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East Hampton
Land Use Dept.

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March 28, 2023

Mr. Mark Reynolds, P.E.
Dutton Associates, LLC
67 Eastern Boulevard
Glastonbury, CT 06033

RE: WETLAND REPORT *prepared for Proposed Residential Development at 65 West High Street (aka. Rte. 66), MBL: 19/46/10, East Hampton, Connecticut.*

Dear Mr. Reynolds:

At the request of the applicant, Mr. James Marino, I delineated the jurisdictional inland wetland and watercourse boundaries at the above referenced parcel 0.46-acre residential lot of record situated on West High Street. I also reviewed the proposed site development plans and I offer the following comments relative to assessing impacts to the inland wetlands and watercourses due to the proposed regulated activities.

WETLAND DELIENATION METHODOLOGY

The on-site wetlands were delineated in March 2022 by a registered professional soil scientist. 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 East Hampton 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 DELINEATION FIELD SURVEY RESULTS

The subject vacant lot is wooded with a mixed hardwood overstory. Two jurisdictional regulated areas were identified on the subject lot. Within the highway line is a well-defined intermittent watercourse flowing south along the road frontage of Rte. 66. (Photos 1 & 2). A very stony forested hillside seepage wetland cuts across the southwest corner of the property. The hillside wetland is identifiable by the extremely stony ground conditions and the extensive cover of moss & ferns that carpet the forest floor (Photo 3) The wetland limits are clearly marked by break in the topographic slope and a noticeable change in the vegetation community as wetland plants, like spicebush, winterberry, skunk cabbage, and sensitive fern quickly give way to the more well-drained upland conditions that favor oaks, hickories, sugar maple, ironwood, and witch hazel. The remainder of the property is wooded, dominated by a mixed hardwood overstory of the upland species mentioned above (Photo 4).

I have reviewed the subject site development plans and I verified that the wetland boundary as illustrated accurately reflects the wetland boundary as flagged in the field.

Representative photos are provided in Appendix A.

WETLAND FUNCTIONS AND VALUES

A wetland functional assessment was completed to assist in identifying impacts to the wetlands and the functions and services they provide. An evaluation of the wetlands functions and values was completed using the United States Army Corps of Engineers (USACE) Highway Methodology Workbook for Wetland Functions and Values: A Descriptive Approach, October 1993” (“Highway Methodology”) and best professional judgement. This wetland methodology describes the wetland functions and values holistically for the project area.

The USACE Highway Methodology evaluates 13 functions and values assigned to wetlands which include:

1. Groundwater recharge/discharge (GWR/D)
2. Flood flow alteration (FFA)
3. Fish and shellfish habitat (F&SH)
4. Sediment/toxicant/pathogen retention (S&TR)
5. Nutrient removal/retention/transformation (NR&T)
6. Production export (PE)
7. Sediment/shoreline stabilization (S&S)
8. Wildlife habitat (WLH)
9. Recreation (REC)
10. Education/scientific value (ED/S)

11. Uniqueness/heritage (U/H)
12. Visual quality/aesthetics (VO/A)
13. Threatened or endangered species habitat (T&E)

Table 1.0 Summary of Project Wetland Function and Value Evaluations

Wetland	Cowardin Classification	HGM Classification	GWR/D	FFA	F&SH	S&TR	NR&T	PE	S&S	WLH	REC	ED/S	U/H	VQ/A	T&E
1 - 12	PFO	Palustrine	P	S	N	S	S	S	N	P	N	N	N	N	N
1A to 9A	PFO	Riverine	P	N	N	N	N	P	N	S	N	N	N	N	N

P- Principle

S- Secondary

N- Not Significant Function

The principal functions of the regulated wetlands is groundwater discharge. Secondary functions include minor local flood flow alteration (storage and desynchronization), and water quality renovation properties (nutrient and sediment uptake and retention). Other wetland functions and services are limited due to historic impacts from adjacent land uses, private ownership of the property, overall site setting, relatively small size in comparison to overall watershed, landscape position, intermittent hydro-period and/or lack of persistent deep-water habitat. The watercourse along the road frontage primarily functions to convey high seasonal flows and stormwater runoff.

These listed functions can be maintained and promoted by maintaining overall on-site drainage patterns, demonstrating a compliant septic system, maintaining erosion and sedimentation controls through construction, stabilizing the bare ground with final vegetative cover and adherence to permit conditions.

SOIL SURVEY

The soils identified on-site is a refinement of the Natural Resources Conservation Service (NRCS) Websoil Soil Survey.

Wetland Soils

The primary wetlands soil series along the flagged wetland boundary are classified as extremely stony poorly drained Ridgebury fine sandy loams. Ridgebury soils are found within drainageways and depressions on glacial till landscapes. Ridgebury soils have a seasonal high-water table at a depth of about 6 inches.

A typical soil profile along the wetland boundary consists of approximately 6"-0" of intermediately decomposed organic material (Oi), followed by 0"-6" of a thick dark topsoil horizon (A), underlain by 6-20" 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 are mapped and classified as belonging to the Sutton soil series. This soil classification unit consists of stony, moderately- drained soils formed in sandy tills. These upland soils are associated with a high-seasonal water-table.

PROPOSED REGULATED ACTIVITIES / PROJECT OVERVIEW

The applicant is seeking approval from the Town of East Hampton to construct a new modest 2-bedroom single-family home centered on the western half of the property. The home would be serviced by on-site septic and a drilled well. The site constraints dictate the location and position of the proposed home. The subject lot of record has a drainage that flows south along the entire road frontage and there is a forested hillside seepage wetland that cuts diagonally across the southwest corner of the property. The entire lot is within the 100' upland review area.

Because of the site constraints to meet zoning requirement on this lot of record, construction of the home will require filling 2,080 of permanent wetland fill. Additionally, the culvert pipe at the site entrance will be extended to accommodate the new driveway.

IMPACT ASSESSMENT

The home structure and septic treatment system have been situated to provide the least impactful residential design that could be achieving to the extent possible while providing a reasonable use of the property and balance to minimizing impact the wetland resources. Essentially this is the smallest septic system that can be designed which is the main driver for the development layout.

Short-term impacts during construction can be reduced through measures to control sedimentation and erosion and adherence to BMPs. These controls as well as compliance with permit approvals will ensure that no long-term adverse effects will impact the natural capacity of the wetlands or detract from the functions and services they currently provide.

INDIRECT IMPACTS

Indirect or secondary impacts to a wetland or watercourse can occur as a result of activities outside of the wetlands or watercourses. These impacts can be either short-term (*construction phase*) or long-term (*i.e., change in drainage patterns / whole-sale clear cutting*) and are typically associated with erosion and sedimentation during construction, removal or disturbance of vegetation in adjacent upland areas, alteration of ground / drainage patterns that could affect the flow regime of a watercourse, and the discharge of degraded or insufficiently treated surface or groundwater, which may adversely impact the water quality of the regulate resource.

The potential for any of these indirect impacts to occur at the site as a result of the development depends on the quality of the regulated resources, the sensitivity to said resources, the resource's physical and ecological characteristics, and the degree to which those resources provide recognized functions and values and the nature of the activities

proposed in areas surrounding or which contribute flow (either surface water or groundwater to the regulated resource). These potential impacts are described in detail below.

EROSION AND SEDMIENTATION

To minimize potential impacts, the design incorporates industry standard best management practices (BMPs) and guidelines for residential developments. A detailed construction sequence has been provided as part of the application. All construction activities will be completed in compliance with the standards and guidelines provided by the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

The risk for potential adverse impacts from erosion and sedimentation is considered low to moderate because 1.) A detailed erosion and sediment control plan has been prepared, 2) the site's in-situ undisturbed soils are for the most part low to moderately erosive. 3) the site is vegetated, and topography is easily managed, and 4) there is no need for large scale tree removal keeping the building area envelope to a manageable size. Therefore, it is my professional opinion that with coordination and watchful monitoring and maintenance of erosion and sediment controls until construction is completed and restoration activities have stabilized the ground conditions there will be no anticipated adverse impacts to the regulated resources resulting from sedimentation discharging from the development of the parcel as proposed.

VEGETATION REMOVAL AND HABITAT LOSS

Habitat loss associated with land clearing is a consequence of land development which has the potential of impacting wetlands and watercourses. The proposed development will keep clearing limits to a minimum by clearing what is physically needed for facilitating the construction site improvements and associated appurtenances. The conversion of the vegetation cover within the development envelope will not change or diminish the ecological integrity of the surrounding forest and wetland adjacent community.

POTENTIAL IMPACTS TO WETLAND HYDROLOGY AND STREAM DYANAMICS

The proposed site improvements will not impact overall drainage patterns. The site improvements will not increase the potential for downstream flooding. The proposed development will not create any new point discharges. The site will be graded so stormwater runoff will sheet flow across the landscape to promote infiltration into the surrounding soils. This infiltration into the ground will recharge the nearby wetland resource baseflow.

The proposed development will not holistically alter surface or subsurface flow conditions or directions in a substantially impactful way. Site clearing and grading activities will not de-water nor flood the nearby wetland or alter surface water drainage patterns in a significant manner that exacerbates erosion or causes downstream issues.

CLOSING REMARKS

While direct wetland impacts are unavoidable to develop the subject lot the inclusion of BMP measures will protect the overall wetland resources. The proposed development plan is a feasible and prudent proposal for residential development of this property giving due consideration to the limitations of the lot, balancing the protection of the inland wetlands and watercourses, and fostering of the landowner rights.

Alterations within the URA will have some conversion of habitat. The activities in the uplands required to facilitate the development will not result in any loss of wetland function. Post development the wetlands and watercourse will still have the same ability to perform the existing functions they currently provide. As a result, environmental effects will be minor and highly localized. The applicant will mitigate such impacts by implementing standard construction BMPs and conforming to permit conditions. Because there will be no loss in wetland functions coupled with the site constrains and no mitigation should be required.

The proposed development is consistent with the adjacent single-family home developments. The proposed layout makes reasonable use of the buildable upland space on the parcel while maintaining the integrity of the forested wetland and existing upland features. It is my opinion that the proposed activities will not result in any loss of wetland function, value, unique or significant wetland habitat. Post development the wetland will still have the same ability to perform its existing functions. As a result, long term environmental effects should be minor and highly localized.

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

APPENDIX A
WETLAND SURVEY
SITE PHOTOS
65 WEST HIGH STREET
EAST HAMPTON, CT
MARCH 2022



Photo 1: Drainage that runs along the road frontage.



Photo 2: Example of the watercourse channel conditions along the road



Photo 3: Example of the stony hillside seepage wetland conditions in the rear of the subject property.



Photo 4: Example of the wooded upland conditions on the property

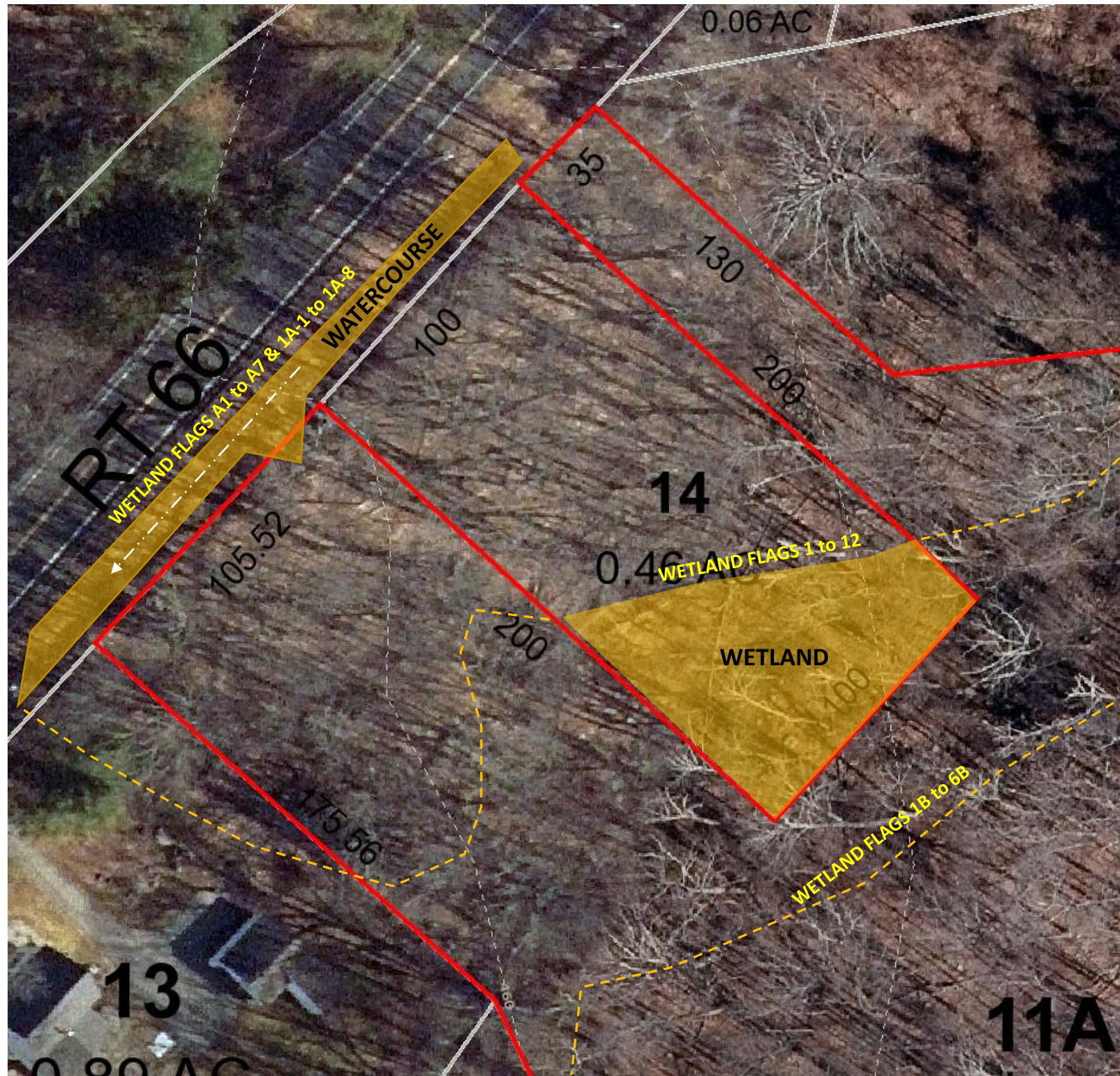
Wetland Delineations

Wetland Evaluations

Soil Evaluations

WETLAND SKETCH : MBL: 19-46-14

WEST HIGH STREET (ROUTE 66) – EAST HAMPTON

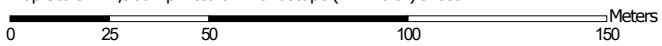


Disclaimer: This map is for planning purposes only. Verification of its accuracy, currency and completeness is the responsibility of the reader's own independent research. All inland wetland and watercourse boundaries are subject to refinement once traditionally field located by a Licensed Land Surveyor 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
(WEST HIGH ST)



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



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



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: State of Connecticut
Survey Area Data: Version 22, Sep 12, 2022

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

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

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
51B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	3.9	31.1%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	5.4	42.8%
60D	Canton and Charlton soils, 15 to 25 percent slopes	1.7	13.7%
308	Udorthents, smoothed	1.6	12.3%
Totals for Area of Interest		12.6	100.0%