

MARKET STREET CENTER

APPLICATION # PL2021406

3501 SW MARKET STREET

Date: December 2, 2021

Sanitary Sewer Analysis

Per discussion with City staff as part of the preliminary development plan application, the feasibility of extending the public sanitary sewer main to the property from south was analyzed. See the attached schematic exhibit for reference. The following was found:

- Extending the public sanitary sewer from the south would require approximately 885 L.F. of new 8" PVC pipe and 5 new public sanitary sewer manholes. By comparison, the current proposed plan requires approximately 470 L.F. of new 8" PVC pipe and 3 new public sanitary sewer manholes. The additional pipe length and number of structures adds financial burden to the developer and maintenance burden to the City.
- The developer does not control rights to the southern property. Therefore, extending the public sanitary sewer from the south would require easements from the southern neighbor for construction which may not be attainable.
- Extending the public sanitary sewer from the south would require significant removal and replacement of existing private pavement, sidewalk, and landscaping from the southern neighbor's property. Not yet accounted for in the schematic design is the existing bank drive thru canopy. In order to avoid the drive thru canopy with both the sewer and easement, additional manholes would be required to shift the main westerly. Additionally, this would push the main closer to the QuickTrip property and existing underground stormwater detention facility. The additional off-site removal/replacement adds financial burden to the developer.
- Extending the public sanitary sewer from the south results in multiple utility / storm sewer crossings.

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- The public sanitary sewer will cross the drainage channel directly east of the existing 36" storm discharge at the southwest corner of the property. The crossing will have approximately 18" of cover and require additional erosion control protection.
- The public sanitary sewer is not able to cross under the proposed detention basin and therefore must be routed around it. If routed through the detention basin, the public sanitary sewer would be out of the ground.
- The public sanitary sewer will cross a private storm sewer pipe that discharges into the detention basin. Adequate vertical separation can be achieved.
- The public sanitary sewer will cross the home improvement store private fire and private domestic water lines. Adequate vertical separation can be achieved.
- The public sanitary sewer will need to cross the proposed 48" storm sewer that will be routed through the site from SW Market Street to the detention basin. The public sanitary sewer will conflict with the 48" storm sewer. The public sanitary sewer would need to be raised approximately 3 feet, at this location, in order to achieve 1 ft of vertical separation between the storm sewer. The public sanitary sewer cannot run under the storm sewer. Raising the public sanitary sewer 3 feet at this location would not allow the southern retail/office building to gravity sewer and therefore it would need to be on a low pressure system with a grinder pump.

Conclusion

Extending the public sanitary sewer to the property from the south results in a significant financial burden to the developer due to additional length, additional structures, required off-site removal / replacement of private facilities, rights of control for easements, and utility crossings / conflicts.

Extending the public sanitary sewer to the property from the south results in a significant maintenance burden to the City.

Extending the public sanitary sewer to the property from the south does not allow for all buildings to sewer via gravity flow.

Therefore, it is not recommended to pursue extending the sanitary sewer to the property from the south.

Sincerely,

Judd D. Claussen, P.E.



