April 2, 2021

Jason Wilkins, PE
Townes Site Engineering
1 Park West Circle, Suite 108
Midlothian, VA 23114

RE: Gateway II
1648 N. Parham Rd.
FILE NO.1695 POD2021-00119

Dear Mr. Wilkins:

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 March 17, 2021.

DPU recommends approval of these plans by the Planning Commission.

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

Sheet C-1 (Cover Sheet):

1. Provide a north arrow for the vicinity map.
2. Increase text size on the map. Move the label of Parham Road and Three Chopt Road to a less crowded location so it is more readable.
3. Provide an original signature on the P.E. seal on the cover sheet. All other sheets can have facsimile signatures.
4. Revise water and sewer material quantities in accordance with all comments.
5. Clarify the square footage of the main building and clubhouse in the site data as it does not match with what is shown in Fire Flow Estimate Form.
6. Provide clarification for the first floor's layout of the main building. Is only a portion of it retail (14,700sf out of 20,837sf)?

Sheet C-2 (Existing Conditions):

7. Increase the font size on text callouts for utilities and easements, as presented, it is not readable. The easement for the existing water and sanitary sewer must be recorded if it has not been previously recorded. Update where necessary.
8. Indicate the size and materials of all existing utilities. Update on all sheets.
9. Show all the existing water & sewer services, clean-out, and meters located on site and the neighboring sites, within the scope of the project to avoid any conflicts with the proposed water and sewer main installations.
10. Clearly show all existing water valves, fire hydrant lead and valves. Update where necessary.

11. Clearly show the location of the existing meters that are serving the site with meter numbers and sizes included. Update on Demolition Plan as well.
12. Include CSB or GIS information for all existing manholes by including MH ID or Station Numbers, top elevations, inverts, and provide directional flow arrows on the sanitary sewer main. Update where necessary.
13. Provide the surveyed elevations and inverts for all the existing manholes surrounding the site. Update on all sheets.
14. Verify the location of the existing utilities and easement. Why are the utilities not in the center of the easement?

Sheet C-3 (Demolition Plan):

15. All comments on existing conditions sheet also apply to this sheet.
16. The existing sanitary sewer cannot be removed since it is also serving the neighboring property (McDonald's). Relocate the clubhouse or the existing sanitary sewer to avoid conflict.
17. Revise the sheet number referenced in Demolition Notes Legend 3 and 4 to Sheets C-16.
18. Include the following note on this sheet: "Utilities to be abandoned shall be abandoned per DPU standards 1.4.01 C and 10.3.10."
19. Add the following notes to this sheet:
    a. Contractor shall notify DPU of the demolition schedule so that DPU metering staff can read the meter and turn off the service prior to disconnection, and DPU inspector can verify the work.
    b. Meter will be removed with the present of the DPU staff and return to DPU Operations Division.
    c. Account will be finalized, and billing will stop only after proper abandonment of the services has been verified by DPU.
20. Show the location where you are planning to cut and plug/cap the existing water and sanitary sewer mains and service connections.

Sheet C-16 (Utility Plan):

21. All comments on existing conditions sheet also apply to this sheet.
22. Update sheet C-4 to match with the utility plan.
23. Note 2 mentioned buildings 1, 2, and 3 but it does not apply to this project. Label each proposed building such as clubhouse, retail and apartment. Clarify the layout of the main building. Is it one big building or two buildings with a common area?
24. Note 6 indicates the use of an irrigation meter; however, no irrigation meter is shown on the utility plan. Show the location of the irrigation meter on the utility sheet, include size, type, peak demand, and detail number within its callout.
25. Show the location of the waterline adjustment in the water main by providing a bubble around the adjustment area on the utility plan.
26. Recommend including details D-520 & D-525 within the 5/8" meter callout.
27. All proposed water main should be 8". Eliminate the short portion of the existing 6" water main. Tie the proposed water main to the existing 6" water line with an 8"x8" tee and the 8"x6" reducer. Provide 2 proposed valves at the tee.

28. Relocate the proposed tee and valve near station 14+50 eastward to avoid conflict with the storm sewer.
29. Proposed water line must be 10 feet away from the big storm sewer near station 13+55 and 12+60. Using two 45 degree bends instead of 90-degree bend and realigning the water line slightly should solve this problem.
30. Realign the proposed water line to avoid putting the bend under the storm sewer at station 13+21. The realignment also will eliminate the proposed water line from being within 10 feet of that big storm sewer.
31. Review the callout of the 1" water meter. The service size must be 1.5" and not 1" as proposed on the plan. Label the pipe material of the service pipe to be copper.
32. Show the 6" gate valve at the tee in addition to the boundary valve. Label the size of the boundary valve to be 6". Include DPU details D-476 within boundary valve's callout.
33. Provide domestic backflow device on the plan with proper detail number, size included within its callout. Show the location of the two backflow preventers to make sure they are not in conflict with each other.
34. Recommend labeling to install fire hydrant per detail D-495.
35. Show the 4" valve on the water domestic service line to the main building.
36. What is the purpose of "water line D"? Relocate the tee to the location of the 90-degree bend and eliminate the bend.
37. Provide a dedicate fire hydrant for the fire line. It must be within 50 feet of the FDC. Additional fire hydrant might be required depending on the revised Fire Flow calculation.
38. Label size and material of the proposed sanitary sewer.
39. Provide a new location for the clubhouse or relocate the existing sanitary sewer to avoid conflict.
40. Provide new manholes and realign the existing sanitary sewer where it is in on top of the curb. Changing manhole top and rotating it out of curbing is not acceptable.
41. Provide a table to address the raising and lowering of existing manholes to finished grade.
42. Provide internal angle for proposed sanitary sewer.
43. Provide more information on the potential usage of the "Clubhouse" and/or "First Floor Retail". If any non-domestic wastewater is generated at either location, such as food prep occurring, a Monitoring Manhole and Pretreatment would be required in the design. Is there going to be any restaurant or all retail?
44. Resolve overlapping texts on the plan to prevent any conflict. Update where necessary.
45. Provide benchmarks every 500 feet to be consistent with DPU Spec. 5.5 L.
46. Provide 3 additional northing and easting coordinate points at 3 other property corners.
47. Reference CWB/CSB sheet 196SW on the bottom of this sheet.

Sheet C-17 (Utility Details):

48. Revise this sheet by providing Henrico County Details and not Goochland County Details.
49. Include Material Notes (Form F-6) and Water and sewer notes (Form F-11) on this sheet.

50. Request an updated water system flow request with the fire flow of 3500 gpm.
51. Delete all the unnecessary details such as drop connection, and casing pipe.
52. Add detail D-165, D-435, D-476, D-485, D-520, D-525, D-530, D-535, and D-700.
53. Add Electronic Marker Placement Detail For Water Mains And Sewer Force Mains D-740 & Electronic Marker Placement Detail For Gravity Sewer D-750.
54. Add the appropriate backflow preventer detail for the domestic water service line.

Sheet C-21 & C-22 (Profiles):

55. Revise the "Sanitary Sewer MH E1 to MH2 Profile" in accordance with comments on Utility plan sheet.
56. Change the size of the tapping sleeve & valve shown at the beginning of "Waterline A Alignment Profile" to 8"x8" to match what is shown on the utility sheet.
57. Show all storm crossings on "Waterline B Alignment Profile".
58. Delete the label of the fire hydrant tee at station 11+50.
59. Label to use DI pipe where you are adjusting the waterline under the storm sewer.
60. Identify the 90-degree horizontal bend in "Waterline C Alignment Profile" to match with the plan view.
61. Review the labels at the end of "Waterline C Alignment Profile" near station 12+00 to match with the plan view.

Sheet C-25 (Fire and Water Calculations):

62. Remove the Project Summary Report form and the Engineering Report from this sheet. Update the flow on these two forms based on the correct square footage of the building. Update the fire flow and the minimum pressure. Provide retail flow, and DI pipe in the project summary report. Clarify how did you calculate peak hour demand and maximum hour demand.
63. Complete the Domestic Meter Sizing Form for the retail building.
64. Revise the fixture value of the washing machine in the Domestic Meter Sizing Form for the apartments and update the total combined fixture value and maximum demand.
65. Revise the ground floor area in the Fire Flow Estimate Form to match with what is shown in the site data on the cover sheet and update the calculation. Shouldn't there be exposure between the two buildings?

General:

66. Agreements have not been executed at this time. Agreements must be executed prior to the authorization to begin utility construction or approval of building permits. An Information Sheet for the Preparation of Utility Agreements has been submitted and is being reviewed. If the Information Sheet is incomplete, we will send you comments for correction and resubmittal. If the Information Sheet is complete, an Agreement will be forwarded to the Owner for signature.
67. Update the Fire and Water calculation on sheet C-26 with the correct required fire flow.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4601 or Carmel Duverné 501.7314.

Sincerely,

for Bob Dao
Utilities Engineer

cc: Mr. Steven T. Alexander, Gateway Associates of Richmond, LLC

bc: Ralph Claytor
Carmel Duverné; Megan Gallagher
Christina Goggin, Planning
CED/tt