



**Consulting & Municipal
ENGINEERS**

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MEMORANDUM

**To: Chairman and Members of the
West Orange Planning Board**

**From: John J. Hess, PE, PP, CME
Planning Board Engineer**

FOR

Date: June 13, 2025

**Re: Application No. PB 24-01
West Essex Highlands, LLC
Preliminary & Final Site Plan - Review #3
Warner Road
Block 179, Lot 32
Our File: 115.WRP0179.V01**

**CC: Geniece Gary-Adams – Director of Planning & Development/Zoning Official
Zayibeth Carballo, PE, PLS, PP, CME, CFM, CFS – Township Engineer
Diana McGovern, Esq. – Planning Board Attorney
George Wheatle Williams, PP – Planning Board Planner
West Essex Highlands, LLC – Applicant
Bryan D. Plocker, Esq. – Applicant's Attorney
Paul W. Anderson, PE – Applicant's Engineer**

Our office has received for review the following documents which were submitted in support of the above referenced application for Preliminary and Final Site Plan approval:

- A set of Preliminary and Final Site Plan drawings (60 sheets) prepared by Paul W. Anderson, PE with Anderson Consulting Services of Boonton, New Jersey and bearing a latest revision date of October 1, 2024.
- A set of Regulated Water + Riparian Zone Impacts drawings (2 sheets) prepared by Paul W. Anderson, PE with Anderson Consulting Services of Boonton, New Jersey and bearing a latest revision date of November 5, 2024. These plans are stamped as approved under NJDEP File Number 0722-04-0001.1.
- A set of Freshwater Wetland + Wetland Transition Area Impacts drawings (2 sheets) prepared by Paul W. Anderson, PE with Anderson Consulting Services of Boonton, New Jersey and bearing a latest revision date of November 5, 2024. These plans are stamped as approved under NJDEP File Number 0722-04-0001.1.

CONSULTING AND MUNICIPAL ENGINEERS LLC

NJ CERTIFICATE OF AUTHORIZATION NO. 24GA28359000

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- A Geotechnical Investigation Report prepared by Atilla Sencar, PE with Sor Consulting Engineers, Inc, of Cedar Grove, New Jersey dated April 19, 2021.
- A Subsurface Investigation Report prepared by Atilla Sencar, PE with Sor Consulting Engineers, Inc, of Cedar Grove, New Jersey dated May 23, 2023.
- A Subsurface Investigation Report prepared by Atilla Sencar, PE with Sor Consulting Engineers, Inc, of Cedar Grove, New Jersey dated February 12, 2024.
- A Supplementary Subsurface Investigation Report prepared by Atilla Sencar, PE with Sor Consulting Engineers, Inc, of Cedar Grove, New Jersey dated April 4, 2024.
- A Stormwater Management Report prepared by Paul W. Anderson, PE with Anderson Consulting Services of Boonton, New Jersey and bearing a latest revision date of October 28, 2024.
- A print of a Response Letter to the September 13, 2024 Princeton Hydro Letter prepared by Paul W. Anderson, PE with Anderson Consulting Services, LLC, of Boonton, New Jersey dated October 10, 2024.
- A print of a Slope Stability Study, prepared by Ronald D. Boyer, PE and Mark K. Seel, PE with Langan Engineering and Environmental Services, LLC of Princeton, New Jersey dated January 14, 2025.
- A print of an Environmental Report prepared by Scarlett Simpson and Ariana Tsiattalos with the New Jersey Department of Environmental Protection, dated November 15, 2024.
- A print of an Engineering Report, prepared by Danielle Jones and Dennis Contois with the New Jersey Department of Environmental Protection, dated November 12, 2024.
- A print of a NJDEP Freshwater Wetlands Letter of Interpretation – Extension, dated November 18, 2024.
- A print of a NJDEP Permit Number 0722-04-00.1 LUP230001 which granted a Flood Hazard Area Individual Permit, Freshwater Wetlands General Permit 10B, Freshwater Wetlands General Permit 11, Freshwater Wetlands General Permit 17, and a Water Quality Certificate for the project, dated November 15, 2024.

In addition to the above, our office previously received the following information as part of the original submission for this application:

- A print of a Topographic Survey of Tax Lot 32, Block 179 (1 sheet) prepared by Jeffrey S. Grunn, PLS with Lakeland Surveying of Rockaway, New Jersey dated September 6, 2023.



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- A set of architectural plans (24 sheets) prepared by Laurance D. Appel, RA with Appel Design Group Architects of Florham Park, New Jersey and bearing a latest revision date of May 13, 2024.
- A Traffic Impact Study prepared by Karl A. Pehnke, PE and Eric J. Vilorio, PE with Langan Engineering and Environmental Services, LLC of Princeton, New Jersey and bearing a latest revision date of June 19, 2024.
- A June 27, 2024 letter from Paul W. Anderson, PE to the West Orange Planning Board which addresses the comments in our June 26, 2024 review memorandum.
- An executed copy of a Settlement of Litigation Agreement between West Essex Highlands, Inc., the Township of West Orange and the West Essex Highlands Condominium Association, Inc. and bearing a latest signature date of April 23, 2020.
- A completed Application Form dated December 21, 2023.
- A Written Proposal for Application for Preliminary and Final Major Site Plan Approval.
- A Disclosure of Ownership.
- A List of Contiguous or Adjacent Properties Owned by Applicant.
- A completed Site Plan/Subdivision Checklist.
- A completed Sustainability Checklist Form.
- A Verification of Taxes & Sewer Charges Paid from the Office of the Tax Collector dated December 28, 2023 which states that the taxes on Lot 32, Block 179 are paid until the 4th Quarter of 2023.
- A List of Owners within 200 Feet of Block 179, Lot 32 from the Office of the West Orange Tax Assessor dated December 12, 2023.
- A List of Owners within 200 Feet of Block 179, Lot 32 from the Office of the Essex Fells Tax Assessor dated December 12, 2023.
- A List of Owners within 200 Feet of Block 179, Lot 32 from the Office of the Verona Tax Assessor dated December 6, 2023.
- Copies of the following prior Planning Board Resolutions for the property in question:
 - Resolution of Approval for Planning Board Case No. PB-04-23 dated February 2, 2005.
 - Resolution of Approval for Planning Board Case No. PB-04-23 dated May 5, 2005.
 - Resolution of Approval for Planning Board Case No. PB-04-34 dated May 5, 2005.
 - Resolution of Denial for Planning Board Case No. PB-04-24 dated April 5, 2006.



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We have reviewed the submitted information in support of this application and offer the following comments:

A. PROJECT DESCRIPTION

The property in question is an irregularly shaped tract which fronts on the northerly ends of Warner Road, Kuzik Drive and Bayowski Road. It also abuts the municipal boundary with the Borough of Essex Fells to the north and west, the municipal boundary with the Township of Verona to the north and the West Essex Highlands Condominium development to the south. The property in question is located in the IH-1 Inclusionary Housing District and has an area of 5,245,870 sf or approximately 120.429 acres. The property is currently vacant and wooded and is traversed by several stream corridors. Development of the property is subject to the terms and conditions in a Settlement of Litigation Agreement between West Essex Highlands, LLC, the Township of West Orange and the West Essex Condominium Association, Inc.

The Applicant is seeking Preliminary and Final Site Plan approval to construct a residential development containing 496 residential apartments, 100 of which will be set aside for low and moderate income families. The Applicant proposes to construct six (6) apartment buildings, a clubhouse, a maintenance building, a dog kennel and a dog park. The residential apartments will be located within 6 separate buildings. In addition, on-site parking is proposed for 1,095 vehicles including 23 handicap accessible spaces. The proposed parking spaces include 796 under building parking spaces and 299 surface parking spaces. In addition, 5% of the parking spaces will be designed for electric vehicle charging. We note that an additional 55 parking spaces, including 2 handicap accessible parking spaces, are proposed at the clubhouse and an additional 17 parking spaces, including 1 handicap accessible parking space, are proposed at the dog park.

The 396 market rate apartments will consist of 68 one-bedroom units, 101 one-bedroom plus den units, 25 two-bedroom units, 120 two-bedroom plus den units, 66 three-bedroom units and 16 three-bedroom plus den units. The 100 affordable units will consist of 12 one-bedroom units, 64 two-bedroom units and 24 three-bedroom units. Buildings D1& D2 will include roof top amenities including private terraces and a public sky lounge. In addition, a leasing office is proposed in the clubhouse. Also, two superintendent apartments are proposed in the maintenance building. The superintendent apartments will each be two-bedroom units.

Access will be provided to the site via extensions of Warner Road and Kuzik Drive. In addition, an emergency access drive is proposed to Howell Drive. The Applicant has indicated that the proposed streets will be private. The site will be serviced by extensions of the existing sanitary sewer and water systems. Also, a stormwater management system consisting of one large scale surface infiltration basin with a manufactured treatment device, three small scale surface infiltration basins, seven porous pavement infiltration systems and one small scale subsurface infiltration basin are proposed to mitigate the increase in stormwater runoff from the site.



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As part of the Stipulation of Litigation Agreement, the Applicant is required to install a traffic signal at the intersection of Oval Road and Eagle Rock Avenue. We note that the installation of this traffic signal is not part of the application that is presently before the Planning Board.

C. WAIVERS AND/OR EXCEPTIONS FROM THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (RSIS)

This application is subject to the requirements of the Residential Site Improvement Standards (RSIS) adopted as NJAC 5:21-1, et seq.

1. The Applicant has not requested any waivers from the RSIS.
2. The Applicant has requested a *de minimis* exception from the requirement to provide access to the property from Kuzik Drive.
3. The Applicant has requested a *de minimis* exception from the requirement to provide a sidewalk on both sides of the street in certain areas due to wetlands and riparian zone restraints.

D. DESIGN COMMENTS

1. The Applicant has requested a *de minimis* exception from the RSIS to not provide access to the property from Kuzik Drive. The RSIS stipulates that a street with a single means of ingress and egress is limited to a maximum average daily traffic of 250 vehicles. The average daily traffic for a 496 unit mid-rise apartment project will be approximately 2,728 trips which requires a second means of ingress and egress.

As stipulated in the RSIS, an application for an exception shall be filed in writing with the Planning Board and shall include:

- a) A statement of the requirements of the standards from which an exception is sought;
- b) A statement of the manner by which strict compliance with said provisions would result in practical difficulties; and
- c) A statement of the nature and extent of such practical difficulties.

Within 30 days of granting a *de minimis* exception request, the Planning Board shall send a copy of the document(s) constituting the *de minimis* exception resolution and/or document to the New Jersey Department of Community Affairs, Division of codes and Standards, 101 South Broad Street, PO Box 802, Trenton, NJ 08625-0802. Such notice shall be clearly marked "Site Improvement Exception".

If the *de minimis* exception is granted by the Planning Board, then it is our recommendation that the connection to Kuzik Drive be maintained as an emergency access.



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2. It shows on the Zoning Schedule on sheet SP-3 that 1,070 parking spaces are proposed. It shows on the Overall Development Summary Table on sheet SP-3 that 1,103 parking spaces are proposed. Further, adding all parking spaces shown within the Overall Development Summary Table on sheet SP-3 results in 1,095 parking spaces being proposed. This discrepancy must be resolved.
3. The Overall Development Summary Table should be revised to indicate building A.2 as A.1 is included twice.
4. The Overall Development Summary Table indicates that Building B will have 69 total units while the table above indicates 68 total units for Building B. This discrepancy must be resolved.
5. The grading plans must be revised to include spot elevations at all ADA ramps and ADA accessible landing areas. Further, additional spot elevations must be added to the handicap accessible parking spaces on the west side of the roadway across from Building D.1.
6. Detail No. 10 on Sheet SP-59 must be named.
7. The plans should be revised to include details of the following improvements that are proposed:
 - a) Keep Right Around Circle sign.
 - b) Electric Vehicle parking space sign.
 - c) Pump stations.
 - d) Emergency access drive to Howell Drive.
 - e) Emergency access drive gate.
 - f) Retaining walls (greater than 4' height)
 - g) Porous HDPE pipe installation detail.
 - h) Sanitary sewer manhole.
 - i) Sanitary force main.
 - j) Tennis courts
 - k) Gazebo
 - l) Pergola
 - m) Span bridge

E. DRAINAGE COMMENTS

1. The proposed development will result in the disturbance of more than one acre. As a result, it is classified as a Major Development and is subject to the stormwater management requirements set forth in Section 25-29.4 of the Ordinance. Our office notes that the project has received an NJDEP Permit which granted a Flood Hazard Area Individual Permit, Freshwater Wetlands General Permit 10B, Freshwater Wetlands



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General Permit 11, Freshwater Wetlands General Permit 17, and a Water Quality Certificate.

2. Based on our review of the provided soil testing and Chapter 12 of the BMP Manual, we offer the following:
 - a. One (1) additional soil test is required for BMP #4 as TP-10 is located further than 25 feet from the porous pavement system.
 - b. One (1) additional soil test is required for BMP #6.
 - c. Two (2) additional soil tests are required for BMP #7.
 - d. One (1) additional soil test is required for BMP #8.
 - e. One (1) additional soil test is required for BMP #10.

Our office defers to NJDEP to confirm compliance with Chapter 12 of the BMP Manual regarding the quantity of soil tests.

3. The plans should be revised to include notation indicating that soil testing during construction and post construction will be performed for all infiltration BMPs in accordance with the NJDEP BMP Manual.
4. The Stormwater Management Report hydrographs indicate that the replacement soil and exfiltration rate used for porous pavement system #3 and porous pavement system #8 are 10 inches per hour. The porous pavement system details on Sheet SP-25 and Sheet SP-26 indicate replacement soil with a permeability rate of 8 inches per hour should be used. The details must be revised to indicate replacement soil with a permeability rate of 10 inches per hour will be used.
5. Verify the size of pipes connected to outlet structure #6 as they are inconsistent between the outlet control structure label, the pipe labels, and the details. Sheet SP-19 and the details on Sheet SP-25 must be revised accordingly.
6. Verify the size of the pipes associated with outlet control structure #8 as they are inconsistent between the outlet control structure label, pipe labels, and detail. Sheet SP-22 and the detail on Sheet SP-26 shall be revised accordingly. Further the outlet control structure #8 detail should be revised to show the 15" HDPE pipe from inlet W-9.
7. Revise outlet structure #9 detail on Sheet SP-26 to show both 15" pipes that connect into the structure. Further, verify the sizes and material of the inlet pipes and outlet pipe as they are inconsistent between the outlet control structure label, pipe labels, and detail. Sheet SP-23 and the detail on sheet SP-26 must be revised accordingly.



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8. Sheet SP-20 must be revised to identify the pipes proposed in conjunction with porous pavement system #3. All pipes should be labeled with pipe size, material, length, and slope.
9. Clarify the limits of porous pavement for BMP #8, BMP #9 and BMP #11. Two separate pavement hatches are shown and it is unclear if both hatches are intended to be pervious pavement.
10. Revise the hatching associated with BMP#4 to remove the pervious pavement hatching from the landscape island.
11. Sheet SP-25 must be revised to correct the finished grade elevation on porous pavement section #6 detail.
12. As stipulated in Section 25-29.10(b)(1) of the Ordinance, the design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development. It further stipulates in Section 25-29.10(b)(4) of the Ordinance that the maintenance plan and any future revisions shall be recorded upon the deed of record for each property on which the maintenance described in the maintenance plan must be undertaken. Prior to recording, the form of the deed must be approved by the Board Attorney and our office.

F. LANDSCAPING COMMENTS

1. The Applicant has proposed deer exclusion fencing for existing wooded areas to remain. Details of the proposed fence, method of installation, maintenance responsibilities and notes should be provided for further review.
2. Revise the street tree layout to create uniformity within the site by providing the same species of trees on both sides of the roadways within substantial groupings.
3. Review and revise match lines, as they create difficulties for review (and later construction), such as labels to corresponding graphics are not on the same sheet. Also, the overall landscape plan should indicate the match line locations.
4. Our office recommends that street trees be provided on the lawn side of sidewalks, where feasible, to reduce future hardscape conflicts as well as to provide greater soil volume for a healthier tree.
5. Revise the 'Plant List', sheet 29 of 66, as indicated below:
 - a. Both BP (Paper Birch) and AS (Sugar Maple) are a northern tree species and with a warming climate, these species are not recommended.



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- b. RP (Black Locust) is an invasive species, is not commercially available, nor recommended. The Applicant has included the 25 RP within the tree credits as native trees.
 - c. Indicate single or multi-stem trees for proposed ornamental trees, to prevent any confusion. Single stem trees should be indicated by caliper and multi-stem trees by height.
 - d. Provide oak species, a keystone species of our ecosystem.
 - e. PA (American Plum) is not recommended as it is highly susceptible to black knot fungus.
 - f. Correct the common name for AM (Black Chokeberry).
 - g. Specifically indicate a minimum planting height/spread for proposed shrubs. Currently, only container sizes are listed, but many of these species will not be available at these sizes.
 - h. Provide cultivar selections for proposed trees and shrubs, to prevent confusion during construction.
 - i. Ensure shrub and perennial plantings located within parking islands do not exceed 30" at maturity to ensure visibility.
- 6. Revise the plans to provide a four-season landscape screen around proposed trash enclosures. Currently, the Applicant has provided deciduous shrubs.
 - 7. Revise the plans to shift shrub landscape beds to be a minimum of three (3) feet from edge of curb, to reduce damage from vehicles, snow clearing operations and road salt spray.
 - 8. Review and revise proposed plant material locations, to ensure planting beds are not in conflict with proposed hardscaping. It appears shrubs are proposed across the parking garage entrance at proposed Building C, shrubs are within entrance walkway at proposed Building B, etc.
 - 9. Revise the plans to provide shade trees within the parking lot island and the traffic circle island located in the parking area between proposed Building C and the Clubhouse. Also, shade trees should be provided in lieu of proposed CF (Flowering Dogwood) at the north end of the parking lot between proposed Buildings B and C. Sufficient space is available to support a shade tree, rather than an ornamental tree as proposed.
 - 10. Revise the plans to provide additional native trees to revegetate open areas by the proposed basins.



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11. Revise the plans to shift landscape materials outside of the dog park fence, to reduce damage. Also, benches and/or play equipment should be considered for this space.
12. It appears labels are missing for landscaping in the vicinity of proposed Building D.2. Provide shade and ornamental trees for this area.
13. The Applicant has proposed foundation landscaping for most of the proposed buildings; however, these do not consider the solar orientation of the planting beds. This should be revised to ensure a successful landscape. Also, provide foundation landscaping for the proposed buildings near the dog park and for screening the pump station.
14. Revise the plans to label proposed road names, buildings, basins, exterior utilities, etc., on the landscape sheets.
15. The Applicant has indicated Ernst Seed Mix #137 by the basins; however, there are two (2) distinct hatch lines at the basin. Revise the plans to clarify the difference. Also, provide mix specifications and maintenance notes.
16. Revise the plans to graphically depict and specifically label the proposed and existing woodline. Tree protection fencing should be depicted on the plans, to prevent confusion during construction.
17. Revise the plans to provide mulch bed lines on the plans, to prevent confusion during construction.
18. Revise the plans to indicate proposed disposition for all open areas, such as lawn, mulch, stone, sod, etc.
19. Revise the plans to provide general planting notes and planting details, to include, but not limited to, handling, quality, watering responsibilities, etc. Our office recommends that the tree planting details provide rigid, plastic open mesh trunk guards to prevent irreparable damage from buck rub, burlap around root ball to be removed and the root flare to be at final grade.
20. Revise the plans to provide a minimum clearance of fifteen (15) between proposed trees and light fixtures.
21. It appears that wetland education signs are proposed as details are provided on sheet 28 of 66. Revise the plans to indicate proposed mounting method as well as their specific locations on site, to prevent confusion during construction.

G. LIGHTING COMMENTS

1. In accordance with IES (Illuminating Engineering Society) standards, parking lots shall have a minimum of 0.50 footcandles and residential streets should be an average of 0.40-



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- 0.45 footcandles. Revise the plans to provide a data summary chart, indicating maximum, minimum, and average footcandles, for further review.
2. Revise the plans to provide a luminaire schedule, to include, but not limited to, quantities, ordering information for both fixtures and poles, color temperature, etc. Also, provide manufacturer's catalog cuts, for further review.
 3. Revise the plans to provide isolux patterns on the plans and provide isolux pattern details, with a scale and graph.
 4. Revise the plans to indicate proposed timers and hours of operation. Also, indicate proposed color and finish for all fixtures and poles.
 5. Revise the plans to provide a light pole footing detail, to indicate dimensions, rebars, concrete strength, etc.
 6. It does not appear light fixtures are proposed within the Clubhouse amenities area. The Applicant should indicate the expected operating hours to determine if lighting should be provided.

The Applicant is hereby advised that any revised plans or other documents submitted to the Board should be accompanied by a cover letter which addresses each of the comments in this review letter and details any other changes that have been made to the plans as these may not be readily apparent.