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CASE STUDY:

FLOWTITE® USED IN MICROTUNNELING APPLICATION



Changing the world one pipe at a time.



CHALLENGE

On a Saturday morning in August 2012, residents of southwest Portland, Oregon, awoke to find approximately 15,000 gallons of sewage streaming alongside a local walking trail. A heavy rainstorm the night before had increased the pressure on the sewer pipe, causing it to leak five gallons of sewage per minute. To prevent future rude awakenings, the Portland Bureau of Environmental Services planned to construct a new pump station near the existing one and connect the facilities with a two-pass system. The first pass called for crews to microtunnel 380 feet of 72-inch diameter steel casing, and then, to complete the second pass, workers would have to insert a 63-inch diameter High Density Polyethylene (HDPE) pipe inside the steel casing. But before work began, James W. Fowler Co., the contractor charged with solving the problem, identified a solution to reduce time and save money.

SOLUTION

The contractor knew the strength and durability of Thompson Pipe Group – Flowtite's Reinforced Polymer Mortar Jacking Pipe would complete the project with just one pipe. Work began by digging two shafts about 400 feet apart. A tunneling machine chewed up the ground between the two holes, and a 57-inch Flowtite® Reinforced Polymer Mortar Jacking Pipe was advanced in ten-foot sections until it reached the other side.

Additional considerations for using Flowtite® Reinforced Polymer Mortar Jacking Pipe:

- ▶ **Does not require liners or coatings to protect against corrosion, eliminating future repair costs**
- ▶ **Adequate allowable jacking loads for microtunneling applications**
- ▶ **Relatively light in weight**
- ▶ **High flow efficiency**
- ▶ **Excellent hydraulic properties that will not change over time**

- ▶ **Strong and durable—it is tough enough to withstand the installation process**
- ▶ **Ability to endure corrosive chemicals found in wastewater pipe**
- ▶ **No liners or other types of protection needed to protect against corrosion**
- ▶ **Meets ASTM, AWWA, ISO and EN standards**
- ▶ **Affordable, with a minimum projected life of 50 years as required by related ASTM standards**
- ▶ **Manufactured by Thompson Pipe Group – Flowtite, an American-owned and -operated company, and an industry leader in pipe construction**



OUTCOME

Eliminating the carrier pipe enabled crews to install a one-pass system with Flowtite® Reinforced Polymer Mortar Jacking Pipe in just two weeks. Additional benefits included:

- ▶ **Grouting annular space was no longer necessary**
- ▶ **Outside diameter of the Flowtite® pipe was smaller than the specified steel casing, and reduced the opportunity to find unforeseen soils and conditions**
- ▶ **Lower volume of excavated material was hauled off the job site, reducing the carbon footprint and the impact to traffic in the area**



"Flowtite® Reinforced Polymer Mortar Jacking Pipe had never been used in the U.S. in a microtunneling application before, and everyone was understandably cautious. However, the pipe worked well and we were pleased with the support we received from Thompson Pipe Group,"

JOHN FOWLER, EXECUTIVE VICE PRESIDENT, JAMES W. FOWLER CO.