

13-0328-024-01  
March 27, 2020

Mr. Jeremy Ginsberg, AICP  
Planning Director  
Town of Darien  
2 Renshaw Road  
Darien, Connecticut 06820

**Re: 49 Sunswyck Drive Engineering Review**

Dear Mr. Ginsberg:

In accordance with our proposal dated March 10, 2020, we have reviewed the application to the Planning and Zoning Commission and Environmental Protection Commission for the proposed re-subdivision of property at 49 Sunswyck Road.

The applicant proposed a two lot re-subdivision for property located at 49 Sunswyck Road. The 2.596 acre parcel is access from a paved driveway off Sunswyck Road, and contains an existing residential structure and detached garage. The applicant proposed razing the existing residential structure and the detached garage, subdividing the parcel into two properties, each with a new residential structure, driveway, and subsurface sewage disposal system. A new curb cut will be required to serve the north lot. Wetlands are present on the southern and western sides of the property. It is our understanding that these are site-specific house designs and represent true housing footprints instead of generic footprints that are often used in these types of applications. Tighe & Bond visited the site with the Town Land Use Director and Town Environmental Officer on March 16, 2020.

Our review was focused on the application's consistency with the Town of Darien Zoning Regulations (DZR), specifically Sections 850 (Land Filling, Excavation and Earth Removal), Section 870 (Sediment and Erosion Control), and Section 880 (Stormwater Management), and Inland Wetlands Regulations.

## **Basis of Review**

Our review is based on the following documents:

1. "Site Engineering Report, Oresman Subdivision, 49 Sunswyck Road, Darien, Connecticut, Prepared for Palladian Builders, 6 Thorndal Circle, Darien, CT 06820," dated February 2020, revised March 2020, prepared by DiVesta Civil Engineering Associates, Inc.
2. "Palladian Builders, 49 Sunswyck Road, Darien, Connecticut, Proposed Site Development Plan," Sheet 1 of 3 prepared by DiVesta Civil Engineering Associates, Inc., dated February 26, 2020, revised March 20, 2020.
3. "Palladian Builders, 49 Sunswyck Road, Darien, Connecticut, Details," Sheet 2 of 3 prepared by DiVesta Civil Engineering Associates, Inc., dated February 26, 2020, revised March 20, 2020.
4. "Palladian Builders, 49 Sunswyck Road, Darien, Connecticut, Notes," Sheet 3 of 3 prepared by DiVesta Civil Engineering Associates, Inc., dated February 26, 2020, revised March 20, 2020.



5. "Pre-Development Watershed," prepared by DiVesta Civil Engineering Associates, Inc., dated February 25, 2020.
6. "Post-Development Watershed," prepared by DiVesta Civil Engineering Associates, Inc., dated February 25, 2020.
7. "Alternative Site Plan," prepared by DiVesta Civil Engineering Associates, Inc., dated March 18, 2020.
8. "Alternative Site Plan," prepared by DiVesta Civil Engineering Associates, Inc., dated March 18, 2020. (Based on February 26, 2020 initial submission)
9. HydroCAD Report, prepared by DiVesta Civil Engineering Associates, Inc., dated March 17, 2020.

## Review Comments

Based upon our review, more information is needed to determine if the application meets the requirements of the Town's stormwater management and erosion control regulations. We offer the following comments:

### A. Stormwater Management

Since razing of existing residential structures is proposed, the applicant is required to follow the provisions of Section 880, Stormwater Management, of the Darien Zoning Regulations. The applicant has submitted a stormwater management plan as required by DZR 880.b.1. The Site Engineering report documents runoff conditions from the 2, 10, 25 and 50 year design storms, and indicates no increase in peak flow in accordance with DZR 881.

The applicant's engineer used the "fresh meadow" approach as dictated by DZR 883a, and utilized underground stormwater chambers to infiltrate runoff and attenuate peak flow rates from the site. The appropriate water quality volume is provided per DZR 881.c, with supporting computations.

1. The outlet from the chamber system on the east side of Lot 1 discharges adjacent to the existing 12 inch CMP. During our field visit, we noted that there was some erosion in this area. We recommend that a preformed scour hole be installed here to act as a small forebay that would reduce velocities for both the existing and proposed outlets. We discussed this recommendation in the field with the Town's Environmental Officer, and acknowledge that it will disturb wetland area.
2. Is there a patio around the proposed pool on Lot 2? If so, was impervious area accounted for in the curve number computation?
3. In the HydroCAD Report, Detention Basin 1a, which is the underground chamber system at the rear of Lot 2, shows that there is storage below the lowest outlet. A similar condition exists for Detention Basin 1aa, which is the underground chamber system at the front of Lot 1. We assume that there will be exfiltration, otherwise the chambers will remain full. Please confirm and revise computations as needed.
4. Upstream of Junction Box #1, the footing drain and site drainage tie together and enter as a single line. A similar situation exists at Junction Box #5 with the roof leader and sump pump force main. Instead of being tied together, can they enter the junction box separately?

5. It appears as if the proposed underground chamber systems will drain within 72 hours based on infiltration rates provided, but confirm that all three underground chamber systems will drain in the allotted time.
6. Add cleanouts at bends in the 6" PVC runs to and from the detention systems.
7. The applicant has provided a stormwater management and operation plan in accordance with DZR 881.f. Update the provided plan to include specific maintenance practices for the proposed Cultec chambers.
8. Where outlets discharge to slopes, use a level spreader to distribute the flow.

## **B. Sediment and Erosion Control**

DZR 870 identifies requirements for sediment controls, and refers to the 2002 Connecticut Erosion and Sediment Guidelines. In general, the proposed controls are appropriately placed, but need some minor modifications to confirm conformance with DZR 870 and Section 7.5 of the Town's Inland Wetlands Regulations.

1. Supplement silt fencing upstream of wetlands with a row of haybale barriers, or a second row of silt fencing.
2. The catch basin inlets near the southern driveway should have inlet protection such as silt sacks to protect against tracked sediment from entering the storm drains.
3. Some proposed slopes are graded at a slope of approximately 2 horizontal to 1 vertical. Since this is steeper than 3H:1V, provide an erosion control blanket in accordance with the Erosion Control Blanket measure on Page 5-4-10 of the 2002 Connecticut Erosion and Sediment Guidelines. This comment applies to:
  - a. The slope south of the Lot 1 primary leaching area
  - b. The slope west of the Lot 2 primary leaching area
4. Some additional trees may need to be removed because regrading work extends into the critical root zone as defined in Figure TP-1 of the 2002 Connecticut Erosion and Sediment Guidelines:
  - a. The new retaining wall will result in a three foot cut within the critical root zone of the 48" Oak just north of the south driveway.
  - b. The proposed primary leaching system for Lot 1 will be in the critical root zone of the 36" Maple just to the north.
  - c. The proposed infiltration system located on the west side of Lot 2 will require the removal of the 18" Hickory and 15" Locust

## **C. Earth Filling and Regrading**

We have reviewed the project for consistency with DZR 850. The proposed application appears to be mostly consistent with the provisions of DZR 854, except as noted elsewhere. We do not anticipate any negative impacts from the proposed regrading activities provided that they protected with the sediment and erosion controls proposed, the above Sediment and Erosion Control comments, and the comments below.

1. West of the Lot 2 primary leaching area, the south side contours return to existing grade, creating a "V" shaped channel that has a potential to cause erosion because of

the slope steepness. Is it possible to extend the contours across the common property line to avoid creating a channel here? Another option may be to place plantings here to provide stability.

2. We could not locate a planting plan. Is one proposed?

We will be present at a future hearing of the Environmental Protection Commission and Planning and Zoning Commission to present our findings and address questions the Commissions may have.

Very truly yours,

**TIGHE & BOND, INC.**



Joseph Canas, PE, LEED AP, CFM  
Principal Engineer

Enclosures

Copy: Richard Jacobson, Town of Darien Environmental Protection Officer  
Doug DiVesta, DiVesta Civil Engineering Consultants

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