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September 13, 2023

Ref: 43322.00

Bradley Parsons, PE, PMP
Verogy
124 LaSalle Road, West Hartford, Connecticut

Re: Wetlands and Watercourses Delineation Report
3MW-AC Solar Project, 445 River Street, Windsor, Connecticut

Bradley,

VHB completed an on-site investigation to determine the presence or absence of wetlands and/or watercourses at 445 River Street (Windsor Assessor's MBL 39-126-10) in Windsor, Connecticut (Figure 1) as requested and authorized. This investigation encompassed the entire parcel (herein referred to as the Project Site) and was completed by a Certified Professional Soil Scientist and conducted in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) Soil Survey Manual (2017). The soil classification system of the National Cooperative Soil Survey was used in this investigation to identify the soil map units present on the Project Site. This report includes descriptions of site conditions, photographic documentation (Appendix A), and a Delineated Resources Map (Figure 2) displaying delineated wetland/watercourse resources within the Project Site.

REGULATORY INFORMATION

Wetlands and watercourses are regulated by both state and federal laws each with different criteria for establishing regulatory limits. Accordingly, the State may regulate waters that fall outside of federal jurisdiction; however, where federal jurisdiction exists concurrent State jurisdiction is almost always present.

State Regulation

Wetland determinations are based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land. Drainage class identifies the natural drainage condition of the soil (USDA-NRCS 2014). It refers to the frequency and duration of wet periods under conditions similar to those under which the soil developed. Drainage class is inferred from observation of landscape position and relies principally on presence of absence of features in the soil profile associated with soil development under saturated conditions.

Watercourses are defined as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon the state or any portion thereof." *Intermittent watercourse*

100 Great Meadow Road
Wethersfield, Connecticut 06109
P 860.807.4300
F 860.372.4570

determinations are made based on the presence of a defined permanent channel and bank, and two of the following characteristics: (1) evidence of scour or deposits of recent alluvium or detritus, (2) the presence of standing or flowing water for a duration longer than a particular storm incident, and (3) the presence of hydrophytic vegetation. (See Inland Wetlands and Watercourses Act §22a-38 CGS.)

Federal Regulation
Federal wetlands were delineated in accordance with the Corps of Engineers 1987 Manual (Environmental Lab. 1987) in conjunction with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0, January 2012). This method relies on the documentation of the presence of three parameters 1) wetland soils, 2) hydrophytic vegetation, and 3) wetland hydrology for an area to be mapped as a wetland. Field Indicators for Identifying Hydric Soils in New England- Version 4 and by inference Field Indicators of Hydric Soils in the United States A Guide for Identifying and Delineating Hydric Soils Version 8.2 were used to document the presence of hydric soils.

INVESTIGATION & METHODOLOGY

The Project Site was investigated on July 17 and August 31, 2023, during which time a delineation based on criteria used in the State of Connecticut Inland Wetlands and Watercourse Act was completed. Weather was seasonable, sunny with temperatures in the high-80's. The Project Area is an agricultural parcel spanning approximately 15 acres. The majority of the parcel is vegetated with agricultural crops. The surrounding area is mostly residential development.

Soil types are identified by observing soil morphology (soil texture, color, structure, etc.). Soil morphology is evaluated through numerous test pits and/or hand borings (generally to a depth of at least two feet). If a wetland and/or watercourse were determined to be present, their boundaries are identified with flags and hung from vegetation or small wire stakes if in fields or grass communities. For wetlands, these flags are labeled "Wetland Delineation" and generally spaced 25 to 50 feet apart. It is important to note that flagged wetland and watercourse boundaries are subject to change until verified by local, state, or federal regulatory agencies.

WETLAND DELINEATION RESULTS

During the site investigation, multiple soil test pits were taken throughout the project site and evaluated for wetland soil drainage class indicators. These test pits were along transects and where the potential for wetlands might occur. One intermittent stream was observed on the southern edge of the project area. Delineated resource areas are listed in Table 1 below.

Stream S01 was observed flowing south out of the project area. The stream, a riverine intermittent streambed, cobble/gravel, seasonally flooded, (R4SB3C) begins at a swale that flows from the dirt access road to the north of the stream. The stream consists of a boulder/cobble bottom while flowing down the slope until the elevation levels out. From that point, the stream bottom consists of primarily sand and gravel.

TABLE 1: Delineated Wetlands and Watercourses within the Project Area

Stream ID	Wetland Classification	HGM	Description
S01	R4SB3C	Riverine	Intermittent stream located on the south central edge of the project area; drains from access road and continues off-site.

See Figure 2 for an aerial map of the site. Presented in the next section are the soils observed on the Project Site.

SOIL MAP TYPES

The Cooperative Soil Survey used three map units when they mapped the Site. The map units, listed below, are upland soils; no wetland units were mapped within the project area. Descriptions of the named series which make up these map units are presented below including information from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Official Series Descriptions. Mapping from the NRCS Web Soil Survey tool is included in Appendix E. Further information on these and other soils, please refer to the internet site at http://soils.usda.gov/technical/classification/osd/index.html).

Upland Soils

The following soil series or their similar analogs were observed in the field.

Ur—Urban land (306)

This unit consists of areas where urban structures cover more than 85 percent of the surface. Examples of such structures are roads, parking lots, shopping and business centers, and industrial parks. Most areas are in the towns of Bridgeport, Danbury, Fairfield, Norwalk, Shelton, Stamford, and Stratford. The areas are commonly rectangular and range from 5 to 500 acres. Slopes range from 0 to 8 percent but are dominantly less than 5 percent. Included with this unit in mapping are small areas of Udorthents and areas of excessively drained Hinckley soils; somewhat excessively drained Hollis soils; well drained Agawam, Charlton, and Paxton soils; and moderately well drained Ninigret and Sutton soils. Included areas make up about 15 percent of this map unit. This unit requires onsite investigation and evaluation for most uses.

Windsor loamy sand

The Windsor series consists of very deep excessively drained soils formed in sandy glacial outwash. They are nearly level to very steep soils on glaciofluvial landforms. Slope ranges from 0 to 60 percent. The soils formed in glacial outwash deposits of poorly graded sands and loamy sands derived mainly from crystalline rocks. Diagnostic horizons include an ochric epipedon - the zone from 0 to 3 inches (Oe and A horizons).

REFERENCES

1. Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
2. U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0). ERDC/EL TR-12-1
3. United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil descriptions. Internet site: http://soils.usda.gov/technical/classification/osd/index.html).

CLOSING

Thank you for the opportunity to work with you on this Project. Please contact Jeffrey Shamas at 860-807-4388 if you have any questions or require additional assistance.

Sincerely,

Vanasse Hangen Brustlin, Inc.

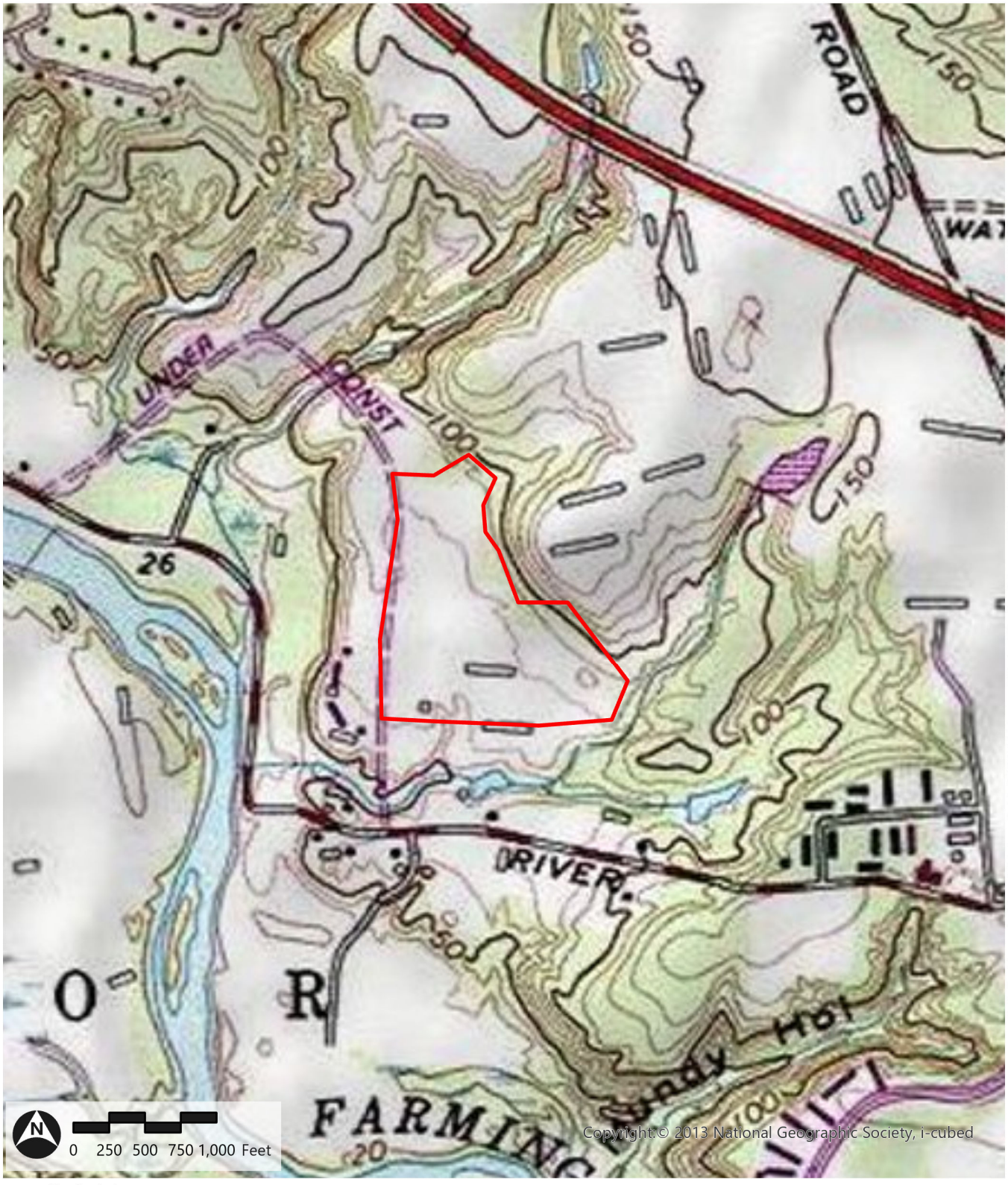
Sara Berryman, CSS
Wetland Scientist
Sberryman@vhb.com

Jeffrey R. Shamas, CE, CSS, EVN SP, SPWS
Director, Energy & Natural Sciences
Jshamas@vhb.com

Attachments:
Figure 1 – USGS Site Location Map
Figure 2 – Delineated Resources Map
Appendix A – Site Photograph Log
Appendix B – Web Soil Survey Map

Figure 1 USGS Site Location Map

Figure 1: USGS Site Location Map
Verogy | Windsor, Connecticut



Source: USGS, VHB

Figure 2 Delineated Resources Map

Figure 2: Delineated Resources Map

Verogy | Windsor, Connecticut

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Source: VHB, NearMap

Appendix A Site Photographic Log

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 1 **Date:** 7/17/2023

Description: Facing east, a view of the site from the entrance on the west edge along River Street.

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 2 **Date:** 7/17/2023

Description: Facing south, a view of the site from the entrance on the west edge along River Street.

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 3 **Date:** 7/17/2023

Description: Facing north, a view of the site from the entrance on the west edge along River Street.

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 4 **Date:** 7/17/2023

Description: Facing south, a view of the site from the north edge.

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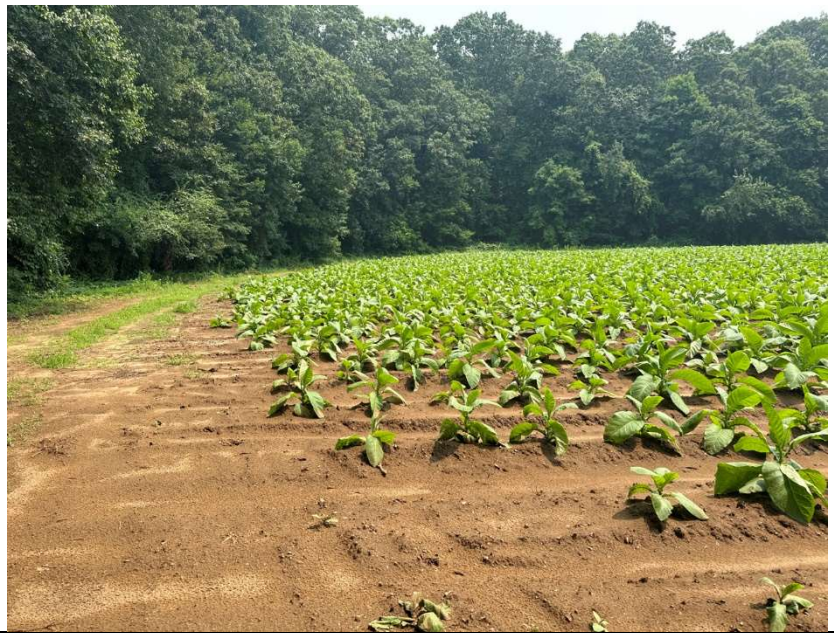
PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 5 **Date:** 7/17/2023

Description: Facing west, a view of the site from the north edge.



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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 6 **Date:** 7/17/2023

Description: Facing east, a view of the site from the north edge.

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 7 **Date:** 7/17/2023

Description: Facing north, a view of the site from the southeast corner.

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PHOTOGRAPHIC LOG

Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 8 **Date:** 7/17/2023

Description: Facing northwest, a view of the site from the southeast corner.

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PHOTOGRAPHIC LOG

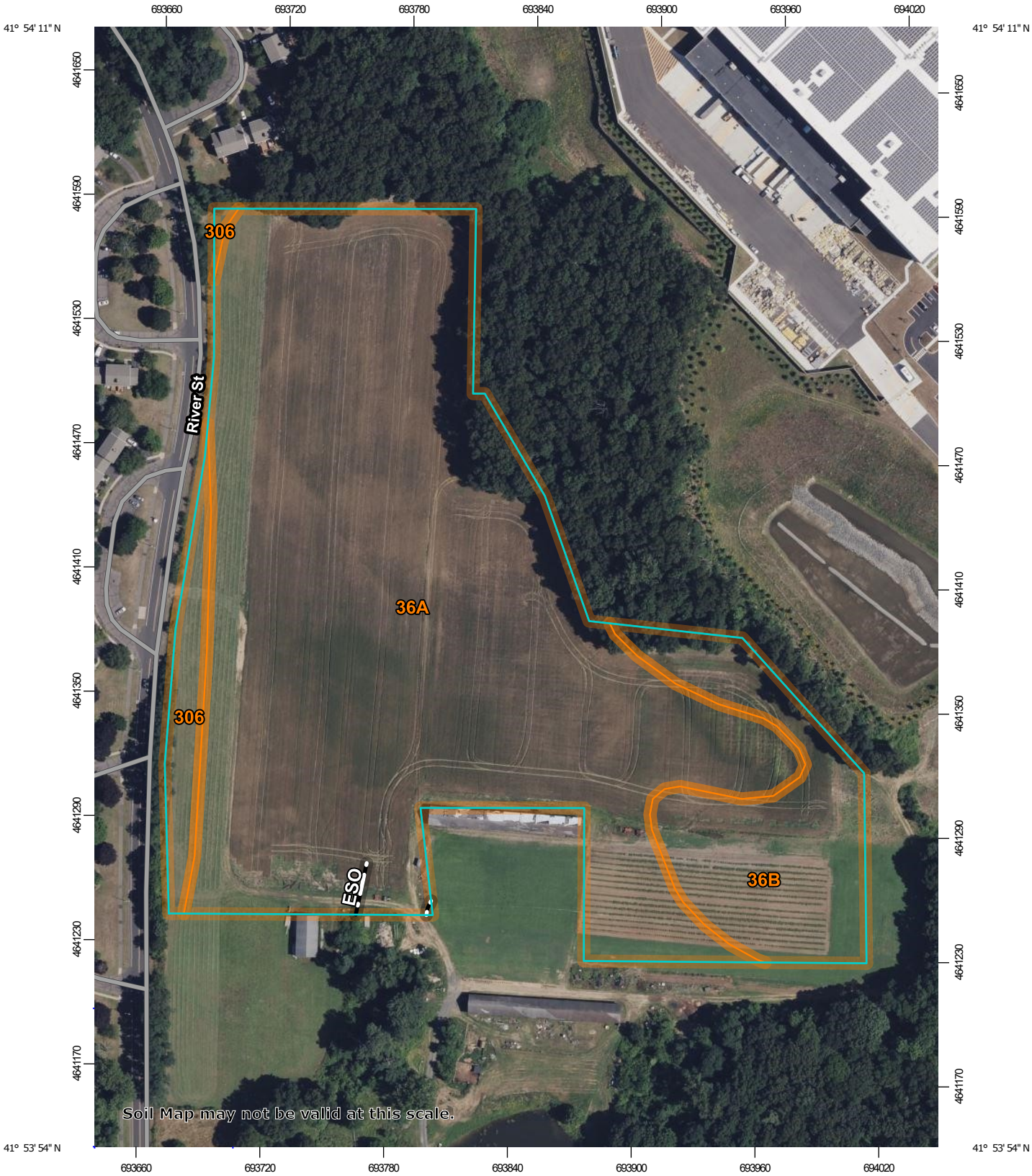
Client Name: Verogy	**Site Location:** Windsor, CT	**Project No**: 43322.00

Photo No.: 9	**Date:** 7/17/2023

Description: Facing west, a view of the site from the southeast corner.

Appendix B Web Soil Survey Map

Soil Map—State of Connecticut
(Verogy, Windsor, CT)



Map Scale: 1:2,640 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 35 70 140 210

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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 22, Sep 12, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Oct 6, 2022

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

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
36A	Windsor loamy sand, 0 to 3 percent slopes	15.1	81.9%
36B	Windsor loamy sand, 3 to 8 percent slopes	2.6	14.1%
306	Udorthents-Urban land complex	0.7	4.0%
Totals for Area of Interest		**18.4**	**100.0%**