

June 9, 2023

Marshall Agee, P.E.  
VHB  
115 South 15<sup>th</sup> Street  
Richmond, VA 23219

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

Dear Mr. Agree:

The Department of Public Utilities has completed a review of the water and sewer plans that are part of the plan of development submitted to the Planning Department on My 24, 2023.

DPU recommends approval of these plans by the **Director of Planning**.

Please address the following comments before submitting the construction plans for signature.

**General:**

1. An Information Sheet for Preparation of Agreements for Water and/or Sewer Service has not 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.
2. Since the water system design need to be revised to address the fire protection comments, revised Hydraulic Calculation will need to be submitted for review to ensure adequate pressure is provided in the system. As mentioned in the DPU rezoning comments, offsite upgrades may be required to the water system to provide needed fire flow to this site.

**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 C.301 (Demolition Plan):**

5. Clearly show the location all existing water and sewer mains and utilities (hydrants, meters, valves, etc) on this sheet. See utility plans sheet as well.
6. Label the size and material of all existing water and sewer mains.
7. Provide a note indicating all existing utilities to be abandoned shall be done in accordance with DPU Standards 1.4.01C and 10.3.10.
8. Label the size and meter numbers for the existing meters to be abandoned off Crenshaw Rd. See Sheet C3.02 as well.

**Sheet C.302 (Demolition Plan):**

9. Was a septic tank/drainfield serving Parcel 5700 Chamberlayne Rd? If so, show the location of the septic tanks/drainfields and provide a note indicating all existing well and septic tanks/drainfields will be abandoned in accordance with VDH requirements.

**Sheet C7.01 (Utility Plan):**

10. Provide three (3) northing/easting points on the plans.
11. Label the distance from water main to either the face or back of curb.
12. Show the location of all water line adjustments by providing an oval or circle in the area of the adjustment in the water line.
13. Provide water line stationing on the utility plan sheet.
14. Why is the connection to the existing water pipes referenced as a "Tee" and "TS&V". Remove the tee references and use a tapping sleeve & valve to connect to the existing pipes.
15. Relocate the fire hydrant near the Clubhouse to the entrance of the site. Be sure to relocate the hydrant at the point of tangent.
16. Three valves are not required at a tee. Remove the unnecessary valves from the fire hydrant tee connections.
17. Show the limits of all tees and bends on the water line.
18. The water line is shown within the amenity area. Be advised, no structures, landscaping, lighting and/or hardscaping will be allowed in the utility easement around the proposed water main.
19. Label the size and material of the fire service line between the tee connection and boundary valve as well as the domestic service line before the meter as DI.
20. Label the size of the domestic and fire system backflow preventers.
21. Show the approximate location of the backflow preventers on the building.
22. A dedicated fire hydrant and siamese connection is required for each apartment building.
23. Be advised, dedicated fire hydrants cannot be used to meet hose lay requirements. Additional fire hydrants are required for this project.
24. Relocate the water meters in the grass area and out of the sidewalk to avoid a trip hazard.
25. Relocate the boundary valve closer (approximately 10') the tee connection.
26. An exclusion meter is shown on the plan but not referenced on the plan.
27. If an exclusion meter will be installed, a backflow preventer will be required after the meter.
28. Use and reference a full pattern mechanical joint to connect to the existing water main in Crenshaw Rd.
29. The security fence cannot be installed over the 8" water main. Provide a gate where the water main cross the fence. The water main should be centered in the gate and gate posts need to be located out of the easement.
30. The water main located northeast of the property off Crenshaw Rd is not acceptable. Additional onsite water piping will be required to meet fire protection requirements.
31. Install a fire hydrant in the grass island at the entrance off Crenshaw Rd.
32. Provide an isolation valve near the tee connection on the domestic and fire service connections.
33. How will the Clubhouse be served by water? If Clubhouse will be served via plumbing lines from the Apartment Building, clearly show on the plans.
34. Is the sewer main public or private? If the sewer is private, label the sewer as private on the utility plan and profiles.
35. The storm pipe between STR-400 and STR-401 is located overtop of the existing sewer main at the entrance off Chamberlayne Rd. Relocate the storm pipe 10' from the sanitary sewer pipe.
36. Change the dash line style to solid line style for the proposed sanitary sewer.
37. Show the direction of flow arrows on the proposed and existing sanitary sewer mains.
38. Reference the GIS MH ID and surveyed MH rim and invert information for the existing manholes.

- 39. Be sure to provide benchmarks within 500' in the area of the sanitary sewer mains.
- 40. Provide internal angles at the manhole connections.

**Sheet C7.03 (Profiles):**

- 41. Provide a profile of the doghouse manhole to the next upstream and downstream manhole.
- 42. Show all water and sewer crossings on the storm sewer profiles.
- 43. Be sure to match crowns at MH-S-1.
- 44. The slope between MH-S-1 and MH-S-2 is too steep. Reduce the slope of the sewer line to tie into the public sewer main.
- 45. Remove the drop connection at MH-S-2 and install the sewer to the manhole bench of MHS-2.

**Sheet C7.04 (Profile):**

- 46. Update the water line profile per plan comments.
- 47. Show the proposed valves to the proposed grade line.
- 48. The water main must be installed at a minimum of 3.5' of cover.

**Sheet C9.05 (Utility Details):**


- 49. Remove all details (D-115, D540) that do not pertain to this project and add all detail that are relevant to this project such as Thrust Blocking and Electronic Marker Ball details.

**Sheet C10.13 (Utility Calculations):**

- 50. A fire flow estimate form is required for the proposed Clubhouse.
- 51. Provide a hard copy of the Engineer Report with the next submittal. Be sure to sign and date the Engineering Report.
- 52. Provide signatures on all the Domestic Meter Sizing and Fire Flow Forms.
- 53. There is no Domestic Meter Sizing form for the Clubhouse. Provide a form for the clubhouse.
- 54. No fixtures are shown on the Meter Sizing Form. The size of the meters cannot be confirmed until all information is provided to DPU for review.
- 55. Clearly show how the ground floor area was calculated on the Fire Flow Estimate Forms.

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

bc: Marchelle Sossong  
Daniel Ivy  
Planning  
ANT/djm