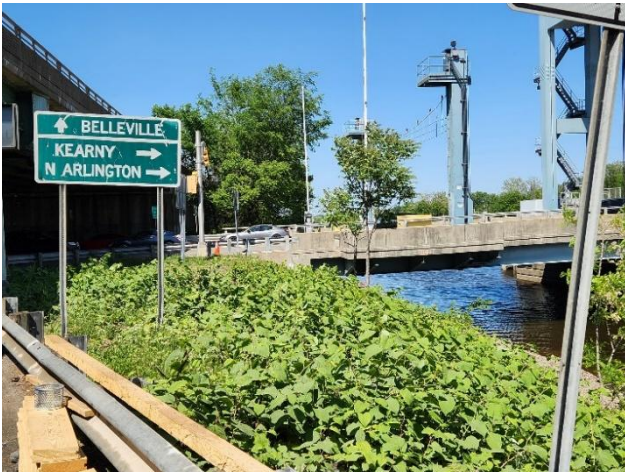




JOB REPORT



THE KEARNY MULTIPLES EMERGENCY REPAIR AND REHABILITATION KEARNY, NJ

CLIENT:

Passaic Valley Water Commission

YEAR OF CONSTRUCTION:

2023

TYPE OF CONSTRUCTION MEASURE:

Potable water transmission mains rehabilitation

OUR SERVICES:

- Engineering review and support
- Delivery of the 10-inch MD and ND Primus Liners and R1 connectors

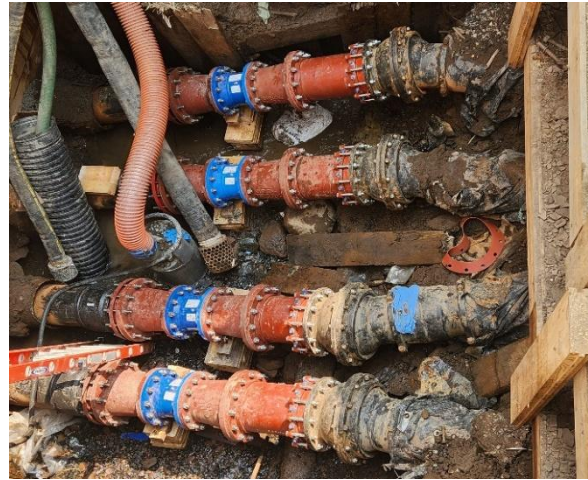
SITUATION:

Over a century ago, seven 16-inch wrought iron water mains known as the “Kearny Multiples” were installed across the Passaic River resting on its bed, transferring drinking water from the Water Treatment Plant to the North Arlington distribution system.

In 1986, after decades of constant exposure to harsh environmental and operational conditions, the seven water mains were rehabilitated by sliplining using 12-inch HDPE pipe.

In 2013, the water mains’ connections at the pipe header failed requiring an extensive repair that included header replacement and installing double-ball expansion joints at each connection to absorb pipes’ movements. Further more also three water mains that were severely deteriorated were decommissioned.

In 2018, one of the four remaining water mains failed and was later shut down, followed by another water main failure in 2023, leaving only two active transmission mains, resulting in a significant reduction of water supply, and prompting an immediate and emergency repair.



TECHNICAL DETAILS:

Material of Host Pipe:	HPDE
Transported Fluid:	Potable water
Diameter of Host Pipe:	12 inches
Operating Pressure:	90 PSI
Test Pressure:	140 PSI
Primus Line® System:	10-inch MD and ND liners / R1 connectors
Total Length:	2,200 feet
Number of Sections:	4
Installation Time:	2 weeks

REHABILITATION SYSTEM:

Primus Line® 10-inch MD and ND liners and R1 connectors

PROJECT DESCRIPTION:

Considering the nature of the installation, constantly subjecting the water mains to the river's tidal and current influences, Passaic Valley Water Commission teamed with J. Fletcher Creamer & Son, Inc. (Creamer) to rehabilitate four water main crossings, each measuring 550 linear feet and including two 45° bends. They decided on the Primus Line® system as the best long-term solution because of its uniquely engineered design that combines strength and flexibility.

In early May 2023, Creamer set out to excavate only two access pits: one on each side of the river, to clean and CCTV-inspect the four water main crossings. This was followed by the liners' insertion and inflation, connectors' installation, and pressure-testing of each rehabilitated segment.

From start to end, Creamer completed all project work in three weeks, including the integration of the four rehabilitated water mains into existing pipe network and site restoration – marking yet another successful Primus Line® system installation that effectively restored the system's hydraulic capacity and extended the service life of the Kearny Multiples by at least 50 years.

