



Trenchless Stretches Capital Dollars

Innovation is not confined to high tech industries. Cities innovate too! Just ask the residents of Casselberry, Florida, located just outside of Orlando. Casselberry, a medium sized city providing utility service to 55,000 people, is a perfect example of municipal innovation as they installed the largest asbestos cement pipe bursting project in North America. Targeting potable water main rehabilitation, the four-year project was funded through the American Recovery and Reinvestment Act and the State Revolving Loan Fund program. And, it was a huge success for the both city's capital plan and their pipeline rehabilitation program. Specifically, the project was less disruptive to pretty neighborhoods, it cost significantly less than traditional replacement methods and it will last the utility well over 100 years!



The AC pipe replacement project saw 35 miles of pipe replacement over a 4-year period. This ambitious project was planned, designed and bid with in-house staff resources in a short, 3-month time frame. As most of you know, this dramatically reduced design time frame is almost unheard of within a municipal setting, because of the difficulties of working through cumbersome

governmental processes. However, the motivated city staff embraced proven and innovative industry products and unique construction methods. After researching trenchless rehabilitation using pipe bursting, staff conducted a trial with two different materials then specified HDPE as the pipe line material choice and pipe bursting as the preferred installation method.

Pipe bursting replaces the host pipe by fragmenting the existing pipe and pulling in a replacement pipe of equal or larger size. Use of pipe bursting results in up to 85% less trench than typical and commonly used open trench construction. And, since the existing conduit is utilized, potential construction unknowns are dramatically reduced. Pipe bursting projects are also significantly easier to design when the risks are minimized through identification of all adjacent utilities and main connections.

Tens of thousands of miles of HDPE has gone in ground in the U.S. and Europe in the past. HDPE pipe is a proven material as it withstands both the rigors of pipe pull in and the bursting process. As such it has proven very capable of withstanding all forces exerted on the pipe during installation of pipe bursting projects and continues to provide years of leak free distribution system operation after installation. It is essential to use a qualified contractor to perform the pipe bursting project as experience plays an important role in successful execution. Local HDPE distributors tend to have good lists of qualified contractors.

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Spotlight: Murphy Pipeline

#HDPE expert Murphy Pipeline replaced 7 miles of old, failing cast iron water lines at Arlington Cemetery w/HDPE using pipe bursting method. The award winning project was managed by the Army Corps and completed in half the time of traditional methods and without the hazard of open cut installation.



Kudos to Andy Mayer and his crew for a job well done.



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Trenchless Stretches Capital Dollars (continued)

Developed in Britain by British Gas in the 70's pipe bursting has earned its stripes throughout old, European cities. British Gas was criticized for years for ripping up the quaint streets of London so they developed and then perfected bursting technology with HDPE pipe. The success and rapidity as to which Casselberry's pipe bursting project was executed highlighted the City's implementation of this innovative technology. There is no reason this innovation cannot be the way to conduct formal rehabilitation programs in the future. Traditional replacement of pipe usually results in a significantly higher replacement cost than proactively replacing pipelines as it tends to be in response to a failure or series of failures. Also, a responsive program is usually ten times more expensive than planned replacements and it often utilizes the same techniques and pipeline materials that previously failed and the distribution system may forever remain in a responsive mode.

It is essential for today's cities to embrace innovation in technology implementation both in construction implementation and pipeline materials. HDPE installed in this manner provides generations of maintenance free operation and will allow the utility to focus its future man power and capital dollars on other areas of the distribution system that require rehabilitation. Use of pipe bursting and HDPE allowed Casselberry to successfully progress from a reactive response scenario to a successful, proactive rehabilitation program. In fact, Casselberry was able to replace twice as many lineal feet with pipe bursting than they would have been able to with open cut. Given there are several hundred thousand miles of AC pipe left in the U.S., municipalities have their work plate very full.

About the Author: Alan Ambler, PE was the engineer behind bringing pipe bursting to Casselberry and has shared his story with many towns throughout the country. He was the Water Resources Engineer for the city for many years and led innovation at the city. Given his success, he has now retired from Casselberry and now hung out his own shingle to assist other cities with the implementation of bursting strategies for their capital plans. You can reach him at alanambler@amtrenchless.com



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Huge Turnout

We have a huge turnout planned for the Baltimore and Northern Virginia roadshows this week with over 140 RSVP's! Check out all the agencies and engineering firms that are turning out this week! HDPE is on the move!

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 Baltimore County DPW
 Calvert County Government
 CDM Smith
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