



**Memorandum**

To: Chuck Regulbuto  
Optasite, Inc.  
One Research Drive, Suite 200C  
Westborough, MA 01581

Date: August 31, 2006

Project No.: 40999.08

From: Sara Fusco  
Soil Scientist

Re: Wetland Inspection  
Proposed Telecommunication Facility  
940 Meriden Road  
Waterbury, CT

---

Vanasse Hangen Brustlin, Inc. (VHB) has completed on-site investigations to determine if wetlands and/or watercourses are located on the above-referenced Site. VHB has relied upon the accuracy of information provided by Optasite, Inc. regarding the proposed lease area, access road, and utility easement locations for identifying wetlands and watercourses within and proximate to said locations.

VHB understands that Optasite, Inc. proposes to construct a wireless telecommunication facility at 940 Meriden Road in Waterbury, Connecticut (the "Site"). The facility will include an approximate 100-foot by 100-foot fenced compound area that will house a 120-foot monopole and associated telecommunication equipment and structures. Access to the Site will be gained via a proposed 12-foot gravel access drive from an existing asphalt drive. Wetlands identified and delineated on the property include a small potential vernal pool, a large palustrine wetland system and a small man made depressional wetland; refer to the attached Wetlands Delineation Report for further detail. No wetlands or watercourses were identified within 300 feet of proposed development activities. The nearest wetland is the man made depression (Wetland 3) located approximately 325 feet east of the proposed lease area. Therefore, proposed development activities will not directly or indirectly affect wetlands or watercourses and will not have a significant adverse effect on wetland resources of the City of Waterbury.

Enclosure

Ccc: Julie Kohler, Esq. Cohen and Wolf PPC



*Vanasse Hangen Brustlin, Inc.*

**WETLANDS DELINEATION REPORT**

**Date:** August 31, 2006

**Project No.:** 40999.08

**Prepared For:** Chuck Regalbuto  
Project Manager  
Optasite, Inc.  
One Research Drive, Suite 200C  
Westborough, MA 01581

**Site Location:** 940 Meriden Road  
Waterbury, CT

**Site Map:** Sketch Map, 8/31/06 – S. Fusco

**Inspection Date:** August 31, 2006

**Field Conditions:** Weather: sunny, mid 70's  
Snow Depth: 0 inches

General Soil Moisture: moist  
Frost Depth: 0 inches

**Type of Wetlands Identified and Delineated:**

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

<input checked="" type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

**Field Numbering Sequence of Wetlands Boundary:** WF1-01 to WF1-06; WF2-01 to WF2-17;  
WF2A-01 to WF2A-20; WF3-01 to WF3-04

*[as depicted on attached wetland sketch map]*

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

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

The wetlands delineation was conducted by:      The wetlands delineation was reviewed by:

*Sara Fusco DG*

Sara Fusco  
Soil Scientist

*Dean Gustafson*

Dean Gustafson  
Professional Soil Scientist

Enclosures (4)

54 Tuttle Place  
Middletown, Connecticut 06457-1847  
**860.632.1500 ■ FAX 860.632.7879**  
email: info@vhb.com  
www.vhb.com

# Attachments



- 
- <sup>TM</sup> Wetland Delineation Field Form
  - <sup>TM</sup> Soil Map
  - <sup>TM</sup> Soil Report
  - <sup>TM</sup> Wetland Delineation Sketch Map

### Wetland Delineation Field Form

Project Name:	Optasite, Waterbury CT	Project Number:	40999.08
Inspection Date:	8/31/06	Inspector:	S. Fusco
Wetland I.D.:	1		

Field Conditions:	Weather: Sunny, mid 70's	Snow Depth:	0
	General Soil Moisture: Moist	Frost Depth:	0
Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>		
	ACOE <input type="checkbox"/>		
	Tidal <input type="checkbox"/>		
Field Numbering Sequence: WF1-01 to WF1-06			

#### 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 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 Marsh <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	
Comments:		

#### WATERCOURSE TYPE:

Upper Perennial <input type="checkbox"/>	Lower Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>
Tidal <input type="checkbox"/>		
Comments: N/A		

#### SPECIAL AQUATIC HABITAT:

Vernal Pool <input checked="" type="checkbox"/>	Other <input type="checkbox"/>	
Comments: +/- 1,000 sq		

#### DOMINANT PLANTS:

Red Maple	
Winterberry	
High bush blueberry	

# Wetland Delineation Field Form

Project Name:	Optasite, Waterbury CT	Project Number:	40999.08
Inspection Date:	8/31/06	Inspector:	S. Fusco
Wetland I.D.:	2		

Field Conditions:	Weather: Sunny, mid 70's	Snow Depth:	0
	General Soil Moisture: Moist	Frost Depth:	0
Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>		
	ACOE <input type="checkbox"/>		
	Tidal <input type="checkbox"/>		
Field Numbering Sequence: WF2-01 to WF2-17			

## WETLAND HYDROLOGY:

### Nontidal

Regularly Flooded <input type="checkbox"/>	Irregularly Flooded <input type="checkbox"/>	Permanently Flooded <input type="checkbox"/>
Semipermanently Flooded <input checked="" type="checkbox"/>	Seasonally Flooded <input type="checkbox"/>	Temporarily Flooded <input type="checkbox"/>
Permanently Saturated <input checked="" type="checkbox"/>	Seasonally Saturated - seepage <input 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 Marsh <input type="checkbox"/>	Scrub-shrub <input checked="" type="checkbox"/>	Forested <input type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	
Comments:		

## WATERCOURSE TYPE:

Upper Perennial <input type="checkbox"/>	Lower Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>
Tidal <input type="checkbox"/>		
Comments: N/A		

## SPECIAL AQUATIC HABITAT:

Vernal Pool <input type="checkbox"/>	Other <input type="checkbox"/>	
Comments: water impounded by berm/easement		

## DOMINANT PLANTS:

Red Maple	elderberry
Silky dogwood	tussock sedge
Spicebush	cattail
Peppercorn	Jewelweed
Spirea	cinnamon fern
winterberry	Silene coccinea
High bush blueberry	tulip poplar

⊗ dense stand of Japanese Knotweed at edge near drive

## Wetland Delineation Field Form

Project Name:	Optasite, Waterbury CT	Project Number:	40999.08
Inspection Date:	8/31/06	Inspector:	S. Fusco
Wetland I.D.:	2A		

Field Conditions:	Weather: Sunny, mid 70's	Snow Depth: 0
	General Soil Moisture: Moist	Frost Depth: 0
Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>	
	ACOE <input type="checkbox"/>	
	Tidal <input type="checkbox"/>	
Field Numbering Sequence: WFAA-01 to WFAA-20		

### 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 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 Marsh <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	
Comments:		

### WATERCOURSE TYPE:

Upper Perennial <input type="checkbox"/>	Lower Perennial <input type="checkbox"/>	Intermittent <input checked="" type="checkbox"/>
Tidal <input type="checkbox"/>		
Comments:		

### SPECIAL AQUATIC HABITAT:

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

### DOMINANT PLANTS:

Red maple	Highbush blueberry
tulip poplar	black birch
green ash	yellow birch
Spicebush	
pepperbush	
Silene cabbage	
Jack-in-the-pulpit	

### Wetland Delineation Field Form

Project Name:	Optasite, Waterbury	Project Number:	40999.08
Inspection Date:	8/31/06	Inspector:	S. Fusco
Wetland I.D.:	3		

Field Conditions:	Weather: Sunny, mid 70's	Snow Depth: 0
	General Soil Moisture: moist	Frost Depth: 0
Type of Wetland Delineation:	Connecticut <input checked="" type="checkbox"/>	
	ACOE <input type="checkbox"/>	
	Tidal <input type="checkbox"/>	
Field Numbering Sequence: WF3-01 to WF3-04		

#### 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 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: man made depression at toe slope +/- 100 ft		

##### 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 Marsh <input type="checkbox"/>	Scrub-shrub <input type="checkbox"/>	Forested <input checked="" type="checkbox"/>
Open Water <input type="checkbox"/>	Disturbed <input type="checkbox"/>	
Comments:		

#### WATERCOURSE TYPE:

Upper Perennial <input type="checkbox"/>	Lower Perennial <input type="checkbox"/>	Intermittent <input type="checkbox"/>
Tidal <input type="checkbox"/>		
Comments: N/A		

#### SPECIAL AQUATIC HABITAT:

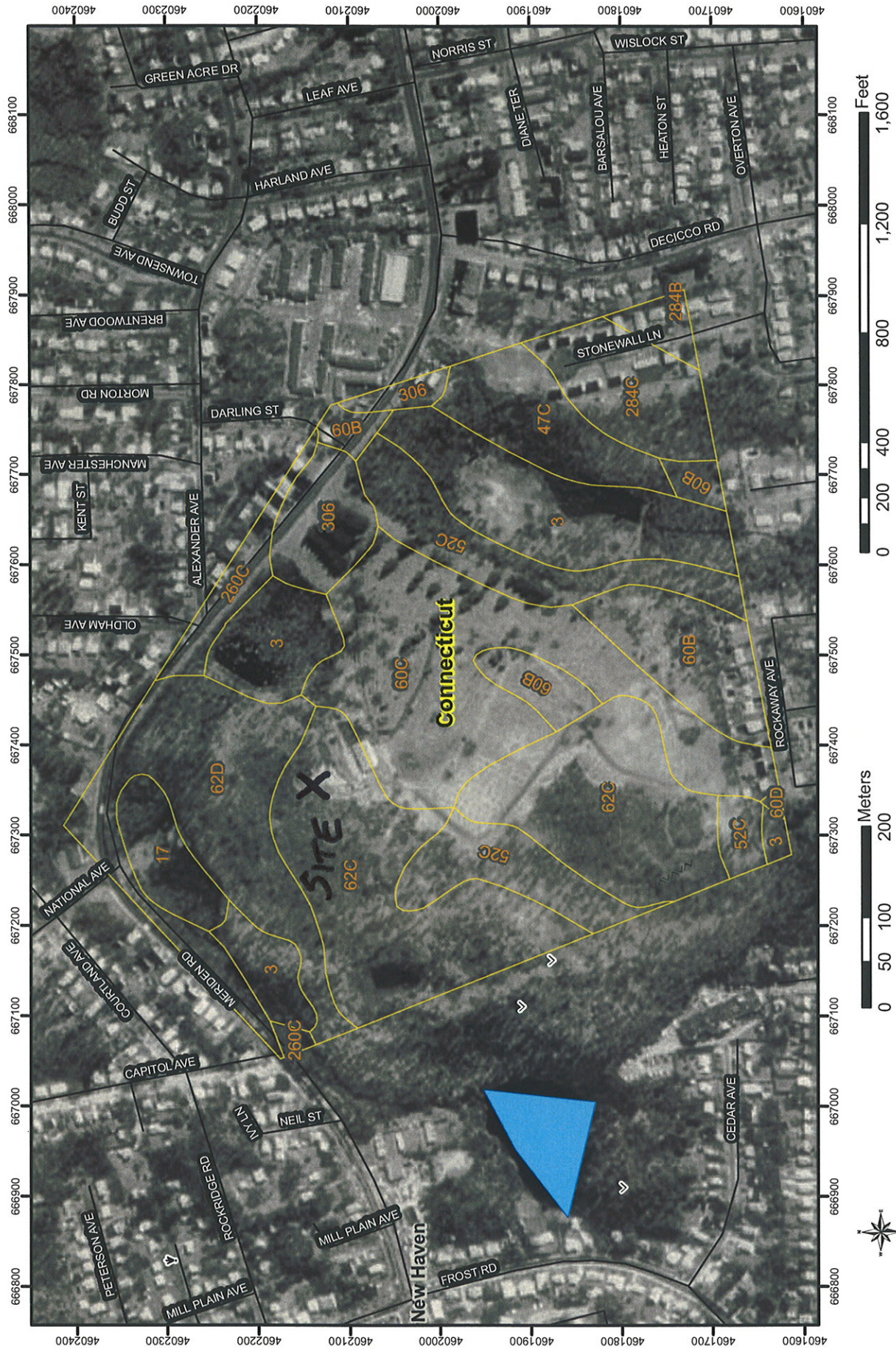
Vernal Pool <input type="checkbox"/>	Other <input type="checkbox"/>	
Comments: N/A		

#### DOMINANT PLANTS:

Cinnamon fern	
Skunk cabbage	









































# SOIL SURVEY OF STATE OF CONNECTICUT





# SOIL SURVEY OF STATE OF CONNECTICUT

## MAP LEGEND

	Soil Map Units
	Cities
	Detailed Counties
	Detailed States
	Interstate Highways
	Roads
	Rails
	Water
	Hydrography
	Oceans
	Escarpment, bedrock
	Escarpment, non-bedrock
	Gulley
	Levee
	Slope
	Blowout
	Borrow Pit
	Clay Spot
	Depression, closed
	Eroded Spot
	Gravel Pit
	Gravelly Spot
	Gulley
	Lava Flow
	Landfill
	Marsh or Swamp
	Miscellaneous Water
	Rock Outcrop
	Saline Spot
	Sandy Spot
	Slide or Slip
	Sinkhole
	Sodic Spot
	Spoil Area
	Stony Spot
	Very Stony Spot
	Perennial Water
	Wet Spot

## MAP INFORMATION

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 18

Soil Survey Area: State of Connecticut  
Spatial Version of Data: 3  
Soil Map Compilation Scale: 1:12000

Map comprised of aerial images photographed on these dates:  
4/3/1991; 4/12/1991; 4/13/1992

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 Summary

## State of Connecticut

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, extremely stony	13.8	13.2
17	Timakwa and Natchaug soils	2.7	2.6
47C	Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony	4.9	4.7
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	10.5	10.0
60B	Canton and Charlton soils, 3 to 8 percent slopes	8.0	7.6
60C	Canton and Charlton soils, 8 to 15 percent slopes	16.6	15.8
60D	Canton and Charlton soils, 15 to 25 percent slopes	0.1	0.1
62C	Canton and Charlton soils, 3 to 15 percent slopes, extremely stony	23.0	22.0
62D	Canton and Charlton soils, 15 to 35 percent slopes, extremely stony	12.8	12.2
260C	Charlton-Urban land complex, 8 to 15 percent slopes	2.4	2.3
284B	Paxton-Urban land complex, 3 to 8 percent slopes	1.1	1.0
284C	Paxton-Urban land complex, 8 to 15 percent slopes	4.9	4.7
306	Udorthents-Urban land complex	4.1	3.9

# Map Unit Description (Brief)

State of Connecticut

[Only those map units that have entries for the selected non-technical description categories are included in this report]

Map Unit: 3 - Ridgebury, Leicester, and Whitman soils, extremely stony

Description Category: SOI

## Ridgebury, Leicester And Whitman Soils, 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 50 inches (940 to 1270 millimeters) and the average annual air temperature is 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 40 percent Ridgebury soils, 35 percent Leicester soils, 15 percent Whitman soils. 10 percent minor components.

### Ridgebury soils

This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is 20 to 30 inches to densic material. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 2.5 inches (low) 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 3 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 7s

#### Typical Profile:

0 to 1 inches; slightly decomposed plant material  
1 to 5 inches; fine sandy loam  
5 to 14 inches; fine sandy loam  
14 to 21 inches; fine sandy loam  
21 to 60 inches; sandy loam

### Leicester soils

This component occurs on upland drainageway and depression landforms. The parent material consists of melt-out till derived from granite, schist, and gneiss. The slope ranges from 0 to 5 percent and the runoff class is very low. The depth to a restrictive feature is greater than 60 inches. The drainage class is poorly drained. The slowest permeability within 60 inches is about 0.57 in/hr (moderate), with about 7.4 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 about 9 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 7s

#### Typical Profile:

0 to 1 inches; moderately decomposed plant material  
1 to 7 inches; fine sandy loam  
7 to 10 inches; fine sandy loam  
10 to 18 inches; fine sandy loam  
18 to 24 inches; fine sandy loam  
24 to 43 inches; gravelly fine sandy loam  
43 to 65 inches; gravelly fine sandy loam

### Whitman soils

This component occurs on upland drainageway and depression landforms. The parent material consists of lodgement till derived from gneiss, schist, and granite. The slope ranges from 0 to 2 percent and the runoff class is very low. The depth to a restrictive feature is 12 to 20 inches to densic material. The drainage class is very poorly drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 1.9 inches (very low) 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 occasional. The minimum depth to a seasonal water table, when present, is about 0 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 7s

#### Typical Profile:

0 to 1 inches; slightly decomposed plant material  
1 to 9 inches; fine sandy loam  
9 to 16 inches; fine sandy loam  
16 to 22 inches; fine sandy loam  
22 to 60 inches; fine sandy loam

# Map Unit Description (Brief)

State of Connecticut

Map Unit: 17 - Timakwa and Natchaug soils

Description Category: SOI

## Timakwa And Natchaug Soils

This map unit is in the 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 45 to 52 degrees F. (7 to 11 degrees C.) This map unit is 45 percent Timakwa soils, 40 percent Natchaug soils. 15 percent minor components.

## Timakwa soils

This component occurs on depression landforms. The parent material consists of woody organic material over sandy and gravelly 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 5.95 in/hr (rapid), with about 16.2 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. 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 10 inches; muck  
10 to 21 inches; muck  
21 to 24 inches; muck  
24 to 37 inches; muck  
37 to 47 inches; very gravelly loamy coarse sand  
47 to 60 inches; gravelly loamy very fine sand

## Natchaug soils

This component occurs on depression landforms. The parent material consists of woody organic material over loamy alluvium, loamy glaciofluvial deposits, or loamy till. 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 0.20 in/hr (moderately slow), with about 15.6 inches (very high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 3.9 LEP (moderate). The flooding frequency for this component is rare. The ponding hazard is frequent. The minimum depth to a seasonal water table, when present, is about 0 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 2 inches; peat  
2 to 4 inches; peat  
4 to 6 inches; muck  
6 to 11 inches; muck  
11 to 18 inches; muck  
18 to 24 inches; muck  
24 to 33 inches; fine sandy loam  
33 to 36 inches; fine sandy loam  
36 to 80 inches; loam

## Map Unit Description (Brief)

State of Connecticut

Map Unit: 47C - Woodbridge fine sandy loam, 2 to 15 percent slopes, extremely stony

Description Category: SOI

### Woodbridge Fine Sandy Loam, 2 To 15 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 80 percent Woodbridge soils. 20 percent minor components.

### Woodbridge soils

This component occurs on upland drumlin and hill landforms. The parent material consists of lodgement till derived from schist, granite, and gneiss. The slope ranges from 2 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is moderately well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.9 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 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 7s

### Typical Profile:

0 to 7 inches; fine sandy loam  
7 to 18 inches; fine sandy loam  
18 to 26 inches; fine sandy loam  
26 to 30 inches; fine sandy loam  
30 to 43 inches; gravelly fine sandy loam  
43 to 65 inches; gravelly fine sandy loam

Map Unit: 52C - Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony

Description Category: SOI

### Sutton Fine Sandy Loam, 2 To 15 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 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 15 percent and the runoff class is 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 7s

### 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 Description (Brief)

State of Connecticut

Map Unit: 60B - Canton and Charlton soils, 3 to 8 percent slopes

Description Category: SOI

## Canton And Charlton Soils, 3 To 8 Percent Slopes

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 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 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 2e

#### 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 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 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 2e

#### 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 Description (Brief)

State of Connecticut

Map Unit: 60C - Canton and Charlton soils, 8 to 15 percent slopes

Description Category: SOI

## Canton And Charlton Soils, 8 To 15 Percent Slopes

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 8 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 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 3e

#### 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 8 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 3e

#### 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 Description (Brief)

State of Connecticut

Map Unit: 60D - Canton and Charlton soils, 15 to 25 percent slopes

Description Category: SOI

## Canton And Charlton Soils, 15 To 25 Percent Slopes

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 25 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 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 4e

## 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 25 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 4e

## 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 Description (Brief)

State of Connecticut

Map Unit: 62C - Canton and Charlton soils, 3 to 15 percent slopes, extremely stony

Description Category: SOI

## Canton And Charlton Soils, 3 To 15 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 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 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 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 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 Description (Brief)

State of Connecticut

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

Description Category: SOI

## 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 Description (Brief)

State of Connecticut

Map Unit: 260C - Charlton-Urban land complex, 8 to 15 percent slopes

Description Category: SOI

### Charlton-Urban Land Complex, 8 To 15 Percent Slopes

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 40 percent Charlton soils, 35 percent Urban Land. 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 8 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 3e

### 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

### Urban Land

Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 8 to 15 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8

Map Unit: 284B - Paxton-Urban land complex, 3 to 8 percent slopes

Description Category: SOI

### Paxton-Urban Land Complex, 3 To 8 Percent Slopes

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 40 percent Paxton soils, 35 percent Urban Land. 25 percent minor components.

### Paxton soils

This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 3 to 8 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 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 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 2e

### Typical Profile:

0 to 8 inches; fine sandy loam  
8 to 15 inches; fine sandy loam  
15 to 26 inches; fine sandy loam  
26 to 65 inches; gravelly fine sandy loam

### Urban Land

Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 3 to 8 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8

## Map Unit Description (Brief)

State of Connecticut

Map Unit: 284C - Paxton-Urban land complex, 8 to 15 percent slopes

Description Category: SOI

### Paxton-Urban Land Complex, 8 To 15 Percent Slopes

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 40 percent Paxton soils, 35 percent Urban Land, 25 percent minor components.

### Paxton soils

This component occurs on upland hill and drumlin landforms. The parent material consists of lodgement till derived from granite, gneiss, and schist. The slope ranges from 8 to 15 percent and the runoff class is medium. The depth to a restrictive feature is 20 to 40 inches to densic material. The drainage class is well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 3.4 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 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 3e

### Typical Profile:

0 to 8 inches; fine sandy loam

8 to 15 inches; fine sandy loam

15 to 26 inches; fine sandy loam

26 to 65 inches; gravelly fine sandy loam

### Urban Land

Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 8 to 15 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8

Map Unit: 306 - Udorthents-Urban land complex

Description Category: SOI

### Udorthents-Urban Land Complex

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 55 degrees F. (7 to 13 degrees C.) This map unit is 50 percent Udorthents soils, 35 percent Urban Land, 15 percent minor components.

### Udorthents soils

This component occurs on cut (road, railroad, etc.), railroad bed, road bed, spoil pile, urban land, fill, and spoil pile landforms. The slope ranges from 0 to 25 percent and the runoff class is medium. The depth to a restrictive feature varies, but is commonly greater than 60 inches. The drainage class is typically well drained. The slowest permeability within 60 inches is about 0.00 in/hr (very slow), with about 9.0 inches (high) available water capacity. The weighted average shrink-swell potential in 10 to 60 inches is about 1.4 LEP (low). The flooding frequency for this component is none. The ponding hazard is none. The minimum depth to a seasonal water table is greater than 60 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 3e

### Typical Profile:

0 to 5 inches; loam

5 to 21 inches; gravelly loam

21 to 80 inches; very gravelly sandy loam

### Urban Land

Urban land is land mostly covered by streets, parking lots, buildings, and other structures of urban areas. The slope ranges from 0 to 35 percent and the runoff class is very high. The Nonirrigated Land Capability Class is 8



CLA

CHA PROJECT NO:  
15363 - 1002 - 1801

0.	SUBMITTAL		
0	04/05/08	ISSUED FOR REVIEW	
	REV. 01	PLAN. 01	ADD. 002

[illegible]

---

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

---

100

UNLESS THEY ARE ACTING UNDER THE DIRECTION  
OF A LICENSED PROFESSIONAL ENGINEER,  
TO ALTER THIS DOCUMENT.

SITE ID:  
CT-999-0096

**SITE ADDRESS:**

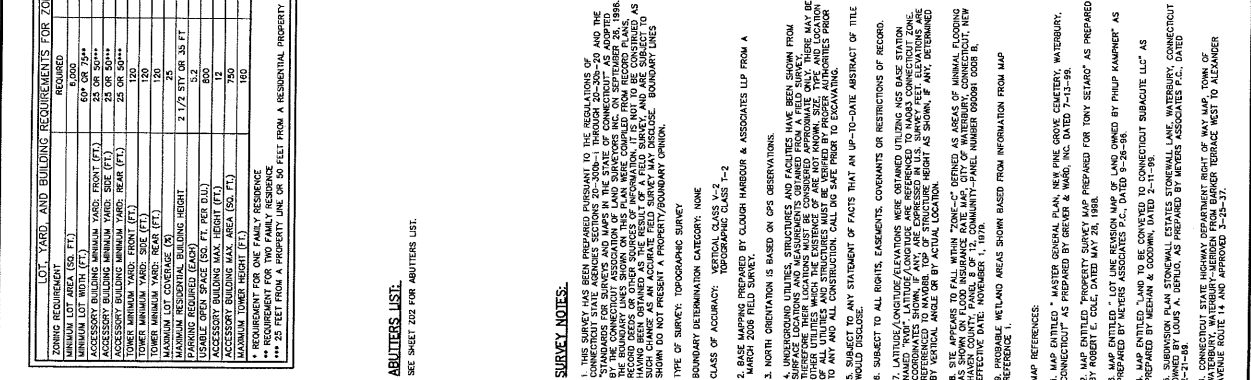
WATERBURY, CT  
06705

SHEET TITLE

# COMPREHENSIVE SITE PLAN

701  
SHEET NUMBER

---

[illegible]