



AMERICAN NATIONAL STANDARD

*ANSI/ASSE A10.12 – 1998 (R2016)
Safety Requirements for Excavation*

*American National Standard
for Construction and Demolition Operations*

ANSI/ASSE A10.12 – 1998 (R2016)



AMERICAN SOCIETY OF
SAFETY ENGINEERS

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ANSI/ASSE A10.12 – 1998 (R2016)

American National Standard
Construction and Demolition Operations
Safety Requirements for Excavation

Secretariat

American Society of Safety Engineers
520 N. Northwest Highway
Park Ridge, Illinois 60068

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Foreword (This Foreword is not a part of American National Standard A10.12-1998 (R2016))

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor, and equipment manufacturers. For the convenience of users, a list of existing and proposed standards in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

- A10.1 Pre-Project & Pre-Task Safety & Health Planning
- A10.2 Safety, Health and Environmental Training (under development)
- A10.3 Powder-Actuated Fastening Systems
- A10.4 Personnel Hoists and Employee Elevators
- A10.5 Material Hoists
- A10.6 Demolition Operations
- A10.7 Transportation, Storage, Handling and Use of Commercial Explosives and Blasting Agents
- A10.8 Scaffolding
- A10.9 Concrete and Masonry Construction
- A10.10 Temporary and Portable Space Heating Devices
- A10.11 Personnel Nets
- A10.12 Excavation
- A10.13 Steel Erection
- A10.15 Dredging
- A10.16 Tunnels, Shafts and Caissons
- A10.17 Safe Operating Practices for Hot Mix Asphalt (HMA) Construction
- A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
- A10.19 Pile Installation and Extraction Operations
- A10.20 Ceramic Tile, Terrazzo, and Marble Work
- A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities (under development)
- A10.22 Rope-Guided and Non-Guided Workers' Hoists
- A10.23 Safety Requirements for the Installation of Drilled Shafts
- A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
- A10.25 Sanitation in Construction
- A10.26 Emergency Procedures for Construction Sites
- A10.27 Hot Mix Asphalt Facilities
- A10.28 Work Platforms Suspended from Cranes or Derricks
- A10.29 Aerial Platforms in Construction (under development)
- A10.31 Digger-Derricks
- A10.32 Personal Fall Protection Used in Construction and Demolition Operations
- A10.33 Safety and Health Program Requirements for Multi-Employer Projects
- A10.34 Public Protection
- A10.37 Debris Nets
- A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
- A10.39 Construction Safety and Health Audit Program
- A10.40 Reduction of Musculoskeletal Problems in Construction
- A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
- A10.43 Confined Spaces in Construction and Demolition Operations
- A10.44 Lockout/Tagout in Construction
- A10.46 Hearing Loss Prevention
- A10.47 Highway Construction Safety
- A10.48 Communication Structures
- A10.49 Control of Health Hazards

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AMERICAN NATIONAL STANDARD A10.12 SAFETY REQUIREMENTS FOR EXCAVATION

1. SCOPE, APPLICATION AND DEFINITIONS APPLICABLE TO THIS STANDARD

1.1 Scope and Application.

This standard applies to all open excavations made in the earth's surface that require worker and/or property protection. See Section 3, Requirements for Protection Systems. Excavations are defined to include trenches.

1.2 Definitions.

1.2.1 Accepted Engineering Practices. Those requirements that are compatible with standards of practice required by a registered (licensed) professional engineer.

1.2.2 Adjacent. The area within a horizontal distance from the edge of a vertical sided excavation equal to the depth of the excavation.

1.2.3 Aluminum Hydraulic Shoring. A pre-engineered shoring system comprised of aluminum hydraulic cylinders (cross braces) used in conjunction with vertical rails (uprights) or horizontal rails (walers). Such system is designed specifically to support the sidewalls of an excavation and prevent cave-ins.

1.2.4 Benching (Benching System). A method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

1.2.5 Cave-In. The separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation,

either by falling or sliding, in sufficient quantity so that it could entrap, bury or otherwise injure or immobilize a person.

1.2.6 Competent Person. One who is capable of identifying existing and predictable hazards in the surroundings or working conditions that are unsanitary, hazardous or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate these hazards.

1.2.7 Confined Space. A space that:

1.2.7.1 Is large enough and so configured that an employee can bodily enter and perform assigned work; and

1.2.7.2 Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults and pits); and

1.2.7.3 Is not designed for continuous employee occupancy.

1.2.8 Contractor. A contractor, sub-contractor, specialty contractor or other entity as designated in the project documents, responsible for part of the construction process on a construction project.

1.2.9 Cross Braces. The horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or wales.

1.2.10 Design. To formulate, evaluate and prepare plans and/or specifications for a device, system, slope or other means to protect workers in excavations. All worker-protection designs shall be prepared by registered professional engineers.