

Levee Pipe Relined with Large Diameter HDPE Pipe to Prevent Flooding

Prestonsburg, KY

The Problem

The city of Prestonsburg, Kentucky is the owner and sponsor of a levee located near Pikeville, Kentucky. The United States Army Corps of Engineers (USACE) branch in Huntington, West Virginia, who evaluates the condition of levees in the area, determined that a pipe running through the Prestonsburg levee was damaged and needed to be repaired.

The poor condition of the 96-inch corrugated metal pipe (CMP) included several sections that were eroded or collapsing. If the pipe failed, which could happen at any moment in its current condition, the city would be flooded. A repair solution was urgent.

The city of Prestonsburg was unfamiliar with repairing a levee pipe as it never needed to fix one before, so the city asked USACE for help on whom to contact. The USACE representatives



Parts of the old culvert were collapsing. Repair was essential to prevent flooding.



The old levee culvert was damaged and failing in several areas of the length of the pipe. Flooding was a concern.

suggested the city contact Ryan Harrington, Snap-Tite® representative, with whom they worked with on previous levee repair projects.

The Solution

Harrington assisted the city by walking through and reviewing the condition of the site, providing specifications and recommending a contractor, Indiana Reline.

In addition, after Harrington visited the site and evaluated the size and length of the damaged levee drainage pipe, it was determined that a 72-inch large-diameter high-density polyethylene (HDPE) profile wall pipe was the best option for repair.

Snap-Tite® supplied 170-feet of 72-inch HDPE pipe and also rented electrofusion equipment to join the pipe.

The Installation

Indiana Reline, the contractor, lined the 96-inch CMP with the 72-inch HDPE pipe. They electrofused the pipe at the joints and then slid it inside the old pipe. The use of electrofused joints assured a watertight seal. Finally, the contractor grouted any annular space between the old CMP and the new profile wall pipe.

Relining the CMP culvert was the best option because it eliminated the need to dig and replace the old pipe. There was no excavation necessary of the pipe or the area surrounding the levee. Once the pipe was relined, the flow through the pipe was increased by 19 percent.

"We were impressed with the service provided by and experience of the Snap-Tite culvert lining group," said Brian Music, water distribution supervisor for the City of Prestonsburg. "It was the Army Corps of Engineers who recommended Snap-Tite to us, so we knew we would be working with a group who had experience in this field."



Music added, "The Snap-Tite group was there from start to finish on this project. Since we were unfamiliar with lining a culvert, and this being our first lining project, it was essential that we worked with someone who could be there throughout the whole process and provide not only materials, but also support."

About Profile Wall Pipe

- Made of high-density polyethylene
- ID Controlled sizes up to 96-inches
- Smooth yellow interior for high-visibility
- Meets ASTM F894 performance requirements
- Available for culvert lining applications

For more information on Snap-Tite® product offerings visit www.culvert-rehab.com or watch Snap-Tite installation videos on YouTube at www.youtube.com/user/SnapTiteChannel.



Once the culvert was relined, the flow through the culvert improved.

SnapTite®

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