



Excavation and Trenching
Arkansas Workers' Compensation Commission/
Health & Safety Division
www.awcc.state.ar.us
1-800-622-4472 fax: 501-683-3169
Health&Safety@awcc.state.ar.us

Excavation and trenching cave-ins result in more than 100 fatalities annually in the United States. Too often an improperly protected trench or excavation wall will collapse, trapping workers. These accidents can be eliminated if we follow proper excavation and trenching procedures. OSHA Construction Standards for Excavation can be found in Subpart P 1926.650-.652.

WHAT IS AN EXCAVATION?

An excavation is any manmade cut, cavity, trench or depression in an earth surface, formed by earth removal. Employees must be protected from cave-ins except when the excavation is in stable rock or when the excavation is less than 5 feet AND examination by a competent person provides no indication of potential cave in.

PREPLANNING

Any surface encumbrances which may create a hazard to employees shall be removed or supported, as necessary, to safeguard employees. The presence of all underground installations such as sewer, telephone, fuel, electric, or water lines shall be determined prior to opening an excavation. Excavations 4 feet deep or more must have sufficient means of exit and these must be within 25 feet of lateral travel.

PROTECTIVE SYSTEMS

There are three (3) ways to protect against injury from trench collapse. Protective systems include **shoring, sloping, and a trench shield or box.**

Shoring is a structure such as a metal hydraulic, mechanical, or timber bracing system that supports the sides of an excavation. A shoring system may include sheeting, bracing or jacks.

Sloping is accomplished by cutting the banks of the excavation back to the angle of repose. At this angle the soil won't slide. This angle varies, and depends on the soil type.

A trench shield or box is a heavy metal box designed to be placed in a trench; it protect employees inside if the sides of the trench cave in. Trench boxes are used in many types of sewer and pipeline work.

INSPECTIONS

A competent person must inspect the excavation and adjacent areas daily for possible cave-ins, failure of protective systems, hazardous atmospheres, or any other condition which may present a hazard.

