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# Memorandum

**TO:** Glenn R. Gerken PE, Board Engineer

**FROM:** Laura Strang
Christian M. Roche, P.E., LEED-AP

**DATE:** 26 March 2021

**RE:** **Colts Neck Manor**
**Block 22, Lot 18**
**Colts Neck Township, Monmouth County, New Jersey**
**Langan Project No.: 130164001**
**Township File No.: PB743**

This memorandum has been prepared in response to comments listed in your review letter dated 22 February 2021 regarding the Colts Neck Manor project located on Block 22, Lot 18 in Colts Neck Township, Monmouth County, New Jersey. Your review comments are identified in italics, and our responses are identified in bold.

## REVIEW COMMENTS

*A. General Layout and General Items:*

1. *On sheet EX100, Note #1 references a survey prepared by Keller and Kirkpatrick dated 10/16/2014 and a copy of that must be submitted.*

   **Response: Copies of the land survey prepared by Keller & Kirkpatrick Inc. were previously provided in our 24 February 2021 submission package.**

2. *It appears that the layout of the buildings, drives, parking areas etc. comply with the bulk, area and building requirements and the parking and drive requirements of the revised A-6 zone requirements.*

   **Response: No response required.**

3. *There are many small items that have not been addressed.*

   *Will there be group mailboxes and where will they be located and detail needed of the same.*

   **Response: Group mailboxes locations have been identified on the site plan (see sheet CS101). Details of the group mailboxes have been added to the construction details (see sheet CS504).**

   *Are there any flag poles at the club house?*

**Response: No flag poles are proposed as part of this project.**

*Are there any outdoor grilling stations by the buildings or in the park areas?*

**Response: There are four grills proposed in the clubhouse area (see sheet A-13). There are no grilling stations proposed in the park areas.**

*Is the only refuse enclosure the compactor back by the maintenance building?*

**Response: Yes, the compactor near the maintenance building will serve the proposed development.**

*Is there an enclosure around the compacting unit and details of the recyclable container are needed.*

**Response: Yes, a fence has been added around the compactor unit (see sheet CS101). A detail of this fence has been added to the architectural plans (see sheet A-18). Details of the recycling enclosure are provided on sheet A-17 of the architectural plans.**

*Is there going to be a project identification sign out at MC 537?*

**Response: Yes, two monument signs are proposed along Monmouth County Route 537 (see sheet CS100, CS101, and CS102). A detail of the proposed monument sign is provided on sheet A-17 of the architectural plans.**

*Any directional or wayfinding signs?*

**Response: Yes, we anticipate that directional and wayfinding signage will be incorporated into the design. We anticipate that this signage will be coordinated with the postal service and emergency response services once the final building letter/number identifications are assigned.**

*Each building should be identified with a number or letter so they can be referred to in discussions.*

**Response: The buildings have been numbered for the purposes of referencing specific buildings during discussions (see sheets CS100, CS101, and CS102). The final building letter/number identifications will be coordinated with the postal service and emergency response services.**

4. *Details have not been provided for the decorative fence at 537 and the 6 ft. fence on the east property line. A typical detail has been provided for the modular retaining wall but tip*

*of wall and base of wall elevations are needed for each retaining wall. Details of the 12'x15' bicycle sheds must be provided.*

**Response: Details for the 4-ft decorative fence along Route 537 and the 6-ft fence along the east property line have been added to the construction details (see sheet CS504). Details of the bicycle sheds are provided on sheet A-16 of the architectural plans. Top of wall and bottom of wall elevations have been added to the grading and drainage plans (see sheets CG101 and CG102).**

5. *Building floor plans and elevations are needed for the 30' x 33.5' maintenance building and the 20' x 30' wastewater treatment control building.*

**Response: Building floor plans and elevations for the maintenance building and the wastewater treatment control building are provided on sheets A-16 and A-17 of the architectural plans.**

B. *<u>Water System:</u>*

1. *The Water Systems Engineering Report states there will be 5,900 LF of 8" ductile iton pipe for fire and domestic water use. The flows per bedroom are based on RSIS requirements. Based on this there is a 56,530 gpd total water demand and a peak water demand of 169,950 gpd and a peak hourly demand of 23,760 gph.*

**Response: No response required.**

2. *The plans show locations for 2 wells, one being the Primary Pumping Well and the 2nd being the Secondary Backup Well. Then the plans show a concrete pad for water treatment tanks. Then there are 2 concrete pads for water storage tanks, one for domestic water and the other for fire fighting use. The tanks are indicated to be 60,000 +/- gal each. There are notes in several places that state these facilities are proposed if public water service is not available. Notes further state that these are only schematic in nature and final size and location to be determined by the MEP Engineer and coordinated with the NJDEP. It also states that a Safe Water Drinking Permit and Water Use Registration Permit will be required from NJDEP.*

**Response: The intention is to provide public water service to the project. The onsite water system components shown represent a schematic onsite option if a public water service connection is not feasible.**

3. *The above is the only data provided for the water supply treatment and storage. There has been no information concerning the well capacities, depth to and formation into which the well will be drilled. No information on the water treatment proposed. No details on the tanks, will they be ground level or elevated? Will the pressure in the system be from pumps or elevated tank? Complete plans and details are reports for the wells, water treatment and water storage must be provided. I know extensive exploration and testing*

*was done for a prior application at this property but this is a new application and all the information and details required must be provided.*

**Response: The potential onsite water supply system is described in the revised Water System Engineer's Report, which is included with this resubmission package. As stated above, the intention is to provide a public water service to the project. The onsite well system is a secondary option.**

4. *Some other comments on the water system. Each building has 4 water service lines and valves shown and what is the diameter of these lines. Each building has a water line going into each end of the building and is this a fire service line and is it also 8 inches? The 3 northerly buildings on the east end do not have the water line going into one end of the building. This is probably an omission. There are 8 fire hydrants shown. The locations and connections should be approved by the fire department.*

**Response: There will be one 8" fire water service line and one 6" domestic water service line connecting to each building at one end (see sheets CU101 and CU102). We will coordinate the locations of the proposed fire hydrants with the fire department.**

C. *Sanitary Sewer System:*

1. *All sewer mains are 8" PVC pipe at 0.35% slope. All laterals are 6" PVC pipe at 2.08% slope. The Engineering report indicates there is 2678 LF of 8 in. main, 2511 LF of 6 in. laterals, 18 manholes and 61 cleanouts and a total daily flow of 71,175 gpd.*

**Response: No response required.**

2. *There is a 140 LF run of sewer main from MH #115 to the north gutter of MC 537 and states that it is for a potential sanitary sewer connection to a public system. MH 115 is 6.5 ft. higher in elevation than the low point back at the proposed treatment plant. A complete redesign of the pipe flow out to 537 will be required if a public system becomes available. If a connection to a public system becomes available, probably a pump station back at the treatment plant area will be required and a force main piped out to the public system.*

**Response: The onsite wastewater treatment facility is the primary option (see sheets CU101 and CU102). If a connection to the public sanitary sewer system becomes available, the onsite sanitary sewer collection pipe network will be modified to make such connection.**

3. *The sewer mains are relatively shallow. The run from MH #114 to MH#113 ranges from 3.8 to 3.7 feet deep. When you take into account the lateral at 2.08%, the line under the building slab is very shallow. The design engineer should make sure the lines are deep enough to service the buildings.*

**Response: The grading and utility plans have been revised such that adequate cover is maintained over the proposed sanitary sewer lines (see sheets CG101, CG102, CU101, and CU102).**

4. *No plans or details for the Waste Water Treatment Plant have been provided. The sales brochure provided is for an Amphidrome System. This brochure shows that except for the control building, the entire system is underground. This is only a brochure. The plans show a dashed line in the northeast portion of the development which states "proposed wastewater treatment and storage tanks."*

   **Response: Details for the proposed wastewater treatment facility have been added to the construction details (see sheet CS505).**

5. *Also, in the northeast portion of the site on sheet CS101 it shows "Approximate extent of Wastewater Disposal Field (Area approx. 70,000 SF) Typ. (Schematic; to be coordinated with NJDEP). This location is unique in that it is underneath a large paved area for about 100 parking spaces and aisles, recycling enclosure, bike storage shed etc.*

   **Response: The effluent sent to the disposal field is clean effluent that has already been treated by the wastewater system. Based on discussions with the NJDEP, this clean effluent can be discharged in disposal fields beneath impervious surfaces. Full review and permitting of the onsite wastewater system is being performed by the NJDEP.**

6. *A treatment works approval from NJDEP will be required for the sewer lines. To construct the Wastewater Treatment Plant, approval form NJDEP is required. Also, to construct the Disposal Field, a NJPDES permit from NJDEP is required.*

   **Response: Correct. We will obtain permits from the NJDEP for the proposed sanitary sewer network, wastewater treatment facility, and disposal field as required.**

7. *In summary, except for the sewer lines in the drives with some pipe and manhole details, no plans or details or calculations have been provided for the Wastewater Treatment Plant, Wastewater Disposal Field of the Wastewater Treatment Control Building.*

   **Response: Details for the wastewater treatment facility have been added to the construction details (see sheet CS505).**

D. *Stormwater Facilities:*

1. *The total acreage of the property is 39.1 acres but only 20.9 acres will be developed. There are some existing facilities which were previously built on the site, not within the area being developed but mainly within the 300 ft. Special Water Resource Protection*

*Area. There is an existing retention Basin B on the west side of the property with an outlet control structure exiting the basin with a 36" pipe and discharging into the wetlands adjacent to the stream. A 24 inch pipe discharges into the basin and about 60 ft. will be utilized. There is an existing outlet control structure and 36 inch pipe which discharges to an existing pond on the eastern part of the property.*

**Response: No response required.**

2. *There are 3 proposed systems. The westerly system flows to a proposed 45 ft x 172.5 ft underground vault – detention structure from which an outlet control structure regulates flow to the existing basin B with its existing outfall. The middle system discharges into the existing water quality basin which has a gravity overflow into basin A. the easterly system discharges into existing basin A with the existing outlet control structure discharging into the pond. There are 5 manufactured treatment devices with 3 before the discharge into the underground detention structure and one each on the line discharging into water quality basin and basin A.*

   **Response: No response required.**

3. *No details have been provided for the underground detention basin. Also, within Basin A there is a label of B-9 which I assume is a boring. A boring should be taken in each basin and water quality basin plus permeability tests to show the rate of discharge through the bottom of the basins.*

   **Response: Details for the underground detention system are provided on sheets CS503 and CS505. Two borings were previously taken in each basin (four total). The plans have been revised to identify these four boring locations (see sheet EX101). The correlating permeability data for each boring is provided in Appendix N of the Stormwater Management Report.**

4. *In the storm drain profiles it is noticed that some of the pipes are very shallow. For instance from CB 309 to MH 305, over the 24 inch pipe there is less than a foot of cover. The detail shows that 12 inches of stone is needed over the pipe before the pavement section. This location is into the pavement section and must be lowered.*

   **Response: The storm pipe network has been revised such that adequate cover is maintained (see sheets CG202, CG203, and CG204).**