IOWA 811 ONE CALL SM

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Excavator QUARTERLY

IOWA 811 ONE CALL SM

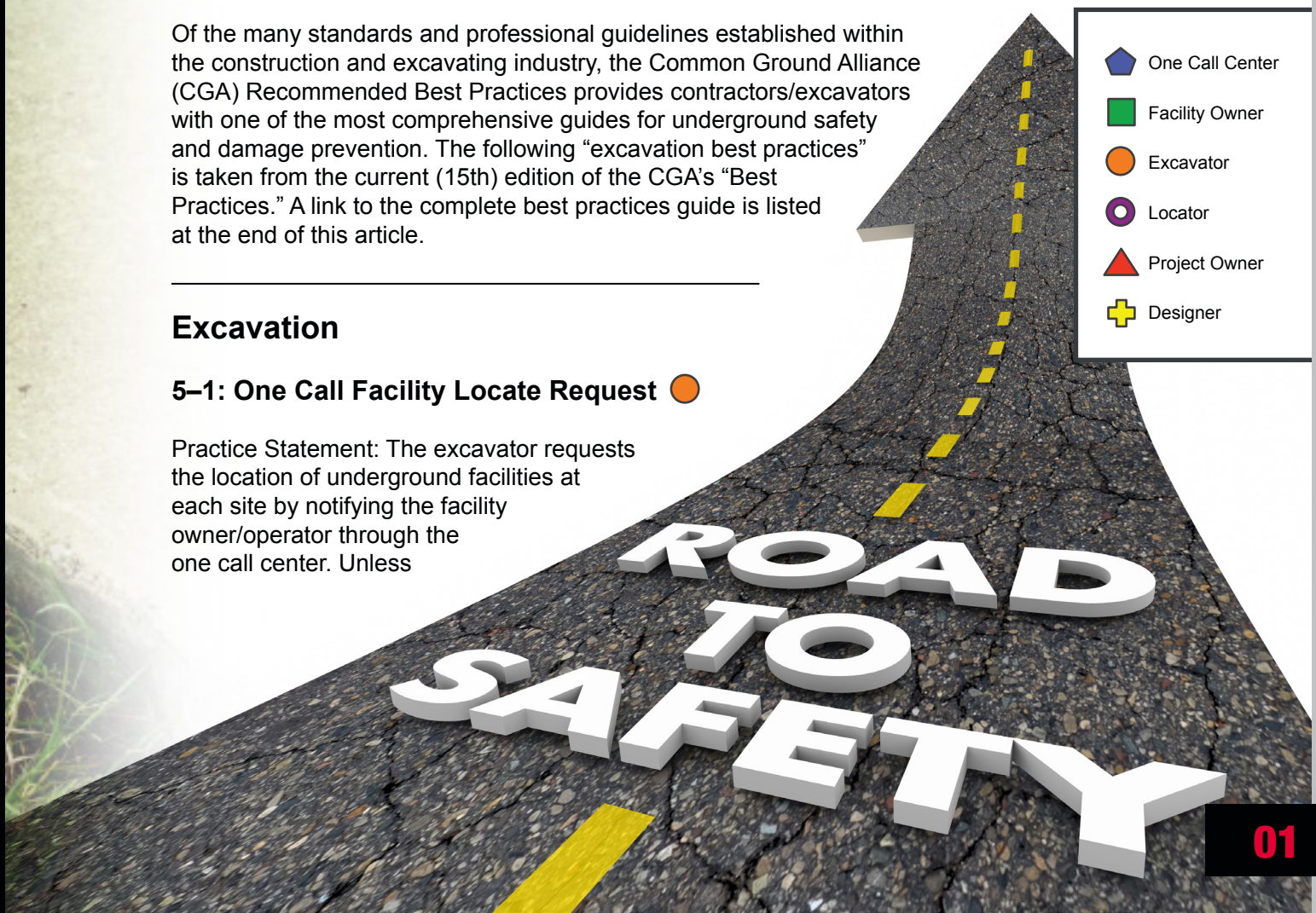
WHAT'S UP BELOW

Defensive Digging

Typically, one of the first things a beginning driver is taught is the concept of defensive driving. Operating a motor vehicle is the easy part, but avoiding all the obstacles – especially other drivers – is the hard part. The same can be said for excavators who routinely encounter obstacles that, like unexpected driving hazards, can greatly impact excavator safety and operational efficiency. Similar to the laws that apply to operating a motor vehicle, the laws that regulate the 'one call' industry, including excavator requirements, were created to establish standards; rules and regulations designed to protect the safety, and the rights of the public. All good drivers and all good excavators understand that merely following laws and regulations is not enough to ensure the safest standards. Excavators should practice defensive digging techniques for the same reasons they practice defensive driving techniques; in order to limit potential hazards and obstacles, and to maximize safety.

Contingency planning and risk management begins with identifying known obstacles/hazards and assessing potential 'unknown' obstacles/hazards. General preparedness is the key to dealing with obstacles and hazards encountered at the worksite. Fortunately, the construction and excavating industry has been around long enough that there are well documented guidelines, standards and best practices already in place. Excavators should embrace these 'best practices' as they are the blueprint to defensive digging.

Of the many standards and professional guidelines established within the construction and excavating industry, the Common Ground Alliance (CGA) Recommended Best Practices provides contractors/excavators with one of the most comprehensive guides for underground safety and damage prevention. The following "excavation best practices" is taken from the current (15th) edition of the CGA's "Best Practices." A link to the complete best practices guide is listed at the end of this article.



Excavation

5–1: One Call Facility Locate Request

Practice Statement: The excavator requests the location of underground facilities at each site by notifying the facility owner/operator through the one call center. Unless

otherwise specified in state/provincial law, the excavator calls the one call center at least two working days and no more than ten working days prior to beginning excavation.

Practice Description: Currently 50 states and 5 Canadian provinces have one call legislation and/or established one call centers recognizing that excavation performed without prior notification poses a risk to public safety, excavators, and the environment, and can disrupt vital services provided by facility operators. Increased participation in this one call system provides for improved communication between excavators and facility operators necessary to reduce damage.

5–2: White Lining

Practice Statement: When the excavation site cannot be clearly and adequately identified on the locate ticket, the excavator designates the route and/or area to be excavated using white premarking, either onsite or electronically (when available through the one call center), prior to or during the request for the locate ticket.

Practice Description: The route of the excavation is marked with white paint, flags, stakes, lines, polygons, or a combination of these to outline the dig site prior to or during notification to the one call center and before the locator arrives on the job. Electronic white lining when available provides an alternative method where excavators may indicate their defined dig area visually by electronic data entry (lines or polygons) without the need for a physical site visit. The technology allows the excavator to identify for the locate technician a clear delineation of their proposed excavation area.

Premarking allows the excavators to accurately communicate to the one call center, facility owners/operators, or their locator where excavation is to occur. The 1997 safety study “Protecting Public Safety through Excavation Damage Prevention” by the NTSB reached the conclusion that premarking is a practice that helps prevent excavation damage. Maine was one of the first states to have mandatory premarking for non-emergency excavations. Connecticut also adopted a premarking requirement; however, the law provides for face-to-face meetings between operators and excavators on projects that are too large for or not conductive to premarking. Facility owners/operators can avoid unnecessary work created when locating facilities that are not associated with planned excavation.

5–3: Locate Reference Number

Practice Statement: The excavator receives and maintains a reference number from the one call center that verifies that the locate was requested.

Practice Description: All calls from excavators processed by the one call center receive a unique message reference number, which is contained on all locate request messages. The excavator records this number; it is proof of notification to the members. The computer-generated request identifies the date, time, and sequence number of the locate request. Each locate request ticket (notification) is assigned a unique number with that one call center, the requestor, and the facility owner/operator. This number distinguishes this ticket from all other tickets so that it can be archived and retrieved upon request to provide the details of that request only.

5–4: Pre-excavation Meeting

Practice Statement: When practical, the excavator requests a meeting with the facility locator at the job site prior to marking the facility locations. Such pre-job meetings are important for major, or unusual, excavations.

Practice Description: The meeting facilitates communications, coordinates the marking with

One Call Center | Facility Owner | Excavator | Locator | Project Owner | Designer

actual excavation, and ensures identification of high-priority facilities. An on-site pre-excavation meeting between the excavator, facility owners/operators, and locators (where applicable) is recommended on major or large projects. This includes projects such as road, sewer, water, or other projects that cover a large area, that progress from one area to the next, or that are located near critical or high-priority facilities. Such facilities include, but are not limited to, high-pressure gas, high-voltage electric, fiber-optic communication, and major pipe or water lines.

5–5: Facility Relocations

Practice Statement: The excavator coordinates work that requires temporary or permanent interruption of a facility owner/operator's service with the affected facility owner/operator in all cases.
Practice Description: Any temporary or permanent interruption requires the active participation by the facility owner/operator and the excavator to ensure protection of facilities through a joint preplanning meeting or conference call. One call centers note on the ticket any special contractor requests for a joint meeting that require the facility owner/operator to initiate the process.

5–6: Separate Locate Requests

Practice Statement: Every excavator on the job has a separate one call reference number before excavating.

Practice Description: There are often several excavators on a job site performing work. The construction schedule may dictate different types of work requiring excavation from different specialty contractors simultaneously. In these situations, it is imperative for each excavator to obtain a one call reference number before excavation to ensure that the specific areas have been appropriately marked by any affected underground facility owner/operator.

5–7: One Call Access (24/7)

Practice Statement: The excavator has access to a one call center 24 hours per day, 7 days a week.
Practice Description: Utilities service the public needs 24 × 7 and thus should be protected during that same time. Certain conditions may exist that require excavators to work during off-hours (city/road congestion, off-peak utility service hours). Although most excavators are on the job site during regular work hours, they need to be able to call in future work locations after 5:00 p.m. This allows them more flexibility to schedule work and to avoid peak hours of locate requests at the one call center.

5–8: Positive Response

Practice Statement: The underground facility owner/operator either 1) identifies for the excavator the facility's tolerance zone at the work site by marking, flagging, or other acceptable methods; or 2) notifies the excavator that no conflict situation exists. This takes place after the one call center notifies the underground facility owner/operator of the planned excavation and within the time specified by state/provincial law.

Practice Description: If a facility owner/operator determines that the excavation or demolition is not near any of its existing underground facilities, it notifies the excavator that no conflict exists and that the excavation or demolition area is "clear." This notification by the facility owner/operator to the excavator may be provided in any reasonable manner including, but not limited to face-to-face communications; phone or phone message, facsimile or other electronic means; posting at the excavation or demolition area; or marking the excavation or demolition area. If an excavator has knowledge of the existence of an underground facility and has received an "all clear," a prudent excavator will attempt

to communicate that a conflict does indeed exist, and the locator will make marking these facilities a priority before excavation begins. Better communication between the excavator and the facility owner/operator is required as an area of excavation becomes more crowded with new underground facilities. "Positive response" is a term used to describe the two types of action taken by a facility owner/operator after it receives notification of intent to excavate. The facility owner/operator must 1) mark its underground facilities with stakes, paint, or flags; or 2) notify the excavator that the facility owner/operator has no underground facilities in the area of excavation. This process allows the excavator to begin work in a timely manner.

When the excavator makes the request to the one call center, the excavator is told which facility owners/operators will be notified. The excavator logs these facilities on a job sheet and identifies which facility owner/operators have responded by marking and which have cleared the area. When a facility owner/operator does not respond by marking or clearing, it may indicate that the facility owner/operator did not receive a locate notice or that the one call center's contact information for that facility owner/operator may be incorrect, incomplete, or corrupt (which could result in calamity).

When the excavator has obtained all required information, the excavation can commence with confidence that the safety of the work crew and the public at large has been considered.

5–9: Facility Owner/Operator Failure to Respond

Practice Statement: If the facility owner/operator fails to respond to the excavator's timely request for a locate (e.g., within the time specified by state/provincial requirements) or if the facility owner/operator notifies the excavator that the underground facility cannot be marked within the time frame and a mutually agreeable date for marking cannot be arrived at, then the excavator re-calls the one call center. However, this does not preclude the excavator from continuing work on the project. The excavator may proceed with excavation at the end of two working days, unless otherwise specified in state/provincial law, provided the excavator exercises due care in all endeavors.
Practice Description: The facility owner/ operator and the excavator partner together to ensure that facilities are marked in an acceptable time frame to allow for underground facility protection.

5–10: Locate Verification

Practice Statement: Prior to excavation, excavators verify that they are at the correct location, verify locate markings and, to the best of their ability, check for unmarked facilities.

Practice Description: Upon arrival at the excavation site and prior to beginning the excavation, an excavator does the following:

- Verifies that the dig site matches the one call request and is timely.
- Verifies that all facilities have been marked and reviews color codes if in doubt.
- Verifies all service feeds from buildings and homes.
- Checks for any visible signs of underground facilities, such as pedestals, risers, meters, and new trench lines.
- Checks for any facilities that are not members of the one call center and contact someone to get them located.

Use of a pre-excavation checklist is recommended by insurers and practiced by responsible excavating contractors.

5–11: Documentation of Marks

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Practice Statement: An excavator uses dated pictures, videos, or sketches with distance from markings to fixed objects recorded, to document the actual placement of markings.

Practice Description: In most situations when underground facilities are not properly marked, excavators have no way of knowing where underground utilities are located. If locate markings are adequately documented through the use of photographs, video tape, or sketches before excavation work begins, it is easier to resolve disputes if an underground facility is damaged as a result of improper marking, failure to mark, or markings that have been moved, removed, or covered. It is important for excavators and locators to document the location of markings before excavation work begins. The primary purpose of this best practice is to avoid unnecessary litigation and expensive legal fees for all parties involved.

5–12: Work Site Review with Company Personnel

Practice Statement: Prior to starting work, the excavator reviews the location of underground facilities with site personnel.

Practice Description: Sharing information and safety issues during an on-site meeting between the excavator and the excavating crews helps avoid confusion and needless damage to underground facilities.

5–13: One Call Reference at Site

Practice Statement: Except in case of an emergency, the excavator at each job site has available a complete description of the dig site, a list of the facility owner members impacted at that dig site as identified by the one call center, and the one call center ticket number.

Practice Description: The availability of locate request details on site is useful because excavators can easily access information about the location and extent of work, the valid start time, and the list of operators notified. The documentation also provides an excavator with appropriate information for daily tailgate meetings for crews; provides quick references for excavation equipment operators; and facilitates communications between the excavator and the one call center with respect to that particular locate request, should it become necessary. When multiple crews are working on the same project at separate locations or when different employers have crews working at the same location, each crew has the information.

5–14: Contact Names and Numbers

Practice Statement: The excavator’s designated competent person at each job site has access to the names and phone numbers of all facility owner/operator contacts and the one call center.

Practice Description: Situations arise on the job site that require immediate notification of the facility owner/operator, one call center, or local emergency personnel. To avoid costly delays, the excavator ensures that the designated job site personnel have all appropriate names and phone numbers. If telephone communication is unavailable, radio communication to the “home office” is available so that timely notification can be made. The “home office” also has immediate access to all appropriate names and telephone numbers.

5–15: Facility Avoidance

Practice Statement: The excavator uses reasonable care to avoid damaging underground facilities. The excavator plans the excavation so as to avoid damage or to minimize interference with the

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underground facilities in or near the work area.

Practice Description: Foremost on any construction project is safety. Excavators using caution around underground facilities significantly contribute to safe excavation of existing facilities.

5–16: Federal and State Regulations

Practice Statement: The excavator complies with all applicable federal and state/provincial safety regulations, and, when required, provides training as it relates to the protection of underground facilities.

Practice Description: Although most existing state/provincial damage prevention legislation does not include reference to federal and state/ provincial regulations, it is important to include reference to worker safety and training in the best practices. Excavators are required to comply with federal and state/provincial occupational safety and health requirements to protect employees from injury and illness. These regulations include reference to training each employee to recognize and avoid unsafe conditions in the work environment and to control or eliminate any hazards or exposures to illness or injury. Therefore, the excavator's crew, as part of its safety training, is informed of the best practices and regulations applicable to the protection of underground facilities.

5–17: Marking Preservation

Practice Statement: The excavator protects and preserves the staking, marking, or other designation of underground facilities until no longer required for proper and safe excavation. The excavator stops excavating and notifies the one call center for re-marks if any facility mark is removed or is no longer visible.

Practice Description: During long, complex projects, the marks for underground facilities may need to be in place far longer than the locating method is durable. Painting, staking, and other marking techniques last only as long as the weather and other variables allow. When a mark is no longer visible, but work continues around the facility, the excavator requests a re-mark to ensure the protection of the facility.

5–18: Excavation Observer

Practice Statement: The excavator has an observer to assist the equipment operator when operating excavation equipment around known underground facilities.

Practice Description: The excavator designates a worker (an observer) who watches the excavation activity and warns the equipment operator while excavating around a utility to prevent damaging that buried facility.

5–19: Excavation Tolerance Zone

Practice Statement: The excavator observes a tolerance zone that is comprised of the width of the facility plus 18 in. on either side of the outside edge of the underground facility on a horizontal plane. This practice is not intended to preempt any existing state/provincial requirements that currently specify a tolerance zone of more than 18 in.

Practice Description: (See Practice Statement 5–20.)

5–20: Excavation within Tolerance Zone

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Practice Statement: When excavation is to take place within the specified tolerance zone, the excavator exercises such reasonable care as may be necessary for the protection of any underground facility in or near the excavation area. Methods to consider, based on certain climate or geographical conditions, include hand digging when practical (pot holing), soft digging, vacuum excavation methods, pneumatic hand tools, other mechanical methods with the approval of the facility owner/operator, or other technical methods that may be developed. Hand digging and non-invasive methods are not required for pavement removal.

Practice Description: Safe, prudent, non-invasive methods that require the excavator to manually determine the actual location of a facility are considered “safe excavation practices” in a majority of state/provincial laws (38 states). A majority of states outline safe excavation practices to include hand digging or pot holing (16 states). Some states specifically allow for the use of power excavating equipment for the removal of pavement. Each state/province must take differing geologic conditions and weather related factors into consideration when recommending types of excavation within the tolerance zone.

5–21: Mismarked Facilities

Practice Statement: The excavator notifies the facility owner/ operator directly or through the one call center if an underground facility is not found where one has been marked or if an unmarked underground facility is found. Following this notification, the excavator may continue work if the excavation can be performed without damaging the facility, unless specified otherwise in state/provincial law.

Practice Description: When an excavator finds an unmarked or inaccurately marked facility, excavation stops in the vicinity of the facility and notification takes place. If excavation continues, the excavator plans the excavation to avoid damage and interference with other facilities and protects facilities from damage.

5–22: Exposed Facility Protection

Practice Statement: Excavators support and protect exposed underground facilities from damage.
Practice Description: Protecting exposed underground facilities is as important as preventing damage to the facility when digging around the utility. Protecting exposed underground facilities helps ensure that the utility is not damaged and, at the same time, protects employees working in the vicinity of the exposed facility. Exposed facilities can shift, separate, or be damaged when they are no longer supported or protected by the soil around them. Excavators support or brace exposed facilities and protect them from moving or shifting, which could result in damage to the facility. This can be accomplished in different ways; for example, by shoring the facility from below or by providing a timber support with hangers across the top of an excavation to ensure that the facility does not move or bend. In addition, workers are instructed to not climb on, strike, or attempt to move exposed facilities that could damage protective coatings, bend conduit, separate pipe joints, damage cable insulation, damage fiber optics, or in some way affect the integrity of the facility. The Occupational Safety and Health Administration (OSHA) also has addressed this issue in Subpart P—Excavation Standard 29 CFR 1926.651(b)(4), which states “While the excavation is open, underground installations shall be protected, supported, or removed as necessary to safeguard employees.” For example, an unsupported sewer main could shift, causing the pipe joints to separate, which could result in the trench where employees are working to flood, endangering the safety of employees.

5–23: Locate Request Updates

One Call Center | Facility Owner | Excavator | Locator | Project Owner | Designer

Practice Statement: The excavator calls the one call center to refresh the ticket when excavation continues past the life of the ticket (sometimes, but not always, defined by state/provincial law). This recognizes that it is a best practice to define ticket life. If not currently defined in state/provincial law, ticket life is ideally 10 working days but does not exceed 20 working days. Original locate request tickets are generated so that the minimum number of locate request updates are necessary for the duration of a project. After all the excavation covered by a locate request is completed, no additional locate request updates are generated. Communication between excavation project planners, field personnel, and clerical personnel is essential in accomplishing this task.

Practice Description: Refreshing the ticket recognizes that markings are temporary and provides notification to facility owners/operators of ongoing excavation when a job is started but not completed as planned. Any excavation not begun during the life of the ticket is recalled to the one call center. Any excavation that covers a large area and will progress from one area to the next over a period of time is broken into segments when notifying the one call center in order to coordinate the marking with actual excavation. The possibility exists that new facilities have been installed in the area where the excavation is to be conducted after the original notification and marking. This practice also helps in situations where multiple excavators are working in the same area at essentially the same time. An example of when this can occur is when two facility owners, such as a cable television company and a telephone company, are planning to serve a new section of a subdivision. In their pre-planning process, they see a vacant space in the right-of-way to place their new facility. Each excavator (internal or external) calls the one call center for locates and each facility owner/operator comes and marks their respective facilities indicating that nothing exists. For one reason or another, one of the excavators gets delayed and does not start construction as planned, and when returning to the job site to place the new facility, finds new lines have been installed in the previously vacant space. Many facility owners/operators do not perform their own locates and utilize the services of a contracted facility locator. These contracted facility locators may not be aware of work planned in the near future. By excavators refreshing the locate ticket, the contract locator has another opportunity to identify newly placed facilities. This practice also gives the facility owner/operator another chance to identify the location of their facilities and to avoid possible damage and disruption of service if something was marked incorrectly or missed on a previous locate. Excellent planning, generation, and updating of tickets enhance safety and reduce the unnecessary use of locate resources.

5–24: Facility Damage Notification

Practice Statement: An excavator discovering or causing damage to underground facilities notifies the facility owner/operator and the one call center. All breaks, leaks, nicks, dents, gouges, grooves, or other damages to facility lines, conduits, coatings, or cathodic protection are reported.

Practice Description: A majority of states require notification for damage or substantial weakening of an underground facility (27 states). The possibility of facility failure or endangerment of the surrounding population dramatically increases when a facility has been damaged. Although the facility may not immediately fail, the underground facility owner/operator is provided the opportunity to inspect the damage and make appropriate repairs.

5–25: Notification of Emergency Personnel

Practice Statement: If the damage results in the escape of any flammable, toxic, or corrosive gas or liquid or endangers life, health, or property, the excavator responsible immediately notifies 911 and the facility owner/operator. The excavator takes reasonable measures to protect everyone in immediate danger, the general public, property, and the environment until the facility owner/operator or

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emergency responders arrive and complete their assessment.

Practice Description: This practice is already required by many of the states' one call legislation. This practice minimizes the danger to life, health, or property by notifying the proper authorities to handle the emergency situation. In these situations, local authorities are able to evacuate as appropriate and command substantial resources unavailable to the excavator or underground facility owner/operator. The excavator takes reasonable measures based on their knowledge, training, resources, experience, and understanding of the situation to protect themselves, people, property, and the environment until help arrives. The excavator responsible remains on-site to convey any pertinent information to responders that may help them to safely mitigate the situation.

5–26: Emergency Excavation

Practice Statement: In the case of an emergency excavation, maintenance or repairs may be made immediately, provided that the excavator notifies the one call center and facility owner/operator as soon as reasonably possible. This includes situations that involve danger to life, health, or property or that require immediate correction in order to continue the operation of or ensure the continuity of public utility service or public transportation.

Practice Description: This practice allows excavation to begin immediately to restore service or to stop a hazardous situation from getting worse in the case of a gas or pipeline leak, cut telephone cable, or other facility damage.

5–27: Backfilling

Practice Statement: The excavator protects all facilities from damage when backfilling an excavation. Trash, debris, coiled wire, or other material that could damage existing facilities or interfere with the accuracy of future locates are not buried in the excavation.

Practice Description: Extra caution must be taken to remove large rocks, sharp objects, and large chunks of hard-packed clay or dirt. No trash or pieces of abandoned lines are backfilled into the trench. This helps prevent inadvertent damage to the facility during the backfill process.

5–28: As-built Documentation

Practice Statement: Contractors installing underground facilities notify the facility owner/operator if the actual placement is different from expected placement.

Practice Description: For a facility owner/operator to maintain accurate records of the location of their facilities, it is critical that the contractor installing the new facility be required to notify the facility owner/operator of deviations to the planned installation. Some facility owners/operators do not require a full-time inspector and use a sampling process to ensure that a new facility is correctly installed in compliance to specifications. When this occurs, it becomes much more critical for the contractor to notify the facility owner/operator of changes. For example, it is common for the contractor to make adjustments in the location of the new facility when rocks or other underground obstructions are encountered or when the location of the new facility conflicts with another existing underground facility. This change in plan can represent changes in horizontal or vertical distances from the specified plans. The facility owner/operator establishes standards that require notification if a deviation is beyond specified tolerances, such as changes in depth of 6 in. or more and lateral measurement changes of greater than 1 ft. When these changes to the expected location are communicated to the facility owner/operator, it is the owner/operator's responsibility to take appropriate action to update their

records so that an accurate locate can be conducted in the future.

5–29: Trenchless Excavation

Practice Statement: All stakeholders comply with all best practices and the following general guidelines prior to, during, and after any trenchless excavation (as applicable).

Practice Description:The excavator requests the location of underground facilities at the entrance pit, trenchless excavation path, and the exit pit by notifying the facility owner/operator through the one call center. The trenchless equipment operator performs a site inspection, walking the trenchless excavation path prior to commencing work, and has a good understanding of the job.

The trenchless excavation operator confirms and maintains the path and minimum clearances established by the project owner and design engineer by tracking and recording the path of the trenchless excavation until complete. Means of tracking trenchless excavations include electronic locating/guidance devices, pipe lasers, water levels, visual inspection, etc.

When existing facilities are known to be present but cannot be potholed as a result of local conditions, the facility owner and the excavator meet to discuss how to safely proceed with the excavation. The excavator stops the trenchless excavation operations if an abnormal condition, unknown substructure, or other hidden hazard is encountered. The excavator proceeds safely only after making positive identification.

5–30: Emergency Coordination with Adjacent Facilities

Practice Statement: Emergency response planning includes coordination with emergency responders and other aboveground and/or underground infrastructure facility owner/operators identified by the Incident Commander through the Incident Command System/Unified Command (ICS/UC) during an emergency.

Practice Description: During emergency situations, there are many stakeholders involved: excavators, locators, owner/operators, first responders, one call centers, and the general public. Any actions taken by one stakeholder could adversely affect other stakeholders. Accordingly, emergency planning and response are coordinated.

5–31: No Charge for Providing Underground Facility Locations

Practice Statement: Upon notification by one call centers, locations of underground facilities are provided by operators at no cost to excavators.
Practice Description: It is the basic underpinning of the call-before-you-dig process that persons involved in excavation activities receive facility locates at no charge when they contact their local one call center to give notice of intent to excavate. This service is critical to maintaining the communication between operators and excavators. Call-before-you-dig education and marketing campaigns, such as 811 and those promoted by one call centers and associated industries, advise persons involved in excavation activities, including the public, homeowners, and professional excavators, that the service is provided by facility operators at no charge to the person providing the notice of intent to excavate.

5–32: Vacuum Excavation

Practice Statement: Vacuum excavation, when used appropriately, is an efficient, safe, and effective alternative to hand digging within the designated underground facility tolerance zone. Use of equipment also follows state/provincial laws and/or local ordinances.

One Call Center | Facility Owner | Excavator | Locator | Project Owner | Designer

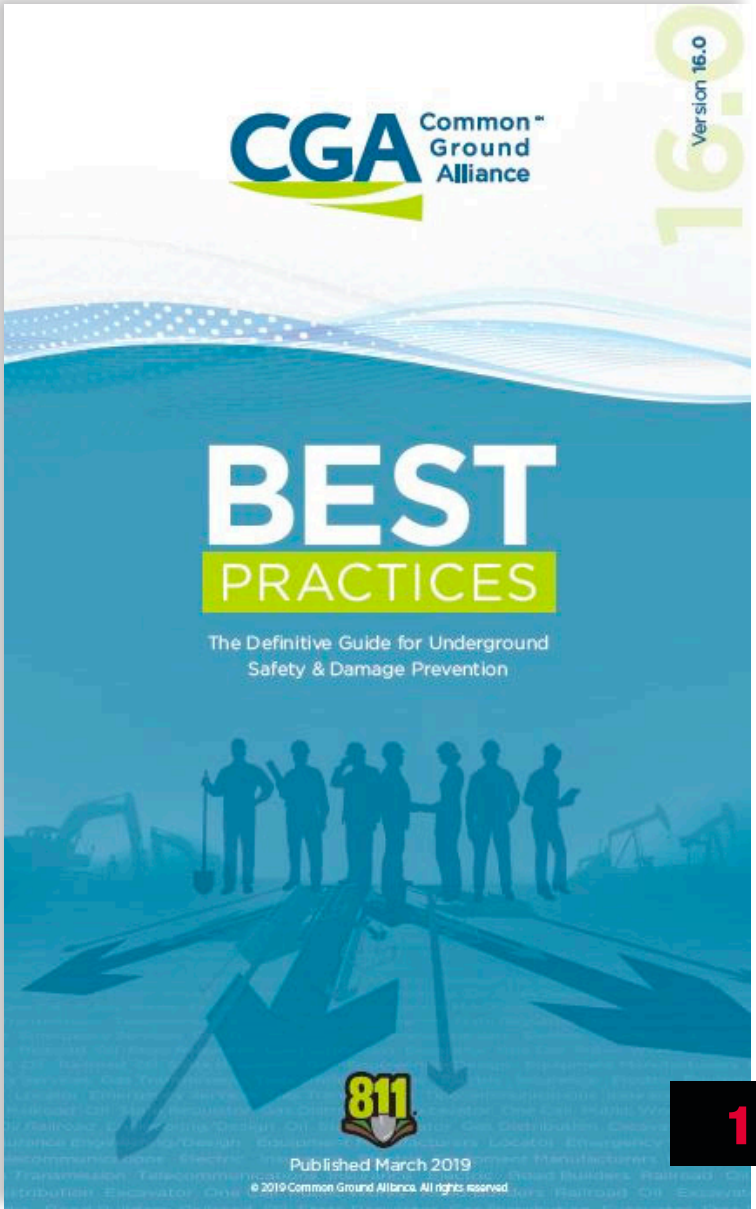
Practice Description: The safe exposure of underground facilities within the tolerance zone is essential to damage prevention. Site conditions may make the use of hand tools to expose underground facilities difficult or even impractical. Vacuum excavation is often an appropriate alternative. Locates must be obtained prior to the commencement of work (see Practice Statement 5–1). Many underground facility owners/operators have specific criteria for safe excavation/exposure practices around their facilities. Some underground facility owners/operators accept vacuum excavation as equivalent to hand excavation for exposing their facilities, and others have restrictions on its use. Vacuum excavation is an appropriate method of excavating safely around underground facilities provided that the equipment has been specifically designed and built for this purpose; is operated by a worker trained and experienced in its operation; is operated in accordance with practices that provide appropriate levels of worker and public safety and prevent damage to buried facilities; and is used in compliance with state/provincial laws and/or local ordinances.

5–33: Facility Owner Provides a Monitor During Excavation

Practice Statement: If a facility owner/operator considers it necessary to be on site during excavation activities to work with the excavator in protecting their existing facilities, the facility owner/operator makes arrangements with the excavator to be present during those excavation activities within the time specified by state/provincial law.

Practice Description: The facility owner/operator may determine it necessary to be on site during excavation activities taking place near their facilities to help protect them. A facility owner/operator has access to information and resources that may not be available to the excavator. This practice should be considered in conjunction with Practice Statement 2–4: Utility Coordination.

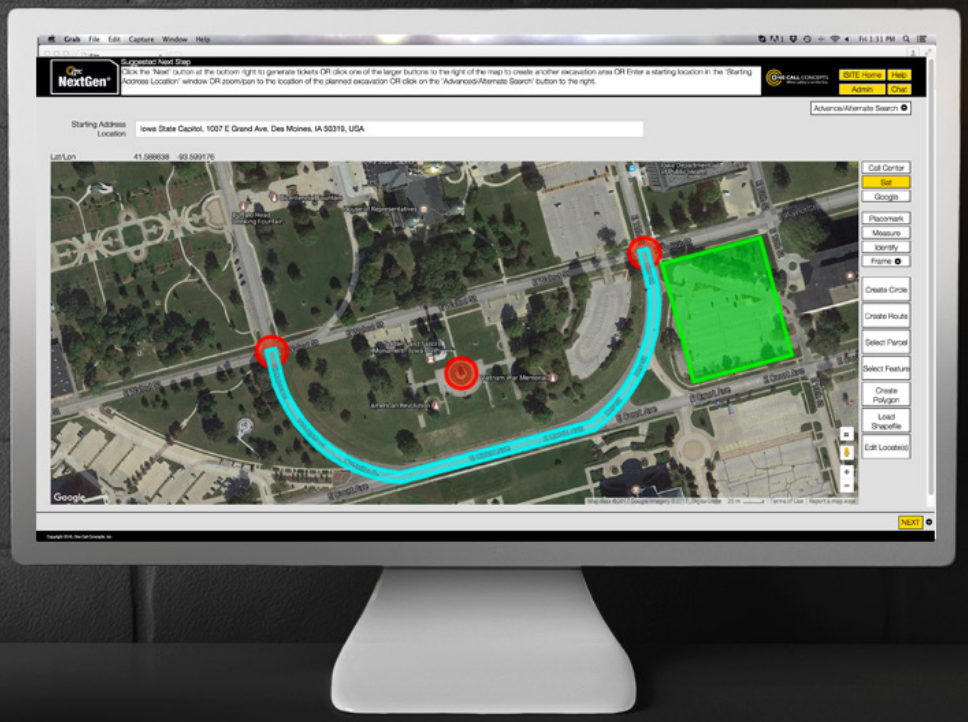
To view the complete Common Ground Alliance (CGA) Best Practices guide, please **click here**.



Dig safe!

ITIC NextGen®

TIPS FOR MAPPING PRECISELY AND ACCURATELY



CHECK OUT THE NEXTGEN ONLINE TICKETING TUTORIAL HERE!

1. Use the right tool for the job – ITIC NextGen offers a diverse array of mapping options to fit every scenario.
2. Don't over-map – ITIC NextGen builds the locate request from the mapping. Over-mapping a work area can result in wasted time and resources.
3. Double-Check your work – use the different map views and/or google street view to help ensure you've mapped accurately and completely.

WWW.IAITICNEXTGEN.COM

2019 RECAP
EXCAVATION SAFETY AWARENESS PROGRAM

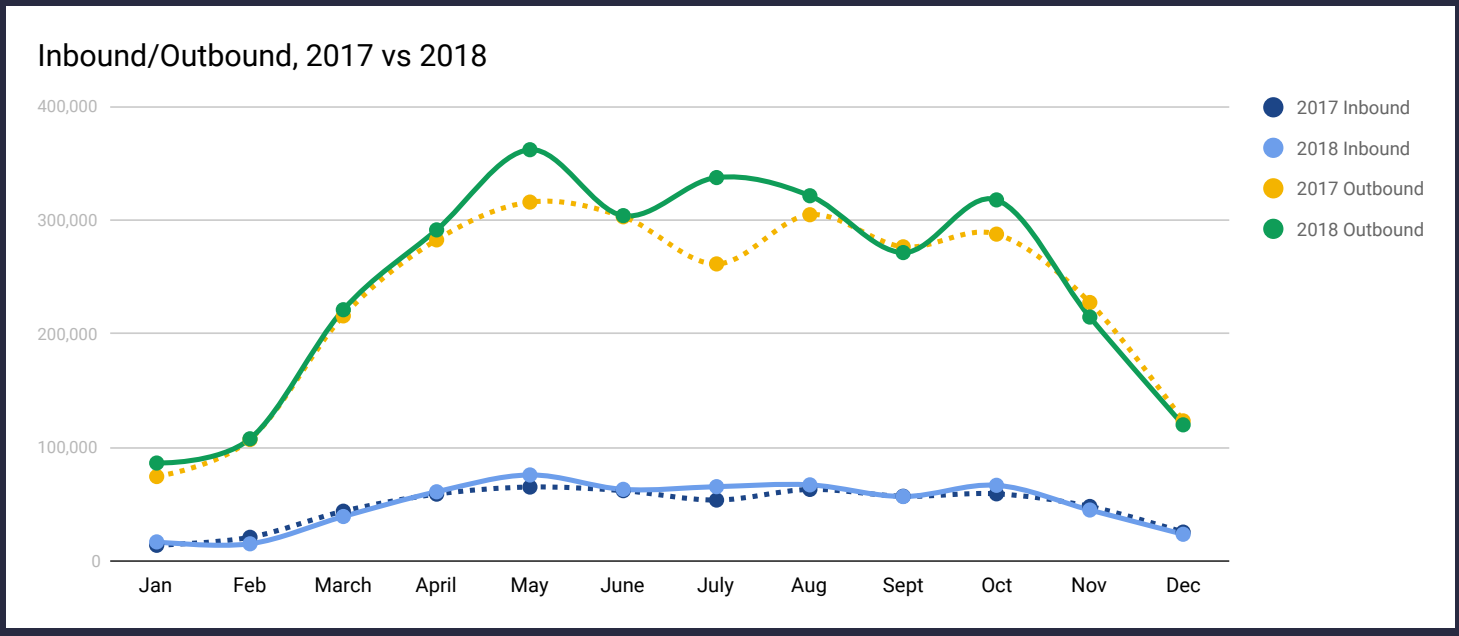
Trends, Issues and Best Practices


2019 ESAP in Johnston, IA

Iowa One Call concluded the 2019 Excavation Safety Awareness Program on February 28. We fought significant amounts of snow and ice as we travelled the state to cover trends, issues and best practices related to the Iowa One Call system. There were 3,051 registered across our 17 meeting locations, up from the 2,825 registered in 2018.

TRENDS

Data shows outbound transmissions (locates) have increased by 28 percent in Iowa in the past decade. In 2018, 13 percent of locates were completed in the month of May. With the seasonality of digging in our state, it's not a surprise when activity spikes as the ground thaws.



ISSUES

Challenges arise when the system goes from zero to 100 in such a short period of time. The connection is simple: More excavation activity = more locates to be completed. While this is not an excuse for locators to miss the mark of the 48 hour locating requirement, it should not go unrecognized.

The solution? Quality communication between all parties. For contractors, communication may be non-verbal but in the form of white lining and creating an informative ticket online. If poor information is received, locators must request the right detail from the excavator.

BEST PRACTICES

Using the proper mapping tool.
Can the scope of your project be more clearly defined by using a different tool in NextGen? The circle and route tools are excellent in allowing you to provide a precise location of your planned work. By over-gridding the excavation area, you may be unintentionally adding hours to locating process.

Provide a detailed written description.
Always supply a detailed written description. You know your project better than anyone. Bring the locator into the story by utilizing this box.

2019 ESAP in Cedar Falls, IA

CHECK OUT THE VIDEOS BELOW

Fiber Optic Damages and Investigations

Iowa Attorney General Update

Don't inundate the locators.
While the law does not limit the number of tickets an excavator can submit, it should be considered what this does to the system. Data shows a majority of tickets are created on Monday and Tuesday each week. Be sure to plan and set realistic expectations of what work will be touched that week. (And don't submit tickets for work that has already been completed! Yes, this happens.)

Communicate with the contractors. Need more information to complete a ticket? Get on the phone. Send an email. Don't status a ticket as "Not Marked, Inadequate Information" and walk away.

Ticket lifetime. A ticket is valid for 20 consecutive calendar days. There is no need to call in a ticket for the same work each week.

Thank you to all who were able to join us for the 2019 ESAP! Remember to play your part in preventing damages. Safety, health and essential services are on the line.

IOWA 811 ONE CALL SM

IOWA 811 ONE CALL SM

INTRODUCING THE

Safe Excavator App

State laws pertaining to excavation (or digging) vary – and finding the specific information you're looking for quickly can be a challenge.

FREE to download in the App store (Apple) and Google Play (Android)!

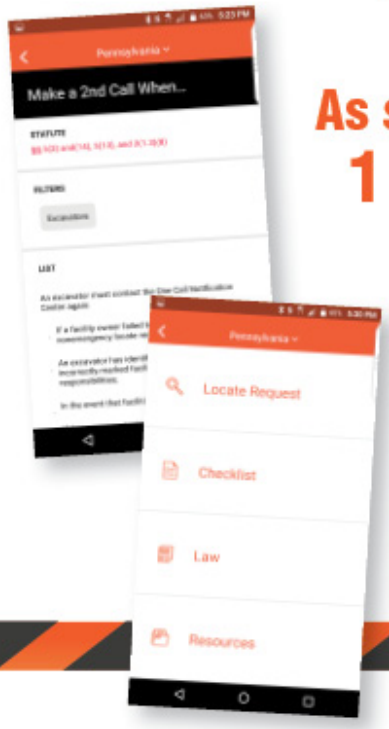
Search "safe excavator" or "safeexcavator" and look for the orange shovel

Google play

App Store

The Safe Excavator App makes it easy to find state-specific excavation information including the following requirements or events:

- Advance notice or wait time
- Pre-marking ('whitelining')
- 811 ticket information
- Names of local enforcement agencies and 811 call centers, also connecting you electronically to submit a locate request
- Includes safe digging tips + checklist



As simple as... 1...2...3!

1. Select a state
2. Pick an activity
3. Research your topic

PLEASE CONTACT
Lindsay Sander
713.208.0273
LNS@SanderResources.com
WITH ANY QUESTIONS.

National Excavator Initiative
Safety always.

www.safeexcavator.com

811 Know what's below. 811 before you dig.

The National Excavator Initiative is an effort to raise the awareness of a critically important program 811.

Contacting 811 before digging is the single most critical action an excavator can take to help ensure their health and safety are protected, while at the same time preventing financial harm and environmental impact.

THE FUTURE OF LOCATING: SEEING THROUGH DIRT

Imagine a world where you can see through the dirt. Envision observing the location, depth, size and direction of underground utilities without needing to break ground. The concept and technology are growing in popularity in the industry.

The Technology

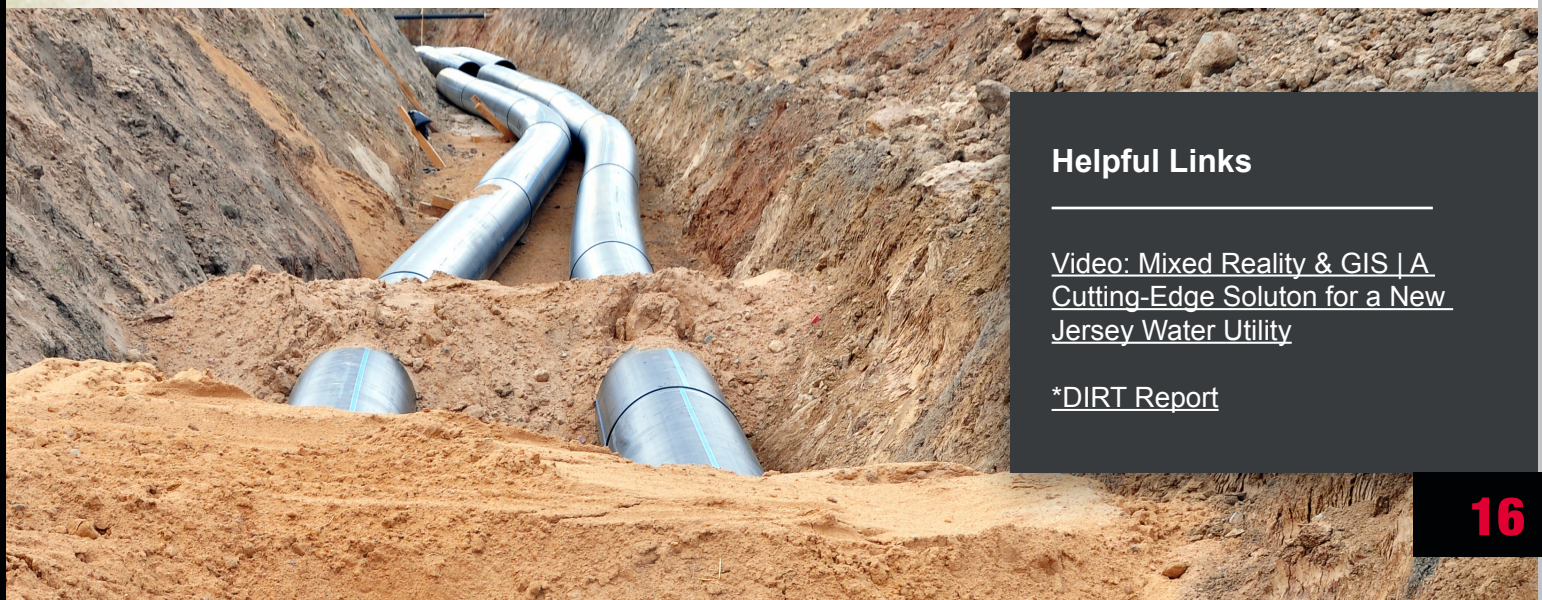
Utility companies across the country are beginning to pair GIS data with augmented reality to reshape the locating landscape. GIS data is a collection of location and attribute information and may include material type, size, length, diameter and installation date of the infrastructure. A cloud-computing service and an augmented reality or mixed reality technology are also required to make the application come alive in the field.

While these technological terms may sound daunting, there are commercially available services and they are currently being used to develop applications for locating underground infrastructure.

The Benefits

Utilizing new technology is at its best when the true benefits are realized. Sure, it can be easy to be drawn toward the shiny, new tools. Companies tapping into this platform are reporting benefits in the following areas:

> *Timeliness.* The current locating technology requires a quality signal from the electromagnetic field. This recipe often leads to lengthy locating processes. With an augmented reality application, the location is clearly visible the moment a locator steps on site.
>
> *Accuracy.* Back to the electromagnetic signal – if an underground facility is in close proximity to other infrastructure or has a common bond, the electromagnetic field may make accurately locating the facility a difficult task. Augmented reality applications offer the ability to accurately determine the location of the facility. The GIS data must be precise to properly display the underground facilities in the augmented reality model.
>
> *Projected to scale.* The application displays the facilities to scale and according to the APWA uniform color code. You'll know exactly what the underground architecture looks like before you begin.



Helpful Links

Video: Mixed Reality & GIS | A Cutting-Edge Soluton for a New Jersey Water Utility

*DIRT Report

Damage prevention. Proper use of the technology paired with safe digging practices will likely lead to a reduction in damages related to excavation and locating. The 2017 DIRT Report* showed "excavation practices not sufficient" as the root cause for unique damages in the state of Iowa, followed by "locating practices not sufficient". With excavation activity up 28 percent in Iowa in the last decade, the need for attentive excavating to reduce damages is at an all-time high. The total dollars saved may reach into the tens of thousands when labor, outages, fines, lost equipment and other costs associated with a damaged utility are added up.

Next Steps

Building an application for a large or small utility operator will require time, money and patience. However, the ROI is significant in the categories of time saved, locating accuracy and reduction in damages and repairs. While there is no mandate to move toward this form of technology, it would surely be a way to lead the charge in damage prevention.

IOWA GOVERNOR SIGNS PROCLAMATION APRIL IS NATIONAL SAFE DIGGING

As part of the ongoing efforts in this country to recognize and promote safe digging and underground damage prevention, state damage prevention representatives work in conjunction with their state's governors to officially declare the month of April as "National Safe Digging Month." On April 9th Iowa's Governor Kim Reynolds signed the official proclamation designating April as National Safe Digging Month in Iowa. The event, which was held at the State Capitol, in the Governor's Office, was coordinated by the Common Ground Iowa (CGI) and attended by industry stakeholders, including representatives from Iowa One Call. The CGI is a regional partner of the Common Ground Alliance (CGA), the national arm of the underground damage prevention industry and architect of the 811 abbreviated dialing system.

In many parts of the country April marks the start of the new "dig season," when the excavation industry begins ramping up operations and property-owners begin their annual spring landscaping and gardening projects. Logically, April marks the start of Iowa One Call's annual advertising and marketing campaign designed to promote underground damage prevention and excavation safety awareness, and to remind anyone planning to disturb the soil to notify the Iowa One Call notification system at least forty-eight hours prior to excavating – excluding Saturdays, Sundays, and legal holidays. It's very fitting that the industry has selected April as National Safe Digging Month.

In the News

Local Excavation and Safety News From Around the Web

Iowa Utilities Board supports National Safe Digging Month, Encourages 811 Calls for Utility Location

www.crestonnews.com

More than 40% of American homeowners who plan to plant a tree, landscape a yard or install a fence or mailbox this spring likely will not make a required 811 call to have their underground utilities located before digging begins, according to a survey conducted by the Common Ground Alliance (CGA), a national association dedicated to protecting underground utility lines ... [more]