

Project Experience

North Area Sanitary Sewer and Pump Station

- City of Wichita, KS
- Owner Contact: David Warren, Director of Utilities
455 N. Main Wichita, KS 67202
tel. 316.268.4504
- Firm's Role: Designer – Builder
- Project Delivery: Design-Bid-Build
- Term of Agreement: Guaranteed Maximum Price
- Contract Value: \$7,120,000

MKEC
ENGINEERING
CONSULTANTS, INC.



The original concept indicated in the City Master Plan for this area required two new pump stations and left the existing 22-year old pump station in operation. Upon review of the area and its conditions, MKEC recommended replacing the original pump station with a larger one, which would eliminate the need for two new pump stations; this resulted in substantial cost savings for the City. The revised design allowed coverage of the service basin with sewers no deeper than the original concept and made it possible to increase the project service area from 1,990 acres to 2,600 acres.

This project consisted of installation of 18,000 lineal feet of gravity sanitary sewer mains and force mains ranging in size from 12 to 27-inches in diameter. The pipelines were installed by conventional open-cut trenching, micro-tunneling, and horizontal directional drilling.

The firm pumping capacity of the new North Area Lift Station is 3.2 MGD (2,200 gpm) and will have the capability to provide a capacity of 4.8 MGD (3,300 gpm) if future conditions require it. The pumping capacity will be accomplished by installing three pumps at 1.6 MGD (1,100 gpm) each, and adding one pump at 1.6 MGD in the future. The pump station was architecturally designed to be compatible with the local residential neighborhood. The pump station contains an air filtration odor control system that is specified to remove 90% of typical wastewater collection system odors. The pump station is equipped with controls that allow fully remote monitoring and operation of the equipment. The design also consists of standby power generator inside the building.

The project was completed on schedule with no litigation history or accidents.

