

**HUMBOLDT COUNTY BUILDING DEPARTMENT
CITY OF WINNEMUCCA BUILDING DEPARTMENT
ACCESSIBLE RAMP**

REFERENCED CODE: ICC/ANSI A117.1 -2009 – Accessible and Usable Buildings and Facilities & 2012 International Building Code

Ramps (Section 405)

Slope and Rise. Ramps in new construction shall have a running slope greater than 1:20 and not steeper than 1:12. The rise for any ramp run shall be 30" maximum. Curb ramps and ramps constructed on existing sites or existing buildings or facilities shall be permitted to have slopes and rises as shown in Table 405.2 provided space limitations prohibit use of a 1:12 slope or less. (405.2)

Table 405.2 – Allowable Ramp Dimensions for Construction in Existing Sites, Buildings & Facilities

Slope*	Maximum Rise
Steeper than 1:10 but not steeper than 1:8	3"
Steeper than 1:12 but not steeper than 1:10	6"
*A slope steeper than 1:8 shall not be permitted	

Floor Surfaces: Floor surfaces shall be stable, firm, and slip resistant, and shall comply with Section 302. Changes in level in floor surfaces shall comply with Section 303.

Clear Width. The clear width of a ramp run shall be 36" minimum. Handrails and handrail supports that are provided on the ramp run shall not project into the required clear width of the ramp run. (405.5)

Landings. Ramps shall have level landings at bottom and top of each run. Landings shall have the following features: (405.7)

- Slope: Cross slope of ramp surfaces shall not be steeper than 1:48. (405.7.1)
- Width: Clear width of landings shall be at least as wide as the widest ramp leading to the landing. (405.7.2)
- Length: Landings shall have a clear length of 60 inches (405.7.3)
- Change in Direction: Reamps that change direction at ramp landings shall be sized to provide a turning space complying with Section 304.3 (407.7.4)
- Doorways: Doorways that are adjacent to ramp landing, maneuvering clearances required by Sections 404.2.3 and 404.3.2 shall be permitted to overlap the landing area. Where doors that are subject to locking are adjacent to a ramp landing, landings shall be sized to provide turning space complying with Section 304.3 (405.7.5)

Handrails. Ramps runs with a rise greater than 6 inches shall have handrails complying with Section 505.

Guardrails. Guardrails are required when the ramp is over 30" above grade. Guardrails shall comply with IBC Section 1012.

Thresholds. Threshold at doorways shall not exceed ½" in height per IBC Section 1008.1.6

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. (405.9) (see exceptions)
The floor surface of the ramp run or ramp landing shall extend 12" minimum beyond the inside face of a railing complying with Section 505. (405.9.1)

A curb shall be a minimum of 4" in height. (405.9.2.1)

Barriers shall be constructed so that the barrier prevents the passage of 4" diameter sphere where any portion of the sphere is within 4" of the floor. (405.9.2.2)

Wet Conditions. Landings subject to wet conditions shall be designed to prevent the accumulation of water. (405.10)

Curb Ramps (Section 406)

Counter Slope: Counter slopes of adjoining gutters and road surfaces immediately adjacent to the curb ramp shall not be steeper than 1:20. The adjacent surfaces at transitions at curb ramps to walks, gutters, and streets shall be the same level. (406.2)

Sides of Curb Ramps: Where provided, curb ramp flares shall comply with Section 406.3

Slope: Flares shall not be steeper than 1:10. (406.3.1)

Marking: If curbs adjacent to the ramp flares are painted, the painted surface shall extend along the flared portion of the curb. (406.3.2)

Floor Surfaces: Floor surfaces of curb ramps shall comply with Section 302. (406.5)

Location: Curb ramps and the flared sides of curb ramps shall be located so they do not project into vehicular traffic lanes, parking spaces, or parking access aisles. Curb ramps at marked crossings shall be wholly contained within the markings, excluding any flared sides. (406.6)

Landings: Landings shall be provided at the tops of curb ramps. The clear length of the landing shall be 36" minimum. The clear width of the landing shall be at least as wide as the curb ramp, excluding flared sides, leading to the landing. (406.7)

Obstructions: Curb ramps shall be located or protected to prevent their obstruction by parked vehicles. (406.8)

Diagonal Curb Ramps: Diagonal or corner type curb ramps with returned curbs or other well defined edges shall have the edges parallel to the direction of pedestrian flow. The bottoms of diagonal curb ramps shall be 48" minimum clear space outside active traffic lanes of the roadway. Diagonal curb ramps provided at marked crossings shall provide the 48" minimum clear space within the markings. Diagonal curb ramps with flared sides shall have a segment of curb 24" minimum in length on each side of curb ramp and within the marked crossing. (406.10)

Detectable Warnings at Raised Marked Crossings: Marked crossings that are raised to the same level as the adjoining sidewalk shall be preceded by a detectable warning 24" in depth complying with Section 705. The detectable warning shall extend the full width of the marked crossing. (406.12)

Detectable Warnings at Curb Ramps: Where detectable warnings are provided on curb ramps, they shall comply with Sections 476.13 and 705.

Area Covered: Detectable warnings shall be 24" minimum in depth in the direction of travel. The detectable warning shall extend the full width of the curb ramp or flush surface. (406.13.1)

Location: The detectable warning shall be located so the edge nearest the curb line is 6" minimum and 8" maximum for the curb line.

Handrails (Section 505)

Handrails shall be provided on both sides of stairs and ramps. Exception: Aisle stairs and aisle ramps provided with handrail either at the side or within the aisle width. (505.2)

Handrails shall be continuous within the full length of each stair flight or ramp run. Exception: handrails in aisles serving seating. (505.3)

Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. Other handrails shall comply with 307 & 505.10. Exception: Handrails in aisles serving seating. (505.3)

Top of gripping surfaces of handrails shall be 34" minimum to 38" maximum vertically above ramp surfaces. Handrails shall be at a consistent height above ramp surfaces. (505.4)

Clear space between handrail and wall shall be 1 ½" minimum. (505.5) See Fig. 505.5

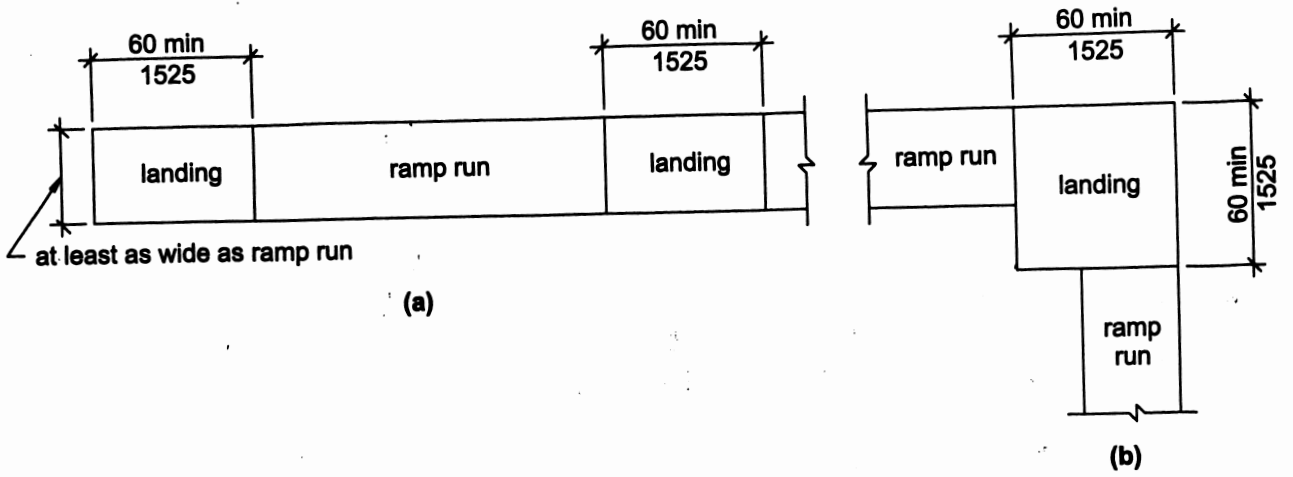
Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions. (505.6)

Handrails shall have a circular cross section with an outside diameter of 1 ¼" minimum and 2" maximum; or shall provide equivalent graspability in accordance with the following requirement. Handrails with other shapes shall be permitted provided they have perimeter dimension of 4" minimum and 6 ¼" maximum, and provided their largest cross-section dimension is 2 ¼" maximum See Fig. 505.7 (505.7.1)

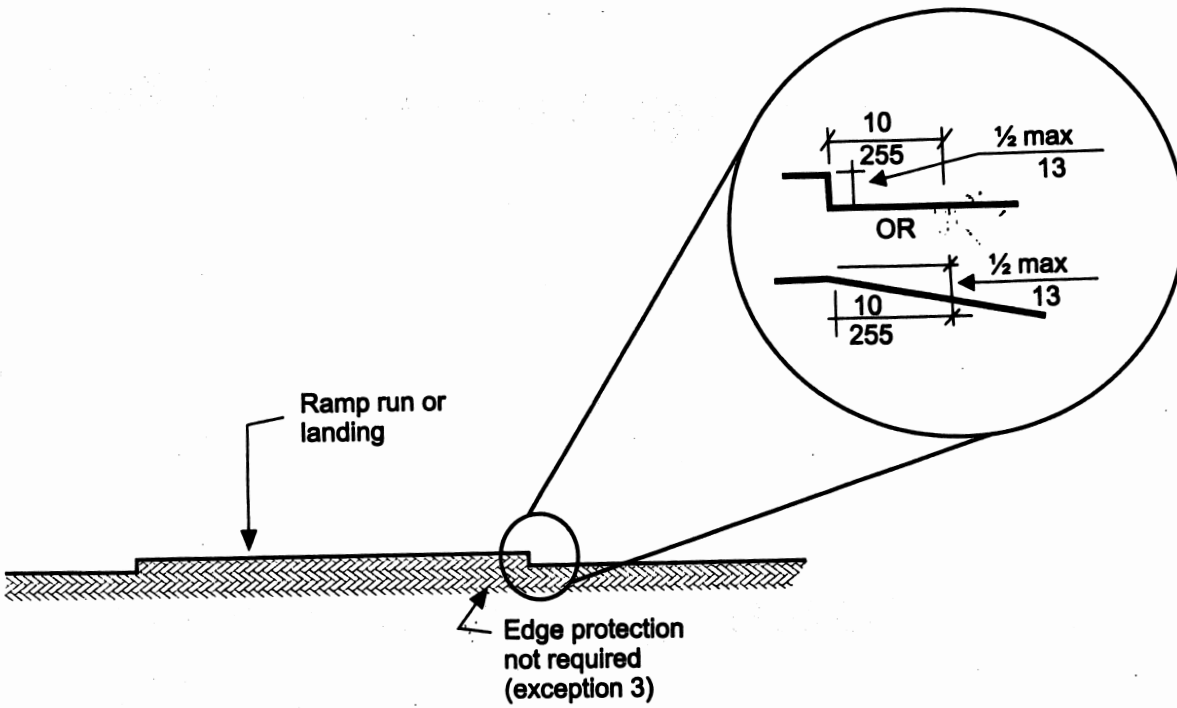
Handrails, and any wall or other surfaces adjacent to them, shall be free of any sharp or abrasive elements. Edges shall be rounded (505.8)

Handrail Extensions (505.10) – Handrails for stairs and ramps shall have extensions complying with 505.10 (see exceptions)

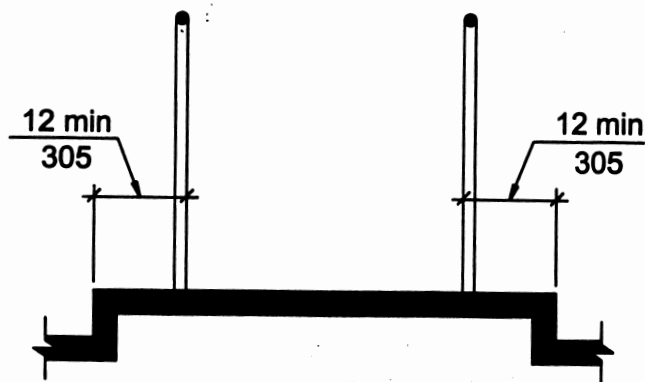
Ramp handrails shall extend horizontally 12" minimum beyond the top and bottom of ramp runs. Such extensions shall return to a wall, guard, or the floor, or shall be continuous to the handrail of the adjacent ramp run. See Fig. 505.10.1 (505.10.1)



**FIG. 405.7
RAMP LANDINGS**

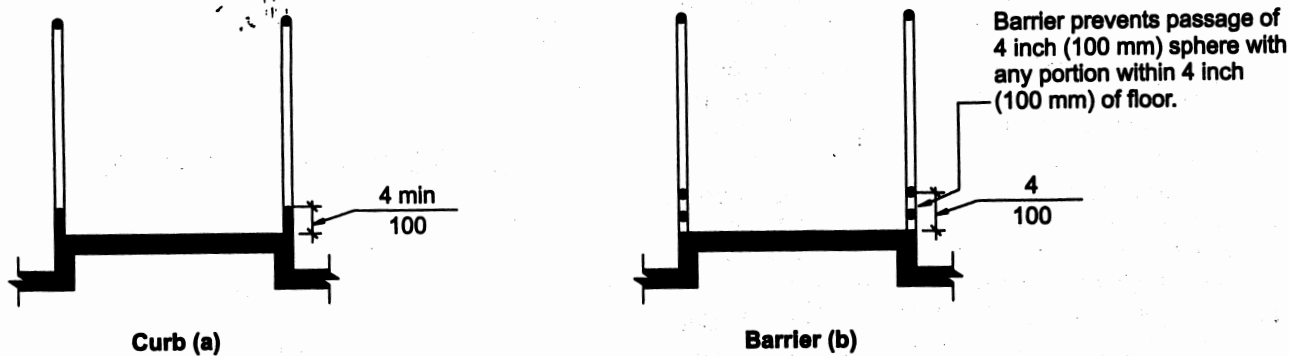


**FIG. 405.9
EDGE PROTECTION—LIMITED DROP OFF**

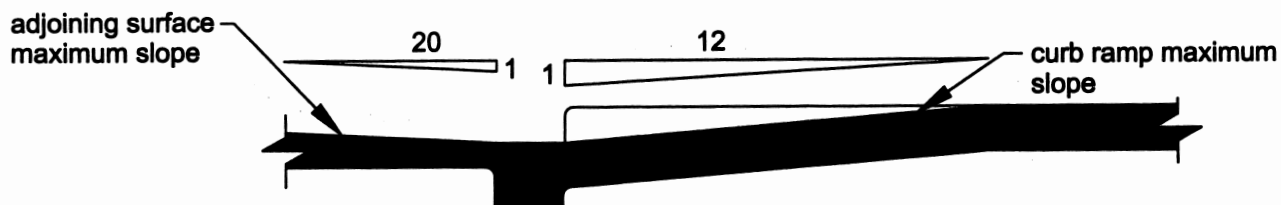


Extended Floor Surface

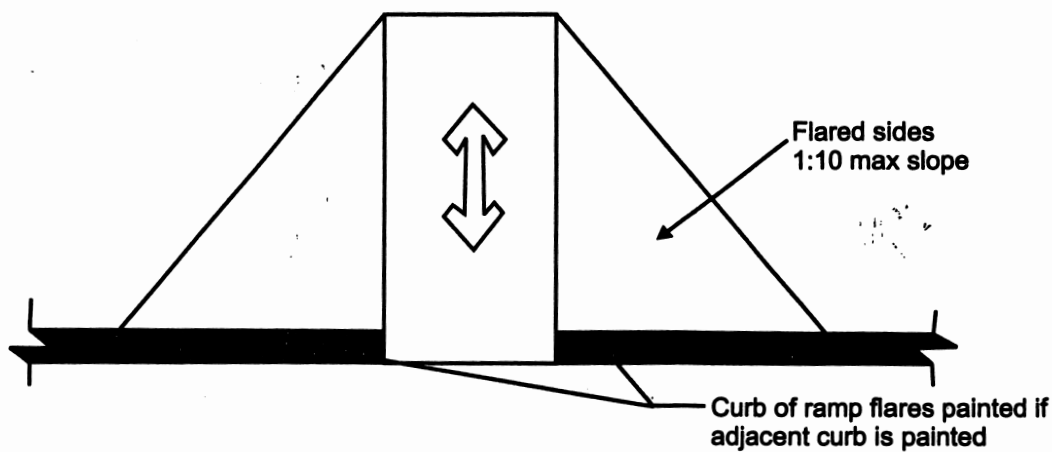
**FIG. 405.9.1
EXTENDED FLOOR SURFACE**



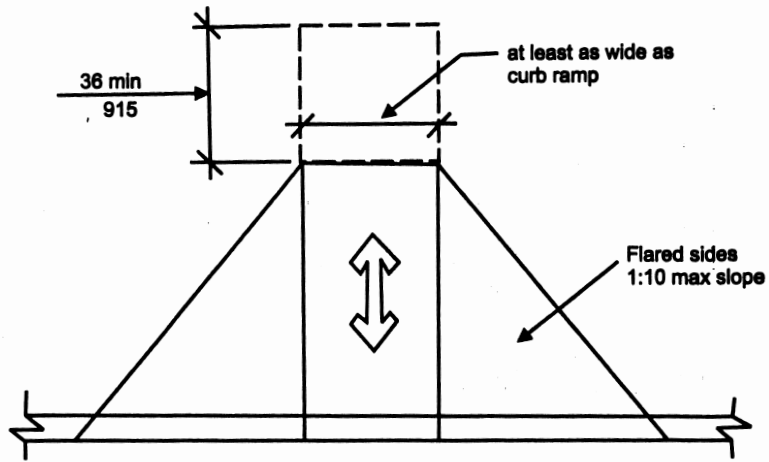
**FIG. 405.9.2
RAMP EDGE PROTECTION**



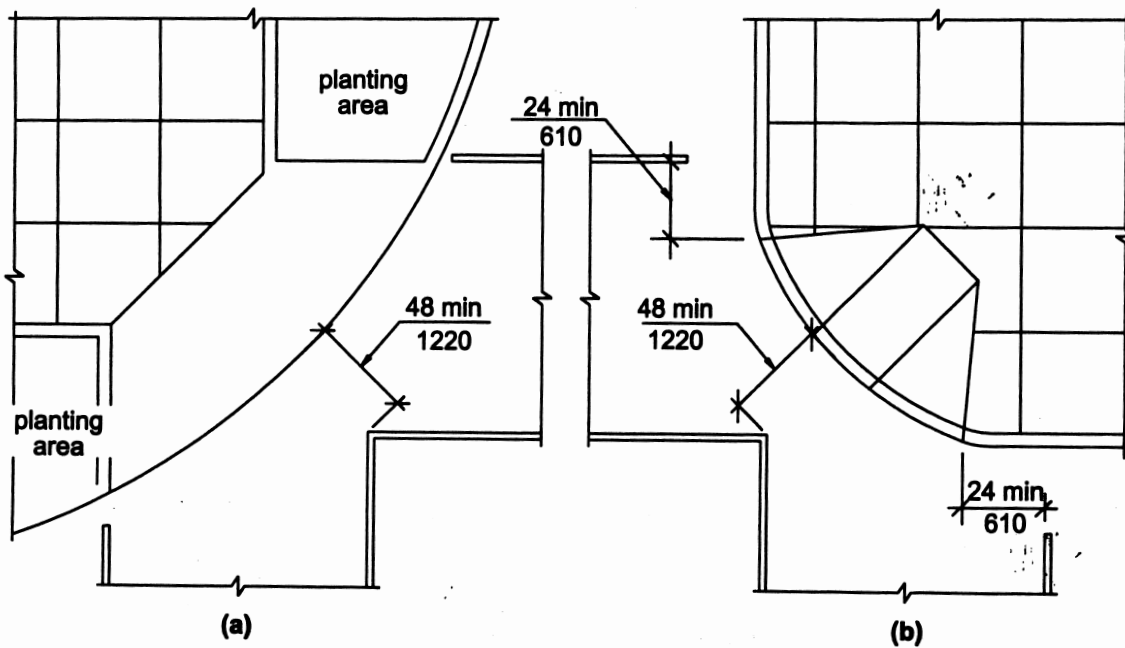
**FIG. 406.2
COUNTER SLOPE OF SURFACES ADJACENT TO CURB RAMPS**



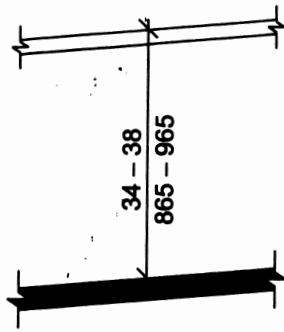
**FIG. 406.3
SIDES OF CURB RAMPS**



**FIG. 406.7
LANDINGS**



**FIG. 406.10
DIAGONAL CURB RAMPS**



(b) Ramps

FIG. 505.4
HANDRAIL HEIGHT

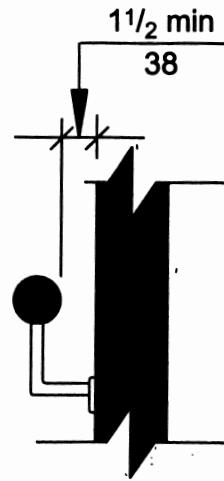


FIG. 505.5
HANDRAIL CLEARANCE

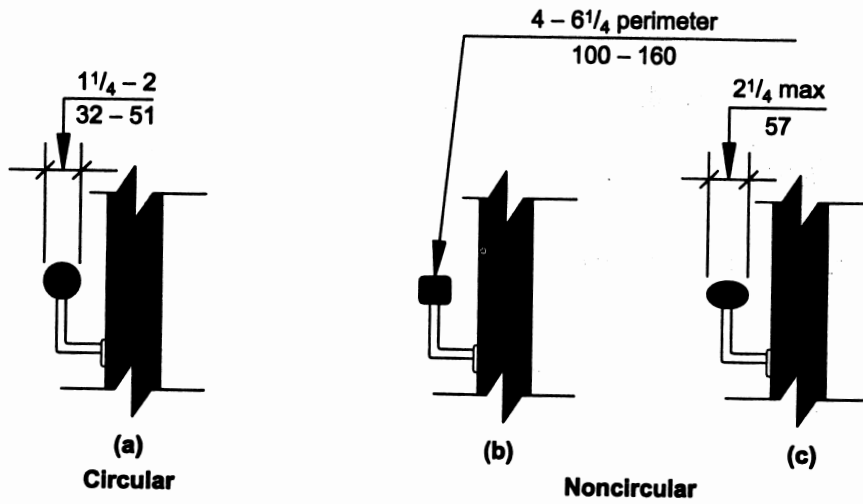


FIG. 505.7
HANDRAIL CROSS SECTION

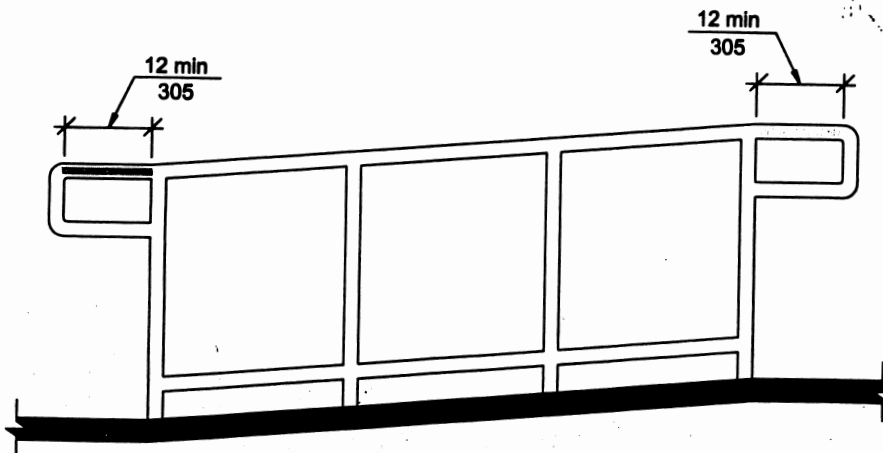


FIG. 505.10.1
TOP AND BOTTOM HANDRAIL EXTENSIONS AT RAMPS