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TO: Glenn R. Gerken PE, Board Engineer

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

DATE: 28 May 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 26 April 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. *Previously there were many small items that were not been addressed.*

a. *The group mailboxes are now shown on the site plan sheet CS101 and on the detail sheet CS504. There are 24 Unit Group Mailboxes for a single building and 48 Unit Group Mailboxes for two buildings.*

Response: Informational comment. Note that the group mailbox details have been moved to sheet CS502.

b. *There are no flagpoles proposed per item no. 10 above.*

Response: Informational comment. No response required.

c. *Item no. 10 above states there will be 4 grills proposed at the clubhouse as shown on architectural sheet A-13. These should be labeled on that sheet.*

Response: The proposed grills have been labeled on sheet A-13 of the architectural plan set. The patio area and four grills have also been noted on the site plan (see sheet CS102).

d. *There is one compactor to service the proposed development located near the maintenance building. A fence has now been provided around the compactor as shown on sheet A-18.*

Response: Informational comment. No response required.

- e. *Details of the recycling enclosure are now shown on sheet A-17.*

Response: Informational comment. No response required.

- f. *Two monument signs are now shown on the site plan sheets out along Rt 537 and a detail provided on sheet A-17. The size and height comply. The ordinance requires 10 ft. minimum setback from the right-of-way and this dimension must be provided on the site plans.*

Response: The dimensions from the proposed monument signs to the proposed right-of-way line are provided on sheet CS101.

- g. *Any directional or wayfinding signs? Item no 10 above indicates that there will be wayfinding signs that will be coordinated with the postal service and emergency response services. A typical detail of these should be provided on the plan since the ordinance limits the size and height of these signs.*

Response: Typical wayfinding and directional signage, including building identification signage and post-mounted street signage, has been detailed on sheet CS504 in accordance with ordinance requirements.

- h. *The buildings have now been numbered on sheets CS100, CS101 & 102. They should also be numbered on all other sheets that show the buildings.*

Response: The civil plans have been revised to show the building numbers on all sheets that show the buildings.

2. *Details have now been provided for the decorative fence at 537 which is a 4 ft. three rail fence and the 6 ft. fence on the east property line which is a solid vinyl fence. These are shown on sheet CS504.*

Response: Informational comment. No response required.

3. *A typical detail was previously shown for the modular retaining wall and top of wall and base of wall elevations have now been added to the grading plans.*

Response: Informational comment. No response required.

4. *Floor plan and elevations views of the 12' x 15' bicycle sheds have now been provided on sheet A-16.*

Response: Informational comment. No response required.

5. *Building floor plans and elevations have now been provided for the 30' x 33.5' maintenance building and the 20' x 30' wastewater treatment control building on sheets A-16 & A-17.*

Response: Informational comment. No response required.

B. Water System:

1. *The Water Systems Engineering Report states there will be 5,900 LF of 8" ductile iron 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: Informational comment. No response required.

2. *The Water Systems Engineering Report states that the project proposes connection to the Gordon's Corner Water Supply System some 10,000 ft away in Marlboro in Dutch Lane Road. It further states that an onsite water supply system is proposed as a secondary option if the connection to the public water supply system becomes available.*

Response: Informational comment. No response required.

3. *The report further states and the plans show locations for 2 wells, one being the Primary Pumping Well and the 2nd being a 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 use and the other for firefighting 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. The Water System Engineering Report indicates that Pickwick Well Drilling installed an 8 inch. Test well in the Englishtown Formation with a 30 ft. screen some 313 ft. deep. It further indicates that they did preliminary pumping tests to see if the well could produce the 130 gpm flow which is required which it did. They indicate as required by NJDEP a 72 hour constant-rate aquifer test is scheduled in the near future to verify the aquifer's safe yield at 130 gpm and to determine if other existing users of groundwater would be significantly affected by the well once permitted to be in service.*

Response: A 72-hour pump test is scheduled for the week of 31 May 2021. Once the test is performed, a supplemental memorandum will be provided to support the site plan application.

4. *As it stands as of this date, there is no approval to hook up to a public water supply system in either Freehold Township or Marlboro Township. If the applicant wishes to proceed*

before the Planning Board with the application, the On-Site Water Supply System is the primary system and the possible hook up to a public water supply system is the secondary system. Therefore, more than schematic plans are needed at this stage. Final design and location by the MEP Engineer and NJDEP must be provided now.

Response: **Schematic details for the on-site water system have been provided with this resubmission package. While the applicant still prefers the public water system connection, the plans have been revised to indicate the on-site system as the primary option.**

5. *For the prior applications at the site, a Hydrogeologic Report and Aquifer Test Report was prepared for the 49 wells proposed. A test well was installed and pumped, and two observation wells installed and draw down during the pumping tests were recorded. It was concluded at that time that there would be little or no effect on any of the adjoining wells in the vicinity. However, that was for a pumping rate of 32,400 gpd and the current proposal is for 169,590 gpd which is significantly larger. Previously a \$75,000.00 bond was required to remediate any adverse impacts the development would have on any adjoining property wells. There has been no data provided concerning the draw-down at the production well or at the adjoining properties to the east nor any projection concerning any effects on any nearby wells. 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? Will there be fencing around any of the components. The water treatment tanks will be less than 10 ft. from 10 ft. high retaining walls and the water storage tanks, 20 to 30 ft. away from 5 ft retaining walls. Stability of the walls must be checked. Will chemicals be stored for the water treatment system? Complete plans and details and reports for the wells, water treatment and water storage must be provided. Will a separate company manage and operate the water system?*

Response: **A 72-hour pump test is scheduled for the week of 31 May 2021. Once the test is performed, a supplemental memorandum will be provided to support the site plan application.**

Supplemental design details have been provided for the on-site water system. The system will include two production wells, a treatment building, and a ground-mounted storage tank. The system will be fed by pumps. We anticipate that a private company will manage and operate the on-site water system.

6. *There are 10 or more fire hydrants shown. The locations and connections should be approved by the fire department.*

Response: **The hydrants shown on the previous submission were based on the assumption that water service to the site would be provided by Gordon's Corner Water Company. Although that is still the preference of the applicant, since a connection to Gordon's Corner Water Company hasn't been approved by the township yet, the**

current site plans show an on-site domestic water system with approximately 60,000 gallons of below grade water storage for fire protection purposes. In addition, it is anticipated that each building will have internal fire storage tanks/pumps.

C. Sanitary Sewer System:

1. *The plans indicate that the Onsite Sanitary Wastewater Treatment Facility is proposed as the primary sanitary sewer service option and should connection into a public sewer system become available, the onsite system will be modified to accommodate this connection. This is understood and has been reviewed accordingly.*

Response: Informational comment. No response required.

2. *Previously there was a concern with the depth of the sanitary sewer mains. The sewer mains have been lowered in the areas of concern.*

Response: Informational comment. No response required.

3. *Details of the Wastewater treatment facilities have been provided on the Utility Plan sheet CU101 and on the detail sheet CS505. The details are schematic in form and when a full detailed set are filed with the NJDEP for permits and approval, a full set should be provided to the Planning Board besides the Township Committee.*

Response: Copies of the final wastewater treatment facility plans will be provided to the township when filed with the NJDEP.

4. *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. The extent of the proposed system is not shown. When it extends under the parking area which are shaded dark, the start and stop of the cross hatched lines of the system cannot be seen. The outer limit of the system must be clearly marked on the plans.*

Response: The approximate outer limit of the system is shown as a solid grey line on the utility plans (see sheets CU101, & CU102).

5. *A typical detail of the disposal system must be provided to show the material and depths of the various components of the system. Also, typical details for where the sanitary sewer line and the storm drainage lines cross the system and where the footings for the recycling enclosure are over the system must be provided.*

Response: A typical detail of the disposal field system has been added to the Construction Details (see sheet CS506).

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

Response: **A Treatment Works Approval and a NJPDES permit will be obtained from the NJDEP for the proposed development.**

D. Stormwater and Grading 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 Water Quality Basin toward the middle of the property with piping leading into it which will be removed. Further to the east is retention basin A which has an existing outlet control structure and 36 inch pipe which discharges to an existing pond on the eastern part of the property. For all of the facilities within the 300 ft. riparian buffer area, approval of the continued use of these facilities must be obtained from NJDEP.*

Response: **An application for approval to utilize these facilities has been submitted to the NJDEP and is under review.**

2. *Some details have been provided for the underground detention basin. There are extended areas approximately 12 +/- ft on each side of the basin which shows zone 2 backfill. Dimensions of this are needed. It would appear that the limit of this could extend to or beyond the retaining wall on one side. Also, details of the end treatment of the system must be provided.*

Response: **End panel details and installation notes for the proposed underground detention system have been added to sheet CS505. The "Zone 2" backfill detail graphically depicts installation by way of a sloped excavation. It is noted that excavation, and therefore the "Zone 2" area of backfill, shall be in accordance with applicable OSHA excavation standards (min. slope 1.5':1'). This is a fill area on-site so excavation will be limited. In areas adjacent to the proposed retaining wall, shoring may be utilized if necessary.**

3. *In viewing the retaining walls, some are very high and extend relatively close to structures such as parking, drives, drainage inlets or the water facilities. Some type of barriers such as fencing, guide rail or similar devices will be needed. An example is on sheet CG102. From CB 104 to 105, the retaining wall is 11 ft. high and the inlets are 3-5 ft from the wall. Guide Rail is needed in these areas. Also, how will the geogrid be installed in the areas. I*

MEMO

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assume underneath the pavement. These areas of close improvements to the walls must be addressed.

Response: The retaining wall detail has been updated (see sheet CS502). The detail shows a safety fence to be installed next to the retaining wall (or a guide rail in parking areas). The detail also shows that the geosynthetic reinforcing fabric (geogrid) shall be installed below the pavement sections. The grading and drainage plan has been revised such that most inlet/manhole structures have been relocated further than ten feet away from the retaining walls (see sheets CG101 and CG102). Detailed construction documents for retaining walls with structures located within five to ten feet of the wall will be prepared by a licensed geotechnical engineer. A note has been added to the detail on sheet CS502 indicating such.