

D'Allesandro Corp. Tackles Tough Bursting Project in A Sensitive Location

by Jim Schill

NUCA contractor D'Allesandro Corp., Avon, MA, recently completed a large-diameter storm sewer replacement project for Boston Water and Sewer Commission (BWSC), Boston MA. The Stony Brook Sewer Separation project was part of a major storm sewer, sanitary sewer and water main replacement and rehabilitation program aimed at mitigating I&I and eliminating combined sewer overflows (CSOs).

According to D'Allesandro Senior Project Manager John Bauld, the project was originally specified as open cut, but was well suited for pneumatic pipe bursting. He said, "The location of the project and surrounding structures really made pipe bursting an ideal choice for the project. After we were contracted for the work, we suggested a pipe bursting option and it was accepted."

For the replacement of the existing 12-inch VCP storm sewer with 20-inch HDPE, Bauld chose a 14-inch pneumatic Koloss from Associate NUCA member TT Technologies, Aurora, Ill.



The D'Allesandro crew used a 14-inch diameter, reversible [Grundocrack](#) Koloss to replace 53 feet of 12-inch VCP storm sewer with 20-inch HDPE.

Project Background

The BWSC, along with the Massachusetts Water Resources Authority (MWRA) have been targeting issues like I&I and CSOs since the mid-1980s. The BWSC recently implemented several projects under its CSO plan. The scope of the projects ranges from new water main installation to the replacement of aging storm and sewer drains. Other portions like the Stony Brook project, are aimed at separating combined sanitary and storm sewer systems in order to reduce pollution levels in natural waterways such as the Stony Brook Conduit, the Muddy River and the Charles River.

Bauld said, "The objective of separating sanitary and storm sewers is very basic. Removing storm water from sanitary sewer lines reduces the amount of water being treated at the treatment facilities. It's water that doesn't need to be treated anyway. Separating the lines also effectively eliminates combined sewer overflows. This keeps the

sewage from backing up into homes and overflowing into rivers, streams and bays."

Pipe Bursting

With several thousand feet of bursting experience in projects ranging from 4 inches through 20 inches in diameter, Bauld and the entire crew were able to see that replacing this particular storm sewer section would be best accomplished through the trenchless method.

He said, "The main reason we decided to use bursting was the existing pipe ran under a field-stone wall that's probably close to 200 years old. The wall stands eight feet high and four feet wide and surrounds the Arnold Arboretum, which is maintained by Harvard University. In addition to the wall, arboretum officials were concerned an open cut project would disturb several large and rare trees."

Bauld contacted TT Technologies pipe bursting specialist Ric Micellota for technical support. Micellota said, "After reviewing the project with John, we decided to use a pneumatic straight barrel reversible tool. That way, we only needed to dig a launch pit and could burst from the launch pit to a manhole and then reverse the tool out through the new pipe. This would create the least amount of disruption. We also opted for a larger bursting tool because of the substantial upsized. Twelve inches to twenty inches is significant."

On The Job

Bursting was scheduled for a Wednesday however, a poor weather forecast prompted Bauld to push the timeframe forward 24 hours and attempt to burst on Tuesday instead. He said, "I called Ric at TT Technologies at 7:00 am and told him we wanted to burst that day. He arrived at the job site several hours later and we were ready to go."

While the 14-inch diameter Koloss was fitted with a 23-inch OD front expander to allow the upsized from 12-

inch to 20-inch pipe, the D'Allesandro crew prepared the launch pit. Bauld said, "The launch pit was located at the base of a small rise. At that point, the pipe was only 5 feet deep. This allowed us to use of a relatively small launch pit. The run was approximately 53 feet. I had the pipe fused at the factory and delivered to the site in one piece."

Bursting proceeded without complications. The 53 feet of 12-inch VCP storm sewer was upsized to 20-inch HDPE in approximately 20 minutes. Once installed, the D'Allesandro crew put the tool in reverse and backed out to the launch pit through the new HDPE. The tool's front expander was then cut from the front of the pipe and removed through the manhole.

Everyone associated with project was pleased with the results. Bauld said, "Prep worked started around 11:00. We started bursting at 2:00 by 2:20 we were done. It went like clockwork!"

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