

US Access Board-Detectable Warnings: Synthesis

Excerpts outlining requirements of California Title 24

by Access Board

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Sources of recommendations

Purpose of this chapter

With the exception of the *Americans with Disabilities Act* requirement (ADAAG 10.3.1(8)) for 24 in deep truncated dome detectable warnings at transit platform edges having drop-offs (see Chapter 2), there is no national requirement in the U.S. for the use of truncated dome detectable warnings in other locations.

- However, a number of publications that followed ADAAG, including local and state standards, resolutions of organizations of and for people who are blind, and a workshop on the topic conducted by Project ACTION provide recommendations or guidance on other uses of truncated dome detectable warnings in locations where pedestrians who are blind do not have a definitive cue to the end of the pedestrian way.
 - These recommendations are summarized and illustrated in this chapter.
 - Readers will note that some of the recommendations are in conflict with one another.
 - **None of the recommendations should be construed to represent the opinion of the authors or of the Access Board.**
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ADAAG

As published in 1991, ADAAG included scoping and technical provisions for detectable warnings on transit platform edges, curb-ramps, hazardous vehicular ways and at reflecting pools. The specific sections in ADAAG are re-printed in Chapter 2. In this chapter (6), ADAAG requirements for locations other than transit platforms are illustrated for the sake of comparison with other recommendations.

California Title 24

Title 24, California Code of Regulations is the California accessibility code. The 1999 edition requires detectable warnings on curb-ramps having a slope less than 1:15, at hazardous vehicular ways, and on all transit boarding platforms. The specifications for the detectable warning are similar to those in ADAAG 4.29.2, but a little more specific. Detectable warnings at most curb-ramps, at hazardous vehicular ways, and on transit platforms require a more precisely specified surface texture: the dome diameter shall be .9 in, measured at the bottom of the dome, tapering to .45 in at the top. Detectable warnings on curb-ramps for privately funded housing, at hazardous vehicular ways, and on transit platforms shall be safety yellow (Federal color 33538).

Continued on next page

Recommendations for detectable warnings at curb-ramps, continued

Whole surface of ramp— California Title 24

“The only legal action related to detectable warnings in California has been one threatened suit in W. Sacramento. A bicyclist was injured. The city was not considered liable because the domes were required by state law.” Michael Mankin, AIA, CA office of the State Architect.

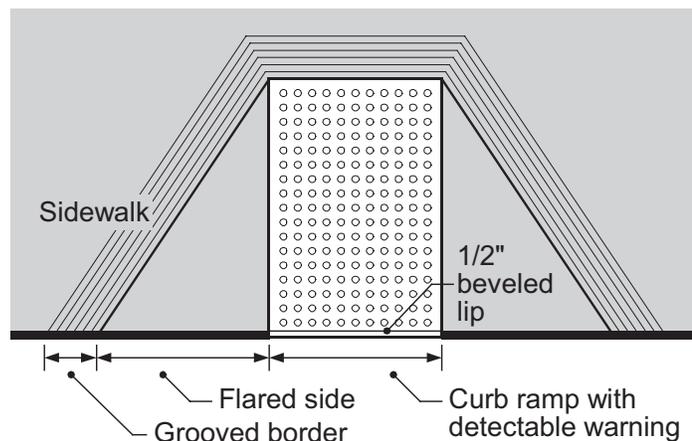
Since 1994, California Title 24 has required detectable warnings on the full surface of curb-ramps having slopes less than 1:15. The detectable warning on transit platforms must be safety yellow (Federal Color No. 33538).

The California specifications for the detectable warning texture for curb-ramps and transit platforms are more precise than those in ADAAG, specifying that the 0.9 in dome diameter is to be measured at the base of the dome, and the top diameter is to be 0.45 in. The 2.35 in dome spacing is to be measured on the diagonal of a square pattern of domes.

California has also required a ½ in beveled lip at the lower end of each curb ramp since 1982. The requirement for the ½ in beveled lip was the result of extensive consultation involving both pedestrians who are blind and people who use wheelchairs as a mobility aid. The ½ in beveled lip was to indicate to pedestrians who are blind the location of the bottom of the ramp, and the lip was not considered to make curb-ramps inaccessible to people who use wheelchairs.

California Title 24 also requires a grooved border 12 in wide at the level surface of the sidewalk along the top and each side. The grooves are approximately ¾ in on center.

FIG. 6-3. CURB-RAMP DESIGN REQUIRED BY CALIFORNIA TITLE 24.



Bottom 3 feet— Roseville, CA

The City of Roseville, CA requires that a 3 ft deep strip of detectable warning surface extend the width of the curb-ramp. See Figure 5-9 in the Roseville Case Study.

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Recommendations for detectable warnings at curb-ramps

Bottom 2 feet— multiple sources

Placing detectable warnings only on the bottom 2 ft of curb-ramps has been recommended in a number of sources.

- The panel of experts convened by Project ACTION at the request of the Access Board, on June 4-5, 1995, recommended that 24 in deep detectable warnings be placed at the bottom of curb-ramps.
- The same recommendation is made in *Designing sidewalks and trails for access: Part II of II: A best practices guidebook* (Axelson, et al., 2000, FHWA).
- Multiple resolutions passed by the AER and by the ACB have also called for 24 in deep detectable warnings at the bottom of curb-ramps.
- All of these sources suggest that parallel alignment of the truncated domes may make it easier for people with mobility impairments, especially those who use wheelchairs, to use curb-ramps having detectable warnings.

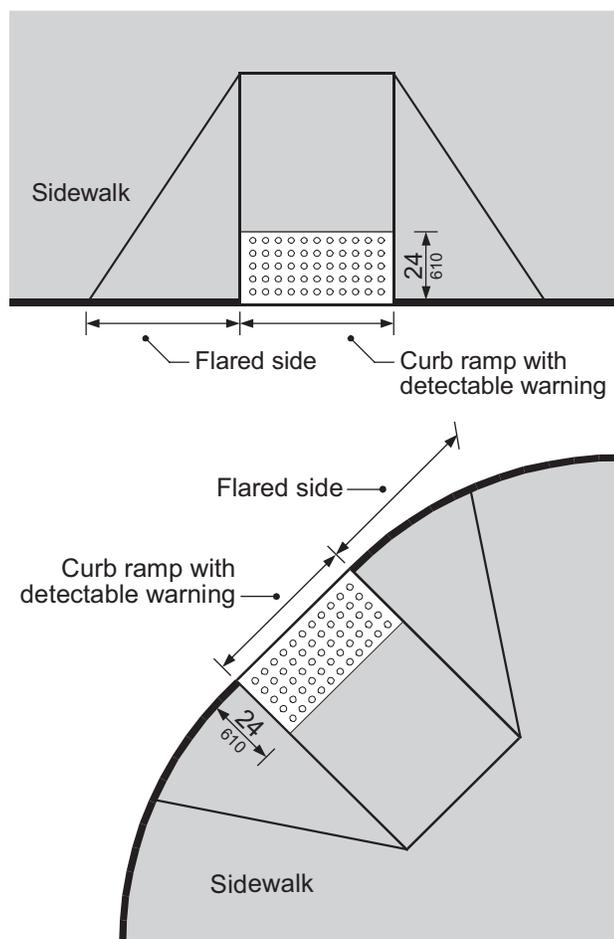


FIG. 6-4. CURB RAMP
DESIGNS SHOWING
24 IN DETECTABLE
WARNING.

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Recommendations for detectable warnings at curb-ramps, continued

Parallel curb-ramp

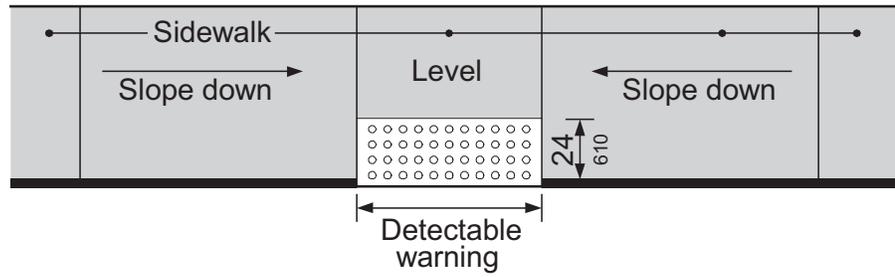


FIG. 6-5. PARALLEL CURB-RAMP DESIGN SHOWING RECOMMENDED 24-INCH DETECTABLE WARNING.

Detectable warnings at hazardous vehicular ways

California Title 24

California Title 24 requires that “If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 inches (914 mm) wide....” It must be safety yellow.

Several types of hazardous vehicular ways are shown below.

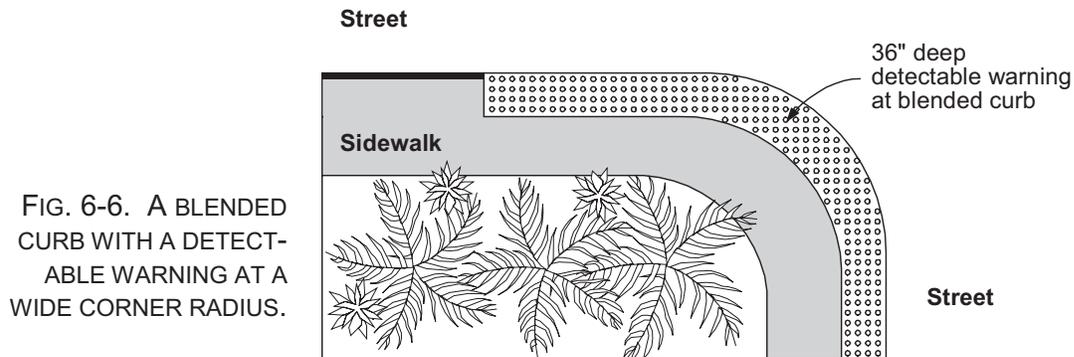


FIG. 6-6. A BLENDED CURB WITH A DETECTABLE WARNING AT A WIDE CORNER RADIUS.

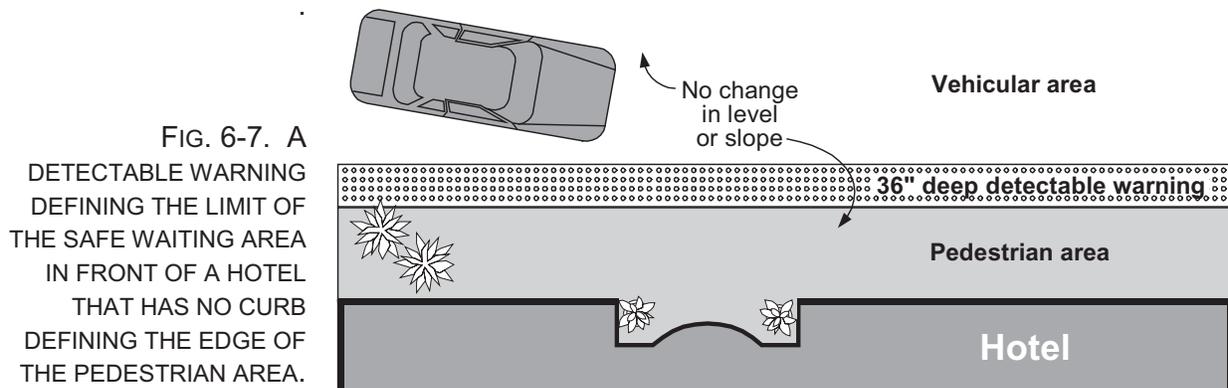


FIG. 6-7. A DETECTABLE WARNING DEFINING THE LIMIT OF THE SAFE WAITING AREA IN FRONT OF A HOTEL THAT HAS NO CURB DEFINING THE EDGE OF THE PEDESTRIAN AREA.