

**RIGHTS-OF-WAY ACCESSIBILITY UPDATE FROM THE US ACCESS BOARD**  
*January 2008*

Agencies and design professionals looking for guidance on designing new or altered public sidewalks, street crossings, and related pedestrian facilities should consider the US Access Board's draft Public Rights-of-Way Accessibility Guidelines (PROWAG) as a best practice where the current ADA standard, ADAAG, is silent or inapplicable, according to a February 2006 Federal Highway Administration (FHWA) Memorandum (see <http://www.fhwa.dot.gov/environment/bikeped/prwaa.htm>).

Because title II of the ADA, which covers State and local governments, requires accessible new construction and alterations rather than adherence to a standard, covered entities must provide usability even if there are no standards for a specific facility type. Although relevant provisions of the current ADA Standards for Accessible Design (the Board's 1991 ADAAG) can serve as a measure of compliance and safe harbor for designers, they were not developed for rights-of-way use and are difficult to apply. The Board's 2005 PROWAG draft tailors ADAAG to the public pedestrian environment and thus can provide more detailed guidance on usability. When completed, PROWAG, which provides scoping and technical provisions for pedestrian access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, roundabouts, and other features, will serve as the basis for new DOJ and DOT standards.

The PROWAG draft is posted to the Access Board website at <http://www.access-board.gov/news/row-draft.htm>. It incorporates many of the industry and consumer recommendations submitted in comment to the Board's June 2002 draft. Board staff are currently developing the regulatory assessment required as the next step in rulemaking before a Notice of Proposed Rulemaking (NPRM) can be published. The regulatory assessment, a type of cost/benefit analysis, is focused on 5 key cost issues identified with industry input; these are: 1/pedestrian signals at multi-lane roundabout crossings; 2/'tabling' at sidewalk intersections to provide level landings and crosswalks; 3/temporary pedestrian routes; 4/integrated accessible pedestrian signals, and 5/the new 24-inch detectable warnings specification. Industry organizations – APWA, ITE, and AASHTO – will help the Board assess cost effects. With the completion of the regulatory assessment, the NPRM can be published for a last round of public comment. A Final Rule will follow.

Technical assistance on pedestrian design is available on the Board's toll-free line at 800/872-2253. A new publication on sidewalk and street alterations has been posted at [www.access-board.gov/news/rowalterations-guide.htm](http://www.access-board.gov/news/rowalterations-guide.htm); print copies are also available. Other website ([www.access-board.gov/pubs.htm](http://www.access-board.gov/pubs.htm)) resources include:

- >Accessible Rights-of-Way: A Design Guide= (1999);
- >Detectable Warnings: a Synthesis on U.S. and International Practice= (2000);
- 'Interfacing APS with Traffic Controllers' (2003); and
- 'Pedestrian Access to Modern Roundabouts' (2003)
- 4-part video on 'Accessible Sidewalks: Design Issues' (1997)

To order (free) DVD copies of the video and print copies of the Alterations publication, call 202/272-0011 or email [baes@access-board.gov](mailto:baes@access-board.gov).

New FHWA research undertaken for the Board has been posted to the Board's 'Research' page at <http://www.access-board.gov/research/project-list.htm>:

- 'Contrast in Detectable Warnings' (2006); and
- 'Roundabout Signalization' (2006).

FY 2008 research will soon begin to refine roundabout signalization options.

Information on current and proposed provisions for detectable warnings can be found at [www.access-board.gov/adaag/dws/update.htm](http://www.access-board.gov/adaag/dws/update.htm). FHWA policy also requires detectable warnings; see

[www.fhwa.dot.gov/environment/bikeped/dwm.htm](http://www.fhwa.dot.gov/environment/bikeped/dwm.htm). Other information on detectable warnings and accessible pedestrian signals, including listings of manufacturers and useful powerpoint presentations, is available from Accessible Design for the Blind at [www.accessforblind.org](http://www.accessforblind.org). Key NCHRP-funded research on APS ([www.walkinginfo.org/aps/](http://www.walkinginfo.org/aps/)) is posted to the website of the Pedestrian and Bicycle Information Center (PBIC), hosted at the Highway Safety Research Center at North Carolina State University. FHWA's "Designing Sidewalks and Trails for Access" can be read at [www.fhwa.dot.gov/environment/sidewalk2/](http://www.fhwa.dot.gov/environment/sidewalk2/).

ITE resources include a toolbox on intersection accessibility posted to their website at [www.ite.org/accessible/](http://www.ite.org/accessible/) and a 4-part on-line course on accessible pedestrian facilities at [www.ite.org/emodules/source/orders/index.cfm](http://www.ite.org/emodules/source/orders/index.cfm).

The Association of Pedestrian and Bicycle Professionals (APBP) offers an 8- to 12-hour course on designing accessible pedestrian facilities; contact [kit@apbp.org](mailto:kit@apbp.org).

Enforcement of access requirements in the public right-of-way is generally referred to the US Department of Transportation, which also has an enforcement responsibility under the Rehabilitation Act of 1973 ('504'). See the September 2006 FHWA memorandum at [www.fhwa.dot.gov/civilrights/ada\\_memo\\_clarificationa.htm](http://www.fhwa.dot.gov/civilrights/ada_memo_clarificationa.htm). For funding, consult [www.fhwa.dot.gov/hep/flexfund.htm](http://www.fhwa.dot.gov/hep/flexfund.htm).

The US Department of Justice also maintains a website ([www.ada.gov](http://www.ada.gov)) and a technical assistance hotline at 800/514-0301 (voice and tty) for questions about

**the ADA title II implementing regulations that cover State and local governments, including accessibility obligations for existing facilities and for agency programs, services, and activities. The title II regulation and preamble can be viewed at [www.ada.gov/reg2.html](http://www.ada.gov/reg2.html). An ADA toolkit is posted at [www.ada.gov/pcatoolkit/toolkitmain.htm](http://www.ada.gov/pcatoolkit/toolkitmain.htm).**

**For more information, contact Access Board PROW staff leader Scott Windley at 202/272-0025 (v) or -0082 (tty) or [windley@access-board.gov](mailto:windley@access-board.gov).**

# A Checklist for Accessible Sidewalks and Street Crossings

The Americans with Disabilities Act (ADA) requires that new and altered facilities be accessible. Title II of the ADA covers sidewalk and street construction and transit accessibility and references the ADA Accessibility Guidelines (ADAAG) or the Uniform Federal Accessibility Standards (UFAS) for new construction and alterations undertaken by or on behalf of a state or local government. The Department of Justice (DOJ) title II regulation specifically requires that curb ramps be provided when sidewalks or streets are newly constructed or altered. (Requirements for **existing** pedestrian networks not otherwise being altered are also included in the DOJ regulation, available on line at [www.ada.gov/reg2.html](http://www.ada.gov/reg2.html)).

The ADA Accessibility Guidelines ([www.access-board.gov/adaag/html/adaag.htm](http://www.access-board.gov/adaag/html/adaag.htm)) include standards for site development that can be adapted to **new construction and alterations** in the public right-of-way. Draft guidelines developed specifically for right-of-way use are posted to the Board's website at <http://www.access-board.gov/prowac/index.htm>.



## **CURB RAMP**

***A curb ramp or other sloped area is required wherever a new or altered pedestrian walkway crosses a curb or other barrier to a street.*** Similarly, a curb ramp is required wherever a new or altered street crosses a pedestrian walkway. A curb ramp may be perpendicular to the curb it cuts or parallel with the sidewalk. Other designs may also comply, including parallel ramps (sidewalks that ramp down), and combination ramps (sidewalks that ramp down to a lesser curb height, with a short perpendicular curb ramp to the street). Also consider: blended or at-grade connections or raised crossings that connect at sidewalk level.

***The running slope of a new curb ramp should not exceed 1 in 12 (8.33%).*** Steeper ramps are not usable by many pedestrians in wheelchairs and scooters. Cross slope must be limited to 1:48 (2%).

***A level landing should be provided for turning and bypassing curb ramps.*** Landings must be at least 48 inches (1220 mm) deep with a cross slope of no more than 1:48 (2%). The landing will be at the top of a perpendicular curb ramp, at the bottom of a parallel ramp, or in the middle of a combined ramp (the side flares of a curb ramp are not intended for accessible travel). Landings are not required at blended transitions, although cross-slope limits will produce them at intersections.

***The foot of a curb ramp should be contained within the crosswalk markings.*** Pedestrians who use wheelchairs should not be directed outside the crosswalk or into an active travel lane in order to cross stopped traffic. If a diagonal ramp is used, a 48-inch long (1220 mm) bottom landing must be provided in the space between the curb radius and curb line extensions.

***The transition from curb ramp to gutter should be flush.*** Lips are not permitted. Gutter counterslope in the line of travel should not exceed 1 in 20 (5%) and should connect smoothly with other elements of the pedestrian network.

***The boundary between the sidewalk and street should be detectable underfoot.*** A 24-inch strip of truncated dome (detectable warning) material should be provided the full width of the ramp or other uncurbed connection to the crosswalk so that pedestrians do not inadvertently travel into the street.

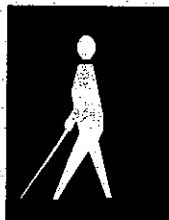


## SIDEWALKS

**A sidewalk should provide for two-way circulation.** A 60-inch (1525-mm) walkway can accommodate turns and passing space and is recommended as the minimum width for urban sidewalks and for sidewalks immediately adjacent to curbs. In areas with 48-inch-wide (915 mm) walkways, passing space (60x60 inches/1525x1525 mm) should be provided at intervals of 200 ft (61 m) maximum. A 48-inch (915 mm) width allows travel with a service animal or sighted guide. Maneuvering space is also necessary at turns, at entrances and doors, at street furniture such as drinking fountains and telephones, and at pedestrian pushbuttons.

**The cross slope of a sidewalk should not exceed 1:48 (2%).** Excessive cross slope requires additional energy to counteract and tends to direct wheelchair users into the street, particularly when it is wet, icy, or snowy underfoot. At driveways there should be a minimum 36-inch (915 mm) wide passage with a cross slope of no more than 1:48 (2%). Corners at intersections should comply in both directions, since the running slope of one walkway will be the cross slope of another.

**Street furniture, plantings, poles and standards, and other fixed items should not protrude into travel routes.** Pedestrians with vision impairments can detect objects mounted on walls or posts if they are installed so that the leading edge is less than 27 inches (685 mm) above the sidewalk. Items mounted above this height should not project more than 4 inches (100 mm) into any circulation route. Particular care needs to be taken to ensure that temporary signage and construction barriers do not impede pedestrian travel.



## STREET CROSSINGS

**Consider the information needs of blind and low-vision pedestrians at intersections.** When pedestrian signals are provided, their crossing and timing information should be available to all users via APS.

**Insufficient crossing time may be a barrier for some pedestrians.** Every pedestrian cohort should be expected to contain some walkers whose rate of travel is less than 3.5 feet per second.



## TEMPORARY WORK

**Temporary work should be accessible.** Where construction blocks a public sidewalk for more than a short time, an alternate accessible route should be provided. Temporary events and facilities should also meet accessibility criteria.



## OTHER PEDESTRIAN FEATURES

**Pedestrian facilities on and along sidewalks must be accessible.** Signal actuating buttons, drinking fountains, telephones, kiosks, and other pedestrian elements should meet accessibility criteria for approach and maneuvering space, reach range, and operation.

The development of new public rights-of-way guidelines is underway and can be monitored on the U.S. Access Board's website at <http://www.access-board.gov/prowac/index.htm>. The Board also maintains a toll-free technical assistance line at 800/872-2253 (V); 800/993-2822 (TTY).

## ABOUT THIS RULEMAKING

Sidewalks, street crossings, and other elements of the public rights-of-ways present unique challenges to accessibility for which specific guidance is considered essential. The Board is developing new guidelines for public rights-of-way that will address various issues, including access for blind pedestrians at street crossings, wheelchair access to on-street parking, and various constraints posed by space limitations, roadway design practices, slope, and terrain. The new guidelines will cover pedestrian access to sidewalks and streets, including crosswalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way. The Board had developed a draft set of guidelines based on recommendations from an **advisory committee** it had chartered. The Public Rights-of-Way Access Advisory Committee was comprised of representatives from disability organizations, public works departments, transportation and traffic engineering groups, the design and civil engineering professions, government agencies, and standards-setting bodies. The draft guidelines are being revised based on the input received from the public and will be available for public comment once published.

## RELATED INFORMATION

- [Revised Draft Guidelines \(2005\)](#) [PDF Version](#)
- [Notice of Availability of Revised Draft Guidelines](#) [About this Notice](#)
- [Draft Guidelines \(2002\)](#)
- [Public Comments to the Draft Guidelines \(2002\)](#)
- [Background](#)
- [How the Board Develops Guidelines](#)

## GUIDANCE MATERIAL

The Board has developed information to provide a source of guidance on various aspects of accessible public rights-of-way until its guidelines are completed. This information includes:

- **Accessible Public Rights-of-Way: Planning and Designing for Alterations NEW PDF Version**
- **Accessible Rights-of-Way: A Design Guide**
- **Accessible Sidewalks(DVD)**
- **Detectable Warnings Update**
- **Manufacturers of Detectable Warning Products**

Research:

- **Accessible Pedestrian Signals**
- **Detectable Warnings: Synthesis of U.S. and International Practice**
- **Interfacing Audible Pedestrian Signals and Traffic Signal Controllers**
- **Pedestrian Access to Modern Roundabouts**
- **Synthesis of Literature Relevant to Roundabout Signalization to Provide Pedestrian Access**
- **Synthesis of Maintenance and Durability Information for Detectable Warnings on Sidewalks**
- **Visual Detection of Detectable Warning Materials by Pedestrians with Visual Impairments Technical Brief**

Information on detectable warnings and accessible pedestrian signals is also available from **Accessible Design for the Blind** and **www.walkinginfo.org**.

## **FEDERAL HIGHWAY ADMINISTRATION (FHWA) POLICY AND GUIDANCE**

- **Questions and Answers About ADA and Section 504**
- **Memorandum Clarifying FHWA Oversight Role in Accessibility (9/12/06)**
- **Memorandum on Use of the Revised Draft Guidelines (1/23/06)**
- **Memorandum on Detectable Warning Requirements (5/6/02)**
- **Coverage of Non-Federally Funded Facilities (Civil Rights Restoration Act) (9/2/92)**

**FOR FURTHER INFORMATION CONTACT:**

**phone:** (202) 272-0025 (voice) or (202) 272-0082 (TTY)  
**e-mail:** [row@access-board.gov](mailto:row@access-board.gov)  
**fax:** (202) 272-0081

## **OTHER RESOURCES**

- **Accessible Design for the Blind**
- **Designing Sidewalks and Trails for Access** (Federal Highway Administration guide)
- **Institute of Transportation Engineers** (resources for **accessible intersections** are available)
- **Manual on Uniform Traffic Control Devices**
- **www.walkinginfo.org**

[Guidelines and Standards](#) | [Home](#)

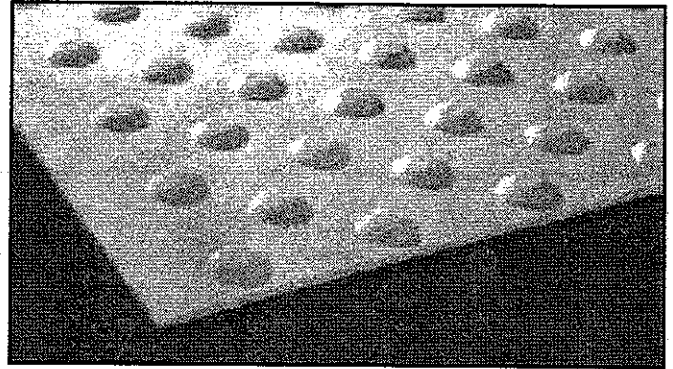


# ADAAG Requirements for Detectable Warnings

[ADAAG](#) | [ADAAG Homepage](#) | [Home](#)

**March 2003**

Detectable warnings, a distinctive surface pattern of domes detectable by cane or underfoot, are used to alert people with vision impairments of their approach to streets and hazardous drop-offs. The ADA Accessibility Guidelines (ADAAG) require these warnings on the surface of curb ramps, which remove



a tactile cue otherwise provided by curb faces, and at other areas where pedestrian ways blend with vehicular ways. They are also required along the edges of boarding platforms in transit facilities and the perimeter of reflecting pools.

## **Suspension of Requirements (1994 - 2001)**

The Board temporarily suspended the requirements for detectable warnings in 1994 due to concerns raised about the specifications, the availability of complying products, maintenance issues such as snow and ice removal, usefulness, and safety. This suspension applied to all requirements for detectable warnings except those at boarding platforms in transit stations. The departments of Justice (DOJ) and Transportation (DOT), which maintain enforceable standards based on ADAAG, joined the Board in this action. As a result, the requirements for detectable warnings were temporarily removed from the ADA standards. The suspension expired on July 26, 2001. Consequently, the requirements for detectable warnings at curb ramps and other areas are again part of ADAAG and the enforceable standards. Questions regarding the enforceability of these requirements should be directed to [DOJ](#) or [DOT](#).

## **Update of the ADA Accessibility Guidelines**

During the suspension, the Board sponsored further research on detectable warnings. The Board also conducted a comprehensive review of ADAAG in an effort to update its requirements. In addition, it resumed work on developing a supplement to ADAAG specific to public rights-of-ways.

Because issues concerning the use of detectable warnings are most relevant to public streets and sidewalks, the Board determined that provisions for detectable warnings on curb ramps should be addressed in rulemaking on public rights-of-ways rather than facilities on sites. As a result, the Board did not include requirements for detectable warnings at curb ramps (or hazardous vehicular areas and reflecting pools) in its proposal to update ADAAG.

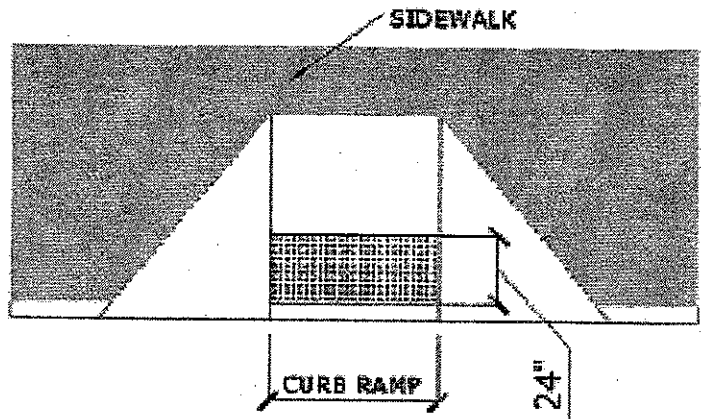
### **Rulemaking on Public Rights-of-Ways**

Currently, the Board is in the process of developing guidelines on public rights-of-ways that, once finalized, will supplement the new ADAAG. While ADAAG covers various features common to public streets and sidewalks, such as curb ramps and crosswalks, further guidance is necessary to address conditions unique to public rights-of-way. Constraints posed by space limitations at sidewalks, roadway design practices, slope, and terrain raise valid questions on how and to what extent access can be achieved. Guidance on providing access for blind pedestrians at street crossings is also considered essential.

In June 2002, the Board released guidelines on public rights-of-way in draft form and made them available for public comment. Through this release, the Board sought information and feedback, including usability and cost data, for its use in developing a proposed rule, which will provide an additional opportunity for comment in the future. The Board released a revised draft in November 2005 based on the comments received. The guidelines are based on recommendations the Board received from an advisory body it had chartered, the Public Rights-of-Way Access Advisory Committee. This committee included representation from disability organizations, public works departments, transportation and traffic engineering groups, design professionals and civil engineers, government agencies, and standards-setting bodies. The committee's recommendations, which are contained in a report, "Building a True Community," include new specifications for detectable warnings.

The draft guidelines, consistent with the advisory committee's recommendations, would revise the technical criteria. The revised specifications are responsive to concerns that had been raised about the impact of the truncated dome surface on wheelchair maneuvering. The Board believes that the draft revised specifications, which permit wider

dome spacing, an in-line grid pattern, and smaller surface coverage at curb ramps (24 inches instead of the full ramp length, set back from the curbline) will improve usability of surfaces without affecting detectability.



Additional rulemaking steps, including another public comment period, must be completed before the Board can finalize the rights-of-way guidelines. At this time, the original detectable warning specifications in the current ADAAG remain in effect. However, ADAAG does include an "equivalent facilitation" clause (section 2.2) which permits departures from the guidelines that provide equal or greater access. The Board believes that the specifications for detectable warnings in the draft rights-of-way guidelines provide a level of access substantially equal to or greater than that currently specified by ADAAG. However, the Board does not have the statutory authority to officially make such a determination. This authority resides with the DOT and DOJ, the agencies which enforce the design requirements of the ADA. DOT, which also enforces certain ADA provisions concerning access for pedestrians, has issued guidance consistent with the Board's position.

### Related Board Materials

- **Suspension Notice - Extension** (1998)
- **ADAAG** [see sections 4.1.3(15) 4.7.7, 4.29, 10.3.1(8)]
- **Draft Guidelines for Public Rights-of-Ways** (2005) [see sections R207 and R304]
- **Advisory Committee Report: "Building a True Community"** (2001)
- **Status of Rulemaking on Public Rights-of-Ways**
- **Detectable Warnings: Synthesis of U.S. and International Practice** (2000)
- **List of Manufacturers**
- **Guidance Material on Accessible Public Rights-of-Way**

### Other Resources

- Department of Transportation [www.fta.dot.gov](http://www.fta.dot.gov) (888) 446-4511 (voice/relay)  
See DOT [memorandum](#) on compliance with detectable warning requirements (May 2002)  
See DOT's [ADA regulations](#) (49 CFR Part 37.9) for determinations on equivalent facilitation
- Department of Justice [www.ada.gov](http://www.ada.gov) (800) 514-0301 (voice) (800) 514-0383 (TTY)
- Accessible Design for the Blind [www.accessforblind.org](http://www.accessforblind.org) (978) 838-2307

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