

Trenching and Shoring

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Because of the various types of soil and its angle of repose, trenching without bracing, shoring or proper sloping is hazardous. A cave-in can even occur in hard soil. If such a failure does occur, persons in the trench can be buried, resulting in serious injury or death. Improper or careless installation of bracing and shoring can cause similar tragedies.

Let's review the hazards of trenching and the safety requirements for shoring and bracing.

Exposed faces of trenches five feet or more in depth must be supported and held firmly in place by adequate bracing. All trenches deeper than four feet must have a ladder, ramp, or other method of egress every 25 feet. This requirement must be fulfilled for all trenching, except:

- Trenches that are in rock or hard shale that have been shown to be geologically self-supporting of an unsupported vertical face.
- Trenches with exposed faces sloped to the angle of repose for the type of soil in which the excavation is being made or properly benched to an equivalent of the angle of repose.
- Trenches in which trench shields or boxes are used.

REMEMBER: Before entering a trench, inspect all shoring at least daily. You should also inspect it after weather changes, blasting or any other activity which might affect the shoring system.

If the excavation is greater than four feet in depth, it must be tested for oxygen deficiency or a hazardous atmosphere before employees may enter. Monitoring and/or emergency rescue equipment may be required.

Under no conditions should bracing or shoring be omitted, regardless of the length of time that the trench will be open.

To prevent placing an additional load on the trench face wall, excavated material must be placed at least two feet from the edge of the trench.

Employees should never ride the bucket to the bottom of the excavation. Ladders should be used at all times.

Whenever working in the area of trenching operations, don't forget to wear your hard hat.

In all bracing and shoring operations, management is responsible for the type of bracing, the material size, and proper installation. You are responsible for the safe handling of the material and safe installation.

By being proficient in the installation of proper bracing, the application of safety precautions, and the knowledge of soil conditions, you can eliminate the hazards involved in trenching operations.

REMEMBER: Before you dig any trenches or drill any holes ALWAYS call GOPHER STATE ONE-CALL first:

**Twin Cities Metro: (651) 454-0002
Toll Free:(800) 252-1166**

Minnesota state statute 216d requires anyone who engages in any type of excavation to provide advance notice of at least 48 hours to underground facility operators who might be affected by the excavation.