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October 5, 2025

Mr. Nicholas Hatsiandou
Edgemarth Hill Road
Westport, Connecticut 06880

RE: Edgemarth Hill Roadway
WPL-12191-25
Westport, Connecticut

Dear Mr. Hatsiandou

At your request, I have reviewed the following documents for the above referenced application.

Plans and documents Reviewed:

1. Road Improvement Plans for Edgemarth Hill Road Association by LandTech Consultants of 11/1/24.
2. Stormwater Management Report for The Edgemarth Hill Road Association by LandTech Consultants of August 13, 2025.

Executive Summary:

A. The current and more environmentally appropriate approach to dealing with stormwater is to address runoff where it is generated (source control) where the soils are suitable for infiltration and vegetated systems will provide a water quality benefit and minimize the use of conventional stormwater systems, such as catch basins and pipes (which are proposed) which cause runoff to be concentrated as a point discharge.
B. The Bioswales are not designed in accordance with Low Impact Development (LID) processes, and they will fail as currently proposed.

Site Plans:

Sheet T-1.0: No comment.

Sheet C-1.0:

1. This shows the existing conditions of Edgemarth Hill Road. Only a single catch basin exists on the road close to the intersection with Greens Farm Road.
2. The runoff from most of the road simply occurs as overland flow off either side of the road from the top of the hill back toward Greens Farm Road.

Sheet C-1.1:

3. The proposed improvements shown on this plan involve the installation of a bituminous concrete curb along the south side of the road from the start of the turnaround heading downhill. This will prevent runoff from occurring as overland flow along this side of the road.
4. Proposed grading will create a cross slope from the south to the north. It appears that the intent of this grading is to allow runoff to discharge to a bioswale on the north side of the road. It is my professional opinion that very little runoff will enter the bioswale, but will continue down the road surface.
5. A Bioswale is a Low Impact Development stormwater management system which is basically a linear depression Bioretention cell. Bioswale are designed to collect, temporary hold and then infiltrate runoff into the original soil. Based upon the grading shown on the plan, what is shown on the plan is NOT a Bioswale.
6. Furthermore, no deep test holes or double ring infiltration tests have been performed in the Bioswale to determine if the soils are suitable and will actually infiltrate runoff. Without this data, this Bioswale is simply "green washing" which means showing a green practice which does not function as intended.

Sheet C-1.2:

7. Two more Bioswale are along the west side of the road and all of the issues discussed under Sheet C-1.1 area also applicable to the two shown on this plan.
8. Just below the driveway to the Carrol property, curbing will be installed on both sides of the roadway. Additionally, instead of a cross slope, a crown will be made part of the road improvement. The installation of the curbing will prevent the runoff from occurring as overland flow off either side of the road as it currently does.
9. A series of catch basins and connecting pipes will be installed to collect the runoff from the road surface. This will result in concentrated runoff at the end of the pipe.
10. A stone trench is shown along the north side of the road surface where the conventional drainage system is being proposed.

Sheet C-1.3:

11. The runoff from the new conventional drainage system will be discharged into a fourth Bioswale via a small riprap apron. The concentrated flow from all runoff events into this Bioswale will cause the Bioswale to quickly fail as LID practices are not designed to accept concentrated unless the design has been significantly modified which is not the case here.
12. All of the issues raised in the Sheet C-1.1 concerning the Bioswale are also applicable here.
13. As all of the Bioswales will not function as they should, this plan will cause concentrated runoff to overflow the Bioswales onto the adjacent private properties.

Sheet C-3.0:

14. The detail for the Bioswale shows an overflow from the system. A properly sited and designed Bioswale will not overflow the system.
15. Additionally, the detail as proposed will prevent any runoff from entering the system, proving the inadequate design of the Bioswale.

16. The detail of the Bioswale does not reflect the grading of the Bioswale shown on the other plan sheets.

Stormwater Management Report:

17. If the road surface is cracking, this is due to an inadequate base which allows the gravel to become saturated and, in the winter, frost will push the pavement surface up and down, which causes the cracking and breakup of the paved surface. The cracking is not due to the lack of drainage infrastructure or curbing as there are many road with no curbing or drainage infrastructure which are in excellent condition.
18. Appendix C of the report provides computations for sizing of the Bioswale while is uses a formula from the CT DEEP 2024 Storm Water Quality Manual, it does not demonstrate that the Bioswales will infiltrate the runoff which is the primary function of a Bioswale.
19. The calculations are for the entire road and have not been done for each Bioswale which is the correct way to design a Bioswale.

Please contact my office if you have any questions concerning this information.

Respectfully submitted,
Trinkaus Engineering, LLC

Steven D. Trinkaus

Steven D. Trinkaus, PE