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December 16, 2023

Please see the following in response to comments made at the December 14, 2023 Wetlands Commission meeting by the consultant.

1. A 24" vertical separation of infiltration systems from ledge is the widely accepted standard in municipalities in Fairfield County. Please see attached relevant sections from the Drainage Manuals of Greenwich, Stamford and Westport. Wilton has no formal manual, but that has been the standard as well. I know of no municipality that follows the 2004 CT Stormwater Manual in this regard.
2. The Coarse Particle Separator as shown removes 25% of the TSS. In conjunction with an underground retention structure (galleries), the treatment train removed 92.5% of TSS. Again, this is a widely accepted practice.

The simple particle separator shown is adequate. The Town's Engineering department has reviewed the plans, and made no comment about the TSS removal not being adequate.

3. The systems are designed to overflow at the driveway drain grates. The HydroCAD model shows the galleries overflowing at their top with a 6" vertical outlet. The proposed system on the plans is more conservative as the overflow actually occurs at the higher elevation of the driveway drains, affording slightly more runoff to collect in the pipes, separator and drains than the model calculates. In other words, the system as shown on the plan provides slightly better retention than the model indicates. The overflow is also more diffuse, exiting out of two larger area grates.
4. Porous asphalt can be used in Hydrologic Group D soils. In fact, the Town of Greenwich *only* allows rain gardens or porous asphalt to be used on sites with Group D soils. This is irrelevant in this case, as the majority of the soil on the site has Hydrologic classification of B.
5. While continued traffic of heavy machinery may be an issue with porous asphalt, this application is a Single Family Residence, with a low traffic volume, of standard weight vehicles (cars, light trucks).
6. The concrete box culverts weigh 13,000 pounds. A Caterpillar 309 mini excavator has a lifting capacity greater than this. Attached is Caterpillar's lifting specifications for this machine. As the box culverts are to be installed basically at grade, the excavator won't be required to lift more than 10' maximum. The table shows capacities greater than 13,000 pounds for this requirement.
7. Given most of the test holes found ledge at 40" or deeper, it is likely the 24" separation will be provided with no chipping required for most of the sets of galleries.

The two sets of galleries north of the wetlands are in an area that will be raised, and almost certainly well above any ledge.

8. The galleries with the proper separation to restrictive layers provide the required retention. Again, this is standard practice.
9. The proposed driveway is at existing grade at the narrowest width of the ROW. As no grading will be required in that area, a 10' wide driveway will fit. Grading in other areas is contained within the ROW width, which varies and widens in most other areas. The 10' wide driveway can be built on the ROW, which is its intended purpose.

Respectfully submitted,

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Principal

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