

Date: Friday, August 04, 2023

To: Olsson Associates - David Eickman, P.E.
North Kansas City, MO 64116

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

Application Number: PL2023144

Application Type: Engineering Plan Review

Application Name: THE VILLAGE AT DISCOVERY PARK - PUBLIC WATER

The Development Services Department has completed its review of the above-referenced plans dated Jun. 30, 2023 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 - Corrections

1. Sheet C554:
 1. Sta. 10+00 Line A: WU is considering installing a 12" X 12" cross instead of a 12' X 12" tee in the Colbern Road Project south of Sta. 10+00 Line A. If the cross is installed, the proposed water main will connect to the cross.
 2. A note on the north side of Colbern Road included moving a fire hydrant 29 feet NW. WU is considering moving the hydrant in the Colbern Road plans 30 feet to the east to avoid the Discovery Park entrance.
2. Sheet C555:
 1. There is a note to raise an existing hydrant on the north side of Colbern Road. The Private water main plans indicate abandoning the 8-inch water main. If the 8-inch water main will be abandoned, remove the hydrant instead of raising it.
3. Sheet C556:
 1. The proposed water main turns north at Sta. 19+62.40 to cross Colbern Road. Can the water main cross Colbern Road closer to the intersection such as near where the right-of-way turns toward the Douglas Road right-of-way lines?

4. Sheet C557:
 1. Sta. 9+88.21 Line B: If the 8-inch water main is going to be abandoned, do not install a fire hydrant at Sta. 9+88.21 Line B.
5. Private water main plans:
 1. The water supply requirements for Discovery Park are unknown. WU is considering installing a 12-inch water main across the westernmost entrance instead of an 8-inch main in case a 12-inch main is needed.
 2. Proposed hydrants are shown along the north side of Colbern Road that appear to connect to the proposed water main on the south side of Colbern Road. These hydrants will need to connect to the private water system north of Colbern Road.
6. On sheet C553 of the plans, there is a note to abandon approximately 1800 feet of 8-inch water main along the west side of the property. The main is actually a 12-inch water main. Abandoning the 1800 feet of 12-inch water main will create about two and a half miles of dead end water main extending north then east to the northeast corner of the airport property. The proposed 12-inch water main will need to be extended north along Lee's Summit Rd. and connected to the 12-inch water main running along Lee's Summit Road. Please revise as appropriate.
7. Sheet C553, a note near Douglas states portions of the existing 8-inch water to be abandoned. This water main is actually 20-inch.
8. Sheet C554: Fire hydrant along Colbern at the new entrance is shown within 20 feet of curb return. All fire hydrants should be located no less than 20 feet from a curb return. Please revise.
9. Sheet C554: Tee at station 10+00 is too close to the vertical bend. The northern valve may be on a 22.5 degree incline. For more information, see Garver Plan sheet C-817. Please revise as appropriate.
10. Sheet C554: Incorrect fire hydrant is called-out. Please use the City of Lee's Summit standard fire hydrant for all fire hydrants used on this project.
11. Sheet C554: The Garver plan set (i.e., Sheet C-818) shows the existing water main is under the shared-use path. Please evaluate and revise as appropriate.
12. All Sheets: Please show the right of way and/or easement boundary on all sheets. In particular, Sheet C554 appeared to be missing this information.
13. Sheet C554: Inset view on "Permanent Connection Detail" shown in lower right hand corner states

"existing solid sleeve". Shouldn't this be specified as "proposed solid sleeve"? The main doesn't exist at the present time.

14. Sheet C554: The legend specifies a symbol for "straddle block". Please show where straddle blocks will be installed, including the inset views.
15. Sheet C555: A fire hydrant is shown within a median at the new entrance. Please move this fire hydrant outside the limits of the median, and ensure it is a minimum of 20 feet from any curb return.
16. Sheet C555: Please show the location of all right of way and/or easements.
17. Sheet C556: Please show restrained joints inside the casing carrier pipe throughout the entire length.
18. Sheet C558: A bend is shown near station 17+00. The as-built Record Drawings from TransSystems do not show this bend. How was this information obtained?
19. Sheet C558: There is confusion on where the right of way line is located. Please label, and ensure any future right of way line is also shown.
20. Sheet C559: A bend is shown in the existing line at station 20+50. The as-built Record Drawings from TransSystems do not show this bend. How was this information obtained?
21. Sheet C560: Please show a restrained 8 inch gate valve to the 12" by 8" tee near the backflow vault.
22. Sheet C560: Dead end water mains shall always terminate with a fire hydrant, not a flushing assembly. However, the 12 inch main shall be extended along Douglas St. to form a loop with the existing 12 inch main along Douglas St. to the north in accordance with prior comments, so the comment is moot. Please evaluate and revise as appropriate.
23. Water Utilities would prefer the 12 inch main serving their lift station facility be abandoned from Douglas St. to their lift station, as water service at this location is not needed. Please evaluate and revise as appropriate.
24. Sheet C560: Why is the section of water main near station 10+00 being relocated? In any case, as-built Record Drawings indicate there is a straddle block on the 20 inch main near station 10+56. If any work is necessary based on the question above, no disturbance of this straddle block should be allowed during construction. If appropriate, add sufficient notation that describes the straddle block and a clear note stating "do not disturb" or equivalent language.

25. Sheet C560: Profile view of 20 inch main shall be shown with restrained joints throughout the section to be replaced. Please revise as appropriate.
26. Sheet C560: The as-built Record Drawings from TransSystems sheet LS-103 shows the 20 inch main crossing under the culvert. Top of the pipe at Station 10+00 should be approximately 938.0. Please revise as appropriate.
27. A meeting between the engineer, Water Utilities, Development Services, and Public Works is warranted to discuss these comments and how they relate to the Colbern Rd. Capital Improvement Project. We will be in contact concerning this meeting which is anticipated to take place via Zoom.

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 Aug. 4, 2023

Gene Williams, P.E.
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cc: Development Engineering Project File