

Construction Trench Collapse Cases Require Knowledge and Experience with OSHA

Trench collapses (a.k.a. cave-ins) are one of the most feared construction accidents in the underground utility and site-work construction industry. The very thought of being buried alive and crushed by the soil is horrifying and often results in death or serious injury. Other potentially fatal dangers may exist when workers enter trench excavations such as asphyxiation in a confined space and inhalation of toxic fumes. Electrocution or explosions can occur when workers come into contact with underground electric cables natural gas mains or service lines. OSHA requires that all workers in trenches and excavations are protected, and that safety and health programs address the wide range of dangers that may be encountered during excavations. Excavation cave-ins are a major cause of fatalities within the construction industry. The fatality rate for excavation work is 112% higher than the rate for general construction. (OSHA)

Trench collapse cases are frequently very intense, as the result is often death or serious injury. Experts must be experienced and proficient in various shoring components, construction installation methods and means, soil classifications, impact of weather conditions, testing, OSHA regulations regarding workplace safety, and OSHA investigative report conclusions. Trench collapse cases often require the expert give oral testimony in lengthy depositions and review countless other documents, and evidence. The expert must also be explicitly familiar with OSHA citations that may have been issued in the case. OSHA uses classifications of citations such as “willful and serious,” and the expert must be well versed in the implications these classifications have on the case. After a thorough review of all the documentation, depositions and other evidence, the expert must provide an initial expert report and likely supplemental or rebuttal reports, which include testing results, graphs, charts, detailed analysis, and conclusive supported professional opinion. The report must be clear, concise, detailed, and accurate, and presented professionally.

OSHA 29 CFR 1926.652 (in part)

- **1926.652(a) 1926.652(a)(1)**
- Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c).
- **1926.652(a)(2)**
- Protective systems shall have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.
- **1926.652(b)**
- Design of sloping and benching systems. The slopes and configurations of sloping and benching systems shall be selected and constructed by the employer or his designee and shall be in accordance with the requirements of paragraph (b)(1); or, in the alternative, paragraph (b)(2); or, in the alternative, paragraph (b)(3); or, in the alternative, paragraph (b)(4), as follows:
 - **1926.652(b)(1)**
 - Option (1) - Allowable configurations and slopes.
 - **1926.652(b)(1)(i)**

- Excavations shall be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the employer uses one of the other options listed below.
- **1926.652(b)(1)(ii)**
- Slopes specified in paragraph (b)(1)(i) of this section, shall be excavated to form configurations that are in accordance with the slopes shown for Type C soil in Appendix B to this subpart.
- **1926.652(b)(2)**
- Option (2) - Determination of slopes and configurations using Appendices A and B. Maximum allowable slopes, and allowable configurations for sloping and benching systems, shall be determined in accordance with the conditions and requirements set forth in appendices A and B to this subpart.
- **1926.652(b)(3)**
- Option (3) - Designs using other tabulated data.
- **1926.652(b)(3)(i)**
- Designs of sloping or benching systems shall be selected from and in accordance with tabulated data, such as tables and charts.

A complete version of OSHA 1926.652 can be found at:

www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10776

As you can see, OSHA provides detailed and specific regulations regarding cave-in prevention and worker protection from cave-ins. The expert must be experienced and proficient in the regulations regarding shoring, bracing, shielding, sloping, trench access and egress as well as competent person requirements to protect workers in trenches and excavations. These and other trenching and excavation regulations and requirements can be daunting and complex for the layperson. Attorneys involved in such cases would benefit by reading and developing an awareness of these OSHA safety regulations found in 29 CFR 1926.652. This information will help the attorney formulate questions to ask the prospective expert to ascertain his or her knowledge, qualifications, and experience in complex cases of trench or excavation collapse and cave-ins.

References

www.texasrialawyer.com/trench_collapse/index.htm

OSHA www.osha.gov

William Gulya, Jr., President & CEO, Middlesex Trenching Company for more than 35 years, specializes in excavation & construction site preparation, earthwork, grading, water mains, sewer installation, trenching, containment, underground utilities, dike repair, heavy equipment rentals and causation. He provides litigation prevention consulting, mediation, arbitration, and expert witness testimony, regarding construction contract disputes; scheduling; delay claims; differing site condition claims; change order justification, support and processing; nonpayment issues; back charges, lien filings.

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