

# 555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD WETLAND DELINEATION

## SOIL SCIENTIST REPORT

Prepared for:

Drubner Equities, LLC  
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Waterbury, CT 06708

Client Ref: 141.20970.00002

November 2022

**555 Christian Road and 764 Southford Road  
Wetland Delineation  
Middlebury, Connecticut  
Soil Scientist Report**

Prepared for:  
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This document has been prepared by SLR International Corporation (SLR). The material and data in this report were prepared under the supervision and direction of the undersigned.



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# CONTENTS

<b>1. INTRODUCTION .....</b>	<b>2</b>
<b>2. METHODOLOGY .....</b>	<b>4</b>
<b>3. RESULTS .....</b>	<b>5</b>
3.1 Soils .....	5
3.2 Wetlands and Watercourses.....	5
3.2.1 Federal Wetlands.....	6
3.2.2 State wetlands .....	8
3.2.3 Non-Regulated Resources.....	10
3.2.4 Functions and Values.....	10
3.2.5 Wetland Impact Assessment .....	11

## APPENDICES

- Appendix A Site Maps
- Appendix B ACOE Wetland Determination Data Forms
- Appendix C Site Photos
- Appendix D Wetland Function-Value Evaluation Forms
- Appendix E Wetland Impact Assessment
- Appendix F Wetland Mitigation Plan

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## ACRONYMS

FEMA Federal Emergency Management Agency

NRCS Natural Resources Conservation Service

SLR SLR International Corporation

USACE United States Army Corps of Engineers

USDA United States Department of Agriculture



# 1. INTRODUCTION

On October 20, and November 9, 2022, Matthew Sanford, Registered Soil Scientist and Professional Wetland Scientist, and Meaghan Fogarty and Marlee Antill, Environmental Scientists, all of SLR International Corporation (SLR), visited the subject site at 555 Christian Road and 764 Southford Road in Middlebury, Connecticut. Onsite wetlands were previously delineated by Environmental Resource Associates, Inc. in September 1996. The purpose of this investigation was to field-verify the existing wetland boundaries, identify onsite soil types, and to demarcate (flag) the boundaries of wetlands identified onsite within the vicinity of proposed project activities. Additionally, SLR performed a functions and values assessment of all onsite wetlands and watercourses, and an assessment of potential impacts to onsite wetlands and watercourses from the proposed project activities. In summary, regulated resources onsite consist of approximately 0.5 acres of isolated state wetlands and approximately 7 acres of federal palustrine forested, palustrine scrub shrub, and palustrine emergent wetlands. Portions of these wetland areas adjacent to the proposed redevelopment were re-flagged onsite during the site visits and are described below.

## Site Description

The approximately 112-acre site is comprised of two parcels located in a moderately-settled residential and commercial area of southwestern Middlebury, Connecticut (**Appendix A, Figure 1**). The site is accessed to the west via Christian Road, which forms the eastern boundary of the site. To the south, the site abuts Southford Road (Route 188), and Judd Hill Road forms the northernmost site boundary.

Topography onsite consists of steep, undulating hills and valleys with elevations ranging from 626 feet above mean sea level (msl) to 738 feet above msl. The western portion of the site exists as undeveloped hardwood forest, while much of the eastern portion of the site contains former and existing agricultural fields, including an approximately 10-acre hayed field at the intersection of Southford Road and Christian Road. These managed fields are surrounded by areas of scrub shrub and several stormwater basins. During the last two decades, the site was the headquarters for Timex Group USA and an approximately 55,000-square-foot (SF) office building remains atop a drumlin in the northeast portion of the site surrounded by manicured lawn and appurtenances including an approximately 38,000 square foot (SF) solar panel array to the east. A 20-foot-wide access road (Timex Road) extends approximately 0.35-mile from Christian Road to the existing Timex building, also connecting to three paved parking areas south of the building, each occupying approximately 30,000 SF.

## Watershed Location

The site straddles two watersheds. The western portion of the site sits within the 17.4-square-mile Eightmile Brook subregional basin which drains south from Middlebury to Oxford; while the eastern portion of the site is located within the 8.5-square-mile Long Meadow Pond Brook subregional basin which drains an area from Middlebury southeast to Naugatuck. Drainage leaving the western portion of the site flows to the south and eventually joins Eightmile Brook which flows southwest for approximately 7.25 miles from the site latitude to drain to the Housatonic River in Kettletown State Park. Drainage from the eastern portion of the site flows generally north to a tributary which joins the southeast-flowing Long

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Meadow Pond Brook approximately 6.5 miles northwest of the Long Meadow Pond Brook drainage connection to the Naugatuck River.

Federal Emergency Management Agency (FEMA) Mapping

According to the most recent FEMA flood map (09009C0095H, effective December 17, 2010) the site is not located within any special flood hazard zones.

## 2. METHODOLOGY

Inland wetlands and watercourses within the project area were delineated in accordance with the regulations of the Town of Middlebury, Connecticut, the State of Connecticut Inland Wetlands and Watercourses Act, Connecticut General Statutes (CGS) 22a-36 through 45 and federal wetland regulations.

Inland wetland delineation methods followed the 1987 U.S. Army Corps of Engineers *Wetlands Delineation Manual* (USACE, 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual for the Northcentral and Northeast Region* (USACE, 2012). The classification system of the National Cooperative Soil Survey and *Field Indicators of Hydric Soils in the United States* (USDA, 2017) were used in this investigation. A second-order soil survey in accordance with the principles and practices noted in the United States Department of Agriculture (USDA) publication *Soil Survey Manual* (1993) was completed at the subject site. Soil types were identified by observation of soil morphology (soil texture, color, structure, etc.). To observe the morphology of the property's soils, hand auger borings (maximum depth of 2 feet) were completed at the site.

Wetland determinations were completed based on the presence of poorly drained, very poorly drained, alluvial, or floodplain soils and submerged land (e.g., a pond). Intermittent watercourse determinations were made based on the presence of a defined permanent channel and bank and the occurrence of two or more of the following characteristics: A) evidence of scour or deposits of recent alluvium or detritus, B) the presence of standing or flowing water for a duration longer than a particular storm incident, and C) the presence of hydrophytic vegetation. Wetland boundaries that were re-delineated were demarcated (flagged) with pink and blue surveyor's tape hung from sturdy vegetation and generally spaced a maximum of every 30 to 50 feet. Complete boundaries are located along the lines that connect these sequentially numbered flags (**Figure 2**). The wetland boundaries are subject to change until adopted by local, state, or federal regulatory agencies.

During the site visits, weather conditions were sunny and dry, with air temperatures above freezing. Site conditions were suitable for wetland delineation work.

## 3. RESULTS

### 3.1 SOILS

Geospatial data were accessed via the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS) web soil survey mapping. The soil survey mapping is appended (**Appendix A, Figure 2**). The survey identifies the following soil mapping units with associated NRCS map number in the project area, including four wetland soils:

- Ridgebury fine sandy loam (2) – Poorly drained
- Ridgebury, Leicester, and Whitman soils (3) – Poorly drained
- Walpole sandy loam (13) – Poorly drained
- Catden and Freetown soils (18) – Very poorly drained
- Hinckley loamy sand (38C)
- Woodbridge fine sandy loam (45A)
- Woodbridge fine sandy loam, extremely stony (47C)
- Canton and Charlton fine sandy loams (60B)
- Paxton and Montauk fine sandy loams (84C)
- Paxton and Montauk fine sandy loams, extremely stony (86)

Soils were examined using a Dutch auger. Field investigations generally confirmed the NRCS mapping of poorly drained to very poorly drained soils along three corridors within the southern portion of the site. Additional areas of wetland soils were confirmed and observed northward of the mapped NRCS wetland soil unit areas, including several isolated pockets in the central and western portions of the site, some of which were not identified during the previous 1996 wetland delineation and are a likely result of the development of the Timex site in the late 1990's. Please note that SLR did not fully re-delineate the wetland boundaries onsite where they did not intersect with proposed site work, nor were upland soil types fully delineated within the project parcels.

### 3.2 WETLANDS AND WATERCOURSES

A total of 7.5 acres of wetlands exist onsite, as verified by SLR registered soil scientists. The majority of onsite wetland boundaries were previously delineated by others, and SLR completed three types of wetland determination including re-delineation in areas adjacent to the development zone, field verification of wetlands onsite outside of the development zone, and graphical delineation of those wetlands extending more than 25 feet off of the property line. SLR affixed wetland flagging along all wetland boundaries in close proximity (i.e., within the 100-foot upland review area) to the proposed development. Additionally, SLR identified and delineated four small, isolated areas of lawn-seepage wetlands (likely formed as a result of the development that occurred onsite in the late 1990's) which were not previously mapped or delineated during the 1996 wetland delineation.

The wetlands on the site are comprised of three federal wetland systems (Fed-A through Fed-C) which consist of wetland corridors containing areas of palustrine emergent, scrub shrub and forested wetlands,

as well as four state wetland systems (CT-A through CT-D) which consist of small, isolated scrub shrub and forested wetlands, and state CT-Wet Lawn Seep wetlands (1 through 4). Each wetland system is described further below.

### 3.2.1 FEDERAL WETLANDS

#### 3.2.1.1 Federal Wetland-A

Federal Wetland-A is comprised of a narrow drainage corridor extending approximately 0.3-mile along the eastern site boundary and covering a total of approximately 1.7 acres onsite. This north-draining corridor emanates in the southeast portion of the site just north of the large hay field along Southford Road. The wetland is a narrow scrub shrub corridor bordering the east and west banks of a north-flowing, intermittent watercourse which extends through a manmade drainage trough.

The southernmost portion of the wetland is situated north of an old field, south of Timex Road, and flanked to the east and west by upland manicured lawn. Due to its landscape position, it is likely hydrologically supported by stormwater runoff from the lawn hillslope to the west and a seasonally high groundwater table. Water is conveyed north through a well-vegetated, and hummocky emergent and scrub shrub wetland, channelizing into an intermittent watercourse before draining under Timex Road via a 15-inch reinforced concrete pipe cross culvert. The perimeter of this wetland is dominated by a mixture of native and non-native shrubs and lianas, including gray dogwood (*Swida racemosa*), maleberry (*Lyonia ligustrina*), Morrow's honeysuckle (*Lonicera morrowii*), multiflora rose (*Rosa multiflora*), common blackberry (*Rubus allegheniensis*), and porcelain-berry (*Ampelopsis glandulosa*). The central corridor exhibits a mucky/mineral surface and is dominated by emergent vegetation such as broad-leaved cattail (*Typha latifolia*), tussock sedge (*Carex stricta*), blue flag iris (*Iris versicolor*), woolgrass (*Scirpus cyperinus*), soft rush (*Juncus effusus*), and lurid sedge (*Carex lurida*). Red maple (*Acer rubrum*) trees are growing on hummocks and scattered silky dogwood (*Swida amomum*) are found in the shrub strata. SLR affixed wetland flags along the northern boundary of Federal Wetland-A and the flags were labeled W-Z-200 through W-Z-206.

The intermittent watercourse flows beneath Timex Road through a concrete culvert and discharges to the north of the road through a 15-inch concrete flared end pipe. The intermittent watercourse narrows to approximately 3 feet in width and is bordered by scrub shrub banks. Vegetation in this portion of the narrow (30 to 60-foot-wide) wetland corridor is comprised of a sparse tree canopy including yellow birch (*Betula allegheniensis*), black cherry (*Prunus serotina*), and eastern shadblow (*Amalanchier canadensis*) above a dense shrub layer dominated in areas by thickets of multiflora rose (*Rosa multiflora*) and in other areas with an assortment of native and non-native shrubs including silky dogwood (*Swida amomum*), white meadowsweet (*Spiraea alba*), northern arrowwood (*Viburnum dentatum*), autumn olive (*Eleagnus umbellata*), and Morrow's honeysuckle (*Lonicera morrowii*). SLR wetland flags in this area are composed of series W-Z-101 through W-Z-112.

The intermittent watercourse described above eventually meanders through an emergent wetland located adjacent to Christian Road. The intermittent watercourse flows into the road right-of-way and then flows north along Christian Road. The wetland area flagged as WZ-1 through WZ-22 includes the

manmade trapezoidal shaped discharge channel from Detention Basin 2, and emergent marsh wetlands associated with the larger wetland system to the south and west. Vegetation observed within and/or along the side slopes of the discharge channel and emergent wetland included maleberry (*Iyonia ligustrina*), highbush blueberry (*Vaccinium corymbosum*), silky dogwood, black elderberry (*Sambucus nigra*), tussock sedge, sensitive fern (*Onoclea sensibilis*), woolgrass, cinnamon fern (*Osmundastra cinnamomeum*), lurid sedge, and several species of goldenrod (*Solidago* sp.). Wetland flags WZZ-1 through WZZ-8 represent a slope scrub shrub wetland that is dominated by dead white ash trees, multiflora rose, Morrow's honeysuckle, and skunk cabbage.

### 3.2.1.2 Federal Wetland-B

Federal Wetland-B is comprised of a linear wetland corridor extending south from the vicinity of the existing parking lot to Southford Road. SLR affixed wetland flag series W-B-1 through W-B-30 along the western boundary of the onsite wetland, which covers a total area of approximately 3.98 acres. The northern portion of the wetland system features a palustrine forested canopy of red maple (*Acer rubrum*) and yellow birch bordering a south-flowing intermittent watercourse. On the day of the site investigation, the intermittent watercourse featured approximately 1 inch of flow within an approximately two-foot-wide channel lined with small boulders and rocks. The understory is comprised of spice bush (*Lindera benzoin*), highbush blueberry (*Vaccinium angustifolium*), winterberry (*Ilex verticillata*), with stands of multiflora rose and Japanese barberry (*Berberis thunbergii*), especially in openings of the tree canopy. Scant herbaceous vegetation was observed including sensitive fern (*Onoclea sensibilis*) and cinnamon fern (*Osmundastrum cinnamomeum*).

Approximately 0.10-mile north from the site boundary at Southford Road, the wetland corridor narrows, but was found to maintain a small surface connection with hydric soils and vegetation between the forested area to the north and an area of palustrine scrub shrub wetland to the south. This area features high microtopography with mossy hummocks between areas of standing water. The limited canopy consists of scattered red maples measuring approximately 12 inches in diameter at breast height (DBH) and smaller, and saplings of yellow birch. Dominant shrubs in the understory include winterberry and multiflora rose, with sweet pepperbush (*Clethra alnifolia*), Japanese barberry, spice bush, Morrow's honeysuckle, Oriental bittersweet (*Celastrus orbiculatus*), and winged euonymus (*Euonymus alatus*). Herbaceous groundcover is variably dense and comprised of cinnamon fern, tussock sedge (*Carex stricta*), skunk-cabbage (*Symplocarpus foetidus*), deer-tongue grass (*Dichanthelium clandestinum*), New York fern (*Parathypteris noveboracensis*), and New England aster (*Symphotrichum novae-angliaea*).

An upland forested area buffers the wetland corridor to the east from the western boundary of the hay field onsite. In the southernmost portion of this wetland, the intermittent watercourse widens into a more diffuse red maple swamp with areas of standing water. The wetland system connects offsite with the palustrine emergent Kissawaug Swamp which covers an extensive area between Southford Road and the Interstate-84 corridor.

### 3.2.1.3 Federal Wetland-C

Federal Wetland-C is situated along the western boundary of the 764 Southford Road parcel, demarcated by SLR flags W-A-1 through W-A-39. Although much of the wetland lies just offsite to the west, offsite boundaries were graphically delineated to establish the extents of its onsite upland review area. The southernmost portion of this wetland system is a shallow, emergent and scrub-shrub basin that discharges below Southford Road. It occupies approximately 0.6 acres onsite and extends offsite to the north and west. Dense vegetation grows largely on hummocks, surrounded by pools of standing or low-velocity water. The vegetation in this portion is comprised primarily of silky dogwood, winged euonymus, broad-leaved cattail, sensitive fern, and tussock sedge. Additionally, the margins and scattered hummocks of this portion of the wetland support trees including red maple, yellow birch, and American hornbeam (*Carpinus caroliniana*).

This wetland area is hydrologically supported by stormwater runoff from adjacent upland forested areas and seasonal groundwater breakout at the toe of slope. An intermittent watercourse flows south, meandering roughly 50 to 200 feet west of the property along entirety of its western property boundary. Three small portions of forested wetland were delineated onsite, totaling approximately 0.034 acres ( $\pm 1,480$  SF). Similar in composition, they are dominated by yellow birch, red maple, spice bush, sweet pepperbush, and cinnamon fern. The wetland exhibits evidence of drainage patterns and areas of seasonal inundation, generally bounded by topographical breaks in slope. Upgradient of this wetland corridor, the majority of the 764 Southford Road property is occupied by moderately steep forested uplands, reaching a topographical high point near the center of this parcel.

## 3.2.2 STATE WETLANDS

### 3.2.2.1 Connecticut State Isolated Wetland A

This depressional scrub-shrub wetland is situated on a steep and densely vegetated hillslope, located upgradient and to the west of Federal Wetland-A. It occupies approximately 0.04 acre ( $\pm 1,650$  SF) and exhibits no hydrological connection to any federally regulated wetland systems. Stones and boulders within the depression support hydrophytic mosses, indicating groundwater discharge. Vegetation observed within this wetland includes silky dogwood, gray dogwood, multiflora rose, tussock sedge, soft rush (*Juncus effusus*), Canada goldenrod (*Solidago canadensis*), sensitive fern, and skunk cabbage. The western boundary is represented by flags W-9 through W-11.

### 3.2.2.2 Connecticut State Isolated Wetland B

This depressional scrub-shrub wetland is located approximately 100 feet north of Connecticut State Isolated Wetland A, and exhibits very similar landscape position, hydrology, and vegetative structure. It is slightly larger, occupying approximately 0.08 acre ( $\pm 3,250$  SF) and has no hydrological connection to any federally regulated wetland systems. It is dominated by multiflora rose, European privet (*Ligustrum vulgare*), black elderberry (*Sambucus nigra*), soft rush, and sensitive fern. The western boundary of this wetland is represented by flags W-12 through W-16.

### 3.2.2.3 Connecticut State Isolated Wetland C

This approximately 0.2-acre, isolated state wetland is located approximately 40 feet east of Timex Road in a shallow, forested depression. The canopy is dominated by shagbark hickory (*Carya ovata*), with a dense shrub layer comprised primarily of multiflora rose, Morrow's honeysuckle, Japanese barberry, winterberry, and winged euonymus. No evidence of an active water table was observed; however, hydric soils were encountered at approximately 12 inches in depth. This complete boundary of this wetland is demarcated by flags WD-1 through WD-8.

### 3.2.2.4 Connecticut State Isolated Wetland D

This approximately 0.05-acre, isolated wetland feature was re-flagged by SLR as series W-C-1 through W-C-12. It is located west of the southern portion of Federal Wetland-B and to the north of a residential property to the north of Southford Road. This formerly excavated gravel pit is enclosed by steep banks and surrounded by upland forest. Within the isolated depressional wetland, trees of green ash (*Fraxinus pennsylvanica*) and yellow birch are found as well as shrubs including spice bush, winterberry, and high bush blueberry with scant herbaceous species including cinnamon fern and skunk cabbage (*Symplocarpus foetidus*).

### 3.2.2.5 Connecticut State Isolated Lawn Seepage Wetlands

These four small, isolated state wetland features share several characteristics including all emanating from groundwater seepage, likely following grading activities and the construction of the existing Timex building. The previous 1996 wetland delineation did not identify these wetland features however, our 2022 investigations showed the presence of vegetation and/or hydrology in these state wetland areas.

One emergent seep wetland was observed near the southeast corner of the solar field, at the downgradient extent of a meadow area. This wetland is labeled CT 1 and demarcated by flags WF-1 through WF-4. It occupies approximately 370 SF and is dominated by reed canary grass (*Phalaris arundinacea*). On the day of investigation, soil was mucky at the surface and approximately 0.5-inch of standing water was pooled within a tire rut located within the center of the wetland.

A second small lawn seep, labeled CT 2 and demarcated by flags WE-1 through WE-4, occurs just west of Timex Road. It occupies approximately 435 SF and is situated along a cut slope, which was created during the construction of Timex Road. It is surrounded by upland grasses and forbs, but seasonally high groundwater supports soft rush, woolgrass, lurid sedge, and sensitive fern.

Two small lawn seepage wetland areas, labeled CT 3 and CT 4, exist to the west of the existing Timex building. They measure approximately 2,000 SF and 3,800 SF respectively and are flagged as WY-1 through WY-14 and WX-1 through WX-11. Both wetlands originate at the foundation of retaining walls and decorative stone walls. It appears that the construction of these features compacted the soils and intercepted the groundwater table allowing shallow hydric soil formation. These wetlands have seasonal surface water discharges that infiltrate into the upland till soils located immediately downgradient of the lawn areas. While the northern of the two areas features maintained lawn, the southern area has a combination of maintained lawn and a portion that transitions to an open field with upland herbaceous



species dominated by common mugwort (*Artemisia vulgaris*) and multiflora rose intermixed with some hydric vegetation such as soft rush, cattails, soft-stemmed bulrush (*Schoenoplectus tabernaemontani*), and arrow-leaved tear thumb (*Persicaria sagittata*).

### 3.2.3 NON-REGULATED RESOURCES

#### 3.2.3.1 Stormwater Management Basin

Two constructed stormwater management basins were delineated within the project site. These detention basins were constructed to manage stormwater associated with the parking lots and buildings on this site.


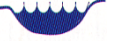










Detention Basin 1 is located south of Timex Road and has a concrete outlet control structure with metal grated top located along the southwest edge of the basin. The basin appears to have been constructed within a former upland area. Portions of the basin support hydrophytic vegetation including broad-leaved cattail, woolgrass, soft rush, and lurid sedge which occupies approximately 0.78 acres. In addition, the basin supports upland vegetation including autumn olive, multiflora rose, Asiatic bittersweet, common mugwort, grasses, and goldenrods. The basin sideslopes require management of upland vegetation and it is recommended that the basin be mowed once a year to allow for annual inspections and control of invasive vegetation.

Detention Basin 2 parallels Christian Road and is hydrologically controlled by a concrete weir structure located at its northern limits. This basin is approximately 0.4-acre in size. Stormwater from Timex Road is discharged into this detention basin. Several riprap berms were observed with the basin and were installed to help slow water and create stormwater treatment cells. A deep pool (standing water approximately two feet deep) is located along the northern extents of the basin. The basin is dominated by broad-leaved cattail with woolgrass, purple loosestrife, maleberry, highbush blueberry, and black chokeberry (*Aronia melanocarpa*), and willows present.

### 3.2.4 FUNCTIONS AND VALUES

Wetlands perform certain functions and possess values based on wetland type, hydrologic connectivity, habitat, and a variety of other measurable parameters. Using the USACE *Highway Methodology Workbook Supplement*, SLR completed wetland Function-Value Evaluation Forms for each of the federal and state wetland systems within the project area and described above (**Appendix D**). The principal functions and values of each wetland system are listed below in **Table 1**.

**Table 1 Principal Wetland Functions and Values Assessment  
555 Christian Road and 764 Southford Road\***

Principal* Functions and Values		CT 1-4	CT A-D	Fed-A	Fed-B	Fed-C
	Groundwater Recharge/Discharge	Yes	Yes	Yes	Yes	Yes
	Flood Flow Alteration (Storage and Desynchronization)	No	No	No	No	No
	Fish and Shellfish Habitat	No	No	No	No	No
	Sediment/Toxicant Retention	No	No	Yes	Yes	Yes
	Nutrient Removal/Retention/Transformation	No	No	Yes	Yes	Yes
	Production Export (Nutrient)	No	No	Yes	No	No
	Sediment/Shoreline/Watercourse Bank Stabilization	No	No	No	No	No
	Wetland-Dependent Wildlife Habitat	No	No	Yes	Yes	Yes
	Recreation (Consumptive and Non-Consumptive)	No	No	No	No	No
	Educational Scientific Value	No	No	No	No	No
	Uniqueness/Heritage	No	No	No	No	No
	Visual Quality/Aesthetics	No	No	No	No	No
<b>ES</b>	Endangered Species	No	No	No	No	No

\*Please refer to Appendix D, Functions & Value Forms, for detailed explanations of each wetland function and value per wetland, as well as a list of suitable (though not principal) functions and values per wetland onsite

### 3.2.5 WETLAND IMPACT ASSESSMENT

An assessment of potential impacts on wetlands and watercourses associated with the proposed project activities, and a proposed mitigation plan to compensate for direct wetland impacts can be found in **Appendix E**.

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## APPENDIX A

## SITE MAPS

### SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022




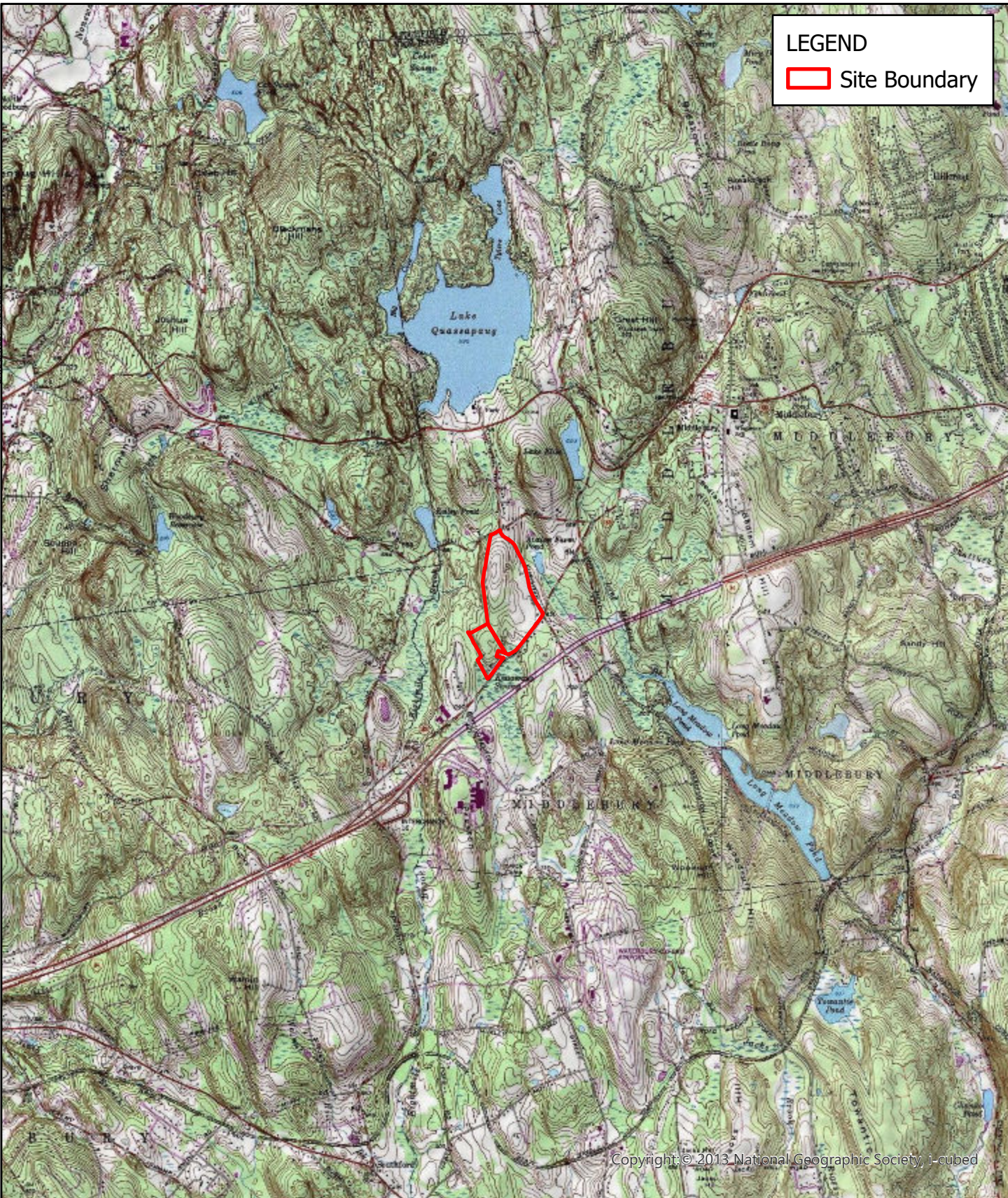
COPYRIGHT SJE CONSULTING - 2022

DATE SAVED: 11/21/2022

DOCUMENT PATH: W:\DESIGN\20970.00002\DESIGN\MAPS\TIMEKZ\_MIDDLEBURY.APRX

**LEGEND**

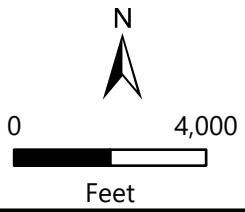
 Site Boundary



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**SLR**  
 99 REALTY DRIVE  
 CHESHIRE, CT 06410  
 203.271.1773

**USGS LOCUS MAP**  
 555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
 ATLANTIC MANAGEMENT CORPORATION  
 555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
 MIDDLEBURY, CONNECTICUT

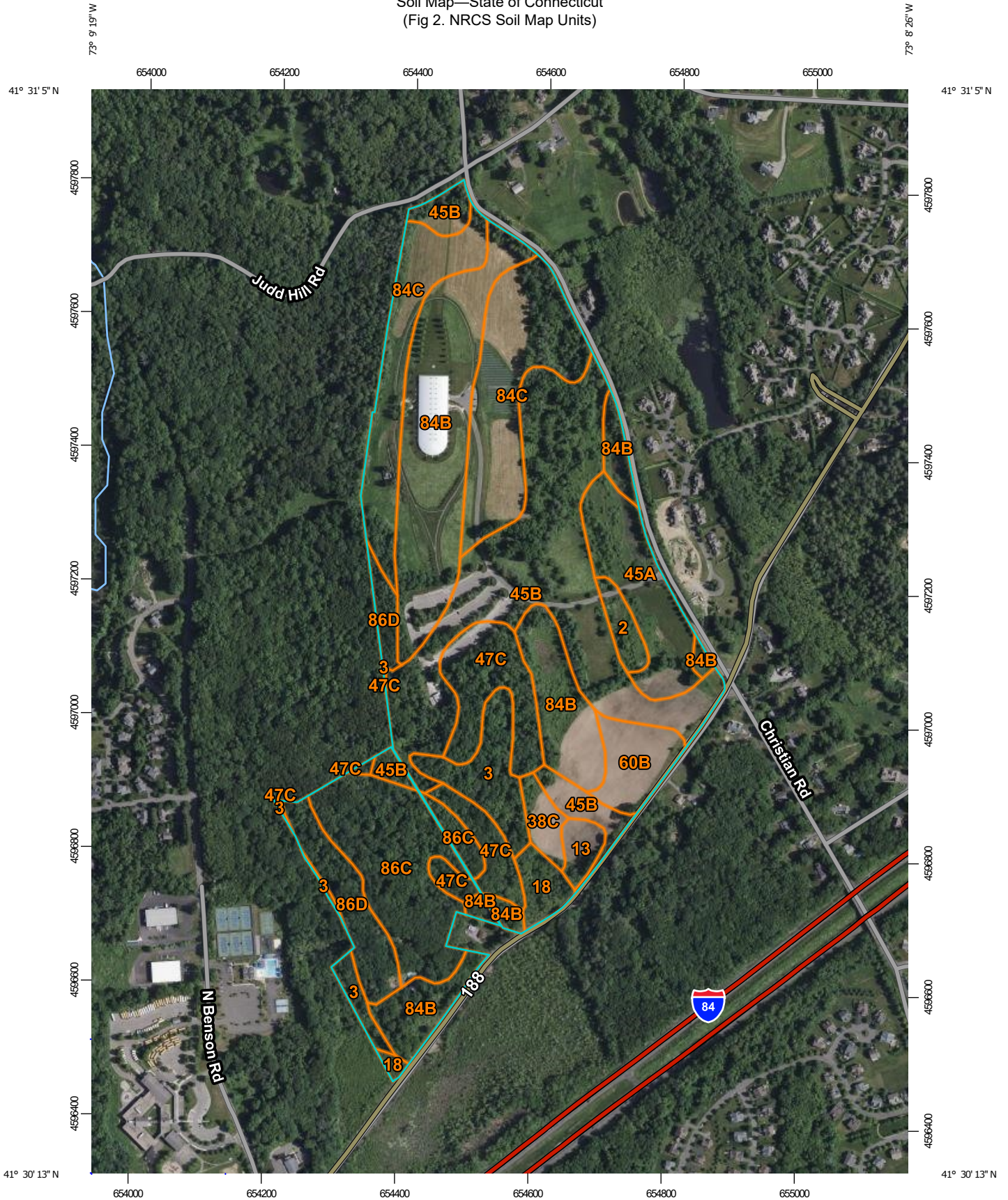


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 DATE 11/21/2022  
 PROJ. NO. 141.20970.00002

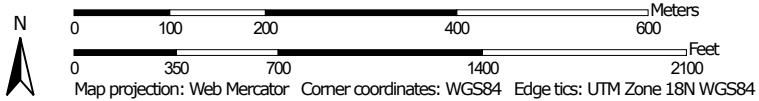
**FIG. 1**



Soil Map—State of Connecticut  
(Fig 2. NRCS Soil Map Units)



Map Scale: 1:7,900 if printed on A portrait (8.5" x 11") sheet.



## 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.

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 8, 2020—Jun 12, 2020

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

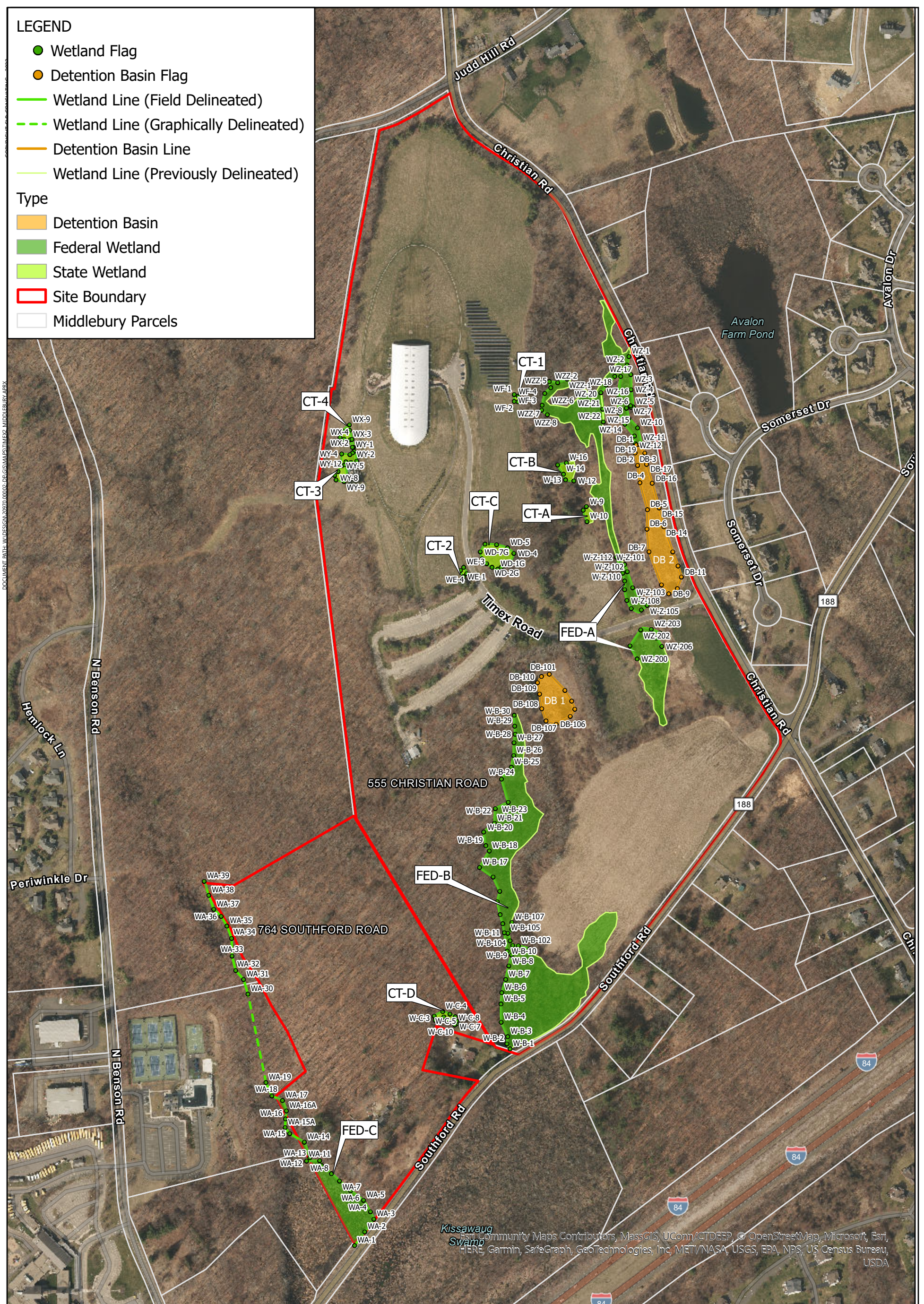
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Ridgebury fine sandy loam, 0 to 3 percent slopes	1.3	1.2%
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	5.0	4.5%
13	Walpole sandy loam, 0 to 3 percent slopes	1.2	1.1%
18	Catden and Freetown soils, 0 to 2 percent slopes	1.9	1.7%
38C	Hinckley loamy sand, 3 to 15 percent slopes	1.4	1.2%
45A	Woodbridge fine sandy loam, 0 to 3 percent slopes	6.5	5.8%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	25.5	22.7%
47C	Woodbridge fine sandy loam, 3 to 15 percent slopes, extremely stony	8.2	7.3%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	3.2	2.9%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	24.1	21.5%
84C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes	17.6	15.7%
86C	Paxton and Montauk fine sandy loams, 3 to 15 percent slopes, extremely stony	10.9	9.7%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	5.2	4.6%
<b>Totals for Area of Interest</b>		<b>112.1</b>	<b>100.0%</b>



**LEGEND**

- Wetland Flag
  - Detention Basin Flag
  - Wetland Line (Field Delineated)
  - - - Wetland Line (Graphically Delineated)
  - Detention Basin Line
  - Wetland Line (Previously Delineated)
- Type
- Detention Basin
  - Federal Wetland
  - State Wetland
  - Site Boundary
  - Middlebury Parcels

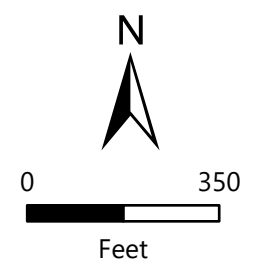
DOCUMENT PATH: \\VADESIGNA\20220\00002-DR-GIS\MAPS\TIMEXC\_MIDDLEBURY.APRX



99 REALTY DRIVE  
CHESHIRE, CT 06410  
203.271.1773

**WETLAND DELINEATION**

555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
DRUBNER EQUITIES, LLC  
555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
MIDDLEBURY, CONNECTICUT



SCALE	1" = 350'
DATE	11/23/2022
PROJ. NO.	141.20970.00002
<b>FIG. 3</b>	

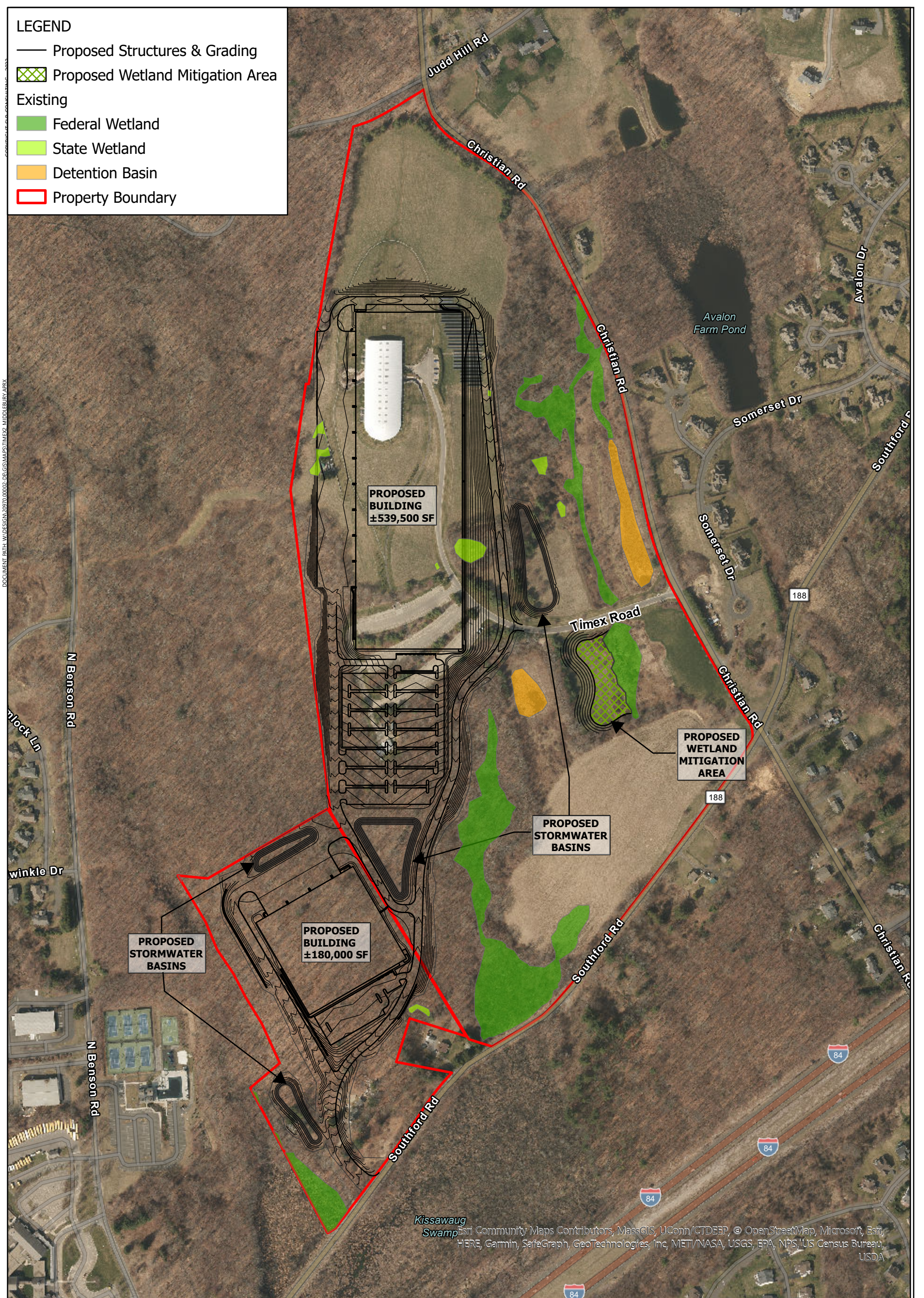
Esri, Community Maps Contributors, MassGIS, UConn/CTDEEP, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



**LEGEND**

- Proposed Structures & Grading
- ▨ Proposed Wetland Mitigation Area
- Existing
- Federal Wetland
- State Wetland
- Detention Basin
- ▭ Property Boundary

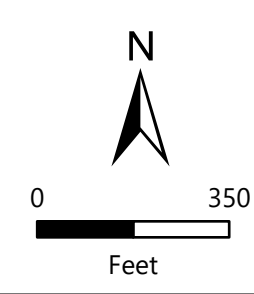
DOCUMENT PATH: \\VADESIGNA\20220\00002-DR-GIS\MAPS\TIMEX2\_MIDDLEBURY.APRX



99 REALTY DRIVE  
CHESHIRE, CT 06410  
203.271.1773

**PROPOSED CONDITIONS**

555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
DRUBNER EQUITIES, LLC  
555 CHRISTIAN ROAD AND 764 SOUTHFORD ROAD  
MIDDLEBURY, CONNECTICUT



SCALE	1" = 350'
DATE	11/23/2022
PROJ. NO.	141.20970.00002
<b>FIG. 4</b>	

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## APPENDIX B

# ACOE WETLAND DETERMINATION DATA FORMS

## SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: W-1  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 3%  
 Subregion (LRR or MLRA): 144A Lat: 41.51207726 Long: -73.14805212 Datum: NAD 83  
 Soil Map Unit Name: Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type: <u>Forested wetland</u>	
<p><b>Isolated state wetland. Watershed to this wetland was likely impacted during adjacent Timex Rd construction 20-25 years ago.</b></p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)																				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)																				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)																				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)																				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)																				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks:																					

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-1

<u>Tree Stratum</u> (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Carya ovata</u>	<u>30</u>	Y	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
	<u>30</u>	= Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>145</u></td> <td>x 4 = <u>580</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>145</u> (A)</td> <td><u>580</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>145</u>	x 4 = <u>580</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>145</u> (A)	<u>580</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>0</u>	x 3 = <u>0</u>																	
FACU species <u>145</u>	x 4 = <u>580</u>																	
UPL species <u>0</u>	x 5 = <u>0</u>																	
Column Totals: <u>145</u> (A)	<u>580</u> (B)																	
<u>Sapling/Shrub Stratum</u> (Plot size: <u>15'</u> )				<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)														
1. <u>Rosa multiflora</u>	<u>90</u>	Y	FACU															
2. <u>Berberis thunbergii</u>	<u>10</u>	N	FACU															
3. <u>Lonicera morrowii</u>	<u>5</u>	N	FACU															
4. <u>Euonymus alatus</u>	<u>2</u>	N	NR															
5. _____																		
6. _____																		
7. _____																		
	<u>107</u>	= Total Cover		<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.  <b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
<u>Herb Stratum</u> (Plot size: <u>5'</u> )																		
1. <u>Rosa multiflora</u>	<u>5</u>	Y	FACU															
2. <u>Euonymus alatus</u>	<u>5</u>	Y	NR															
3. <u>Lonicera morrowii</u>	<u>5</u>	Y	FACU															
4. _____																		
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
	<u>15</u>	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														
<u>Woody Vine Stratum</u> (Plot size: <u>15'</u> )																		
1. <u>No liana observed within plot.</u>																		
2. _____																		
3. _____																		
4. _____																		
	<u>0</u>	= Total Cover																

Remarks: (Include photo numbers here or on a separate sheet.)

**Dominated by non-native FACU vegetation.**

**SOIL**

Sampling Point: W-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	100					Fine sandy loam	No redox
12-22	2.5Y 5/4	95	7.5YR 4/6	5	D	M	Fine sandy loam	Few distinct depletions
22-24	10YR 4/5	50	10YR 5/2	50	C, D	M	Fine sandy loam	Common distinct concentrations and depletions

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: None  
 Depth (inches): N/A

Hydric Soil Present?    Yes     No

**Remarks:**

Concentrations and depletions beginning at 12" depth.

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: U-1  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): None Local relief (concave, convex, none): None Slope (%): 0%  
 Subregion (LRR or MLRA): 144A Lat: 41.51198265 Long: -73.14792508 Datum: NAD 83  
 Soil Map Unit Name: Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type: <u>Upland forest</u>  Located approximately 10 feet outside isolated forested state wetland.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) _____ <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks: No indications of active hydrology.	

**VEGETATION** – Use scientific names of plants.

Sampling Point: U-1

Tree Stratum (Plot size: <u>30'</u> )	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Carya ovata</u>	<u>5</u>	Y	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
2. <u>Malus pumila</u>	<u>1</u>	N	NR															
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
<u>6</u> = Total Cover				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:right;">Total % Cover of:</td> <td style="width:50%; text-align:left;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>22</u></td> <td>x 3 = <u>66</u></td> </tr> <tr> <td>FACU species <u>96</u></td> <td>x 4 = <u>384</u></td> </tr> <tr> <td>UPL species <u>1</u></td> <td>x 5 = <u>5</u></td> </tr> <tr> <td>Column Totals: <u>119</u> (A)</td> <td><u>455</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>3.82</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>22</u>	x 3 = <u>66</u>	FACU species <u>96</u>	x 4 = <u>384</u>	UPL species <u>1</u>	x 5 = <u>5</u>	Column Totals: <u>119</u> (A)	<u>455</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>22</u>	x 3 = <u>66</u>																	
FACU species <u>96</u>	x 4 = <u>384</u>																	
UPL species <u>1</u>	x 5 = <u>5</u>																	
Column Totals: <u>119</u> (A)	<u>455</u> (B)																	
<b>Sapling/Shrub Stratum (Plot size: <u>15'</u> )</b>																		
1. <u>Rosa multiflora</u>	<u>90</u>	Y	FACU															
2. <u>Elaeagnus umbellata</u>	<u>10</u>	N	NR															
3. <u>Rhamnus cathartica</u>	<u>2</u>	N	FAC															
4. <u>Malus pumila (sapling)</u>	<u>2</u>	N	NR															
5. _____																		
6. _____																		
7. _____																		
<u>104</u> = Total Cover																		
<b>Herb Stratum (Plot size: <u>5'</u> )</b>																		
1. <u>Grasses sp.</u>	<u>60</u>	Y	NR															
2. <u>Galium boreale</u>	<u>20</u>	N	FAC															
3. <u>Daucus carota</u>	<u>1</u>	N	UPL															
4. <u>Solidago canadensis</u>	<u>1</u>	N	FACU															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
<u>82</u> = Total Cover																		
<b>Woody Vine Stratum (Plot size: <u>15'</u> )</b>																		
1. <u>No liana species observed.</u>																		
2. _____																		
3. _____																		
4. _____																		
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)				<b>Hydrophytic Vegetation Present?</b>														
				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>														

**SOIL**

Sampling Point: U-1

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-10	10YR 3/2	100					Fine sandy loam	No redox
10-24	10YR 5/6	100					Fine sandy loam	No redox; large stones intermixed at 10"

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histic Sol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: None  
 Depth (inches): N/A

Hydric Soil Present?    Yes     No

Remarks: **No redox features; unrestrictive rock/stone encountered at 10"**



**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: W-2  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5%  
 Subregion (LRR or MLRA): 144A Lat: 41.51195468 Long: -73.14852663 Datum: NAD 83  
 Soil Map Unit Name: Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type: <u>Seep</u>  Small isolated seep - approximately 435 SF. Located upgradient and opposite Timex Rd from W-1 and U-1, at the toe of slope of an early successional meadow.	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input checked="" type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																				
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>18"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:																					
Remarks: Seasonally high water table. Groundwater seepage likely infiltrates immediately downgradient in U-2.																					

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-2

	Absolute % Cover	Dominant Species?	Indicator Status																													
<b>Tree Stratum</b> (Plot size: <u>30'</u> )																																
1. <u>No trees observed within plot.</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																												
2. _____																																
3. _____																																
4. _____																																
5. _____																																
6. _____																																
7. _____																																
	<u>0</u>	= Total Cover																														
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )																																
1. <u>No saplings/shrubs observed within plot.</u>				<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%;"></td> <td style="width:25%; text-align:center;">Total % Cover of:</td> <td style="width:25%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>30</u></td> <td></td> <td>x 1 = <u>30</u></td> </tr> <tr> <td>FACW species <u>75</u></td> <td></td> <td>x 2 = <u>150</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>0</u></td> <td></td> <td>x 4 = <u>0</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>105</u></td> <td>(A)</td> <td><u>180</u></td> </tr> <tr> <td></td> <td></td> <td>(B)</td> </tr> <tr> <td colspan="3" style="text-align:center;">Prevalence Index = B/A = <u>1.71</u></td> <td></td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species <u>30</u>		x 1 = <u>30</u>	FACW species <u>75</u>		x 2 = <u>150</u>	FAC species <u>0</u>		x 3 = <u>0</u>	FACU species <u>0</u>		x 4 = <u>0</u>	UPL species <u>0</u>		x 5 = <u>0</u>	Column Totals: <u>105</u>	(A)	<u>180</u>			(B)	Prevalence Index = B/A = <u>1.71</u>			
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4. _____																																
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6. _____																																
7. _____																																
	<u>0</u>	= Total Cover																														
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																																
1. <u>Juncus effusus</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	<b>Hydrophytic Vegetation Indicators:</b> <input checked="" type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																												
2. <u>Scirpus cyperinus</u>	<u>20</u>	<u>N</u>	<u>OBL</u>																													
3. <u>Carex lurida</u>	<u>10</u>	<u>N</u>	<u>OBL</u>																													
4. <u>Onoclea sensibilis</u>	<u>10</u>	<u>N</u>	<u>FACW</u>																													
5. <u>Epilobium ciliatum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>																													
6. _____																																
7. _____																																
8. _____																																
9. _____																																
10. _____																																
11. _____																																
12. _____																																
	<u>105</u>	= Total Cover																														
<b>Woody Vine Stratum</b> (Plot size: <u>15'</u> )																																
1. <u>No liana observed within plot.</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																												
2. _____																																
3. _____																																
4. _____																																
	<u>0</u>	= Total Cover																														
Remarks: (Include photo numbers here or on a separate sheet.)																																
Concentration of hydrophytic vegetation within a field of upland grasses and forbs.																																

**SOIL**

Sampling Point: W-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/2	100					Organic muck	No redox
4-24	10YR 4/2.5	90	10YR 5/2	10	D	M	Sandy loam	Highly compacted; few fine depletions

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<b>Hydric Soil Indicators:</b>		<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR R, MLRA 149B)	<input type="checkbox"/> 2 cm Muck (A10) (LRR K, L, MLRA 149B)	<input type="checkbox"/> Coast Prairie Redox (A16) (LRR K, L, R)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR R, MLRA 149B)	<input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)	<input type="checkbox"/> Dark Surface (S7) (LRR K, L)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (LRR K, L)	<input type="checkbox"/> Polyvalue Below Surface (S8) (LRR K, L)	<input type="checkbox"/> Thin Dark Surface (S9) (LRR K, L)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Iron-Manganese Masses (F12) (LRR K, L, R)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 149B)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Mesic Spodic (TA6) (MLRA 144A, 145, 149B)	<input type="checkbox"/> Red Parent Material (F21)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			
<input type="checkbox"/> Sandy Redox (S5)			
<input type="checkbox"/> Stripped Matrix (S6)			
<input type="checkbox"/> Dark Surface (S7) (LRR R, MLRA 149B)			

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

<b>Restrictive Layer (if observed):</b>	
Type: <u>None</u>	
Depth (inches): <u>N/A</u>	
Hydric Soil Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks: Fine few 10YR 5/2 depletions at 4-24". Saturation at 18-24".

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: U-2  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5%  
 Subregion (LRR or MLRA): 144A Lat: 41.51197285 Long: -73.14848454 Datum: NAD 83  
 Soil Map Unit Name: Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type:  <p align="center"><b>Early successional meadow of grasses and forbs; approximately 15 feet downgradient of W-2 plot.</b></p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply) <table style="width:100%; border: none;"> <tr> <td style="width:50%; border: none;"><input type="checkbox"/> Surface Water (A1)</td> <td style="width:50%; border: none;"><input type="checkbox"/> Water-Stained Leaves (B9)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> High Water Table (A2)</td> <td style="border: none;"><input type="checkbox"/> Aquatic Fauna (B13)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Saturation (A3)</td> <td style="border: none;"><input type="checkbox"/> Marl Deposits (B15)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Water Marks (B1)</td> <td style="border: none;"><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sediment Deposits (B2)</td> <td style="border: none;"><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Drift Deposits (B3)</td> <td style="border: none;"><input type="checkbox"/> Presence of Reduced Iron (C4)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Algal Mat or Crust (B4)</td> <td style="border: none;"><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Iron Deposits (B5)</td> <td style="border: none;"><input type="checkbox"/> Thin Muck Surface (C7)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</td> <td style="border: none;"><input type="checkbox"/> Other (Explain in Remarks)</td> </tr> <tr> <td style="border: none;"><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</td> <td></td> </tr> </table>	<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)	<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)	<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		<b>Secondary Indicators (minimum of two required)</b> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9)																				
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Aquatic Fauna (B13)																				
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Marl Deposits (B15)																				
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<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)																				
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)																					
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  Remarks: <p align="center"><b>No indications of active water table.</b></p>																					

**VEGETATION** – Use scientific names of plants.

Sampling Point: U-2

	Absolute % Cover	Dominant Species?	Indicator Status															
<b>Tree Stratum</b> (Plot size: <u>30'</u> )																		
1. <u>No trees observed within plot.</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
	<u>0</u>	= Total Cover																
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )																		
1. <u>Rosa multiflora</u>	<u>15</u>	<u>Y</u>	<u>FACU</u>	<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>95</u></td> <td>x 4 = <u>380</u></td> </tr> <tr> <td>UPL species <u>5</u></td> <td>x 5 = <u>25</u></td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.05</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>95</u>	x 4 = <u>380</u>	UPL species <u>5</u>	x 5 = <u>25</u>	Column Totals: _____ (A)	_____ (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
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FACU species <u>95</u>	x 4 = <u>380</u>																	
UPL species <u>5</u>	x 5 = <u>25</u>																	
Column Totals: _____ (A)	_____ (B)																	
2. _____																		
3. _____																		
4. _____																		
5. _____																		
6. _____																		
7. _____																		
	<u>15</u>	= Total Cover																
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																		
1. <u>Galium triflorum</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Plantago lanceolata</u>	<u>40</u>	<u>Y</u>	<u>FACU</u>															
3. <u>Grasses sp.</u>	<u>15</u>	<u>N</u>	<u>NR</u>															
4. <u>Daucus carota</u>	<u>5</u>	<u>N</u>	<u>UPL</u>															
5. _____																		
6. _____																		
7. _____																		
8. _____																		
9. _____																		
10. _____																		
11. _____																		
12. _____																		
	<u>100</u>	= Total Cover																
<b>Woody Vine Stratum</b> (Plot size: <u>15'</u> )																		
1. <u>No liana species observed.</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.														
2. _____																		
3. _____																		
4. _____																		
	<u>0</u>	= Total Cover																
<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		

Remarks: (Include photo numbers here or on a separate sheet.)

Area is likely mowed irregularly. Appears to have been at least 1 growing season without mowing.

**SOIL**

Sampling Point: U-2

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-8	10YR 3/2	100					Fine sandy loam	No redox
8-16	2.5Y 4/4	90	10YR 5/2	10	D	M	Fine sandy loam	Faint mottling

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators:**

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)
- Sandy Redox (S5)
- Stripped Matrix (S6)
- Dark Surface (S7) (LRR R, MLRA 149B)

- Polyvalue Below Surface (S8) (LRR R, MLRA 149B)
- Thin Dark Surface (S9) (LRR R, MLRA 149B)
- Loamy Mucky Mineral (F1) (LRR K, L)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

- 2 cm Muck (A10) (LRR K, L, MLRA 149B)
- Coast Prairie Redox (A16) (LRR K, L, R)
- 5 cm Mucky Peat or Peat (S3) (LRR K, L, R)
- Dark Surface (S7) (LRR K, L)
- Polyvalue Below Surface (S8) (LRR K, L)
- Thin Dark Surface (S9) (LRR K, L)
- Iron-Manganese Masses (F12) (LRR K, L, R)
- Piedmont Floodplain Soils (F19) (MLRA 149B)
- Mesic Spodic (TA6) (MLRA 144A, 145, 149B)
- Red Parent Material (F21)
- Very Shallow Dark Surface (TF12)
- Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if observed):**

Type: Rock/gravel  
 Depth (inches): 16"

Hydric Soil Present? Yes  No

Remarks: **Groundwater seepage from W-2 likely infiltrates downgradient here in U-2.**

**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: W-3  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5%  
 Subregion (LRR or MLRA): 144A Lat: 41.51346527 Long: -73.15015606 Datum: NAD 83  
 Soil Map Unit Name: Paxton and Montauk fine sandy loams, 8 to 15 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type: <u>Seep</u>	
<p>Two small mowed lawn seeps approximately 5800 SF total originate at the foundation of retaining walls and decorative stone walls, which appear to have compacted the soils and intercepted the groundwater table. Situated on the hillslope of a drumlin.</p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input checked="" type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input checked="" type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input checked="" type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>&lt;0.5"</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>0-12"</u> (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p>Seasonal surface water discharges infiltrate into the upland till soils located immediately downgradient of the lawn areas.</p>	

**VEGETATION** – Use scientific names of plants.

Sampling Point: W-3

	Absolute % Cover	Dominant Species?	Indicator Status	
<b>Tree Stratum</b> (Plot size: <u>30'</u> )				
1. <u>No tree species observed within plot.</u>				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: _____ (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>0</u>	= Total Cover		
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )				
1. <u>No sapling/shrub species observed within plot.</u>				<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B)  Prevalence Index = B/A = _____
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
	<u>0</u>	= Total Cover		
<b>Herb Stratum</b> (Plot size: <u>5'</u> )				
1. <u>Lolium perenne</u>	30	Y	FACU	<b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. <u>Festuca rubra</u>	30	Y	FACU	
3. <u>Trifolium repens</u>	20	N	FACU	
4. <u>Plantago major</u>	5	N	FACU	
5. <u>Artemisia vulgaris</u>	5	N	UPL	
6. <u>Taraxacum officinale</u>	5	N	FACU	
7. <u>Plantago lanceolata</u>	5	N	FACU	
8. _____				
9. _____				
10. _____				
11. _____				
12. _____				
	<u>100</u>	= Total Cover		
<b>Woody Vine Stratum</b> (Plot size: <u>15'</u> )				
1. <u>No liana observed within plot.</u>				<b>Definitions of Vegetation Strata:</b>  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.
2. _____				
3. _____				
4. _____				
	<u>0</u>	= Total Cover		
Remarks: (Include photo numbers here or on a separate sheet.)				
<b>Maintained as lawn.</b>				
				<b>Hydrophytic Vegetation Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>





**WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region**

Project/Site: 555 Christian Rd - Timex Site City/County: Middlebury Sampling Date: November 9, 2022  
 Applicant/Owner: Drubner Equities, LLC State: CT Sampling Point: U-3  
 Investigator(s): MJS, MJF Section, Township, Range: \_\_\_\_\_  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 0%  
 Subregion (LRR or MLRA): 144A Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 83  
 Soil Map Unit Name: Woodbridge fine sandy loam, 3 to 8 percent slopes NWI classification: \_\_\_\_\_

Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation , Soil , or Hydrology  significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation , Soil , or Hydrology  naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) Community type: <u>Upland forest</u>	
<p><b>Located approximately 25 feet downgradient of W-3 on a drumlin hillslope. Area is maintained as lawn.</b></p>	

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b> Primary Indicators (minimum of one is required; check all that apply)	<b>Secondary Indicators (minimum of two required)</b>
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> Water-Stained Leaves (B9) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Aquatic Fauna (B13) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Marl Deposits (B15) <input type="checkbox"/> Water Marks (B1) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Sediment Deposits (B2) <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) <input type="checkbox"/> Drift Deposits (B3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Algal Mat or Crust (B4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Iron Deposits (B5) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Other (Explain in Remarks) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	<input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:	
Remarks: <p><b>No indications of active hydrology.</b></p>	

**VEGETATION** – Use scientific names of plants.

Sampling Point: U-3

	Absolute % Cover	Dominant Species?	Indicator Status																	
<b>Tree Stratum</b> (Plot size: <u>30'</u> )				<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. <u>No trees observed within plot.</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>0</u>	= Total Cover		<b>Prevalence Index worksheet:</b> <table style="width:100%; border:none;"> <tr> <td style="width:50%; text-align:center;">Total % Cover of:</td> <td style="width:50%; text-align:center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>0</u></td> <td>x 3 = <u>0</u></td> </tr> <tr> <td>FACU species <u>102</u></td> <td>x 4 = <u>408</u></td> </tr> <tr> <td>UPL species <u>0</u></td> <td>x 5 = <u>0</u></td> </tr> <tr> <td>Column Totals: <u>102</u> (A)</td> <td><u>408</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align:center;">Prevalence Index = B/A = <u>4</u></td> </tr> </table> <b>Hydrophytic Vegetation Indicators:</b> <input type="checkbox"/> Rapid Test for Hydrophytic Vegetation <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 <sup>1</sup> <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>102</u>	x 4 = <u>408</u>	UPL species <u>0</u>	x 5 = <u>0</u>	Column Totals: <u>102</u> (A)	<u>408</u> (B)	Prevalence Index = B/A = <u>4</u>	
Total % Cover of:	Multiply by:																			
OBL species <u>0</u>	x 1 = <u>0</u>																			
FACW species <u>0</u>	x 2 = <u>0</u>																			
FAC species <u>0</u>	x 3 = <u>0</u>																			
FACU species <u>102</u>	x 4 = <u>408</u>																			
UPL species <u>0</u>	x 5 = <u>0</u>																			
Column Totals: <u>102</u> (A)	<u>408</u> (B)																			
Prevalence Index = B/A = <u>4</u>																				
<b>Sapling/Shrub Stratum</b> (Plot size: <u>15'</u> )																				
1. <u>No saplings/shrubs observed within plot.</u>																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
6. _____																				
7. _____																				
	<u>0</u>	= Total Cover																		
<b>Herb Stratum</b> (Plot size: <u>5'</u> )																				
1. <u>Lolium perenne</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>																	
2. <u>Festuca rubra</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>																	
3. <u>Trifolium repens</u>	<u>30</u>	<u>Y</u>	<u>FACU</u>																	
4. <u>Plantago lanceolata</u>	<u>10</u>	<u>N</u>	<u>FACU</u>																	
5. <u>Taraxacum officinale</u>	<u>2</u>	<u>N</u>	<u>FACU</u>																	
6. _____																				
7. _____																				
8. _____																				
9. _____																				
10. _____																				
11. _____																				
12. _____																				
	<u>102</u>	= Total Cover																		
<b>Woody Vine Stratum</b> (Plot size: <u>15'</u> )																				
1. <u>No liana species observed.</u>																				
2. _____																				
3. _____																				
4. _____																				
	<u>0</u>	= Total Cover																		
Definitions of Vegetation Strata:  <b>Tree</b> – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.  <b>Sapling/shrub</b> – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.  <b>Herb</b> – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.  <b>Woody vines</b> – All woody vines greater than 3.28 ft in height.																				
Hydrophytic Vegetation Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				
Remarks: (Include photo numbers here or on a separate sheet.) <b>Maintained as lawn.</b>																				



## APPENDIX C

## SITE PHOTOS

### SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022



**Client Name:**  
Drubner Equities, LLC

**Site Location:** 555 Christian Road  
Middlebury, CT

**Project No.**  
141.20970.00002

<b>Photo No.</b> 1	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
Northwest

**Description:**  
View of Federal Wetland A narrow, scrub shrub riparian wetland bordering the eastern bank of the manmade ditch, downstream (north) of the Timex Road culvert crossing.



<b>Photo No.</b> 2	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
Southeast

**Description:**  
View of Federal Wetland A from the vicinity of the Timex Road culvert crossing, facing upstream.





<b>Client Name:</b> Drubner Equities, LLC	<b>Site Location:</b> 555 Christian Road Middlebury, CT	<b>Project No.</b> 141.20970.00002
--	--	---------------------------------------

<b>Photo No.</b> 3	<b>Date:</b> 10/18/2022
<b>Direction Photo Taken:</b> East	

**Description:**  
View from within the northern, palustrine forested portion of Federal Wetland B, looking towards narrow intermittent watercourse



<b>Photo No.</b> 4	<b>Date:</b> 10/18/2022
<b>Direction Photo Taken:</b> South	

**Description:**  
View of southern, scrub shrub portion of Federal Wetland B.





**Client Name:**  
Drubner Equities, LLC

**Site Location:** 555 Christian Road  
Middlebury, CT

**Project No.**  
141.20970.00002

<b>Photo No.</b> 5	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
Southwest

**Description:**  
Federal Wetland C near the southwest boundary of 764 Southford Rd.



<b>Photo No.</b> 6	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
West

**Description:**  
Federal Wetland C with pockets of scrub-shrub (background) and emergent (foreground) vegetation.





**Client Name:**  
Drubner Equities, LLC

**Site Location:** 555 Christian Road  
Middlebury, CT

**Project No.**  
141.20970.00002

<b>Photo No.</b> 7	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
East

**Description:**  
View of State Wetland A, an isolated scrub-shrub and emergent depressional wetland.



<b>Photo No.</b> 8	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
East

**Description:**  
View of State Wetland B, an isolated scrub-shrub depressional wetland.





**Client Name:**  
Drubner Equities, LLC

**Site Location:** 555 Christian Road  
Middlebury, CT

**Project No.**  
141.20970.00002

<b>Photo No.</b> 9	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
Northeast

**Description:**  
View of State Wetland C, an isolated forested wetland comprised primarily of non-native vegetation.



<b>Photo No.</b> 10	<b>Date:</b> 10/18/2022
------------------------	----------------------------

**Direction Photo Taken:**  
Southeast

**Description:**  
View of steep bank along western side of Isolated State Wetland D within the southern portion of the property





**Client Name:**  
Drubner Equities, LLC

**Site Location:** 555 Christian Road  
Middlebury, CT

**Project No.**  
141.20970.00002

<b>Photo No.</b> 1	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
North

**Description:**  
Isolated lawn seep (CT-1) located downgradient of the office building and solar field. Hydric soils are dominated by one species of hydrophytic grass.



<b>Photo No.</b> 2	<b>Date:</b> 10/18/2022
-----------------------	----------------------------

**Direction Photo Taken:**  
West

**Description:**  
Isolated lawn seep (CT-2) located east of Timex Road and north of the main parking area. Several hydrophytic vegetation species are present.





<b>Client Name:</b> Drubner Equities, LLC	<b>Site Location:</b> 555 Christian Road Middlebury, CT	<b>Project No.</b> 141.20970.00002
--	--	---------------------------------------

<b>Photo No.</b> 11	<b>Date:</b> 10/18/2022
<b>Direction Photo Taken:</b> South	

**Description:**  
Southern of two isolated lawn seep wetland areas to the west of the Timex office building (CT-3). The manicured lawn west of the stone wall was underlain by saturated, hydric soils. See surface water present.



<b>Photo No.</b> 12	<b>Date:</b> 10/18/2022
<b>Direction Photo Taken:</b> North	

**Description:**  
The northern of two isolated lawn seep wetland areas to the west of the Timex office building (CT-4). Standing water was observed above hydric soils with some hydric vegetation identified within the herbaceous meadow to the west.





## APPENDIX D

# WETLAND FUNCTION-VALUE EVALUATION FORMS

## SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022

# Wetland Function-Value Evaluation Form

Total area of wetland 0.15-ac Human made? yes Is wetland part of a wildlife corridor? no or a "habitat island"? yes

Adjacent land use commercial, residential, and forested Distance to nearest roadway or other development 20-300 feet

Dominant wetland systems present palustrine emergent Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? yes If not, where does the wetland lie in the drainage basin? \_\_\_\_\_

How many tributaries contribute to the wetland? N/A Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. CT-1 through 4 (lawn seep wetlands)













Latitude 41.508182° Longitude -73.149882°

Prepared by: MLA Date 11-22-2022

Wetland Impact:  
Type fill Area 0.15-acre

Evaluation based on:  
Office \_\_\_\_\_ Field X

Corps manual wetland delineation completed? Y \_\_\_\_\_ N X

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	2,4,5,7,8	Y	Groundwater discharges through these wetlands feeding surface waters downgradient
 Floodflow Alteration	N		N	These isolated wetlands are not associated with a watercourse and/or floodplain
 Fish and Shellfish Habitat	N		N	No watercourse/water body conducive to fish habitat is associated with these wetlands
 Sediment/Toxicant Retention	Y		N	Small size and topographic position w/out significant source of sediment upgradient limits performance of this function
 Nutrient Removal	Y	3,4	N	Small size of these wetlands and low vegetation diversity limits nutrient removal potential
 Production Export	N	1,12	N	Small, isolated nature of these wetlands limits contribution to this function
 Sediment/Shoreline Stabilization	N		N	These small, isolated wetlands are not associated with a watercourse or waterbody
 Wildlife Habitat	N	7,8	N	Limited vegetation diversity and structure and small size of these wetlands limits wildlife habitat potential
 Recreation	N		N	This function is not provided by these wetlands, which occur on private property
 Educational/Scientific Value	N		N	This function is not provided by these wetlands, which occur on private property
 Uniqueness/Heritage	N		N	<b>The wetland does not provide uniqueness/heritage</b>
 Visual Quality/Aesthetics	N		N	<b>The wetland does not provide significant aesthetic value</b>
<b>ES</b> Endangered Species Habitat	N		N	No mapped habitat for state or federally listed species per June 2022 review of NDDDB and IPaC data
Other				

Notes:

\* Refer to backup list of numbered considerations.



# Wetland Function-Value Evaluation Form

Total area of wetland 0.25-ac Human made? no Is wetland part of a wildlife corridor? no or a "habitat island"? yes













Adjacent land use forest and residential Distance to nearest roadway or other development 20-300 feet

Dominant wetland systems present palustrine scrub shrub Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? yes If not, where does the wetland lie in the drainage basin? \_\_\_\_\_

How many tributaries contribute to the wetland? N/A Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. CT-Wet-A through D  
 Latitude 41.508182° Longitude -73.149882°  
 Prepared by: MLA Date 11-22-2022  
 Wetland Impact:  
 Type fill Area 0.2-acre  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation completed? Y \_\_\_\_\_ N X \_\_\_\_\_

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	2,4,5,7,8	Y	Groundwater discharges through these wetlands feeding surface waters downgradient
 Floodflow Alteration	N		N	These isolated wetlands are not associated with a watercourse and/or floodplain
 Fish and Shellfish Habitat	N		N	No watercourse/water body conducive to fish habitat is associated with these wetlands
 Sediment/Toxicant Retention	Y		N	Small size and topographic position w/out significant source of sediment upgradient limits performance of this function
 Nutrient Removal	Y	3,4	N	Small size of these wetlands and low vegetation diversity limits nutrient removal potential
 Production Export	N	1,12	N	Small, isolated nature of these wetlands limits contribution to this function
 Sediment/Shoreline Stabilization	N		N	These small, isolated wetlands are not associated with a watercourse or waterbody
 Wildlife Habitat	Y	7,8	N	Limited vegetation diversity and structure and small size of these wetlands limits wildlife habitat potential
 Recreation	N		N	This function is not provided by these wetlands, which occur on private property
 Educational/Scientific Value	N		N	This function is not provided by these wetlands, which occur on private property
 Uniqueness/Heritage	N		N	<b>The wetland does not provide uniqueness/heritage</b>
 Visual Quality/Aesthetics	N		N	<b>The wetland does not provide significant aesthetic value</b>
<b>ES</b> Endangered Species Habitat	N		N	No mapped habitat for state or federally listed species per June 2022 review of NDDDB and IPaC data
Other				













Notes:

\* Refer to backup list of numbered considerations.

# Wetland Function-Value Evaluation Form

Total area of wetland 1.7 AC Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? \_\_\_\_\_  
 Adjacent land use commercial and residential Distance to nearest roadway or other development 130 ft  
 Dominant wetland systems present PSS Contiguous undeveloped buffer zone present no  
 Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? upper  
 How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Federal Wetland-A  
 Latitude 41.511783° Longitude -73.146115°  
 Prepared by: MLA Date 11-22-2022  
 Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation completed? Y X N \_\_\_\_\_

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	2,4,5,7,15	Y	Runoff from adjacent grassy areas recharge groundwater table from this wetland
 Floodflow Alteration	Y	2,5,6,7,8,9,10,11,15,18	N	May provide localized floodflow attenuation but is not w/in or bordering a mapped floodplain or perennial watercourse
 Fish and Shellfish Habitat	N	8, 17	N	Watercourse is intermittent, manipulated and shallow - unlikely to provide fish habitat
 Sediment/Toxicant Retention	Y	1,2,10	Y	Size, topographic position, and vegetation support sediment retention from upgradient sources
 Nutrient Removal	Y	3,4	Y	Position downgradient of nutrient runoff sources and high stem density w/in a wide, flat area promote this function
 Production Export	Y	1,12	Y	High density of fruit and mast producing vegetation is present and contributes to this function
 Sediment/Shoreline Stabilization	Y	3,4,7,12,13,14,15	N	Vegetation is dense bordering IWC though steep, well-defined banks are not present
 Wildlife Habitat	Y	7,8,10,13,19,21	Y	Dense scrub shrub vegetation provides shelter and food for wetland-dependent wildlife
 Recreation	N		N	This function is not provided by this wetland, which occurs on private property
 Educational/Scientific Value	N		N	This function is not provided by this wetland, which occurs on private property
 Uniqueness/Heritage	N		N	<b>The wetland does not provide uniqueness/heritage</b>
 Visual Quality/Aesthetics	N		N	<b>The wetland does not provide significant aesthetic value</b>
<b>ES</b> Endangered Species Habitat	N		N	No mapped habitat for state or federally listed species per June 2022 review of NDDDB and IPaC data
Other				

Notes:

\* Refer to backup list of numbered considerations.

# Wetland Function-Value Evaluation Form

Total area of wetland 3.98 AC Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? \_\_\_\_\_













Adjacent land use commercial, agricultural, residential, forested Distance to nearest roadway or other development 5 ft

Dominant wetland systems present PSS and PFO Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? upper

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. **Federal Wetland-B**  
 Latitude 41.508291° Longitude -73.148338°  
 Prepared by: MLA Date 11-22-2022  
 Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation completed? Y X N \_\_\_\_\_

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	2,4,5,7,15	Y	Groundwater discharges from this wetland feed downgradient surface waters
 Floodflow Alteration	Y	2,5,6,7,8,9,10,11,15,18	N	May provide localized floodflow attenuation but is not w/in or bordering a mapped floodplain or perennial watercourse
 Fish and Shellfish Habitat	N	8, 17	N	Watercourse is intermittent, manipulated and shallow - unlikely to provide fish habitat
 Sediment/Toxicant Retention	Y	1,2,10	Y	Size, topographic position, and vegetation support sediment retention from upgradient sources
 Nutrient Removal	Y	3,4,5,6,7,8,9,10,11	Y	Position downgradient of nutrient runoff sources and high stem density w/in a wide, flat area promote this function
 Production Export	Y	1,2,4,7,8,12	N	High density of fruit and mast producing vegetation is present but export is limited by low downstream hydro. connectivity
 Sediment/Shoreline Stabilization	Y	3,4,7,12,13,14,15	N	Vegetation is dense bordering IWC though steep, well-defined banks are not present
 Wildlife Habitat	Y	7,8,10,13,19,21	Y	Dense vegetation provides shelter and food for wetland-dependent wildlife
 Recreation	N		N	This function is not provided by this wetland, which occurs on private property
 Educational/Scientific Value	N		N	This function is not provided by this wetland, which occurs on private property
 Uniqueness/Heritage	N		N	<b>The wetland does not provide uniqueness/heritage</b>
 Visual Quality/Aesthetics	N		N	<b>The wetland does not provide significant aesthetic value</b>
<b>ES</b> Endangered Species Habitat	N		N	No mapped habitat for state or federally listed species per June 2022 review of NDDDB and IPaC data
Other				

Notes: \* Refer to backup list of numbered considerations.



# Wetland Function-Value Evaluation Form

Total area of wetland 0.6 AC Human made? no Is wetland part of a wildlife corridor? yes or a "habitat island"? \_\_\_\_\_













Adjacent land use commercial, agricultural, residential, forested Distance to nearest roadway or other development 5 ft

Dominant wetland systems present PSS and PFO Contiguous undeveloped buffer zone present no

Is the wetland a separate hydraulic system? no If not, where does the wetland lie in the drainage basin? upper

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Federal Wetland-C  
 Latitude 41.505493° Longitude -73.150895°  
 Prepared by: MLA Date 11-22-2022  
 Wetland Impact:  
 Type \_\_\_\_\_ Area \_\_\_\_\_  
 Evaluation based on:  
 Office \_\_\_\_\_ Field X  
 Corps manual wetland delineation completed? Y X N \_\_\_\_\_

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	2,4,5,7,15	Y	Groundwater breakout (from toes of slope) discharge downgradient from wetland
 Floodflow Alteration	Y	2,5,6,7,8,9,10,11,15,18	N	Provides localized floodflow attenuation but is not w/in or bordering a mapped floodplain or perennial watercourse
 Fish and Shellfish Habitat	N	8, 17	N	Watercourse is intermittent, manipulated and shallow - unlikely to provide fish habitat
 Sediment/Toxicant Retention	Y	1,2,10	Y	Size, topographic position, and vegetation support retention from upgradient sources of sediment and debris
 Nutrient Removal	Y	3,4,5,6,7,8,9,10,11	Y	Position downgradient of nutrient runoff sources and high stem density w/in a wide, flat area promote this function
 Production Export	Y	1,2,4,7,8,12	N	High density of fruit and mast producing vegetation is present but export is limited by low downstream hydro. connectivity
 Sediment/Shoreline Stabilization	Y	3,4,7,12,13,14,15	N	Vegetation is dense bordering IWC though steep, well-defined banks are not present
 Wildlife Habitat	Y	7,8,10,13,19,21	Y	Dense vegetation provides shelter and food for wetland-dependent wildlife
 Recreation	N		N	This function is not provided by this wetland, which occurs on private property
 Educational/Scientific Value	N		N	This function is not provided by this wetland, which occurs on private property
 Uniqueness/Heritage	N		N	<b>The wetland does not provide uniqueness/heritage</b>
 Visual Quality/Aesthetics	N		N	<b>The wetland does not provide significant aesthetic value</b>
<b>ES</b> Endangered Species Habitat	N		N	No mapped habitat for state or federally listed species per June 2022 review of NDDDB and IPaC data
Other				

Notes:

\* Refer to backup list of numbered considerations.



## APPENDIX E

# WETLAND IMPACT ASSESSMENT

## SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022

## Wetland Impact Assessment – 555 Christian Road and 764 Southford Road

The following wetland impact assessment is based on design plans for a project located at 555 Christian Road and 764 Southford Road in Middlebury, Connecticut titled *Southford Park* and dated November 28, 2022, prepared by SLR International Corporation (SLR). The two adjacent subject parcels occupy approximately 112 acres, primarily comprised of agricultural fields, hardwood forest, mowed lawn, stormwater management basins, one office building, maintenance garages, associated parking areas, and a single-family residence. The purpose of the project is to demolish the buildings and construct two new warehouse and distribution buildings, totaling approximately 719,500 square feet (SF), with a new primary access road off Southford Road. Additional components include new stormwater drainage systems consisting of four new stormwater basins, and two parking areas. The project will result in an increase of 27.91 acres of impervious area, for a total of 33.68 acres.

Onsite wetlands were found to represent approximately 7.5 acres, based on a previous delineation by Environmental Resource Associates, Inc (1996) and SLR's delineation (2022), which field-verified previous wetland boundaries and identified additional wetland resource areas. In total, the proposed project will directly impact 15,608 SF of isolated state wetlands. It should be noted that all wetlands slated for direct impact are state-regulated, isolated features with no hydrologic connection to federally regulated waterways or wetlands. An additional 303,403 SF of the proposed project will occur within the Town of Middlebury's 100-foot upland review area (URA). In order to compensate for these activities, a mitigation plan has been prepared by SLR to create a new 31,200 SF on-site wetland, adjacent to an existing emergent and scrub-shrub wetland. Details of the mitigation plan are provided in Appendix F.

A summary of each proposed regulated activity and anticipated impacts to onsite wetlands follows below.

### Proposed Building 1

This building is the smaller of the two proposed warehouse and distribution buildings, measuring approximately 415 feet by 435 feet, for a total area of 180,000 SF. It will be located in the southwestern portion of the site, entirely within the 764 Southford Road parcel. A new primary road will provide access from Southford Road and continue northeast towards the 555 Christian Road parcel. The construction of this building, adjacent parking lot, access road, retaining wall, and all associated grading will lie within and be accessible via upland areas. No direct wetland impact is proposed for the construction of Building 1. Construction of a retaining wall and associated clearing and grading will impact 2,241 SF of the URA to Federal Wetland-C; construction of access roads and retaining walls, stormwater drainage improvements, and associated grading and clearing will impact 42,147 SF of the URA to State Isolated Wetland D. In total, the construction of Building 1 and associated structures will result in 21,545 SF of impacts to the URA and no direct wetland impacts.

### Proposed Building 2

This larger building is proposed to replace the existing Timex office building, which is currently located on a drumloidal landform and surrounded by mowed lawn bisected by Timex Road. The new building will occupy 539,500 SF, measuring 435 feet by 1,305 feet. An approximately 231,000 SF parking area is



proposed immediately south of the building, accessible via the new access road from Southford Road. The access road will extend north, climbing upgradient along the eastern side of the building and wrapping around the northern edge, providing access to the loading dock on the western side of the proposed building. The new building, access road, stormwater drainage improvements, and associated grading will result in the fill of five isolated wetlands, totaling 15,608 SF of direct impact to state-regulated wetlands. The same activities will result in 212,234 SF of URA disturbance.

The wetlands to be filled include five isolated wetlands, which are labeled CT-1 through CT-4 and CT-C and are described in detail within the above soil report's existing conditions section. In summary, these five wetlands possess varying levels of the required hydrology, soils, and vegetation to qualify as wetlands; however, they all lack hydrologic (i.e., nexus) connection to federally regulated waterway or wetland. Therefore, these five wetlands fall under the jurisdiction of Connecticut (i.e., local commission), but not the United States Army Corps of Engineers (USACE). Four of the five wetlands to be impacted are "lawn seep" wetlands, which occur within early successional meadows or mowed lawns and likely formed following grading activities associated with the site's original development. Although a lack of hydrologic connectivity does not necessarily reduce the value of a wetland, they are constrained by size, topographic position, disturbance (i.e., mowing), and prevalence of invasive vegetation, which considerably limit their functions and values. The remaining wetland proposed to be filled, CT-C, is a slightly larger forested and state-regulated wetland that lacks both hydrologic connectivity and hydrophytic vegetation. It exhibits minimal evidence of hydrology, which may have been altered by the site's original development. Its original watershed was significantly altered by the construction of Timex Road. This wetland is currently dominated by invasive vegetation, most of which is classified as facultative upland vegetation. Using the USACE *Highway Methodology Workbook Supplement*, SLR found that the functions and values provided by these five wetlands are limited to groundwater discharge.

#### Stormwater Basins and Drainage Improvements

Due to the increased percentage of impervious area on-site, the proposed project necessitates significant improvements to stormwater management. The two existing stormwater management basins DB-1 and DB-2 will continue to service portions of Timex Road, which will serve as a construction access road, and a portion of the new parking areas. In addition, four new stormwater basins will be constructed across the site, for a total basin area of 212,069 SF. The southernmost proposed stormwater basin (Basin 510) will be located south of Building 1, just west of the proposed access road from Southford Road. This basin will occupy 13,897 SF and will store runoff from a series of catch basins located along the access road and adjacent parking lot. An emergency spillway with level spreader will convey overflow during the largest storm events west into Federal Wetland-C. A perforated underdrain within the basin will facilitate drainage, given the extremely rocky soils on site. The second stormwater basin (Basin 110), located north of Building 1, will occupy 16,761 SF. Similarly, this basin will feature a perforated underdrain, emergency riprap spillway, and level spreader to convey water west. The watershed to this basin includes runoff from impervious pavement east of Building 2. Due to the position of these two basins on the periphery of proposed development limits, a native planting plan was developed to create a vegetative structure beneficial for sediment retention, wildlife habitat, and slope stabilization. The remaining two proposed stormwater basins (Basins 420 and 320) will be located south and east of Building 2 and occupy 49,318 SF and 35,765 SF, respectively. Basin 420 will collect drainage from catch basins within the central parking

lot and roof of Building 1, while Basin 320 will accommodate stormwater from the roof of Building 2. Both will feature perforated underdrains, creating moist-bottom basins without persistent standing water. Basin 420 will outlet east to Federal Wetland-A, while Basin 320's outlet will pipe its overflow, as well as stormwater from five access road catch basins, to a roughly 2,500 SF water quality basin. The water quality basin and associated grading will impact approximately 42,147 SF of the URA to Federal Wetland-A. This basin will feature a riprap berm that will function as a level spreader, as stormwater overtops east into Federal Wetland-A. Because this basin will be graded to the level of the wetland, it is anticipated to remain wet and planting plan comprised of native hydrophytic vegetation has been developed to further improve water quality. All proposed basins have been designed in accordance with the Connecticut Department of Energy and Environmental Protection (CTDEEP) *2004 Connecticut Stormwater Quality Manual* and will accommodate the entire runoff volume for 90 percent of average annual storm events, or the first one inch of rainfall. The basins will be seeded with appropriate native seed mixes from New England Wetland Plants, Inc. The vegetated basins will provide thermal protection of water temperatures, increased filtration of nutrients and/or sediments, and wildlife habitat.

### Sediment and Erosion Control

A robust sediment and erosion control plan has been developed to protect wetlands and water quality onsite and offsite, during and after construction. All measures conform to the *Connecticut Guidelines for Soil Erosion and Sediment Control (2002)*, requirements in place by the Town of Middlebury, and Best Management Practices. Prior to the commencement of construction, geotextile silt fence will be installed along the downhill limits of all disturbance and around the perimeter of temporary soil stockpile areas. Staked haybales will intercept sediment from smaller disturbance areas. Three temporary sediment traps, adequately sized to detain anticipated sediment loads, will also be installed prior to construction to detain, and settle out sediment before reaching wetlands. Following the grading of all steeper slopes, erosion control blankets will be utilized to provide immediate stabilization. Construction entrance pads on both access roads will reduce the tracking of sediment offsite onto paved surfaces. Temporary vegetative cover will be established on all disturbed soils by spreading topsoil followed by a grass seed mix. All sediment and erosion control measures will remain in place, inspected, and maintained as needed until the site is stabilized.

### Impact Mitigation

To compensate for the proposed filling of the 5 state-regulated wetlands totaling 15,608 SF, SLR has designed an approximately 31,200 SF wetland mitigation area. The complete mitigation plan can be found in Appendix F and grading, plantings, and notes depicted on sheets WR-1 and WR-2 of the site plans. Additionally, the project proposed to restore portions of the upland review area adjacent to Federal Wetland-C which has been a salvage storage area for the current property owner for many years.

### Conclusions

Overall, the proposed industrial development project will disturb 59.52 acres of the approximately 112-acre site. Of that disturbance, 15,608 SF (0.36 acres) will be direct wetland impact, while 303,403 SF (6.97 acres) will occur within the URA. The filling of the wetlands is considered minimal given their limited



function and value within the localized and regional watershed. Most importantly, the project has been designed to avoid filling federally regulated wetlands, which provide the greater functions and values within the localized and regional watershed. Although the isolated state wetlands will be filled, the proposed extensive drainage improvements, sediment and erosion control measures, and the wetland mitigation plan aim to minimize and compensate for adverse impacts to the greatest extent practicable.

## APPENDIX F

## WETLAND MITIGATION PLAN

### SOIL SCIENTIST REPORT

Drubner Equities, LLC

500 Chase Parkway

Waterbury, CT

November 2022

## Wetland Mitigation Plan – 555 Christian Road and 764 Southford Road

The following wetland mitigation plan is based on design plans for a project located at 555 Christian Road and 764 Southford Road in Middlebury, Connecticut titled *Southford Park* and dated November 28, 2022, prepared by SLR International Corporation (SLR). In order to compensate for the proposed filling of 5 state-regulated wetlands totaling 15,608 square feet (SF), SLR has designed an approximately 31,200 SF wetland mitigation area for a 2:1 creation to impact ratio. The wetland mitigation plans were prepared based on field investigations and baseline conditions established during design development and regulatory permitting. Please note that in accordance with the design plans, all wetland mitigation work must be supervised by a professional wetland scientist. The selected wetland consultant should adhere to the notes as shown on sheet WR-2 of the project plans.

In addition to the wetland mitigation area, the project proposes to restore previously impacted areas located within the upland review area of Federal Wetland-C. Here, the current property owner has been collecting, salvaging, and storing anthropogenic debris under structures and within the forested areas. In addition, there is a former driveway through the forested uplands. The anthropogenic debris will be removed, and areas will be restored with appropriate native seed mixes. The existing driveway will be scratched with an excavator bucket down to 12 inches below the surface and approximately 4 inches of topsoil will be applied over the driveway to accommodate reseeding with a native seed mix.

The existing wetlands slated for direct impact (CT-1 through CT-4 and CT-C) are small, isolated features, some of which were likely created by development in the late 1990's and are currently vegetated primarily by invasive vegetation. These wetlands provide one principal function and value – groundwater discharge. The goal of mitigation is to compensate for the loss of the wetland landscape extents and functions and values by conversion of an upland-maintained lawn area into a scrub-shrub/emergent wet meadow wetland.

The proposed mitigation area will be located within the eastern portion of the 555 Christian Road parcel, north of the agricultural field and south of Timex Road, abutting an existing portion of Federal Wetland-A to the east. The area is currently comprised primarily of mowed lawn, with a few scattered crabapple (*Malus pumila*) trees. This location was chosen due to its considerable distance from proposed development areas, as well as the opportunity to replace manicured upland lawn with a diverse wetland, significantly increasing this portion of the sites ecological value. The existing adjacent wetland, described in the existing conditions section of the soil report as the southern portion of Federal Wetland-A, conveys surface water north through a densely vegetated scrub-shrub and emergent wetland featuring topographical flat areas, depressional areas and hummocky microtopography and habitat features. As such, the mitigation area was designed to reflect and mimic the existing wetland vegetative community structure and habitat.

The boundaries of the mitigation area feature a 5:1 upland slope, that creates a gentle transitional zone into the wetland mitigation area. Two depressional areas will accommodate deeper water levels, while hummocks throughout the shallower wetland areas will provide extensive microtopography. A comprehensive native species planting plan has been developed to replicate the vegetative composition of both the adjacent wetland and those wetlands that will be filled as part of this development (sheet WR-2). A diverse variety of native trees, shrubs, and herbaceous plants were selected based on the proposed hydrologic regime and to provide wetland dependent and non-wetland dependent wildlife habitat,



pollinator pathway, increase biodiversity, groundwater discharge, enhance nutrient and sediment retention, and visual/aesthetic quality. In addition to native plantings, New England Wetmix seed will be applied to the lower elevations, while New England Conservation/Wildlife mix seed will be applied to the upland side slopes. Features such as short woody trunks with roots, large multi-branched woody debris, and large boulders will be scattered throughout to further enhance wildlife habitat and structural complexity. Finally, 8-foot polyvinyl deer fencing will be installed to protect the plantings from deer browse for the first 5 years after construction. It is recommended that the deer fencing, and fence poles be removed after 5 years.

In order to promote long-term success of wetland plantings and manage invasive species colonization, SLR recommends the site owner/permittee retain a qualified professional wetland scientist to conduct post-construction wetland mitigation monitoring/reporting. It is recommended that monitoring be completed annually for the first two growing seasons following installation, then biennially for the next 8 years. As such, monitoring should occur in post mitigation construction years 1, 2, 4, 6, 8, and 10. It is recommended that the wetland scientist establish photographic monitoring stations and transect plots at select areas to facilitate comparisons of vegetative compositions year over year. The success standard for woody vegetation and trees should be a minimum of 50 percent after 2 years. Any invasive vegetation observed during the monitoring period should be managed in a timely manner using the most appropriate hand, mechanical, or chemical means for the target species, area, and location as determined by the supervising professional wetland scientist.

In conclusion, the project plans provide the level of information (i.e., grading limits, proposed elevations, plantings, and notes) to allow the contractor and supervising wetland scientist to achieve a successful wetland mitigation project. However, the overall success of the wetland mitigation areas is predicated on construction oversight by the professional wetland scientist and completion of the required post-construction monitoring. With any construction related project, some field modifications may be necessary during construction to achieve the project goals, and any such modification should be guided by the supervising wetland scientist. Lastly, SLR accepts no responsibility for the overall success of the wetland mitigation area if the mitigation work is not properly supervised and monitored by a professional wetland scientist. However, it is our professional opinion that the effective implementation of this proposed wetland mitigation plan and upland review area restoration will provide the appropriate level of compensation commensurate with the functions and values lost by the filling of wetlands for this proposed development.