



Project: Woodland Oaks 1st Plat – Public Low Pressure Sanitary Sewer System
Application Number: PL2021074
Application Type: Engineering Plan Review
Comments Dated: May 17, 2022

Engineering Review

1. Additional information is required on the odor control system to be included in the report. Information such as sizing, application/dosing details, onsite storage, electrical/controls. Other than making a mention that it will be included, there was no additional detail. **Specifications added on Sheet C.406 and additional info provided in the report. Acknowledged. See comments on Odor Control Specs.**
2. Tracer wire should be provided on the forcemain and on the sewer stubs. Please show by sufficient notation or other means on the plans. **Notes added on the plans and noted on service lateral detail. Acknowledged.**
3. A high point appears to exist on Line 3 near station 14+00. An air release valve appears warranted. **Additional air release valve added at Sta. 14+00.00. Acknowledged.**
4. Construction and Design Notes, Notes 1 and 2 under Sanitary Sewers reference PVC, SDR-26. This should be updated to be SDR 11 HDPE. **Notes 1 and 2 revised accordingly. Acknowledged.**
5. Note 2 seems to be for gravity mains/laterals, not LPS. All notes should probably be checked for conflicts. **Note revised throughout plan set. Acknowledged.**
6. Sheet C.401 and Sheet C.405: Odor control is only mentioned, but no specific information is presented. On-site storage requirements are required, electrical and control systems are required, as well as any other information required to build the odor control system. **Detail and Notes added on Sheet C.406. Acknowledged. See comments on Odor Control Specs.**
7. Sheet C.406: Please submit calculations supporting the valve sizing. These calculations can be either from the manufacturer, or your firm. **Recommendation by MFR provided in the report. Acknowledged.**
8. Sheet C.406: Flomatic is not on the approved products list. Please provide justification for inclusion of this non-approved part, or specify what is already shown on the approved products list. **ARVs switched to ARI Model D-025 per the approved manufacturer's list and the ARI application engineer recommendation. Acknowledged.**
9. Sheet C.406: Provide a 5 feet diameter manhole detail for use with the air release valve assembly. **A "Shallow Precast Manhole" Detail has been added. The ARV vault diameter was changed to 5'-0" from 4'-0". Acknowledged. See comment on Sheet C.406 on Air Release detail.**
10. Sheet C.406: Provide a tee instead of the tapping saddle for the air release valve assembly. **Tee provided in lieu of tapping saddle. Acknowledged.**
11. Sheet C.406: Provide an isolation valve in the yard upstream of the ARV. This way if there's a break, we can isolate the system to fix it. **Isolation valves added upstream of both ARVs. Acknowledged.**
12. Sheet C.406: There is concern about the location for the ARV near the entrance to Woodland Shores subdivision. This is right inside the main entrance and close to property owners. What is the proposal to manage potential odor issues? Carbon canister appears warranted. **Carbon canisters to be provided at each ARV. Acknowledged.**
13. Sheet C.406: Provide additional detail on the valves proposed for the ARV assembly. They are shown in the detail but not called out. **Isolation valve has been called out. Acknowledged.**
14. Updated "Low Pressure Sanitary Sewer System for Woodland Oaks Subdivision" installation manual was not included in the resubmittal. This manual is required, as it will be consulted when homeowners, homebuilders, and plumbers are installing pumps and performing maintenance. It shall also be consulted by Development Services staff. An updated manual shall be required prior to formal approval of the plans. **Acknowledged. Acknowledged (but did they provide the updated manual?).**



- Acknowledged. This seemed on point with my notes but I will defer to you Gene if there is anything that I missed.
15. Forcemain is located at the foot of three (3) retaining walls. Two (2) are located along Blackwell, and one (1) is located along Woodland Shores Dr. near the entrance. The Design and Construction Manual requires a minimum of 15 feet of distance between any structures and the outside of the pipe, and this has not been achieved. **Forcemain has been aligned per most recent discussion w/ City.**
 16. Forcemain is located at the foot of three (3) floodlights. See above comment concerning this issue. **See Response Above.**
 17. The 90 degree bend at the south corner of Woodland Oak Dr. and Blackwell is not desired. Please eliminate the 90 degree bend and replace with two (2) 45 degree bends at a minimum. **Bend revised.**
 18. The 90 degree bend at the south corner of Woodland Shores Dr. and Blackwell is not desired by the City. Please use two (2) 45 degree bends at a minimum. **Bend revised.**
 19. Will the forcemain be bored? At a minimum, it shall be bored at all street crossings. Please add sufficient notation showing where the forcemain will be bored. Steel casing shall not be required. **Note Added.**
 21. Epoxy coating of three (3) manholes is shown on Sheet C.404 with no corresponding information, details, or specifications on what is required to epoxy-coat these three (3) manholes. Please provide all necessary information on what is required to epoxy-coat these manholes. **Notes Added.**
 22. Profile view along line 3 appears to be missing the location of the three (3) water lines. This would include near station 12+00, and station 12+50. **Profile Updated.**
- Acknowledged. I did see a note. I did not see where they added notes. Acknowledged. Saw two water lines and a storm.

Please forward all comments or concerns to Matthew Schlicht.

I didn't see two 45 deg bends...I saw some odd bend angles instead. I don't claim to be an expert at HDPE pipe but I assumed they would use an electrofusion fitting (two 45 deg bends for example) but I don't believe they make a 62.5 deg bend or a 33.75. Therefore, I believe they are trying to achieve this bend through the bending of the pipe and not through a fitting. There's a maximum allowable bend radius that's allowed for HDPE pipe and maybe they meet this, however, is there a way we could put it back on them to prove that they don't exceed this bend radius?