

**GI Part 5. Scaffolding  
Detailed Comparison With  
29 C.F.R. Subpart D – Walking-Working Surfaces:  
1910.28 Safety requirements for scaffolding**

The comparisons show only those provisions where MIOSHA rules are different than OSHA or where MIOSHA rules are not included in 29 C.F.R.

<p><b>MIOSHA</b> <b>R 408.10511. General requirements.</b> <b>Rule 511.</b> (1) When required by this part, a safety belt, lanyard, and lifeline shall be provided and used as prescribed in Part 33. Personal Protective Equipment, being R 408.13301 et seq. of the Michigan Administrative Code. (2) Except where a ladder, as prescribed in Part 4. Portable Ladders, being R 408.10401 to R 408.10456 of the Michigan Administrative Code, or a self-propelled vehicle mounted elevating platform is furnished, an employee engaged in work that cannot be done safely from the ground or from solid construction shall be provided a scaffold from which to work or shall wear a safety harness and lifeline. (8) A lifeline and safety belt shall be used where an employee is required to crawl out on a thrust out or projecting beam. (9) An employee shall not be permitted to work on a scaffold outdoors during a storm or high wind, or on a scaffold covered with ice or snow, except when performing emergency service. When performing emergency service, safeguards such as, but not limited to, lanyards and safety belts shall be used by the employee. (10) Scaffolding endangered by a truck or other moving equipment shall be protected by a warning device, or barrier, or both. (11) A scaffold shall not be altered or moved horizontally while it is in use or is being occupied unless the scaffold is specifically designed for occupied horizontal travel. (12) Fiber rope used for or near any work involving the use of corrosive substances or chemicals shall be treated or protected against deterioration.</p> <p><b>R 408.10512. Planking.</b> <b>Rule 512.</b> (1) Planking shall be scaffold grade and capable of supporting the intended load. The maximum span for a 2-by 10-inch or wider plank shall be as prescribed in table 1. (2) Planking shall comply with all of the following: (a) Extend over the end bearer not less than 6 inches, but not more than 12 inches. (b) Be cleated or otherwise fastened to prevent shifting and be uniform in thickness, except where lapped as prescribed in subrule (3) of this rule. (c) Consist of not less than 2 2-by 10-inch wide boards. (3) Where planks are lapped, each plank shall lap its bearer not less than 6 inches which will provide minimum overlap of 12 inches. (4) Where the ends abut each other, the butt joint shall be at the centerline of a pole and rest on separate bearers. (5) A manufactured plank, or pick, shall be used as</p>	<p><b>OSHA</b> <b>No comparable OSHA provision except:</b></p> <p><b>1910.28 Safety requirements for scaffolding.</b> (a) General requirements for all scaffolds. (19) Employees shall not work on scaffolds which are covered with ice or snow, unless all ice or snow is removed and planking sanded to prevent slipping.</p> <p><b>1910.28 Safety requirements for scaffolding.</b> (a) General requirements for all scaffolds. (9) All planking shall 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 are shown in the following table:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2"></th> <th colspan="4">Material</th> </tr> <tr> <th colspan="2">Full thickness undressed lumber</th> <th colspan="2">Nominal thickness lumber</th> </tr> </thead> <tbody> <tr> <td>Working load (p.s.f.)</td> <td>25</td> <td>50</td> <td>75</td> <td>25 50</td> </tr> <tr> <td>Permissible span (ft.)</td> <td>10</td> <td>8</td> <td>6</td> <td>8 9</td> </tr> </tbody> </table> <p>(13) Scaffold planks shall extend over their end supports not less than 6 inches nor mmore than 18 inches.</p>		Material				Full thickness undressed lumber		Nominal thickness lumber		Working load (p.s.f.)	25	50	75	25 50	Permissible span (ft.)	10	8	6	8 9
	Material																			
	Full thickness undressed lumber		Nominal thickness lumber																	
Working load (p.s.f.)	25	50	75	25 50																
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prescribed in the manufacturer's instructions.

(6) Planks shall be laid with their edges close together so as to prevent material and tools from falling.

(7) Where a scaffold turns a corner, the planks shall be laid to prevent tipping. The planks that meet the corner bearer at the angle shall be laid first, extending over the diagonally placed bearer far enough to have a good bearing, but not far enough to tip the planks running in the different direction shall be laid so as to extend over the rest on the first layer of planks.

(8) Table 1 reads as follows:

Planking Span Table	Material	
	Full thickness undressed lumber	Nominal thickness lumber
Working load (p.s.f.)	25 50 75	25 50
Permissible span (ft.)	10 8 7	8 7

**R 408.10513. Construction.**

**Rule 513.** (2) A scaffold, except a ladder scaffold, boatswain's chair, or needle beam scaffold, 10 feet or more above floor or ground level, shall have a standard barrier and toeboard pursuant to rules 231 and 233 of Part 2. Floor and Wall Openings, Stairways, and Skylights, being R 408.10231 and R 408.10233 of the Michigan Administrative Code. A life line and safety belt shall be used where a railing is required but not practical.

(4) When work is being performed above a scaffold, overhead protection consisting of 2 inch planks laid tight, or equivalent material, shall be installed not more than 9 feet above the scaffold floor.

(5) Where access is not available directly from a structure, a wood scaffolding shall have a stair to the platform or portable ladder pursuant to Part 4. Portable ladders, being R 408.10401 to R 408.10456 of the Michigan Administrative Code, or a fixed ladder pursuant to Part 3. Fixed Ladders, being R 408.10301 to R 408.10365 of the Michigan Administrative Code, except that a cage is not mandatory for the fixed ladder. Use of a stair or fixed ladder shall not have a tendency to tip the scaffold.

(6) Manufactured scaffolding shall be equipped with a stair or a fixed ladder, mounted by a portable ladder, except that a cage is not mandatory for a fixed ladder. On manufactured scaffolding purchased after November 16, 1974, and equipped with a built-in fixed ladder or an attached scaffold ladder, the ladder shall be constructed of rungs not less than 12 inches long, uniformly spaced not less than 12 inches nor more than 16 1/2 inches from the center of 1 rung to another and the rung and component parts shall support a minimum of 300 pounds.

(7) Instead of the requirements for a stair, fixed ladder, or portable ladder, the intermediate horizontal members of a frame of a manufactured tubular welded frame scaffold may be used for access to, and egress from, the work platform if all of the following conditions are met:

**No comparable OSHA provisions except:**

(16) Overhead protection shall be provided for men on a scaffold exposed to overhead hazards.

(12) An access ladder or equivalent safe access shall be provided.

- (a) All frames and component parts are compatible in design.
- (b) The intermediate horizontal members of a frame are a minimum of 16 inches in length.
- (c) The horizontal members of each frame shall be uniformly spaced and shall not exceed 17 inches center to center vertically.
- (d) When frames are connected vertically to one another, the distance between the bottom horizontal member of the upper end frame and the top horizontal member of the lower end frame shall be within 3 inches of the uniform spacing of the horizontal members of each frame.
- (e) The elevation to the lowest horizontal member of the bottom frame shall not exceed 21 inches from ground or floor.
- (f) Each horizontal member shall be capable of supporting 300 pounds applied at the member's midpoint without bending or cracking.
- (g) Each horizontal member shall be inspected for, and found free of cracks, bends, or bad welds.
- (h) The guardrail system located on the side where horizontal members of the scaffold frame are used for access to or egress from, a work platform shall be constructed as follows:
  - (i) The intermediate rail shall be omitted between the corner posts at access location.
  - (ii) The top rail shall be continuous between posts.
  - (iii) Only 1 employee at a time shall use a horizontal member of a frame as access to, or egress from, the workstation.
- (11) Construction and attachment of a scaffold shall be such that there is no direct pull on the fasteners.

#### BUILT-UP SCAFFOLDS

##### **R 408.10521. Wood pole scaffolds generally.**

- Rule 521.** (1) When a wood pole is spliced, the ends shall be square and flat. Not less than 2 wood splice plates shall be secured to adjacent sides and shall be not less than 4 feet in length by 1 inch thick by the same width as the pole and have equal overlap to the joint. More than 1 consecutive splice per general level shall not be made (see figure 1).
- (2) A pole scaffold shall be guyed or tied to the building or structure. Where the height or length is more than 25 feet, the scaffold shall be secured at intervals not more than 25 feet vertically and horizontally.
- (5) A ledger shall not be spliced between poles. A spliced ledger shall be reinforced by a bearing block secured to the side of the pole to form a support for the ledger.
- (6) A bearer shall be set with its greater dimension vertical and shall project 3 inches beyond the ledger and the inner and outer pole.
- (8) When moving a work platform to a new level, the old platform shall remain in place until the new bearers are in place to receive the platform.
- (9) A wood pole scaffold less than 60 feet in height shall use materials prescribed in tables 2 to 7. A scaffold more than 60 feet in height shall be designed by an engineer knowledgeable in scaffolds and erected as prescribed in the blueprints. A copy of the blueprint shall be on the job

##### **No comparable OSHA provision except:**

##### **1910.28 Safety requirements for scaffolding**

- (b) General requirements for wood pole scaffolds.
- (2) Where wood poles are spliced, the ends shall be squared and the upper section shall rest squarely on the lower section. Wood splice plates shall be provided on at least two adjacent sides and shall not be less than 4 feet 0 inches in length, overlapping the abutted ends equally, and have the same width and not less than the cross-sectional area of the pole. Splice plates of other materials of equivalent strength may be used.

site. A wood pole scaffold shall not be erected beyond the reach of the local fire fighting apparatus.

(10) Diagonal bracing shall be provided to prevent the poles moving in a direction parallel with the wall or from buckling. Full diagonal face bracing shall be erected across the entire face of pole scaffolds in both directions. Brace splices shall be at the poles.

(11) The free ends of a pole scaffold shall be cross-braced.

(12) A wood pole scaffold shall not be erected beyond the reach of fire fighting equipment.

**R 408.10523. Single pole scaffold, specific.**

**Rule 523.** Single pole scaffolding shall:

(a) Have the inner end of the bearer rest in the wall of the building with at least a 4 inch bearing. Notching is prohibited.

(b) Have the inner end of the bearer, when used on frame buildings, rest on a block 12 inches long and not less than 2 inches by 6 inches nominal size. The block shall be notched the width of the bearer and not less than 2 inches deep. The bearer shall be nailed to both the block and the building.

(c) Have the inner end of the bearer, when it comes at a window opening, supporting by a plank of equal strength resting on the window sill and fastened to the building. The bearer shall be braced against displacement.

**R 408.10524. Suspension scaffolding.**

**Rule 524.** (1) A suspension scaffold, including the supporting thrustout, shall be capable of sustaining a working load of 50 pounds per square foot with a designed safety factor of not less than 4.

(2) Wire ropes used on suspension scaffolding shall have a designed safety factor of not less than 6. Wire ropes fastened around a rod shall be equipped with a thimble.

(3) When "U" bolt clamps are installed, a minimum of 3 shall be used at each fastening with the "U" bolts installed on the dead end (see table 8). The clamps shall be retightened after loading.

(4) A thrustout for a suspension scaffold shall be not less than a 7 inch, 15.3 pound steel "I" beam which is not less than 15 feet long and which does not project more than 6 1/2 feet beyond the bearing point. It shall be set with the web vertical and spaced not more than 7 feet apart and shall project 1 foot beyond the outer edge of the suspension platform.

(5) The thrustout inner end shall be fastened to the frame of the building with bolts, anchor plates, lockwashers, and jam nuts and it shall be anchored against horizontal displacement or a thrustout may be counterbalanced if the counterweight is fastened to the thrustout. Sand bags or other loose material shall not be used. Where a counterweight is used, it shall be 3 times the supported weight and located on the inner end of the thrustout with the center of the counterweight mass not less than equal distance to the center of the weight of the load as measured from the fulcrum.

(6) A thrustout outer end shall be equipped with a stop-bolt to prevent the shackle slipping over the edge. A thrustout rigged over a parapet wall shall be supported

**No comparable OSHA provision**

**1910.28 Safety requirements for scaffolding.**

(f) Masons' adjustable multiple-point suspension scaffolds.

(1) The scaffold shall be capable of sustaining a working load of 50 pounds per square foot and shall not be loaded in excess of that figure.

(5) Each outrigger beam shall be equivalent in strength to at least a standard 7-inch, 15.3-pound steel I-beam, be at least 15 feet long, and shall not project more than 6 feet 6 inches beyond the bearing point.

(4) The scaffold outrigger beams shall consist of structural metal securely fastened or anchored to the frame or floor system of the building or structure.

by a wood block a minimum of 4 by 4 by 18 inches long nominal size at that point.

(7) A suspension platform shall be secured to prevent swinging away from the building. Rollers or fenders shall be provided to prevent striking the building and to facilitate raising and lowering.

(8) A bearer for a suspension scaffold shall be made of 4 by 6 inch timber set on edge or structural steel of equivalent strength. A bearer shall have sufficient length to hold the planks between the frame where a hoisting machine is used. Plank edges shall abut.

(9) A powered hoisting machine, where used, shall conform to R 408.10548. The running edge of the suspension wire rope shall be securely attached to the hoisting drum, and not less than 4 turns of rope shall remain on the drum at all times.

(10) Each scaffold shall be installed or relocated in accordance with designs and instructions of a registered professional mechanical or civil engineer, and such installation or relocation shall be supervised by a competent designated person.

(11) Table 8 reads as follows:

See Table 8

**R 408.10525. Swinging scaffolds.**

**Rule 525.** (1) A platform for a swing scaffold shall have a bar, strip, or other device attached to the platform outside the hanger to prevent the platform from slipping off the hanger. A platform shall be not less than 20 inches nor more than 36 inches wide.

(2) Where rope and blocks are used to support a swing scaffold, the scaffold shall comply with all of the following requirements:

(a) Have hangers made of 3/4 inch round steel, or its equivalent: which are designed to have a flat bottom to hold a platform and which have arms to hold a standard barrier pursuant to R 408.1 051 3(2) and a loop to hold the hook on a block.

(c) Have all blocks fit the size of rope they carry.

(d) Have ropes made fast to the point of the hook on the hanger eye by a special hitch which cannot slip.

(4) A hook with an eye or ring that is used to support the swing scaffold on the building shall be wrought iron or steel of a cross section not less than 5/8 by 2 inches, or equivalent, with the 5/8 inch measurement on the edge. Eaves or cornices shall be inspected for cracks, loose blocks, or other deterioration before setting the hooks. A hook shall have a safety line of 3/4 inch manila rope, or its equivalent, secured from an eye or ring to a structurally sound portion of the building to prevent slipping of the hook.

(5) Two or more scaffolds shall not be combined by bridging with planks or similar connecting links, unless the scaffolds are equipped with hoisting machines and the planking has the capability to pivot and remain secured to the unit.

(7) An employee using a swing scaffold shall use a safety belt tied to a lifeline by a lanyard not more than 48 inches long connected by an approved fall prevention device on the lifeline. The lifeline shall extend to the ground.

**No comparable OSHA provisions except:  
1910.28 Safety requirements for scaffolding**

(g) Two-point suspension scaffolds (swinging scaffolds).

(1) Two-point suspension scaffold platforms shall be not less than 20 inches no more than 36 inches wide overall. The platform shall be securely fastened to the hangers by U-bolts or by other equivalent means.

(h) Stone setter's adjustable multiple-point suspension scaffolds.

(9) When two or more scaffolds are used on a building or structure they shall not be bridged one to the other but shall be maintained at even height with platforms butting closely.

- (8) In lieu of providing a lifeline, an employee may attach a safety belt and lanyard to the scaffold, if a separate fall prevention device is installed at each support point, using safety lines equivalent to the support ropes, and if the device is connected to the scaffold with a line which will allow a drop of not more than 12 inches.
- (9) Swing scaffolds shall be equipped with rollers or fenders as prescribed in R 408.10524(7).
- (10) When not in use, a swing scaffold shall be secured to the building or ground, and all tools and materials shall be removed.
- (11) When a hoisting machine is used with a swing scaffold, it shall be as prescribed in R 408.10548 and R 408.10549.

**R 408.10526. Outrigger's scaffolds.**

- Rule 526.** (3) Planking for the platform shall abut edges tightly from end of thrustout to building or from vertical hanger to vertical hanger, and shall be as prescribed in rule 512.
- (4) A standard barrier and toeboard shall be installed as prescribed in rule 231 and 233 of general industry safety standards commission standard, Part 2. Floor and Wall Openings, Stairways and Skylights.
- (5) A horse scaffold shall not be used with an outrigger's scaffold.

**R 408.10527. Horse scaffolds.**

- Rule 527.** (1) A horse scaffold shall be built pursuant to table 9 of straight-grained lumber and braced to resist side thrusts.
- (2) A horse higher or longer than 4 feet shall have the cross section of each member increased to the next nominal size in width.
- (3) Nailing of extension pieces to the legs is prohibited.
- (4) Legs shall be set on concrete, another hard surface, or base plates as prescribed in R 408.10513(7).
- (5) Horses shall be spaced not more than 6 feet apart on bearer centers.
- (7) Table 9 reads as follows:

**TABLE 9**  
Nominal size material for a  
4 foot long x 4 foot high horse.

Bearers.....	2 x 6 inches
Legs.....	2 x 4 inches
Brace between legs.....	1 x 6 inches
Gusset brace at top of leg.....	1 x 8 inches
Half diagonal brace.....	1 x 6 inches

**R 408.10528. Ladder jack scaffolds.**

- (2) The hoisting machine and its supports shall be of a type tested and listed by a nationally recognized testing laboratory. Refer to 1910.399(a)(77) for definition of listed, and 1910.7 for nationally recognized testing laboratory.

**No comparable OSHA provision**

**No comparable OSHA provision except:  
1910.28 Safety requirements for scaffolding.**

- (m) Horse scaffolds.
- (3) Horses shall be spaced not more than 5 feet for medium duty and not more than 8 feet for light duty.

**TABLE D-19 – MINIMUM DIMENSIONS FOR  
HORSE SCAFFOLD MEMBERS**

Members	Dimensions (inches)
Horizontal members or bearers.....	3 by 4.
Legs.....	1 ¼ by 4 ½.
Longitudinal brace between legs.....	1 by 6.
Gusset brace at top of legs...	1 by 8.
Half diagonal braces.....	1 ¼ by 4 ½.

**1910.28 Safety requirements for scaffolding.**

- (q) Ladder-jack scaffolds.

<p><b>Rule 528.</b> (3) The span of a pick shall not exceed 24 feet.</p> <p>(4) A ladderjack scaffold, shall be limited to 2 employees at any 1 time, except if 3 ladders support the plank 3 employees may occupy the plank.</p> <p>(5) A ladder used with a ladder jack shall be equipped with nonslip feet pursuant to rule 447 of the general industry safety standards commission standard, part 4. Portable Ladders.</p> <p>(6) A ladder jack shall be made of metal with a designed strength to sustain the load as prescribed in subrule (1) of rule 513. A ladder jack shall be designed to bear on the side rails in addition to the rungs, or if bearing on the rungs only, the bearing surface shall be not less than 10 lineal inches on each rung.</p> <p><b>R 408.10529. Boatswain's chair.</b> <b>Rule 529.</b></p> <p>(4) The tackle shall consist of bearing of brushed blocks and 5/8 inch manila rope, or its equivalent. A roof iron, hook, or other object to which the tackle is anchored shall be secured to prevent dislodgment. Tie backs shall be installed at right angles to the face of the building and secured to the roof hooks and the building.</p> <p><b>R 408.10530. Bricklayer's square scaffold.</b> <b>Rule 530.</b> (3) Platform planks shall be not less than 2 by 10 inches with the ends overlapping the bearers of the squares. Each plank shall be supported by not less than 3 squares.</p> <p><b>R 408.10531. Carpenter's bracket scaffold.</b> <b>Rule 531.</b> (1) The supporting brackets of a carpenter's bracket scaffold shall be a triangular frame of not less than 2 by 3 inch material fitted and secured together or of metal of equivalent strength, and of such size to support not less than two, 2 by 10 inch planks.</p> <p>(2) The supporting brackets shall be fastened to the structure by 1 of the following:</p> <p>(a) If made of wood, the corners shall be gusseted in a manner to prevent the joints pulling apart.</p> <p>(b) Through bolts not less than 5/8 inch in diameter and long enough to project 3/4 inch beyond the nut when in place.</p> <p>(c) A metal stud attachment device.</p> <p>(d) Welding to a metal tank.</p> <p>(e) Hooking over a secured supporting member capable of sustaining the imposed load.</p> <p>(3) The supporting brackets shall be not more than 10 feet apart to support 1 employee and not more than 75 pounds of material, or 6 feet apart to support 2 employees and not more than 75 pounds of material.</p> <p><b>R 408.10534. Needle beam scaffold.</b> <b>Rule 534</b></p> <p>(3) Rope supports shall be 1 inch diameter first grade manila rope, or equivalent material, and spaced not more than 10 feet apart. The rope shall be attached to the needle beams by a scaffold hitch or an eye splice. The loose end of the rope shall be tied by a bowline knot or a</p>	<p>(4) Ladders used in conjunction with ladder jacks shall be so placed, fastened, held, or equipped with devices so as to prevent slipping.</p> <p>(3) The ladder jack shall be so designed and constructed that it will bear on the side rails in addition to the ladder rungs, or if bearing on rungs only, the bearing area shall be at least 10 inches on each rung.</p> <p><b>1910.28 Safety requirements for scaffolding.</b> (j) Boatswain's chairs. (6) The roof irons, hooks, or the object to which the tackle is anchored shall be securely installed. Tiebacks when used shall be installed at right angles to the face of the building and securely fastened to a chimney.</p> <p><b>1910.28 Safety requirements for scaffolding.</b> (1) Bricklayers' square scaffolds. (5) Platform planks shall be at least 2- by 9-inch nominal size. The ends of the planks shall overlap the bearers of the squares and each plank shall be supported by not less than three square</p> <p><b>1910.28 Safety requirements for scaffolding.</b> (1) Carpenters' bracket scaffolds. (4) The platform shall consist of not less than two 2- by 9-inch nominal size planks extending not more than 18 inches or less than 6 inches beyond each end support.</p> <p>(2) Each bracket shall be attached to the structure by means of one of the following:</p> <p>(i) A bolt no less than 5/8 inch in diameter which shall extend through the inside of the building wall.</p> <p>(ii) A metal stud attachment device.</p> <p>(iii) Welding to steel tanks.</p> <p>(iv) Hooking over a well-secured and adequately strong supporting member.</p> <p>The brackets shall be spaced no more than 10 feet apart.</p> <p>(3) No more than two persons shall occupy any given 10 feet of a bracket scaffold at any one time. Tools and materials shall not exceed 75 pounds in addition to the occupancy.</p> <p><b>No comparable OSHA provision</b></p>
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round turn and half hitch. The scaffold hitch shall be arranged in a manner so as to prevent the needle beam from rolling or otherwise becoming displaced.  
 (4) Scaffold planks shall be secured against displacement.  
 (6) A needle beam scaffold shall be suspended from thrustouts prescribed in rule 524 or from permanent structural members if they have a safety factor of not less than 4 times the maximum intended load.

**R 408.10535. Window jack scaffold.**

(2) A window jack scaffold shall consist of a plank secured to the structure with braces running from a point not more than 4 inches from the end of the plank to the structure at an angle of not less than 45 degrees to the horizontal.

**MANUFACTURED SCAFFOLDING**

**R 408.10541. General.**

**Rule 541.** (1) Manufactured scaffolding shall be erected and used as specified by the manufacturer's instructions.  
 (2) Manufactured scaffolding shall be constructed, installed and maintained as prescribed in rules 511, 512 and 513.  
 (3) Manufactured scaffolding shall be erected by a competent and experienced employee.  
 (4) Stationary manufactured scaffolding shall be tied to and braced against a building at intervals not to exceed 30 feet horizontally and 26 feet vertically or otherwise guyed.  
 (5) Adjusting screws on stationary manufactured scaffolding shall have an adjustment of not more than 18 inches from baseplate to bottom of frame with a minimum of 6 inches retained within the frame.  
 (6) Before a metal scaffold is erected near an exposed powerline, the utility or property owner shall be consulted. A power line or electrical apparatus shall be considered energized unless the property owner or utility indicates it is deenergized and the line or apparatus is visibly grounded. Where deenergizing is impracticable, the following minimum clearances shall be maintained:

Voltage	Clearance
To 50 kV	10 feet
Over 50 kV	10 feet + .4 inch per kV

**R 408.10543. Welded frame type scaffolds**

(1) Welded frame type scaffolds shall:  
 (e) Have the planking span limited to table 1 of the rule 512(8).

Planking Span Table	Material				
	Full thickness undressed lumber		Nominal thickness lumber		
Working load (p.s.f.)	25	50	75	25	50
Permissible span (ft.)	10	8	7	8	7

**R 408.10544. Mobile scaffolds.**

**No comparable OSHA provision**

**No comparable OSHA provision**

**1910.28 Safety requirements for scaffolding.**

(d) Tubular welded frame scaffolds.  
 (10) Maximum permissible spans of planking shall be in conformity with paragraph (a)(9) of this section.

	Material				
	Full thickness undressed lumber		Nominal thickness lumber		
Working load (p.s.f.)	25	50	75	25	50
Permissible span (ft.)	10	8	6	8	9

**No comparable OSHA provision**



<p><b>Rule 544.</b>  (2) A mobile scaffold shall:  (d) Have a limit adjustment of screw jack to not more than 12 inches from top of castor bearing plate to bottom of frame. The castor stem shall fit the socket in the frame and extend inside not less than 6 inches.  (4) A sectional folding ladder scaffold shall:  (e) Have an integral set of pivoting and hinged folding diagonal and horizontal braces and a detachable work platform incorporated into the structure.</p> <p><b>R 408.10545. Wire rope scaffolding.</b>  <b>Rule 545.</b> (1) Wire rope used as a supporting means for a plank shall have a designed safety factor of not less than 6 with the load figure including the total weight of men, materials and scaffold.  (2) A plank used on a wire rope scaffold shall be as prescribed in rule 512. A lifeline prescribed in subrule (7) of rule 525 shall be used.  (3) A plank used on a wire rope scaffold shall be attached to the wire rope in a manner which will not allow the plank to disengage such rope and shall facilitate moving the plank along the wire rope.  (4) Wire rope shall be used and maintained as prescribed in rule 571.</p> <p><b>R 408.10546. Powered mobile elevating platforms.</b>  <b>Rule 546.</b> A powered mobile elevating platform, excluding a powered industrial truck, shall:  (a) Be used according to the manufacturer's written instructions which shall be kept on the premises.  (b) Provide standard barrier and toeboard pursuant to rules 231 and 233 of the general industry safety standards commission standard, part 2. Floor and Wall Openings, Stairways and Skylights.  (c) Have a designed safety factor of not less than 4 for the lifting device and platform.  (d) Have a designed safety factor of not less than 6 for all cables.  (e) Have a positive safety device to prevent the platform from controlled descent in case of power failure or failure of the elevating system.  (f) Be visually inspected by the operator before each use for defects that are hazardous and not be used until the defective part is repaired or replaced.  (g) Not be ridden when moving horizontally, except where specifically designed for that purpose.  (h) Not exceed a height of 4 times the minimum base dimension where the stability of the scaffold is dependent on the base dimension, or shall be guyed every 20 feet of height to prevent movement. Outriggers, when used, may be considered as a part of the base dimension.  (i) Have the wheels locked when in use.  (j) Have the hoisting motor pursuant to rules 548 or 549.  (k) Have the base enclosed where the cables or a pinch point constitutes a hazard to an employee.</p> <p><b>R 408.10547. Manual mobile elevating platforms.</b>  <b>Rule 547.</b> (1) A manually powered mobile elevating platform shall be equipped with a positive locking device to prevent horizontal movement.</p>	<p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p>
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<p>(2) A manually powered mobile elevating platform shall comply with all items in rule 546 except subdivision (j).</p> <p><b>R 408.10548. Powered hoisting machine.</b>  <b>Rule 548.</b> (1) A powered hoisting machine shall be inspected not less than once a month when in service and not put into service unless free of hazards.  (2) A powered hoisting machine manufactured after the effective date of this part shall carry a label of an approved nationally recognized testing laboratory such as Underwriters Laboratories or Factory Mutual Engineering Corporation that the Machine is approved for the use on a suspension scaffold, swinging scaffold or powered mobile elevating platform.</p> <p><b>R 408.10549. Manual powered hoisting devices.</b>  <b>Rule 549.</b> A manually powered hoisting device shall be equipped with a positive locking device.</p> <p><b>R 408.10550. Hydraulic and pneumatic systems.</b>  <b>Rule 550.</b> (1) Rigid or flexible piping and the component parts or a hydraulic or pneumatic hoisting machine system shall have a safety factor of not less than 4.  (2) When a hydraulic or pneumatic system is bled, the platform supported by this system shall be in the lowered position or blocked in such a manner that the safety of the employee is assured.  (3) A leak in a hydraulic or pneumatic system shall be repaired before the unit is used.  (4) A reverse check valve or equivalent means shall be installed in the hydraulic cylinder to prevent uncontrolled fall of the work platform in case of system failure.</p> <p style="text-align: center;"><b>POWERED PLATFORMS</b></p> <p><b>R 408.10561. Construction and modification; requirements for buildings utilizing working platforms for maintenance; tie-in guides.</b>  <b>Rule 561.</b> (1) A powered platform installed, or that part of a powered platform modified, after August 27, 1971, shall be in compliance with the design and manufacturing requirements prescribed in ANSI standard A1 20.1 - 1970, safety requirements for powered platforms for exterior building maintenance, which is adopted in these rules by reference, and as further prescribed in the rules of this part. The standard is available for inspection at the Lansing office of the department of consumer and industry services. This standard may be purchased from the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909, at a cost as of the time of adoption of these rules of \$7.00 each.</p> <p><b>R 408.10565. Roof cars; carriages; suspension methods.</b>  <b>Rule 565</b> (4) Carriages or roof cars shall be in compliance with all of the following provisions:  (h) The stability factor against overturning shall not be less than 5 for horizontal traversing of the carriage,</p>	<p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p> <p><b>All of the provisions of Rule 561 are the same as OSHA except for (1) which is not covered in OSHA</b></p> <p><b>1910.66 Powered platforms for building maintenance.</b>  (f) Powered platform installations – Equipment  (3) Suspension methods.  (i) Carriages.  (G) (1) The stability factor against overturning shall not be less than two for horizontal traversing of the carriage, including the effects of impact and wind.</p>
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<p>including the effects of impact and wind.</p> <p><b>R 408.10568. Perimeter guarding; equipment stops; maintenance access: elevated track system walkway and guardrail system; platform access and egress safety; certain anchors, fasteners, and structures to be corrosion resistant; cable installation; emergency action plan; repairs or major maintenance to parts of building providing primary support.</b>  <b>Rule 568.</b>          (4) Means shall be provided to traverse all carriages and their suspended equipment to a safe area for maintenance and storage. Maintenance shall be performed on equipment in a stored position when possible.</p> <p><b>R 408.10569. Electrical requirements.</b>  <b>Rule 569.</b> The following electrical requirements apply to buildings that utilize working platforms for building maintenance:          (a) General building electrical installations shall be in compliance with the provisions of general industry safety standard 1910.309 national electrical code, 1971, as adopted by reference pursuant to the provisions of section 14 of Act No. 154 of the Public Acts of 1974, as amended, being §408.1014 of the Michigan Compiled Laws, unless otherwise specified in these rules. This standard is available from the Safety Standards Division, Michigan Department of Consumer and Industry Services, 7150 Harris Drive, Lansing, Michigan 48909, at no charge as of the time of adoption of these rules.</p> <p><b>R 408.10570. Controls and interlocks.</b>  <b>Rule 570.</b> (1) Control devices for a powered platform shall be a constant pressure type and shall be designed to prevent accidental actuation.          (2) Control devices shall be permanently labeled as to their function.          (3) Where a roof car is used, safety interlocks shall be provided to insure that the working platform will not leave the stored position until the required positive position anchor is engaged and to insure that the roof car cannot move when the working platform is not in the stored position.</p> <p><b>R 408.10571. Safety factors.</b>  <b>Rule 571.</b> All of the parts of a powered platform that are subject to stress, except for the wire rope, shall have a design safety factor of not less than 5. Wire rope shall have a design safety factor of not less than 10.</p> <p><b>R 408.10572. Working platforms.</b>  <b>Rule 572.</b> A working platform that is used on the exterior of a building shall be equipped with rollers which will be in contact with the building face. Where the vertical working travel of a working platform is more than 130 feet, the platform shall be equipped with guide rollers or guide shoes which shall positively engage guides, such as "t" rails or indented mullions. The guide rollers or guide shoes shall enter the guides at the lowest possible speed and shall not require any manual assistance from</p>	<p><b>1910.66 Powered platforms for building maintenance.</b>          (e) Powered platform installations – Affected parts of buildings          (5) Maintenance access. Means shall be provided to traverse all carriages and their suspended equipment to a safe area for maintenance and storage.</p> <p><b>1910.66 Powered platforms for building maintenance.</b>          (e) Powered platform installations – Affected parts of buildings          (11) Electrical requirements. The following electrical requirements apply to buildings which utilize working platforms for building maintenance.          (i) General building electrical installations shall comply with 1910.302 through 1910.308 of this part, unless otherwise specified in this section.</p> <p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p>
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an employee while the work platform is in motion. A working platform which is installed before the effective date of this part and which has a rise of more than 130 feet may use an equivalent means to tie the platform to the building instead of guide rollers or guide shoes.

**R 408.10573. Inspections and tests.**

**Rule 573**

(2) A special inspection of platform governors and secondary brakes shall be made not less than annually by an authorized and trained employee or outside service to verify that the initiating device for the secondary brake operates at the proper overspeed. If a test cannot be made in the field, the initiating device or hoisting machine, or both, shall be removed from the building and sent to a shop that is equipped to make such a test. When the tested parts are reinstalled, the powered platform shall be reinspected before returning it to service.

**R 408.10574. Maintenance.**

**Rule 574.** (1) The following maintenance shall be performed, when required, during the 30-day inspection: Replacement of any worn or defective parts noted during the inspections prescribed in R 408.10572.

**Electrical connections shall be tightened** and controller contacts and relays shall be cleaned.

**Gears, shafts, bearings, brakes, and hoisting drums shall be aligned.**

(2) Hoisting ropes shall be reshackled at the non-drum ends at least once every 2 years. In reshackling a rope, enough shall be cut from the end to remove damaged or fatigued portions. **The rope shall be retagged and the limit switches reset, if necessary.**

(3) **Hoisting rope shall be replaced when there are 6 or more broken wires in any 1 lay or when the wire rope becomes damaged or is in a deteriorated condition.**

**R 408.10575. Hoisting machines; suspended equipment; 2 and 4-point suspended working platforms; single-point suspended platforms; ground-rigged working platforms; intermittently stabilized platforms; button-guide stabilized platforms; supported equipment; suspension wire ropes and rope connections.**

**Rule 575.**

(11) All of the following provisions apply to suspended

**1910.66 Powered platforms for building maintenance.**

(g) Inspection and tests

(4) Special inspection of governors and secondary brakes.

1910.66(g)(4)(i) Governors and secondary brakes shall be inspected and tested at intervals specified by the manufacturer/supplier but not to exceed every 12 months.

1910.66(g)(4)(ii) The results of the inspection and test shall confirm that the initiating device for the secondary braking system operates at the proper overspeed.

1910.66(g)(4)(iii) The results of the inspection and test shall confirm that the secondary brake is functioning properly.

1910.66(g)(4)(iv) If any hoisting machine or initiating device for the secondary brake system is removed from the equipment for testing, all reinstalled and directly related components shall be reinspected prior to returning the equipment installation to service.

1910.66(g)(4)(v) Inspection of governors and secondary brakes shall be performed by a competent person.

1910.66(g)(4)(vi) The secondary brake governor and actuation device shall be tested before each day's use. Where testing is not feasible, a visual inspection of the brake shall be made instead to ensure that it is free to operate.

**No comparable OSHA provision**

**1910.66**

1910.66(f) Powered platform installations - Equipment

(5) Suspended equipment

(i) General requirements

<p>equipment:</p> <p>(g)...All of the following provisions apply to the guardrail system:</p> <p>(ii) The top guardrail shall be not less than 42 inches high and shall be able to withstand not less than a 200-pound force in any downward or outward direction</p> <p>.</p> <p>(vi) Toeboards shall be not less than 4 inches in height from the top edge to the level of the platform floor.</p> <p>(vii) Toeboards shall be securely fastened in place at the outermost edge of the platform and have not more than ¼ of an inch (1.3 cm) clearance above the platform.</p> <p>(18) All of the following provisions apply to suspension wire ropes and rope connections:</p> <p>(e) A reverse bend in wire rope shall not be permitted.</p> <p>(f) A bend radius in wire rope shall not be less than 20 times the wire rope diameter.</p> <p>(g) Wire rope shall be inspected and maintained as specified in the provisions of R 408.10582.</p> <p><b>WIRE, FIBER, AND SYNTHETIC ROPE</b></p> <p><b>R 408.10582. Wire rope; reinforcement; use of metal thimble, end fittings; requirements for use of wire clips; cutting preparation; lubrication; use of suspension wire rope to follow procedures recommended by manufacturer; inspection of suspension wire rope; certification record. Rule 582.</b></p> <p>(2) Wire rope that is bent to form an eye over a bolt or rod which has a diameter that is less than 4 times the rope diameter shall be equipped with a metal thimble.</p> <p>(3) End fittings should be swagged or zinc-poured sockets.</p> <p>(4) Where wire clips are used, the provisions of table 8 shall be followed and the u-bolts shall be installed on the dead end or short end of the wire rope.</p> <p>(5) Wire rope shall be stored in a manner to prevent damage or deterioration.</p> <p>(6) Before cutting wire rope, a seizing shall be placed on each side of the cut on preformed wire rope, 2 seizings shall be placed on each side of 7/8 inch size or smaller nonpreformed wire rope, and 3 seizings shall be placed on each side of 1 inch or larger size nonpreformed wire rope.</p> <p>(7) Wire rope shall be maintained in a lubricated condition over its entire length with the same type of lubricant that is used by the manufacturer.</p> <p><b>R 408.10583. Fiber rope; inspection; storage; drying of wet rope; use prohibited under certain conditions; replacement; use of thimble. Rule 583.</b> (1) A fiber rope shall be inspected visually before the start of each daily use as follows:</p> <p>(a) Externally for any of the following conditions:</p> <p>(i) Abrasions.</p> <p>(ii) Cut or broken fibers.</p> <p>(iii) Decay.</p> <p>(iv) Burns.</p>	<p>G)(2) The top guardrail shall not be less than 36 inches (914 mm) high and shall be able to withstand at least a 100-pound (444 n) force in any downward or outward direction:</p> <p>(6) Toeboards shall be three and one half inches (9cm) minimum in length from their top edge to the level of the platform floor.</p> <p>(7) Toeboards shall be securely fastened in place at the outermost edge of the platform and have no more than one-half inch (1.3 cm) clearance above the platform floor.</p> <p>(7) Suspension wire ropes and rope connections.</p> <p>(v) No more than one reverse bend in six wire rope lays shall be permitted.</p> <p><b>No comparable OSHA provision</b></p> <p><b>No comparable OSHA provision</b></p>
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<p>(v) Lack of strength.  (vi) Softness.  (vii) Variation in size or roundness of the strands.  (b) Internally, by separating the strands at 3 foot intervals, for any of the following conditions:  (i) Broken fibers.  (ii) Presence of grit.  (iii) Mildew or mold.  (iv) Color change of the fibers.  (v) Powdering.  (vi) Short loose fibers.  A rope that has any of the conditions specified in this rule shall be replaced or returned to the manufacturer for repair.  (2) A fiber rope shall be stored in a dry room in coils or on a reel.  (3) A wet fiber rope shall be dried by placing it in the sunshine or a warm room hanging loosely over a rounded peg or hook.  (4) A fiber rope shall not be kinked or run over sharp corners, shall not be used when frozen, and shall not be left in freezing temperatures when wet.  (5) A fiber rope that is subjected to an impact load that is equal to or more than its rated capacity shall be replaced.  (6) A thimble shall be used with fiber rope pursuant to the provisions of R 408.10581(2).</p> <p><b>R 408.10584. Synthetic rope; inspection; condition of use; replacement; use of thimble.</b>  <b>Rule 584.</b> (1) A synthetic rope shall be inspected visually before the start of each job for all of the following conditions:  (a) Abrasions.  (b) Cut or broken fibers.  (c) Burns.  (d) Melted fibers.  (e) Variation in size or roundness of the strands. A rope that has any of these conditions shall be replaced or returned to the manufacturer for repair.  (2) Because of the variance in manufacturing methods, the manufacturer's recommendations shall be followed.  (3) A synthetic rope shall not be kinked, run over sharp corners, used when frozen, or left in freezing temperatures when wet.  (4) A synthetic rope that is subjected to an impact load that is equal to or more than its rated capacity shall be replaced.  (5) A thimble shall be used with synthetic rope pursuant to the provisions of R 408.10581 (2).</p>	<p><b>No comparable OSHA provision</b></p>
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