

Date: Wednesday, February 01, 2023

To: POWELL CWM INC
3200 S STATE ROUTE 291 BLDG 1
INDEPENDENCE, MO 64057

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

Application Number: PL2022163

Application Type: Engineering Plan Review

Application Name: Lakewood Business Center on I-470 Plat S - Public Sanitary

The Development Services Department has completed its review of the above-referenced plans dated Jan. 19, 2023 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 - Corrections

1. Please label the existing City manhole 14-043 on Jones Industrial Dr. (i.e., the manhole being utilized as the receiving manhole for the new alignment). This is needed for our GIS technicians to update the GIS maps.
2. Sheet 411: The scale does not appear accurate. Please evaluate and revise as appropriate.
3. Manhole AA4 and AA2 shall be designed with a minimum 0.50 feet fall between the incoming pipe and the outgoing pipe for deflection angles greater than 45 degrees. Please revise as appropriate, but please keep the 1.0% slope as a minimum for this line at all locations.
4. Please provide the wall thickness of the casing pipe on the plans. In addition, please show the location of the casing pipe in graphical format on the profile view, with clear indications of the start and stop point of the casing pipe for the sanitary sewer crossing on Hagan Dr. Please revise.
5. Wall thickness described above shall follow the Design and Construction Manual specifications for wall thickness. For this application (i.e., a 16 inch casing pipe), the wall thickness shall be no less than 0.188 inches or 3/16". Please revise on the notes provided on the plan view.

6. Standard details for the sanitary sewer frame and lid shall be provided in the plans, as these were missing. Please provide these standard details.
7. A trenching and backfill detail was not included in the plans. Please provide a trenching and backfill detail for the sanitary sewer, and ensure it meets the new July 2020 standard of 12 inches of aggregate over the top of pipe. The City does not have a standard detail for trenching and backfill, so it will need to be produced by your firm. Please update and revise as appropriate.
8. Please provide a note on the plan view for manhole AA5 to be constructed as shown on the detail on Sheet 452. In addition, it is acceptable to bring the concrete to the surface rather than provide a 2 inch asphalt cap at this location, and it may be beneficial to clarify this on the notes. Please update as appropriate.
9. Table of Wye Connections: Lots are specified as F2 and F3, and this does not match the plat or the plans. Please show the correct lot numbers, and please show in graphical format on the same sheet the lot numbers.
10. Provide a note on the plans stating the following: "All construction activities conducted on the Lee's Summit Airport site shall be coordinated with the Development Services inspector and the Airport Manager. Excavation equipment may require the issuance of a Notice to Airmen (NOTAM) for the duration of the excavation equipment being present on the airport property." or equivalent language.

Traffic Review - Not Required

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 Feb. 1, 2023

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