
DEVELOPMENT SERVICES

Date: Friday, November 19, 2021

To: SCHLAGEL & ASSOCIATES
14920 W 107TH ST
LENEXA, KS 66215

From: Gene Williams, P.E.
Senior Staff Engineer

Application Number: PL2021432

Application Type: Engineering Plan Review

Application Name: Manor at Bailey Farm 1st Plat - Public Water Main

The Development Services Department received plans for this project on November 05, 2021. We have completed our review and offer the following comments listed below.

- See comments below to determine the required revisions and resubmit to the Development Services Department public portal located at devservices.cityofls.net. Digital documents shall follow the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within ten (10) business days of the date received.

Engineering Review

1. Tri County Water Authority (TCWA) may have issues with the expanded right of way along Ranson Rd., and may require additional easement for their line and/or relocation of their line. Please coordinate with TCWA (John Overstreet) on this issue, as it may affect lot placement, right of way, off-site traffic improvements on Ranson Rd., or other effects.
2. Fire hydrant is too close to the PC at Ranchland St. and Cape Dr. The minimum distance is 20 feet as measured from the PC of the curb return.
3. A fire hydrant is required on Sweet Root Dr. Distance requirements cannot include adjacent streets, hence the requirement for a fire hydrant along Sweet Root Dr.
4. Sheet 5: It appears the new 8 inch water line beneath Bailey Rd. is being bored. No notes or details are provided, however. Please provide sufficient notes clarifying this issue. Please be aware the City will not allow open-cut installation of the water line, and please be aware casing carrier pipe is not required for water mains.
5. Please review the profile view for all segments of water line. Where fill is being provided, provide sufficient notation on the profile view, along with sufficient notes which specify that the fill be brought in

and compacted to a plane 18 inches minimum over the top of pipe prior to trenching and installation of pipe.

6. Sheet 5: Stub streets serving future phases are shown with fire hydrants within the curb return which is normally not allowed. In this instance, however, it make sense given the future construction will require these to be relocated. Inline placement of the fire hydrants in these instances to facilitate an easier relocation in the future is required.
7. Fire hydrants appear to be missing along Bailey Farms Pkwy. Maximum distance between fire hydrants is 500 feet. Fire hydrants on adjacent cross streets cannot be used to satisfy this requirement.
8. Sheet 6: Two (2) of the storm line crossings are too deep. The City allows up to 7 feet maximum depth of cover over a water main.
9. Sheet 6: Fire hydrants appear to be missing along Bailey Farms Pkwy. Please see previous comment related to this requirement.
10. Sheet 7: Fire hydrant is shown within the curb return on Richland St. The fire hydrant shall be no closer than 20 feet from the PC of the curb return.
11. Sheet 7: The water main should be extended a short distance to the west along Cape Dr., and a temporary inline fire hydrant installed.
12. Sheet 7: Storm line crossing near sta 4+00 is too deep. Maximum depth of cover is 7 feet as measured from top of pipe.
13. Sheet 7: Where are the gate valves at the tees? The City requires two (2) valves for each tee, including the new tee to be installed for the short western extension along Cape Dr. described in the above comment.
14. Sheet 8: Fire hydrants are missing along Ranchland St. Maximum distance between fire hydrants is 500 feet. Fire hydrants on adjacent cross-streets cannot be used to satisfy this requirement.
15. Sheet 8: Fire hydrants are shown within the curb return which is not allowed. Please see previous comments related to placement of fire hydrants behind the PC of the curb return.
16. Sheet 8: Gate valves appear to be missing at tees. Please see previous comments related to this requirement.

17. Sheet 9: Valves appear to be missing on this sheet. Please see previous comments related to the placement of two (2) valves in relation to tees. Also, three (3) valves are required at a cross, so please ensure this is considered.
18. Sheet 10: Storm crossing shown on the profile view is too deep. Maximum depth of cover is 7 feet.
19. Sheet 10: Please see previous comments related to placement of valves in relation to tees and crosses. No valves were shown.
20. Sheet 11: Storm line crossings (both) shown in the profile view are too deep. Maximum depth of cover is 7 feet.
21. Sheet 11: A fire hydrant is warranted on Sweet Root Dr. Fire hydrants located on adjacent cross streets cannot be used to satisfy the 500 foot maximum distance requirement between fire hydrants.
22. Sheet 11: Please refer to previous comments related to the installation of valves in relation to tees and crosses. No such valves were shown on the plans.
23. Sheet 12: Both storm line crossings shown on the profile view are too deep. Maximum depth of cover is 7 feet as measured to the top of pipe.
24. General Comment Related to All Future Stubs: The City does not allow a plug to be installed at the end of the line as shown in numerous locations. A temporary inline fire hydrant is required. Please go through all sheets related to this requirement and revise.
25. Please refer to Sheet 12. As an example of the above comment, please see the notes at the south end of Line 5. The City does not allow a simple cap in this instance, but rather, a temporary inline fire hydrant. Since these are stub streets and the hydrants will be moved in the future, it will be acceptable to place the temporary fire hydrant within the curb return limits rather than 20 feet beyond the PC of the curb return.
26. Sheet 12: Please refer to previous comments related to the placement of valves in relation to crosses and tees. No such valves were shown.
27. Sheet 13: A blow-off assembly is shown. The City does not allow blow-off assemblies. Please remove and use a temporary fire hydrant.
28. Sheet 13: Regarding the temporary fire hydrants along Bailey Pkwy., these fire hydrants shall not count towards the required number of fire hydrants along Bailey Farm Pkwy. The reason is that these are temporary fire hydrants to be relocated along their respective streets in the future, and cannot be used to

satisfy the 500 foot rule for maximum distance between fire hydrants along Bailey Farm Pkwy.

29. Sheet 14: Profile view for Line 9 and 10 appears incomplete. Please revise.
30. Sheet 14: Blow-off assembly is called-out. These are not allowed in the City of Lee's Summit.
31. Sheet 14: Please see previous comments related to stub-off streets and temporary fire hydrants. Termination of all water mains shall be at a fire hydrant rather than a plug.
32. Sheet 15: Please see previous comments related to the placement of valves in relation to tees and crosses. It appears this was missing from the sheet.
33. A trenching and backfill detail was missing. Please ensure the new July 2020 standard of 12 inch aggregate over the top of pipe is shown, rather than the previous 6 inch requirement.

Traffic Review - Not Required

In order to calculate the Engineering Plan Review and Inspection Fee, a sealed Engineer's Opinion of Probable Construction Costs shall accompany your final submittal copies. The itemized estimate (material and installation) shall be sufficiently broken down and shall include the following items, as applicable.

- Public infrastructure, both onsite and offsite.
- Private street construction, including parking lots and driveways.
- Sidewalks located within the right-of-way.
- ADA accessible ramps.
- Sanitary sewer manholes and piping between manholes, including private mains.
- Connection of the building sanitary sewer stub to the public main.
- Waterlines larger than 2 inches in diameter, valves, hydrants, and backflow preventer with vault, if outside the building.
- Stormwater piping greater than 6 inches in diameter, structures, and detention / retention facilities - public or private.
- Water quality features installed to meet the 40-hour extended duration detention requirements.
- Grading for detention / retention ponds.
- Grading to establish proper site drainage.
- Utility infrastructure adjustments to finished grade (i.e. manhole lids, water valves, etc.).
- Erosion and sediment control devices required for construction.
- Re-vegetation and other post-construction erosion and sediment control activities.

Electronic Plans for Resubmittal

All Planning application and development engineering plan resubmittals shall include an electronic copy of the documents as well as the required number of paper copies.

Electronic copies shall be provided in the following formats

- Plats – All plats shall be provided in multi-page Portable Document Format (PDF).

- Engineered Civil Plans – All engineered civil plans shall be provided in multi-page Portable Document Format (PDF).
- Studies – Studies, such as stormwater and traffic, shall be provided in Portable Document Format (PDF).

Please contact me if you have any questions or comments.

Sincerely,

/s/ electronically signed Nov. 19, 2021

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cc: Development Engineering Project File