DEPARTMENT OF LICENSING AND REGULATORY AFFAIRS

DIRECTOR'S OFFICE

CONSTRUCTION SAFETY AND HEALTH STANDARD

(By authority conferred on the director of the department of licensing and regulatory affairs by sections 14, 16, 19, 21, and 24 of the Michigan occupational safety and health act, 1974 PA 154, MCL 408.1014, 408.1016, 408.1019, 408.1021, and 408.1024, and Executive Reorganization Order Nos. 1996-1, 1996-2, 2003-1, 2008-4, and 2011-4, MCL 330.3101, 445.2001, 445.2011, 445.2025, and 445.2030)

PART 12. SCAFFOLDS AND SCAFFOLD PLATFORMS

R 408.41201 Scope, adoption, and availability of standards.

Rule 1201. (1) These rules apply to scaffolds and scaffold platforms used in construction operations. The equipment may be commercially manufactured or job-built.

(2) These rules do not apply to crane or derrick suspended personnel platforms as prescribed in Construction Safety and Health Standard Part 10. "Cranes and Derricks" and Construction Safety Standard Part 32. "Aerial Work Platforms."

(3) The following federal Occupational Safety and Health Administration (OSHA) regulations are adopted by reference in these rules:

(a) 29 CFR 1926.450 "Scope, application and definitions applicable to this subpart," as amended August 9, 2010.

(b) 29 CFR 1926.451 "General requirements," as amended November 25, 1996, except 29 CFR 1926.451(c)(2) to (iii) is replaced with R 408.41210(2) in these rules.

(c) 29 CFR 1926.452 "Additional requirements applicable to specific types of scaffolds," as amended August 30, 1996.

(d) 29 CFR 1926.454 "Training requirements," as amended August 30, 1996.

(e) 29 CFR part 1926, subpart L, appendix A "Scaffold Specifications," as amended August 7, 2012.

(f) 29 CFR part 1926, subpart L, appendix D "List of Training Topics for Scaffold Erectors and Dismantlers," as amended August 30, 1996.

(g) 29 CFR part 1926, subpart L, appendix E "Drawings and Illustrations," as amended November 25, 1996.

(4) A reference to 29 CFR 1926.21 means Construction Safety Standard Part 1. "General Rules."

(5) A reference to 29 CFR 1926.453 means Construction Safety Standard Part 32. "Aerial Work Platforms."

(6) A reference to 29 CFR 1926.502 means Construction Safety Standard Part 45. "Fall Protection."

(7) The adopted federal regulations have the same force and effect as a rule promulgated under the Michigan occupational safety and health act, 1974 PA 154, MCL 408.1001 to 408.1094.

(8) The OSHA regulations adopted in these rules are available from the United States Department of Labor, Occupational Safety and Health Administration website, www.osha.gov, at no charge, as of the time of adoption of these rules.

(9) The American National Standards Institute Standard ANSI A10.8 "Scaffolding Safety Requirements," 1977 edition, is adopted in these rules. This standard is available from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112, USA, telephone number: 1-800-854-7179 or via the internet at the company's website, http://global.ihs.com, at a cost as of the time of adoption of these rules of $25.00.

(10) The standards adopted in these rules are available for inspection at the Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143.

(11) The standards adopted in these rules may be obtained from the publisher or the Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143, at the cost charged in this rule, plus $20.00 for shipping and handling.

(12) The following Michigan Occupational Safety and Health Administration (MIOSHA) standards are referenced in these rules. Up to 5 copies of these standards may be obtained at no charge from the Michigan Department of Licensing and Regulatory Affairs, MIOSHA Regulatory Services Section, 530 West Allegan Street, P.O. Box 30643, Lansing, Michigan, 48909-8143 or via the internet at the following website: www.michigan.gov/mioshastandards. For quantities greater then 5, the cost, as of the time of adoption of these rules, is 4 cents per page.

(a) Construction Safety Standard Part 1. "General Rules," R 408.40101 to R 408.40134.

(b) Construction Safety and Health Standard Part 6. "Personal Protective Equipment," R 408.40601 to R 408.40660.

(c) Construction Safety and Health Standard Part 10. "Cranes and Derricks," R 408.41001 to R 408.41099a.

(d) Construction Safety Standard Part 11. "Fixed and Portable Ladders," R 408.41101 to R 408.41140.

(e) Construction Safety Standard Part 16. "Power Transmission and Distribution," R 408.41601 to R 408.41658.

(f) Construction Safety Standard Part 17. "Electrical Installations," R 408.41701 to R 408.41734.

(g) Construction Safety Standard Part 21. "Guarding of Walking and Working Areas," R 408.42101 to R 408.42160.

(h) Construction Safety and Health Standard Part 30. "Telecommunications for Construction," R 408.43001 to R 408.43006.

(i) Construction Safety Standard Part 32. "Aerial Work Platform," R 408.43201 to R 408.43220.

(j) Construction Safety Standard Part 45. "Fall Protection," R 408.44501 to R 408.44502.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41202 Rescinded.

History: 2016 AACS; 2018 AACS.

R 408.41203 Rescinded.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41204 Rescinded.

History: 1981 AACS; 1990 AACS; 1997 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41205 Rescinded.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41206 Rescinded.

History: 1981 AACS; 1997 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41207 Rescinded.

History: 1981 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41208 Rescinded.

History: 1981 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41209 Rescinded.

History: 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41210 Construction and capacity generally.

Rule 1210. (1) A scaffold shall be designed, constructed, erected, and used pursuant to the provisions of these rules, 29 CFR 1926.451 and 29 CFR 1926.452, as adopted by reference in R 408.41201. A scaffold shall be designed by a qualified person.

(2) The support for a scaffold shall be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Leveling jack adjusting screws, when used, shall not extend more than 18 inches below the base of the scaffold. Unstable objects, such as barrels, boxes, pallets, brick, or concrete blocks, shall not be used to

support a scaffold or work platform. Scaffold poles, legs, posts, frames, and uprights shall bear on base plates, along with mudsills or other adequate support.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41211 Access to scaffold platforms.

Rule 1211. (1) Access to a scaffold platform shall be provided by 1 or more of the following:

(a) A ladder that conforms to Construction Safety Standard Part 11. "Fixed and Portable Ladders," as referenced in R 408.41201.

(b) Hook-on or attachable metal ladders that are specifically designed for use in construction with manufactured types of scaffolds. If hook-on or attachable metal ladders are used as access to, or egress from, a work platform that is more than 35 feet above the ground or floor level, then a ladder safety device shall be installed or the ladders shall be offset with landing platforms and guardrails that are installed at not more than 35-foot intervals.

(c) Step or hook-on, stair-type accessories that are specifically designed for use with appropriate types of scaffolds.

(d) Direct access from an adjacent scaffold, the structure, or personnel hoist. The direct access to or from another surface shall be used only when the scaffold is not more than 14 inches (36 cm) horizontally and not more than 24 inches (61 cm) vertically from the other surface.

(e) A ramp, runway, or stairway that conforms to Construction Safety Standard Part 21. "Guarding of Walking and Working Areas," as referenced in R 408.41201.

(2) The intermediate horizontal members of the frame of a manufactured tubular welded frame scaffold may be used instead of a ladder or stairway for access to, and egress from, the work platform, if all of the following conditions are met:

(a) All the frames and component parts are compatible in design.

(b) The intermediate horizontal members of a frame are a minimum of 11 1/2 inches in length.

(c) The horizontal members of each frame shall be uniformly spaced and shall not be more than 18 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 be more than 24 inches from the ground or floor.

(f) Each horizontal member shall be capable of supporting 300 pounds applied at its midpoint without bending or cracking.

(g) Each horizontal member shall be inspected for, and found free of, cracks, bends, or bad welds. Cracks, bends, or bad welds shall be corrected.

(h) Only 1 employee at a time shall use a horizontal member of a frame as access to, or egress from, the workstation.

(i) Cross braces shall not be used as a means of access.

(3) 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:

(a) The intermediate rail shall be omitted between the corner posts at the access location.

(b) The top rail shall be continuous between posts. A scaffold and its components shall be capable of supporting, without failure, not less than 4 times the maximum intended load.

(4) If horizontal members of scaffold frames are used as access to, or egress from, a work platform which is more than 35 feet above ground or floor level, a ladder safety device shall be installed and used or the horizontal members shall be offset with landing platforms and guardrails that are installed at not more than 30-foot intervals.

(5) Steps and rungs of ladder and stairway-type access shall line up vertically with each other between rest platforms.

(6) All of the following provisions apply to erecting or dismantling a scaffold:

(a) An employer shall provide a safe means of access for each employee erecting or dismantling a scaffold if providing safe access is feasible and does not create a greater hazard. The employer shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use, a safe means of access. The determination shall be based on site conditions and the type of scaffold being erected or dismantled.

(b) Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.

(c) When erecting or dismantling tubular welded frame scaffolds, endframes, that have horizontal members which are parallel, level, and not more than 22 inches apart vertically as climbing devices for access, the employer shall ensure that the tubular welded frame scaffolds are erected in a manner that creates a usable ladder and provides a good handhold and foot space.

(d) Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41212 Accumulation of tools, material, or debris prohibited; weather conditions; slippery conditions; electrical hazards; rope protection; fall protection.

Rule 1212. (1) Excess tools, materials, and debris shall not be permitted to accumulate on a scaffold to create a hazard.

(2) Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on a scaffold and that the employees are protected by a personal fall arrest system. Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.

(3) A scaffold shall be kept free of slippery conditions such as those caused by ice, snow, oil, grease, or other slippery compounds.

(4) An employee shall not be allowed within 10 feet of uninsulated electrical energized lines.

(5) Before a scaffold is erected within 10 feet of a power line all of the following requirements shall be met, as applicable:

(a) The utility or property owner is consulted.

(b) A power line or electrical apparatus is considered energized unless the property owner or utility indicates it is de-energized and the line or apparatus is visibly grounded. If de-energizing is impractical and the equipment is exposed to contact by an employee, the minimum clearances in table 1 shall be maintained between the scaffold, employee, or material, whichever is closer.

(c) The requirements for employees performing power transmission and distribution work, electrical work, or telecommunications work are found in Construction Safety Standard Part 16. "Power Transmission and Distribution," Construction Safety Standard Part 17. "Electrical Installations," and in Construction Safety and Health Standard Part 30. "Telecommunications for Constructions," as referenced in R 408.41201.

(6) Table 1 reads as follows:

TABLE 1		
INSULATED LINES		
VOLTAGE	MINIMUM DISTANCE	ALTERNATIVES
Less than 300 volts	3 feet (0.9 meters)	
300 volts to 50 kilovolts	10 feet (3.1 meters)	
More than 50 kilovolts	10 feet (3.1 meters) plus 0.4 inches (1.0 centimeter) for each kilovolt over 50 kilovolts	2 times the length of the line insulator, but not less than 10 feet (3.1 meters)
UNINSULATED LINES		
VOLTAGE	MINIMUM DISTANCE	ALTERNATIVES
Less than 50 kilovolts	10 feet (3.1 meters)	
More than 50 kilovolts	10 feet (3.1 meters) Plus 0.4 inches (1.0 centimeter) for each kilovolt over 50 kilovolts	2 times the length of the line insulator, but not less than 10 feet (3.1 meters)

(7) Welding, burning, riveting, or open flame work shall not be performed within 10 feet of fiber or synthetic rope that is used to suspend a scaffold, unless the rope is protected from sparks, flame, or hot metal. Only treated or protected fiber or synthetic

ropes shall be used for or near any work that involves the use of corrosive substances or chemicals.

(8) A suspension rope, including connecting hardware, used on nonadjustable or adjustable suspension scaffolds shall be capable of supporting, without failure, not less than 6 times the maximum intended load applied or transmitted to the rope.

(9) If personal fall arrest systems are required by these rules for the protection of employees, then the arrest system equipment shall be as prescribed in Construction Safety Standard Part 45. "Fall Protection," as referenced in R 408.41201.

(10) To reduce the possibility of welding current arcing through the suspension wire rope when performing welding from suspended scaffolds, a welder shall take the following precautions, as applicable:

(a) An insulated thimble shall be used to attach each suspension wire rope to its hanging support, such as a cornice hook or outrigger. Excess suspension wire rope and any additional independent lines from grounding shall be insulated.

(b) The suspension wire rope shall be covered with insulating material extending not less than 4 feet (1.2 meters) above the hoist. If there is a tail line below the hoist, it shall be insulated to prevent contact with the platform. The position of the tail line that hangs free below the scaffold shall be guided or retained, or both, so that it does not become grounded.

(c) Each hoist shall be covered with insulated protective covers.

(d) In addition to a work lead attachment required by the welding process, a grounding conductor shall be connected from the scaffold to the structure. The size of the conductor shall be at least the size of the welding process work lead, and the conductor shall not be in series with the welding process or the workpiece.

(e) If the scaffold grounding lead is disconnected, the welding machine shall be shut off.

(f) An active welding rod or uninsulated welding lead shall not be allowed to contact the scaffold or its suspension system.

History: 1981 AACS; 1990 AACS; 1996 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41213 Guardrails; fall arrest devices.

Rule 1213. (1) A guardrail shall be installed on any open side or end of a scaffold work platform that is 10 feet (3.1 meters) or more above the floor or ground, except for any of the following:

(a) A boatswain's chair.

(b) A catenary scaffold.

(c) A float scaffold.

(d) A ladder jack scaffold.

(e) A needle beam scaffold.

The guardrail shall be as prescribed in Construction Safety Standard Part 21. "Guarding of Walking and Working Areas," as referenced in R 408.41201.

(2) An employee on a boatswain's chair, catenary scaffold, float scaffold, needle beam scaffold, or ladder jack scaffold shall be protected by a personal fall arrest system. An employee on a single-point or 2-point adjustable suspension scaffold shall be protected by both a personal fall arrest system and guardrail system.

(3) A personal fall arrest device as prescribed in Construction Safety Standard Part 45. "Fall Protection," as referenced in R 408.41201, shall be worn and attached to a substantial portion of a scaffold when the work platform of an adjustable suspension scaffold with overhead protection is 10 feet (3.1 meters) or more above the floor, water, or ground. Separate safety lines shall be attached to a substantial portion of the structure above and to the scaffold by an approved fall prevention device to prevent the scaffold from falling more than 12 inches if the scaffold suspension system fails.

(4) A top rail or an intermediate rail may be eliminated if the configuration of the scaffold and the material deck provides equivalent protection to prevent an employee falling from the platform or if a personal fall arrest device is worn.

(5) A cross brace may be used as part of the guardrail system as follows:

(a) If the pivot point occurs from 36 inches to 48 inches above the platform, then a midrail shall be added midway between the platform and the brace pivot point.

(b) If the pivot point occurs from 18 inches above the platform, then a top rail shall be added.

(c) If the pivot point occurs less than 18 inches or more than 48 inches above the platform, then both a top rail and midrail shall be provided.

(6) An employer shall have a competent person determine the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. An employer shall provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of the protection is feasible and does not create a greater hazard.

(7) If vertical lifelines are used, then they shall be fastened to a fixed safe point of anchorage and shall be protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but do not include any of the following:

(a) Standpipes.

(b) Vents.

(c) Other piping systems.

(d) Electrical conduit.

(e) Outrigger beams.

(f) Counterweights.

(8) If horizontal lifelines are used, they shall be secured to 2 or more structural members of the scaffold or may be looped around both suspension and independent support lines equal in number to the number of points supported and equivalent in strength to the strength of the suspension ropes. Independent support lines and suspension ropes shall not be attached to the same points of anchorage

History: 1981 AACS; 1990 AACS; 1996 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41214 Hoisting machines generally.

Rule 1214. (1) A hoisting machine shall carry a label of an approved nationally recognized testing laboratory, such as underwriters laboratories or factory mutual engineering corporation, which states that the machine is approved for use on a suspension scaffold, swinging scaffold, or powered mobile elevating platform.

(2) If wire rope is used to suspend an adjustable scaffold, then the rope shall be in compliance with all of the following requirements.

(a) Have the fixed end equipped with a proper size thimble and attached to the upper support member.

(b) Have the running rope securely attached to the hoisting drum and have not less than 4 wraps of the rope remain on the drum at all times.

(c) When other types of hoists are used, either the suspension ropes shall be long enough to allow the scaffold to be lowered to the level below without the rope end passing through the hoist or the rope end shall be configured or provided with means to prevent the end from passing through the hoist.

(3) A hoisting machine shall be inspected daily when in use and shall not be put in service unless it is free of defects which would affect the operation of the machine.

(4) The stall load of any scaffold hoist shall not be more than 3 times its rated load.

History: 1981 AACS; 1998-2000 AACS.

R 408.41215 Rescinded.

History: 1981 AACS; 2013 AACS; 2018 AACS.

R 408.41216 Manually powered hoisting machines.

Rule 1216. (1) A manually powered hoisting device shall be equipped with a positive locking device.

(2) A manually powered machine shall be designed to prevent free-spooling of the cable drum.

History: 1981 AACS.

R 408.41217 Planking and scaffold platforms generally.

Rule 1217. (1) If wood planks are used for a work platform, then the planks shall be scaffold-grade lumber that has a minimum of 1,500 pounds per square inch fiber stress value. The planks shall be not less than 2 inches by 10 inches. The platform shall consist of a minimum of 2 planks laid side by side. Each platform on all working levels of scaffolds shall be fully planked or decked between uprights where practicable. Spaces between the platform and the uprights shall not be more than 9 1/2 inches. The maximum permissible spans for 2- by 10-inch or wider planks are as follows:

	Material full thickness undressed lumber				Material nominal thickness lumber			
Working load (per square foot)	25	50	62	75	25	37	50	62
Permissible span (feet)	10	8	7	6	8	7	6	4

(2) Wood scaffold planks, laminated planks, manufactured work platforms, and picks that are found to be defective shall be removed from service and shall not be used.

(3) A manufactured pick shall be permanently marked or tagged to indicate the maximum working load and shall not be less than 14 inches wide when used in single width, except that a ladder jack scaffold may be used with a minimum 12-inch manufactured pick.

(4) Platform planks shall be laid with their edges together so the platform is tight and does not have spaces through which tools or fragments of materials can fall.

(5) Planking shall comply with all of the following provisions:

(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 (8) of this rule.

(c) Where 16-foot planks are used as prescribed in subrule (7) of this rule, tie downs are not required unless wind uplift may occur.

(6) Hook-on-type manufactured work platforms may be used if they are secured to the bearer.

(7) Where planks are lapped, each plank shall lap its bearer not less than 6 inches, which will provide a minimum overlap of 12 inches.

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

(9) When moving a platform to the next level, an employee shall leave the old platform undisturbed until the new platform supports have been set in place and are ready to receive the platform planks.

(10) A platform shall not deflect more than 1/60 of the span when loaded.

(11) A wood platform shall not be covered with opaque finishes, except that platform edges may be covered or marked for identification. A platform may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes; however, the coating may not obscure the top or bottom wood surfaces.

(12) The front of a platform shall be not more than 14 inches from the face of the work unless a guardrail system is erected along the front edge, or unless a personal fall arrest system is used pursuant to Construction Safety Standard Part 45. "Fall Protection," as referenced in R 408.41201, except that the maximum distance from the face of the work for plastering and lathing operations shall be not more than 18 inches.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41218 Plywood scaffold platforms.

Rule 1218. (1) If plywood is used as a work platform, the plywood shall be supported by 2- by 10-inch planks. The planks shall support 2 parallel edges of the plywood and shall also be spaced not more than 24 inches center to center.

(2) The plywood work surface shall be secured to the planks.

(3) If the plywood work surface is a load-carrying member, it shall have a minimum thickness of 5/8 inch.

History: 1981 AACS.

R 408.41219 Rescinded.

History: 1998-2000 AACS; 2016 AACS; 2018 AACS.

FLOOR AND GROUND SUPPORTED SCAFFOLDS

R 408.41221 Stilts.

Rule 1221. (1) A stilt shall be inspected for damage, wear, and corrosion. A defective stilt, including the pins and straps, shall be repaired or replaced before being placed in use.

(2) Stilts shall be used only if all of the following conditions exist:

(a) Floors are level.

(b) All floor holes are securely covered.

(c) When an employee is using stilts, the top edge height of the top rail, or equivalent member, shall be increased an amount equal to the height of the stilts.

(d) The floor is capable of supporting a load on the stilt's base plate without deformation of more than 1/4 of an inch.

(e) The floor is cleared of debris, materials, or liquids that could cause a slipping or tripping hazard.

(3) Stilts shall not be used while going from one level to another.

(4) An employee may wear stilts on a scaffold only if it is a large area scaffold.

History: 1981 AACS; 1990 AACS; 1996 AACS; 1998-2000 AACS; 2013 AACS.

R 408.41222 Wood pole scaffolds.

Rule 1222. (1) Where a pole of a wood pole scaffold is spliced, the ends shall be squared and the upper section shall rest squarely on the lower section. Wood splice plates shall be fastened on not less than 2 adjacent sides, shall be not less than 4 feet in length, shall overlap the abutted ends equally, shall have the same width and same total cross-sectional area of the pole, and shall be capable of preventing displacement of the abutted ends. Splice plates of other materials of equivalent strength may be used.

(2) A bearer shall be set with its greater end dimension vertical and shall be long enough to project over the ledgers not less than 3 inches for proper support.

(3) The inner end of a bearer for a single pole scaffold shall be supported in accordance with 1 of the following:

(a) Rest in a wall of a building with not less than a 40 inch bearing. Notching of the bearer is not permitted.

(b) Rest on a 12- by 2- by 6- inch wood block. The block shall be notched at the center to the width of the bearer and 2 inches deep. The bearer shall be nailed to both the block and the building.

(c) At a wall opening by a plank capable of supporting the loaded bearer and fastened to the building. The bearer shall be braced against displacement.

(4) A ledger shall be long enough to extend over 2 pole spaces. The ledger shall not be spliced between the poles. The ledger shall be reinforced by bearing blocks securely nailed to the side of the pole to form a support for the ledger.

(5) Diagonal bracing shall be provided to prevent the poles of a single pole scaffold from moving in a direction parallel with the wall of the building or from buckling.

(6) Bracing shall be provided between the inner and outer sets of poles in independent pole scaffolds. The free ends of pole scaffolds shall be cross braced.

(7) Full diagonal face bracing, in both directions, shall be erected across both faces of pole scaffold. The braces shall be spliced at the poles.

(8) Pole scaffolds over 60 feet in height shall be designed by a registered professional engineer, and shall be constructed and loaded in accordance with that design. Non-mandatory Appendix A to this standard contains examples of criteria that will enable an employer to comply with design and loading requirements for pole scaffolds under 60 feet in height.

History: 1981 AACS; 2013 AACS.

R 408.41223 Tube and coupler scaffolds.

Rule 1223. (1) A tube and coupler scaffold shall have all posts, bearers, runners, and bracing of not less than a nominal 2-inch (1.90 inches outside dimension) steel tubing or equivalent.

(2) The material used for couplers shall be of a structural type, such as a drop-forged steel, malleable iron, or structural grade aluminum. Dissimilar metals shall not be used.

(3) The posts of a tube and coupler scaffold shall not be spaced more than 6 feet apart in width and not more than 10 feet along the length for a light-duty rated scaffold, 8 feet along the length for a medium-duty rated scaffold, and 6 feet along the length for a heavy-duty rated scaffold.

(4) Drawings and specifications for a tube and coupler scaffold over 125 feet in height above the base plate shall be designed by a qualified engineer who is knowledgeable in scaffolding. Drawings and specifications shall be readily available at the jobsite. A scaffold that is less than 125 feet in height shall conform to the requirements of table 3.

(5) Runners shall be erected along the length of the scaffold and located on both the inside and the outside posts at even heights. When tube and coupler guardrails and midrails are used on outside posts, they may be used in place of outside runners. Runners shall be interlocked to form a continuous length and coupled to each post. The bottom runner shall be located as close to the base as possible. The runners shall be placed not more than 6 feet 6 inches on centers.

(6) A bearer shall be installed transversely between posts and shall be securely coupled either to a post bearing on a runner coupler or directly to a runner and shall be kept as close to the post as possible.

(7) A bearer shall be not less than 4 inches, but not more than 12 inches, longer than the post spacing or runner spacing. A bearer may be cantilevered for use as brackets to carry 2 2-inch by 10-inch planks. The bearer for a cantilevered section shall be not more than 24 inches and the section shall be limited to 25 pounds per square foot.

(8) Cross bracing shall be installed across the width of the scaffold at both ends and at least every third set of posts horizontally and every fourth runner vertically. The bracing shall extend diagonally from the inner and outer runners upward to the next outer and inner runners.

(9) Longitudinal diagonal bracing on the outer rows of poles shall be installed at 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, the bracing shall be duplicated beginning at every fifth post. In a similar manner, longitudinal diagonal bracing shall 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.

(10) Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4-to-1 ratio height and be repeated vertically at locations of horizontal members every 20 feet (6.1 meters) or less thereafter for a scaffold 3 feet (0.91 meters) wide or less and every 26 feet (7.9 meters) or less thereafter for a scaffold more than 3 feet (0.9 meters) wide. The top guy, tie, or brace of a completed scaffold shall be placed no farther than a 4-to-1 ratio from the top. The top guys, ties, and braces shall be installed at each end of the scaffold and at horizontal intervals of not more than 30 feet (9.1 meters), measured from 1 end, not both, towards the other end. Outriggers, when used, may be considered a part of the base dimension. The outriggers shall be installed on both sides of the scaffold at each frame line.

(11) Table 3 reads as follows:

TABLE 3						
TUBE AND COUPLER SCAFFOLDS	LIGHT DUTY		MEDIUM		HEAVY	
Maximum uniformly distributed load	25 pounds per square foot		50 pounds per square foot		75 pounds per square foot	
Post spacing (longitudinal)	10 feet		8 feet		6 feet	
Post spacing (transverse)	6 feet		6 feet		6 feet	
Work levels	1	2	3	1	2	1
Maximum allowable additional planked levels	8	4	0	6	0	6

Maximum height (feet)	125	125	91	125	75	125

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2016 AACS.

R 408.41224 Rescinded.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41225 Rescinded.

History: 1981 AACS; 2013 AACS; 2018 AACS.

R 408.41226 Rescinded.

History: 1981 AACS; 2013 AACS; 2018 AACS.

R 408.41227 Pump jack scaffolds.

Rule 1227. (1) Pump jack brackets, braces, and accessories shall be fabricated from metal plates and angles. Each bracket shall have 2 positive gripping mechanisms to prevent any failure or slippage.

(2) A pole shall comply with both of the following provisions:

(a) Be secured to the structure by rigid triangular bracing, or equivalent, at the bottom, top, and other points as necessary to provide a maximum vertical spacing of not more than 10 feet between braces. Each brace shall be capable of supporting not less than 225 pounds tension or compression.

(b) Be made of 2, 2 by 4s of Douglas fir, or the equivalent, or 2 continuous lengths made of 2 by 4s spiked together, with the seam parallel to the bracket, with 10D common nails at not more than 12 inches center to center, staggered uniformly from opposite outside edges. Each 2 by 4 may be spliced to make up a pole if the splice is constructed to develop the full strength of the member.

(3) Where the bracket must pass bracing already installed, an extra brace shall be used approximately 4 feet above the one to be passed until the original brace is reinstalled.

(4) If poles are made of wood, then the pole lumber shall be straight-grained and free of shakes, large loose or dead knots, and other defects that might impair strength.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS.

R 408.41228 Rescinded.

History: 1981 AACS; 2013 AACS.

R 408.41229 Rescinded.

History: 1998-2000 AACS; 2016 AACS; 2018 AACS.

SUSPENDED SCAFFOLDS

R 408.41231 Adjustable multipoint suspension scaffolds.

Rule 1231. (1) Only wire rope shall be used for suspending an adjustable multipoint suspension scaffold.

(2) The steel shackles or clevises with which the wire ropes are attached to the outrigger beams shall be placed directly over the hoisting drums.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS.

R 408.41232 Multipoint suspended scaffold.

Rule 1232. (1) A multipoint suspended scaffold shall be suspended from structural components that are capable of supporting 4 times the maximum intended load.

(2) A multipoint suspended scaffold shall be light- or medium-duty scaffold only.

(3) If wire rope is used for the suspension of a multipoint suspended scaffold, a minimum of 2 wraps around the supporting structural members and around put logs shall be used and secured with the proper number of wire rope clips or fist grips.

(4) Softeners shall be used to prevent damage to wire rope that is used for suspension.

History: 1981 AACS; 1990 AACS; 2013 AACS; 2016 AACS.

R 408.41233 Two-point adjustable suspension scaffold; swing stage scaffold.

Rule 1233. (1) A 2-point adjustable suspension scaffold, also known as a swing stage scaffold platform, shall not be less than 20 inches nor more than 36 inches wide overall. The platform shall be securely fastened to the stirrups by U-bolts or by other equivalent means.

(2) The stirrups shall be designed with a support for a guardrail, intermediate rails, and toeboard.

(3) Rope and blocks that are used to support a 2-point adjustable scaffold shall have all of the following:

(a) Supporting ropes of 3/4-inch, first-quality manila rope or a synthetic rope of equivalent strength used with at least one 6-inch single and one 6-inch double block.

(b) Blocks that have sheaves which fit the size of the rope the blocks carry.

(c) Live ropes made fast to the scaffold in a manner to prevent displacement.

(d) The dead-end of the supporting rope connected to the block at the stirrup by means of an eye splice incorporating a thimble.

(4) A swing stage scaffold shall be limited to the following number of employees:

(a) For a scaffold designed for a working load of 500 pounds, not more than 2 employees shall be permitted to work at 1 time.

(b) For a scaffold designed for a working load of 750 pounds, not more than 3 employees shall be permitted to work at 1 time.

(5) Two or more scaffolds shall not be combined by bridging with planks or similar connecting links.

(6) Rollers or fenders shall be provided to prevent striking the building and to facilitate raising and lowering.

(7) The platform of a swing stage scaffold shall be 1 of the following types:

(a) Ladder-type platforms - The ladder-type platform shall be constructed to meet ANSI standard A10.8 "Scaffolding Safety Requirements," 1977 edition, as adopted in R 408.41201.

(b) Plank-type platform - The plank-type platform shall be composed of not less than two 2 by 10-inch unspliced planks which are laid straight and which are cleated together on the underside, with the cleats starting 6 inches from each end and spaced at 12-inch intervals.

(c) Beam-type platform - The beam platform shall have side stringers made of lumber that is not less than 2 by 6 inches set on edge. The span between hangers shall not be more than 12 feet. The flooring shall be supported on 2 by 6-inch crossbeams which are laid flat, which are set into the upper edge of the stringers with a snug fit at intervals of not more than 4 feet center to center, and which are securely nailed in place. The flooring shall be 1 by 6-inch lumber or 3/4-inch plywood and shall be securely nailed. Floorboards shall not be spaced more than 1/2 of an inch apart.

(d) Manufactured picks - When used, a manufactured pick shall conform to the requirements of R 408.41217(2) and (3).

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41234 Multilevel suspension scaffolds.

Rule 1234. (1) A multilevel suspension scaffold shall have a separate fall prevention device that allows a drop of not more than 12 inches installed at each support point connected with a line to the scaffold.

(2) The device shall be attached to a wire rope safety line equivalent to the support rope, and the safety line shall be secured to a substantial member of the structure separate from the support rope and to the ground. If it is not possible to attach a safety line to the structure, then the safety line shall be attached to the outrigger.

(3) The multilevel suspension scaffold shall be in compliance with the provisions of R 408.41233 and 29 CFR 1926.452(v), as adopted by reference in R 408.41201.

(4) A support for a platform shall be attached directly to the support stirrup and not to any other platform.

History: 1981 AACS; 1990 AACS; 1996 AACS; 1998-2000 AACS; 2013 AACS; 2018 AACS.

R 408.41235 Single-point adjustable suspension scaffolds.

Rule 1235. A single-point adjustable suspension scaffold shall travel only in a vertical line.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS.

R 408.41236 Needle beam scaffolds.

Rule 1236. (1) A needle beam scaffold shall not be altered or moved while in use.

(2) The scaffold planking shall be secured against displacement. Cleats are not an adequate means of attachment.

(3) Ropes or hangers shall be used for supports, except that 1 end of a needle beam scaffold may be supported by and secured to a permanent structural member.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS.

R 408.41237 Boatswain's chair.

Rule 1237. (1) Two 5/8-inch, first-quality manila rope slings or synthetic rope of equivalent strength shall be reeved through the 4 seat holes so as to cross each other on the underside. Where an employee is using a heat or spark-producing process, such as gas welding or cutting, a protected 3/8-inch wire rope shall be used in place of fiber rope.

(2) The tackle shall consist of bearing or bushed blocks and 5/8-inch, first grade manila rope or its equivalent. The block shall be secured to roof irons, hooks, or other objects that are secured. Tiebacks shall be installed at right angles to the face of the building and shall be secured to the roof hooks and the building.

History: 1981 AACS; 1990 AACS; 1996 AACS; 2013 AACS.

R 408.41238 Float scaffolds.

Rule 1238. (1) A float scaffold shall be constructed of not less than 3/4-inch exterior plywood or equivalent material. The platform shall be not more than 3 by 6 feet in size, and the ends of the platform shall project 6 inches beyond the outer edge of the bearers.

(2) The plywood shall be securely fastened to 2 2- by 4-inch bearers which are made of select lumber that is free of knots and other defects and which project 6 inches beyond the platforms on each side. The plywood shall be reinforced with a diagonal brace that runs from bearer to bearer beneath the platform.

(3) An edging of wood not less than 1 by 2 inches, or its equivalent, shall be secured around all sides of the platform to prevent tools from rolling off.

(4) Supporting ropes shall be 1-inch manila rope, or its equivalent, and shall be free of defects.

(5) Rope connections shall be made in a manner that prevents the platform from shifting or slipping. The rope shall be arranged to do all of the following:

(a) Pass under the platform.

(b) Be hitched around the end of each bearer on each side.

(c) Provide 4 ends that shall be securely fastened to an overhead support.

(6) Not more than 2 employees and necessary light tools shall occupy a float scaffold.

(7) Each employee on a float scaffold shall be protected by a personal fall arrest system.

History: 1981 AACS; 1990 AACS; 1996 AACS.

R 408.41239 Rescinded.

History: 1998-2000 AACS; 2018 AACS.

R 408.41240 Rescinded.

History: 1998-2000 AACS; 2018 AACS.

MOBILE SCAFFOLDS

R 408.41241 Mobile scaffolds.

Rule 1241. (1) When a freestanding mobile scaffold is used, the height shall not be more than 4 times the minimum base dimension.

(2) Outriggers, when used, may be considered as part of the base dimension. The outriggers shall be installed on both sides of the scaffold at each frame line.

(3) Locking devices shall be used to secure the casters to the frame or adjusting screw. The adjusting screw shall not extend more than 12 inches. The casters shall be provided with a positive locking device to prevent movement of the scaffold. The device shall be used when the scaffold is in use, except where the work platform is 4 feet or less from the floor.

(4) Vertical members of the scaffold shall be braced by cross bracing and diagonal bracing. Not less than 2 horizontal diagonal braces shall be installed, 1 as close to the casters as possible, at intervals of not more than 4 times the least-based dimension. The horizontal diagonal brace may be omitted on a scaffold that is specifically designed to absorb racking.

(5) A scaffold platform shall cover the full width of the scaffold, except for a necessary entrance opening. A platform shall be secured in place. A platform shall not extend outward beyond the base supports of the scaffold unless outrigger frames or equivalent devices are used to ensure stability.

(6) A ladder or stairway that is provided on a manually propelled mobile scaffold shall be affixed or built into the scaffold and shall be so located that, when in use, the ladder or stairway does not have a tendency to tip the scaffold. A landing platform shall be provided at intervals of not more than 30 feet.

(7) In place of a ladder or stairway, the requirements of R 408.41211(2) may be complied with.

(8) Only manual force shall be used to move a scaffold covered by this rule. The force shall be applied near or as close to the base as practical, except for a scaffold with a work platform that is 4 feet or less from the floor.

(9) When being used, a mobile scaffold shall rest upon a suitable footing and shall stand plumb. Where leveling of the scaffold is necessary, screw jacks or an equivalent means shall be used.

(10) An employer shall not allow an employee to ride on a mobile scaffold, unless all of the following conditions exist:

(a) The floor or surface is within 3 degrees of level and is free from pits, holes, or obstructions.

(b) The minimum base dimension of the scaffold when ready for rolling is not less than 1/2 of the height.

(c) The casters are equipped with rubber or similar resilient tires.

(d) All tools and materials are secured or removed from the platform before the mobile scaffold is moved.

(e) The scaffold is equipped with guardrails on all sides.

(f) Before a scaffold is moved, each employee on the scaffold is made aware of the move.

(11) A mobile scaffold shall be in compliance with the applicable provisions of R 408.41217, R 408.41218, R 408.41223, and 29 CFR 1926.452(c), as adopted by reference in R 408.41201.

(12) A power system used to propel a mobile scaffold shall be designed to propel a mobile scaffold. A forklift, truck, similar motor vehicle, or add-on motor shall not be used to propel a scaffold unless the scaffold is designed to be propelled by a forklift, truck, similar motor vehicle, or add-on motor.

(13) If a power system is used to propel a scaffold, then the propelling force shall be applied directly to the wheels and shall not produce a speed of more than 1 foot per second (0.3 meters per second).

(14) An employee shall not be on any part of a powered mobile scaffold that extends outward beyond the wheels, casters, or other supports.

(15) A powered mobile scaffold shall be stabilized to prevent tipping during movement.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41243 Rough terrain forklift truck scaffolds; equipment requirements; employee safety requirements.

Rule 1243. (1) The scaffold platform shall be attached to the forks by enclosed sleeves and shall be secured against the back of the forks with a mechanical device so that the platform cannot tip or slip.

(2) A work platform shall be in compliance with all of the following requirements:

(a) Except for the guardrail system as specified in Construction Safety Standard Part 21. "Guarding of Walking and Working Areas," as referenced in R 408.41201, be of welded mild steel construction that has a minimum safety factor of 4 times the maximum intended load.

(b) Have a continuous guardrail system constructed as follows:

(i) Have a top rail which is located not less than 36 inches, nor more than 42 inches, above the platform floor and which is constructed to withstand a minimum of 200 pounds of force in any direction.

(ii) Have a midrail which is installed at mid-height between the top rail and platform floor and which is constructed to withstand a 200-pound side thrust.

(iii) Have a toeboard which is not less than 4 inches in nominal height and which is installed not more than 1/4 of an inch above the floor around the periphery of the work platform. If the platform has a gate, then the toeboard shall be installed on the gate.

(c) Have a wood planking, steel plate, or a steel grating bolted or welded to the bottom of the platform and be maintained free of slip or trip hazards.

(d) Have a permanently affixed sign on the platform that specifies the maximum number of passengers allowed, the work platform identification number, and the maximum rated load.

(e) Be easily identifiable by high-visibility color or marking.

(3) The work platform shall be level when in use.

(4) If an employee is elevated in a platform on a variable reach lift truck, a personal fall arrest system, including the anchorage required in Construction Safety Standard Part 45. "Fall Protection," and Construction Safety and Health Standard Part 6. "Personal Protective Equipment," as referenced in R 408.41201, is required and shall be worn when an employee is elevated.

(5) The rough terrain fork truck or the lift truck shall rest on firm footing. Leveling devices and outriggers shall be used where provided on equipment.

(6) A trained operator shall remain at the operator station of a lift truck to control the lift truck while an employee is elevated. The lift truck control or controls shall be in neutral and the parking brake set. The operator of the lift truck scaffold platform shall be able to see the elevated platform at all times.

(7) A lift truck platform shall be returned to the ground before a lift truck is repositioned. The forklift shall be moved as close to the work area as possible for final positioning. An employee shall exit the landed platform and reboard the platform only after the lift truck repositioning is completed.

(8) The combined mass weight of the platform, load, and the employee shall not be more than 1/3 of the rated capacity of the rough terrain forklift truck on which the platform is used.

(9) An employee shall maintain firm footing on the platform floor. Railings, planks, ladders, or other materials shall not be used on the platform to achieve reach or height.

(10) The guardrail system of the platform shall not be used to support any of the following:

(a) Materials.

(b) Other work platforms.

(c) Employees.

(11) The platform shall be lowered to ground level for an employee to enter or exit, except where elevated work areas are inaccessible or hazardous to reach. An employee may exit the platform with the knowledge and consent of the employer. When exiting to unguarded work areas, fall protection shall be provided and used as required in Construction Safety Standard Part 45. "Fall Protection," as referenced in R 408.41201.

An employee shall not climb on any part of a lift truck when attempting to enter or exit the platform.

(12) A platform shall not be modified if the modification is detrimental to its safe use.

(13) Floor dimensions parallel to the truck longitudinal centerline shall not be more than 2 times the load center distance listed on the rough terrain forklift truck nameplate. The floor dimension width shall not be more than the overall width of the truck measured across the load-bearing tires plus 10 inches (250 mm) on either side. The minimum space for each employee on the platform shall be not less than 18 inches (450 mm) in either direction.

(14) A wood pallet shall not be used as a platform for lift truck scaffolds.

(15) If arc welding is performed by an employee on the platform, then the electrode holders shall be protected from contact with the metal components of the work platform.

(16) A work platform shall not be used during high winds, electrical storms, snow, ice, sleet, or other adverse weather conditions that could affect the safety of the employees on the work platform or the operator of the truck.

History: 1981 AACS; 1990 AACS; 1997 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41244 Rescinded.

History: 1997 AACS; 2013 AACS.

R 408.41245 Operator training.

Rule 1245. An employer shall ensure that an employee has been trained before the employee's assignment as an operator of a rough terrain forklift truck that is used to elevate employees. An employee shall be trained in all of the following areas:

(a) The capabilities of the equipment and its attachments.

(b) The purpose, use, and limitations of the controls.

(c) How to make daily checks.

History: 1997 AACS; 2013 AACS.

R 408.41246 Rescinded.

History: 1997 AACS; 2013 AACS.

AUXILIARY SUPPORTED SCAFFOLDS

R 408.41251 Outrigger scaffolds.

Rule 1251. (1) The inboard end of an outrigger beam measured from the fulcrum point to anchorage point shall be not less than 1 1/2 times the outboard end in length.

The beams shall rest on edge, the sides shall be plumb, and the edges shall be horizontal. The fulcrum point of the beam shall rest on a secure bearing not less than 6 inches in each horizontal dimension. The beam shall be secured in place against movement and shall be securely braced at the fulcrum point against tipping.

(2) The inboard end of an outrigger beam shall be securely anchored either by means of struts bearing against sills in contact with the overhead beams or ceiling or by means of tension members secured to the floor joists underfoot, or by both if necessary. The inboard end of an outrigger beam shall be secured against tipping, and the entire supporting structure shall be securely braced in both directions to prevent any horizontal movement.

(3) An outrigger scaffold shall be constructed as prescribed in table 4.

(4) Planking shall be laid tight and shall extend to within 3 inches of the building wall. Planking shall be secured to the outriggers.

(5) A scaffold and scaffold components shall be designed by a qualified person who is knowledgeable in scaffolding and shall be constructed and loaded pursuant to the design.

(6) Table 4 reads as follows:

TABLE 4
SPACING AND LENGTH OF OUTRIGGER SCAFFOLDS

Maximum Scaffold Load	Light Duty 25 p.s.f.	Medium Duty 50 p.s.f.
Outrigger size	2 inches by 10 inches	3 inches by 10 inches
Maximum outrigger spacing	8 feet	6 feet
Maximum outrigger length	6 feet	6 feet

History: 1981 AACS; 1998-2000 AACS; 2016 AACS.

R 408.41253 Roofing brackets and crawling boards.

Rule 1253. (1) A roofing bracket shall be installed in a manner to maintain a level working surface.

(2) In addition to the pointed metal projections, the brackets shall be secured in place by nailing. When it is impractical to nail brackets, rope supports shall be used. When rope supports are used, they shall consist of first-quality manila rope of at least 3/4-inch diameter or its equivalent.

(3) A crawling board shall not be less than 1 by 10 inches, shall extend from the eave to the ridge of the roof, and shall be secured against displacement.

History: 1981 AACS; 2013 AACS.

R 408.41254 Carpenter's bracket scaffold.

Rule 1254. (1) Each bracket, except those for wooden bracket-form scaffolds, shall be attached to the supporting formwork or structure by means of 1 or more of the following:

(a) Nails.

(b) A metal stud attachment device.

(c) Welding, hooking over a secured structural supporting member, with the form wales either bolted to the form or secured by snap ties or tie bolts extending through the form and securely anchored.

(d) For carpenters' bracket scaffolds only, by a bolt extending through to the opposite side of the structure's wall.

(2) The supporting brackets shall be fastened to the structure by 1 of the following:

(a) Three-eighths-inch diameter bolts extending through the studs at the top of the bracket and projecting 3/4 inch beyond the nut and washer when in place.

(b) Welding to a metal tank.

(c) Hooked over a secured supporting member of the structure.

History: 1981 AACS; 2013 AACS; 2016 AACS.

R 408.41255 Form Scaffolds.

Rule 1255. Metal brackets that are an integral part of the form shall be bolted or welded to the form. A folding-type bracket shall be secured by bolts or locking pins when in the extended position. Clip-on hook-on brackets may be used if the form walers are bolted to the form or secured by snap ties or shea-bolts extending through the form and anchored.

History: 1981 AACS; 1990 AACS; 2013 AACS.

R 408.41256 Ladder jack scaffolds.

Rule 1256. (1) A ladder jack scaffold shall be used only for light duty on type I manufactured ladders at heights not more than 20 feet from the ground or floor level. The ladder shall be used as prescribed in Construction Safety Standard Part 11. "Fixed and Portable Ladders," as referenced in R 408.41201.

(2) All bearing points of a ladder jack shall be designed to bear on the side rails and the rungs, but if bearing on the rungs only, the bearing area shall be not less than 10 lineal inches per rung.

History: 1981 AACS; 2013 AACS; 2016 AACS; 2018 AACS.

R 408.41256a Step, platform, and trestle ladder scaffolds.

Rule 1256a. (1) A scaffold platform shall not be placed higher than the second highest rung or step of the ladder supporting the platform.

(2) A ladder used in conjunction with a step, platform, and trestle ladder scaffold shall comply with the pertinent requirements of Construction Safety Standard Part 11. "Fixed and Portable Ladders," as referenced in R 408.41201, except that job-made ladders shall not be used to support a step, platform, or trestle scaffold.

(3) A ladder used to support a step, platform, and trestle ladder scaffold shall be placed, fastened, or equipped with a device to prevent slipping.

(4) A scaffold shall not be bridged to another scaffold.

History: 1998-2000 AACS; 2016 AACS; 2018 AACS.

R 408.41256b Rescinded.

History: 1998-2000 AACS; 2016 AACS; 2018 AACS.

WIRE, FIBER, AND SYNTHETIC ROPE

R 408.41261 Wire rope.

Rule 1261. (1) A wire rope shall be inspected for defects by a competent person before each work shift and after every occurrence that could affect a rope's integrity. A rope shall be replaced if any of the following conditions exist:

(a) Physical damage that impairs the function and strength of the rope.

(b) Kinks that might impair the tracking or wrapping of rope around the drum or sheaves.

(c) Six randomly distributed broken wires in 1 rope lay or 3 broken wires in 1 strand in 1 rope lay.

(d) Abrasion, corrosion, scrubbing, flattening, or peening that has caused the loss of more than 1/3 of the original diameter of the outside wires.

(e) Heat damage caused by a torch or any damage caused by contact with electrical wires.

(f) Evidence that the secondary brake has been activated during an overspeed condition and has engaged the suspension rope.

(2) Wire rope that is bent to form an eye over a bolt or rod which has a diameter of less than 4 times the rope diameter shall be equipped with a metal thimble.

(3) Swaged attachments or spliced eyes on wire suspension ropes shall not be used unless they are made by the wire rope manufacturer or a qualified person.

(4) If wire rope clips are used on suspension scaffolds, then all of the following provisions apply:

(a) Clips shall be installed according to the manufacturer's recommendations.

(b) Clips shall be retightened to the manufacturer's recommendations after the initial loading.

(c) Clips shall be inspected and retightened to the manufacturer's recommendations at the start of each work shift.

(d) U-bolt clips shall not be used at the point of suspension for any scaffold hoist.

(e) If U-bolt clips are used, then the U-bolt shall be placed over the dead end of the rope and the saddle shall be placed over the live end of the rope.

(5) Wire rope shall not come in contact with sharp edges.

History: 1981 AACS; 1990 AACS; 1998-2000 AACS; 2013 AACS; 2016 AACS.

R 408.41262 Rescinded.

History: 1981 AACS; 1998-2000 AACS; 2013 AACS.

R 408.41263 Rescinded.

History: 1981 AACS; 2013 AACS.

R 408.41264 Window jack scaffolds.

Rule 1264. (1) A window jack scaffold shall be used as a work platform for not more than 1 employee and only for the purpose of working at the window opening through which the jack is placed.

(2) A window jack shall not be used to support planks placed between one window jack and another or for other elements of scaffolding.

History: 1990 AACS; 1998-2000 AACS; 2013 AACS.