February 28th, 2022

Development Services
City of Lee's Summit, Missouri

Application Number: PL2022019
Development Name: Town Centre – Lot 1

Ms. Pyles,

The following changes have been made to the submitted mass grading documents at the request of City Staff:

Engineering Review

1. Retaining walls appear to be slightly within public easements. Retaining wall or any portion of geogrid or tie-backs, and footings are a "Non-Allowed" use of the easement according to the current Encroachment Policy adopted by the City.

   Acknowledged. The retaining wall located near the proposed sediment basin outlet has been pulled back from the property line and the geogrid and footings of the wall will not encroach on the property line or any public easement.

2. Location, material, and sizing of the water transmission main existing along the west side of the project was missing. This transmission main shall be shown on the plans.

   The transmission water main was field surveyed and is located approximately 24' west of the western property line. Please see Sheet C2.1 for water line location.

3. Transmission main location will be impacted by cut/fill. Maximum depth of cover is 7 feet, and minimum depth of cover is 3.5 feet. The vertical location in the form of a profile view shall be presented. Please provide the method used to determine the depth of the transmission main in the affected areas, as as-builts may not be the most suitable method. It is possible Water Utilities will require potholing or other direct methods for vertical location of the line. This is a critical transmission main to the City of Lee's Summit.

   The transmission water main was field surveyed and is located approximately 24' west of the western property line. Please see Sheet C2.1 for water line location.

4. Sheet C2.1: Drainage swale 2-2 is shown in the plan view, but the typical section view at bottom of sheet does not match the callout. In addition, no other section views were shown for the swale despite the different geometry at different locations along the swale. Recommend several sections be called-out, with different section views for each. In any case, all must match what is called-out on the plan view versus the section view.

Please see the revised drainage swale cross-section shown on Sheet C2.1. The proposed drainage swale will have a bottom width of 2' and slopes of 4:1 from the beginning of the swale to its discharge location north of the proposed sediment basin.

5. The water transmission main is crucial to Water Utilities. Ensure there is no conflict with the retaining walls, as Water Utilities will require a substantial buffer between the retaining walls and the transmission main. Please show the location of this transmission main on the plans.

   The transmission water main was field surveyed and is located approximately 24' west of the western property line. Please see Sheet C2.1 for water line location.

6. General Note: The note concerning contacting Development Services Inspections 48 hours prior to construction commencement is not correct. Please revise to read "A pre-construction meeting shall be scheduled between Contractor and Development Services Inspections with a minimum of 48 hours notice. Please contact 816-969-1200 to schedule this pre-construction meeting."

   The note has been correct. Please see Sheet C1.1.

7. Erosion Control Note #1: The erosion control note did not mention the construction of the basin. This is a critical element of the plan, and shall be discussed within the notes. A note shall also be provided indicating the basin to be constructed first, along with the other initial erosion and sediment control measures.

   The note has been correct. Please see Sheet C1.1.

8. Are there any areas on this project where turf reinforcement mat (TRM) would be appropriate? It does not appear any TRM was called-out for this project, and it is unclear how this plan will limit off-site erosion and sediment from leaving the site without it.

   Immediately following mass grading, slopes will be seeded or hydroseeded. Please see the revised seeding locations and notes on Sheet C2.3.

9. All retaining wall designs with walls greater than 2.5 feet including the footing shall be submitted to Development Services for review and approval.

   Acknowledged. Retaining wall design will be completed by others and installed under the corresponding building permit.

10. Sediment basin design is incomplete and based on "hunch" estimates of volume and flows. I see the summary design table on the last sheet of the plans, but no site-specific design parameters are presented. Please complete, and provide a new design if the calculations show a larger basin is necessary. Drainage area shall include any off-site contributors to flow.

    Please see the Sediment Basin Design Summary table on detail ESC-11 on sheet C4.2.

11. Sheet C2.2: Why isn't the sediment basin being constructed first? I realize the pond needs to be removed, but shouldn't the sediment basin be installed as the first measure of erosion and sediment control?

    Acknowledged. The sediment basin will be constructed once perimeter silt fencing, construction entrances, and other initial ESC measures have been installed before mass grading actives begin.

12. The discharge location of the sediment basin appears to be lacking in terms of design. Sufficient energy dissipation measures shall be installed, and sufficient distance shall be maintained between the discharge point and the adjacent property. Provide design calculations for any energy dissipation measures, and ensure there is no adverse impact to adjacent property.

    Since the spillway and top of riser elevation will be above the elevation of the runoff from the 100-year storm in the basin, discharge rates from the basin will be minimal at 0.21 CFS. The permanent emergency spillway designed for the entire future developed site will be constructed during mass grading at an elevation of 1004.10 and a dam elevation of 1005.60. Additionally, permanent outlet protection designed for the entire future developed site will constructed at the same time as the proposed sediment basin. Please see Sheet C4.3 for the outlet protection detail.

13. Two (2) separate swales are located toward the east side of the project, each in a north/south orientation. Neither swale was labeled, and neither swale included cross-sections at key locations. In addition, two (2) separate swales are also located toward the west side of the project in a north/south orientation. These additional swales were neither labeled nor detailed in the form of a section view. Please see previous comments concerning the other swale bisecting the project in an east/west fashion. The same comments apply to these swales.

    These areas are intended to be graded to facilitate drainage to the proposed private storm sewer system, rather than drainage swales to the proposed sediment basin. Private storm infrastructure will be installed concurrently with mass grading operations once approved during the FDP review process.

Respectfully submitted,

Jon Prueter, E.I.T.,
Davidson Architecture and Engineering