



## **Excavation & Trench Protective System Requirements**

Almost every month somewhere in the news you can read about a working being injured or killed when a trench they were working in collapses. These injuries and fatalities are preventable with planning and proper execution of safety precautions. Trench collapses can occur without warning, regardless of the depth. The vast majority of trenching fatalities occur in trenches 5- to 15-feet deep. These depths invite taking chances, and often it is the good, safe-looking material that turns out to be the unsuspecting killer. But trench cave-ins don't have to happen. The following information can help you avoid these potentially deadly accidents.

Protective System requirements:

- When employees work in trenches more than 5 feet deep, the employer must protect them from cave-ins by using an adequate protective system. In hazardous soil, employers must provide an adequate protective system in trenches less than 5 feet deep.
- Determine maximum allowable slopes for soil or rock deposits in accordance with Table B-1, Appendix A, of the OSHA standard.
- Have a registered professional engineer design sloping or benching for excavations greater than 20 feet deep.
- Qualified personnel must design and install piling, sheeting, shoring, shields, and support systems. The loads imposed upon it.
- Make sure material and equipment used for sheeting, sheet piling, bracing, shoring, and underpinning is in good serviceable condition. Use timbers that are sound and free of defects.
- Place members of support systems in true horizontal position, spaced vertically and secured to prevent sliding, falling or kick outs.
- Progress from the bottom of the trench when removing support-system members. Slowly release jacks and supports.
- Remove support systems as you backfill the trench.
- Extend trench boxes and shields to the bottom of the trench and no less than 18 inches above the vertical part of the trench face, except in certain cases.
- Do not allow employees in shields during their installation, removal, or relocation.
- When portable trench boxes are stacked, provide attaching means to prevent them from separating.
- Do not work outside of trench shields or shoring protection in unprotected trenches.



### **SAFETY REMINDER**

**Employees working in trenches 4 feet deep or more should have an adequate and safe means of exit, such as ladders, steps, or ramps available at no more than 25 feet of lateral travel.**