

DEPARTMENT OF CONSUMER AND INDUSTRY SERVICES LICENSING AND REGULATORY AFFAIRS

BUREAU OF SAFETY AND REGULATION DIRECTOR'S OFFICE

CONSTRUCTION SAFETY STANDARDS COMMISSION

FILED WITH THE SECRETARY OF STATE ON APRIL 4, 2013

~~This rule takes effect 15 days after filing with the Secretary of State.~~

These rules become effective immediately upon filing with the Secretary of State unless adopted under section 33, 44, or 45a(6) of 1969 PA 306.

Rules adopted under these sections become effective 7 days after filing with the Secretary of State.

(By authority conferred on the director of the department of ~~consumer and industry services~~ **licensing and regulatory affairs** by sections 19 and 21 of **1974 PA 154, and Executive Reorganization Order Nos. 1996-2, 2003-1, 2008-4, and 2011-4, MCL 445.2001, 445.2011, 445.2025, and 445.2030** Act No. 154 of the Public Acts of 1974, as amended, and Executive Reorganization Order No. 1996-2, being §§408.1019, 408.1021, and 445.2001 of the Michigan Compiled Laws)

R 408.41111, R 408.41122, R 408.41123, R 408.41124, R 408.41126, R 408.41132, R 408.41133, and R 408.41140 of the Michigan Administrative Code are amended and R 408.41102, R 408.41115, R 408.41125, R 408.41130, and R 408.41131 of the Code are rescinded, as follows:

PART 11. FIXED AND PORTABLE LADDERS

R 408.41102. Rescission. **Rescinded.**

~~Rule 1102. (1) Part 11 of the construction safety commission standards, being R 408.2101 to R 408.2115 of the Michigan Administrative Code and appearing on pages 4297 to 4301 of the 1967 Annual Supplement to the Code, is rescinded.~~

~~(2) Part 12 of the construction safety commission standards, being R 408.2201 to R 408.2205 of the Michigan Administrative Code and appearing on pages 3315 and 3316 of the 1964-1965 Annual Supplement to the Code is rescinded.~~

R 408.41111. Adoption by reference; certification.

Rule 1111. (1) A manufactured portable wood ladder shall be constructed and maintained as prescribed in the ANSI standard A14.1-1990, which is adopted by reference in this rule and may be inspected at the Lansing office of the department of **licensing and regulatory affairs** ~~consumer and industry services~~. This standard may be purchased at a cost as of the time of adoption of this rule of ~~\$35.00~~ **\$36.00** from **Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112, telephone number 1-800-854-7179, website: www.global.ihs.com** ~~the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Licensing and Regulatory Affairs Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.~~

(2) A manufactured portable metal ladder shall be constructed and maintained as prescribed in the ANSI standard A14.2-1990, which is adopted by reference in this rule and may be inspected at the Lansing office of the department of **licensing and regulatory affairs** ~~consumer and industry services~~. This standard may be purchased at a cost as of the time of adoption of this rule of ~~\$35.00~~ **\$41.00** from **Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112, telephone number 1-800-854-7179, website: www.global.ihs.com** ~~the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Licensing and Regulatory Affairs Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.~~

(3) A manufactured portable plastic ladder shall be constructed and maintained as prescribed in the ANSI standard A14.5-1982 and supplement 1985, which is adopted by reference in this rule and may be inspected at the Lansing office of the department of **licensing and regulatory affairs** ~~consumer and industry services~~. This standard may be purchased at a cost as of the time of adoption of this rule of ~~\$24.00~~ **\$42.00** from **Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112, telephone number 1-800-854-7179, website: www.global.ihs.com** ~~the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Licensing and Regulatory Affairs Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.~~

(4) Fixed ladders shall be constructed and maintained as prescribed in the ANSI standard A14.3-1984, which is adopted by reference in this rule and may be inspected at the Lansing office of the department of **licensing and regulatory affairs** ~~consumer and industry services~~. This standard may be purchased at a cost as of the time of adoption of this rule of ~~\$15.00~~ **\$20.00** from **Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112,**

telephone number 1-800-854-7179, website: www.global.ihc.com the American National Standards Institute, 11 West 42nd Street, New York, New York 10036, or from the Michigan Department of Licensing and Regulatory Affairs Consumer and Industry Services, 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.

~~(5) Job-made ladders shall be constructed and maintained as prescribed in the ANSI standard A14.4-1979 (R1984), which is adopted by reference in this rule and may be inspected at the Lansing office of the department of consumer and industry services. This standard may be purchased at a cost as of the time of adoption of this rule of \$15.00 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.~~

~~(5) (6) A manufactured portable ladder shall be branded or have a permanent label permanently affixed by the manufacturer which shows the type of ladder and certifies that it meets the requirements of the appropriate ANSI standard as set out in subrules (1) to (4) (5) of this rule.~~

R 408.41115. Ladder loads; clearances; safety devices; cages; wells; extensions.—~~Rescinded.~~

Rule 1115. (1) Ladders shall be capable of supporting the following loads without failure:

~~(a) For each self-supporting portable ladder, not less than 4 times the maximum intended load, except that each extra heavy duty type IA metal or plastic ladder shall sustain not less than 3.3 times the maximum intended load. The ability of a ladder to sustain the loads indicated in this subdivision shall be determined by applying or transmitting the requisite load to the ladder in a downward vertical direction.~~

~~(b) For each portable ladder that is not self-supporting, not less than 4 times the maximum intended load, except that each extra heavy-duty type IA metal or plastic ladder shall sustain not less than 3.3 times the maximum intended load. The ability of a ladder to sustain the loads indicated in this subdivision shall be determined by applying or transmitting the requisite load to the ladder in a downward vertical direction when the ladder is placed at an angle of 75 1/2 degrees from the horizontal.~~

~~(c) For each fixed ladder, not less than 2 loads of 250 pounds (114 kg) each, concentrated between any 2 consecutive attachments (the number and position of additional concentrated loads of 250 pounds (114 kg) each, determined from the anticipated usage of the ladder, shall also be included), plus anticipated loads caused by ice buildup, winds, rigging, and impact loads that result from the use of ladder safety devices. Each step or rung shall be capable of supporting a single concentrated load of not less than 250 pounds (114 kg) applied in the middle of the step or rung.~~

~~(2) The minimum perpendicular clearance between fixed ladder rungs, cleats, and steps and any obstruction behind the ladder shall be 7 inches (18 cm), except in the case of an elevator pit ladder, for which a minimum perpendicular clearance of 4 1/2 inches (11 cm) is required.~~

~~(3) The minimum perpendicular clearance between the center line of fixed ladder rungs, cleats, and steps and any obstruction on the climbing side of the ladder shall be 30 inches (76 cm), except as provided in subrule (4) of this rule.~~

~~(4) When unavoidable obstructions are encountered, the minimum perpendicular clearance between the center line of fixed ladder rungs, cleats, and steps and the obstruction on the climbing side of the ladder may be reduced to 24 inches (61 cm), if a deflection device is installed to guide employees around the obstruction. See figure 2.~~

~~(5) Through fixed ladders, at their point of access or egress, shall have a step across distance of not less than 7 inches (18 cm) nor more than 12 inches (30 cm), as measured from the center line of the steps or rungs to the nearest edge of the landing area. If the normal step-across distance is more than 12 inches (30 cm), a landing platform shall be provided to reduce the distance to the specified limit. See figure 3.~~

~~(6) Fixed ladders that do not have cages or wells shall have a clear width to the nearest permanent object of not less than 15 inches (38 cm) on each side of the center line of the ladder.~~

~~(7) Fixed ladders shall be provided with cages, wells, ladder safety devices, or self-retracting lifelines where the length of climb is less than 24 feet (7.3 m), but the top of the ladder is at a distance that is more than 24 feet (7.3 m) above lower levels.~~

~~(8) Where the total length of a climb equals or is more than 24 feet (7.3 m), fixed ladders shall be equipped with 1 of the following:~~

~~(a) Ladder safety devices.~~

~~(b) Rest platforms at intervals of not more than 150 feet (45.7 m) and self-retracting lifelines.~~

~~(c) Multiple ladder sections and a cage or well. Each ladder section shall not be more than 50 feet (15.2 m) in length. Ladder sections shall be offset from adjacent sections, and landing platforms shall be provided at maximum intervals of 50 feet (15.2 m).~~

~~(9) Cages for fixed ladders shall be in compliance with all of the following provisions:~~

~~(a) Horizontal bands shall be fastened to the side rails of rail ladders or for individual rung ladders, directly to the structure, building, or equipment.~~

~~(b) Vertical bars shall be on the inside of the horizontal bands and shall be fastened to them.~~

~~(c) Cages shall extend not less than 27 inches (68 cm), and not more than 30 inches (76 cm) from the center line of the step or rung, excluding the flare at the bottom of the cage, and shall not be less than 27 inches (68 cm) in width.~~

~~(d) The inside of the cage shall be clear of projections.~~

~~(e) Horizontal bands shall be spaced not more than 4 feet (1.2) on center vertically;~~

~~(f) Vertical bars shall be spaced at intervals of not more than 9 1/2 inches (24 cm) on center horizontally.~~

- (g) The bottom of the cage shall be at a level that is not less than 7 feet (2.1 m) and not more than 8 feet (2.4 m) above the point of access to the bottom of the ladder. The bottom of the cage shall be flared not less than 4 inches (10 cm) all around within the distance between the bottom horizontal band and the next higher band.
- (h) The top of the cage shall be not less than 42 inches (1.2 m) above the top of the platform or the point of access at the top of the ladder and shall provide for access to the platform or other point of access.
- (10) A well for a fixed ladder shall be in compliance with all of the following provisions:
- (a) The well shall completely encircle the ladder.
 - (b) The well shall be free of projections.
 - (c) The well's inside face on the climbing side of the ladder shall extend not less than 27 inches (68 cm) and not more than 30 inches (76 cm) from the center line of the step or rung.
 - (d) The inside clear width of the well shall be not less 30 inches (76 cm).
 - (e) The bottom of the wall on the access side of the well shall start at a level that is not less than 7 feet (2.1 m) and not more than 8 feet (2.4 m) above the point of access to the bottom of the ladder. See figure 4.
- (11) Ladder safety devices and related support systems for fixed ladders shall be in compliance with all of the following provisions:
- (a) The devices and support systems shall be capable of withstanding, without failure, a drop test that consists of an 18-inch (41 cm) drop of a 500-pound (226 kg) weight.
 - (b) The devices and support systems shall permit the employee who uses the device to ascend or descend without continually having to hold, push, or pull any part of the device, thereby leaving both hands free for climbing.
 - (c) The devices and support systems shall be activated within 2 feet (.61 m) after a fall occurs and shall limit the descending velocity of an employee to 7 feet per second (2.1 m/sec.) or less.
 - (d) The connection between the carrier or lifeline and the point of attachment to the body belt or harness shall not be more than 9 inches (23 cm) in length.
- (12) The mounting of ladder safety devices for fixed ladders shall be in compliance with all of the following provisions:
- (a) To provide the strength necessary to stop an employee's fall, mountings for rigid carriers shall be attached at each end of the carrier and intermediate mountings, as necessary, shall be spaced along the entire length of the carrier.
 - (b) Mountings for flexible carriers shall be attached at each end of the carrier. When the system is exposed to wind, cable guides for flexible carriers shall be installed at a minimum spacing of not less than 25 feet (7.6 m) and not more than 40 feet (12.2 m) along the entire length of the carrier in a manner that will prevent wind damage to the system.
 - (c) The design and installation of mountings and cable guides shall not reduce the design strength of the ladder.
- (13) The side rails of through or side-step fixed ladders shall extend 42 inches (1.1 m) above the top of the access level or landing platform served by the ladder. For a parapet ladder, the access level shall be the roof if the parapet is cut to permit passage through the parapet; however, if the parapet is continuous, the access level shall be the top of the parapet.
- (14) For through fixed ladder extensions, the steps or rungs shall be omitted from the extension and the extension of the side rails shall be flared to provide not less than 24 inches (61 cm) and not more than 30 inches (76 cm) of clearance between side rails. Where ladder safety devices are provided, the maximum clearance between side rails of the extensions shall not be more than 36 inches (91 cm).
- (15) For side-step fixed ladders, the side rails and the steps or rungs shall be continuous in the extension.
- (16) Individual rung ladders and stepladders, except for ladders that are used where their access openings are covered with manhole covers or hatches, shall extend not less than 42 inches (1.1 m) above an access level or landing platform either by the continuation of the rung spacings as horizontal grab bars or by providing vertical grab bars that shall have the same lateral spacing as the vertical legs of the rungs.

R 408.41122. Use generally.

Rule 1122. (1) A ladder shall not be placed in a passageway, doorway, driveway, or any location where it may be displaced, unless it is protected by barricades or guards or is secured to prevent displacement.

(2) A ladder shall be placed on a substantial and stable base unless it is secured to prevent accidental displacement. The area around the top and bottom of the ladder shall be kept clear.

(3) A ladder shall not be used as a brace, slide, guy, gin pole, or gangway or for any other use than that for which it is designed.

(4) An employee shall face the ladder when ascending or descending. Each employee shall use at least 1 hand to grasp the ladder when progressing up or down the ladder. An employee shall not carry any object or load that could cause the employee to lose balance and fall.

(5) An employee who is on a ladder shall not overreach or do any pushing or pulling that may cause the ladder to move or topple. If both of an employee's shoulders are outside of a side rail, the employee is overreaching.

~~(6) A manufactured portable ladder or a single-cleat ladder shall not be used by more than 1 employee at a time.~~

(6) (7) A ladder shall be located and maintained to prevent an employee from bumping into, or snagging onto, projecting objects while ascending or descending the ladder.

~~(8) If a ladder provides the only means of access to, or egress from, a working area for 25 or more employees, or if simultaneous 2-way traffic is expected, a minimum of 2 ladders or a job-built, double-cleat ladder shall be provided.~~

~~(9) A rope or chain ladder shall not be used on a construction site.~~

- (7) ~~(10)~~ A ladder shall not be loaded beyond its load-carrying capacity.
 (8) ~~(11)~~ A ladder shall not be moved, shifted, or extended while occupied by an employee.
 (9) ~~(12)~~ Single-rail ladders shall not be used.

R 408.41123. Classification of ladders.

Rule 1123. The use of all manufactured portable ladders or stepladders shall be limited to those classified as type IA or type I, as prescribed in ANSI A14.1-1990, which is adopted by reference in this rule and may be inspected at the Lansing office of the department of **licensing and regulatory affairs** ~~consumer and industry services~~. This standard may be purchased from **Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado, 80112, telephone number 1-800-854-7179, website: www.global.ihs.com** ~~the American National Standards Institute, 11 West 42nd Street, New York, New York, 10036, or from the Safety Standards Division, Michigan Department of Licensing and Regulatory Affairs, MIOSHA Standards Section, Consumer and Industry Services 7150 Harris Drive, Box 30643, Lansing, Michigan 48909, at a cost as of the time of adoption of this rule of \$35.00~~ **\$36.00**.

R 408.41124. Portable ladders.

Rule 1124. (1) A portable ladder shall be used at such a pitch that the horizontal projected distance from the top support to the base is not more than 1/4 of the vertical distance between these points.

(2) A portable ladder in use shall be equipped with appropriate safety feet, unless the ladder is tied, blocked, or otherwise secured to prevent it from being displaced. Slip-resistant feet shall not be used as a substitute for care in placing, lashing, or holding a ladder that is used upon slippery surfaces, including flat metal or concrete surfaces that are constructed so that they cannot be prevented from becoming slippery.

(3) A portable ladder that is used at such a pitch that the horizontal projected distance from the top support to the base is less than 1/5 of the vertical distance between these points shall be secured at the top to prevent tipping backward.

(4) A portable ladder that is used at a pitch of 80 degrees or more shall be in compliance with the requirements of a fixed ladder as prescribed in R 408.10335 ~~of the Michigan Administrative Code~~.

(5) When portable ladders are used for access to an upper landing surface, the ladder side rails shall extend not less than 3 feet (.9 m) above the upper landing surface to which the ladder is used to gain access; or, when such an extension is not possible because of the ladder's length, then the ladder shall be secured at its top to rigid support that will not deflect and a grasping device, such as a grabrail, shall be provided to assist employees in mounting and dismounting the ladder. The side rails shall not extend in a manner that would permit ladder deflection under a load, by itself, to cause the ladder to slip off its support. The top of a non-self-supporting ladder shall be placed with the 2 rails supported equally, unless the ladder is equipped with a single support attachment.

(6) A manufactured portable metal ladder shall not be used for electrical work or where the ladder or an employee may contact electrical conductors. A ladder shall have nonconductive siderails if the ladder is used where the employee or the ladder could contact exposed energized electrical equipment.

(7) A metal ladder shall not be used or moved unless a minimum of 20 feet is maintained between power transmission or distribution lines.

(8) A power transmission or distribution line or electrical apparatus shall be considered energized unless the property owner or utility indicates it is de-energized and the line or apparatus is visibly grounded. Where de-energizing is impractical, the minimum clearances set forth in table 1 shall be maintained between the ladder, employee, or material, whichever is closer.

(9) Table 1 reads as follows:

VOLTAGE	MINIMUM CLEARANCE
To 50 kV	10 feet
Over 50 kV	10 feet plus .4 inch per kV

~~(10) A manufactured portable ladder shall not be more than the following lengths:~~

TYPE	MAXIMUM LENGTH
Single-section ladder (Type 1A or 1)	30 feet
Extension ladder (Type 1A or 1)	60 feet
Trestle ladder or extension sections or base sections of an extension trestle ladder	20 feet

~~(10) (11)~~ An employee who is using a portable ladder shall not stand on the top 2 rungs or within 3 feet of the top of the ladder.

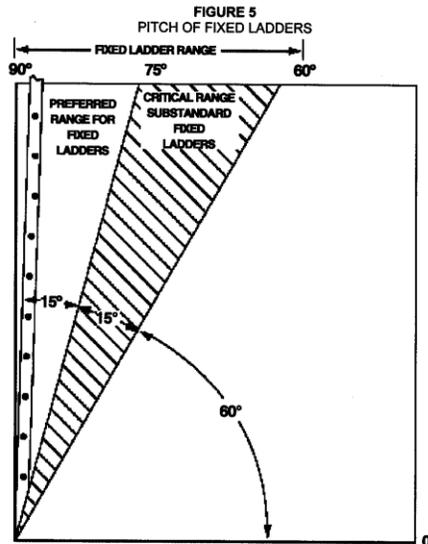
~~(11) (12)~~ Two portable ladders shall not be spliced together to provide long sections unless such ladders are specifically designed for such use.

~~(13)~~ A portable extension ladder shall be adjusted only from the ground, floor, or the lower section of the ladder.

~~(12)~~ (14) A portable 2-section extension ladder shall be erected so that the top section rests on the base section. The top section shall be the section nearest to the climber.

~~(13)~~ (15) A non-self-supporting ladder shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately 1/4 of the working length of the ladder that is the distance along the ladder between the foot and the top support.

~~(14)~~ (16) A fixed ladder shall be used at a pitch of not more than 90 degrees from the horizontal, as measured to the back side of the ladder. See figure 5.



R 408.41125. ~~Trestle ladders.~~ **Rescinded.**

~~Rule 1125. (1) When trestle ladders are used to support an elevated work platform, the entire system shall be considered a scaffold.~~

~~(2) An employee shall not work directly from the vertical portion of an extension trestle ladder.~~

~~(3) Rungs, cleats, and steps of the base section of extension trestle ladders shall be not less than 8 inches (20 cm) and not more than 18 inches (46 cm) apart, as measured between center lines of the rungs, cleats, and steps. The rung spacing on the extension section of the extension trestle ladder shall be not less than 6 inches (15 cm) and not more than 12 inches (31 cm).~~

R 408.41126. Use of stepladders.

Rule 1126. (1) An employee shall not use the backside of a stepladder for climbing, unless the stepladder is designed for such use.

(2) Unless the stepladder is equipped with a handrail, the top step and cap shall not be used to stand on.

(3) A stepladder shall not be used as a straight ladder by leaning it against a wall or other support.

(4) A metal spreader or locking device shall be provided on each stepladder to hold the front and back sections in an open position when the ladder is being used. The ladder shall be opened fully and the spreaders shall be locked while in use.

~~(5) Each leg of a step ladder shall be in contact with solid footing.~~

~~(6) A portable metal stepladder shall not be used for electrical work or where the ladder or an employee may contact electrical conductors.~~

~~(7) A portable stepladder shall be in compliance with the provisions of R 408.41121(2) to (5), R 408.41122(1) to (7), (9), and (10), and R 408.41130(1) to (4).~~

R 408.41130. ~~Storage of ladders.~~ **Rescinded.**

~~Rule 1130. (1) A ladder should be stored in such a manner as to provide ease of access and inspection. A ladder stored in a horizontal position shall be supported at a sufficient number of points to prevent the ladder from sagging during storage.~~

~~(2) A wood ladder shall not be stored within 6 feet of a radiator, stove, or steam pipe or in a location subject to excessive heat or dampness.~~

~~(3) A metal ladder shall not be stored where it is subject to reaction with corrosive substances like acids and alkali solutions.~~

~~(4) A plastic ladder shall be stored on edge on racks when not in use and in a location which is free of corrosive substances and which provides protection from adverse environmental conditions.~~

R 408.41131. ~~Handling and transporting of ladders.~~ **Rescinded.**

~~Rule 1131. (1) A ladder shall be handled with reasonable care and not be subjected to deliberate dropping or to misuse.~~

~~(2) A ladder which is transported on a vehicle shall be secured to prevent it from catapulting or falling from the vehicle.~~

R 408.41132. Maintenance.

Rule 1132. (1) A ladder shall be maintained free of slip-enhancing hazards and in good working condition.

(2) A ladder shall not be painted with an opaque material. A ladder, particularly one used out-of-doors should be coated with a suitable transparent protective material to retard splintering caused by weathering.

(3) The side rails and legs of a ladder shall be kept free from splinters. The joint between the side rail and step shall be kept tight and metal hardware and fittings secured.

~~(4) The locks, pulleys, spreader joints, or other movable metal parts of a ladder shall operate freely without undue play. Lubricants shall be applied as needed.~~

~~(5) A rope used on a ladder shall not have a long or loosely twisted lay, shall be free of burns and cuts, and shall not show evidence of weakness resulting from fraying, wear, mildew, or rot. Rope ends shall be fastened or whipped.~~

(4) ~~(6)~~ A ladder surface shall be free of puncture or laceration hazards.

R 408.41133. Special-purpose ladders.

Rule 1133. (1) A special-purpose ladder may be capable of being used as a step ladder, a single or extension ladder, or a trestle ladder.

(2) A special-purpose ladder, when used as any of the types of ladders listed in subrule (1) of this rule, shall meet the requirements of the applicable rules of this part.

(3) A special-purpose ladder may be used by more than 1 employee if specifically designed for that purpose.

~~(4) A platform step ladder shall be constructed in accordance with requirements for a type 1 step ladder. A platform of a platform ladder shall be capable of supporting a load of 200 pounds placed at any point on the platform.~~

R 408.41140. Fixed ladders.

Rule 1140. A fixed ladder shall be as prescribed in Part 3. Fixed ladders, being R 408.10301 et seq. of the Michigan Administrative Code. This standard may be inspected at or purchased from the ~~Safety Standards Division,~~ Michigan Department of **Licensing and Regulatory Affairs, MIOSHA Standards Section** ~~Consumer and Industry Services,~~ 7150 Harris Drive, Box 30643, Lansing, Michigan 48909.