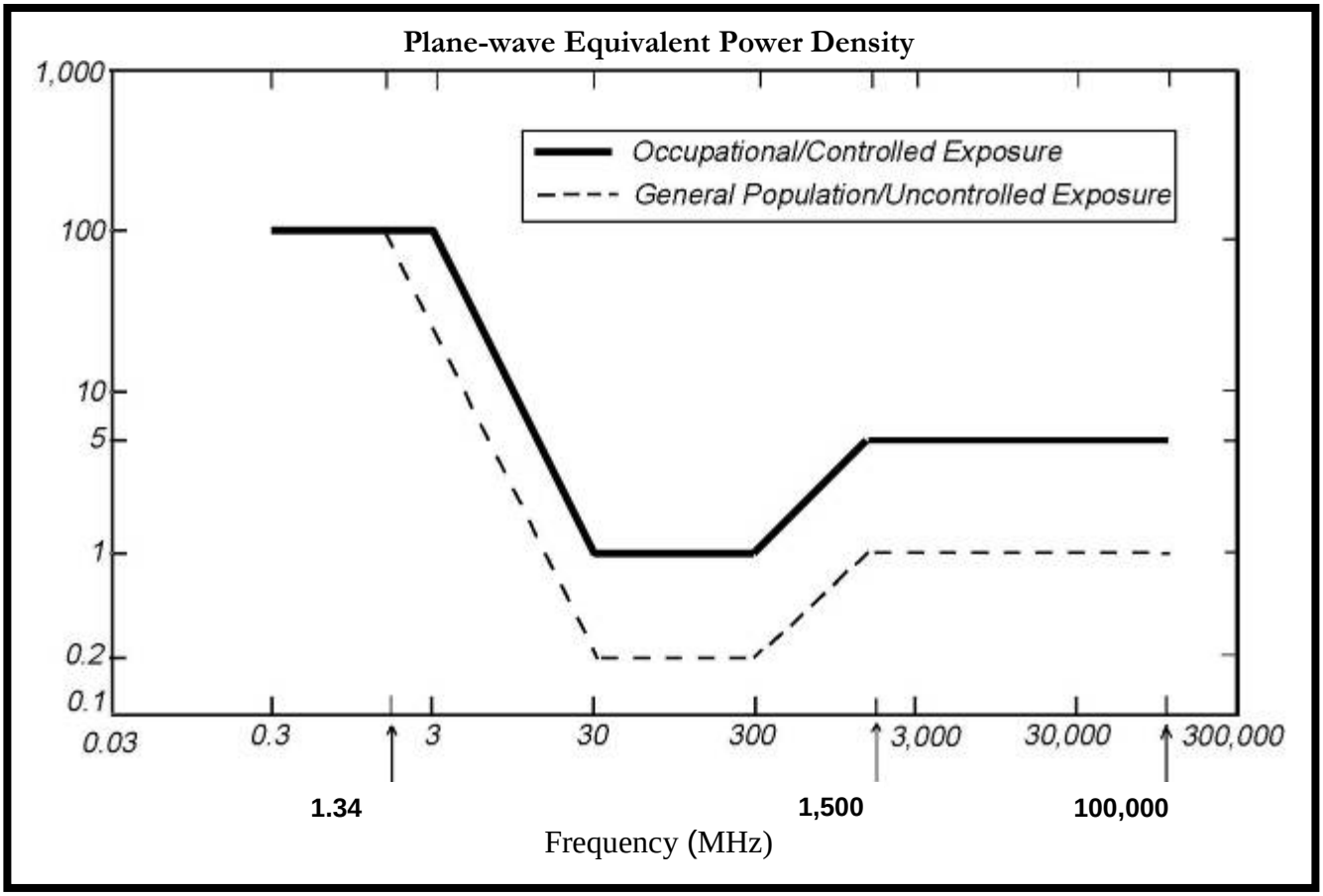
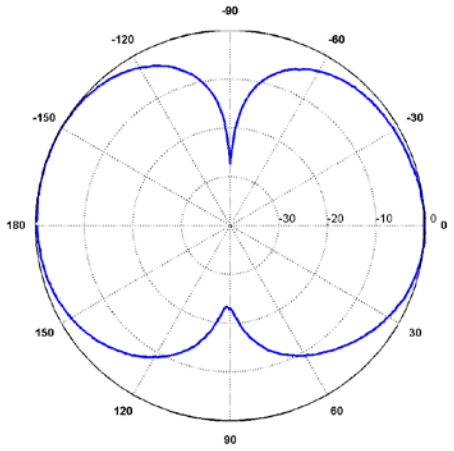


Figure 1: Graph of FCC Limits for Maximum Permissible Exposure (MPE)

Attachment C: Antenna Data Sheets and Electrical Patterns[3]

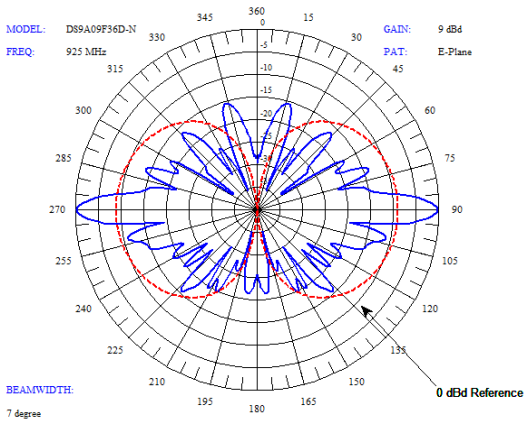
48-49 MHz

Manufacturer:	Kreco
Model #:	CO-41-AN
Frequency Band:	30-50 MHz
Gain:	0 dBd
Vertical Beamwidth:	N/A
Horizontal Beamwidth:	360°
Polarization:	Vertical
Length:	15’



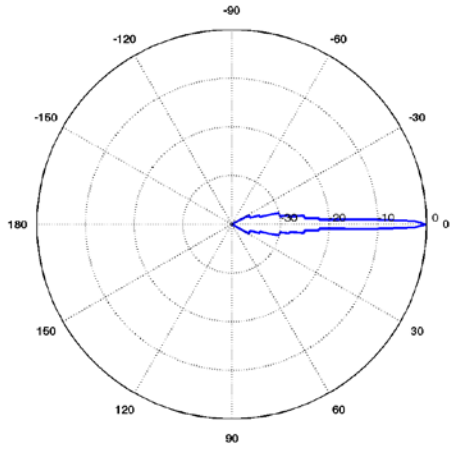
900 MHz

Manufacturer:	DBSpectra
Model #:	DS9A09F36D-N
Frequency Band:	896-960 MHz
Gain:	9.0 dBd
Vertical Beamwidth:	8°
Horizontal Beamwidth:	360°
Polarization:	Vertical
Length:	21’

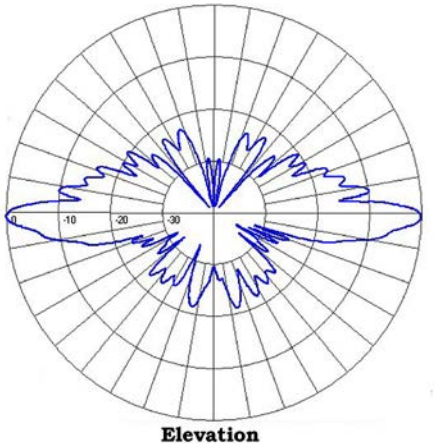
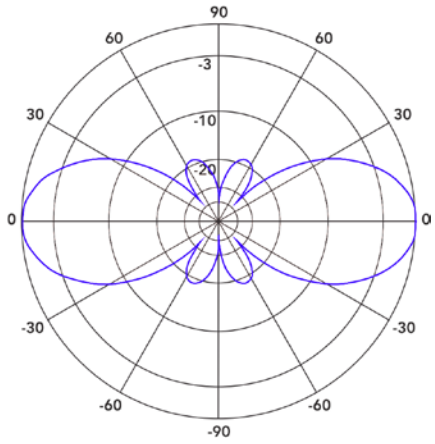


6000 MHz

Manufacturer:	RFS
Model #:	PADX6-59A
Frequency Band:	5925 - 6425 MHz
Gain:	38.5 dBd
Vertical Beamwidth:	1.8°
Horizontal Beamwidth:	1.8°
Polarization:	Dual
Diameter:	6’



[3] In the case where pattern data was unavailable from the manufacturer, vertical patterns shown are for antennas with similar specifications.

450 MHz Manufacturer: Sinclair Model #: SC331-SF2LDF Frequency Band: 450-463 MHz Gain: 10 dBd Vertical Beamwidth: 6° Horizontal Beamwidth: 360° Polarization: Vertical Length: 20’	
150 MHz Manufacturer: Telewave Model #: ANT150F2 Frequency Band: 148-174 MHz Gain: 2.5 dBd Vertical Beamwidth: 38° Horizontal Beamwidth: 360° Polarization: Vertical Length: 5’	

Attachment 8 – Visibility Analysis

ALL-POINTS TECHNOLOGY CORPORATION

VISIBILITY ANALYSIS

MICROWAVE TOWER
22 EAST HIGH STREET
EAST HAMPTON, CONNECTICUT

Prepared for:

Eversource
107 Selden Street
Berlin, CT 06037

Prepared by:

All-Points Technology Corporation, P.C.
3 Saddlebrook Drive
Killingworth, CT 06419

JUNE 2016

Project Introduction

Eversource Energy ("Eversource" or the "Company") is pursuing a Petition that no Certificate of Environmental Compatibility and Public Need is required from the Connecticut Siting Council ("Council") for replacing an existing wireless communications facility ("Replacement Facility") at 22 East High Street in East Hampton, Connecticut ("Site"). At the request of Eversource, All-Points Technology Corporation, P.C. ("APT") prepared this Visibility Analysis to evaluate the potential visibility of the proposed Replacement Facility within a two mile radius of the proposed site location ("Study Area").

Site Description and Setting

Eversource currently owns and operates a telecommunications tower located at 22 East High Street in East Hampton, Connecticut. The Site is an approximately 11-acre parcel owned by the Eversource and is presently used as a service center and maintenance yard. The Site is located north of Bevin Avenue, South of Lake Pocotopaug, east of Main Street and west of Lakeview Street (CT 196). The Company has an existing 70-foot wooden pole ("Existing Facility") in the southern portion of the Site that currently includes one 12-foot tall whip antenna mounted at the top, making the total height approximately 82 feet above ground level ("AGL").

Eversource proposes to remove the Existing Facility and replace it with a 120-foot, three-legged self-supporting lattice tower on a 26-foot by 26-foot concrete pad within a 31-foot by 31-foot gravel compound area surrounded by a six-foot high chain link security fence with one locked entrance. The compound will house and protect the Replacement Facility while tower utilities will be located within the existing service center building adjacent to the proposed tower. The Replacement Facility would be erected on the Site and located approximately 15 feet southwest of the Existing Facility. The ground elevation at this portion of the Site is similar to the existing tower site, approximately 484 feet above mean sea level.

Eversource would install new antennas, a microwave dish and coaxial cables on the replacement lattice tower to meet its system needs. Two top-mounted whip antennas would extend approximately 20 feet above the proposed 120-foot tower, raising the total height of the Proposed Facility to approximately 140 feet AGL. Eversource would own the replacement tower. After the new tower is constructed and operative, the Existing Facility would be removed.

Land use within the immediate vicinity is primarily a mix of light to medium density, rural commercial and residential development, with Connecticut Route 66 (East High Street) and the East Hampton Shopping Mall to the north and Connecticut Route 196 (Lakeview and Summit Streets) to the south and east and Main Street to the west. The topography within the Study Area is characterized by the Lake Pocotopaug basin in the north with gently wooded rising hills to the south, east and west, with ground elevations ranging from approximately 480 feet to 800 feet Above Mean Sea Level (AMSL).

Methodology

APT used the combination of a predictive computer model and in-field analysis to evaluate the visibility associated with the proposed Replacement Facility on both a quantitative and qualitative basis. The predictive model provides a measurable assessment of potential visibility throughout the entire Study Area including private properties and other areas inaccessible for direct observations. The in-field analyses included a balloon float and reconnaissance of the Study Area to record existing conditions, verify results of the model, inventory visible and nonvisible locations, and provide photographic documentation from publicly accessible areas. A description of the procedures used in the analysis is provided below.

Preliminary Computer Modeling

Two computer modeling tools were used to calculate those areas from which at least the top of the tower is estimated to be visible: IDRISI image analysis program (developed by Clark Labs, Clark University) and ArcGIS®, developed by Environmental Systems Research Institute, Inc. Project- and Study Area-specific data were incorporated into the computer model, including the tower's location, height, and ground elevation, as well as the surrounding topography and existing vegetation which are two primary features that can block direct lines of sight. Information used in the model included LiDAR[1]-based digital elevation and land use data. The LiDAR-based Digital Elevation Model ("DEM") represents topographic information for the state of Connecticut that was derived through the spatial interpolation of airborne LiDAR-based data collected in the year 2000 and has a horizontal resolution of 1.5 to 2 feet, and was downloaded from the National Oceanic and Atmospheric Administration in 2011. In addition to the topographic information, this LiDAR data set contains all other recorded dimensional observations (or "returns") of land features including vegetation, buildings, and other infrastructure. The results of the LiDAR DEM analysis were compared with National Agricultural Imagery Program (USDA) aerial photography (1-foot resolution, flown in 2012) using IDRISI image processing tools, to confirm its general accuracy. The IDRISI tools develop light reflective classes defined by statistical analysis of individual pixels, which are then grouped based on common reflective values such that distinctions can be made automatically between deciduous and coniferous tree species, as well as grassland, impervious surface areas, water and other distinct land use features.

Once the data layers were entered, image processing tools were applied and overlaid onto USGS topographic base maps and aerial photographs to achieve an estimate of locations where the Replacement Facility might be visible. Additional data was reviewed and incorporated into the visibility analysis, including protected private and public open space, parks, recreational facilities, hiking trails, schools, and historic districts. The Belltown Historic District is located adjacent to the Site. The Center Elementary School, located at 7 Summit street, is located 0.31 mile to the south while the nearest recreational park, Sears Park located on Sears Lane, is approximately 0.65 mile to the northwest. Based on a review of publicly-available information, no designated state scenic roads exist within the Study Area.

[1] LiDAR is an acronym for Light Detection and Ranging. It is a technology that utilized lasers to determine the distance to an object or surface. LiDAR is similar to radar, but incorporates laser pulses rather than sound waves. It measures the time delay between transmission and reflection of the laser pulse.

Field Reconnaissance

To supplement and fine tune the results of the computer modeling efforts, APT completed in-field verification activities consisting of a balloon float, vehicular and pedestrian reconnaissance, and photo-documentation.

Balloon Float and Field Reconnaissance

A balloon float was conducted on December 6, 2015 and again on January 7, 2016. The balloon float consisted of raising an approximately four-foot diameter, helium-filled red balloon, tethered to a string height of 120 feet above ground level ("AGL") at the proposed Replacement Facility location. At the time of the balloon floats, weather conditions on both dates consisted of partly cloudy skies with calm winds. On both occasions the balloon was secured and a Study Area reconnaissance was performed by driving along the local and State roads and other publicly accessible locations to document and inventory where the balloon could be seen above/through the trees and canopy. Visual observations from the reconnaissance were also used to evaluate the results of the preliminary visibility mapping and identify any discrepancies in the initial modeling.

Photographic Documentation

APT drove the public roads within the Study Area during the balloon float and photo-documented representative areas where the balloon was and was not visible. At each photo location, the geographic coordinates of the camera's position were logged using global positioning system ("GPS") technology. Photographs were taken with a Canon EOS 6D digital camera body and Canon EF 24 to 105 millimeter ("mm") zoom lens. APT uses a standard focal length of 50mm; presenting a consistent field of view throughout the document. On occasion, APT will include photos taken at lower focal lengths/greater depth of field in order to include existing contextual surroundings and/or more of the proposed facility within the photograph. Photo 18 was taken using a 24 mm focal length. Regardless of the lens setting, the scale of the subject in the photograph (the balloon) and corresponding simulation (the tower) remains proportional to its surroundings.

Final Visibility Mapping

Information obtained during the field reconnaissance was incorporated into the mapping data layers, including observations of the balloon float, the photo locations, areas that experienced recent land use changes and those places where the initial model was found to over-predict visibility. Once the additional field data was integrated into the model, APT re-calculated the visibility of the proposed Replacement Facility from within the Study Area to assist in producing the final viewshed map.

Photographic Simulations

Photographic simulations were generated to portray scaled renderings from 38 representative locations where the proposed Replacement Facility could be visible year-round. Using field data, site plan information and 3-dimension (3D) modeling software, spatially referenced models of the site area and tower were generated and merged. The geographic coordinates obtained in the field for the photograph locations were incorporated into the model to produce virtual camera positions within the spatial 3D model. Photo simulations were then created using a combination of renderings generated in the 3D model and photo-rendering software programs[2]. For presentation purposes in this report, the photographs were produced in an approximate 7-inch by 10.5-inch format.

Photo-documentation of existing conditions and photo-simulations of the proposed Replacement Facility are presented in the attachment at the end of this report. Where visible in the existing conditions photos, the balloon provides visual reference points for the approximate height and location of the tower relative to the scene. The photo-simulations are intended to provide the reader with a general understanding of the different views that might be achieved of the Replacement Facility. Note that the existing pole is visible in four (4) of the photographs (views 17-20); the existing tower has been removed from the corresponding photo-simulations of the Replacement Facility to provide a representation of proposed conditions once the project is complete

It is important to consider that the publicly-accessible locations selected are typically representative of a "worst case" scenario. They were chosen to present unobstructed view lines (wherever possible), are static in nature and do not necessarily fairly characterize the prevailing views from all locations within a given area. From several locations, moving a few feet in any direction will result in a far different perspective of the tower than what is presented in the photographs. In several cases, a view of the tower may be limited to the immediate area of the specific photo location.

The simulations provide a representation of the Replacement Facility under similar settings as those encountered during the balloon float and reconnaissance. Views of the tower can change substantially throughout the season and are dependent on environmental conditions, including (but not necessarily limited to) weather, light conditions, seasons, time of day, and the viewer location.

[2] As a final step, the accuracy and scale of select simulations are tested against photographs of similar existing facilities with recorded camera position, focal length, photo location, and tower location.

Photograph Locations

The table below summarizes characteristics of the photographs and simulations presented in the attachment to this report including a description of each location, view orientation, the distance from where the photo was taken relative to the proposed Replacement Facility and the general characteristic of that view. The photo locations are depicted on the photolog and viewshed maps provided as attachments to this report.

Photo No.	Photo Location	View Orientation	Distance to Facility	View Characteristic
1	Tarragon Drive	Northeast	±1.05 Miles	Not visible
2	Barton Hill Road	Northeast	±0.46 Mile	Not visible
3	Oak Knoll Road	Northeast	±0.29 Mile	Seasonal
4	Main Street	Northwest	±0.84 Mile	Not visible
5	Main Street	Northwest	±0.78 Mile	Year-round
6	Edgerton Street	Northwest	±0.84 Mile	Year-round
7	Chatham Fields Road	Northwest	±0.70 Mile	Seasonal
8	Huckleberry Acres	Northwest	±0.80 Mile	Not visible
9	Viola Drive	Northwest	±0.79 Mile	Not Visible
10	Pecausett Trail	Northwest	±1.29 Miles	Not Visible
11	Whispering Woods Road	Southwest	±1.58 Miles	Not Visible
12	Town Line Drive	Southwest	±1.52 Mile	Not Visible
13	Old Airline Trail	Northwest	±0.63 Mile	Not Visible
14	Bishop Hill Road	Northwest	±0.40 Mile	Seasonal
15	Summit Street	Northwest	±0.33 Mile	Year-round
16	Bevin Court	Northwest	±0.26 Mile	Year-round
17	Bevin Boulevard	Northwest	±0.10 Mile	Year-round
18	Bevin Boulevard	Northeast	±245 Feet	Year-round*
19	Entrance to Host Property	Southeast	±0.10 Mile	Year-round
20	Stop & Shop Parking Lot	Southeast	±0.18 Mile	Year-round
21	East High Street	Southwest	±0.16 Mile	Year-round
22	West Point Road	Southwest	±0.24 Mile	Year-round
23	Lake View Cemetery	Southwest	±0.23 Mile	Year-round
24	Old Marlborough Road	Southwest	±0.41 Mile	Year-round
25	Old Marlborough Road	Southwest	±0.49 Mile	Year-round
26	Day Point Road	Southwest	±0.61 Mile	Not Visible
27	O'Neil Lane Road	Southwest	±0.77 Mile	Year Round
28	Laurel Ridge	Southwest	±1.06 Miles	Not Visible
29	Spellman Point Road	Southwest	±1.25 Mile	Not visible

*Photograph taken with 24 mm focal length

Photo-documentation and simulations are presented in the attachment at the end of this report.

Photo No.	Photo Location	View Orientation	Distance to Facility	View Characteristic
30	Raymond Road	Southeast	±1.52 Miles	Year Round
31	Lake Drive	Southeast	±1.49 Miles	Year-round
32	Lake Drive	Southeast	±1.40 Miles	Not Visible
33	Old Clark Hill Road	Southeast	±1.38 Miles	Year Round
34	Tiffany Court	Southeast	±1.23 Miles	Not Visible
35	Christopher Road	Southeast	±0.96 Mile	Not visible
36	Sears Park	Southeast	±0.67 Mile	Not visible
37	Wells Avenue	Southeast	±0.30 Mile	Seasonal
38	Hills Avenue	Southeast	±0.29 Mile	Seasonal

Visibility Analysis Results

Results of this analysis are graphically displayed on the visibility analysis maps provided in the attachment to the end of this report. The maps also include the locations of photographs and corresponding simulations.

Areas from where the Replacement Facility would be visible comprise of ±157 acres of year-round visibility and ±238 acres of seasonal visibility. Cumulatively, this equals less than 5% of the Study Area.

As seen on the visibility maps, the majority of views of the Replacement Facility would occur from the areas within the immediate vicinity of the Site (note: the whip antenna will not be visible beyond the immediate area of the Site). These views could extend about 0.75 mile to the south and east and up to approximately 1.5 miles to the north where only the upper portion of the Replacement Facility might be seen. A majority of the views to the west would be seasonal. Relatively dense development and vegetative cover throughout the general area result in few unobstructed near-views of the tower once beyond the Site limits. The size and style of the Replacement Facility would result in a change in the character of most views. However, the majority of views from nearby residential streets are obscured by intervening trees, minimizing direct lines of sight of the entire tower.

Based on the results of this analysis, development of the proposed Replacement Facility would not result in a substantial change to existing conditions nor would it have a significant adverse visual impact on the environment or character of the community.

LIMITATIONS

The viewshed maps presented in the attachment to this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground through intervening topography, vegetation, buildings and other infrastructure. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2000 LiDAR data and 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The simulations provide a representation of the Facility under similar settings as those encountered during the balloon float and reconnaissance. Views of the Facility can change throughout the seasons and the time of day, and are dependent on weather and other atmospheric conditions (e.g., haze, fog, clouds); the location, angle and intensity of the sun; and the specific viewer location. Weather conditions on the day of the balloon float included partly cloudy skies. The photo-simulations presented in this report provide an accurate portrayal of the Facility during comparable conditions.

ATTACHMENTS

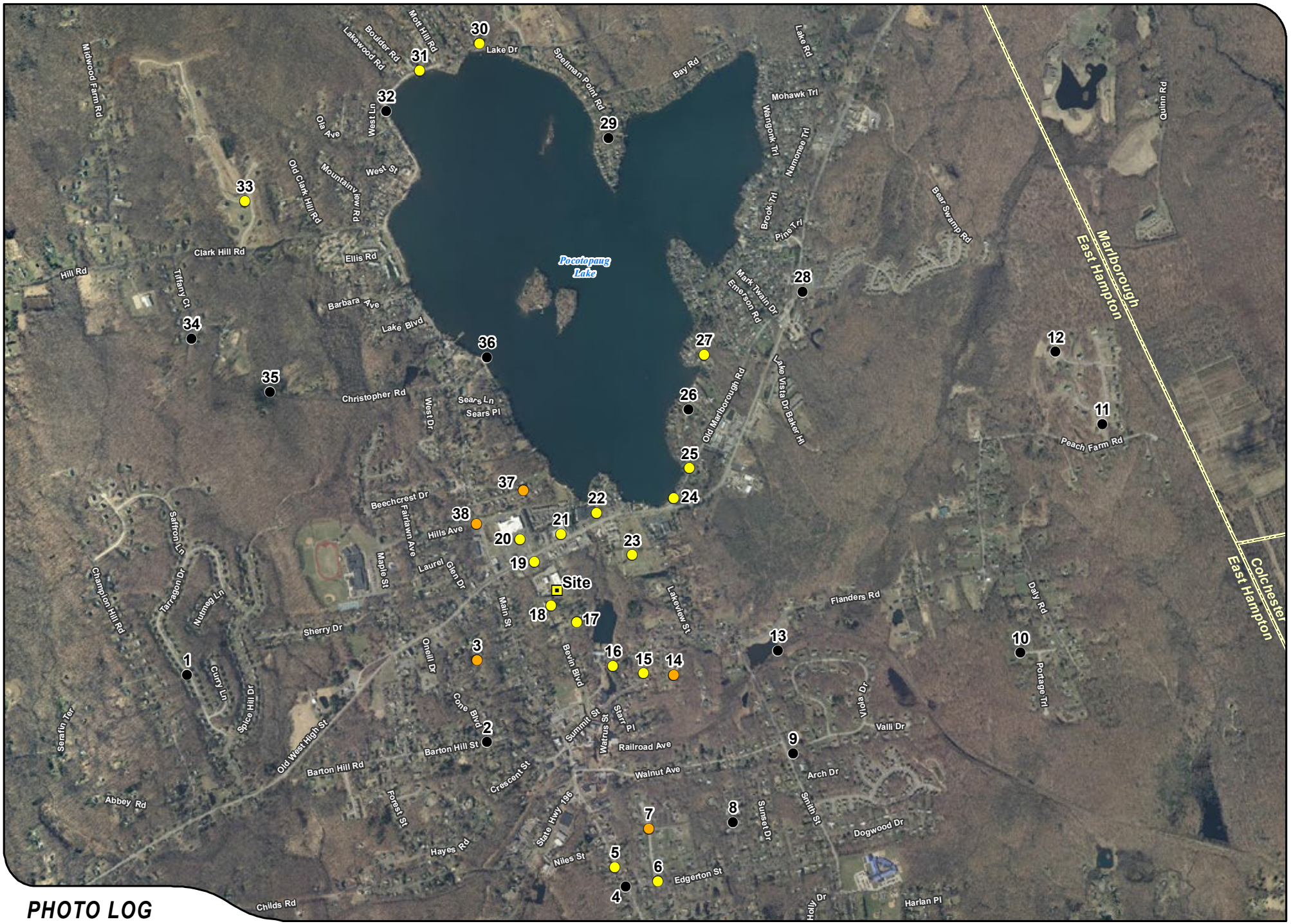


PHOTO LOG

Legend

Site | Not Visible | Seasonal Visibility | Year-Round Visibility | Municipal Boundary

1,800 900 0 1,800 Feet

1 inch = 1,800 feet

All-Points Technology Corporation

Eversource Energy

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
1	**TARRAGON DRIVE**	**NORTHEAST**	**+/- 1.05 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
2	**BARTON HILL ROAD**	**NORTHEAST**	**+/- 0.46 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**OAK KNOLL ROAD**	**NORTHEAST**	**+/- 0.29 MILE**	**SEASONAL**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
3	**OAK KNOLL ROAD**	**NORTHEAST**	**+/- 0.29 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
4	**MAIN STREET**	**NORTHWEST**	**+/- 0.84 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**MAIN STREET**	**NORTHWEST**	**+/- 0.78 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
5	**MAIN STREET**	**NORTHWEST**	**+/- 0.78 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**EDGERTON STREET**	**NORTHWEST**	**+/- 0.84 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
6	**EDGERTON STREET**	**NORTHWEST**	**+/- 0.84 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**CHATHAM FIELDS ROAD**	**NORTHWEST**	**+/- 0.70 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
7	**CHATHAM FIELDS ROAD**	**NORTHWEST**	**+/- 0.70 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
8	**HUCKLEBERRY ACRES**	**NORTHWEST**	**+/- 0.80 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
9	**VIOLA DRIVE**	**NORTHWEST**	**+/- 0.79 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
10	**PECAUSETT TRAIL**	**NORTHWEST**	**+/- 1.29 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
11	**WHISPERING WOODS ROAD**	**SOUTHWEST**	**+/- 1.58 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
12	**TOWN LINE DRIVE**	**SOUTHWEST**	**+/- 1.52 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
13	**OLD AIRLINE TRAIL**	**NORTHWEST**	**+/- 0.63 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**BISHOP HILL ROAD**	**NORTHWEST**	**+/- 0.40 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
14	**BISHOP HILL ROAD**	**NORTHWEST**	**+/- 0.40 MILE**	**SEASONAL**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**SUMMIT STREET**	**NORTHWEST**	**+/- 0.33 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
15	**SUMMIT STREET**	**NORTHWEST**	**+/- 0.33 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	**BEVIN COURT**	**NORTHWEST**	**+/- 0.26 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
16	**BEVIN COURT**	**NORTHWEST**	**+/- 0.26 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**BEVIN BOULEVARD**	**NORTHWEST**	**+/- 0.10 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
17	**BEVIN BOULEVARD**	**NORTHWEST**	**+/- 0.10 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**BEVIN BOULEVARD (24mm Focal Length)**	**NORTHEAST**	**+/- 245 FEET**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
18	**BEVIN BOULEVARD (24mm Focal Length)**	**NORTHEAST**	**+/- 245 FEET**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**ENTRANCE TO HOST PROPERTY**	**SOUTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
19	**ENTRANCE TO HOST PROPERTY**	**SOUTHEAST**	**+/- 0.10 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	**STOP & SHOP PARKING LOT**	**SOUTHEAST**	**+/- 0.18 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
20	**STOP & SHOP PARKING LOT**	**SOUTHEAST**	**+/- 0.18 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**EAST HIGH STREET**	**SOUTHWEST**	**+/- 0.16 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
21	**EAST HIGH STREET**	**SOUTHWEST**	**+/- 0.16 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	**WEST POINT ROAD**	**SOUTHWEST**	**+/- 0.24 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
22	**WEST POINT ROAD**	**SOUTHWEST**	**+/- 0.24 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	**LAKEVIEW CEMETERY**	**SOUTHWEST**	**+/- 0.23 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
23	**LAKEVIEW CEMETERY**	**SOUTHWEST**	**+/- 0.23 MILE**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
24	**OLD MARLBOROUGH ROAD**	**SOUTHWEST**	**+/- 0.41 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
24	**OLD MARLBOROUGH ROAD**	**SOUTHWEST**	**+/- 0.41 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
25	**OLD MARLBOROUGH ROAD**	**SOUTHWEST**	**+/- 0.49 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
25	**OLD MARLBOROUGH ROAD**	**SOUTHWEST**	**+/- 0.49 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
26	**DAY POINT ROAD**	**SOUTHWEST**	**+/- 0.61 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
27	**ONEILL LANE**	**SOUTHWEST**	**+/- 0.77 MILE**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
27	**ONEILL LANE**	**SOUTHWEST**	**+/- 0.77 MILE**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
28	**LAUREL RIDGE**	**SOUTHWEST**	**+/- 1.06 MILES**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
29	**SPELLMAN POINT ROAD**	**SOUTHWEST**	**+/- 1.25 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
30	**RAYMOND ROAD**	**SOUTH**	**+/- 1.52 MILES**	**YEAR ROUND**

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
30	**RAYMOND ROAD**	**SOUTH**	**+/- 1.52 MILES**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
31	**LAKE DRIVE**	**SOUTHEAST**	**+/- 1.49 MILES**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
31	**LAKE DRIVE**	**SOUTHEAST**	**+/- 1.49 MILES**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
32	**LAKE DRIVE**	**SOUTHEAST**	**+/- 1.40 MILES**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
33	**OLD CLARK HILL ROAD**	**SOUTHEAST**	**+/- 1.38 MILES**	**YEAR ROUND**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
33	**OLD CLARK HILL ROAD**	**SOUTHEAST**	**+/- 1.38 MILES**	**YEAR ROUND**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
34	**TIFFANY COURT**	**SOUTHEAST**	**+/- 1.23 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
35	**CHRISTOPHER ROAD**	**SOUTHEAST**	**+/- 0.96 MILE**	**NOT VISIBLE**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
36	**SEARS PARK**	**SOUTHEAST**	**+/- 0.67 MILE**	**NOT VISIBLE**

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
37	**WELLS AVENUE**	**SOUTHEAST**	**+/- 0.30 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
37	**WELLS AVENUE**	**SOUTHEAST**	**+/- 0.30 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY

EXISTING

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
38	**HILLS AVENUE**	**SOUTHEAST**	**+/- 0.29 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

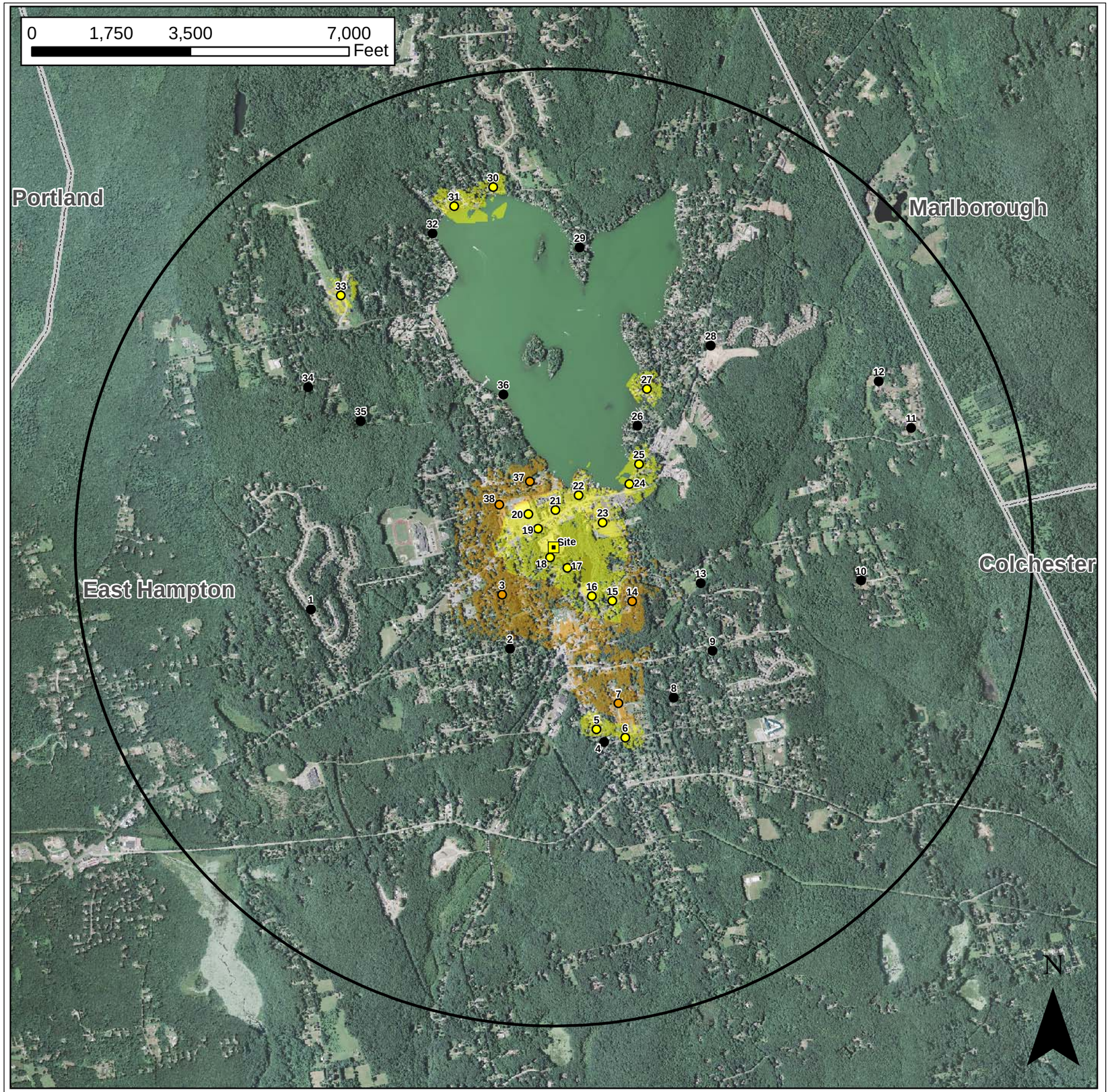
EVERSOURCE ENERGY

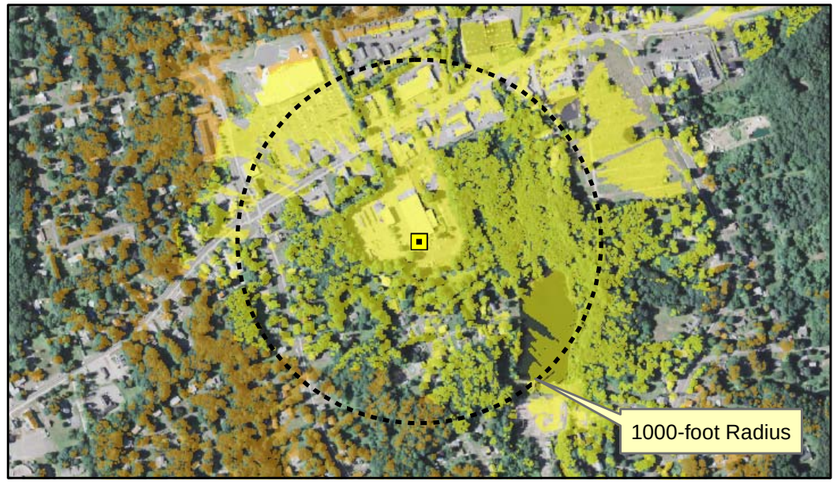
PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE	VISIBILITY
38	**HILLS AVENUE**	**SOUTHEAST**	**+/- 0.29 MILE**	**SEASONAL**

ALL-POINTS TECHNOLOGY CORPORATION

EVERSOURCE ENERGY





Viewshed Map – Aerial Base

Proposed Communications Facility
Replacement Tower
22 East High Street, East Hampton, CT

Proposed facility height is 120 feet AGL. Forest canopy height is derived from lidar data. Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 2/29/2015.

Map information field verified by APT on 12/6/2015 and 1/17/2016.

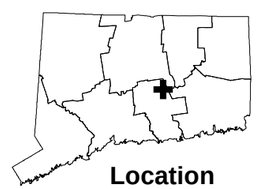
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

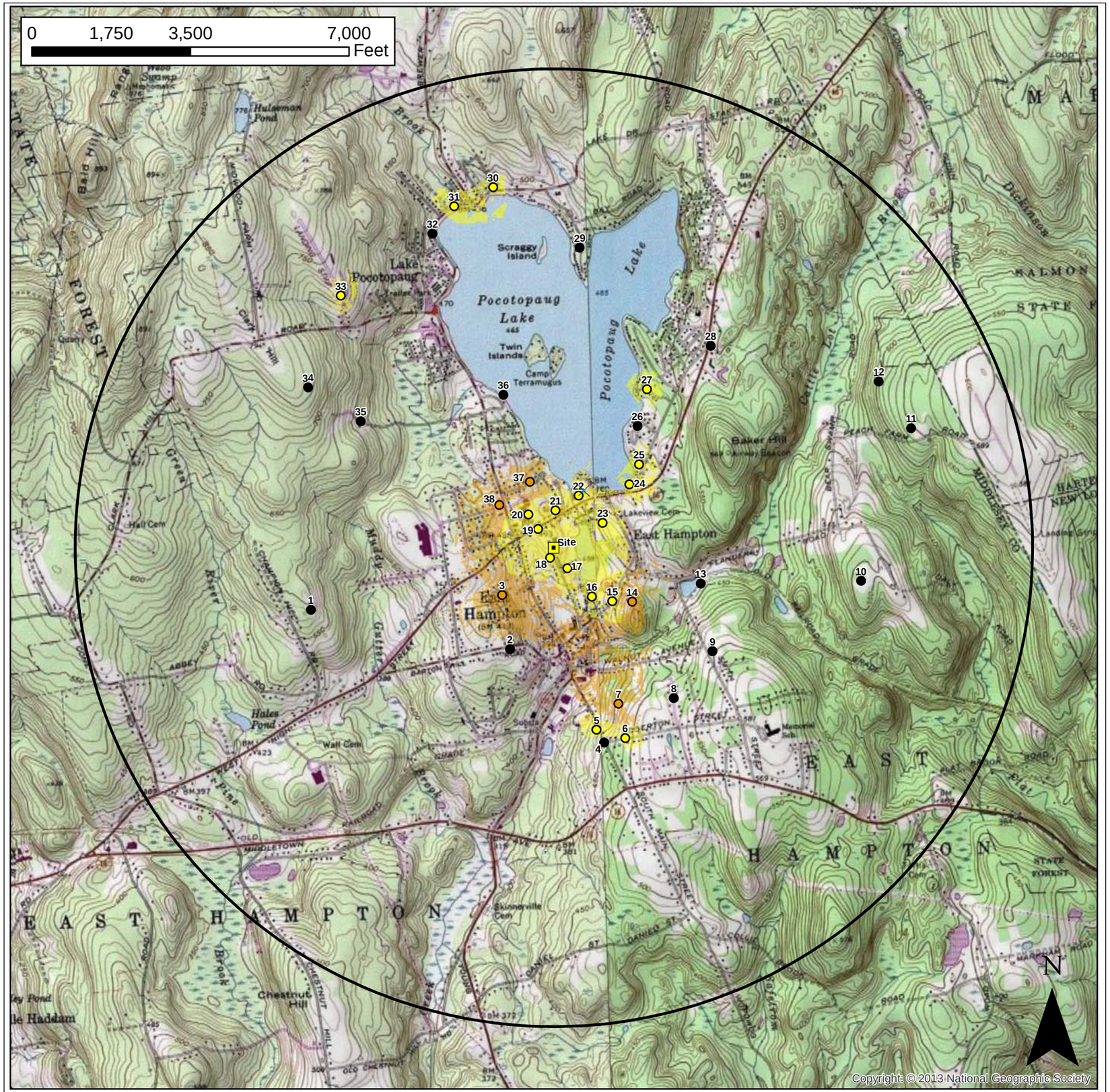
- Not Visible
- Seasonal Views
- Year-round Views
- Trails
- Predicted Seasonal Visibility (238 Acres)
- Predicted Year-Round Visibility (157 Acres)
- Towns
- 2-Mile Study Area
- Open Space

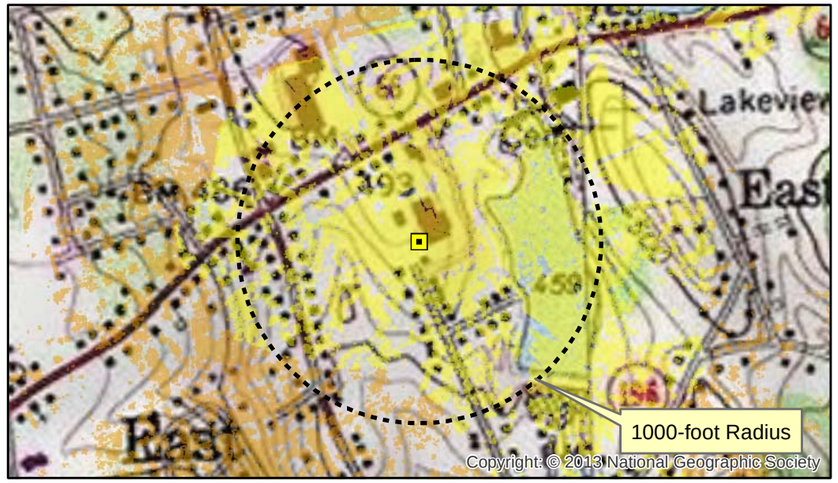


Location

EVERSOURCE ENERGY

ALL-POINTS TECHNOLOGY CORPORATION





Viewshed Map – Topo Base

Proposed Communications Facility
Replacement Tower
22 East High Street, East Hampton, CT

Proposed facility height is 120 feet AGL. Forest canopy height is derived from lidar data. Study area encompasses a two-mile radius and includes 8,042 acres of land.

Map compiled 2/29/2015.

Map information field verified by APT on 12/6/2015 and 1/17/2016.

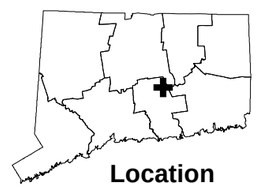
Only those resources located within the extent of the map are depicted. For a complete list of data sources consulted for this analysis, please refer to the Documentation Page.

Legend

- Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views
- Trails
- Predicted Seasonal Visibility (238 Acres)
- Predicted Year-Round Visibility (157 Acres)
- Towns
- 2-Mile Study Area
- Open Space



Location

EVERSOURCE ENERGY

ALL-POINTS TECHNOLOGY CORPORATION

DOCUMENTATION

SOURCES CONSULTED FOR VIEWSHED MAPS
22 East High Street
East Hampton, Connecticut

Physical Geography / Background Data

National Oceanic and Atmospheric Administration ^
- *LiDAR land use/land cover data – topography, vegetation, buildings and infrastructure (2000)

United States Geological Survey
- *USGS topographic quadrangle maps (1984)

National Resource Conservation Service
- *NAIP aerial photography (2012)

Department of Transportation data
- ^State Scenic Highways (updated monthly)

Heritage Consultants
- ^Municipal Scenic Roads

Cultural Resources

Heritage Consultants
- ^National Register
- ^ Local Survey Data

Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP)
- *DEEP Property (May 2007)
- *Federal Open Space (1997)
- *Municipal and Private Open Space (1997)
- *DEEP Boat Launches (1994)

Connecticut Forest & Parks Association
- ^Connecticut Walk Book East – The Guide to the Blue-Blazed Hiking Trails of Eastern Connecticut, 19th Edition, 2006.

Other

- ^ConnDOT Scenic Strips (based on Department of Transportation data)

*Available to the public in GIS-compatible format (some require fees).
^ Data not available to general public in GIS format. Reviewed independently and, where applicable, GIS data later prepared specifically for this Study Area.

LIMITATIONS

The visibility analysis map(s) presented in this report depict areas where the proposed Facility may potentially be visible to the human eye without the aid of magnification based on a viewer eye-height of 5 feet above the ground and intervening topography, vegetation, buildings and infrastructure. This analysis may not necessarily account for all visible locations, as it is based on the combination of computer modeling, incorporating 2012 aerial photographs, and in-field observations from publicly-accessible locations. No access to private properties beyond the host Property was provided to APT personnel. This analysis does not claim to depict the only areas, or all locations, where visibility may occur; it is intended to provide a representation of those areas where the Facility is likely to be seen.

The photo-simulations in this report are provided for visual representation only. Actual visibility depends on various environmental conditions, including (but not necessarily limited to) weather, season, time of day, and viewer location.

Attachment 9 – SHPO Submittal

May 2, 2016

To: Mr. Todd Levine
State of Connecticut Department of
Economic and Community Development
State Historic Preservation Office
One Constitution Plaza, Second Floor
Hartford, CT 06103

Re: Proposed 120' Lattice Tower (140' with Antennas) Replacement Facility
22 East High Street
East Hampton, Connecticut 06424
APT Project#: CT259180

Determination of Effects for the Proposed Telecommunications Facility to be Constructed at 22 East High Street in East Hampton, Connecticut:

In accordance with the Federal Communication Commission (FCC) National Environmental Policy Act (NEPA) rules and Section 106 of the National Historic Preservation Act (NHPA), the above-referenced telecommunications project, proposed by Eversource Energy, is being evaluated for its potential effects to districts, sites, buildings, structures, or objects significant in American history, architecture, archeology, engineering, or culture that are listed, or potentially eligible for listing in the National Register of Historic Places (NRHP).

In accordance with the Nationwide Agreement, please find the attached Submission Packet, FCC Form 620, which presents the details on the proposed project as well as efforts that have been taken to identify, assess, and make determinations of effect on the impacts of the proposed project on Historic Properties. As part of this Undertaking Eversource Energy is proposing to construct a telecommunications facility at 22 East High Street in East Hampton, Connecticut. The Subject Property consists of an approximately 10.53-acre developed parcel. The property is located on the south side of East High Street and is the site of an office building an d an equipment storage and maintenance facility built by Eversource Energy in 1974. There are two two-story red brick buildings on the site, these surrounded by asphalt parking lots. The boundaries of the parcel are largely lined with mature trees, while the eastern third of the property remains wooded. A paved access drive leads to the facility from East High Street, which is a heavily developed commercial thoroughfare. The proposed tower replacement facility consists of a 120-foot lattice tower with antennas, to reach an overall height of 140-feet above ground level, situated within a fenced (chain link) equipment compound adjoining the rear (south) elevation of the existing Eversource Service Center. The existing 70' tall wooden pole communications facility would be removed.

File reviews of the National Register Database, Connecticut State Historic Register, and Connecticut State Historic Resource Inventory were conducted by Lucas Karmazinas, architectural historian with FuturePast Preservation, and Mr. William Keegan, Historical Geographer & GIS Specialist, with Heritage Consultants, LLC, to identify Historic Properties within the 0.5-mile Area for Potential Effect (APE) for

Visual and Direct Effects. No Historic Properties[1] previously listed or deemed eligible for the National Register of Historic Places were identified within the APE for Direct Effects, and one (1) Historic Property previously listed or deemed eligible for the National Register of Historic Places was identified within the APE for Visual Effects. The latter consists of the Belltown National Register Historic District (NR# 85003543), which is located north, south, and west of the Subject Property. Despite the presence of the district, however, it is the opinion of the investigator that the Undertaking would present No Adverse Effects to the Historic Property. This is based upon a number of factors. For the limited number of resources located within the district along East High Street, the proposed tower would either be largely visible or partially screened from view when the trees are in leaf, however, it would present far less of an impact than the extensive development along that thoroughfare and would not significantly detract from the district's historic character, which is largely derived from its association with local industries. For those properties along West High Street near its intersection with Main Street, the tower will either be fully screened from view when the trees are in leaf or will be blocked by the numerous buildings that line the street. As one moves west along West High Street, the rise of the land and the southwesterly course of the street will completely hide the proposed antenna from view. Similar natural and topographical screening will also eliminate visibility further south within the district from points along Main Street, Barton Hill Road, Summit Street, and Bevin Court. The antenna will be minimally visible from the former site of the Bevin Brothers Manufacturing Company mill (all but several ancillary structures were destroyed by a massive fire in 2012) at the southern end of Bevin's Pond, and from the northern terminus of Bevin Court, however, only the very top of the antenna will be visible above the treeline from these locations and the impact will be limited. Perhaps the most significant impact of the antenna will be felt from the only contributing resource located on Bevin Boulevard, this being the octagonal house at the northern terminus of the street. Here an emergency access driveway leading to the Eversource property creates a break in the trees through which the antenna will be visible, however, even here a screen of trees will partially block the tower from view when the trees are in leaf.

Furthermore, per request from Connecticut's State Historic Preservation Office, a good-faith effort has been made on the part of the investigator to identify any undocumented resources that might be considered Historic Properties. While evaluated outside of the scope of the Submission Packet, FCC Form 620, several additional historic resources were identified within the APE for Visual Effects. They consist of a number of residential buildings and a historic cemetery located beyond the present boundaries of the Belltown Historic District along Main Street, Hills Avenue, Wells Avenue, Bevin Boulevard, Bevin Avenue, Summit Street, and Maple Street that might be included in the existing district as part of a boundary extension. Despite the presence of the aforementioned resources, however, it is the opinion of the investigator that the Undertaking would present No Adverse Effects to these Historic Properties as the proposed antenna would only be visible from limited locations along Hills Avenue, Wells Avenue, Bevin Boulevard and Bevin Avenue, where dense tree cover would again screen the antenna from view. Limited seasonal or locational visibility along these streets would also not detract from the area's character as an industrial village to such a degree that those resources would not be eligible for inclusion in the historic district at a later date.

A historic cemetery established during the mid-nineteenth century was also identified roughly 0.2-mile west of the Subject property, however, this does not appear to possess historical significance worthy of an individual listing on the National Register of Historic Places, nor would visibility of the proposed antenna compromise its historic character, which is primarily derived from the presence of locally notable individuals interred there. The vast majority of the monuments observed during a site visit conducted on April 20, 2016 dated to the twentieth century and these were not particularly notable for their architectural or artistic character, nor does the layout appear to be of a formal design.

[1] The Nationwide Programmatic Agreement defines a "Historic Property" as "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or NHO that meet the National Register criteria."

Please note that an Archaeological Assessment prepared by Mr. David George of Heritage Resources, LLC, is included as part of this submission.

Sincerely,

Lucas Karmazinas
c/o All-Points Technology Corp., P.C.

FCC Form 620

Notification Date:

File Number:

FCC Wireless Telecommunications Bureau
New Tower ("NT") Submission Packet

Approved by OMB
3060 – 1039
See instructions for
public burden estimates

General Information

1) (Select only one) **(NE)** **NE** – New **UA** – Update of Application **WD** – Withdrawal of Application	
2) If this application is for an Update or Withdrawal, enter the file number of the pending application currently on file.	File Number:

Applicant Information

3) FCC Registration Number (FRN): **0003583721**
4) Name: **Eversource Energy Service Company**

Contact Name

5) First Name: **K.H.**	6) MI:	7) Last Name: **Law, DC**	8) Suffix:
9) Title: **Keller and Heckman, LLP**			

Contact Information

10) P.O. Box:	**And /Or**	11) Street Address: **1001 G Street NW, Suite 500 West**		
12) City: **Washington**			13) State: **DC**	14) Zip Code: **20001**
15) Telephone Number: **(202)434-4100**		16) Fax Number:		
17) E-mail Address: **telecomlicensing@khlaw.com**				

Consultant Information

18) FCC Registration Number (FRN): **0021738141**
19) Name: **Lucas A. Karmazinas c/o All-Points Technology Corp., P.C.**

Principal Investigator

20) First Name: **Lucas**	21) MI:	22) Last Name: **Karmazinas**	23) Suffix:
24) Title: **Architectural Historian**			

Principal Investigator Contact Information

25) P.O. Box:	**And /Or**	26) Street Address: **3 Saddlebrook Drive**		
27) City: **Killingworth**			28) State: **CT**	29) Zip Code: **06419**
30) Telephone Number: **(860)633-1697**		31) Fax Number:		
32) E-mail Address: **ncastro@allpointstech.com**				

Professional Qualification

33) Does the Principal Investigator satisfy the Secretary of the Interior's Professional Qualification Standards?	(**X**) **Y**es ( ) **N**o

34) Areas of Professional Qualification:

( ) Archaeologist

(**X**) Architectural Historian

( ) Historian

( ) Architect

( ) Other (Specify) _____

Additional Staff

35) Are there other staff involved who meet the Professional Qualification Standards of the Secretary of the Interior?	(**X**) **Y**es ( ) **N**o

If "YES," complete the following:

36) First Name: **William**	37) MI:	38) Last Name: **Keegan**	39) Suffix:

40) Title: **Heritage Consultants**

41) Areas of Professional Qualification:

( ) Archaeologist

( ) Architectural Historian

(**X**) Historian

( ) Architect

( ) Other (Specify) _____

36) First Name: **David**	37) MI:	38) Last Name: **George**	39) Suffix:

40) Title: **Heritage Consultants**

41) Areas of Professional Qualification:

(**X**) Archaeologist

( ) Architectural Historian

( ) Historian

( ) Architect

( ) Other (Specify) _____

Site Information

Tower Construction Notification System

1) TCNS Notification Number: **137380**

Site Information

2) Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: ( ) Yes (X) No

3) Site Name: **East High Street Microwave Site**

4) Site Address: **22 East High Street**

5) Detailed Description of Project:

Replacing existing communications tower. Please see attached site plans

6) City: **East Hampton**	7) State: **CT**	8) Zip Code: **06424**

9) County/Borough/Parish: **MIDDLESEX**

10) Nearest Crossroads: **East High and Main Streets**

11) **NAD 83** Latitude (DD-MM-SS.S): **41-34-54.3** (X) N or ( ) S

12) **NAD 83** Longitude (DD-MM-SS.S): **072-30-10.3** ( ) E or (X) W

Tower Information

13) Tower height above ground level (include top-mounted attachments such as lightning rods): **42.7** ( ) Feet (X) Meters

14) Tower Type (Select One):

( ) Guyed lattice tower

(X) Self-supporting lattice

( ) Monopole

( ) Other (Describe):

Project Status

15) Current Project Status (Select One):

(X) Construction has not yet commenced

( ) Construction has commenced, but is not completed Construction commenced on: _____

( ) Construction has been completed Construction commenced on: _____

Construction completed on: _____

Determination of Effect

14) Direct Effects (Select One):

(**X**) No Historic Properties in Area of Potential Effects (APE)

( ) No Effect on Historic Properties in APE

( ) No Adverse Effect on Historic Properties in APE

( ) Adverse Effect on one or more Historic Properties in APE

15) Visual Effects (Select One):

( ) No Historic Properties in Area of Potential Effects (APE)

( ) No Effect on Historic Properties in APE

(**X**) No Adverse Effect on Historic Properties in APE

( ) Adverse Effect on one or more Historic Properties in APE

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(**X**) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: **137380** Number of Tribes/NHOs: **5**

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: **0**

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Keweenaw Bay Indian Community**

Contact Name

5) First Name: **Gary**	6) MI:	7) Last Name: **Loonsfoot**	8) Suffix: **Jr**
9) Title: **THPO**			

Dates & Response

10) Date Contacted **03/24/2016** 11) Date Replied **03/23/2016**

( ) No Reply

( ) Replied/No Interest

(**X**) Replied/Have Interest

( ) Replied/Other

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Lac Vieux Desert Band of Lake Superior Chippewa Indians**

Contact Name

5) First Name: **Giiwegiizhigookway**	6) MI:	7) Last Name: **Martin**	8) Suffix: **Ms**
9) Title: **THPO and NAGPRA Representative**			

Dates & Response

10) Date Contacted **03/23/2016** 11) Date Replied **03/28/2016**

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

(**X**) Replied/Other

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(**X**) Yes ( ) No

2a) Tribes/NHOs contacted through TCNS Notification Number: **137380** Number of Tribes/NHOs: **5**

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: **0**

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Mashantucket Pequot Tribe**

Contact Name

5) First Name: **Marissa**	6) MI:	7) Last Name: **Turnbull**	8) Suffix:
9) Title: **THPO**			

Dates & Response

10) Date Contacted **03/23/2016** 11) Date Replied **04/12/2016**

( ) No Reply

(**X**) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Mohegan Indian Tribe**

Contact Name

5) First Name: **Elaine**	6) MI:	7) Last Name: **Thomas**	8) Suffix:
9) Title: **Deputy THPO**			

Dates & Response

10) Date Contacted **03/24/2016** 11) Date Replied **03/28/2016**

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

(**X**) Replied/Other

Tribal/NHO Involvement

1) Have Indian Tribes or Native Hawaiian Organizations (NHOs) been identified that may attach religious and cultural significance to historic properties which may be affected by the undertaking within the APEs for direct and visual effects?	(**X**) **Y**es ( ) **N**o

2a) Tribes/NHOs contacted through TCNS Notification Number: **137380** Number of Tribes/NHOs: **5**

2b) Tribes/NHOs contacted through an alternate system: Number of Tribes/NHOs: **0**

Tribe/NHO Contacted Through TCNS

3) Tribe/NHO FRN:

4) Tribe/NHO Name: **Narragansett Indian Tribe**

Contact Name

5) First Name: **Sequahna**	6) MI:	7) Last Name: **Mars**	8) Suffix:

9) Title: **Program Manager-Cell Tower Division**

Dates & Response

10) Date Contacted **03/24/2016** 11) Date Replied

(**X**) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Other Tribes/NHOs Contacted

Tribe/NHO Information

1) FCC Registration Number (FRN):
2) Name:

Contact Name

3) First Name:	4) MI:	5) Last Name:	6) Suffix:
7) Title:			

Contact Information

8) P.O. Box:	**And /Or**	9) Street Address:		
10) City:			11) State:	12) Zip Code:
13) Telephone Number:		14) Fax Number:		
15) E-mail Address:				
16) Preferred means of communication: ( ) E-mail ( ) Letter ( ) Both				

Dates & Response

17) Date Contacted _____ 18) Date Replied _____

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Historic Properties

Properties Identified

1) Have any historic properties been identified within the APEs for direct and visual effect?	(**X**) Yes ( ) No
2) Has the identification process located archaeological materials that would be directly affected, or sites that are of cultural or religious significance to Tribes/NHOs?	( ) Yes (**X**) No
3) Are there more than 10 historic properties within the APEs for direct and visual effect? If "Yes", you are required to attach a Cultural Resources Report in lieu of adding the Historic Property below.	( ) Yes (**X**) No

Historic Property

4) Property Name: **Belltown National Register Historic District (NR# 85003543)**
5) SHPO Site Number: **NR# 85003543**

Property Address

6) Street Address: **Various, including Main ST., East High St., & West High St.**		
7) City: **East Hampton**	8) State: **CT**	9) Zip Code: **06424**
10) County/Borough/Parish: **MIDDLESEX**		

Status & Eligibility

11) Is this property listed on the National Register? Source: **NR# 85003543**	(**X**) Yes ( ) No
12) Is this property eligible for listing on the National Register? Source: **NR# 85003543**	(**X**) Yes ( ) No
13) Is this property a National Historic Landmark?	( ) Yes (**X**) No

14) Direct Effects (Select One):

(**X**) No Effect on this Historic Property in APE

( ) No Adverse Effect on this Historic Property in APE

( ) Adverse Effect on this Historic Property in APE

15) Visual Effects (Select One):

( ) No Effect on this Historic Property in APE

(**X**) No Adverse Effect on this Historic Property in APE

( ) Adverse Effect on this Historic Property in APE

Local Government Involvement

Local Government Agency

1) FCC Registration Number (FRN):
2) Name: **Town Manager**

Contact Name

3) First Name: **Michael**	4) MI:	5) Last Name: **Manuscalco**	6) Suffix:
7) Title: **Town Manager**			

Contact Information

8) P.O. Box:	**And /Or**	9) Street Address: **20 East High St.**		
10) City: **East Hampton**			11) State: **CT**	12) Zip Code: **06424**
13) Telephone Number: **(860)267-4468**		14) Fax Number:		
15) E-mail Address: **mmanisccalco@easthamptonct.gov**				
16) Preferred means of communication: ( ) E-mail (**X**) Letter ( ) Both				

Dates & Response

17) Date Contacted **03/22/2016** 18) Date Replied _____

(**X**) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

19) Information on local government's role or interest (optional):

Local Government Involvement

Local Government Agency

1) FCC Registration Number (FRN):
2) Name: **P/Z Commission Chairman**

Contact Name

3) First Name: **Raymond**	4) MI:	5) Last Name: **Zatorski**	6) Suffix:
7) Title: **Chairman**			

Contact Information

8) P.O. Box:	**And /Or**	9) Street Address: **20 East High St.**		
10) City: **East Hampton**			11) State: **CT**	12) Zip Code: **06424**
13) Telephone Number: **(860)267-9601**		14) Fax Number:		
15) E-mail Address: **zoning@easthampton.com**				
16) Preferred means of communication: ( ) E-mail (**X**) Letter ( ) Both				

Dates & Response

17) Date Contacted **03/22/2016** 18) Date Replied _____

(**X**) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

19) Information on local government's role or interest (optional):

Local Government Involvement

Local Government Agency

1) FCC Registration Number (FRN):
2) Name: **Historic District Commission**

Contact Name

3) First Name: **Raymond**	4) MI:	5) Last Name: **Zatorski**	6) Suffix:
7) Title: **Historic District Commission**			

Contact Information

8) P.O. Box:	**And /Or**	9) Street Address: **20 East High St.**		
10) City: **East Hampton**			11) State: **CT**	12) Zip Code: **06424**
13) Telephone Number: **(860)267-9601**		14) Fax Number: **(860)267-9601**		
15) E-mail Address: **zoning@easthampton.com**				
16) Preferred means of communication: ( ) E-mail (**X**) Letter ( ) Both				

Dates & Response

17) Date Contacted **03/22/2016** 18) Date Replied _____

(**X**) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

19) Information on local government's role or interest (optional):

Other Consulting Parties

Other Consulting Parties Contacted

1) Has any other agency been contacted and invited to become a consulting party?	( ) **Y**es (**X**) **N**o

Consulting Party

2) FCC Registration Number (FRN):
3) Name:

Contact Name

4) First Name:	5) MI:	6) Last Name:	7) Suffix:
8) Title:			

Contact Information

9) P.O. Box:	**And /Or**	10) Street Address:		
11) City:			12) State:	13) Zip Code:
14) Telephone Number:		15) Fax Number:		
16) E-mail Address:				
17) Preferred means of communication: ( ) E-mail ( ) Letter ( ) Both				

Dates & Response

18) Date Contacted _____ 19) Date Replied _____

( ) No Reply

( ) Replied/No Interest

( ) Replied/Have Interest

( ) Replied/Other

Additional Information

20) Information on other consulting parties' role or interest (optional):

Designation of SHPO/THPO

1) Designate the Lead State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Officer (THPO) based on the location of the tower.

SHPO/THPO

Name: **Connecticut Historical Commission (TCNS SHPO)**

2) You may also designate up to three additional SHPOs/THPOs if the APEs include multiple states. If the APEs include other countries, enter the name of the National Historic Preservation Agency and any state and provincial Historic Preservation Agency.

SHPO/THPO Name: _____

SHPO/THPO Name: _____

SHPO/THPO Name: _____

Certification

I certify that all representations on this FCC Form 620 Submission Packet and the accompanying attachments are true, correct, and complete.

Party Authorized to Sign

First Name:	MI:	Last Name:	Suffix:
Signature:			Date:

FAILURE TO SIGN THIS APPLICATION MAY RESULT IN DISMISSAL OF THE APPLICATION AND FORFEITURE OF ANY FEES PAID.

WILLFUL FALSE STATEMENTS MADE ON THIS FORM OR ANY ATTACHMENTS ARE PUNISHABLE BY FINE AND/OR IMPRISONMENT (U.S. Code, Title 18, Section 1001) AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)), AND/OR FORFEITURE (U.S. Code, Title 47, Section 503).

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 1 – Consultant Information

Provide a current copy of the résumé or curriculum vitae for the Principal Investigator and any researcher or other person who contributed to, reviewed, or provided significant input into the research, analysis, writing or conclusions presented in this filing.

Current curriculum vitae or résumés are included within this attachment and are on file at the Connecticut State Historic Preservation Office for the Principal Investigator and any researcher or other person who contributed to, reviewed, or provided significant input into the research, analysis, writing or conclusions presented in this filing.

Lucas A. Karmazinas, M.A.

940 West Boulevard
Hartford, CT 06105
(860) 428-7982
Lucas.Karmazinas@gmail.com

Objective

To apply an education and job experience in the fields of architectural history, historic preservation, cultural resource management, and urban planning demanding scholarship, creativity, and advocacy at a professional level.

Education

Master of Arts, Public History and Historic Preservation. 2009. Central Connecticut State University, New Britain, CT
Bachelor of Arts, Liberal Arts and Sciences. 2003. University of Connecticut, Storrs, CT

Professional Experience

FuturePast Preservation, Hartford, CT. Established 2009.
Lucas Karmazinas: Principal, Architectural Historian, Preservation Planner. 2009-Present.
Mr. Karmazinas provides clients with consultant services related to historic preservation, architectural history, cultural resource management, historical research, and urban planning. Specialties include preparation of National Register of Historic Places nominations, State of Connecticut Register of Historic Places nominations, Local Historic District nominations, Historic Resource Inventory (HRI) surveys, National Environmental Policy Act (NEPA) compliance evaluations, Section 106 surveys, and State and Federal rehabilitation tax credit applications. Functions as a liaison between the owners of historic properties (both public and private) and Federal, State, and local entities – including non-profits and advocacy groups – involved in the processes of preservation, rehabilitation, and redevelopment. Conducts preliminary historical research, architectural analysis, and photo-documentation of resources and landscapes necessary to identify those possessing historical or cultural significance. Responsible for the employment and oversight of contract historians and consultants, as well as all budgetary and business planning needs.

Project Experience

National and State of Connecticut Register of Historic Places Nominations, Local Historic District Nominations.
A Federal and State-certified Architectural Historian responsible for the nomination of over 600 historic resources to the National and/or State of Connecticut Register of Historic Places, with another 470+ resources currently pending review and approval. Prepared requisite applications for the inclusion of individual structures or historic districts on historic registers. Evaluated historic and cultural resources for potential listing on historic registers. Conducted historical research, architectural analysis, and photo-documentation of historic and cultural resources. Oversaw public informational meetings regarding nomination processes and their implications.

Sample National Register of Historic Places Nominations:

- "George W. Crawford Manor," 94 Park Street, New Haven, CT, 2013-Present.
- "Parkville Industrial Historic District," Hartford, CT, 2013-Present.
- "Sisson-South Whitney Historic District," Hartford, CT, 2011-2013.
- "Kensington Grammar/Jean E. Hooker High School," 462 Alling Street, Berlin, CT, 2011-2012.

Sample State of Connecticut Register of Historic Places Nominations:

- "Hartford Rubber Works Company Factory," 45-55 Bartholomew Avenue, Hartford, CT, 2014.
- "Hotel America," 5 Constitution Plaza, Hartford, CT, 2011.
- "New Haven Screw Company Factory," 191 Foster Street, New Haven, CT, 2011.
- "Yale Armory," 40 Central Avenue, New Haven, CT, 2009.

Sample Local Historic District Nominations:

- "Guilford Town Center Historic District Boundary Increase," Guilford, CT, 2012.

Historic Resource Inventories and Historical Surveys.
Conducted all aspects of historical research, architectural analysis, and writing involved in completing Historic Resource Inventories, a comprehensive survey document used by the State of Connecticut to identify and record historic resources. Carried out architectural surveys, historical research, and photo documentation of historically significant architecture related to the history and development of Connecticut cities and towns. Researched and documented the architectural character and developmental history of over 970 historic resources in the State of Connecticut. Coordinated with the State Historic Preservation office and local entities, including municipalities, historical societies, and preservation advocacy groups. Oversaw public informational meetings regarding the survey process and its implications. Participated in fieldwork and data input involved in preparing and compiling a database of 20,000 buildings in Hartford, CT.

Sample Historic Resource Inventories:

- "Historic Resources Inventory Survey of Historic Architecture, Phase IIIa & b, South Windsor, CT," 2014.
- "Historic Resources Inventory Survey of Historic Architecture, Meriden, CT," 2013-2014.
- "Historic Resources Inventory Survey of Historic Architecture, Clinton, CT," 2012-2013.
- "Historic Resources Inventory Survey of Historic Architecture, Deep River, CT," 2011.

National Environmental Policy Act (NEPA) compliance evaluations.
Conducted architectural analysis, historical evaluation, and form preparation involved in completing Federal Communications Commission Forms 620/621, the applications used by the FCC to identify and record historic resources impacted by telecommunication projects involving new tower construction and collocations in compliance with National Environmental Policy Act (NEPA) rules and Section 106 of the National Historic Preservation Act (NHPA).

Sample National Environmental Policy Act (NEPA) compliance evaluations:

- Completed dozens of FCC Wireless Telecommunications Bureau New Tower ("NT") Submissions Packets (FCC Form 620) and FCC Wireless Telecommunications Bureau Collocation ("CO") Submissions Packets (FCC Form 621) throughout Connecticut, Massachusetts, Rhode Island, and Vermont, 2014-Present.

Sample Section 106 Historical Surveys:

- "Cultural Resources Reconnaissance Survey for Landscape Improvements to the Coltsville Industrial District," Hartford, CT, 2012.

Federal and State Historic Preservation Tax Credit Applications.
Responsible for the preparation of Federal and State of Connecticut tax credit applications and oversight of historic rehabilitation projects. Conducted historical research, architectural analysis, and photo-documentation necessary to complete rehabilitation tax credit applications. Served as a liaison between the owners of historic properties and the Federal, State, and local entities involved in the tax credit application and rehabilitation process. Consulted with architects, contractors, developers, and property owners to successfully create rehabilitation plans compliant with the Secretary of the Interior's Standards for Historic Preservation.

Sample Federal and State Historic Preservation Tax Credit Applications:

- "Federal and State of Connecticut Historic Preservation Tax Credit Applications, Summit Park," 887-891 and 897-901 Park Street; 439-441 and 443-445 Summit Street; and 445-449 and 459-461 Zion Street, Hartford, CT, 2012-Present.
- "Federal and State of Connecticut Historic Preservation Tax Credit Applications, Lovell School," 45 Nash Street, New Haven, CT, 2011-2012.

Professional Affiliations, Community Work, Awards and Honors

- 2012-Present – Co-Chair, West End Civic Association, Architectural History and Resources Committee.
- 2012-Present – Board Member, Parkville Neighborhood Revitalization Zone.
- 2010-Present – Member, National Trust for Historic Preservation.
- 2009-2011 – Volunteer, New Haven Preservation Trust, Historic Resources Inventory survey of Modernist architecture in New Haven, Connecticut.
- 2008 – Recipient, "Graduate Studies Academic Award for MA Program in Public History," given by the School of Graduate Studies, Central Connecticut State University.

DAVID R. GEORGE, M.A, R.P.A.

PRINCIPAL INVESTIGATOR

EDUCATION

Bachelor of Science in Business Management, Ithaca College, Ithaca, New York, 1990.
Master of Arts in Anthropology, University of Connecticut, Storrs, Connecticut, 1992.
Introduction to Federal Projects and Historic Preservation Law, Section 106 Compliance, 1999.
Federal Energy Regulatory Commission, Environmental Report Preparation Seminar, 2003

ACADEMIC AWARDS AND FELLOWSHIPS

Phi Kappa Phi, 1995.
University of Connecticut Anthropology Department Research Assistantship, 1994.
University of Connecticut Anthropology Department Teaching Assistantship, 1991- 1994.
University of Connecticut Anthropology Department Pre-Doctoral Fellowship, 1992.
University of Connecticut Anthropology Department Lectureship, 1991.

PROFESSIONAL EXPERIENCE

Principal Investigator, Heritage Consultants, LLC, February 2004-Present.
Vice President-Archeological Services, Goodwin & Associates, Inc., December 2002-March 2004.
Assistant Vice President, R. Christopher Goodwin & Associates, Inc., May 2001-December 2002.
Senior Project Manager, R. Christopher Goodwin & Associates, Inc., May 2001-November 2001.
Project Manager, R. Christopher Goodwin & Associates, Inc., September 1998-May 2001.
Laboratory Supervisor/Crew Chief, Archaeological and Historical Consultants, Inc., 1996-1998.
Instructor, Department of Anthropology, University of Connecticut, Storrs, 1995-1996.
Field Director/Project Manager, Public Archaeology Survey Team, Inc., 1990-1996.
Field Technician, Office of the Connecticut State Archaeologist, 1990-1996.
Teaching Assistant, Department of Anthropology, University of Connecticut, 1991, 1994.
Field Instructor, Department of Anthropology Fieldschool, University of Connecticut, 1992-1994.

PROFESSIONAL MEMBERSHIPS

Society for American Archeology
Society for Historical Archaeology
Eastern States Archaeological Federation
Register of Professional Archeologists

SPECIAL SKILLS

Existing Conditions/Disturbance Investigations
SHPO/Native American Consultation
Geographic Information Systems Applications
Faunal, Botanical, and Lithic Analyses

PROJECT EXPERIENCE

With 24 years of experience, I have completed hundreds of cultural resources investigations, including many within the Town of Waterford.

WILLIAM F. KEEGAN, B.A.

HISTORICAL GEOGRAPHER & GIS SPECIALIST

EDUCATION

Bachelor of Arts in Anthropology and Geography, University of Connecticut, Storrs, 1996

Master of Arts Candidate in Geography, University of Connecticut, Storrs (all but thesis)

Certificate in Geographic Information Systems, University of Connecticut, Storrs (application pending)

PROFESSIONAL EXPERIENCE

Partner, Heritage Consultants, LLC, February 2004 - Present

Partner, Keegans Associates, LLC, April 1997 - April 2004

Teaching Assistant, Department of Geography, University of Connecticut, Storrs, 2000-2001

PROFESSIONAL MEMBERSHIPS

Archeological Society of Connecticut

Northeast Arc Users Group

Council for Northeastern Historic Archaeology

SPECIAL SKILLS

Geographic Information Systems

Cartography

Archival, Cartographic, and Historical Research

PROJECT EXPERIENCE

I have completed hundreds of cultural resources investigations across Connecticut during my 17 years of cultural resrouces management experience, many of which were in the Town of Waterford.

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 2 – Site Information - Photographs

You are required to provide photographs and maps as part of this filing. Additional site information can be provided in an optional attachment.

Photograph Requirements:
Except in cases where no Historic Properties were identified within the Areas of Potential Effects, submit photographs as described below. Photographs should be in color, marked so as to identify the project, keyed to the relevant map or text, and dated; the focal length of the lens and the height of the camera should be noted. The source of any photograph included but not taken by the Applicant or its consultant (including copies of historic images) should be identified on the photograph.

1. *Photographs taken from the tower site should show views from the proposed location in all directions. The direction (e.g., north, south, etc.) should be indicated on each photograph, and, as a group, the photographs should present a complete (360 degree) view of the area around the communications tower or non-tower structure.*
2. *Photographs of all listed and eligible properties within the Areas of Potential Effects.*
3. *If any listed or eligible properties are visible from the proposed tower site, photographs looking at the site from each historic property. The approximate distance in feet (meters) between the site and the historic property should be included. If any listed or eligible properties are within the APE, photos looking at each historic property should be included.*

Include aerial photos of the APE for visual effects, if available. There are a variety of publicly available websites that provide aerial photographs.

Please see the attached photographs, which were taken by Mr. Lucas A. Karmazinas, Architectural Historian with FuturePast Preservation, DBA, for All-Points Technology Corp. P.C., on April 20, 2016, unless otherwise noted. A photograph location map is included within this attachment.

Photograph 1.
View looking southeast towards the Subject Property from across East High Street.
Note 14 East High Street (ca. 1804-06) at far right, which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 2.
View looking southeast towards the Subject Property from East High Street.
Note 14 East High Street (ca. 1804-06) at center, which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 3.
View looking northeast along East High Street.
4/20/2016.

Photograph 4.
View looking southwest along East High Street.
Note 2 East High Street (1853) at left, and 1 East High Street (1855-1856) at right, which are contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 5.
View looking southeast towards the Subject Property across East High Street.
Note 2 East High Street (1853) at right, and 1 East High Street (1855-1856) at left, which are contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 6.
View looking southeast towards the Subject Property along West High Street.
Note the buildings to the left and right, most of which being contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 7.
View looking southeast towards the Subject Property along West High Street.
Note the buildings to the left and right, most of which being contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 8.
View looking northwest towards the Subject Property along West High Street.
Note the buildings to the left and right, most of which being contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 9.
View looking southeast towards the Subject Property from Wells Avenue.
Photograph taken on 2/10/2016 by Rick Landino, All-Points Technology Corp.

Photograph 10.
View looking southeast towards the Subject Property from Hills Avenue.
Photograph taken on 2/10/2016 by Rick Landino, All-Points Technology Corp.

Photograph 11.
View looking northeast towards the Subject Property from Barton Hill Road.
Note 14 Barton Hill Road (1868), which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 12.
View looking north towards the Subject Property from intersection of Barton Hill Road, Main Street, and Summit Street. Note the buildings to the left and right, which are contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 13.
View looking northwest towards the Subject Property along Bevin Boulevard.
Note the buildings to the left and right, most of which being contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 14.
View looking northwest towards the Subject Property from Summit Street.
Note 11 Summit Street (ca. 1790) to the left, and 13 Summit Street (19th c., 1880, & 1914) at right, both of which being contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 15.
View looking northwest towards the Subject Property from Summit Street beyond the eastern boundary of the Belltown Historic District.
4/20/2016.

Photograph 16.
View looking northwest towards the Subject Property from northern terminus of Bevin Court. Note the former site of the Bevin Brothers Manufacturing Company mill at center and left. 4/20/2016.

Photograph 17.
View looking northwest towards the Subject Property from Bevin Court.
Note 4 Bevin Court (ca. 1910) at far right, which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 18.
View looking north towards the Subject Property from Bevin Boulevard.
4/20/2016.

Photograph 19.
View looking north towards the Subject Property from Bevin Boulevard.
4/20/2016.

Photograph 20.
View looking northwest towards the Subject Property from Bevin Avenue.
4/20/2016.

Photograph 21.
View looking northwest towards the Subject Property from Bevin Boulevard.
4/20/2016.

Photograph 22.
View looking southwest away from the Subject Property from Bevin Boulevard.
Note 29 Bevin Boulevard (ca. 1855), which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 23.
View looking northeast towards the Subject Property from Main Street.
Note 37 & 39 Main Street (ca. 1850 & ca. 1925), which are contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 24.
View looking northeast towards the Subject Property from Main Street.
Note 11 & 13 Main Street (1865 & ca. 1880), which are contributing resources within the Belltown Historic District.
4/20/2016.

Photograph 25.
View looking southeast towards the Subject Property from Main Street.
Note 3 Main Street (ca. 1880), which is a contributing resource within the Belltown Historic District.
4/20/2016.

Photograph 26.
View looking southwest towards the Subject Property from Lakeview Cemetery.
4/20/2016.

Photograph 27.
View looking north across Lakeview Cemetery. The topography drops to the north, east, and south, obscuring any view of the Undertaking from those vantage points.
4/20/2016.

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 3 – Site Information – Map Requirements

Include one or more 7.5-minute quad USGS topographical maps that:
a. Identify the Areas of Potential Effects for both Direct and Visual Effects. If a map is copied from the original, include a key with name of quad and date.
b. Show the location of the proposed collocation site and any new access roads or other easements including excavations.
c. Show the locations of each property listed.
d. Include keys for any symbols, colors, or other identifiers.
e. Submit color maps whenever possible.

Please see the attached figures, which were prepared by Mr. William Keegan, Historical Geographer & GIS Specialist, with Heritage Consultants, LLC, for All-Points Technology Corporation, unless otherwise noted.

The following maps are attached to this report:

Figure 1 – Aerial Photograph and Photograph Directions Map.
Figure 2 – Topographic Map.
Figure 3 – Bird's Eye View Aerial Photograph.
Figure 4 – Cultural Resources Screen: National.
Figure 5 – Cultural Resources Screen: Local.
Figure 6 – Viewshed Map Detail, Topo Base

Figure 1: Aerial Photograph and Photograph Directions Map.

Applicant: Eversource Energy
Project Number: CT259180
Project Location: 22 East High Street, East Hampton, CT, 06424

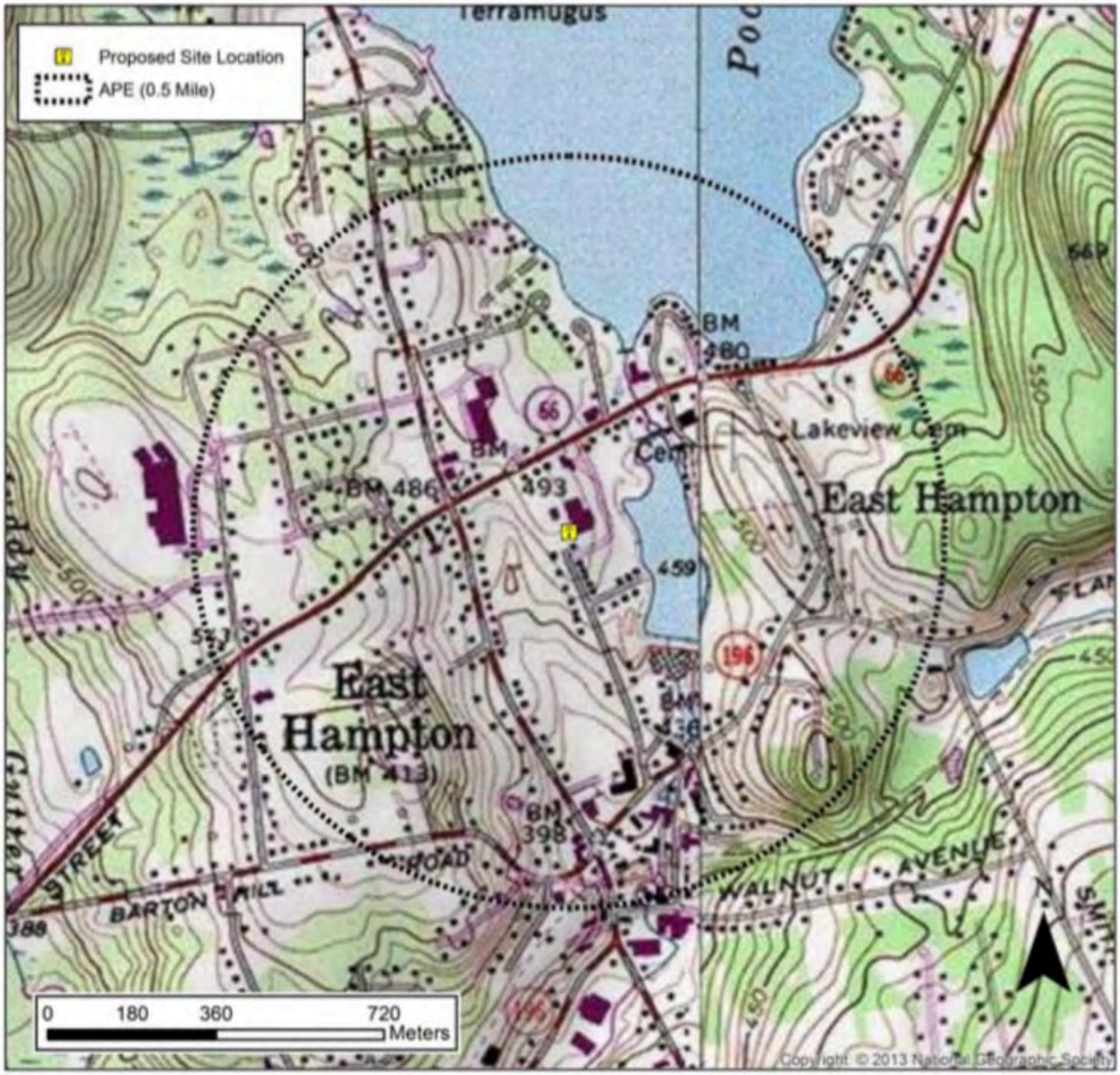


Figure 2: Topographic Map.

Figure 3: Bird's Eye View Aerial Photograph

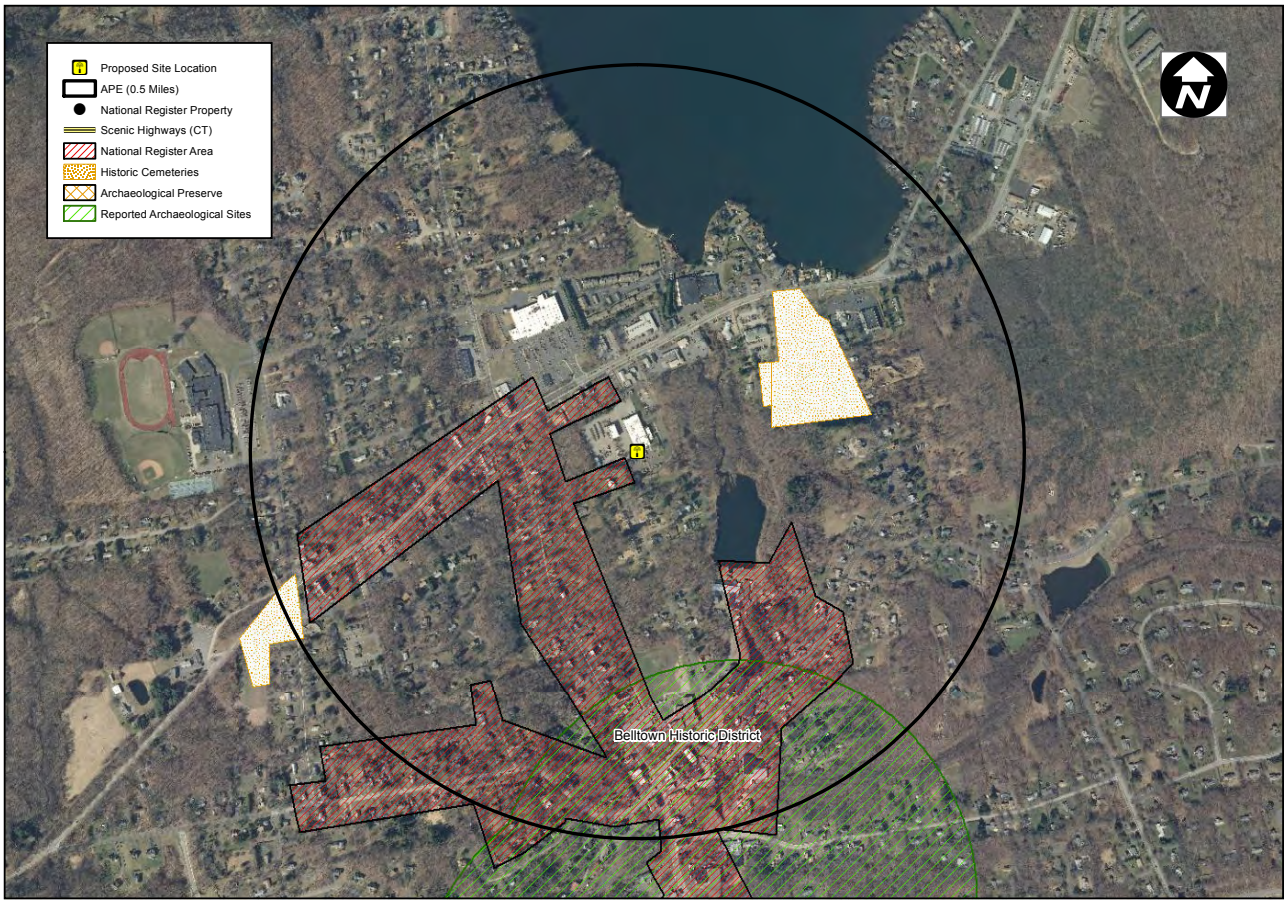
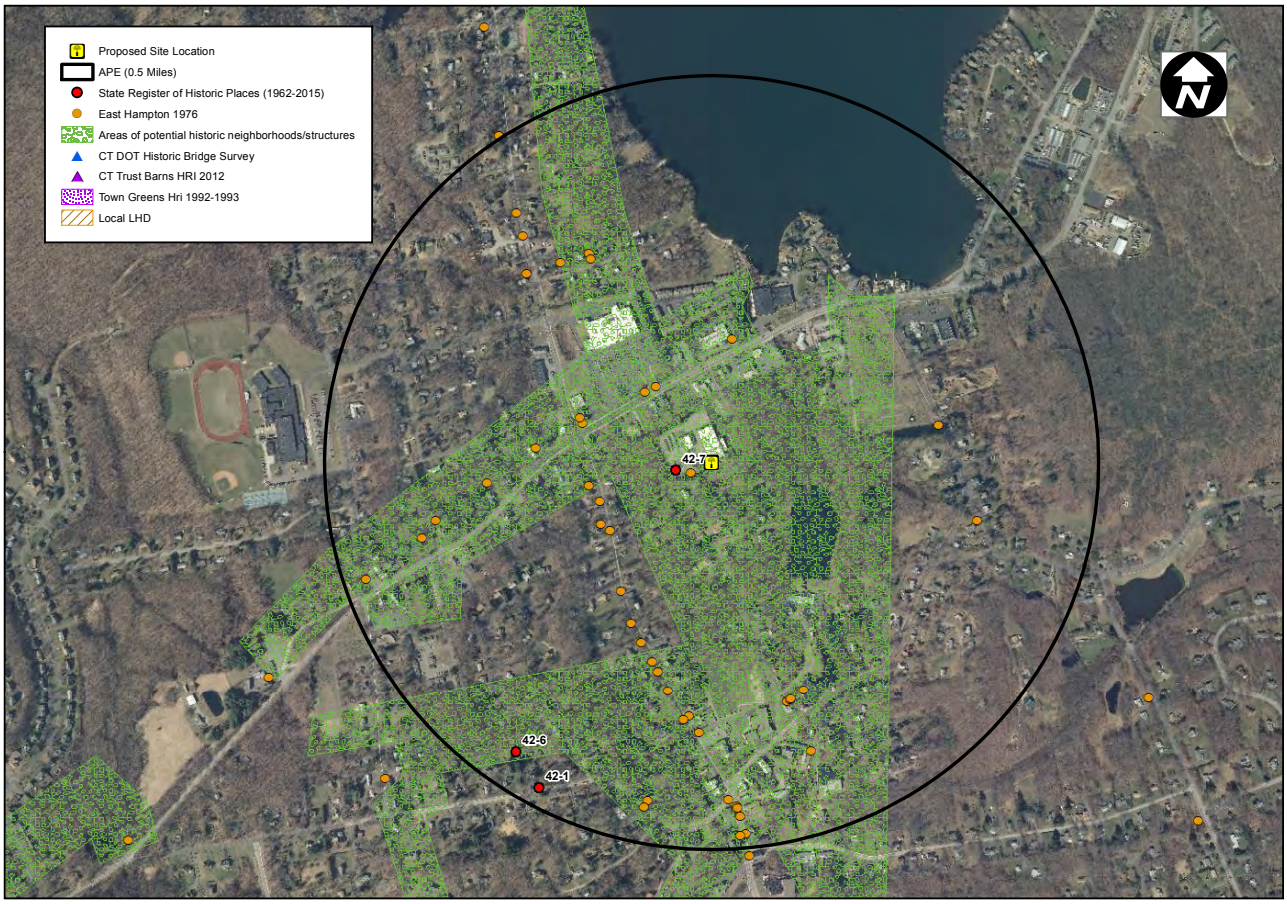


Figure 4: Cultural Resources Screen – National



Cultural Resources Screen
East Hampton Tower Replacement -22 East High Street, East Hampton CT
March 22, 2016 \ USGS QUAD: Middle Haddam-Moodus

0 500 1,000 2,000 Feet

Prepared for All-Points Technology Corp. by Heritage Consultants, 2016.

Figure 5: Cultural Resources Screen – Local

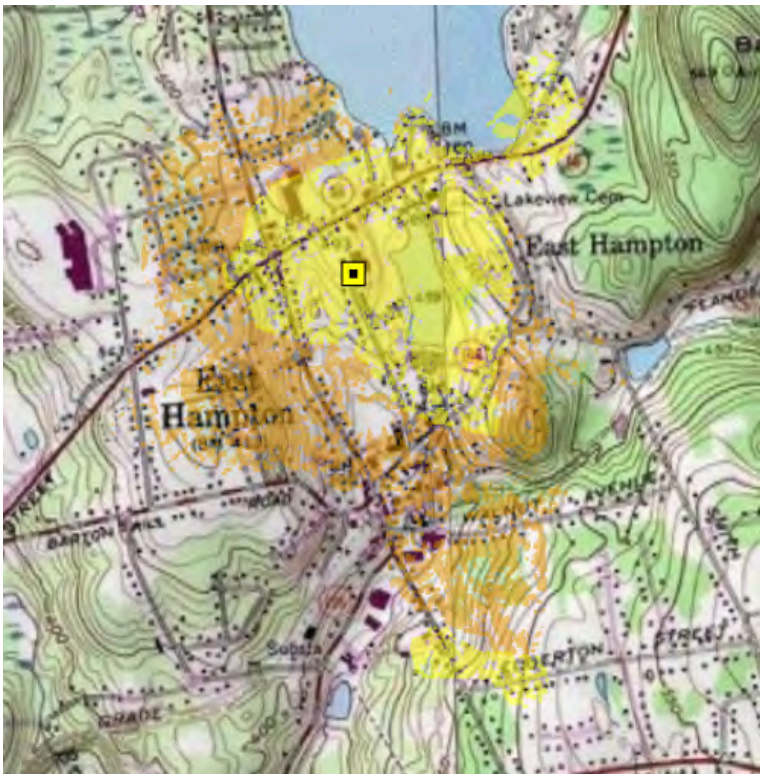


Figure 6: Viewshed Map Detail, Topo Base

Legend

- Proposed Tower

Photo Locations

- Not Visible
- Seasonal Views
- Year-round Views
- Trails
- Predicted Seasonal Visibility (238 Acres)
- Predicted Year-Round Visibility (157 Acres)

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 4 – Site Information – Additional Site Information

Describe any additional structures, access roads, utility lines, fences, easements, or other construction planned for the site in conjunction with the proposed collocation and related facilities. Use this attachment to provide additional details needed to provide a full and accurate description of any structural alterations, additions, or other construction activities that will take place to complete the collocation.

Additional Site Information and Recommendations:

The Subject Property consists of an approximately 10.53-acre developed parcel. The property is located on the south side of East High Street and is the site of an office building and an equipment storage and maintenance facility built by Eversource Energy in 1974. There are two two-story red brick buildings on the site, these surrounded by asphalt parking lots. The boundaries of the parcel are largely lined with mature trees, while the eastern third of the property remains wooded. A paved access drive leads to the facility from East High Street, which is a heavily developed commercial thoroughfare. The Host Structure is situated in a heavily developed commercial area located northeast of the Belltown National Register Historic District (NR#85003543).

The area surrounding the proposed site was settled with scattered residences and farms lining Main Street, East and West High Streets, Barton Hill Road, and Summit Street by the middle of the nineteenth century. Development accelerated during the second half of the nineteenth century after the Bevin Brothers Manufacturing Company began producing brass bells in a factory located north of Summit Street near the center of town. By the end of the nineteenth century several additional firms had been organized and East Hampton had established itself as a nationally notable center of bell production. New streets, including Bevin Boulevard, Bevin Avenue, and Bevin Court, were laid out and additional houses were soon built along both these and aforementioned streets. A bustling town center also developed near the intersection of Main and Summit Streets just west of the Bevin Brothers mill. The town center lies in a hollow along the west side of Pocotopaug Creek, which flows south from Pocotopaug Lake. A damn along the creek once provided power to the Bevin Brothers mill and forms Bevin's Pond, which is located southeast of the Subject Property. Steep hills rise south, east, and west of both the town center and the Subject Property.

The proposed tower replacement facility consists of a 120-foot lattice tower with antennas, to reach an overall height of 140-feet above ground level, situated within a fenced (chain link) equipment compound adjoining the rear (south) elevation of the existing Eversource Service Center. The existing 70' tall wooden pole communications facility would be removed.

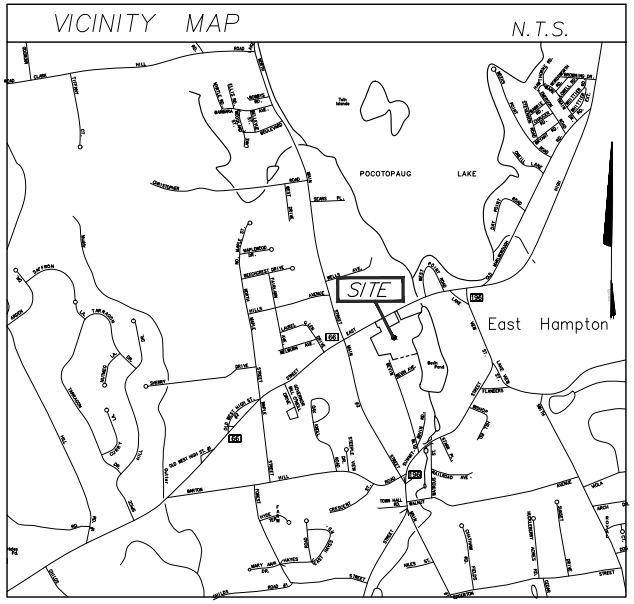
Site Plans provided by Eversource Energy are included in this attachment.

EVERSOURCE ENERGY

EAST HIGH STREET MICROWAVE SITE

22 EAST HIGH STREET
EAST HAMPTON, CONNECTICUT

VICINITY MAP N.T.S.



SITE DIRECTIONS

FROM BERLIN:

1. Head toward Berlin Tpke on Selden St Go for 485 ft/
2. Turn left onto Berlin Tpke (US-5) Go for 1.8 mi/
3. Take ramp toward CT-9 S Go for 0.3 mi/
4. Take ramp onto CT-9 Go for 7.5 mi/
5. Turn slightly right onto St Johns Sq (CT-17 N) toward CT-66 E/Portland/Willimantic Go for 0.2 mi/
6. Turn right onto CT-17/CT-66 Go for 0.9 mi/
7. Turn right onto Marlborough St (CT-17/CT-66) Go for 2.0 mi/
8. Continue on Portland Cobalt Rd (CT-66) Go for 6.2 mi/
9. Arrive at E High St (CT-66). Your destination is on the right.

APPROVALS

CONSTRUCTION	DATE:
LEASING	DATE:
RF	DATE:
ZONING	DATE:
QC	DATE:
NETWORK ENG	DATE:
OWNER	DATE:

PROJECT SUMMARY

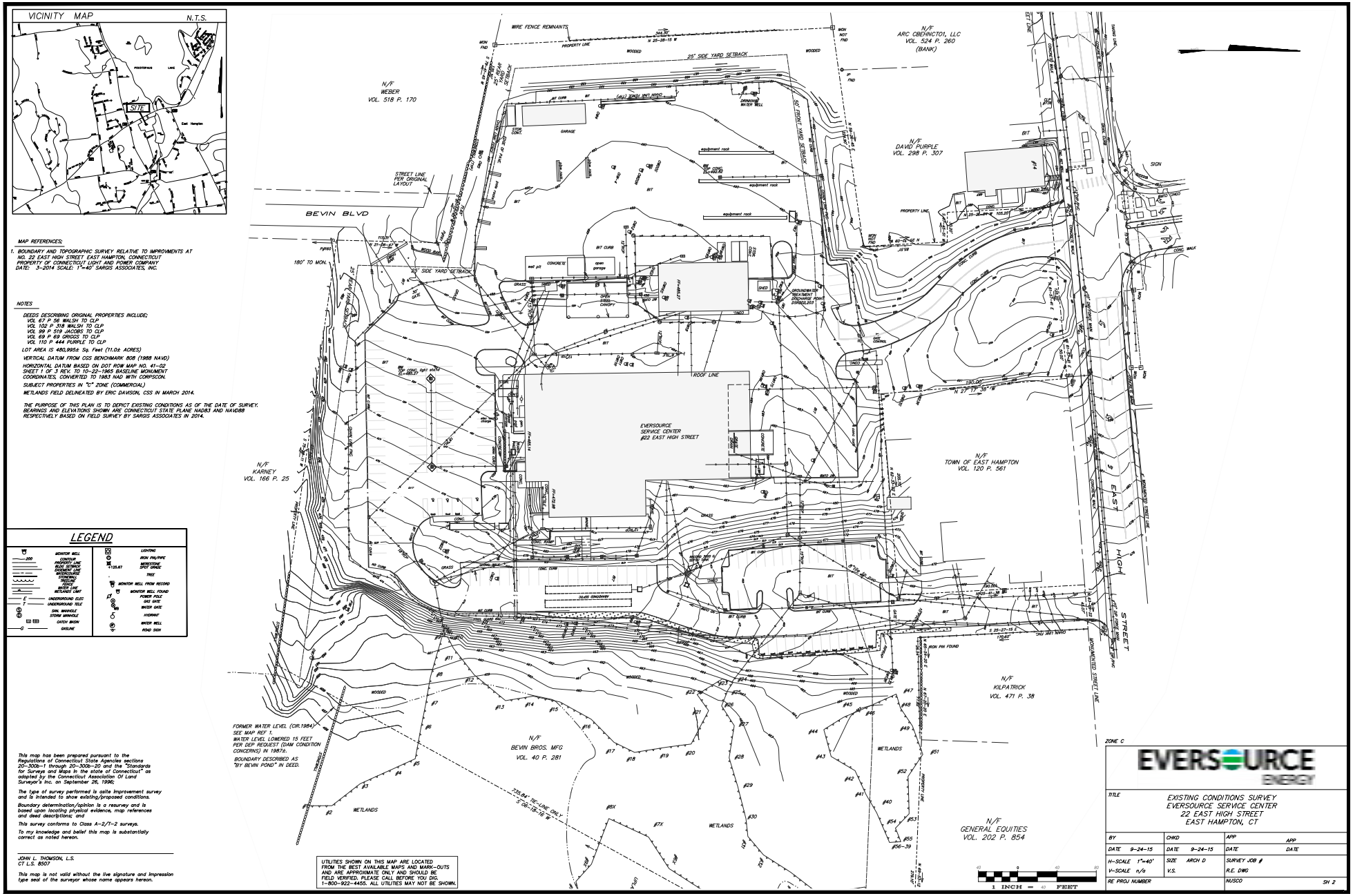
SITE NAME:	EAST HIGH STREET MICROWAVE SITE #
SITE ADDRESS:	22 EAST HIGH STREET EAST HAMPTON, CT
CONTACT PERSON:	107 SELDEN STREET STEVE FLORIO OFFICE: (860) 665-5611 FAX. (860) 665-5585
GOVERNING CODE:	CONNECTICUT STATE BUILDING AND LIFE SAFETY CODE
APPLICANT:	EVERSOURCE ENERGY 107 SELDEN STREET BERLIN, CT. 06037
ARCHITECT:	EVERSOURCE ENERGY 107 SELDEN STREET BERLIN, CT. 06037
M/E/P ENGINEER:	EVERSOURCE ENERGY 107 SELDEN STREET BERLIN, CT. 06037
TOWN SITE ID#	

PROJECT DESCRIPTION

THE SCOPE OF THIS PROJECT INCLUDES THE CONSTRUCTION OF A 120' HIGH SELF SUPPORTING LATTICE TOWER LOCATED ON LAND OWNED BY EVERSOURCE ENERGY.

SHEET INDEX

PLANS PRESENTED BY
SARGIS ASSOCIATES, INC.
ENGINEERING AND SURVEYING



MAP REFERENCES:

1. BOUNDARY AND TOPOGRAPHIC SURVEY RELATIVE TO IMPROVEMENTS AT NO. 22 EAST HIGH STREET, EAST HAMPTON, CONNECTICUT. PROPERTY OF CONNECTICUT LIGHT AND POWER COMPANY DATE: 3-2014 SCALE: 1"=40' SARGIS ASSOCIATES, INC.

NOTES

DEEDS DESCRIBING ORIGINAL PROPERTIES INCLUDE;
VOL 67 P. 56 WALSH TO CLP
VOL 102 P. 318 WALSH TO CLP
VOL 99 P. 519 JACOBS TO CLP
VOL 69 P. 69 GRIGGS TO CLP
VOL. 110 P. 444 PURPLE TO CLP

LOT AREA IS 480,995± Sq. Feet (11.0± ACRES)

VERTICAL DATUM FROM CGS BENCHMARK 808 (1988 NAVD)

HORIZONTAL DATUM BASED ON DOT ROW MAP NO. 41-02, SHEET 1 OF 3 REV. TO 10-22-1965 BASELINE MONUMENT COORDINATES, CONVERTED TO 1983 NAD WITH CORPSCON.

SUBJECT PROPERTIES IN "C" ZONE (COMMERCIAL)

WETLANDS FIELD DELINEATED BY ERIC DAVISON, CSS IN MARCH 2014.

THE PURPOSE OF THIS PLAN IS TO DEPICT EXISTING CONDITIONS AS OF THE DATE OF SURVEY. BEARINGS AND ELEVATIONS SHOWN ARE CONNECTICUT STATE PLANE NAD83 AND NAVD88 RESPECTIVELY BASED ON FIELD SURVEY BY SARGIS ASSOCIATES IN 2014.

LEGEND

MONITOR WELL
CONTOUR
PROPERTY LINE
BLDG. SETBACK
EASEMENT LINE
RIGHT OF WAY
FOUNDATION/ TREELINE
STONE WALL
WATER LINE
WETLANDS LIMIT
UNDERGROUND ELEC
UNDERGROUND TELE
SAN. MANHOLE
STORM MANHOLE
CATCH BASIN
GASLINE
LIGHTING
IRON PIN/PIPE
MONUMENT/ SPOT GRADE
TREE
MONITOR WELL FROM RECORD
MONITOR WELL FOUND
POWER POLE
GAS GATE
WATER GATE
HYDRANT
WATER WELL
ROAD SIGN

This map has been prepared pursuant to the Regulations of Connecticut State Agencies sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the state of Connecticut" as adopted by the Connecticut Association Of Land Surveyor's Inc. on September 26, 1996;

The type of survey performed is asite improvement survey and is intended to show existing/proposed conditions.

Boundary determination/opinion is a resurvey and is based upon locating physical evidence, map references and deed descriptions; and

This survey conforms to Class A-2/T-2 surveys.

To my knowledge and belief this map is substantially correct as noted hereon.

JOHN L. THOMSON, L.S.
CT L.S. 8507

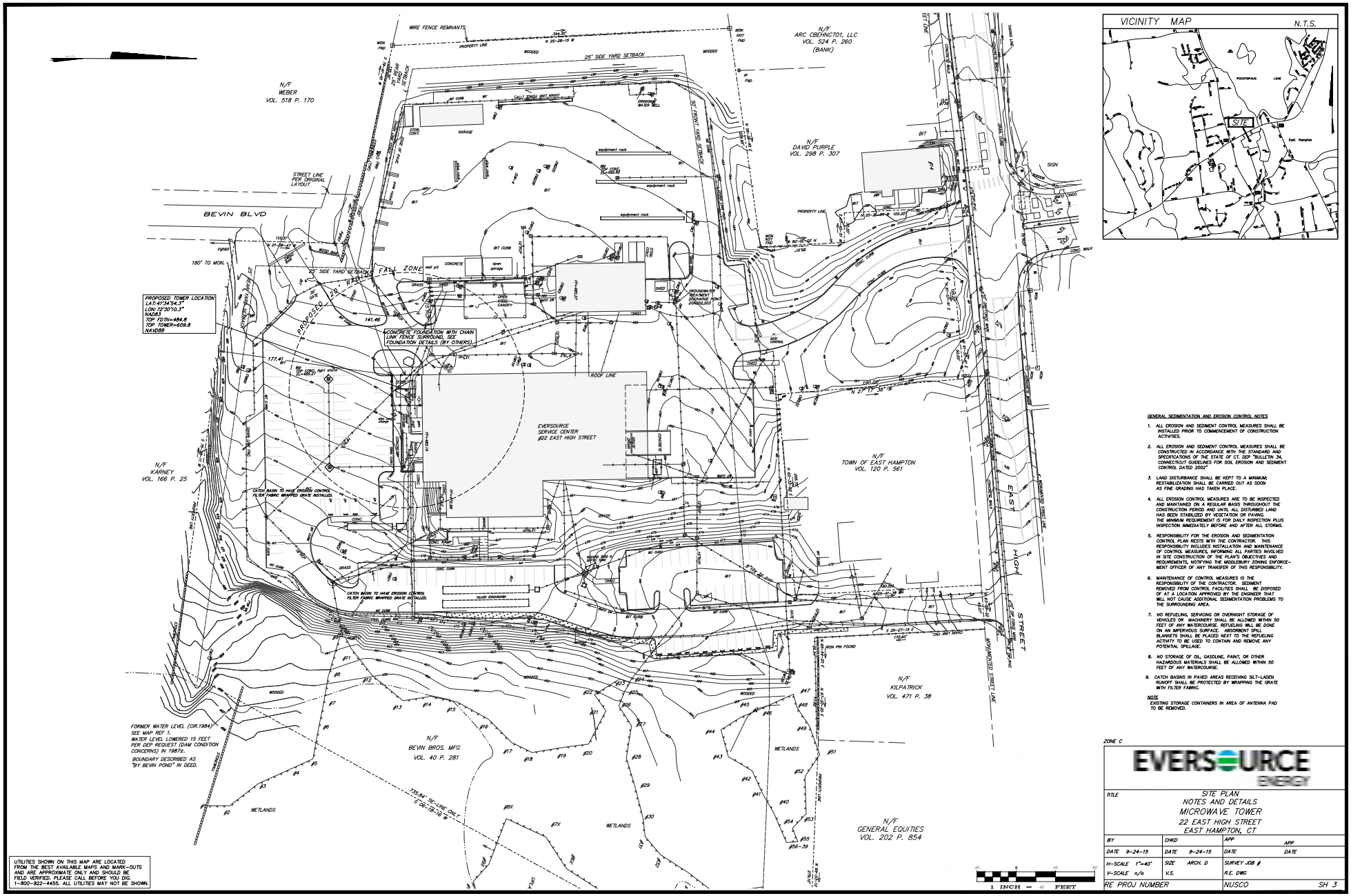
This map is not valid without the live signature and impression type seal of the surveyor whose name appears hereon.

UTILITIES SHOWN ON THIS MAP ARE LOCATED FROM THE BEST AVAILABLE MAPS AND MARK-OUTS AND ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED. PLEASE CALL BEFORE YOU DIG. 1-800-922-4455. ALL UTILITIES MAY NOT BE SHOWN.

EVERSOURCE ENERGY

TITLE
EXISTING CONDITIONS SURVEY
EVERSOURCE SERVICE CENTER
22 EAST HIGH STREET
EAST HAMPTON, CT

BY	CHKD	APP
DATE 9-24-15	DATE 9-24-15	DATE
H-SCALE 1"=40'	SIZE ARCH D	SURVEY JOB #
V-SCALE n/a	V.S.	R.E. DWG
RE PROJ NUMBER		NUSCO SH 2



GENERAL SEDIMENTATION AND EROSION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATIONS OF THE STATE OF CT. DEP "BULLETIN 34, CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL DATED 2002"
3. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM; RESTABILIZATION SHALL BE CARRIED OUT AS SOON AS FINE GRADING HAS TAKEN PLACE.
4. ALL EROSION CONTROL MEASURES ARE TO BE INSPECTED AND MAINTAINED ON A REGULAR BASIS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED LAND HAS BEEN STABILIZED BY VEGETATION OR PAVING. THE MINIMUM REQUIREMENT IS FOR DAILY INSPECTION PLUS INSPECTION IMMEDIATELY BEFORE AND AFTER ALL STORMS.
5. RESPONSIBILITY FOR THE EROSION AND SEDIMENTATION CONTROL PLAN RESTS WITH THE CONTRACTOR. THIS RESPONSIBILITY INCLUDES INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES INVOLVED IN SITE CONSTRUCTION OF THE PLAN'S OBJECTIVES AND REQUIREMENTS, NOTIFYING THE MIDDLEBURY ZONING ENFORCEMENT OFFICER OF ANY TRANSFER OF THIS RESPONSIBILITY.
6. MAINTENANCE OF CONTROL MEASURES IS THE RESPONSIBILITY OF THE CONTRACTOR. SEDIMENT REMOVED FROM CONTROL FACILITIES SHALL BE DISPOSED OF AT A LOCATION APPROVED BY THE ENGINEER THAT WILL NOT CAUSE ADDITIONAL SEDIMENTATION PROBLEMS TO THE SURROUNDING AREA.
7. NO REFUELING, SERVICING OR OVERNIGHT STORAGE OF VEHICLES OR MACHINERY SHALL BE ALLOWED WITHIN 50 FEET OF ANY WATERCOURSE. REFUELING WILL BE DONE ON AN IMPERVIOUS SURFACE. ABSORBENT SPILL BLANKETS SHALL BE PLACED NEXT TO THE REFUELING ACTIVITY TO BE USED TO CONTAIN AND REMOVE ANY POTENTIAL SPILLAGE.
8. NO STORAGE OF OIL, GASOLINE, PAINT, OR OTHER HAZARDOUS MATERIALS SHALL BE ALLOWED WITHIN 50 FEET OF ANY WATERCOURSE.
9. CATCH BASINS IN PAVED AREAS RECEIVING SILT-LADEN RUNOFF SHALL BE PROTECTED BY WRAPPING THE GRATE WITH FILTER FABRIC.

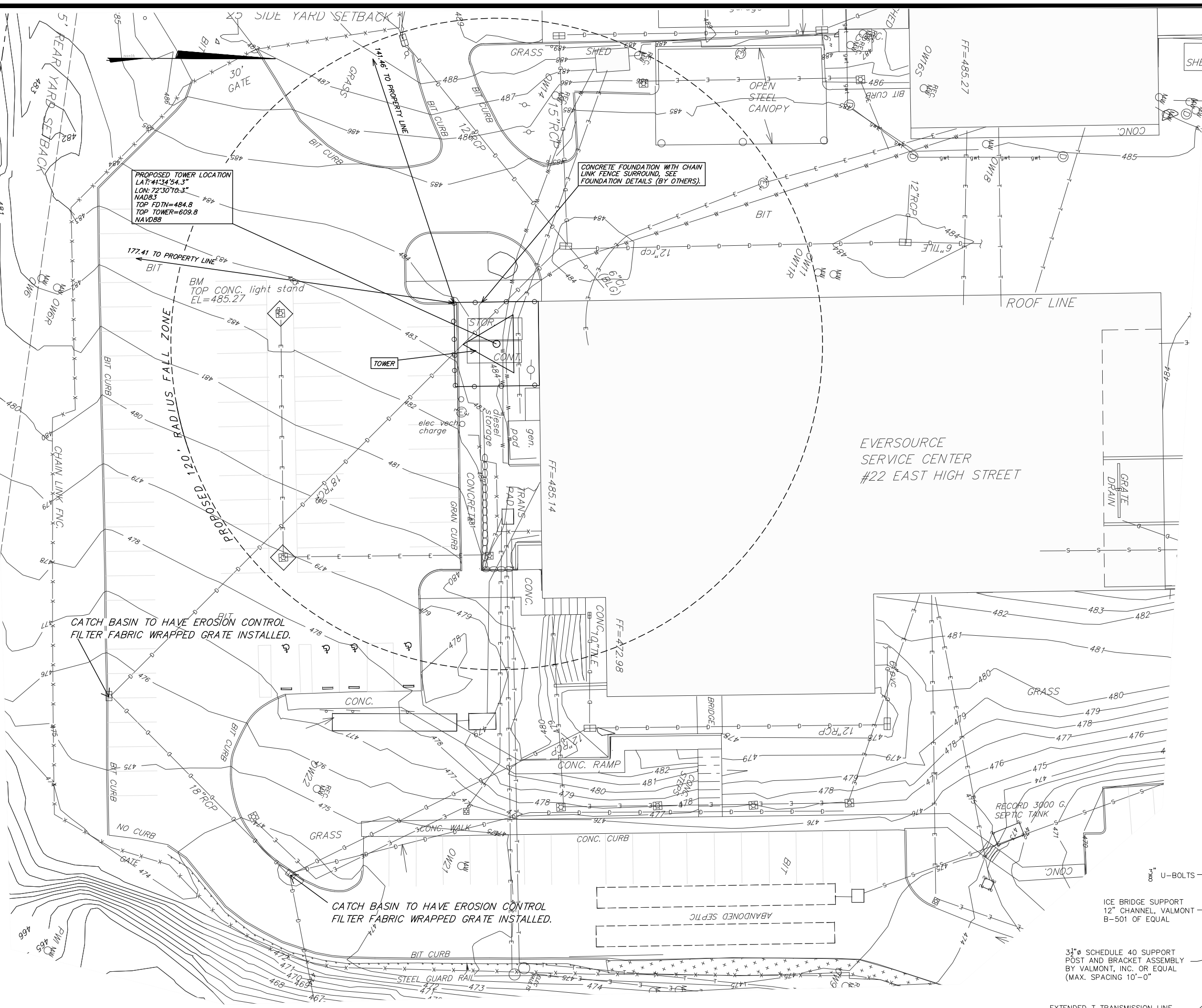
NOTE
EXISTING STORAGE CONTAINERS IN AREA OF ANTENNA PAD TO BE REMOVED.

ZONE C

EVERSOURCE ENERGY

TITLE
SITE PLAN
NOTES AND DETAILS
MICROWAVE TOWER
22 EAST HIGH STREET
EAST HAMPTON, CT

BY	CHKD	APP
DATE 9-24-15	DATE 9-24-15	DATE
H-SCALE 1"=40'	SIZE ARCH. D	SURVEY JOB #
V-SCALE n/a	V.S.	R.E. DWG
RE PROJ NUMBER	NUSCO	SH 3

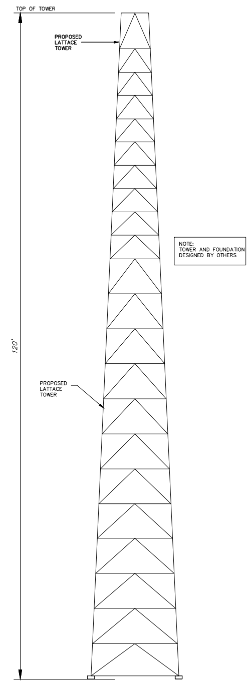


ENLARGED SITE PLAN

SCALE: 1"=20'

0 20 40 60

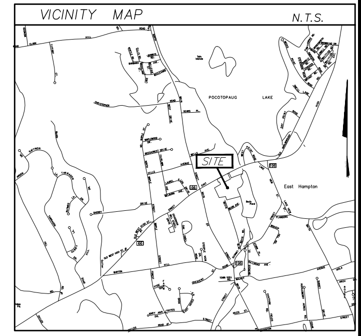
UTILITIES SHOWN ON THIS MAP ARE LOCATED FROM THE BEST AVAILABLE MAPS AND MARK-OUTS AND ARE APPROXIMATE ONLY AND SHOULD BE FIELD VERIFIED. PLEASE CALL BEFORE YOU DIG. 1-800-922-4455. ALL UTILITIES MAY NOT BE SHOWN.

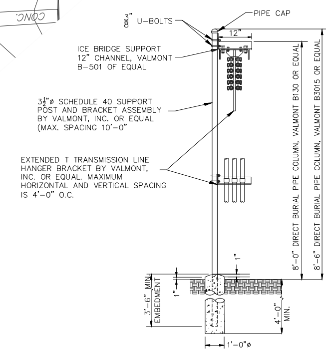


NOTE: TOWER AND FOUNDATION DESIGNED BY OTHERS

PROPOSED TOWER ELEVATION

NOT TO SCALE, SEE MANUFACTURERS SPEC. SHEET FOR TOWER DETAILS





SECTION ICE BRIDGE TRAY

NOT TO SCALE

GENERAL SEDIMENTATION AND EROSION CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
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3. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM; RESTABILIZATION SHALL BE CARRIED OUT AS SOON AS FINE GRADING HAS TAKEN PLACE.
4. ALL EROSION CONTROL MEASURES ARE TO BE INSPECTED AND MAINTAINED ON A REGULAR BASIS THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED LAND HAS BEEN STABILIZED BY VEGETATION OR PAVING. THE MINIMUM REQUIREMENT IS FOR DAILY INSPECTION PLUS INSPECTION IMMEDIATELY BEFORE AND AFTER ALL STORMS.
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8. NO STORAGE OF OIL, GASOLINE, PAINT, OR OTHER HAZARDOUS MATERIALS SHALL BE ALLOWED WITHIN 50 FEET OF ANY WATERCOURSE.
9. CATCH BASINS IN PAVED AREAS RECEIVING SILT-LADEN RUNOFF SHALL BE PROTECTED BY WRAPPING THE GRATE WITH FILTER FABRIC.

ZONE C

EVERSOURCE ENERGY

TITLE	COMPOUND PLAN TOWER ELEVATION AND DETAILS MICROWAVE TOWER 22 EAST HIGH STREET EAST HAMPTON, CT		
DATE 9-24-15	CHKD	APP	APP
REV. 2-12-16	DATE	DATE	DATE
H-SCALE 1"=20' V-SCALE n/a	SIZE ARCH. D V.S.	SURVEY JOB # R.E. DWG	
RE PROJ NUMBER		NUSCO	SH 4

1518

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 5 – Determination of Effect Attachments

You are required to provide two attachments regarding the Determination of Effect: Areas of Potential Effect and Mitigation of Effect (if applicable).

Areas of Potential Effect Guidelines:

Direct Effects

a. Describe the APE for direct effects and explain how this APE was determined.
The APE for Direct Effects is limited to the area of potential ground disturbance and any property, or any portion thereof, that will be physically altered or destroyed by the construction of the proposed telecommunications facility. Mr. Lucas Karmazinas, Architectural Historian with FuturePast Preservation, confirmed via a field survey completed by a representative of Heritage Consultants, LLC on April 20, 2016 that the APE for direct effects is confined to the area of ground disturbance (proposed Cellco Partnership access/utility and compound easements).

No historic structures were identified within the APE for direct effects.

Visual Effects

b. Describe the APE for visual effects and explain how this APE was determined.
The APE for Visual Effects is the geographic area in which the Undertaking has the potential to introduce visual elements that diminish or alter the setting, including the landscape, where the setting is a character-defining feature of a Historic Property that makes it eligible for listing on the National Register. The Nationwide Programmatic Agreement governing new tower construction indicates that, unless otherwise established through consultation with the SHPO/THPO, the presumed APE for visual effects relative to the construction of new facilities is a) 0.5-mile radius for towers 200 feet or less in overall height, b) 0.75-mile radius for towers greater than 200 but no more than 400 feet in overall height; or, c) 1.5-mile radius for towers greater than 400 feet in overall height.

The aforementioned field survey completed on April 20, 2016 confirmed that the 0.5-mile APE for visual effects for this project is appropriate. No adjustments are recommended to the APE as defined under the Nationwide Programmatic Agreement, and 0.5-mile radius was considered acceptable for establishing visual impacts of the planned undertaking based on an overall structure height of 140 feet above ground level.

One (1) Historic Property[1] previously listed or deemed eligible for the National Register of Historic Places was identified within the APE for Visual Effects. This consists of the Belltown National Register Historic District (NR# 85003543), which is located north, south, and west of the Subject Property.

A Viewshed Map is also included with these attachments.

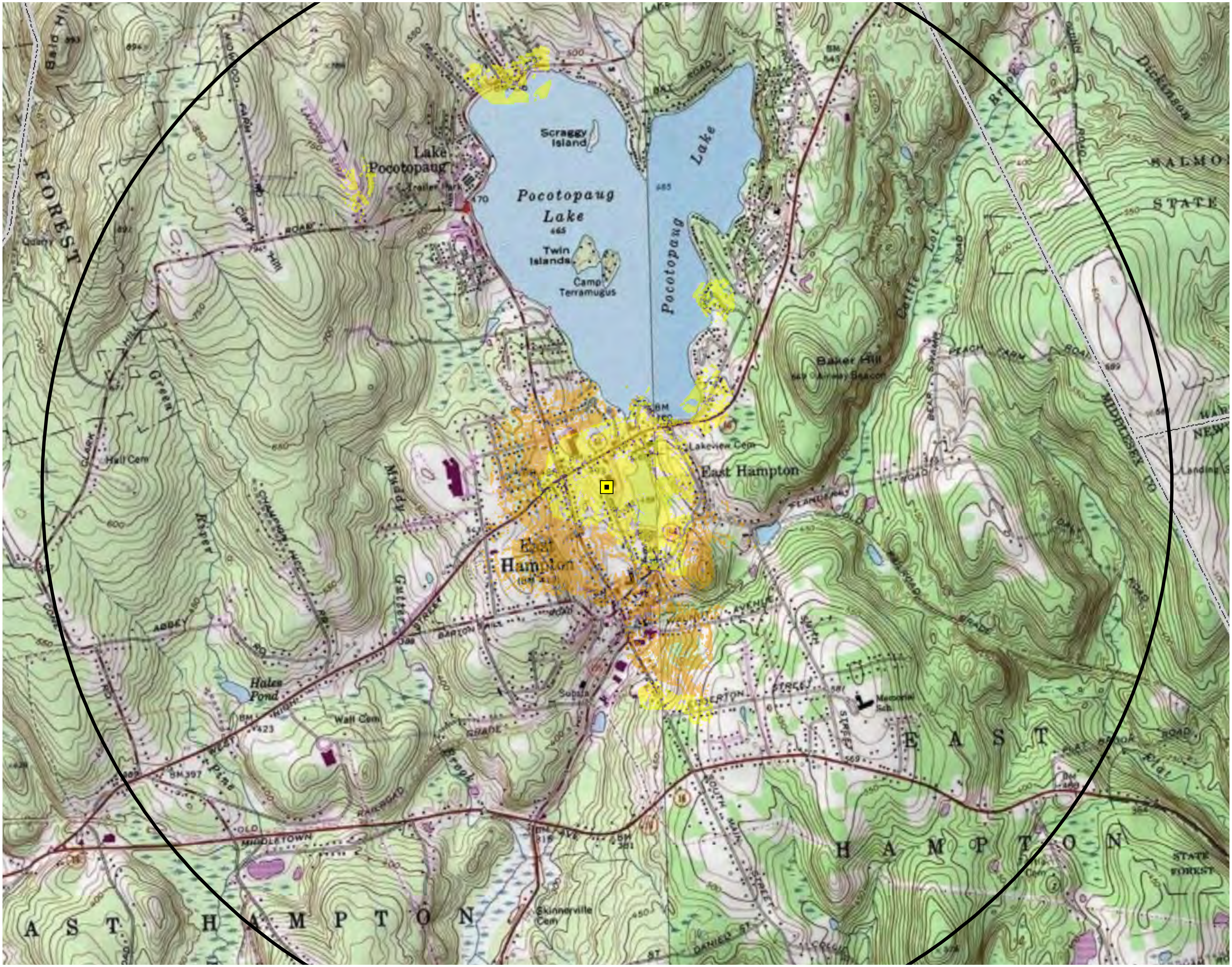
[1] The Nationwide Programmatic Agreement defines a "Historic Property" as "Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or NHO that meet the National Register criteria."

Mitigation of Effect Guidelines:

In the case where an Adverse Visual Effect or Adverse Direct Effect has been determined you must provide the following:

1. *Copies of any correspondence and summaries of any oral communications with the SHPO/THPO and any consulting parties.*
   As of the date of this report, there has been no correspondence with the SHPO/THPO.
2. *Describe any alternatives that have been considered that might avoid, minimize, or mitigate any adverse effects. Explain the Applicant's conclusion regarding the feasibility of each alternative.*

No adverse effects are expected as a result of the proposed Undertaking; therefore, alternatives that might avoid, minimize, or mitigate any adverse effects need not be considered. As such, as of the date of this report, there has been no correspondence with the SHPO/THPO regarding mitigation of effect.


Lake Pocotopaug
Pocotopaug Lake
Scraggy Island
Twin Islands
Camp Terramugus
Trailer Park
FOREST
Baker Hill
Airway Beacon
Lakeview Cem
East Hampton
Hall Cem
Green
Muddy
Gutter
Hales Pond
Wall Cem
Skinnerville Cem
Memorial Sch
SALMON
STATE
STATE FOREST
MIDDLESEX CO
Dickinson
Cattle Lot
EAST
HAMPTON
AST HAMPTON
Substa
BARTON HILL
ABBEY
MIDDLETOWN
SOUTH MAIN STREET
DANIELS ST
RAILROAD
GRADE
Brook
Pine
HIGH
WEST
AVENUE
STREET
OLD
ROAD
BAY ROAD
Clark Hill
PEACH FARM ROAD
Landing

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 6 – Historic Properties Attachment

You are required to provide two attachments regarding the Determination of Effect: Areas of Potential Effect and Mitigation of Effect (if applicable).

File reviews of the National Register Database, Connecticut State Historic Register, and Connecticut State Historic Resource Inventory were conducted by Lucas Karmazinas, architectural historian with FuturePast Preservation, and Mr. William Keegan, Historical Geographer & GIS Specialist, with Heritage Consultants, LLC, to identify Historic Properties within the APEs for Visual and Direct Effects. Mr. Karmazinas also completed an evaluation of NRHP eligibility, according to the NRHP criteria of eligibility (36 C.F.R. Part 63), for any additional properties identified within the APE for direct or visual effects that may not have been identified during a review of the aforementioned files. The results of these reviews are discussed below, as necessary.

A preliminary archaeological assessment prepared by Mr. David George, archaeologist with Heritage Consultants, LLC, on April 15, 2016, for All-Points Technology corporation, P.C. is also included with these attachments.

Historic Properties Identified within the APE for Direct Effects:

1. *List all properties identified within the APE for direct effects.*
2. *Provide the name and address (including U.S. Postal Service ZIP Code) of each property in the APE for direct effects, not listed in part "a", that the Applicant considers to be eligible for listing in the National Register as a result of the Applicant's research. For each such property, describe how it satisfies the criteria of eligibility (36 C.F.R. Part 63). For each property that was specifically considered and determined not to be eligible, describe why it does not satisfy the criteria of eligibility.*
3. *Describe the techniques and the methodology, including any field survey, used to identify historic properties within the APE for direct effects. If no archeological field survey was performed, provide a report substantiating that: i) the depth of previous disturbance exceeds the proposed construction depth (excluding footings and other anchoring mechanisms) by at least 2 feet; or, ii) geomorphological evidence indicates that cultural resource-bearing soils do not occur within the project area or may occur but at depths that exceed 2 feet below the proposed construction depth.*

No Historic Properties previously listed or formally deemed eligible for the National Register of Historic Places were identified within the APE for Direct Effects.

Historic Properties Identified within the APE for Visual Effects:

1. *Provide the name and address (including U.S. Postal Service ZIP Code) of each property in the APE for visual effects that is listed in the National Register, has been formally determined eligible for listing by the Keeper of the National Register, or is identified as considered eligible for listing in the records of the SHPO/THPO, pursuant to Section VI.D.1.a. of the Nationwide Agreement.6*
2. *Provide the name and address (including U.S. Postal Service ZIP Code) of each Historic Property in the APE for visual effects, not listed in part "a", identified through the comments of Indian Tribes, NHOs, local governments, or members of the public. Identify each individual or group whose comments led to the inclusion of a Historic Property in this attachment. For each such property, describe how it satisfies the criteria of eligibility (36 C.F.R. Part 63).*

3. *For any properties listed in part "a", that the Applicant considers no longer eligible for inclusion in the National Register, explain the basis for this recommendation.*

One (1) Historic Property previously listed or deemed eligible for the National Register of Historic Places was identified within the APE for Visual Effects. This consists of the Belltown National Register Historic District (NR# 85003543), which is located north, south, and west of the Subject Property.

As of the date of this report, All-Points Technology has not received comments from Indian Tribes, NHOs, local governments, or members of the public that identify Historic Properties in the APE for visual effects that are not listed in the above list of Historic Properties.

No properties included in the APEs were considered no longer eligible for inclusion in the National Register by the Applicant.

HERITAGE
CONSULTANTS, LLC

INTEGRATED HISTORIC PRESERVATION PLANNING

April 15, 2016

Ms. Nicole Castro
All-Points Technology Corporation
3 Saddlebrook Drive
Killingworth, Connecticut 06419

RE: Preliminary Archeological Assessment of a Proposed Telecommunications Tower Located at 22 East High Street in East Hampton, Connecticut

Ms. Castro:

Heritage Consultants, LLC, is pleased to have this opportunity to provide All-Points Technology Corporation with the following preliminary archeological assessment of a proposed telecommunications tower located at 22 East High Street in East Hampton, Connecticut (Figure 1). The current project entailed completion of an existing conditions cultural resources summary based on the examination of GIS data obtained from the Connecticut State Historic Preservation Office, as well as historical data, aerial photographs, and topographic quadrangles maintained by Heritage Consultants, LLC. This investigation did not consider the effects of the proposed construction upon built resources, and it is based upon project location information provided to Heritage Consultants, LLC by All-Points Technology Corporation. The objectives of this study were to gather and present data regarding previously identified cultural resources situated within 0.8 km (0.5 mi) of the proposed tower location and to investigate the Area of Potential Effect (APE) in terms of its natural and historical characteristics so that the need for completing additional cultural resources investigations could be evaluated.

Figures 2 and 3 show that there was a well-developed network of roads in the project region by the mid to late nineteenth century. The area encompassing the proposed tower location appears to have consisted of an undeveloped parcel of land that was likely used as an agricultural field. This interpretation is confirmed by Figure 4, an aerial image dating from 1934, which shows that the proposed tower location was situated within an open area that appears to have been used to grow crops. Figure 5, which is an aerial image taken in 1970, documents that no large scale changes had occurred in immediate vicinity of the proposed tower location as of the middle of the twentieth century; the area remained open and undeveloped. Figure 6, an aerial image captured in 1990, shows that development of the parcel had occurred in the closing decades of the twentieth century, including the construction of the existing building and parking lots that currently occupy the APE. The subsequent aerial images, Figures 7 and 8, show the area surrounding the proposed tower location in its essentially modern state. These images were captured in 2004 and 2014, respectively, show the project region in its essentially modern configuration. This portion of East Hampton is characterized by the downtown area, which contains numerous residences, commercial facilities, and municipal buildings. This area is well developed and contains a mixture of historic and modern landscape features.

A review of previously recorded cultural resources on file with the Connecticut State Historic Preservation Office revealed that while no previously recorded archaeological sites have been identified

P.O. Box 310249 • Newington, Connecticut 06131
Phone (860) 667-3001 • Fax (860) 667-3008
Email: info@heritage-consultants.com

within 0.8 km (0.5 mi) of the proposed tower location, a single National Register of Historic Places property is situated within the APE (Figures 9 and 10). This National Register of Historic Places property is the Belltown Historic District. Listed in 1985, this historic district consists of a large concentration of buildings. Of the 176 structures in the district, 147 consist of contributing elements. Many of the buildings in the Belltown Historic district were constructed in the mid nineteenth century and are centered on manufacturing, and they represent domestic, industrial, institutional, and commercial forms of architecture. The district also contains two stone dams. One the dams is part of a historic mill complex in the center of the historic district, while the other is associated with a small number of industrial archaeological sites that exist outside of the 0.8 km (0.5 mi) buffer around the proposed tower location. According to the National Register of Historic Properties nomination form, the Belltown Historic District is historically significant as the only mill town in America known to be devoted to bell making (Criterion A). In addition, the district is significant under Criterion C because it represents a cohesive entity that contains a range buildings types dating from 1748 to 1935. Architectural style represented in the Belltown Historic district include Greek Revival-style Second Empire, Italianate, and Colonial Revival styles. While the proposed tower is location immediately adjacent to the Belltown Historic district, it will not directly impact ant resources in the area; however, it will be visible from the historic district.

A pedestrian survey of the proposed tower location and the associated access road by representatives of Heritage Consultants, LLC was completed in April of 2016 (Photos 1 through 7). Visual inspection of the area containing the proposed tower revealed that it consisted of a previously disturbed parking lot that has been paved in the past, likely during construction of the adjacent Eversource Energy terminal building. No intact soils remain in this area. Thus, this area retains no potential to yield intact prehistoric or historic period cultural deposits. Given the low archaeological potential of the proposed project area, it is the professional opinion of Heritage Consultants, LLC that no additional archaeological research is recommended prior to construction of the proposed tower and its associated access road.

If you have any questions regarding this Technical Memorandum, or if we may be of additional assistance with this or any other projects you may have, please do not hesitate to call us at 860-667-3001 or email me dgeorge@heritage-consultants.com. We are at your service.

Sincerely,

David R. George

David R. George, M.A., R.P.A

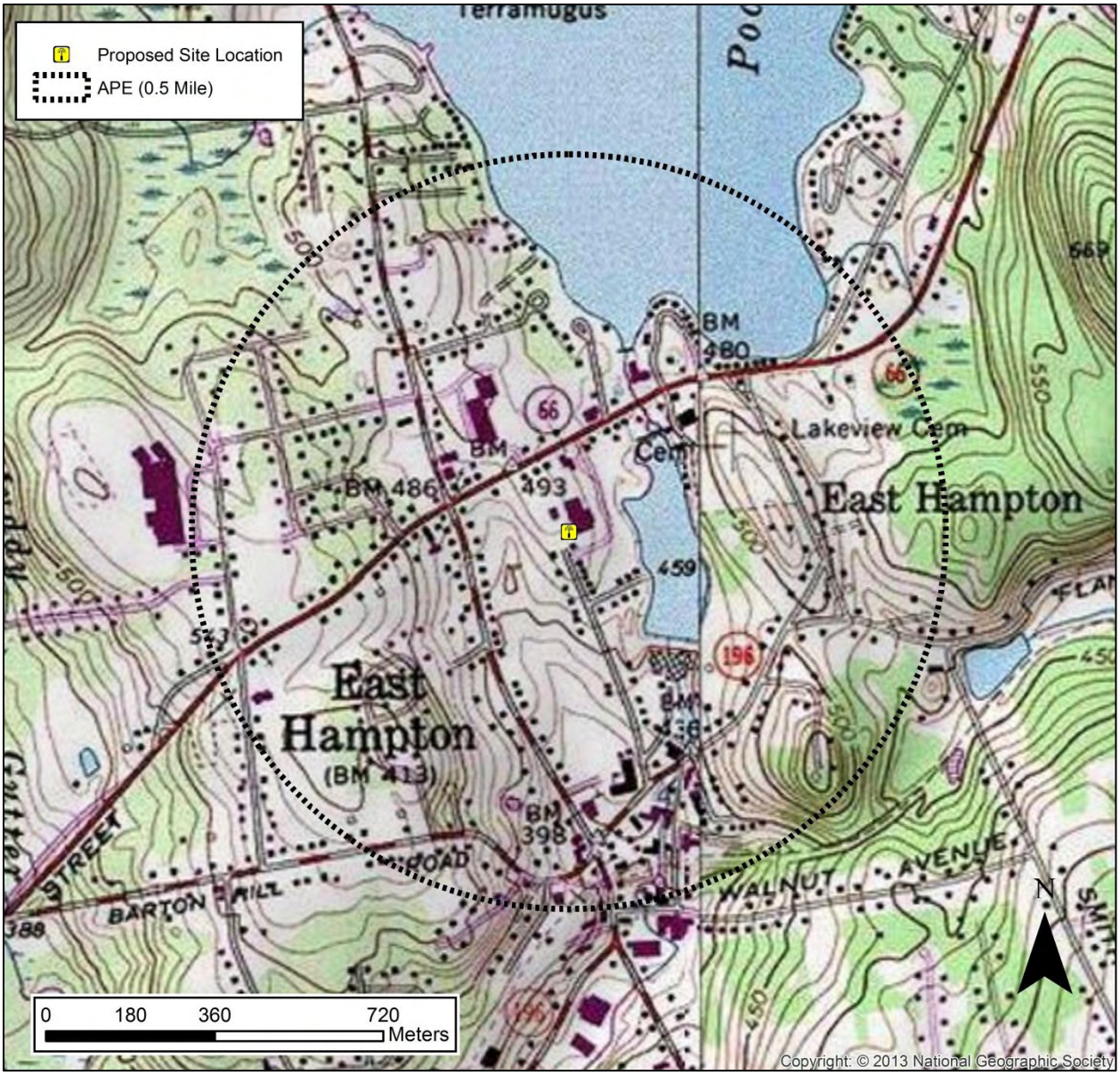


Figure 1. Excerpt from recent USGS topographic quadrangle map depicting the proposed tower location in East Hampton, Connecticut.

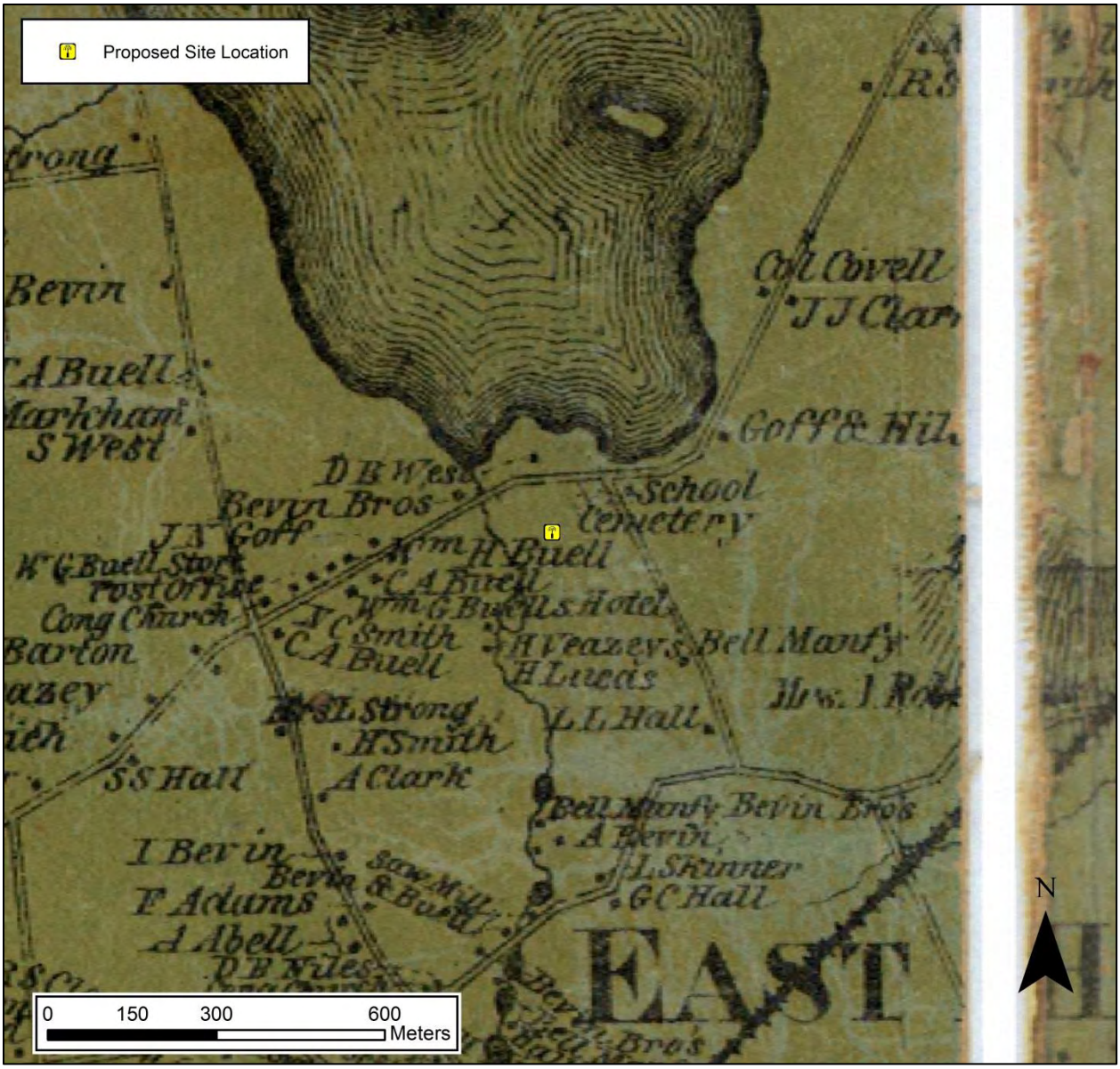


Figure 2. Excerpt from a 1859 historic map depicting the proposed tower location in East Hampton, Connecticut.

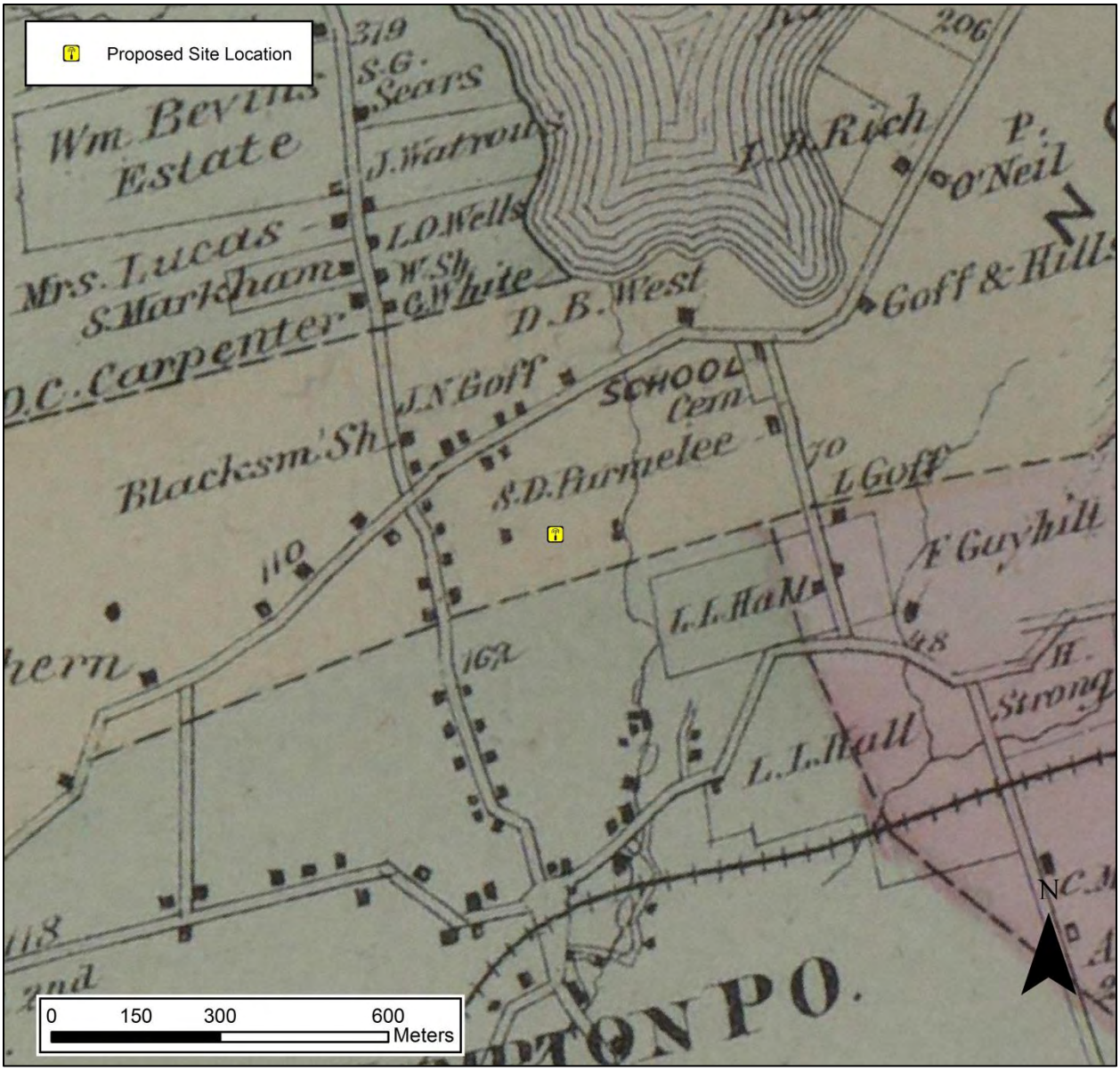


Figure 3. Excerpt from an 1874 historic map depicting the proposed tower location in East Hampton, Connecticut.

Figure 4. Excerpt from a 1934 aerial image depicting the proposed tower location in East Hampton, Connecticut.

Figure 5. Excerpt from a 1970 aerial image depicting the proposed tower location in East Hampton, Connecticut.

Figure 6. Excerpt from a 1990 aerial image depicting the proposed tower location in East Hampton, Connecticut.

Figure 7. Excerpt from a 2004 aerial image depicting the proposed tower location in East Hampton, Connecticut.

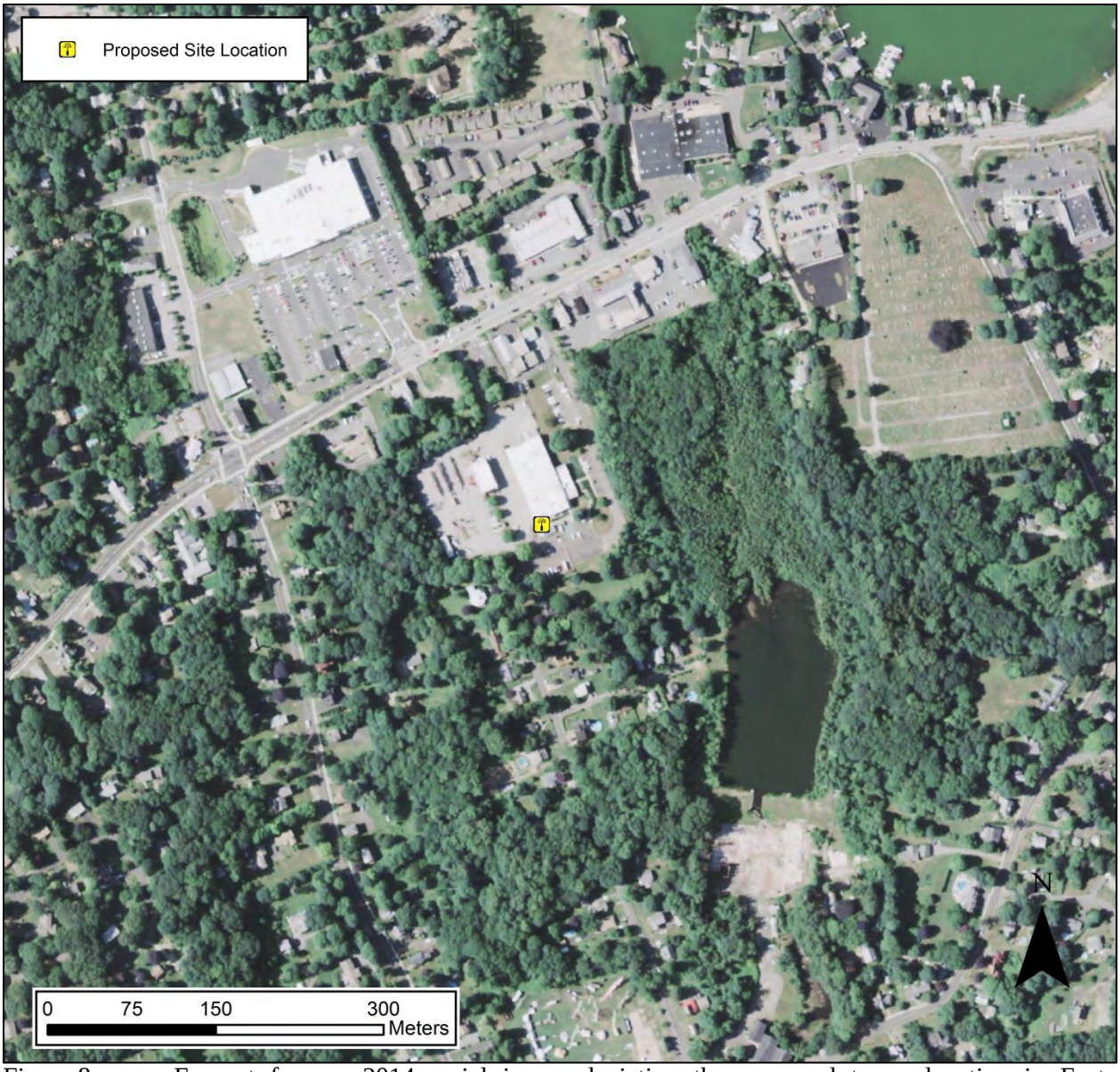


Figure 8. Excerpt from a 2014 aerial image depicting the proposed tower location in East Hampton, Connecticut.

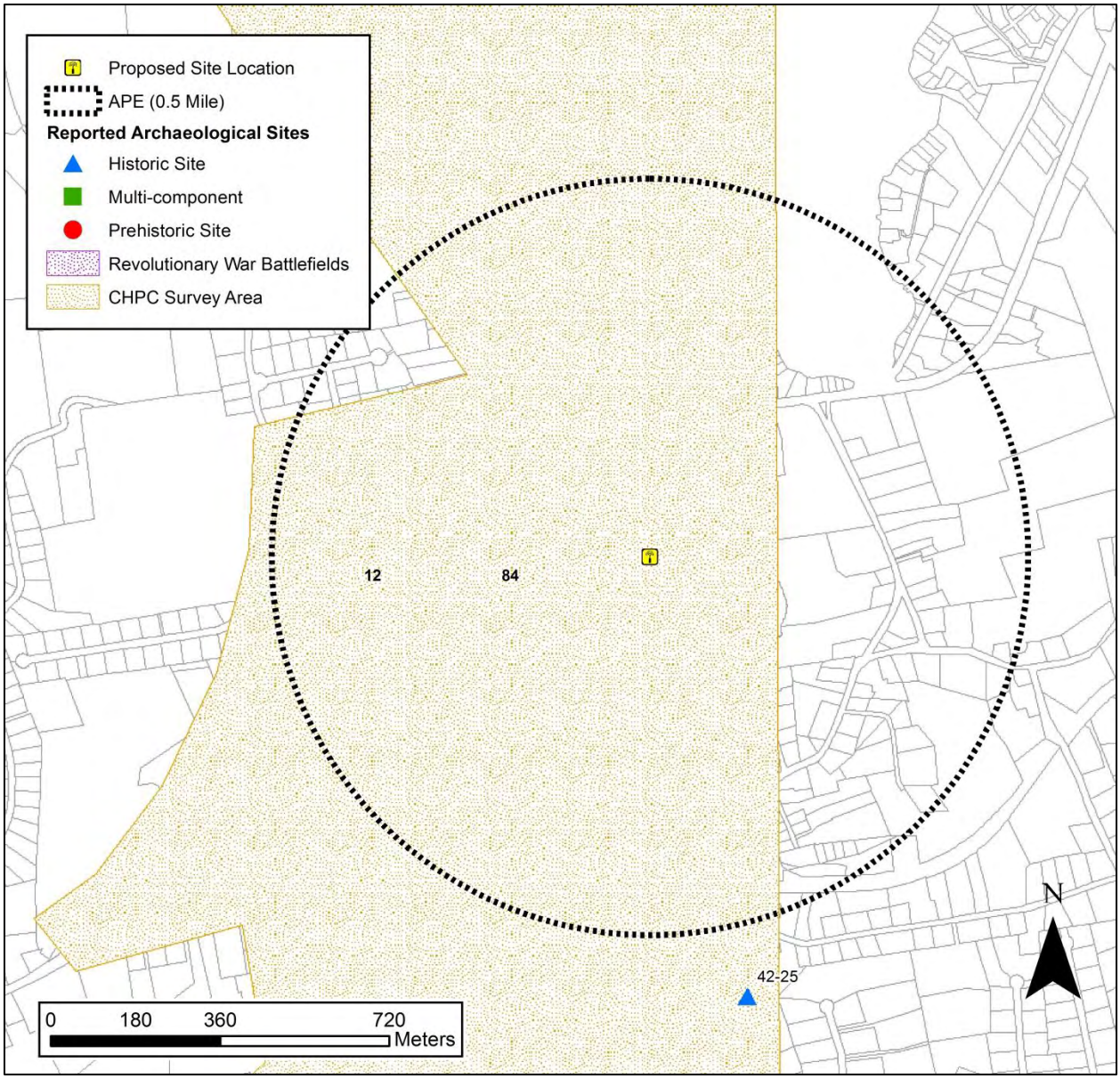


Figure 9. Digital map depicting the locations of previously recorded archaeological sites in the vicinity of the proposed tower location in East Hampton, Connecticut.

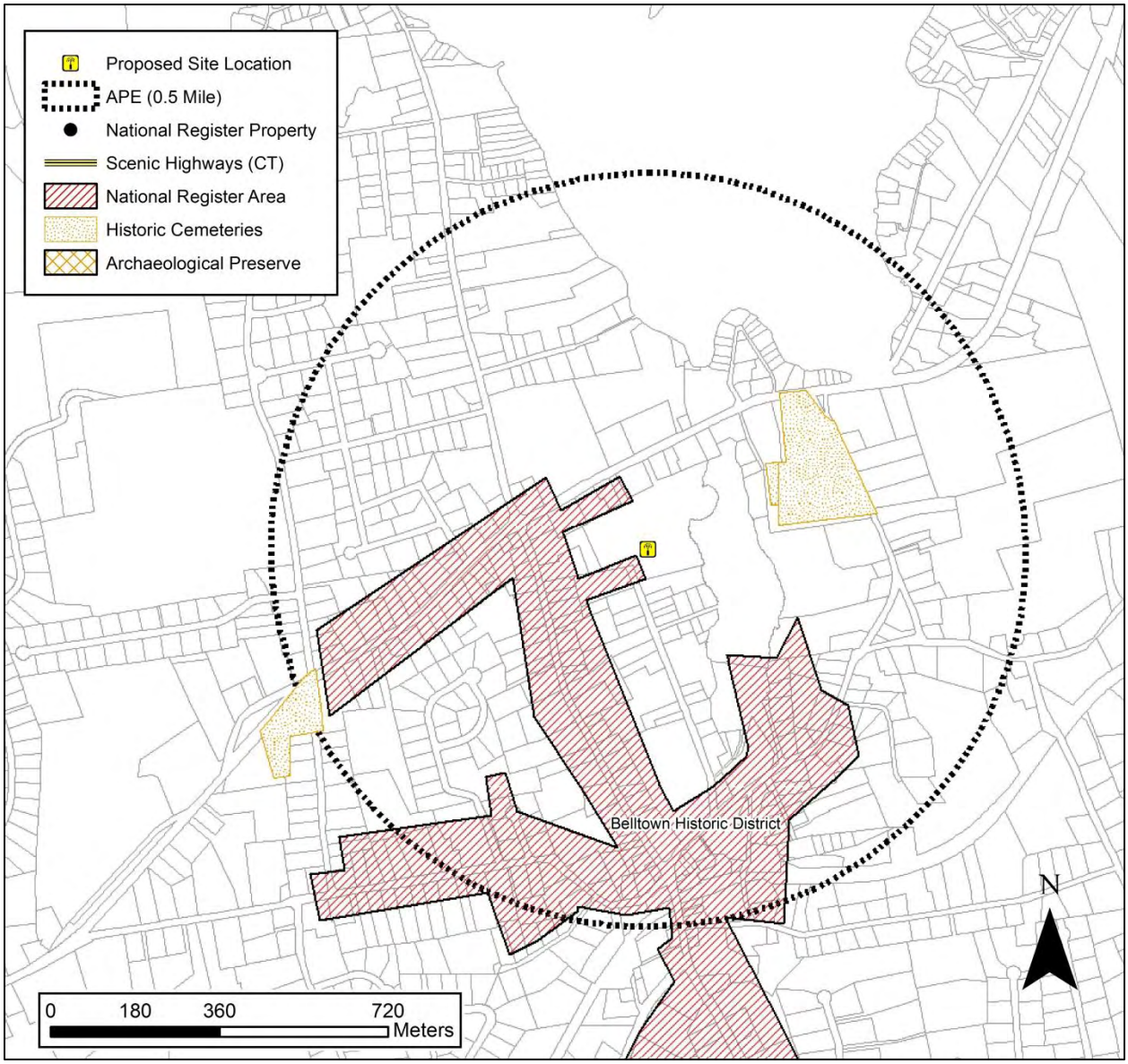


Figure 10. Digital map depicting the locations of previously National Register of Historic Places properties in the vicinity of the proposed tower location in East Hampton, Connecticut.

Figure 11. Aerial view of the location of the proposed telecommunications tower in East Hampton, Connecticut depicting the location and direction of each the following photographs.

Photo 1. Overview photo of the proposed tower location facing northeast.

Photo 2. Overview photo toward the proposed tower location facing north.

Photo 3. Overview photo of the area to the southwest of the proposed tower location.

Photo 4. Overview photo toward the proposed tower location facing northeast.

Photo 5. Overview photo toward the proposed tower location facing southeast.

Photo 6. Overview photo toward the proposed tower location facing southwest.

Photo 7. Overview photo the area to the north of the proposed tower location facing north.

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 7 – Tribal and NHO Involvement

At an early stage in the planning process, the Nationwide Agreement requires the Applicant to gather information from appropriate Indian Tribes or Native Hawaiian Organizations (NHOs) to assist in the identification of Historic Properties of religious and cultural significance to them. Describe measures taken to identify Indian tribes and NHOs that may attach religious and cultural significance to Historic Properties that may be affected by the collocation within the Areas of Potential Effects (APE) for direct and visual effects. If such Indian tribes or NHOs were identified, list them and provide a summary of contacts by either the FCC, the Applicant, or the Applicant's representative. Provide copies of relevant documents, including correspondence. If no such Indian tribes or NHOs were identified, please explain.

All-Points Technology Corporation, P.C. completed the Tower Construction Notification System (TCNS) on March 21, 2014. The attached FCC Notification email lists the Tribes identified through the TCNS process. Follow up correspondence, when necessary, will be completed via the methods listed on the attached email considered acceptable to each Tribe.

Ellen Gustafson

From: towernotifyinfo@fcc.gov
Sent: Friday, March 25, 2016 3:01 AM
To: Ellen Gustafson
Cc: Jonathan.Jonas@fcc.gov; diane.dupert@fcc.gov
Subject: NOTICE OF ORGANIZATION(S) WHICH WERE SENT PROPOSED TOWER CONSTRUCTION NOTIFICATION INFORMATION - Email ID #4530794

Dear Sir or Madam:

Thank you for using the Federal Communications Commission's (FCC) Tower Construction Notification System (TCNS). The purpose of this electronic mail message is to inform you that the following authorized persons were sent the information you provided through TCNS, which relates to your proposed antenna structure. The information was forwarded by the FCC to authorized TCNS users by electronic mail and/or regular mail (letter).

Persons who have received the information that you provided include leaders or their designees of federally-recognized American Indian Tribes, including Alaska Native Villages (collectively "Tribal Nations"), Native Hawaiian Organizations (NHOs), and State Historic Preservation Officers (SHPOs). For your convenience in identifying the referenced Tribal Nations and NHOs and in making further contacts, the City and State of the Seat of Government for each Tribal Nation and NHO, as well as the designated contact person, is included in the listing below. We note that Tribal Nations may have Section 106 cultural interests in ancestral homelands or other locations that are far removed from their current Seat of Government. Pursuant to the Commission's rules as set forth in the Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission (NPA), all Tribal Nations and NHOs listed below must be afforded a reasonable opportunity to respond to this notification, consistent with the procedures set forth below, unless the proposed construction falls within an exclusion designated by the Tribal Nation or NHO. (NPA, Section IV.F.4).

The information you provided was forwarded to the following Tribal Nations and NHOs. If a Tribal Nation or NHO does not respond within a reasonable time, you should make a reasonable effort at follow-up contact, unless the Tribal Nation or NHO has agreed to different procedures (NPA, Section IV.F.5). In the event a Tribal Nation or NHO does not respond to a follow-up inquiry, or if a substantive or procedural disagreement arises between you and a Tribal Nation or NHO, you must seek guidance from the Commission (NPA, Section IV.G). These procedures are further set forth in the FCC's Declaratory Ruling released on October 6, 2005 (FCC 05-176).

1. THPO Marissa Turnbull - Mashantucket Pequot Tribe - (PO Box: 3180) Mashantucket, CT - mturnbull@mptn-nsn.gov - 860-396-7570
Details: The Mashantucket Pequot Tribal Nation will charge a $500.00 research fee for all proposed Cell Tower projects and, as of Monday May 26, 2014 will also charge a $500.00 research fee for all Positive Train Control (PTC) projects.

Please make your check payable to the "Mashantucket Pequot Tribal Nation," and mail to:

Mashantucket Pequot Tribal Nation
Natural Resources Protection & Regulatory Affairs

550 Trolley Line Blvd.
P.O. Box 3202
Mashantucket, CT 06338-3202

For every proposed cell tower project, and for every Positive Train Control (PTC) project, the Mashantucket Pequot Tribal Nation requires a site location map, information regarding project ground disturbance, site plans and a detailed description of the proposed site and project & a copy of any archaeology surveys completed - If the proposed project is to be located on an already existing building, we would like to be informed of that as well.

After we have received the research fee, we will commence our research & review of the proposed cell tower project, and / or the Positive Train Control (PTC) project & make every effort to respond to you within thirty days.

Marissa Turnbull, THPO
Mashantucket Pequot Tribal Nation
mturnbull@mptn-nsn.gov
860-396-7570

2. Deputy THPO Elaine Thomas - Mohegan Indian Tribe - Cultural and Community Programs Dept 13 Crow Hill Road Uncasville, CT - ethomas@moheganmail.com - 860-862-6393
Details: The Mohegan Indian Tribe of Connecticut has an interest in all Cell Tower Projects and Positive Train Control Projects that are within the State of Connecticut.

Beginning May 26, 2014 The Mohegan Indian Tribe of Connecticut will charge a $500.00 research fee per all proposed Cell Tower Projects and Positive Train Control Projects that are within the State of Connecticut. After we have received the research fee, we will commence our research of the proposed Project. The Mohegan Tribe is interested in all notifications of proposed Cell Tower Projects and Positive Train Control Projects that are within the State of Connecticut and will respond to all notifications.

Please make checks payable to The Mohegan THPO, and include, 4990-0300, AA code 52, onall checks along with the TCNS#. Please send checks to: The Mohegan THPO c/o James Quinn, 13 Crow Hill Road, Uncasville, CT 06382.

3. Program Manager-Cell Tower Division Sequahna Mars - Narragansett Indian Tribe - (PO Box: 350) Wyoming, RI - sequahna@yahoo.com - 401-419-2959
Details: NITHPO respectfully requests that additional contacts following initial TCNS notification be made via e-mail to Sequahna Mars, at sequahna@yahoo.com.

NITHPO respectfully requests a site map and photographs for all projects that involve ground disturbance.

Please note that NITHPO's current review fees are as follows:
For projects in which there is to be no ground disturbance the review fee is $500.
For ALL projects which include ground disturbance, the review fee is $1000.

4. THPO Gary Loonsfoot Jr - Keweenaw Bay Indian Community - 16429 Beartown Road . Baraga, MI - gloonsfoot@kbic-nsn.gov - 906-353-4278
Details: The KBIC THPO reviews all projects within historic homelands for the presence of cultural resources with significance to the Anishinaabe. Your request will go through a preliminary review by our THPO/NAGPRA Technician, the review consists of relevant studies submitted by the applicant regarding cultural resources documentation, in house literature search, database search and GIS search for further information. If any cultural resources are identified during this process, the file will be turned over to the Tribal Historic Preservation Officer in order to make a determination of effects.
Information required in order to complete this process are as follows:
Project Name
Project Location
Physical Address
Latitude and Longitude
State, County,Township, Range, Section quarters Brief Project Description Existing studies for archaeological sites, and cultural resources.

As of June 11, 2014 the KBIC THPO will be charging a fee of $500.00 per review/collocation unless the review covers more than one section of land in which case the fee is $500.00 per section. Fees in this process cover the research and other activities required to provide you with a timely response so your project can stay on track. Please submit payment of $500.00 for each project application submitted, checks should be made payable to KBIC THPO, 16429 Beartown Road, Baraga, Michigan 49908. Any questions can be directed to: Gary Loonsfoot Jr via email gloonsfoot@kbic-nsn.gov, or by phone: 906-353-6623 ext. 4108. (Please note thatMinogheezhig Sandman-Shelifoe is no longer a contact within the KBIC-THPO office)

5. THPO and NAGPRA Representative Giiwegiizhigookway Martin Ms - Lac Vieux Desert Band of Lake Superior Chippewa Indians - E23857 Poplar Circle (PO Box: 249) Watersmeet, MI - gmartin@lvdtribal.com - 906-358-0137
Details: Effective January 2016

ELECTRONIC TRANSER OF MATERIALS - The Lac Vieux Desert Band of Lake Superior Chippewa (Getegitigaaning Ojibwe Nation) will go paperless.

To enable us to participate fully, Lac Vieux Desert (Getegitigaaning Ojibwe Nation) fee for such services is $500. The fee must be submitted so that the research can be done. This will be the only item received in our office via regular USPS mail or other appropriate carriers.

At that time we will review and make our determinations with the appropriate information that we have on file with our Tribe pertaining to this area and an email response will go to the designated person at that agency.

All Collocation Projects will be handled in the same manner as new projects UNLESS the Getegitigaaning Ojibwe Nation commented on the original project.

The following information shall be emailed for each project to gmartin@lvdtribal.com . The information must contain summary of the proposed ground disturbing activity, legal description of the Area of Potential Effects, (APE), Topo maps identifying the proposed area, and copies of any studies that have already been conducted regarding cultural resources and archaeology in their full format, including reports on archaeological andcultural sites identified to the email address below. All responses and tower project closures will be emailed back to the appropriate contact person for your agency.

Should you have any questions, please feel free to contact me at 906-358-0137.

Miigwetch,

giiwegiizhigookway Martin,THPO

Fee can be sent along with the requested information to:
Make Check Payable to:
Getegitigaaning Ojibwe Nation THPO
P.O. 249
Watersmeet, Michigan 49969
Office: 906-358-0137
Fax: 906-358-4850Email: gmartin@lvdtribal.com

The information you provided was also forwarded to the following SHPOs in the State in which you propose to construct and neighboring States. The information was provided to these SHPOs as a courtesy for their information and planning. You need make no effort at this time to follow up with any SHPO that does not respond to this notification. Prior to construction, you must provide the SHPO of the State in which you propose to construct (or the Tribal Historic Preservation Officer, if the project will be located on certain Tribal lands), with a Submission Packet pursuant to Section VII.A of the NPA.

6. SHPO Cara Metz - Massachusetts Historical Commission - 220 Morrissey Boulevard Boston, MA - cara.metz@sec.state.ma.us - 617-727-8470

7. SHPO Frederick C Williamson - Rhode Island Historic Preservation & Heritage Comm - Old State House 150 Benefit St Providence, RI - - 401-222-2678

8. Deputy SHPO Edward F Sanderson - Rhode Island Historic Preservation & Heritage Comm - Old State House 150 Benefit St Providence, RI - rgreenwood@preservation.ri.gov - 401-222-4134

9. SHPO Karen J Senich - Connecticut Commission on Culture and Tourism - One Constitution Plaza Hartford, CT - karen.senich@ct.gov - 860-256-2753

"Exclusions" above set forth language provided by the Tribal Nation or SHPO. These exclusions may indicate types of PTC wayside pole notifications that the Tribal Nation or SHPO does not wish to review. TCNS automatically forwards all notifications to all Tribal Nations and SHPOs that have an expressed interest in the geographic area of a proposal. However, if a proposal falls within a designated exclusion, you need not expect any response and need not pursue any additional process with that Tribal Nation or SHPO. Exclusions may also set forth policies or procedures of a particular Tribal Nation or SHPO (for example, types of information that a Tribal Nation routinely requests, or a policy that no response within 30 days indicates no interest in participating in pre-construction review).

Please be advised that the FCC cannot guarantee that the contact(s) listed above opened and reviewed an electronic or regular mail notification. If you learn any of the above contact information is no longer valid, please contact the FCC. The following information relating to the proposed tower was forwarded to the person(s) listed above:

Notification Received: 03/21/2016
Notification ID: 137380
Tower Owner Individual or Entity Name: Eversource Energy
Consultant Name: Ellen Gustafson Mrs
Street Address: All-Points Technology Corp., P.C.
3 Saddlebrook Drive
City: Killingworth
State: CONNECTICUT
Zip Code: 06419
Phone: 860-663-1697
Email: egustafson@allpointstech.com

Structure Type: LTOWER - Lattice Tower
Latitude: 41 deg 34 min 54.3 sec N
Longitude: 72 deg 30 min 10.3 sec W
Location Description: 22 East High Street
City: East Hampton
State: CONNECTICUT
County: MIDDLESEX
Detailed Description of Project: Replacing existing communications tower. Please see attached site plans
Ground Elevation: 147.8 meters
Support Structure: 36.6 meters above ground level
Overall Structure: 42.7 meters above ground level
Overall Height AMSL: 190.5 meters above mean sea level

If you have any questions or comments regarding this notice, please contact the FCC using the electronic mail form located on the FCC's website at:

http://wireless.fcc.gov/outreach/notification/contact-fcc.html.

You may also call the FCC Support Center at (877) 480-3201 (TTY 717-338-2824). Hours are from 8 a.m. to 7:00 p.m. Eastern Time, Monday through Friday (except Federal holidays). To provide quality service and ensure security, all telephone calls are recorded.

Thank you,
Federal Communications Commission

NEW TOWER SUBMISSION PACKET – FCC FORM 620

Attachment 8 – Local Government, Other Consulting Parties, and Public Notice

1. *If any local government been contacted and invited to become a consulting party pursuant to Section V.A. of the Nationwide Programmatic Agreement, list the local government agencies contacted. Provide a summary of contacts and copies of any relevant documents (e.g., correspondence or notices).*

   All-Points Technology Corporation, P.C. contacted relevant local government agencies on March 22, 2016. The respective correspondence is attached.

2. *If a local government agency will be contacted but has not been to date, explain why and when such contact will take place.*

   N/A.

3. *List additional consulting parties that were invited to participate by the Applicant, or independently requested to participate. Provide any relevant correspondence or other documents.*

   N/A.

4. *You are required to provide a Public Notice Attachment.*

   Attached, please find a copy of the legal notice regarding the proposed telecommunications installation that was posted in the *Hartford Courant* on March 24, 2016. As of the date of this submission packet, no comments regarding this notice have been received by All-Points Technology Corporation, P.C. Should a response be received, copies will be forwarded to all consulting parties as an addendum to this submission packet.

MEMORANDUM

Date: March 22, 2016

To: Mr. Michael Maniscalco, Town Manager
East Hampton Town Hall
20 East High Street
East Hampton, CT 06424
860-267-4468
mmanisccalco@easthamptonct.gov

Re: Proposed Replacement Communications Facility
22 East High Street
East Hampton, Middlesex County, CT 06424

To comply with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, Eversource Energy (Eversource) has retained All-Points Technology Corporation, P.C. (APT) to evaluate proposed wireless telecommunications facilities for any adverse effect it may have on historic properties. As part of this evaluation, and in conformance with the Nationwide Programmatic Agreement (NPA) for review of effects on historic properties for proposed undertakings, APT is submitting this proposed Small Cell installation notification to the Town of East Hampton's Town Manager, Middle Haddam Historic District Commission and Planning and Zoning Commission.

Eversource is proposing to install a replacement communications tower facility on their service yard property located at 22 East High Street in East Hampton, Middlesex County, CT 06424. The existing 70' tall wooden pole communications facility would be replaced with a proposed 120' tall lattice tower with 20' whip antenna located approximately 15' southwest of the existing facility. The overall height of the proposed installation would be 140' above ground level.

The purpose of this letter is to notify you that public notice of this proposed facility will be published in the Hartford Courant newspaper on March 24, 2016 and to invite comments regarding any potential effects that the proposed facility may have upon historic properties from relevant individuals or groups that you may be aware of.

Parties interested in submitting comments regarding any potential effects of the proposed facility on historic properties may do so by sending them to All-Points Technology Corporation at 3 Saddlebrook Drive, Killingworth, CT 06419, to the attention of Ellen Gustafson. Questions about this proposed project may be submitted via regular mail to the above address, emailed to egustafson@allpointstech.com, or by calling (860) 663-1697 x214.

APT will be accepting comments and/or questions within 30 days of the date of this publication.

MEMORANDUM

Date: March 22, 2016

To: Mr. Raymond A. Zatorski, Chairman
Planning & Zoning Commission
East Hampton Town Hall
20 East High Street
East Hampton, CT 06424
860-267-9601
www.easthamptonct.gov

Re: Proposed Replacement Communications Facility
22 East High Street
East Hampton, Middlesex County, CT 06424

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Hartford Courant
media group

Eversource East Hampton
CT259180

AFFIDAVIT OF PUBLICATION

State of Connecticut

March 24, 2016

County of Hartford

I, Janet Tarasuk, do solemnly swear that I am a Sales Assistant of the Hartford Courant, printed and published daily, in the state of Connecticut and that from my own personal knowledge and reference to the files of said publication the advertisement of Public Notices was inserted in the regular edition.

On Dates as Follows:

03/24/2016 114.67; 03/24/2016 10.00

In the Amount of:

$124.67
All-Points Technology Corporation - CU00316216
4061734
Full Run

Janet Tarasuk Sales Assistant,
Janet Tarasuk

Subscribed and sworn before me on March 24, 2016

Renee N Janes **Notary Public**

RENEE N. JANES
NOTARY PUBLIC
MY COMMISSION EXPIRES MAR. 31, 2018

RENEE N. JANES NOTARY PUBLIC CONNECTICUT

Order # - 4061734

Hartford Courant
media group

Eversource East Hampton
#CT259180

PUBLIC NOTICE: Eversource Energy is proposing to install a replacement communications tower facility on their service yard property located at 22 East High Street in East Hampton, Middlesex County, CT 06424. The existing 70' tall wooden pole communications facility would be replaced with a proposed 120' tall lattice tower with 20' whip antenna located approximately 15' southwest of the existing facility. The overall height of the proposed installation would be 140' above ground level.

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Order # - 4061734

Hartford Courant media group

Publication Date: 03/24/2016

Ad Number:	4061734-1	Client Name:	/ PO# Project #CT25918
Insertion Number:		Advertiser:	All-Points Technology Corporation
Size:	1 x 1.91	Section/Page/Zone:	CLA/C009/THUCLA
Color Type:	B&W	Description:	Project #CT259180

PUBLIC NOTICES

Connecticut

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JOBS

For an easy-to-scan reference to all of today's local jobs appearing on CareerBuilder, check out the QuickFind grid in Wednesday's CTNOW section. Then go to Courant.com/jobs and type in the job's CT reference number to get the full listing.

Hartford Courant

Direct Mail Project Specialist

Role: Responsible to conceive, develop, and manage on-going and new circulation sales programs, which will contribute to departments overall goals regarding circulation volume and revenue growth for all paid and free products.

3 to 5 years experience with direct mail. Exceptional skills in organization, multi-tasking and meeting deadlines. Great project leader. Knowledge working with printers, direct mail houses and mail lists. Knowledge about design & layout for direct mail. Able to manage a budget of $500,000 or more. Great people skills. Strong communication skills. Self-starter, with the ability to work independently in a fast pace market. Proficient with Excel, Word & Office.

Please send resumes to stefsmith@tribpub.com

Join Williams International Is Hiring ENGINEERS

TURBINE EXPERTS

Williams International is the world leader in the development, manufacture and support of small gas turbine engines. We are seeking engineers to join our dynamic, rapidly expanding organization. *To qualify, you must have a degree in engineering and experience with gas turbine engines. U.S. citizenship is required.*

We offer challenging work, competitive pay and benefits and the opportunity for growth and advancement. Relocation assistance is available.

Interested candidates must apply online by visiting www.williams-int.com, reference job #16-0021.

Williams International is committed to equal employment opportunities for all individuals regardless of race, color, religion, sex, national origin, age, disability, and protected veteran status.

Attachment 10 – TOWAIR Determination

TOWAIR Determination Results

A routine check of the coordinates, heights, and structure type you provided indicates that this structure does not require registration.

*** NOTICE ***

TOWAIR's findings are not definitive or binding, and we cannot guarantee that the data in TOWAIR are fully current and accurate. In some instances, TOWAIR may yield results that differ from application of the criteria set out in 47 C.F.R. Section 17.7 and 14 C.F.R. Section 77.13. A positive finding by TOWAIR recommending notification should be given considerable weight. On the other hand, a finding by TOWAIR recommending either for or against notification is not conclusive. It is the responsibility of each ASR participant to exercise due diligence to determine if it must coordinate its structure with the FAA. TOWAIR is only one tool designed to assist ASR participants in exercising this due diligence, and further investigation may be necessary to determine if FAA coordination is appropriate.

DETERMINATION Results

PASS SLOPE(50:1): NO FAA REQ-RWY 10499 MTRS OR LESS & 4517.74 MTRS (4.51769) KM AWAY

Type	C/R	Latitude	Longitude	Name	Address	Lowest Elevation (m)	Runway Length (m)
AIRP	C	41-35-22.00N	072-26-32.00W	SALMON RIVER AIRFIELD	HARTFORD MARLBOROUGH, CT	164.6	609.60000000000002

Your Specifications

NAD83 Coordinates

Latitude	41-34-54.3 north
Longitude	072-30-10.3 west

Measurements (Meters)

Overall Structure Height (AGL)	42.7
Support Structure Height (AGL)	36.6
Site Elevation (AMSL)	147.8

Structure Type

LTOWER - Lattice Tower

Tower Construction Notifications
Notify Tribes and Historic Preservation Officers of your plans to build a tower.

CLOSE WINDOW