LEE'S SUMMIT
MISSOURI

DEVELOPMENT SERVICES

Date: Friday, December 16, 2022

To: SCHLAGEL & ASSOCIATES - Mark Breuer, P.E.
14920 W 107TH ST
LENEXA, KS 66215

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

Application Number:	PL2022415
Application Type:	Engineering Plan Review
Application Name:	Residences at Blackwell - Public Water

The Development Services Department has completed its review of the above-referenced plans dated Nov. 30, 2022 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. A 3 inch sanitary sewer force main was installed along Blue Pkwy. along the north side, but does not appear to be shown on the plans. Please locate this line, and show on the plans. Please ensure there are no conflicts with this line in terms of distance requrements or clearance issues.

2. The proposed interior private line is shown in bold on the general overview sheet, but is not being constructed with these improvements. Wouldn't it be better to show this in a lighter lineweight to distinguish between features to be constructed with these plans? Please revise if appropriate.

3. Line C is shown beneath Heritage St., and it appears to be shown as a public rather than a private line. This line should be private. Please ensure the plans reflect the private nature of this line, and revise the notes as appropriate.

4. The overview sheet shows the location of the north loop towards Summit Mill subdivision. The City is not reviewing at this time, and will determine the best method of future water main looping at a later date. For purposes of these plans, it may be acceptable to use a lighter lineweight with the words "possible loop location" or equivalent language.

5. It appears there are several instances where the pipe is shown where the radius of curvature is less than

the threshold of approximately 1200 feet radius. Water main is not designed to be deflected within the pipe itself, but rather, only 1 degree per joint is allowed (i.e., within the joint itself, not the pipe wall). This equates to approximately 1200 feet. Please evaluate, and provide the location of all bends, including the magnitude of the bend.

6. Butterfly valves are specified for the 12 inch line, but this specification has recently changed to allow for gate valves in lieu of butterfly valves. Please revise as appropriate wherever a butterfly valve is specified.

7. Sheet 5: Water line C is shown as public. Please revise, as this line is private. Please see previous comments related to the lineweight, as this may confuse the contractor and/or the inspector during construction, as well as our GIS technicians who are entering data into our GIS system.

8. Trenching and backfill detail should be updated to include the new 12 inch aggregate requirement over the top of pipe.

9. Sheet 5: Maximum depth of cover over water mains is 7 feet. There are instances where this has been exceeded slightly, and it appears the 7 foot rule can be achieved. Please revise.

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/ electronically signed Dec. 16, 2022

Gene Williams, P.E.
Senior Staff Engineer
(816) 969-1223
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cc: Development Engineering Project File