

Section 02260

TRENCH SAFETY SYSTEM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Trench safety system for construction of trench excavations.
- B. Trench safety system for structural excavations, which fall under provisions of State and Federal trench safety laws.

1.02 UNIT PRICES

- A. Measurement for trench safety systems used on trench excavations is on a linear foot basis measured along centerline of trench, including manholes and other line structures.
- B. No payment shall be made for trench safety systems for structural excavations under this section. Include payment for trench safety system in applicable structure installation sections.
- C. Payment for auger pits will be based on the actual length, but shall be no greater than 40% of the linear footage of total length augered.
- D. Refer to Section 01270 - Measurement and Payment for unit price procedures.

1.03 DEFINITIONS

- A. Trench. Narrow excavation (in relation to its depth) made below surface of ground. In general, depth is greater than width, but width of trench (measured at bottom) is not greater than 15 feet.
- B. Trench safety system requirements shall apply to larger open excavations if erection of structures or other installations limits space between excavation slope and installation to dimensions equivalent of a trench as defined.
- C. Trench safety systems include but are not limited to sloping, sheeting, trench boxes or trench shields, sheet piling, cribbing, bracing, shoring, dewatering, or diversion of water to provide adequate drainage. Trench safety system is Contractor's methods and means of construction.
- D. Trench safety program is set of safety procedures governing presence and activities of individuals working in and around trench excavations.

1.04 SUBMITTALS

- A. Conform to requirements of Section 01330 - Submittal Procedures.
- B. Submit trench safety program specifically for construction of trench excavation. Design trench safety program in accordance with OSHA 29 CFR standards.
- C. Trench safety system and special designs containing deviations from OSHA standards to be sealed by a Professional Engineer registered by State of Texas.
- D. Review of trench safety system by City Engineer shall only be in regards to compliance with this specification and shall not constitute approval by City Engineer nor relieve Contractor of obligations under State and Federal trench safety laws.
- E. Submit trench safety system certification that trench safety system shall not be subjected to loads exceeding those which system was designed to withstand according to available construction and geotechnical information. When trench box is used in a manner other than what is indicated and certified in manufacturer's technical data, submit trench box manufacturer certifications of proposed usage.

1.05 REGULATORY REQUIREMENTS

- A. Install and maintain trench safety systems in accordance with detail specifications set out in provision of Excavations, Trenching, and Shoring, Federal Occupation Safety and Health Administration (OSHA) Standards, 29CFR, Part 1926, Subpart P, as amended, including Final Rule, published in Federal Register Vol. 54, No. 209 on October 31, 1989. Sections that are incorporated into these specifications by reference include Sections 1926-650 through 1926-652.
- B. Reproduction of OSHA standards included in "Subpart P - Excavations" from Federal Register Vol. 54, No. 209 is available upon request to Contractors bidding on City projects. City assumes no responsibility for accuracy of reproduction. Obtain copy of this section of Federal Register.
- C. Legislation enacted by Texas Legislature with regard to Trench Safety Systems, is hereby incorporated, by reference, into these specifications. Refer to Texas Health and Safety Code Ann., '756.021 (Vernon 1991).
- D. Reference materials, if developed for specific project, issued with Bid Documents, including following:
 - 1. Document 00820 - Trench Safety Geotechnical Information: Geotechnical information obtained for use in design of trench safety system.
 - 2. Document 00821 - Special Shoring Requirements.

1.06 INDEMNIFICATION

- A. Contractor to indemnify and hold harmless City, its employees and agents, from any and all damages, costs (including, without limitation, legal fees, court costs, and cost of investigation), judgments or claims by anyone for injury or death of persons resulting from collapse or failure of trenches constructed under this Contract.
- B. Contractor acknowledges and agrees that this indemnity provision provides indemnity for City, its employees and agents, in case City is negligent either by act or omission in providing for trench safety, including, but not limited to safety program and design reviews, inspections, failures to issue stop work orders, and hiring of Contractor.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install and maintain trench safety systems in accordance with provisions of OSHA 29 CFR.
- B. Install specially designed trench safety systems in accordance with Contractor's trench excavation safety program for locations and conditions identified in program.
- C. A competent person, as identified in Contractor's Trench Safety Program, to verify that trench boxes and other pre-manufactured systems are certified for actual installation conditions.

3.02 INSPECTION

- A. Contractor, or Contractor's independently retained consultant, to make daily inspections of trench safety systems to ensure that installed systems and operations meet OSHA 29 CFR and other personnel protection regulations requirements.
- B. If evidence of possible cave-ins or slides are apparent, immediately stop work in trench and move personnel to safe locations until necessary precautions have been taken to safeguard personnel entering trench.
- C. Maintain permanent record of daily inspections.

3.03 FIELD QUALITY CONTROL

- A. Verify specific applicability of selected or specially designed trench safety systems to each field condition encountered on project.

END OF SECTION