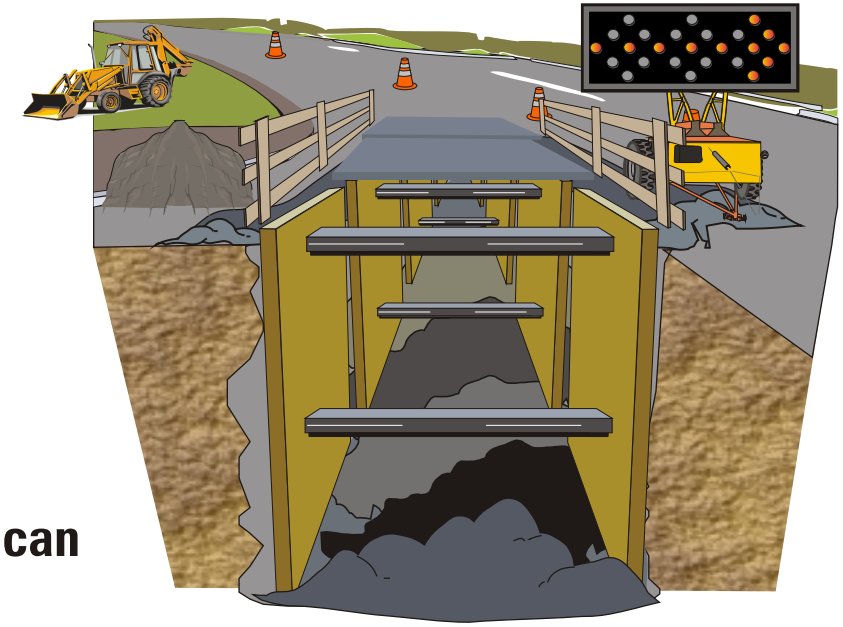
Why Are Trenches Dangerous?

A trench is an excavation deeper than it is wide.

Trenches can kill

- Workers can be buried alive
- Cave-ins can result from stresses in walls, nearby moving vehicles and equipment, or spoil piles
- Water can collect in bottom
- Flammable/toxic gases can build up
- Gas from nearby sewer or gas lines can seep into trench



Trenches > 4' deep may be confined spaces.

An excavation with formwork 15' or less from a sidewall is also a trench.

Before digging

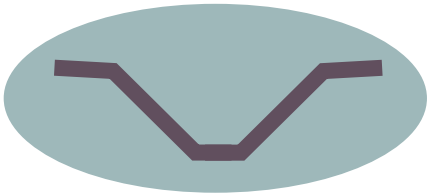
- Call electrical, gas, and communications utilities
- Use extreme caution with equipment

How Do We Prevent Cave-Ins?

Trenches 5 feet or deeper require support.*

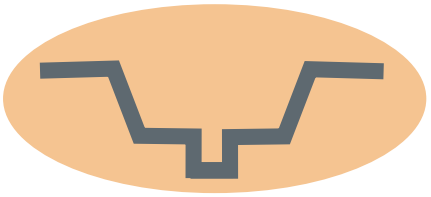
Sloping

- Soil angled to increase stability



Benching

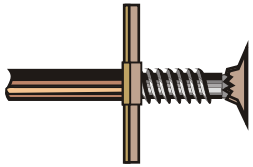
- Steps in trench wall

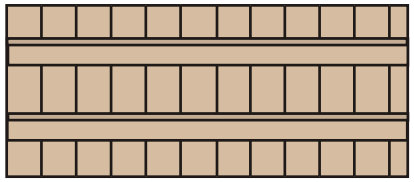


Keep spoil piles away from trench edge

Shoring

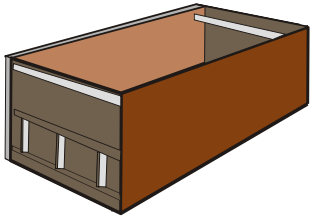
- Support system made of posts, wales, struts, and sheeting or hydraulic shoring





Shielding

- Protective frame or box, to protect workers *after* a cave-in



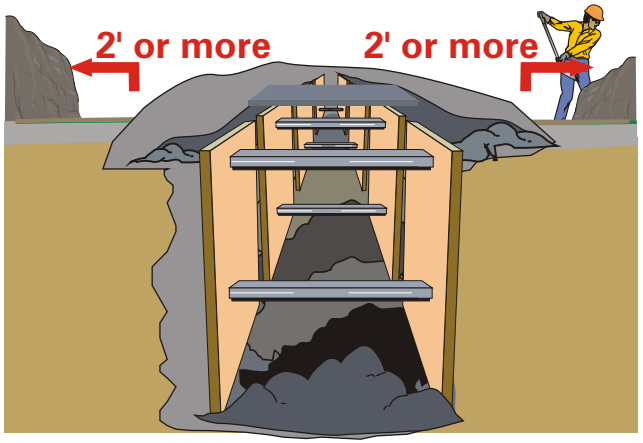
**Unless in stable rock (see definition).*

What Else Does Excavation Require?

Employer should designate 'competent person.'

'Competent person' must inspect

- At least daily and beginning of each shift
- After precipitation, a thaw, and other events that could increase hazard
- For disturbed ground, water, toxics, and other hazards
- If walls sag or crack or the bottom bulges
- To keep spoil at least two feet from trench edge
- If there are nearby vibration sources such as railroads or piledriving
- That no worker is more than 25 feet from an exit.



'Competent person' should stop the work if a hazard exists.