

Trenching Safety

Trenches and excavations don't need to be deep or very large to create a life-threatening hazard. Soil is very heavy and failures can take place with little or no warning. A cubic yard of dirt weighs around 2,700 pounds and a cave-in is like dropping a small car from one foot above your head. You can be trapped before there is time to react. It is important to plan every trenching or digging project correctly. Here are some of the safety practices that need to be considered and addressed:



- Where are the underground utilities? Sewer, water, gas, communication, and electric lines must be identified and physically located. Call 811 at least 48 hours prior to digging, giving them the location or the route of the proposed project.
- Where are the overhead utilities? Digging equipment must have adequate clearances to avoid contact with electric and communication lines. Evaluate the need for shoring, sloping, or other means to eliminate the potential for cave-ins prior to the start of work. This needs to be done by someone who understands the soil, the use of protective systems, and applicable standards (refer to 29 CFR 1926 Subpart P).
- If the job isn't planned ahead of time, the crew may be inclined to "make do" just to get the job done. Shortcuts might be taken, putting people in serious danger. Workers sometimes deceive themselves into thinking that the soil "looks solid", when in fact nobody can see the condition of soil just behind the trench walls. Excuses and shortcuts are unacceptable. The work should be properly planned and performed to prevent unnecessary risk-taking.
- **All trenches and excavations over 5 feet in depth must be protected from cave-ins, unless they are made entirely in stable rock.** Protection can be provided by sloping, benching, supporting/ shoring, or providing trench shields/boxes. Trenches less than 5 feet in depth may need shoring depending on soil conditions.
- If shoring or trench boxes are used, be sure the top of the shoring or box extends at least 18 inches above the hole. On an extended job where the hole is deeper than 6 feet, fall protection should be installed around the perimeter to protect those working on the surface.

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- Excavated material must be placed at least 2 feet from the edge of any trench or excavation. Placing the spoil any closer puts pressure on the walls of the hole and increases the likelihood of a cave-in.
- Nobody should be working on the sides of a slope or benched excavation unless workers at a lower level are protected from falling materials.
- Precautions must be taken to ensure that vibrating equipment and traffic don't cause a cave-in. In short, keep equipment and traffic away from the edge of the trench.
- Always consider ground water seepage as a potential cause of collapse of any trench or excavation. Workers must stay out of excavations where water is accumulating until precautions are taken to protect them. This may involve shoring, pumping, or the use of lifelines and harnesses.
- Under no conditions should workers be permitted under loads handled by lifting or digging equipment. Workers must stand away from vehicles being loaded or unloaded.
- Any trench or excavation four feet or deeper must have a means of exit. Safe exit must be provided so nobody has to travel more than 25 feet to get out of the trench. This can be accomplished with a ladder, ramp, or open end. Another good safety practice is to make sure the ladders extend three feet above the surface of the excavation and are tied off if possible

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August 2021 Safety Talk Sign-in Sheet Topic:
Trenching Safety

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