



Application Number: PL2022228
Application Type: Commercial Final Development Plan
Application Name: Living Faith Parking Lot Addition
Location: 1121 SW Hook Road, Lee's Summit, MO 64082
Comment Date: August 29, 2022

Please see our responses to City comments, below in bold.

Planning Review

1. Ownership affidavit. Please upload an ownership affidavit application. **To Be Uploaded.**
2. **LIGHTING To be submitted under separate cover.**
 - Please show the lighting specification for the pole and the headlight fixture. Parking lot lighting shall meet the requirements of the UDO lighting Section specification 8.250.
 - Please indicate the foot-candle level at the property line shared with the residential property to the west. A max of 0.5 fc is allowed. Provide a revised photometric plan.

Engineering Review

1. Please refer to the previous applicant letter. Although the swale slopes have been modified, there are issues with the calculations for velocity. The calculations for velocity appear to be based on uniform normal depth flow, which is not the case for these slopes. A preliminary glance at the slopes indicate the flow is supercritical. This will lead to excessive flow velocities for all storm events, and will lead to significant back-cutting of the swale towards the parking lot. It would appear a better system is required such as an underground pipe and inlet system. Please revise as appropriate. **See response to Item 4.**
2. 100 year water surface elevations shown on the plan view were not changed after revisions to the swale entering the basin. This shall be required since the outline of the 100 year WSEs for both the nominal and clogged condition do not make sense in relation to the proposed contour elevations. However, please see comment above since it appears a different system for conveying stormwater to the basin is needed. Please evaluate and revise as appropriate. **100-YR WSE have been revised around swale sections.**
3. Please see previous applicant letter concerning the new point source of stormwater directed towards the east. The response to comments letter stated that a berm is being proposed to capture more of the stormwater around the field inlet to the north of the basin, but the grading plan is not clear in this respect. Perhaps additional contours tying into the 1014 elevation contour just north of the inlet are needed to specify a berm is to be installed at this location to prevent bypassing the field inlet? Additional notes on the plan view would also appear warranted. Please review, evaluate, and revise as appropriate. **Multiple spot grades have been called out to identify crest of berm.**
4. In lieu of an underground stormwater collection system to convey stormwater to the detention basin, it may be possible to design a system utilizing specialized turf reinforcement mat - such as the ones developed for higher velocity flows in the supercritical flow regime. If such a system is desired, it shall be based on manufacturers recommendations for design, and calculations shall be provided. Please be aware these calculations cannot be based on Mannings equation unless it can be proven that flow is within the subcritical flow regime. Please review and evaluate, and revise as appropriate. **TRM has been added at the flow transition between the swales and the detention pond per our e-mails.**

Thanks,

Matt Schlicht