LEE'S SUMMIT
MISSOURI

DEVELOPMENT SERVICES

Date: Monday, October 21, 2024

To: MATT SCHLICHT
50 SE 30TH ST
LEES SUMMIT, MO 64082

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

Application Number:	PRSUBD20245294
Application Type:	Public Infrastructure
Application Name:	Oldham Village - Mass Grading and Eroison control

The Development Services Department received record drawing documents for this project and we have completed our review 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.

Engineer Review - Grading **Reviewed By: Gene Williams, P.E.** **Corrections**

1. Plans are incomplete in terms of identification and design of the sediment basin. Are you proposing the detention basin to act as a sediment basin? Where is the outlet structure? Where is the emergency spillway? Correction required.

2. 100 year clogged/zero available storage condition shall be shown on the plan view(s) along with numeric callout. Minimum of 20 feet setback required from any property line or building. Correction required.

3. Stormwater report: Grading plan for the detention basin in the appendix does not match the grading plan shown in the plan set on Sheet C.200. No further review of stormwater report or the stormwater detention basin performed.

4. Sheet C.200: This grading plan is showing the sheetflow discharge of stormwater from the dam onto 1111 SW Mission Place, which we are showing is not currently happening. According to LIDAR data within the GIS, I am showing only 1109 SW Mission Place is currently being affected by stormwater flow within the channel. Drainage swale along the dam should be modified to remove any sheet flow from the dam onto 1111 SW Mission Place, unless a suitable legal agreement is made between the lot owner and the developer. Correction required.

5. It appers the top of dam width is only 2.5 feet according to Sheet C.200. This is too narrow to provide access to the facility, and is too narrow to provide stability to the top of dam. Minimum width for the top of the dam should be at least wide enough to drive maintenance equipment (e.g., 6 feet?). Correction required.

6. The grading plan for the detention basin shown in the drainage report differs from what is shown on Sheet C.200. According to the grading plan shown in the appendix of the stormwater report, stormwater from the embankment will impact the residential lots to the west even greater than already shown on Sheet C.200, in particular, 1111 SW Mission Place. Correction required.

7. Based on a cursury review, it would appear the storage of the detention basin will be too small to manage the 100 year event after moving the basin further to the east to address the above comments, and widening the top of the dam to

accommodate access and to provide a stable top of dam. It is likely portions of the basin will need to be constructed with vertical sides (i.e., retaining walls) to accommodate the needed storage. Corrections required.

8. Sheet C.200: Scale in upper right hand corner appears in error. Correction required.

9. No further review of Sheet C.200 possible due to scale error (see above). Correction required.

10. It is questionable whether grading shown on the corners of the detention basin can be achieved (i.e., squared-off rather than rounded). Correction required.

11. Where is the turf reinforcement mat for the detention basin sides? Correction required.

12. It is likely you are wanting to grade the detention basin one time, and install the outlet structure one time rather than retrofit later. As such, all aspects of the unapproved final stormwater report shall be addressed, and all aspects of the detention basin outlet structure shall be addressed on the plans, and all aspects of the sediment basin design shall be addressed, such as sizing of skimmer, placement of skimmer, etc. Correction required.

13. Stormwater Study Comments: 1) Isn't the methodology of the report to determine whether the detention system is capable of meeting Section 5600 Comprehensive Control Strategy?, 2) you are proposing 0% slope for the bottom? How is this going to work? We have seen less than 2% in the past, but 0% is going to unnacceptable and will lead to mosquito breeding and stagnant water, 3) Conclusions and Recommendations did not mention anything about meeting Section 5600 Comprehensive Control Strategy, 4) no discussion of potential stream buffer issues was presented, and calculation of the drainage area upstream of the outlet structure was not addressed, 5) no discussion of eliminating impact to resididential properties to the west was presented in the report, and how a drainage swale would be constructed to address this issue, 6) no discussion of width of top of dam and what would be sufficient based on your recommendations, 7) no discussion of how the water quality orifice is going to remain clog-free, 8) no discussion of the emergency spillway in terms of providing a safe path for discharge of the design event, 9) any wetland issues, 10) any U.S. Army Corps of Engineers issues.

14. The zero percent slope within the bottom of the basin is a questionable design and is going to lead to public safety issues such as mosquito breeding. This will take place adjacent to a residential subdivision. As previously commented, this 0% slope will not be approved. Corrections required.

15. There are still questions regarding the scale of the plans. Without an accurate scale, I am reluctant to provide any review of the required storage volume shown in the report. Review to be delayed until the scale issue is resolved.

16. Cost estimate required prior to formal approval. Correction 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,

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cc: Development Engineering Project File