January 29, 2020

Planning & Zoning Commission
New Canaan Town Hall
77 Main Street
New Canaan, CT 06840

Re: Engineering Summary
Proposed Site Development
453 Laurel Road, New Canaan, CT
Map 40, Block 105, Lot 108

Dear Commissioners:

This office has been commissioned by Laurel Road, LLC to submit a Special Permit application to the Planning & Zoning Commission for the proposed site development at 453 Laurel Road. The following is an engineering summary of the existing property, proposed development and regulated activity.

The property totals 4.000-acres and is located within New Canaan’s “Two-Acre Residence” zone. It is currently developed with a single-family residence, asphalt driveways, pool, hardscape and lawn. The edges of the property are woodland. Topography on the site consists of steep slopes that drain east. All of the stormwater runoff sheet flows east following the topography. This includes roof and driveway runoff as the roof leaders and driveway drains discharge to surface. The property is currently served by a septic system and private well. The property and proposed development are outside of any FEMA Floodzones. Refer to the attached GIS aerial image for clarity.

There is currently ongoing construction at the property. Additions are being constructed as shown on the “Septic System/Site Development Plan” prepared by this office, dated September 24, 2019. The prior approved plan included a B100a code-complying septic system design and proposed driveway reconstruction (including a new pull-off area) to facilitate the additions. This septic system is not intended or required to be constructed at this time and the existing septic system shall remain in use.

The proposed site development is based on a Landscape Design Concept generated by Rosalia Sanni Design, LLC. It consists of removing the existing pool patio and constructing a new larger pool patio. The existing pool will remain. New retaining walls are proposed downgradient of the pool patio to overcome the steep slope. There are existing retaining walls in this location that will be removed. Also, the existing retaining wall north of the pool patio will be extended to create an upper level lawn. Slab steps are proposed to transition between the upper lawn, pool area and lower property. The landscaping concept proposes a 2:1 grading along the slab steps and atop
the retaining walls for a horizontal distance of 8-ft (4-ft of elevation change). Refer to the “B100a Septic System/Site Development Plan” prepared by this office, dated January 28, 2020 and “Landscape Concept Plan A” prepared by Rosalia Sanni Design, LLC dated November 14, 2019 for additional information.

The proposed site development also includes converting an existing field to a 7,000 sq. ft. meadow area. A portion of the meadow is located within the 50-ft inland wetland upland review area. The meadow creation will involve clearing invasive weeds, creating wood chip paths through the meadow and installing native wildflower and grass seed. There is no site grading proposed as part of the meadow creation. Slope stabilization blankets will be employed to protect the slope while it is disturbed during construction. An administrative review application for the disturbance within the upland review area has been submitted to the Inland Wetlands Department. Refer to the “Meadow Plan” prepared by Rosalia Sanni Design, LLC, dated January 28, 2020 for additional information.

As part of the proposed development there will be disturbance on-site to construct the pool patio, retaining walls, grading and meadow area. Earthwork (mostly filling) is required to construct the new pool patio, retaining walls and site grading against a steep topography. Site grading of 2:1 is proposed atop the retaining walls to limit the amount of grading due to the existing steep topography. The 2:1 grading downstream of the pool patio limits the retaining wall height because the existing topography in this location is near 2:1. If 3:1 grading were proposed the retaining wall would need to be taller as it would move further down slope and also create the need for more earth filling. The 2:1 grading atop the existing extended retaining wall is proposed to create an upper level lawn. Due to the existing steep topography there is essentially no level recreational space on the entire four acre parcel. The 2:1 grading would fit the landscaping concept plan while also maximizing what little level lawn space is possible. A Special Permit is required because the Total Area of Disturbance is greater than 10,000 sq. ft. and the proposed site grading is steeper than 3:1. The total disturbance for the proposed site development is 15,700 sq. ft. and the site grading is proposed at 2:1. The total earthwork will be 640 cu. yd. which is less than the 1,000 cu. yd. that requires a Special Permit.

Portions of the proposed retaining walls are ±5.8-ft tall. Walls that are greater than 4-ft tall require a Zoning Permit per Section 6.5.B.6 of the New Canaan Zoning Regulations. Refer to the “Wall Plan” prepared by Rosalia Sanni Design, LLC, dated December 23, 2019 for additional information. This wall plan includes a standard wall detail. Upon approval of this Special Permit, a structurally engineered retaining wall design will be provided for permitting and construction.

There are no stormwater detention measures proposed since the increase in impervious area is only 900 sq. ft., which is less than the 1,000 sq. ft. threshold stated in the Town of New Canaan Drainage Certification Policy. The increase in impervious area includes the additions and driveway expansion that were previously approved. The retaining walls will have wall drains that will connect to existing relocated drainage pipes. The wall drains will relieve hydrostatic pressure behind the walls and minimize runoff spilling over the walls. A level spreader outlet is proposed on the existing relocated drainage pipe that the wall drains are connected to. The level spreader will provide outlet protection and promote sheet flow runoff to the east conforming to the existing conditions. Existing drainage pipes that are not affected by the proposed development shall remain as is.
The site grading and retaining wall construction will have a negligible impact on downstream neighbors as the existing site topography is steep and the closest downstream neighbor is located approximately 350-ft away through a dense woodland.

Any excess material excavated from the property will be trucked away in order to minimize the amount of stockpiled material on the site. Soil and erosion controls, including silt fence and erosion control blankets, will be employed to protect down-gradient properties and inland wetlands during construction. These controls will remain in place until the site is stabilized and permanent vegetative cover has been established.

It is the opinion of this office, and the conclusion of this letter, that the proposed site development is suitable for the subject property and will have no adverse impacts to the adjacent properties or inland wetlands.

Sincerely,

Harry Rocheville, E.I.T.
Senior Engineer

Cc: file

Attachments
453 Laurel Road

1/30/2020 12:37:00 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.