

## Summary of 1926 CFR Subpart P -OSHA Excavation Standard

This is a worker protection standard, and is designed to protect employees who are working inside a trench. This summary was prepared by the Massachusetts Department of Labor Standards and not OSHA for informational purposes only and does not constitute an official interpretation by OSHA of their regulations, and may not include all aspects of the standard. For further information or a full copy of the standard go to [www.osha.gov](http://www.osha.gov).

- **Trench Definition per the OSHA standard:**
  - An excavation made below the surface of the ground, narrow in relation to its length.
  - In general, the depth is greater than the width, but the width of the trench is not greater than fifteen feet.
- **Protective Systems** to prevent soil wall collapse are always required in trenches deeper than 5', and are also required in trenches less than 5' deep when the competent person determines that a hazard exists. Protection options include:
  - Shoring. Shoring must be used in accordance with the OSHA Excavation standard appendices, the equipment manufacturer's tabulated data, or designed by a registered professional engineer.
  - Shielding (Trench Boxes). Trench boxes must be used in accordance with the equipment manufacturer's tabulated data, or a registered professional engineer.
  - Sloping or Benching. In Type C soils (what is most typically encountered) the excavation must extend horizontally 1 ½ feet for every foot of trench depth on both sides, 1 foot for Type B soils, and ¾ foot for Type A soils.
  - A registered professional engineer must design protective systems for all excavations greater than 20' in depth.
- **Ladders** must be used in trenches deeper than 4'.
  - Ladders must be inside the trench with workers at all times, and located within 25' of unobstructed lateral travel for every worker in the trench.
  - Ladders must extend 3' above the top of the trench so workers can safely get onto and off of the ladder.
- **Inspections** of every trench worksite are required:
  - Prior to the start of each shift, and again when there is a change in conditions such as a rainstorm.
  - Inspections must be conducted by the competent person (see below).
- **Competent Person(s) is:**
  - Capable (i.e., trained and knowledgeable) in identifying existing and predictable hazards in the trench, and other working conditions which may pose a hazard to workers, and
  - Authorized by management to take necessary corrective action to eliminate the hazards. Employees must be removed from hazardous areas until the hazard has been corrected.
- **Underground Utilities** must be:
  - Identified prior to opening the excavation (e.g., contact Digsafe).
  - Located by safe and acceptable means while excavating.
  - Protected, supported, or removed once exposed.

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- **Spoils** must be kept back a minimum of 2' from the edge of the trench.
- **Surface Encumbrances** creating a hazard must be removed or supported to safeguard employees. Keep heavy equipment and heavy material as far back from the edge of the trench as possible.
- **Stability of Adjacent Structures:**
  - Where the stability of adjacent structures is endangered by creation of the trench, they must be underpinned, braced, or otherwise supported.
  - Sidewalks, pavements, etc. shall not be undermined unless a support system or other method of protection is provided.
- **Protection from water accumulation hazards:**
  - It is not allowable for employees to work in trenches with accumulated water. If water control such as pumping is used to prevent water accumulation, this must be monitored by the competent person.
  - If the trench interrupts natural drainage of surface water, ditches, dikes or other means must be used to prevent this water from entering the excavation.
- **Additional Requirements:**
  - For mobile equipment operated near the edge of the trench, a warning system such as barricades or stop logs must be used.
  - Employees are not permitted to work underneath loads. Operators may not remain in vehicles being loaded unless vehicles are equipped with adequate protection as per 1926.601(b)(6).
  - Employees must wear high-visibility clothing in traffic work zones.
  - Air monitoring must be conducted in trenches deeper than 4' if the potential for a hazardous atmosphere exists. If a hazardous atmosphere is found to exist (e.g., O<sub>2</sub> <19.5% or >23.5%, 20% LEL, specific chemical hazard), adequate protections shall be taken such as ventilation of the space.
  - Walkways are required where employees must cross over the trench. Walkways with guardrails must be provided for crossing over trenches > 6' deep.
  - Employees must be protected from loose rock or soil through protections such as scaling or protective barricades.