



Rippled Waters
Engineering, LLC

January 10, 2025

VIA EMAIL

Mr. Stuart Lieberman, Esq.
Lieberman Blecher & Sinkevich, LLC
10 Jefferson Plaza, Suite 400
Princeton, New Jersey 08540

Re: V-Fee Mendham Apartments, LLC
Major Preliminary & Final Site Plan Review
Block 801, Lot 20 (also known as 84-90 East Main Street)
Borough of Mendham, Morris County, New Jersey

Dear Stuart:

The Mendham Alliance for Preservation & Conservation contracted with me to review the pending Major Subdivision application for the V-Fee Mendham Apartments, LLC located on Block 801, Lot 20 in the Borough of Mendham, Morris County, New Jersey. The application involves the construction of a multi-family residential building, tenant parking, and residential amenity facilities at the northerly end of the project site where an existing athletic facility currently exists. Additional site improvements are also proposed within the existing shopping center that fronts East Main Street including off-street parking areas, driveways, lighting fixtures, landscaping, and stormwater infrastructure among others. According to the applicant, the total project area is 13.27 acres with a total impervious coverage reduction of 0.80 acres and a total limit of disturbance of 12.97 acres.

In preparation of this report, I reviewed the following materials:

1. NJDEP Freshwater Wetlands Letter of Interpretation dated October 1, 2020;
2. Report entitled, "Flood Hazard Area Study Block 801, Lot 20, 84-90 East Main Street," dated May 2021, prepared by Princeton Hydro, LLC;
3. Report entitled, "Ecological Impact Statement Proposed Multi-Family Residential Development," dated October 20, 2022, prepared by Stonefield Engineering & Design, LLC;
4. Letter from NJDEP with the results of the Natural Heritage Database search dated October 27, 2022;
5. Full copy of the submitted NJDEP permit application dated January 17, 2023;
6. Letter from Ferriero Engineering, Inc to NJDEP relaying comments on stormwater for the project dated January 23, 2023;

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7. Three letters prepared by One Water Consulting, LLC addressed to Mr. Eric Arena with the Borough of Mendham Environmental Commission detailing environmental and stormwater comments on the project dated February 2, 2023, February 15, 2023, and June 12, 2023;
8. Report entitled, "Stormwater Management Report Proposed Multi-Family Residential Development," last revised May 19, 2023, prepared by Stonefield Engineering & Design, LLC;
9. NJDEP Flood Hazard Area and Freshwater Wetlands Permit dated September 19, 2023;
10. Letter from Stonefield Engineering & Design, LLC dated July 2, 2024 transmitting revised materials to the Borough of Mendham;
11. Letter from Boswell Engineering detailing comments related to the application from the Borough Engineer dated July 15, 2024;
12. Plans entitled, "NJDEP Permitting Plans V-Fee Mendham Apartments, LLC," last revised January 10, 2023, prepared by Stonefield Engineering & Design, LLC;
13. Plan entitled, "ALTA/NSPS Land Title Survey," last revised October 30, 2023, prepared by Stonefield Engineering & Design, LLC;
14. Plans entitled, "Preliminary and Final Site Plan for V-Fee Mendham Apartments, LLC," last revised July 2, 2024, prepared by Stonefield Engineering & Design, LLC;
15. Plans entitled, "Site Plan Rendering Exhibit V-Fee Mendham Apartments, LLC," last revised December 12, 2024, prepared by Stonefield Engineering & Design, LLC.

Specifically, my review focuses on the environmental and stormwater management aspects of the application. The comments below have been organized into subheadings reflecting the various aspects of my review.

1.0 FRESHWATER WETLANDS AND TRANSITION AREAS ONSITE

The applicant was granted a Freshwater Wetlands Letter of Interpretation (LOI) Line Verification on October 1, 2020, for the above referenced property based upon a plan entitled, "BOUNDARY AND TOPOGRAPHIC SURVEY; PREPARED FOR MENDHAM VILLAGE SHOPPING CENTER TAX MAP BLOCK 801 LOT 20." The wetlands onsite were classified as exceptional resource value with a 150 wetland transition area. According to N.J.A.C. 7:7A-3.2 an exceptional resource value wetland is a wetland which:

1. "Discharges into FW01 or FW-2 trout production waters or their tributaries;
2. is a present habitat for threatened or endangered species; or
3. is a documented habitat for threatened or endangered species and which remains suitable for breeding, resting or feeding by these species during the normal period these species would use the habitat."

The wetlands on the project site meet all three of the criteria under N.J.A.C. 7:7A including that the stream is classified FW-2 Trout Production and Category One under the New Jersey Surface Water Quality

Standards, N.J.A.C. 7:9A and under the Natural Heritage Database, the site has documented presence of the bob cat and Indiana bat.

Freshwater Wetlands Disturbance

According to the approved permit, there is a total of 112 square feet of proposed freshwater wetland disturbance for the proposed stormwater outfall into the existing depression to the west located in proximity to Wetland Flag WB-3 and WB-4. This was permitted under an NJDEP Freshwater Wetlands General Permit 11 issued on September 19, 2023.

The following comments relate to my review of the freshwater wetlands in the Environmental Impact Statement submitted with the Preliminary and Final Major Site Plan application to the Borough of Mendham:

- A. The submitted EIS states on page 5 that there will be no impacts to wetlands onsite. This is inconsistent with the NJDEP permit issued for wetland disturbance and should be corrected. The impacts of the wetland disturbance should also be detailed in the EIS as required under the Borough of Mendham ordinance Section 124-43D which states that the EIS must include “a listing and evaluation of adverse ecological impacts and damages to natural resources which cannot be avoided.”
- B. Section 124-43E of the Borough of Mendham ordinance states that the EIS must include “steps to minimize and mitigate ecological damage. A description of steps to be taken to minimize and mitigate adverse impacts during construction and operation, both at the project site and in the affected region...”. Since the EIS erroneously states that there is no proposed wetland disturbance from the project this section of the ordinance has not been properly addressed by the applicant.

Freshwater Wetlands Transition Area Disturbance

According to the approved permit, there is a total of 1,071 square feet of transition area disturbance associated with the stormwater outfall under the FWW GP #11. A transition area waiver for redevelopment was also issued involving 63,791 square feet of in-kind redevelopment (impervious to impervious), 23,695 square feet of restoration (impervious to pervious grass or vegetated condition), and 23,177 square feet of enhancement (maintained lawn to vegetated condition). There is also 1,382 square feet of restoration (impervious to pervious grass or vegetated condition) associated with the onsite wetland. The permit also includes 4,007 square feet of transition area reduction under the Special Activity Transition Area Waiver. The transition area disturbances were permitted under an NJDEP Freshwater

Wetlands General Permit 11, TAW-R Special Activity Redevelopment, and TAW - Reduction issued on September 19, 2023.

The following comments relate to my review of the freshwater wetlands transition areas in the Environmental Impact Statement submitted with the Preliminary and Final Major Site Plan application to the Borough of Mendham:

- A. Section 124-43E of the Borough of Mendham ordinance states that the EIS must include “steps to minimize and mitigate ecological damage. A description of steps to be taken to minimize and mitigate adverse impacts during construction and operation, both at the project site and in the affected region...”. There is no description of the proposed freshwater wetland transition area disturbance and no discussion is included regarding impacts to the transition areas or potential mitigation.

2.0 FLOOD HAZARD AREAS, REGULATED WATERS, AND RIPARIAN ZONES ONSITE

According to the applicant, there is a regulated water on the project site that is located in the northwestern corner of the property flowing from west to north, which has a regulated riparian zone of 300 feet and was delineated under a Flood Hazard Area Verification prepared by Princeton Hydro, LLC in May 2021. This was approved by NJDEP on September 19, 2023 under a Flood Hazard Area Verification and Flood Hazard Area Individual Permit.

The following comments relate to my review of the flood hazard areas and regulated waters in the Environmental Impact Statement submitted with the Preliminary and Final Major Site Plan application to the Borough of Mendham:

- A. The submitted EIS does not include a proper discussion of the existing site hydrology including all of the onsite streams, ditches, and open waters. Page 3 of the EIS states “the runoff that is collected goes through the onsite conveyance system and is ultimately released through one (1) discharge point to the stream/wetlands area to the north of the development.” This is incorrect based upon the submitted plans and stormwater report which detail two existing stormwater outfalls at the project site – one to the west and one to the north. Details on the locations of existing stormwater outfalls and pipes on the site is included in the EIS. None of the maps provided show the location of the regulated waters or the mapped flood hazard areas onsite. Section 124-43B requires that the EIS include an inventory of existing ecological conditions and the applicant has not complied with this requirement.

- B. The EIS prepared by Stonefield Engineering & Design, LLC does not include any detail of the existing streams, ditches, and channels that exist on the north and western portions of the site. These are shown on the existing conditions plan prepared by Stonefield Engineering & Design entitled, "Existing Conditions Plan – Preliminary and Final Site Plan V-Fee Mendham Apartments, LLC," last revised July 2, 2024. These streams and channels are headwaters to the unnamed tributary to the Raritan River which is a FW2-Trout Production Category One watercourse under N.J.A.C. 7:9A. As such, the EIS as submitted does not fully detail the hydrology of the existing project site.

- C. In addition, the impacts to the existing site hydrology are not described in the EIS submitted. These impacts should also be detailed in the EIS as required under the Borough of Mendham ordinance Section 124-43D which states that the EIS must include "a listing and evaluation of adverse ecological impacts and damages to natural resources which cannot be avoided."

- D. Section 124-43E of the Borough of Mendham ordinance states that the EIS must include "steps to minimize and mitigate ecological damage. A description of steps to be taken to minimize and mitigate adverse impacts during construction and operation, both at the project site and in the affected region...". Since the EIS does not speak to the existing hydrology of the project site this section of the ordinance has not been properly addressed by the applicant.

- E. Headwaters as defined under N.J.A.C. 7:7A-7.7(a)1i "means a water or wetland that is upstream of the point on a non-tidal stream where the average annual flow is less than 5 cubic feet per second." The watercourses on the northern and western portions of the project site have documented perennial flow as evidenced by the photographs of the applicant and One Water Consulting. Details on the headwaters and their impact on the riparian zone limits should be included in the EIS as required by the Borough of Mendham ordinance.

The following comments relate to my review of the flood hazard area elements of the NJDEP application materials for the project:

- A. From my review of the submitted materials the applicant did not fully delineate all regulated waters on the project site for the NJDEP application. Sheet C-2 entitled, "Existing Conditions Plan – Preliminary and Final Site Plan V-Fee Mendham Apartments, LLC," dated October 20, 2022, last revised July 2, 2024, prepared by Stonefield Engineering & Design clearly indicates the presence of channels connected to the regulated water noted in the drawings approved with the NJDEP permit.

- B. Numerous errors in the submitted study prepared by Princeton Hydro, LLC were noted in comment letters submitted to NJDEP dated June 12, 2023 by One Water Consulting, LLC and I fully concur with their comments regarding the report.

- C. The Flood Hazard Area limits delineated on the sheets entitled, "NJDEP Permitting Plans V-Fee Mendham Apartments, LLC," are not accurate based upon the May 2021 report entitled, "Flood Hazard Area Study Block 801, Lot 20," as prepared by Princeton Hydro, LLC. The elevation of the regulated flood hazard area design flood on the project site is approximately 537.74 feet at Cross-Section 1726. The baseline survey data used in the NJDEP Permitting Plans is not the same as the existing conditions survey entitled, "Existing Conditions Plan – Preliminary and Final Site Plan V-Fee Mendham Apartments, LLC," last revised July 2, 2024. It appears that the survey data in the basemap used in the NJDEP Permitting Plans was less detailed and therefore did not fully capture the areas where the flood hazard area boundary existed. As such, the mapped boundary is not accurate as drawn. The mapped flood hazard area boundary should be re-verified in accordance with Standard Condition 25 of the approved FHA Verification dated September 19, 2023 which states "Where the permittee becomes aware that it failed to submit any relevant facts in an application, or submitted incorrect information in an application or in any report to the Department, it shall promptly submit such facts or information."

Riparian Zone Extents Onsite

The regulated waters onsite are considered part of an unnamed tributary to the North Branch Raritan River which is a FW2-TP C1 watercourse and as such, have a 300-foot riparian zone measured from the top of bank.

Riparian Zone Disturbance

The following comments relate to my review of the riparian zone in the Environmental Impact Statement submitted with the Preliminary and Final Major Site Plan application to the Borough of Mendham:

- A. The report entitled, "Ecological Impact Statement Proposed Multi-Family Residential Development," dated October 20, 2022, prepared by Stonefield Engineering & Design incorrectly states that there is a "150 ft riparian zone associated with the stream from the surveyed top of bank." The FHA Verification issued by NJDEP in September 2023 clearly indicates that there is a 300-foot riparian zone on the project site. The EIS should be revised to correct this inaccuracy.

- B. The applicant's engineer mapped additional waters on the west and northern sides of the property after the NJDEP application was submitted that were not included when the LOI was issued. The

waters have a drainage area of less than 50 acres, but they contain water perennially so it is unclear whether these watercourses are manmade or whether they are naturally occurring. The applicant should provide additional documentation in the EIS regarding these features and provide documentation justifying the claim that they are man-made.

- C. The documented presence of the bob cat and Indiana bat on the project site should be discussed in the EIS as it relates to the riparian zone and impacts to the habitats of these species related to the proposed site.

3.0 ENVIRONMENTAL IMPACT STATEMENT GENERAL COMMENTS

The following comments relate to my review of the overall Environmental Impact Statement submitted with the Preliminary and Final Major Site Plan application to the Borough of Mendham:

- A. The submitted Environmental Impact Statement prepared by Stonefield Engineering & Design, LLC does not fully characterize the impacts of the proposed project on the freshwater wetland transition areas onsite. The Borough of Mendham ordinance requires an ecological assessment of the impact of the project be included in the EIS under Section 124-43C. According to the ordinance, “the assessment shall include an evaluation of the public costs of the project, including but not limited to the costs of additional schools, roads, police, etc. and indirect costs such as the loss of open space.” No analysis of public costs was included in the EIS reviewed nor was any information on indirect costs included in the analysis. The ordinance requires that the EIS include these elements as part of the EIS.

4.0 STORMWATER MANAGEMENT REVIEW (BOROUGH ORDINANCE SECTION 195-57.1 AND N.J.A.C. 7:8)

Since the project involves more than one acre of land disturbance, the project is considered a major development under the New Jersey Stormwater Management Rules (N.J.A.C. 7:8) and must comply with the standards included therein. Based on the information provided in the application, stormwater will be managed onsite by 11 pervious pavement systems discharging with the majority of the stormwater runoff being discharged from the site via a single stormwater outfall structure into an existing channel to the west. In addition, a portion of the runoff is being conveyed through an existing stormwater pipe network and stormwater outfall to the north.

Groundwater Recharge

The following are comments related to compliance with the groundwater recharge standards under N.J.A.C. 7:8-5.4:

- A. The report entitled, “Stormwater Management Report Proposed Multi-Family Residential Development,” dated May 19, 2023, prepared by Stonefield Engineering & Design, LLC states that “the proposed development will increase the amount of pervious land cover for the project site which will substantially reduce the quantity of runoff leaving the site so that there is no increase in runoff in the two-year storm event.” No groundwater recharge is proposed with the project and no infiltration calculations have been included. The groundwater recharge standards appear to have been met due to the reduction in runoff volume during the 2-year storm, however, the potential issues outlined in the Stormwater Quantity section below may yield different peak runoff rates for the 2-year storm and thus mean that the project does not comply with this standard as designed.

Stormwater Quality

The following are comments related to compliance with the stormwater quality standards under N.J.A.C. 7:8-5.5:

- A. As stated in the One Water Consulting June 2023 comment letter, “the new vehicle traffic areas and proposed areas of pavement reconstruction should be treated for water quality in accordance with the stormwater management regulations. In addition, the proposed development discharges to stormwater outfalls that are within the 300-foot riparian zone. Therefore, the Applicant/Engineer should demonstrate compliance with N.J.A.C. 7:13-11.2(j)4 including reduction of the post-construction load of total suspended solids by 95% of the anticipated load from the development site. This requirement applies regardless of whether or not the site is redeveloped (see NJDEP Stormwater Rule Frequently Asked Questions).”

Stormwater Quantity

The following are comments related to compliance with the stormwater quantity standards under N.J.A.C. 7:8-5.6:

- A. The Stormwater Management Report states that “peak stormwater discharge rates are reduced by at least the required amount for each storm event,” however, the validity of the calculations presented is unclear given the information that was not included to fully document compliance with the requirements for the design of the pervious paving systems and the soil testing requirements under the New Jersey Stormwater Best Management Practices Manual (herein referred to as NJ BMP Manual).

- B. Full details of the soil test pits completed by Whitestone Associates was not included in the Stormwater Management Report submitted. Without full details of the test pit logs it is unclear how the determinations for seasonal high groundwater were made. On page 3 of the Whitestone report it states that there were both an Appendix A and Appendix B to that report, however, neither of those appendices were submitted with the report and were unavailable for review.
- C. Based upon my review there is a single soil test pit (SPP-21) that is near pervious pavement system PV-7. This does not comply with the requirements outlined in Chapter 12 of the NJ BMP Manual, which states that a minimum of two soil profile pits are required for each BMP.
- D. Based upon my review there is a single soil test pit (SPP-22) that is near pervious pavement systems PV-8 through PV-11. This does not comply with the requirements outlined in Chapter 12 of the NJ BMP Manual, which states that a minimum of two soil profile pits are required for each BMP.
- E. Although a map was not provided showing the location of soil test pits as it relates to the proposed stormwater BMPs, it appears that an insufficient number of soil test pits were located in the areas of the proposed pervious pavement systems as required by the NJ BMP Manual Chapter 12.
- F. Page 11 of Chapter 9.6 of the NJ BMP Manual states that “the seasonal high water table (SHWT) or bedrock must be at least 1 foot below the bottom of the storage bed if designed with underdrains or 2 feet below the bottom of the storage bed if designed to infiltrate into the subsoils.” Based upon my review of the potential estimated seasonal high water tables from the Whitestone report the data reported in Table 12 of the Stormwater Management Report does not appear to be correct as reported. Additional information and the appendices from the Whitestone report are necessary to document compliance with this requirement specifically for pervious pavement systems PV-7 through PV-11 where the separation distance is much less than what is reported in Table 10 of the Stormwater Management Report. Tables 10 and 12 should be corrected after this data is reviewed and verified. This may impact the routings submitted with the application as well which could indicate that the system as designed does not comply with the stormwater quantity standards.
- G. Underdrains should extend beneath the entire area of pervious pavers since field testing indicated poor infiltration rates within the subsoils. There are large portions, particularly for PV-8, PV-9, PV-10 and PV-11 that do not have an underdrain beneath the pervious paver areas. If underdrains are not placed under the full extent of the BMPs proposed stormwater could

compromise the functionality of the BMPs and result in increased runoff volume discharged into the streams and wetlands on the project site.

Summary Opinion

In conclusion, it is my expert opinion that further assessment and analysis beyond the submitted materials for the Preliminary and Final Major Site Plan application as submitted is required.

Should you have any questions regarding this information please contact me at your convenience by email mary@rippledwatersllc.com or by phone at 732.735.3440.

Sincerely,



Mary L. Paist-Goldman, P.E.
Owner