

Spot The Safety Violation: 8 Common Trench & Excavation Hazards



What do you think happened to the worker who was in this trench when it collapsed'



Trenches and excavations pose a variety of serious hazards to both workers working in them and those working near these digs. And if there is an incident in a trench, the would-be rescuers could also be at risk unless suitable precautions are taken.

This picture shows the aftermath of a trench collapse in Pennsylvania. Crews were installing storm drains when the 18-foot-deep trench partially collapsed on a worker. It took rescuers nearly an hour to remove the worker, who was buried up to his waist in dirt and rocks. Fortunately, he only sustained lower-body injuries.

The trench did have a metal box to hold the walls in place surrounding the workers. But the worker wasn't inside the box when the trench collapsed—he was directly beside it.

The rescue effort was delayed a short time because responders had to put panels in place to avoid additional collapse before they could attempt to rescue the worker.

8 COMMON TRENCH & EXCAVATION HAZARDS

The most common hazards posed by trenches and excavations include:

1. **Cave-ins or excavation collapses**—when you remove soil to make an opening, the remaining soil 'relaxes' and increases the pressure on the walls surrounding the opening, making the walls unstable;
2. **Excavated material**—if soil dug out of an excavation is piled too close to the excavation, it can fall back into the opening or destabilize the opening's walls;
3. **Falling objects or objects near an excavation**—tools, equipment and barriers—and even workers—around an excavation can fall into the opening if

they're too close to the edge and there are no guards or barriers around the trench;

4. **Powered mobile equipment**'back hoes, concrete trucks and the like can strike workers in and around excavations or collapse on top of workers inside them;
5. **Slips, trips, and falls**'excavation entrances and exits and uneven ground can cause workers to slip and/or trip, and fall;
6. **Hazardous atmospheres**'the air in trenches is often dangerously lacking in oxygen and may also contain common atmospheric hazards, such as gasoline vapours, methane and other explosive gases;
7. **Flooding/water hazards**'if an excavation is below the water table or near a water source or if it absorbs a lot of rain, the excavation can flood or collapse; and
8. **Underground utilities**'workers in trenches and excavations may strike electrical, oil and gas lines and suffer injuries as a result.

Because of the above hazards, the OHS regulations contain detailed requirements for excavations and trenches. To ensure that your trenches and excavations comply with these requirements and are safe for workers, require a 'competent person' to inspect them regularly (see, trench/excavation inspection checklist) and to keep a log or record of these inspections and (see, daily trench/excavation log).