

	<b>SOIL TYPES</b>	Date:
	<b>TOOLBOX / TAILGATE TALK</b>	Presenter:

## Soil Types

### Introduction

1. Review any accidents or "near accidents" from the past week.
2. Describe the hazards of the work as they relate to your project. Explain or show the SAFE way of doing the job.
3. Give the Tool box Safety Talk

The greatest hazard in excavation and trenching is the risk of a cave-in. Of the deaths resulting from excavation and trenching incidents, the majority are from injuries received during the collapse of the trench. The type of soil in the trench influences the stability of the trench. A soil analysis is critical in determining appropriate sloping, benching, and shoring

- Trench failure can be deadly. Trench failures often occur in multiples, starting with a movement of soil material near the bottom of the trench wall. After the failure of the base, the support of the wall will quickly erode and the wall will collapse. The collapsing soil is extremely heavy and can weigh one and a half tons per cubic yard, producing a tremendous crushing force
- Before excavation, ensure that a "Competent Person" conducts a soil test to determine the stability of the soil.
- Type A soil (clay, salty clay and hardpan) is the most stable.
- Type B soil (silt, sandy loam, medium clay, and unstable dry rock) has medium stability.
- Type C (gravel, loamy sand, soft clay, submerged soil, or dense, heavy, unstable rock) is the least stable, and requires the greatest safety precautions when excavating.
- Stable Rock is a natural, solid mineral material can be excavated with vertical sides and remains intact while exposed.
- After the soil has been classified, use prescribed methods of wall retention, piling, cribbing, sloping, shoring, trench boxing and sheeting to maintain trench and excavation walls. For each trenching or excavation situation, employ the proper sloping, shoring and bracing structures and measures designed specifically for the particular situation.



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