
DEVELOPMENT SERVICES

Date: Tuesday, January 14, 2025

To: Shawn Duke
802 Francis Street
St. Joseph, MO 64501

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

Application Number: PRSUBD20243308

Application Type: Public Infrastructure

Application Name: WHISPERING WOODS 3RD PLAT

The Development Services Department received record drawing documents for this project and we have completed our review 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 - Street and Storm

Reviewed By: Gene Williams, P.E.

Corrections

1. The plans for the Pryor Rd. improvements to be constructed by the City will need to be coordinated with these plans. Contact Nikia Chapman Freiburger at 816-969-1800 for a copy of the most recent plans for Pryor Rd. It is recommended a Teams meeting be setup to discuss. Correction required.
2. A LOMR-F appears warranted for this site. Previous work on the first phase of Whispering Woods included this requirement, and many of the lots adjacent to the stream were filled in the corners to remove the lot from the floodplain, and went through the LOMR-F process. Correction required.
3. It is possible a no-rise shall be required depending on the lot corners in Whispering Woods 1st Plat being at the base flood elevation. In other words, no encroachment will be allowed onto adjacent properties from an increase in the base flood elevation caused by fill, unless inundation easement or other appropriate legal instrument is recorded. Informational comment.
4. On all asphaltic concrete sections, KCMMB mix is required. Correction required.
5. Typical asphaltic concrete and subgrade sections are outdated. New standards for residential local are 6 inch aggregate over geogrid rather than 10 inch. New standards for residential collector are 7.5 inches aggregate over geogrid rather than 12 inches. Correction not necessarily required, but wanted to make you aware of the downgrade in design criteria.
6. All storm lines shall include the HGL for the design storm on the profile view. The design storm shall be called-out, and if the pipe cannot manage the 100 year event without surcharging, a suitable overflow route shall be established on the plans

and identified on the plans for the amount the underground system is unable to manage within the pipe. Correction required.

7. In graphic form on the profile view, show how all storm pipes shall be installed after the fill is placed a minimum of 18 inches above the grade of the pipe. Let me know if you need examples from other plans. Correction required.

8. Sheet 18: The 15 inch storm line is entering a pipe below the crown of the receiving pipe. Correction required.

9. Signage plan was missing. Corrections required.

10. Street names are required on all sheets. Corrections required.

11. Typical section views are incorrect in terms of the street names. Go through the plans and add the correct street names to the appropriate section view. For this project, 26th St. is a residential collector, and all others are residential local. Correction required.

12. Storm lid detail is outdated. See the new standard detail on the website, and ensure it is included in the revised plans. Correction required.

13. Sheet 11: The distance between the truncated domes on ramp 8 exceed 5.00 feet to back of curb. Maximum is 5.00 feet. Correction required.

14. General Comment: Type B curb ramps are no longer allowed under PROWAG as a multidirectional ramp. A new design is required which separates each pedestrian route across each intersection. Single direction paths using Type A ramps are unaffected by this new ruling. Corrections required.

15. All street cross pipes beneath collector streets (i.e., 26th St.) shall be either RCP or CPP. Correction required.

16. Rip rap shall be called-out with dimensions such as width, length, taper, depth, and geofabric in addition to the D50 sizing. Calling out a square yardage of rip rap with D50 of 6 inches is insufficient detail. Correction required.

17. Will all lots within Whispering Woods 3rd Plat be outside the limits of the floodplain after obtaining the LOMR-F? That was a condition of approval of the preliminary plan. All lots shall be outside the limits of the 100 year floodplain. A LOMR-F appears to be warranted.

18. Itemized and sealed cost estimate required prior to formal approval. Informational comment.

19. Floodplain Development Permit required prior to formal approval. Informational comment.

20. LOMR-F required prior to formal approval. Informational comment.

21. Sidewalk at the south end of Fern Ct. should be shown "emptying" straight into the cul-de-sac bulb, along with an ADA-accessible detail. In other words, there should be no curvature around the cul-de-sac bulb, but rather, the sidewalk will terminate and direct pedestrian traffic into the cul-de-sac bulb with an ADA-accessible ramp. Correction required.

Engineering Review - Water

Reviewed By: Gene Williams, P.E.

Corrections

1. Pipe cannot be curved less than 1200 feet radius. Otherwise the pipe integrity is jeopardized. Provide the location and magnitude of fittings required to ensure the radius of curvature is not less than 1200 feet. Correction required.

2. Sheet 4: Sta 10+00 install four (4) gate valves at the cross. Correction required.

3. Sheet 4: Sta 12+21: Install one (1) valve on the south side of the tee. Corrections required.

4. Sheet 5: Extend water line B and move the hydrant to the next property line to ensure there is sufficient room to provide service connection without crossing extended property line. Correction required.

5. An MDNR construction permit shall be required prior to formal approval. Informational comment.

6. Itemized cost estimate required prior to formal approval. Informational comment.

Water Utilities - Water Review **Reviewed By: Kevin York** **Corrections**

Engineering Review - Sanitary **Reviewed By: Gene Williams, P.E.** **Corrections**

1. Manhole frame and lid is shown in the incorrect location within the pavement. Either lane can be used, but the center of the lid should be positioned in the middle of the driving lane to avoid wheel interference. Correction required.

2. City standard detail for the above-referenced placement of sanitary sewer manholes in pavement was missing. Provide this detail in the revised plans. Correction required.

3. Existing sanitary sewer manhole labeled as A-0 should be relabeled as City manhole number #51-001. Correction required.

4. Use the City standard detail SAN-7 for pipe encasement beneath the creek rather than your standard detail. Correction required.

5. Epoxy-coated ductile iron pipe is required beneath the creek from manhole to manhole. Correction required.

6. Insufficient fall at manhole B3. Skew requires 0.50 feet minimum fall. Correction required.

7. Same comment for B2. Correction required.

8. Segment A-2 to A-1: The fifteen (15) foot easement is insufficient. Sewer is as deep as 20-21' deep. Easement shall be a minimum of forty (40) feet wide. Correction required.

9. The above easement shall be an exclusive sanitary sewer easement. Show on plans and plat. Correction required.

10. See Design and Construction Manual for minimum slopes based on upstream lot numbers. There is insufficient slope for the sanitary sewer line throughout the entire design. Many of these segments are subject to a 1.00% slope requirement based on lot numbers upstream. Correction required.

11. Is manhole A-1 a shallow manhole? If so, a shallow manhole detail is warranted. Corrections required is applicable.

12. MDNR construction permit is required prior to formal approval. Informational comment.

Water Utilities - Sanitary Review **Reviewed By: Amanda Bagwell** **Corrections**

Engineer Review - Grading **Reviewed By: Gene Williams, P.E.** **Corrections**

1. A CLOMR-F appears warranted for this project similar to what was required for previous phases of this project. Even though it may be possible within the context of our Floodplain Development Ordinance to fill within the floodplain adjacent to the floodway, a rise of 1.00 feet or less is possible due to the fill by definition of a floodway, and it is possible the 100 year floodplain limits may encroach-upon adjacent properties in Whispering Woods Phase 1 and 2. It appears the previous phase of the project had corner elevations very close to the base flood elevation, and it will be necessary to show any new

fill brought into the floodplain limits will not cause an encroachment of the 100 year floodplain on adjacent properties. Correction required.

2. A floodplain development permit shall be obtained from the City Floodplain Administrator prior to any work within the floodplain. The floodplain permit application shall include all plans and studies necessary for the City Floodplain Administrator to make a decision. Correction required.

3. Sheet 8: The detention basin/sedimentation pond shown in the northeast portion of the project does not make sense when shown superimposed upon the stream. What is the plan for diverting the stream at this location? As shown, it appears to hit the backside of the dam which does not appear to be a good design. Correction required.

4. Have you obtained any documentation from USACE concerning the stream described in the above comment? The stream in question is located in the northeast portion of the project, within the limits of the temporary sediment basin. Correction required.

5. All temporary sediment basins should be lined with turf reinforcement mat. Correction required.

6. All skimmers used on the project shall include a site-specific design rather than a generic standard detail. Sizing of the skimmer, etc. is required. Correction required.

7. Elevation callouts are required on key contours shown on the grading plan. Correction required.

8. Elevation callouts are required on the temporary sediment basins, including grading, top of dam, bottom of basin, slope of basin bottom, emergency spillway, etc. Corrections required.

9. Sheet 6: Graphical scale is incorrect. Corrections required.

10. Sheet 5: 100 year floodplain is called-out but does not appear accurate based on what I am seeing. Corrections required.

11. Itemized and sealed cost estimate required prior to formal approval. Informational comment.

Box Culvert and Stream Restoration comments:

1. The box culvert shall provide a low-flow channel. Correction required.
2. The "Hydraulic Report" dated Dec. 6, 2024 never makes clear the objectives of the report. Provide objectives of the report. Correction required.
3. I am assuming there is no overtopping of the road during the 100 year event? Informational request.
4. Is a USACE permit required? Informational request.
5. Report discussed an 8x10 triple box culvert, but the plans show an 8x8. Reconcile the sizing.
6. Water main is shown beneath box culvert. Water main shall be relocated above the box culvert rather than beneath. Correction required.
7. Design shall meet HL-93 loading, and report shall be submitted for inclusion in the City's annual bridge inspection.
8. Floodplain Development Permit shall be obtained prior to any work within the floodplain. Informational comment.

9. LOMR-F required. Informational comment.

10. Cost estimate required prior to formal approval. Informational comment.

Please contact me if you have any questions or comments.

Sincerely,

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