

Small trench, big disaster

The crew had been working for a week to dig up and replace sewer and draining pipes beside a house. The first part of the job involved cutting through a concrete apron next to the house. With the concrete removed, the excavator dug out the soil below, creating a narrow trench 21 inches wide, 60 inches long and 7 feet deep.

The soil was unstable and wet – loamy sand classified as “Type C” soil, the least stable soil type. Type C includes granular soils in which particles don’t stick together and cohesive soils with a low unconfined compressive strength, of 0.5 tons per square foot or less. In the week preceding the accident, the site had received more than 3 inches of rain.

On the day of the incident, a 36-year-old pipelayer and another worker for a water, sewer and drainage installation and repair business entered the trench to remove old pipes and install new ones. The trench had no protective system, although there was a hydraulic shoring cylinder near the bottom on one side.

The job was almost done when the victim entered the trench to finish connecting the pipes. The trench collapsed, burying him, but the coworker escaped and contacted emergency services. Fire department rescue personnel arrived within minutes and began to dig out the collapsed trench, but as the minutes ticked away, the rescue attempt soon turned into a recovery effort. After he was uncovered and removed from the trench, the victim was declared dead of compressional asphyxia.



Illustration by Don Lomax

How this accident could have been prevented:

- All trenches more than 4 feet deep should be made safe with the proper shoring or shielding system.
- An OSHA competent person must inspect the job area each day before the start of work and during the day if it rains or other conditions warrant.
- An OSHA competent person must remove workers from the excavation when they find evidence of a situation that could cause a cave in.
- Workers should never enter an unprotected trench or excavation even for a short time.
- Before entering a trench, inspect it to ensure that it is safe.
- Exit the trench or excavation immediately and contact the OSHA competent person if you see that it is unsafe.

For more information on this accident and OSHA requirements for safe trench operations see:
<http://www.lni.wa.gov/Safety/Research/Face/Files/PipelayerBuriedWhenTrenchCollapses.pdf>

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Date of safety talk: _____ Leader: _____
Attending: _____