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Planning & Development
Town of Waterford, CT

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May 15, 2024

Mr. Uzair Manzoor
28 Dunbar Road
Quaker Hill, CT 06375

RE: ***WETLAND & WATERCOURSE SURVEY REPORT: 81 MINER LANE, ASSESSOR'S PARCEL ID 4765, WATERFORD, CONNECTICUT.***

Dear Mr. Manzoor:

At your request, I completed a field survey of the jurisdictional freshwater inland wetland and watercourses boundaries at the above referenced 3.04-acre property located at 81 Miner Lane in Waterford, Connecticut.

WETLAND DELINEATION METHODOLOGY

The wetland delineation was completed in accordance with the standards of the Natural Resources Conservation Services (NRCS) National Cooperative Soil Survey and the definitions of inland wetlands and watercourses as found in the Connecticut General Statutes, Chapter 440, Sections 22a-36 through 22a-45 as amended. Wetlands, as defined by the Statute, are those soil types designated as poorly drained, very poorly drained, floodplain or alluvial in accordance with the NRCS National Cooperative Soil Survey. Such areas may also include disturbed areas that have been filled, graded, or excavated and which possess an aquic (saturated) soil moisture regime.

Watercourses means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water, natural or artificial, vernal, or intermittent, public, or private, which are contained within, flow through or border upon the Town of Waterford or any portion thereof not regulated pursuant to sections 22a-28 through 22a-35, inclusive, of the Connecticut General Statutes. Intermittent watercourses are 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 duration longer than a particular storm incident, and (c) the presence of hydrophytic vegetation.

WETLAND SURVEY RESULTS

The wetland survey was completed on May 8th, 2024. The on-site wetland delineation examined the upper 20" of the soil profile for the presence of hydric soil conditions. Two areas meeting the wetland criteria noted above were marked in the field with sequentially numbered pink and blue wetland flagging labeled 1 through 20. Please refer to the attached hand sketch which illustrates the approximate location of the wetland resources and corresponding flag series. Please be advised that the subject wetland sketch is for planning purposes only and the wetland boundary as illustrated is subject to refinement once traditionally located by a Licensed Land Surveyor and the wetland boundary line is formally adopted by the Town of Waterford.

The 3.04-acre residential zoned lot is vacant and undeveloped. The property is wooded, predominately covered by a mixed hardwood forest overstory. Along the southern limits of the property abutting to the adjacent Town owned parcel the forest community transitions to scrub-shrub thicket of multiflora rose, which obscures ground conditions. One regulated jurisdictional wetland areas was flagged on the property. A classic red maple dominated forested wetland occupies the bulk of the property. The wetland is centrally located on the north side of the property, occupying a distinct topographic bowl. The wetland continues and drains off-site to the north. Overall, the wetlands are well-defined, with a strong boundary located along a distinct break in slope. The wetlands are confined to the stony and mucky ground conditions that characterize the wetland floor which is carpeted in skunk cabbage. Overall, the wetland community exhibits classic Red Maple swamp vegetation, including:

Trees: Red Maple, yellow birch, and swamp white oak.

Shrubs: Highbush blueberry, spicebush, sweet pepperbush, Japanese barberry, winterberry, honeysuckle, multiflora rose, Asiatic bittersweet.

Herbaceous: Tussock sedge, sphagnum moss, sensitive fern, cinnamon fern, skunk cabbage, and false hellebore.

The above is not an exhaustive list, but a sample of commonly encountered vegetation that characterizes the on-site wetland community.

Representative photos of the site are attached below.

SOIL SURVEY

The soils identified on-site are a refinement of the Natural Resources Conservation Service (NRCS) Websoil Soil Survey. The on-site soils originated from glacial melt-out till parent material.

Wetland Soils

The wetlands soils are classified as (3) Ridgebury, Leicester, and Whitman fine sandy loams. The poorly drained soils along the wetland boundary belong to the Ridgebury and Leicester soil series. Ridgebury and Leicester soils are found within drainageways and depressions on glacial till landscapes. Ridgebury and Leicester soils have a seasonal high-water table at a depth of about 6 inches. Very poorly drained Whitman soils are found in the lowest lying areas within the interior of the wetlands where the water table is at the surface thought most of the growing season.

A typical soil profile along the wetland boundary consists of approximately 2"-0" of intermediately decomposed organic material (Oi), followed by 0"-6" of a thick dark topsoil horizon (A), underlain by 6-18" of a wet weakly developed grayish subsoil horizon (Bg) with common redoximorphic features (Common medium distinct strong brown mottles, masses) ranging from fine sandy loam to very fine sandy loam. This subsoil is underlain by a saturated sandy loam to fine sandy loam gray substratum (2Cg).

Upland Soils

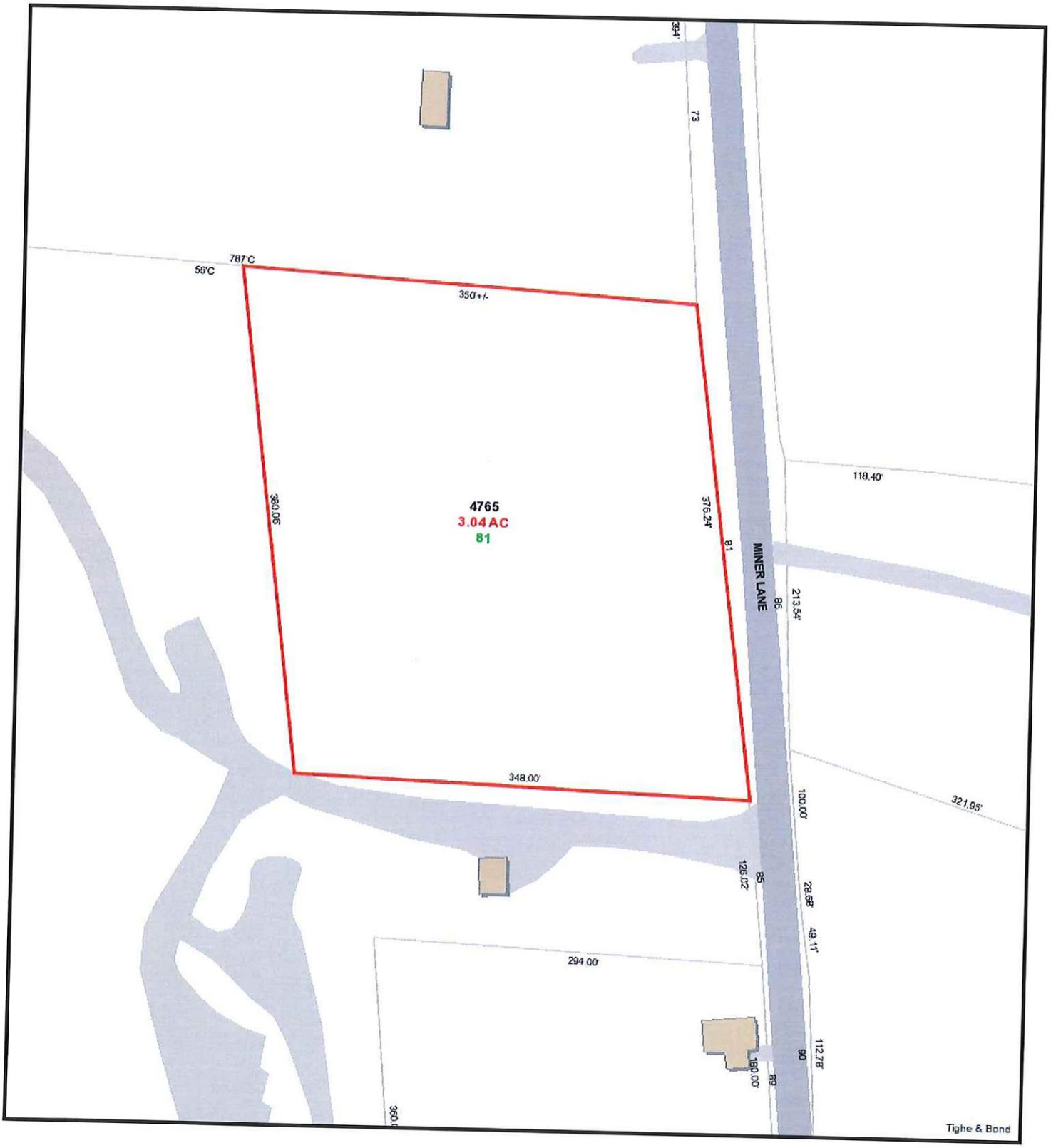
The upland soils were not examined in great detail except where necessary to delineate the wetland boundary. The bulk of the uplands within the areas suitable for development are mapped and classified as a well-drained Canton and Charlton fine sandy loams. If the site cannot be serviced by municipal sewer and water connections on-site testing would be required and it is recommended to be completed with the Health Department and a CT licensed Professional Engineer early in the development planning process.

If you have any questions or comments, please do not hesitate to contact me at itcole@gmail.com or (860) 514-5642.

Sincerely,

Ian T. Cole
Professional Registered Soil Scientist
Professional Wetland Scientist #2006

Attachments:
GIS MAP
WETLAND SKETCH
NRCS SOIL MAP
PHOTOS



5/11/2024 6:55:27 PM

Scale: 1"=100'

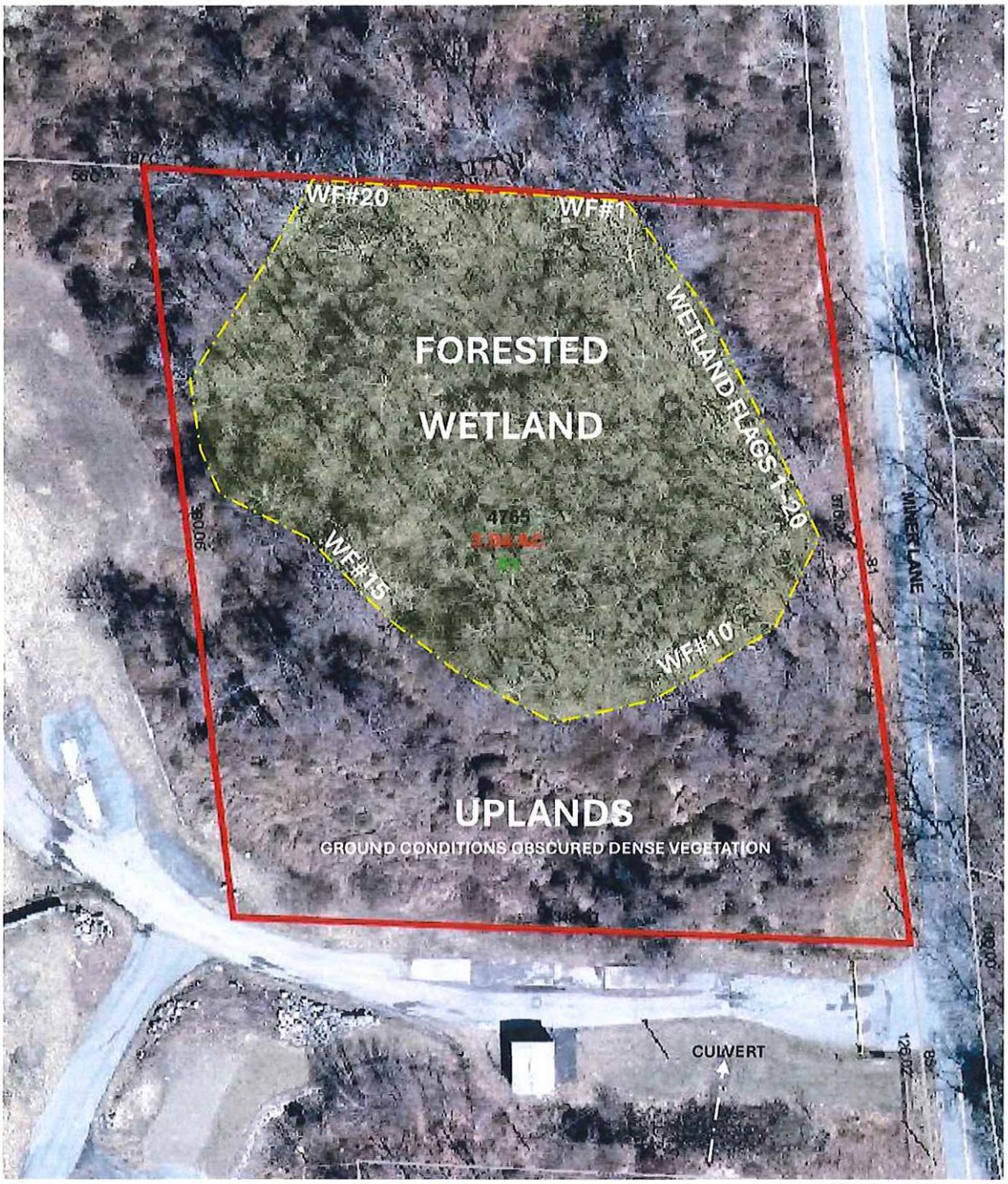
Scale is approximate

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

WETLAND SKETCH

81 MINER LANE – WATERFORD

PROPERTY OF MR. UZAIR MANZOOR- 3.04-ACRES



Disclaimer: This map is for planning purposes only. Verification of its accuracy, currency and completeness is the responsibility of the reader's own independent research. All inland wetland and watercourse boundaries are subject to refinement once traditionally field located by a Licensed Land Surveyor and formally adopted by the Town. Ian Cole LLC shall not be held liable for any loss, damages or claims made in relation to anyone referring to this map.

Soil Map—State of Connecticut, Eastern Part

Map Scale: 1:1,020 if printed on A landscape (11" x 8.5") sheet.

N

0 15 30 60 90 Meters

0 45 90 180 270 Feet

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: State of Connecticut, Eastern Part
Survey Area Data: Version 1, Sep 15, 2023

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	1.2	38.8%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	1.8	58.7%
302	Dumps	0.1	2.5%
Totals for Area of Interest		**3.1**	**100.0%**

WETLAND SURVEY

SITE PHOTOS

MAY 8, 2024

81 MINERS LANE

WATERFORD

Photo 1: Example of Wetland on-site

Photo 2: General conditions of uplands along the southern property limits