

**OCCUPATIONAL SAFETY
AND HEALTH STANDARDS BOARD**

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Date: May 19, 2026

From: Maryrose Chan, Senior Safety Engineer

Re: **Stakeholder Comment Request**
General Industry Safety Orders
Article 4. Access, Workspace, and Work Areas
Comment Period: May 19, 2026, to June 19, 2026

The Occupational Safety and Health Standards Board (OSHSB) is requesting input from stakeholders on draft proposed regulatory language.

This preliminary rulemaking activity was prompted by the Federal Walking-Working Surfaces standard, which was published in the Federal Register on November 18, 2016. OSHSB is informally seeking comments from the regulated public prior to commencing the formal rulemaking process. Comments received will help guide OSHSB's next steps.

A copy of proposed amendments to title 8 sections is provided:

- §3270. Access General
- §3272. Aisles, Walkways, and Crawlways
- §3273. Working Area
- §3274. Access to Valves and Controls
- §3275. Scaffolds
- §3276. Portable Ladders
- §3278. Use of Fixed Ladders
- §3279. Step Bolts (Pole Steps), Manhole Steps and Underground Vault Steps
- §3280. Individual Rung Ladders

Please note that proposed rules regarding fixed ladders are not included in the above list because an [advisory committee meeting](#) was held on February 12, 2020.

Please send your comments to mchan@dir.ca.gov by June 19, 2026, at 5:00 PM.

Thank you for participating in the rulemaking process.

EXPRESS TERMS

CALIFORNIA CODE OF REGULATIONS TITLE 8. INDUSTRIAL RELATIONS DIVISION 1. DEPARTMENT OF INDUSTRIAL RELATIONS

This document uses strikeout and underline to specify text changes. If using assistive technology, please adjust your settings to recognize underline, strikeout and ellipsis.

Legend:

Text in single underline is proposed new text.

Text in single strikeout is deleted text.

***** means there is existing text in the section that is not being amended nor repealed, therefore, it is not being included.

Text in brackets [] is supplementary information, not part of the regulatory or proposed text.

ARTICLE 4. ACCESS, WORK SPACE, AND WORK AREAS

Amend section 3270 as follows:

§3270. Access General.

(a) Access and egress to every permanent elevated work location shall be by means of either fixed ladders or permanent ramps or stairways. [29 C.F.R. § 1910.22(c)]

~~NOTE:~~ For ramp requirements see ~~S~~section 3232 of these Orders. For stairway requirements see ~~S~~section 3234 of these Orders. For fixed ladder requirements see ~~S~~section 3277 of these Orders.

(b) Every permanent elevated work location, where there is machinery, equipment, or material which is customarily operated or frequently repaired, serviced, adjusted, or otherwise handled and every other permanent-work location, shall be provided with a safe platform or maintenance runway.

(c) Access shall be provided to all equipment and appliances except those located on roofs of dwellings and their accessory buildings.

~~NOTE:~~ For mobile vehicles and equipment, see ~~S~~section 3210(b), Exception EXCEPTION No. 9.

~~Exceptions~~ EXCEPTIONS to subsection (c):

(~~1~~) 1. Access to elevator machinery rooms shall comply with the Elevator Safety Orders.

~~(2)~~2. This Article subsection does not apply to overhead electric and communication systems, overhead line shaft bearings and clutches, valves, or similar controls which are infrequently serviced or operated from safely hooked or otherwise stable or fixed ladders or to cranes covered more-specifically elsewhere in these Orders.

(d) Every permanent pit, sump, or other sunken location 30 inches or more in depth in, or from which, machinery, equipment, or materials are customarily operated or frequently repaired, serviced, adjusted, or otherwise handled shall be provided with a safe means of access. Such means of access shall be provided by means of either portable or fixed ladders or permanent stairways. ~~NOTE:~~ Access to electrical equipment shall not be less than that required by the Electrical Safety Orders, Title 8, CCR.

(e) The employer shall provide and ensure each employee uses a safe means of access and egress to and from a temporary work location. [29 C.F.R. § 1910.22(c), Cal. Code Regs, tit. 8, § 3270(a); addresses permanent work location but not temporary work location]

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3272 as follows:

§3272. Aisles, Walkways, and Crawlways.

(a) Crawlways shall not be less than 24 inches in width and as high as the opening or 30 inches, whichever is greater.

(c) ~~Permanent aisles, ladders, stairways, and walkways~~ Walking-working surfaces shall be kept reasonably clear and in good repair. Where, due to lack of proper definition, such aisles or walkways become hazardous, they shall be clearly defined by painted lines, curbing, or other method of marking.

(f) Where normal clearances present a hazard with the use of industrial vehicles, clearance limit warning signs shall be provided. ~~(Title 24, Part 2, Section 2-3313(i))~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(c), Health and Safety Code.

Amend section 3273 as follows:

§3273. Working Area.

~~(a) Permanent floors and platforms~~ All places of employment, passageways, storerooms, service rooms, and walking-working surfaces shall be free of dangerous projections or obstructions, maintained in good repair, and reasonably free of oil, grease, or water. Where the type of operation necessitates working on slippery floors, such surfaces shall be protected against slipping by using mats, grates, cleats, or other methods which provide equivalent protection. Where wet processes are used drainage shall be maintained and false floors, platforms, mats, or other dry standing places provided. [29 C.F.R. § 1910.22(a)(1)-(2)]

~~(b) Permanent roadways, walkways,~~ Walking-working surfaces and material storage areas in yards shall be maintained free of dangerous depressions, obstructions, and debris. [29 C.F.R. § 1910.22(a)(3)]

~~(e) Protection from falling objects:~~ [This language moved to section 3210.2.]

~~(1) Where there is employee exposure below an elevated work area, one or more of the following safeguards shall be implemented:~~

~~(A) Provide toeboards, screens, or guardrail systems in accordance with Article 2 of these Orders to prevent objects from falling from higher levels; or~~

~~(B) Provide a canopy structure to protect employees from falling objects; or,~~

~~(C) Provide a physical barrier such as, but not limited to, fencing, barricades or other equivalent means or methods, to prevent entry into the area to which objects could fall.~~

~~(2) Where the type of process or operation, exclusive of repair and maintenance, is such that there are hazards to employees from materials falling through platform or runway openings, the openings shall be limited to a size that prevents materials falling through the openings. \~~

~~(3) Where platform or runway gratings are used as work areas during repair or maintenance, there shall be provided at such areas suitable safeguards to prevent tools or materials falling on employees below. Such safeguards may be netting suspended below the work area, canvas, planking on the surface of the grating, or barricaded or sheltered areas below the work area.~~

~~(f) Lowering objects:~~ [Relocated to Cal. Code Regs., tit. 8, § 3212.]

~~(1) Where there is employee exposure below an elevated work area, all objects, including materials, equipment and tools shall be lowered in a controlled manner, such as but not limited to using enclosed chutes, material handling equipment, or hand lines; or,~~

~~(2) When controlled lowering is not practical, or would subject employees to a greater risk of injury, protection from falling objects shall be provided by the use of effective physical barriers, such as but not limited to canopies, fencing, barricades, or barrier tape when the barrier tape is attended by a spotter who is authorized to effectively restrict entry into the area and who is on the same level as the area of the exposure, or other equivalent means or methods.~~

~~(A) Signs in accordance with Section 3340 shall be posted at the perimeter of the affected work area to warn employees of the hazard.~~

~~(g)~~(e) Where it is necessary to lubricate or adjust prime movers, machines, or equipment, which extends below the floor line, sufficient work space shall be provided for the safe performance of the work.

~~(h)~~(f) Permanently installed prime movers, machines, and equipment shall be located and guarded so that transported material does not strike either the moving parts of machines or the employees at their operating positions.

~~(i)~~(g) Machines or equipment shall be located and guarded so that the product, waste stock, or material being worked or processed does not endanger employees.

~~(j)~~(h) Where machinery or equipment is installed in a pit and there are shear hazards between the pit edges and parts of the machine or equipment, skirt guards shall be installed to remove such hazards, or such other device used to provide equivalent protection.

~~(k)~~(i) Every shop transfer car and equipment carriage operating on rails, together with their loads, shall clear stationary machines, equipment, structures, or piled or stacked material, by at least 24 inches.

~~(l)~~(j) Ditches, pits, excavations and surfaces in poor repair shall be guarded by readily visible barricades, rails or other equally effective means.

~~(m)~~(k) Existing installations having impaired clearances shall be well posted to indicate the hazards due to such impaired clearance, and shall be guarded by guardrails, barricades, or other means.

EXCEPTIONS:

1. Inaccessible monorails, conveyors, and similar equipment operating on rails.

2. Transfer cars or carriages where the process is such that a minimum of clearance is necessary for safe operations.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3274 as follows:

§3274. Access to Valves and Controls.

(a) Where pipe valves require daily manipulation and are so located that they cannot be reached or operated from the floor, a permanent platform or other safe means of operation shall be provided.

~~(Title 24, Part 2, Section 2-3328(a))~~

(b) Valves or other controls shall not be so located that their manipulation exposes the employee to hazards of dangerous moving parts of prime movers, machines, or transmission equipment.

~~(Title 24, Part 2, Section 2-3328(b))~~

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code; and Section 18943(c), Health and Safety Code.

Amend section 3275 as follows:

§3275. Scaffolds.

Scaffolds shall be of construction at least equivalent to that required by articles 21-23 of the Construction Safety Orders (sections 1635.1-1667 of these regulations) and shall be suitable for the work to be performed thereon.

For Permanent Suspended Scaffolds see section 3291 Special Design Considerations--
Permanent Roof Top Installations.

For Powered Platforms and Equipment for Building Maintenance see Article 6 of the
General Industry Safety Orders.

For Mobile Scaffolds (Towers) see Article 23 of the General Industry Safety Orders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3276 as follows [to add the following definitions within the existing definitions in alphabetical order]:

§3276. Portable Ladders.

(a) Scope. This section is intended to prescribe rules and establish minimum requirements for the design, construction, selection, care, and use of all self-supporting and non-self-supporting portable ladders, in order to ~~insure~~ ensure safety under normal conditions of usage. This section does not apply to ladder type step stools or other types of step stools except for the definition of "step stool" and "step stool (ladder type)" in subsection (b) and the design and construction requirements of subsection (c)(5). [29 C.F.R. § 1910.23(a)](b) Definitions.]

Combination Ladder. A portable ladder that can be used as a stepladder, extension ladder, trestle ladder, or stairway ladder. The components of a combination ladder also may be used separately as a single ladder. [29 C.F.R. § 1910.21(b)]

Extension Ladder. [No change in text]

~~Ladders. A ladder is an appliance usually consisting of two side rails joined at regular intervals by crosspieces called steps, rungs, or cleats, on which a person may step in ascending or descending. See section 3207.~~

Portable Ladder. A ladder that can readily be moved or carried, and usually consists of side rails joined at intervals by steps, rungs, or cleats. [29 C.F.R. § 1910.21(b)]

Sectional Ladder [No change in text]

Step Ladder. [No change in text]

Step Stool. A self-supporting, portable ladder that has flat steps and side rails. Step stools include only those ladders that have a fixed height, do not have a pail shelf, and do not exceed 32 inches in overall height to the top cap, although side rails may extend above the top cap. A stepstool is designed so an employee can climb and stand on all of the steps including the top cap. [29 C.F.R. § 1910.21(b)]

Step sStool (Ladder tType). A self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in ~~length~~ overall height, with flat steps and without a pail shelf, designed so that the ladder top cap as well as all steps can be climbed on. The side rails may extend above the top_ cap but such extension is not considered as part of the step stool ~~length~~ height. [29 C.F.R. § 1910.21(b)]

Trestle Ladder. [No change in text]

Trolley Ladder. [No change in text]

(c) Design and Construction.

(1) Portable wood ladders placed in service after January 7, 2011, shall meet the design and construction requirements of ANSI A14.1-2007, American National Standard for Ladders--Wood Safety Requirements, which is hereby incorporated by reference. Portable wood ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of the ANSI A14.1 standard in effect at the time such ladders were placed in service. [29 C.F.R. § 1910.23(b)]

EXCEPTION: Portable job-made cleat ladders that are designed and constructed in accordance with the requirements of §section 1676 of the Construction Safety Orders.

(2) Portable metal ladders placed in service after January 7, 2011, shall meet the design and construction requirements of ANSI A14.2-2007, American National Standard for Ladders--Portable Metal--Safety Requirements, which is hereby incorporated by reference. Portable metal ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of either the ANSI A14.2 standard or the ANSI A14.10 standard, American National Standard for Ladders--Portable Special Duty Ladders, in effect at the time such ladders were placed in service. [29 C.F.R. § 1910.23(b)]

(3) Portable reinforced plastic ladders placed in service after January 7, 2011, shall meet the design and construction requirements of ANSI A14.5-2007, American National Standard for Ladders--Portable Reinforced Plastic--Safety Requirements, which is hereby incorporated by reference. Portable reinforced plastic ladders placed in service on or before January 7, 2011, shall meet the design and construction requirements of either the ANSI A14.5 standard or the ANSI A14.10 standard in effect at the time such ladders were placed in service. [29 C.F.R. § 1910.23(b)]

(4) Portable special purpose ladders that are not covered by one of the ANSI A14 standards referenced in this section shall be designed and constructed in accordance with sound engineering principles and approved per §§section 3206.

(5) Step stools and Ladder type step stools shall be designed and constructed such that the rungs, cleats, and steps are not less than 8 inches apart, or more than 12 inches apart, as measured between center lines of the rungs, cleats, and steps.

(A) Step stools shall have a minimum clear width of 10.5 inches. [29 C.F.R. § 1910.23(b)(4)(iv)]

(e) Care, Use, Inspection and Maintenance of Ladders.

(2) Inspection. Ladders shall be inspected by a qualified person for visible defects ~~frequently before initial use in each work shift, and more frequently as necessary, to~~ identify any visible defects that could cause employee injury and after any occurrence that could affect their safe use. [29 C.F.R. § 1910.23 (b)(9)]

(4) Cleaning. Ladders shall be free of oil, grease, or slippery materials.

(5) Surface Coatings. Wood ladders shall not be coated with any material that is not transparent. [29 C.F.R. § 1910.23 (b)(5)]

~~Wood ladders shall not be painted with other than a transparent material.~~

(9) Angle of Inclination. Non-self-supporting ladders such as single ladders and extension ladders shall, where possible, be used at such a pitch that the horizontal distance from the top support to the foot of the ladder is one-quarter of the working length of the ladder (the length along the ladder between the foot and the top support). The ladder shall be so placed as to prevent slipping, or it shall be tied, blocked, held, or otherwise secured to prevent slipping. Ladders shall not be used in a horizontal position as platforms, runways, or scaffolds unless designed for such use.

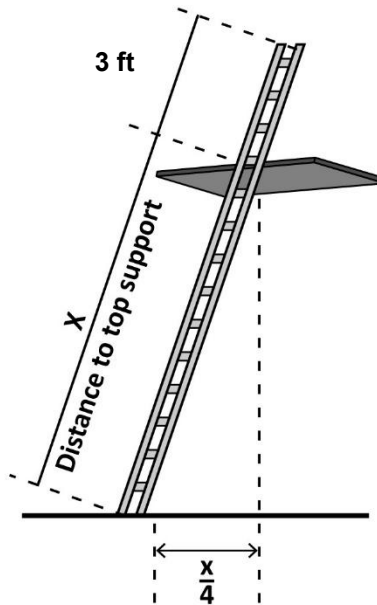


Figure 3276-1: Portable Ladder Setup

[Illustration of subsection(e)(9), the angle of inclination when a ladder is leaned up next to a wall or structure]

(11) Access to Landings. When portable ladders are used for access to an upper landing surface, the side rails shall extend not less than 36 inches above the upper landing surface to which the ladder is used to gain access; or when such an extension is not possible, then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grab-rail, shall be provided to assist employees in mounting and dismounting the ladder. In no case shall the extension be such that ladder deflection under a load would, by itself, cause the ladder to slip off its support. [29 C.F.R. § 1910.23(c)(11)]

EXCEPTION to subsection (e)(11)

~~No. 1: 1. A grasping device such as a grab-rail is not required where the employee is protected by personal fall protection system in accordance with Article 24 of the Construction Safety Orders, Article 36 of the High Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders. Operations or conditions not specifically covered by Article 36 of the~~

~~High Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders. section 3210.1 of the General Industry Safety Orders. [Section 3210.1 is a proposed new section in article 2.]~~

~~EXCEPTION NO. 2: 2.~~ The provisions of this subsection do not apply to emergency rescue and emergency rescue training operations where it is not practical to extend a portable ladder 36 inches or more above the landing surface.

(15) Climbing and Working on Ladders.

(A) The employee shall climb or work with the body near the middle of the step or rung and shall not overreach from this position. When necessary to avoid overreaching, the employee shall descend and reposition the ladder. When it is not practical to work with the body near the middle of the step or rung, the ladder shall be secured to the top support, and the employee shall be protected by a personal fall protection system in accordance with ~~Article 36 of the High Voltage Electrical Safety Orders, Article 24 of the Construction Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders.~~ Operations or conditions not specifically covered by ~~Article 36 of the High Voltage Electrical Safety Orders, Article 12 of the General Industry Safety Orders, or Article 1 of the Telecommunication Safety Orders~~ shall comply with the fall protection provisions of Article 24 of the Construction Safety Orders. section 3210.1 of the General Industry Safety Orders.

(16) Prohibited Uses.

(D) Ladders that exceed the following maximum lengths shall not be used:

<i>Ladder Type</i>	<i>Maximum Length (Feet)</i>
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 <u>Maximum Length (Feet)</u>

• <u>Special duty - Type IAA</u>	<u>32</u>
• <u>Extra heavy-duty - Type IA</u>	<u>60</u>
• <u>Heavy-duty - Type I</u>	<u>60</u>
• <u>Medium-duty - Type II</u>	<u>48</u>
• <u>Light-duty - Type III</u>	<u>32</u>
<u>Three-section extension ladder (reinforced plastic)</u>	<u>Maximum Length (Feet)</u>
• <u>Special duty - Type IAA</u>	<u>36</u>
• <u>Extra heavy-duty - Type IA</u>	<u>72</u>
• <u>Heavy-duty - Type I</u>	<u>72</u>
• <u>Medium-duty - Type II</u>	<u>60</u>
Trestle ladder	20
Extension trestle ladder base section	20
Extension trestle ladder extension section	20
Painter's step ladder	12
Mason's ladder	40
Cleat ladder	30
Trolley ladder or side-rolling ladder	20
Single ladder	30

(E) ~~Two section~~ Metal and reinforced plastic extension ladders shall not be used when the overlap between the sections is less than the following minimum overlap:

<u>Metal and Reinforced Plastic Extension Ladders</u>	<u>Minimum Overlap (Inches)</u>	<u>Minimum Overlap (Inches)</u>
<u>Ladder Size (Feet)</u>	<u>Two-Section Ladders</u>	<u>Three-Section Ladders</u>

Up to and including 32	36	<u>33</u>
Over 32, up to and including 36	46	<u>45</u>
Over 36, up to and including 48	58	<u>57</u>
Over 48, up to and including 60	70	<u>69</u>

(17) Two-section wood extension ladders shall not be used when the overlap between the sections is less than the following minimum overlap:

<u>Ladder Size (Feet)</u>	<u>Minimum Overlap (Inches)</u>
<u>Up to and including 32</u>	<u>34</u>
<u>Over 32, up to and including 36</u>	<u>46</u>
<u>Over 36, up to and including 48</u>	<u>58</u>
<u>Over 48, up to and including 60</u>	<u>70</u>

(18) Wood extension trestle ladders shall not be used when the overlap between the sections is less than the following minimum overlap:

<u>Size of the Base Section (Feet)</u>	<u>Minimum Overlap (Inches)</u>
<u>6 up to and including 8</u>	<u>33</u>
<u>Over 8, up to and including 12</u>	<u>45</u>
<u>Over 12, up to and including 16</u>	<u>57</u>
<u>Over 16, up to and including 20</u>	<u>69</u>

~~(17)~~(19) Portable rung ladders with reinforced rails shall be used only with the metal reinforcement on the under side.

~~(18)~~(20) Electrical Hazards. 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 wording.

NOTE: Additional requirements for working in proximity to energized electrical equipment can be found in Article 37 of the Electrical Safety Orders.

~~(19)~~(21) The area around the top and bottom of a ladder shall be kept clear.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3278 as follows:

§3278. Use of Fixed Ladders.

(a) The employer shall ensure that fixed ladders are used only for the purpose for which they are designed. [29 C.F.R. § 1910.23(b)(8)]

~~(a)~~(b) Employees shall:

- (1) be prohibited from carrying equipment or materials which prevent the safe use of ladders;
- (2) be required to face the ladder when ascending and descending;
- (3) always use both hands when climbing up or down the ladder; and
- (4) be prohibited from using single-rail ladders.

(c) Any ladder with structural or other defects is immediately tagged "Dangerous: Do Not Use."

~~(b)~~(d) As used in this section, "single-rail ladders" means a ladder with rungs, cleats, or steps mounted on a single-rail instead of the normal two rails used on most other ladders.

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3279 as follows:

§3279. ~~Portable Metal Ladders. [Repealed]~~ Step Bolts (Pole Steps), Manhole Steps, and Underground Vault Steps.

Step Bolts (Pole Steps) and Manhole Steps are not ladders. Fixed ladders shall comply with section 3277.

(a) Definitions.

Manhole and Underground Vault Steps. Steps that are individually attached to, or set into, the wall of a manhole or vault structure. [29 C.F.R. § 1910.21(b)]

Step Bolt (Pole Step). A permanent or detachable round or flat bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing and designed to prevent the foot from sliding off while ascending or descending. [29 C.F.R. § 1910.21(b)]

(b) Step Bolts.

(1) Each step bolt installed on or after **[60 days after OAL effective date]**, in an environment where corrosion may occur shall be constructed of, or coated with, material that protects against corrosion. [29 C.F.R. § 1910.24(a)(1)]

(2) Each step bolt shall be designed, constructed, and maintained to prevent the employee's foot from slipping off the end of the step bolt. [29 C.F.R. § 1910.24(a)(2)]

(3) Step bolts shall be uniformly spaced at a vertical distance of not less than 12 inches and not more than 18 inches apart, measured center to center (see Figure 3279-1). The spacing from the entry and exit surface to the first step bolt may differ from the spacing between the other step bolts. [29 C.F.R. § 1910.24(a)(3)]

(4) Each step bolt shall have a minimum clear width of 4.5 inches. [29 C.F.R. § 1910.24(a)(4)]

(5) The minimum perpendicular distance between the centerline of each step bolt to the nearest permanent object in back of the step bolt shall be 7 inches. When the employer demonstrates that an obstruction cannot be avoided, the distance shall be at least 4.5 inches. [29 C.F.R. § 1910.24(a)(5)]

(6) Each step bolt installed before **[60 days after OAL effective date]**, shall be capable of supporting its maximum intended load. [29 C.F.R. § 1910.24(a)(6)]

(7) Each step bolt installed on or after [60 days after OAL effective date], shall be capable of supporting at least four times its maximum intended load. [29 C.F.R. § 1910.24(a)(7)]

(8) Each step bolt shall be inspected at the start of the work shift and maintained regularly and as necessary, in a safe condition. Hazardous conditions shall be corrected or repaired before an employee uses the step bolt again. If the correction or repair cannot be made immediately the hazard shall be guarded to prevent employees from using the step bolt until the hazard is corrected or repaired. When any correction or repair involves the structural integrity of the step bolt a qualified person shall perform or supervise the correction or repair. [29 C.F.R. §§ 1910.24(a)(8) and 1910.22(d)(2)]

(9) Any step bolt that is bent more than 15 degrees from the perpendicular in any direction shall be removed and replaced with a step bolt that meets the requirements of this section before an employee uses it. [29 C.F.R. § 1910.24(a)(9)]

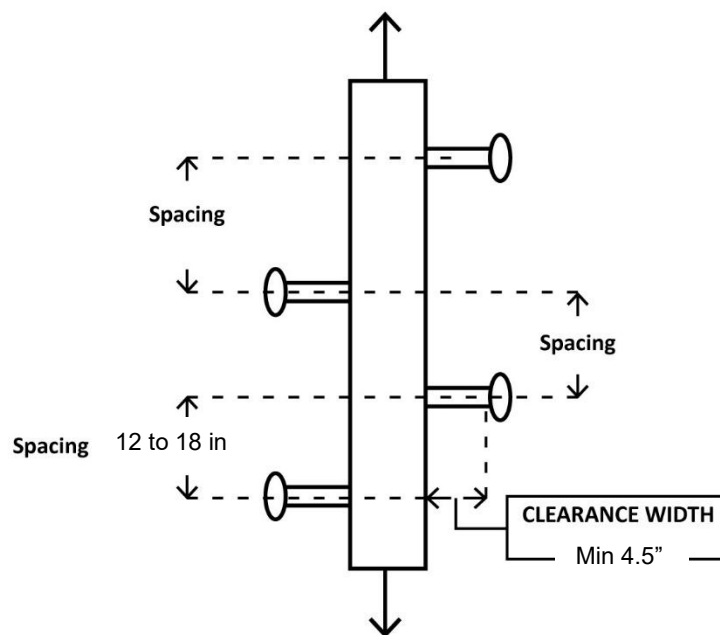


Figure 3279-1: Step Bolts

[Image of a step bolt depicting the required spacing and clearance in subsections (b)(3) and (b)(4). See subsection (a) for a definition of step bolts.]

(c) Manhole and Underground Vault Steps.

(1) All steps shall have a minimum diameter of 3/4 inch. [29 C.F.R. § 3277(d)(1)]

(2) The employer shall ensure that each step is capable of supporting its maximum intended load. [29 C.F.R. § 1910.24(b)(1)]

(3) Embedment. Individual rungs of steps installed in manholes and underground vaults having a wall thickness which will not permit at least 6 inches of embedment shall have anchoring devices that will provide the following minimum design load requirements: [29 C.F.R. § 3277(d)(11)]

(A) The minimum design live load shall be a single concentrated load of 300 pounds. [29 C.F.R. § 3277(d)(11)(A)]

(B) Steps or rungs shall be embedded in the wall a minimum distance of 3 inches. [Cal. Code Regs., tit. 8, § 3277(d)(11)(B), ASTM C478 16.4.2]

(C) Steps embedded in concrete, which serve as access to pits and to other areas under floors, are frequently located in an atmosphere that causes corrosion and rusting. To increase rung life in such atmosphere, steps shall have a minimum diameter of 1 inch or shall be constructed of, painted with, or otherwise treated to resist corrosion and rusting. [29 C.F.R. § 1910.24(b)(2)(ii), Cal. Code Regs., tit. 8, § 3277(e)(1)]

(4) Clear width of rungs or cleats shall not be less than 14 inches. [29 C.F.R. § 1910.23(b)(4)(ii), Cal. Code Regs., tit. 8, § 3277(d)(3) Exception]

(5) Step spacing shall not exceed 16 inches between the top surfaces of rungs and shall be uniformly spaced. [Exception to Cal. Code Regs., tit. 8, § 3277(d)(2), ASTM C478 16.14.1]

(6) The clearance from the center line of steps to the nearest permanent object in back shall not be less than 5 inches. [29 C.F.R. § 1910.24(b)(2)(v), Exception in Cal. Code Regs., tit. 8, § 3277(f)(4), Figure 3279-1]

(7) Steps shall be -designed so that the climber's foot cannot slide off the end of a rung.

(8) The employer shall ensure that each step installed on or after **[60 days after OAL effective date]**, has a corrugated, knurled, dimpled, or other surface that minimizes the possibility of an employee slipping. [29 C.F.R. § 1910.24(b)(2)(i)]

(9) Steps shall be free of splinters, sharp edges, burrs, or projections which may be a hazard. [29 C.F.R. § 1910.23(b)(7), Cal. Code Regs., tit. 8, § 3277(d)(4)]

(10) Electrolytic Action. Adequate means shall be employed to protect dissimilar metals from electrolytic action when such metals are joined. [Cal. Code Regs., tit. 8, § 3277(d)(9), ASTM C478C16.3.2.1]

(11) Welding. All welding shall be in accordance with procedures of the American Welding Society, or equivalent. [Cal. Code Regs., tit. 8, § 3277(d)(10)]

(12) Steps installed in the walls of conical top sections of manholes and underground vaults shall be allowed to exceed a pitch of 90 degrees for a distance of not more than 2 rungs or steps in the conical top sections. The deviation from 90 degrees shall not exceed 6 inches. (See Figure 3279-2.) [Exception to Cal. Code Regs., tit. 8, § 3277(h)(4)]

(13) The employer shall ensure that each step is inspected at the start of the work shift and maintained regularly and as necessary. Hazardous conditions shall be corrected or repaired before an employee uses the step again. If the correction or repair cannot be made immediately, the hazard shall be guarded to prevent employees from using the step until the hazard is corrected or repaired. When any correction or repair involves the structural integrity of the step, a qualified person shall perform or supervise the correction or repair. [29 C.F.R. §§ 1910.24(b)(3) and 1910.22 (d)]

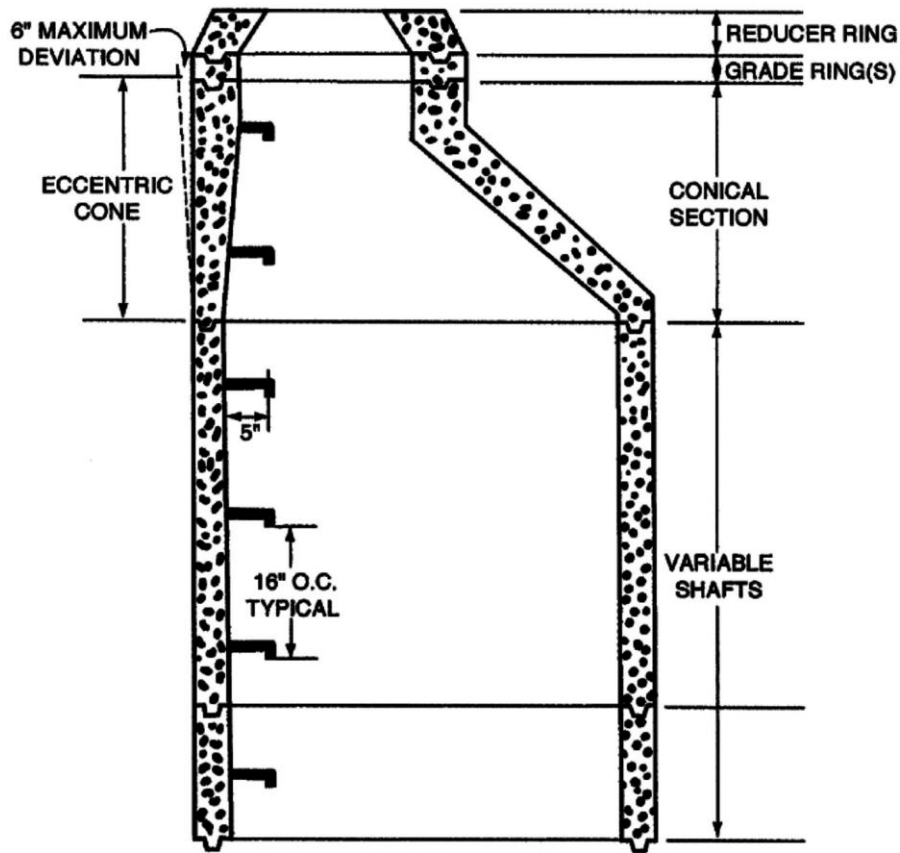


Fig. 13
Manholes and Underground Vaults

Figure 3279-2: Manholes and Underground Vaults

[Image of the manhole or underground vault with manhole steps. See subsection(a) for a definition of manhole steps. The image shows the required specifications in subsections (c)(5), (c)(6), and (c)(12).]

NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

Amend section 3280 as follows:

§3280. ~~Portable Reinforced Plastic Ladders. [Repealed]~~ Individual Rung Ladders.

(a) All steps shall have a minimum diameter of 3/4 inch. [Cal. Code Regs., tit. 8, § 3277(d)(1)]

(b) Step spacing shall not exceed 12 inches between the top surfaces of rungs and shall be uniformly spaced. [Figure 3277.1-1 Exception to Cal. Code Regs., tit. 8, § 3277(d)(2)]

(c) Clear width of rungs or cleats shall not be less than 16 inches. [Figure 3277.1-1 of Cal. Code Regs., tit. 8, § 3277.1, 29 C.F.R. § 1926.1053(a)(4)(i)]

(d) Embedment. Individual rungs of steps installed in manholes and underground vaults having a wall thickness which will not permit at least 6 inches of embedment shall have anchoring devices that will provide the following minimum design load requirements: [Cal. Code Regs., tit. 8, § 3277(d)(11)]

(A) The minimum design live load shall be a single concentrated load of 300 pounds. [Cal. Code Regs., tit. 8, § 3277(d)(11)(A)]

(B) Steps or rungs shall be embedded in the wall a minimum distance of 3 inches. [Cal. Code Regs., tit. 8, § 3277(d)(11)(B)]

(C) Steps embedded in concrete, which serve as access to pits and to other areas under floors, are frequently located in an atmosphere that causes corrosion and rusting. To increase rung life in such atmosphere, steps shall have a minimum diameter of 1 inch or shall be constructed of, painted with, or otherwise treated to resist corrosion and rusting. [29 C.F.R. § 1910.24(b)(2)(ii), Cal. Code Regs., tit. 8, § 3277(e)(1)]

(e) The clearance from the center line of steps to the nearest permanent object in back shall not be less than 7 inches. [Cal. Code Regs., tit. 8, § 3277(f)(4)]

(f) Steps shall be so-designed so that the climber's foot cannot slide off the end of a rung. A suggested design for metal steps is shown in Figure 3280-1. [Figure 4 of the current Cal. Code Regs., tit. 8, § 3277, 29 C.F.R. § 1910.23(d)(10), 29 C.F.R. § 1926.1053(a)(5)]

(g) Steps shall be free of splinters, sharp edges, burrs, or projections which may be a hazard. [Cal. Code Regs., tit. 8, § 3277(d)(4), 29 C.F.R. § 1910.23(b)(7)]

(h) Electrolytic Action. Adequate means shall be employed to protect dissimilar metals from electrolytic action when such metals are joined. [Cal. Code Regs., tit. 8, § 3277(d)(9)]

(i) Welding. All welding shall be in accordance with procedures of the American Welding Society, or equivalent. [Cal. Code Regs., tit. 8, § 3277(d)(10)]

(j) The employer shall ensure that each step is inspected at the start of the work shift and maintained regularly and as necessary. Hazardous conditions shall be corrected or repaired before an employee uses the step again. If the correction or repair cannot be made immediately, the hazard shall be guarded to prevent employees from using the step until the hazard is corrected or repaired. When any correction or repair involves the structural integrity of the step, a qualified person shall perform or supervise the correction or repair. [29 C.F.R. § 1910.24(b)(3) for manhole steps]

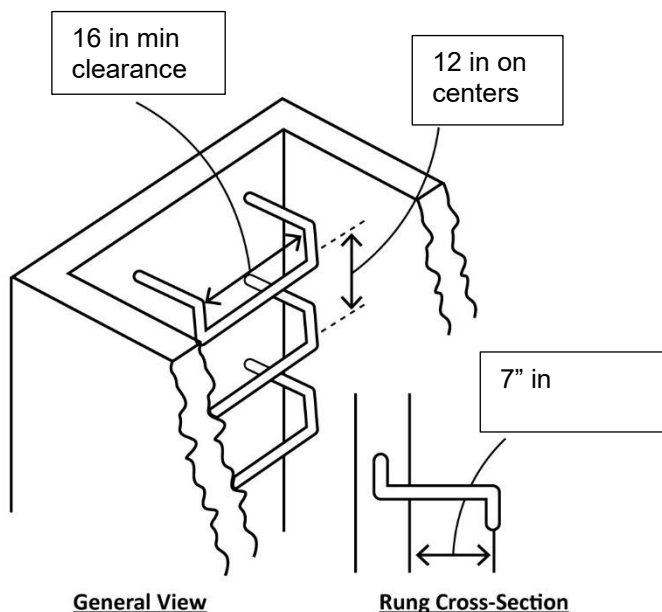


Figure 3280-1: Individual Rung Ladder

[Image depicting the required specifications of individual rung ladder inside a well. See section 3277 for definitions of individual rung ladder and well. The image shows the specifications detailed in subsections (b), (c), and (e).]