

Underground Utility Safety and Damage Prevention

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Every year, workers in the U.S. are injured or killed on the jobsite due to utility excavation damages. Fortunately, there were no major injuries or fatalities in Colorado in 2007 from underground utility damages. According to the annual report published by the Utility Notification Center of Colorado (UNCC), "the decreasing trend since 2003 in the number and severity of facility damages in Colorado is evidence that shared responsibility, mutual cooperation and precise information do make a difference." While the number of incidences has decreased, other statistics provided by UNCC show that damages and their negative impacts are still occurring daily.

- 6,385 underground utility damages were reported
- In 77 % of the damages, the excavator had contacted the UNCC, as required by law, for a utility locate request
- Utility owners reported that 48,013 customers were affected by the damages
- "Professional" excavators were responsible for 86% of the damages

By eliminating utility damages, contractors can reduce or eliminate:

- Utility replacement and repair costs
- Thirty-party claims including property damage, injury, lost of business revenue, etc.
- Legal, health and medical expenses for employees
- Penalties and fines for failure to comply with Colorado's locate laws

The following activities can improve utility safety and damage prevention:

1. Know the Colorado One Call Law

In Colorado, if an excavation is to be performed, the excavator must call the UNCC (811) to request utility locates be performed at least three business days before the proposed excavation (two business days, plus the day of the call). An excavation is defined by law as any operation in which earth is moved or removed by means of any tools, equipment or explosives and includes auguring, backfilling, boring, ditching, grading, plowing-in, pulling-in, ripping, scraping trenching and tunneling.

With the call to 811, all Tier I utility owners will be contacted directly by UNCC notifying them of the locate request. For Tier II utility owners, UNCC will provide the excavator with a contact name and phone number, and the excavator must contact the utility owner themselves.

Prior to excavation, the contractor must ensure that the entire requested dig area has been located. If the locate has not been performed as requested, call 811 again to request a second notice due to an incomplete locate.

Per the law, a “good” locate is within 18 inches on either side of the marks or flags that the utility locator puts on the ground. The contractor can excavate on the locate marks for up to 30 days, if the marks are still visible.

2. Implement the Subsurface Utility Engineering (SUE) Process

The SUE process provides precise information that mitigates the risk of cost overruns and safety issues for underground utility work. Based upon studies performed by the Federal Highway Administration, every \$1.00 spent performing the SUE process will save \$4.62 throughout the course of a project. The following is a brief description of the process:

Level D - Obtain and review existing utility company records and maps.

Level C – Visual site inspection of the surface features shown on the utility company records and maps obtained from Level D.

Level B - Electronic designation (locating) of the underground utilities with sketches of all utilities identified.

Level A - Potholing of the utilities identified and designated in level B to obtain the exact horizontal and vertical location of the utilities.

3. Understand Excavator Responsibilities and Protections

Excavators must use reasonable care when excavating around marked facilities. The following are acceptable methods of verifying locate marks and excavating within 18 inches on either side of the marks:

- Potholing / vacuum excavation
- Hand digging
- Visual verification of the facility
- Use of non-mechanical excavation tools

If working in an area with multiple excavators, respect other excavator’s utility locating marks.

4. Develop and Follow a Damage Prevention Plan

In order to carry out a successful damage prevention plan, establish a strategy, set goals and track progress including the following:

- Provide your utility workers with a written damage prevention plan
- Advise all utility workers of the state one call laws
- Document all locate requests and verifications from the utility owner
- Construct your reasonable care case if damage occurs and maintain all relevant data including sketches, photos, emails or faxes
- Call 911 on all gas emergencies and 811 to report all other utility damages
- Implement post-damage drug testing and discipline (as warranted)

Damage prevention is a shared responsibility. With excavators, utility owners, locators and other professionals working together, we can save time, money and continue to reduce the risk of injury. For more information on underground utility safety and damage prevention, please contact Dennis Thebeau at 303-459-6645 or dthebeau@sitewisellc.com.