

TOWN OF WATERFORD
Application for Inland Wetland / Watercourse Permit

Type of Application:

Permitted Use, Section 4.1 _____

Unregulated Activities, Section 4.2 _____

Regulated Activities, Section 6 ☒

Fee: _____

Agency Use:

Date Received: 10/8/26

Received By: DH

Application Number: C-26-07

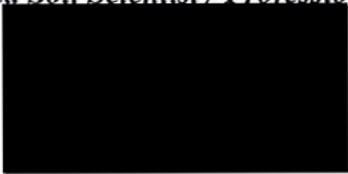
1. Applicant: <u>ERVIS RUSI</u>		Phone: [REDACTED]
Address: [REDACTED]		State: <u>CT</u> Zip: <u>06385</u>
Fax: [REDACTED]	E-Mail: [REDACTED]	
2. Owner: <u>SAME</u>		Phone: [REDACTED]
Address: [REDACTED]		State: [REDACTED] Zip: [REDACTED]
Fax: [REDACTED]	E-Mail: [REDACTED]	
3. Agent: <u>KILLINGLY ENGINEERING ASSOCIATES</u>		Phone: [REDACTED]
Address: [REDACTED]		State: <u>CT</u> Zip: <u>06241</u>
Fax: [REDACTED]	E-Mail: [REDACTED]	
4. Property Address: <u>150 GREAT NECK ROAD</u>		
5. Abutting Property Owners – Complete Attached Form		
6. Activity to be Reviewed and / or Licensed (attach sheet if necessary): <u>CONSTRUCTION OF A SINGLE-FAMILY HOME WITHIN THE UPLAND REVIEW AREA.</u>		
7. Description of Proposed Activity (attach sheet if necessary): <u>ACTIVITY INCLUDES CLEARING AND GRADING WITHIN THE UPLAND REVIEW AND UP TO THE FLAGGED WETLAND BOUNDARY</u>		
8. Purpose of Activity (attach sheet if necessary):		
9a. Acreage of Property: <u>0.912 AC</u>	9b. Acreage of Wetlands: <u>0.644 AC</u>	
10. Acreage of Wetlands Altered: <u>-0-</u>		
11. Wetland Mitigation Proposed: <u>-0-</u>		
12. Section 7 and sections 8.1 & 8.2 of the Town of Waterford "Inland Wetlands and Watercourse Regulations" have been complied with: (Review attached check list) Yes: ☒ No: ☐		
The applicant / owner hereby gives the Commission, its agent and consultants the right of free access to any part of the property under consideration. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his / her knowledge, information and belief.		
Applicant: <u>ERVIS RUSI</u> [Signature]		Date: <u>09/09/26</u>
Owner: <u>ERVIS RUSI</u> [Signature]		Date: <u>09/09/26</u>
Agent: <u>NORMAND THIBEAULT, JR</u> [Signature]		Date: <u>[Signature]</u>

RECEIVED

OCT 01 2026

Planning & Development
Town of Waterford, CT



Ian Cole, LLC***Professional Registered Soil Scientist / Professional Wetland Scientist***


August 30, 2026

Mr. Normand Thibeault, P.E.
Killingly Engineering Associates, LLC
**RECEIVED**

OCT 01 2026

Planning & Development
Town of Waterford, CT**RE: WETLAND REPORT
150 GREAT NECK ROAD
PARCEL ID 152-0264000
WATERFORD, CONNECTICUT**

Dear Mr. Thibeault,

At Killingly Engineering Associates, LLC request, I completed a field delineation of the Connecticut jurisdictional freshwater inland wetland and watercourse boundaries at the above referenced 0.918-acre residential parcel located at 150 Great Neck Road (Rte. 213) in Waterford, Connecticut.

I also prepared this letter report to detail an evaluation of the on-site wetland resources and the development impacts that potentially could result from the proposed plans to construct a new single family residence and associated site improvements located in the available uplands positioned in the southeast portion of the site. I offer the following comments for consideration in evaluating the proposed project.

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 as 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 April 22, 2026. The on-site wetland delineation examined the upper 20" of the site's soil profile for the presence of hydric soil conditions and delineated any wetland and/or watercourse boundaries located within the survey area. Those areas meeting the wetland criteria noted above were marked in the field with sequentially numbered pink wetland delineation flagging labeled 1 through 12 and 1A through 5A. The provided wetland sketch illustrates the approximate wetland locations and corresponding flag series, please be advised this sketch is subject to refinement once traditionally located and mapped by a Licensed Land Surveyor and adopted by the Town.

The vacant site is located on an undeveloped wooded parcel between the Perkins Farm Road open space to the north and a developed residential lot at 152 Great Neck Road. A wetland pocket located along the roadside in the northwest corner site drains east down the north property line where it flows into to a larger forested wetland system that covers the bulk of the low-lying level eastern side of the property. There is an upland area of approximately .30 acres in the southeastern corner of the lot. Overall, the site drains west to east and falls within the Southeast Shoreline subregional drainage basin (CTDEEP #2000).

The wetland vegetation community includes:

Trees: Red Maple, yellow birch, silver maple, American elm

Shrubs: Highbush blueberry, sweet pepperbush, green briar, spicebush, Japanese barberry, multiflora rose

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

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.

Wetland Soils

The primary wetlands soil series along the flagged wetland boundary 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.

Upland Soils

The soils around the proposed homesite are generally level and are classified as Woodbridge fine sandy loams. Because of the underlying dense till Woodbridge soil has perched water table resulting in slow subsurface permeability rates.

PROPOSED ACTIVITIES

The applicant is proposing to develop a new single-family residential dwelling and associated appurtenances on the southeastern portion of the overall lot. The new proposed dwelling would be accessed by a standard 12-foot wide gravel driveway and will be serviced by buried utilities including a municipal sewer and a waterline. Grading for the new driveway has been located so there will be no direct impacts to the wetland resources.

Prior to construction erosion and sediment control barriers installed at the limits of disturbance. These site protection measures will be maintained throughout construction and will be removed once the site is stabilized. Clearing limits have been minimized to the extent it is practical to develop the lot. At the limits-of-disturbance a row of 20 individual "deer resistant" green giant arborvitaes will boarder the wetlands which will be backstopped by a split rail fence to mitigate future encroachments.

The site work proposed will not significantly impact on the wetlands and will utilize the 100-foot upland review area to support the dwelling. Details of the location and extent of the proposed regulated activities are illustrated on the subject site plans.

WETLAND and UPLAND REVIEW AREA RESOURCES

The property is wooded, dominated by a mixed hardwood forest overstory with thick patches of green briar in the understory. The on-site soils originated from several sources of parent material including glacial melt-out till and lodgment glacial till. The site is not located in an aquifer protection area. The wooded swamp forms a feeder stream which is a headwater that drains to the south towards Goshen Cove. The on-site wetlands are classified as a freshwater, palustrine, seasonally flooded, forested wetland (Red Maple dominated).

The site is not located in aquifer protection zone, and a review of FEMA Flood Mapping indicates that there is no FEMA 100-year flood plain is located on the property. Lastly,

the site is not located in a Connecticut Department of Energy and Environmental Protection (CTDEEP) designated Natural Diversity Data Base (NDDDB) area per the publicly available December 2025 Town of Waterford NDDDB.

VERNAL POOL EVALUATION

The forested wetland was evaluated for vernal pool characteristics. At the time of inspection on April 22, 2026:

- The wetland exhibited seasonal flooding to saturation, with isolated areas of shallow standing water (approximately 4–8 inches in depth).
- No amphibian egg masses (wood frog or spotted salamander) or other breeding indicators were observed.

Based on regional experience and ongoing monitoring of multiple confirmed vernal pools by Ian Cole, LLC at the time of the April 22, 2026, site inspection:

- The wood frog breeding period had concluded, and
- The spotted salamander breeding period was near completion at the time of inspection.

Despite this timing, the observed hydrologic conditions are not sufficient to support vernal pool function, for the following reasons:

- While micro-topography is widely present, ponding is too shallow, discontinuous, and limited in spatial extent to provide the necessary hydroperiod to reliably sustain larval development in most years.
- The wetland is expected to dry relatively quickly following leaf-out, further limiting suitability.

Therefore, I concluded that the forested wetland on-site does not meet functional criteria for vernal pool habitat, the wetland's hydroperiod neighboring to the proposed development is not long enough nor are there sufficient pools deep enough to sustain breeding habitat for three months in the early spring growing season.

WETLAND FUNCTIONS AND VALUES ANALYSIS

The assessment of wetlands and watercourses functions and values is based on the US Army Corps of Engineers' (USACE) *The Highway Methodology Workbook, A Descriptive Approach* (1995) methodology, and on best professional judgment.

The functions and values of the wetland corridor is summarized in Table 1. The *Highway Methodology* recognizes 13 separate wetland functions and values. The degree to which a wetland provides each of these functions is determined by one or more of the following factors: landscape position, substrate, hydrology, vegetation, history of disturbance, and size. Each wetland may provide one or more of the listed functions at significant levels. The determining factors that affect the level of function provided by a wetland can often be broken into two categories. The effectiveness of a wetland to provide a specified function is generally dependent on factors within the wetland whereas the opportunity to provide a function is often influenced by the wetland's position in the landscape as well as adjacent land uses. For example, a depressed wetland with a restricted outlet may be

considered highly effective in trapping sediment due to the long residence time of runoff water passing through the system. If this wetland is located in gently sloping woodland, however, there is no significant source of sediment in the runoff therefore the wetland is considered to have a small opportunity of providing this function.

Wetland Functions and Values	Groundwater Recharge/Discharge	Sediment/Shoreline Stabilization	Floodflow Alteration	Fish & Shellfish Habitat	Sediment/Toxicant/Pathogen Retention	Nutrient Removal/Attenuation	Production Export	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Listed Species Habitat
WETLAND #1 Front	S	U	P	U	P	P	S	S	U	U	U	U	U
WETLAND #2 Rear	P	U	P	U	P	P	S	P	U	U	U	U	U
Suitability P = principal function S = secondary function U = function unlikely to be provided at a significant level N/A = not applicable or unknown													

Table:1 Wetland Functions and Values

For context of evaluating the wetland features it is important to acknowledge that the upper edge of the wetlands adjacent to the road which will be impacted are not as highly functioning in comparison to the interior / downgradient portion of the wetland and where the watercourse hydrology is more persistent throughout the year and there are pockets of organic soils accompanied by a diversity of wetland vegetation; it is within this interior downstream wetland zone the system is more sensitive and includes the more beneficial part of the overall wetland system.

The wetlands in the front of the parcel that will be filled with the driveway entrance have functions and values that are limited due to the narrow confines of the wetland, prolific growth of invasive species reducing the ecological integrity, lack of open water, lack of deep organic soils or thick topsoil to provide residency and retention of water, pollutants and sediments and private ownership of the site. The wetlands functions will not be significantly impacted from the fill placed at the edge of the wetland to accommodate the driveway entrance apron.

IMPACT ASSESSMENT

No wetlands will be directly impacted from the proposed activities. Staked bales of hay at grade will be installed prior to the start of construction and will be maintained until the site is stabilized. The site will be sewered so dissolved nitrates and pollutants will not be an issue. The development will leave the bulk of the property wooded including nearly all of the sensitive wetland features in the rear of the lot in their existing natural undisturbed state.

The proposed activities in the upland review area will not change the overall character of the wetlands and watercourses in a negative or adverse way. Post development the watercourse will still maintain the same capacity to convey stormwater and seasonal groundwater runoff. Due to the extents of the wetlands and limited uplands available on-site requires unavoidable activities within the 100-foot upland review area. All proposed activities are in the upland review area.

Stormwater runoff and grading has been designed to promote sheet flow and infiltration into the ground. There will be no substantial changes to hydrology or watershed of the wetland feature. There will be no changes in the wetland vegetation community or overall species composition of the wetlands as a result of the proposed development(s). The applicant will mitigate construction related impacts by implementing standard construction Best Management Practices (BMPs) and conforming to permit conditions.

The proposed activities are not likely to have a significant effect on the environment for the following reasons:

1. There is no filling of any inland wetland and/or watercourses with this proposal.
2. The project will not substantially change the natural channel or negatively inhibit the natural dynamics of the wetland system.
3. The proposed activities within the uplands will not diminish the capacity of the wetland. The wetland will provide the same wetland functions and values post development.
4. The erosion and sediment controls will protect the environment from the proposed activities and if appropriately installed, monitored and maintained will not likely cause or have the potential to cause substantial turbidity, siltation or sedimentation in a wetland or watercourse.
5. No activities will cause a substantial diminution of flow of a natural watercourse or groundwater levels of the regulated area.
6. The site development will have public sewer and water utilities as well as health department approval and is unlikely to cause or have the potential to cause pollution of the wetland.

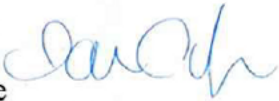
7. The wetland features are not unique, nor do they provide demonstrable scientific or educational value.

In considering feasible and prudent alternatives, the current proposal respects the integrity of the environment, has no direct wetland impact, and implements best management practices that will protect the adjacent resource areas. There are no less impactful ways to access the properties and therefore, the proposal is the most feasible and prudent alternative for the development of this property, giving due consideration to balancing the protection of the inland wetlands and watercourses while fostering reasonable development and use of the site.

In my professional opinion there will be no significant adverse impacts resulting from the development of the project as currently proposed. The activities required to facilitate the development will not result in any loss of function to wetlands and watercourses. Post development the wetlands and watercourses will still have the same ability to perform the existing functions currently provided. Furthermore, the regulated activities depicted on the subject site development plans are materially and substantially similar in comparison to adjacent developed parcels. As a result, environmental effects will be minor, temporary, and highly localized.

If you have any questions or comments, please do not hesitate to contact me at

Sincerely,


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

ATTACHMENTS:

GIS PARCEL MAP
WETLAND DELINEATION MAP
NRCS SOIL SURVEY
SITE PHOTOS

WETLAND SURVEY PHOTOS

APRIL 22, 2026

150 GREAT NECK ROAD

CONNECTICUT



Photo 1: Example of the site access / proposed driveway on Great Neck Road.



Photo 2: Example of the forested uplands and proposed homesite.



Photo 3: Photo of the wetlands in the front of the parcel that drain east towards the wetland in the rear / eastern side of the parcel.

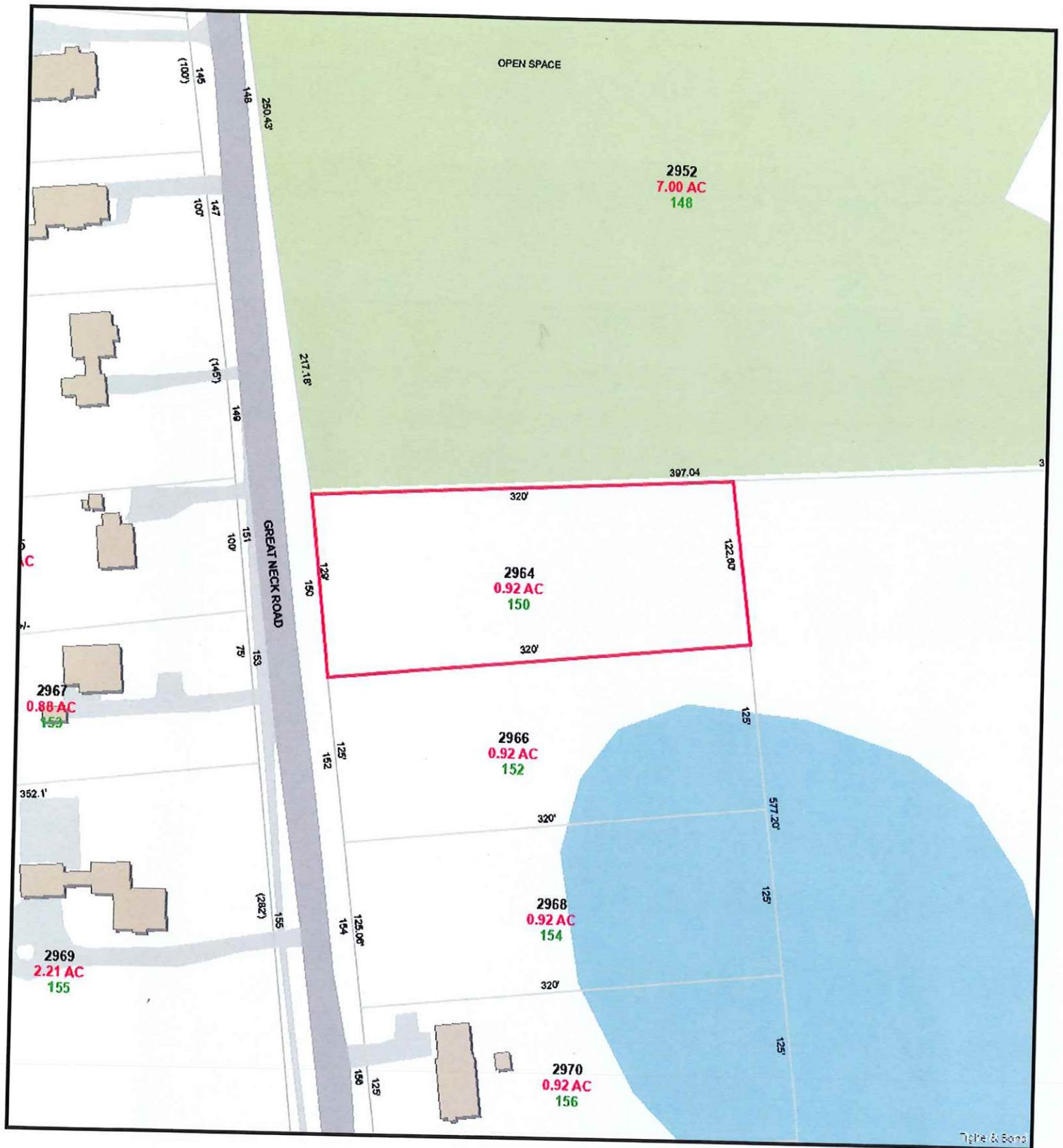
Wetland Delineations

Wetland Evaluations

Soil Evaluations



Photo 4: General conditions of the forested wetland system in the rear of the site. Green briar extensively covers the wetland boundary.



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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.





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Scale: 1"=188'

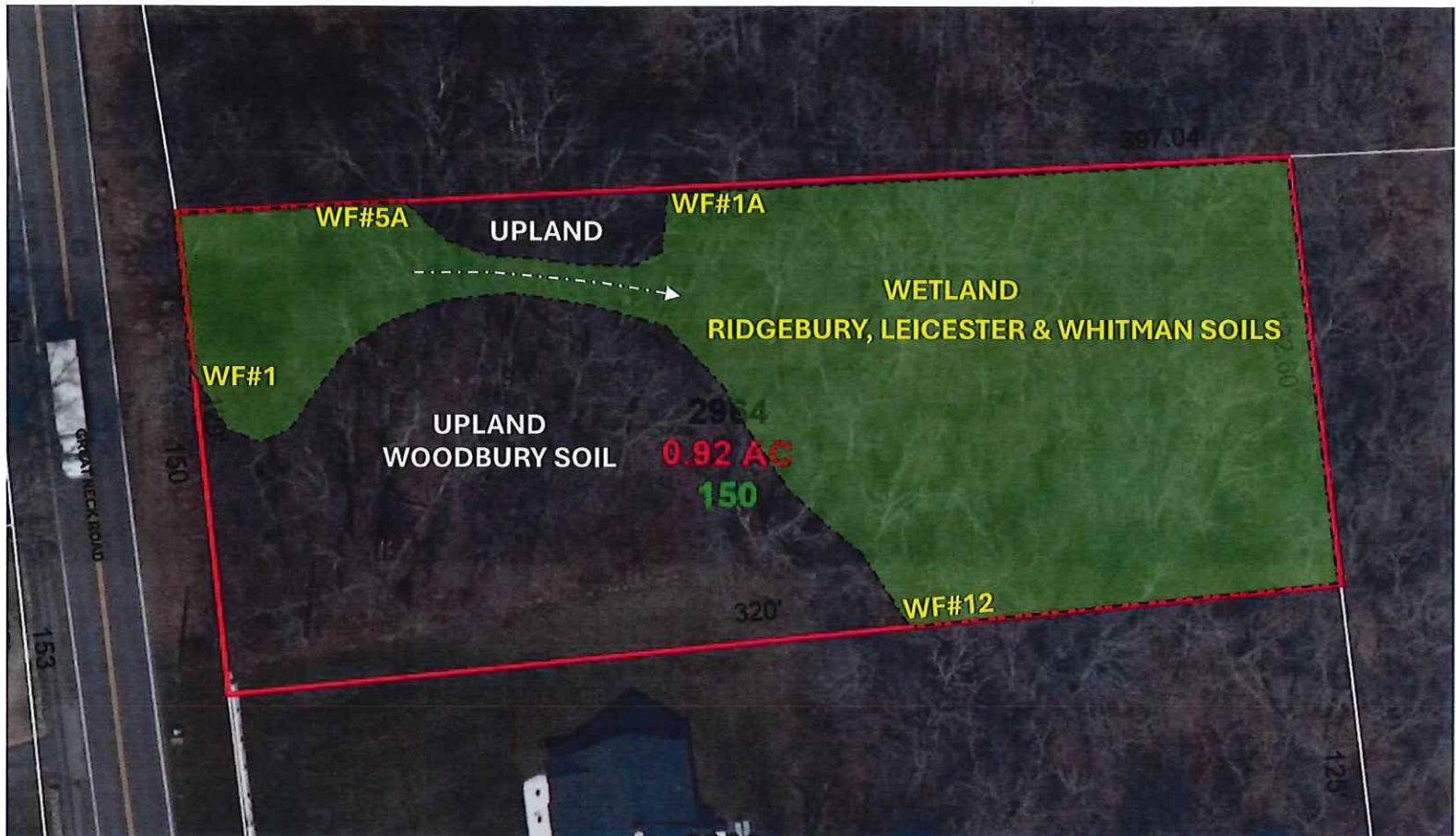
Scale is approximate

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WETLAND DELINEATION MAP – APRIL 22, 2026

150 GREAT NECK ROAD, WATERFORD



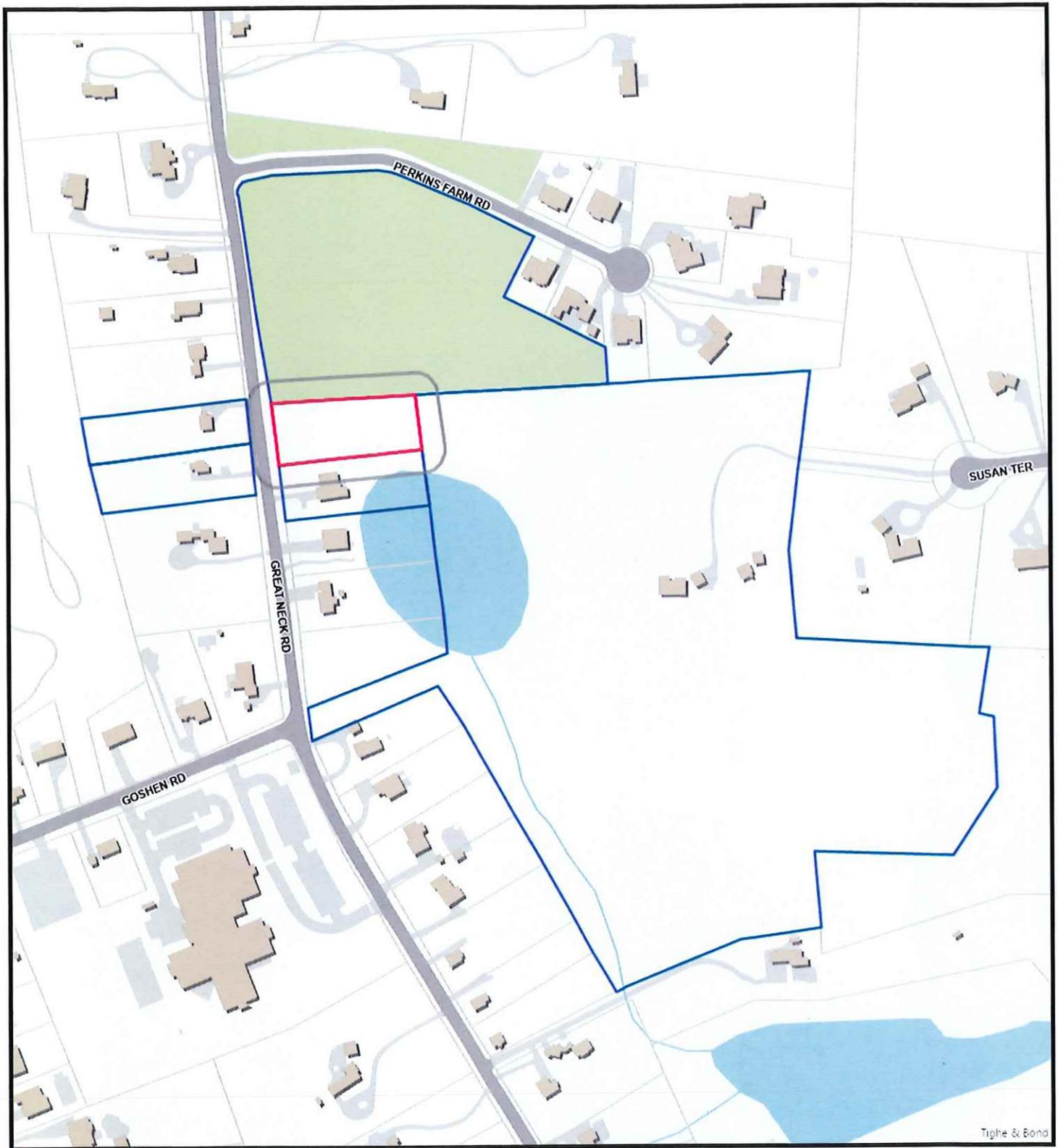
Disclaimer: This map is for planning purposes only. Verification of its accuracy, currency and completeness is the responsibility of the reader's own independent research. All inland wetland and watercourse boundaries are subject to refinement once traditionally field located by a Licensed Land Surveyor 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 (150 GREAT NECK ROAD - WATERFORD)



Map Scale: 1:989 if printed on A landscape (11" x 8.5") sheet.

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



Rusi - 150 Great Neck

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Scale: 1"=300'

Scale is approximate

The information depicted on this map is for planning purposes only.
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interpretation, or parcel-level analyses.



MAP LEGEND

Area of Interest (AOI)		Area of Interest (AOI)		Spoil Area
Soils		Soil Map Unit Polygons		Stony Spot
		Soil Map Unit Lines		Very Stony Spot
		Soil Map Unit Points		Wet Spot
Special Point Features		Blowout		Other
		Borrow Pit		Special Line Features
		Clay Spot		Streams and Canals
		Closed Depression		Transportation
		Gravel Pit		Rails
		Gravelly Spot		Interstate Highways
		Landfill		US Routes
		Lava Flow		Major Roads
		Marsh or swamp		Local Roads
		Mine or Quarry		Background
		Miscellaneous Water		Aerial Photography
		Perennial Water		
		Rock Outcrop		
		Saline Spot		
		Sandy Spot		
		Severely Eroded Spot		
		Sinkhole		
		Slide or Slip		
		Sodic Spot		

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 6, Sep 16, 2025

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	3.4	65.1%
45B	Woodbridge fine sandy loam, 3 to 8 percent slopes	0.4	7.8%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	1.4	27.1%
Totals for Area of Interest		5.2	100.0%

