Scaffold Safety
WAC 296-24-860

1.0 General Requirements for All Scaffolds

- Scaffolds must be furnished and erected in accordance with this standard for persons engaged in work that cannot be done safely from the ground or from solid construction, except that ladders used for such work must conform to WAC 296-24-780 through 296-24-78009 and 296-24-795 through 296-24-79507.
- The footing or anchorage for scaffolds must be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects such as barrels, boxes, loose brick, or concrete blocks must not be used to support scaffolds or planks.
- Guardrails and toe-boards must be installed on all open sides and ends of platforms more than 8 feet above the ground or floor except:
    - Scaffolding wholly within the interior of a building and covering the entire floor area of any room therein and not having any side exposed to a hoist-way, elevator shaft, stairwell, or other floor openings
    - Needle-beam scaffolds and floats in use by structural ironworkers.
- Guardrails should all be 2 x 4 inches or the equivalent, installed no less than 36 inches or not more than 42 inches high, with a mid-rail, when required, of 1 x 4 inch nominal lumber or equivalent. Supports should be at intervals not to exceed ten feet. Toe-boards must be a minimum of 4 inches nominal lumber in height.
- Factory-built (laminated) scaffold planks meeting the requirements of wood scaffold planks may be substituted for wood scaffold planks.
- Scaffolds and their components must be capable of supporting without failure at least four times the maximum intended load.
- Scaffolds must be maintained in safe condition. Scaffolds may not be altered or moved horizontally while they are in use or occupied.
- Any scaffold damaged or weakened from any cause must be immediately repaired and may not be used until repairs have been completed.
- Scaffolds may not be loaded in excess of the working load for which they are intended.
- All planking must be Scaffold Grade as recognized by grading rules for the species of wood used. The maximum permissible spans for 2 x 9-inch or wider planks can be found in the table in WAC 296-24-28503(16).
- Nails or bolts used in the construction of scaffolds must be of adequate size and in sufficient numbers at each connection to develop the designed strength of the scaffold. Nails must not be subjected to a straight pull and must be driven full length.
- All planking or platforms must be overlapped (minimum 12 inches) or secured from movement.
- An access ladder or equivalent safe access must be provided.
- Scaffold planks must extend over their end supports not less than 6 inches or more than 18 inches.
- The poles, legs, or uprights of scaffolds must be plumb, and securely and rigidly braced to prevent swaying and displacement.
- Materials being hoisted onto a scaffold must have a tag line.
- Overhead protection must be provided for workmen working on a scaffold when they are exposed to overhead hazards.

• Scaffolds must be provided with a screen between the toe board and the guardrail, extending along the entire opening, consisting of No. 18 gauge U.S. Standard Wire one-half-inch mesh or the equivalent, where persons are required to work or pass under the scaffolds.
• Employees must not work on scaffolds during storms or high winds.
• Employees must not work on scaffolds that are covered with ice or snow.
• Tools, materials, and debris must not be allowed to accumulate in quantities to cause a hazard.
• Only treated or protected fiber rope must be used for or near any work involving the use of corrosive substances or chemicals.
• Wire or fiber rope used for scaffold suspension must be capable of supporting at least six times the intended load.
• When acid solutions are used for cleaning buildings over 50 feet in height, wire rope supported scaffolds must be used.
• The use of shore scaffolds or lean-to scaffolds is prohibited.
• Lumber sizes, when used in WAC 296-24-82505 through 296-24-82545, refer to nominal sizes except when otherwise stated.
• Scaffolds must be secured to permanent structures, through use of anchor bolts, reveal bolts, or other equivalent means. Window cleaners' anchor bolts must not be used.
• Special precautions must be taken to protect scaffold members, including any wire or fiber ropes, when using a heat-producing process.
• When rope falls are used to support swinging scaffolding, the rope falls must be of sufficient length to reach the ground. Lengthening rope falls by typing on additional lengths is prohibited.
• When screw shackles are used to support staging, etc., the pin must be wired or pinned so that the shackle will not become unscrewed by strain or stress.
• All hooks on blocks used for raising scaffolding must be provided with a safety latch or be "moused at the throat" to prevent the hook from becoming dislodged.
• Lifelines size must be ¾ inch manila rope or equivalent with a minimum breaking strength of 5400 pounds. Safety belt lanyards must be a minimum of ½ inch nylon or equivalent with a maximum length to provide for a fall of no greater than 6 feet. This rope must have a minimum breaking strength of 5400 pounds.

2.0 Tube and coupler scaffolds

• A light-duty tube and coupler scaffold must have all posts, bearers, runners, and bracing of nominal 2-inch O.D. steel tubing. The posts must be spaced no more than 6 feet apart by 10 feet along the length of the scaffold. Other structural metals when used must be designed to carry an equivalent load.
• A medium-duty tube and coupler scaffold must have all posts, runners, and bracing of nominal 2-inch O.D. steel tubing. Posts spaced not more than 6 feet apart by 8 feet along the length of the scaffold must have bearers of nominal 2 ½-inch O.D. steel tubing. Posts spaced not more than 5 feet apart by 8 feet along the length of the scaffold must have bearers of nominal 2-inch O.D. steel tubing. Other structural metals when used must be designed to carry an equivalent load.
• A heavy-duty tube and coupler scaffold must have all posts, runners, and bracing of nominal 2-inch O.D. steel tubing, with the posts spaced not more than 6 feet apart by 6 feet 6 inches along the length of the scaffold. Other structural metals when used must be designed to carry an equivalent load.

• Tube and coupler scaffolds must be limited in heights and working levels to those permitted in Tables D-13, 14, and 15 in WAC 296-24-860. Drawings and specifications of all tube and coupler scaffolds above the limitations in Tables D-13, 14, and 15 must be designed by a registered professional engineer and copies made available to the employer and for inspection purposes.
• All tube and coupler scaffolds must be constructed and erected to support four times the maximum intended loads as set forth in Tables D-13, 14, and 15, or as set forth in the specifications by a registered professional engineer. Copies of the specifications must be made available to the employer and for inspection purposes.
• Competent and experienced personnel must erect all tube and coupler scaffolds.
• Posts must be accurately spaced, erected on suitable bases, and maintained plumb.
• Runners must be erected along the length of the scaffold located on both the inside and the outside posts at even height. Runners must be interlocked to form continuous lengths and coupled to each post. The bottom runners must be located as close to the base as possible. Runners must be placed not more than 6 feet 6 inches on centers.
• Bearers must be installed transversely between posts and must be securely coupled to the posts bearing on the runner coupler. When coupled directly to the runners, the coupler must be kept as close to the posts as possible.
• Bearers must be at least 4 inches but not more than 12 inches longer than the post spacing or runner spacing. Bearers may be cantilevered for use as brackets to carry not more than two planks.
• Cross bracing must be installed across the width of the scaffold at least every third set of posts horizontally and every fourth runner vertically. Such bracing must extend diagonally from the inner and outer runners upward to the next outer and inner runners.
• Longitudinal diagonal bracing must be installed at approximately a 45-degree angle from near the base of the first outer post upward to the extreme top of the scaffold. Where the longitudinal length of the scaffold permits, such bracing must be duplicated beginning at every fifth post. In a similar manner, longitudinal diagonal bracing must also be installed from the last post extending back and upward toward the first post. Where conditions preclude the attachment of this bracing to the posts, it may be attached to the runners.
• The entire scaffold must be tied to and securely braced against the building at intervals not to exceed 30 feet horizontally and 26 feet vertically.
• Guardrails not less than 2 x 4 inches nominal lumber or the equivalent and not less than 36 inches or more than 42 inches high, with a mid-rail, when required, of 1 x 4-inch nominal lumber or equivalent, and toe-boards, must be installed at all open sides on all scaffolds more than 10 feet above the ground or floor. Toe-boards must be a minimum of 4 inches in height. Wire mesh must be installed in accordance with WAC 296-24-82503(17). (See Tables D-13, 14 and 15.)

3.0 Tubular welded frame scaffolds

• Metal tubular frame scaffolds, including accessories such as braces, brackets, trusses, screw legs, ladders, etc., must be designed and proved to safely support four times the maximum intended load.
• Spacing of panels or frames must be consistent with the loads imposed.
• Scaffolds must be properly braced by cross bracing or diagonal braces, or both, for securing vertical members together laterally, and the cross braces must be of such length as will automatically square and align vertical members so that the erected scaffold is always plumb, square, and rigid. All brace connections must be made secure.

• Scaffold legs must be set on adjustable bases or plain bases placed on mudsills or other foundations adequate to support the maximum intended load.
• The frames must be placed one on top of the other with coupling or stacking pins to provide proper vertical alignment of the legs.
• Where uplift may occur, panels must be locked together vertically by pins or other equivalent suitable means.
• Guardrails not less than 2 x 4 inches or the equivalent and not less than 36 inches or more than 42 inches high, with a mid-rail, when required, of 1- x 4-inch nominal lumber or equivalent, and toe-boards, must be installed at all open sides on all scaffolds more than 10 feet above the ground or floor. Toe-boards must be a minimum of 4 inches nominal lumber in height. Wire mesh must be installed in accordance with WAC 296-24-82503(17).
• All tubular metal scaffolds must be constructed and erected to support four times the maximum intended loads.
• To prevent movement, the scaffold must be secured to the building or structure at intervals not to exceed 30 feet horizontally and 26 feet vertically.
• Maximum permissible spans of planking must be in conformity with WAC 296-24-82503(9).
• Drawings and specifications for all frame scaffolds over 125 feet in height above the base plates must be designed by a registered professional engineer and copies made available to the employer and for inspection purposes.
• All tubular welded frame scaffolds must be erected by competent and experienced personnel.
• Frames and accessories for scaffolds must be maintained in good repair and every defect, unsafe condition, or noncompliance with this section must be immediately corrected before further use of the scaffold. Any broken, bent, excessively rusted, altered, or otherwise structurally damaged frames or accessories must not be used.
• Periodic inspections must be made of all welded frames and accessories, and any maintenance, including painting, or minor corrections authorized by the manufacturer, must be made before further use.

4.0 Training

Employees who construct scaffold for use by themselves of for others shall be trained to do so.