

ACCESSING SAFETY KNOWLEDGE (ASK) SHEET: Trench Safety by The Numbers

According to the Occupational Safety and Health Administration (OSHA), trenching/excavating is recognized as one of the most hazardous construction operations. OSHA revised 29 CFR 1926 Subpart P, Excavations, to make the standard easier to understand, permit the use of performance criteria where possible, and provide construction employers with options when classifying soil and selecting employee protection methods.

What is an excavation? "Excavation" means any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

What is a trench? "Trench" means a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) cannot not be greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured to 15 feet or less (measured at the bottom of the excavation), the excavation is also considered to be a trench.



Review of some of the numbers to be aware of when trenching or excavating:

2 feet	minimum distance spoils/material must be back from the edge of the trench/excavation
2 feet	maximum distance between the bottom of the trench and trench shield or box to include legs
3 feet	height a ladder must extend above the landing area
4 feet	depth at which you must use a ladder or other device to access the trench/excavation
5 feet	depth at which employee protection is required in the trench/excavation
6 feet	height at which fall protection is required when working near the trench/excavation if it is obstructed
8 feet	maximum allowable distance between aluminum hydraulic shoring vertical rails
10 feet	minimum distance you must stay away from overhead power lines with the excavator
20 feet	maximum depth of a trench without an engineered system for employee protection
25 feet	maximum distance between an employee in a trench and the ladder or ramp used for exiting
18 inches	minimum exposure of a trench shield when used in a sloped trench application
18 inches	area around either side of a buried utility that you must hand dig
34°	slop of a trench in type C soil
45°	slope of a trench in type B soil
53°	slope of a trench in type A soil
90°	slop of a trench in stable rock

Remember – A competent person must inspection the trench every day before employees enter.

Name & Signature of Employees at Tailgate Meeting
