

April 21, 2023

Charlene Harper, PE
VHB
115 South 15th Street
Richmond, VA 23219

**RE: Tuckahoe Park Phases 1-3
2400 Little League Drive
POD NO.: 2022-00141**

Dear Mr. Harper:

We have reviewed the construction plans submitted to the Planning Department on March 31, 2023

Please address the following comments and **resubmit revised construction plans** for review. Water and Sewer Agreements are not required for county projects.

General:

1. Provide a copy of the revised water and sewer design calculations on the 2nd page of the Engineering Report.
2. Provide a revised copy of the Sewer Design Form F-4.

Cover Sheet:

3. Update the engineer address in item 2 of the site data.
4. Eliminate the dark shade backgrounds on the vicinity map.
5. Update the utility quantities list.

Existing Conditions Plan C1.00

6. Show the pipe material and size of all the existing utilities.
7. Revise the pipe material of the existing sanitary sewer near manhole SMH006351 to be DI instead of PVC.
8. Provide both surveyed and GIS manhole ID and elevations of existing manholes upstream and downstream of the tying points.
9. Show all the existing valves.
10. Recommend turning off the topo layer in the existing condition and demo plans so it is less crowded to make the utilities more visible. You can go to grading plan if you want to see the topo.

Demo Plan C 1.10:

11. Is there a plan to pump around with the existing sanitary sewer being removed? Is the Tuckahoe Sports Training Facility going to be close the entire time during the construction of this project? Are there any other connections to the existing sanitary sewer beside the one from the Tuckahoe Sports Training Facility?

E&SC Phase 1 Plan C 2.04-2.05:

12. Recommend relocate the sediment trap #2 to another location away from the existing sanitary sewer if the existing sanitary sewer is active.

Utility Plan C4.00-C4.02:

13. Update the overall with comments on the utility plans.
14. See existing conditions comments.
15. Provide GIS manhole ID and elevations for all the existing manholes especially the tie-in manhole.
16. Show flow direction in the existing sanitary sewer.
17. Proposed manhole 11 should not be in speed bump area. It should be in the center of the road out of the wheel path in a flat pavement area.
18. Recommend tying the proposed sanitary sewer into existing manhole 398NW502 instead manhole E9 to avoid the guard rail.
19. Provide internal angle at manhole 13.
20. Show the proposed sanitary sewer lateral from the building to clean-out structure 17.
21. Structure 17 should be a clean-out not SIP. Replace the SIP detail with a clean-out detail.
22. Proposed sanitary sewer pipe from manhole 15 to the existing manhole should be 8" instead 6". Only the sanitary sewer lateral from the building to manhole 15 can be 6". Update the pipe table to reflect this.
23. Update the pipe table to include the pipe from E9-11.
24. Revise the pipe material from manhole 1 to manhole 5 to be DI instead of PVC in the pipe table.
25. Recommend the slope of the lateral from the building to manhole 15 to be 2.08% instead of 1.04%.
26. Complete the 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.
27. Provide the elevation for the benchmark at the corner pin west of manhole E9.
28. Provide 10 feet separation from the proposed sanitary sewer to storm inlet 69.
29. Revise the invert out at the existing manhole E5.
30. Use a M.J. blind cap tapped with the 2" copper pipe instead of 8"x2" reducer to install the water service for the 1.5" meter. Label to install the water service and meter per detail D-530 and detail D-535. The pipe material for the water service pipe from the main to the meter must be copper instead of PVC.
31. Proposed pipe material for the 4" water line leading to the water meter must be DI instead of PVC.
32. Provide a symbol for the 8"x6" reducer.
33. Proposed fire hydrant near maintenance building 1 should be no more than 7 feet from the curb.
Fire hydrant valve should not be in the curb.
34. Relocate the leaders to adjust water line under the storm to the correct locations.

Utility Profiles C4.10-C4.11:

35. Revise the profile per comments on utility plan.
36. Clarify why are there two invert outs at manhole E5. There should only be one invert out and multiple invert in.
37. Provide GIS elevations at the existing manhole.
38. Label the type of manhole covers on each manhole.

Utility Details C7.10-C7.13:

- 39. Add detail D-535.
- 40. Remove detail D-470.

Planting Plan L5.01-L5.03:

- 41. All trees and shrubs need to be moved outside of the utility easements and 10 feet away from the water and sanitary sewer mains. Check pages L5.01 and L5.03.
- 42. No light pole structures are allowed within 10 feet of the water and sewer.

If you have any questions concerning the above noted comments or the plans, please contact me at 501-4601 or Nolan Ekers at 501-4992.

Sincerely



Bob Dao
Utilities Engineer

cc: Al Azzarone, County of Henrico

bc: Ralph Claytor
Marchelle Sossong
Mike Aust, DPW
Daniel Ivy
Christina Goggin, Planning

BQD/