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October 12, 2018

City of Lawrence Utilities Department Attn: Andy Ensz, Utilities Engineer P.O. Box 708 Lawrence, KS 66044

Subject: North Lawrence Riverfront Development – Sanitary Sewer Design

Mr. Ensz,

This letter is to address the sanitary sewer flows for the above referenced project. Originally, the Utilities Department spoke with Chris Storm, PE with Landplan Engineering back in 2016 about the same proposed development. The project consists of a 16.1 acre tract located west of North 2<sup>nd</sup> Street and east of the Kansas River Levee System. Two of the existing building located along North 2<sup>nd</sup> Street will remain with all the other buildings on-site being removed. The new development has increased in the number of units/ square footage being constructed, since the 2016 conversation and will have the following land use properties.

Commercial area – 97,500 sq. ft.
Office Space - 42,000 sq. ft.
Apartments - 520 units
Hotel - 200 units

The proposed construction will be phased with a combination of apartments and mix use being constructed in phase 1 (one building) next to North 2<sup>nd</sup> Street. Phase 2 will be the remaining units adjacent to the levee, except for the hotel which is proposed to be constructed in phase 3. Originally, the sanitary sewer flows for the project were going to be split with 34% being discharged to the north within the Lincoln Street system and the remaining 66% being discharged within the Locust-Elm System. The proposed development will be designed to discharge 100% of the flow into the Locust-Elm System, specifically manhole SW301220-001, with an 8" PVC pipe.

The original design that was discussed added an additional 0.326 MGD to the system, which was split into the two systems (North & South). The proposed design will add an additional 0.436 MGD to the South or the Locust-Elm system and isn't proposed to be split. The calculations for the proposed sewer flow are attached to this letter for your use.

If you have any questions feel free to contact me at 785-843-7530.

Thank you,

Shawn R. Bryan, P.E. CFM Senior Project Engineer