

AMERICAN LOCATOR

MAGAZINE



2019 DAMAGE REVIEW

year in

INSIDE...

State By State - Damages Detailed Across the Country

A Contractor Responds - What Matters Most?

Excavators on Alert - Top Chicago Contractor Averts Catastrophe

The American Locator - One Woman Tells Her Story

GPR CASE STUDY - AND MORE!



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Jose Rivera is one of Electric Conduit Construction's most seasoned professionals. Having started as a ground hand back in 1999, he has spent his years training very hard to improve his level of excellence and certification. Most recently Jose was certified as ECC's Superintendent of Cable Replacement. A typical day for him is to be up at 4:00 AM for a weather check, by 5:00 he is managing his crews and work site location changes, and at 6:00 its out to the yard to meet with his team of foreman for final instructions of the day, and that's all before 7:00 AM. He does this every day in order to keep ECC's head and shoulders above the competition all the while keeping safety and health of his crews top-of-mind. He has a strong loyalty to ECC and looks forward to continuing on his journey of opportunity and success.

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AMERICAN LOCATOR[®]

MAGAZINE

VOLUME 33 ISSUE 6
January 2020



Table of Contents

DIGGING DANGERS	4
Damages Dateline 2019: Utility Excavation Related Incidents Across America—State By State	
THE AMERICAN EXCAVATOR <i>(letters to the editor)</i>	14
Root Cause: Getting to the Heart of Utility Damages and How to Avoid Them	
THE AMERICAN EXCAVATOR	18
An HDD Case Study: Electric Conduit Construction Swiftly Averts a Sinkhole Disaster	
EXCAVATION SAFETY	22
Is 811 Broken? One Insurance Industry Leader Weighs In on Where to Go From Here	
PLANET UNDERGROUND TV	24
PUTV On the Road: Nicor Gas <i>Investing in Illinois</i>	
LOCATING TECHNOLOGY	30
GPR Experiences: Imaging Void Spaces While Locating Underground Utilities	
THE AMERICAN LOCATOR	34
An Interview with Jennifer Dolman: Exceeding the Call to Duty, One Woman Tells Her Story	



ON THE COVER

On Sept. 6, 2019 in Bradford, PA, contractors working on street repairs jackhammered into a 12-inch water main, releasing about 300,000 gallons of water into the street. Find more damages across the nation, p. 4.

Photo courtesy Bradford Era.

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American Locator (ISSN 1090-400X) is published six times annually.



As we reported in the previous issue of *American Locator*, the Common Ground Alliance's most recent DIRT Report for 2018 showed an all-time high in the number of estimated damages for that year: 509,000. This represents a 16% increase over 2017, and a general trend that shows no sign of stopping anytime soon.

So, you might ask yourself: where are all these damages happening? When are they occurring? Maybe in the middle of the night? Or maybe only in the summertime, or on the West Coast, or in Florida, or in the big cities? The DIRT Report has an interactive feature on their website where you can break down some of these variables and see what they say (for instance, Wednesday is the day when most damages were likely to occur).

But it is also very possible that you haven't heard about any of these damages because they haven't been reported anywhere. Oftentimes, a utility strike is only covered by the local media when it involves a ruptured gas line that causes a building evacuation, or a water main break that leads to a community boil-order. And almost certainly, these strikes are only covered by the national media when major injuries or fatalities are involved.

Through our compilations of utility strikes in this country in 2019 that were covered by media outlets, one thing became very clear: these damages are happening near YOU. It was not difficult at all to find utility damages in nearly all 50 states, in small towns and big cities, in areas rural and suburban, during all 12 months of the year. And remember, these are just the damages reported on by the news. Obviously, thousands more are happening every single day that go unreported and unnoticed by the general public.

Also, don't forget that a damage could happen hundreds of miles away and still impact your life, such as the fiber cut on August 28th outside of Kansas City International Airport that led to a chain reaction of delays and cancellations across the country. Ultimately, we won't know for sure exactly how many damages happened in 2019, because there is no mandatory reporting law in place for such a thing, and our best estimate for a total won't be released until the DIRT Report around September of 2020. But until then, here are some avoidable damages that occurred near you last year!

ALABAMA – JUNE 20th, AUBURN

Water service was temporarily unavailable in the city of Auburn after a contractor struck a 16-inch water main.

ALASKA – JULY 26th, KENAI

Two commercial buildings were evacuated after an excavator severed a 2-inch gas line, closing the entire area while crews worked to fix the damage.

ARIZONA – OCTOBER 22nd, NOGALES

Workers removing asphalt struck and damaged a natural gas pipe, causing a downtown shopping plaza to be evacuated for over four hours. The incident also delayed a train on the railroad tracks behind the plaza.

ARIZONA – SEPTEMBER 27th, WILLCOX

A ruptured gas line caused evacuation of several homes. According to the Public Safety Director, the gas line was marked.

ARKANSAS – OCTOBER 3rd, LITTLE ROCK

A contractor hit a main water line in Little Rock on a transfer line that runs along Chicot and Frontage Road. Officials say the break did not cause any water outages.

CALIFORNIA – JULY 15th, MURRIETA

A gas company worker was killed, and 15 people were injured when an explosion and fire leveled a home in Murrieta. The explosion was apparently connected to a gas leak that happened after a private contractor installing solar panels was digging on the property and ruptured an underground gas line with a grounding rod. The gas company said it appears the contractor had failed to call 811 to check for gas lines before digging.

CALIFORNIA – AUGUST 15th, SAN FRANCISCO

Construction crews ruptured two large gas lines, a 2-inch and a 4-inch gas line, in the Mission District in San Francisco. An alert went out from the city, and the fire and police departments went door to door calling for all residents to evacuate their homes within a block of the site in all four directions.

CALIFORNIA – AUGUST 22nd, SAN DIEGO

A construction crew broke a ¾-inch steel service gas line, which caused the San Diego Zoo to be closed for an entire day. The broken line led utility crews to shut off gas lines to all the facilities in Balboa Park, while the Natural History Museum and Spanish Village were also temporarily closed due to the line break. Staffers were evacuated from the facility, and other areas of the park were also closed as well, including the main entrance to the zoo and a nearby parking lot while crews worked on the fix.



“The DIRT Report's estimate of total damages in the US—509,000 in 2018—represents a 16% increase over 2017.” -Editor

Cleaning up debris from the aftermath of an explosion in Murrieta, California that killed a worker and injured 15 people.

CALIFORNIA – OCTOBER 3rd, SAN DIEGO

A third-party construction crew doing work in the area struck a 3/4-inch diameter gas line, forcing the evacuation of nearly 150 Mission Beach residents.

COLORADO – APRIL 17th, WINDSOR

Two construction workers died after having been trapped in a 15-foot-deep trench that collapsed on top of them, completely burying them in dirt and compact soil. Despite an hours-long rescue operation, both men died from injuries sustained in the accident, Windsor Severance Fire Rescue said.

COLORADO – OCTOBER 23rd, BOULDER

Construction crews accidentally cut a gas line near the Koelbel business building and the Engineering Center, causing the building to be evacuated by the University of Colorado Boulder Police Department and Boulder Fire Department.

CONNECTICUT – OCTOBER 9th, NEW LONDON

Parts of downtown New London were evacuated, and power was shut off to more than 8,400 customers after construction crews cut a gas line. Gas crews responded to repair the line and clear gas from multiple affected buildings.

DELAWARE – APRIL 22nd, NEWARK

Delaware Department of Transportation reported that a contractor struck a gas line while repaving East Main Street, shutting down the road and causing traffic jams for more than two hours.

FLORIDA – JULY 17th, FORT LAUDERDALE

A utility subcontractor doing work near the Fort Lauderdale Executive Airport damaged a critical 42-inch water main, creating a water crisis for over 220,000 people in the area over the next few days. The incident, the most major of a recent string of water line breaks, highlighted major flaws in Fort Lauderdale's crumbling water infrastructure.

FLORIDA – AUGUST 16th, MELBOURNE

Melbourne city officials said a “serious” break in a city water main was caused when a contractor was drilling a hole for a new line, and the drill bit snagged on a 6-inch service line emerging from the water main. About 1,200 customers, or about 4,000 residents, remained under a precautionary boil water notice the next day.

FLORIDA – AUGUST 20th, BRADENTON

An estimated 180,000 gallons of water was spilled after a contractor struck a 16-inch reclaimed water main, according

to a report submitted to the Florida Department of Environmental Protection.

GEORGIA – OCTOBER 24th, COLUMBUS

A third-party fiber cut led to service interruptions for telecom customers in the local and Phenix City areas, as well as Smiths Station.

HAWAII – NOVEMBER 12th, HONOLULU

A contractor working on a new classroom building punctured a gas line, forcing the evacuation of over 4,000 students from three nearby schools.

IDAHO – JULY 11th, REXBURG

A crew using a horizontal directional drill ruptured an underground gas line that prompted the Rexburg Police Department to issue an emergency evacuation for residents living on streets in the area. The gas leak eventually caught fire, damaging the line itself and the construction equipment. On the same day, a fencing contractor damaged a different gas line with a post hole digger, leading the police to evacuate two other nearby residences.

IDAHO – SEPTEMBER 9th, IDAHO FALLS

Employees at International Isotopes Inc. were evacuated after a nearby contractor struck a natural gas line, causing a leak.

ILLINOIS – SEPTEMBER 12th, WEST DUNDEE

A utility subcontractor broke three gas mains over the span of two days in West Dundee. They will face penalties and be required to take excavation safety classes.

ILLINOIS – SEPTEMBER 18th, ANDALUSIA

A fiber crew boring for optic lines hit an abandoned gas line that had gas serviced to it, leading to an evacuation of a nearby elementary school.

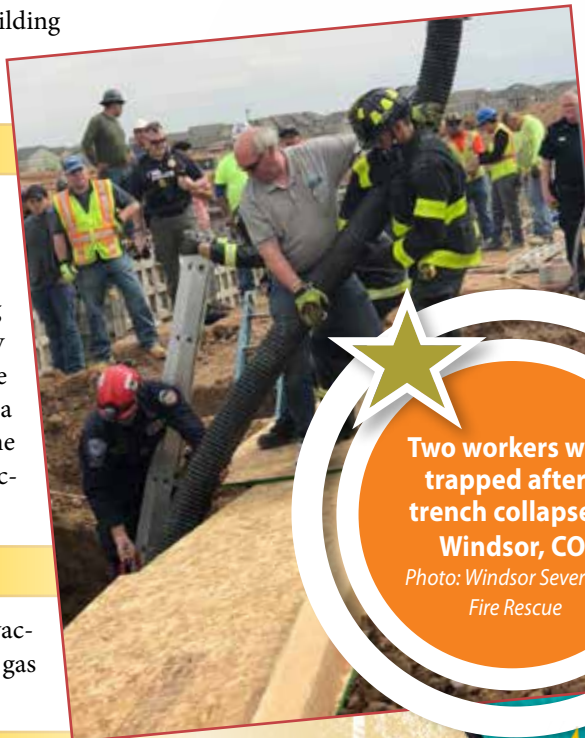
INDIANA – NOVEMBER 14th, SELLERSBURG

A fiber crew hit an 8-inch water main with an underground drill, causing the break, and also damaging a nearly 30-foot section.

The incident caused the city to issue a boil water advisory and led to the closures of a college and dozens of businesses after their water was shut off.

IOWA – AUGUST 19th, MONTICELLO

Construction crews working on a project hit a gas line, leading to the evacuation of the entire block, and shutting off gas to the entire area for hours during the repair.



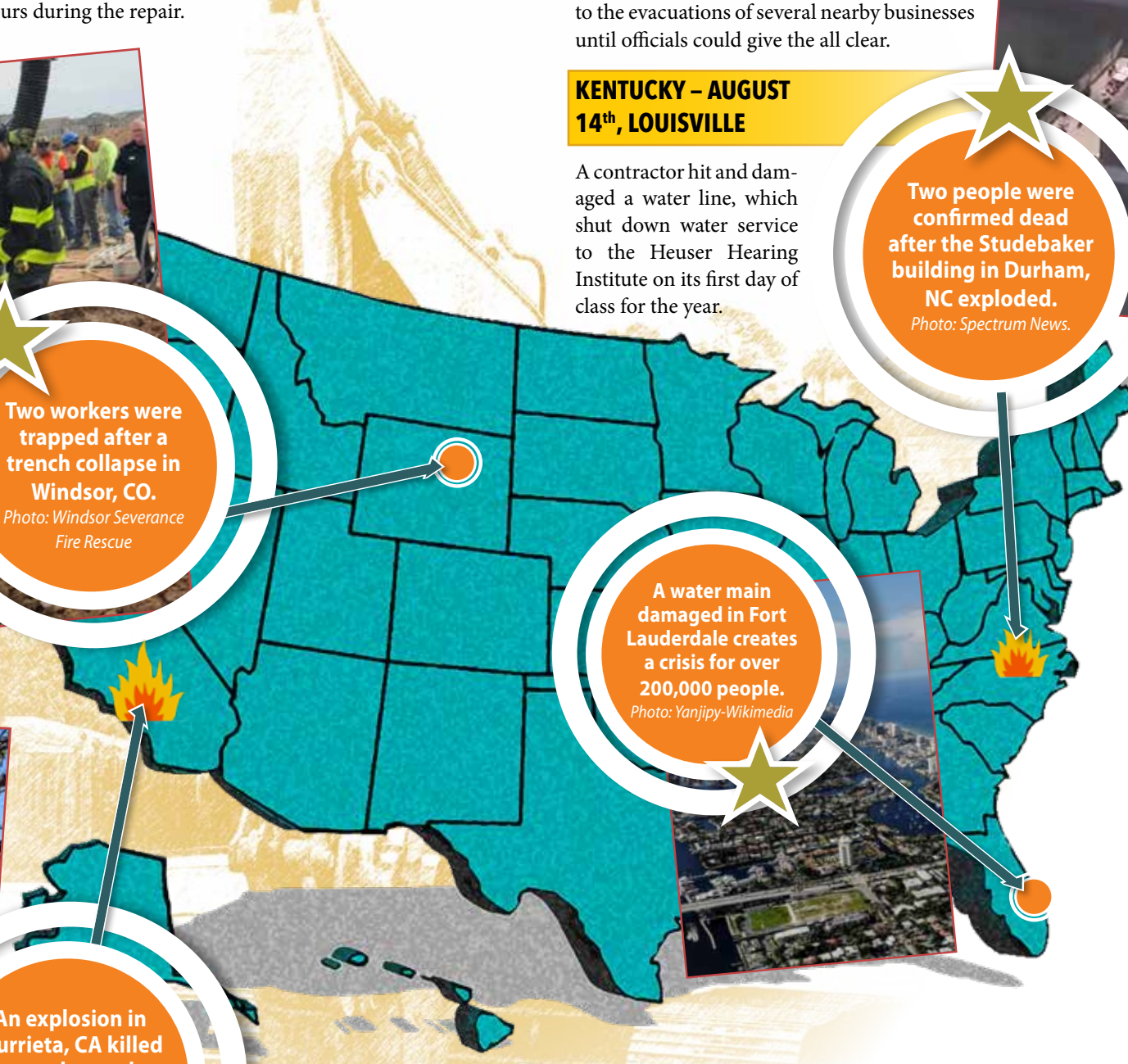
Two workers were trapped after a trench collapse in Windsor, CO.

Photo: Windsor Severance Fire Rescue



An explosion in Murrieta, CA killed a worker and injured 15 people.

Photo: Thomas Young



KANSAS – SEPTEMBER 25th, MANHATTAN

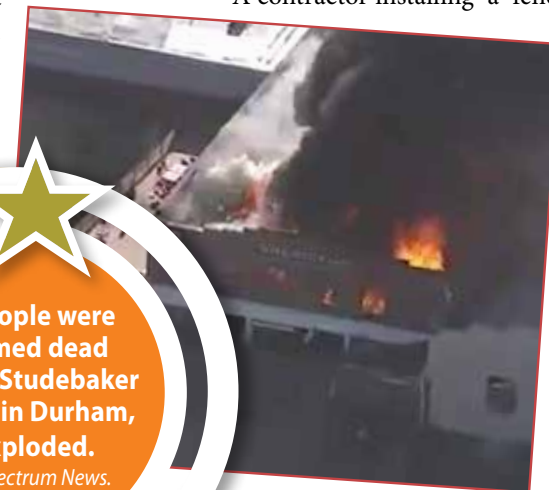
Two incidents of workers breaking gas lines caused gas leaks and disruptions to traffic and business operations. The first incident occurred after a fiber contractor for a telecom company bore into a gas line while working on construction in the area. The next day the same line was struck again, which blocked traffic in the area and led to the evacuations of several nearby businesses until officials could give the all clear.

KENTUCKY – AUGUST 14th, LOUISVILLE

A contractor hit and damaged a water line, which shut down water service to the Heuser Hearing Institute on its first day of class for the year.

Two people were confirmed dead after the Studebaker building in Durham, NC exploded.

Photo: Spectrum News.



That break also impacted two other wastewater pump stations, discharging an additional 60,000 gallons into a nearby creek.

LOUISIANA – SEPTEMBER 26th, LEONVILLE

A contractor installing a fence caused a 3-inch break in a water main, causing town officials to issue a boil water order for nearby residents.

MAINE – OCTOBER 2nd, ORONO

A contractor hit an underground gas line while digging, resulting in the evacuation of 18 tenants from an apartment building and the closure of two downtown streets. All Orono schools located within a mile of the gas leak also canceled outdoor activities and brought students indoors for recess.

MARYLAND – OCTOBER 14th, CLARKSBURG

A 3-inch high-pressure gas main was hit by excavator at a construction site, prompting the evacuation of several nearby homes in the area.

MASSACHUSETTS – OCTOBER 1st, NORTH ATTLEBORO

Construction workers struck a low-pressure old gas main fire, forcing the evacuation of seventeen residents from three separate housing units in the area.

MASSACHUSETTS – NOVEMBER 18th, LAWRENCE

A city contractor struck a low-pressure gas line, prompting the evacuation of over 50 homes, shutting off gas and electricity to the area, and forcing city officials to bus people to warming shelters.

MICHIGAN – AUGUST 12th, KALAMAZOO

Construction workers hit a gas line while working on the street, and as a result, gas seeped into the sewer lines, prompting the evacuation of several businesses in the area. The location of the leak was identified by gas crews who were able to cap the leak, and purge and vent the gas from the lines.

MICHIGAN – AUGUST 20th, GRAND RAPIDS

Construction crews were working at the John Ball Zoo when they hit a 4-inch gas line, forcing zoo workers and the fire department to evacuate nearly 1,000 guests from the facility. Some animals

KENTUCKY – AUGUST 26th, LOUISVILLE

A contractor working on new construction in eastern Louisville hit an underground wastewater force main and discharged more than 100,000 total gallons of sewage. Officials said nearly 50,000 gallons of wastewater was discharged to the construction site after the contractor hit the 18-inch underground wastewater main.

were also moved to holding facilities as the zoo immediately went into emergency protocol to deal with the situation.

MINNESOTA – JUNE 10th, ROSEVILLE

A natural gas line was struck Monday afternoon, disrupting traffic in a heavily traveled area of Roseville, authorities said. The incident also left seven commercial buildings without gas service during the repair process.

MISSISSIPPI – SEPTEMBER 24th, JACKSON

Several areas of downtown and South Jackson were without water after a contractor struck and ruptured a 16-inch water main.

MISSOURI – AUGUST 28th, KANSAS CITY

An off-site fiber cut causing an internet outage led to delayed flights and slower check-ins at Kansas City International Airport. Officials said that the cut impacted several airlines and caused inbound flights to be held at their destination cities because of later outbound flights from Kansas City.

MONTANA – NOVEMBER 4th, BOZEMAN

An excavator at a construction site hit a 4-inch gas line, sending gas wafting into local neighborhoods and causing a middle school to evacuate. The utility received reports of a gas smell up to five miles away from the strike.

NEBRASKA – FEBRUARY 7th, LINCOLN

Light pole replacement work on the University of Nebraska-Lincoln campus led to multiple gas line strikes the week of January 29th. Charlie Griesen, a utility project manager for UNL Facilities, Planning and Construction said “We’ve found that the reliability and the accuracy of the markings of (the energy company’s) vendors are not nearly as reliable. All that stuff kind of compounds to make it a really difficult situation.”

NEVADA – NOVEMBER 16th, LAS VEGAS

Las Vegas Valley Water District reported that a water main break near West Flamingo Road was caused by a contractor that hit a water line.

NEW HAMPSHIRE – MAY 20th, SALEM

A contractor installing a new sewer line accidentally struck a gas line, forcing authorities to close a section of the road, and evacuate more than six local businesses nearby. The gas line was an unmarked 1-inch service feed to a property on the other side of the street.

NEW JERSEY – SEPTEMBER 6th, EGG HARBOR

Several stores were evacuated, and parking lots cordoned off after

construction crews excavating on a nearby property accidentally struck an underground gas line and caused a gas leak.

NEW MEXICO – OCTOBER 15th, ALAMOGORDO

A New Mexico Department of Transportation subcontractor hit a fiber optic line, creating an outage and needing 192 lines running through the conduit to be restored.

NEW YORK – DECEMBER 12th, ALBANY

A city water, crew probing underground to find a water main, struck and ruptured an 8-inch high pressure gas line. The explosion of gas sent cobblestones and pressurized gas flying into the air.

The massive gas leak led two main roads into the city to be shut down and forced the evacuation of hundreds of workers from buildings in the nearby area. It took utility and city crews three hours to clamp the line and seal the valve.



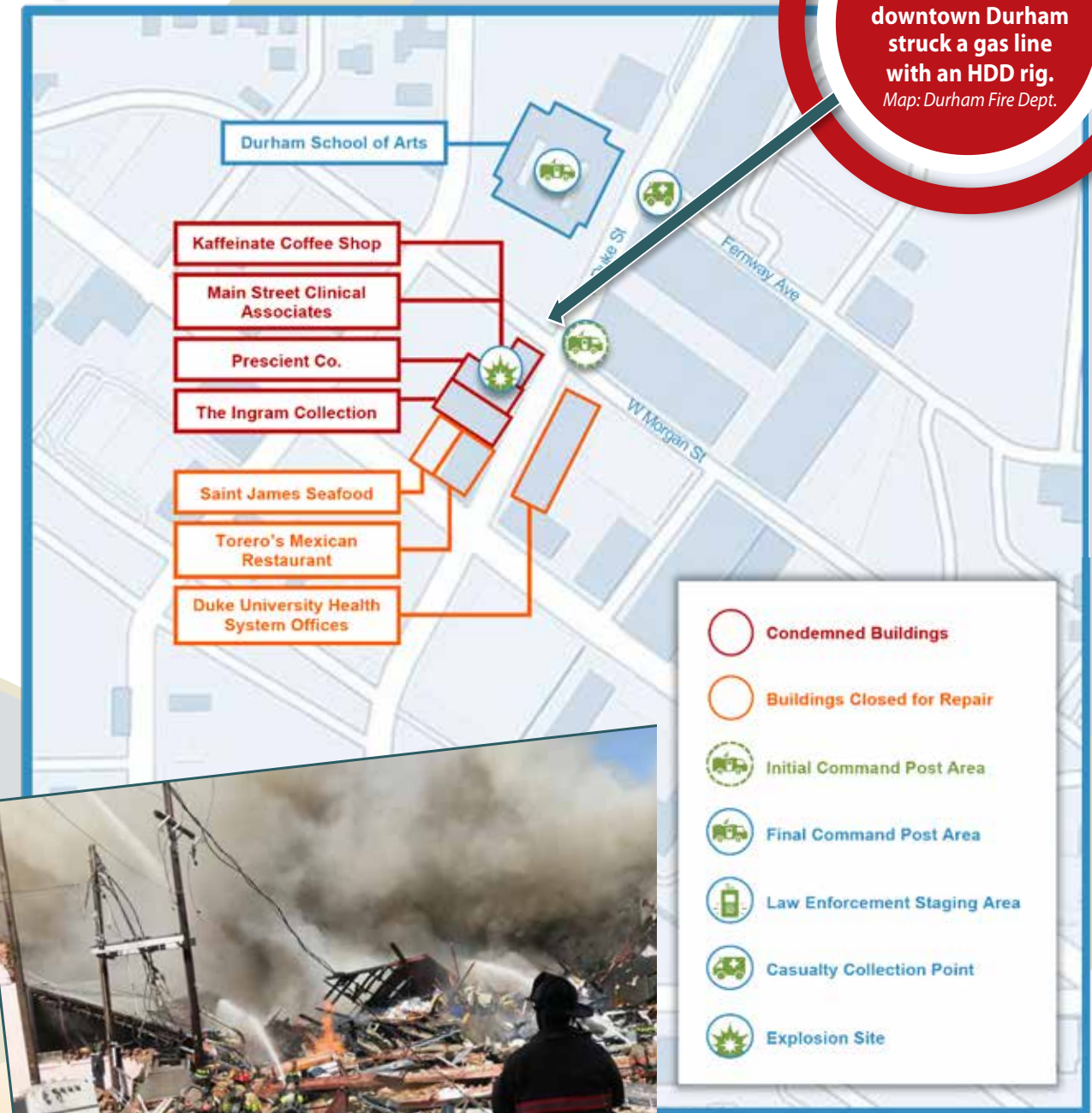
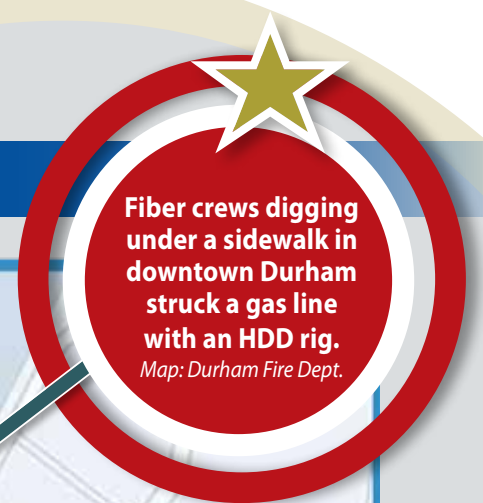
NORTH CAROLINA – APRIL 10th, DURHAM

April saw no less than SIX excavating-related fatalities across the country, two from the massive explosion in downtown Durham, and four from three separate trench collapse incidents. On April 10th, a fiber crew digging under a sidewalk in downtown Durham struck a gas service line with an HDD rig. After first calling 811 to report the smell of escaping gas, the caller then called 911 to have the nearby buildings evacuated. The explosion occurred 30 minutes after this 911 call, completely destroying the Studebaker building and its ground-level coffee shop, killing the shop owner, Mr. Kong Lee, and utility worker Jay Rambeaut. Twenty-five other people were wounded and taken to the hospital, including nine firefighters and two utility workers.

Durham Explosion – *Incident Map*



Durham Fire Department 2019 Report



Left page: Mr. Kong Lee, owner of Kaffeinate Coffee Shop, moments before the explosion, captured on security cam footage. Durham Fire Dept. Engine 1 was on the scene at 115 N. Duke St.

Above: The aftermath of the explosion in which Mr. Lee was killed and remains of the historic Studebaker building, including the coffee shop, on ground level.

NORTH CAROLINA - AUGUST 27th, CLAYTON

Three separate gas leaks in Johnston, Wake and Durham counties occurred in a single day in the Triangle area of North Carolina. The gas leak in Johnston County shut down a highway for several hours, while a 6-inch gas line strike in Durham led to the evacuations of 25 homes in the area.

NORTH DAKOTA - MAY 21st, GRAND FORKS

Construction workers doing work on the UND campus hit a 4-inch gas line, causing an evacuation of multiple buildings in the area. The repair work took more than four hours before an "all clear" was issued.

OHIO - AUGUST 9th, CENTERVILLE

A fencing contractor, digging post holes for a fence, hit a 2-inch residential gas line with their auger, which prompted the evacuation of three homes and the swimming pool at Black Oak Park. A gas utility crew arrived on the scene, and worked to stop the leak.

OKLAHOMA - OCTOBER 7th, OKLAHOMA CITY

Construction workers using a small backhoe struck a medium pressure gas line in downtown Oklahoma City, leading to road closures, and causing the evacuation of multiple buildings in the area.

OREGON - AUGUST 18th, RAINIER

A contractor working on a rail project accidentally struck and ruptured a water main, sending water spewing up out of the ground. Service in the city of Rainier was shut off for six hours, with a boil order in place throughout the next day.

PENNSYLVANIA - SEPTEMBER 6th, BRADFORD

Contractors working on street repairs jackhammered into a 12-inch water main, releasing about 300,000 gallons of water into the street. The city water reservoir dropped about one foot from the incident, according to city authorities.

RHODE ISLAND - MAY 16th, PROVIDENCE

For the second time in one week, a construction crew doing road work in downtown Providence hit a pressurized 16-inch cast iron gas line, leading to road closures and the evacuation of four nearby buildings.

SOUTH CAROLINA - SEPTEMBER 24th, CHARLESTON

A third-party excavator accidentally struck a gas line, prompting the evacuation of the MUSC's Shawn Jenkins Children's Hospital.

TENNESSEE - SEPTEMBER 25th, MEMPHIS

A telecom contractor working on fiber optic cables struck and ruptured a water main, leading to flooding, road closures and massive traffic delays in the area.

TENNESSEE - OCTOBER 24th, OAK RIDGE

Fiber crews were blamed for two utility strikes in Oak Ridge, first breaking a water main that caused mud and water damage to a nearby house. Though later, city officials said that the line was mis-marked, and that the locator's map did not show the water line that was hit. Later in the week, a fiber line in the area was cut as well, leading to an internet outage for a large section of Oak Ridge.

Charred debris from a home explosion sparked by a struck gas line, July 15 in Murrieta CA. Photo: Thomas Young.



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A gas company crew works to repair a gas line damaged by a contractor working on W. Stephan St. in Martinsburg, West Virginia.

TEXAS - AUGUST 20th, COMANCHE

A contractor ruptured the City of Comanche's water main, sending water shooting 70 feet into the air, and causing the mayor to declare a disaster. The entire city, as well as some of the outlying areas, was completely out of water, as other lines around the city started to break when the water was turned back on. Crews worked through the night to get the water shut off. As the water was turned back on, other lines around the city started breaking.

UTAH - SEPTEMBER 26th, SANTA CLARA

A housing contractor struck a 2-inch gas line, closing the block for over an hour while crews worked to crimp the line on either side of the leak. The contractor had not called 811 to mark the locations of underground utilities prior to digging.

UTAH - NOVEMBER 13th, SALT LAKE CITY

A contractor boring underground in downtown Salt Lake City ruptured a gas line, which led to road closures and forced evacuations in the area, including the Cathedral of the Madeleine.

VERMONT - AUGUST 30th, BURLINGTON

A contractor hit a natural gas line, causing a gas leak that forced evacuations and street closures in downtown Burlington. It was Friday of Labor Day weekend, and several businesses and restaurants were forced to close during what was normally a very busy time for them.

VIRGINIA - NOVEMBER 5th, HENRICO

A utility contractor damaged both water and gas lines, closing a busy road during the morning rush hour. A water main strike had occurred in the same area the previous day.

WASHINGTON - OCTOBER 14th, SEATTLE

A construction crew operating a trencher struck a 2-inch gas line, which ultimately led the Seattle Fire Department to order a 12-block evacuation of the area. The leak was eventually capped three hours later, but a theater in front of the incident was forced to cancel a concert scheduled for that evening.

WASHINGTON D.C. - DECEMBER 26th

A construction crew ruptured a 4-inch high pressure gas line, causing a gas leak near the Washington D.C. Navy Yard Metro station. This leak shut down a portion of the transit system's Green Line and forced the evacuation of some nearby high-rise buildings.

WEST VIRGINIA - NOVEMBER 7th, MARTINSBURG

A contractor working on upgrading traffic signals cut a 6-inch steel gas line with a pavement cutter, causing a gas leak that prompted the evacuation of several buildings in the immediate area, including a law office and an apartment building. 294 students were also evacuated from the nearby St. Joseph School.

WISCONSIN - DECEMBER 13th, MILWAUKEE

A contractor cut through a 2-inch natural gas main in downtown Milwaukee, spewing gas into the sewer system underneath four buildings with dozens of people inside. The Fire Department quickly evacuated each of the surrounding buildings as gas crews rushed to contain the spewing gas.

WYOMING - MAY 3rd, WIND RIVER

Contractors working on the North Federal Project struck a water line that flooded a nearby business park. The line had apparently been misidentified before digging began. ★

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Which is More Important — Who Did It or Root Cause? *by C. Allen Scott*

★ Letters to the Editor

Well, my career as a utility coordinator is over. I have joined the ranks of the retired. One of the last emails that I was copied on before retiring came from a frustrated colleague. It could have just as well have been the other way around; in fact, during my career, there were days where he was the recipient, and I was the frustrated sender.

During our work, my fellow utility coordinators and I were challenged with the task of finding the conflicts of pre-existing utility infrastructure and proposed highway construction before these same conflicts became delays and/or damages. The frustration that prompted that last email that I referenced came about from a conflict that had been identified and presumably resolved. New infrastructure had been installed to retire the conflicting infrastructure. Problem solved, correct? Unfortunately, no.

The problem was renamed. Instead of the conflict being at Point A, the conflict had been moved to Point B. When our pipe crew went to lay the pipe that was conflicted, they had to cross the new infrastructure. It had been marked in response to our Georgia 811 ticket. Our crew attempted to expose the facility for the width of the tolerance zone and for the depth of the trench plus one foot. They found nothing and proceeded with their task. They encountered the new infrastructure and damaged the same outside the tolerance zone.

My problem with cases like this is not with the mismarking of facilities; rather, it is with the futility of resolving a utility conflict by moving it from one point of conflict to another place of conflict. If this did not happen frequently, I would not be taking time away from retirement to write this article.

Throughout my career as a utility coordinator, I griped and complained to utility companies and the Public Service Commission about situations like the one I just described. Griping and complaining changed nothing. Rather than repeat the folly of whining, could I ask you to humor an old man and give him a chance to suggest why these damages happen? Maybe, if we understood the root cause, we could get to the core of the problem.

The first problem that I cite is that utility personnel are expected to read and digest highway plans as expertly as someone in the highway construction industry. Depending on the project, the plan set can exceed 1,000 drawings, much of which is Greek to the engineers and construction crews of the utility companies. By way of illustration, to accurately assess the impact of bridge construction on underground utility infrastructure, someone has to go to the bridge plans, identify the dimensions of the substructure, research the shoring and/or sloping requirements of safe excavation, and transfer this information to the utility plans. This is not rocket science, but it is a lot of work, and it is work that is foreign to most engineers inside the utility industry. So, in a nutshell, the first problem is the lack of conflict assessment by qualified personnel.

The second problem is that the contract between the project owner and the prime contractor is often silent on construction layout. The contracts that address construction

layout include such vague and ambiguous language that they are practically meaningless. Utility accommodations typically precede the highway construction. Without construction layout, the utility contractor is forced to attempt installation of new facilities without detailed definition of the grading, wall construction, bridge construction, etc. The result is that conflict resolution is performed by personnel that are “grading blind” as the saying goes in the highway industry. “Grading blind” is a polite way of saying that someone is simply guessing at the limits of proposed grading and structures.

The third problem is that there are no perfect plans; thus, plans are subject to revision during the construction process. Sometimes, project owners are careful to distribute plan revisions to the affected facility owners/operators. Sometimes, project owners ignore the facility owners/operators. Even when revisions are distributed, there is practically no follow-up. In fact, the instance of frustration that prompted this article involved a plan revision. The initial facility relocation had actually accommodated the proposed construction as prevailed on the day of installation. However, with the revision came no review of the change in plans—not

★
“When all parties are trying
to do the right thing and
damages still happen, claims
for recovery and fines do nothing
to prevent the next damage.”

—C. Allen Scott



This photo was taken by me to compliment BRI Utility Construction. They are one of the two utility contractors that I have seen set up a surveyor's level so that they could check grade. BRI was adjusting a nine-way telephone ductbank that was situated in conflict with a storm drain that was proposed to drain US 41 at the recently constructed Atlanta Braves Stadium.

by the project owner nor by the facility owner/operator. I must say, to my colleague's credit, that he did advise the facility owner/operator of the plan revision; however, his advisement went unheeded. Thus no one even posed the question, “Will this plan revision impact the facilities that were installed to accommodate the original plans?”

I could go on with a litany of problems, but what's the remedy? Isn't this what we are really all about—preventing delays and damages?

Part of the remedy is that we abandon the preconceived notion that damage is always excavator misconduct. I can tell you as one who spent his career as an excavator, that this preconception is a misconception that offends the conscientious excavator. If the utility community is really intent on reducing damage, my suggestion is to abandon the “witch hunts” of culprits that need to pay for damaged facilities long enough to assess the root cause. When all parties are trying to do the right thing and damages still happen, claims for recovery and fines do nothing to prevent the next damage, they simply cause animosity between stakeholders. In regard to the subject damage, the root cause was neither the negligence

of the excavator nor the negligence of the installer. The root cause was that the plans were revised after conflicting facilities had been rightly relocated. Knowing this, how are we going to prevent damage the next time that the plans are revised? Should not someone pose the question, “How will this plan revision impact the facilities that were installed to accommodate the original plan?”

I have a surveying background. Perhaps that is why I am so adamant about construction layout. As excavation is driven increasingly by GPS, and the excavator requires less construction layout, the downside of this is that while the excavators might not require it, the facility owners/operators still do. If project owners are interested in delay/damage prevention, then they need to step up. They need to write specifications that require the excavator to define his proposed construction for the benefit of the facility owners/operators, and these specifications need to be specific enough that the excavator can price construction layout when preparing his bid.

I can lose two fingers and the thumb of my right hand and still count on this same hand the number of times that I have seen a utility contractor check grade. If we are serious about delay/dam-

age prevention, projects are going to have to be staffed by people who are knowledgeable of construction layout and who are equipped to transfer alignments and grades from the construction layout that is provided.

I can lose all the digits and thumb of my right hand and still count the number of times that I have seen a facility owner/operator inspect a newly installed/adjusted facility for alignment and grade. When new facilities are damaged inside the templates of proposed construction, the fault typically comes back to the excavator along with the accusation, “You didn’t pothole enough.” I know this flies in the face of damage prevention, but as an engineer, I have to

ask, “Why should the excavator have to pothole a facility that was relocated/adjusted to accommodate the proposed construction?” The reason for this relocation/adjustment was to remedy a pre-existing conflict—not rename it. If the installer failed to accommodate the final template, and if the facility owner accepted the accommodation without inspection, why is it all the excavator’s fault when he encounters the new facility inside the template of the proposed construction? Had the installer and the facility owner/operator had done their jobs, the new facility should never invaded the template in the first place. Well, I have had my say, and I will leave it with you. Now, I can retire in peace. ★

The photo below is an illustration of the construction layout that needs to be provided for a utility contractor to understand the proposed storm drain installation. Because BRI knew how to check alignment and grade, the nine-way ductbank was successfully adjusted so that there was a separation of one V.F. between the bottom of the proposed pipe and the top of the adjusted ductbank.



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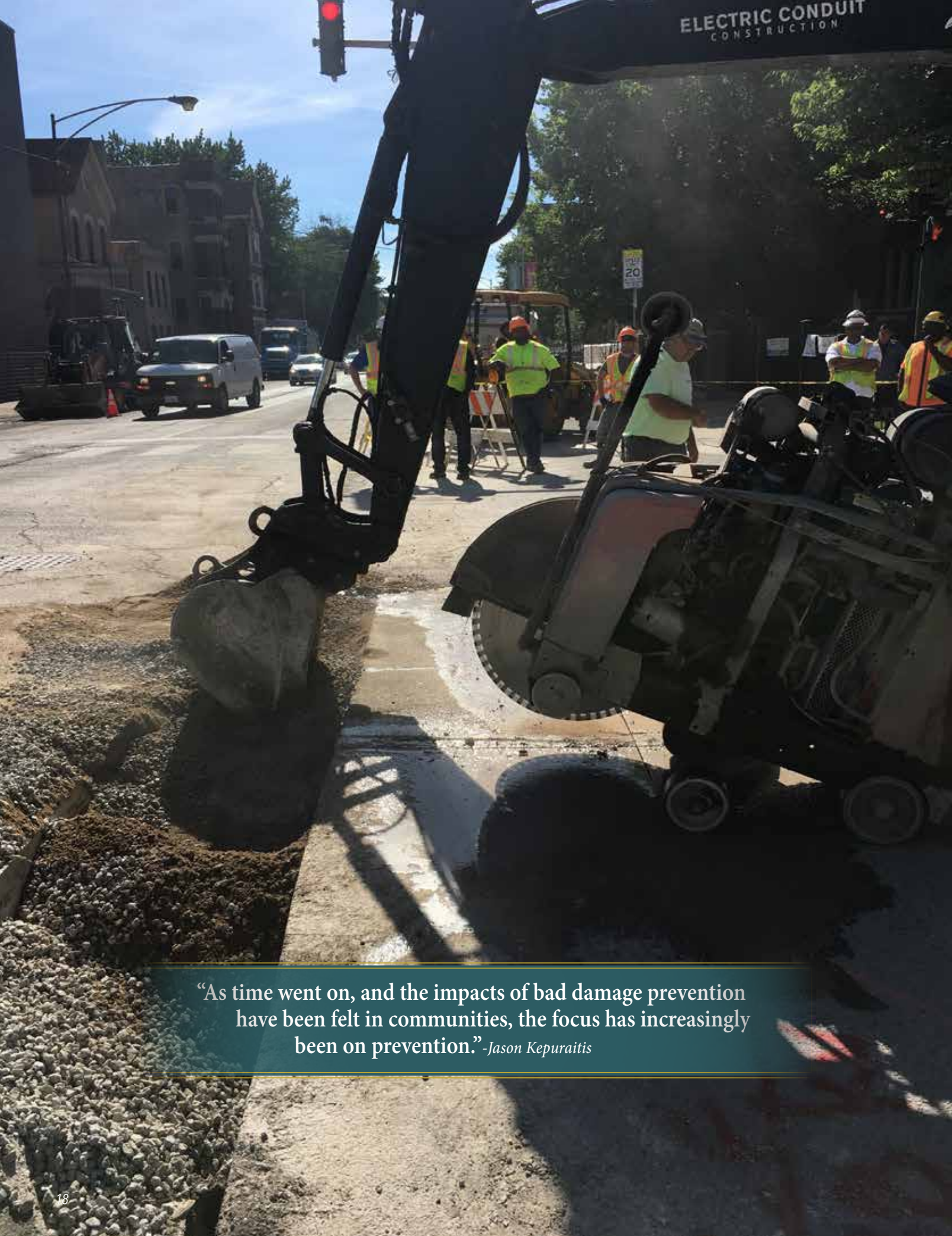
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“As time went on, and the impacts of bad damage prevention have been felt in communities, the focus has increasingly been on prevention.”-Jason Kepuraitis

CASE STUDY CATASTROPHE AVERTED!



Left: Saw cutting to find the extent of a void beneath a Chicago city street. Above: Utility engineers on site.

On July 18th, 2018 lives were saved by a very observant Electric Conduit Construction crew. Their work for that day consisted of trenching about 80 feet along Augusta Street in Chicago and laying conduit for fiber optic cable to bring faster cell service to the neighborhood. As they saw cut and removed the road base, the foreman noticed that they had cut into a void. The void turned out to be 8 feet deep and was the result of a cracked tile carrying storm water out of a catch basin. Inside the void was a 36-inch and 6-inch gas main, along with a high voltage distribution cable, all unsupported due to material being carried away by the storm water flowing through the cracked tile.

The foreman realized that if the road surface failed the gas main would likely crack and an explosion and fire would be the result. He immediately shut the road down and parked a dump truck in the middle of the street to prevent traffic from entering the area. He notified CDOT, Com Ed and Peoples Gas as well as the neighboring residences and college prep school.

A true disaster was averted. The crew opened up the void and back filled it with sand and road gravel. This gave support to the gas mains until permanent repairs are made.

Sinkholes happen for a variety of reasons. Ground water, broken water mains, leaking storm drains can all contribute to their formation. Some of the most complex civil engineering problems stem from the interaction of water and the subsurface ground matrix. It sounds mundane. But there's a good chance you've seen sinkholes in the news before. As urban subsurface infrastructure ages problems like sinkholes will continue to occur. Many of our subsurface utilities are placed directly below roadways, and the road surface often acts as a final bridge above the sinkhole, hiding the void below. Erosion is a powerful force and in the case of sink holes it is difficult to detect until it is too late, and the surface collapses. Fortunately ECC discovered this one, called the appropriate parties, assisted with the back fill and completed the project with no incidents.

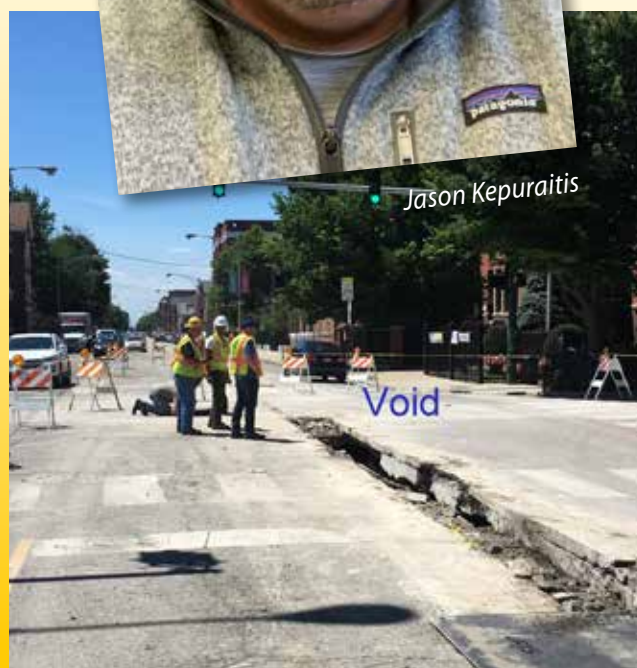
As a company we are very proud of our crews. They consistently keep safety at the top of their minds. This attitude extends to their safety and the safety of the public. The actions of our foreman Jason Kepuraitis, and his crew, Jake Fishback, Chris Hoselton and Ron Underwood are exemplary. There will be no headlines, no reports of people injured, and no one weeping over the loss of a loved one. Because Electric Conduit Construction crews go above and beyond when they are doing their work. We refer to these incidents as a Good Catch! In this case it was an understatement.

Catastrophe Averted! *Case Study Spotlight*

★ ECC Crew Leader Jason Kepuraitis Weighs In



Jason Kepuraitis, and his crew:
Jake Fishback, Chris Hoselton and Ron Underwood



To start off, it's amazing how many voids like this exist in the City of Chicago. With all of the old infrastructure in the city, this is an unseen problem until we actually pull the roadway and verify the void. In this case, I believe that the quick decision making by myself and crew was a huge factor in keeping the area safe and avoiding what could of been a huge potential catastrophe. Communication and the chain of command in our industry is key. With that being said, when I realized just how big this void was, my crew followed my direction immediately. There was no panic or confusion, just an immediate action to get the area completely shut down and keep traffic out of the affected area. It was like a quarterback calling an audible at the line of the big game. As I called the audible, my team looked at me and received the new play. The ball was snapped, and all of the players executed the call perfectly and celebrated in the end zone knowing we just beat the defense coming at us. Teamwork is dream work, and on that day, myself and my team demonstrated that. ★

