

Date: Friday December 20, 2024

To: Grant White

From: Chris Krumrei

Re:

Application Number: PL2024188

Application Type: Commercial Final Development Plan

Application Name: Joint Operations Facility

Location: 2 NE TUDOR RD, LEES SUMMIT, MO 64086

Analysis of Commercial Preliminary Development Plan:

Review Status:

Required Corrections:

Planning Review	Hector Soto Jr. (816) 969-1238	Senior Planner Hector.Soto@cityofls.net	Approved with Conditions
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1. FAA FORM 7460. Staff acknowledges that the applicant has submitted the necessary information to the FAA for their review. A copy of the FAA response to the Form 7460 shall be submitted to the City prior to any issuance of building permits for commencement of construction.

a. [Response: Form is attached](#)

Engineering Review	Gene Williams, P.E. (816) 969-1223	Senior Staff Engineer Gene.Williams@cityofls.net	Corrections
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1. Refer to comment #3 in previous applicant letter. The following requested items are still missing from the plans: 1) anti-clog measures for the outlet works. Correction required.

a. [Response: Acknowledged. A riser pipe with weir holes has been added and detailed with the outlet control structure on Sheet C3.3.](#)

2. Refer to comment #4 in previous applicant letter. The following items were missing or mislabeled on the plans: 1) emergency spillway crest elevation is called-out as "overflow spillway" and needs to be corrected to "emergency spillway to avoid any confusion, 2) dimensional callouts to property lines from the 100 year clogged condition to ensure the 20 foot setback is maintained., 3) slope callouts in the bottom of the basin, 4) 100 year design storage volume for the basin. Correction required.
 - a [Response: The labeling has been corrected on sheet C3.3.](#)
3. It appears there is insufficient setback from the north property line and the 100 year clogged condition. While it is not an issue with the emergency spillway due to the proximity of Commerce Dr., it will be an issue with all other portions of the detention basin. It is likely a retaining wall is warranted. Correction required.
 - a [Response: 20-ft setback provided and label on sheet C3.3.](#)
4. Sheet C3.3: What does the phrase "top of spillway" represent? It does not appear to correlate with any feature shown on the plans. Correction and clarification required.
 - a [Response: Updated detail on outlet structure and emergency overflow spillway provided on Sheet C3.3](#)
5. Sheet C3.3: Where is the detail for the concrete emergency spillway? As shown, it is only in the form of a plan view and a note. Correction required to show dimensions, thickness, concrete type, etc.
 - a [Response: Updated detail provided on sheet C3.3.](#)
6. Sheet C3.3: Weir wall detail is not sufficiently detailed for construction. Notes are provided about an integralgrate that is not shown or detailed anywhere on the sheet. Anti-clog measures for the 3 inch orifice are missing. Thickness, type of material, steel reinforcement, etc. is missing for the outlet structure. Recommend a profile view, a section view, and a plan view showing all aspects of the design. Recommend normal drafting standards on the plan view referring the reader to the detail on the sheet. Correction required.
 - a [Response: Updated detail provided on sheet C3.3.](#)
7. Sheet C3.3: Flowline elevation of the 3 inch orifice does not appear to match the proposed pond setup table within the stormwater report dated Nov. 15, 2024. 995.00 is shown in the report, but plan shows 997.50. Correction required and possible re-run of the routing calculations required.
 - a [Response: This has been corrected.](#)

8. Sheet C3.3: Weir opening on outlet structure shown as 48 inch by 8 inch tall opening. No such structure is shown in the pond setup table for the proposed detention basin in the Final Stormwater Report dated Nov. 15, 2024. Correction required, and possible re-run of the routing calculations required.

- a [Response: Updated outlet control structure detail provided. This structure has been updated to match new routing model.](#)

The exert from the routing model below aligns with the design of the outlet control structure.

Device	Routing	Invert	Outlet Devices
#1	Primary	994.78'	30.0" Round Culvert L= 59.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 994.78' / 994.28' S= 0.0084 '/' Cc= 0.900 n= 0.012, Flow Area= 4.91 sf
#2	Device 1	994.83'	3.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	997.75'	42.0" W x 16.0" H Vert. Orifice/Grate C= 0.600
#4	Device 1	1,001.00'	1.0' long Sharp-Crested Rectangular Weir 2 End Contraction(s) 0.7' Crest Height

Primary OutFlow Max=53.81 cfs @ 12.16 hrs HW=1,002.75' (Free Discharge)
 1=Culvert (Passes 53.81 cfs of 61.27 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.66 cfs @ 13.44 fps)
 3=Orifice/Grate (Orifice Controls 46.73 cfs @ 10.01 fps)
 4=Sharp-Crested Rectangular Weir (Weir Controls 6.42 cfs @ 5.65 fps)

9. Additional openings are shown in the pond setup table shown in the Final Stormwater Report dated Nov. 15, 2024 which do not appear to be shown in the plans. Correction required, and possible re-run of the routing calculations required.

- a [Response: This has been corrected and the report matches the labeling on the outlet control structure on detail sheet C3.3.](#)

10. Stormwater report shall be resubmitted as necessary based on above comments. Informational comment.

- a [Response: Understood. Updated Stormwater report provided.](#)

11. Sheet C3.3: What does "top of weir wall" represent? It does not appear to be shown in the Final Stormwater Report dated Nov. 15, 2024. Correction required in the form of reconciling with the stormwater report, and further detailing of the outlet structure.

- a [Response: Updated outlet control structure provided on sheet C3.3.](#)

12. Access to the outlet structure from the surface may require steps. If needed, show the location of steps in the outlet structure. Correction required.

a [Response: Steps indicated on outlet control structure on Sheet C3.3.](#)

13. Plan and profile view of the storm line exiting the detention basin is missing. Correction required.

a [Response: Plan and profile provide on Sheet C5.2.](#)

14. See comment #10 in previous applicant letter. 100 year design storm HGL was not shown in graphic format within the detention basin. This should be shown in a similar manner as the clogged condition you are already showing. Correction required.

a [Response: HGLs indicated on plan and profiles.](#)

15. Sheet C4.0: Note W02 refers the reader to "plan and profile for the private water line design". No such plan and profile was provided. Correction required.

a [Response: Water line plan and profile provided on Sheet C4.0.](#)

16. Sheet C4.0: Gate valves are not labeled. In addition, a gate valve was missing just prior to the backflow valve. Correction required.

a [Response: Gate valves labeled on Sheet C4.2.](#)

17. Sheet C4.0: Backflow vault was not labeled. In addition, the method used to drain the sump of the backflow vault was not shown (i.e., either a small diameter pipe to daylight, curb inlet, or permanent sump pump). Adequate details and reference to the standard detail shall be required. Correction required.

a [Response: Backflow preventer and drain line indicated on Sheet C4.2.](#)

18. Sheet C4.0: Water meter was not labeled as to the size or type. Is it a displacement or compound meter? Size? Correction required.

a [Response: Water meter indicated on Sheet C4.2.](#)

19. Water meter shall be installed just prior to the gate valve. Correction required.

a [Response: Waterline meters and gate valve locations indicated on Sheet C4.2.](#)

20. Refer to previous comment letter. You are still showing an extraneous water meter towards the south that is connected to the fire line which is not allowed. All water meters shall be shown prior

to the gate valve denoting the end of public service. The meters shall be labeled with size and type. Reference to the standard detail in the plans shall also be provide. Correction required.

- a [Response: This has been updated to reflect the conversation from the applicant meeting on 12/11/24.](#)

21. Refer to comment #15 in previous applicant letter. Utility plan shall include pipe type, size, material, length, and location. Correction required.

- a [Response: This information is included on sheet C4.2 water main plan and profile.](#)

22. Refer to comment #18 in previous comment letter. Profile view of fire line labeled as "PRIVATE" including pipe material was missing. Correction required.

- a [Response: This information is included on sheet C4.2 water main plan and profile.](#)

23. Refer to comment #23 in previous applicant letter. A simple note was provided on the detention basin concerning the use of the detention basin as a temporary sediment basin, but not included in the erosion and sediment control plan as requested. In addition, a simple note is not sufficient. Show on the plan and profile view how this will be accomplished in accordance with the detail you provided. Correction required on both the detention basin plan sheet and the erosion and sediment control plan sheets.

- a [Response: Acknowledged. This has been updated to reflect the faircloth skimmer installation on the erosion control plans. The skimmer can connect through to the proposed 3" weir location on the outlet control structure.](#)

24. Sheet C7.0: Surface course is still called-out with incorrect specification. KCMMB asphaltic concrete is required for all asphaltic concrete sections. Correction required.

- a [Response: This has been updated on Sheet C7.0](#)

25. Refer to comment #22 in previous applicant letter. Trenching and backfill detail still missing. Correction required.

- a [Response: City stand Water trench detail added. Project typical bedding and backfill detail added to project details as well.](#)

26. Refer to comment #25. Commerce Dr. still mislabeled on Sheet C3.3, C6.0, C6.2. Correction required.

- a [Response: This has been corrected.](#)

27. Sheet C3.5 is partially-illegible due to strikeouts. Correction required.

a [Response: Location of callouts corrected.](#)

28. Sheet C3.5: Maximum design running slope of 7.5% has been exceeded on the south portion of the ADA-accessible ramp. The City uses a more stringent standard to allow for construction tolerance up to 8.33% installed slope. Correction required.

a [Response: Per applicant meeting on 12/11/24, our team has confirmed with construction manager that the slopes indicated are feasible for construction.](#)

29. Sheet C3.5: Scale is incorrect. Correction required.

a [Response: 1" = 5' scales on this sheet have been confirmed.](#)

30. Refer to comment #27 in previous comment letter. numerical cross-slope callouts were missing.

a [Response: ADA slope call outs added.](#)

31. Refer to comment #27 in previous comment letter. ADA-accessible route across the new entrance was missing dimensional callouts, slope callouts, cross-slope callouts, and widths missing from the sheet. Correction required.

a [Response: ADA slope call outs added.](#)

32. Refer to comment #31 in previous comment letter. HGL for the design storm, including callout of the design storm was missing from the profile views of the storm lines. If the underground system is unable to manage the 100 year event without surcharging, suitable overflow routes shall be established for the stormwater above and beyond what the underground system can manage. Correction required.

a [Response: HGLs have been added to plan and profile sheets and do not surcharge in the 100-year event.](#)

33. Refer to comment #34 in previous comment letter. Plan view shows D50, but refers reader to a detail in the plans that does not show the dimensions, the thickness, or the geotextile layer. In addition, why refer the reader to a detail contained later in the plans that can more easily be shown on the plan view? Correction required on the plan view.

a [Response: City standard flared end section detail added to sheet C7.2 along with typical rip-rap details. Length and width dimensions of rip-rap sections added to respective plan and profiles.](#)

34. Regardless of how the above comment is managed concerning rip rap design, do not require the reader to use math skills to determine the length, width, or thickness. This should be up to the engineer, not the contractor in the field. Provide explicit dimensions and directions within the plans. Correction required.

- a [Response: Length and width dimensions of rip-rap sections added to respective plan and profiles.](#)

35. Refer to comment #33 in the previous comment letter. Line 100 is entering the basin too high. Lower the discharge point by deepening the curb inlet just upstream of the discharge point. Severe erosion and back cutting will result otherwise. Correction required.

- a [Response: Line 100 has been modified to enter the basin 1-ft above basin bottom.](#)

36. Refer to comment #40 in previous comment letter. Grated inlet detail still missing. Correction required.

- a [Response: APWA standard grated inlet detail added to project plans on sheet C7.4.](#)

37. Refer to comment #41 in previous comment letter. Concrete end treatment detail was still missing. Concrete end treatment detail refers to the concrete that is placed at the end of the pre-manufactured flared end section. Include standard detail STM-5 in the plan set which shows this end treatment. Correction required.

- a [Response: STM-5 detail added to plans on sheet C7.2.](#)

38. Use new storm lid design in STM-6 and include in the plans. Correction required.

- a [Response: Corrected storm lid design added to plans on sheet C7.2.](#)

39. A cost estimate required prior to formal approval. Informational comment.

- a [Response: Acknowledged.](#)

Building Codes Review Joe Frogge
Joe.Frogge@cityofls.net

Plans Examiner Approved with Conditions (816) 969-1241

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1. Unified Development Ordinance Article 8, Section 8.180.F Ground mounted equipment – Ground mounted equipment shall be totally screened from view by landscaping or masonry wall up to a height of the units to be screened.

- a. Action required: Make needed corrections to drawings that provide details as to how mechanical equipment will be screened from all 4 sides per referenced UDO section. Re: New generator. 11/22/2024 - Field verify
- b. Response: The vehicle building has been eliminated as an alternate and will not be part of this project.