



CITY COUNCIL AGENDA SUMMARY

3/28/2023

**PROFESSIONAL SERVICES PROJECT ORDER (PSPO)
BETWEEN THE CITY OF WYLIE and BIRKHOFF, HENDRICKS & CARTER LLP
WASTEWATER SYSTEM MODEL
W2023-46-E**

The intent of this PSPO is to provide the City with up to date knowledge of the current capacity and utilization of the City's wastewater system (lines of 10" in diameter and above).

Estimated completion time for this project is 250 consecutive business days.

Project Description:

The design engineer will provide professional engineering services to create a network using an InfoSewer Hydraulic Model to simulate the City's main wastewater sewer system. Network will be created from existing City GIS Mapping, Wastewater Master Plan Map, Zoning Map, and from record drawings. The modeling will be over a 48-hour period of time. Trunk line sizes generally range from 10-inch to 48-inch as shown on the current GIS Map.

Modeling parameters will be based on the most recent edition of the City of Wylie Water and Wastewater Design Manual criteria. The design engineer will utilize the most recent City of Wylie Land Use Plan and coordinate land use classifications with the City, and will utilize City of Wylie CMOM 2017 flow monitoring data and rain gauge data to calibrate the model. The design engineer will coordinate with North Texas Municipal Water District to obtain recent flow monitoring data at the Muddy Creek Regional Wastewater Treatment plant for calibration of the overall model.

At the completion of the model, the design engineer will provide a map of the City's main wastewater sewer system related to the hydraulic model and provide digital files of the hydraulic model together with a report summarizing the results of the hydraulic model listing any significant deficiencies with general recommendations for improvements where appropriate.

Tasks for this project include:

Preliminary Hydraulic Model

Calibration of the Hydraulic Model with CMOM and NTMWD Flow Monitoring Data

Providing a final Wastewater System Map, Hydraulic Model and Report

Additional Services:

- Review meetings with City Staff
- Working with NCTCOG to obtain the NCTCOG Multiple Year LiDAR Contour Drawings
- Up to 16 hours of field survey services as requested by City Staff.