

January 5, 2024

Ameila Wehunt, PE
Timmons Group
1001 Boulders Parkway, Suite 300
Richmond, VA 23225

**RE: Lewis Botanical Gardens
1800 Lakeside Ave.
POD NO.: 2023-00430**

Dear Ms. Wehunt:

We have reviewed the construction plans submitted to the Planning Department on December 6, 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. Update the utility quantity list per comments.
2. Original signature is required on the P.E. Seal on the Cover Sheet. A facsimile of seal, signature and date is acceptable on all other sheets.
3. Delete some of the symbols in the legend on sheet C0.11. There are two symbols for water valves. One of the symbols for water valve is the same as post indicator valve.

Existing Conditions Plan C1.01-C1.04:

4. Review and show the existing utilities more accurately. The 6" irrigation line should not go through a storm inlet. The tee should be perpendicular instead of an angle. The irrigation line should not go through the building. The valve should not be inside the building.
5. Show the valve correctly between the tee and the fire hydrant at the bottom of sheet C1.02.
6. Verify the location of the existing manhole with the rim 181.50. Provide documentation showing this manhole. We have no record of it. Why is it the same elevation of the manhole east of it (monitoring manhole)?
7. Verify location of fire hydrants near the pump house. Is there supposed to be two instead of one hydrant at this location? Our record only shows one fire hydrant there.
8. Label GIS rim elevation at the existing manhole 202NE023 to be 143.28.
9. Show the easement and provide DB&PG for the easement around the public water and the public sewer on site. If the easement has not been recorded previously then it must be shown on the plan as proposed easement and record as soon as possible with this plan.
10. Review the location of valves shown on site. There are bunch of valves that are not even on the waterline.

Storm Drainage Profiles & Schedules C5.10:

11. Label the existing 8" DI watermain in the profile and plan view where it crossed pipe A11.

Utility Plan C7.01-C7.04:

12. See previous comments on existing utilities.
13. Profile all the existing water and sanitary sewer lines to show how much cut or fill are you proposing over the existing utilities. How much cover is on the 6" irrigation line near the pond?
14. Does any of the existing irrigation valve needed to be adjusted to grade?
15. Relocate the proposed sanitary sewer manhole S3 to be 10 feet from the existing water main.
16. There should not be any bends in the water lines for fire hydrants. The proposed fire hydrant should be 10 feet from the sanitary sewer and the 4" waterline.
17. Add note that the owner is responsible for the maintenance of both the trees and private fire protection water line and is responsible for any removal or repairs.
18. Show more of the existing waterline near the tapping sleeve and valve on sheet C7.04. Isn't there already a 90 degrees bend and existing fire line there?
19. Label the size of the tapping sleeve and valve.
20. Label manhole S4.
21. Provide another angle on the east side of manhole S4.
22. Label CO2 on sheet C7.04.
23. The angle at CO2 must be 90 or greater. Relocate manhole S5 to make it work.
24. Can the proposed 2" waterline be relocated to another area to avoid conflict with the footing of the pergola?
25. Revise the pipe size of the sanitary sewer from the building to CO1 to be 6" instead of 4". Update the profile and the pie table.
26. Label the bend at the tie in point from the existing water line to the proposed water line.
27. If there is no easement recorded previously then show the easement as proposed and record the easement as soon as possible.

Utility Profiles C7.10-C7.12:

28. Update the profile with comments on utility plans.
29. Show the 4" water main crossing between manhole S2 and S3.
30. Show the 8" water main crossing between manhole S3 and S4
31. Show the equivalent station at manhole S4,
32. Show the station at manhole S5. Label to provide vandalproof manhole frame and cover at this manhole.
33. Use 0.10' drop between the invert in and invert out.
34. Provide 3.5' of cover on the sewer if possible.
35. Use dash line to show the existing waterline portion.
36. Show another 45 degree bend near station 5+75.
37. Show the DI drop stack at manhole S4.
38. What is the 1.95' of clearance referring to between manhole S4 and S6?
39. Label the 8"x6" tapping sleeve at the beginning of the proposed hydrant profile to be consistent with the plan view.
40. Provide 3.5' of cover over the waterline.

Utility Notes & Details C7.20-C7.21:

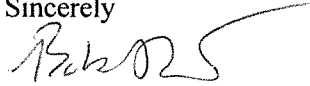
41. Provide an engineering signature on the fire flow estimate form. Clarify how did you calculate the total floor area.
42. Clarify which Meter Sizing Form is for the new building.

Landscaping and Lighting Plan:

43. Show the utilities clearly in the landscaping and lighting plans. Tree plantings and light poles need to be 10' from water lines and sewer lines.

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

Sincerely



Bob Dao
Utilities Engineer

cc: Kristen Hughes, Lewis Ginter Botanical Garden

bc: Ralph Claytor
Marchelle Sossong
Scott Jackson, DPW
Daniel Ivy
Salim Chishti, Planning

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