

WETLANDS / WATERCOURSES DELINEATION REPORT

Date of Work: 9/21/2020 Client: Mr. David Whitney
Project: 4 Vermillion Drive, Avon, CT
Location: 2 Arch Rd, Avon, CT

IDENTIFICATION OF WETLANDS AND WATERCOURSES RESOURCES

Wetlands and watercourses present on property? Yes ☒ No ☐

Wetlands: Wetlands: Identification Method:
Inland Wetlands ☒ Perennial Streams ☐ Auger and Spade ☒
Tidal Wetlands ☐ Intermittent Watercourses ☒ Backhoe Pits ☐

Numbering Sequences: Wetland Plant Communities Present:

Wetlands: Intermittent Forest ☒
WL 1-22 Watercourses: Sapling/Shrub ☐
WL 23-35 WWC 1-15 Wet Meadow ☒
WL 36-41 Marsh ☐
Field/Lawn ☐

Definitions and methodology for identification of state regulated wetlands & watercourses

Wetlands and watercourses are regulated in the State of Connecticut General Statutes, Chapter 440, sections 22a-28 to 22a-45. The Statutes are divided into the Inland Wetlands and Watercourses Act (sections 22a-36 to 22a-45) and the Tidal Wetlands Act (sections 22a-28 to 22a-35). Inland Wetlands "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soil Survey, as may be amended from time to time, of the National Resource Conservation Service (NRCS) of the United States Department of Agriculture" section 22a-38(15). 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 this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by 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" section 22a-38(16). Tidal Wetlands are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and upon which may grow or be capable of growing some, but not necessarily all of the following" (includes plant list section 22a-29(2)).

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WETLAND SOIL TYPES

Wetland soils consist of Wilbraham silt loam. The Wilbraham series consists of poorly drained loamy soils formed in subglacial till. The soils are very deep to bedrock and moderately deep to a dense contact. They are nearly level to gently sloping soils in drainageways and low-lying positions of till hills. Wilbraham soils have a water table at or near the surface much of the year. They have an aquic moisture regime.

NON-WETLAND SOILS

The non-wetland soils were not examined in detail, except as was necessary to determine the wetland boundary. Non-wetland soils consist of Wethersfield loam and Ludlow silt loam. The Wethersfield series consists of very deep, well drained loamy soils formed in dense glacial till on uplands. The soils are moderately deep to dense basal till or hardpan. They are nearly level to steep slopes on till plains, low ridges, and drumlins. Depth to bedrock is commonly more than 6 feet, although a shallower perched water table may be present during the late fall, winter and early spring.

The Ludlow series consists of moderately well drained soils formed in loamy subglacial till. They are very deep to bedrock and moderately deep to a dense contact or hardpan. They are nearly level to strongly sloping soils on till plains, hills, and drumlins. Ludlow soils have a seasonal high water table at a depth of about 20"-42" from November through May.

NOTES:

Respectfully submitted,

Michael S. Klein
Certified Professional Wetland Scientist
Registered Soil Scientist

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February 12, 2021

Mr. David Whitney, P.E.
David F. Whitney Consulting Engineers, LLC
PO Box 1605
Avon, CT 06001

RE: Angeloni Residence
4 Vermillion Drive
Avon, CT

Dear Mr. Whitney:

I am writing to report the results of investigations conducted by this office at the referenced site. This 4.424-acre parcel of land proposed for development as a single-family residence is located at the northeast corner of the intersection of Vermillion Drive and Oak Bluff. The lot slopes down from a high point of 505' along the eastern property line to a low point of 386' at a headwall at the northwest corner.

The parcel is currently wooded. I marked the wetland boundary at the site on September 21, 2020. A copy of my report is attached. An intermittent watercourse with a narrow flanking wetland is delineated by wetland flags WL 1-22, labelled Wetland Area #2 on the site plan. The watercourse largely follows the southern property line and discharges to the street drainage system in Vermillion Drive. The wetland limit is along the top of the bank. Vegetation in this area consists of typical deciduous wetland species such as red maple, white ash, spicebush, cinnamon fern and various sedges, with the addition of thickets of the invasive species multi-flora rose and Japanese barberry.

The western-most portion of Wetland Area #2 (flags WL 36-41) is a narrow strip (10-30' wide) adjacent to Oak Bluff consisting of smaller red maples, multi-flora rose, barberry, and spicebush. It is likely that this is small wetland remnant or fragment that remained after the adjacent roadways were constructed, with associated drainage. The hydrologic regime is of Wetland Area #2 is seasonally saturated. The principal functions of this overall area are flow conveyance, bank stabilization, and groundwater discharge, although these functions are only minimally present in the area of flags 36-41.

Wetland flags 23-35 mark the limit of a groundwater slope/seepage wetland (aka Wetland Area #1) in an area of concave topography in the east-central portion of the site. There is an open canopy of red maple, a scattered shrub layer, and a herbaceous layer with sedges, skunk cabbage, sensitive and royal fern common. The principal functions of this area are groundwater discharge and nutrient transformation.

Wetland Area #2 narrows downslope to the west and where the topography steepens, it terminates in an intermittent watercourse (flagged WWC 1-15 and labelled Wetland Area #3). The watercourse drains westerly through the center of the site. It is deeply eroded in many areas, flanking wetland soils are absent, and it terminates at an inlet to the drainage system in Vermillion Drive and Oak Bluff. This resource area functions to convey drainage across the site, but it also contributes to sediment loads in the downstream receiving waters.

Due to the sloping nature of the property, the site plan requires grading most the center of the site. Wetland Areas 1 and 2 will not be altered, but the western portion of the intermittent watercourse (Wetland Area 3) will be diverted to the north and south in a bench on the cut slope. Groundwater seepage and storm flows will be conveyed to the street drainage in Vermillion Drive as they currently are. The larger trees in the narrow strip of wetland soil at the intersection of Vermillion Drive and Oak Bluff will be removed.

After reviewing the site plan, we had the following recommendations:

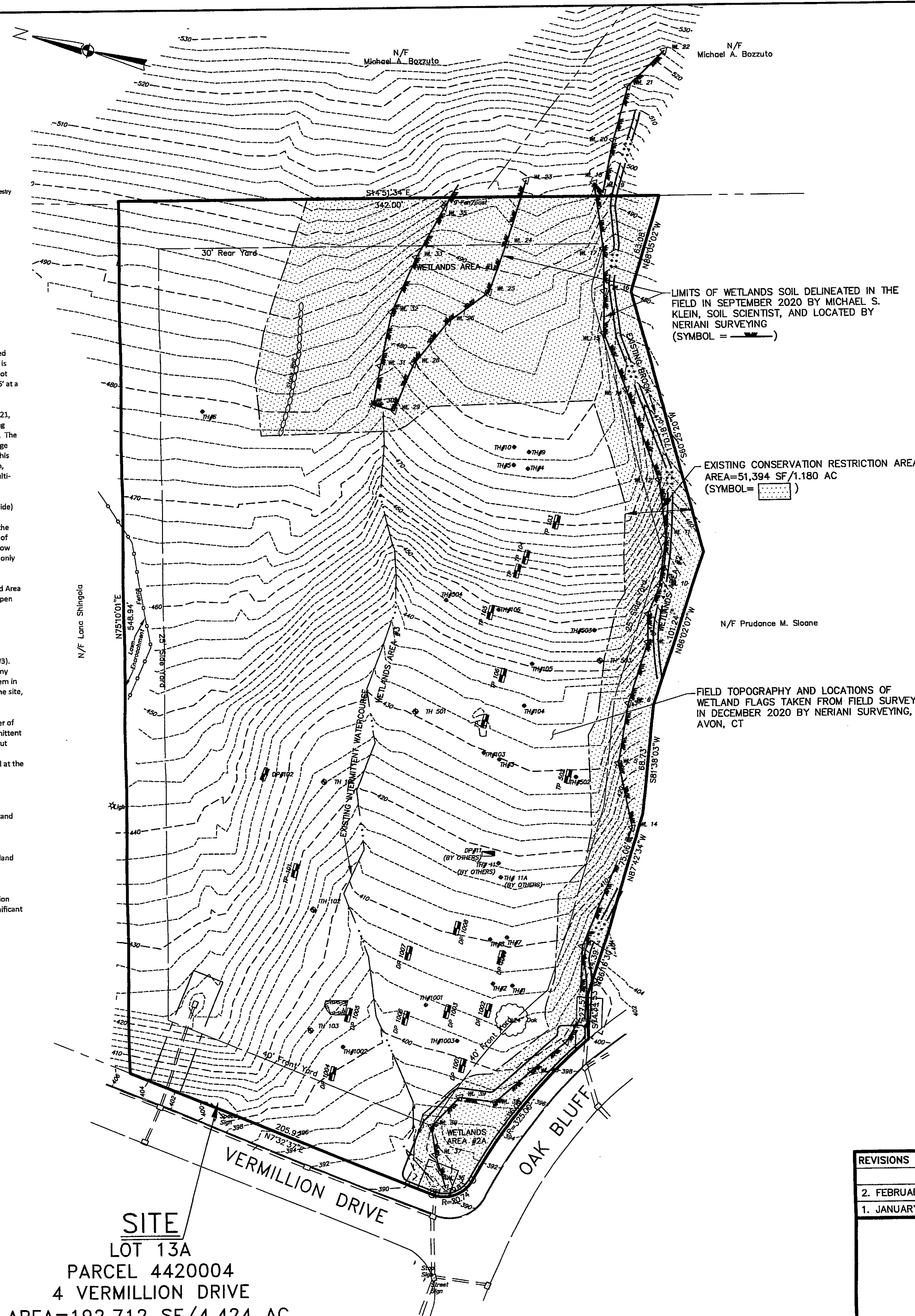
- Remove dead trees and invasive plants from Wetland Areas 2 and 3.
- Stabilize the cut slopes east of the house with New England Roadside Matrix Mix and erosion control blankets.
- Seed the proposed drainage swale east of the house with New England Erosion Control/Restoration Mix.
- Plant the area of wetland at the Vermillion Drive/Oak Bluff intersection with wetland wildflowers and ferns with plugs or containerized plants at 12-18" o.c.

The attached plant list and planting notes provide additional detail.

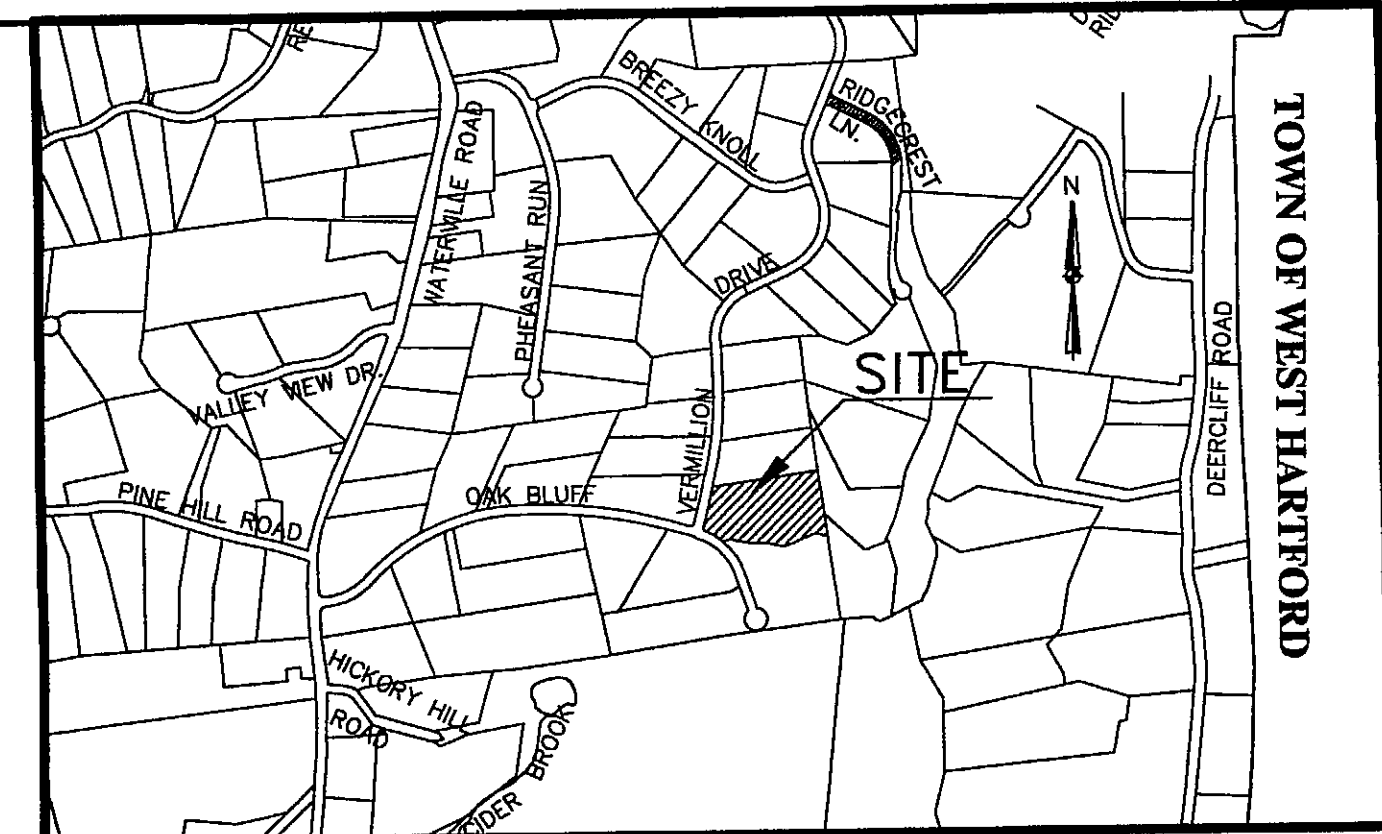
The proposed site plan incorporates our recommendations on Sheet 8, Wetland Mitigation Plan. In my opinion, the proposed development of the site as shown will not have a significant adverse impact on wetland functions and values, and will reduce erosion and resultant sedimentation to the drainage system and downstream resources.

Yours truly,

Michael S. Klein, Principal
Professional Soil Scientist
Professional Wetland Scientist



SITE
LOT 13A
PARCEL 4420004
4 VERMILLION DRIVE
AREA=192,712 SF/4.424 AC.
RU-2A ZONE



KEY MAP
SCALE: 1"=1000'

NOTES

- Property lines, dimensions, locations of wetland flags, location of watercourses, topography on entire property, bench mark, soil test locations, existing roads, existing storm drainage, and miscellaneous information taken from field survey in December 2020 and worksheet prepared by Neriani Surveying, Avon, CT.
- Limits of wetlands soil delineated in the field on September 21, 2020 by Michael S. Klein, Soil Scientist from Davison Environmental LLC, and located by Neriani Surveying in December 2020.
- Site is located in RU-2A Residential Zone.
- Total area of site = 193,350 s.f. / 4.44 acres.
- Sanitary sewage disposal by individual on-site subsurface septic system. The proposed septic system shall be designed by a Professional Engineer licensed in Connecticut, approved by Farmington Valley Health District and installed in accordance with the requirements of the Connecticut Public Health Code.
- This lot is included in a subdivision that was approved prior to the 1982 revisions of the Connecticut Public Health Code, and therefore the minimum required separation distance from a septic system to the watercourse is 25 feet.
- Water supply by individual on-site well.
- All construction methods and materials shall conform to the regulations and requirements of the Town of Avon.
- The Owner shall be responsible for obtaining all necessary permits and approvals prior to start of construction.
- All stumps shall be chipped on-site and used as mulch, or taken off-site for disposal. No stumps shall be buried on-site.
- It is intended that all erosion and sediment control measures conform to the requirements of the "Connecticut Guidelines for Soil Erosion & Sediment Control", May 2002 CT DEP Bulletin 34, and the "2004 Connecticut Stormwater Quality Manual" by the CT DEP.
- A pre-construction meeting shall be conducted at least two weeks prior to the start of construction with the owner, the contractor, the design engineer and the Avon Planning and Community Development Specialist, John E. McCahill. John McCahill shall also be notified 48 hours in advance of any tree clearing and the start of construction on the site (860-409-4330).

RECEIVED

JUL - 1 2021

Planning Department
Town of Avon

INDEX OF SHEETS

- MAP OF EXISTING SITE
- PROPOSED SEPTIC SYSTEM DESIGN
- SOIL DATA AND SEPTIC SYSTEM DETAILS
- SITE PLAN
- FEASIBLE ALTERNATIVES (PREVIOUS APPROVED PLANS)
- CONSTRUCTION SEQUENCE (PHASES I, II, AND III)
- CONSTRUCTION SEQUENCE (PHASES IV, V, AND VI)
- COMPARISON OF WETLAND DELINEATIONS
- WETLAND MITIGATION PLAN

REVISIONS

2. FEBRUARY 9, 2021: ADDITIONAL REVISIONS FOR IW APPLICATION
1. JANUARY 12, 2021: MISCELLANEOUS REVISIONS FOR IW APPLICATION

MAP OF EXISTING SITE

FOR:
THE ANGELONI RESIDENCE
PARCEL 4420004
4 VERMILLION DRIVE
AVON, CONNECTICUT

DAVID F. WHITNEY,
CONSULTING ENGINEERS, LLC
21 ARCH ROAD
P.O. BOX 1605
AVON, CONNECTICUT 06001
(860) 673-8412

DATE: JULY 19, 2020 SCALE: 1"=40' DRAWN BY: GRA CHECKED BY: DFW SHEET NO. 1 PROJECT NO. 20-07