

By Standard Number / 1910.25 - Stairways.

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- **Part Number:** 1910
  - **Part Number Title:** Occupational Safety and Health Standards
  - **Subpart:** 1910 Subpart D
  - **Subpart Title:** Walking-Working Surfaces
  - **Standard Number:** 1910.25
  - **Title:** Stairways.
  - **GPO Source:** e-CFR
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#### 1910.25(a)

*Application.* This section covers all stairways (including standard, spiral, ship, and alternating tread-type stairs), except for stairs serving floating roof tanks, stairs on scaffolds, stairs designed into machines or equipment, and stairs on self-propelled motorized equipment.

#### 1910.25(b)

*General requirements.* The employer must ensure:

##### 1910.25(b)(1)

Handrails, stair rail systems, and guardrail systems are provided in accordance with § 1910.28;

##### 1910.25(b)(2)

Vertical clearance above any stair tread to any overhead obstruction is at least 6 feet, 8 inches (203 cm), as measured from the leading edge of the tread. Spiral stairs must meet the vertical clearance requirements in paragraph (d)(3) of this section.

##### 1910.25(b)(3)

Stairs have uniform riser heights and tread depths between landings;

##### 1910.25(b)(4)

Stairway landings and platforms are at least the width of the stair and at least 30 inches (76 cm) in depth, as measured in the direction of travel;

##### 1910.25(b)(5)

When a door or a gate opens directly on a stairway, a platform is provided, and the swing of the door or gate does not reduce the platform's effective usable depth to:

##### 1910.25(b)(5)(i)

Less than 20 inches (51 cm) for platforms installed before January 17, 2017; and

##### 1910.25(b)(5)(ii)

Less than 22 inches (56 cm) for platforms installed on or after January 17, 2017 (see Figure D-7 of this section);

##### 1910.25(b)(6)

Each stair can support at least five times the normal anticipated live load, but never less than a concentrated load of 1,000 pounds (454 kg) applied at any point;

#### 1910.25(b)(7)

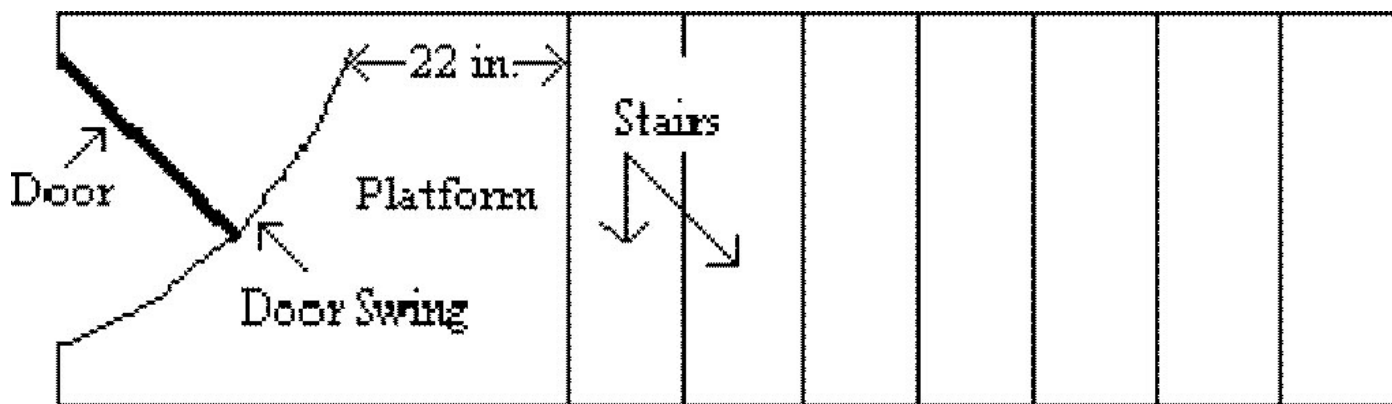
Standard stairs are used to provide access from one walking-working surface to another when operations necessitate regular and routine travel between levels, including access to operating platforms for equipment. Winding stairways may be used on tanks and similar round structures when the diameter of the tank or structure is at least 5 feet (1.5 m).

#### 1910.25(b)(8)

Spiral, ship, or alternating tread-type stairs are used only when the employer can demonstrate that it is not feasible to provide standard stairs.

#### 1910.25(b)(9)

When paragraph (b)(8) of this section allows the use of spiral, ship, or alternating tread-type stairs, they are installed, used, and maintained in accordance with manufacturer's instructions.



## Figure D-7 -- Door or Gate Opening on Stairway

Figure D-7 -- Door or Gate Opening on Stairway.

#### 1910.25(c)

*Standard stairs.* In addition to paragraph (b) of this section, the employer must ensure standard stairs:

#### 1910.25(c)(1)

Are installed at angles between 30 to 50 degrees from the horizontal;

#### 1910.25(c)(2)

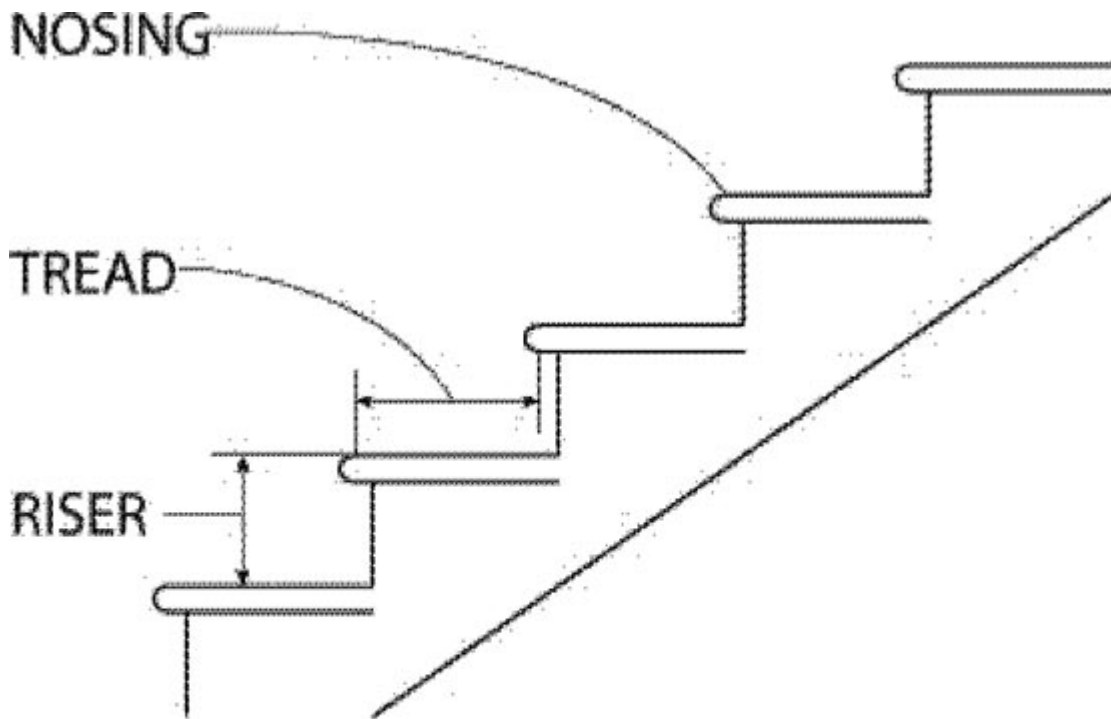
Have a maximum riser height of 9.5 inches (24 cm);

#### 1910.25(c)(3)

Have a minimum tread depth of 9.5 inches (24 cm); and

#### 1910.25(c)(4)

Have a minimum width of 22 inches (56 cm) between vertical barriers (see Figure D-8 of this section).



**MINIMUM TREAD WIDTH 22 IN (56 CM)**  
**MINIMUM TREAD DEPTH 9.5 IN (24 CM)**  
**MAXIMUM RISER HEIGHT 9.5 IN (24 CM)**

**FIGURE D-8 — Tread and Riser Measurements**

1910.25(c)(5)

*Exception to paragraphs (c)(2) and (3) of this section.* The requirements of paragraphs (c)(2) and (3) do not apply to standard stairs installed prior to January 17, 2017. OSHA will deem those stairs in compliance if they meet the dimension requirements specified in Table D-1 of this section or they use a combination that achieves the angle requirements of paragraph (c)(1) of this section.

**Table D-1 -- Stairway Rise and Tread Dimensions**

Angle to horizontal	Rise (in inches)	Tread run (in inches)
30 deg. 35'	6 1/2	11
32 deg. 08'	6 3/4	10 3/4
33 deg. 41'	7	10 1/2
35 deg. 16'	7 1/4	10 1/4
36 deg. 52'	7 1/2	10
38 deg. 29'	7 3/4	9 3/4
40 deg. 08'	8	9 1/2
41 deg. 44'	8 1/4	9 1/4

Angle to horizontal	Rise (in inches)	Tread run (in inches)
43 deg. 22'	8 1/2	9
45 deg. 00'	8 3/4	8 3/4
46 deg. 38'	9	8 1/2
48 deg. 16'	9 1/4	8 1/4
49 deg. 54'	9 1/2	8

## 1910.25(d)

*Spiral stairs.* In addition to paragraph (b) of this section, the employer must ensure spiral stairs:

## 1910.25(d)(1)

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

## 1910.25(d)(2)

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

## 1910.25(d)(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;

## 1910.25(d)(4)

Have a minimum tread depth of 7.5 inches (19 cm), measured at a point 12 inches (30 cm) from the narrower edge;

## 1910.25(d)(5)

Have a uniform tread size;

## 1910.25(e)

*Ship stairs.* In addition to paragraph (b) of this section, the employer must ensure ship stairs (see Figure D-9 of this section):

## 1910.25(e)(1)

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

## 1910.25(e)(2)

Have open risers with a vertical rise between tread surfaces of 6.5 to 12 inches (17 to 30 cm);

## 1910.25(e)(3)

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

## 1910.25(e)(4)

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

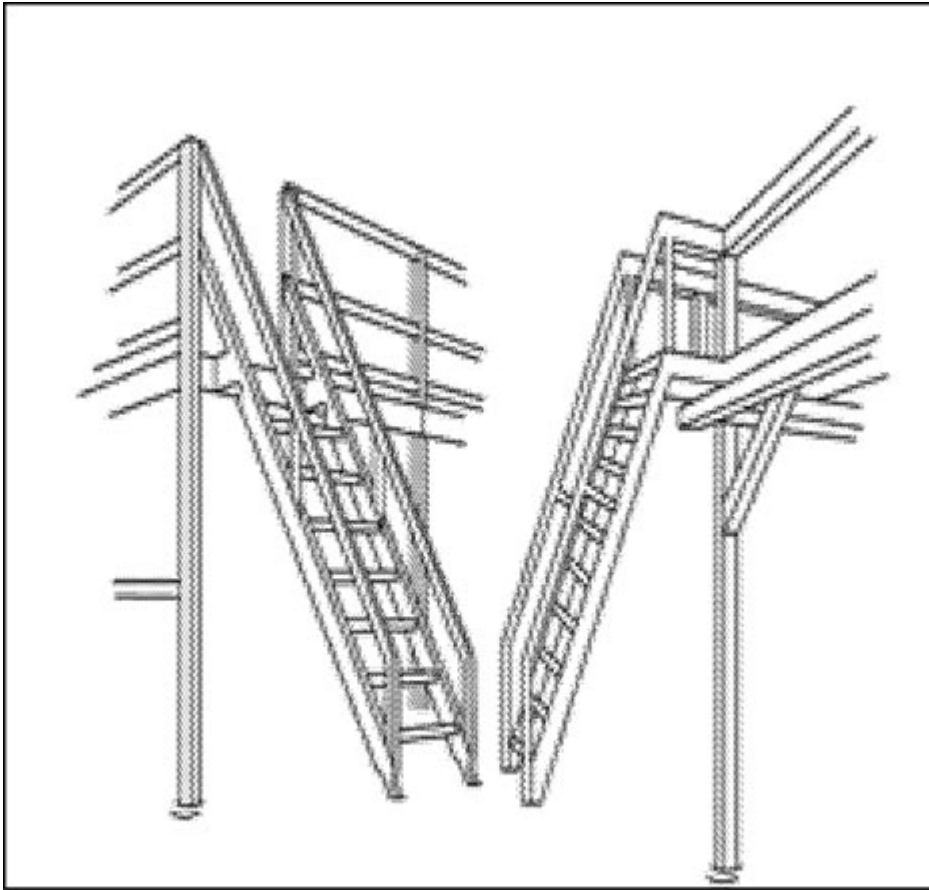


Figure D-9 – Ship Stairs

**Figure D-9 -- Ship Stairs.**

1910.25(f)

*Alternating tread-type stairs.* In addition to paragraph (b) of this section, the employer must ensure alternating tread-type stairs:

1910.25(f)(1)

Have a series of treads installed at a slope of 50 to 70 degrees from the horizontal;

1910.25(f)(2)

Have a distance between handrails of 17 to 24 inches (51 to 61 cm);

1910.25(f)(3)

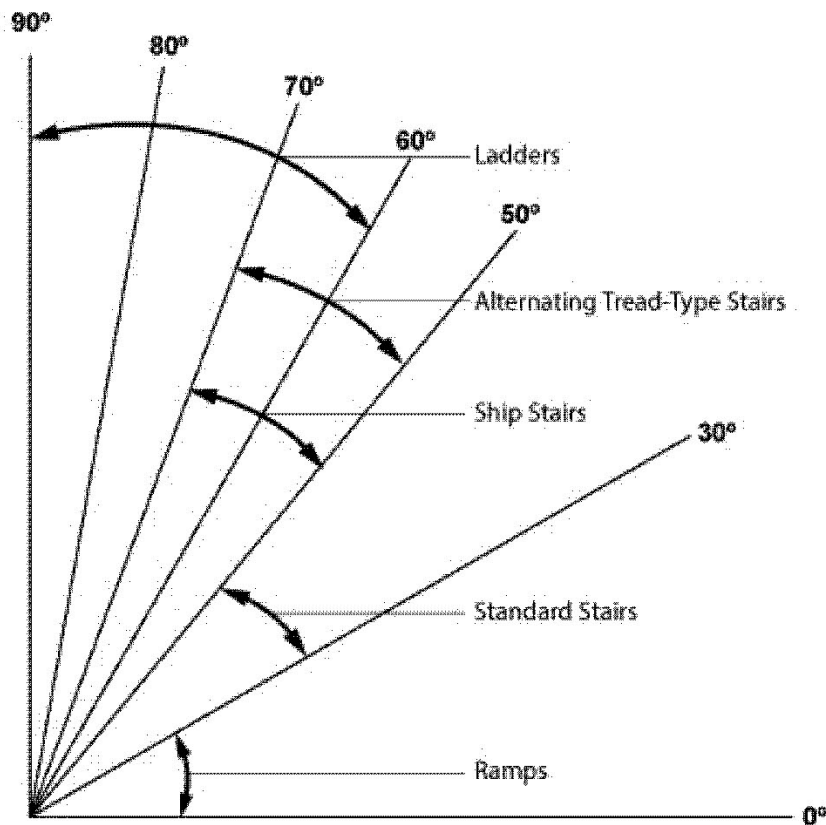
Have a minimum tread depth of 8.5 inches (22 cm); and

1910.25(f)(4)

Have open risers if the tread depth is less than 9.5 inches (24 cm);

1910.25(f)(5)

Have a minimum tread width of 7 inches (18 cm), measured at the leading edge of the tread (*i.e.*, nosing).



Angle	Type
≤ 30°	Ramps
30° – 50°	Standard Stairs
50° – 70°	Ship Stairs
50° – 70°	Alternating Tread-Type Stairs
60° – 90°	Ladders

Figure D-10 – Angles for Stairs, Ramps, and Ladders

Figure D-10 -- Angles for Stairs, Ramps, and Ladders.

[39 FR 23502, June 27, 1974, as amended at 43 FR 49744, Oct. 24, 1978; 49 FR 5321, Feb. 10, 1984; 81 FR 82987-82990, Nov. 18, 2016]

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