



When an Excavation or Trench Collapses

Trenching and excavation work is a dangerous activity that takes place in many projects, including installation or repair of services, residential construction, and road construction and repair work, to name a few. If you are working on a project that involves removing material from the ground or working near an excavation in which the depth exceeds the width, it is important that you understand the hazards associated with this type of work and how to protect yourself and your co-workers.

Those working in or near trenches face many deadly hazards. The risk of a cave-in is the most serious and it often occurs instantaneously and in seemingly safe conditions. A trench collapse or a cave-in occurs when the walls of the trench or excavation site collapse inwards due to instability or improper use of safety techniques such as sloping or benching the sides of the trench, shoring, or supporting the sides of the excavation, or placing a shield between the sides of the excavation/trench and the work area.

Some of the most common reasons for trench or excavation collapses are attributed to:

- Unstable soil
- Vibrations due to machinery being used nearby
- Vibrations from heavy traffic passing close to the trench
- Flooding
- Heavy rain or snow
- Excessive pressure placed on the edge of a trench.

Trench or excavation collapses result in workers being buried under tons of sand and rock, suffocating due to being smothered by soil, or suffering other lesser fatal injuries which can still put them in hospital and require injury leave.

Before excavation work begins, employers must ensure that a competent person inspect worksites daily before the start of each shift, and as needed thereafter (for example, a sudden heavy rainfall occurring after the pre-work inspection has taken place that could result in excess water gathered in the trench affecting soil stability).

How to Stay Safe

- Wait until the daily pre-job safety assessment has been conducted before you enter the trench.
- Know the conditions that may cause a cave-in, such as soil conditions, vibrations, and the addition or removal of water.
- Understand that excavation conditions can change at a moment's notice.



- Watch for changing weather conditions and vibrations from traffic or from other equipment working nearby.
- Report to your supervisor any defects you notice in the trenching equipment.
- Never enter a trench alone.
- Do not sit or lie down in a trench.
- Do not get into an unsupported trench that is deeper than your knees.
- Understand your company's established emergency procedures in the event of a cave-in.

SAFETY REMINDER

Excavations, whether shallow or deep, are unstable. Pre-planning, proper protective measures, and safe working procedures are all critical to keeping safe those working in or near the trenches.