



February 27, 2020

Michael Schlosser, P.E.
Alteration of Terrain Bureau
P.O. Box 95
Concord, NH 03302-0095

RE: Site Alteration of Terrain Permit Application #190917-177
TurboCAM International
Tax Map 233 Lot 77 & Tax Map 234 Lots 1.2 & 1.4 – Barrington, NH

Dear Mr. Schlosser,

In regards to your Request for More Information Letter for the Alteration of Terrain Application for TurboCAM International located at Route 9/Redemption Road, Barrington, NH, Tax Map 233 Lot 77 & Tax Map 234 Lots 1.2 & 1.4, we offer the following responses. Below you will find your letter in regular text and our response to your comments in bold “italics”.

1. I have sent an email to NHFG&G for final review and approval. Their final review is necessary prior to issuing a permit.

The changes having been made since the NHFG and Endangered Wildlife Program email on January 22, 2020 are minimal. The changes include the increase in size of the bioswale systems. The knockouts of the catch basins have been replaced with a trash rack over the catch basin (see detail on sheet D2). The inlet is 1.5' above the proposed ground surface.

2. BR1 & BR2 w/ ISR

a. Review the analysis for inconsistencies in the elevations of outlets.

Inconsistencies between the HydroCAD model and the plan set have been revised.

b. It seems that CB3 and CB5 should be removed from the analysis and included as part of the outlet structure for each bioswale.

Pond nodes CB3 and CB5 have been removed from the HydroCAD model. The outlets have instead been added to pond nodes BR1 and BR2.

c. BR1 w/ ISR: The routing does not match what is shown on the plans. I see two pipes flowing to DW1 from CB5. Where on the plans is Device #3 & #5? How do #3 & #5 flow to the

civil & structural consultants, land planner

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overflow pipe? Device #2 should be routed to the 12" overflow. Device #4 should also be primary.

Devices #3, #4 and #5 have been removed from the analysis. The outlets of BR1 have been remodeled to more accurately portray the stormwater flow.

d. BR1 w/ ISR: PDL5 (12" overflow in analysis and detail) is specified as 15" on the plan.

PDL5 has been remodeled as a 15" pipe in HydroCAD. The "bioswale-ISR long-section typical detail" on sheet D2 specifies this as "Pipe outlet (varies)", and the "outlet control structure typical detail" on sheet D2 specifies this as "dia. varies pipe outlet". The pipe listing on sheet C4 showing PDL as a 15" diameter pipe remains unchanged.

e. BR2 w/ ISR: The routing does not match what is shown on the plans. Where is the 12' long sharp crested weir and how is it routed to the 18" overflow pipe?

The 12' long sharp crested weir in BR2 has been removed from the analysis. It has been replaced and modeled as an open 48" diameter horizontal orifice.

3. The pipes from CB3 & CB5 are now directly connected to the drywell (DW1). It doesn't appear that the drywell has the outlet capacity through the limited number of 1.5" holes to pass the expected flows (9.86 cfs in the 50-year storm) to the stone reservoir. The dry well will also require a larger perforated riser section (shown as 36" in the detail) to accommodate the 4 inlet pipes which span from elevation 225.50 to 229.25 (3.75').

DW1 has been increased from a 4' diameter drywell to 8' diameter. By doing so, there will be more perforations, and the perforations will be larger. Furthermore, the pipe listing now indicates that pipes PDL3-PDL6 are to be perforated within SII.

The detail showing the 36" perforated riser indicates the risers used for BR1 and BR2. The "outlet control structure components by Shea" detail has been revised to be named "outlet control structure components for BR1 & BR2 by Shea".

4. The Drainage Structure Chart on Sheet C4 was not updated to reflect the revisions to the analysis.

The drainage structure chart on Sheet C4 has been updated to reflect the revisions to the analysis.

Thank you,

Bruce Scamman P.E.

Copy to: Town of Barrington
Elliot Wilkins
Clint Forrest
File