LEE'S SUMMIT
MISSOURI

DEVELOPMENT SERVICES

Date: Friday, April 16, 2021

To: OLSSON ASSOCIATES
Terry Parsons, P.E.
7301 W 133RD ST #200
OVERLAND PARK, KS 66213

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

Application Number:	PL2021114
Application Type:	Engineering Plan Review
Application Name:	LSR7 Middle School #4 - Off-site Sanitary Sewer Main Extension No. 1 - Segment #1

The Development Services Department received plans for this project on March 30, 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 - Corrections

1. Off-site easements (from the Whistance property to the south) in a form acceptable to the City shall be obtained prior to approval of plans. They should be twice the depth of the sewer, rounded to the next 5 feet. Please submit a review copy prior to execution and recording. A document number should be provided to the City following recording for verfication.

2. Manhole A8 shall be a outside drop manhole due to the excessive drop greater than 2 feet at this point. Please provide notation, along with the standard detail for the outside drop manhole (i.e., SAN-4).

3. Recommend increasing the drop across manholes to allow for construction tolerance (i.e., additional 0.1 feet?). As shown, the minimum drop is shown.

4. Manhole A5 is too close to the stream bank. Please move the manhole to achieve a minimum distance of 15 feet from the top of bank to the outside of the manhole.

5. What is the calculated 100 water surface elevation of the stream? A conservative approach to determining these elevations in relation to the flowline of the stream should be calculated along key

points, assuming full build-out upstream, and upstream detention basins being fully clogged and zero available storage (i.e., assume no detention). Tops of manholes shall extend a minimum 1'-0" above the calculated 100-year floodwater elevation, provided that such extension shall not exceed 4 feet above final finish grade. Where these requirements result in a manhole with a rim at or below the 100-year floodwater elevation, the manhole shall be equipped with watertight ring and bolt-down cover assembly with neoprene gaskets.

6. Label the existing tie-in point as City manhole #47-019.

7. It is very difficult to determine what is shown at the connection point. It appears two (2) new manholes are being installed, and it is unclear why.

8. The private forcemain was not located on the plans. What is the plan for managing the private forcemain? This forcemain serves the school district, and will need to be considered during the design. The location of the line should also be shown, rather than assumed based on the easement.

9. Portions of the sanitary sewer improvements are shown in red, and would appear to be separate from these plans. Please provide sufficient notation that these lines are not part of the project, to be installed by others (or equivalent language).

10. Recommend coordination with David Rinne at Schlagel and Associates concerning the connection point for Bailey Farms. You are showing a manhole in the southeast corner of the school project, which will likely become a drop manhole. Will this drop manhole be able to service the Bailey Farm project? A large diameter sewer line will be connected presumably at this location, and the manhole size may not work with a standard drawing for a drop manhole.

11. Concerning the coordination comment above, a plan and profile view of the intended route to serve the Bailey Farm site is required. A cost estimate shall be required for this portion, even if not built until the Bailey Farm project proceeds (see next comment).

12. Public sanitary sewer shall be extended to the plat boundary (i.e., to the east to serve Bailey Farms). An off-site easement may suffice after coordination with David Rinne at Schlagel and Associates for this extension. The City would consider an easement be dedicated to the plat boundary in lieu of construction of said improvements, but construction costs would need to be provided by the school district. Coordination between David Rinne would also be required to minimize any future disruption of the sanitary sewer line, and to minimize any re-design at the connection point.

13. Trenching and backfill detail shall include 12 inches of aggregate on top of pipe rather than 6 inches shown. This standard changed in the Design and Construction Manual in 2020.

14. Design flow calculations were not shown. Typically this is provided in the form of a table. It should

include the ultimate condition including the Bailey Farm property.

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 developmrnt 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 mulit-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/ Gene Williams electronically signed Apr. 16, 2021

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