CONSTRUCTION SITE SAFETY

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Policy

The American Society of Civil Engineers (ASCE) believes improving construction site safety requires attention and commitment from all parties involved. This is accomplished by the following:

- Safety issues are addressed for each project on a project specific basis. The following responsibilities should be addressed in the contracting documents.
- Owners have responsibility for:
  - Assigning overall project safety responsibility and authority to a specific organization or individual, (or specifically retaining that responsibility);
  - Designating an individual or organization to develop a coordinated project safety plan and monitor safety performance during construction;
  - Designating responsibility for the final approval of shop drawings and details through contract documents; and
  - Including prior safety performance as a criterion for contractor selection.
- Design engineers have responsibility for:
  - Recognizing that safety and constructability are important considerations when preparing construction plans and specifications; and
  - Providing through the specifications that the design or details of critical elements of temporary construction, erection and lifting schemes, complicated form work and scaffolding be prepared by a professional engineer.
- Contractors have responsibility for:
  - Control of the worksite;
  - Developing and implementing a coordinated project specific safety plan, as per American National Standards Institute (ANSI) A10.33 and ANSI A10.38; and
  - Maintaining the safety of their employees and of all other persons in the work area or on the worksite.
- A Construction Manager who functions as an owner’s agent should assume the same safety responsibilities as an owner. A Construction Manager who has an “at risk” contract with the Owner should assume the same responsibilities as a contractor.
- The safety responsibilities of design-builders are the same as those of design engineers and contractors.
- Educators are encouraged to:
  - Incorporate project site safety and constructability concepts in design and construction curricula;
  - Emphasize engineer’s role in providing a safe and healthy environment to
personnel engaged in project activities through proper planning and design; and

- Conduct basic and applied research to advance the knowledge and practice of safe design and construction;
- All employers with employees on the construction site should provide appropriate safety training for their employees on specific hazards they may encounter, and inform employees concerning hazardous materials under the right to know provisions of the law.
- All on-site workers, after proper training, should assume personal responsibility and accountability for their actions, including knowing and observing safety rules and safe work procedure; wearing and using the required clothing, equipment and protective devices and being free from drugs and alcohol.

- Design or details of critical elements, such as temporary construction, erection and lifting schemes, form work, scaffolding, and the use of lifting equipment and its supports should be approved by a professional engineer.
- The construction industry should develop innovative methods, techniques, and equipment, and assist in the formulation of legislation and in the development of ongoing safety training and education.
- The Occupational Safety and Health Administration (OSHA) should continue to identify safety and health hazards and establish technical rules and standards in conjunction with the construction industry, while emphasizing voluntary participation, education and training.

**Issue**

Improved construction site safety is needed. Safety problems to overcome include: lack of clear cut contractual responsibility for safety, lack of an industry-wide agreement on shop drawing responsibility, the need for general and site-specific safety training, and the need for workers to accept responsibility for their own actions.

Each construction project is unique with site-specific issues. Hazards and exposures change daily. There are numerous contractual arrangements, such as design-build, multiple or single prime contract, or construction management, that can affect construction site safety responsibility. Many projects have multiple prime contractors and possibly owner-employees working in the same area with safety responsibilities not always clearly delineated.

Numerous accidents have been attributed to the lack of clear responsibilities for final approval of shop drawings, such as L'Ambiance Plaza and the Kansas City Hyatt walkway. There is no clear consensus on an industry standard as to who (the designer, the contractor, the erector, the supplier, the manufacturer/fabricator, or the detailer) should have ultimate responsibility for the approval of shop drawings that cover such critical items as connection details and temporary construction or form work.

Laws and regulations administered by OSHA generally provide adequate technical guidance to the construction industry on how to work safely, but the administrative and procedural requirements tend to be punitive and burdensome, especially on small projects.

**Rationale**

Effective improvements in construction site safety can be achieved through a committed, cooperative relationship between owners, contractors, subcontractors, construction managers, safety professionals, construction workers, labor unions, designers, regulatory agencies, associations, institutes, academia, and legal and insurance professionals.

Safety issues vary during construction of different sizes and types of projects. Proposed regulations and legislation should recognize these differences. ASCE believes that legislation and OSHA's rule making, while continuing to identify safety and health hazards, need to emphasize and apply an approach in which cooperation, education and training is the primary focus. The construction industry should actively participate in formulating changes to safety legislation.

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