



Ladders

Falls are the most common cause of worker injury associated with ladder use. Falls are mostly caused by the: (1) use of faulty ladders; (2) improper set-up of a ladder; or (3) incorrect use of ladders.

Except where either permanent or temporary stairways or suitable ramps or runways are provided, ladders shall be used to give safe access to all elevations. **1675(a)**

A. General requirements for ladders:

1. Portable ladders shall comply with T8 CCR **3276**, **1675(b)**.
2. Design and construction of portable ladders shall comply with T8 CCR **3276(c)**.
3. Fixed ladders shall comply with T8 CCR **3277** and **3278**, **1675(c)**.
4. Wood parts of fixed ladders shall meet the requirements of T8 CCR **3276(c)**, **3277(c)(5)**.
5. Extension ladders shall comply with **3276(e)(16)**.
6. Portable metal ladders shall comply with **3276**.
7. Portable wood ladders shall comply with **3276**.
8. Portable reinforced plastic ladders shall comply with **3276(c),(e)**.
9. Single-rail ladders shall not be used.

B. Portable ladders are generally designed for one-person use to meet the requirements of the person, the task, and the environment. When selecting a ladder for use, consider the ladder length, height, the working load, the duty rating, worker position, and how often the ladder is used. **3276(d)(1)(B)**

C. Double-cleat ladders are required for two-way traffic or when 25 or more employees are using a ladder. Double-cleat ladders shall not exceed 24 ft. in length. **1629(c)**

D. Maximum lengths of portable ladders shall not exceed the following: **3276(e)(16)(D)**

Ladder Type	Maximum Length (Feet)
Step ladder	20
Two-section extension ladder (wood)	60
Two-section extension ladder (metal)	48
Three-section extension ladder (metal)	60



Two-section extension ladder (reinforced plastic)	72
Painter's step ladder	12
Cleat ladder	30
Single ladder	30

- E. Minimum overlap in two section portable extension ladders shall not be less than the following: **3276(e)(16)(E)**

Ladder Size (Feet)	Minimum Overlap (Inches)
Up to and including 32	36
Over 32, up to and including 36	46
Over 36, up to and including 48	58
Over 48, up to and including 60	70

- F. Portable ladders shall be used according to the following duty classifications: **3276(d)(2)**

Duty Rating	Ladder Type	Working Load (Pounds)
Special Duty	IAA	375
Extra Heavy-Duty	IA	300
Heavy-Duty	I	250
Medium-Duty	II	225
Light-Duty	III	200

- G. All portable ladders used in outdoor advertising structures shall be at least Type I, Type IA or Type IAA as designed and constructed in accordance with T8 CCR **3276, 3413(a)**.

- H. Job-built ladders must meet the following requirements:

1. Job-built ladders must safely support the intended load. **1676(a)**
2. Cleats must be made from clear, straight-grained lumber and must be uniformly spaced 12 in. apart vertically. **1676(c)**
3. Cleats must be nailed at each end with three 10d nails or the equivalent. **1676(j)**
4. Cleats must be blocked or notched into the side rails. **1676(j)**
5. The width of single-cleat ladders shall be 15 in. to 20 in. **1676(f)**
6. Rails must be made from select Douglas Fir without knots (or the equivalent). **1676(b)**
7. Rail splicing is permitted only when there is no loss of strength to the rail. **1676(b)**
8. Single-cleat ladders must not exceed 30 ft. in length. **1676(e)**



9. Double-cleat ladders must not exceed 24 ft. in length. **1676(d)**

I. Portable Ladders

1. Inspection and maintenance requirements are below:
 - a. Ladders shall be inspected frequently by a Qualified Person for visible defects and after any occurrence that could affect their safe use. **3276(e)(2)**
 - b. Ladders shall be maintained in good condition at all times. **3276(e)(2)**
 - c. Metal ladders shall not be exposed to acid or alkali materials that are capable of corroding the ladder and reducing the ladder's strength, unless recommended otherwise. **3276(e)(1)**
 - d. Remove ladders that have developed defects such as broken or missing steps, rungs, cleats, safety feet, side rails, or other defects from service, and tag or mark them "Dangerous, Do Not Use". **3276(e)(3)**
 - e. All ladders shall be free of oil, grease, or slippery materials. Wood ladders shall not be painted with other than a transparent material. **3276(e)**
2. Prohibited uses of portable ladders are given below:
 - a. Ladders shall not be used as a brace, skid, guy, or gin pole, gang-way, or for uses they were not intended, unless recommended by the manufacturer. **3276(e)(16)**
 - b. Do not place planks on the top cap. **3276(e)(16)(B)**
 - c. Step ladders shall not be used as single ladders or in the partially closed position. **3276(e)(16)(C)**
3. To safely use portable ladders employees must also follow the requirements noted below:
 - a. All portable ladders used for window washing shall be equipped with nonslip devices. Middle and top sections shall not be used as bottom sections unless equipped with nonslip bases. **3287(b)(2)**
 - b. Portable ladders shall not be overloaded when used. **3276(e)(6)**
 - c. The base of ladders shall be placed on a secure and level footing. Ladders shall not be placed on unstable bases. **3276(e)(7)**



- d. Ladders shall not be used on ice, snow, or slippery surfaces unless slippage is prevented. **3276(e)(7)**
- e. The top of a non self-supporting ladder shall be placed with two rails supported equally, unless a single support attachment is provided and used. **3276(e)(8)**
- f. Non self-supporting ladders shall, where possible, be used so that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder. **3276(e)(9)**
- g. The ladder shall be so placed as to prevent slipping, or it shall be tied, blocked, held, or otherwise secured to prevent slipping. **3276(e)(9)**
- h. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds unless designed for such use. **3276(e)(9)**
- i. When two or more separate ladders are used to reach an elevated work area, the ladders shall be offset with a platform or landing between the ladders (see exceptions). **3276(e)(10)**
- j. Extend ladder side rails to at least 3 ft. above the landing unless handholds are provided. **1629(c)(3), 3276(e)(11)**
- k. Do not tie ladders together to provide longer sections unless the ladders are designed for such use and equipped with the necessary hardware fittings. **3276(e)(12)**
- l. Extension ladders shall be erected so that the top section is above and resting on the bottom section with the rung locks engaged. **3276(e)(13)**
- m. Do not place ladders in passageways, doorways, driveways, or any location where they may be displaced unless protected by barricades or guards. **3276(e)(14)**
- n. Climb or work with the body near the middle of the step or rung and do not overreach from this position. To avoid overreaching, the employee shall descend and reposition the ladder. **3276(e)(15)(A)**
- o. Employees shall be prohibited from carrying equipment or materials which prevent the safe use of ladders. **3276(e)(15)(B)**
- p. Face the ladder while climbing and descending, and maintain contact with the ladder at three-points at all times. **3276(e)(15)(C)**



- q. Do not stand and work on the top three rungs of a single or extension ladders. **3276(e)(15)(D)**
- r. Employees shall not sit, kneel, step or stand on the pail shelf, topcap, or the step below the topcap of a stepladder. **3276(e)(15)(E)**

Exception: Employees may stand on the step below the topcap provided it is located 18 in. under the topcap.

- s. Do not use the X-bracing on the rear section of a stepladder for climbing unless the ladder is so designed and provided with steps for climbing on both front and rear sections. **3276(e)(15)(F)**
- t. Ladders shall not be moved or extended while occupied, unless designed and recommended by the manufacturer. **3276(e)(15)(G)**
- u. Portable rung ladders with reinforced rails shall be used only with the metal reinforcement on the underside. **3276(e)(17)**
- v. Non-conductive ladders shall be used in locations where the ladder or user may contact unprotected energized electrical conductors or equipment. Conductive ladders shall be legibly marked with signs reading “CAUTION -- DO NOT USE AROUND ELECTRICAL EQUIPMENT” or equivalent. **3276(e)(18)**
- w. The area around the top and bottom of a ladder shall be kept clear. **3276(e)(19)**

J. Fixed Ladders

To safely use fixed ladders, employees must also follow the requirements noted below:

- 1. Do not carry equipment or materials which prevent the safe use of ladders. **3278(a)**
- 2. Fixed ladders shall be inspected before use. Any ladder determined to be unsafe shall not be used. **1511(b)**
- 3. Face the ladder when ascending and descending. **3278(a)**
- 4. Always using both hands when climbing up or down the ladder. **3278(a)**
- 5. Do not use single-rail ladders. **3278(a)**

- K. The following are training requirements for employees using portable ladders: **3276(f)**



1. Employees shall be trained in the safe use of ladders before using them.
2. Supervisors of employees who routinely use ladders shall also be trained in ladder safety training.
3. The training may be provided as part of the employer's IIP Program (T8 CCR **3203**).
4. The training shall address the following topics, unless the employer demonstrates that a topic is not applicable to the workplace:
 - a. Importance of using ladders safely including injuries due to falls from ladders. **3276(f)(1)**
 - b. Selection of ladders, including types, proper length, maximum working loads, and electrical hazards. **3276(f)(2)**
 - c. Maintenance, inspection, and removal of damaged ladders from service. **3276(f)(3)**
 - d. Erecting ladders including footing support, top support, securing, and angle of inclination. **3276(f)(4)**
 - e. Climbing and working on ladders including user's position and points of contact with the ladder. **3276(f)(5)**
 - f. Causes of falls, including haste, sudden movement, lack of attention, footwear, and user's physical condition. **3276(f)(6)**
 - g. Prohibited uses including climbing on cross bracing, uses other than designed, exceeding maximum lengths, and not meeting minimum overlap requirements. **3276(f)(7)**
- L. It is a good idea to make sure that the stepladder is properly set up and that the spreader is in the locked position before use.