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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**

Date: October 16, 2023

**Re: Application No. PB 23-09
Essex County Country Club
Amended Site Plan - Review #1
350 Mt. Pleasant Avenue
Block 156, Lot 1
Our File: VWRP0156.01**

**CC: Paul Grygiel, AICP, PP - Township Planning Director
Leonard Lepore, PE - Township Engineer
Diana McGovern, Esq. - Planning Board Attorney
Essex County Country Club - Applicant
Lisa A. John-Basta, Esq. - Applicant's Attorney
Paul T. Calabrese, PE - Applicant's Engineer
Frank J. Rawding, RA - Applicant's Architect**

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

- A set of Site Plan drawings (16 sheets) prepared by Paul T. Calabrese, PE with Watermen, LLC of Allenwood, New Jersey dated August 7, 2023.
- A set of architectural plans of the Proposed Comfort Station (2 sheets) prepared by Frank J. Rawding, RA of Morristown, New Jersey dated July 15, 2023.
- A set of architectural plans of the Proposed Cart Barn (2 sheets) prepared by Frank J. Rawding, RA of Morristown, New Jersey dated July 15, 2023.
- A print of a Survey of East Course, Essex County Country Club prepared by Charles Stewart, PLS with Stewart Associates Inc. of Roseland, New Jersey dated October 27, 1978.
- A Stormwater Management Report prepared by Paul Calabrese, PE dated August 22, 2023.
- A completed Application Form dated August 21, 2023.
- A completed Application for Tree Removal and Replacement Permit dated August 23, 2023.



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- A completed Site Plan/Subdivision Checklist.
- A completed Sustainability Checklist Form.
- A list of the waivers requested by the Applicant.
- A Verification of Taxes & Sewer Charges Paid from the Office of the Tax Collector dated August 10 2023 which states that the taxes are paid until October 31, 2023 and the 2023 sewer charges are paid in full.
- A List of Owners within 200 Feet of Block 151, Lots 1 & 49 from the Office of the West Orange Tax Assessor dated August 8, 2023.
- Copies of the following prior Planning Board Resolutions of Approval for the property in question:
 - Planning Board Case No. PB-78-42 dated September 6, 1978.
 - Planning Board Case No. PB-79-36 dated November 28.1979.
 - Planning Board Case No. PB-93-35 dated March 23, 1994.
 - Planning Board Case No. PB-96-27 dated February 5, 1997.
 - Planning Board Case No. PB-00-19 dated February 15, 2001.
 - Planning Board Case No. PB-02-10 dated November 13, 2002.
 - Planning Board Case No. PB-03-18 (SRP) dated January 7, 2004.
 - Planning Board Case No. PB-14-04 dated July 2, 2014.

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

A. PROJECT DESCRIPTION

The property in question is an irregularly shaped tract which is bounded by Mt. Pleasant Avenue to the north, Prospect Avenue to the east, Old Indian Road to the south and the Francis A. Byrne Golf Course to the west. It is located in the R-2 Single Family Residential Zone and has an area of 176.832 acres. The property is currently occupied by the Essex County Country Club which includes an 18 hole golf course, a driving range, a practice green, a club house, a pool house, two (2) inground pools, tennis courts, a golf cart barn/pro shop, several maintenance buildings and several parking areas.

The Applicant is seeking Amended Site Plan approval to permit demolition of the golf cart barn/pro shop and the construction of a cart barn near the northwest corner of the site, a comfort station building along the southerly side of the site, widening of the driveway entrance, improvements to the parking lots, installation of new lighting along the entrance drive and parking lots, and a new



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tee box for the 1st hole. The proposed parking lot improvements will result in the addition of 37 parking spaces at the site for a total of 240 parking spaces.

B. DESIGN COMMENTS

1. Based on our review, we find that the following items from the Township's Site Plan/Subdivision Checklist must be addressed:
 - a) Item #14 – *Affidavit of ownership.*
 - b) Item #20 – *Copy and/or delineation of any existing or proposed deed restrictions or covenants.*
 - c) Item #23 – *List of required regulatory approvals or permits.*
 - d) Item #33 – *Existing system of drainage of subject site and of any larger tract of basin of which it is a part.*
 - e) Item #36 – *Proposed utility infrastructure plans, including sanitary sewer, water storm water management, telephone, electric and cable TV.*
 - f) Item #45 – *Landscape plan & details prepared by a professional landscape architect.*
 - g) Item #52 – *Plans and legal documents for compliance with West Orange COAH Ordinances.*
2. The Applicant has requested the following waivers:
 - a) Item #13 – *Metes and bounds description showing dimensions, bearings, curve data, length of tangents, radii, arcs, chords and central angles for all centerlines and right-of-way, and centerline curves on streets.*
 - b) Item # 19 – *All proposed lot lines and area of lots in square feet.*
 - c) Item #28 – *All existing street, water courses, flood plains, wetlands or other environmentally sensitive areas on and within 200' of site.*
 - d) Item #29 – *Existing right-of-way and/or easements on and within 200' of tract.*
 - e) Item #32 – *Boundary, limits, nature and extent of wooded areas, specimen trees, and other significant physical features.*
 - f) Item #46 – *Solid waste management plan.*
 - g) To permit the submission of a boundary survey which is more than 5 years old.
3. The Applicant has submitted a List of Owners within 200 Feet of Block 151, Lots 1 & 49 whereas the property in question is Block 156, Lot 1. Therefore, it remains for the Applicant to submit a List of Owners within 200 ft of the property in question.



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4. The Applicant should address the Board regarding their plans to provide make-ready electric vehicle parking spaces at the site. We note that Section 25-12.6 of the Land Use Regulations requires the installation of make-ready parking spaces for each application involving a parking lot which requires preliminary site plan approval.
5. It states in Variance Request #1 on sheet 1 that 240 parking spaces are proposed at the site. As stipulated in Table 208.2 in the Americans with Disabilities Act (ADA) Standards, a minimum of 7 accessible parking spaces are required at the site. In addition, Section 208.2.4 of the ADA Standards stipulates that for each 6 or fraction of 6 parking spaces, at least 1 shall be a van parking space. The plans must be revised to demonstrate that the required number of accessible parking spaces are provided. In addition, the proposed van accessible spaces must be identified.
6. It shows on sheet 2 that 5 existing trees are to be removed. As a result, the Applicant has applied to the Board for a tree removal permit. As stipulated in Section 25-27.5c, the Applicant must submit a qualified tree expert's report which addresses the factors and standards in Section 25-27.7.
7. Demolition Note #13 on sheet 2 states that an abandoned fire hydrant is to be removed. The location of the abandoned fire hydrant must be shown.
8. Demolition Note #14 on sheet 2 states that a stand pipe is to be removed. The location of the stand pipe must be shown.
9. Sheet 4 should be revised to dimension the width and depth of the proposed parking spaces and the width of the proposed drive aisles.
10. Sheet 4 must be revised to show the radii of all proposed curved curbing.
11. Sheet 4 must be revised to show the widths of the pavement widening areas and the widths of the stone paver walkways. In addition, the dimensions of the parking lot island sumps must be shown.
12. It shows on sheet 4 that 3 handicap accessible parking spaces are proposed in the vicinity of the Pool House. We note that 2 of the handicap parking spaces are proposed on the northerly side of the parking lot approximately 80 ft from the Pool House. It is our recommendation that these spaces be located closer to the Pool House.
13. Sheet 4 must be revised to show the access aisles that are required for the handicap accessible parking spaces. In addition, the plans must be revised to show that an accessible route is provided between the handicap accessible parking spaces and the Pool House.
14. It shows on sheet 4 that the pavement entrance will be reconstructed using a 2" surface course of HMA 9.5M64 whereas the HMA Pavement Section Full Depth on sheet 14 shows the 2" surface course to be HMA 12.5M64. This discrepancy must be resolved.



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15. It shows on sheet 4 that concrete stairs with wing walls are proposed along the entrance drive adjacent to the Club House. Therefore, a detail of the concrete stairs with wing walls must be provided on the plans.
16. It shows on sheet 4 that a new 1st hole tee box is proposed. Therefore, a detail of the 1st hole tee box must be provided on the plans.
17. Sheet 5 shows that the proposed Comfort Station will be set back 58 ft from the southerly property line. In addition, it will be located approximately 145 ft from the nearest existing residential dwelling. The Applicant should address the Board regarding how this location was selected and the anticipated impacts, if any, on the existing residential neighborhood to the south. The Applicant may wish to consider relocating the Comfort Station further from the existing residential dwellings.
18. Sheet 5 shows the utility extensions (water, electric and sewer) that are proposed to the Comfort Station. However, the utility extension information is incomplete. The plans must be revised to show the utilities extending to the point of connection to the existing systems. In addition, the water system extension must show the size and type of pipe while the sanitary sewer extension must show the size and type of pipe, the pipe slopes and the invert elevations at each cleanout.
19. Sheet 5 should be revised to show the proposed grading in the vicinity of the Comfort Station. In addition, proposed spot grades must be shown at each corner of the building.
20. Sheet 6 shows the utility extensions (water and electric) that are proposed to the Cart Barn. However, the utility extension information is incomplete. The plans must be revised to show the utilities extending to the point of connection to the existing systems. In addition, the water system extension must show the type of pipe.
21. Sheet 6 shows that the building sewer lateral will be connected to the existing sanitary sewer to the north and east of the building. The size, type of pipe and invert elevation of the existing sewer must be shown. In addition, the invert elevations at each cleanout must be shown for the proposed sewer lateral.
22. It shows on sheet 6 that the proposed grading on the southerly and easterly sides of the building will direct runoff to the sides of the building. The proposed grading must be revised to direct runoff away from the sides of the building. In addition, proposed spot grades must be shown at each corner of the building.
23. It shows on sheet 6 that a pervious 8" concrete slab with welded wire reinforcement is proposed at the entrance to the cart barn. However, the Pervious Concrete Slab detail on sheet 14 specifies an 8" thick structural concrete slab. The detail must be revised to specify the use of pervious concrete. In addition, we question the use of welded wire reinforcement in pervious concrete.



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24. Sheet 7 must be revised to label the 579 to 576 contours along the driveway on the easterly side of the parking lot.
25. It shows on sheet 7 that the Applicant proposes to mill and overlay the existing parking lots. Therefore, a mill and overlay detail must be added to the plans.
26. Sheet 15 includes a Service Connection with Ford Meter Pit detail. Therefore, the plans must be revised to identify the locations where meter pits are proposed. We question if separate meters are proposed for the Cart barn and the Comfort Station or if the existing water system serving the site is already metered.
27. The Parking Island Sump Drain Detail on sheet 15 shows a 6" PVC pipe which is to drain to an existing inlet. Therefore, sheet 4 must be revised to show the proposed 6" PVC pipes and the inlets to which they are to be connected.
28. The Cart Barn architectural plans show proposed recycling filtration equipment within the building. The purpose of the recycling filtration equipment must be clarified.

C. LANDSCAPING AND LIGHTING

1. In accordance with Section 25-12.1 o., parking areas for thirty (30) or more spaces, one (1) tree plus ground level plantings shall be provided for every ten (10) parking stalls; whereas, no landscaping has been proposed.
2. It appears the Applicant is proposing to remove a 40" DBH tree to increase the parking by a few additional stalls. If the tree is in good condition, our office strongly recommends seeking out other alternatives for these additional spaces.
3. The 'Parking Island Sump Drain Detail', sheet 15 of 16 depicts landscaping; however, none are proposed on the plans. This should be revised, for further review.
4. In accordance with Section 25-14.1 e., provision shall be made for the reduction in the intensity of illumination to the minimum needed for security purposes when the facility is not in operation; whereas timers and hours of operation have not been indicated.
5. Proposed light fixtures depicted at the westerly parking lot are to be located within the pavement area. Also, it does not appear the entire area of the parking lot is proposed to be illuminated. This should all be reviewed and revised for an acceptable lighting plan.
6. Review and revise light fixture quantities, as graphics do not correspond to the proposed luminaire schedule.
7. The Applicant has proposed a lighting plan that does not meet the 0.50 footcandle minimum required throughout the parking lot, in accordance with IES (Illuminating Engineering Society) standards.
8. Revise the plans to indicate the proposed color and finish for all light fixtures and poles.



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9. Provide the manufacturer's catalog cuts for all fixtures and poles. Include the isolux pattern details with a scale and graph. Additionally, provide the ordering information for the proposed light poles.
10. Revise the 'Light Pole Foundation' detail, sheet 15 of 16, to indicate a concrete strength of 4,500 PSI. Currently, 4,000 PSI is indicated.

D. DRAINAGE

1. It shows on the plans that the area of disturbance will be greater than 2 acres. As a result, the project is classified as a Major Development which requires that the project be designed to meet the stormwater runoff quality, quantity and groundwater recharge standards using green infrastructure.
2. No soil investigation/analysis has been performed to determine the conditions of the soils on site in accordance with Chapter 12 of the current NJ Stormwater Best Management Practices (NJBMP) Manual. Accordingly, compliance with the applicable State and Township stormwater management requirements cannot be confirmed and it is unclear whether the proposed stormwater management system will function consistent with the analysis in the stormwater management report. At a minimum, the following soil investigations are required:
 - a. A minimum of two (2) soil profile test pits must be excavated within the infiltration area of any proposed infiltration BMP to determine the suitability and distribution of soil types and seasonal high-water table present at the location of the BMP.
 - b. At least one (1) test to establish the soil hydraulic conductivity must be conducted for each soil profile pit / boring.
 - c. All soil profile test pits and/or soil borings performed for the purpose of designing an infiltration BMP must extend to a minimum of eight (8) below the lowest elevation of the BMP.
3. In accordance with Section 25-29.4.h of the Ordinance, whenever the stormwater management design includes one or more BMPs that will infiltrate stormwater into subsoil, the design engineer shall assess the hydraulic impact on the groundwater table and design the site, so as to avoid adverse hydraulic impacts. Additional groundwater mounding analysis should be provided for all proposed stormwater management features designed to infiltrate into the subsoil.
4. In accordance with Section 25-29.4.i, if there is more than one drainage area, the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards shall be met in each drainage area. As noted below, it appears that the runoff quantity standards are not met for PDA-2 and PDA-3.



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5. In accordance with Section 25-29.4.q.2, to comply with the stormwater quality standards, an 80% total suspended solid (TSS) removal rate must be provided when a major development proposes a net increase of 0.25 acres or more of regulated motor vehicle surface. The stormwater management report indicates that there will be less than 0.25 acres increase in motor vehicle surface and that the stormwater quality requirements are not applicable to this development. Testimony should be provided to confirm same and detailed calculations should be provided to verify the increase in motor vehicle surface area.
6. In accordance with Section 25-29.4.r.2, post-construction peak runoff rates for the 2-, 10- and 100-year storm events shall be 50%, 75%, and 80%, respectively, of the pre-construction peak runoff rates. The stormwater runoff report appears to indicate that the post-construction peak runoff for PDA-2 and PDA-3 will exceed pre-construction peak runoff rates. Design modifications appear to be required.
7. In accordance with Section 25-29.5.a.4, in computing stormwater runoff from all design storms, the design engineer shall consider the relative stormwater runoff rates and/or volumes of pervious and impervious surfaces separately; peak runoffs shall then be hydraulically combined. The SWM report shall be revised to comply with same for the pre- and post-development conditions.
8. It states in Section 3.0 of the Stormwater Management Report that *"the pervious paving systems are designed for contributory areas less than 3x the area occupied by the pervious surface"*. However, the plans do not show any pervious pavement but show pervious concrete. This discrepancy must be resolved.
9. In accordance with Chapter 9.2 of the BMP Manual, drywells may not be used to address the applicable water quantity requirements. Drywells are intended for small storm events; therefore, the drywell must have a storage volume no greater than the runoff volume generated by the Water Quality Design Storm (WQDS).
10. In accordance with Chapter 9.6 of the BMP Manual, pervious paving systems designed to provide stormwater runoff quantity control must also be designed with an outlet structure. It does not appear that an outlet structure is proposed at the pervious concrete area. Design modifications are required.
11. In accordance with Chapter 9.7 of the BMP Manual, small-scale bioretention basins with underdrains may not include exfiltration in the routing calculations. The SWM report must be revised to comply with same as the routing calculations for the bioretention basins in the parking area include a 5 in./hr. exfiltration rate which is not permitted.
12. In addition, bioretention basins with underdrains may not be used to address the applicable groundwater recharge requirements. The Applicant should confirm same.



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13. Our office has concerns with the use of a 10 in/hr exfiltration rate within the stormwater analysis as no soil testing has been performed to substantiate the permeability of the existing soils. Additional permeability testing is required.
14. Verify the allowable and proposed post-development peak flow rate indicated in Section 4.2 of the SWM report.
15. Verify total drainage indicated for EDA-3 (Parking Lot) in the stormwater management report.
16. Verify slopes of Tc paths indicated in the SWM report and on the drainage area maps.
17. The drainage area maps should be renamed to be consistent with the hydrographs included in the SWM report.
18. Site-specific construction details of the pervious concrete, bioretention basins, drywells, etc. should be provided. The details should include detailed specifications (soil layer depth, weirs, filter fabric, stone depth, etc.) for each stormwater management feature; same should be consistent with the requirements outlined in the BMP Manual.
19. The pond reports for the basins, drywells, and pervious concrete include outlet devices such as weirs and orifices which are not clearly identified on the plan. Site plan should be revised to clearly identify these outlets and the required site-specific construction details, noted above, should also include same, where necessary.
20. The 'Pervious Concrete Slab' detail should be revised to include the specifications required for same which are outlined in the New Jersey Best Management Practice Manual.
21. The invert elevations indicated for the various outlet devices in the SWM report should be consistent with the proposed conditions on site and the associated construction details. Check and revise as necessary.
22. At least one (1) inspection port should be provided at each drywell, pervious concrete area, and bioretention basins with underdrains. The inspection ports shall comply with the requirements outlined in the respective chapters for each stormwater management feature in the BMP Manual.
23. Our office recommends that signage be provided at the pervious concrete areas to eliminate improper application of de-icing compounds, to prevent dumping of hazardous materials and eliminate the intrusions of vehicles exceeding the design-loading rate of the system.
24. A construction detail for the perforated HDPE pipes (12" and 24") embedded in stone should be provided for review.



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25. As stipulated in Section 25-29.10 of the Land Use Regulations, the design engineer shall prepare a maintenance plan for the stormwater management measures incorporated into the design of a major development. In addition, 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 Planning Board Attorney and our office.

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 also details any other changes that have been made to the plans as these may not be readily apparent.