

April 12, 2018

Shannon McGuire, Planner
Lee's Summit Planning and Development
220 SE Green Street
Lee's Summit, MO 64063

**Re: Applicant Number: PL2018022
 Commercial Final Development Plan
 For Lee's Summit Fire Station #3
 WSKF Architects, Inc., Applicant**

Dear Ms. McGuire:

In regards to the Planning and Development comments of March 30, 2018 regarding the above mentioned permit application, please find listed below each comment requiring correction or comment, followed by our response.

PLANNING REVIEW:

1. Once the property is rezoned a high impact buffer will not be required along the south property line. However, due to the intensity of use of this property abutting residential a high impact buffer shall be required by the UDO. Existing vegetation may be used to satisfy this requirement as long as it meets the minimum standards as outlined in Article 14, Section 14.050 of the UDO. Please update the landscaping plan to reflect this requirement.

Applicant's Response:

Based on clarification from Shannon McGuire on 4/3/18, we are only going to show the plant screening since there is already an existing wooden fence along the property line that is shared with the residential development. We have added plant screening to meet the Medium Impact Screen A, which includes 1 shade tree, 1 ornamental tree, 1 evergreen tree and 2 shrubs, see Sheet C7.0 for updates. A letter is attached to use as our request waiver when submitted for city council approval, justifying this reason.

2. Thank you for submitting the manufacturer's specification sheets for the proposed lighting. Sheets for Voltaire Medium Architectural Flood Lights were submitted but there is no corresponding location labeled on the lighting plan. It appears these may be intended for lighting around the proposed monument sign. Please update the plans to reflect the location of the proposed flood lighting.

Applicant's Response:

The fixture has been labeled correctly on the site plan.

3. Per previous City comment the sidewalk was required to be extended to the west property line. On sheets C2.0 and C3.0 it appears that this was completed, however it also appears that the line indicating the previous sidewalk's limit remains on the plan sheets. Please remove this line and confirm the sidewalk has been extended to the property line.

Applicant's Response:

The old sidewalk limit has been removed from sheets, and the proposed sidewalk extends to the property line.

ENGINEERING REVIEW:

1. The "Micro Storm Water Drainage Study" dated March 21, 2018 is incomplete. As stated in the previous comment letter, this report appears to be a summary of findings and conclusions, missing several key exhibits and appendices to support the findings. In particular, the following items are missing: 1) elevation-area-volume curves for the detention facility, 2) inflow hydrographs for all storm events, 3: stage-discharge rating curves for each emergency spillway, primary outlet works, and combined outlets and overflows, 4) routing curves for all storm events with time plotted as the abscissa and the cumulative inflow volume, cumulative discharge, stage elevation, and cumulative storage plotted as the ordinate.

Applicant's Response:

Data provided in Storm Water Report.

2. Without the above information, it is difficult to comment on the adequacy of the design.

Applicant's Response:

Acknowledged.

3. Also missing from the stormwater report were soil maps showing the native soil present on the site, soil group to determine an appropriate curve number, time of concentration calculations and assumptions, supporting documentation concerning the design of the outlet structure (i.e., orifices, weirs, etc.), and rationale behind the use of a composite curve number shown in the report.

Applicant's Response:

Data provided in Storm Water Report.

4. Page 7 Stormwater Study: Watershed 1 Proposed Peak Discharge Table appears suspect for the 10 and 100 year event for watershed B. Without supporting documentation described in the previous comments, however, it is difficult to determine whether these low peak discharge numbers are correct.

Applicant's Response:

Documentation provided in Storm Water Report.

5. A waiver request is required for the undetained portion along the fringes. This waiver request should include a discussion of: 1) existing drainage area, and existing drainage patterns (i.e., sheet flow, concentrated flow to a point, etc.), 2) proposed drainage area after development, including a discussion of the proposed drainage patterns (i.e., sheet flow, concentrated flow, or a combination thereof, 3: pre-development peak flow rate versus post-development peak flow rate, 4) additional downstream concerns, including impacts to Sterling Hills subdivision to the southwest of the project, and 5) any additional BMPs or other engineered methods to mitigate water quality concerns. The waiver request should also include exhibits, calculations, and other quantifiable results justifying the necessity of the waiver.

Applicant's Response:

Waiver Request provided. See Storm Water Report attachments.

7. Sheet C2.0: The previous applicant letter asked that construction along Shamrock Ave. to be performed by others be shown on the Final Development Plan. The note "City to Install..." should be changed to read "installed by others". This will clarify who is responsible for each aspect of the project along Shamrock Ave.

Applicant's Response:

Notes have been updated on Sheet C2.0 to reflect the correct wording.

8. Sheet C2.0: A specific design for ADA-accessible ramps in the right of way must be submitted for those portions of the ramps constructed under this Final Development Plan. At a minimum, it would appear this pertains to the west commercial entrance. A plan and profile view should be provided, which conforms to the design standards set forth in Section 5300 of the Design Construction Manual. As part of the review of the Final Development Plan, our group shall not review nor inspect the interior sidewalks for compliance, but rather, sidewalks within the right of way. If the commercial entrance to the east is being constructed with this Final Development Plan, then it must be constructed with a 5 foot route across the driveway, which is no more than 1.5% cross slope. Placing a note on the plans that "the City shall construct ADA ramps" is not sufficient, since the commercial entrance is part of this ADA-accessible ramp.

Applicant's Response:

The City of Lee's Summit is constructing the east commercial entrance, and ADA ramps/access route. For the west commercial entrance, notes, details, and sections have been added to Sheets C4.0 and C8.0 for clarification of ADA ramps and accessible path across the drive.

9. KCMMB concrete mix must be specified for all commercial entrances. In addition, please provide sufficient notes on who will be responsible for constructing these entrances. The note on the easternmost commercial entrance is confusing, since the entrance is integral to the ADA-accessible ramp.

Applicant's Response:

Notes have been updated to specify KCMBB. See Sheet C2.0.

10. Sheet C2.0: A backflow vault and backflow assembly is warranted near the property line. This is required due to the distance being greater than 50 feet to the building, as measured from the water line. A gate valve must also be installed prior to the backflow vault, within an easement or right of way. The vault should be completely contained on the private side, outside of any easement or right of way.

Applicant's Response:

The Fire Chief, Brian Austerman, is getting a variance on this from the Water Department.

11. Sheet C4.0: An ADA Access Grading Detail is provided in the lower right hand corner of the drawing, but it is unclear where this is being constructed. Again, the Engineering Group is only interested in the design details for ADA-accessible ramps within right of way. Specific design criteria and required submittals within the drawings are outlined in Section 5300 of the Design and Construction Manual. No "field design" of these features are allowed.

Applicant's Response:

Details, notes, and sections have been added to Sheet C4.0 for ADA ramps within the R.O.W.

12. Where are the plans for the off-site sanitary sewer? A plan and profile view is required.

Applicant's Response:

We are currently waiting on determination from City about who is responsible for the design of the sanitary sewer.

13. Detention Basin Issues: We do not see 3% slope at the bottom of the basin. Without elevations called-out on the grading plan, however, it is difficult to determine. Please call-out the elevations of all contours shown on the grading plan, not only in the vicinity of the detention basin, but all other areas. It is difficult to determine whether adequate drainage is being provided.

Applicant's Response:

Labels have been added to show that 2% slope is provided. See Sheet C4.0.

14. The 100 year water surface elevation is still not shown within the detention basin. Please show the location, in graphic form, the outline of the 100 year water surface elevation within the detention basin, along with the elevation of the 100 year water surface. Finally, provide a dimension showing the 20 foot rule has been satisfied.

Applicant's Response:

The 100 Year Water Elevation has been shown graphically and labeled on Sheet C4.0. A setback line and label has been added to confirm that the 20 ft. rule is met.

15. Sheet C4.0: The stormwater report did not discuss the emergency spillway. It appears from the grading plan that an earthen emergency spillway is being proposed, with the overflow path directed toward homeowners within Sterling Hills subdivision. This does not appear acceptable.

Applicant's Response:

The top grated inlet is the primary emergency spillway which conveys the 100-yr event. The grass-lined weir is the secondary emergency spillway for events above the 100-year storm.

16. Where are the profile views of the stormwater structures and lines greater than 6 inches in diameter? It appears there are several of these lines missing from the plan set.

Applicant's Response:

Profile views have been drawn for all storm lines greater than 6". See Sheets C5.0, C5.1 and C9.0.

17. Rip rap calculations are still not shown on the plans. Although the response letter provided sizing information, calculations were not provided. Although not specifically required, the City recommends showing the calculations on the plans. If not, then a separate design memorandum should be provided showing the calculations, or the calculations could be shown within the stormwater report.

Applicant's Response:

Calculations provided in Storm Water Report.

18. Where are the calculations showing the downstream storm drain system is capable of managing the 100 year event, or if not, capable of providing a suitable overflow route for the 100 year event? It does not appear this has been addressed anywhere in the plans, stormwater report, or design memorandum. Again, the City recommends this information be provided in tabular format within the plans.

Applicant's Response:

Calculations provided in Storm Water Report.

20. Sheet C5.0, and Other Sheets: Various linetypes are shown, with no identification concerning what they represent. The previous comment letter requested these features be identified, but the response directed the City to a demolition and existing condition sheet, and therefore, we still do not know what these linetypes represent.

Applicant's Response:

Labels have been added to all sheets.

21. Sheet C6.0: The previous applicant letter asked why the detention basin was not being used for a temporary sediment basin. The response appeared to miss the point of the question (i.e., the response discussed 40 hour extended detention, which has no pertinence to a temporary sediment basin). It is the opinion of the City that this basin should be utilized as a temporary sediment basin, with an appropriate design shown on the plans for a temporary sediment basin. Without this feature, it is unclear how the proposed erosion and sediment control plan will mitigate the off-site transfer of sediment to the receiving storm sewer system.

Applicant's Response:

Clarification has been added to Sheet C6.0, the detention pond is used as a temporary sediment basin during construction, to be cleaned out before final grading and seeding.

22. The previous applicant letter requested that standard details be provided within the plans. We were given a 8 ½ by 11 copies of these standard drawings, but they must be shown within the plans.

Applicant's Response:

Details have been included within CD Set, see Sheets C10.0 – 10.2.

23. A curb and gutter detail just be provided, showing not only the curb and gutter, but also the aggregate subgrade extending a minimum of 1 foot beyond the back of curb.

Applicant's Response:

Detail has been added, see Sheet C8.0.

24. Sheet C9.0: It is our opinion that the detention basin outlet structure shown on this sheet is inadequate to serve its intended purpose. Small orifices are shown, with no provision for clogging upstream of these orifices, and no design calculations are evident within the stormwater report to support the placement of these orifices. In addition, other questions remain, such as whether the top grated inlet is intended as an emergency spillway, or whether the grass-lined swale shown on the grading plan will act as the emergency spillway. Finally, the report does not appear to support the use of a 12" RCP as the emergency overflow route.

Applicant's Response:

Anti-clogging hood provided. The top grated inlet is the primary emergency spillway which conveys the 100-yr event. The grass-lined weir is the secondary emergency spillway for events above the 100-year storm.

25. The hydraulic grade line for the design storm should be shown on the profile view of the stormwater plans. If the system is capable of managing the 100 year event, then a suitable overflow route must be established and shown for the 100 year event. Please be aware that a suitable overflow route for the 100 year event should not be assumed to be a downstream lot within the Sterling Hills subdivision.

Applicant's Response:

Hydraulic Grade Line provided in profile view of outlet structure. See Sheet C9.0.

26. Sheet C9.0: The placement of the manhole frame and cover will make it impossible to access the structure, since there is no offset on the lid. Please correct.

Applicant's Response:

Eccentric Manholes have been specified, see Sheet C9.0.

27. Sheet C9.0: A potential sanitary sewer line conflict is shown in profile, with no additional information concerning the location of this potential conflict.

Applicant's Response:

Additional information has been provided, see Sheet C9.0 for profile.

28. Sheet C9.0: Is the "Outlet Structure" also AI-1? If so, then clearly show it on the plans. The profile view does not correspond to the call-out in the plan or section views.

Applicant's Response:

Sheet C5.0 and C9.0 have been updated for clarification on naming of area inlets.

29. It is unclear at this time whether the temporary sanitary sewer extension to the southeast will be public or private. As such, easement call-outs will need to be evaluated at a later date.

Applicant's Response:

We are currently waiting on determination from City about who is responsible for the design of the sanitary sewer.

30. Although the sediment forebay is not specifically required, the design for a sediment forebay should be considered and discussed in the stormwater report. If it is not utilized in the design, it should specify why it is not being utilized.

Applicant's Response:

Discussion provided in Storm Water Report.

31. A Stormwater Pollution Prevention Plan (SWPPP) shall be required prior to approval of the Final Development Plan.

Applicant's Response:

A SWPPP is attached to fulfill this comment.

32. Please see comments #36, #37, and #38 of the previous applicant letter. None of the standard details were included within the plans. Submission of separate standard details on 8 ½ x 11 inch paper is not sufficient to meet this requirement.

Applicant's Response:

Details have been included within CD Set. See Sheets C10.0 – 10.2.

33. An itemized and sealed Engineer's Estimate of Probably Construction Costs should accompany your re-submittal drawings. The Engineering Plan Review and Inspection Fee is based on this estimate, and calculated a 3% of the total, plus a nominal water testing fee for the observation and collection of water samples.

Applicant's Response:

A stamped engineers cost estimate has been attached, including the necessary items as discussed with Gene Williams.

FIRE REVIEW:

1. All issues pertaining to life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to the safety to fire fighters and emergency responders during emergency operations, shall be in accordance with the 2012 International Fire Code.

Applicant's Response:

Acknowledged.

2. IFC 903.3.7 – Fire department connections. The location of fire department connections shall be approved by the fire code official. Connections shall be a 4 inch Storz type fitting and located within 100 feet of a fire hydrant, or as approved by the code official.

Action required: Show the location of the FDC on the building.

Applicant's Response:

The FDC is located on the North Elevation of the building. See Keynote 21 on the architectural plans.

With these responses and enclosures, we trust that all necessary and appropriate information has been provided.

Respectfully,

Williams Spurgeon Kuhl & Freshnock Architects, Inc.



Rick Kuhl, RA MBA LEED AP

Enc Revised Documents
Cc: file