

**Date:** Friday, February 05, 2021

**To:** OLSSON ASSOCIATES  
Julie Sellers, P.E.  
1301 BURLINGTON, SUITE 100  
NORTH KANSAS CITY, MO 64116

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

**Application Number:** PL2021017

**Application Type:** Engineering Plan Review

**Application Name:** Hook Farms 2nd Plat - Streets, Storm and Master Drainage Plan

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The Development Services Department received plans for this project on January 14, 2021. We have completed our 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**

1. A stormwater report appeared to be missing for this phase of the project. In particular, the stormwater extended detention basin should be discussed, and calculations presented.
2. We would suggest a re-evaluation of MBOEs based on conversations and emails provided previously on MBOE guidance. Although MBOEs can be specified for each lot, it is not necessarily required.
3. We are assuming the extended detention basin after conversion from a sediment basin will not require any additional floodplain development permit? Will there be any additional grading within the floodplain which changes the ground elevations?
4. Hook Farm Circle: An ADA-accessible ramp was not shown entering the cul-de-sac bulb, but rather, terminating within the right of way. The City has been terminating these ADA-accessible ramps into cul-de-sacs, and the plans should be revised. One option is to design a 90 degree ADA-accessible ramp entering the cul-de-sac bulb.
5. Plan and Profile Views for Storm Lines: Please provide a light hatching and appropriate notes which specify that all pipe being installed in fill locations be backfilled and compacted, followed by tamping and pipe installation in the fill area.

6. Sheet C138, C139, and C140 appear to be missing a flowline out for the storm lines entering the creek.
7. Sheet C131 appears to show the storm line daylighting into the extended detention basin at 940.0. The bottom of the basin appears to be flat for a portion of the basin bottom, and it would appear it will not properly.
8. The extended detention basin does not appear to be designed in accordance with the Design and Construction Manual in terms of freeboard between the nominal 100 year water surface elevation, and the spillway. It also does not appear to meet the clogged condition freeboard requirements from the flow within the emergency spillway and the top of the dam. A minimum 0.5 feet freeboard is required between the nominal 100 year water surface elevation and the spillway elevation, and a 1.0 foot freeboard requirement for the 100 year clogged condition flow within the spillway to the lowest point on the dam.
9. There appears to be a discrepancy in the pipe size shown on the section view versus the profile view for the extended detention basin outlet pipe. The section view appears to show 9 inch diameter, and the profile view shows 12 inch.
10. Master Drainage Plan Comments: The City is ok with allowing side yard auxiliary swales to be installed by the homebuilder, as long as they are noted on the Master Drainage Plan (MDP). Other auxiliary swales such as those to be constructed on the rear property lines should be installed along with the public subdivision improvements.
11. Other Master Drainage Plan Considerations: The City is of the opinion that basement type should still be required for each lot, unlike the MBOE.

#### **Traffic Review - Corrections**

1. Sidewalk Ramp missing across Hook Farm Cir. aligned with proposed ramp on Tracker Ln. on Layout Sheet. Sidewalk Ramp proposed near Lot 61/62 shall be moved to directly align with the proposed ramp on the southeast corner of the intersection. No unnecessary diagonal or angled roadway crossings.
2. Sidewalk Ramp proposed near Lot 77/76 shall be moved to directly align with the proposed ramp on the southeast corner of the intersection. No unnecessary diagonal or angled roadway crossings.
3. Sidewalk Ramp proposed near Lot 51/52 shall be moved to directly align with the proposed ramp on the southeast corner of the intersection. No unnecessary diagonal or angled roadway crossings.
4. Coordinate Street Name comment on Plat to Street Name Signs for Hook Farm Drive/Hook Farm Circle. Hook Farm Circle is not a Circle, but rather a Court. If acceptable by Planning, consider the portion of Hook Farm Drive continuing to the cul-de-sac without a name change.

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 Feb. 5, 2021

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

