

PROJECT OVERVIEW

The community of Walden on Lake Conroe had been experiencing significant growth and the water infrastructure had begun to feel the burden. A 130 linear foot corrugated metal pipe (66 inches in diameter) that conveyed storm water from a local thoroughfare into the lake was severely deteriorated over most of its length with a section closest to lake having completely collapsed. When the city of Conroe began to look at options to repair the structure, it quickly eliminated the possibility of excavation and replacement of the pipe because its location and diameter would have likely endangered two neighboring residences. So the city decided that a trenchless rehabilitation would have to be the solution.

SOLUTION

To begin the process, a new section of the pipe was added at the end of the outfall where the original pipe had completely corroded and failed. Once this repair was complete, the outfall end of the pipe was plugged to prevent ingress from the high lake level.

After the pipe was cleared of water and the damaged section by-passed, the contractor cleaned the pipe with a high pressure water treatment. After cleaning, several of the small holes in the pipe were plugged with GeoPlug™ rapid-set mortar to stop active infiltration.

The GeoSpray mortar lining was installed using the centrifugal casting method in three 1/2 inch passes. A single pass of the line took less than 2.5 hours to complete and all three passes were completed within 12 hours. The by-pass was released in under 24 hours and the new monolithic structure was completed.

RESULTS

The minimally invasive GeoSpray geopolymer technology, which allowed all work to be conducted through existing manholes, was greatly appreciated by the homeowners within the neighborhood. During the spray application, only 200 feet of the road was barricaded and the entire section remained passable during construction.

PROJECT DETAILS

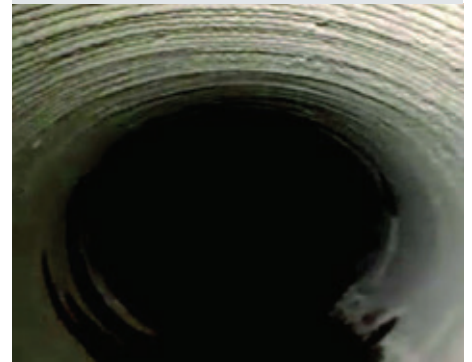
Application: Corrugated Metal Storm Sewer

Client: City of Conroe

Location: The Community of Walden on Lake Conroe

Installation: March 2012

Contractor: Inland Pipe Rehab



Completed liner using GeoSpray mortar.



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+1.855.655.6750



Outfall pipe, ending in Lake Conroe, was collapsed and replaced.



Outfall was plugged to prevent inflow of water from the lake.



Heavy corrosion and infiltration within the pipe.



Close up view of sprayed geopolymer liner.



Severely deteriorated 130-foot CMP.