



## Barrier Free Access Ramps

This information bulletin explains requirements for barrier free access ramps under the 2006 International Building Code (IBC) and ICC/ANSI A117.1-2003, effective August 1<sup>st</sup>, 2007.

**A Ramp is required** when the change in level of a floor surface is greater than ½ inch within an accessible space or along an accessible route of travel unless an elevator or platform lift provides access at the changes of level. **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.

**Slope:** Ramps shall have a running slope not steeper than 1:12 and a cross slope not steeper than 1:48.

**Table 405.2—Allowable Ramp Dimensions for Construction in Existing Sites, Buildings, and Facilities**

Slope <sup>1</sup>	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)

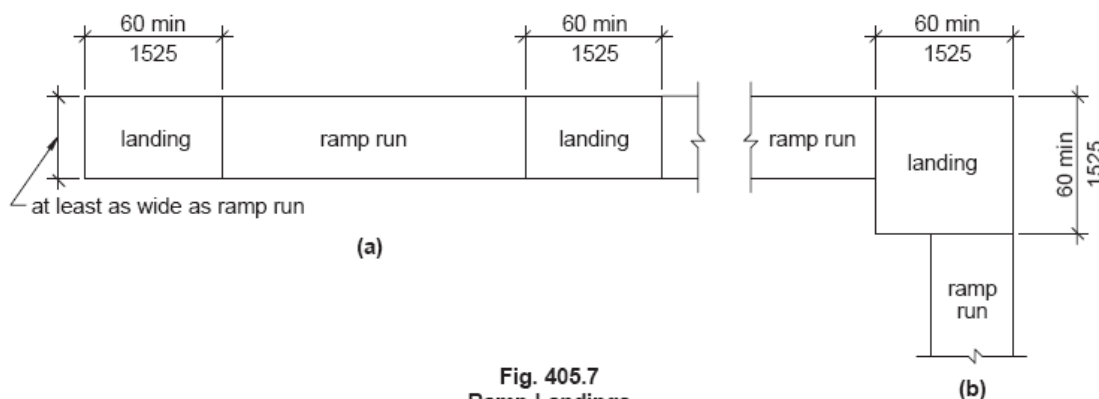
<sup>1</sup>A slope steeper than 1:8 shall not be permitted.

**Clear Width:** The clear width of a ramp runs shall be 36 inches for interior ramps, and 44 inches for exterior ramps. Where handrails are provided on the ramp run, the clear width shall be measured between the handrails.

**Rise:** The rise for any ramp run shall be 30 inches maximum.

**Landings:** Ramps shall have landings at bottom and top of each ramp run.

- Landings shall have a slope not steeper than 1:48
- Clear width of landings shall be at least as wide as the widest ramp run leading to the landing
- Landings shall have a clear length of 60 inches minimum
- Ramps that change direction at ramp landings shall be sized to provide a turning space complying with Section 304.3 ICC/ANSI A117.1-2003



**Fig. 405.7**  
**Ramp Landings**

**Handrails:** Ramp runs with a rise greater than 6 inches shall have complying handrails.

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

**Continuity:** Handrails shall be continuous within the full length of each stair flight or ramp run. Inside handrails on switchback or dogleg stairs or ramps shall be continuous between flights or runs. **Exception:** Handrails in aisles serving seating.

**Height:** Top of gripping surfaces of handrails shall be 34 inches minimum and 38 inches maximum vertically above stair nosings, ramp surfaces and walking surfaces. Handrails shall be at a consistent height above stair nosings, ramp surfaces and walking surfaces.

**Clearance:** Clearance between handrail gripping surface and adjacent surfaces shall be 1 and ½ inches minimum.

**Gripping Surface:** Gripping surfaces shall be continuous, without interruption by newel posts, other construction elements, or obstructions.

**Exceptions:**

1. Handrail brackets or balusters attached to the bottom surface of the handrail shall not be considered obstructions, provided they comply with the following criteria:
  - a. Not more than 20 percent of the handrail length is obstructed,
  - b. Horizontal projections beyond the sides of the handrail occur 1 and ½ inches minimum below the bottom of the handrail, and provided that for each ½ inch of additional handrail perimeter dimension above 4 inches, the vertical clearance dimension of 1 and ½ inch can be reduced by 1/8 inch, and
  - c. Edges shall be rounded.
2. Where handrails are provided along walking surfaces with slopes not steeper than 1:20, the bottoms of handrail gripping surfaces shall be permitted to be obstructed along their entire length where they are integral to crash rails or bumper guards.

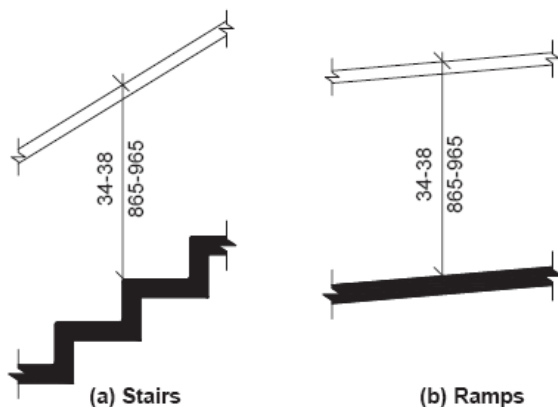


Fig. 505.4  
Handrail Height



Fig. 505.5  
Handrail Clearance