



Boundaries LLC
179 Pachaug River Drive
P.O. Box 184
Griswold, CT 06351
T 860.376.2006 | F 860.376.5899

www.boundariesllc.net

May 16, 2023

Ms. Liz Burdick
Director, Land Use and Development Department
Town of Montville
310 Norwich-New London Turnpike
Uncasville, CT 06382

**Re: 23IWC7 – A&B Excavation
69 Fitch Hill Rd & Leffingwell Rd
Montville, CT
Site Development Plan and Stormwater Management Report Review**

Dear Ms. Burdick,

Per your request Boundaries, LLC. has completed a review of the site development plans and stormwater management report for the proposed commercial development located at 69 Fitch Hill Road and Leffingwell Road (Map 062, Lot 036-000) prepared by Green Site Design, LLC. This review is intended to evaluate compliance of the plan with the requirements of the Town of Montville Inland Wetlands and Watercourses Regulations.

The project includes limited disturbance within the 50-foot Upland Review Areas of the on-site wetland systems. The proposed activity within the Upland Review Area consists of re-grading previously disturbed areas and restoring them with topsoil, grass seed and mulch. All activity within the Upland Review Area is proposed to occur behind a row of sediment fence backed by a wood chip berm. The double row of erosion and sediment controls is compliant with DEEP best management practices for activity within 50-feet of regulated inland wetlands.

The project also includes the construction of approximately 4 acres of new impervious surfaces which drain to two Water Quality Basins prior to discharging approximately 55 feet from the wetland boundaries. Runoff from the proposed impervious surfaces ultimately will enter the wetland systems, therefore the proposed stormwater management system has also been reviewed with respect to meeting requirements for stormwater quality and protection of the downgradient wetlands.



The following comments or question are based on the documents received May 10, 2023:

Stormwater Conveyance

- The plan proposes conveyance of stormwater using permanent diversion swales. Since the swales will be part of the permanent stormwater management system it would be beneficial to include the proposed grading for the swales in the site development plans in addition to the flow direction arrows. Specifically, proposed topography for the diversion swale along the easterly property line would help demonstrate how the swale should be constructed between the top of the proposed 2H:1V slope and the adjacent property line.
- The off-site contributing drainage area to the east should be evaluated for sizing and stabilization details for the proposed diversion swale. The diversion swale ends upgradient of the proposed access driveway. Please evaluate if the design flows from the swale are minor enough that they should be allowed to sheet flow over the driveway.
- Please review the proposed grading on the north side of Building 1 to determine if runoff from the paved area north of the building has the potential to flow to the north instead of to Water Quality Basin 1. Additional spot elevations to clarify intended runoff flow patterns north of the building may be warranted.
- Is runoff from the improved entrance driveway, proposed building addition, and parking areas at Fitch Hill Road intended to be treated or captured by Water Quality Basin 2? Additional spot elevations to clarify intended runoff flow patterns west of the driveway low point may be warranted.
- Please provide additional details regarding the “-CD-” line to the west of Building 3. It appears this line may be intended to direct runoff from the proposed pavement west of Building 3 to Water Quality Basin 1, but no construction details, notes or sizing information is available. If this is not intended to convey runoff to the Water Quality Basin it appears that the paved area to the west of Building 3 will not drain to a Water Quality Basin.
- The Erosion Control & Sedimentation Narrative refers to diversion swale locations shown on Sheet 3. Please update as appropriate.

Erosion and Sedimentation Control

- In some areas proposed sediment fence runs perpendicular to the slope. Please incorporate sediment fence wings or checks in accordance with DEEP Guidelines.
- Some of the 2H:1V slopes exceed 15 vertical feet. Please provide additional details of how these slopes comply with Section 5(b)(2)(A)(i) of the DEEP Construction General Permit.
- Please evaluate if the proposed silt fence and wood chip berm should be replaced with a check dam immediately downgradient of the proposed sediment trap discharges. Will the potential concentrated flows impact the integrity of the silt fence?
- Please provide details for the proposed stone check dams called for in the easterly diversion swale (12-inch depth).

Water Quality Basins

- The Water Quality Basins are proposed to be used as temporary sediment traps during construction. The DEEP Stormwater Quality Manual recommends not using infiltration basins as temporary sediment traps due to the negative impact of construction equipment and sedimentation on the long-term infiltration rate. Please identify alternate locations for the



sediment traps or incorporate procedures that will protect the long-term infiltration rates of the Water Quality Basins.

- The proposed bottoms of the Water Quality Basins appear to be near the elevation of the wetland system on site. The nearest test holes to the Water Quality Basins indicate a restrictive layer between 10 and 45 inches below existing grade. Please provide additional information regarding the intent for meeting recommended separating distances between the bottom of the Water Quality Basins and seasonal high groundwater.
- Pre-treatment of stormwater runoff is recommended for stormwater infiltration practices with infiltration rates of greater than 3 inches per hour per the DEEP Stormwater Quality Manual. Please consider whether sediment forebays or other pretreatment measures should be incorporated into the design to meet the recommendation.
- A factor of safety of 2 is recommended for stormwater infiltration practices per the DEEP Stormwater Quality Manual. Please evaluate whether a factor of safety for the infiltration rates has been incorporated into the stormwater model.
- Please provide additional information regarding the determination of the design infiltration rates and how those rates comply with Section 5(b)(1)(B)(v)(c) of the DEEP Construction General Permit.

General

- The Drainage Map referenced in the Drainage Calculations, Hydraulics & Hydrology Report did not appear to be included in the submission package. Please provide the referenced Drainage Map for review.
- The existing conditions topography on the northerly half of Sheet 4 is not plotted on the PDF.
- The northerly Water Quality Basin is labeled Water Quality Basin 2 on all sheets. Based on the narrative in the Drainage Report it should be labeled Water Quality Basin 1.
- The Erosion Control & Sedimentation Narrative on Sheet 10 references the Town of Salem.
- Based on the existing and proposed contours it appears that the proposed retaining wall along the easterly property line has a maximum height of approximately 18 to 20 feet. Is there adequate space between the wall and the property line for the construction of the footing or placement of grid reinforcement for a wall of that height?

Please do not hesitate to contact me with any questions.

Sincerely,



David C. McKay, P.E.