



ARMSTRONG ROAD WATER TREATMENT PLANT, WELLS & EAST PLANT DEMOLITION

Frankfort, Indiana

The capacity of the Frankfort Water Works' system was just meeting current needs. Increased capacity was needed to support potential development resulting from the Indiana Department of Transportation's planned expansion of S.R. 28 from Frankfort to I-65. With the East Plant at the end of its useful life and the West Plant experiencing major aging issues, it was critical the Utility make upgrades to the system.

Through comprehensive planning and partnering, the City of Frankfort and Clinton County worked together to develop creative funding sources that resulted in four successful projects designed and administered by Wessler. The projects were designed and constructed concurrently and included the Armstrong Road Water Treatment Plant, 12,000 LF of 18" water main extension, a 1 MG composite water storage tank, and water and sanitary sewer service to the residents of Jefferson.

The construction of the Armstrong Road Water Treatment Plant, Wells and East Plant Demolition Project included a new 6.0 MGD plant incorporating :

- Utility offices and conference room
- Two 2,100 gpm aerators
- Four 1,050 gpm horizontal pressure filters
- Four 1,050 gpm high-service pumps
- Chemical feed equipment
- Two 1,250 gpm supply wells with well houses
- Concrete detention and backwash tanks
- Lift Station
- Two standby generators
- HVAC
- Motor control center, electrical and SCADA
- Security system
- Site work

The Frankfort Water Works system operates on one pressure zone. Three elevated storage tanks are constructed at the same

overflow elevation, and all supply wells are interconnected to provide raw water to both plants. To prevent flooding of either water treatment plant, the design utilized motor-operated valves installed on the inlet pipes of the aerators at each plant. The valves are programmed to constantly adjust, controlling



the flow to each plant based on the water levels in each clearwell. Because of the deteriorating condition of the existing West Plant, the Armstrong Road Plant was designed to be readily upgradeable to a 9.0 MGD plant. Wessler's

design included strategic sizing and placement of piping and valves, additional building space and two steel ring "knock outs" cast in the building for two future 10' diameter filters.

The budget for the Armstrong Road Plant project and the 18" water main project was \$7.9 million. Due to fast tracking and economic-driven competition, the total cost to Frankfort Water Works was \$5.3 million for these projects, an astonishing \$2.6 million under budget.



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