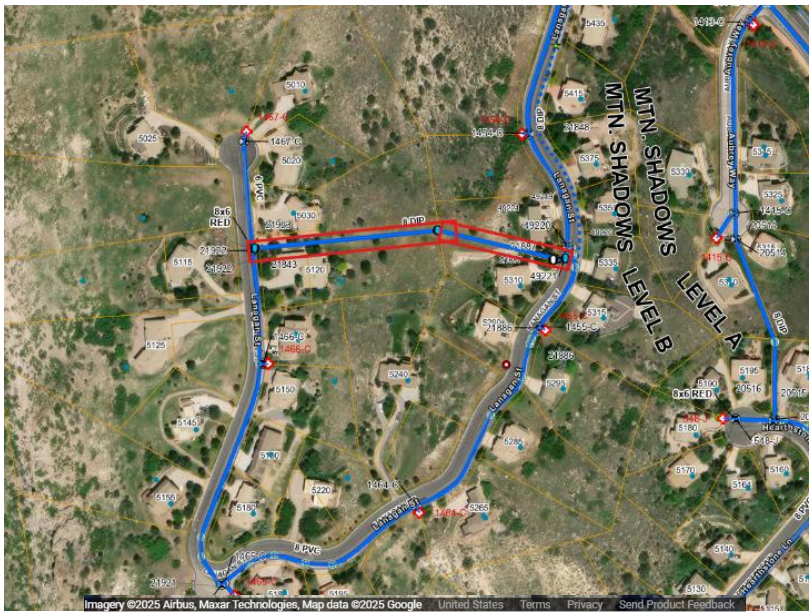
JOB REPORT



REHABILITATION IN A RESIDENTIAL AREA IN COLORADO SPRINGS

CLIENT:
Colorado Springs Utilities

YEAR OF CONSTRUCTION:
2025

TYPE OF CONSTRUCTION MEASURE:
Rehabilitation of 535 linear feet of potable water transmission pipe under Lanagan Street between houses

OUR SERVICES:
- Supply and delivery of the flexible medium-pressure Primus Liner DN 200 (ANSI/NSF 61 approved)
- Supply and delivery of Primus Line medium-pressure connectors with ANSI flanges DN 200

SITUATION:
Colorado Springs Utilities had a potable water pipeline that had been compromised due to age and was de-commissioned temporarily. There were mechanical faults causing leaks at the joints of the system with soil erosion and water loss in the section spanning the compromised system. The system was comprised of 535 linear feet of Griffin class 52 8" ductile iron pipe with OD of 9.05" and thickness of 0.33" for inside diameter of 8.39" ID, but with cement mortar lining it was 8.265" ID. The pipeline had a 22-degree bend with operating pressure of 177 PSI with a hydrostatic test requirement of 227 PSI. The pipeline access points were in a residential area in the downstream pit which required a very low profile for access and rehabilitation staging. The pipeline ran directly underneath a roadway between 2 driveways so the access pits needed to be low-profile to not disrupt residents.

TECHNICAL DETAILS:

Material of Host Pipe:	Ductile iron with cement lining
Transported Fluid:	Potable water
Diameter of Host Pipe:	9.05” OD / 8.265” ID
Operating Pressure:	177 PSI
Primus Line® System:	MD DN200 / 8" - W
Total Length:	535 LF
Number of Sections:	1
Installation Time:	2 days

REHABILITATION SYSTEM:

Primus Line® DN 200 FFRP and 2 Primus Line® DN 200 connectors (2 x medium pressure) for reintegration into the existing water main

PROJECT DESCRIPTION:

The primary factor was accessibility, given the bend located in the middle of the pipeline and the pressures at this location. See the visual highlighting the rehabilitated section in the red polygon. Although this was a redundant main, it could not be abandoned due to fire flow requirements for the hydrant at the dead-end (1467-C).

The main itself was situated behind homes on a steep hillside, with a 22.5-degree bend at the steepest section. Because of the terrain, there were significant concerns about moving heavy machinery through the area if the city pursued open-cut replacement. This led them to evaluate lining options.

Initially, Colorado Springs considered Class 4 liners; however, it would have required a pit at the fitting, located in the middle of the hillside behind residential properties. Additionally, most Class 4 liners are limited to 150 psi, which was below the project’s pressure requirements.

Given these site restrictions and pressure considerations, the most suitable solution was to utilize Primus Line®.

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Primus Line explained simply:
Watch the video!