

EXCAVATION SAFETY CHECKLIST

Job Location: _____ Job #: _____ Date: _____

Competent Person Inspection

The Competent Person must inspect the excavation:

- Before workers enter the excavation each day, and as needed throughout the shift, especially after rain
- Inspect for cave-in hazards, subsurface utilities, overhead powerlines, atmospheric hazards, other hazards (traffic, etc.)
- Soil type must be classified as A, B, or C by at least one visual and one manual test
- Change of weather can change soil classification – rain/water can cause an excavation to collapse
- Cracking along trench on top and sides is a definite sign of moving soil. Frequently check for cracks before and during work periods. **If cracks appear in or next to a trench, remove personnel!**

Soils Classification

At least one visual and one manual test must be performed. Place an 'X' in the appropriate boxes:

Soil Class	Visual Tests	Manual Tests
A	<input type="checkbox"/> Soil is hard, cohesive, not granular, no fissures when dug <input type="checkbox"/> Not subject to vibration <input type="checkbox"/> Not previously disturbed <input type="checkbox"/> No layers or slightly-sloped layers <input type="checkbox"/> No seeping water	<input type="checkbox"/> Thumb test: can only penetrate slightly <input type="checkbox"/> Dry strength: not easily crumbled <input type="checkbox"/> Plasticity: able to roll soil into 1/8 th -inch threads without cracking or crumbling <input type="checkbox"/> Pocket penetrometer: _____ (> 1.5 TSF)
B	<input type="checkbox"/> Soil is cohesive (excavated soil in clumps), or angular (such as crushed rock) <input type="checkbox"/> Subject to some vibration <input type="checkbox"/> Previously disturbed, but not beside existing trench <input type="checkbox"/> Layered, but not steeply sloped <input type="checkbox"/> Some water present, but not saturated	<input type="checkbox"/> Thumb test: takes force to penetrate <input type="checkbox"/> Dry strength: able to be crumbled, with pressure <input type="checkbox"/> Plasticity: able to roll soil into 1/8 th -inch threads with some cracks, but without crumbling <input type="checkbox"/> Pocket penetrometer: _____ (0.5 to 1.5 TSF)
C	<input type="checkbox"/> Soil is cohesive, but soft, or granular <input type="checkbox"/> Subject to significant vibration <input type="checkbox"/> Previously disturbed, beside existing trench <input type="checkbox"/> Fissures or cracks present <input type="checkbox"/> Steeply sloped layers <input type="checkbox"/> Seeping water <input type="checkbox"/> Bulging or sloughing	<input type="checkbox"/> Thumb test: easily penetrated <input type="checkbox"/> Dry strength: easily crumbled <input type="checkbox"/> Plasticity: soil crumbles when rolled into 1/8 th -inch threads <input type="checkbox"/> Pocket penetrometer: _____ (< 0.5 TSF)

Protect from Cave-in:

- All excavations 5 feet or deeper must be protected. Excavations less than 5 feet deep may require protection.
- Protect by sloping, benching, and/or shoring. Protect all sides and the **ends** of trenches.
- Cave-in protection must be in place prior to worker entry into the excavation.

Other Requirements:

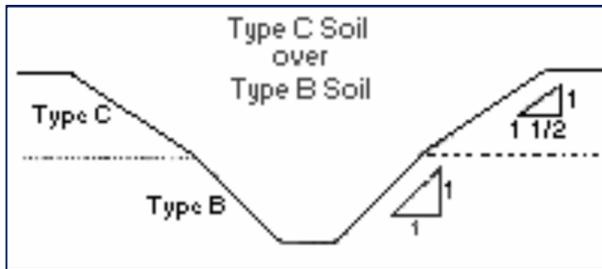
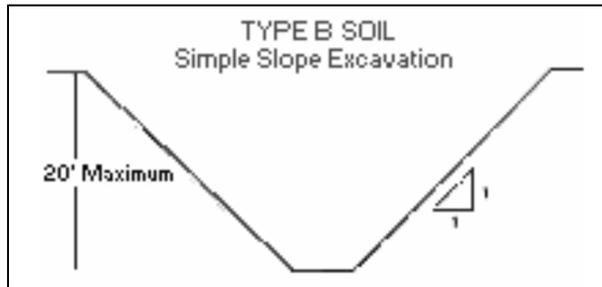
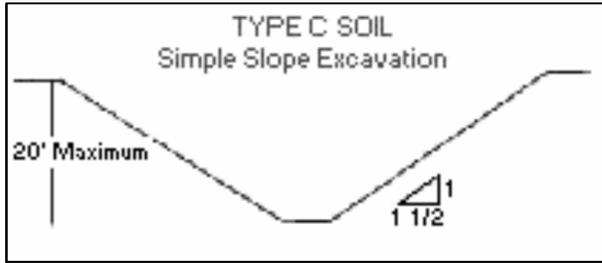
- Provide workers with unobstructed means of entry/exit within 25 feet of where they are (ladder, sloping).
- Ladders must extend 3 feet above the edge, and be secured from movement.
- Keep spoils piles at least 2 feet from the edge of the excavation.
- Workers must not work directly under any suspended or raised loads.
- Protect workers from traffic and moving equipment.
- Fence, barricade, or cover excavations that are left open when leaving the jobsite.

Soil Class: _____ Depth: _____' _____" Hydraulic Shoring Shore Box Sloping/Benching - Angle: _____

Competent Person: _____ Date: _____ Time: _____

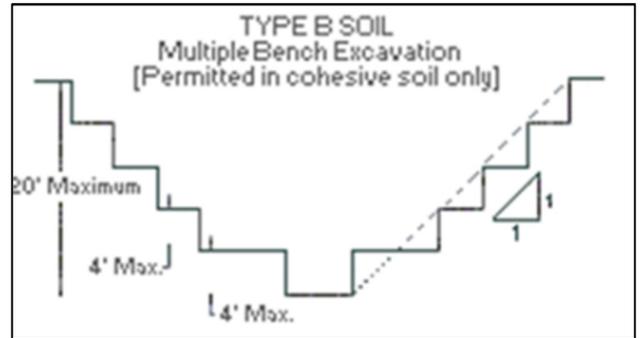
Sloping

- Type A soils: ¾ : 1 slope
- Type B soils: 1 : 1 slope
- Type C soils: 1 ½ : 1 slope
- Layered soils must be sloped based on the soil class of the lower layer



Benching:

- No benching in Type C soils
- Benches: max. 4 foot deep each.
- Bottom bench must be 2 times as wide as other benches



Shore Boxes:

- Keep tabulated data on site.
- Slope or shore ends.
- Shore boxes may be raised a max. of 2 ft. above the bottom of the excavation, if the soil does not ravel in from beneath.
- Backfill between the shoring box and the edge of the excavation.
- If shoring boxes are used at the bottom of a slope, the top of the box must extend 18" above the bottom of the slope.

Hydraulic Shoring (e.g. Speedshore):

- Cannot be used in type C-80 soil.
- Keep tabulated data on site.
- Slope or shore ends.
- Use tabulated data for horizontal and vertical spacing of cylinders.
- Plywood sheeting is only used to prevent raveling, and must extend to the top, and within 2 feet of the bottom, of excavation.
- Sheeting must be either Finn Form or 1.125-in. thick CDX plywood or equal.

