

**Date:** Friday, October 16, 2020

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

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

**Application Number:** PL2020289

**Application Type:** Engineering Plan Review

**Application Name:** Hawthorn Ridge 3rd Plat - Streets, Stormwater, Master Drainage Plan

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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. A brief stormwater memorandum is required, which discusses the previous plats detention basin construction, and the applicability of this plat to the overall plan.
2. Sheet C104: The grading plan appears to show adverse impact to adjacent properties along the entire western edge of the development. Existing grades are altered, and drainage pathways are now directed toward the properties to the west.
3. Please ensure there are sufficient notes that define the construction of ADA-accessible ramps being part of this project (i.e., not by the homebuilder).
4. Sheet C118: Buckthorn St. is a collector street, and therefore, HDPE is not allowed. Suitable alternatives include CPP and RCP.
5. Sheet C118: The crown of the incoming pipe at JB-1-2 is lower than the outgoing pipe. At a minimum, please ensure the crowns are matched.
6. Sheet C118: An odd dashed line is shown within JB 1-2. Is this a drafting remnant?

7. Drainage Calculations: The mannings n factor does not appear correct for any of the pipe calculations. The 0.010 was applied for all pipes, and does not appear to meet any of the City of Lee's Summit design standards. Please verify and reconcile.
8. Profile Views of Stormwater: Where fill is being placed prior to trenching and backfill of storm lines, please show in graphic format (e.g., cross-hatching, etc.) the limits of the fill and compaction that will be done prior to trenching and backfill of the pipe. The note is also required (which has already been done), but a graphic reference must also be provided.
9. Sheet C118: The hydraulic grade line for the design storm must be shown on all profile views. It would appear the storm line was designed for the 100 year event, and we would agree this is required in this case due to the fact the storm line is being placed in between homes. Please update the profile view as appropriate.
10. Master Drainage Plan: Please show the locations of all swales that were detailed in the previous sheets, showing their location, and showing the sheet number where the details can be found.
11. Master Drainage Plan: The entire western edge of the development is being shown with grading that alters the existing condition. While that is acceptable if not impacting adjacent properties, it would appear the grading will have an adverse impact on them. Please determine the best way to manage this situation.
12. Master Drainage Plan: A spot check of several of the proposed MBOEs appear to show the proposed MBOE is not 2.0 feet above the calculated 100 year water surface elevation within the rear yard swale. Please perform a thorough review, and ensure all MBOEs are a minimum of 2.0 feet above the calculated 100 year water surface elevation.

### **Traffic Review - No Comments**

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**

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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 electronically signed Oct. 16, 2020

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