

INDIANA CITY WINS WITH HDPE

Windfall, IN

The city of Windfall, Indiana, located north of Indianapolis needed a new water system. The cast iron water main that was currently in place was installed approximately 60-70 years previously and had reached the end of its useful life. The city was losing a lot of water and knew something had to be done soon. Leaks included small leaks as well as weekly main breaches. The amount of lost water was well above normal but difficult to measure because of old meters.

Background

Initially, the project called for replacing the system with PVC pipe via an open cut method. The alternative was installing high-density polyethylene (HDPE) pipe using a trenchless method. Midwest Trenchless Services (MTS), a Trenchless specialty company based in Troy, Michigan, was awarded the project. MTS was familiar with the benefits of installing a HDPE system since they had worked with the product many times before. Once MTS explained the benefits of HDPE to the city of Windfall, including the fact that the pipe is leak-free, the city decided that HDPE was a better alternative.

The Solution

The City of Windfall was hesitant at first to go forward with the HDPE system, since it requires fusing the pipe together instead of mechanical joints. The city had not worked with fusible pipe in the past. MTS partnered with ISCO Industries to provide all of the pipe for the project and to consult for any fusion services. Once MTS and ISCO trained the city workers on the ease of using McElroy fusion machines, they were convinced of the benefits.



HDPE pipe delivered and laid out for the installation.



HDPE pipe placed on the fusion machine.



HDPE pipe installed using horizontal directional drilling.

HDPE pipe is also ideal for water applications and has been used in potable water applications since the 1960s. According to the Plastics Pipe Institute (PPI), because HDPE pipe is fused instead of joined by mechanical means, "allowable water leakage" is zero. Typical leakage rates for PVC and ductile iron installations are from 10 to 20 percent. In addition, HDPE pipe is corrosion and chemical resistant.

Nearly the entire HDPE pipe was installed by directional drilling, thus eliminating the need for digging and hauling earth away.



By installing the pipe using horizontal directional drilling, there is no need for open cut, saving the city money.

"This was the first time I had worked with HDPE pipe," said Terry Cooper, Windfall Department of Public Works director. "The main reason we chose to have HDPE pipe installed using directional boring, as opposed to an open trench method, was the cost savings for the city."

The project took nearly a year to complete, but Windfall was very pleased with how well everything went. The entire city's water system was replaced. MTS and ISCO saved the city nearly \$1 million by using HDPE as compared to ductile iron.