KELLARD SESSIONS

John Kellard, P.E.
David Sessions, RLA, AICP
Joseph M. Cermele, P.E., CFM
Jan K. Johannessen, AICP

MEMORANDUM

TO: North Castle Planning Board

CC: Adam Kaufman, AICP
Paul R. Sysak, RLA
Jeffrey B. Mendell

FROM: Joseph M. Cermele, P.E., CFM
Kellard Sessions Consulting
Consulting Town Engineers

DATE: June 24, 2021

RE: Summit Club Phase B Residential Site Plan
568 & 570 Bedford Road
Section 101.02, Block 1, Lot 28.1 & 28.2

As requested, Kellard Sessions Consulting has reviewed the plans and application submitted in conjunction with the above-referenced project for the Residential Phase of the Summit Club at Armonk. The applicant is proposing to develop Lot 2 of the two (2) lot subdivision previously approved for the Brynwood Country Club. As you know, the owner is currently redeveloping the golf course portion of the overall development, located on Lot 1, in accordance with a previously approved Site Plan. The proposed project includes six (6), 3-story multi-family residential buildings with a total of 162 bedrooms within 72 housing units, including fifty-four (54), 2-bedroom and eighteen (18), 3-bedroom units. Each residential building has proposed at-grade parking in the front of the building and enclosed parking on the lower level with access from the side of the building. The plan also proposes an amenity building with associated parking, four (4) tennis courts, a tennis pavilion and a gate house. Finally, a lot line adjustment is proposed as part of this application, which will result in reducing the size of Lot 1 from ±129.9 acres, under existing conditions, to ±127.6 acres; while Lot 2 is increased from ±26.3 acres to ±28.6 acres. The ±156 acre property is located in the One-Family Residence, R-2A, Golf Course Community Floating Overlay District (GCCFO).

GENERAL COMMENTS:

We found the drawings to be a well prepared and detailed package. The plans provide good vehicle and pedestrian circulation and access to the proposed buildings. Our only significant comment with regard to the project's layout is within the area of the amenities building southeast corner. At this location, the driveway traverses around the proposed tennis courts to the large, existing parking lot. There is also a driveway at this location, which descends to the cart shed building. Conflicting grades between the two (2)

drives result in a very awkward slope. This coupled with two (2) perpendicular turns and a tennis court located very close to the driveway at a grade 4-6 feet above the drive, appears to present additional issues. We would suggest the applicant examine this area further to improve on the alignment and/or grades.

Our technical comments and recommendations follow:

COVER SHEET

1. Parking space calculations do not appear to comply fully with the regulations. The additional ½ space per bedroom is only required for bedrooms in excess of the initial two (2) bedrooms per unit.

SITE PLANS

2. The applicant should provide the design for the retaining wall (approximately 8 ft high) located along the cul-de-sac of Road B and driveway to Building #6. Proposed finishes should be provided for the Planning Board's consideration.

3. The applicant should provide the design for the decorative stone wall along Bedford Road frontage.

4. Traffic signage is not provided in front of the amenities building or proposed parking lot in front of the building.

5. Permeable asphalt pavement is proposed within the new parking lot in front of the amenities building. Soil test data should be provided.

6. Pervious pavers are proposed within the parking courts in front of the residential buildings. Soil test data should be provided.

7. Setbacks should be provided along internal property boundaries.

8. Sidewalk width should be provided on the site plans.

9. The applicant should examine the site plan and provide all required dimensions required to layout and construct roadways and parking areas. This should include dimensions, radii, tangents, etc., along roadway center lines, intersections and parking areas.

10. Below grade parking layouts should be provided for verification of the parking provided.

11. A Highway Work Permit and Driveway Access Permit will be required from the New York State Department of Transportation (NYSDOT).

12. The roadway center line radius for Road "A" is less than the Town regulations for roadways. We do not consider this portion of Road "A" west of the traffic circle to be a roadway, but a driveway servicing the amenities building. Considering the speed limit and grades in front of the building, we see no issue with the proposed radius.

FIRE TRUCK PLAN

13. The applicant has provided fire truck turning movements along proposed roadways and driveways through the project. The only apparent conflict is at the end of Road "A" where apparatus exiting the parking lot traverses over the three (3) parking spaces east of the driveway. The applicant should re-examine this turning movement and show whether the movement can be accomplished when vehicles are parked within these spaces. We would recommend that the plan be referred to the Armonk Fire Department for review.

GRADING PLAN

14. We would suggest the applicant re-examine the driveway grades where the driveway to the cart shed meets the amenity building driveway. Also, proposed grading at the southwest corner of the proposed tennis courts may require a wall.

15. Grading within the lawn area in front of Buildings #1 thru #4 and the northeast portion of the amenities building require some additional attention, contours appear to be missing.

16. Grading of the driveway and area between the pool deck and putting green behind Building #1 appear to also need some attention.

17. The embankment making up the detention pond is proposed at 1 vertical on 2.5 horizontal slope (1V:2.5H). The New York State Stormwater Management Design Manual (NYSSMDM) recommends a maximum slope of 1V:3H. It appears slope stabilization is being proposed, however, we could not find this additional detail. The applicant should consider revising the grading.

18. Please provide a detail of the curb cut at the NYSDOT roadway. We have concern that the location and elevation of catch basins in relationship to the existing grades at Route 22 could result in ponding of stormwater runoff. Please address.

19. The proposed tennis courts are graded at a slope across their width of less than 1%. This may result in ponding and therefore, a different grading plan for the courts may be proposed at the time of their construction. We would recommend that the drainage system inverts at the tennis courts be established at an elevation, which would permit drainage at the far end of the court be collected should final grading vary from the proposed grades shown.

20. The applicant should prepare a cut and fill analysis for each phase of construction so that there is an understanding of the overall requirement for import or export of materials and how materials will be handled between phases of construction, i.e., if there is surplus material for Phase 1, it is assumed it would be used to off-set fill requirements for Phase 2, etc.

ROADWAY PROFILES

21. The proposed grade at Road "A" between Station 0+00 and 1+85.44 is less than the Town's minimum grade of 1.5%.

22. The vertical curve at Road "B" Station 9+00.00 should be increased to a minimum of 160 feet in length to meet the minimum K value of 20 for crest curve and at Station 10+34.66 to 90 feet in length to meet the minimum K value of 15 for sag curves to comply with Town standards.

23. The vertical curve at Road "C" Station 0+50.50 should be increased to 105 feet in length to meet the minimum required K value of 15 to comply with Town standards.

PRELIMINARY UTILITY PLANS

24. Please clarify how the existing drainage system within the NYSDOT right-of-way at the proposed entrance functions and where it discharges.

25. The applicant is proposing a new water distribution system to service the project. Fire hydrants are proposed at various locations throughout the project. The applicant is proposing hydrants on the far side of the sidewalk approximately 10 feet from the roadway. Hydrants are typically installed within the grass strip between the roadway and sidewalk approximately two (2) feet off the roadway. This makes for easier access and clearing of snow. A hydrant is also proposed in front of the amenities building. We would suggest the hydrant layout be forwarded to the Armonk Fire Department for their review and comment.

26. The proposed water distribution and sanitary sewer collection systems will require approval by the Westchester County health Department (WCHD).

27. Individual domestic and fire service mains are proposed into each of the six (6) residential structures and the amenities building. Upon determination of the size and type of the service main, such information should be included on the site plans.

28. The water main does not appear to have sufficient cover over the pipe between Station 1+00 and 4+00. Is fire service and domestic water service required to the cart shed and if so, will it be a separate service line or be fed through the amenities building?

29. The applicant is proposing a new sewer collection system to service the project. The sewer main between the amenities building and sewer plant is proposed within the existing sewer trench. A separate branch will service the six (6) residential buildings from the rear of the buildings. Individual building services are proposed to each building. Also, a gravity service main is proposed to the gate house. We have provided preliminary comment related to the layout below.

30. The four (4) inch service pipe to the gate house appears to be proposed at a depth, which is significantly lower than what may be necessary (16 feet deep at SMH 4-1B). This excessive depth could be due a rim elevation at SMH 4-2B, which is ten (10) feet lower than the proposed grade. Please re-examine the design, it appears the sewer service could be raised significantly.

31. The sewer main within the rear of the residential buildings also appears to be excessively deep, with significant portions of the main in excess of 20 feet deep and a manhole at 22 feet deep. The depth of installation could be reduced significantly with some minor changes to the grading plan at SMH 15 and 13 and also within a short segment of the main between SMH's #11 and #12. Also, if the sewer main were constructed between manholes BMH #3 and SMH #7 instead of SMH #4 and SMH #7, further reductions of depth may be achieved.

32. There are no stormwater collection or treatment practices proposed on the plans for runoff from the amenities building, new tennis courts in front of the amenities building, driveway, existing parking lot or pool deck. The applicant should explain their intent on addressing the runoff.

33. Drainage Manhole DMH-8A-1-1 is proposed at a depth of 20 feet. A shallow manhole located around Station 1+50 would permit reducing the depth to 3-4 feet for DMH-8A-1-1. Also, manhole DMH-4B-4 is 12 feet deep. This manhole could be significantly reduced with no additional improvements.

34. As previously mentioned, the inverts at DMH-8A-1-1 and DMH 4B-4 should be examined to assure a depth sufficient to collect runoff from the opposite side of the tennis court should an alternate grading scheme be implemented.

35. Roof discharge locations at Buildings 1-6 should be provided.

36. The plan illustrates catch basins and storm piping located within the proposed future road. The plan should clarify whether it is proposed to install these improvements as part of this plan or only if the future road is to be constructed.

UTILITY PROFILES

37. Crushed stone or gravel should be shown on the sewer profiles and water main profiles between the existing grade and the main when the mains are located within areas of fill.

38. The applicant should check drainage profiles for adequate cover over pipes. In particular, downstream of DMH-5B, vicinity DMH-5A, WQS-4A, TD-4B-5-1, between WQS-4B and CI-4B-1, CI-4B-1 and DMH-4B-2 and DMH-8B.

39. The profiles should illustrate all utility crossings to demonstrate that minim required separation distances to sewer and water mains are provided.

CONSTRUCTION DETAILS

40. We would prefer all drainage structures to be precast concrete. Solid concrete block structures should only be used when precast options are not available.

41. Sidewalk thickness should be 5" minimum.

42. Heavy duty pavement should include a 4" thick binder course.

43. Provide details for:

    - 4" mountable curb
    - Granite cobblestone pavers
    - Porous pavers
    - Tennis courts

SWPPP

44. The applicant has submitted a Preliminary Stormwater Pollution Prevention Plan (SWPPP) for review and approval. Our office will continue to review the SWPPP along with the stormwater treatment design, pipe sizing and erosion and sediment plan as the project develops. We shall forward our preliminary comments on the SWPPP.

45. We note that the project proposes approximately 18 acres of overall disturbance. The plans indicate three (3) phases of construction. The Erosion and Sediment Control Plan shall clearly identify the phases of construction, total disturbance area for each phase, and the measures required to control erosion and sediment for each phase. Because disturbance for a particular

phase will exceed five (5) acres, the owner has acknowledged that he will be required to perform increased inspections throughout construction.

46. The Erosion and Sediment Control Plan should include additional measures such as diversion swales and water bars to direct stormwater runoff to the proposed temporary sediment basins. Due to the level of earthwork and grading proposed behind Buildings #4 thru #6, we recommend that an additional temporary sediment basin be constructed downgrade of this development area.

As additional information becomes available, we will continue our review. It is noted that the applicant should provide an itemized response to all comments will facilitate completeness and efficiency of review.

PLANS & REPORT REVIEWED, PREPARED BY JMC, DATED JUNE 14, 2021:

- Cover Sheet (C-000)
- Overall Existing Conditions Map (C-010)
- Existing Conditions Map (South) (C-011)
- Existing Conditions Map (North) (C-012)
- Site Demolition & Tree Removal Plan (South) (C-020)
- Site Demolition & Tree Removal Plan (North) (C-021)
- Site Tree Removal Table (C-022)
- Overall Site Layout and Phasing Plan (C-100A)
- Site Layout Plan (South) (C-100)
- Site Layout Plan (North) (C-101)
- Fire Truck Access Plan (C-102)
- Site Grading Plan (South) (C-200)
- Site Grading Plan (North) (C-201)
- Road Profiles Plan (C-202)
- Site Preliminary Utilities Plan (South) (C-300)
- Site Preliminary Utilities Plan (North) (C-301)
- Sanitary Sewer Profiles (C-302)
- Water Main Profiles (C-303)
- Storm Sewer Profiles (C-304)
- Site Erosion & Sediment Control Plan (South) (C-400)
- Site Erosion & Sediment Control Plan (North (C-401)
- Erosion & Sediment Control/Phasing Notes (C-402)
- Construction Details (C-900, C-901, C-902, C-903)
- Integrated Plot Plan (IPP-1)
- Preliminary Subdivision Plat (PSP-1)
- *Stormwater Pollution Prevention Plan* Report

JMC/dc