

September 26, 2023

Marshall Agee, P.E.
VHB
115 South 15th Street
Richmond, VA 23219

**RE: Chamberlayne Multifamily Apartments
5701 Chamberlayne Rd
POD2023-00206**

Dear Mr. Agree:

We have reviewed the construction plans submitted to the Planning Department on September 1, 2023.

Please address the following comments and **resubmit revised construction plans** for review. Water and Sewer Agreements that must be executed by the Owner and the County for water and sewer improvements **have not** been executed.

General:

1. An Information Sheet for Preparation of Agreements for Water and/or Sewer Service has been submitted. The Information Sheet allows the Department of Public Utilities to prepare the Water and Sewer Agreements which must then be executed by the Owner and the County prior to approval of building permits and/or prior to the utility pre-construction meeting and authorization to proceed with utility construction. It is recommended that the Information Sheet be submitted as soon as possible to avoid delays in either of these steps. Preparation of the Agreements may take up to 15 days after receipt of the Information Sheet and execution by the County after execution by the Owner may take up to 10 days. Conflicts between the completed Information Sheet and the plans may generate additional review comments. salvage
2. Review the following comments pertaining to the Engineering Report (Page 2 of 2):
 - a. The design basis should be evaluated using 300 GPD/Unit for the apartments and 250/1000sqft for the Clubhouse.
 - b. The Equivalent Residential Units is the Average Design Flow divided by 300.
 - c. Update the form and resubmit it to DPU for review.

Cover Sheet:

3. Provide original signature and date on the engineer's seal.
4. Revise water and sewer material quantities in accordance with all comments.

Sheet C7.01 (Utility Plan):

5. As previously commented, is the distance labeled from water main to the face or back of curb? **This should be clearly indicated on the utility plan sheet.**
6. As previously commented, show the limits of all tees and bends on the water line.
7. As previously commented, clearly show the gates on the utility plan where the water line crosses the fence line.
8. As previously commented, reference the size of the tapping sleeve & valve as "8" x 8" TS&V" on Chamberlayne and Crenshaw Rd.
9. As previously commented, reference the size and material of the domestic service line for the Clubhouse.
10. Remove the water line adjustment symbols between STA 10+00 and 11+50. There are no adjustments in this area nor are any adjustments shown on the water line profile.

11. Remove the grading layer from the utility plan.
12. Relocate the water meter for Building-2 in the grass island located east of its current location.
13. Shift the fire service line to serve Building-1 in the pavement to relocate the valves out of the sidewalk to avoid a trip hazard.
14. A hold harmless agreement will be required for the proposed Picketball Court to be located overtop of the water line/easement. DPU will not be responsible for any replacement of any specialized surfacing for the court if maintenance is required on the water line. Also, no structures are allowed overtop of the water line/easement.
15. Reference the sheet location of the backflow preventer details in the backflow preventer callout.
16. Remove the dark shading from the Picketball Court area shown on the utility plan sheet so the utilities can be clearly seen.
17. The domestic water line and meter for the Clubhouse is too close to the sewer main. Relocate the water service connection to the eastern side of the building (near water line station 12+75).
18. Reference the size and material of the domestic service line connection for the Clubhouse.
19. Label the material of the proposed water line.
20. Reference all proposed tee connections on the water line
21. Show the valves that are part of the tapping sleeve & valve assembly on the water line.
22. The siamese connection for Building-1 must be within 50' of the dedicated fire hydrant for Building-1.
23. All sanitary sewer to be removed/abandoned must be deleted from this plan sheet and should be shown on the demolition sheet.
24. No lighting structures are permitted in the utility easements. Review the location of all lighting structures shown on the plan. Lighting plan cannot be approved until final utility layout is approved.

Sheet C7.03 and C7.04 (Profiles):

25. There are several text overlaps on the sanitary sewer profiles and inverts are not legible. See S-1 on two of the profiles and revise as necessary.
26. Show the sanitary sewer crossing between STA 10+00 and STA 10+40.
27. Why is a fire hydrant shown on the water line profile near STA 10+30 on Proposed Water 2 profile. There are no fire hydrants in this area.

Sheet C10.03 (Utility Calculations):

28. DPU forms should not be modified. Use the Standard F-9 form in DPU Standards to calculate the Needed Fire Flow. Update the Fire Flow Estimate Forms accordingly. Additional comments may be generated based on this change.

Sheet C10.04 (Utility Calculations):

29. Several of the Fixture Valves on the Meter Sizing Forms are incorrect. Review and update subsequent calculations as necessary.
30. Will flush valves or tank type toilets be installed in the Apartments? Update F-8 as necessary.
31. For a Maximum Demand of 1401, a dual 1-½" water meter is required for Building-1. Update the utility plan and meter sizing form accordingly.
32. For a Maximum Demand of 87.5, a 2" water meter is required for Building-2. Update the utility plan and meter sizing form accordingly.
33. DPU is reviewing the sanitary sewer analysis. Once the review is completed, DPU will forward any comments to the Engineer.
34. The hydraulic water calculation does not run both domestic and fire flow demand on one table. Based on the hydrant table, pulling 1000gpm at H-6 the pressure is at 20 psi. When the domestic demand is included in the table, the pressure will be below 20psi. As mentioned in the DPU rezoning comments,

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offsite upgrades will be required to the water system to provide the needed fire flow and domestic demand to the site.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4508 or John Yi 501-4511.

Sincerely,



Alice Thompson
Utilities Engineer

cc: Andrew Basham, Spy Rock Real Estate Group

bc: Marchelle Sossong
Daniel Ivy
Planning

ANT/vr