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Anderson Pointe
February 28, 2022
Multi-Family Development
Lee's Summit, MO

Introduction

This letter report is to serve as the Final Sanitary Study for the proposed Anderson Pointe Single and Multi-Family Residential Development located north of the intersection of NE Anderson Drive and NE Velle Road. The proposed development contains 23.73 acres and will consist of 86 total units, 20 multi-family and 66 single-family. The downstream sanitary sewer system is a gravity collector main which consists of segments of 8, 10 and 12 inch PVC pipe. The collector terminates at a 54" RCP gravity interceptor sewer which connects to a LBVSD trunk sewer for further conveyance downstream. Per City request we analyzed existing sewer capacity from the farthest upstream tie in manhole 02-080 to downstream Pump Station 01-002. Design flows for the proposed development along with the existing development area will be calculated per Section 6500 of the City of Lee's Summit Design and Construction Manual.

Background

The following Figures from the Wastewater Master Plan were utilized to identify any known issues within the area.

Figure 7-3 High Inflow Areas in Existing System Plan
Figure 8-1 2015 Condition of Conveyance/Collection System Bottlenecks
Figure 8-2 2015 Condition Recommended Improvements

Figure 7-3 does not identify the subject watershed as having I&I issues. Figure 8-1 does not identify any bottlenecks in the conveyance system being analyzed nor downstream based upon capacity analysis methodology proposed in the Wastewater Master Plan and subsequently adopted by the City. Figure 8-2 did not recommend any new sewer improvements along the analyzed line nor downstream. As of 2015 the sewer analyzed was in service and there were no known issues.

Ultimate Buildout

The sanitary sewer analysis was terminated at Pump Station 01-002, see Sanitary Sewer Map attached for both the existing sanitary sewer system layout along with proposed development location and tie-in points. There are 130.8 +/- acres tributary to PS 01-002 from the east, the attached Sanitary Sewer Map identifies the serviceable area utilized for this analysis. The tributary areas delineated were based on both network geometry and topography. All tributary area has been accounted for to PS 01-002 as stipulated by the City's design criteria. The proposed development consists of 18.44 acres of tributary area. The proposed development may be served by the existing downstream sewer system with little to no surcharging as outlined in the attached sanitary sewer capacity analysis.

Conclusions

The sanitary sewer analysis shows there is adequate capacity in the system to service the proposed development at ultimate buildout. The analysis anticipates minimal surcharging in a few downstream segments at ultimate buildout. The surcharging would be minimal with no sewage overflowing and leaving the system. No improvements are necessary due to the development of this site. The existing system will continue to convey sanitary sewage without problem.

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