ScarGuard Enables HDD Installation Under the Oneida River

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New York

Pipe Details

- New, 24-inch (609.6-mm) regulated pipeline was being installed using HDD
- The line was being pulled 1,200 feet (366 m) through cobble
- The original ARO failed to protect the pipeline from damage

Summary

- A company installed a new, 24-inch (609.6-mm) pipeline using HDD
- The line was being pulled 1,200 feet (366 m) through cobble
- The original protection failed to protect the line during HDD
- ScarGuard replaced the ineffective coating, protecting the FBE coating during installation
- No UV light or heating required
- No negative impact on project schedule or budget
- No hazards introduced to the work site.

A natural gas utility company that was installing a new, 24-inch (609.6-mm) regulated pipeline via horizontal directional drilling (HDD) and encountered a challenging bore path approximately 1,200 feet (366 m) long, under the Oneida River. The pipeline, which was being placed through cobble, was contending with one of the most difficult soil conditions the contractor had ever seen.

The first run set the tone for the project. Not only was the carbide cone lost as the section of pipeline was being pushed through the cobble, but the coating was scarred down to wall loss. A site engineer assessing the damage suggested the scarring on the pipe had resulted from the cone dragging at a tangent along the line. While this seemed likely, the team could not locate the carbide cone, and drilling another hole would be cost prohibitive, amounting to approximately $1.5 million.

The installation team prepares a 300-ft (91-m) section of pipe with ScarGuard for a test pull.

With a successful test pull determined the ARO could withstand the abrasion from the cobble.

It was apparent that running the pipe as originally intended would not be successful. The crew needed a better plan.

Several members of the installation team had experience with successful HDD installations using ScarGuard®, a composite abrasion resistant overcoating (ARO) constructed of fiberglass cloth that is pre-impregnated with a durable, flexible polyurethane resin. It is activated by water and cures in a matter of minutes, creating a sacrificial outer laminate system that protects preapproved, anticorrosion field joint coatings and mainline coatings such as fusion bonded epoxy (FBE), liquid epoxies, shrink sleeves, and tapes. It is designed to protect these coatings from the mechanical stresses and scarring associated with HDD, thrust-bore, direct pipe and microtunnel pipeline installation methods.

With the decision made to use ScarGuard® to contain the damage, Canusa-CPS the exclusive distributor for ScarGuard®, provided the materials and 2 technicians were deployed to the site to wrap the entire bath, which included the entire 10-foot (3-m) diameter, 35-ft (10.7-m) long unit, plus the domes on each end.

The field team wrapped 300 ft (91-m) of the line and every weld with ScarGuard to provide maximum protection during the installation, enabling the successful HDD installation of the full 1,200 feet (366 m) of pipe.

A successful test pull proves that ScarGuard is equal to the task of protecting the pipe from abrasion from the cobble.

The technicians prepared the surface and began applying two layers of the composite system, completing the project in 3 eight-hour shifts.

The completed solution delivered a layer of corrosion-resistant reinforcement on top of the original pipe that will allow the unit to work safely while a new vessel is being built to replace the corroded unit. The quick installation of this long-lasting composite repair enables continuing safe service, eliminating the considerable cost of taking the unit offline and removing the threat of environmental damage.