

February 2, 2021

Joe Faudale, P.E.  
The Bay Companies  
8500 Bell Creek Rd  
Mechanicsville, VA 23116

**RE:** Retreat at One-Section 2  
LOCATION: 9009 Brook Rd & Telegraph Rd  
**FILE NO. 5459 POD NO. 2021-00011**

Dear Mr. Faudale:

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 January 11, 2021.

DPU recommends approval of these plans by the Planning Commission.

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

**General**

1. 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 not been submitted for review. If the Information Sheet is incomplete when submitted, we will send you comments for correction and resubmittal. If the required Information Sheet is complete when submitted, an Agreement will be forwarded to the Owner for signature within 21 days.
2. Required offsite sanitary sewer improvements (sewer upgrade from 12" to 16" for manholes E30-E34) based on the overall sewer shed analysis shall be constructed prior to acceptance of section 2 or any other future section of this development, whichever comes first. Therefore, either include this work as part of this plan of development or develop and submit separate utility plans to DPU for this upgrade.
3. Utility plans shall be submitted to DEQ for acceptance and a certificate to construct (CTC) obtained from DEQ prior to DPU approval. This applies to the offsite sanitary sewer improvements.
4. Revise and resubmit calculations for the Engineering Report, Project Summary Report (i.e., Local Review Form), and water system hydraulic calculations in accordance the following and with all subsequent comments:
  - Revise the water and sewer calculations within the Engineering Report to be based on this development having 106 townhouses and 54 condominiums.
  - Revise the Project Summary Report to show 106 residential connections and 4 other connections for the condominiums. Flow demand will be 300 gpd for each condominium unit.
  - Revise the hydraulic evaluation information within the Project Summary Report to correctly show the max day and peak hour demands based on the total water flow demand. In addition, show the fire flow that produced the worst-case pressure situation.

- Revise model for additional waterline and hydrants that will be required within the condominium sites.

#### **Cover Sheet**

5. Revise water and sewer material quantities in accordance with all comments and per the following:
  - Include 8"x4" tees, 4" gate valves and 4" waterline for condominium water services.

#### **C2-C3(Existing conditions and demolition)**

6. Add a note that the utility demolition work indicated on these sheets is shown for informational purposes and was previously shown to be performed with the Section 1 plans.

#### **C4(Overall Plan) and C4A (Section 2 Overall Plan)**

7. Label buildings 5, 6, 7, and 8 as being part of section 2.
8. Update these sheets based on subsequent comments.

#### **C9(Erosion Control Phase 2 West)**

9. Modify note 2 in the erosion control narrative to say that utilities will be installed except for waterline utilities within the confines of sediment basin#1 which will be installed after this basin is taken offline and filled.

#### **C16-C19(Layout & Utility Plan)**

10. Given the problems with both excessive depth of sewer and shallow sewer along McCormick Farm Drive and excessive sewer depth along McCormick Farm Place, reroute sanitary sewer (as discussed and confirmed with emailed pdfs) serving McCormick Farm Place and McCormick Farm Drive to go to manhole 1 within Section 1 instead of manhole 32 near Rivanna Hill Road. Both this plan and Section 1 will now show manhole 1 will be relocated, and the run of sewer from manholes 3 to 1 lengthened and reduced to minimum slope, to allow for a small run of sewer connecting to manhole 26 without having to add another manhole within the turn of the road. Sewer within Rivanna Hill Road and McCormick Farm Place can be truncated to pick up the last laterals at blocks K and O instead of being interconnected.
11. On sheets C16 and C17, extend 8" waterline into the condominium sites so that an additional fire hydrant can be placed at a location to enable Fire Division to logistically meet the required maximum hose lay distance as the truck drives. For Haversack Hunt Way, locate the hydrant just at the P.T. just above the first parking space of the 4-space area on the back west side. For Garrett Way, locate the hydrant 10 feet from storm structure 273.
12. On sheets C16 and C17 within the condominium sites, label and point to the 6" boundary valve with a separate lead line to minimize confusion with the 6" valve at the tee.
13. Provide a callout note on each plan sheet for connecting laterals to existing sewer mains using a cast iron compression type tapping saddle.
14. Show revised 12" and 16" waterline and valve arrangement within intersection of Telegraph Road and Magnolia Farm Road.
15. Provide a table to address the raising and lowering of existing manholes to finished grade. This table should include:
  - a. Existing top elevation.
  - b. Proposed top elevation.
  - c. Amount of modification required, i.e. vertical feet of raising or lowering.
  - d. Proposed method of adjusting each manhole.
  - e. Phase of construction each manhole modification is to be done.

16. In addition to manholes 1, 5, and 13 which will need adjustments to grade, review other manholes such as 43, 44 and 19 for potential grade impacts and necessary adjustments.
17. Add notes at manholes 1, 5, and 13 stating to connect sewer to existing manhole.
18. Locate light poles outside of utility easements and 10 feet away from public utilities. Locate individual lot light poles at least 5 feet from back of water meter boxes.
19. Provide an exception request letter to DPU Director for any fire hydrants that cannot be placed at least 50 feet from nearby buildings.
20. Revise the waterline connection note in Foxway Ridge Lane to include removal of the flushing hydrant before extension.
21. Relocate valve on west side of tee within Foxway Ridge Lane and Rivanna Hill Road to the east side.
22. Add an additional valve for a full cluster at the tee within Rivanna Hill Road and McCormick Farm Place. This will allow for flow from either direction to supply future section 4 thru the sole source line within Rivanna Hill Road.
23. Provide flushing hydrants at the end of water mains within Rivanna Hill Road and McCormick Farm Place.
24. Water main along block J can be reduced to 6" or 4" (latter requires tapping saddles on water services) since no fire hydrants are on this portion of water main.
25. Show dual laterals for lots 3-6 of block F correctly connected to the sewer main.
26. Provide mechanical joint restraint for the water main bend crossing over storm sewer from structures 233 to 234.
27. Locate water service connection for lot 2 of block P to 5 feet from adjacent bend.
28. Clearly show sidewalk location along block N and ensure that water meters and cleanouts are located outside of it.
29. Show all section 1 utility easements with deed book and page number when recorded.
30. Will any irrigation meters be provided for landscaping? Show these per DPU Standards and details.

#### **C24-C27(Road, Utility & Storm Profiles)**

31. Profile grade change over existing sewer main per Section 1 that is installed within the condominium lot areas. Show manhole rim adjustments information where needed.
32. Label manholes 1, 5 and 13 to have vandalproof frame and covers replaced with standard type.
33. Revise profiled sewer to address previous comment on rerouting sewer to solve depth issues. If after sewer redesign there are any laterals remaining at deeper than 12 feet of cover, label and identify these laterals on the profiles.
34. Show water and sewer crossings within storm profiles with separation distances called out where 2 feet or less.
35. Show lateral invert elevations at manholes so that there are matching crowns between lateral and sewer main.

#### **C49(Utility Details)**

36. Revise the following on the ISO fire flow forms:
  - Revise worst case locations to match current designations.
  - Round Ci values to nearest 250gpm and revise remaining calculations accordingly.
  - Review and revise form for 12-unit condo building as this is labeled West Broad Landing.

**C57(Sewer Shed Map)**

37. Revise sewer within section 2 per previous comments on redesign.

**L01-L02(Lighting and Conceptual Landscaping)**

38. Provide a sufficient corridor thru 15' landscaping buffer along both sides of Magnolia Farm Road for the Fire Division to reach the south face of building 6 and north face of building 7 using hydrants along Magnolia Farm Road.
39. Tree plantings must be located outside of all utility easements or at least 10 feet away from utilities within right of ways. All other proposed landscaping must not obscure visibility or hinder maintenance of above grade or at grade utilities. Any non-tree landscaping within utility easements requires the following statement on the landscaping plan: "The owner is responsible for replacement of any planting (i.e. shrubs, etc.) damaged or removed by DPU, or it's agent, as required for maintenance of county owned water and/or sewer facilities."
40. Locate all light poles to be outside of proposed utility easements. Individual lot light poles shall be 5 feet from water meter boxes.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4501 or Ireini Botros at 501-4512.

Sincerely,

*John L. Clark*

John L. Clark, P.E.  
Utilities Engineer

cc: Jeremy Swink, SM Richmond, LLC

bc: Ralph Claytor  
Megan Gallagher  
Ireini Botros  
Christina Goggin, Planning

JLC/tt