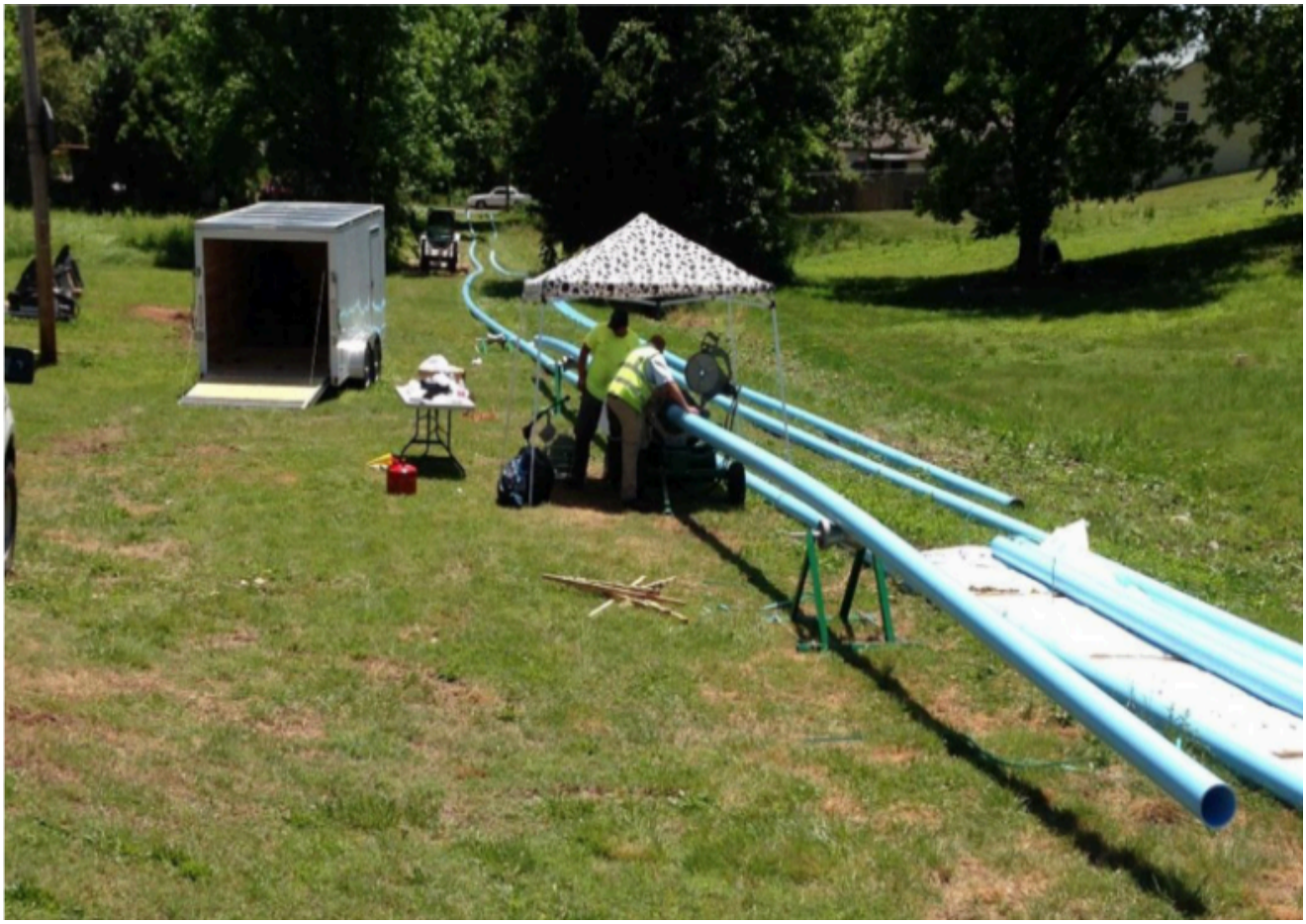
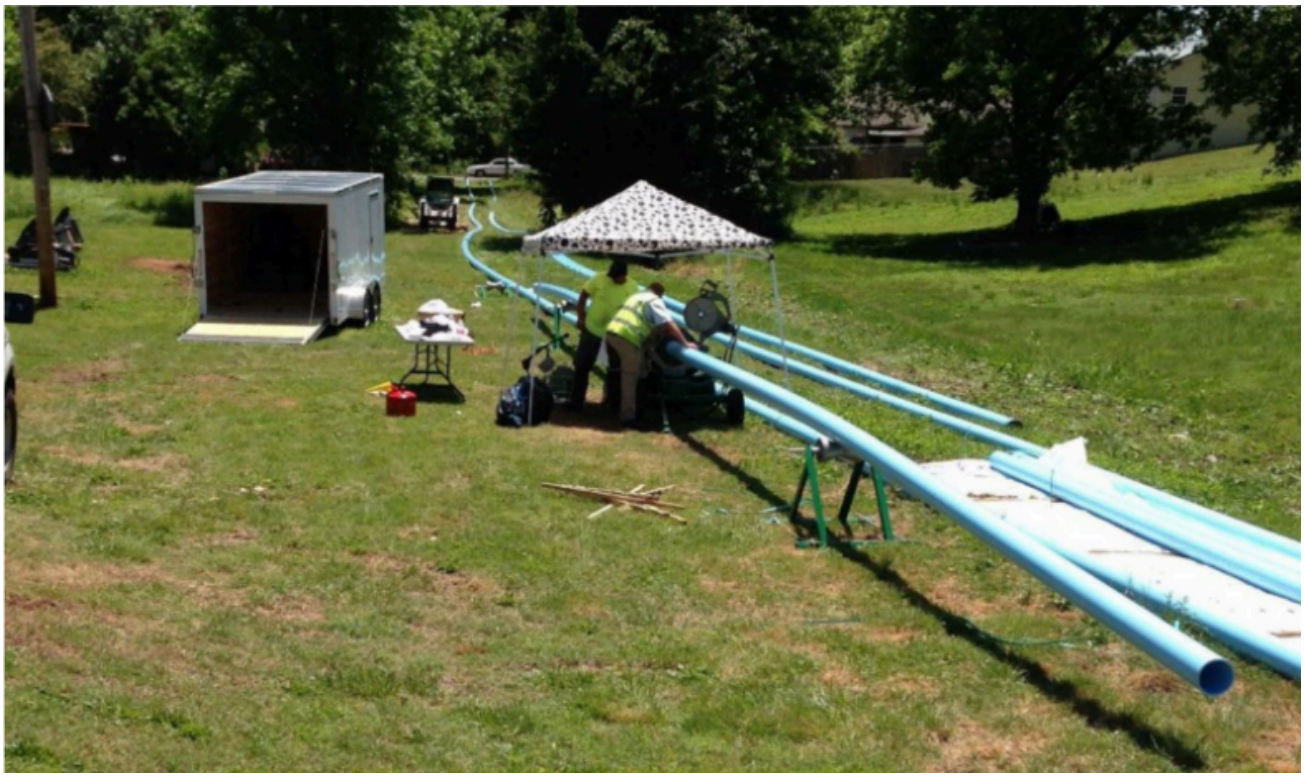
SELF-PERFORMING WATER MAIN PIPE BURSTING WITH FUSIBLE PVC® PIPE IN NORTH CAROLINA



Fusion of several lengths of Fusible PVC® pipe for installation

Monroe, North Carolina, a full-service municipality adjacent to Charlotte, faces a challenge that many utility providers face: how to address its aging water distribution system infrastructure while maintaining affordable rates to its rate payers. Monroe's water distribution system has over 1.5 million feet of piping to provide clean, potable water to 35,000 citizens. Sixteen percent of the system is aging cast iron and steel pipe material - some dating back to the 1920s.



Fusion of several lengths of Fusible PVC® pipe for installation

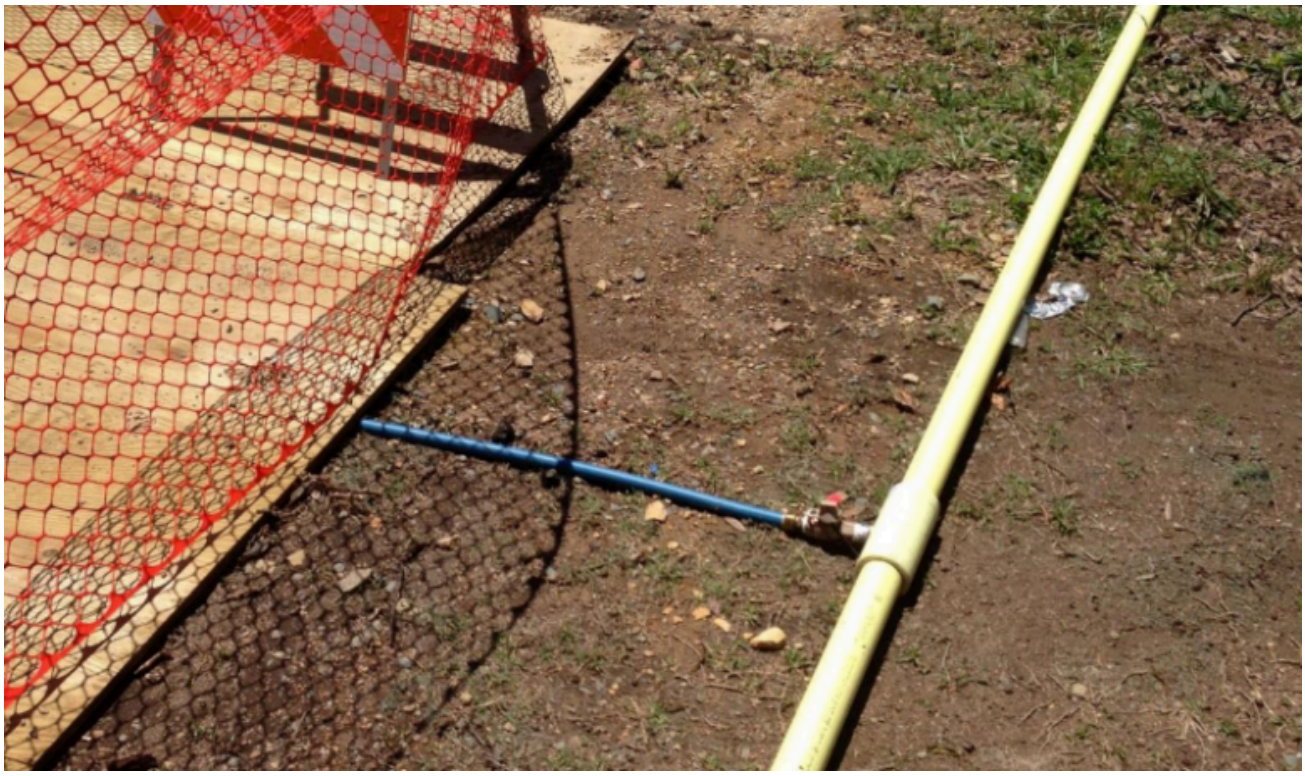
Water Resources Department staff performed a gap analysis and developed a business plan to accelerate water main replacements. Their goal was to double the annual replacement footage. Following the lead of Colorado-based Consolidated Mutual Water Company, which was an early adopter of self-performed pipe bursting, Monroe elected to move forward with in-house pipe bursting using Fusible PVC® pipe, the most cost-effective and least disruptive method, to rehabilitate and replace the deteriorated portions of their system. Several factors supported this decision including lowest program cost, limited additional staffing required, desired trenchless approach, ease of tapping and water service reconnections to Fusible PVC® pipe, ability to upsize the diameter of the existing network and mitigating neighborhood disruption during construction. The business plan and associated budget requests were presented to the city council, and $565,000 of funding was approved to purchase the necessary equipment to initiate the program.

Water main pipe bursting allows the city to tackle difficult projects that would be more costly and that our historical dig and replace strategies cannot overcome.

Tommy Deese

Water Resources Construction Field Supervisor

City of Monroe



Temporary water service connection

Monroe's water main replacement program set a proactive goal of one percent system replacement annually. Within the first year, starting in April 2014, this new pipe bursting program was able to replace approximately 4,000 feet of aged water piping with Fusible PVC® pipe. This was a two-thirds increase in production over their conventional, dig-and-replace rehabilitation method using open-cut excavation. Since that first year, Monroe has steadily increased pipe bursting production to an average of 7,200 feet per year with an overall pipe bursting installation total of 29,400 feet through 2018.

ATTENTION: The text within this dark background is only a sample on white text over dark background should look. Also, notice the underlined links.

Monroe is the only municipality in North Carolina to self-perform water main pipe bursting. The internal design-build process, where staff engineers partner with construction field crews, has results that drives down the total installation cost versus contracting the work or using other methods.

Having static pipe bursting as an additional resource in the city's toolbox has allowed Monroe to move towards a full level of sustainability in managing its water distribution system assets.

Russ Colbath

Water Resources Director

City of Monroe

Products

Insituform CIPP

Markets

MunicipalIndustrial

Solutions

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AT-A-GLANCE

Water System Pipe Bursting Rehabilitation Program

LOCATION

Monroe, North Carolina

LENGTH AND PIPE SIZE

7,200 feet avg./yr.
29,400 feet total through 2018
6- and 8-inch Fusible PVC® pipe

INSTALLATION

Pipe bursting

OWNER

City of Monroe