



From: Ryan Fleming, P.E.
Olsson
7301 W. 133rd Street, Suite 200
Overland Park, KS 66213

July 25, 2019

To: Gene Williams, P.E.
City of Lee's Summit
220 SE Green Street
Lee's Summit, Missouri 64063

Subject: THE PRINCETON – OLDHAM PKWY & PRINCETON DR IMPROVEMENTS

The following are comments from the City of Lee's Summit, Development Services. Our response to each comment has been provided in ***bold italics***. Please feel free to contact me should you have any questions.

Review Comments

Engineering Review

1. Please adjust the "index of sheets" to reflect the water line plans being separate, and not part of these plans.
 - ***Removed waterline plans from the Index of Sheet***
2. Sheet T6: Surface course asphaltic concrete pavement for Princeton Dr. should be specified as Type 5 or 6, and the base course for Princeton Dr. should be specified as Type 5. This changed recently in the Design and Construction Manual.
 - ***Removed waterline plans from the Index of Sheets***
3. Sheet T12: The intersection of Princeton Dr. and Oldham Pkwy. Is at a stop-controlled condition. The design grade across the ADA-accessible route must be designed with a cross-slope no greater than 1.5%, and a minimum width of 5 feet across the ADA-accessible route. This is different than PROWAG, and is a City of Lee's Summit requirement. This allows for tolerance in construction, since the City will allow for a construction tolerance of no greater than 2.0% cross-slope across the ADA-accessible route.
 - ***Revised Princeton Dr profile to include a 5' crossing with a 1.5% cross slope.***
4. Sheet T13: A minimum 5 foot wide ADA-accessible ramp must be shown across the driveway, with a maximum design cross-slope of 1.5%.
 - ***Revised driveway profile to include a 5' crossing with a 1.5% cross slope.***

5. Sheet T15: The maximum design running slope for an ADA-accessible ramp within the City of Lee's Summit is 7.5%. There are instances where this design standard are not met. Please revise.
 - ***Revised the maximum ADA running slope to be no greater than 7.5%.***
6. Sheet T15: All ADA-accessible ramps within right of way require that certain design elements presented in Section 5304.8 of the Design and Construction Manual be specified. In particular, call-outs are required for the distance between the tactile warning and the back of the curb. This distance cannot be more than 5.0 feet. Cross-sections A-A, B-B, and C-C are also required for each ramp, with call-outs of the slopes, elevations, etc. For your reference, cross-section A-A must be shown along the long axis of the ramp, B-B must be across the width of the ramp, and C-C must be along the curb opening of the ramp.
 - ***Modified sheet T15 to include standard detail section views specific to each ramp.***
7. Sheet T15: Tapered "wings" are shown on the various ADA-accessible ramps, for no apparent reason. Is it possible to grade the surrounding earth to achieve a reasonable slope, without using the tapered "wings"? These wings are problematic to our Operations group, and do not serve any purpose.
 - ***Removed the tapered wings and have called out a 5' sidewalk transition on each side of the sidewalk openings.***
8. Sheet T15: Please show the ADA-accessible route across Princeton Dr. since this is a stop-controlled intersection. Maximum cross-slope should be 1.5%, and the minimum width is 5.0 feet.
 - ***Added an ADA route with a 5' dimension label as well as a slope label.***
9. Sheet T15: Please show the ADA-accessible route across the new drive entrance from Oldham Pkwy. Please see above comment concerning maximum cross-slope and minimum width.
 - ***Added an ADA route with a 5' dimension label as well as a slope label.***
10. Sheet T18: Please add a prominent note stating that these details are meant to describe tie bar locations, and isolation joints. It is not meant to supersede the site-specific design details for the ADA-accessible ramps.
 - ***Added note to sheet T18 as requested.***
11. If there are any additional questions concerning the ADA-accessible ramp design details, please contact me. The issue the City has been experiencing in the past, is there is not enough up-front engineering design emphasis on these ramps, and they eventually are designed in the field. Many of these need to be removed and replaced, because the field design was not correct.
 - ***Coordinated with Gene on ADA ramp design plans.***
12. Sheet ST1: Please define "HP" pipe. Is this CPP? Is this HDPE?
 - ***"HP" pipe is polypropylene pipe. A note has been added to provide definition and refer to LS specification on all profile sheets.***

13. Sheet ST1.0: It appears the finish grade was omitted between station 6+00 and 6+50.
 - **Omitted finish grade has been included.**
14. General Note Concerning Hydraulic Grade Line: While it is acceptable to show the 4% chance storm event within the pipe, the City needs to see that the 10% chance event is below the top of the crown of the pipe in all instances. Please revise the profile view to show the 10% chance event hydraulic grade line is below the top of the pipe in all instances, or provide upsizing of the pipe to ensure this occurs.
 - **Noted 10% chance event hydraulic grade line has been provided on profile sheets.**
15. Sheet ST1.3: The 10% annual chance hydraulic grade line is shown above the crown of the pipe on Storm Line 6. The City requires the 10% chance event hydraulic grade line to be below the top of the crown of the pipe. Please revise the design to ensure this occurs.
 - **Revised calculations now show 10% chance hydraulic grade line below the crown of pipe on line C6.**
16. Rip rap calculations may be required by MoDOT. Please be aware of this, and be prepared to make adjustments to the design as needed.
 - **A riprap sizing calculation using HEC-14 have been added to sheet ST1.4**

Traffic Review

1. Improvements related to Oldham Parkway are subject to MoDOT review and approval. Please submit documentation that MoDOT has reviewed and approved the portion of these plans related to Oldham Parkway.
 - ***We will provide this once we are in receipt of their approval.***
2. The alignment of Princeton Drive between L2 and L3 is not described; update the plans with this information.
 - ***This has been addressed.***
3. Was paved shoulder along the north side of Oldham Parkway omitted and deferred to coordinate with Oldham Improvements between Ranson Road and the development, or should the plans be revised to include this shoulder in the area of road widening? The improved typical section supported was intended to match (or be similar with) what was approved and constructed for Blue Parkway west of Todd George in association with recent development on the NW Quadrant of the interchange based on the PDP; subject to MoDOT approval.
 - ***A 6' paved shoulder has been added along the north side across the limits of the property. The typical section and plans have been updated to match the Blue Parkway typical section with the inclusion of a 14' lane width on the south side.***
4. Existing 4" Dashed Yellow Line should be changed to 4" Solid Double Yellow.
 - ***The center stripe has been revised to a 4" solid double yellow.***

5. The S.L (25) sign on Princeton Drive just north of the existing street connection (for northbound traffic) should be removed.
 - ***Updated, this speed limit sign has been removed from the plans.***
6. The stop line and double yellow line on Princeton Drive should be removed.
 - ***Updated, the stop line and double yellow centerline on Princeton Drive have been removed from the plans.***
7. Any existing end of road markings and dead end signing associated with existing Princeton Drive should be removed.
 - ***Updated, a note has been added to the plans to reflect such. No signing came up through our survey data.***

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.
- ***An updated OPC has been included with item specific to the Public Roadway and Drainage plans.***

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).
- ***Understood.***