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ON THE COVER

Steve Taplin began working in the industry as a teenager, and is now president of the Taplin Group, where he oversees eight subdivisions doing industrial services, environmental remediation, and underground infrastructure projects, among others. (Photo by Amy Voigt)

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Chemical & Mechanical Root Control

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Never Stop Learning

You can develop your skills on the job, but there's nowhere better to discover new technology than the WWETT Show

ever stop learning" might sound like a trite motivational poster, but it's actually good advice. If you're not continually learning, growing and improving your skills, your job will probably become mind-numbingly boring before too long. Keeping your skills up will make you more efficient, which means making more money. And if you're not keeping up with the newest technology and best practices, you'll end up losing customers.

Learning on the job is common in this industry. It's necessary to gain experience by doing the work. If you could learn to inspect

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You probably started out shadowing a co-worker who had been on the job for much longer than you — learning the ropes, lending a hand where you could, and soaking up all the tips and tricks your mentor had to offer. Or if you started out on your own with nothing but a cable machine, you probably had to operate by trial and error and figure stuff out as you went along.

There's probably still some of that trial and error when you run into something you and your crew have never dealt with before. So you figure it out. You learn from others and from your own mistakes. After a few years, you can handle whatever challenges a drain can send your way.

But keeping up with the newest technology available on the market isn't something you can do on the job. Hopefully you get a dose of the latest and best equipment every month when you flip through the pages of Cleaner, but once a year you can also head to Indianapolis and see all the tools you could ever want gathered together in one place.

The Water & Wastewater Equipment, Treatment & Transport (WWETT) Show is four days of continuing education classes, live equipment demonstrations and exhibits. You can get your hands on any new machine you've been thinking about purchasing, see exactly how it works and ask manufacturers questions directly.

In other words, it's a great place to learn.

I'll be at the WWETT Show again this year too. This will be my sixth year attending, but my first as the editor of this magazine. I'll be walking the show floor, hoping to meet contractors and hear your stories, and seeing what's new in the industry.

It's definitely a learning experience for me as well. My years in this industry have all been behind a desk. I've learned a lot, but nothing compares to seeing the equipment in person and meeting readers like you, hearing about your work and its challenges.

If you see me at the Indiana Convention Center, come say hello. I'd love to hear about your business and the work you're doing.

I hope you enjoy this month's issue, and I'll see you at the WWETT Show. c

Send your comments, questions or opinions to Kim Peterson at editor@cleaner.com.

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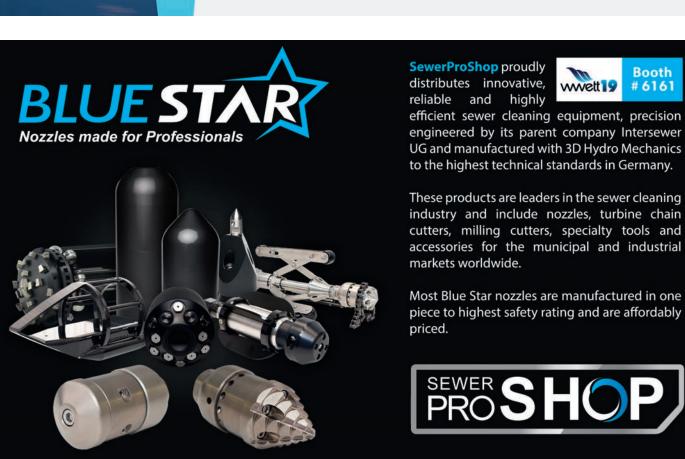




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A company can only be as successful as its employees doing the work out in the field. Good training is of course imperative. This online exclusive takes a look at how four different companies handle their training. >>cleaner.com/featured



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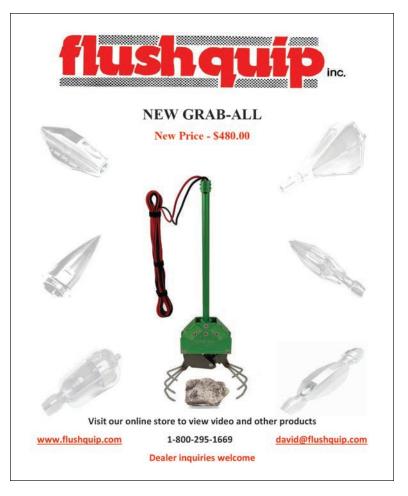
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Below the

Industrial sewer cleaning and pipeline inspection are mainstays of the Taplin Group's diverse services

By Giles Lambertson // Photography by Amy Voigt

teve Taplin has been cleaning up since he was a kid. His father and mother started a cluster of companies in Kalamazoo, Michigan, under the name of A&B Sewer Cleaning and Taplin was well on his way to learning the ins and outs of the business by 16.

A&B evolved from residential sewer and septic work to municipal sewer cleaning and industrial services and eventually to other related enterprises. For 30 years, Taplin worked hands-on across this spectrum of services. He watched the original company evolve into several successful companies. In the 1990s, he spun off an environmental remediation services company of his own, sold it, bought it back, and eventually reassembled the original mix into a new and expanded family of Taplin companies.

Today, he is satisfied with how things turned out, though he can't say he foresaw all the twists and turns. "I only know I was taught to recognize opportunity and to capitalize on it and have tried to convey that to the people who work for me and with me."

Under a corporate umbrella of Taplin Holdings, he now runs the Taplin Group (industrial services, underground infrastructure, asbestos abatement and energy) and Taplin Enterprises (remediation and civil construction) — five subdivisions in all, each presided over by a vice president. Several Taplin family members (Taplin's brother, Mike, and some nieces and nephews) play key roles. Taplin consults with them in conference calls. "I'm trying to maintain that family-company feel."

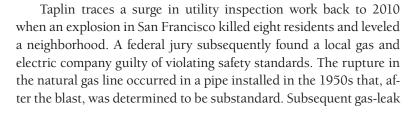
DIVERSE SERVICES

About one-third of the 160 employees in the combined companies work in the underground infrastructure division, which encompasses a host of services. They can be broadly grouped into three categories: pipeline location and assessment, maintenance and repair, and cleaning. Utility company projects, both commercial and residential, account for a lot of the underground work, he says. "Identifying conflicts between gas mains and sewers is a big part of the business. Probably 30 guys work on that. And TV work is a major component."











Project leader William Hollen inspects and cleans a portion of pipe using a custom CUES truck-mounted inspection system.

explosions in Pennsylvania and New York City ratcheted up public concern.

"Utilities across the country were told to upgrade systems of a certain age. So there is quite a demand to locate, inspect, and upgrade lines and, when utilities put in their services, to be sure they don't hit sewer connections," Taplin says. "When you think about how many underground gas mains and sewer connections there are, obviously there is a lot of camera work to be done."

The division also performs manhole inspections. Therefore, between horizontal pipes and vertical access entry points, technicians constantly call on their GIS equipment to precisely map underground structural components and CCTV cameras to visually inspect them. Sonar and laser profiling hardware and software solutions are utilized to assess the infrastructure's condition.



The company depends on cameras by CUES and RapidView IBAK North America. A favorite unit, according to Taplin, is the CUES LAMP II lateral launch model. It's a self-propelled robotic camera unit that can navigate pipe going with or against the flow and, when encountering a lateral pipe, can launch a second mini pan-and-tilt camera to explore it.

Inspection work often leads to cleaning work, and every underground cleaning company has a favorite story about discovering something that wasn't supposed to be in a system. Taplin's story dates from 1977 when the company worked a site in Pennsylvania. Its discovery, however, was with the naked eye.

A dam had broken upstream and overwhelmed stormwater lines serving a community. As Taplin tells it, employees were bucketing out muck from the pipe when, amid the debris, they came upon a hand grenade. "No one wanted to touch the grenade, so a bomb squad was called out and safely retrieved it," Taplin recalls. "It wasn't a toy. I don't think we ever did figure out where it came from."

CLEANING MACHINES

For cleaning, Taplin's underground division uses a variety of hydrovac and jetter equipment, much of it from Vactor. "We bought our first Vactor truck in 1975. We've known that brand for a very long time," he says. Vactor combination sewer cleaning trucks are mainstays of his

"I was taught to recognize opportunity and to capitalize on it

and have tried to convey that to the people who work for me and with me."

Steve Taplin





fleet, including the model 2115, a 500 hp unit with a 15-cubic-yard debris body and 1,500-gallon water tank that rides on dual rear wheels. Some 60 trucks comprise the Taplin underground infrastructure fleet, including support equipment.

Six or eight times a year, the company cleans large-diameter pipe — 48 inches and larger — for one of its clients. The bigger pipe typically is scoured with 200 gpm of water at 2,500 psi. "You need force and volume to convey a large amount of material out of the pipe. The biggest pipe we've cleaned to date was 13 feet in diameter."

But not all of the company's sewer cleaning machinery is massive. Taplin has lovingly refurbished and restored a 1971 O'Brien trailer jetter, something of a Taplin family heirloom.



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"You wouldn't be able to tell it goes back to 1971. It's very unique, and we still use it. We pull it around with a forklift."

THE BREADWINNER

Taplin's industrial services division is a key component of the company structure. In fact, Taplin calls it the hub. "It is the only division in the company that provides services to all the others. It is the bread and butter. It is pivotal to my business." The company began industrial pipeline work back in 1969 when it was still A&B Sewer Cleaning. Today, the division employs 25 people and serves an eclectic mix of Michigan and Ohio industries.

"We are pretty fortunate," Taplin says. "It's not like we are in Gary, Indiana, working only for a steel mill.

The star of the show

In the fall of 2017, Steve Taplin traveled to Liechtenstein, a tiny European principality snuggled between Austria and Switzerland. It wasn't just a pleasure trip. The owner of Taplin Group flew there to check out a sewer cleaning truck.

The truck is a product of equipment manufacturer Kaiser Premier, which at the time did not manufacture its sewer cleaners in the U.S. but now has a plant in Colorado. The company is a respected maker of sewer and industrial cleaning equipment (as well as a one-of-a-kind "mobile walking excavator" that comes into its own on steep slopes and other unstable sites). Taplin was especially interested in the company's AquaStar truck.

Taplin companies have long utilized vacuum trucks in their cleaning and hydroexcavation work. Yet Taplin decided he should look at additional solutions to job site challenges. "We need efficient means to execute our work," Taplin says. One of the efficiencies that took him to Liechtenstein was AquaStar's ability to recycle its water.

"Recycling is important," he says. "When you think about how much time you spend on a

manhole, periodically stopping to run for water or to set up a hose at a hydrant, you start to see a downside. And then you get in some areas where water conservation is a selling point. Some municipalities, because of the age of their system, don't want you pulling water from every hydrant, so you find yourself driving clear across town for water."

The truck's 755-gallon water tank is recycled through the company's patented ROTOMAX system and can be jetted out at 132 gpm at up to 2,900 psi. It can carry almost 1,000 feet of jetting hose and 55 feet of suction hose. It is relatively quiet because its vacuum pump is located in the freshwater tank. The AquaStar boasts 25 percent less fuel consumption than other truck units because a Kaisertronic mechanism adjusts suction power to the vacuum rate, easing off when it can do so without impeding flow.

Taplin says the truck is easily operated and has delivered as advertised. "I also would say — Americans don't like to hear comments like this — they have been cleaning sewers in Europe a hell of a lot longer than we have in the U.S."

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Though his company does not work with radioactive material, Taplin says the industrial division does transport 40,000 gallons of flammable liquid five days a week. "We've been at industrial cleaning a long time and do our best to be equipped with what a client needs for a job."

This preparedness includes being able to respond to emergency contamination events, something as small as spillage of a hundred gallons of diesel fuel. One iteration of Taplin companies was an environmental cleanup firm Taplin started. "I got pretty good at remediation," he says, and his company still carries on the work. In 2010, the emergency team responded to a broken pipeline situation — more than 1 million gallons of heavy crude oil was spilled into a tributary of the Kalamazoo River.

While much of the industrial services work is concentrated in industrial areas in Michigan, Indiana and Ohio, the environmental cleanup work is apt to occur anywhere. Taplin recalls some years ago when crews were simultaneously remediating sites in New Jersey and California. Today, while the company has a project office in San Antonio, only its three staffed Michigan offices have equipment yards.

The 55-year-old company president is not the only Taplin employee with longevity in the business. Some of his superintendents have worked there for 20 years or more, and some equipment operators have been at the company for a long time too. Taplin is hopeful that his family business will carry on his legacy with another member at the helm. His 19-year-old son Hunter is studying business at Michigan State University and "has expressed some interest." c

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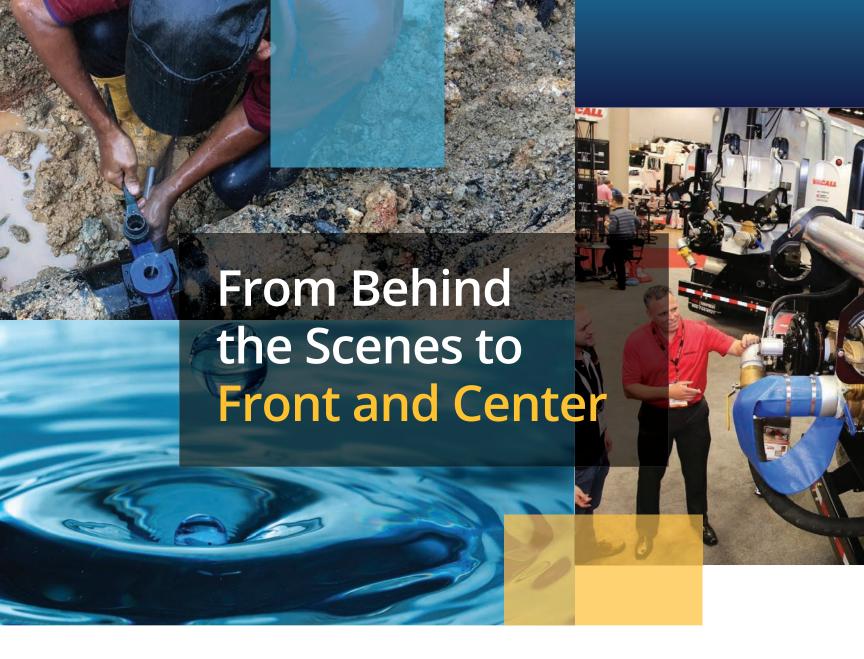


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Reviews in Real Time

This convenient app dramatically boosts contractors' internet presence by enabling customers to post on-the-spot service reviews

By Ken Wysocky

here's no question that online customer reviews should be an essential part of any drain cleaner's marketing efforts. In fact, experts say that more than 90 percent of consumers read online reviews before making decisions about goods and services.

Which leaves only one question: How do contractors go about getting time-crunched customers to post reviews — and amassing the high volume of reviews required to move the meter in terms of online visibility in organic search rankings?

Dan Pentico, the owner of Mr. Rooter Phoenix, has an answer: Real Time Reviews, an app that, as its name succinctly implies, gives customers the opportunity to post a review in real time, before the technician even leaves a job site. That's critically important because no matter how much customers love the service they received, experts say the percentage of people who will post a review online



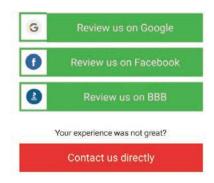
drops to single digits after a contractor leaves a job site. Real life just intrudes too quickly, despite the customer's best intentions.

"That's the part that really piqued my interest," says Pentico, who established the franchise in 1996. The company employs 25 people, runs 18 service vehicles and serves the Phoenix metropolitan area. "It's super important to complete the review process within the transaction period. ... That's what I call the 'golden moment' — right when the technician is finishing up and collecting



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Using Real Time Reviews, Mr. Rooter Pheonix now receives 300 to 500 online reviews per year.

"We don't always know what's going on out there (during service calls), so this app allows customers to really drive whether guys stay employed at our company."

Dan Pentico

payment and the customer is happy. Right then is when you have a really good chance to get a good review."

The company started using Real Time Reviews in 2016, and the results speak for themselves. Pentico says his company used to fight tooth and nail to get just a dozen or so reviews posted a year.

"We used to send customers postcards, asking them to go online and post a review, and then had technicians ask customers to post reviews," he says. "But that's a difficult thing. Technicians might read a customer wrong and think they won't get a good review for whatever reason, so they won't ask for one."

But thanks to Real Time Reviews, the company now earns anywhere from 300 to 500 online reviews annually. "We didn't start to gain traction with online reviews until we started using the Real Time Reviews app. It has made a significant difference.

"Having a transparent online presence is such a big part of doing business today," he says. "It's basically the new word-ofmouth referral."

Here's how the app typically works: After completing a job, a technician asks customers if they're willing to provide an online review of the work. If they agree, the technician calls up the Real Time Reviews app on a cellphone, types in the customer's name and cellphone number, and sends the customer a text.

The resulting message thanks the customer for using the contractor and asks if he or she would recommend the company to family and friends. If they choose yes, then it asks if they want to give a review on Facebook and/or Google. If they click on that, it walks them through some basic steps and then publishes the review immediately. The process only takes three to five minutes.

But what if technicians don't want to get reviewed? Pentico solved that issue by removing technicians from the decision process.

After a software program notifies someone on the company's dispatch team that payment has been received and the invoice has been completed, the dispatcher then sends the text to the customer.

"In the beginning, our techs had control over the process," he explains. "They could pick and choose who they'd ask for a review. But we took that away completely. This is where the world is going; total transparency is where it's at."

As a result, the app also serves as a great management tool because customers can post good and bad reviews, the latter of which can reveal service flaws. The reviews also can tell Pentico what aspects of service they like and don't like.

"We get the reviews, which is great for our online presence," he says. "But we're also taking it another step and using it to better manage our employees and create a better customer experience. If you listen closely, customers will tell you what you need to know.

"We don't always know what's going on out there (during service calls), so this app allows customers to really drive whether guys stay employed at our company."

On the flip side, management also singles out employees for praise at weekly meetings when they receive glowing customer reviews. "The reviews essentially act as the technicians' report cards," Pentico says.

As an additional bonus, the app can reduce fake negative reviews posted online by unscrupulous competitors. A Real Time Review can only be posted if a technician sends a customer a link via the app, and then they have to log in to platforms such as Facebook or Google to complete the process. That ensures they're legitimate reviewers, not dishonest competitors.

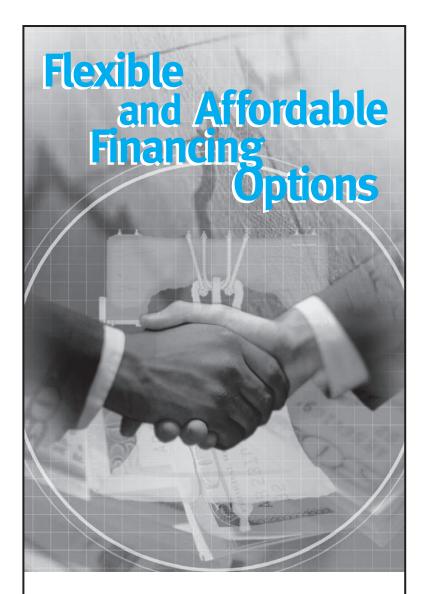
The franchise pays a fee of \$149 a month

to use the app. And even though it's difficult to quantify exactly how it affects the business in terms of increased sales calls and revenue, Pentico thinks it's worth every penny. In fact, he says it's probably the most cost-effective tool the company uses.

"Anyone I talk to, I tell them about Real Time Reviews," he says. "It really doesn't matter what business you're in — this app is it. Without it, I'm sure we wouldn't have the online presence we have today and our business wouldn't be growing the way it has." **c**







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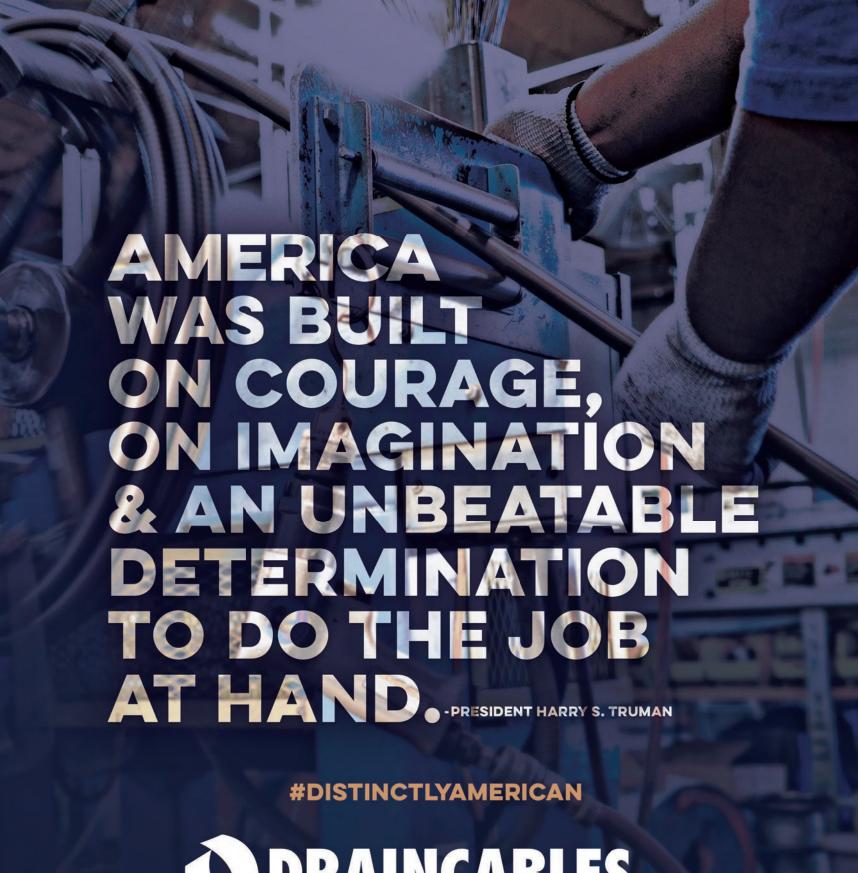
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Continuous investment in new services spurs rapid growth for a multifaceted New Mexico contractor **By Ken Wysocky** // Photography by Roberto Rosales

t's hard to imagine that TLC Plumbing & Utility — with nearly 560 employees, hundreds of service vehicles and a sprawling fleet of equipment — began in 1987 with just one worker: founder Dale Armstrong.

The company's dramatic transformation into a multimillion-dollar-a-year company underscores the power of investing heavily in new technology, building a customer- and employee-centric culture, and meeting customer needs by continually expanding services, including trenchless pipeline rehabilitation.

"Embracing new technology has been a big contributor to our success," says Brian Baughman, who manages the recently formed trenchless department at the Albuquerque, New Mexico-based company. "Newer machines and equipment allow us to work faster and more efficiently and do projects that other companies can't do. We really pride ourselves on being able to figure out how to do the jobs that others turn down."

A good example is a project TLC recently completed for the Albuquerque Water Utility Authority. During the roughly three-month-long, \$1 million-dollar job, crews replaced approximately 5,600 feet of deteriorated 8-inch-diameter sewer main, most of it concrete pipe. TLC used Thermoform PVC pipe lining technology

from Warrior Trenchless Solutions to restore the pipes.

"The host pipes were eroded to the point that the sidewalls were gone or on the verge of collapse, plus there was a lot of heavy root intrusions and built-up silt and debris," Baughman explains. "In some

cases, the lines were basically nothing more than holes in the ground."

TLC crews also rehabbed about 30 manholes within the work zones, which were scattered around the city — approximately seven work sites in all. That included regrouting the manholes with a calcium aluminate mortar product called Alumaliner, made by Quadex (part of Vortex), replacing ring covers and pouring new concrete pads around them.

The project also showcased the company's reputation for





A competitive edge

A willingness to invest in profitable and productivity-enhancing technology has spurred dramatic growth at TLC Plumbing & Utility in Albuquerque, New Mexico. As an example, consider the company's use of Thermoform fold-andform PVC pipe lining technology from Warrior Trenchless Solutions to rehab failing pipelines, says Brian Baughman, manager of the company's trenchless department.



TLC trenchless division manager Brian Baughman.

In essence, here's how

the Warrior Trenchless Solutions system works: The PVC pipe comes in rolls, with the pipe shaped into a flattened "C" or "H" shape to allow for easier insertion into the host pipes. (The pipe is available in diameters ranging from 4 to 36 inches, as well as varying wall widths.) Prior to installation, crews heat up a roll up by encapsulating it with tarps, then using a steam generator made by Sioux to inject heat through the middle of the spool upon which the pipe is wound, Baughman says.

"We heat the pipe to 195 degrees F," he explains. "At that point, it's malleable enough to pull it off the spool with a highspeed winch." The PVC pipe is pulled into the host pipe from manhole to manhole, leaving enough extra pipe on each end to stick out of each manhole; that allows workers to install a rubber bypass plug on each end, he says.

Then steam as well as compressed air is injected through the plugs, which "inflates" the pipe from its "C" or "H" shape, forcing it to conform to the shape of the host pipe. While maintaining pressure, crews then cool the pipe down by pumping in chilled air, which converts the pipe back into its normal hardened state.

"The most critical part of the process is maintaining both the proper air pressure and temperature as the pipe is processing," Baughman says. "We use pressure and temperature gauges on both ends. A typical processing time is about 40 minutes. We're not really curing it, just cooling it back down to its normal PVC state."

The final steps involve trimming the pipe to fit and reinstating any lateral lines with robotic cutters manufactured by Schwalm USA and TRY TEK Machine Works. Including equipment setup and breakdown, it typically takes a day to complete one manhole-to-manhole installation, Baughman says.



"We really pride ourselves on being able to figure out how to do the jobs that others turn down."

Brian Baughman

innovation. Because the pipes were so badly deteriorated, crews couldn't use jetters to clean out the debris in preparation for lining. "That would've only made things worse," Baughman says.

So the company fabricated a shovellike device out of a section of steel pipe, then attached it to a robotic cutter manufactured by Schwalm USA. "It was not a fast process," Baughman says. "The robot would scoop up debris, then travel back to a manhole where a vac truck would suck up the debris.

"But we got the pipes into a state where they could accept the Thermoform PVC pipe, which is able to bridge gaps where there is no host pipe, which is one of the system's advantages. It all speaks to our ability to think outside the box and innovate."

EMBRACING INNOVATION

The company formed a trenchless department in September 2018, a move that reflects the growing importance of this specialty service. The goal: A more intense and dedicated emphasis on trenchless pipeline rehab, a market with big growth potential due to aging underground infrastructure.

"Trenchless employees used to be part of a construction and small-site utilities group, and after we'd finish a trenchless job, the

guys would go back to civil construction work," Baughman explains. "Now we can focus solely on trenchless work and groom our employees to become specialists in this technology ... and gain more market share."

The company's initial foray into trenchless technology centered on pipe bursting, using systems made by Pow-R Mole Trenchless Solutions for smaller-diameter pipes (6 inches or less) and TT Technologies for larger pipes (from 6 to 18 inches in diameter).

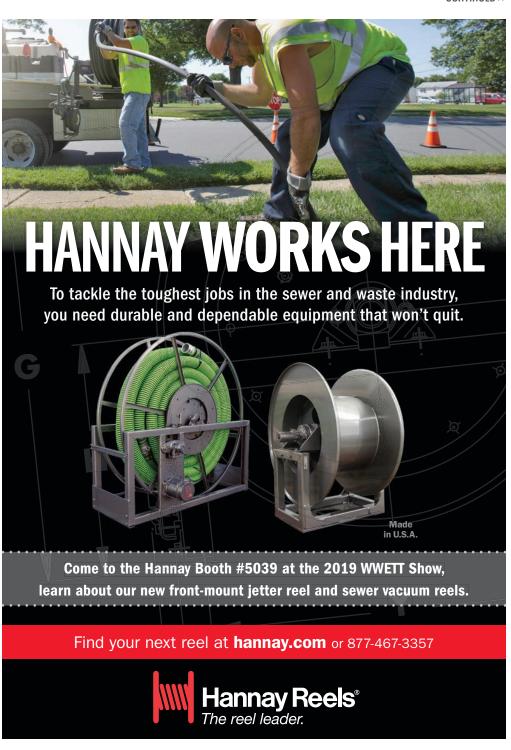
But Thermoform fold-and-form PVC pipe is playing an increasingly larger role in the company's trenchless rehab efforts. Baughman cites lower startup costs for equipment, lessexpensive materials, and an easier installation

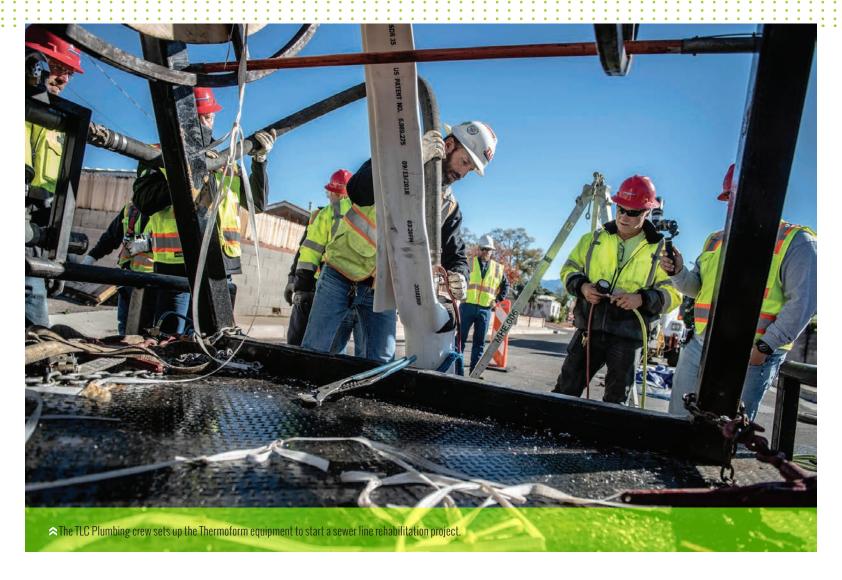
Carl Jackson watches the end of the new PVC pipe come up through the receiving manhole.

process than CIPP systems, many of which require wetting out felt liners — a time-consuming process. In addition, he says, the PVC system is more eco-friendly than some lining systems.

The move into Thermoform technology has been fruitful; Baughman notes that TLC has installed about 20,000 feet of PVC liner in the last year, mostly rehabbing 8-inch-diameter host pipes. And that number will increase to about 30,000 feet by spring, based on the company's current backlog of work.

CONTINUED >>





SMOOTH PROGRESSION

Armstrong founded TLC as a plumbing outfit that did mostly residential service and new construction work. But that focus gradually broadened to include small-site utility work, with the company serving as a subcontractor installing residential storm and sewer drains, waterlines, fire-protection systems, gas lines, and the like.

"Dale started this business by himself 31 years ago with a vision of a diverse company," Baughman says. "Dale trusted employees to take off and run with things, and that is one of the main things that spurred our growth."

Armstrong also wanted to provide clients with great customer service, which often led to providing more services. Consider the small-site utility work, for instance, which eventually led TLC into underground street utility work. That, in turn, required TLC to hire subcontractors to do asphalt and concrete work, Baughman notes.

"To increase efficiency, we decided to provide paving services as well. And that naturally led into civil concrete work — pouring curbs and gutters, sidewalks, and so forth."

That one-stop-shop mentality eventually bred even more services, such as replacement of sewer lateral lines, then rehabbing main water

"Dale trusted employees to take off and run with things, and that is one of the main things that spurred our growth."

Brian Baughman

and sewers lines via trenchless technology. "That's when we started doing pipe bursting," Baughman says. "We felt that this technology best fit the applications we were doing at the time. We were among the first companies in our region to get into pipe bursting."

INVESTING IN EQUIPMENT

To support such a diverse array of services, TLC developed a large fleet of equipment and vehicles, including 208 trucks (a mix of Ford, Dodge and GMC pickup and crew trucks); 138 service vehicles (mostly Isuzu NPR EFI box vans, with bodies made by Morgan with Todco doors, and Ford Transit KUVs); 23 push cameras made by Spartan Tool and Hathorn; 25 Spartan Tool drain cleaning machines; three Envirosight robotic pipeline-inspection cameras; and three HDPE pipe fusion machines made by McElroy.



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In addition, the company owns three trailer jetters built by Spartan Tool; five pipe bursting systems from Pow-R Mole and TT Technologies, four robotic cutters manufactured by Schwalm USA and TRY TEK Machine Works, and eight bypass pumps made by Griffin Pump & Equipment and Godwin Pumps, a Xylem brand.

To clean sewers, TLC also owns a Vactor 2100 combination vacuum truck built on a 1998 Freightliner FL8 chassis with an 8-cubic-yard debris tank, a 1,000-gallon water tank, a 4,500 cfm blower and a water pump that generates 80 gpm at 2,500 psi. The company also owns 34 John Deere excavators and 29 backhoe loaders made by Case Construction Equipment.

"Dale always likes to consider new technology," Baughman says of the company's large investment in equipment. "He's not afraid to invest in new technology."

Looking ahead, Baughman envisions continued growth for the company's trenchless piperehab services. It's currently expanding into CIPP pipe lining for commercial, industrial and residential customers, using a system made by Perma-Liner Industries. "We just did our first application of CIPP at a General Mills factory here in town," he says.



During the three-month-long project, TLC Plumbing crews replaced approximately 5,600 feet of deteriorated 8-inch-diameter sewer main.

"I want to do whatever it takes to ensure we're the local frontrunner on trenchless technology ... and to continue to provide specialty services to our customers," he adds. "If it's pipe, we want to rehab it. We feel like the sky's the limit." c

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Purpose-Driven Employment

Follow these steps to get your crew invested in the success of your company

By Walt Grassl

ike worked for a medium-sized business and went to work every day happy to have a job. But he wasn't too enthused about his work environment. Employee morale was soso because most longtime employees were merely going through the motions.

Greg was a friend of Mike's from school, and they ended up working in different industries. They stayed in touch on social media and decided to get together for lunch.

Mike picked Greg up at his workplace. He felt inspired when he entered Greg's building. There was an energy that was hard to describe. It was definitely not the same as at his company. He was warmly greeted by the receptionist and waited in the pristine lobby for Greg.

At lunch, Mike asked Greg about his job and what he liked about working there. Greg mentioned that the company has a management philosophy that every employee is important, like the links in a chain. They believe in sharing information that reinforces that message.

A good manager knows how every employee contributes to the performance of the company.

WHY IT MATTERS

Every employee plays a role in the company's performance. It's important that they know their role; it gives them a sense of purpose and answers the question: "Why does it matter?"

Some people always take great pride in their work. They know it reflects on them. Some people

only push themselves when others are relying on them to do their part. Sharing the big picture helps to get the most out of these people. Getting the small things right leads to bigger success.

Here are five different strategies you as a small-business owner or manager can use to foster a workplace where every employee feels valued and can contribute to the overall vision of the company:

1. Include all employees in strategy meetings

To the extent possible, involve employees in strategy meetings. When you are contemplating a change in your company, modifying one or more processes or seeking new methods to improve service, involve the people who perform the tasks before decisions are finalized. They are liable to push back. When they do, use your judgment to determine if the pushback is valid.

If it is valid, figure out a better path forward. This will prevent mistakes, save time and reduce waste. If the natural reaction is to resist change, deal with it now. You will avoid passive-aggressive behavior that will sabotage the path forward. Done right, you will earn the respect and buy-in of your workers. However, things like impending job actions (layoffs, promotions, transfers) must never be shared until it is time. When you are otherwise open, the need for discretion will be respected.

2. Stress the importance of every position

A good manager knows how every employee contributes to the performance of the company. Some employees interact with customers. Others work in the office. Drivers and technicians are your front-line service workers. All the employees play a part in the success of the company. Good leaders praise the individuals and the teams, both in public and in private, for their significant contribution. This is important. Over time, those who are not key service providers in the field may forget the significance of their role. They need to be reminded.

3. See the big picture

There is a common fallacy in the workplace that one job contributes more than others to the success of the project or company. It's a great thing when employees realize that what they do is important. It is not so good, however, when the needs of others in the workforce are discounted. Managers should step up and explain the big picture and recognize the important role played by everyone from the receptionist in the office to the equipment operator on the job location.

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the company originally solve? How did the company evolve into its current state? This applies to businesses of all sizes. This is effective in external sales presentations and in keeping employees motivated. When that story is known and repeated, employees will realize that they are part of growing or preserving a legacy.

5. Maintain an open-door policy

When you involve employees in strategy sessions, communicate the importance of the roles of each employee and talk about where they fit in the company's success. The staff will see you as someone who not only talks communication, but also communicates. You can further enhance that relationship by having an open-door policy. Set boundaries, but invite people to approach you with their concerns or questions. Maybe they come to you. Maybe you walk around and catch them doing things right.

A FINAL WORD

When you share the big picture, every employee feels valued. They know they play a role in the success of the company. Job satisfaction increases. It costs little to do this, and it brings big returns.

Driving back to work, Mike realized that this aspect of work culture was missing from his company. He thought about his role and how it fit into the bigger picture. He felt better about his job and vowed to look for ways to help his fellow employees understand their roles in the bigger picture as well. **C**

ABOUT THE AUTHOR

Walt Grassl is a speaker, author, and performer who hosts the radio show, "Stand Up and Speak Up," on the RockStar Worldwide network. For more information, visit www.waltgrassl.com.



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Tech Perspective looks at technology-related issues and provides information and advice that cleaning professionals can apply to equipment selection and to their daily work in the field. Industry members are welcome to offer ideas for this column. Please direct them to editor Kim Peterson, editor@cleaner.com.

Mobilize Your Service

Communication and coordination of job site details is easier with mobile apps

By Jared Raney

dd up all the time lost while struggling to find the right equipment or product in a truck, workshop or warehouse; now picture eliminating all that wasted time with a single simple tool.

That's the essence of mobile applications.

Every time you've needed to go back to the office for a form, find a computer to dig up a piece of info, or just run back to your truck for a piece of paper to write on — the burgeoning array of products in the expanding construction productivity software market has the potential to save hours of time on and off the job site.

Most fieldworkers today have smartphones, which means any crew with these devices has the potential to be transformed into a collaborative, connected and efficient team.

A BETTER TEAM

According to a study by PlanGrid, a construction productivity software developer, the construction industry at large loses almost \$180 billion a year due to lost time while searching for project data, poor communication, and rework due to mistakes while coordinating jobs.

The study also determined that miscommunication and poor project data are the biggest hindrances to productivity on job sites.

PlanGrid offers its productivity software on any mobile device as well as desktop and web browser.

"What it really means is connecting the field team with the right information to do their job at the right time," says Stuart Frederich-Smith, vice president of marketing for PlanGrid. "How do you make sure that you have the most recent, up-to-date plans all the time? In the old paper world, it was difficult to make sure that those things were up to date. How do you make sure that the teams are prioritizing the right things, working together? So collaboration is the second piece in that puzzle. And then the third is being able to



Using mobile apps to organize project management turns workers into a connected, collaborative team. (Photos courtesy of PlanGrid)

analyze performance on one project, share best practices with others and make really good decisions for the business."

Especially for large companies, coordinating over many job sites and dozens of employees, possibly even over great distances, the ability to have a central, accessible database keeps everyone literally on the same page.

"Making sure that when you don't have physical proximity to your team, you still have consistency of access to information matters a lot," Frederich-Smith says. "I think a key value for us is to be mindful of the real job site conditions and build a product that works for people in the real world."

FLEET MANAGEMENT

Another common use of mobile applications is in fleet management. SkyBitz is one developer specializing in object tracking and asset management. Its Ops Center Mobile software allows users to not only track assets, but sort and organize from a tablet or smartphone.

"It all boils down to, for whatever reason, asking, 'Where is it?' They can quickly go on the mobile app, enter in the asset ID, or they can pull up the map, and say, 'I'm expecting to find this asset in this location. Let me see what's there," says Debbie Sackman, senior product manager for SkyBitz.

The mobile app can also sort by region, by asset type, and a number of other options to aid managers in keeping a handle on the many pieces of equipment they are responsible for. Another feature allows alerts to be set up for a work site, or "geo-zone." If equipment leaves that work site when it's not supposed to, supervisors are notified instantly. CONTINUED >>





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» PlanGrid offers a mobile extension of its web-based productivity software, which stores and manages project plans, and aids in communication.

"Any information you look at, it's the same whether I'm looking at it on my mobile phone or whether I have somebody back in the home office looking at it from a web screen," Sackman says. "We're seeing the same set of information, so it's always very quickly synchronized."

BEST USES

Mobile apps are another technology that are often only as good as the uses they are put to. It's important to know what your goals are when implementing a mobile solution.

"The recommendation I have is that there be a very clear plan in terms of how it's going to be used and who's going to be responsible for updating

these things," Frederich-Smith says. "Have a very intentional plan of how teams collaborate with technology."

The asset management software allows managers to create custom IDs for assets, and a consistent naming scheme is important. Again, having all your information in one place, easily accessible, isn't worth much if you can't make sense of it.

Lastly, getting buy-in from your team is essential.

"We see a lot of cases where a decision is made without real input from that team," Frederich-Smith says. "The software is not actually adopted, and adoption is all that matters. So involve the field team in a structured pilot, where they review options, think about how they might need to change their workflow, or how software might adapt to their workflow."

Before that even, you'll need to spend some time researching to make sure the solution you choose is a good fit for the operation.

It's OK to be picky, especially with the rapid expansion that this market segment has experienced.

Take the case of Action Auger in Calgary, Alberta. Owner Brham Trim knew that they needed a better way to organize inventory, as they were losing tens of thousands of dollars a year in wasted or missing parts.

Despite a thorough search, he didn't find quite what he was looking for and instead hired a software developer to create a personalized mobile application solution.

"After we've inventoried a truck, we've set parameters into the app, that this is what we think it should have, and that's a living list," Trim says. "It allows us to know what's on the trucks and allows it to move from truck to truck."

By cataloging each truck's inventory into a single, easily accessible database, Trim's crew has a fuller picture of the overall inventory, limiting doubled purchases and extraneous parts.



"Making sure that when you don't have physical proximity to your team, you still have consistency

of access to information matters a lot."

Stuart Frederich-Smith

No matter what direction you go, it will involve a considerable investment upfront — both in money and time. To ensure that you see results in the long run, choosing the right software is possibly the most important factor of all.

AN EVOLVING FIELD

Mobile applications in the construction field have been around for about a decade, but have gained steam in the last few years.

"I think that it's evolving, definitely," Frederich-Smith says. "I think that as technology has become more available, through pervasive smartphones and tablets, it's created an opportunity for more technology to make its way in the form of mobile apps."

As they develop, companies who aren't embracing the changes of the modern world may find themselves falling behind. Fortunately, the possibilities are more limitless by the day, and any company can find a solution that fits its needs.

"It's really only limited by what our customers are telling us they want us to do," Sackman says. "From a technology standpoint, so far we have not run into anything that somebody has asked for on a mobile app that we haven't been able to do. We continue to add functionality based on what our customers are asking for and new features that they feel are important. So it's like anything in technology — we're never standing still." \mathbf{c}



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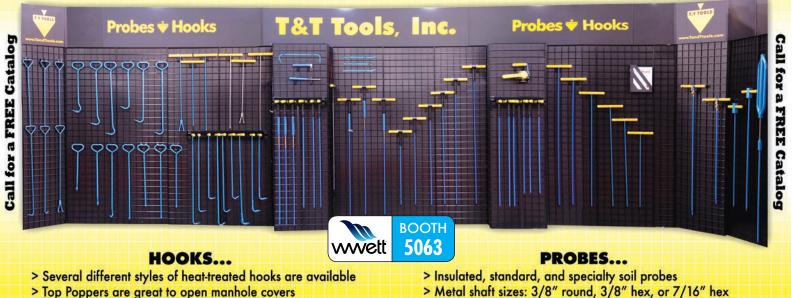


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A Fine Line

It's smart to have a good relationship with rival companies, but teaming up can cross into collusion if it affects fair competition

By Erik Gunn

orking together is a wonderful thing — except when it's against the law. Let's say you have a great customer base on the north side of the interstate highway bisecting your county that gives you enough work to keep you busy.

There's another drain cleaning outfit south of the interstate. They seem pretty busy, too, in their half of the county. You get along with each other well enough at your state trade association meetings. Maybe you've even gotten a call from them to help out one of their customers because they were so busy they couldn't respond to one more emergency.

Imagine you run into the owner at an industry show. He invites you out to dinner and offers a suggestion: "I know you do good work, and you know I do good work. You're busy, and I'm busy. And we probably both worry about some newcomer expanding into this county and poaching our customers. What do you say, how about we just make a gentleman's agreement that you stick to the north side and I'll stick to the south side?"

With that last sentence, the two of you are at risk for breaking the law.

RULES ARE RULES

You might think only corporate giants need to worry about antitrust laws and other regulations that punish businesses for squelching competition. Not so. The specific laws might not be the same, but small businesses like yours are subject to laws against collusion and anti-competitive behavior just as much as big ones, says Peter Carstensen, a professor emeritus at the University of Wisconsin Law School, where he teaches antitrust law, is a senior fellow of the American Antitrust Institute, and has published widely on the law and business competition.

"Antitrust law applies to every business," Carstensen says. "Almost every state has a state antitrust law that is roughly similar to the federal antitrust law. So if the feds don't get you, the states will."

While you might not get prison time, if you get caught, you could wind up with a felony conviction. And because big business is on the federal radar when it comes to anti-competitive shenanigans, states are more likely to keep their eye on small and midsize companies.

"Antitrust lawyers are not cheap," he warns. "But secondly, it takes so much of the energy and mental attention of managers of a business if they get caught up in an antitrust case." That's energy and attention that you should be using to build and improve your business.

If you are trying to run someone else out of business and you gang up with other competitors to try to do that, you're breaking the law.

KEEP COMPETITION ALIVE

Why do these rules exist at all? Our economic system is founded on the idea that fair competition provides the best deal for consumers. So if competition isn't fair, consumers suffer. And that's when government steps in.

So when two or more independent businesses carve up a territory and agree not to compete, "that's pretty much a hardcore violation," Carstensen says.

And colluding over a territory isn't the only way businesses — even small ones — can run afoul of antitrust laws. Agreements among competitors over how much they'll charge for a service is another "straight-up no-no," he says.

WHO'S WATCHING

It's not always the customers who complain, either. Other competitors, if they figure out you're up to something, will be just as ready to turn you in.

A number of years ago, Carstensen recalls, real-estate agents in a particular market got together and agreed to raise their commission rates.

Their plan didn't get very far, though. "At least three of the brokers left the room and called the Justice Department," he says.

Another form of collusion that sometimes crops up is when competitors cooperate to cut one of their number out.

For instance, suppose there are five businesses in the same industry in a particular region and they all use the same supplier. Then, for whatever reason, four of the five decide they want to force



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the fifth company out of business. (Let's call the blackballed business XYZ Drains.)

So those four go to the supplier. "Stop selling to XYZ Drains," they say. "If you don't, the four of us will stop doing business with you."

In a case similar to that example, Carstensen says, the supplier agreed and stopped selling to the target company. The blackballed company in turn sued the supplier and won damages.

GRAY AREAS

Sometimes it's hard to tell if industry infighting is a case of honest whistleblowing or a conspiracy to restrict competition.

If a group of businesses complains to a supplier about one of their competitors, they might genuinely want to sound the alarm about a bad apple. On the other hand, Carstensen says, "Many times people will infer there is an agreement among those guys to complain."

The bottom line: If you have evidence that another business really is a bad actor, it's your right, even your professional duty, to make sure that the appropriate authorities know.

But if you are trying to run someone else out of business and you gang up with other competitors to try to do that, you're breaking the law. "You can't agree to attack a competitor," Carstensen says. "Those are things a business needs to watch out for whenever you're interacting with another business: Why is this happening? Is this lawful?"

RECOMMENDING PRODUCTS

Another gray area can arise in supplier dealings.

Suppose your regional trade group hires an engineer from the local university to evaluate a series of alternative products — pipe lining technologies, for example.

The engineer produces a report and rates the various technologies for their effectiveness, ease of application or other criteria. The report and not others. By itself, Carstensen says, that's perfectly appropriate: Each

is made available to the trade group, recommending some products

member of the association can still choose which product to use.

"Where we get the problem is when they say, 'We ought to standardize on something so we don't confuse customers by giving them all these options.' Now they've fenced out all the other suppliers. The customer is not given a choice."

DRAWING THE LINE

That doesn't mean competitors can't cooperate at all. Trade associations like the WaterJet Technology Association represent the entire industry, providing training, serving as a voice for member businesses in dealings with the public and with government agencies, and promulgating best practices.

Other forms of cooperation are also permissible, so long as they don't harm competition. For instance, if two or more competing companies agree to a joint venture so they can purchase their supplies in larger quantities at a lower price, that's perfectly acceptable, Carstensen says.

THE RIGHT WAY

By all means, cooperate when doing so doesn't mean you'll interfere with competition and when you'll serve the interests of all your competitors as well as your customers and the community. Work through established, reputable trade groups.

Carstensen says agencies such as the Federal Trade Commission and the U.S. Department of Justice are often willing to advise business owners as to what arrangements will be viewed as legitimate and what ones look questionable. But, he warns, ask before you embark on any collaboration of that sort.

If you're going to take that step, even if you don't have any questions, consult with a lawyer versed in both state and federal laws that govern competitive business practices. That can be a challenge, he acknowledges; lawyers with antitrust experience don't come cheap.

But if you have a regular business lawyer (and you really should), the state bar association should be able to direct him or her to an antitrust expert willing to do a one-time phone consultation at no charge.

That way you can be sure you don't fall into the collusion trap. **c**



ABOUT THE AUTHOR

Based in Racine, Wisconsin, Erik Gunn writes for magazines on business and other topics.





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Prepare for the Worst

On a work site, having an emergency action plan can mean the difference between life and death

By Jared Raney

f your crew member was pressure testing a pipe when suddenly the plug was blown out and that worker was thrown from the ladder and became pinned inside a manhole, would you know what to do?

For the crew at Horizontal Boring, that's not a hypothetical scenario. It happened to one of its crew members and, thankfully, they knew exactly how to handle the situation.

"They had to execute the emergency action plan to remove the injured employee from the manhole, bring him up to safety, get the ambulance and safety manager on site and assess the injury," says Ernie Romero, owner of the company, based in Phoenix.

As a result, the employee escaped the situation with no more than minor injuries, showing that emergency action plans can be the deciding factor in whether an employee lives or dies on a work site accident.

"They had to execute the emergency action plan to remove the injured employee from the manhole,

bring him up to safety, get the ambulance and safety manager on site and assess the injury."

Ernie Romero

DRAFTING A PLAN

With all the paperwork and red tape attached to every work site, it can be easy to overlook planning for hypothetical emergency situations. But it's an item that must be crossed off — if not to avoid penalties, then simply for peace of mind.

"That's the last call you ever want to get — an injury on site," Romero says. "At times there are sites that may have some varying circumstances that require we implement an emergency action plan."

Beyond simple best practice, if caught without an emergency action plan, your company will be fined by OSHA. Their safety and health regulations for construction require emergency action plans in writing for each site, which "must cover those designated actions employers and employees must take to ensure employee safety from fire and other emergencies."

Penalties can range from \$10,000 to over \$100,000. There are different standards of violation; for example, initial posting requirement violations are listed as \$12,934 per violation, but a willful or repeated violation jumps to \$129,336 per violation.

OSHA provides information through its website on emergency action plans and requirements, including an eTool to help companies develop their plans.

"It's typically going to consist of the possible emergencies on any given site, what may happen if that does take place, and then we'll address actionable steps to follow, and we'd have the written procedures for that," Romero says. "We're going to have exit routes — we usually like to set two meeting points for everybody if an emergency takes place, a primary and a secondary, to ensure if the emergency takes place at the primary meet point, then we have the secondary to meet at. Those are really the general points we're looking to cover in our action plans."

Emergency action plans can be as in-depth as outlining the specific safety duties of each employee on site, even down to subcontractors involved in the work, as well as safety inspection procedures, accident investigation and reporting.

TAKING THE LEAD

The supervisor in charge of setting up the emergency plan will look at what reporting agencies are nearest, as well as the closest hospitals, so workers know who to contact and where to go.

"I think it's very important to have somebody involved whoever's dealing with your safety plans and your emergency action plans — who understands the OSHA requirements, to have a background in safety, and to really understand the requirements and the actions necessary should certain events occur," Romero says.

Horizontal Boring has a dedicated, full-time safety manager with 30 years' experience in safety management and a comprehensive safety-first program, ensuring that safety requirements like emergency action plans don't fall through the cracks.

That manager runs monthly companywide safety meetings, as well as weekly on-site meetings for each specific work site. The company's overall safety program is constantly evolving.

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PREPARATION PAYS

Horizontal Boring's case of its employee who was injured in the blowout is proof that having a plan in case of emergencies can save lives.

"They were prepared for it, and it's always good to see," Romero says. "We're all responsible for safety, all of us out on site, and we take it extremely seriously. Accidents do happen and things happen that are outside of our control; but when it does happen, you just want to ensure that you have the best plans in place and everyone is best prepared to deal with those situations." **c**

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Field and Office Technology

By Craig Mandli







1 / MY SERVICE DEPOT SMART SERVICE

Smart Service from My Service Depot is a software system that functions as a direct add-on to QuickBooks, adding scheduling, dispatching, invoicing and customer management to the accounting software. It offers real-time integration with QuickBooks Pro, Premier, Enterprise and Online, allowing users to schedule and dispatch work to their customer base regardless of their preferred QuickBooks platform. It allows service companies to streamline their operations and eliminate waste by automating much of the standard job process. When a customer calls, an office dispatcher will create a job in the scheduler, filling in job notes and assigning the work to a field technician. Once they finish, the job gets sent out electronically to the corresponding technician's mobile device. When that tech arrives at the customer's location, they'll build a digital work order, collect a customer signature, and send the completed paperwork back to the office for invoicing. 888-518-0818; www.myservicedepot.com.

2 / RITAM TECHNOLOGIES SUMMIT SERVICE SYSTEM

The Summit Service System from Ritam Technologies is designed for septic, grease, drain or plumbing services. It allows companies to supercharge their QuickBooks with powerful industry-specific capabilities. It offers appointment calendars/ simultaneous map views; reminders, repeat services (email, text, cards), detailed work orders, diagrams, tank info, and condition comments; electronic dispatching; full customer accounting; secure credit card processing; invoice/statement/receipt emailing; and sales reports. It is Android/iOS-compliant, meaning it can be used on a smartphone, tablet, iPhone or iPad. It offers a detailed route map view, voice navigation, work order info, and special instructions, with customer notices for schedule changes/proof of service. Electronic job completion eliminates after-hours paperwork. A customer web portal enables account changes, payments and service requests. A corporate reporting module allows for multicompany, multibranch consolidated reports for oversight and planning. 800-662-8471; www.ritam.com.

3 / SERVICECORE SOFTWARE

ServiceCore software is a QuickBooks-compatible, all-in-one software solution that's custom-built for companies in the liquid waste industry. It can help business owners better manage their schedules, customers and inventory. Through route optimization, scheduling, customer management, accounting and other fundamental features, it is designed to help companies save time and maximize profit. 844-336-0611; www.servicecore.com.

CONTINUED >>















4 / NEXTRAQ SOFTWARE

NexTraq software provides driver assignments that keep track of who is driving a vehicle on any given day. It can help optimize daily planning, helping drivers accomplish more during the day, and provide fleet tracking to find the location of a single vehicle or the entire fleet. Mapping and geofence service creates locations and zones with simplified 32-point geofencing. Sensors and asset tracking allow operators to know when a driver uses a lift or an asset has been moved. Driver behavior tracking can help correct poor driver habits with the tools needed to coach the team. It also helps automate maintenance schedules and gives alerts when repairs are due. Fleet data is available via smartphone with the NexTraq View app. It can also help simplify electronic logging device compliance, operations and fuel management. 800-358-6178; www.nextraq.com.

5 / QUARTIX VEHICLE TRACKING SYSTEM

The Quartix vehicle tracking system helps a wide range of businesses improve productivity, cut costs and save on fuel every day. Providing commercial fleet tracking for trucks, coaches, vans, and cars throughout the U.S., U.K. and France, the system offers a host of features for fleet managers. It helps analyze data, generating simple-to-use reports that can be accessed online. Live tracking, driver time sheets, geofencing and management dashboards allow managers to easily see where efficiencies can be made. Driver League Tables and individual driver reports help to assess driving style, which if improved can save businesses up to 25 percent in fuel consumption, as well as positively impact the safety of road users. It offers tiered packages to help businesses identify their best drivers, make sense of mileage and fuel costs, and reduce administrative tasks. 312-800-9882; www.quartix.com.

6 / US FLEET TRACKING AT-V4

The AT-V4 4G LTE tracking device from US Fleet Tracking has a compact and sleek design that fits in just about any space on a vehicle or asset. After a simple install, it can help uncover crucial data about vehicles and assets to help a business grow. It provides access to a vehicle's location, speed and mileage from a desktop or mobile device, helping increase the number of daily service calls. Its alerting feature helps users know when vehicles have entered or exited a specific location such as a client's home or office. Toggle on the live weather and traffic information to get a robust picture of what a team encounters on the streets. It can help provide realistic arrival times for clients. 405-726-9900; www.usfleettracking.com.

7 / PIPELOGIX GIS

With the addition of the PipeLogix GIS module added to ArcMap, supervisors can view all surveys performed on an asset. The toolbar filters survey data in the master database to highlight pipes with selected conditions, grades or score values, allowing the user to link to the movie or survey. Survey conditions can be exported to a shape file or a geodatabase feature class. When opened in ArcMap, this layer displays the condition along the length of pipe. Selecting the condition will link to the movie and jump to the correct footage for viewing. Seeing the problem and where it exists on the pipe can make it easier to schedule repair and cleaning crews. The system is compatible with ArcGIS 10.0 through 10.5. 866-299-3150; www.pipelogix.com. c

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Field and Office Technology

By Craig Mandli



CLOUD-BASED SYSTEM SPEEDS UP PAPERWORK

PROBLEM / As part of increasing overall company efficiency, Mr. Rooter Plumbing of Sherman Oaks, California, sought an efficient and cost-effective solution to monitor its fleet's vehicles. "Being based in the LA area meant daily traffic and road maintenance on the drivers' routes. We wanted to be able to assist them in finding the most drivable routes and also be able to confirm that our staff is where they are supposed to be," says Bobby Behzadi, company president.

SOLUTION / After detailed research, Mr. Rooter decided to install a GPS tracking solution from ClearPathGPS.

RESULT / The tracking installation has increased the company's efficiency. "Now our drivers have full accountability of their driving habits," Behzadi says. "We can ensure that not only are they driving the most drivable routes to their projects, but we can also make sure they are doing it as safely as possible. It secures their own safety, as well as our clients' and their neighbors' safety." The company can now track where its vehicles are, how many miles per day are driven, and at the same time have proof that the technicians are servicing the customers in the time frame they are meant to. As a side benefit, one of the company's trucks recently got a parking ticket for a commercial vehicle being parked in excess of three hours. Thanks to ClearPathGPS, Mr. Rooter could show the city that the ticket was issued after being parked for just six minutes and get it overturned. 805-724-3572; www.clearpathgps.com.

TRACKING PROGRAM MONITORS LOCATION AND FUEL USAGE

PROBLEM / Plumbing & A/C Medic in Gilbert, Arizona, needed to improve the time management and accountability of their mobile workforce. Since its techs are spread out all over the Phoenix metropolitan area, the company had no way to know what they were doing in between jobs. Another goal was to eliminate fuel card fraud.

SOLUTION / GPS Insight displays the locations of technicians and their estimated arrival time for the next job site on easy-to-read maps. To raise employee accountability, GPS Insight established odd-hours alerts to notify management of unauthorized usage of company vehicles.



RESULT / Having the ability to locate any vehicle in real time has provided better visibility and peace of mind. "We were able to identify one of our technicians using a company vehicle to cross states lines for personal use," says Tami Gurka, Plumbing & A/C Medic dispatcher. "We received an odd-hours alert in the middle of the night that one of our vehicles was moving in another state." It monitors fuel usage by integrating WEX fuel card data to monitor all fuel card purchases. It also makes dispatching simple by eliminating time that would have been spent on the phone trying to figure out technicians' current locations. "On average, I would make 150 calls per day, and now I make virtually no calls because most communication is done through GPS Insight," Gurka says. 866-477-4321; www.gpsinsight.com. c

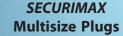




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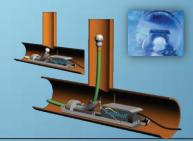
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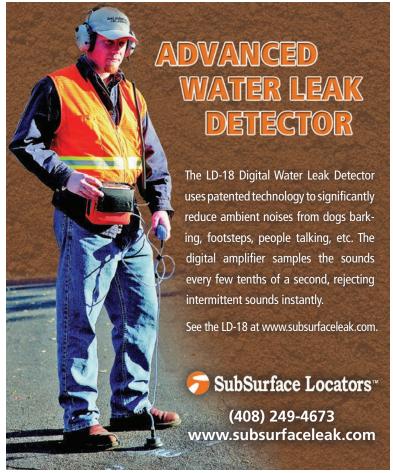
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product NEWS

SPOTLIGHT

Portable sectional machine offers big power

By Craig Mandli

Contractors understand that there is always a trade-off between sectional machine models. Now they don't have to sacrifice power for portability with the RIDGID K-5208 sectional machine. According to the manufacturer, it's the most powerful, most compact, easiest-



to-service and cleanest drain cleaning machine they have produced.

"The RIDGID K-5208 sectional machine has been thoughtfully designed from top to bottom based on feedback from professional plumbers who demanded a more powerful and portable option," says Wyatt Kilmartin, vice president and general manager, global underground technologies, RIDGID.

Weighing 35 percent less than the RIDGID K-1500 sectional machine, with a 71 percent smaller footprint, the K-5208 is built to cut through the toughest roots with a 3/4 hp motor and cable that can spin up to 700 rpm. Designed for drains 2 to 8 inches in diameter up to 200 feet, it offers a toolless clutch adjustment to quickly switch between 7/8- to 1 1/4-inch cable sizes. It comes with a new Trident sectional cable decoupler for disconnecting cables efficiently and cable feeder with guide tube for easy loading and unloading into an enclosed cable carrier. Infield clutch serviceability minimizes downtime, while a carrying handle allows for easy transport from truck to job site.

The unit is also designed to be durable during transport, keeping the electrical cord out of the way and securing the GFCI in place, both of which minimize the potential for damage. In setup mode, the unit's cord management system keeps the cord off the ground while neatly wrapped around the handle. To remove, simply twist and pull the locking pin to release the clutch on the carry handle, allowing the whole cord to dump immediately. When done, the cord wraps up quickly and neatly in grooves, with the GFCI secured in front to create a compact package.

Designed with high-strength square steel tubing and rubber feet for enhanced stability, the K-5208 includes a fluid management system that incorporates a reservoir to catch fluid for later draining. The enclosed cable carrier and cable feeder also enhance cleanliness by reducing exposure of the cables on the job site. A locking pin ensures that the rear guide hose stays in place.

"This new machine is lighter and cleaner with go-everywhere power," Kilmartin says. 800-769-7743; www.ridgid.com.



WATER CANNON INC. 19K02 PORTABLE SKID PRESSURE WASHER

The 19K02 portable skid pressure washer unit from Water Cannon Inc. - MWBE is a totally self-contained system designed to fit into the 6-by-6-foot box of a pickup truck. Forklift slots and a lifting eye make loading easy and efficient. There is also a built-in winterization system, making year-round cleaning and transportation possible. It features 4 gpm at 3,500 psi and has a 14 hp Kohler gas engine with key start. The unit has a powder-coated frame, 225-gallon poly water tank, 10-gallon winterization system, stainless steel unitized valves and a Thermo Pump Protector that engages at 140 degrees F. It also comes with a manual hose reel and five spray nozzles. 800-333-9274; www.watercannon.com.

CUES QUICKZOOM III VIDEO INSPECTION POLE CAMERA

The QuickZoom III from CUES is a lightweight, portable, wireless digital video inspection pole camera that can be operated by one person. It is designed to provide cable-free safe viewing in industrial or environmental areas with no-man entry, such as pipelines, wet wells, manholes, steam generators, tanks and vessels. The camera can also be used to locate lateral services or to identify blockages at manholes, access ports or other entry points without entering the line or structure. The QZIII is mounted on a carbon fiber adjustable telescopic pole that can extend up to 30 feet. The 1,080 pixel digital camera features a 360-to-1 zoom with built-in image stabilization and automatic focus, and it can be operated using a tablet. It also includes distance-to-defect with laser and is powered by batteries that last over five hours on a charge. 800-327-7791; www.cuesinc.com. c











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COXREELS exceeds recommended salt spray testing hours

COXREELS announced that the company recently exceeded the industry recommended standard for salt spray testing by 20 percent more hours. The independent lab test measured the corrosion- and UV-resistance of COXREELS' powder-coated materials, and results indicate the products ranked in the top tier of the grading system for both.

Tornado Global Hydrovacs announces strategic alliances

Tornado Global Hydrovacs announced that its wholly-owned subsidiary Tornado China entered into a five-year strategic partnership agreement with Anhui Jianghuai Yangtian Automobile to manufacture Tornado's lineup of hydrovac trucks. The trucks are customized to satisfy all the Chinese regulatory requirements for sale and operation in China.

Tornado also announced that Tornado China executed a strategic partnership agreement with Daqing Haotian Xinda Technology for an initial term of one year to assist Tornado China with developing a client base in the excavation market in Heilongjiang province.

CUES launches redesigned website

CUES announced it launched a newly designed website, featuring a new look and feel with less text and more imagery. Streamlined menus and simplified navigation make it easier to use, and it has a responsive layout for all platforms, including smartphones and tablets.

PHCC names International Code Council as newest partner

The Plumbing Heating Cooling Contractors National Association announced a new corporate partnership with the International Code Council. Through this alliance, PHCC members will have increased access to I-Codes books and training, potentially through the PHCC associations.

Valley Industries names new Comet product manager

Pete Gustin was named Valley Industries' new Comet product manager. He will be responsible for managing sales and product development for Comet pumps and accessories in North America. Gustin started working with Comet pumps in 1995 while working for his



Pete Gustin

family's business, UNICO Spray Products. UNICO merged with Valley Industries in 2010 and provided the support for Gustin to expand Comet diaphragm pumps into new industrial applications such as carpet cleaning, softwash and liquid rubber.

Ranger Design celebrates 30th anniversary in 2018

Ranger Design announced 2018 was the company's 30th anniversary. Originally started in a small garage by founders Randal and Derek Cowie, the company now has over 300 distributors for its van shelving, ladder racks, drawers and bins, bottle holders, and other van accessories.

WinCan receives NASSCO certifications

WinCan was awarded Pipeline Assessment and Certification Program 7.0 and Lateral Assessment and Certification Program 7.0 certification. Presented by the NASSCO, it certifies that the company's software has been tested for version 7.0 of the relevant data dictionaries and contains and properly implements codes for both the PACP and LACP. The certification ensures that sewer inspection reports created within WinCan VX may be exported to version 7.0 of the NASSCO standard database.

Milwaukee Tool acquires Imperial Blades

Milwaukee Tool announced the acquisition of Imperial Blades, based in Sun Prairie, Wisconsin. Founded in 2008, Imperial Blades is the inventor of the universal shank for use on oscillating multitools. New product technology includes Storm Titanium coating and the Carbide Extreme Blade.

Picote Solutions' Brush Coating System gains approved status

Picote Solutions announced that its Brush Coating System for the rehabilitation of deteriorated pipelines now holds WRc Approved status. The WRc Group is an independent public limited company providing research and consultancy in water, waste and the environment in the United Kingdom. The assessment schedule from WRc includes all aspects of appearance; mechanical characteristics testing, including short-term flexural modulus, long-term flexural modulus, and temperature of deflection under load; resistance to high-pressure waterjetting; resistance to abrasion; product design; product and materials manufacturing; and installation procedures.

StoneAge welcomes new sales team member

StoneAge announced that Yea-bin Jo joined the sales team and will support its customers and dealers in Japan and South Korea. She comes from SUNGBO Hydro Engineering with a background in international trade and is proficient in translation and interpretation.

Trio-Vision licensed to use Envirosight technology

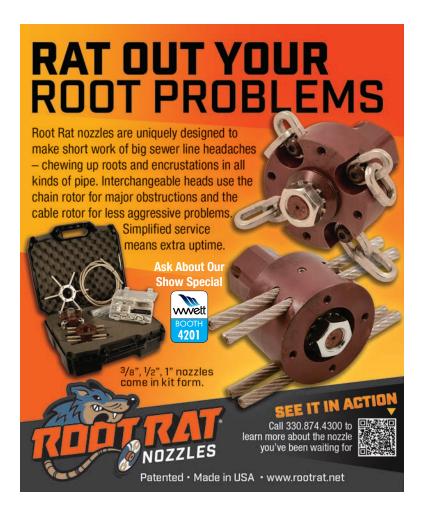
Trio-Vision announced it has secured a license from Envirosight to manufacture and market manhole camera inspection devices that incorporate certain technologies and methods patented by Envirosight. The inspection products will be developed and sold worldwide under the product brand name of XPlorer.

SOUTHLAND OOL MFG. INC. Building Innovative Tools for Municipalities

SOLUTIONS TO SEWER CLEANING THROUGH: CONCEPT DESIGN PRODUCTION









industry news continued

ServiceTitan announces acquisition of JaRay Software

ServiceTitan announced it acquired JaRay Software, an all-inone service business management system based in Wichita, Kansas. Going forward, JaRay customers will be given the choice to opt in to ServiceTitan's software.

Stake Center Locating and S&N Locating Services combine operations

Stake Center Locating and S&N Locating Services have combined operations under the Stake Center Locating name, reflecting the company's full focus on utility locating services. The company, based in Kernersville, North Carolina, named Tony Belford president of operations and business development, and Debbie Scott will serve as chief financial officer.

Rotunda Capital Partners acquires majority stake in MacQueen Equipment

Rotunda Capital Partners, a lower middle-market private equity firm, has acquired a majority stake in MacQueen Equipment. The investment will provide for the continued growth and expansion of one of the leading Federal Signal, Pierce, Oshkosh and Heil dealers in the United States. The management team at MacQueen will retain a significant equity interest and will continue leading the business. Terms of the transaction were not disclosed.

HammerHead Trenchless and Per Aarsleff announce partnership

HammerHead Trenchless, based in Lake Mills, Wisconsin, and Per Aarsleff Pipe Technology, of Aarhus, Denmark, have signed a long-term, strategic partnership agreement that includes plans for HammerHead Trenchless to produce and distribute the Bluelight LED Curing System for CIPP to markets outside of Europe and Russia.

URACA celebrates 125th anniversary

Founded in 1893, URACA got its start when the company developed a 3.5 hp horizontal gasoline engine to drive machine tools. The piston engine became the foundation for generations of plunger pumps, along with innovation and solving technological challenges, that drive the company forward to this day. Along with test pumps, today's applications range from steel descaling to the production of urea, as well as many solutions using high-pressure cleaning, especially for the inside of tanks and vessels.

WJTA announces new editions of recommended practices, orange book

WJTA announced the availability of the new third edition of the Recommended Practices for the Use of Industrial Vacuum Equipment and the new Hydroblaster Orange Book. The vacuum recommended practices cover liquid vacuum trucks, liquid ring trucks, sewer cleaner combo machines, hydro or pneumatic excavators, and air movers. The Hydroblaster Orange Book is a pocket-sized version of the Industry Best Practices for the Use of High Pressure Waterjetting Equipment and includes the same information and illustrations that appear in the original full-sized manual. **c**



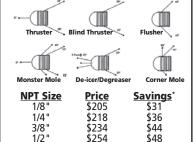
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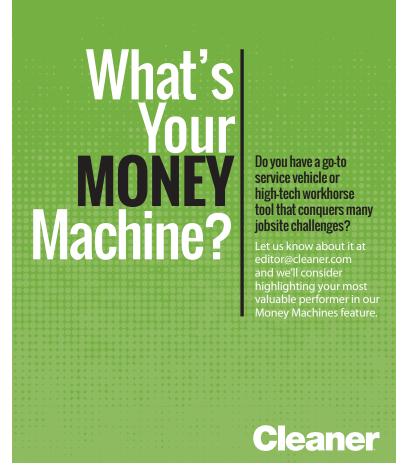


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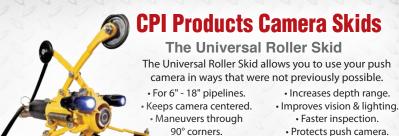


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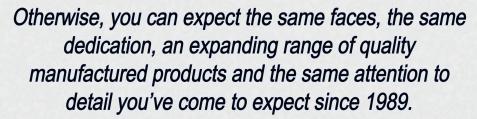


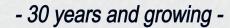






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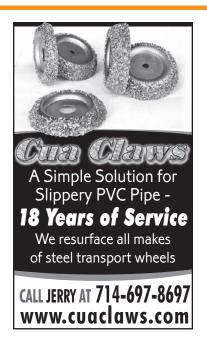






















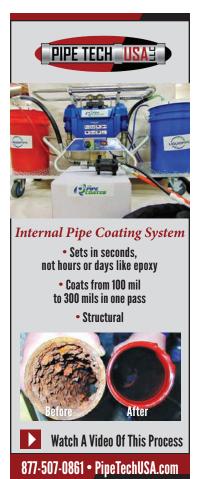


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