

Loss Control *and you*

Scaffolding Safety and Fall Protection

By **Mike Huss**
Loss Control Supervisor

Scaffolding hazards continue to rank high on the list of the most frequently cited standards in the construction industry. Numerous injuries and fatalities occur each year due to improper scaffolding safety. Besides problems with planks and guardrails, the main causes of injuries and deaths on scaffolds are; poor planning for assembling and dismantling, collapse due to missing tie-ins or bracing, loads that are too heavy, slippery conditions, and being too close to electrical hazards including overhead lines. Also, falling objects often hurt people below scaffolds. The standard that regulates the design, erection, dismantling and use of scaffolds is Occupational Safety and Health Administration (OSHA) construction standard 29 CFR 1926.451.

Scaffolding Basics All metal frame scaffolds share common components. Platforms, base supports, side brackets, and support trusses. Scaffolds and their components must be capable of supporting without failure at least four times the maximum intended load, and be properly secured or braced to permanent structures. Employers are required to train each employee who works on a scaffold on the hazards and the procedures to control the hazards. A competent person must be involved in the inspection, erection and dismantling of all scaffolding,

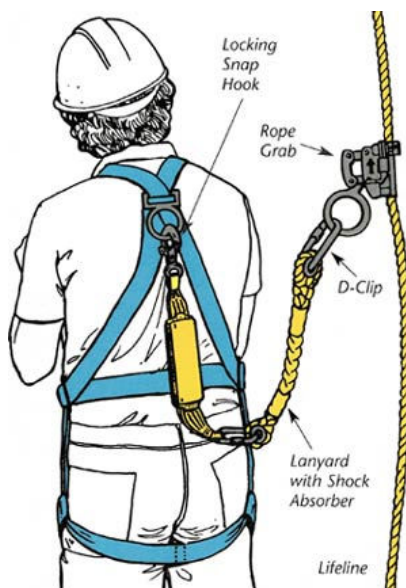
and scaffolds greater than 125 feet in height must be designed by a registered professional engineer.



Fall Protection Fall protection is required on all scaffolds where the working height is more than 10 feet above a lower level. Each worker more than 10 feet above a lower level must be protected from falls by guardrails or a fall arrest system. Top rails shall be about 42" in height. Mid-rails must be installed approximately halfway between the top rail and the platform surface. When "X" bracing or cross bracing is used as a mid-rail the intersection of the "X" must fall between 20 and 30 inches above the work platform. To protect workers from falling objects such as tools and debris toe boards should be installed in addition to the wearing of hard hats. Scaffold footings must be level and capable of supporting the loaded scaffold. All metal frame scaffolds must have a means of access. This access can be gained from attached or portable ladders, stairways, or the adjacent structure.

Fall Protection
In the U.S. construction industry falls are the leading cause of work-

er fatalities. Each year, on average, between 150 and 200 workers are killed and more than 100,000 are injured as a result of falls at construction sites. The safety standard for fall protection in the construction industry is Occupational Safety and Health Administration (OSHA) 29 CFR 1926.500. This standard sets a uniform threshold height of 6 feet which means that construction employers must protect their employees from fall hazards and falling objects whenever an affected employee is 6 feet or more above a lower level. Protection also must be provided for construction workers who are exposed to the hazard of falling into dangerous equipment. Typically fall protection is provided through the use of;



- Guardrail systems—A barrier with a top rail located 42 inches above the floor and a mid-rail. Screens and mesh may be used to replace the mid-rail as

- long as they extend from the top rail to the working level
- Safety net systems—Netting that is installed as close as practicable under the walking/working surface on which employees are working and never more than 30 feet below such levels
- Personal fall arrest systems—A system that includes anchorage, connectors and a harness and may also include a deceleration device and lifelines used to arrest (safely stop) a person who is already falling from a working level
- Positioning device systems—A body harness system rigged to allow an employee to be supported on an elevated vertical surface, such as a wall, and work with both hands free while leaning backwards. The worker should not be able to freefall further than 2 feet
- Warning line systems—A barrier erected on a roof to warn unsecured employees that they are approaching an unprotected roof side or edge
- Covers—Are fastened over holes in working surfaces to prevent falls
- Safety monitoring by a competent person—This allows a trained person to monitor others as they work on elevated surfaces and warn them of any fall hazards.

Lessons from Losses - Masonry

By [Courtney Rosengartner](#)
Loss Control Coordinator

A masonry subcontractor fell from a 13 foot scaffold while applying stucco material to the exterior of an apartment building. Although the scaffolding system was erected by an experienced individual, the toe-boards were inconsistently placed, violating the OSHA standard. The worker suffered severe head trauma in addition to other injuries when he fell from the exposed area.

Never take shortcuts when it comes to safety. The scaffolding was the main cause of injury in this case. Toe-boards should be installed on all open sides of all scaffolds more than 10 feet above the ground and they should be a minimum of 4 inches high. See OSHA's 1910.28 regulation for more information. In addition to scaffolding erection, the following items are essential to avoid injury:

- Develop a written safety plan or manual
 - Complete formal training on a regular basis
 - Assess hazards - provide employees with fall hazard assessment training
 - Implement fall prevention/protection measures before starting a job and continually thereafter
- Conduct pre-job safety meetings to discuss all safety & health issues and review potential hazards

Safety Calendar and News

By [Kim Coonrod](#)
Loss Control Manager

[OSHA Guidance Document Helps Prevent Nail Gun Injuries in Construction](#)

The Occupational Safety and Health Administration (OSHA) and the National Institute for Occupational Safety and Health (NIOSH) have developed new guidance, *Nail Gun Safety: A Guide for Construction Contractors*, to help construction

employers and workers prevent work-related nail gun injuries.

"Nail gun injuries are responsible for approximately 37,000 emergency room visits annually. In some cases, workers have died from their injuries," said Assistant Secretary of Labor for Occupational Safety and Health Dr. David Michaels. "This document will help construction employers make necessary changes to improve nail gun safety and protect their workers from preventable injuries and death."

[CDC Releases Surveillance Data on Waterborne Disease Outbreaks](#)

In 2007-2008, the most recent year for which waterborne disease outbreak data are finalized, 134 outbreaks were associated with recreational water and 36 outbreaks were associated with drinking water. The Center for Disease Control (CDC) has released two MMWR Surveillance Summaries: "Surveillance for Waterborne Disease Outbreaks and Other Health Events Associated with Recreational Water—United States, 2007-2008" and "Surveillance for Waterborne Disease Outbreaks Associated with Drinking Water—United States, 2007-2008."

[An Apple or Pear a Day May Keep Strokes Away: Study](#)

While previous studies have linked high consumption of fruits and vegetables with lower stroke risk, the researchers' prospective work is the first to examine associations of fruits and vegetable color groups with stroke.

According to a Dutch study published in *Stroke: Journal of the American Heart Association*, researchers found that eating a lot of fruits and vegetables with white flesh may protect against stroke.

[ASSE Urges Farmers to Work Safely](#)

According to the CDC, the U.S. agriculture sector had a fatality rate of 24.7 per 100,000 workers in 2009, and an average of 243 lost-time injuries each day. The Ameri-

can Society of Safety Engineers (ASSE) offered safety and health tips to farmers and farm workers during National Farm Safety and Health Week (Sept. 18-25). The harvest season is approaching, and ASSE said workers and employers should be careful to avoid injuries, fatalities, and illnesses.



Safety Calendar

November—[Great American Smoke-Out](#)
-[National Healthy Skin Month](#)
December—[National Drunk and Drugged Driving Prevention Month](#)
-[Safe Toys and Gifts Month](#)
January—[National Radon Action Month](#)

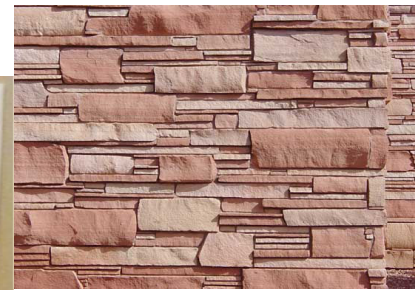
Safety Resources— Online Safety Materials

By [Nick Gustafson](#)
Loss Control Coordinator

FirstComp has recently expanded its selection of online workplace safety and health resources. Available resources include safety alerts, our Fleet Safety and Toolbox Safety Series, self-inspection checklists and helpful links to other safety websites as well as back issues of this newsletter. For more information, see the Loss Control page at [FirstComp.com](#).

For information about any of FirstComp's Loss Control Services, please call (888) 500-3344 or email losscontrol@firstcomp.com

Masonry and Concrete Contractors



[Controlling Silica Exposure in Construction—OSHA](#)

[Concrete Pumping—Industry Standard—WorkSafe](#)

[Ergonomic Survival Guide for Cement Masons—CalOSHA](#)

[Fall Protection Hazard Awareness Guide—Construction Safety Council](#)

[Ladder Safety—OSHA](#)

[OSHA Quick Card—Protect Yourself: Silicosis—ELCOSH](#)

[Personal Protection on the Job—Masonry Magazine](#)

[Preventing Fall Injuries by the Book—Masonry Magazine](#)

[Simple Solutions—Ergonomics for Construction Workers](#)

[The Cold Stress Equation—OSHA](#)

[Training Guide—Cement & Concrete—ELCOSH](#)

[Water Spray Control of Hazardous Dust when Breaking Concrete with a Jackhammer—NIOSH](#)

[Worker Safety Series—Construction—OSHA](#)