# Underground Utility Strikes Meeting Kit



Underground utility strikes are a dangerous and costly event. Almost all line strikes are expensive and many of incidents that damage gas or electric lines can be extremely dangerous for everyone in the area. It is vital to understand the frequency at which line strikes occur and the best practices to assist in preventing line strikes.

If you're lucky… underground utility strikes are relatively minor. No one is harmed and nothing is damaged. Life – and work – goes on after you've dealt properly with the incident. This is the best-case scenario. The worst-case? Loss of life. Injuries. Extensive property damage. Widespread interruption of service. Fines and penalties. Damage to your company's reputation.

**UNDERGROUND UTILITY STRIKE CAUSES**

Three major causes for underground utility strikes:

**Excavation Issues.** According to the DIRT report, "excavation issues" account for 31% of underground utility incidents. This is a broad term, and it covers everything from digging before utilities have an opportunity to respond to using mechanical equipment in a zone that is designated as hand dig.

**Failure to Notify.** Violating state dig laws by failing to call 811 or utilizing utility locate services is the root cause of approximately 23% of utility strikes. 811 is a free service! Failing to call is inexcusable. The cost of private utility locate services is a small price to pay when you consider the potential for injury (including fatalities), property damage, service interruptions, civil penalties and liabilities, and damage to your company's reputation.

**Locating Issues.** Inadequate locating plays a role in 21% of underground utility strikes and incidents. This is another broad category, and many factors can play a role. Whether it is using outdated utility maps or relying on a utility locating company that doesn't have the experience or expertise necessary to deliver accurate results, this can cause significant problems when it comes to your project.

**ADDITIONAL CAUSES OF UNDERGROUND UTILITY STRIKES INCLUDE:**

**Rushing**. The Common Ground Alliance identifies improper bidding as a factor in many incidents. This can leave necessary costs unaccounted for, including locating unmarked and private utility lines. When contractors are rushing to meet deadlines and budgetary constraints, safety can take a backseat.

**(More) Human Error.** Arguably, all of the issues we've covered fall under the category of "human error." However, if personnel are lax in their duties, preoccupied,

indifferent, untrained, or otherwise ill-equipped, underground utility accidents are far more likely to occur.

**AFTER A STRIKE: TAKE IMMEDIATE ACTION**

If your team strikes an underground utility line, cease work at once. Stop all excavation and turn off equipment to minimize the risk of sparks and fire.

The next steps depend on the type of line you've hit. For example, if a gas line is struck, immediately call 911 and clear the area. Call the relevant utility, and make sure to evacuate those nearby.

If an electrical line has been struck, warn everyone in the vicinity and notify 911 (specifically the fire department) and the utility. Be sure to tell dispatchers and emergency personnel that an electrical line has been damaged. The person operating the excavator should remain on the equipment (radioing, calling, or signalling for help); the ground and objects/equipment near the point of contact may be energized. Exiting the excavator at this point is extremely dangerous.

If there is an immediate risk (e.g. fire or explosion), those near the point of contact should jump (not step) away from the equipment and land with both feet together. Then, they should move at least 35-30 feet away using short hops so their feet always land on the ground at the same time. This is critical.

When a telecommunications line is struck, secure the area with warning signs or barricades, notify the owner of the service, and move away from the damaged lines. Do not touch or even stare at broken, severed, or disconnected fibers or fiber cable.

**Excavation Best Practices to Avoid Utility Line Strikes**

- Always call 811 to have lines properly marked two to three days prior to digging, even at home. 811 notifies utility owners of your plans to dig and allows them to have someone come out and mark any utilities in that area. After utility locators have come out and you have confirmed all affected utility owners have responded to your request you are able to dig.
- Do not dig with machinery or pointed tools within the "tolerance zone" around marked utilities. Each state has requirements for excavating within a tolerance zone which is comprised of the width of the facility plus 18'' on either side of the outside edge of the underground facility on a horizontal plane. Some states may require a larger tolerance zone. Use "soft digging techniques" such as hand digging with blunt edged tools or vacuum excavation.
- Stop excavation and call 811 again if unmarked utilities are discovered or utilities are not found where they are marked.

Use methods such as ground penetrating radar, private locators, as-built drawings, and individuals with experience with the facility to locate potential lines before excavating.

**How to Safely Hand Dig Around Underground Utility Lines**

- When performing excavation work and you come across a marked utility line, you must use another method other than heavy equipment. Some pointers on how to properly hand dig in these areas are:
- Use a rounded or blunt-edged shovel- This will help to prevent any damage being done to the utility lines.
- Do not start digging directly over the marked area.
- It is important to be cautious and careful when you are working around underground lines.

## FINAL WORD

There are many hazards to be considered when excavating, underground utilities being one of the major hazards. Having a proactive well-thought out approach prior to digging is important in order to avoid underground utility strikes. Procedures need to be in place for when issues arise during excavation or a utility line is damaged.