

Sewer and Water Relocation Design for Highway 265

The project was completed ahead of schedule

The City of Fayetteville had experienced rapid growth in the areas along Highway 265, between Highway 45 and Highway 16. To accommodate the new growth, the Arkansas DOT initiated a project in 1997 to widen the state highway from a two-lane asphalt road with bar ditches to a four-lane road with curb, gutter, and storm sewer. Many of the homes along the highway were large estates.

RJN performed the design for relocation of the water and wastewater lines to facilitate highway construction. Design included: 15,000 linear feet of 24-inch water line; 12,000 linear feet of 8-inch to 12-inch water line; 4,000 linear feet of wastewater lines; and Numerous air / release vacuum valves and vaults.

Other utility companies were simultaneously designing the relocation of their respective infrastructure. Arkansas Natural Gas had large high-pressure 10-inch and 12-inch transmission lines to be relocated. This design would not be complete until after construction of the water and sewer relocation was underway. This made the location and coordination a crucial project element.

Also along the route, were high voltage transmission towers belonging to the power company SWEPCO. Location of the water and sewer lines through this area had to be located between these towers and their concrete lateral support posts. Special construction measures were considered, including: bore and encasement; precise manhole locations to prevent compromising these structures; and making sure existing sewer mains were intercepted.

There were areas along the existing roadway where there were no shoulders and the new roadway was offset from the existing alignment. The utilities had to be relocated at the edge of the existing pavement.

The original schedule for design was 12 months. Once the funding issues were addressed, the City had only 6 months before the south end of the project had to be under construction. RJN divided the project into two phases and delivered the first phase ahead of schedule, in 4½ months. The second phase was delivered for advertisement 8 months from the Notice To Proceed.

With accurate design of the water and wastewater relocation completed ahead of schedule, the City was able to complete the relocation on time and obtain funding from the State for construction.

