

# GEOSPRAY®

## Textbook Rehabilitation of a Culvert using GeoTree GeoSpray



### PROJECT OVERVIEW

Charlotte-Mecklenburg Storm Water Services perform regular inspections on their assets as part of a larger campaign to rehabilitate stormwater infrastructure across the county. When issues are identified the department works to resolve them by including relevant technical experts.

GeoTree's long-time partner IPR Southeast had previously worked with the Charlotte-Mecklenburg team, so when they identified an aged 96" corrugated metal pipe (CMP) suffering from severe corrosion and pitting, they called on them to find a solution.

IPR inspected the culvert and identified that it ran under a well-travelled roadway in a fairly busy warehousing and industrial area. The roadway needed to remain open to enable local companies to continue operating. Team IPR and Charlotte-Mecklenburg decided on GeoTree's GeoSpray geopolymer as the best solution to rehabilitate the asset. GeoSpray geopolymer forms a structurally sound "new" pipe within the existing host pipe and is installed without disrupting traffic. This prevents the need to dig and replace the culvert which would be expensive and require a prolonged road closure.

### SOLUTION

The project was scheduled during the dry season when the live stream that runs through the culvert was at the lowest flow and was easily diverted with an external bypass while workers were required to be in the pipe.

Once the engineered design thickness was approved, a calculation was made regarding the required amount of GeoSpray and the team set about preparing the work site. The culvert conveys an active stream, Paw Creek, so in order to install the external bypass the team simply dammed up the creek with sandbags daily, dropped in a sump pump and pumped the water out and over the road into other side of the creek. They were able to easily release the water to flow freely at night. This gave the installers from IPR clear and simple access to the entire culvert and due to the large diameter, the crew was able to hand spray the entire culvert in 5 days.

GeoTree Solutions' South Region Manager, Richard Goodrum said: "This was a textbook install that went very smoothly. The team at IPR know our GeoSpray geopolymer product very well and are true expert installers."

### CASE STUDY:

Tarheel Road, City of  
Charlotte, NC

### PROJECT DETAILS

**Location:** Tarheel Road, City of  
Charlotte, NC

**Application:** Culvert Rehabilitation

**Client:** Charlotte-Mecklenburg Storm  
Water Services

**Installation:** February 2019

**Installer:** IPR South East



Completed GeoSpray installation.



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## INSTALLATION



Bypass set up - Paw Creek is a live stream flow



Bottom of pipe left until last for ease of install.



Completed installation of GeoTree GeoSpray.



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