

6. Ramps, Curb-Ramps and Slopes - Sections 1127B, 1133B

When slopes are encountered on the path of travel to a polling place, they fit into three categories:

1. When a slope measures 5 percent or less, it is not a ramp; it is merely a slope in the normal path of travel.
2. When a slope measures more than 5 percent, it is considered a ramp.
3. When a slope provides access across a curb, it is defined as a curb-ramp or curb-cut.

The maximum slope allowed for any ramp that provides access for elderly voters and voters with disabilities is 8.33 percent. (Cal. Code Regs., tit. 24, § 1133B.5.3.) The percent of slope is determined by dividing the number of inches of vertical rise (height) for each 12 inches of horizontal run (length). For example, a slope with 1-inch of vertical rise for every 12 inches of horizontal run equals the maximum slope of 8.33 percent. ($1 / 12 = 8.33$ percent.) (Similar to Section 2, Path of Travel, when ramps slope to the side, the maximum cross-slope allowable is 2 percent.) (Cal. Code Regs., tit. 24, § 1133B.7.1.3.)

Ramps shall be a minimum of 48 inches wide with level landings at both the top and bottom of every ramp. (Cal. Code Regs., tit. 24, § 1133B.5.2., 1133B.5.4.2.) Top landings shall be at least 60 inches wide and 60 inches long. Bottom landings shall be at least 72 inches long. (Cal. Code Regs., tit. 24, § 1133B.5.4.2.) At bottom and intermediate landings, the width shall be at least the same as required for ramps. (Cal. Code Regs., tit. 24, § 1133B.5.4.5.)

Another type of landing is called an "intermediate landing." When the sloped area of a ramp rises vertically to a height of 30 inches above the bottom landing, the ramp shall end or there shall be a break in the slope for a level intermediate landing. (Cal. Code Regs., tit. 24, § 1133B.5.4.1.) See Figure 19. If a ramp rising to any height changes direction more than 30 degrees, there shall be an intermediate landing at least 72 inches long. (Cal. Code Regs., tit. 24, § 1133B.5.4.6.)

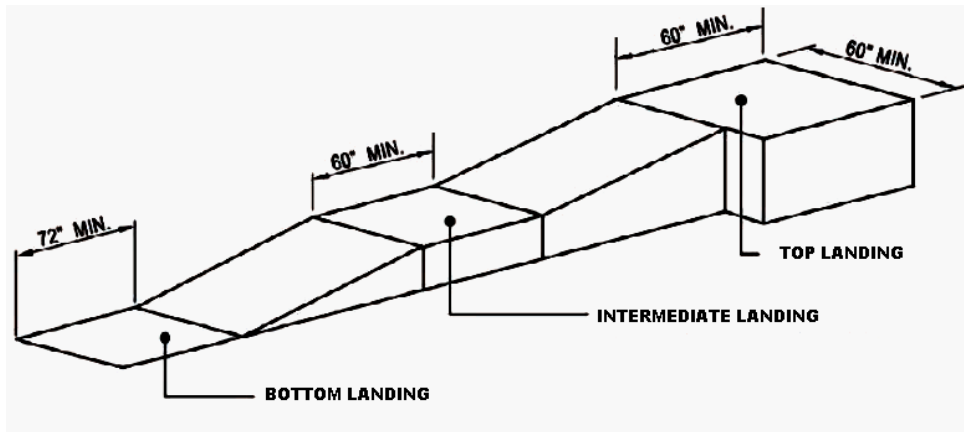


Figure 19

If a ramp is not adjacent to a wall, there shall be a wheel guide curb at least 2 inches high on both sides of the ramp to prevent wheelchair wheels from rolling off the edge of the ramp. (A wheel guide rail may be provided in lieu of the curb.) A wheel guide on one side of the ramp is permitted when the other side adjoins a wall or other vertical surface. (Cal. Code Regs., tit. 24, § 1133B.5.6.) See Figure 20.



Figure 20

Handrails that provide continuous support are required on both sides of a ramp and shall continue at least 12 inches past the end of the ramp surface. The handrail extensions shall be rounded or return to the ground, a wall, or post as shown in Figure 20. By extending the handrail 12 inches past the slope of the ramp, voters with balance difficulties will be on a level surface when they release their grip on the handrail. Handrails shall have a diameter of 1 ¼ inches to 1 ½ inches. When handrails are mounted on a wall, the gap between the handrail and the wall shall be 1 ½ inches. Handrails shall be placed

on each side of each ramp. They shall be continuous the full length of the ramp and shall be mounted 34 to 38 inches above the ramp surface measured to the top of the handrails.

When a ramp has a change in direction, the inside rail shall be continuous from landing to landing as shown in Figure 21. At exterior doors, a ramp does not require handrails if it is less than 6 inches high or 72 inches in length. (Cal. Code Regs., tit. 24, § 1133B.5.5.1.)



Figure 21

Curb-Ramps

When a pedestrian path of travel crosses a curb, a slope is required at the curb face or preferably cut into the curb as shown in Figure 22. (Cal. Code Regs., tit. 24, § 1127B.5.1.)

Curb-ramps are distinguished from ramps by a 12 inch wide grooved border cut into the walkway surface along the top and sides of the sloping surface. (Cal. Code Regs., tit. 24, § 1127B.5.6.) See Figure 22.

Unlike ramps, curb-ramps do not require handrails. Instead, the curb-ramp will have either wheel guides or side flares to prevent a voter with limited vision or a mobility disability from traveling off to the side of the curb-ramp slope. See Figure 22.



Figure 22

Similar to ramps, the maximum slope of a curb-ramp shall be 8.33 percent and the width shall be at least 48 inches. (Cal. Code Regs., tit. 24, § 1127B.5.2., 1127B.5.3.) However, the landing dimensions for curb-ramps are different from ramps. The top landing of a curb-ramp shall be a minimum of 48 inches long to provide a resting place for someone who has just traveled up the curb ramp slope. To rest at the top of the slope also means the top landing shall be level. The bottom landing shall also be at least 48 inches long but the slope can be as high as 5 percent. (Cal. Code Regs., tit. 24, § 1127B.5.3.)

It is important to remember that ramps and curb-ramps are a part of an accessible path of travel which includes the cross-slope, overhead clear space, protruding objects, changes in level, and stable, firm, and slip-resistant surfaces as explained in Section 2, Path of Travel.