

SECTION 402 ACCESSIBLE ROUTES

402.1 General.

Accessible routes shall comply with Section 402.

402.2 Components.

All components of an accessible route shall comply with the applicable portions of this standard. Accessible building entrances shall comply with Section 402.2.1. Accessible routes within a site shall comply with Section 402.2.2. All other accessible routes shall consist of one or more of the following components: walking surfaces with a slope not steeper than 1:20, doors and doorways, ramps, curb ramps excluding the flared sides, elevators, and platform lifts.

402.2.1 Accessible building entrance components.

Accessible building entrances shall provide an exterior accessible route consisting of one or more of the following components: walking surfaces with a slope of not steeper than 1:20; doors and doorways; curb ramps excluding the flared sides; elevators; and platform lifts.

Exceptions:

1. Buildings not normally occupied shall be permitted to provide an accessible route by means of a ramp.
2. In addition to the components listed in Section 402.2.2, a ramp shall be considered as a component of an exterior accessible route in Group R-2, R-3, and R-4 occupancies where a slope not steeper than 1:20 is not feasible.

402.2.2 Components within a site.

Buildings, facilities, elements, and spaces that are required to be accessible and are on the same site shall be connected by an accessible route consisting of one or more of the following components: walking surfaces with a slope not steeper than 1:20; doors and doorways; curb ramps excluding the flared sides; elevators; and platform lifts.

Exception: Buildings, facilities, elements, and spaces not normally occupied shall be permitted to provide an accessible route by means of a ramp.

402.3 Revolving doors, revolving gates, and turnstiles. Revolving doors, revolving gates, and turnstiles shall not be part of an accessible route.

SECTION 403 WALKING SURFACES

403.1 General.

Walking surfaces that are a part of an accessible route shall comply with Section 403.

403.2 Floor surface.

Floor surfaces shall comply with Section 302.

403.3 Slope.

The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of a walking surface shall not be steeper than 1:48.

403.4 Changes in level.

Changes in level shall comply with Section 303.

403.5 Clear width.

The clear width of an accessible route shall comply with Section 403.5.1, 403.5.2, 403.5.3, or 403.5.4, as applicable.

403.5.1 General

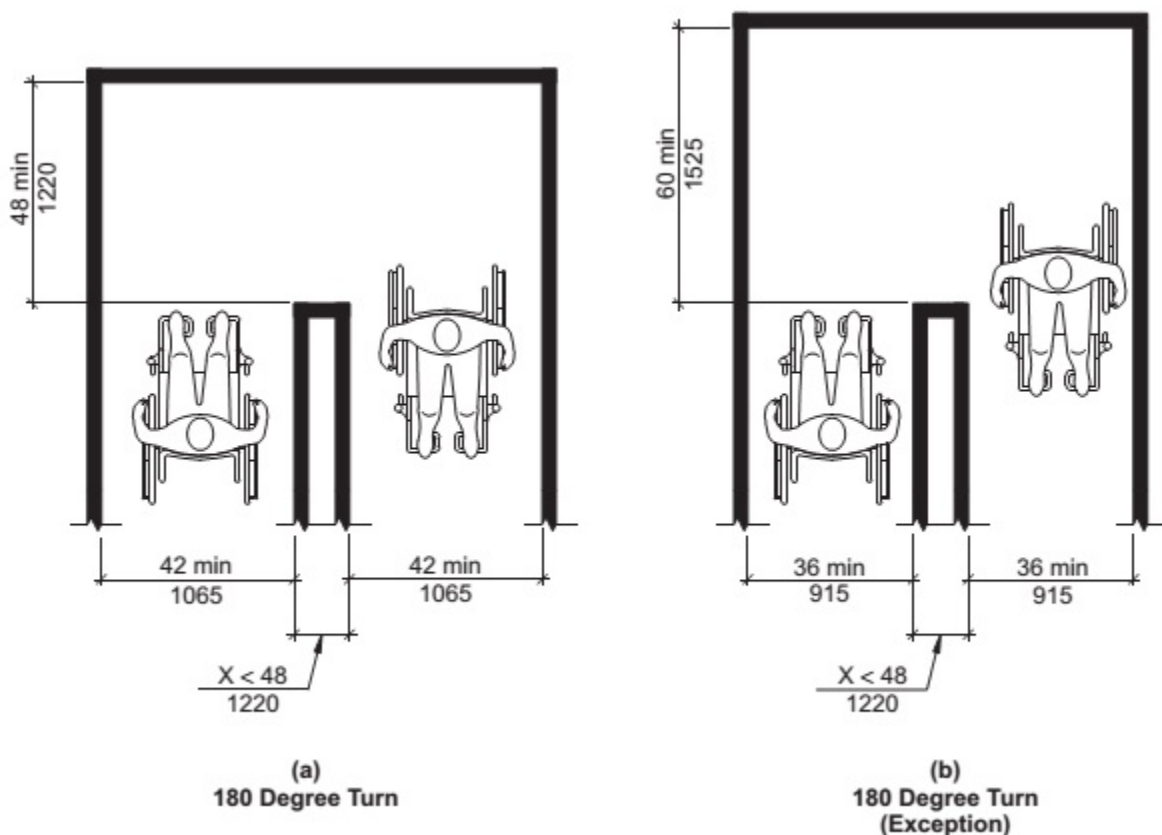
The clear width of an accessible route shall be 36 inches (915 mm) minimum.

Exception: The clear width shall be permitted to be reduced to 32 inches (815 mm) minimum for a length of 24 inches (610 mm) maximum provided the reduced width segments are separated by segments that are 48 inches (1220 mm) minimum in length and 36 inches (915 mm) minimum in width.

403.5.2. Clear Width at Turn

Where an accessible route makes a 180-degree turn around an object that is less than 48 inches (1220 mm) in width, clear widths shall be 42 inches (1065 mm) minimum approaching the turn, 48 inches (1220 mm) minimum during the turn and 42 inches (1065 mm) minimum leaving the turn.

Exception: Section 403.5.2 shall not apply where the clear width at the turn is 60 inches (1525 mm) minimum.



**SECTION 404
DOORS AND DOORWAYS**

See separate handout for details.

**SECTION 405
RAMPS**

405.1 General.

Ramps along accessible routes shall comply with Section 405.

Exception: In assembly areas, aisle ramps adjacent to seating and not serving elements required to be on an accessible route shall not be required to comply with Section 405.

405.2 Slope.

Ramp runs shall have a running slope greater than 1:20 and not steeper than 1:12.

Exception: In existing buildings or facilities, ramps shall be permitted to have slopes steeper than 1:12 complying with Table 405.2 where such slopes are necessary due to space limitations.

TABLE 405.2
ALLOWABLE RAMP DIMENSIONS FOR CONSTRUCTION
IN EXISTING SITES, BUILDINGS AND FACILITIES

SLOPE ¹	MAXIMUM RISE
Steeper than 1:10 but not steeper than 1:8	3 inches (75 mm)
Steeper than 1:12 but not steeper than 1:10	6 inches (150 mm)

1. A slope steeper than 1:8 shall not be permitted.

405.3 Cross slope.

Cross slope of ramp runs shall not be steeper than 1:48.

405.4 Floor surfaces.

Floor surfaces of ramp runs shall comply with Section 302.

405.5 Clear width.

The clear width of a ramp run shall be 36 inches (915 mm) minimum. Handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run.

405.6 Rise.

The rise for any ramp run shall be 30 inches (760 mm) maximum.

405.7 Landings.

Ramps shall have landings at the bottom and top of each ramp run. Landings shall comply with Section 405.7.

405.9 Edge protection.

Edge protection complying with Section 405.9.1 or 405.9.2 shall be provided on each side of ramp runs and at each side of ramp landings.

Exceptions:

1. Edge protection shall not be required on ramps not required to have handrails and that have flared sides complying with Section 406.3.
2. Edge protection shall not be required on the sides of ramp landings serving an adjoining ramp run or stairway.
3. Edge protection shall not be required on the sides of ramp landings having a vertical drop-off of $\frac{1}{2}$ inch (13 mm) maximum within 10 inches (255 mm) horizontally of the minimum landing area specified in Section 405.7.
4. Edge protection shall not be required on the sides of ramped aisles where the ramps provide access to the adjacent seats and aisle access ways.

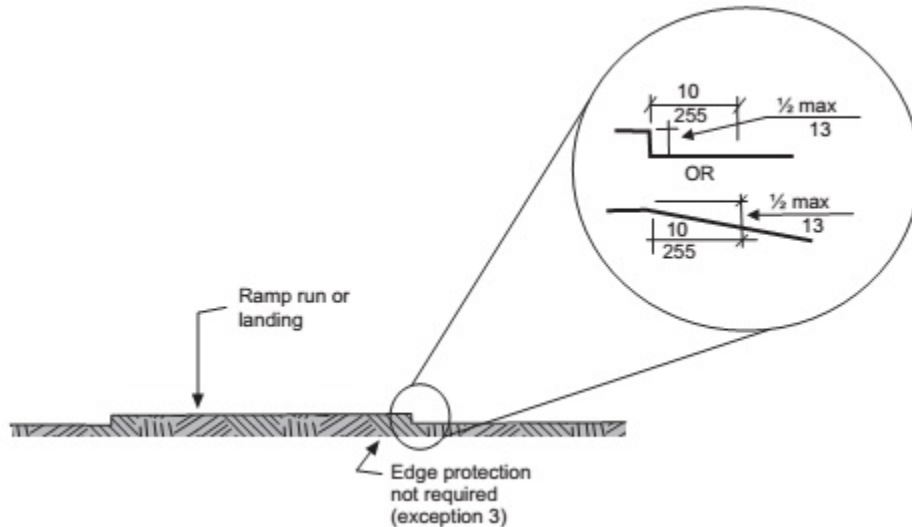


FIGURE 405.9
EDGE PROTECTION—LIMITED DROP OFF

405.9.1 Extended floor surface.

The floor surface of the ramp run or ramp landing shall extend 12 inches (305 mm) minimum beyond the inside face of a railing complying with Section 505.

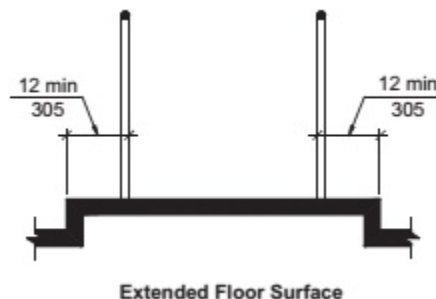


FIGURE 405.9.1
EXTENDED FLOOR SURFACE

405.9.2 Curb or barrier.

A curb complying with Section 405.9.2.1 or a barrier complying with Section 405.9.2.2 shall be provided.

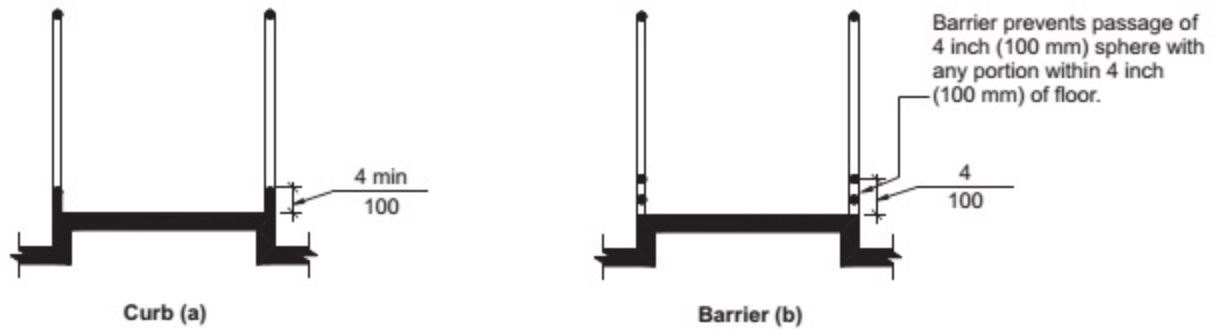


FIGURE 405.9.2
RAMP EDGE PROTECTION

SECTION 504 STAIRWAYS

504.1 General.

Accessible stairs shall comply with Section 504.

504.2 Treads and risers.

All steps on a flight of stairs shall have uniform riser height and uniform tread depth. Risers shall be 4 inches (100 mm) minimum and 7 inches (180 mm) maximum in height. Treads shall be 11 inches (280 mm) minimum in depth.

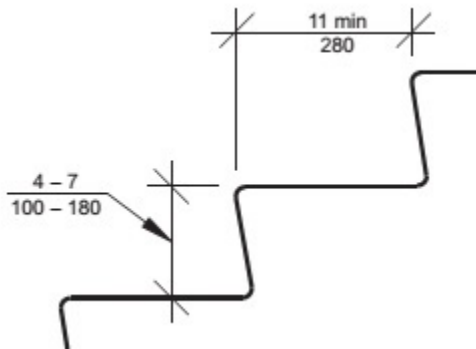


FIGURE 504.2
TREADS AND RISERS FOR ACCESSIBLE STAIRWAYS

504.3 Open risers.

Open risers shall not be permitted.

504.4 Tread surface.

Stair treads shall comply with Section 302 and shall have a slope not steeper than 1:48.

504.5 Nosings.

The radius of curvature at the leading edge of the tread shall be $\frac{1}{2}$ inch (13 mm) maximum. Nosings that project beyond risers shall have the underside of the leading edge curved or beveled. Risers shall be permitted to slope under the tread at an angle of 30 degrees maximum from vertical. The permitted projection of the nosing shall be $1\frac{1}{2}$ inches (38 mm) maximum over the tread or floor below.

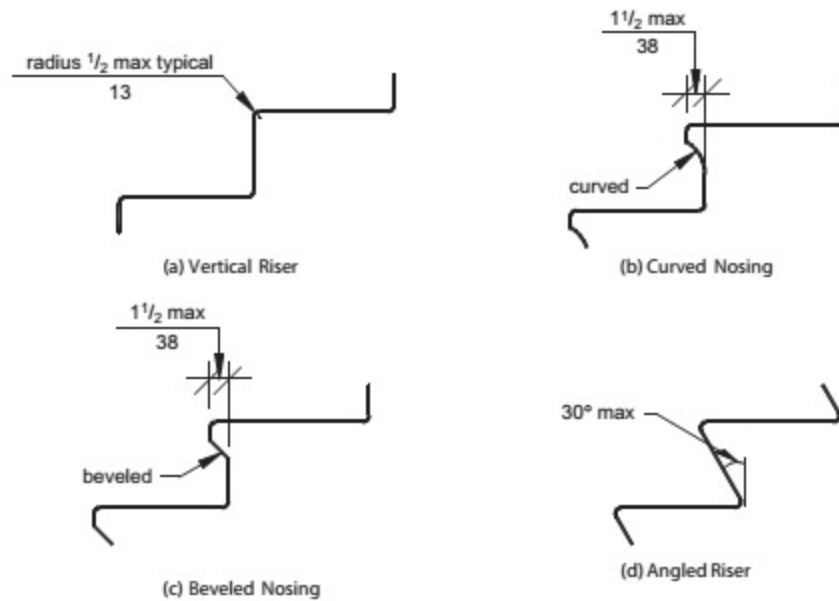


FIGURE 504.5
STAIR NOSINGS

504.5.1 Visual contrast.

The leading 2 inches (51 mm) of the tread shall have visual contrast of dark-on-light or light-on-dark from the remainder of the tread.

504.6 Handrails.

Stairs shall have handrails complying with Section 505.

504.7 Wet conditions.

Stair treads and landings subject to wet conditions shall be designed to prevent the accumulation of water.

504.8 Lighting.

Lighting for interior stairways shall comply with Section 504.8.

504.8.1 Illumination level.

Lighting facilities shall be capable of providing 10 foot-candles (108 lux) of illuminance measured at the center of tread surfaces and on landing surfaces within 24 inches (610 mm) of step nosing.

504.8.2 Lighting controls.

If provided, occupancy-sensing automatic controls shall activate the stairway lighting so the illuminance level required by Section 504.8.1 is provided on the entrance landing, each stair flight adjacent to the entrance landing, and on the landings above and below the entrance landing prior to any step being used.

504.9 Stair level identification.

Stair level identification signs in raised characters and braille complying with Sections 703.3 and 703.4 shall be located at each floor level landing in all enclosed stairways adjacent to the door leading from the stairwell into the corridor to identify the floor level. The exit door discharging to the outside or to the level of exit discharge shall have a sign with raised characters and braille stating "EXIT."

505.7.1 Circular cross section.

Handrails with a circular cross section shall have an outside diameter of 1 $\frac{1}{4}$ inches (32 mm) minimum and 2 inches (51 mm) maximum.

505.7.2 Noncircular cross sections.

Handrails with a noncircular cross section shall have a perimeter dimension of 4 inches (100 mm) minimum and 6 $\frac{1}{4}$ inches (160 mm) maximum, and a cross-section dimension of 2 $\frac{1}{4}$ inches (57 mm) maximum.

505.8 Surfaces.

Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded.

505.9 Fittings.

Handrails shall not rotate within their fittings.

505.10 Handrail extensions.

Handrails shall extend beyond and in the same direction of stair flights and ramp runs in accordance with Section 505.10.

Exceptions:

1. Continuous handrails at the inside turn of stairs and ramps.
2. Handrail extensions are not required in aisles serving seating where the handrails are discontinuous to provide access to seating and to permit crossovers within the aisle.
3. In alterations, full extensions of handrails shall not be required where such extensions would be hazardous due to plan configuration.

505.10.1 Top and bottom extension at ramps.

Ramp handrails shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of ramp runs. Extensions shall return to a wall, guard, or floor, or shall be continuous to the handrail of an adjacent ramp run.

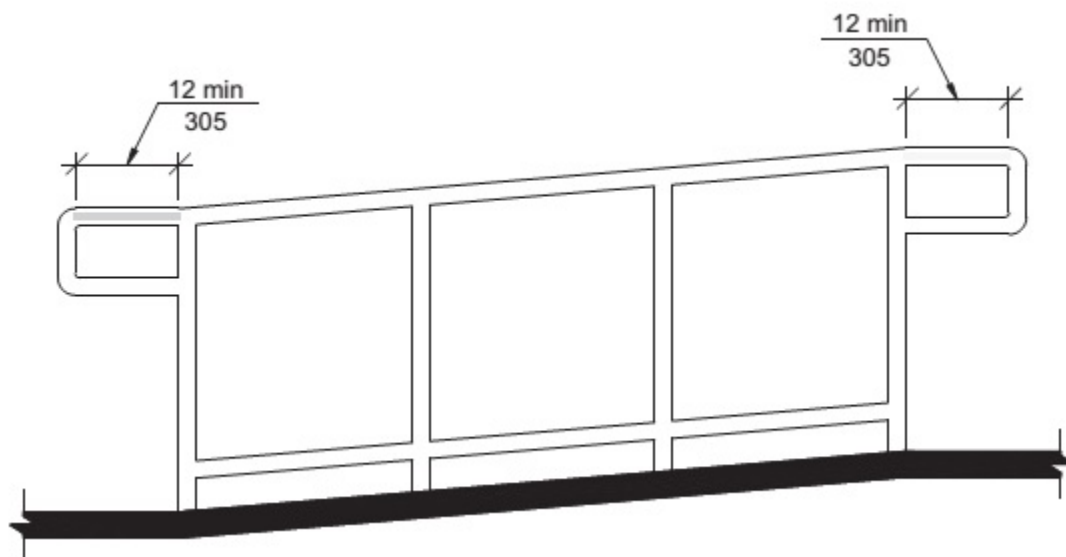


FIGURE 505.10.1
TOP AND BOTTOM HANDRAIL EXTENSIONS AT RAMPS

505.10.2 Top extension at stairs.

At the top of a stair flight, handrails shall extend horizontally above the landing for 12 inches (305 mm) minimum beginning directly above the landing nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

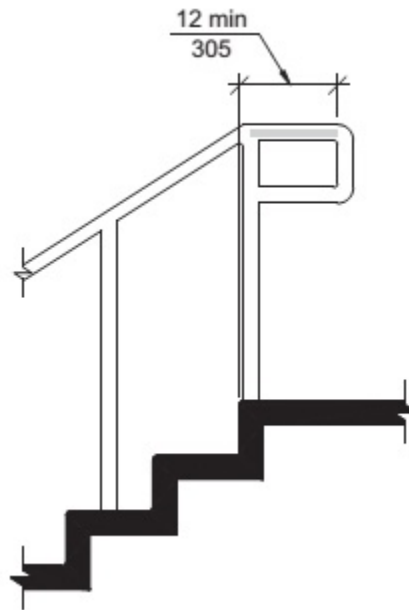


FIGURE 505.10.2
TOP HANDRAIL EXTENSIONS AT STAIRS

505.10.3 Bottom extension at stairs.

At the bottom of a stair flight, handrails shall extend at the slope of the stair flight for a horizontal distance equal to one tread depth beyond the bottom tread nosing. Extensions shall return to a wall, guard, or the landing surface, or shall be continuous to the handrail of an adjacent stair flight.

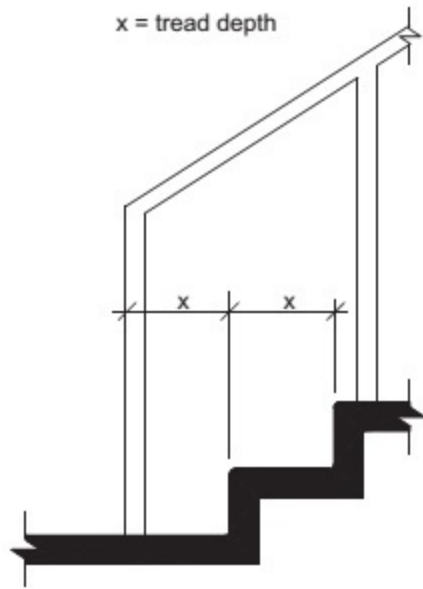


FIGURE 505.10.3
BOTTOM HANDRAIL EXTENSIONS AT STAIRS