

PVC PIPE

news



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NEW ADDRESS, SAME UNI-BELL

Uni-Bell's headquarters relocated last March. Our phone, fax, web address, and e-mails remain the same, but our new mailing address is:

2711 LBJ Freeway
Suite 1000
Dallas, TX 75234

For those of you who visit us, our new offices are on the tenth floor of The Meridian, which is across the street from our previous location.



PVC WATER PIPE IS A CAPITAL IDEA

by Bob Walker, P.E.
Executive Director

Arguably, a city's water delivery system is the most important of all the infrastructure systems on which our economy and livelihood depend. A reliable supply of clean water is essential for industrial and commercial businesses, fire protection, and basic public health. This certainly applies to our nation's capitol.

Washington, DC's water supply and fire protection needs are capably managed by the District of Columbia Water and Sewer Authority, commonly referred to by its acronym – DCWASA. DCWASA's mission is to serve all its customers with superior service by operating reliable and cost-effective water and wastewater services in accordance with best practices. Their vision is to be the industry leader and environmental steward in providing excellent water service, wastewater collection, and treatment services for all its customers. In addition to 500,000

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"AFTER SPENDING MILLIONS OF DOLLARS TO REPLACE MAJOR PORTIONS OF OUR WATER SYSTEM, THE LAST THING WE WANT IS A PREMATURE FAILURE IN ONE OF THESE CORROSION HOT ZONES. THE COMMITTEE FOUND THAT PVC WAS A GOOD FIT FOR THESE PROBLEM AREAS."

BILL DARROW, NEW MATERIALS COMMITTEE CHAIRMAN



Fort Myer Construction workers install 8-inch PVC water main in downtown Washington D.C.

customers in the District of Columbia, DCWASA collects and treats wastewater for 1.6 million customers in Montgomery and Prince George's Counties in Maryland and Fairfax and Loudoun Counties in Virginia.

As with any system, reliability depends upon the performance of the individual components that make up the system. The largest investment component of a water distribution system is pipe. Pipe products and materials warrant careful scrutiny in order to maximize performance and minimize lifecycle costs.

During the next ten years, DCWASA has budgeted over \$190 million for replacement and rehabilitation of water mains. A number of these mains lie in zones with very high corrosion potential. Clearly, a pipe system with a high degree of corrosion resistance is necessary for dependable



service in these areas. In 2005, DCWASA's New Materials Committee made a thorough investigation of alternative pipe materials for their compliance with American Water Works Association (AWWA) standards, ease of maintenance, and compatibility with Washington DC's complex water system. Following specific training for DCWASA personnel, the Committee approved PVC pressure pipe for use in a pilot program. Committee Chairman Bill Darrow states, "After spending millions of dollars to replace major portions of our water system, the last thing we want is a premature failure in one of these corrosion hot zones. The Committee found that PVC was a good fit for these problem areas."

Last year, DCWASA initiated its first PVC water main project by replacing several 6-inch cast iron water mains on D Street, New Jersey Ave. and Ivy Street, SE, near the U.S. Capitol. Because of a significant history of water main breaks in this neighborhood, DCWASA engaged the services of corrosion engineers from DACCO SCI, Inc., located in Columbia, MD. The engineers reported that excessive stray currents and highly corrosive soils in the area were causing the pipes [cast iron water mains] to fail. Complete plans, details, and specifications were then developed by engineers from Hatch Mott MacDonald's offices in Washington, DC; Rockville, MD; and Milburn, NJ within six weeks of the notice to proceed in order to meet DCWASA's accelerated schedule. The old cast iron pipes were replaced with 3,315 feet of 8-inch PVC pipe. The new PVC water mains were installed 4 feet below finished grade by Fort Myer Construction Corporation of Washington, DC.

Ft. Myer Project Manager, Glenn F. Sappington, reported that, "The project proceeded quickly and smoothly."

Projects such as this are designed to maintain an adequate and reliable potable water supply to customers and for fire protection. After all, having a great infrastructure is an essential prerequisite to being a great city.



"EXCESSIVE STRAY CURRENTS AND HIGHLY CORROSIVE SOILS IN THE AREA WERE CAUSING THE PIPES [CAST IRON WATER MAINS] TO FAIL."

DACCO SCI, INC. REPORT



Figure 1b. The 8-inch PVC replacement mains were installed "quickly and smoothly" four-feet below grade.