

Date: Tuesday, June 30, 2020

To: OLSSON ASSOCIATES
1301 BURLINGTON, SUITE 100
NORTH KANSAS CITY, MO 64116

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

Application Number: PL2020125

Application Type: Engineering Plan Review

Application Name: Woodside Ridge - 2nd Plat - Sanitary Sewer

The Development Services Department has completed its review and offer the following comments listed below.

- Resubmit three (3) full size sets of plans (no larger than 24"x36") folded to 8-½"x11", one (1) comment response letter, and one (1) digital copy following the electronic plan submittal guides as stated below.
- Revised plans will be reviewed within five (5) business days of the date received.

Engineering Review - Corrections

1. Sheet C205 and C208 and C209: It appears the easement widths are too narrow for the side lot easements where the sanitary sewer line will be constructed. A minimum of fifteen (15) feet is required between the outside of the sanitary sewer line, and any building. The easements shown will have the potential to allow a building to be placed too close to the sanitary sewer line. In addition, the depth of the sewers in these areas are deep, and in some cases are approximately twenty (20) feet deep as measured to the flowline of the pipe. The Design and Construction Manual requires a minimum of twice the depth of the sanitary sewer for a minimum easement width, assuming the sewer line is installed in the middle of the easement.
2. Sheet C207: Although the City now allows for twenty (20) feet of depth, this new standard is measured from proposed ground to the flowline of the pipe. It appears the sanitary sewer in the vicinity of the drop manhole is too deep. In addition, it is not clear whether "existing ground" in this area is also "proposed grade". Please clarify. Finally, there is another location where the sanitary sewer appears to deep along portions of the segment between manhole #2-1 and #1-2. The new standard allows twenty (20) feet of cover, but "cover" is now defined as to the flowline of the pipe rather than the top of pipe.
3. Please be aware that concrete pipe anchors shall be required if adjusting the drop manhole discussed in the above comment, where the new slope is 20% or greater. These are discussed in the Design and Construction Manual Section 6500.

4. Sheet C207: Please label the drop manhole. As shown, it is labeled as a standard manhole in the plan view.
5. It appears several manholes can be eliminated along Killarney Rd. This would include #4-2, #4-3, #4-4, #4-5. After removing these manholes, a manhole could be placed at the north corner of Lots 193 and 194, outside of the paved area, and outside the sidewalk limits. From this point, a straight line shot could be made from this new location, to manhole #4-6. Please contact Development Engineering if there are any questions concerning this alignment.
6. Standard Details: It appears a shallow manhole will be constructed. If so, then the City standard detail should be provided. In addition, the "Storm" manhole lid should be revised to say "Sewer". This can be done by crossing out the word "Storm", and providing a note.

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/Gene Williams Jun. 30, 2020

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cc: Development Engineering Project File