



## Dependable water delivery pipe system crucial to protecting marina from fire

ESSEX, Md. — In waterfront communities all across the country, such as those along a 175-mile stretch of eastern Baltimore County in Maryland, pleasure boating is a multi-million dollar industry.

As of May 2004, luxury boat owners in Dundalk, Essex and Middle River can store their craft year-round at the Sunset Harbor Marina, home of the county's first "boatel" — a three-level facility with capacity to store craft up to 40 feet long.

One of the selling points of the new 62,000 square-foot, \$3 million facility was a state-of-the-art fire protection sprinkler system. To those boat owners, protecting against fire means protecting their investment.

And as county officials were making decisions on how to upgrade the local infrastructure to accommodate the boatel, they were reminded of a persistent problem.

"The existing 8-inch ductile iron pipe was installed in 1968 and had about 10 failures in the last 10 years," said Mike Mazurek of the Baltimore County Dept. of Public Works and project engineer. "That particular section of the northeast part of the county near Chesapeake Bay has very corrosive soils."



The solution was to install more than 2,000 feet of smoothwall high-density polyethylene (HDPE) water pipe. The result was positive for the residents in two ways – the water main that served the existing homes and businesses was upgraded, and the marina boatel now benefits from a reliable, leak-free water distribution system for fire protection.

“I was very familiar with HDPE as a piping material,” said the contractor and project engineer Vern Dettman of J. Fletcher Creamer & Son, Inc. “We’ve installed it a lot in fiber optic applications, pipe bursting, sewer applications and electric conduit applications. We started out with 16-inch lines, went to 12-inch about halfway down, and used side-saddle fusion to connect to the hydrants. It was very easy to put in.”

Dettman added that traffic along Browns Ave. – the residential street where the pipe was installed – was not disrupted in the process. All of the fusion was done above ground, the existing pipe was just left in place, and the HDPE pipe was simply lowered into the trench .

“Many of the features of HDPE pipe were a benefit to the engineers on this project,” said Camille Rubeiz, P.E., director of engineering for the Plastics Pipe Institute. “The above-ground fusion, light weight, ease of installation, and especially the leak-free system. The business of protecting multi-millions of dollars worth of property from fire must be done with a reliable water delivery system.”

Mazurek added that for the residential customers now served by this new water main, the installers had no trouble connecting the service lines from the main to the houses.

“It really was a two-birds-with-one-stone scenario,” Mazurek said. “As areas like these continue to grow, the infrastructure needs have to be able to grow with them. We’ll monitor how this system performs, and we’re thinking of specifying more projects with HDPE pipe.”

The Browns Rd. project included 1,125 feet of 12-inch HDPE pipe and 1,200 feet of 16-inch pipe.

“Traditionally, water leakage is something that is common in older water pipe system’s Dettman said. “But in this case, the pipeline ends in a very low-lying area. Another problem they were having was poor drainage. For the new system, it was a zero-allowable leakage tolerance,” he added.

According to recent statistics cited by PPI, public water supply systems in the U.S. lose an average of 11 percent of the water they carry due to leaks, cracked pipes and other factors. Water systems serving more than a million people lose even more water. More than three out of every 20 gallons of water entering these systems leak out.



“Water infrastructure improvements must be a priority for public officials,” said Rich Gottwald, president of PPI. “It’s encouraging to see projects like the Sunset Harbor Marina making informed choices to replace antiquated pipe systems with HDPE. The advantages are getting too great to ignore.”

### **About PPI**

The Plastics Pipe Institute is the major trade association representing all segments of the PE piping industry. Member companies share a common interest in broadening market opportunities that make effective use of plastic piping for water and gas distribution, sewer and wastewater, oil and gas production, industrial and mining uses, power and communications, duct and irrigation. More information is available at [www.plasticpipe.org](http://www.plasticpipe.org).