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MEMORANDUM - 01

TO: Alvaro Gonzalez, Ph.D., P.E.

FROM: Sarfeen Tanweer, P.E.

DATE: January 13, 2026

SUBJECT: **Review of the Stormwater Management Report**
383 Bloomfield Avenue
Block 708, Lot 1
Township of Verona
Essex County – New Jersey
Our File No. 25VAP102

We have reviewed the Applicant's submitted documents listed in Table 1. Please, see below for our comments:

Documents Reviewed

Name	Dated	Comments
"Stormwater Management Report"	Nov. 26, 2025	Prepared by Anderson Consulting Services, LLC, and signed by Paul W. Anderson, PE (NJ Professional Engineer License No. 33410).
"Stormwater Management Facilities Operations and Maintenance Manual"	Nov. 18, 2025	Prepared by Anderson Consulting Services, LLC, and signed by Paul W. Anderson, PE (NJ Professional Engineer License No. 33410).
"Soil Report"	Oct. 24, 2025	Prepared by Anderson Consulting Services, LLC, and signed by Paul W. Anderson, PE (NJ Professional Engineer License No. 33410).
"Preliminary & Final Site Plan"	Sep. 15, 2025	"383 Bloomfield Avenue, Block 708, Lot 1" (7 Sheets). Prepared by Anderson Consulting Services, LLC, and signed by Paul W. Anderson, PE (NJ Professional Engineer License No. 33410). *Relevant Sheets*: Sheet SP-2 – Grading and Utility Plan, Sheet SP-4 –Soil Erosion and Sediment Control Plan, and Sheet SP-7 – Utility Construction Details

Please see below for our comments:

1. The proposed project is considered a Major Development, per Township Ordinance §150-25.2 (Definitions), as it will disturb more than 0.5 acres of land. Thus, the Applicant must comply with the corresponding stormwater requirements for said category (Major Development), regarding water quantity, water quality, and groundwater recharge.

2. In accordance with Section 150-25.4R (Stormwater Runoff Quality Standards) of the Township Code, compliance is required with stormwater runoff quality standards. Porous pavement with

underdrains is proposed for the vehicle surface area to meet 80% TSS removal. The stormwater management report and maintenance manual should both contain NJDEP certification letters which ensure 80% TSS removal is achieved with the proposed porous pavement.

3. The proposed development is within the Metropolitan Planning area. As per N.J.A.C 7:8-5.4 (b) 2, the groundwater recharge requirement does not apply to this project.

4. The drainage report makes multiple references to Technical Release 20 (TR-20). It should be noted that both TR-20 and TR-55 have been superseded by the National Engineering Handbook NEH Part 630 – Hydrology. The reference in the report shall be revised to indicate the same. The Applicant include in the stormwater report which unit hydrograph was used in the model.

5. Detailed calculations (pre- and post-development) of the time of concentration should be provided in the report.

6. The Applicant shall provide a soil map (e.g., via USDA Web Soil Survey website) of the subject lot, so that the corresponding Hydrological Soil Group (HSG) can be identified.

7. The Applicant shall provide reference to the selections for the runoff coefficients (C Values) and rainfall intensities being used in the drainage calculations.

8. The Applicant has provided the existing and proposed drainage area maps. However, the Applicant shall include an inlet area map for the proposed conditions as well.

9. The Applicant shall provide the NJDEP BMP Manual Low Impact Development Checklist.

10. The Applicant shall confirm whether the proposed 48-inch HDPE solid pipes have a 0% slope.

11. Composite/weighted runoff curve numbers are no longer recommended by the NJDEP BMP Manual, Chapter 5. The existing and proposed drainage calculations shall be revised per N.J.A.C. 7:8-5.7 to consider the relative curve numbers, stormwater runoff rates and/or volumes of pervious and impervious surfaces separately.

12. Sheet flow typically occurs for no more than 100 feet before transitioning to shallow concentrated flow. The sheet flow exceeds 100 feet for existing DA-1 and DA-3.

13. Bypass flows to the south (DA-1) and Bloomfield Avenue (DA-2) are reduced under proposed flow conditions. The Applicant must analyze the receiving storm drainage system in Park Avenue to determine if it can handle the flows from the connecting pipes. The downstream analysis must be submitted.

14. The porous pavement section detail on Sheet SP-7 shall be revised to show filter fabric along the sides and bottom of the system.

15. As per Chapter 11.2 of the NJDEP BMP Manual the lowest elevation of the subsurface detention basin shall be a minimum of one foot (1') above the Seasonal Hight Water Table (SHWT). As per

Chapter 9.6, the seasonal high-water table (SHWT) or bedrock must be at least one foot below the bottom of the storage bed if designed with underdrains. The Applicant noted in the soil report that soil testing will be done between January and April to verify SHWT. All soil testing shall be done in accordance with Chapter 12 of the NJDEP BMP Manual and soil testing results shall be submitted for review.

16. Pipe capacity calculations shall be provided for all stormwater pipes at every proposed slope. We recommend the pipes shall be designed to convey the 100-year rainfall intensity including the underdrains. Velocities in the pipes shall be at least 1.4 fps (self-cleansing velocity) at the design flow.

17. Per §150-25.4 N, , and N.J.A.C. 7:8-5.2(m), the stormwater management system's maintenance plan must be reflected in a deed notice recorded in the County Clerk's office.

18. The maintenance manual shall include drain time calculations for the maximum design storm runoff volume for the proposed underground detention basin and porous paving systems in accordance with NJDEP BMP Manual, Chapter 9.

19. The Applicant must add a note to the plan outlining the requirement to submit an inspection report on the conditions of the underground detention basins and pervious paving systems every two years and to address any recommendations within 90 days of the report.

If you have any questions, please advise me.

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