

August 19, 2024

Andover Planning Board
Town Office
36 Bartlett Street
Andover, MA 01810

Attn: Ms. Jacki Byerley, Town Planner,

RE: Response to Initial Peer Review of the Stormwater Design
Eden Estates – Definitive Subdivision @ 9 Bancroft Road, Andover, MA

The Horsley Witten Group, Inc. performed a peer review of the stormwater design for Eden Estates and provided comments to the Board as outlined in their letter dated June 17, 2024. The response letter dated August 7, 2024, has been updated as listed below and additional information accompanies this letter.

3. Standard 3 requires that the annual recharge from post-development shall approximate annual recharge from pre-development conditions.

- a. July 24, 2024: In our initial review letter, HW had noted that the estimated seasonal high ground water (ESHW) elevation for the infiltration basin was 282.43 based on Test Pit #1. However, it appears that Test Pit #2 which is less than 25 feet from the revised basin has documented the ESHGW elevation at 286.5. The size of the basin has increased significantly, and the bottom of the basin is at elevation 285.5. HW recommends that the Applicant raise the bottom of the basin to be at elevation 286.5 and eliminate the exfiltration rate in the HydroCAD model. The Applicant will need to update the recharge calculations incorporating the other stormwater practices proposed. HW suggests that the Applicant consider revising the grass channel on the east side of the roadway to a bioretention swale or an infiltration swale if feasible, including a pea stone diaphragm along the edge of the roadway to provide pretreatment.

Response: Three test pits located in the basin have been performed and the results added to sheet 4. The results of the testing indicated the basin with modifications is adequate for an infiltration basin. The drainage calculations have been revised and accompany this letter.

Response (2): The depth to the estimated high water table (ESWT) for test pit B is shown as 50 inches on sheet 4. The actual depth is 48 inches. The plans have been revised and the change has no effect on the calculations. Also, the Soil Suitability Assessment Sheets prepared by Norse Environmental Services, Inc. accompany this letter.

4. Standard 4 requires that the stormwater system be designed to remove 80% Total Suspended Solids (TSS) and to treat 1.0-inch of volume from the impervious area for water quality.

- c. July 24, 2024: The Applicant has included the calculation as requesting using a total impervious area of 0.3 acres. HW was not able to confirm this value and recommends that the Applicant clarify how it was determined.

Response: The impervious area includes the three (3) roofs and driveways and the proposed paved roadway. These areas total 24,890 s.f. or 0.57 areas. The calculations have been revised accordingly.

- d. July 24, 2024: The Applicant has noted that it met this requirement by retaining 1.0 inch of stormwater by the total post-construction impervious surface area. As noted above HW was not able to confirm the value of 0.3 acres and recommends that the Applicant clarify how it was determined.

Response: See response above for 4.c.

Response (2): The letter did not show section 4. It was listed as 5. This has been updated.

10. Standard 10 requires an Illicit Discharge Compliance Statement to be provided

- b. July 24, 2024: *The Planning Board may choose to require receipt of the signed Illicit Discharge Compliance Statement as a condition of approval.*

Response: The Illicit Discharge Compliance Statement has been prepared as a separate document and signed by the Applicant. The document accompanies this letter.

Response (2): The separate document did not accompany the letter. Please see attached.

11. Earth Movement Permit

- a. July 24, 2024: *The Applicant has updated the Earthwork Quantities Cut/Fill Map. However, HW notes that the area between the proposed 288-contour and the existing 290-contour on the west side of Lot #2 has not been included. HW recommends that the Applicant revise the proposed grades within this area or add the fill quantities that will be needed.*

Response: The earthwork quantities have been updated based on the latest revision of the plans.

Response (2): The updated earthwork quantities did not accompany the letter. Please see attached.

Should you require any additional information or questions concerning the responses, please do not hesitate to contact me at your convenience.

Sincerely,

Daniel Koravos, P.E.
DK Engineering LLC