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**PUBLIC WORKS ENGINEERING DIVISION**

**Date:** Tuesday, May 26, 2015

**To:**

THH INC

Email: [twooten@thhinc.com](mailto:twooten@thhinc.com)

Fax #: (573) 814-1128

**From:** Gene Williams, P.E.

Senior Staff Engineer

**Application Number:** PL2015068

**Application Type:** Engineering Plan Review

**Application Name:** Summit Innovation Center Public Sanitary Sewer Extension

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The Public Works Department received plans for this project on May 04, 2015. These plans are dated and were sealed on [April 30, 2015](#). We have completed our review and offer the following comments:

**Engineering Review**

1. Please provide a separate plan set for the sanitary sewer.
2. Please provide an overview sheet showing the location of the sanitary sewer on one sheet.
3. Please show the location of all existing and all future easements.
4. Please label the existing City sanitary sewer manholes with the City manhole number.
5. Please label all road names.
6. Sheet C404: Sanitary sewer line C is shown with 0.6% slope. This is the minimum slope, and should be specified with perhaps 0.7% to account for installation tolerance. The City cannot accept any sanitary sewer less than the minimum (e.g., 0.59% will not be acceptable).
7. Sheet C404: Manhole C2 is shown with approximately 16 feet of cover. This is greater than allowed by the Design and Construction Manual (i.e., 15 feet maximum).
8. There are several instances where the 12" sanitary sewer line is shown with the minimum 0.40% slope. Please use a higher number to allow for tolerance in installation since the City will not accept any sanitary sewer less than the minimum slope (e.g. 0.39% will not be acceptable).
9. Is there a reason that the water line is not shown "grayed out" in the background? Please consider adding the water line layer in the background.
10. Please move manhole A3 outside the limits of the future sidewalk.
11. It appears a portion of the public water line along Innovation Parkway is on the same side of the road as

the sanitary sewer. If this is the case, then a minimum separation of ten (10) feet must be maintained as measured from the outside of the pipe, and five (5) feet from any storm sewer.

12. It did not appear there were any notes concerning the abandonment of the existing sanitary sewer line. Please provide specific details concerning the abandonment.
13. Is there a reason that north is pointing downward on many of the plan sheets?
14. Standard details will need to be included within the plan set for the sanitary sewer. This is due to MDNR requirements for a stamped set of details.

In order to calculate the Public Works' 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.

If you have any questions or comments, please contact me, Gene Williams either at (816) 969-1800 or e-mail to [Gene.Williams@cityofls.net](mailto:Gene.Williams@cityofls.net).

Sincerely,

*Original Signed*

Gene Williams, P.E.  
Senior Staff Engineer

cc: Development Engineering Project File