

## 406.3

### Curbs Along the Flared Sides of Curb Ramps

**CHANGE TYPE:** Addition

**CHANGE SUMMARY:** The new marking requirements help provide users with a visual clue to determine the location of the ramp, the curb, and where the curb flares are located. Where the adjacent curbs are painted, this section requires the flared portion of the curb also to be painted.

**2009 STANDARD:**

#### 406 Curb Ramps

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

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

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

**CHANGE SIGNIFICANCE:** Curb ramps have undeniably helped provide accessible routes for those with different levels of physical disabilities, as well as other pedestrians, such as those pushing strollers or shopping carts. Unfortunately, the lack of visual markings on curb ramps can pose a fall hazard for persons with vision impairments.

The addition of 406.3.2 addresses the problem of pedestrians being exposed to visual miscues of the presence of drop-offs where one portion of the drop-off is painted and the adjacent portion of the drop-off, at the curb flare, is not. The absence of paint at the edge of the flare suggests to the user, approaching from the raised side and seeing the adjacent painted curb, that there is not a drop-off. The failure to perceive the drop-off at the flare can then lead to a misstep, often called an air step, and result in possible injury.

Where curbs are painted, many pedestrians use the painted curbs flanking a curb ramp as navigational cues to indicate the boundaries of a safe walkway. Where such visual clues do not exist or are not consistent it has resulted in stumbles, falls, and serious injuries as pedestrians mistakenly step off the flared side of the curb after initially perceiving it to be the



curb ramp itself. While the A117.1 standard previously provided extensive specifications for designing curb ramps, it failed to indicate how the flared side of curbs should be painted when the flanking curb is painted. This new text will not require that the curbs be painted, but where they are, it will specify how the curb at the flared sides of the curb ramp should be painted. The intent of the new wording is to indicate that it is the flared portion of the curb that is to be painted and that it is painted not only on the curb face but also on the top of the curb portion of the flare. It is not the intent to paint the flared sides, but rather just the curb portion of the flared sides. Painting the flared sides and/or curb ramp itself could make the ramp slippery when wet.

For additional information on this issue, users are directed to an article titled "Curb Ramps: Cross Slope Conspicuity and the Prevention of Air Steps," by Kenneth Nemire, HFE Consulting, Soquel, California. This article was from the Proceedings of the Human Factors and Ergonomics Society 50th Annual Meeting, 2006, and served as the basis for this text being added to the standard.