Project

Haley & Aldrich helps client protect environment and deliver uninterrupted sewer services

Summary

- Haley & Aldrich's geotechnical team helped a public works department shore up aging sewer infrastructure by installing a second force main as a failsafe.
- We guided the town to success in its first-ever trenchless project of this scale and complexity, designing a horizontal directional drilling approach that minimized the project site footprint and limited road closures and other civic disruptions.
- We also completed the project on a tight schedule to prevent it from disrupting the endangered peregrine falcon nesting season.
- This project preserved the town's reputation by preventing dverse environmental impacts and sewer service

disruptions.

Client challenge

One quarter of the town of Westport, Connecticut's residents received sewer service via a cast iron sanitary force main that was installed in 1951 by sinking it to the bottom of the Saugatuck River. The town's public works department was concerned that failure of this aged force main would result in adverse environmental impacts and sewer service disruptions for residents. To avoid the consequences that could arise from the potential failure of the primary force main, the town decided to proactively install a second force main as a failsafe.

It was critical that local businesses and a commuter rail station were minimally disrupted and remained operational during construction. Because the project was highly visible, the town and community needed to be kept up to date on the project status on a regular basis. Additional key project criteria included operating within a limited work area and avoiding impacts to the nearby I-95 bridge foundations and other pile supported structures. Maintaining the project schedule was also crucial to avoid disrupting the nesting season for endangered peregrine falcons.

Haley & Aldrich (as part of a team with Tighe & Bond) was chosen for this project based on our risk-based approach to horizontal directional drilling (HDD), in-depth knowledge of the subsurface conditions, and our ability to protect our client's reputation amid the most complex circumstances.

Our approach

Haley & Aldrich took a proactive approach to identify, evaluate, and address the various risk factors associated with this HDD project. This included a detailed evaluation of a complex subsurface geology consisting of highly abrasive rock.

Our HDD alignment design included higher entry and exit angles to reduce the drill length and fit the equipment laydown areas within the limited workspace allocated for this project. The compact site helped to ensure businesses remained open and minimized impact to the public during construction. The higher entry angle also allowed the alignment to enter bedrock sooner and reduce the potential for inadvertent returns into the river, which could have potentially shut down the project. We designed and implemented instrumentation to monitor critical utilities and nearby structures to ensure that any disruptions could be addressed immediately.

To foster positive community relations and ensure transparent communication, Haley & Aldrich staff provided daily updates to the project team and gave tours to the town's staff, engineers, and politicians. Haley & Aldrich's risk-based approach and our ability to educate the local community on the benefits of HDD assured our client that all bases were covered.

Value delivered

- Preserved the town's reputation to keep the surrounding environment safe and deliver sewer service without interruptions
- Designed a creative HDD approach that required a small project site footprint and thereby avoided road closures and minimized disruptions to nearby stakeholders
- Completed the project on schedule and, as a result, did not disrupt the peregrine falcon nesting season
- Ensured the town's staff, engineers, and politicians supported the work via hosting educational tours and transparent communication
- Guided the town to success for their first-ever trenchless project of this scale and complexity

For more information, contact:

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