

HOBAS PIPE SPEEDS SLIPLINING OF ALBUQUERQUE SEWER LINE

Albuquerque's history long precedes its founding in 1706 as the Villa of San Francisco de Alburquerque. Its natural history museum displays the fossils of dinosaurs dating from 150 million years ago. Part of its infrastructure was also on the verge of becoming extinct.

In the 19th century, it became Albuquerque and the original villa is now "Old Town," which is preserved as an historic district and is a major tourist destination. One aspect of "Old" is not so appealing, because the city, as are many older cities, is struggling with its aging infrastructure.

Mike Rocco, trenchless manager with AUI, Inc., an Albuquerque, N.M., construction firm, said, "In the past 10 years, AUI has been called out to repair interceptor sewer lines that have collapsed resulting in closed roads. Most of the pipes that are being repaired are old reinforced concrete pipe (RCP) installed in the '60s, '70s and even as recently as the '80s. We are now working on several projects that take a more proactive approach and result in a win-win situation for the installer and city.

The SAS Larger Diameter Sewer Line Renovation, detailed here, has already been followed by the San Juan Chama Slipline Project, another AUI job. Its requirements were to slipline existing 48-inch reinforced concrete pipe with 44-inch HOBAS pipe. The total length of the project was 3,424 feet.

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“The benefits of sliplining are many. The overall cost, disruption and time to slipline a segment of pipe are less than traditional remove and replace methods. AUI can also open cut and install pipe, but if given the opportunity to slipline, we prefer it and find it more productive and less intrusive than traditional methods,” explains Rocco.

Sliplining has been underway for the SAS Larger Diameter Sewer Line Renovation for the city. Cleaning operations were finished before each segment was completed. The first sliplining run of about 180 linear feet was completed quickly in one morning. The second run of an additional 315 feet of 48-inch sewer line was sliplined on the following day.

The entire project of sewer line rehab consists of approximately 495 feet from manhole to manhole. It ranged in size from 30-inch to 48-inch diameter. This sanitary sewer sliplining was made necessary by the corroded state of the existing concrete line.

HOBAS Pipe USA of Houston, Texas, was chosen as the pipe supplier for several reasons: HOBAS pipe’s superior hydraulics would increase flow capacity, ease of installation and corrosion resistance. HOBAS centrifugally cast, fiberglass reinforced, polymer mortar (CCFRPM) pipe has been performing reliably in the US since 1984.

Boyle Engineering Corporation of Albuquerque designed the project. Keith Reed, PE, the project manager for Boyle, described the pipe installation and choice of products “Due to the fact that a reach of sewer involved in the current rehab known as the Edith Interceptor is a major sanitary sewer interceptor, which collects much of the flows from the north central portion of the city, capacity was a huge concern.

“If we had used a 42-inch slipliner pipe in the existing 48-inch line, we would have achieved an improvement in line capacity of between three and 10 percent. This was good compared to existing capacity but still inadequate to meet future needs. The severe corrosion in this line made us confident that we could get a 44-inch I.D. HOBAS sliplining pipe inside the existing 48-inch I.D. RCP. We determined that the capacity of the line would likely increase 11 to 19 percent or more over the existing capacity.”

Since the capacity was so critical, the I.D. of the liner was maximized. HOBAS manufactured a 44-inch diameter pipe that is not an industry standard but exactly fills the bill for this project. The other manufacturers offered only standard sizes.

“HOBAS offers pipe diameters in two to three inch increments for the majority of the product line. This often allows for the greatest flow recovery in slipline rehabilitation,” said Richard Turkopp, engineering manager for HOBAS Pipe USA.

Since the fit was so tight, a mandrel (proof section) of HOBAS pipe was pulled through the line before beginning the relining process. The mandrel was an actual section of the sliplining pipe.

AUI used Hobas because the City of Albuquerque specified it. Rocco said, “We have had many successful projects using HOBAS. Our longest push on this job was 920 linear feet in one direction. The post-CCTV inspection of the new HOBAS pipe was excellent.”

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HOBAS has been supplying pipe to the sliplining market since the late '80s and continues to be the pipe of choice for many owners, engineers and contractors because of several unique attributes. The pipe is inherently corrosion resistant, rugged, solid-walled and provides a long maintenance-free life. The company has a long track record in this country with nearly a million feet of pipe installed by sliplining around the USA.

Prior to installing each new sewer reach, the contractor, AUI, noted the location of all sewer services and identified which were in service and which were not. Those no longer in service were abandoned and active services reconnected after sliplining. Closed circuit television inspection of the pipeline was completed pre-installation. After sliplining, a final video was completed.

As part of the contractor's submittals, verification of the design and past performance of the sliplining pipe was required. AUI submitted complete design calculations, joint details and verification of the required 10-year history of successful installations for sliplined sanitary sewers in the US. AUI was looking for the best pipe to slipline and complete the project on

schedule and within budget. Rocco said, "AUI has experience with several products and prefer the HOBAS pipe because of its stiffness and strength that provides the ability to make long distance pushes."

AUI has been installing HOBAS in Albuquerque since 2004 by both sliplining and direct bury. AUI's trenchless manager, Mike Rocco, has become familiar with most of these types of jobs and is responsible for overseeing those that are done by AUI's specially-trained crews

Rocco said, "Most of the collapse happens after hydrogen sulfide has eaten the cement away from the inside of the RCP and it fails and collapses.

"Sliplining is a major plus for municipalities because it is completed in less time and provides a permanent solution to the problem, not just a temporary fix."

HOBAS pipe is manufactured in sizes from 18 inches to 110 inches in pressure and non-pressure classes. For more information, please contact HOBAS at 800-856-7473, 281-821-2200 or e-mail at info@hobaspipe.com. Facts are also available at www.hobaspipe.com.

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