

Scaffolds

Additional Resources:

- [Complete OSHA Standard](#)

General Requirements

Scaffolds are any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage), used for supporting employees or materials or both. 1926.450(b)

Each employee who performs work on a scaffold shall be trained by a person qualified to recognize the hazards associated with the type of scaffold used and to understand the procedures to control or minimize those hazards. The training shall include such topics as the nature of any electrical hazards, fall hazards, falling object hazards, the maintenance and disassembly of the fall protection systems, the use of the scaffold, handling of materials, the capacity and the maximum intended load. 1926.454(a)

Fall protection (guardrail systems and/or personal fall arrest systems) must be provided for each employee on a scaffold more than 10' above a lower level. 1926.451 (g)(1). Each scaffold and scaffold component shall support without failure its own weight and at least 4 times the maximum intended load applied or transmitted to it.

Suspension ropes and connecting hardware must support 6 times the intended load. Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less. 1926.451(a)(1), (a)(4) and (f)(1)

The scaffold platform shall be planked or decked as fully as possible. 1926.451 (b)(1)

The platform shall not deflect more than 1/60 of the span when loaded. 1926.451(f)(16)

The work area for each scaffold platform and walkway shall be at least 18" wide, the guardrails and/or personal fall arrest systems shall still be used. 1926.451(b)(2)

Access must be provided when the scaffold platforms are more than 2' above or below a point of access. Direct access is acceptable when the scaffold is not more than 14" vertically from the other surfaces. Crossbraces shall not be used as a means of access. 1926.451(e)(1) and (e)(8)

A competent person shall inspect the scaffold, scaffold components, and ropes on suspended scaffolds before each work shift and after any occurrence which could affect the structural integrity, and authorize prompt corrective action. 1926.450(b) and 1926.451(f)(3)-(10)

Scaffold, Bricklaying

Employees doing overhand bricklaying from a supported scaffold shall be protected by a guardrail or personal fall arrest system on all sides, except the side where the work is being done. 1926.451(g)(1)(vi)

Scaffold Erectors and Dismantlers

A competent person shall determine the feasibility for safe access and fall protection for employees erecting and dismantling supported scaffolds.

1926.451(e) and (g)(2)

Scaffold, Fall Arrest Systems

Personal fall arrest systems include harnesses. Components of the harness/belt such as Dee-rings and snaphooks, lifelines, and anchorage points, must have a capacity of 5,000 pounds.

1926.451(g)(3) and 1926.502(d)(15)

Vertical or horizontal lifelines may be used. 1926.451(g)(3)(ii)-(iv)

Lifelines shall be independent of support lines and suspension ropes and not attached to the same anchorage point as the support or suspension ropes.

1926.451(g)(3)(iii)-(iv)

When working from an aerial lift, the fall arrest system lanyard shall be attached to the boom or basket. 1926.453(b)(2)(v)

Scaffold, Guardrails

Guardrails shall be installed along all open sides and ends. This shall be done before the scaffold is released for use by employees other than the erection and dismantling crews. Guardrails are not required on the front edge of a platform if the front edge of the platform is less than 14 inches from the face of the work. When plastering and lathing is being done the distance is 18 inches or less from the front edge. When outrigger scaffolds are attached to supported scaffolds the distance is 3 inches or less from the front edge of the outrigger. 1926.451(b)(3) and (g)(4)

The toprail for scaffolds must be 38 inches to 45 inches from the platform. Midrails are to be installed approximately halfway between the toprail and the platform surface. Toeboards are to be used to protect employees working below. 1926.451(g)(4)(ii) and (iii), 1926.4510(1)

When screens and mesh are used for guardrails, they shall extend from the top edge of the guardrail system to the scaffold platform, and along the entire opening between the supports. 1926.451(g)(4)(v)

Crossbracing is not acceptable as an entire guardrail system but is acceptable for a toprail when the crossing point of the two braces is between 38" and 48" above the work platform, and for midrails when the crossing point is between 20" and 30" above the work platform. The end points of the crossbracing shall be no more than 48 inches apart vertically. 1926.451(g)(4)(xv)

Scaffolds, Mobile

Support scaffold footings shall be level and capable of supporting the loaded scaffold. The legs, poles, frames, and uprights shall bear on base plates and mud sills. 1926.451(c)(2)

Supported scaffold platforms shall be fully planked or decked. 1926.451(b)

Each employee more than 10' above a lower level shall be protected from falls or by guardrails or a fall arrest system, except those on single-point and two-point adjustable suspension scaffolds. Each employee on a single-point and two-point adjustable suspension scaffold shall be protected by both a personal fall arrest system and a guardrail. 1926.451(g)(1)(i)-(vii)

Scaffold casters and wheels shall be locked with positive wheel and/or wheel and swivel locks, or equivalent means, to prevent movement of the scaffold while the scaffold is used in a stationary manner. 1926.452(w)(2)

Scaffold, Planking

Scaffold planking shall be capable of supporting without failure its own weight and at least 4 times the intended load. 1926.451(a)(1)

Solid sawn wood, fabricated planks, and fabricated platforms may be used as scaffold planks, following the recommendations by the manufacturer or a lumber grading association or inspection agency. Tables showing maximum permissible spans, rated load capacity, nominal thickness, etc., are in Appendix A of Subpart L, (1)(b) and (c).

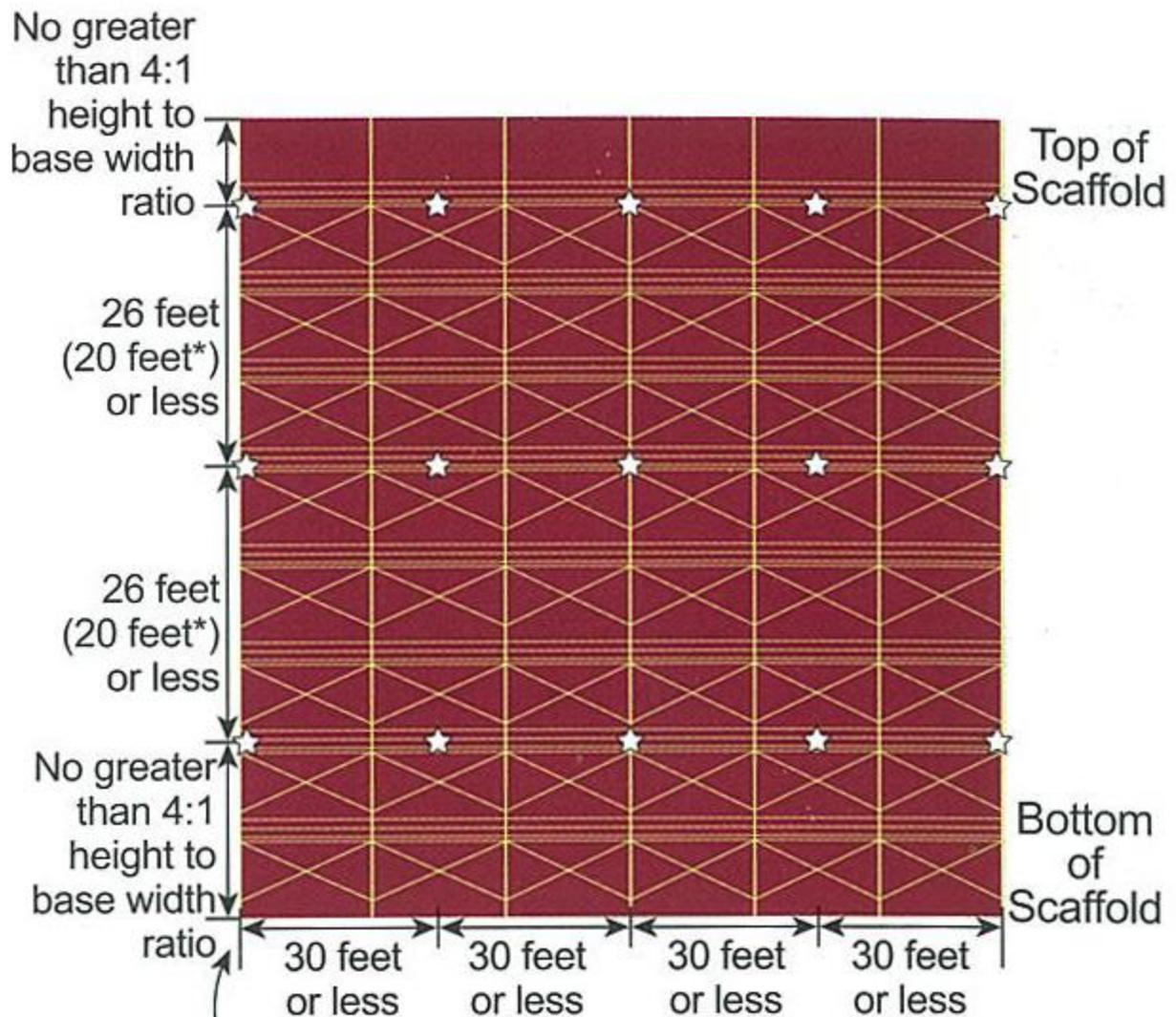
Scaffolds, Supported

Supported scaffolds are platforms supported by legs, outrigger beams, brackets, poles, uprights, posts, frames, or similar rigid support. The structural members, poles, legs, posts, frames, and uprights, shall be plumb and braced to prevent swaying and displacement. 1926.451(b) and (c)

Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mud sills, or on another adequate firm foundation. 1926.451(c)(2)(i) and (ii)

Either the manufacturer's recommendation or the following placements shall be used for guys, ties and braces:

- Vertically
 - Install guys, ties and braces at the closest horizontal member to the 4:1 height;
 - And every 26 feet (20 feet for scaffolds less than 3 feet wide);
 - And with the top restraint no further than the 4:1 height from the top.
- Horizontally
 - At each end;
 - At intervals not to exceed 30 feet. 1926.451(c) (see graphic below)



Measure from one end when laying out horizontal guys, ties and braces.

*The dimension in () on the vertical scale applies to scaffolds 3 feet wide or less.

Be sure to follow the manufacturer's instructions when winterizing scaffolding.

Scaffolds, Suspension

Each employee more than 10 feet above a lower level shall be protected from falling by guardrails and a personal fall arrest system when working from single or

two-point suspended scaffolds and self-contained adjustable scaffolds that are supported by ropes. 1926.451(g)(ii) and (iv)

Each employee 10' above a lower level shall be protected from falling by a personal fall arrest system when working from a boatswain's chair, ladder jack, needle beam, float, or catenary scaffolds. 1926.451(g)(i)

Lifelines shall be independent of support lines and suspension ropes and not attached to the same anchorage point as the support or suspension ropes. 1926.451(g)(3)(iii) and (iv)

A competent person shall inspect the ropes for defects prior to each workshift and after every occurrence which could affect a rope's integrity, evaluate the direct connections that support the load, and determine if two-point and multi-point scaffolds are secured from swaying. 1926.451(d) (3)(i), (d)(10), (d)(18), (f)(3)

The use of repaired wire rope is prohibited. 1926.451(d)(7)

Tiebacks shall be secured to a structurally sound anchorage on the building or structure. 1926.451(d)(3)(ix) and (d)(5)

Tiebacks shall not be secured to standpipes, vents, other piping systems, or electrical conduit. 1926.451(d)(3)(ix) and (d)(5)

A single tieback shall be installed perpendicular to the face of the building or structure. Two

tiebacks installed at opposing angles are required when a perpendicular tie back cannot be installed. 1926.451(d)(3)(x)

Only those items specifically designed as counterweights shall be used. Sand, gravel, masonry units, rolls of roofing felt, and other such materials shall not be used as counterweights. 1926.451(d)(3)(ii) and (iii)

Counterweights used for suspended scaffolds shall be made of materials that cannot be easily dislocated. 1926.451(d)(3)(ii)

Counterweights shall be secured by mechanical means to the outrigger beams. 1926.451(d)(3)(iv)