Scaffold Safety

Hazard Alert

THE CENTER TO PROTECT WORKERS' RIGHTS CPWR

Each year, more than 60 workers are killed by falls from scaffolds, about 1 in 5 of the fatal falls in construction. Besides problems with planks and guardrails, the main causes of injuries and deaths on scaffolds are poor planning for assembling and taking them apart, missing tie-ins or bracing, loads that are too heavy, and being too close to power lines. Also, falling objects can hurt people below scaffolds.

Protect Yourself

Scaffolds are supported (usually by posts/beams and legs) or suspended (by ropes).

• OSHA says a scaffold must be designed by a qualified person.* Supported scaffolds must be able to support their own weight and at least 4 times the maximum intended load .

• OSHA says a competent person* must inspect a scaffold before each workshift and after anything happens that could affect the structure. The competent person should be trained in scaffold safety.

• A competent person must supervise if a scaffold is assembled, changed, moved, or taken apart.

• **Power lines:** Keep scaffolds 10 feet or more from power lines (or 3 feet, if lines are less than 300 volts), unless you are sure the power lines are de-energized.

• **Weather:** You cannot work on a scaffold in high winds or a storm unless a competent person says it is safe and you use personal fall-arrest or a windscreen. (If you use a screen, the scaffold must be secured against the expected wind force.) OSHA says you must not work on a scaffold that has ice or snow on it — except to get ice or snow off the scaffold.

Guidelines for checking a scaffold

• If a scaffold is more than 2 feet above or below a level, there must be a way to get on or off — such as a ladder, ramp, or personnel hoist. The access must not be more than 14" from the scaffold.

• Put a standing scaffold on a firm foundation (with base plates attached to feet)— for instance, with one piece of wood under each pair of legs (across the shortest distance), extending at least 1 foot past each leg.

• Uprights must be vertical and braced to prevent swaying; platforms must be level.

• A scaffold that is more than 4 times higher than its base is wide must be tied to supports.

• Most scaffold platforms and walkways must be 18" wide or more. If a work area is less than 18" wide, guardrails and/or personal fall-arrest must be used.

• Ten-foot planks must extend at least 6" past the end supports, but not more than 12"; no more than 1" between planks or between planks and uprights.

• Wood planks must be unpainted, so any cracks will show.

• For supported scaffolds, check at least these points:

1. Completely planked platforms
2. Proper access
3. Complete guardrails
4. Proper ties to buildings, where required.

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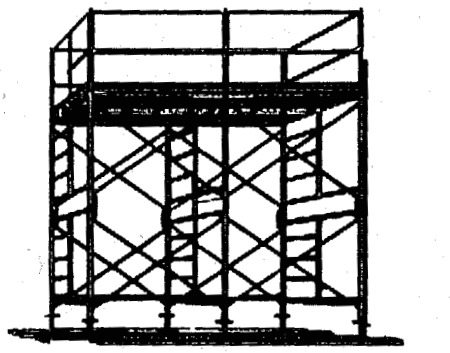

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* OSHA says a *qualified person*...by extensive knowledge, training, and experience can...solve...problems related to the subject matter.... A *competent person* is...capable of identifying existing and predictable hazards...and has authorization to take prompt measures to eliminate them. More information on scaffold safety is in the OSHA Construction Standards in the *Code of Federal Regulations*, CFR 1926.450-454.

Suspended scaffolds

• Supporting outrigger beams must be able to support at least 4 times the intended load. To keep a scaffold from falling to the ground, it must be attached to the roof, tied to a secure anchorage, or secured with counterweights. The suspension ropes and rigging must support at least 6 times the intended load.
• Counterweights must be attached to secure and strong places on a building so they won't move. Do not use bags of sand or gravel, masonry blocks, or roofing materials that can flow or move.
• Do not use gas-powered equipment or hoists. Hoists must have automatic brakes for emergencies.
• A 1-point or 2-point suspended scaffold must be tied or secured to prevent swaying.

Fall protection

• OSHA says if a scaffold is more than 10 feet above a level, workers must have fall protection.
• A competent person must decide if fall protection is feasible when you assemble a scaffold or take it apart.
• On most scaffolds, guard rails must be on all open sides and ends. On supported scaffolds and some other scaffolds, guardrails or personal fall protection is enough. On most suspension scaffolds, both are needed. Use a harness, not a body belt for personal fall protection.
• You do not need a guard rail on the working side when the platform is less than 14" from the work (18" for plastering and lathing). The open side of an outrigger must never be more than 3" from the face of the building.
• On supported scaffolds most of the time, the top rail must be 38" to 45" above the platform. A top rail must be strong enough to hold 200 lb. (or 100 lb. on single-point and two-point suspension scaffolds). A mid-rail must be about halfway between the platform and the top rail; most mid-rails must be able to hold 150 pounds. If mesh, screens, or panels are used, a top rail is needed (unless mesh was designed and installed to meet guardrail requirements).
• Scaffold walkways must have no more than a 9.5" gap between planks and a guardrail.
• Don't let junk collect on the scaffold. You can trip and fall.

Protection for people below a scaffold

There must be a 3½"-high toe board to prevent things falling off a scaffold. If things on the scaffold are taller than 3½" — above the toeboard — other systems, like debris nets, can be used to catch falling tools or materials. If things can fall off a scaffold, people must be prevented from walking under or near the scaffold.

Training

• The employer must have a qualified person provide safety training for each worker who *uses* a scaffold. A competent person must give safety training to any worker who assembles, takes apart, moves, operates, repairs, maintains, or inspects scaffolds.
• If the worksite changes or the type of scaffold or safety equipment changes, workers using scaffolds must be retrained.

For more information, call your local union, the Center to Protect Workers' Rights (CPWR) (301-578-8500 or **www.cpwr.com**), the National Institute for Occupational Safety and Health (1-800-35-NIOSH, 1-800-356-4674, or **www.cdc.gov/niosh**), or OSHA (1-800-321-OSHA or **www.osha.gov**). Or go to the website **www.elcosh.org**

 CPWR is a research, development, and training arm of the Building and Construction Trades Dept., AFL-CIO: CPWR, Suite 1000, 8484 Georgia Ave., Silver Spring, MD 20910. (Edward C. Sullivan is president of the Building and Construction Trades Dept. and of CPWR and Joseph Maloney is secretary treasurer.) Production of this card was supported by grant 1 U54 OH008307 from the National Institute for Occupational Safety and Health and grants U45-ES09764 and U45-ES06185 from the National Institute of Environmental Health Sciences. The contents are solely the responsibility of the authors and do not necessarily represent the official views of NIOSH or NIEHS.
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