

## EXCAVATION, TRENCHING & SHORING 902

### I. PURPOSE

To ensure the safety of employees when working in and around excavation, trenching & shoring operations.

### II. DEFINITIONS

- A. Competent Person -- A person who has specific training in, and is knowledgeable about, soils analysis, the use of protective systems and has the authority to take prompt corrective action.
- B. Excavation -- Any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal.
- C. Hazardous Atmosphere -- An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic or otherwise harmful may cause death, illness or injury.
- D. Shoring/Benching/Sloping -- Methods of protecting employees from cave-ins by supporting side walls, making horizontal levels or steps in side walls or making sides that are sloped away from the excavation.
- E. Trench -- A narrow excavation made below the surface of the ground. In general, the depth is greater than the width.

### III. REQUIREMENTS

- A. All utility installations, such as sewer, telephone, fuel, electric, water lines and any other installation expected to be in the area shall be determined prior to opening an excavation. The appropriate party shall be contacted to assist in determining location of underground utilities. (MISS DIG)
- B. Contact Management for a list of trained competent person(s).
- C. The competent person shall characterize the soil and determine safe excavation/trenching requirements.
- D. All bracing and shoring shall be designed to withstand anticipated loads.
- E. A safe means of access and egress to and from excavations and trenches shall be provided when they are four feet or more in depth so as to require no more than 25 feet lateral travel.

- F. No employee shall be permitted underneath suspended loads handled by lifting or digging equipment.
- G. A barricade system shall be placed at a minimum four feet from the edge of the trench or spoil pile.
- H. Employees shall not work in excavations in which there is accumulated water unless adequate precautions have been taken to protect employees from the hazards posed by the water accumulation.
- I. Where the stability of adjoining buildings, walls or other structures is endangered by excavation operations, support systems shall be provided to ensure the structure's stability.
- J. Excavated materials (spoil) shall not be placed closer than three feet from the edge of the excavation unless retaining devices are sufficient to prevent material or equipment from falling or rolling into the excavation.
- K. Handrails, mid-rails and toe-boards shall be installed on all walkways or bridges crossing an excavation.
- L. Edges of excavations shall be barricaded (minimum four feet). Barricades shall be lighted during night-time hours.
- M. A designated competent person shall conduct daily inspections of excavations for evidence that could result in a cave-in, indications of protection systems failure, hazardous atmospheres or other hazardous conditions. Inspections shall be made after every rainstorm or other potentially hazardous occurrence.
- N. An excavation shall be properly sloped/shored so that the excavation does NOT meet the definition and requirements of a confined space and applicable requirements.

#### IV. REFERENCES

OSHA standard: Subpart P 1926