

**STANDARDS PRESENTATION  
TO  
CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH STANDARDS BOARD**

TITLE 8, DIVISION 1, CHAPTER 4

Subchapter 5. Electrical Safety Orders  
Group 2. High-Voltage Electrical Safety Orders  
Article 36. Work Procedures and Operating Procedures (Formerly Article 85)

Amend Section 2941 as follows:

§2941. Work on or in Proximity to Overhead High Voltage Lines.  
Overhead High Voltage Lines.

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(e) ~~Pole Steps.~~ Step Bolts (Pole Steps). Wood poles (such as poles equipped with risers, potheads, transformers, capacitors, switches where the switch is not operable from near ground level, or other line sectionalizing devices) which are expected to be frequently climbed for maintenance or operating purposes shall ~~be stepped in accordance with Rule 51.7, General Order No. 95, 1981 Edition, Rules for Overhead Electric Line Construction of the California Public Utilities Commission, which is hereby incorporate by reference~~ comply with Section 3279 of the General Industry Safety Orders.

\*\*\*\*\*

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

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Amend Section 2942 as follows:

§2942. Tubular Steel Poles.

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~~Tubular steel power line poles installed six months or more after the effective date of these orders shall meet the requirements of this section.~~

(a) All tubular steel pole structures shall be provided with access to the top of the structure, ~~and the worker's vertical step distance shall be no greater than 18 inches. Where steps are the means of access, the lines of steps shall be located a maximum of 180 degrees apart and shall not exceed 20 inches of arc around the pole surface. Where removable pole steps are used they shall be secured in place when installed to avoid accidental dislodging. Steps and mounts shall be capable of supporting a 250 pound weight with a safety factor of 2.5 minimum.~~  
Step bolts (Pole Steps) shall comply with Section 3279 of the General Industry Safety Orders.

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

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Subchapter 6. Elevator Safety Orders

Article 7. Hoistways, Hoistway Enclosures, and Related Construction for Power Cable-Driven  
Passenger and Freight Elevators

Amend Section 3016 as follows:

§3016. Pits for Elevators.

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(d) Access to Pits.

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(5) Access ladders or stairways shall comply with the requirements of Subchapter 7, Article 4, Title 8, Chapter 4 of the California Administrative Code, except that for vertical ladders the distance from the ladder rung to the wall shall be not less than ~~4 in. (102mm)~~ 4.5 in. (115 mm).

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

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Subchapter 7. General Industry Safety Orders  
Group 1. General Physical Conditions and Structures  
Article 1. Definitions

Amend Section 3207 as follows:

§3207. Definitions.

(a) The following terms are defined for general use in these regulations; specialized definitions appear in individual articles. (See Definitions in the Index)

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Agricultural Building. [No change in text]

~~Alternating Tread Stairs. A stair on which the treads are approximately one half the width of the stair and alternate from right to left, consecutively, for the length of the stair.~~

Alternating Tread-Type Stair. A type of stairway consisting of a series of treads that usually are attached to a center support in an alternating manner such that an employee typically does not have both feet on the same level while using the stairway.

ANSI. [No change in text]

\*\*\*\*\*

~~Equivalent. Equivalent. An alternate design, feature, device, or protective action which provides an equal degree of safety.~~ Alternative designs, equipment, materials, or methods, that the employer can demonstrate will provide an equal or greater degree of safety for employees compared to the designs, equipment, materials, or methods specified in this subpart.

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Guardrail. [No change in text]

Handrail. A ~~device~~ rail to be used as a handhold for support.

Hazard, Extra. [No change in text]

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Inaccessible Location. [No change in text]

Individual-Rung Ladder. A ladder that has rungs individually attached to a building or structure. An individual-rung ladder does not include manhole steps.

Industrial Stairs. [No change in text]

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Rise. [No change in text]

Riser. The upright member of a step situated at the back of a lower tread and near the leading edge of the next higher tread, platform, or landing.

Rope Access. [No change in text]

\*\*\*\*\*

Shear Point. [No change in text]

Ship Stair (Ships Ladder). A fixed ladder within the pitch range of 50 to ~~75~~ 70 degrees with the horizontal, equipped with treads and stair rails.

Should. [No change in text]

Skirt Guard. [No change in text]

~~Spiral stairway (Circular Stairway.) One with closed circular form, uniform sector shaped treads and a supporting column.~~

Spiral Stairs. A series of treads attached to a vertical pole in a winding fashion, usually within a cylindrical space.

Stair Railing. [No change in text]

\*\*\*\*\*

Suitable. [No change in text]

~~Toeboard. A vertical barrier erected along the open edges of floor openings or floor holes, platforms, and runways.~~ A low protective barrier that is designed to prevent materials, tools, and equipment from falling to a lower level, and protect employees from falling.

Toe Plate. [No change in text]

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

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Subchapter 7. General Industry Safety Orders  
Group 1. General Physical Conditions and Structures  
Article 2. Standard Specifications

Amend Section 3214 as follows:

§3214. Stair Railings and Handrails.

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(c) Stair Rail Specifications.

(1) The top of stair railings, handrails and handrail extensions installed on or after April 3, 1997, shall be at a vertical height between 34 and 38 inches above the nosing of treads and landings. For stairs installed before April 3, 1997, this height shall be between 30 and 38 inches. Stair railings and handrails shall be continuous the full length of the stairs and, except for private stairways, at least one handrail or stair railing shall extend in the direction of the stair run not less than 12 inches beyond the top riser nor less than 12 inches beyond the bottom riser. Ends shall be returned or shall terminate in newel posts or safety terminals, or otherwise arranged so as not to constitute a projection hazard.

EXCEPTION: Handrails and stair rails on flights of stairs serving basements or cellars that are covered by a trap door, removable floor or grating when not in use, shall stop at the floor level or entrance level so as not to interfere with the cover in the closed position.

(2) The height of stair rail systems installed on or after [OAL effective date] shall not be less than 42 inches (107 cm) from the leading edge of the stair tread to the top surface of the top rail.

(3) No opening in a stair rail system shall exceed 19 inches (48 cm) at its least dimension.

(d) Handrails.

(1) Handrails shall not be less than 30 inches (76 cm) and not more than 38 inches (97 cm), as measured from the leading edge of the stair tread to the top surface of the handrail (see Figure 1 of this section).

(2) The top rail of a stair rail system may serve as a handrail only when:

(A) The height of the stair rail system is not less than 36 inches (91 cm) and not more than 38 inches (97 cm) as measured at the leading edge of the stair tread to the top surface of the top rail (see Figure 2 of this section); and

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(B) The top rail of the stair rail system meets the other handrail requirements in subsection (d)(3), (d)(4), and (d)(5) of this section.

~~(d)~~ (3) A handrail shall consist of a lengthwise member mounted directly on a wall or partition by means of brackets attached to the lower side of the handrail so as to offer no obstruction to a smooth surface along the top and both sides of the handrail. The handrail shall be designed to provide a grasping surface to avoid the person using it from falling. The spacing of brackets shall not exceed 8 feet.

~~(e)~~ (4) Handrails projecting from a wall shall have a space of not less than 1 1/2 inches between the wall and the handrail.

~~(f)~~ (5) The mounting of handrails shall be such that the completed structure is capable of withstanding a load of at least 200 pounds applied in any direction at any point on the rail.

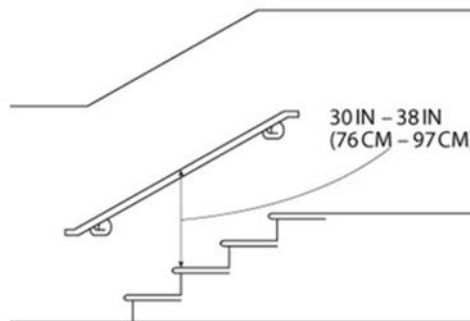


Figure 1 -Handrail Measurement

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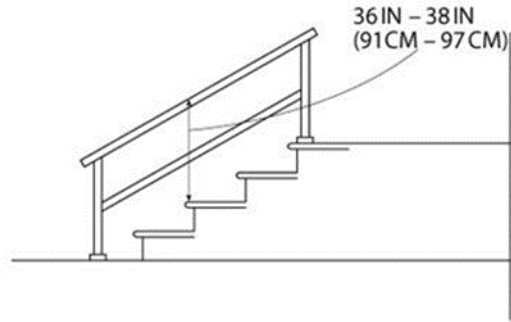


Figure - 2 Combination Handrail and Stair Rail

NOTE: For additional requirements, see California Building Code, Title 24, Part 2, Volume 1, Chapter 10. Means of Egress.

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



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Group 1. General Physical Conditions and Structures  
Article 2. Standard Specifications

Amend Section 3231 as follows:

§3231. Stairways.

(a) General. Every stairway serving any building or portion thereof shall conform to the requirements of this Section. (See Section 3214 for stair rail and handrail specifications and Section 3234 for industrial stairways). ~~(Title 24, Part 2, Section 3305(a).)~~

\*\*\*\*\*

(h) Headroom. Every required stairway shall have a headroom clearance of not less than 6 feet 6 8 inches. Such clearances shall be established by measuring vertically from a plane parallel and tangent to the stairway tread nosing to the soffit above at all points. ~~(Title 24, Part 2, Section 3305(p).)~~

In existing installations where overhead clearance is less than 6 feet 6 8 inches above stairways, the stairway shall be relocated, the obstruction shall be removed, or if both of these are impracticable a suitable warning shall be placed near the obstruction so as to notify employees of its presence. Where the nature of the hazard is such that padding it will increase safety, this also shall be done. ~~(Title 24, Part 2, Section 2-3305(p), Exception.)~~

NOTE: For additional requirements, see California Building Code, Title 24, Part 2, Volume 1, Chapter 10. Means of Egress.

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

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Amend Section 3234 as follows:

§3234. Fixed Industrial Stairs.

(a) Scope. This Section contains specifications for the safe design and construction of fixed general industrial stairs. This classification includes interior and exterior stairs around machinery, tanks, and other equipment, and stairs leading to or from floors, platforms, or pits. This Section does not apply to stairs used for required exit purposes, to construction operations, to private residences, or to articulated stairs, such as may be installed on floating roof tanks or on dock facilities, the angle of which changes with the rise and fall of the base support. ~~(Title 24, Part 2, Section 2 3326(a).)~~

(b) Where Fixed Stairs Are Required.

(1) Fixed stairs shall be provided for access from one structure level to another where operations necessitate regular travel between levels, and for access to operating platforms at any equipment which requires attention routinely during operations. Fixed stairs shall also be provided where access to elevations is daily or at each shift for such purposes as gauging, inspection, regular maintenance, etc., where such work may expose employees to acids, caustic, gases, or other harmful substances, or for which purposes the carrying of tools or equipment by hand is normally required. (It is not the intent of this Section to preclude the use of fixed ladders for access to elevated tanks, towers and similar structures, overhead traveling cranes, etc., where the use of fixed ladders is common practice.)

(A) When subsection (b) of this section allows the use of spiral, ship, or alternating tread-type stairs, they shall be installed, used, and maintained in accordance with manufacturer's instructions.

(2) Spiral stairways shall not be permitted except for special limited usage and secondary access situations where it is not practical to provide a conventional stairway.

(3) Winding stairways may be installed on tanks and similar round structures where the diameter of the structure is not less than 5 feet.

~~(Title 24, Part 2, Section 2 3326(b).)~~

(4) Alternating tread stairs, meeting the requirements of 3234(i) shall be permitted for:

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(A) Limited usage.

(B) Secondary access.

(c) Stair Strength. Fixed stairways shall be designed and constructed to carry a load of 5 times the normal live load anticipated but never of less strength than to carry safely a moving concentrated load of 1,000 pounds. ~~(Title 24, Part 2, Section 2-3326(-).)~~

(d) Stair Width. Fixed stairways shall have a minimum usable width of 22 inches. No chute or open conveyor shall be parallel to and adjoin a stairway unless the usable width of the stairway is at least 22 inches and the stairway is equipped with a stair railing separating the chutes and open conveyors from the stairway.

Chutes shall not be hinged or otherwise constructed or used so as to cover stairways. ~~(Title 24, Part 2, Section 2-3326(d).)~~

(e) Angle of Stairway Rise.

(1) Fixed stairs shall be installed at angles to the horizontal of between 30 and 50 degrees.

(2) Any uniform combination of rise-tread dimensions may be used that will result in a stairway at an angle to the horizontal within the permissible range.

(3) For fixed industrial stairs installed prior to [OAL effective date], ~~The~~ following is a table of rise/tread dimensions which will produce a stairway within the permissible range, stating the angle to the horizontal produced by each combination. However the rise/tread combinations are not limited to those given in Table IS-1 below.

Table IS-1. [Relocated from subsection (e)(6)]

<i>Angle to</i>	<i>Rise</i>	<i>Tread Run</i>
<i>Horizontal</i>	<i>(in inches)</i>	<i>(in inches)</i>
30° 35'	6 1/2	11
32° 08'	6 3/4	10 3/4
33° 41'	7	10 1/2

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35° 16'	7 1/4	10 1/4
36° 52'	7 1/2	10
38° 29'	7 3/4	9 3/4
40° 08'	8	9 1/2
41° 44'	8 1/4	9 1/4
43° 22'	8 1/2	9
45° 00'	8 3/4	8 3/4
46° 38'	9	8 1/2
48° 16'	9 1/4	8 1/4
49° 54'	9 1/2	8

**(4) The employer shall ensure fixed industrial stairs installed after [OAL effective date]:**

**(A) Have a maximum riser height of 9.5 inches (24 cm);**

**(B) Have a minimum tread depth of 9.5 inches (24 cm).**

~~(4)~~ **(5)** Each tread and the top landing of a stairway, where risers are used, shall have a nose which extends one-half-inch to one-inch beyond the face of the lower riser. Noses shall have an even leading edge.

~~(5)~~ **(6)** All treads shall be slip-resistant.

~~Table IS-1.~~ **[This Table is relocated to subsection (e) (3)]**

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<i>Angle to</i>	<i>Rise</i>	<i>Tread Run</i>
<i>Horizontal</i>	<i>(in inches)</i>	<i>(in inches)</i>
30° 35'	6 1/2	11
32° 08'	6 3/4	10 3/4

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33° 41'	7	10 1/2
35° 16'	7 1/4	10 1/4
36° 52'	7 1/2	10
38° 29'	7 3/4	9 3/4
40° 08'	8	9 1/2
41° 44'	8 1/4	9 1/4
43° 22'	8 1/2	9
45° 00'	8 3/4	8 3/4
46° 38'	9	8 1/2
48° 16'	9 1/4	8 1/4
49° 54'	9 1/2	8

Welded bar grating treads without nosings are acceptable providing the leading edge can be readily identified by personnel descending the stairway and provided the tread is serrated or is of definite non-slip design.

~~(6)~~ (7) Rise height and tread width shall be uniform throughout any flight of stairs including any foundation structure used as one or more treads of the stairs.

The maximum variations in the height of risers or the width of treads in any one flight shall be one-fourth-inch.

~~(7)~~ (8) Where the rise would exceed 9 1/2 inches and the run would be less than 8 inches, portable, fixed, or ships ladders shall be used.

~~(Title 24, Part 2, Section 2-3326(e).)~~

(f) Stairway platforms and landings shall be no less than the width of a stairway and minimum of 30 inches in length measured in the direction of travel. ~~(Title 24, Part 2, Section 2-3326(f).)~~

(1) When a door or a gate opens directly on a stairway, a platform shall be provided, and the swing of the door or gate shall not reduce the platform's effective usable depth to:

(A) Less than 20 inches (51 cm) for platforms installed before [OAL effective date]; and

(B) Less than 22 inches (56 cm) for platforms installed on or after [OAL effective date] (see Figure 1 of this section);

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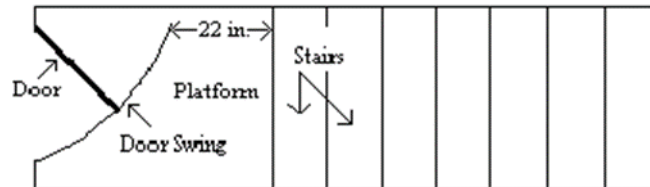


Figure 1

(g) Stair Railings and Handrails.

- (1) Stair railings shall be provided on the open sides of all exposed stairways.
- (2) Handrails shall be provided on at least one side of closed stairways, preferably on the right side descending.
- (3) Stair railings and handrails shall be installed in accordance with the provisions of Section 3214.
- (4) Standard guardrails shall be installed on stairway platforms. See Section 3209. (~~Title 24, Part 2, Section 2-3326(g).~~)

(h) Vertical Clearance. Vertical clearance above any stair tread to an overhead obstruction shall be at least 6 feet ~~6~~ 8 inches measured from the leading edge of the tread.

In existing installations where the overhead clearance is less than 6 feet ~~6~~ 8 inches, the obstruction shall be removed, or if this is impracticable, a suitable warning shall be placed near the obstruction so as to notify employees of its presence. Where the nature of the hazard is such that padding it will increase safety, this also shall be done. (~~Title 24, Part 2, Section 2-3326(h).~~)

(i) Alternating Tread Stairs.

- (1) The stairs shall have a series of steps between 50 and 70 degrees from horizontal.
- (2) Stair rails, designed to provide employees an adequate handhold to avoid falling, shall be provided on both sides of the stair.

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(3) A minimum distance of 6 inches shall be provided between the stair rail and any fixed structure, machine or other object.

(4) A minimum of 12 inches shall be provided between the stair rails of adjacent alternating tread type stairs.

(5) The stair shall have:

(A) A minimum of 17 and a maximum of 24 inches of width between the stair rails.

(B) A minimum tread depth of 8 1/2 inches, a minimum tread width of 7 inches, a minimum tread run of 5 inches and a maximum rise to the next alternating tread surface of 9 1/2 inches.

(C) A minimum usable width of 17 inches.

(6) The initial tread of the stair shall begin at the same elevation as the platform or landing.

(7) The stair shall meet all other requirements of Sections 3214 and 3234.

EXCEPTION: The installation of a midrail and toeboard is not required.

(j) Spiral stairs. In addition to subsections, (b)(2), (c), (d), (e)(7), (f), (g) and (h), the employer shall ensure spiral stairs:

(1) Have a minimum clear width of 26 inches (66 cm);

(2) Have a maximum riser height of 9 1/2 inches (24 cm);

(3) Have a minimum headroom above spiral stair treads of at least 6 feet, 6 inches (2 m), measured from the leading edge of the tread;

(4) Have a minimum tread depth of 7 1/2 inches (19 cm), measured at a point 12 inches (30 cm) from the narrower edge;

(5) Have a uniform tread size;

(k) Ship stairs. In addition to subsections (b)(2), (c), (d), (e)(7), (f), (g) and (h), the employer shall ensure that ship stairs (see Figure 1):

(1) Are installed at a slope of 50 to 70 degrees from the horizontal;

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(2) Have open risers with a vertical rise between tread surfaces of 6 1/2 to 12 inches (17 to 30 cm);

(3) Have minimum tread depth of 4 inches (10 cm); and

(4) Have a minimum tread width of 18 inches (46 cm).

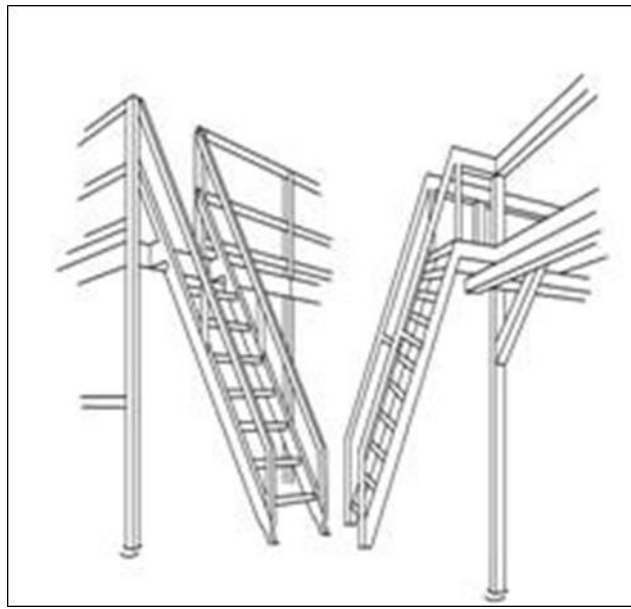


Figure 2- Ship Stairs

NOTE: For additional requirements, see California Building Code, Title 24, Part 2, Volume 1, Chapter 10.

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



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Subchapter 7. General Industry Safety Orders  
Group 1. General Physical Conditions and Structures  
Article 4. Access, Work Space, and Work Areas

Amend Section 3276 as follows:

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§3276. Portable Ladders.

\*\*\*\*\*

(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.

Extension Ladder. [No change in text]

\*\*\*\*\*

Ladders. [No change in text]

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.

Sectional Ladder [No change in text]

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Single-Rail Ladder. A ladder with rungs, cleats, or steps mounted on a single-rail instead of the normal two rails used on most other ladders.

Special-Purpose Ladder. A special-purpose ladder is a portable ladder which represents either a modification or a combination of design or construction features in one of the general-purpose types of ladders previously defined, in order to adapt the ladder to special or specific uses; and includes combination ladder; a portable ladder that can be used as a stepladder, extension ladder,

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treble ladder, or stairway ladder. The components of a combination ladder also may be used separately as a single ladder.

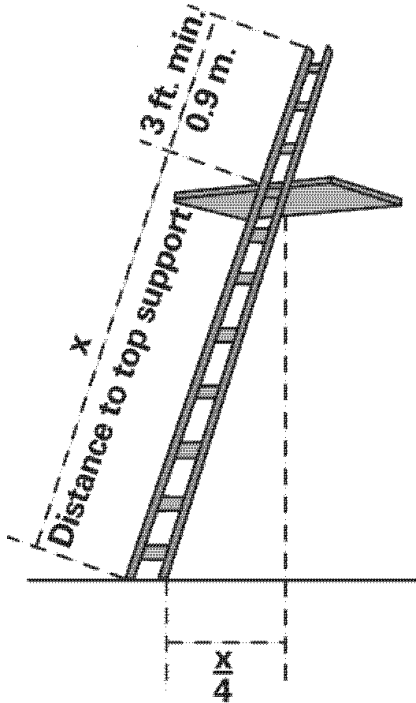


Figure D-1 -- Portable Ladder Set-up

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

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Amend Section 3277 as follows:

§3277. Fixed Ladders.

(a) All fixed ladders shall be approved as defined in Section 3206 of the General Industry Safety Orders. Step bolts (pole steps) and manhole steps shall comply with Section 3279 of the General Industry Safety Orders.

(b) Definitions.

\*\*\*\*\*

Fastenings. [No change in text]

Fixed Ladder. ~~A fixed ladder is a ladder permanently attached to a structure, building, or equipment. Ladders referred to in this code shall be construed to be fixed ladders.~~ A ladder with rails or individual rungs that is permanently attached to a structure, building, or equipment. Fixed ladders include individual-rung ladders, but not ship stairs, step bolts, or manhole steps.

Grab Bars. [No change in text]

Individual-Rung Ladder. ~~An individual-rung ladder is a fixed ladder each rung of which is individually attached to a structure, building, or equipment. A ladder that has rungs individually attached to a building or structure. An individual-rung ladder does not include manhole steps.~~

Ladder. [No change in text]

\*\*\*\*\*

Ladder Safety System. [No change in text]

Manhole Steps. Steps that are individually attached to, or set into, the wall of a manhole structure.

Pitch. [No change in text]

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Side-Step Ladder. [No change in text]

Special-Purpose Ladder. A special-purpose ladder is a portable ladder which represents either a modification or a combination of design or construction features in one of the general-purpose types of ladders previously defined, in order to adapt the ladder to special or specific uses: and includes 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.

Step Bolt (Pole Step). A bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing.

Steps. [No change in text]

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(d) Specific Features.

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(2) The distance between the top surfaces of rungs, cleats, and steps shall not exceed 12 inches and shall be uniform throughout the length of the ladder.

**EXCEPTIONS:**

~~1. Manholes and Underground Vaults. Step spacing shall not exceed 16 inches between the top surfaces of rungs and shall be uniform throughout the length of the ladder.~~

~~2. The vertical distance of the first rung from ground level may be as high as 14 inches.~~

(3) The minimum clear length of rungs or cleats shall be 16 inches.

**EXCEPTION:**

~~Manholes and Underground Vaults. Clear length of rungs or cleats shall not be less than 14 inches.~~

\*\*\*\*\*

(g) Cages or Wells.

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(1) Construction. Cages or wells shall be built as shown on the applicable drawings, covered in detail in Figs. 1, 10, and 11, or of equivalent construction;

~~EXCEPTION: Chimney ladders and manholes and underground vaults.~~

~~(2) Dimensions and Maximum Length. Cages or wells conforming to the dimensions shown in Figs. 1, 10, and 11 shall be provided on ladders of more than 20 feet to a maximum unbroken length of 30 feet.~~

~~EXCEPTIONS:~~

~~(1) Fixed ladders on fire hose drying towers are not required to have a cage, well, offset platform, or ladder safety device if they do not exceed 30 feet in length and provided their use is restricted to trained fire fighters or others equally trained in ladder use.~~

~~(2) Fixed ladders on outdoor advertising structures covered by Article 11.~~

~~(3) Ladders equipped with ladder safety systems as provided under subsection (m).~~

~~(3) Top of Cage. Cages shall extend a minimum of 42 inches above the top of landing, unless other acceptable protection is provided.~~

~~(4) Bottom of Cage. Cages shall extend down the ladder to a point not less than 7 feet nor more than 8 feet above the base of the ladder, with the bottom flared not less than 4 inches. When the ladder terminates on a landing platform or walkway at an elevation greater than 30 inches above the ground, a ladder cage extension shall be provided from the bottom of the cage to the top of the guardrail when the distance from the plane of the ladder rungs to the guardrail is equal to or less than that shown in Figure 11, "Ladder Cages at Elevated Locations."~~

~~(A) When the guardrail is located at a distance greater than that shown in Figure 11, a ladder cage extension need not be provided.~~

~~(B) The ladder cage extension or equivalent shall be constructed as follows:~~

~~1. The ladder cage extension or equivalent shall be capable of withstanding a force of at least 200 pounds applied horizontally at any point.~~

~~2. The ladder cage extension or equivalent shall be of solid construction, grille work with vertical bars located at a maximum spacing of 9 1/2 inches, center to center, or of slat work with openings between slats not more than 4 vertical inches.~~

~~3. The ladder cage extension or equivalent shall be free of hazardous projections.~~

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~~4. The ladder cage extension or equivalent shall be provided not less than two feet each side of the ladder center line where there is an exposure.~~

~~5. Vertical guardrail extensions may be used as equivalent construction for the ladder cage extension provided they are as high as the bottom of the cage opening and they comply with the provisions of (g)(4)(B).~~

~~(5) Size of Cage. Cages shall not extend less than 27 nor more than 30 inches from the center line of the rungs of the ladder. The cage shall not be less than 27 inches in width. The inside shall be clear of projections. Vertical bars shall be located at a maximum spacing of 9 1/2 inches, center to center around the circumference.~~

~~(6) Ladder Wells. Ladder wells shall have a clear width of at least 15 inches measured each way from the center line of the ladder. (See Fig.1.) Smooth walled wells shall be a minimum of 27 inches and a maximum of 30 inches from the center line of rungs to the well wall on the climbing side of the ladder. Where other obstructions on the climbing side of the ladder exist, there shall be a minimum of 30 inches from the center line of the rungs.~~

(2) Cages and wells shall be continuous throughout the length of the fixed ladder, except for access, egress, and other transfer points;

(3) Cages and wells shall be designed, constructed, and maintained to contain employees in the event of a fall, and to direct them to a lower landing; and

(4) Platforms used with fixed ladders shall provide a horizontal surface of at least 24 inches by 30 inches (61 cm by 76 cm).

\*\*\*\*\*

(i) Maintenance. All ladders shall be maintained in a safe condition. All ladders shall be inspected regularly, with the intervals between inspections being determined by use and exposure. Any ladder with structural or other defects shall be immediately tagged "Dangerous: Do Not Use" or with similar language and removed from service until repaired or replaced. When any correction or repair involves the structural integrity of the ladder, a qualified person shall perform or supervise the correction or repair.

(j) Landing Platforms.

(1) When ladders are used to ascend to heights exceeding 20 feet, landing platforms shall be provided as follows:

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(A) Where no cage, well, or ladder safety system is provided, landing platforms shall be provided for each 20 feet of height or fraction thereof.

(B) Where a cage or well is provided and no ladder safety system is provided, landing platforms shall be provided for each 30 feet of height or fraction thereof. (NOTE: refer to phase-in requirements for personal fall arrest and ladder safety systems for ladders more than 24 feet long in subsection (m)).

\*\*\*\*\*

~~(k) Ladder Extensions. The side rails of through or side-step ladder extensions shall extend 3 1/2 feet above parapets and landings. For through ladder extensions, the rungs shall be omitted from the extension and shall have not less than 18 nor more than 24 inches clearance between rails (Figure 2). For side-step or offset fixed ladder sections, at landings, the side rails and rungs shall be carried to the next regular rung beyond or above the 3 1/2 feet minimum (Figure 3).~~

(1) The side rails of through or sidestep ladders shall extend 42 inches (1.1 m) above the top of the access level or landing platform served by the ladder. For parapet ladders, the access level is:

(A) The roof, if the parapet is cut to permit passage through the parapet; or

(B) The top of the parapet, if the parapet is continuous.

(2) For through ladders, the steps or rungs shall be omitted from the extensions, and 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. When a ladder safety system is provided, the maximum clearance between side rails of the extension shall not exceed 36 inches (91 cm).

(3) For side-step ladders, the side rails, rungs, and steps shall be continuous in the extension (see Figure 3 of this section).

(4) Grab bars shall extend 42 inches (1.1 m) above the access level or landing platforms served by the ladder.

\*\*\*\*\*

~~(m) Ladder Safety Systems. Ladder safety systems may be used on tower, water tank, and chimney ladders over 20 feet in unbroken length in lieu of cage protection. No landing platform shall be required in these cases. All ladder safety systems shall meet the design requirements of the ladders which they serve [See subsection (c)].~~

(m)(1) Requirements for fixed ladders that extend more than 24 feet (7.3 m) above a lower level:

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(A) Existing fixed ladders. Each fixed ladder installed before [22 months after OAL effective date] shall be equipped with a personal fall arrest system, ladder safety system, cage, or well;

(B) New fixed ladders. Each fixed ladder installed on and after [22 months after OAL effective date] shall be equipped with a personal fall arrest system or a ladder safety system;

(C) Replacement. When a fixed ladder, cage, or well, or any portion of a section thereof, is replaced, a personal fall arrest system or ladder safety system shall be installed in at least that section of the fixed ladder, cage, or well where the replacement is located; and

(D) Final deadline. On and after November 18, 2036, all fixed ladders shall be equipped with a personal fall arrest system or a ladder safety system.

(2) When a one-section fixed ladder is equipped with a personal fall protection or a ladder safety system or a fixed ladder is equipped with a personal fall arrest or ladder safety system on more than one section:

(A) The personal fall arrest system or ladder safety system shall provide protection throughout the entire vertical distance of the ladder, including all ladder sections; and

(B) The ladder shall have rest platforms provided at maximum intervals of 150 feet (45.7 m).

(3) Ladder sections having a cage or well:

(A) Shall be offset from adjacent sections; and

(B) Shall have landing platforms provided at maximum intervals of 50 feet (15.2 m).

(4) A cage or well in combination with a personal fall arrest system or ladder safety system may be provided such that the cage or well does not interfere with the operation of the system.

(n) Ladder Safety Systems.

(1) Each ladder safety system shall allow the employee to climb up and down using both hands and shall not require that the employee continuously hold, push, or pull any part of the system while climbing.

(2) The connection between the carrier or lifeline and the point of attachment to the body harness or belt shall not exceed 9 inches (23 cm).



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(3) Mountings for rigid carriers shall be attached at each end of the carrier, with intermediate mountings spaced, as necessary, along the entire length of the carrier so the system has the strength to stop employee falls.

(4) Mountings for flexible carriers shall be attached at each end of the carrier and cable guides for flexible carriers shall be installed at least 25 feet (7.6 m) apart but not more than 40 feet (12.2 m) apart along the entire length of the carrier.

(5) The design and installation of mountings and cable guides shall not reduce the design strength of the ladder.

(6) Ladder safety systems and their support systems shall be capable of withstanding, without failure, a drop test consisting of an 18-inch (41-cm) drop of a 500-pound (227-kg) weight.

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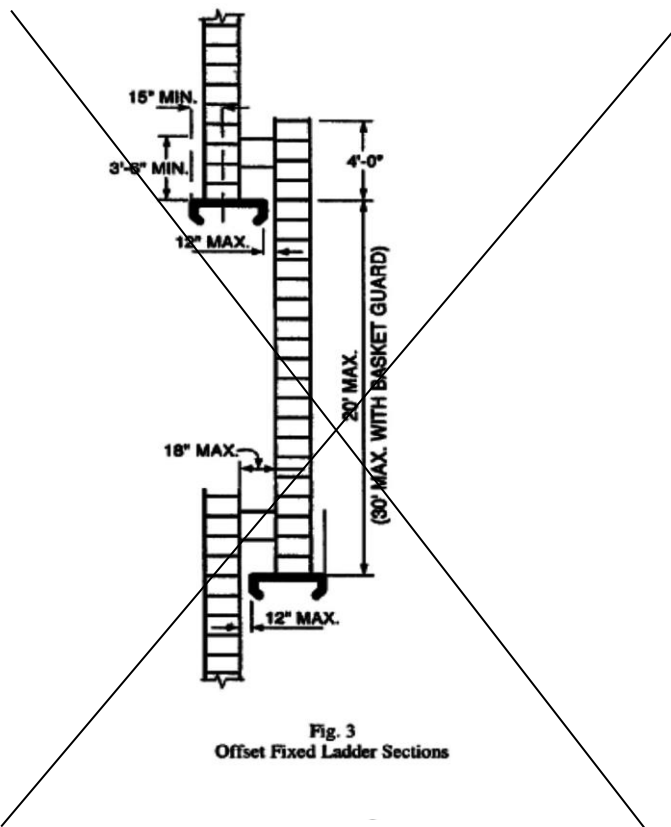


Fig. 3  
Offset Fixed Ladder Sections

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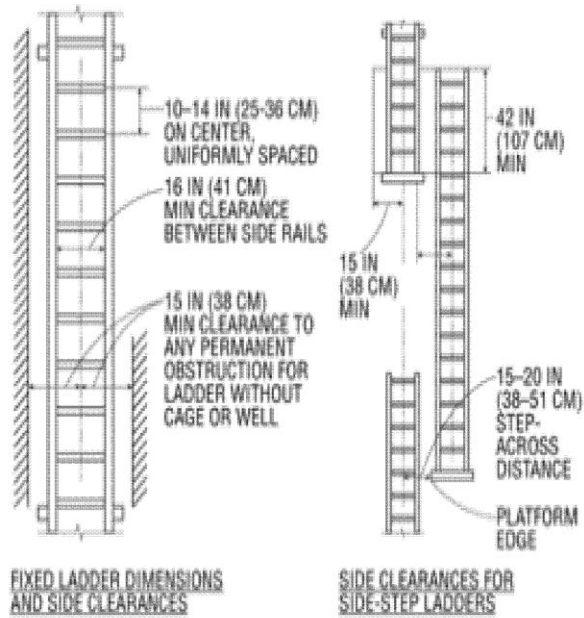


Fig. 3 Side-Step Fixed Ladder Sections

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

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Subchapter 7. General Industry Safety Orders  
Group 1. General Physical Conditions and Structures  
Article 4. Access, Work Space, and Work Areas

Add Section 3279 as follows:

§3279. ~~Portable Metal Ladders. Step Bolts and Manhole Steps. [Repealed]~~

(a) Step bolts.

(1) Each step bolt installed on or after [OAL effective date], in an environment where corrosion may occur shall be constructed of, or coated with, material that protects against corrosion.

(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.

(3) Step bolts shall be uniformly spaced at a vertical distance of not less than 12 inches (30 cm) and not more than 18 inches (46 cm) apart, measured center to center (see Figure 1 of this section). The spacing from the entry and exit surface to the first step bolt may differ from the spacing between the other step bolts.

(4) Each step bolt shall have a minimum clear width of 4.5 inches (11 cm).

(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 (18 cm). When the employer demonstrates that an obstruction cannot be avoided, the distance shall be at least 4.5 inches (11 cm).

(6) Each step bolt installed before [OAL effective date], shall be capable of supporting its maximum intended load.

(7) Each step bolt installed on or after [OAL effective date], shall be capable of supporting at least four times its maximum intended load.

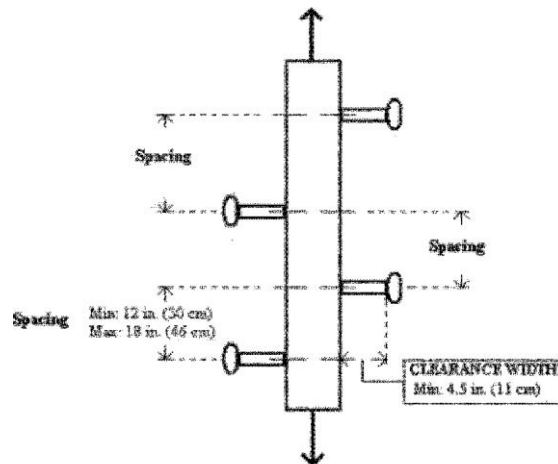
(8) Each step bolt shall be inspected at the start of the workshift and maintained regularly and as necessary, and maintained in a safe condition. Hazardous conditions shall be corrected or repaired before an employee uses the step bolt again. If the correction or repair cannot be made immediately, the hazard shall be guarded to prevent employees from using the step bolt until the

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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.

(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.



**Figure 1 – Step Bolt Spacing**

(b) Manhole steps.

(1) The employer shall ensure that each manhole step is capable of supporting its maximum intended load.

(2) The employer shall ensure that each manhole step installed on or after [OAL effective date]:

(A) Has a corrugated, knurled, dimpled, or other surface that minimizes the possibility of an employee slipping;

(B) Is constructed of, or coated with, material that protects against corrosion if the manhole step is located in an environment where corrosion may occur;

(C) Has a minimum clear step width of 10 inches (25 cm);

(D) Is uniformly spaced at a vertical distance not more than 16 inches (41 cm) apart, measured center to center between steps. The spacing from the entry and exit surface to the first manhole step may differ from the spacing between the other steps.

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(E) Has a minimum perpendicular distance between the centerline of the manhole step to the nearest permanent object in back of the step of at least 4.5 inches (11 cm); and

(F) Is designed, constructed, and maintained to prevent the employee's foot from slipping or sliding off the end.

(3) The employer shall ensure that each manhole 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 manhole step again. If the correction or repair cannot be made immediately, the hazard shall be guarded to prevent employees from using the manhole step until the hazard is corrected or repaired. When any correction or repair involves the structural integrity of the manhole step, a qualified person shall perform or supervise the correction or repair.

(A) Rungs and steps of manhole entry ladders that are supported by the manhole opening shall have a minimum clear width of 9 inches (23 cm).

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

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Subchapter 7. General Industry Safety Orders  
Group 4. General Mobile Equipment and Auxiliaries  
Article 23. Mobile Ladder Stands and Scaffolds (Towers)

Amend Section 3621 as follows:

§3621. Definitions.

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Coupler. [No change in text]

Design Working Load. The maximum intended load, that is, the total of all loads including the weight of the workers, materials, and equipment. (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads the employer reasonably anticipates to be applied to a walking-working surface at any one time.

Elevated Work Level. [No change in text]

~~Ladder Stand. A mobile fixed size self-supporting ladder consisting of a wide flat tread ladder in the form of stairs. The assembly may include handrails but does not include a platform.~~

Ledger. [No change in text]

Maximum Intended Load. The total load (weight and force) of all employees, equipment, vehicles, tools, materials, and other loads the employer reasonably anticipates to be applied to a walking-working surface at any one time.

Mobile [No change in Text]

Mobile Ladder Stand (Ladder Stand). A mobile, fixed-height, self-supporting ladder that usually consists of wheels or casters on a rigid base and steps leading to a top step. A mobile ladder stand also may have handrails and is designed for use by one employee at a time.

Mobile Ladder Stand Platform. A mobile, fixed-height, self-supporting unit having one or more standing platforms that are provided with means of access or egress.

Mobile Scaffold (Tower). [No change in text]

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

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Amend Section 3622 as follows:

§3622. General.

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(f) Work Levels.

\*\*\*\*\*

(2) The minimum platform width for any work level shall not be less than 20 inches for mobile scaffolds (towers). Mobile ladder stands and mobile ladder stand platforms shall have a minimum step width of 16 inches.

\*\*\*\*\*

(4) The steps and platforms of mobile ladder stands and mobile ladder stand platforms shall be slip-resistant. Slip-resistant surfaces shall be either an integral part of the design and construction of the mobile ladder stand and platform, or provided as a secondary process or operation, such as dimpling, knurling, shotblasting, coating, spraying, or applying durable slip-resistant tapes.

\*\*\*\*\*

(6) The standing area of a mobile ladder stand shall be within the base frame.

~~(6)~~ (7) All scaffold work levels 6 feet or higher above the ground or floor shall have a toeboard at locations where persons are required to work or pass under the scaffold. (See Section 3210.)

~~(7)~~ (8) All scaffold work levels 30 inches or higher above the ground or floor shall have guardrail protection that meets the requirements of Section 3209 and 3210.

~~(8)~~ (9) A climbing ladder or stairway shall be provided for proper access and egress, and shall be affixed or built into the scaffold and so located that its use will not have a tendency to tip the scaffold. A landing platform shall be provided at intervals not to exceed 30 feet.

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

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Subchapter 14. Petroleum Safety Orders--Drilling and Production  
Article 18. Standard Type Derricks

Amend Section 6564 as follows:

§6564. Derrick Ladders.

~~(a) (G 2, G 3) Every derrick shall be equipped with a fixed ladder or ladders providing access from the derrick floor to the derrick crown platform and to each intervening outside derrick platform.~~

~~EXCEPTION: The lower end of fixed ladders may be terminated at a height not to exceed ten feet (10') above the floor or working area. A secured portable ladder of similar design shall provide access to the lower section of the fixed ladder when the ladder is in use.~~

~~(b) (G 2, G 3) The width of ladders shall be at least twelve inches (12"), measured from the inside of the side rails.~~

~~(c) (G 2, G 3) Uniform and parallel rung or step spacing shall be employed and shall be not less than twelve inches (12") nor more than sixteen inches (16") from top to top of rungs or steps. The clear space between rungs or steps shall be not less than eight inches (8").~~

~~(d) (G 2, G 3) Where sections of a ladder are spliced, they shall be so supported at the splice that the ladder will be aligned and the splice will not be stressed beyond its safe working limit.~~

~~(e) On the climbing side of the ladder, a clear and unobstructed space shall be maintained to a distance of at least twelve inches (12") from each side of a center line drawn vertically through the center of the ladder width and to a distance at least twenty four inches (24") outward from the front of the ladder rungs or steps; provided, however, this does not apply to ladderway openings in platforms, nor does it forbid the use of safety devices to prevent or control falls from a ladder when the use of the device is approved by the Division or designed and constructed in compliance with recognized national standards such as ANSI, UL or Factory Mutual.~~

~~(f) (G 2, G 3) Throughout the length and width of the back of the ladder, a space of at least four inches (4") shall be maintained clear of all obstructions that present a tripping hazard, prevent a safe footing, or prevent a secure handhold to the ladder rungs or steps.~~

~~(g) No ladder shall lean backward from the vertical. Ladders may, if necessary, lean sideways from the vertical but not in excess of three degrees (3°), provided, however, that the slope of the~~



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rungs or steps, in the width dimension of the ladder, shall not exceed two degrees ( $2^\circ$ ) from the horizontal.

(h) (G-2, G-3) The lowest rung or step of a ladder or ladder section shall be not more than sixteen inches (16") above the derrick floor or platform landing.

(i) (G-2, G-3) Every ladder shall be secured with bolts, brackets, or equivalent fastening.

(j) (G-2, G-3) The top end of each ladder or ladder section providing access to the derrick crown platform, outside derrick platform, ladder offset platform, inside derrick platform, monkey board platform or any fixed platform in or on a derrick shall extend at least three and one half feet ( $3\frac{1}{2}'$ ) above the platform.

(k) (G-3) Continuous ladders or ladder sections shall be provided with platforms at intervals not exceeding forty feet (40') upon which the employee may rest. Such platforms shall be not less than twelve inches (12") in depth, nor less than eighteen inches (18") in width. Handholds shall be provided above the rest platform. Toeboards and railings are not required.

(l) Ladders constructed of wood shall be as follows:

(1) (G-2, G-3) Side rails shall be not less than two by four inches ( $2" \times 4"$ ), nominal size.

(2) (G-2, G-3) Rungs or steps shall be not less than one by four inches ( $1" \times 4"$ ), nominal size.

(3) (G-2, G-3) In addition to nailing rungs or steps to the side rails, provision shall be made to prevent the rungs or steps from being pulled off under normal use. This shall be done by nailing strips of not less than one by two inch ( $1" \times 2"$ ) lumber to the side rails, over the ends of the rungs, or steps, or by other means providing equivalent fastenings.

(4) (G-2, G-3) The top and bottom of each side rail of the ladder section shall be secured to the derrick with bolts at least three eighths inch ( $3/8"$ ) in diameter or other equivalent means.

Lag screws, spikes or nails are not acceptable as a means of securing such ladders in place.

(m) Ladder cages are not required on any standard type derrick.

(n) Every (G-1) derrick shall be equipped with a securely fastened fixed ladder or ladders providing access from the derrick floor to the derrick crown and to each intervening derrick platform in or on the derrick.

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~~NOTE: These ladders need not meet the detailed specifications required by other subsections of this article specifically applying to (G-2) or (G-3) derricks.~~

~~(o) If derrick ladders are offset, such offsets shall occur only at outside derrick platforms or ladder offset platforms.~~

~~(p) Counterweighted ladder climbing assist devices may be used in conjunction with a ladder climbing safety device or in conjunction with rest platforms on the ladder in conformance with these orders. If the assist device is used in conjunction with ladders with rest platforms, the counterweight shall weigh no more than 100 pounds. Employees using the assist device will be instructed in proper use of the device.~~

(a) Derrick ladders shall comply with Section 3277 of the General Industry Safety Orders.

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

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Subchapter 14. Petroleum Safety Orders--Drilling and Production  
Article 28. Ladders and Ladderway Openings for Derricks and Masts

Amend Section 6599 as follows:

§6599. Ladders for Derricks and Masts.

~~(a) Except as provided for gin pole masts in Section 6600, every derrick or mast shall be equipped with a fixed ladder or ladders arranged to provide access from the ground, floor level, or a base landing on the vehicle on which it is mounted, to the crown platform and to any intervening fixed platform in or on the derrick or mast.~~

~~(b) The width of ladders shall be at least twelve inches (12"), measured from the inside of the side rails except that ladders for telescoping type derricks or masts shall be not less than eleven inches (11").~~

~~(c) Rung or step spacing shall be uniform and parallel, and shall be at least twelve inches (12") but not more than sixteen inches (16") from top to top of consecutive rungs or steps. The clear space above the rungs or steps shall be at least six inches (6").~~

~~(d) Where sections of ladders are spliced, they shall be supported at the splice so the ladder will be aligned and the splice will not reduce the strength of the ladder.~~

~~(e) On the climbing side of the ladder a clear and unobstructed space shall be maintained of at least twelve inches (12") from each side of a line drawn vertically through the ladder width, and of at least twenty-four inches (24") outward, but this does not forbid the use of a safety device to prevent or control falls from a ladder when the use of the device is approved by the Division or designed and constructed in compliance with recognized national standards such as ANSI, UL, or Factory Mutual. This subsection does not apply to ladderway openings in platforms.~~

~~(f) Throughout the length and width of the back of the ladder, a space of at least four inches (4") shall be maintained clear of all obstructions that present a tripping hazard, prevent adequate footing, or prevent a secure handhold to the ladder.~~

~~(g) No ladder shall lean backward from the vertical.~~

~~No ladder shall lean sideways more than five and three-fourths degrees ( $5\frac{3}{4}^{\circ}$ ) from the vertical, provided, however, that ladders for the cantilever type derricks or masts shall not lean sideways more than three degrees ( $3^{\circ}$ ).~~

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~~Ladders shall be so constructed that the rungs or steps are approximately horizontal at the normal operating position of the derrick or mast and never more than two degrees ( $2^{\circ}$ ) from the horizontal.~~

~~(h) The lowest rung or step of the ladder or ladder section shall be not more than eighteen inches (18") above the ground, floor, or platform landing.~~

~~(i) Ladders shall be constructed and secured to the derrick or mast to support all expected working loads.~~

~~(j) The top end of each terminating ladder or ladder section providing access to any fixed platform in or on a derrick or mast shall extend at least three and one half feet ( $3\frac{1}{2}'$ ) above the platform unless suitable handholds are provided.~~

~~(k) Unless a ladder climbing assist device is used, continuous ladders or ladder sections below the racking platform of the derrick or mast shall be provided with platforms at intervals not exceeding forty feet (40') upon which employees may rest.~~

~~Such platforms shall be not less than twelve inches (12") in depth nor less than eighteen inches (18") in width. handholds shall be provided above the rest platform. Toeboards and railings are not required.~~

~~(l) If ladders are offset, such offsets shall be located at ladder offset rest platforms only.~~

~~(m) Ladder cages are not required on any derrick or mast except as provided for in Section 6600 (b) of this article and Section 6589 (a) of Article 25.~~

~~(n) Counterweighted ladder climbing assist devices may be used in conjunction with a ladder climbing safety device or in conjunction with rest platforms on the ladder in conformance with these orders. If the assist device is used in conjunction with ladders with rest platforms, the counterweight shall weigh no more than 100 pounds. Employees using the assist device shall be instructed in the proper use of the device, which shall require the use of both hands and feet in contact with the ladder as if climbing with no assist device.~~

~~(a) Ladders for derricks and masts shall comply with Section 3277 of the General Industry Safety Orders.~~

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

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Subchapter 14. Petroleum Safety Orders--Drilling and Production  
Article 28. Ladders and Ladderway Openings for Derricks and Masts

Amend Section 6600 as follows:

§6600. Pole Steps for Gin Pole Masts.

\*\*\*\*\*

(d) ~~Pole steps~~ Step Bolts (Pole Steps), as provided for in subsections (a) and (b) of this section, are acceptable as a type of ladder on the leg or legs of a gin pole mast if the leg is not more than sixteen inches (16 ") in diameter and the steps are constructed and installed as follows:

(1) Pole steps shall be designed, constructed, installed and maintained ~~to conform to good engineering practices.~~ in accordance with Section 3279 of the General Industry Safety Orders.

Diagram relocated at the bottom of Section 6600.

In addition to Section 3279, step bolts (pole steps) shall comply with the following:

(2) The length of the tread surface of the steps shall be not less than five and three-eighths inches (5 3/8 ") and not more than eight inches (8 "). For stirrup type steps, this minimum, clear length, shall be maintained to a distance of at least ~~four inches (4 ")~~ four and one-half inches (4 1/2") above the tread surface of the step before the material is curved or tapered toward the mast.

(3) Steps shall alternate, one step on one side of the mast, the next step on the other side of the mast, and shall be uniformly spaced in elevation at intervals of at least ~~twenty-four inches (24 ")~~, twelve inches (12"), but not more than ~~thirty-two inches (32 ")~~ eighteen inches (18") on each side of the mast.

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

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Subchapter 14. Petroleum Safety Orders--Drilling and Production  
Article 37. Oil Well Pumping Machinery and Equipment

Amend Section 6632 as follows:

§6632. Access to the Walking Beam.

(a) When employees are required to go on top of a walking beam, access shall be provided to the top of the beam (preferably at the samson post) if the top of the beam is more than seven and one-half feet (7 1/2') above the working level. The access shall be by means of a fixed ladder. ~~The ladder shall be continuous from the working level to a point not more than eighteen inches (18") below the top of the beam and not more than twelve inches (12") horizontally from the side of the beam.~~ The ladder shall comply with Section 3277 of the General Industry Safety Orders. Ladders shall be outside of the guards for moving parts of machinery.

~~(b) Uniform and parallel rung or step spacing shall be used. Spacing shall not be less than twelve inches (12") and not more than sixteen inches (16") from top to top of rungs or steps. Throughout the length and width of the back of each fixed ladder, a space of at least six inches (6") [four inches (4") on installations made prior to the effective date of these orders] shall be maintained clear of all obstructions which present a tripping hazard, prevent a safe footing, or prevent a secure handhold to the ladder rungs or steps. A four inch (4") space behind equipment manufactured prior to 1959 is acceptable.~~

~~(c)~~ (b) Before any employee is allowed on the walking beam, the following conditions shall be met:

(1) Pumping unit prime mover shall be turned off at a readily accessible control switch and locked out at the main disconnect.

(2) Unit brake is set and counterweights are in the lowest position. When the operation involves the pitman assembly, additional precautions shall be taken to secure any part of the unit against movement. When the horsehead unit is being removed or is being installed on the walking beam, the counterweights may be placed in an upward position.

~~Existing subsection (c) has been relocated to new subsection (e)~~

~~(d)~~ (c) When the employee is required to work from the top of the walking beam, and the beam is 10 feet (10') or more above the floor or ground level, a safety belt and lanyard shall be worn and attached so that the employee will not fall more than two feet (2') below the beam.

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EXCEPTION: For other than well servicing operations, on walking beams of "I" or "H" section, no lanyard, belt or railing is required if the employee is instructed to and performs their duties while in a sitting position with one leg on each side of the beam and moves along the beam with feet on the lower flange, sitting down on the upper flange to change positions of hands or feet.

~~(e)~~ (d) Bearings on the walking beam requiring lubrication shall be equipped with extension lubricant fittings so arranged that the lubricating can be done from floor or ground level, and from outside of guards for moving parts of machinery, or from the ladder providing access to the beam if the ladder at the point where the lubricating is done is equipped with a cage, ring, or a railed platform.

~~(f)~~ (e) When areas of the horsehead are not accessible from the walking beam, a safety basket, as specified in the General Industry Safety Orders, Section 5004, or a boatswain's chair, as specified in the Construction Safety Orders, Section 1662, shall be provided and utilized, including a safety belt and lanyard. When hoisting an employee in the basket or chair, the hoist unit shall be powered up and down and the hoist operator shall be at the controls at all times. The travelling block, cathead and catline, or sand line shall never be used for hoisting personnel. A hydraulic or air wench may be used to hoist an employee during work of short duration and of a temporary nature, or in an emergency, provided the employee is sitting in a boatswain's chair or safety basket and is tied off with a safety belt and lanyard.

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

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Subchapter 21. Telecommunication Safety Orders  
Article 1. Telecommunications

Amend Section 8608 as follows:

§8608. Poles, Towers and Ladders.

Definition applicable to subsection (a).

~~"Steps" means permanent or detachable round or flat members attached to the pole or tower on one end with the other end designed to prevent the foot from sliding off while ascending or descending the pole or tower.~~

Step Bolt (Pole Step). A bolt or rung attached at intervals along a structural member used for foot placement and as a handhold when climbing or standing.

~~(a)(1) Permanent steps for poles and towers shall not unnecessarily obstruct the climbing space and shall have a minimum diameter of 5/8 inch and a minimum clear tread width of 4 1/2 inches.~~

~~(2) Detachable steps for poles and towers shall meet the requirements of subsection (a)(1) or shall provide a suitable foothold that does not unnecessarily obstruct the climbing space and shall provide a minimum clear tread width of 4 1/2 inches. Detachable steps shall be properly secured when in use.~~

~~(3) The spacing between permanent and detachable steps installed on poles and towers shall be not more than 18 inches (36 inches on any one side). Spacing shall be uniform except where working, standing or access steps are required.~~

(a)(1) Step bolts (pole steps) shall comply with Section 3279 of the General Industry Safety Orders.

In addition to Section 3279, step bolts (pole steps) shall comply with the following:

~~(4)~~ (2) The lowest permanent step bolt shall be not less than 7 feet 6 inches above the ground line. The lowest detachable step bolt shall be no more than 24 inches above the ground line, or if there is a structural footing or foundation, no more than 24 inches above the top surface of the footing/foundation.

~~(5)~~ (3) Poles with pole mounted terminals and/or strand mounted terminals which are expected to be climbed for maintenance or operating purposes shall ~~be stepped in accordance with California~~



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Public Utilities Commission, General Order No. 95, August 2009, Sections 51.7, 81.6, 84.7 E. and 91.3, which are hereby incorporated by reference comply with Section 3279 of the General Industry Safety Orders.

~~(b)(4)~~ All fixed ladders on poles and towers shall be approved as provided in Section 3206 of the General Industry Safety Orders and shall comply with Section 3277 of the General Industry Safety Orders.

~~(2) Fixed ladder rungs for poles and towers shall have a minimum diameter of 5/8 inch and a minimum clear width of 12 inches between the side rails.~~

~~(3) The distance between the top surfaces of rungs shall not exceed 12 inches and shall be uniform throughout the length of the ladder.~~

~~(e) The employer shall require that no employee nor any material or equipment will be supported on any portion of a ladder unless it is first determined by inspection by a qualified person that such ladder is adequately strong, in good condition, and properly secured in place.~~

~~(d)~~ (c) Portable metal ladders shall not be used in telecommunications work, except in vaults and manholes.

~~(e) After April 30, 1975, portable wood ladders intended for general use shall not be painted but may be coated with a translucent nonconductive coating. Portable wood ladders shall not be longitudinally reinforced with metal.~~

(d) Portable wood ladders shall comply with Section 3276 of the General Industry Safety Orders.

~~(f) Portable wood ladders that are not being carried on vehicles and are not in active use shall be stored under cover.~~

~~(g)~~ (e) The applicable provisions of the General Industry Safety Orders shall apply to rolling ladders used in telecommunications centers, except that existing ladders may have a minimum inside width, between the side rails, of at least 8 inches.

~~(h)~~ (f) When in use, rolling ladders shall be secured to prevent inadvertent displacement.

~~(i)~~ (g) Climbing ladders or stairways on scaffolds used for access and egress shall be affixed or built into the scaffold by proper design and engineering, and shall be so located that their use will not disturb the stability of the scaffold.

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(1) If a portable ladder is affixed to the scaffold, it shall be securely attached and shall have rungs meeting the spacing and clearances requirements of Section 3277 of the General Industry Safety Orders.

(2) If a fixed ladder is installed on the scaffold it shall comply with Section 3277 of the General Industry Safety Orders.

(3) Stairways shall comply with Section 3234 of the General Industry Safety Orders.

(4) Horizontal end braces may also be designed and used as a climbing device provided that the steps are:

(A) Parallel and level.

(B) Uniformly spaced throughout the climb.

(C) Not less than 16 inches in width.

(D) Not less than 12 inches nominal nor more than 16 inches nominal apart on center.

(E) Provided with sufficient clearance to provide a good handhold and foot space. 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 (18 cm). When the employer demonstrates that an obstruction cannot be avoided, the distance shall be at least 4.5 inches (11 cm).

(5) Those surfaces of rungs and steps designed for use in ascending and descending shall be corrugated, serrated, knurled, dimpled, or coated with skid-resistant material.

⌘ (h) When a ladder is supported by an aerial strand, and ladder hooks or other supports are not being used, the ladder shall be extended at least 2 feet above the strand and shall be secured to it (e.g. lashed or held by a safety strap around the strand and ladder side rail). When a ladder is supported by a pole, it shall be securely lashed to the pole unless the ladder is specifically designed to prevent movement when used in this application.

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