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September 2, 2022

Maureen FitzGerald
Environmental Planner
Town of Waterford
15 Ropes Ferry Road
Waterford, CT 06385

RE: Application #C-22-07: 48 Great Neck Road
Residential Condominium Development
Responses to Application Review Comments

Dear Maureen,

Please find below our responses to your plan review regarding this application.

1) At the August 11th meeting, we discussed Alternatives A & B and provided color-coded sketches of disturbance areas and also provided reasons supporting proceeding with Alternative A. The estimated wetland disturbance areas are as follows: 454 s.f. (0.0104 ac.) of permanent disturbance and 1,460 s.f. (0.0335 ac.) of temporary disturbance for a total of 1,914 s.f. or 0.044 acres.

2) The grading and clearing at the toes of slopes for all stormwater management basins is the minimum required for construction and implementation of e&s controls. In all cases, temporarily cleared and disturbed areas along the fringes of the 50-foot buffer will be replanted per the project planting plan and full 50-foot (min.) vegetated buffers will be provided.

3) Details for the proposed bridge that is comprised of pre-cast footings, abutments, voided beam slabs, and wingwalls are enclosed. A supplemental construction sequence for the crossing has been added to the plans. Construction mats will be utilized over the existing woods road/farm crossing to provide construction access to the crossing site.

4) Dewatering details and specifications have been added to the plans. Dewatering pump discharges with silt sack will be placed within either temporary sediment traps (for e&s) and/or within roughly graded WQV basins for infiltration into the sandy soil substrate.

5) Alternative A has a single 20-foot bridge span crossing proposed. In the vicinity of the proposed crossing, there are large boulders that will be retained in place and/or temporarily relocated for construction and then replaced to maintain the natural surface substrate and also provide scour protection for the bridge. Per Jim Cowen ~ Substrate consisting of stones and gravel disturbed during construction will be used at the edges of the bridge and retaining walls to stabilize and restore the streambed and banks. There are 2 large boulders one on each side of the streambank at the southern edge of the proposed bridge. These boulders stabilize and define the stream channel banks. Leave them in place or reposition them if needed so that they continue to function.

6) Sediment forebay areas that provide a minimum of 10% WQV are included on the plans within the two main stormwater basins. Callouts including sizing information are provided as well.

7) Four soil test pits were recently conducted on site. Generally, the subsoil and parent material are sandy with no shallow restrictive layers and favorable permeability rates. The results of that testing including descriptions, sieve analyses, and permeabilities are enclosed herewith.

8) The 18-inch layer of biofiltration soil mix as recommended in the planting plan has been added to the stormwater management basin details. Due to favorable soil conditions on site, it will be possible to utilize native materials for the biofiltration mix.

9) These basin storage elevations and WQV volumes are included within the project drainage report.

10) Per Jim Cowen ~ The stormwater basins are designed to be biofiltration basins which will drain between storm events. In all 4 test pits, there was no indication of seasonal high groundwater well below the bottom of the proposed basins. The underlying parent soil was medium loamy sand. No restrictive layer or water table was observed. This is consistent with the mapped soil units (Canton & Charlton) Both soil units have a depth to a root restrictive layer greater than 60 inches and the natural drainage class is well drained. The soils excavated to create the basins are suitable to use in the biofiltration soil mix.

11) The watershed model would need to be reconfigured and reanalyzed to extrapolate this information. We will provide this information at or before the September 8, 2022 Conservation Commission meeting.

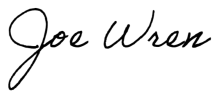
12) As previously discussed and reviewed, we have revised the plans in this area to regrade a portion of the roadway to promote overland flow and reduce flow and impervious area to the catch basins. Also, due to favorable soil conditions, we have added four new WQV biofiltration basins at drainage outfalls to handle runoff from the roadway areas and other point discharges.

13) The trail will be constructed of woodchips generated from site clearing. The path will be located in such a manner to minimize grading, clearing and tree removal. Minimal ground disturbance is anticipated for trail construction. Due to a mountain laurel understory throughout the site, some mountain laurel will need to be cut for the trail but then will be transplanted on slopes and buffer areas.

14) The plans have been updated to include the signature of James Cowen, CPSS who is the project soil and wetland scientist and flagged the wetland boundaries on site.

Please contact me if you have any questions or need any additional information.

Sincerely,

A handwritten signature in cursive script that reads "Joe Wren".

Joe Wren, P.E.
Principal
Indigo Land Design, LLC