
PUBLIC WORKS ENGINEERING DIVISION

Date: Tuesday, May 26, 2015

To:

THH INC

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From: Gene Williams, P.E.

Senior Staff Engineer

Application Number: PL2015069

Application Type: Engineering Plan Review

Application Name: Summit Innovation Center Public Water Line Extension

The Public Works Department received plans for this project on May 04, 2015. These plans are dated and were sealed on [April 30, 2015](#). We have completed our review and offer the following comments:

Engineering Review

1. Please provide a separate plan set for the water line. This should include the entire public water line, including the "off-site" water line.
2. Please provide an overview sheet showing the location of the water line in bold in relation to other features (grayed-out).
3. Please add a note stating that "...all construction shall follow the City of Lee's Summit Design and Construction Manual as adopted by Ordinance 5813. Where discrepancies exist between these plans and the Design and Construction Manual, the Design and Construction Manual shall prevail."
4. All Sheets: Please specify a minimum of 42" of cover, and a maximum depth of 7 feet.
5. All Sheets: Please specify a butterfly valve on the 12 inch water line. Butterfly valves are required for all water lines 12 inches and greater.
6. Sheet C301: Fire hydrants are required for every 500 feet of street length. It appears this requirement has not been met.
7. Sheet C301: It appears that a blow-off assembly will be necessary at the high point of the 12 inch water line.
8. Sheet C302, C303, and C305: It appears a blow-off assembly will be necessary at the high point of the 12 inch water line.
9. Sheet C302: It appears the fire hydrant spacing is not sufficient, and additional fire hydrants will be necessary to meet the 500 hundred feet requirement.

10. Sheet C302: A butterfly valve should be specified rather than a gate valve on the 12 inch water line. Please see previous comment.
11. Are there existing easements for the new 12 inch water line? If so, please show them.
12. Sheet C303: Please specify on the plan view that all water lines to be bored and cased beneath Ward Road.
13. Sheet C303: Please specify a butterfly valve on the 12 inch water line.
14. Sheet C303: It does not appear that the fire hydrant spacing meets the 500 foot requirement.
15. Sheet C303: A 12 inch by 6 inch tee is shown at station 25+00, but it does not appear to serve any purpose. Is this a typographical error? Was this intended to be a butterfly valve?
16. Sheet C304: It does not appear that the fire hydrant spacing meets the 500 foot requirement.
17. Sheet C305: Please specify the water line beneath Ward Road will be bored and cased.
18. It is unclear where the water line along Innovation Parkway is in relation to the sanitary sewer. Please ensure there is a minimum of ten (10) feet horizontal distance between the sanitary sewer and water line, as measured from the outside of the respective pipes.
19. Please show the location of all existing and proposed easements.
20. Standard details should be provided within the water line extension plan set. This is an MDNR requirement since they require sealed standard details. Please ensure that the casing carrier pipe detail, blow off assembly detail, valve box and cover details, thrust block (horizontal and vertical) detail, fire hydrant assembly detail, and any other details are included in the plan set.

In order to calculate the Public Works' 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.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1800 or e-mail to Gene.Williams@cityofls.net.

Sincerely,

Original Signed

Gene Williams, P.E.
Senior Staff Engineer

cc: Development Engineering Project File