Vol. 3 Issue 1
Contractor's Edition

Good Connections

Information on Watertight Storm Sewers

Water Facts

- Water covers nearly three-fourths of the earth's surface.
- The average person needs two quarts of water a day.
- The first water pipes made in the U.S. were fire-charred, bored-out logs.
- The amount of water is constant and recycled throughout time, and it's possible to drink water that was part of the dinosaur era.
- There are over one million miles of water pipelines and aqueducts in the U.S. and Canada-enough to circle the globe 40 times.
- There are over 59,000 community public water systems in the U.S.
- Community water systems process over 35 billion gallons of water daily.
- The U.S. has 3.5 million miles of rivers, and the 600,000 miles of rivers behind dams amounts to 17 percent of the nation's river mileage.

Sources: Minnesota Rural Water Association, National Park Service & United States EPA - Office of Water.

INSIDE

Flexible Connectors Help Contractors Stay Ahead of the Pack

As a leading excavation contractor, Brubacher Excavating, Inc., strives hard to maintain its "best in class" status. "We want to always represent ourselves as being the better contractor," says Michael Laudermilch, purchasing manager for the Bowmansville, Pa.-based firm. "Because of this, we're constantly seeking out solutions and products that can help us reach our goals, and help our customers reach their goals."

That's precisely why traditional brick and mortar pipe connectors don't cut it anymore for Brubacher, which for 30 years has been working on commercial and residential projects throughout southeastern Pennsylvania. "We've always used brick to fill the gaps and mortar to join around the boxes," says Laudermilch. "We really want to look back on the job 10 years from now and be proud of our work and say 'We did that.' Unfortunately, that's hard to do when over time, the brick falls in, the mortar cracks away and the work ends up looking unsightly."

With its eye on alleviating such problems and keeping those projects looking good and operating properly for the long haul, Brubacher recently ordered 28 flexible rubber connectors for the storm drain boxes that it will install in the new Rosewood Residential Development in Trappe Borough, Montgomery County, Pa.

The 38-home residential development is a small project for the 300-employee contractor, which will install the storm sewer, sanitary sewer, curb work and paving for the neighborhood. The drainage boxes are being built by By-Crete of Lebanon, Pa., which recently introduced Brubacher to flexible connectors at its yearly open house event.

"Brubacher had never used the flexible connectors before," says Jeff Long, By-Crete's plant manager. "They were ready for something different, and very willing to try them out on this project."

With flexible connectors, Laudermilch says Brubacher is aiming to save money by eliminating the labor required to brick-up and mortar-fill the storm sewer connections. Being able to backfill immediately while producing a much cleaner job are two more benefits the contractor is looking forward to.

"We can just put the gasket in, insert the pipe, put the clamp on and backfill right away," says Laudermilch, adding

Continued Inside

Jeff Long, Plant Mangaer, By-Crete and Michael Laudermilch, Purchasing Manager, Brubacher Excavating, Inc.

Did You Know?

- Flexible rubber connectors have been used in sanitary sewer systems for more than 30 years.
- When brick and mortar connections fail, the resulting leaks can cause soil subsidence, which typically leads to costly repairs.
- Flexible connectors can be cast into the concrete structure when it's made, mechanically installed before shipment or added to the structure in the field.
- Flexible connectors can be installed in the field.
- Flexible connectors are not only easy to install and work with, but they can also expedite a project and save contractor time and money in the process.
- Traditional brick-and-mortar connections may begin to leak within a few days of their installation.
- Once leaks start, surrounding soils subside into the system, resulting in loss of structural support to critical parts of the system. On busy streets and intersections, pavement support is undermined and the road surface itself can begin to deteriorate.

Contractor Saves Time and Money with Flexible Connectors

Every contractor knows what it's like to work under a time limit and penalty clause on a major project. But while the financial incentive to finish on or before deadline may be alluring, the necessary resources don't always fall into line to make the goal achievable.

Not so in Manatee County, Fla., where Frederick Derr & Company, Inc., sought out the most efficient and economical installation methods to help satisfy tough specifications on the recent Lockwood Ridge Road connector highway to Route 70. The $8 million, 2-1/2-mile, four-lane road project required over 20,000 feet of concrete pipe from 15 through 60 inches. The road connects with over 110 structures using 134 flexible connectors.

To get the project done in less than 14 months and with the highest quality construction processes available, Frederick Derr & Co used flexible connectors whenever possible. Previously used in Manatee County – but not by this particular contractor – the flexible connectors were approved by both the project engineer and the Florida Department of Transportation as an alternative to traditional mortar joints.

"We specified flexible connectors per Florida DOT standards," says Bill Tarolli, vice president of Frederick Derr & Co and job superintendent. "Time was an important element on this job, and this was my first experience with the connectors, but they worked pretty slick." Tarolli estimates that his firm saved at least 50 percent of the installation time that mortar joints would have required.

Tarolli joins a long list of Florida contractors who have reported significant time and cost savings by using flexible connectors to join storm pipe to structures. By taking the variables out of cost estimating, reducing dewatering costs, and facilitating easy installation, the flexible connectors give contractors advantages that they would never realize using traditional mortar joints.

In addition to the contractors who install them, project owners reap significant cost savings with flexible connectors over the life of the project. Flexible connectors provide long-term protection against water infiltration and the resulting soil erosion into storm sewer systems. Because traditional mortar joints fail relatively quickly and cause subsidence in areas at or around structures, they often result in road surface failure – a large budget item for most cities and municipalities, and a concern for everyone who uses the roads.

By eliminating costly mortaring and enabling a quick return to normal traffic patterns, the connectors make construction more economical and less intrusive. In addition, the flexible connectors' dependable sealing greatly reduces long-term maintenance costs.

Because they ensure long-term joint integrity under even the most adverse conditions, flexible connectors can also help project owners meet the new EPA regulations concerning non-point source pollution – an issue that is closely related to storm water movement. Add up the benefits and it's clear why contractors like Frederick Derr & Co have made the switch to flexible connectors and started reaping the rewards of this "win-win" proposition. ■

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Cont'd. from cover

that the project's engineers – most of whom are constantly pushing contractors to find newer, better methods – are also enthused by the concept, and looking forward to seeing the results of the installation process.

Most important, says Laudermilch, is that the contractor can "keep on moving," and won't have to wait overnight for a brick-and-mortar joint to cure. "We make our money in production, not by waiting around," says Laudermilch, adding that Brubacher is already working on a 100-home residential project in Penn Township, Chester Township in which it will use about 145 flexible connectors.

He says it's all in the name of staying ahead of the pack and maintaining an edge in an increasingly competitive business environment. "As a leading contractor, we don't ever want to be followers," says Laudermilch. "We're constantly seeking out better ways to improve our standing in the marketplace, and we expect this new solution to help us do just that." ▪

Why Watertight Storm Sewers Work

Watertight Storm Sewers help prevent:

- Structural Failures
- Non-Point Stream Pollution
- Groundwater Contamination
- De-Watering of Wetlands

With Watertight Storm Sewers you can count on:

- Faster and Lower Cost Construction
- High Product Quality
- Exceptional Value

Source: The Journal for Surface Water Quality Professionals

Contractor Safety Know-How

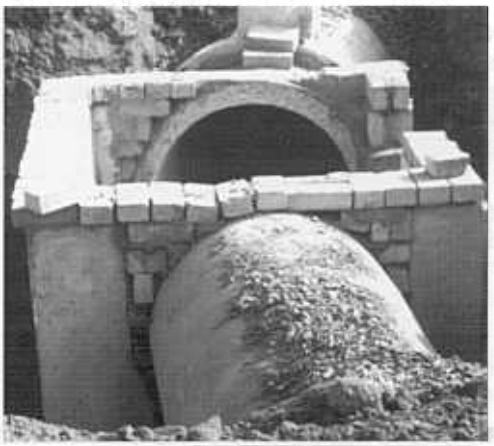
Looking for a quick and easy way to get your hands on valuable safety information that you can use on the jobsite? Check out OSHA's "Preventing Fatalities" informational guide at www.osha.gov. This informational "eTool" was created to help job contractors prevent fatalities and accidents in the construction industry. OSHA says its eTools are interactive, Web-based training programs that provide guidance information for the development of a comprehensive safety and health program. The tools include elements that go beyond specific OSHA mandates, such as recommendations for good industry practice.

Source: OSHA

PHOTO GALLERY

Wanted: Road Damage Pictures
Reward: $100.00

The old-fashioned method of using bricks and mortar to join pipes into structures in storm sewer construction gives everybody problems, from the contractor to the customer. Now you can turn one of these cracked messes into enough money for a good dinner for two, just for sharing your photos with "Good Connections". Each issue will feature photos of real-world problems caused by rigid brick and mortar joints. If your photo is selected, we'll send you a check for $100, your reward for helping us educate others about using flexible connectors in storm sewers. Please e-mail your pictures to mailroom@frankgroupinc.com or mail to Frank Group, Inc., 2555 Kingston Road, Suite 230, York, PA 17402. Please be sure to reference the Watertight Storm Sewer Group.



What a Mess!
There's nothing like a cold winter day spent digging up a problematic storm sewer only to discover a bad mortar job that could have easily been remedied by using flexible rubber connectors. Selected by contractors for their cost-effectiveness, ease of installation and watertight qualities, flexible connectors are much more robust than traditional mortar joints, which simply cannot withstand the stress that the elements and constant usage put on them. If you're not convinced, check out this photo and judge for yourself!

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