

Prevent utility line-related accidents and injuries.

Utility lines serve an important role in supplying homes, businesses, streets, and roadways with the necessary resources to safely and efficiently operate. While their presence is now commonly understood to be above and below our streets and roadways, they can often be overlooked or forgotten about.

Examples of resources supplied and managed by utility lines include:

- Telecommunications
- Electricity
- Main Water
- Storm Drains
- Wastewater
- Natural Gas

If struck or damaged, these lines have the potential to endanger lives, damage nearby property, and interrupt business operations.

In addition to the danger and inconvenience, there are costs to repair the systems and reimburse a company for their lost revenue or spoiled inventory during the power outage. These charges can be expensive and may become the responsibility of the contractor that caused the damage or made the strike.

Some examples of physical damage and lost revenue may include:

- Refrigeration equipment losing power and perishable items spoiling
- Fires resulting from downed power lines
- Explosions from punctured gas lines
- E-Commerce businesses unable to process online payments
- Restaurant cooking equipment unable to operate
- Damaged water lines contaminating drinking supply



Common reasons for utility line strikes

Research conducted by the Electrical Safety Foundation International (ESFI), and the Common Ground Alliance (CGA) shows that the leading causes of utility line strikes are primarily due to inadequate training and a lack of site preparation.

- CGA's Damage Information Reporting Tool (DIRT), estimates 439,000 events resulting in damage to buried utility lines occurred in 2017, a 5.5% increase over the prior year. 80% of these events were due to improper work practices, including no locates being called prior to digging.
- EFSI reports that 36% of all electrocutions between 2011-2017 were due to contact with overhead power lines, and 53% of electrocutions in 2016 involved the construction industry. For non-electrical workers, the two most common fatal incidents involved contacting a tool, or piece of machinery that was in direct contact with energized power lines.

Preventing strikes through adequate site preparation and employee training

Through development of company-specific policies and proper training of workers, the risks associated with working near utility lines can be greatly reduced. When designing a training program, consider these commonly followed safety tips, and review the resources referenced for additional best practices:

Overhead Power Lines

- Be observant and identify overhead power prior to work beginning
- If possible, have overhead power lines de-energized and grounded or insulated. **Always assume lines and equipment are energized**
- Never contact a piece of equipment that is touching a power line
- All equipment should be carried horizontally by ground crews
- Use insulated or non-conductive tag lines
- Objects such as attachments, booms, and extensions that are mounted on mobile equipment should be safely lowered before moved
- Establish a clear, marked boundary around lines, and have established safe routes to travel
- Stay at least 35 feet away from any downed lines
- Ensure all equipment operations are not closer than the minimum approach distance found under OSHA's **Table A of §1926.1408**
- Post signs that warn of the overhead utility lines

Underground Utility Lines

- Call 811 utility locates before any underground work begins
- Markers are not designed to provide exact location or depth
- Hand-dig if the location is within the 24-inch safety zone of the marked utility location



- Use hydrovacating to safely remove the soil around buried utility lines
- Remember the Three S's when working near gas lines:
 - **Sight**-Look for any damage to the pipe, bubbling of water, blowing dirt, or decaying vegetation
 - **Smell**-Be aware of any odd odors. Utility companies often add a chemical to the gas lines that creates an odor when released
 - **Sound**-Listen for any hissing, blowing, or roaring sounds coming from the pipeline
- Reference the **American Public Works Association (APWA) Color Code legend** to properly identify marker flags if they are illegible

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