

Cleveland, Ohio

Culvert Reline



Pushing Weholite® Liner into place

In August 2009, Uponor and The Ohio Department of Transportation (ODOT) lead the way when ODOT had the first 11' diameter Weholite® HDPE pipe installed in the US for a culvert slip line application. The existing 1000' long 15' diameter CMP culvert had been extended an additional 260' with a 10' CMP culvert. The culvert carries a tributary of the Chagrin River under Rte. 2, its interchange ramps and two local streets. There were also nine laterals, including one measuring 72" and one 66".

Through the entire 1000' length, extensive deterioration was found and major rehabilitation was required. Four options were considered.

1. Slip lining.
2. A New culvert on the existing alignment.
3. A new culvert with new alignment.
4. Tunneling

Option 2 & 3 were eliminated due to cost, public inconvenience and prolonged construction scheduling. Option 4 was eliminated due to the high cost. With slip lining the only viable option, the engineers selected Profile Wall HDPE manufactured to ASTM F894. Weholite manufactured by Infra Pipe was one of the few products that could meet the requirements and was the most cost effective, installation friendly HDPE choice. The pipe was provided in 42' lengths. Each joint was extrusion welded providing a monolithic pipeline for 1000'.

Infra Pipe and D.A. Van Dam technicians provided extrusion welding services. This joint effort combined with the expertise of Great Lakes Construction enabled the entire 1000' of 11' pipe to be installed in 4 ½ days. Ed Adamczyk, Design Manager with Arcadis said "Weholite offered the most economical solution to the existing culvert problem without any disruption to existing traffic in the area."

Project:

Culvert Rehabilitation under State Route 2, Ohio

Owner:

Ohio Department of Transportation

Application:

Culvert Slipline – 1000' of 11', 266' of 96"

Distributor:

D.A. Van Dam & Associates.

Consultant:

Arcadis and Parsons Brinckeroff – Cleveland

General Contractor:

Anthony Allega/Great Lakes Construction Joint Venture