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January 6, 2020

Ms. Kathy King  
Planning & Zoning Clerk  
Town of Clinton  
54 East Main St  
Clinton, CT 06413

**SUBJECT: 11 Killingworth Turnpike  
19-013R  
DTC No.: 16-157-126**

Dear Ms. King:

As requested, we have completed our review of plans and application materials provided for the above referenced application. The information reviewed consisted of the following:

- Plan set entitled "Wetland Buffer Enhancement Plan 11 Killingworth Turnpike, Prepared for Greylock Property Group, LLC", dated December 2, 2019, no revisions, consisting of five sheets, prepared by: Fuss & O'Neill, scales vary.
- Plan set entitled "Inland Wetland Submission, Indian River Shops, Proposed Mixed Use Development, 11 Killingworth Turnpike, Clinton, Connecticut, dated October 24, 2019, no revisions, consisting of twenty-nine sheets, prepared by: Fedus Engineering, scales vary
- Miscellaneous application materials including:
  - Clinton Inland Wetlands Application Form
  - Assessors map
  - Assessors Field Card
  - List of Abutters
  - CRAHD B-100a Application Form
  - Copy of check to CRAHD application
  - Wetlands Commission Application Checklist
  - Public Water Supply Watershed or Aquifer Area Project Notification Form
  - Wetland Report dated November 27, 2019, prepared by: R. Richard Snarski
  - Stormwater Management Report dated December 2, 2019, prepared by: Fedus Engineering, LLC.

Based on this review, we offer the following comments:

#### Stormwater Management Report

1. The stormwater report shows that peak flows and volumes will greatly increase due to the proposed development. The report claims that there will be no adverse impacts to downstream watersheds but does not provide calculations showing this.

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- We recommend that the engineer show that increases in peak flows from the proposed site do not increase peak flows and velocities downstream by greater than 5%. Refer to par. 7.6.5 of the 2004 Connecticut Stormwater Quality Manual.
2. We recommend the engineer uses NOAA Atlas 14 to determine 24 hour rainfall depth for each storm event per CT DOT Engineering Bulletin EB-2015-2.
  3. We recommend analyzing the 2, 10, 25, 50, and 100-year storm events per Clinton Construction and Development Standards 90A.2.
  4. We recommend the engineer provides maps showing pre and post drainage areas and overall watershed area.
  5. Contractor will be required to obtain a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activity from DEEP. This will also include a determination from NDDB.
  6. We recommend the engineer show that the full water quality volume is retained and infiltrated on site. This will be required when obtaining a General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activity from DEEP. Test pits at retention locations at the depth of infiltration will also be required.
  7. We recommend engineer provides sizing calculations for each outlet type per CT DOT Drainage Manual Chapter 11.13 "Outlet Protection."
  8. We recommend engineer provides a maintenance schedule for all stormwater structural elements.
  9. Report says two hydrodynamic separators are to be used to handle water quality flow. There are five Stormceptor 900 manholes shown on the plans. We recommend showing the water quality flow for each hydrodynamic separator along with data from manufacturer showing that the flow can be treated.
  10. In two locations the proposed storm system connects to existing pipes prior to outfalls. These two pipes are owned by CTDOT. We recommend the engineer shows that the existing pipes have sufficient capacity to allow for the increase in flows. We also recommend that the outlets of these pipes have sufficient protection against any increases in velocity due to the increase in flows. We also recommend that the engineer consult with CT DOT as to whether connecting to pipes will be allowed, that using HDPE is allowed, and that the angle at which they connect is allowed.

#### Plan Set

1. On Sheet WET-105 we recommend providing details for raingardens. For example, cross sections showing depth and specifications of each soil layer.
2. On sheet 14 parking lot at building 5 drains to existing catch basin without being treated. We recommend providing treatment for stormwater in this area.

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3. On sheet 15 a pipe connects to existing outfall pipe at an adverse angle. We recommend showing that this will not cause stormwater to backup into proposed catch basin.
4. On grading plans notes for detention systems say that they provide detention for sidewalks. No sidewalks actually drain to detention systems, they are only providing detention for roofs.
5. We recommend providing details for connecting to existing outfall pipes.
6. We recommend showing roof leader routing on all grading sheets.
7. No information provided on sheet 14 for detention system at building 3N.
8. Pipe leaving detention system behind building 7 does not connect to drainage system.
9. We recommend providing details for retaining walls shown on grading plans.
10. We recommend providing details for pipe outfall at retaining wall on sheet 15.
11. We recommend providing a phasing schedule for all sediment and erosion control measures.
12. We recommend showing soil stockpile areas with silt fence on Soil Erosion & Sediment control Plan sheets.
13. We recommend providing temporary erosion control blankets to all slopes 3 to 1 or steeper.
14. We recommend providing temporary sediment traps or basins to contain runoff throughout construction. These should be designed to contain a minimum of 134 CY per acre of contributing drainage area. Water diversions should be used with necessary check dams to direct runoff to sediment basins.
15. We recommend providing inlet protection during construction for all stormwater inlets.
16. Manhole information missing on sheet 16
17. We recommend showing emergency spillway areas for raingardens.
18. We recommend showing details for each outlet control manhole.
19. Building 2N appears to extend into CT DOT drainage easement.
20. Per section 5.7.2 of the Town of Clinton Subdivision regulations, storm water for the subdivision shall be discharged no less than 100 feet from the street line. Discharge at northwest end of site is within 100' of street line.
21. On sheet 18 leaching fields are shown within the footprint of the existing school. We recommend engineer confirms with CRAHD that installing leaching fields in disturbed soils is allowed.
22. Leaching field for buildings 5, 2N, 2S, 6 are within 25' of storm piping. This will require approved water-tight storm piping in these locations.
23. If footing drains are to be used for the building foundations, sewage systems will have to be located a minimum of 25' from them.

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Page 4 of 4

24. Leaching fields for buildings 1 and 5 are located within 15' of retaining walls. This can cause seepage at wall. We recommend engineer show that the invert of the leaching field is below the grade of the bottom of wall.
25. Leaching field for building 1 located within 50' of wetland boundary. This is not allowed per IWC regulation 6.5 unless engineer can demonstrate that there will be no adverse impacts.

Please contact the undersigned if you have any questions.

Sincerely,



Eric Zawatski, P.E.  
Project Manager  
**DTC, Inc.**

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