From: Fred Schlegel, P.E.
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August 16, 2019

To: Gene Williams, P.E.
Senior Staff Engineer
City of Lee's Summit
220 SE Green Street
Lee's Summit, Missouri 64063

Subject: The Princeton Senior Living – SE Oldham Pkwy – Water Main Extension PL2019214

The following are comments from the City of Lee's Summit. Our response to each comment has been provided in ***bold italics***. Please feel free to contact me should you have any questions.

Questions within body of email from Gene Williams

1. Sheet W2.1: Please adjust the slope of the 12 inch line to the east of the air release valve at sta 14+34 to eliminate to the extent practical, the high point, and therefore, **eliminate the need for an air release valve**. Please keep in mind that the maximum depth of cover over the 12 inch line, as measured from the top of pipe to the finish grade, is 7 feet. Although it may not be possible to completely eliminate this high point, it will be largely mitigated by adjusting the vertical geometry.
   - ***This has been addressed.***

2. Completely eliminate the other air release valves on the entire project.
   - ***This has been addressed.***

3. Add a fire hydrant near sta 10+39 as shown on Sheet W2.1. This will also act as a manual air release valve if air build-up is experienced. The location of the fire hydrant should be offset from the 12 inch main to the south of the new line.
   - ***This has been addressed.***

4. Eliminate all of the fire hydrants that are shown offset to the north of the new 12 inch line.
   - ***This has been addressed.***

5. In lieu of the offset fire hydrants shown extending to the north of the new 12 inch line, install fire hydrants near the property line at sta 30+10, and another near sta 35+10. Both of these fire hydrants should be installed in an offset fashion, but **south of the new 16 inch water line** rather than to the north. They should be fully-contained within the easement. If necessary, the new 12 inch water line can be

moved slightly to the north to accommodate the placement of the fire hydrant assemblies.
   - ***This has been addressed.***

6. Update the plans to show an 8 inch line along Princeton Dr., since the results of the City's water modeling show that 4400 gpm can be achieved.
   - ***This has been addressed.***

7. Sheet W2.3: Eliminate the 12 inch butterfly valve at sta 23+15.
   - ***This has been addressed.***

8. Sheet W2.5: Add a 12 inch butterfly valve near sta 30+00 (i.e., near the property line).
   - ***This has been addressed.***

9. Sheet W2.6: Eliminate the two (2) butterfly valves at sta 33+12 and sta 33+28. Neither of these are needed or desired.
   - ***This has been addressed.***

10. Sheet W2.6: Eliminate the butterfly valve at sta 36+35 to the west of the tee. The reason for this elimination is that the valve shown to the east (i.e., just prior to the fire hydrant at the end of the line) can be counted as one of the two required valves needed at a tee.
    - ***This has been addressed.***

11. Sheet W3.1: Please remove the note on standard drawing WAT-10 which states "Note: A combination air vacuum/air release valve (CAV-ARV) is required. Size of fittings to be 2" as per the Lee's Summit Design and Construction Manual."
    - ***This has been addressed.***

Per comments from Private Plans Set – no tees or valves are included for The Princeton connections.

Sincerely,

Fred Schlegel

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