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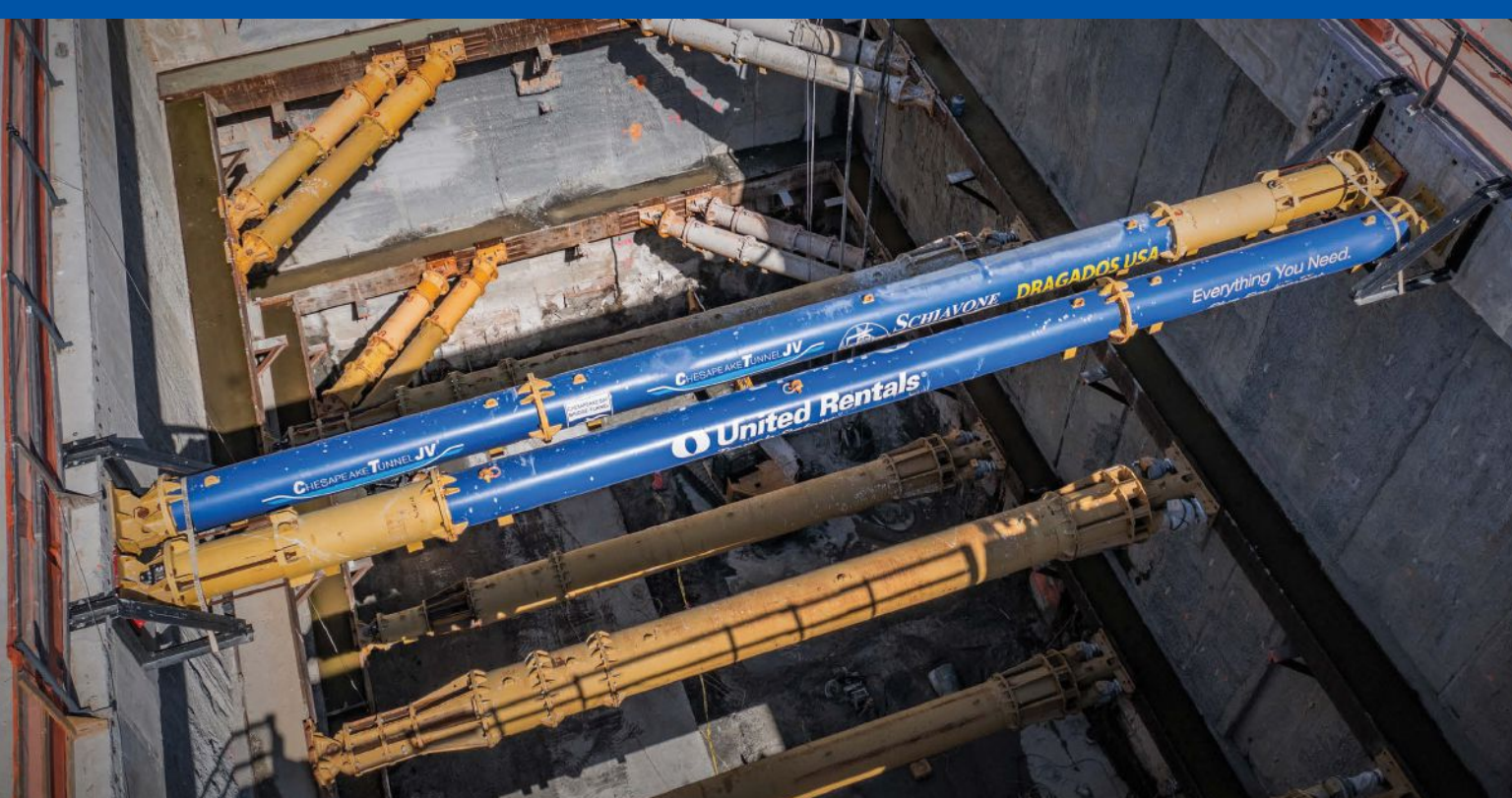

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BENJAMIN MEDIA 30 YEARS 1992-2022

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NUCA Chairman's Message

It's hard to believe that my term as Chairman is half over. As you may remember, my goals for this year revolve around membership growth through both retention and recruiting. We usually have a good idea where we will end up on retention by now and all signs are that we will have another great year. On the other hand, new member recruiting is a year-round process, and it must be kept a priority if we are to maintain and hopefully grow NUCA.

We saw success earlier this year with the first annual Signing Day membership drive. With 74 new members signed up in one day we got off to a great start at seeing growth this year. There has been a steady stream of membership applications coming in throughout the year and we are nearly at last year's membership count already. That's great news, but the goal wasn't to match last year's count.

In an effort to push us beyond last year's membership count and onto growth we are excited to be hosting another membership drive this fall. The Fall Regional "Most Wanted" Campaign will be a little different than our Signing Day in that we are going to work regionally and offer up some structure to identify the top targets for the drive and hopefully increase the chances of getting some of our high priority prospects to join.

The structure is simple: Each chapter forms a "Most Wanted" list with its Top 5 Most Wanted Contractors and Specialty Contractors to recruit during the drive. Each region is given a week to hold their drive and members are given the list so that everyone knows who to go after. NUCA, the chapter, and its members will make every effort to make sure the prospects know that we have noticed that they aren't a member yet and that we want them to be. It's a simple recipe of equal parts flattery and friendly peer pressure to help reinforce that NUCA membership would be a good business decision for them.

I have to come clean though, this isn't a new concept for NUCA. NUCA's 2020-2021 Chairman Fred Chesney shared at our Convention last year that this type of membership drive was what brought him to join his chapter, NUCA of South Florida, in the 1980s. We figured we'd blow the dust off that method and try it again. Hopefully we can have as much success with it as they did back then.

We all know that associations are about using the power of numbers to accomplish what none of us can alone. If NUCA is going to grow, that power we must grow those numbers. This fall drive will be a great opportunity to do that. We want you to be a part of it.

Sincerely yours,
Ryan Kinning
NUCA Chairman of the Board / Penro Construction Company

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Tidewater Equipment Company leadership join CASE representatives and local officials in the grand opening of its new operation in Enterprise, AL.

CASE and Tidewater Equipment Company Roll into Southern Alabama

CASE Construction Equipment dealer Tidewater Equipment Company has expanded its construction equipment footprint in the southeastern United States with a new full-service location in Enterprise, Alabama — delivering dedicated equipment sales, parts and service support to southern Alabama. This is Tidewater's sixth construction equipment operation, and the company now serves a broad section of the southeastern U.S. construction industry with facilities throughout southern Georgia and northern Florida.

"Tidewater has been a heavy equipment powerhouse throughout the southeast since 1947 — our construction-focused partnership started in 2019, and their team has shown an unwavering commitment to customer support and helping businesses grow with the right equipment and technology," says Terry Dolan, vice president — North America, CASE Construction Equipment, a NUCA Bronze National Partner. "Their customer-first approach matched with the continuing evolution and growth of the CASE lineup — including some never-before seen products and solutions available this fall — will position equipment owners and their businesses for success for years to come."

The opening of the new Enterprise location was attended by representatives of CASE and Case IH, Enterprise Mayor William E. Cooper, elected officials, local members of the Chamber of Commerce, and other local celebrities. CASE and Tidewater treated guests and partners to a barbecue lunch and a raffle giveaway of Tidewater, CASE and Case IH branded prizes, and special equipment offers and other swag.

"We are passionate about the jobs we're creating here in southern Alabama, as well as providing the world-class support that equipment owners and construction businesses here deserve," says Jamie Young, president and CEO, Tidewater Equipment Company. "We've been in the heavy equipment game since the 1940s and understand what good equipment and support means to business success — we're passionate about that work and proud to be waving the CASE flag here in Alabama."

The new location is open at 1504 East Park Avenue in Enterprise, Alabama.

Government Affairs Solutions Opens Doors

Government Affairs Solutions (GA Solutions), a new firm based in Churchton, MD, is providing advocacy and other government-relations services to a growing list of clients. Beginning June 1, GA Solutions represents the American Pipeline Contractors Association and the Power & Communication Contractors Association, and more recently has signed on to represent the National Utility Contractors Association and the State Technical College of Missouri.

GA Solutions principals Jaime Steve and Zack Perconti will lead the government affairs efforts. They are partnering with Innovative Association Solutions, who provides back-office support, accounting, IT, and marketing services.

"NUCA is at the forefront of America's program to rebuild its infrastructure," said Doug Carlson, NUCA Chief Executive Officer. "If we're not at the table, then Congress is missing the essential corporate component required to literally rebuild our community's water pipes and wastewater facilities. Our presence on Capitol Hill is extremely important for this nation, and our members welcome the GA Solution team to represent our industry's indispensable interests in Washington."

A graduate of Cornell University and the New York Law School, Jaime Steve has been lobbying on behalf of energy and telecom firms in Washington, D.C., for 25 years. He was legislative director for the American Wind Energy Association for 12 years and spent another seven representing energy companies on Capitol Hill. The Hill newspaper recognized Steve as one of the "50 Best Business Lobbyists on Capitol Hill." Away from work, Steve regularly busts his knuckles repairing old British and American cars, and he enjoys visiting new places with his wife, Whitney.

Zack Perconti, a graduate of the College of William & Mary and the Schar School of Policy and Government at George Mason University, has worked on infrastructure and labor issues since 2016. He has deep knowledge of U.S. legislative, budgetary, and regulatory processes and is an expert on grassroots communication. This has translated into high effectiveness in achieving clients' government-relations objectives. Perconti is an accomplished home chef, and he enjoys hiking with his wife, Ariela, and their dog, Sadie.

"The GA Solutions team is privileged to represent the hard-working folks who build and maintain America's vital infrastructure," Steve said. "We aim to work like hell to make their voices and concerns heard and acted on in Washington, D.C."

Perconti said, "The utility construction industry will benefit tremendously from the new federal infrastructure law we worked on last year, but in many respects, the fight in our world is just beginning. Many challenges await, but so do many opportunities. Having a robust presence in Washington is more important than ever."

Jaime Steve can be reached at jsteve@gasolutions.net, and Zack Perconti can be reached at zperconti@gasolutions.net.

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Indiana's Utility Construction Contractors Remember Rep. Walorski

The Indiana utility construction industry suffered a great loss after the news of the tragic accident and death of Indiana's U.S. Representative Jackie Walorski on Aug. 3. Her personal grace and kindness to her constituents and our industry members across Indiana was clearly the foundation she built upon for her invaluable Congressional support to those who build Indiana's heavy civil engineering projects.

Here, NUCA of Indiana members share their thoughts about Rep. Walorski and the considerate and honorable impressions she made on those she met with her over the years.

"I've worked with Rep. Walorski for over a decade, and she exemplified all that I could wish for from my congressional representative. Jackie always made time for constituents, cared about our industry's issues, and would do her best to resolve any problems we encountered in our member's projects. She always supported NUCA of Indiana and our positions. She would also always make us defend our positions, and wasn't afraid of the back-and-forth it took to get us on the same page. I feel terrible for her staffers and their families—she was generous to them like her own family. I'm just at a loss," remarked Kurt Youngs, president of NUCA of Indiana.

"I was saddened to hear of Rep. Walorski and her staffers' deaths. I will always recall how engaged she was with us whenever we were in Washington to meet. She would take the time out of her busy schedule to make sure she met with us personally and listen to our thoughts and concerns and how our issues impacted all of her constituents. She was a champion for us Hoosiers and all Americans. I have met several Representatives and Senators over the years, and I found her and her staff always to be some of the most genuine and caring. Her passing will be a great void to fill," said David Howell, division manager for Midwest Mole in Greenfield, Ind.

"I had the honor of meeting with Rep. Walorski every year since I began attending NUCA's Washington Summits since 2013. If she was in the Capitol voting on issues, she would have her staffers escort us from her office over to the U.S. Capitol so she could meet us, sometimes even having to pause our meeting so she could go and vote, and promptly returning and picking right back up where we left off. Congresswoman Walorski was just a genuine, wonderful woman who truly cared for people, constituents, and non-constituents. Her staffers absolutely loved working for her. She treated everyone with such kindness. She was everything you could have wished for in a Congresswoman and will be deeply missed," said Rebecca Risdon, executive director of NUCA of Indiana.

"There are good people who come to Congress and bring their genuine warmth and care to their job, and Rep. Walorski was certainly one of those exceptional lawmakers. She always enjoyed meeting our Indiana members during our annual fly-ins over the last nine years and went the extra mile to make the most of their visit. Our members across this nation extend their heartfelt prayers and kindest sympathies to her family and to those of her staff during this very difficult time," said Doug Carlson, NUCA Chief Executive Officer.

Ditch Witch Acquires HydraWheel Line of Rock Saws

Ditch Witch announced Aug. 1 that it has acquired specific assets from River City Manufacturing Inc., including the HydraWheel design of rock saws. Based out of Bertram, Texas, the company has designed and manufactured rock saws since 1982, earning a strong reputation throughout the industry.

Through this acquisition, Ditch Witch continues to show its commitment to the traditional open-cut utility installation industry. The product line features saws, ranging in depth from 9 to 46 in., and can be paired with both stand-on skid steers and heavy-duty tractors. As the fiber market continues to drive demand, Ditch Witch, a NUCA Bronze National Partner, is uniquely positioned to meet the needs of contractors around the world.

The rock saws will be manufactured, branded and sold under the Ditch Witch name and are available through the global Ditch Witch dealer network, with nearly 200 locations worldwide. For more information, or to contact your local dealer, visit ditchwitch.com.

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In Memoriam: **Bob Vermeer**

Robert "Bob" Lee Vermeer, husband, father, grandfather and leader passed away at the age of 78 on August 17, 2022. Known as a servant leader in his personal, professional and spiritual life, Bob's vibrant love of people, passion for Christ, distinct laugh and desire to put others first is what those who know and love Bob will remember most.

Born in Oskaloosa, Iowa, on July 28,1944, to Gary and Matilda Vermeer, the second child, with brother Stan and sister Mary, Bob grew up on a family farm near Pella. Bob's love for the outdoors and life on the farm was evident, with animals being his favorite. There was always a well-loved farm dog around and even a bottle calf to feed. But it was his grandfather, John Van Gorp, that introduced him to the best of all pets, horses. Bob's grandfather and mother picked out his first pony, Ruby. Bob was rarely without a pony or horse from that point forward and enjoyed many fond memories and awards as a result of his horse hobby.

Bob attended Wheatgrow Country school through first grade, and then Pella Christian schools through high school graduation in 1962. He enjoyed academics, played intramural sports and was involved with music, singing in various choirs and playing tenor sax in the band.

From an early age, Bob loved spending time with his parents and two siblings. They grew up watching their father and founder of Vermeer, Gary Vermeer, build a company based on values while innovating better ways to do work on the farm. Even as a child, Bob saw a future in business. For career day at Wheatgrow School, Bob dressed as a businessman.

After high school, Bob attended Dordt College for a two-year degree. There his love for music grew as he discovered his beautiful tenor voice. Interested in economics and business, Bob transferred to Central College, graduating in 1966. Bob's first job out of college was working at Marion County Bank, working there until 1973, eventually serving as Vice President and Director.

In 1968, Bob married Lois DeJong. Together, they raised their three children – Daniel, Heidi and Allison – in Pella. Fond memories included fishing trips to Canada and family vacations to Lake Okoboji and the Lake of the Ozarks. Eventually, regular gatherings at their Lake Panorama home (Meer Huis) is where Bob and Lois spent cherished time with their children and grandchildren as they grew. You could also find Bob regularly cheering on his kids and grandkids in their extracurricular activities. Bob generously devoted his time and talents to family, church and community.

Bob joined Vermeer in 1974 and held multiple roles that drove the business strategy and long-term growth of Vermeer, including Chief Executive Officer beginning in 1989 and later Co-Chief Executive Officer in 2003 alongside his sister Mary. Bob also served as Chair of the Board from 1989 through 2014. It was during his tenure that the business grew to more than 60 countries on six continents with an amazing team of employees and products supported by hundreds of dealers around the world. On the family side, Bob was a leader in promoting succession planning to transition the business to future generations of the Vermeer family.

Bob was committed to countless philanthropic endeavors as President of the Vermeer Charitable Foundation. The Foundation's efforts have improved the lives of people throughout local communities, the State of Iowa and worldwide. Bob and Lois were charter and long-term member of Faith Christian Reformed Church (CRC). Bob served as an elder and often participated in praise and worship. In 2007, the Bob Vermeer Spirit of Caring award began as a recognition of the important company culture Bob helped build. The award celebrates team members who demonstrated that culture both at work and beyond.

His business expertise and passion for people resulted in several board roles, past and present, some of which include: Central College Board of Trustees, Dordt College Board, Guide One Insurance Co. Board, Marion County State Bank Vice President and Board of Directors, Association of Equipment Manufacturers (AEM),

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Iowa Business Council, Calvin Theological Seminary Board of Trustees, Pella National Bank Board, Pella Community Hospital Board, Pella Opera House Board, Hilltop Manor Board, Pella Area Community & Economic Alliance, Pella Planning & Zoning Committee and Vital Men Ministries.

Later in life, Bob continued to expand his interests, sharing his time with causes such as Blessman International, Wildwood Hills Ranch and New Life Prison Church. In 2019, Bob and his daughter Allison built a horse arena and business, Grace Therapeutic Riding, used to enrich the lives of people with equine-assisted services and training. He continued contributing his vocal talents by actively singing with groups, choirs and praise teams in the area. Bob also dedicated time as an ambassador for Vermeer, family business planning and shareholder engagement.

Bob is survived by his wife, Lois, three children and their spouses and nine grandchildren, Dan and Tricia Vermeer – Brant (Kelsey), Isaac, Jack, Ella; Heidi and Chad Quist – Xander, Anna, Zoey; and Allison and Kyle Van Wyngarden – Drew, Clair. Bob was also survived by his siblings Stan and Alma Vermeer and Mary and Dale Andringa. His surviving in-laws are Stan and Judy Ver Heul, Pete and Carol Verhey, Mark and Jaci Hugen and Bob and Diane DeJong and many neices and nephews. He was preceded in death by his parents, Gary and Matilda Vermeer, Lois' parents, Martin and Minnie DeJong, and Margaret Vermeer, Stan's first wife, and in-laws Fred and Linda Pelton.

Bob will be best remembered by his friends, family and peers for the spirit he exemplified where people matter most. Caring for others and his strong faith are some of the lasting legacies Bob leaves behind for his family, friends and the team at Vermeer to carry on well into the future.

Memorials in honor of Bob may be designated to Faith CRC Building Project, the Well Resource Center and Pella Christian Schools.

CEMENTECH

Cemen Tech signs Beard Equipment Company as Authorized Dealer in Northern Florida

Cemen Tech has signed Beard Equipment Company as the exclusive dealer for Cemen Tech volumetric concrete mixers in northern Florida. Beard has focused its road building product inventory on paving and compaction equipment. Now, by partnering with Cemen Tech, a NUCA Silver National Partner, the company is expanding its offerings to include concrete mixing technology to better serve contractors in Florida.

"We are focused on products that offer solutions to our customers by helping them grow their businesses and profitability. We believe Cemen Tech to be a great fit for our customers and will complement our John Deere construction and Wirtgen Group road building products," said Drew DeLaney, President at Beard Equipment Company. "For more than 50 years, Cemen Tech has been the worldwide volumetric concrete leader due to their innovation and high-quality products. Their customer focus and support will ensure an excellent partnership with Beard Equipment."

Volumetric concrete mixers are known for the ability to increase concrete production efficiency and reduce waste by allowing concrete to be mixed on the job site for the exact quantity needed every time. As today's construction projects become more specialized and the demand for contractors to be more nimble increases, Beard and Cemen Tech know there is a growing need for precision technology in concrete equipment like that of the C60.

"We partner with companies that value relationships with their customers and employees as much as we do at Cemen Tech," said Connor Deering, CEO and President at Cemen Tech. "Beard operates with similar core values and has an excellent reputation in northern Florida. Through the best customer service and best volumetric concrete mixer in the market, I have no doubt contractors in their area will be able to confidently do more and grow their business."

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GEARING UP

Auger Boring School Gets Contractors Up to Speed

With utility contracting companies seeking new workers to meet an increasing demand for projects, the need to train workers is at an all-time high. According to a recent report by the Associated General Contractors of America, nearly all construction firms face shortfalls in their workforces, resulting in an inability to complete projects efficiently and limiting their ability for growth. According to the report, 93 percent of construction companies are seeking to fill openings within their operations.

One of the reasons for the shortfall cited by the report was the lack of experienced candidates available to perform the work. Fortunately, there are training and educational opportunities available that may help get new hires up to speed quicker.

One such opportunity is the Auger Boring School hoste d by Louisiana Tech University in Ruston, Louisiana, in conjunction with the Division of Construction Engineering & Management at Purdue University's College of Engineering. The four-day course has been developed in association with industry partners, including NUCA, and aims to meet the high demand for training engineers and contractors in auger boring design, application, and installation. The school includes both classroom lectures and field operations at Tech's new outdoor training and research facility.

Course directors are Tom Iseley, Ph.D., P.E., Dist. M.ASCE, and John Matthews, Ph.D., M.ASCE. Iseley is a PWAM Beavers Heavy Construction Distinguished Fellow and Professor of Engineering Practice Construction Engineering & Management at Purdue University. Matthews is the director of the Trenchless Technology Center (TTC), Eminent Scholar Chair in Construction and Associate Professor, CE & CET at Louisiana Tech University.

"We see a lot of demand from contractors for training because workforce development has been an issue for our industry and will continue to be an issue in the future," says Matthews. "The thrust of the school is the field training where attendees can get out and actually use the equipment in the field."

The course is designed for contractors, engineers, project superintendents, foremen, crew members, estimators, public officials, educators, state highway department representatives, and regulatory agency representatives, and also is of interest to engineers designing and planning auger boring projects.

Typical attendees are individuals from companies looking to enter into or expand their auger boring business. "Our focus is on workforce development," Matthews says. "Whether a company has just purchased their first auger boring machine or is expanding its services, our goal is to train workers on the equipment and get them up to speed quickly. With this

type of format, attendees can touch the equipment, run the augers and push casing. It is a very hands-on course coupled with classroom training on the basics of auger boring."

Matthews says that typically the course draws in the range of 20 to 40 attendees from companies large and small throughout the country.

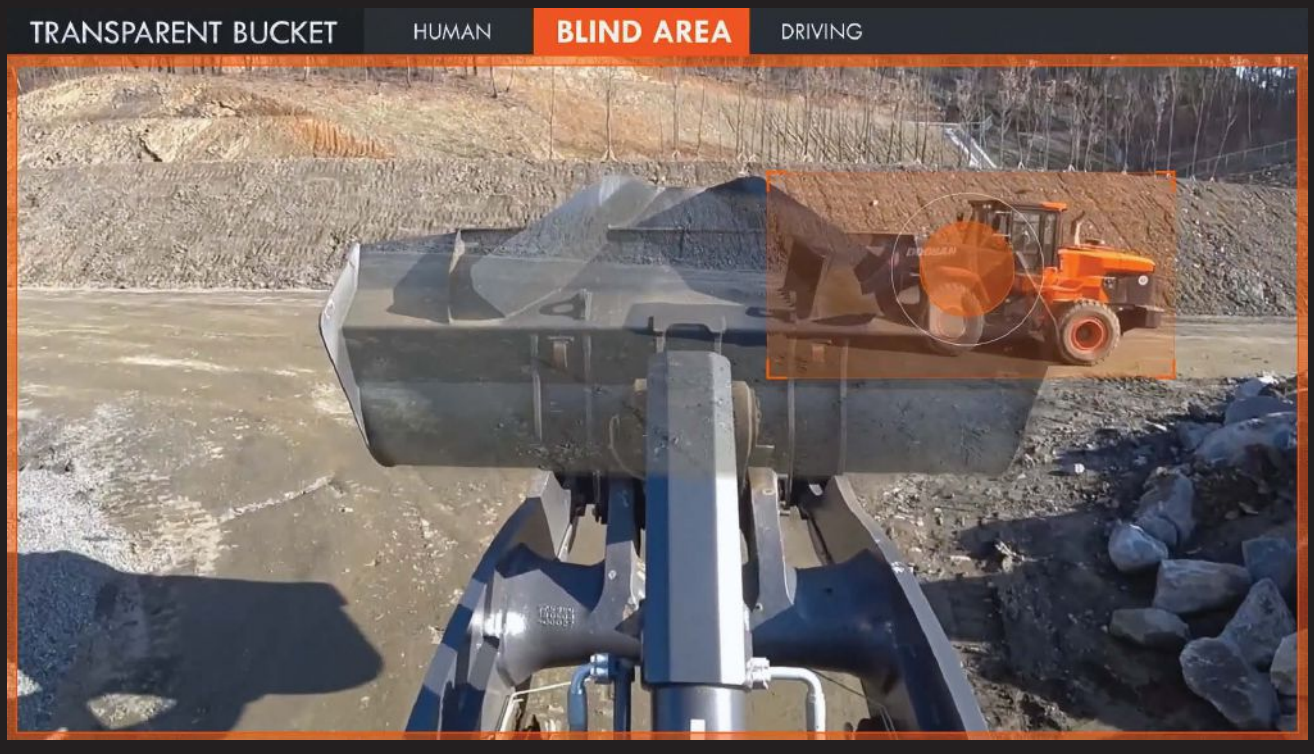
The course covers topics including auger boring history; best practices; project planning, design, and specifications; geotechnical considerations including settlement risks; equipment; safety; shoring; shaft/pit construction; pipe/pipe materials; groundwater control; instrumentation and monitoring; and claims, among others.

The course is taught by experienced industry professionals, with industry support through the years coming from companies including Barbo, American Augers, The Robbins Company, Trinity Products, U.S. Shoring, Trenchless Rental Solutions, Midwest Mole, Huxted Tunneling, Baroid, Logan Pipe and more.

Louisiana Tech recently opened its Barbera Education, Research & Training (BERT) facility on campus. The facility honors the past through the recognition of the contributions of the Barbera family (Leo, founder of American Augers, and brother Jim, founder of Barbco) to the trenchless industry. The brothers were awarded the Trenchless Technology Center's first Lifetime Achievement Awards during the 2018 course.

The BERT facility drives the future of the industry through the establishment of a world-class field training and research facility. The new facility provides a state-of-the-art environment that allows year-round training.

The firth annual Auger Boring School is scheduled for Nov. 7-10, 2022, in Ruston. CEUs and PDHs are available for those completing the course.



NEW Wheel Loader Technology

Doosan Transparent Bucket Enhances Operator Visibility and Productivity

By Rachel Ori

As technology evolves, heavy construction equipment manufacturers continue to develop tools and machine accessories that allow operators to move about a worksite more safely.

One standout safety feature that was introduced in 2021 is the Doosan Transparent Bucket, an exclusive technology from Doosan Infracore North America. This technology is currently available for new Doosan -7 Series wheel loaders.

Increased safety comes from enhanced operator visibility, and the Transparent Bucket allows the wheel loader operator to see directly through the bucket and to the area in front of the machine. This is achieved through camera technology that projects a supplemental view from the bucket to a monitor inside of the wheel loader cab.

Despite what the name may imply, the Transparent Bucket isn't actually transparent.

"It's not made of glass or clear acrylic," says Bill Zak, Doosan wheel loader product manager. "Rather, it incorporates technology that gives wheel loader operators an unobstructed view in front of the wheel loader bucket, allowing them to see objects or challenging terrain in front of and beside the machine. The bucket will virtually disappear. This is done through the work of two cameras that use a curved projection method to show the combined image on the in-cab monitor."

Between other equipment, people and extracted material, construction jobsites can present many obstacles for operators. A traditional bucket can obstruct the view of these obstacles.

"A Doosan Transparent Bucket enables operators to move the wheel loader on the site more confidently, leading to more efficient work and greater machine uptime protection," Zak says.

Why a Transparent Bucket?

When someone hears about the Transparent Bucket, they may wonder why such an option would be necessary. After all, traditional buckets have been used on wheel loaders for decades.

Manufacturers have made strides in recent years to increase overall visibility from the wheel loader cab. These improvements have ranged from increasing the amount of glass in a cab structure to installing additional mirrors and rearview cameras.

"No matter how much glass is in the cab, or how clean the glass is kept, the bucket will always be in an operator's

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The Safety/Damage Prevention Conference offers the unique opportunity for safety management to hear from industry experts on a wide variety of topics that impact the industry and network with other utility construction safety managers from across the country.

This conference also provides an opportunity to address and strategize how members can better navigate complex damage prevention issues in our industry.

Invited speakers:

- Sharon Lipinski, CEO | Habit Mastery Consulting
- Kirk Blomgren | Petticoat-Schmitt Civil Engineers
- John Olaechea | OSHA
- Perry Silvey | BT Construction
- Dr. Katie Welfare | Construction Safety Research Alliance
- Ron Peterson | Peterson Consulting
- Tom Olson | Olson Construction Law PC
- Shawn Farrell | Cohen, Seglias, Pallas, Greenhall & Furman PC
- BJ Woehler | Robert Woehler & Son Construction, Inc
- Craig Ingram | Tennessee 811
- Tina Sanders | Texas 811
- Matt Mingus | Team Construction LLC
- Sarah Magruder Lyle | CGA
- Sam Hall | DP Institute

For the most up-to-date list of speakers, registration, and venue information please visit:

www.NUCA.com/sdpc

line of vision," Zak says. "This can be an issue for multiple reasons."

One reason is that an operator may not be familiar with the worksite. For example, an operator may have never worked at a jobsite before or is still relatively new to using heavy equipment. With other equipment, trucks and workers, a jobsite can be intimidating to an inexperienced or new operator.

"A newer operator may move across a site more cautiously than more experienced operators or crane their neck from the cab to ensure they are in full control of the bucket and there's nothing in front of it," Zak says. "While this may not be the most pressing issue, or even something an operator would classify as an issue, it can still eat into productivity. That's where a Transparent Bucket comes into play."

The Technology

Doosan Transparent Bucket technology consists of an in-cab monitor, two cameras with protective guarding and a video controller. One camera is mounted high, while another camera is mounted low on the front of the machine.

"The reason for two cameras is that a bucket moves up and down," Zak says. "When the bucket is low, the view of the bottom camera is being obstructed. Similarly, when the bucket is high, the top camera's view is obstructed. With two cameras, each bucket movement is recorded."

The system's processor automatically combines the camera inputs into a single image that makes the bucket appear transparent on an in-cab monitor. This also assists with operator visibility.

Transparent Bucket Benefits

Often, a wheel loader is moving forward and reverse multiple times in its work pattern. When operating a wheel loader, an obstructed view can develop in the front of the machine. It's best for an operator to have an unobstructed view of their surroundings.

These obstructed views are especially noticeable when raising or lowering a bucket. With the Transparent Bucket, these areas are minimized.

Maximizing visibility allows a wheel loader operator to move about their worksite more confidently. This confidence translates into a more productive workday. The ability to "see through" the wheel loader bucket allows operators to efficiently dig into and precisely place material where it needs to go. This innovative technology from Doosan helps maximize productivity even on the busiest jobsites.

This article was written by **Rachel Ori**, Two Rivers Marketing, Des Moines, Iowa, on behalf of Doosan Infracore North America, Suwanee, Georgia

TECH TALK:

Technology Helps Operators Stay Productive

In today's contracting environment, use of technology in equipment operation can make a big impact on a crew's productivity given the challenges contractors face in hiring and retaining skilled operators. Over the last several years, key innovations have combined to make equipment for water, sewer, gas, power and telecommunications infrastructure simpler to operate – meaning that companies can still achieve high productivity levels even with less experienced operators. To get a sense of how technology is impacting utility construction, we talked with Ed Savage, product manager for Vermeer.

With the launch of Vermeer's RTX1250i2 and XTS1250i2 ride-on tractors, which are capable of running attachments including trenchers, rock saws and plows, the company combines a suite of technology that is helping contractors in the field.

"The 'i2' represents intelligence and interchangeability. Intelligent features enable them to self-identify the attachments the machine is using, which eases control adjustments. And, the interchangeability of attachments has been eased, which reduces the amount of time to switch out attachments," Savage said.

The purpose behind the launch is to help to get operators up to speed quickly. "We're trying to make equipment that is easy to train people on and which requires less user inputs," he said. "What that does is shorten the training curve. It makes it so that you can get a less experienced operator up to speed quicker and still be productive with the piece of equipment."

One of the key features of the machines is what Vermeer calls the "Productivity Zone." This feature identifies the ideal engine rpm operating range and automatically adjusts the ground speed to maintain peak performance in that range, optimizing machine production.

Monitoring the engine's rpm, "i2" Auto Plunge technology automatically reduces the rate of plunge for a trencher or rockwheel attachment so the rpm does not drop too far, reducing engine stalls.

"One of the most difficult things when you are starting a trench is that initial plunge cut," Savage said. "You are plunging down into the dirt. Sometimes there are rocks or tree roots involved, and it is easy to stall out the digger chain, so then you have to lift up or re-engage the chain and start again. So, Auto Plunge is always looking at that optimal rpm range so that if it starts pulling down the engine, it eases up. This helps automate the process and takes the user inputs out of the equation. Basically, the machine is thinking for the operator."

Monitoring the engine's rpm while trenching in challenging ground conditions, the TrenchSense electronic control system helps prevent engine stall by automatically pausing the tractor's forward creep if the rpm drops or the trencher chain stops.

"This is kind of similar to Auto Plunge in that if you are digging and hit a rock or tree root, it will automatically stop forward movement of the machine, back up a small amount, get the digger chain moving again and start forward motion again with the trencher," Savage explained. "Again, it is taking the human element out of the equation and letting automation take over, which adds to the productivity and shortens the training curve."

To reduce fuel consumption during operation, this machine is equipped with the EcoIdle engine control system, which automatically lowers the engine's speed to an idle if the tractor has not been active for 15 seconds.

These technologies combined are essential in today's competitive hiring market. "It's the same across all of the markets we serve. It's a struggle to find, train and retain labor," Savage said. "So, if you have high turnover, shortening the training curve is key so you can get operators up to

speed while still being productive."

When a contractor purchases a new machine, Vermeer dealers provide training based on the experience level of the operator, so that they are comfortable using the machine when they take it to the jobsite.

Of course, new technology only helps if the machine itself is operating a peak capacity. That means maintaining your equipment is vital. "You need to fully understand the maintenance requirement of the machines to get the best return on investment," Savage added. "Typical routine maintenance includes keeping the machine lubricated, and changing air and fuel filters. Equipment is a big investment, so it is time well spent to understand the maintenance."

Also key to success is knowing the ground conditions that you typically encounter or may encounter on future jobs to ensure that the attachments are well suited to that ground. "If you are running a trencher, for example, it is critical to have the right type of cutting teeth for the ground to maximize productivity."

Similarly, understanding the size of cable or pipe to be installed, as well as the depth, helps zero-in on the right combination of machine and attachments a contractor needs. "A Rock saw, for example, typically cuts shallower and narrower than a trencher, whereas a trencher is capable of cutting wider and deeper, so understanding what you need to accomplish is key to understanding your optimal equipment setup. Vibratory plows cut a narrow slot and require less surface restoration, so we are seeing a lot of use in some of the fiber optic installations."

When purchasing a machine, there are several options to consider, including whether you want tires or tracks, and whether you want a climate-controlled cab. "Again, you need to understand the types of jobs you will be bidding on," Savage added. "If you are working in rural areas, you may want to consider tracks vs. rubber tires. Whereas if you are working in urban areas on hard surface roadways, rubber tires may be the better option. If you are working in very hot or very cold conditions, a climate-controlled cab can be a benefit in keeping operators comfortable."

As the future for the utility construction market looks bright, companies like Vermeer strive to improve their equipment to help contractors stay as productive as possible. "We are continually looking at ways to make it easier for the operator to run our machines and improve the operator experience."

BEFORE THE BORE:

Three Potholing Best Practices to Help Maximize Efficiencies

By Chris Thompson

As the underground utility network becomes increasingly more complex and congested, underground professionals know that there is no room for error. With the demand for HDD projects on the rise, vacuum excavators are becoming a crucial tool aiding in damage prevention and jobsite productivity. In a process known as potholing, which uses a soft excavation method – a vacuum excavator – in lieu of a shovel or backhoe to make a hole and remove debris, operators can effectively, efficiently and safely uncover and navigate around existing utilities.

To keep jobsites efficient and crews safe, it is paramount to adhere to and understand proper potholing techniques. Here are three potholing best practices to help underground construction professionals improve efficiency, increase productivity and maximize jobsite safety

Properly Starting a Pothole

The first step to any successful underground construction project is to locate utilities. Crews must call 811 before breaking ground, then after the jobsite is marked, it is recommended that contractors verify the locates with their own locators. By verifying the locate before digging, contractors can get a vital understanding of the jobsite's layout and develop an educated construction plan.

The second step is to expose the utility by using a vacuum excavator. Utilizing either air or water, contractors can safely dig underground to an existing utility, ensuring it is visible from ground level before the bore. As a best practice, contractors should excavate to the depth of the bore, especially when going under utilities so operators can physically see the drill bit and pipe safely passing under the utility. Without this best practice, operators can potentially strike

or damage a utility, causing costly downtime and risking operator safety.

Additionally, contractors should start small – utilizing air or water excavating method - and expand as needed. This ensures that contractors won't make a bigger hole than what is required, streamlining efficiency and keeping operators productive.

However, if contractors are struggling to expose utilities in hard soil or heavy clay, hot water heater packages are an option with most vacuum excavators. Using hot water can help break down clay without applying additional water pressure. However, operators should keep the temperature below 150 degrees Fahrenheit for best results.

Consider The Nozzle Configuration

Operators should constantly keep the nozzle moving within the excavation and not focus the water on one specific area. One way to ensure that operators keep the water moving to help operators efficiently dig is by using the proper nozzle configuration. For example, when hydroexcavating, operators should use a rotating nozzle, also known as an oscillating nozzle, to deliver a stream of circulating water. A stream of circulating water will help keep the water moving and prevent excessive pressure from consistently hitting a specific area.

Additionally, operators should keep the nozzle 6 to 8 inches away from the utility and out of the dirt. Holding the nozzle too close to the utility increases the risk of damage. To prevent the nozzle from clogging and avoid costly downtime, the nozzle should never impact the soil or be used as a shovel to dig. When using an air excavator, it's even more important to avoid putting the nozzle in the ground, as cleaning dirt out of the nozzle can be more challenging with air excavators.

Working in a Variety of Ground Conditions

When choosing between hydro or air excavation, contractors should consider the soil conditions to ensure the method used is the most efficient. For example, pressurized water typically exposes utilities faster than air. However, air is the better choice when working in areas where contractors are worried about an overcut, next to a highway or transportation work. This is because air typically displaces less soil and reduces the worry of washout near roadbeds.

Hydro excavation is the most widely practiced form of soft excavation because it can be used in a range of soil conditions, including tightly compacted and hard soil, cobble and clay. Because hydro excavation requires operators to dispose of liquid spoils and replenish water sources while on the jobsite, following best practices for water conservation is important. However, the ability to conquer various soil conditions quickly and efficiently makes hydro excavation the preferred method for many contractors.

Air excavation allows operators to break up soil with compressed air and vacuum dry spoils, which can be reused onsite as backfill. This method works best on softer soils such as topsoil, sand and some clay formations. Unlike hydro excavation, which requires access to water, air excavation keeps machines running and operators on the jobsite without having to make trips to acquire water or dispose of liquid spoils. Additionally, many operators are turning to air excavation on jobsites as liquid spoils disposal restrictions tighten and certified disposal sites become more difficult to find.

Today, most equipment manufacturers design vacuum excavators with both air- and hydro-excavation capabilities, so operators don't have to choose between the two. For example, contractors can start excavating the ground surface with air and switch to hydro once they reach harder soil formations. The water will cut through the clay and be sucked into the spoils tank to mix with the dry spoils from the air excavation. With the ability to switch from hydro to air, operators can better adapt to changing jobsite conditions and stay productive in a variety of ground conditions.

Optimizing Jobsite Success and Safety

Properly exposing utilities by following best practices is a surefire way to keep jobsites efficient and crews safe. To avoid underground utility damage, understanding proper potholing techniques can help contractors mitigate damage and streamline efficiency. From understanding the differences between hydro and air excavation on the jobsite to nozzle considerations and using the proper psi, operators can ensure they are set up for success.

This article was written by **Chris Thompson**, vacuum excavation product manager for Ditch Witch.

BEST PRACTICE TIPS:

1. **If operators are not getting enough pressure from their vacuum excavator, they should check their filters, as clogs can cause issues with water pressure.**
2. **If the water pressure is low, operators should check the nozzle to ensure nothing is blocking the nozzle's flow.**
3. **The recommended pressure for soft excavation is no greater than 3,000 psi. Although many vacuum excavators and nozzles offer higher psi capabilities. Too much pressure can damage utilities, and the pressure should be reduced even further if using heated water.**

To Rent or Not to Rent:

Vacuum Excavator Edition

By Steve Carbeck and Ed Walsh

The vacuum excavation market has really taken off over the last two years, especially in the Northeast — these trucks are the future of digging around utilities. Some people will argue that a mechanical excavator is faster and more efficient than a vacuum excavator, and to some extent that is true.

However, what is your employees' safety worth? Or the time and money it will cost, if you puncture an electrical line, or an unknown water line? These things are less likely to happen when you are using a vacuum excavator.

When a customer is considering renting a vacuum excavator, he or she should take a few things into consideration, first where will the unit be working. These trucks come single axle, tandem and tri axle. If you are working in the city, you want a smaller truck for better maneuverability. Another consideration is where will you be dumping the material and how often. Not only do the units come in different axle configurations, but the debris bodies are also different sizes as well; you can get them in 3, 9 or 12 cubic yards. Depending on how far your dump site is, you may want a 12 cubic yard debris body as opposed to a 9 cubic yard unit so you can be on site for longer before having to go dump.

Once you pick the size truck you are going to use, you will pick which way you feel will be best to excavate the material. You can use up to a 300-cfm air compressor, which is usually used when excavating around electrical lines or in a substation. This method is also nice because after you dig the hole, you can reuse the material in the debris body since it is dry material; therefore, eliminating the need for the contractor to bring a dump truck with clean fill onsite. The other option is to use water, where, depending on the size of your truck, you will have anywhere from 8 to 20 gpm to excavate. This is the most common way of vacuum excavating and the fastest. If you are working on a chilly day and the ground has frozen, you have a 400,000-btu boiler that you can switch on to heat the water and help you cut through the frost with ease; the heated water also comes in handy when trying to cut through thick clay regardless of the season.

Much like the water system, the size of the vacuum system all depends on the size of the truck you are using. All vacuum systems use positive displacement blowers and range from 2,200 to 5,200 cfm.

The market for these trucks is only growing and it is not going to slow down anytime soon as more and more utility companies are forcing contractors to include these types of trucks in their bids. We predict within the next five years every utility contractor will have at least one of these trucks in their fleet same as they have mechanical excavators and dump trucks.

The vacuum excavator market has seen major growth over the last 10 years as billions of dollars are being invested into expansion, rehabilitation and updating of the underground infrastructure systems in North America. These systems include water, sewer, natural gas, telecommunications, power

distribution and transmission, as well as oil and oil byproducts pipeline installation and maintenance. With all the dollars being invested in the aging and undersized underground utility distribution grid, comes the need to protect these systems from accidental line strikes as well as increasing productivity by eliminating hand digging to locate the utilities.

Accurate above ground locating, coupled with the use of hydro-excavation equipment to pothole or daylight the existing utility has also become required by many of the utility owners and operators. This need has opened opportunity for contractors that already own and operate equipment that has hydro-excavation capabilities, as well as new contractors into the market. The demand for rental equipment has also grown as many of the larger prime contractors desire the ability to regulate their own progress schedules and not have to wait on a sub-contractor to mobilize to their site, as well as to pay the hourly rate for travel time, water, dump fees, minimum hourly charges, overtime and other charges typically included in hiring a contractor to perform hydro-excavation work.

The rental market has also seen growth due to the sheer amount of available work. The underground infrastructure has historically been neglected as an 'out of sight, out of mind' problem. With more public national attention, and multiple, long term, Federal government funding programs, the underground infrastructure construction industry should see steady growth for the foreseeable future.

With the increase in unit demand, the manufacturing sector has responded with major improvements with technological advances to improve productivity, safety and reliability as well as improvements in payload capacity to comply with local and federal weight restrictions. The later has been brought around primarily from the commercial market demanding units that are able to legally transport as much spoils as possible.

When considering a rental or purchase of a hydro-excavator, there are a few significant specifications that need to be looked at and decided. We can take the manufacturers branding out of the equation for this purpose, although service support is also a major factor. That aside, all units have some basic specifications to be considered, which are: debris body capacity and the legal weight capacity, fresh water capacity, how many gallons can the water tank hold, etc. These are two of the variables for every jobsite that will affect the production the greatest. If the material must be transported off-site, sometimes a considerable distance, and if a suitable water source is close by or not will dictate the productivity immensely. There are also other specs to consider, such as blower size and performance, boom size and reach and water pump flow and pressure to mention a few.

In general, though, most of the units produced today are comparable when lined up head-to-head and can be broken into four basic groups. Full size units with debris body ranges from 10 cubic yards up to 15 cubic yards and chassis axle configurations from tandem drive to tri-drive or tandems with air lift pusher and tag axles. These full-size units also typically carry 1,000 to 1,600 gallons of water, utilize large 5,000 to 6,000 cfm at 27 in. Hg positive displacement blowers and have 8-in. suction hose booms that are hydraulically manipulated via wireless remote control.

The next size down would be a mid-size unit. These typically have 6 cubic yard to 9 cubic yard debris bodies, carry approx. 600 gallons of fresh water and will be mounted on a smaller chassis with a tandem drive axle or possibly tandem with a pusher lift axle. Often these units will have a 6-in. diameter boom hose and a 3,000 to 4,500 cfm blower. They will still have many of the full-size unit features, just in a more compact, easier to maneuver configuration.

Next would be the compact size unit. These hydro-excavators will have 3 to 5 cubic yard debris bodies, 300- to 500- gallon water capacity tanks and typically a 6-in. boom system. The blower systems are often hydraulically driven as opposed to direct drive transfer case as they require less horse power to drive the blower. Again, the compact units will have many of the same features as the full and mid-size units. One big advantage is the ability for some manufacturers to mount their equipment for the compact size hydro-excavators on a non-CDL chassis. This has become a popular rental feature for contractors that don't have a pool of CDL-licensed drivers/operators.

Lastly is the trailer mounted unit. These units typically range in size from 2 to 3 Cubic yard capacity debris bodies, 200 to 300 gallons of water and often utilize a 3- or 4-in. suction hose. While some manufacturers do offer a boom system, it's also common to see units without any boom as the smaller hose is more easily handled with manpower. These units will typically be pulled with a one-ton size truck and require class A CDL drivers.

All the units discussed here have a large array of options, depending on the individual manufacturer. Some of these options include air compressors to perform air spade digging in lieu of using high pressure water, diesel fired burners to heat the water in frozen ground conditions, full opening rear doors, some units have hydraulic hoists to dump and others utilize sloped floors or pusher plates to eject the material out of the debris tank, pressure off load systems, hydro sludge pumps, winterization packages to insulate and protect the water systems from freezing during winter months, and many other options.

Steve Carbeck and **Ed Walsh** are regional sales representatives-commercial at Jack Doheny Co.

2021 Top Jobs: Trenchless Technologies

Lower Conner Creek Interceptor

Editor's Note: In each issue, *Utility Contractor* will profile NUCA's Top Job winners. These projects present the association's best and most innovative work that keep our country's utility networks operating at peak performance. To nominate your project for Top Jobs, visit: *nuca.com/topjobs*

The Lower Connor Creek Interceptor project involved installing more than 12,500 lf of 36-in. gravity sewer and more than 5,000 lf of 16-in. force main for the Unified Government of Wyandotte County and Kansas City, KS. Trenchless construction was required for 2,600 lf of the project. Three trenchless methods were used, including: 640 lf of soft ground TBM pipe jacking with steel casing; 1,300 lf rock tunneling with ribs and board; and multiple pilot-tube guided auger bores with steel casing totaling 640 lf.

The use of multiple trenchless construction methods addressed a variety of mixed ground conditions, right-of-way issues and installation sizes, making the project both unique and challenging. Collaboration between the primary stakeholders was essential in proactively identifying risks, developing solutions to minimize or avoid these risks altogether, and streamlining the installation of the critical infrastructure.

The contract was bid in January 2020 and was awarded to Rodriguez Mechanical Contractors (Kansas City, KS), with the trenchless work subcontracted to a collaboration of Iowa Trenchless (Panora, IA) and Midwest Mole (Greenfield, IN). Before the work began, open-communication and

teamwork between the project owner, engineer, prime and subcontractors was essential in identifying the need for additional geotechnical exploration, and then obtaining the additional information to better define the right trenchless methods for each respective portion of the project's success.

At bid time, it was anticipated that both the soft ground and rock tunnels would be challenging and risky. The soft ground tunnel was depicted to be in soft, wet granular soils directly underlain by solid bedrock; and the rock tunnel was placed just into the bedrock stratum overlain by the same wet, granular material. Due to the nature and location of the dirt-rock interface, each trenchless crossing had a heightened possibility of encountering a mixed-ground condition. It was because of this that the project stakeholders undertook several rounds of additional subsurface exploration along both alignments until a plan was developed. This communication and the additional geotech work proved to be paramount to the success of each crossing, which were completed in summer 2021.

"Because we were dealing with soft ground and hard rock alignments both close to the interface, we decided to do multiple rounds of exploration. The collaboration between the design and construction team resulted in a cohesive team all pulling toward the same goal," said Jay Klein, Iowa Trenchless.

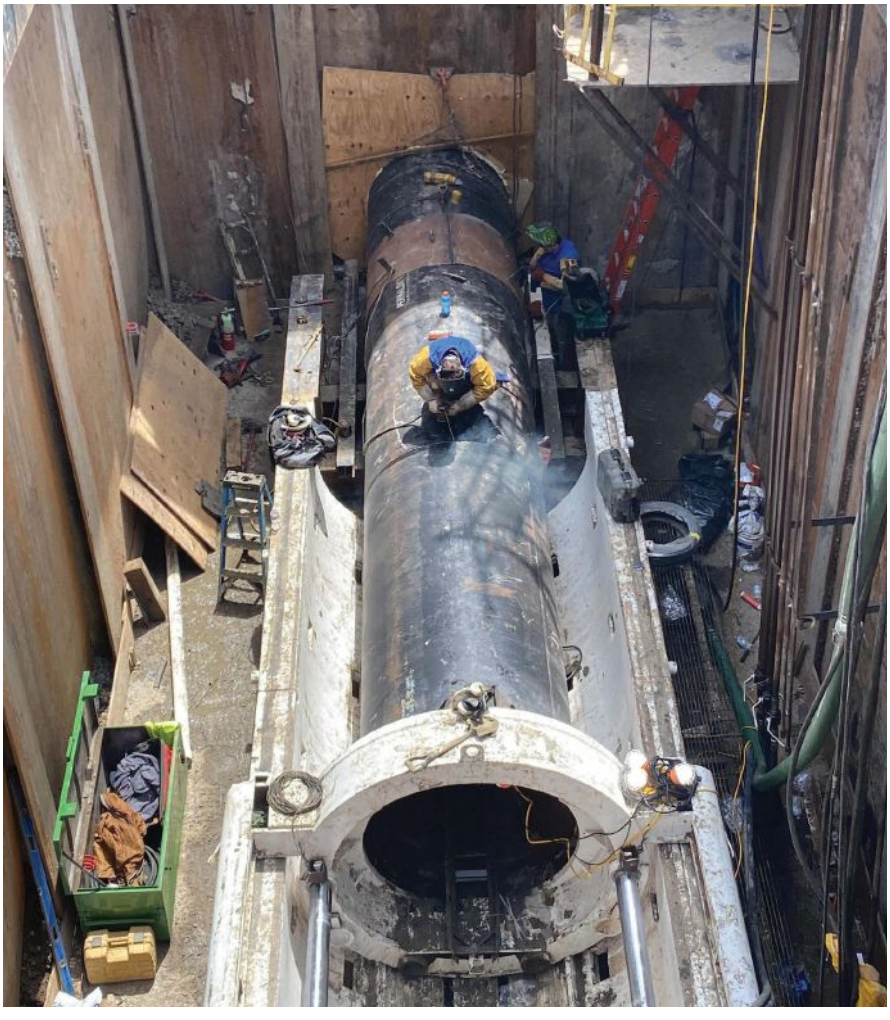
Tunnel A – Soft Ground – 640 ft of 59.5-in. Steel Casing

The added subsurface investigation discovered a bedrock knoll between the start and ending points of soft ground Tunnel A. If gone undiscovered, this would have been detrimental to the tunnel installation. The new information allowed the project team to re-evaluate the crossing, leading to realignment and lengthening – from 570 ft to 640 ft – of the already long (by industry standards) pipe jack in order to comply with Kansas DOT Interstate requirements and avoid the bedrock all while maintaining necessary elevation and grade requirements.

The new crossing design of Tunnel A was completed with an Akkerman 480 TBM with a closed-face cutterhead. Iowa Trenchless elected to use 59.5-in. OD Permalok steel casing as the initial tunnel liner and pushed with a 1,200-ton hydraulic jacking frame. The selection of interlocking steel casing pipe was important in achieving production rates as high as 60 ft per shift, averaging 35 ft per shift overall. Lubrication of the tunnel was also a key factor in the successful installation of the tunnel, resulting in no intermediate jacking stations being activated throughout the entire 640-ft push.

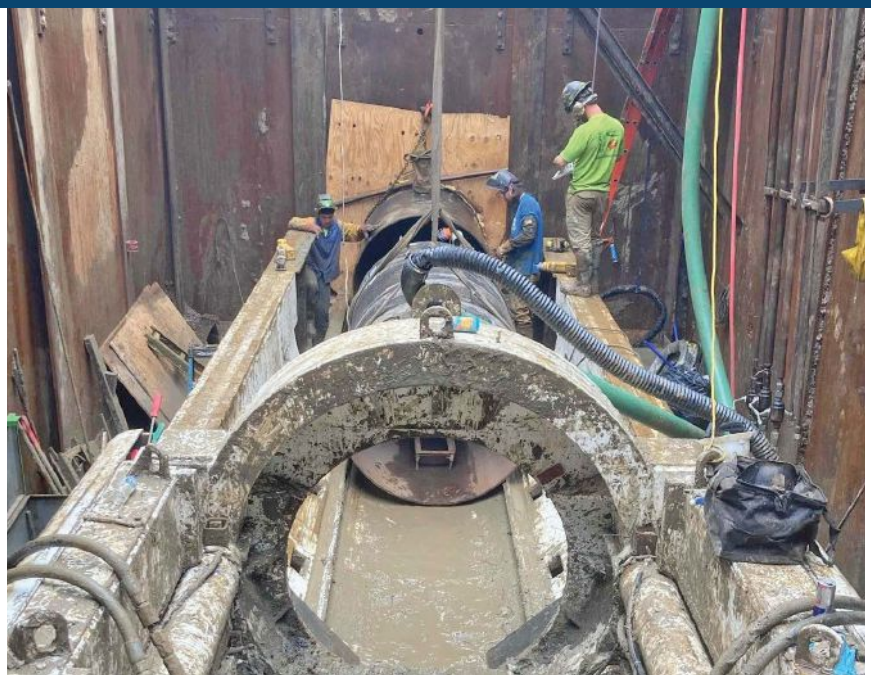
Tunnel B – Rock – 1,300 ft of 67.25-in. Beam & Lagging

Rock Tunnel B was designed to be installed in interbedded limestone and shale bedrock, however little was known about the quality and characteristic of the rock. Again, communication and the additional geotechnical work identified hard, consistent, quality limestone strata throughout. This led to the decision to utilize a custom-built 66-in. TBM that was heavily modified to optimize penetration rates in the solid rock. Midwest Mole utilized steel ring beam and wood lagging as the tunnel liner. Sets were built behind the TBM and expanded to match the 67.25-in. cut di-



ameter of the cutterhead. The decision to select this segmented tunnel lining approach was key to the success, as it significantly reduced the jacking forces required for the 1,300-ft crossing, as well as aiding in steering the TBM since it is advanced off the installed liner immediately behind.

Tunnels A & B each housed a final product of 36-in. HOBAS CCFRMP to be used for a sanitary interceptor sewer. The final product-pipe was threaded, blocked, and grouted in place with low-density cellular concrete, placed in multiple lifts.



Guided Auger Boring of Steel Casing

Other trenchless methods used for the project included 24- and 30-in. steel casings installed utilizing an Akkerman 240A guided boring machine (GBM) and Michael Byrne and Barbco auger boring machines (ABM) to complete the trio of trenchless technologies, crossing a local highway and Class 1 railroad track.

A strong stakeholder team, communication resulting in additional geotechnical work, and the requirement of soft ground tunneling, hard rock tunneling, and guided auger boring within the confines of a single contract make this project unique.

The successful communication and collaboration by Rodriguez Mechanical, Iowa Trenchless, Midwest Mole, George Butler Associates and the Unified Government of Wyandotte County – Kansas City, KS helped overcome the challenges and make the project a success.

Challenges and Innovative Solutions

Bedrock found at a higher elevation than expected conflicted with the originally designed soft ground tunnel method. Had this subsurface condition gone undiscovered and the tunnel started with a soft ground TBM, it could have been disastrous to the project, likely resulting in abandonment of the TBM and unfinished tunnel, or emergency excavation in the I-435 ROW approaching 50-ft deep. Additional permitting, significant disruption to the public, and substantial costs would have followed.

Supplementary subsurface exploration by the contractor team and open communication with the owner led to the redesigned tunneled and saved an insurmountable amount of expense and additional work.

Additionally, the combination of size, length and tolerance requirement of the rock tunnel presented its own challenge, requiring a high level of skill, expertise, and knowledge. The trenchless subcontractor team was able to interpret the rock conditions with the additional geotechnical work, and custom build the necessary TBM to successfully complete the required 1,300-ft crossing on-line and grade. The team heavily modified the cutter positioning, quantity and type to control steering and optimize penetration rates in the solid limestone, which exhibited compressive strengths exceeding 20,000 psi. As a result of this ingenuity, production rates averaged 20 ft per shift, reaching a high of 35-ft in one shift.

Benefit to the Client and Community

Despite discovered conditions that differed materially from those anticipated, the project team of owner, engineer and contractors were able to collaboratively and proactively identify project risk factors and work together to create a situation supporting successful completion of this work, maintaining forward movement of planned Wyandotte County infrastructure improvements. Overcoming the challenges to maintain trenchless construction techniques, thus minimizing impacts to the general public, was essential.

Citizens of the region rely on the infrastructure system to function flawlessly, while government officials and planning and zoning officers count on infrastructure to support future growth and quality of life. Without the team's collaborative effort and solutions to complete the trenchless facets of the project, this project would have been significantly delayed, had a greater impact to the daily activities of the community, and would have cost the regional government and taxpayers many times the realized expenses.

Paul Rodriguez, President, Rodriguez Mechanical Contractors Inc. (RMC),

said: "The key theme for this project was teamwork. Iowa Trenchless and Midwest Mole both worked with us to make this project a success. Through solid coordination and teamwork, their personnel identified the inherent challenges for a tunneling project in this location, including the use of multiple trenchless methods, unusually long tunnels, and unexpected geotechnical obstacles. By identifying the challenges early in this job, these contractors were able to collaborate with our team to creatively modify the design, into a complex — but possible — project. Their teamwork, and their staff's industry experience, helped us to overcome challenges with a proactive, cost-effective approach, and allowed the project to be completed successfully. We were very pleased with the teamwork, cooperation and performance of the Iowa Trenchless team, and would not hesitate to hire them again on the next challenging project."

Collaboration of the entire team, including the owner, design engineers and contractors, was paramount to the success of the project. It was because of the open communication, teamwork, proactive preparation, forethought, and positive attitude by all parties that this project was able to be constructed efficiently and effectively. The experienced crews, creative problem-solving effort of project leadership, and old-fashioned hard work combined with the most important factor – teamwork – to make this project an outstanding success.

Project-at-a-Glance

Project Name:
Lower Conner Creek Interceptor

Project Owner:
Unified Government of Wyandotte County/ Kansas City, Kansas

Location:
Kansas City, KS

Contractors:
Rodriguez Mechanical Contractors (prime); Iowa Trenchless and Midwest Mole (trenchless subcontractors)

Suppliers:
Akkerman Inc., Barbco Inc., Michael Byrne Mfg., Northwest Pipe/Permalok, Hobas Pipe

Engineering:
George Butler Associates

By Zack Perconti

IIJA Implementation as Midterm Elections Loom

Elections will have major impact on future path of landmark infrastructure law

The current 117th Congress has seen a number of significant accomplishments for the United States and the utility contracting industry, none more substantial than the landmark bipartisan Infrastructure Investment and Jobs Act (IIJA) which will deliver over $550 billion in new infrastructure spending directly to NUCA members in key markets.

NUCA has written extensively in past "Inside Washington" columns about the many benefits that IIJA will bring to our country, and our members will be on the front lines of implementing this historic legislation. However, the fight over how best to implement the legislation has just begun.

Since IIJA's passage in November 2021, our industry has found itself facing numerous severe challenges in business operations. Supply chain issues, the rising price of gas, and the effects of inflation on the costs of materials have rocked the industry. Furthermore, contractors across the country continue to grapple with workforce capacity issues. Unfortunately, policy decisions by the Biden Administration and the current Congress run the risk of exacerbating these challenges, directly threatening the success of IIJA.

Of these issues, perhaps none is more concerning to NUCA membership than federally mandated project-labor agreements (PLAs). President Biden's Executive Order (EO) 14063, issued in February 2022 and recently formally proposed through the rule-making process, represents a dangerous step in the wrong direction for American infrastructure construction.

Despite most of Washington's framing, this is not purely a labor policy issue, nor is it limited to certain types of construction. NUCA represents both union and merit-shop contractors. Our members build and maintain all underground utility systems. We're doing everything possible to combat the enduring workforce and inflation challenges facing our industry, but the proposed rules that would implement Biden's ill-advised EO do nothing but make matters much worse by limiting the number of workers available to carry out jobs while also driving up the costs of projects.

The proposed rules' expressed intent is to help with management challenges that can interfere with federal construction projects, but mandating PLAs will only exacerbate existing workforce capacity challenges by our industry. And

unfortunately, PLA mandates are likely to lead to higher costs on IIJA projects, limiting how far badly needed infrastructure dollars can go. PLAs tend to increase construction costs significantly on projects, with increases of 12% to 20% on some jobs. Combined with continuing supply chain and materials challenges, as well as inflation, this will further limit the impact of federal infrastructure investment – and balloon the number of contracts subject to this onerous requirement.

PLA requirements restrict the majority of construction firms who traditionally bid on contracts that include federal financing assistance, in particular merit-shop contractors who make up over 80% of the construction industry. Industry surveys have consistently shown that over 70% of contractors are unable or unwilling to bid on projects carrying a mandatory project-labor agreement, with the further damaging result that small and/or disadvantaged businesses are often unable to bid on these jobs. Requirements imposed by PLAs often make it difficult for contractors to find enough eligible workers, as well. And in an industry already facing a shortage of hundreds of thousands of workers, we cannot afford to cut anyone out.

Government-mandated project-labor agreements are a damaging policy that will reduce the workforce available to build infrastructure projects, including those funded by the IIJA. NUCA has urged the Administration to withdraw the proposed rules, and has continued to work to overhaul the proposed rule, but the makeup of the current Congress is not conducive to progress on this front.

If IIJA is to be successfully implemented, Congress will need to exercise appropriate oversight and guidance at all stages of the process.

The 2022 midterm Congressional elections will have a major impact on the path our country takes, and on how the IIJA and other work done by our industry is carried out. NUCA members should be sure to cast their ballots to elect candidates that support American infrastructure.

Please make sure that you are registered to vote and have a plan to cast your ballot: in-person or by mail, early or on Election Day. Voting is the most important way that you can make your voice heard as a NUCA member. Please also give your employees time on that day to vote, as that ability to cast a ballot for our leaders is one of the most important rights we possess as Americans.

Watch for additional 2022 election-related NUCA communications as Election Day, November 8, approaches, and keep an eye out for our column in the November/December 2022 Utility Contractor issue detailing NUCA's 2023 legislative strategy for the new Congress.

Zack Perconti is the vice president of government affairs for NUCA.

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Finding New Employees

and Keeping Them

Recruitment and retention are hot topics in today's industry. The truth is companies have never done as much hiring as they do today, and they've never spent as much money doing it. The days of someone walking into your office and asking for a paper application are almost nonexistent. Most companies have moved to electronic applications, and some have been outsourced to third party companies based out of India.

How are companies recruiting today? I can tell you from experience that within the last 5-8 years, job fairs have shown a steady decline in attendance. Today's youth typically won't be motivated to print out 10-15 resumes and spend the time handing them out. Popular websites like Indeed, Zip recruiter, and Monster are good tools to use, but are you reaching the younger demographic that way? Maybe, but you cannot effectively market your company from those websites alone. Sure, you can post a job and get responses, but chances are there are 50 other companies looking to hire for the same position the same way.

So how do you make your company stand out and appeal to someone who's

looking for a new career? Today's generation is infatuated with their phones, and they are typically look at some form of social media. With that said, if you are not marketing your companies on TikTok, Snapchat, Instagram, and other forms of social media, you are missing a whole demographic of potential employees.

In the world of social media, content is king, and short videos get the furthest reach by far, which makes them one of the best recruiting tools you can use on social media. Making these videos doesn't take much time and posting them is easy. Your videos could be as simple as footage of a piece of equipment in action, an overview of a completed job, or even just short snippets of your people working. Add in testimonials from employees with them talking about the positive experiences within your company, and you could reach a lot of potential, long-term employees looking for their path in life.

Then there's retention – that's keeping the employees you hire. We all know that companies often hire from competitors, which on the surface saves some time with training. The issue this practice creates can be a vicious circle where trained people must constantly be replaced. Finding seasoned employees is great, but focusing on new, long-term employees is necessary.

When hiring someone, a review of the resume is crucial, not only to judge their experience, but also to examine how many companies they've worked for and their tenure at each job. If someone had six jobs within the last two years, that's typically a red flag and a potential indicator that they're not planning on sticking around long. These employees may leave for less than a dollar an hour pay increase, and there's not a lot you can do about it. Recognizing these "Job Jumpers" can save you from headaches down the road.

When someone leaves, it's helpful to conduct exit interviews and ask the reasons why: was it pay, safety, or was the employee unhappy? Sometimes you can reason with your employees, and they will stay, but we all know that's not always the case. Regardless, the info you get from exit interviews can be invaluable to keeping the rest of your people happy and working for you.

Some ways to keep employees is to create an environment where employees want to come to work. You can do this by having a good benefits package, offering competitive salaries, and providing effective training. Opportunities for advancement are always an attractive way to keep employees within your company. That said, all companies are struggling to hire people.

We live in time where the employee has the advantage – it's a worker's market, so to speak. So, using some savvy recruitment and retention tricks may help you keep your company staffed.

Mike Flowers *is Director of Safety, Training and Education for National Utility Contractors Association (NUCA).*

Products

Hi-Vac X-8 Hydro Excavator
x-vac.com

The Hi-Vac X-8 Hydro Excavator combines industry-leading vacuum power with a compact footprint and noise-dampening engineering to meet every need of the urban jobsite. The X-8 is designed for improved maneuverability and offers the highest legal payload on the market, making it ideal for potholing, daylighting and utility location along tight city streets. The 4,000 CFM 27-in. Hg high-performance blower provides more than enough power for any application, while noise attenuation technology and climate-controlled noise deadening enclosures make X-Vac the quietist hydro excavators on the market. The X-8 has a 23,000-lb payload capacity and carries 570-gallons of freshwater onboard, ensuring standalone power that maximizes your crews' efficiency. The top-mounted, 360-degree boom ensures accessibility in all directions while a heavy-duty, hydraulic vibrator facilitates fast and efficient unloading of the debris body. An optional severe-duty, 400,000 BTU boiler safely heats water for frozen ground applications.

Cat Introduces New 350 Excavator
Cat.com

Featuring powerful digging force and strong swing torque, the new Cat 350 Excavator can be equipped with large buckets up to 3.2 m3 (4.2 yd3) for class-leading productivity. While productive, the 350 consumes up to 13 percent less fuel than the Cat 349 to lower costs, reduce CO2 emissions, and operate more sustainably. Three power mode options – Smart, Power, and Eco – match the excavator to the job to further reduce fuel consumption.

The new 350 Excavator's standard Cat 2D Grade system indicates depth and slope on the monitor with alerts to increase operating efficiency. Grade Assist helps the operator to effortlessly stay on grade with single-lever digging. For truck loading and trenching applications, Swing Assist automatically stops excavator swing at operator-defined setpoints to consume less fuel. Lift Assist helps to avoid machine tipping by letting the operator know the load is within safe working range limits. To safely work around obstructions, 2D E-Fence prevents the excavator from moving outside of operator-defined set points.

John Deere Expands G-tier Wheel Loader Offerings
JohnDeere.com

After a successful introduction into the Canadian market in 2021, John Deere expands its G-tier Wheel Loader offerings to the United States with the 644 G-tier Wheel Loader, continuing the transition to Performance Tiering . As part of the John Deere Performance Tiering Strategy, customers can benefit from tailored offerings that provide more performance, comfort, and economical options. The expansion of this lineup also includes the new 544 G-tier Wheel Loader now available in Canada. The 544 G-tier provides customers working in a variety of applications with a no-frills, versatile, and reliable solution backed by John Deere and its world class dealer network.

The 644 G-tier leverages industry-proven components and is equipped with a cab design that promotes ease of operation. With the 644 G-tier machines, John Deere delivers a solution ideal for customers in the governmental, rental, site development, and asphalt industries. The 644 G-tier Wheel Loaders boast a reliable John Deere 6.8L engine and feature John Deere Teammate axles.

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Productivity Starts with Preparation

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The Pipeline

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