

Trenching

Toolbox Talks

Discuss with crews on _____

Working in trenches and excavations can be hazardous if the proper procedures are not in place or followed. For specific information about trenching requirements, refer to the [General Regulation 91-191](#). In particular, [sections 180-188](#) deal specifically with trenching.

Never enter any trench more than 1.2 meters (4 feet) deep unless it's:

- Sloped
- Shored
- Protected by a trench box

Those are the three basic methods of protection against cave-ins.

Unless the walls of the trench are solid rock, it should be sloped, shored, or boxed before you get into it.

Sloping

Sloping the walls is one way to keep a trench from collapsing.

The trench or excavation must be sloped or benched to within 1.2 m (4 feet) of the bottom, with the slope or bench not exceeding 1 m (3.3 feet) vertical rise to each 1 m (3.3 feet) of horizontal run.

If the trench or excavation is cut in solid rock that is not stable, the walls and crests must be supported by rock bolts, wire mesh, shoring, or a method that provides equivalent support.

Shoring

Shoring is a system that shores up, or supports, walls to prevent soil movement. It also helps to support underground utilities, roadways and foundations.

The two types of shoring most commonly used are timber and hydraulic. Both consist of posts, wales, struts, and sheathing.

One major advantage of hydraulic shoring is that you don't have to enter the trench to install the system. Installation can be done from the top of the trench.

Whenever possible, shoring should be installed as excavation proceeds. If there's any delay between digging and shoring, no one should enter the unprotected trench.

Trench Boxes

Trench boxes aren't really meant to shore up or support trench walls. They're only meant to protect workers in case of a cave-in.

Boxes are capable of supporting trench walls if the space between the box and the trench wall is backfilled.

Otherwise, a cave-in or collapse may cause the trench box to tilt or turn over. It's also easier to enter the box if soil comes right up next to it.

Trench boxes are commonly used in open areas away from utilities, roadways and foundations.

As long as you're in the trench, you should stay inside the box and leave only when the box has to be moved.

Ladders

Whether the trench is sloped, shored, or protected by a trench box, you need a way to climb in and out of it safely.

Trenches must be provided with ladders in the areas protected by shoring or trench boxes. The ladder must be securely tied off at the top, extend above the shoring or box by at least 1 m (3.3 feet) and be inspected regularly for damage.

A ladder should be placed as close as possible to where you are working and never more than 15 m (50 feet) away

WorkSafe NB Check List for Trenching and Excavation:

<https://www.worksafenb.ca/media/61062/checklist-for-trenching-and-excavation.pdf>

