

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

**RE: APPLICATION OF SBA TOWERS II LLC
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR
THE CONSTRUCTION, MAINTENANCE AND
OPERATION OF A TELECOMMUNICATIONS
FACILITY AT 49 BRAINERD ROAD,
NIANTIC (EAST LYME), CONNECTICUT**

DOCKET NO. 396

Date: August 10, 2010

**APPLICANT'S RESPONSES TO LIMITED RE-OPENING
INTERROGATORIES FROM THE SITING COUNCIL**

Applicant SBA Towers II, LLC ("SBA") hereby submits the following responses to the Siting Council's interrogatories dated August 4, 2010:

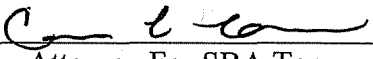
Q1. In SBA Towers II, LLC's (SBA) Motion to Re-open the Evidentiary Hearing dated July 26, 2010, SBA included a Wetland Sketch Map dated 07/23/10 (drawing number EX-1). This drawing included the original proposed site and the Russell Brown Option No. 1 Site as well as details such as access, well location, etc. Provide a similar drawing depicting the original proposed site and the SBA Hybrid Site.

A1. Please see wetlands report dated August 10, 2010 attached hereto as Exhibit A.

Q2. What, if any, wetland impacts are expected from the SBA Hybrid Site? What steps would SBA take to mitigate such effects?

A2. Please see wetlands report dated August 10, 2010 attached hereto as Exhibit A. SBA is willing to employ the mitigation efforts recommended by VHB in this report in order to mitigate any wetlands impact at the SBA Hybrid Site.

Respectfully Submitted,

By: 
Attorney For SBA Towers II LLC
Carrie L. Larson, Esq.
clarson@pullcom.com
Pullman & Comley, LLC
90 State House Square
Hartford, CT 06103-3702
Ph. (860) 424-4312
Fax (860) 424-4370

Certification

This is to certify that a copy of the foregoing has been mailed this date to all parties and intervenors of record.

Kenneth Baldwin
Robinson & Cole LLP
280 Trumbull Street
Hartford, CT 06103


Russell L. Brown
41 Brainerd Road
Niantic, CT 06357

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Tracy Collins
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Christopher B. Fisher
Cuddy & Feder LLP
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Keith Ainsworth
Evans Feldman & Ainsworth, LLC
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New Haven, CT 06505

Joseph Raia
97 West Main Street, Unit 9
Niantic, CT 06357



Carrie L. Larson

EXHIBIT A



Vanasse Hangen Brustlin, Inc.

54 Tuttle Place
Middletown, Connecticut 06457
860 632-1500
FAX 860 632-7879

Memorandum

To: Ms. Hollis M. Redding
SBA Towers II LLC
One Research Drive, Suite 200 C
Westborough, MA 01581

Date: August 10, 2010

Project No.: 40999.30

From: Dean Gustafson
Professional Soil Scientist

Re: Wetland Impact Analysis
300 Foot Alternate Facility
East Lyme - Site No. CT11794
49 Brainerd Road
Niantic (East Lyme), Connecticut

Vanasse Hangen Brustlin, Inc. (VHB) previously completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site. At the request of SBA Towers II LLC, VHB reinspected the subject property on July 23, 2010 to evaluate wetland constraints at an alternate location for the proposed wireless telecommunications facility (Facility) located approximately 500 feet south of the originally proposed location. VHB was provided with Site Plan prepared by CHA, noted as drawing EX-1, as attached. VHB subsequently evaluated potential wetland impacts with an alternate Facility location 300± feet south of the original Facility location. The details of this evaluation are provided below.

One wetland system was previously identified and delineated by VHB on July 29, 2009 in the east-central portion of the subject property in proximity to the proposed SBA Towers II LLC project. This wetland is characterized as a palustrine forested inland wetland bordering along a seasonal intermittent watercourse. The headwaters to this relatively narrow wetland corridor starts on adjoining residential properties to the north. This wetland system is located approximately 48 feet east of the northeast corner of the originally proposed SBA Towers II LLC tower facility (Facility), noted as "Old SBA Lease Area Location" on the attached CHA Site Plan.

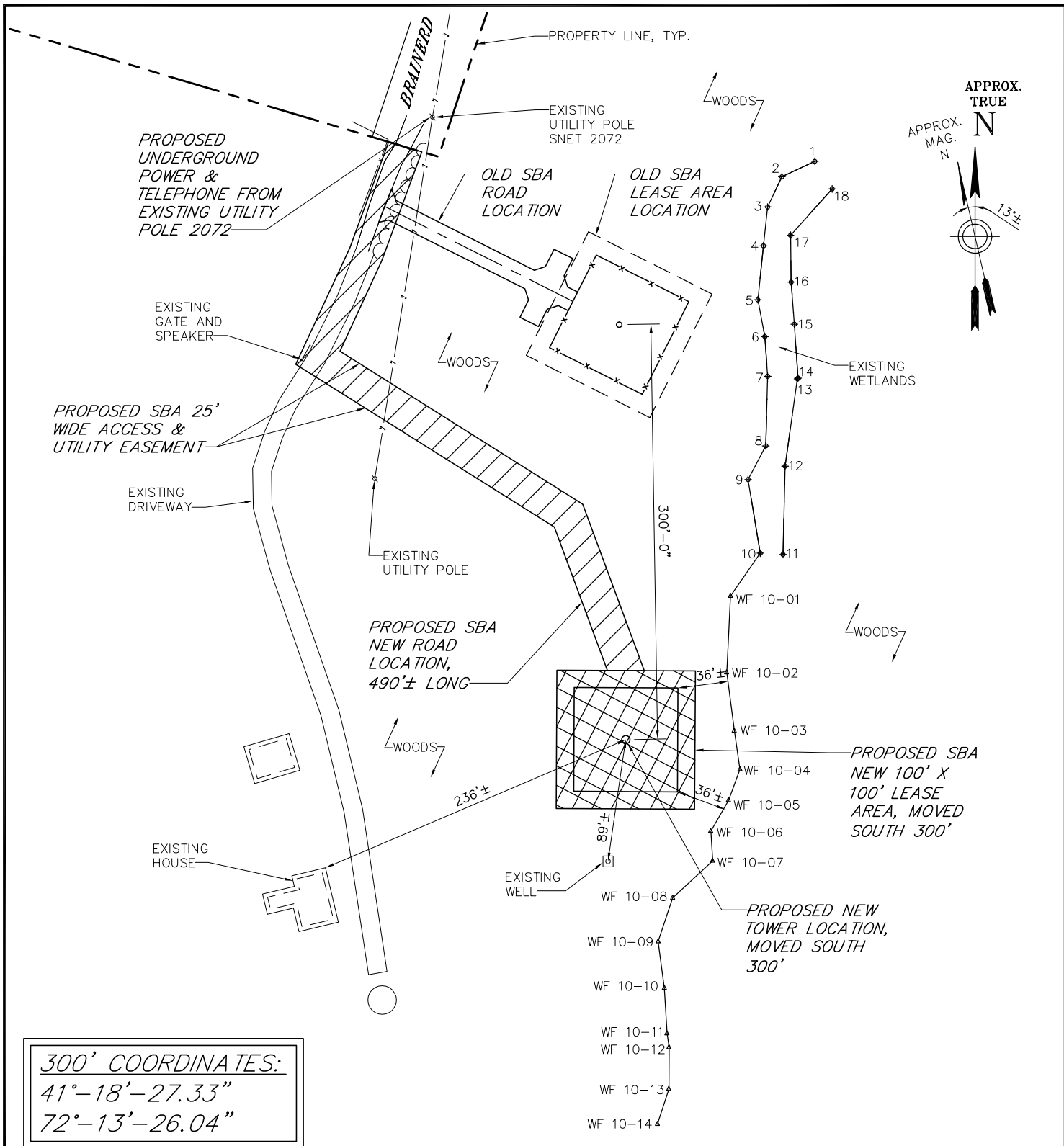
The delineation of the western boundary of this wetland system was extended on July 23, 2010 from wetland flag (WF) 10 with flag series WF 10-1 to 10-18, approximately 100 feet south of the alternate Facility location (500 feet south of the original Facility location). Refer to attached Wetlands Delineation Report, revised July 26, 2010. The wetland boundary shifts to the west as the wetland system expands considerably in width from the section delineated in proximity to the original Facility location. The proposed 500-foot alternate Facility location was flagged in the field by CHA approximately 113 feet south of a water supply well that services the subject property residence. Based on field measurements to estimate the location of the newly delineated wetland boundary in proximity to the proposed Facility, the wetland boundary would extend approximately 8 to 10 feet into the eastern side of the proposed 75-foot by 75-foot compound. It is estimated that

approximately 500 square feet to 1,000 square feet of wetlands would be permanently filled as a result of development of the 500-foot alternate Facility location.

In order to avoid direct wetland impacts, VHB recommended that an alternate location be considered. A "hybrid" alternate site location was considered during the Connecticut Siting Council's hearings on this proposed Facility, approximately 300 feet south of the original Facility. It appears that a Facility could be constructed at this hybrid location without directly impacting wetlands and allow for a sufficient buffer to nearby wetlands. Subsequent surveying of the additional wetland delineation revealed that the 300-foot alternate Facility location would not result in direct wetland impacts and would be approximately 36 feet west of the nearest wetland boundary (wetland flags WF 10-2 and 10-5); refer to attached Site Plan.

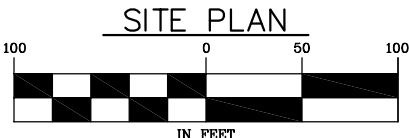
VHB understands that proper erosion control measures would be installed and maintained during construction activities to avoid any temporary impacts to nearby wetland areas. VHB recommends that the Facility be constructed so that a minimum 25 foot buffer exists between the proposed compound and nearest wetland boundary. VHB also recommends that any exposed soils surrounding the proposed 300-foot alternate Facility location be permanently stabilized by loam and seeding with a New England Conservation/Wildlife seed mix (New England Wetland Plants, Inc., or approve equivalent). The New England Conservation/Wildlife seed mix provides a permanent cover of grasses, forbs, wildflowers, legumes and grasses to provide both good erosion control and wildlife habitat value. This mix is designed to be a no maintenance seeding, and it is appropriate for cut and fill slopes and disturbed areas. In addition, VHB recommends that a row of native shrubs (i.e., serviceberry, silky dogwood, and spicebush) be planted along the east side of the proposed compound in the disturbed area between with the compound's fence and limit of work line defined by erosion and sedimentation controls. This buffer enhancement planting of native shrubs would provide food, shelter and nesting habitat for a variety of small animals, in particular several avian species, which would enhance the wildlife habitat value of the buffer between the proposed Facility and nearby wetland system. With incorporation of these mitigation recommendations, it is our opinion that no likely adverse impact to wetlands would occur as a result of the proposed 300-foot alternate Facility location.

Enclosures



300' COORDINATES:
 41°-18'-27.33"
 72°-13'-26.04"

NOTE:
 PROPOSED SBA INSTALLATION SHOWN IS ONLY APPROXIMATE. EXACT LOCATIONS AND DETAILS WILL BE DETERMINED BY FINAL ENGINEERING DESIGN.



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CT11794
 EAST LYME
 49 BRAINERD ROAD
 NIAN TIC (EAST LYME), CT 06357
 NEW LONDON COUNTY
 CHA PROJ. NO. - 15363-1046

1 OF 1
 REV 0
 EX-1



WETLANDS DELINEATION REPORT

Vanasse Hangen Brustlin, Inc.

Date: September 16, 2009
Revised July 26, 2010

Project No.: 40999.30

Prepared For: Hollis M. Redding
SBA Network Services, Inc.
One Research Drive
Suite 200C
Westborough, MA 01581

Site Location: 49 Brainerd Road
East Lyme, Connecticut

Site Map: VHB Wetland Sketch Map, updated 7/23/10

Inspection Date: 7/29/09; additional delineation on 7/23/10

Field Conditions: (7/29/09) Weather: ptly. sunny, mid 80's General Soil Moisture: moist
Snow Depth: 0 inches Frost Depth: 0 inches
(7/23/10) Weather: lt. rain, mid 80's General Soil Moisture: moist
Snow Depth: 0 inches Frost Depth: 0 inches

Type of Wetlands Identified and Delineated:

Connecticut Wetlands and Watercourses
Tidal Wetlands
U.S. Army Corps of Engineers

Field Numbering Sequence of Wetlands Boundary: WF 1 to 10, WF 11 to 18; additional delineation extending from WF 10: WF 10-1 to 10-18
[as depicted on attached wetland sketch map]

The classification systems of the Massachusetts Department of Environmental Protection, National Cooperative Soil Survey, the U.S. Department of Agriculture, Natural Resources Conservation Service, County Soil Survey Identification Legend, and/or United States Army Corps of Engineers New England District were used in this investigation.

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

The wetlands delineation was conducted and reviewed by:

Dean Gustafson
Professional Soil Scientist

Enclosures

Attachments



-
- Wetland Delineation Field Form
 - Soil Map
 - Soil Report
 - Wetland Delineation Sketch Map

Wetland Delineation Field Form

Project Address:	49 Brainerd Road East Lyme, Connecticut	Project Number:	40999.30
Inspection Date:	7/29/09 rev. 7/23/10	Inspector:	Dean Gustafson, PSS
Wetland I.D.:	Wetland 1		

Field Conditions:	Weather: ptly. sunny, mid 80's; cloudy light rain, mid 80's	Snow Depth: none
	General Soil Moisture: moist	Frost Depth: none
Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>	
	ACOE <input checked="" type="checkbox"/>	
	Tidal <input type="checkbox"/>	

Field Numbering Sequence: WF 1 to 10, WF 11 to 18, connect from WF 10: WF 10-1 to 10-18

WETLAND HYDROLOGY:

NONTIDAL

Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input type="checkbox"/>	Seasonally Flooded <input checked="" type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input type="checkbox"/>	Seasonally Saturated – seepage <input checked="" type="checkbox"/>	Seasonally Saturated - perched <input type="checkbox"/>
Comments:		

TIDAL

Subtidal <input type="checkbox"/>	Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>
Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>	
Comments: N/A		

WETLAND TYPE:

SYSTEM:

Estuarine <input type="checkbox"/>	Riverine <input type="checkbox"/>	Palustrine <input checked="" type="checkbox"/>
Lacustrine <input type="checkbox"/>	Marine <input type="checkbox"/>	
Comments:		

CLASS:

Emergent <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	Wet Meadow <input type="checkbox"/>
Comments:		

WATERCOURSE TYPE:

Perennial <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>	Tidal <input type="checkbox"/>
Comments: small seasonal intermittent stream flows through interior of narrow wetland corridor		

SPECIAL AQUATIC HABITAT:

Vernal Pool <input type="checkbox"/>	Other <input type="checkbox"/>	
Comments: N/A		

Wetland Delineation Field Form (Cont.)

MAPPED SOILS:

SOIL SERIES (Map Unit Symbol)	WET	UP	NRCS MAPPED	FIELD IDD/ CONFIRMED
Ridgebury, Leicester, and Whitman soils, extremely stony (3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Charlton-Chatfield complex (73)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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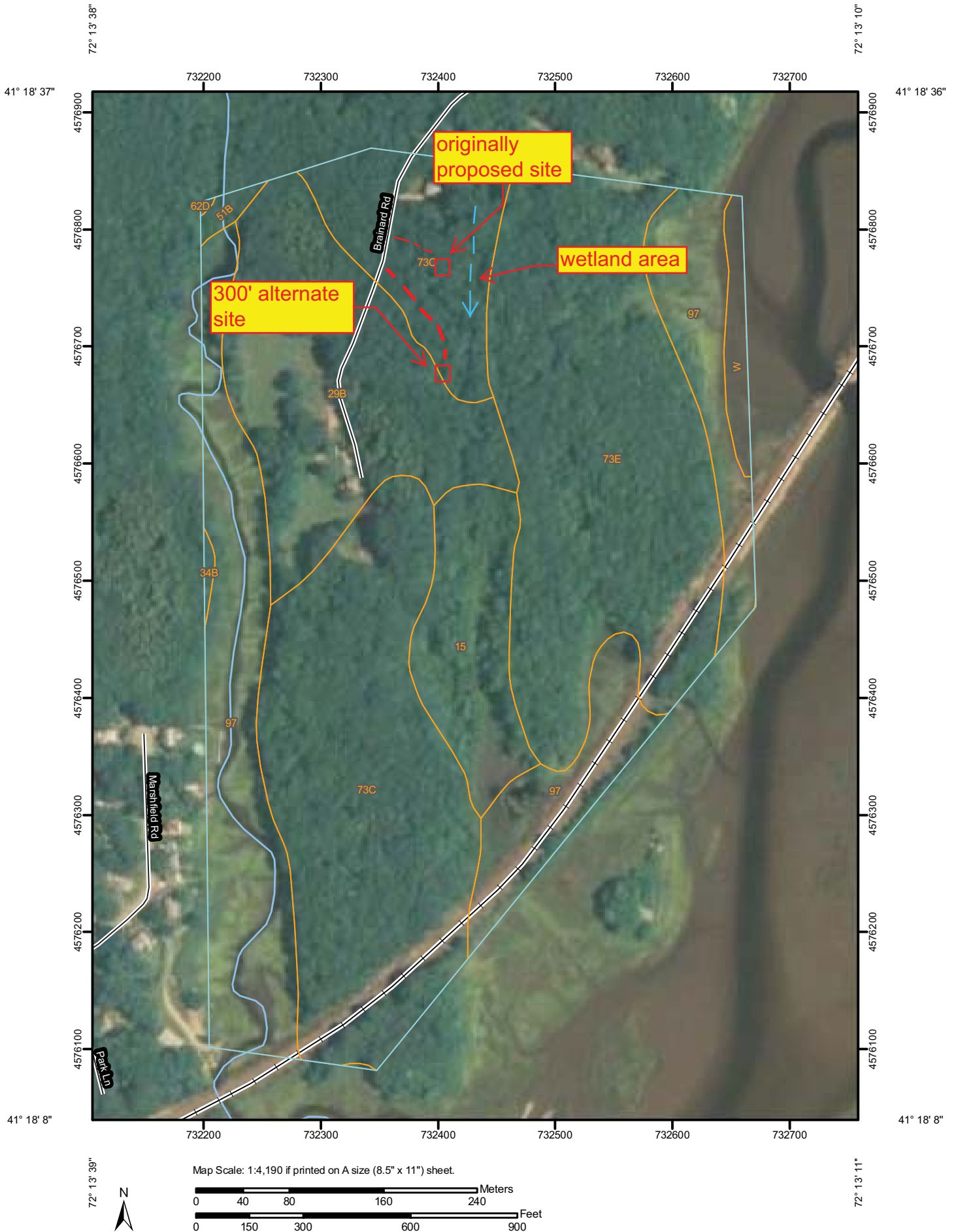
DOMINANT PLANTS:

red maple (<i>Acer rubrum</i>)	reed canarygrass (<i>Phalaris arundinacea</i>)
highbush blueberry (<i>Vaccinium corymbosum</i>)	speckled alder (<i>Alnus rugosa</i>)
cinnamon fern (<i>Osmunda cinnamomea</i>)	skunk cabbage (<i>Symplocarpus foetidus</i>)
royal fern (<i>Osmunda regalis</i>)	narrowleaf cattail (<i>Typha angustifolia</i>)
northern arrowwood (<i>Viburnum dentatum</i>)	sedge sp. (<i>Carex sp.</i>)








































WETLAND NARRATIVE:

Wetland 1 is located approximately 50 feet east of the proposed wireless telecommunications facility. This wetland feature is well confined in a relatively narrow valley constrained by a shallow bedrock ridge to the west and a larger ridge to the east. The narrow wetland corridor extends off the subject property to the north, flowing south with surface flows conveyed through a relatively small shallow seasonal intermittent watercourse channel. The wetland area broadens considerably generally from the existing well to the south into a more substantial forested wetland system.

Soil Map—State of Connecticut
(49 Brainard Road, East Lyme, CT)



MAP LEGEND

 Area of Interest (AOI)	 Very Stony Spot
 Soils	 Wet Spot
 Area of Interest (AOI)	 Other
 Soil Map Units	Special Line Features
Special Point Features	 Gully
 Blowout	 Short Steep Slope
 Borrow Pit	 Other
 Clay Spot	Political Features
 Closed Depression	 Cities
 Gravel Pit	Water Features
 Gravelly Spot	 Oceans
 Landfill	 Streams and Canals
 Lava Flow	Transportation
 Marsh or swamp	 Rails
 Mine or Quarry	 Interstate Highways
 Miscellaneous Water	 US Routes
 Perennial Water	 Major Roads
 Rock Outcrop	 Local Roads
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	
 Spoil Area	
 Stony Spot	

MAP INFORMATION

Map Scale: 1:4,190 if printed on A size (8.5" x 11") sheet.
 The soil surveys that comprise your AOI were mapped at 1:12,000.
 Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 18N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 6, Mar 22, 2007
 Date(s) aerial images were photographed: 7/17/2006

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

State of Connecticut (CT600)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
15	Scarboro muck	4.7	6.5%
29B	Agawam fine sandy loam, 3 to 8 percent slopes	11.2	15.4%
34B	Merrimac sandy loam, 3 to 8 percent slopes	0.1	0.2%
51B	Sutton fine sandy loam, 2 to 8 percent slopes, very stony	0.3	0.4%
62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	0.0	0.0%
73C	Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky	21.3	29.5%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	18.0	24.9%
97	Pawcatuck mucky peat	15.7	21.8%
W	Water	0.9	1.3%
Totals for Area of Interest		72.2	100.0%

Map Unit Description (Brief)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the selected area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit. A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The "Map Unit Description (Brief)" report gives a brief, general description of the major soils that occur in a map unit. Descriptions of nonsoil (miscellaneous areas) and minor map unit components may or may not be included. This description is written by the local soil scientists responsible for the respective soil survey area data. A more detailed description can be generated by the "Map Unit Description" report.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief)

State of Connecticut

Description Category: SOI

Map Unit: 15—Scarboro muck

Scarboro Muck This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Scarboro soils. 20 percent minor components. Scarboro soils This component occurs on outwash plain terrace, depression, and drainageway landforms. The parent material consists of organic material over sandy glaciofluvial deposits derived from gneiss, granite, and schist. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 4.8 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.8 LEP (low). The flooding frequency for this component is none. The ponding hazard is occasional. The minimum depth to a seasonal water table, when present, is about 4 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 5w Typical Profile: 0 to 12 inches; muck 12 to 17 inches; loamy sand 17 to 31 inches; stratified sand to loamy fine sand 31 to 72 inches; stratified very gravelly coarse sand to loamy fine sand

Map Unit: 29B—Agawam fine sandy loam, 3 to 8 percent slopes

Agawam Fine Sandy Loam, 3 To 8 Percent Slopes This map unit is in the Connecticut Valley New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 50 degrees F. (7 to 10 degrees C.) This map unit is 80 percent Agawam soils. 20 percent minor components. Agawam soils This component occurs on valley and outwash plain terrace landforms. The parent material consists of eolian deposits over glaciofluvial deposits derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 4.8 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 8 inches; fine sandy loam 8 to 14 inches; fine sandy loam 14 to 24 inches; fine sandy loam 24 to 60 inches; stratified very gravelly coarse sand to fine sand

Map Unit: 34B—Merrimac sandy loam, 3 to 8 percent slopes

Merrimac Sandy Loam, 3 To 8 Percent Slopes This map unit is in the New England and Eastern New York Upland, Southern Part Connecticut Valley Major Land Resource Area. The mean annual precipitation is 32 to 50 inches (813 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Merrimac soils. 20 percent minor components. Merrimac soils This component occurs on valley outwash plain, terrace, and kame landforms. The parent material consists of sandy glaciofluvial deposits derived from schist, granite, and gneiss. The slope ranges from 3 to 8 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is somewhat excessively drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 4.0 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 2e Typical Profile: 0 to 9 inches; sandy loam 9 to 16 inches; sandy loam 16 to 24 inches; gravelly sandy loam 24 to 60 inches; stratified very gravelly coarse sand to gravelly sand

Map Unit: 51B—Sutton fine sandy loam, 2 to 8 percent slopes, very stony

Sutton Fine Sandy Loam, 2 To 8 Percent Slopes, Very Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 80 percent Sutton soils. 20 percent minor components. Sutton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, gneiss, and schist. The slope ranges from 2 to 8 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.3 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is about 24 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 6 inches; fine sandy loam 6 to 12 inches; fine sandy loam 12 to 24 inches; fine sandy loam 24 to 28 inches; fine sandy loam 28 to 36 inches; gravelly fine sandy loam 36 to 65 inches; gravelly sandy loam

Map Unit: 62D—Canton and Charlton soils, 15 to 35 percent slopes, extremely stony

Canton And Charlton Soils, 15 To 35 Percent Slopes, Extremely Stony This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Canton soils, 35 percent Charlton soils. 20 percent minor components Canton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from schist, granite, and gneiss. The slope ranges from 15 to 35 percent and the runoff class is medium. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 1.98 in/hr (moderately rapid), with about 5.6 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; moderately decomposed plant material 1 to 3 inches; gravelly fine sandy loam 3 to 15 inches; gravelly loam 15 to 24 inches; gravelly loam 24 to 30 inches; gravelly loam 30 to 60 inches; very gravelly loamy sand Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 15 to 35 percent and the runoff class is medium. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam

Map Unit: 73C—Charlton-Chatfield complex, 3 to 15 percent slopes, very rocky

Charlton-Chatfield Complex, 3 To 15 Percent Slopes, Very Rocky This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Charlton soils, 30 percent Chatfield soils. 25 percent minor components. Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist and gneiss. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam Chatfield soils This component occurs on upland hill and ridge landforms. The parent material consists of melt-out till derived from gneiss, granite, and schist. The slope ranges from 3 to 15 percent and the runoff class is low. The depth to a restrictive feature is 20 to 40 inches to bedrock (lithic). The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 6s Typical Profile: 0 to 1 inches; highly decomposed plant material 1 to 6 inches; gravelly fine sandy loam 6 to 15 inches; gravelly fine sandy loam 15 to 29 inches; gravelly fine sandy loam 29 to 36 inches; unweathered bedrock

Map Unit: 73E—Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky

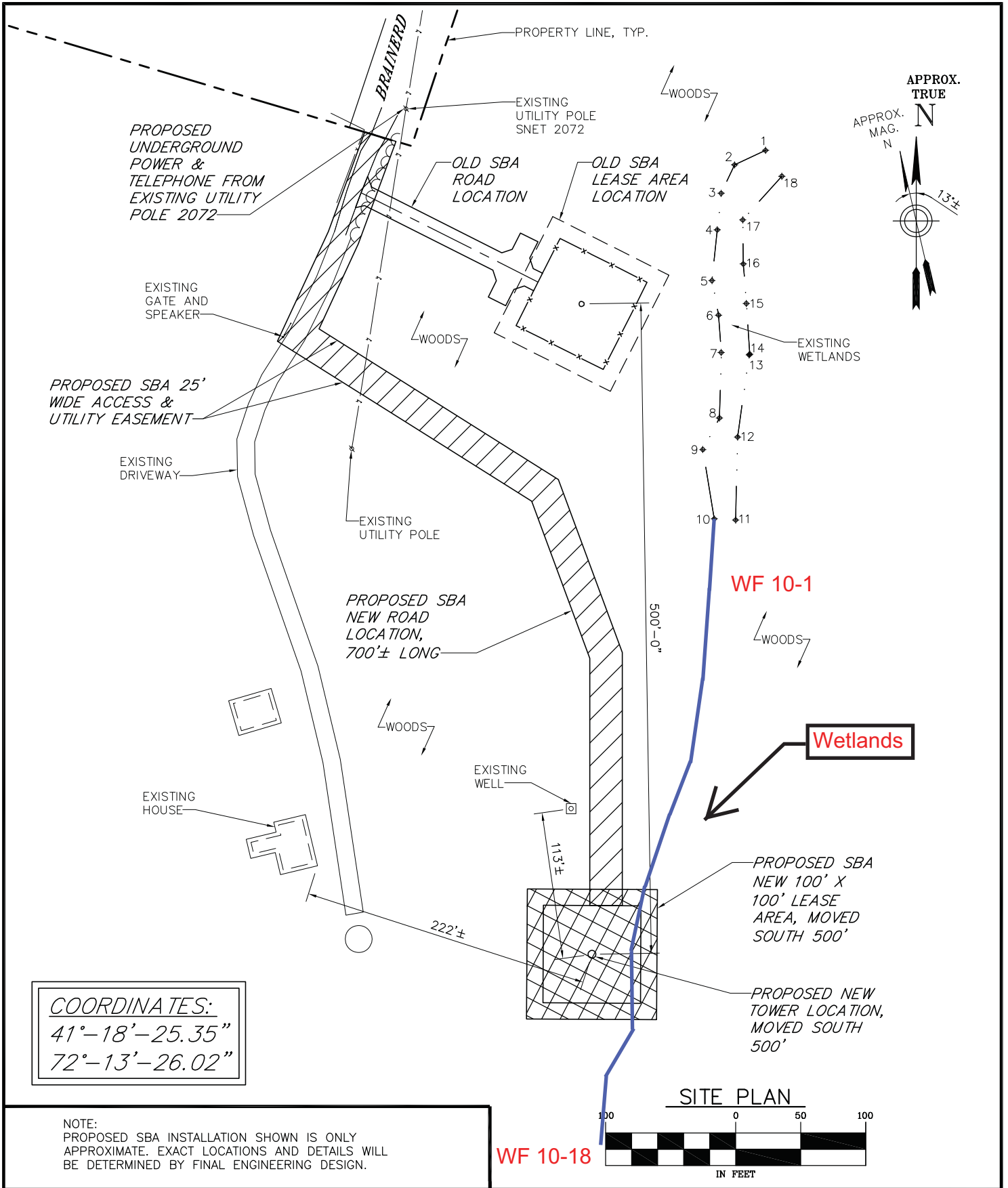
Charlton-Chatfield Complex, 15 To 45 Percent Slopes, Very Rocky This map unit is in the New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 37 to 49 inches (940 to 1244 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Charlton soils, 30 percent Chatfield soils. 25 percent minor components. Charlton soils This component occurs on upland hill landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 15 to 45 percent and the runoff class is high. The depth to a restrictive feature is greater than 60 inches. The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 6.4 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 4 inches; fine sandy loam 4 to 7 inches; fine sandy loam 7 to 19 inches; fine sandy loam 19 to 27 inches; gravelly fine sandy loam 27 to 65 inches; gravelly fine sandy loam Chatfield soils This component occurs on upland hill and ridge landforms. The parent material consists of melt-out till derived from gneiss, granite, and schist. The slope ranges from 15 to 45 percent and the runoff class is high. The depth to a restrictive feature is 20 to 40 inches to bedrock (lithic). The drainage class is well drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 3.3 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.5 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table, when present, is greater than 6 feet. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 0 mmhos/cm (nonsaline). The Nonirrigated Land Capability Class is 7s Typical Profile: 0 to 1 inches; highly decomposed plant material 1 to 6 inches; gravelly fine sandy loam 6 to 15 inches; gravelly fine sandy loam 15 to 29 inches; gravelly fine sandy loam 29 to 36 inches; unweathered bedrock

Map Unit: 97—Pawcatuck mucky peat

Pawcatuck Mucky Peat This map unit is in the Connecticut Valley New England and Eastern New York Upland, Southern Part Major Land Resource Area. The mean annual precipitation is 40 to 50 inches (1016 to 1270 millimeters) and the average annual air temperature is 48 to 52 degrees F. (9 to 11 degrees C.) This map unit is 85 percent Pawcatuck soils. 15 percent minor components. Pawcatuck soils This component occurs on coastal plain salt marsh and tidal marsh landforms. The parent material consists of herbaceous organic material over sandy glaciofluvial deposits. The slope ranges from 0 to 2 percent and the runoff class is negligible. The depth to a restrictive feature is greater than 60 inches. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 4.1 inches (moderate) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 7.8 LEP (high). The flooding frequency for this component is frequent. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 6 inches. The maximum calcium carbonate within 40 inches is none. The maximum amount of salinity in any layer is about 32 mmhos/cm (strongly saline). The Nonirrigated Land Capability Class is 8 Typical Profile: 0 to 12 inches; mucky peat 12 to 40 inches; mucky peat 40 to 46 inches; mucky peat 46 to 50 inches; very fine sandy loam 50 to 60 inches; loamy sand

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 6, Mar 22, 2007



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