

March 3, 2023

Joseph Faudale, PE
The Bay Companies, Inc.
8500 Bell Creek Rd
Mechanicsville, VA 23116

**RE: Virginia Center Commons Section 2 and Condos
10101 Brook Road
POD2022-00567**

Dear Mr. Faudale:

We have reviewed the construction plans submitted to the Planning Department on February 6, 2023 and received by DPU on February 7, 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. Owner to submit executed Utility Agreements prior to approval of building permits or prior to the utility pre-construction meeting and authorization to proceed with utility construction by DPU. 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. Utility design shall be coordinated with the Overall master utility plan that has been emailed to Dan Caskie on February 28, 2023.
3. Utility plans shall be submitted to DEQ for acceptance and certificate to construct (CTC) obtained from DEQ prior to DPU approval.

C1 Cover Sheet:

4. Update water and sewer material quantities in accordance with all comments.
5. Include a contact name for the Owner in the Site Data.

C2(Existing Conditions and Demolition):

6. In the sequence of demolition show step 1 after steps 2-4 since disconnections must occur first prior to demolition permit approval.

C2A(Existing Conditions and Demolition-Utilities & Drainage):

7. Determine how American Family Fitness is sewered to ensure their service is not disrupted during construction. The plans currently show sewer stopping shortly downstream of manhole 588SE. There is a note on the plans indicating that the discharge is to manhole 588SE014, however that is not being shown on the plans. DPU Operations staff will also be performing a cctv inspection when schedule permits in the near future to investigate this issue.
8. Show work already performed by the disconnect plan Dwg2022-171(cut and cap lines and portions of abandoned services). Update service abandonment note since this work has already been performed.
9. Review fire hydrant 588NE010H lead location as this appears to connect at a different location per DPU as-built information on GIS.

10. Update flow in note 3 to equal 1.5 MGD.

C3A Overall Utility Plan:

11. Utility crossings will not be allowed to go through the primary road Teacher Boulevard per Form Based Overlay District requirements. Water main on both sides of this street shall be looped as required to meet pressure and multiple feed directions. Therefore, truncate and plug the proposed watermain just after these appurtenances:
 - The water meter that is to serve building 10. Adjust meter so fire hydrant is at the end of the main.
 - The tee connecting 8" and 12" mains to the left of building 15.
 - The water meter that is to serve building 11. Adjust meter so fire hydrant is at the end of the main.
 - The water meter that is to serve building 17. Adjust meter so fire hydrant is at the end of the main.
 - Use a 8"x4" tee at the intersection of Arthur Mews Place and Fring Road with the water meter teeing off this line to serve building 18.
12. Review with Planner whether the private fire lines crossing Teacher Boulevard will be acceptable regarding the requirement of a Form Based Overlay District for not allowing utilities within a primary road.
13. DPU discussions with Bay Companies seem to confirm that there will be a future intersection from Turning Point Road into the parcel to the west of block U and Gilligan Lane. Based on this scenario, utilities will need to be coordinated to be consistent and minimize future relocations. In addition, waterline extension from Gilligan Lane to the west and a waterline stub off of Turning Point Drive need to be installed in anticipation of this future development. The nearby hydrant should also be located to not conflict with the intersection at Turning Point Road.
14. Complete the looping of water main along Arthur Mews Place to Bellow Blvd.
15. Access roads will need to be provided through proposed Section 3 for maintenance and operational access of water and sewer mains installed.
16. The sewer main along Turning Point Drive is to be 18" per the Overall master plan. This sewer needs to start from existing manhole 588SE017, which will need to be replaced, where the multiple mains junction at this manhole. Update profiles accordingly and lower proposed inverts by 6" so that pipe crowns will be aligned between the proposed 18" and existing upstream 12" main.
17. Provide a minimum of 10' of separation between the sanitary sewer and storm sewer where possible. If separation is not met, sanitary sewer must be DIP.
18. Set up water and sewer extensions to offsite adjacent parcels in accordance with the Overall water and sewer plan. Provide easements to these parcels where needed for the extensions to occur.
19. Sewer depth becomes shallow within Tuco Place, Fring Road and White Lane. Review sewer path and alignment in accordance with Overall sewer plan and improve sewer depth to minimum 5.5 feet where possible.

C4 and C5 Erosion Control Phases 1 and 2:

20. Silt basin #4 conflicts with proposed water main.

C9 Layout & Utility Plan (South):

21. Eliminate sewer run from manholes 23 to 22(also, profile was missing) and extend sewer within road to serve buildings 17 and 18. Sewer between buildings is to be avoided where possible and reasonable and there is not enough room between adjacent building foundations for this sewer anyway.
22. Adjust sewer from manholes 7 to 8 to be at least 10 feet away from building foundation.
23. Provide larger utility easements for all fire hydrants on all plan sheets by showing 16-foot width and 8 feet from the back of the hydrant.
24. There are several sewer laterals that are too close together along Fring Road. Provide 5' of separation between connections where possible.
25. Blocks R and S have water service connections that are too close together. Provide 3' of separation if on the opposite sides of the main. Provide 5' of separation if on the same side of the main.
26. Remove or relocate the sign next to the FH to the west of block T.
27. Label material of sewer laterals where DI is used. DI laterals are required where connecting to DI sewer main.

28. In order to connect to existing 12" main near American Family Fitness, specify an 8"x8" tee with 12"x8" increaser and an 8" valve.

C10 Layout & Utility Plan (East):

29. Water service connections serving block B and Sec 3 are too close together. Provide adequate separation per previous comment.
30. Storm pipe from structures 81-17 is too close to the FH to allow for adequate separation and spacing behind the curb and installation of thrust blocking. Relocate hydrant to another location such as the intersection at Turning Point Drive or entrance to Gilligan Place.
31. Sanitary sewer run from 14-15 will need to be 16" based on interim projected flows. Per the Overall sewer master plan, this pipe will be abandoned in the future when sewer relocation project occurs.
32. Provide additional easement for a 20-foot total width for sewer downstream of manhole 15.
33. The hydrant at the intersection of Bellow Blvd and Turning Point Drive is in conflict with storm sewer. Relocate to the other side of Bellow Blvd.

C11 Layout & Utility Plan (North):

34. Building 17 requires a hydrant coming from the eastern direction on Arthur Mews Place that is within 300 feet per ISO requirements. Extend 8" water main so that a hydrant is placed just to the east of building 18 and after the water meter service for this same building. Meter and hydrant are to be 5 feet apart.
35. Location of the reduced pressure detector assembly and dedicated hydrant appears to conflict with the future apartment building #3. In addition, the waterline alignment within this area needs to be coordinated with the same future building and location of roads to minimize future waterline and appurtenance relocations.
36. At the intersection of Fring and Saul, relocate the valve from the 90° bend to the tee.

C12 Layout & Utility Plan (West):

37. Provide a note that there should be at least 5' of separation from FHs to storm pipe to allow for installation of thrust blocking. This would apply to all 3 FHs along Walter Road.
38. The valve at the northern line side of the tee in Tuco Street and Walter Road can be omitted.

C17 Road, Utility, and Storm Sewer Profiles:

39. Update all profiles in accordance with all comments.
40. Provide a profile for the future run of sewer main (MH40 -MH27) in Gilligan Lane (Sec3) to ensure there is enough depth of cover throughout.
41. The following concern the Albion Mews Place profile:
 - Show waterline crossing near storm structure 160.
 - Inverts at existing manhole 2 do not match with approved plans for the Apartments. Invert in from manhole 4 is shown as 119.51 and invert out is 119.41. Please coordinate.
42. For Gilligan Lane profile, show sanitary sewer crossing near storm structure 118.
43. Provide a profile for 12" waterline beyond station 14+50 on Saul Street.

C19 Road, Utility, and Storm Sewer Profiles:

44. Provide a profile for the future run of sewer main (MH30-MH31) in Tuco Place (Sec3) to ensure there is enough depth of cover throughout.
45. The following pertain to Turning Point Drive profile:
 - Replace existing 12" sewer with 18" from manhole 588SE017 on downstream per previous plan view comment.
 - Provide 4 feet of cover depth over 12".
46. The following pertain to Walter Road profile:
 - Provide DI for sewer run from manholes 5 to 6 since there is less than 1 foot of separation where crossing under storm pipe.
 - Show field verified inverts for the two laterals from American Family Fitness and coordinate with sewer design depth.

- Profile is missing for sanitary sewer downstream of manhole 7 to where tie-in occurs with existing sewer.
47. The following pertain to Tuco Place profile:
- Sewer main can be lowered to where there is 6" separation above storm pipe.
 - Provide a vandal proof frame and cover for manhole 31 since in future section 3 unless it will be within a road.

C20 Road, Utility, and Storm Sewer Profiles:

48. The following pertain to White Lane:
- Combine first two vertical waterline adjustments under storm structures 101 and 108/109 since there are no water services involved.
 - Correct minimum depth over waterline to be 3.5' at station 12+75.
49. For Fring Road, combine the last two vertical waterline adjustments and relocate the water service for block C lot 1 to be outside of this adjustment. In addition, omit the 11.25 ° horizontal bend and add a note to rotate the nearest vertical bend 11.25 degrees horizontally. Coordinate with plan view.
50. For Bellow Blvd profile, 8" sewer must match crowns with 18" at manhole 12.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4501 or Kiara Korduc at 501-4993 for any necessary clarifications.

Sincerely,

John L. Clark

John L. Clark, PE
Utilities Engineer

cc: Shamin VCC LLC & VCC Partners LLC
Jeremy Swink - Stanley Martin Homes, LLC
Daniel Caskie – The Bay Companies, INC

bc: Marchelle Sossong
Daniel Ivy
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JLC/mab