



February 14, 2023

Diana Johnson
Lee's Summit – Development Services
220 SE Green Street
Lee's Summit, MO 64063

RE: Application Number: PL2023008
Commercial Final Development Plan
HCA LSMC ASC
Response to Review Comments Sent 2/2/23

Dear Diana,

We are in receipt of Commercial Final Development Plan comments regarding the HCA LSMC ASC project located at 1950 SE Blue Parkway. See below for your original comments and our respective responses.

Planning Review

1. **EXISTING SANITARY SEWER LINE AND EASEMENT.** For your information, the existing public main and easement that conflict with the proposed building location shall be relocated (the main) and easement vacated prior to the issuance of a building permit for the building. The associated vacation of easement (VOE) application is currently undergoing the approval process.
Response: Acknowledged.
2. **DROP-OFF AREAS.** The drop-off lane serving the building entry at the southwest building corner has a single lane. Staff assumes the intent is for vehicles to circulate in a counterclockwise manner, so the passenger side of a vehicle is on the building side. Provide "One-way" signage at the entrance and "Do Not Enter/Exit Only" signage at the exit plus pavement markings in order to direct circulation.
Response: Pavement markings and signage have been added to the plan.
3. **MONUMENT SIGNS.** For your information, the review and approval of all exterior signage (i.e. monument signs and wall signs) is done under separate cover through a sign permit application.
Response: Acknowledged.

Engineering Review

1. Sanitary sewer and water line alignment will likely change based on discussions with Water Utilities, and the revised layout shall be included on the Final Development Plan.
Response: Acknowledged. The revised layout of the utility mains is included.

2. Overall grading plan shall include notes and labels for the stream buffer. Please revise.
Response: Notes have been added, including labels for the stream buffer.
3. In addition to elevation and dimension callouts on the ADA-accessible parking space plan, slope callouts shall also be provided with the design slope no greater than 1.5% in any direction within the ADA-accessible space. Please revise.
Response: Slope callouts have been added to the plan.
4. Erosion and sediment control plan does not show the installation of the detention basins on the staging chart. This shall be one of the first items required as part of the project (i.e., installation of the detention basins), as they directly-affect water quality. It may be necessary to design these basins as temporary sediment basins until such time that the project is completed. Please evaluate and revise as appropriate.
Response: The installation of the detention basins has been added to the staging chart.
5. Note W5 on the utility plan specifies a 2-inch line. This shall be specified as copper to the meter, and a minimum of 10 feet beyond the meter as copper. Please revise.
Response: The water line notes have been revised to indicate the copper pipe.
6. Rip rap dimensions, including thickness, shall be shown on the plans. Reliance on a formula is not sufficient. Please callout the specific dimensions, including thickness, on the rip rap plans.
Response: The requested information has been added to the plans.
7. Trenching and backfill detail should be updated to the July 2020 standard of 12-inch aggregate over the top of pipe. Please revise.
Response: The trench and backfill detail has been revised.
8. The method of draining the backflow vault sump shall be shown. We have seen the following methods used in the past: 1) daylighting with a small diameter pipe, 2) connection to a storm box, or 3) construction of an infiltration gallery in the form of a 2-foot diameter hole lined with permeable geotextile and filled with clean 3/4-inch rock. In lieu of the above, a sump pump could be installed. Please evaluate and revise as appropriate.
Response: Due to the depth needed to drain the sump, it is not feasible to handle that with a pipe. The infiltration option will be utilized and is now indicated on the plans.
9. A single sheet or perhaps two sheets should be prepared for the detention basins. This shall include the plan view, section views of dam/emergency spillway, and the outlet structures. The reason for this consolidation of the detention basin plans is that an occupancy permit cannot be obtained until an as-built detention basin plan has been accepted by the City. Placing these plans on one or two sheets will make it easier to meet this requirement post-construction.
Response: The noted detention basin plan sheets have now been added to the set.



10. A note should be placed on the detention basin and outlet structure sheets that the detention basins shall be constructed along with the erosion and sediment control devices and measures, and prior to any other activity on the project. In addition, a note shall be provided on these sheets indicating an as-graded and as-built survey shall be submitted and accepted by the City prior to occupancy permit being granted.

Response: The requested notes have been included.

11. The following information is required on the detention basin sheets: 1) outlet structure details, including flowline elevations of all weirs, orifices, top elevation, bottom elevations, etc., 2) grading plan of the detention basin, 3) 100 year water surface elevation within the basin shown graphically and numerically, 4) 100 year water surface elevation for the 100% clogged/zero available storage event, 5) cross-section of the dam in relation to an emergency spillway, with callouts showing the 100% clogged/zero available storage condition is a minimum of 1.00 feet below the top of the dam, 6) cross-section of the dam showing the 100 year water surface elevation for the nominal condition (i.e., fully-functioning and not clogged) is a minimum of 0.50 feet below the crest of the emergency spillway, 7) bottom of the basin with slope callouts and elevations, 8) 100 year storage volume callouts. These figures shall be compared to the as-built condition prior to issuance of an occupancy permit to determine whether storage volumes have been met, and whether elevations of the outlet works have been met.

Response: All the information is now included on the added detention basin sheets.

12. Dimensions shall be shown between the 100-year water surface elevation for the 100% clogged, zero available storage event and any property line or building and shall be no less than 20 feet.

Response: The dimensions have been included on the detention basin plan sheets.

13. A plat is needed to fully-evaluate the alignment of the public sanitary sewer and public water lines to be relocated for this project. The plat is also needed to evaluate the project in terms of other issues including setbacks, easements, etc. Please submit a proposed layout of the plat.

Response: The existing property is already platted. A copy of that plat is included with the resubmittal. The project will include a minor plat lot split, however that is still being completed. Staff had indicated that since the property ownership will be maintained, this was not required prior to issuing any permits.

14. Concrete low-flow channel is not allowed in the City of Lee's Summit unless a waiver is granted by the City Engineer. Please revise.

Response: The basins have been graded to remove the low-flow channel.

15. A single 1-inch diameter orifice or 1.5-inch diameter orifice shown for the detention basin outlet structures does not meet the recommendations of the MARC manual. According to guidance supplied in the MARC manual, any calculated orifice less than 4 inches in diameter should utilize a perforated riser or other means to regulate the 90% mean annual event. Please evaluate and revise as appropriate.

Response: Trash racks are proposed on the orifices to ensure no clogging will occur. The perforated riser would require similar small diameter openings to limit the release of the water quality event over 40 hours.



16. Orifice 2 on the north detention basin outlet structure on Sheet C7.4 does not appear to match the pond setup sheet shown in the report. Please review and revise as appropriate, including a re-run of the routing calculations.

Response: The plans and software output have now been coordinated with the current design.

17. Concerning the above comment on the 2-inch orifice, is a 2 inch orifice appropriate for both of these outlet structures? This would appear prone to clogging and high maintenance. Please evaluate and revise as appropriate.

Response: Trash racks are proposed on the orifices to ensure no clogging will occur.

18. Landscaping Plan: Please show the location of all public water lines and public sanitary sewer lines to ensure a minimum of 5 feet from the mature tree trunk is maintained between the outside of the pipe and any tree trunk.

Response: The utility lines are now shown; a few tree locations have been revised to meet the above requirement.

19. Ensure no lighting pole bases are within any City easements. This would appear to be a concern for the north property line, where the new sanitary sewer will be located.

Response: The noted light pole has been revised to be outside the easement.

20. A curb and gutter detail showing the extension of subgrade (i.e., aggregate base and geotextile) a minimum of 1 foot beyond the back of curb was not shown. Please provide a typical section view showing the minimum 1.0 feet extension beyond the back of curb. Alternatively, you may wish to update the asphaltic concrete and PCC section details to show the section in relation to a curb and gutter, and how the subgrade will be extended a minimum of 1 foot beyond the back of curb. Please evaluate and revise as appropriate.

Response: The pavement section details have been revised to show the 1-foot extension of the subgrade past the back of curb.

21. Were both discharge pipes from the two detention basins sized to manage the 100-year event? These pipes shall be designed to manage the 100-year event without reliance on the emergency spillway. The emergency spillway shall be utilized only in the event of a storm event that exceeds the 100-year event, or when the outlet works becomes clogged. Please evaluate and revise as appropriate.

Response: The discharge pipes have been upsized to carry the 100-year event.

22. If an emergency spillway(s) is not necessary based on grades (i.e., if overtopping would not lead to a catastrophic failure of the dam due to it being placed within a depression), please discuss in the stormwater report. This would include a discussion of the 100-year water surface elevation in relation to the existing grades at the toe of the dam or other considerations. Based on what I can gather from the grading plan, it would appear here may be the opportunity to delete the requirement for an emergency spillway, but we will need you to evaluate and make this independent determination based on your design.



Response: An emergency spillway is still being provided with the project for the north basin. The south basin will have a spillway that consists of the east side of the embankment. Due to the grades that exist around the basin, as noted in the above comment, if the embankment collapsed, water would just continue running down into the existing creek where there are no structures in the path. A discussion of this has been added to the stormwater report.

23. In addition to elevation callouts on the ADA-accessible ramps, slope callouts are required. A maximum cross-slope of 1.50% shall be shown for the sidewalk and ADA-accessible ramps, and no more than 7.50% running slope for the ADA-accessible ramps. Please revise as appropriate.

Response: Slope callouts have been added to the plan.

24. The 5-foot minimum width ADA-accessible route across the commercial entrances shall be shown, including width, cross-slope, and elevations. Please revise as appropriate.

Response: The additional information is now provided on the drive entrances.

25. A gate valve is required immediately prior to the backflow vault on the public side. Please revise.

Response: A gate valve is call for prior to the backflow vault.

26. An itemized and sealed Engineer's Estimate of Probable Construction Costs should accompany your final submittal drawings. Items to include in the estimate are: 1) pavement, 2) aggregate subbase, including the area one (1) foot beyond the back of curb, 3) geogrid, including the area one (1) foot beyond the back of curb, 4) compaction and grading for parking lot, 5) detention basin grading, 6) private storm lines and structures, 7) detention basin outlet structure and piping, 8) sanitary sewer laterals and wyes and tracer wire in accordance with the standard detail, 9) water lines and connections, 10) fire hydrants, 11) sidewalk, 12) ADA-accessible ramps, 13) curb and gutter, 14) rip rap, 15) erosion and sediment control measures and devices, and 16) final restoration including sodding, seeding, topsoil, fertilizer, mulch, and final removal of erosion and sediment control measures and devices.

Response: A sealed cost estimate is provided with the resubmittal.

Fire Review

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.

Response: A private fire hydrant is proposed to be installed and is shown on the utility plan. The FDC connection is now called out and will be within 100' of the proposed hydrant.

Building Codes Review

1. Provide cleanout near where sanitary leaves footprint of building per 2018 IPC 708.1.3. Provide additional cleanout to comply with 100' rule per 2018 IPC 708.1.2.

Response: The required cleanouts have been added to the plan.



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2. Provide engineered light pole base detail.

Response: The light pole base detail is being provided on the electrical site plan included with the building plans.

3. Specify type and location of irrigation system backflow preventer.

Response: The irrigation service will come off the domestic service in the water entry room of the building upstream of the domestic backflow device. After coming off the domestic service, the irrigation will flow through a reduced pressure zone backflow assembly prior to leaving the building for connection to the site irrigation. This will be shown on the plumbing plans for the building.

If you have any questions on any of the above, please feel free to call me at 913-663-1900 or email me at eric.byrd@ibhc.com.

Sincerely,



Eric Byrd, P.E.
Senior Project Engineer



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