

Date: Wednesday, August 31, 2022

To: ENGINEERING SOLUTIONS
50 SE 30TH ST
LEES SUMMIT, MO 64082

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

Application Number: PL2022248

Application Type: Engineering Plan Review

Application Name: THE VILLAS OF CHAPEL RIDGE 2ND PLAT, LOTS 43-74 AND TRACTS C-1 AND D-1
- Street, Stormwater and Master Drainage Plan

The Development Services Department has completed its review of the above-referenced plans dated Aug. 12, 2022 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.
- Revised plans will be reviewed within ten (10) business days of the date received.

Engineering Review

1. ADA-accessible ramp at Dick Howser is showing a 4 foot width sidewalk. The minimum is 5.0 feet for both the sidewalk and the ADA-accessible route across the intersection. If the current sidewalk at Dick Howser is only 4 feet wide, a taper will be required to tie-into the new 5 foot sidewalk/ramp/route across the intersection. Please revise.
2. Sheet C.100 is still showing a curb inlet in the northeast corner of Lot 63. Please go through the plans, and ensure this is corrected throughout the plan set, as this appears to be a recurring issue during the review.
3. Sidewalks are still missing along common area tracts, in particular, on the plan and profile sheets. Suggest a bold or hatched symbology to ensure it is not missed during construction. Please revise.
4. Please refer to comment #18 in previous comment letter pertaining to the excessive pipe slope at the discharge end of line 1. Nothing was done to mitigate the issues discussed in this comment. I do not agree with your assessment that nothing additional is required. Please review, evaluate, and provide a re-design.

5. Comment #24 in previous applicant letter was not addressed. Please address this comment. As discussed in the previous applicant letter, no plan was provided other than direct-discharge to a point on the ground, with no limits of the detention basin shown, including normal pool elevation, and how the stormwater will be discharged to this basin without negative impact. It shall include off-site contours and contour elevations (proposed and existing), grading to make this work, along with any structures needed to manage stormwater. As shown, there is no way to evaluate the system. All that is shown is rip rap, with no associated grading. No further review of the discharge point shall be conducted until the items listed in the previous comment letter have been addressed. Please provide the required information to perform a review, and provide a re-design as appropriate.
6. Please refer to comment #27 in previous applicant letter. I disagree with your assessment that the end of pipe will tend to float. You stated that a 1000 pound force is sufficient to mitigate this concern. I would disagree this is sufficient force, as there appears to be minimal cover over the discharge end of the pipe. If you can provide an independent assessment by the pipe manufacturer, it could be considered. However, it has been my experience that a pipe collar on HDPE pipe with insufficient cover (i.e., less than 2 feet of cover) should be secured with a concrete collar at the end. Please address this issue, as the City shall not be in a position to approve a system which causes the pipe to gradually work its way out of the ground. Please review and revise as appropriate.
7. Please refer to comment #23 in the previous applicant letter. The easement width between Lot 71 and 70 is still too narrow. A minimum width of 20 feet is required based on the depth of the underground storm system. Please revise, and ensure the easement width is carried-through to the final plat.
8. Please refer to comment #9 in the previous applicant letter. Although the response to comments states you are comfortable "as-is" and don't see the need for sideyard swale callouts, I feel it is necessary to avoid any confusion during the plot plan review process. If you can provide other reasons not to place these notes on the Master Drainage Plan, it would be considered. However, with the potential to create issues with drainage not only for the new lots, but existing lots to the west, it would appear notes are warranted. Please review and revise as appropriate.
9. Please refer to comment #17 in the previous applicant letter. The response to comments states the drainage area does not meet the warrants stated in KCAPWA concerning the placement of additional curb inlets to manage stormwater. The issue is the lack of curb inlets on Dick Howser Dr. in the immediate downstream vicinity, and the addition of the new street connection and additional drainage area and runoff will likely create adverse conditions along Dick Howser Dr. due to your development. Placing additional inlets near the intersection of Dick Howser Dr. and NE Independence Ave. appears warranted to mitigate this issue. If you can provide an assessment of the entire downstream drainage on Dick Howser Dr. after your development is completed, and you can show the additional runoff will have no adverse impact in terms of gutter spread on a collector street, it would be considered. Please review, evaluate, and revise as appropriate.
10. Sheet C.301: The end of Line 3 is not matching crowns as required by the Design and Construction Manual. The incoming pipe crowns are lower than the crown of the 36 inch outgoing pipe. Please revise as appropriate.

11. Please see previous applicant letter. A curb inlet is still called-out on Sheet C.301 on Lot 60. Is this a junction box? Field inlet? Please reconcile and revise as appropriate.
12. Please refer to comment #25 in the previous applicant letter. I had requested you specify which method to use for the underdrain, but saw no such indication in the details section of the plans. I also requested you show the location where these would be installed, but only saw a vague note on the street profile view. This should be shown on the plan view as well, showing in general terms where it is located on the plan view (e.g., from curb inlet to curb inlet). Please specify which method(s) to use for installation of the underdrains, and show in clear terms where it is to be installed on the plan view.
13. A revised cost estimate shall be required prior to formal approval of the plans.

Traffic Review - No Comments

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 development 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 multi-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,

/s/ electronically signed Aug. 31, 2022

Gene Williams, P.E.
Senior Staff Engineer
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cc: Development Engineering Project File