Public Right-of-Way Accessibility Guidelines (PROWAG)

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Standards & Guidelines

- 2010 ADA Standards for Accessible Design
  Current enforceable standard under the ADA
- Public Rights-of-Way Accessibility Guidelines (PROWAG)
  - 2013 Supplemental Notice of Proposed Rulemaking – accessibility guidelines for shared use paths

WHY PROWAG

- Pedestrians who use wheelchairs
- Pedestrians with ambulatory impairments
- Pedestrians who are blind
- Pedestrians with low vision

Public Right of Way Accessibility Guidelines (PROWAG)

- R1 Application and Administration
- R2 Scoping Requirements
- R3 Technical Requirements
  - Pedestrian Access Route and Curb Ramps
  - Accessible Pedestrian Signals
  - Transit Stops/Shelters
  - On-street parking
- R4 Supplementary Technical Requirements
  - Takes ADA Building Standard Provisions and adapts them for ROW application
  - 2013 SNPRM Incorporates Shared Use Path Guidelines

PROWAG Application and Administration

- Facilities for pedestrian circulation and use located in the public right-of-way
- Equivalent facilitation permitted
- Referenced standards – MUTCD

Scope of Guidelines

- ADA and ABA Facilities
- New construction and alterations to existing facilities
- Temporary facilities are also covered (street fairs, block parties, farmers’ markets)
Alterations

- Accessible to the extent practicable within the scope of the project
- Recommend documentation of decisions
- Transitional segment compliant to the extent practicable

What's Required?

- PROWAG does not require Pedestrian Access Routes unless pedestrian facilities are provided.
- If sidewalks are provided, they are required to be accessible to and usable by persons with disabilities.

Types of Pedestrian Facilities

- **Shared-use Paths**
  - Intended for multi-use
  - Bicycle/transportation focus
  - Machined, layered surface (improved)
  - Located in either an “independent corridor” or public right-of-way

- **TRAILS** (design to ABA Accessibility Standards)
  - Designed for the “recreation experience”
  - Does not connect elements and spaces on a site
  - Generally includes a trailhead
  - Has limited to no transportation function

Pedestrian Access Route Width

- 48” min continuous pedestrian access route (PAR) in the public right-of-way

Distinguish SUPs from Trails

**SHARED USE PATH** (design to PROWAG)
- Intended for multi-use
- Bicycle/transportation focus
- Machined, layered surface (improved)
- Located in either an “independent corridor” or public right-of-way

**TRAILS** (design to ABA Accessibility Standards)
- Designed for the “recreation experience”
- Does not connect elements and spaces on a site
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Clear Width Around Obstructions

- 48” minimum clear width must be maintained around obstructions

60” x 60” Passing Space

- PROWAG R302.4 Passing Spaces

Shared Use Path Width

- PROWAG: 4ft minimum
- Width determined by use and not accessibility and NOT controlled by our guidelines
- Full width must meet PAR requirements

Width

- 2013 Supplemental Notice of Proposed Rulemaking i.e. SHARED-USE PATH: Entire width of the shared-use path

Pedestrian Access Route Running Slope

- Within Street or Highway Right-of-Way. The grade of pedestrian access routes shall not exceed the general grade established for the adjacent street or highway.

Pedestrian Access Route Running Slope

- Not Within Street or Highway Right-of-Way. The grade of pedestrian access routes shall be 5% maximum.
Within pedestrian street crossings: 5% maximum

PROWAG does not specify when to mark... Or how to mark (see MUTCD requirements)

Which one meets the requirements?

0% best for wheelchair users

Some slope needed for drainage

Max cross slope 2%

Exceptions for street crossings

Pedestrian Street Crossings

Pedestrian Street Crossings

Pedestrian Access Route

Pedestrian Access Route

Pedestrian Street Crossings

Pedestrian Street Crossings

Pedestrian Access Route

Pedestrian Access Route
Pedestrian Access Route Cross Slope

- Midblock Pedestrian Street Crossings: Street or highway grade

Surfaces and Horizontal Openings

- Firm, stable, & slip resistant
- No large openings or gaps
- Bricks and paving stones can work if properly installed and maintained.

Changes in Level

- Must be beveled if greater than ¼ inch.

Flange Way Gap

Grade Level RR Crossings

Flange Way Gap at Rail Crossings
Flange Way Gap at Rail Crossings

Alternate Pedestrian Access Routes
- PROWAG references MUTCD (section 6)
- Maintain pedestrian usability
- Same-side alternate routes if feasible
- Consider APS if extra crossings required
- Cane-detectable barricades

Surface quality and maintenance

Grade Level RR Crossings

Grade Level RR Crossings

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Temporary Traffic Control

Curb Ramp Basics
- 8.3% max running slope (with length limit as exception to slope limit)
- 2% cross slope (with exceptions for stop condition)
- Width – PAR is 48” min, Shared use path is full width
- Landing at top of perpendicular curb ramp
- Clear space at the bottom outside of parallel travel lane
- Flush transitions (no lips)
- Perpendicular grade breaks

Curb Ramps
- The ‘cookie cutter’ curb ramp
**Perpendicular Curb Ramps**
- Perpendicular to the curb or street

**Parallel Curb Ramps**
- Parallel to curb or street

**Blended Transitions**
- Raised Crossing
- Depressed corner

**Diagonal Curb Ramp**
- Diagonal/Apex can cause dangerous conflicts
- Only permitted in ROW alterations as last option (PROWAG R207.2)
- Permitted on sites (2010 ADA Standards 406.6)

**Street Crossing**
- Two ramps per corner

**Curb Ramp Design Factors**
- 2 ramps per corner are feasible and preferable

*United States Access Board*
Creative Design Solutions

- Slope the sidewalk down and shorten the perpendicular curb ramp run to the street

Curb Ramp Running Slope

- Maximum curb ramp slope 1:12
- When ‘chasing grade’ length of the ramp can be limited to 15 feet.

Curb Ramp Cross Slope

- 2% max at stop/yield controlled crossing
- 5% max at crossing without stop/yield

Curb Ramp Width

- PAR 48 inches minimum width.
- Curb ramp must extend full width of a shared use path.

Landings

- Perpendicular curb ramps without landings at the top can be difficult to negotiate (4’ x 4’ min)

Landings

- Level landing at the top of a perpendicular curb ramp
- Level landing at the bottom of a parallel curb ramp
**Curb Ramp Design Factors**

Maneuvering space is required at the top of curb ramps for changing direction (4’ x 4’ min)

- Grade Breaks must be perpendicular to direction of travel

**Perpendicular Grade Breaks**

- Both wheels must hit the break at the same time for stability (especially manual wheelchairs)

**Counter Slope**

- Algebraic difference of the ramp or landing slope and the street crown 13% max

**Transitions**

- Transition must be flush at all grade breaks

**Detectable Warnings**

- Required at all street crossings
  - Driveways??
- Provide warning to the visually impaired that they are about to enter a hazardous area.
- 24” min. in the direction of travel and full width of curb opening
- Contrast in color with surrounding surface
Detectable warning at boarding area

- Required at boarding platforms
- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles

Detectable Warning Specifications

- Due to their distinct design, truncated domes are detectable by cane and underfoot

Detectable Warning Location

- Place DW on curb ramp at grade break if space at bottom of ramp is less than 5’ deep
- Place DW on bottom behind the back of the curb if space is more than 5’ deep at any point

Detectable Warnings at Refuge Islands

- Pedestrian refuge islands greater than 6 feet - DWs placed at front edge of island

Detectable Warning at Rail Crossings

- DW shall have a visual contrast with the surrounding surfaces (light on dark or dark on light)
- No specific color specified or required
Detectable Warnings (Quiz)

Steps at Corner: Before

Steps at Corner: After

Protruding Objects

Avoiding Protruding Objects

Ramps

1. Objects between 27” and 80” may not protrude more than 4”.
2. Entire pedestrian circulation route!

Post mounted objects must not protrude more than 4” beyond the base

Space greater than 12” between posts must be detectable

Slope: 8.3%max
Cross slope: 2% max
Clear width: 36” min
Rise for each run: 30” max
Handrails (both sides)
Edge protection
Level landings (top & bottom)
Ramps

- > 6” elevation change requires edge protection

Handrails

- Required on ramps and stairs, not required on curb ramps
- Knuckle clearance: 1 ½” min
- Diameter: 1 ¼” – 2” (applies to outer diameter)
- Circular & noncircular cross sections

Pedestrian Street Crossings

- Accessible Pedestrian Signal: Provide visual and audible information
- Adequate crossing time (3.5 feet/second (fps))
- Multi-lane roundabouts needs some type of pedestrian demand signalization

Crossing Time

- 3.5 fps from top of curb ramp to opposite curb
- PROWAG references MUTCD requirements

Crossing Distance

- Curb extensions can reduce crossing distance
Pedestrian Street Crossings

- Refuge islands can be useful

Pedestrian Street Crossings

- If crossing is prohibited, it should be closed off to all pedestrians.

Pedestrian Street Crossings

Running slope of pedestrian street crossing is 1:20 max (crown)

Maximum crosswalk cross slope
- 1:48 is a general requirement for pedestrian access routes
- 1:20 is allowed in a street crossing without stop or yield control

Pedestrian Pushbuttons Reach Range

- 48” max.
- 15” min.
- Side reach within 10”
- No obstruction permitted under forward reach

Accessible Pedestrian Pushbuttons

- Usable with a closed fist
- Not accessible

Operable parts shall be operable with one hand and not require tight grasping, pinching or twisting of the wrist.
Pushbutton Location

- Between 1½ ft to 6 ft from the edge of curb, shoulder or pavement
- No more than five feet from crosswalk line

Pushbutton Location?

- Find the pushbutton. Now line up to cross.
- Missed your chance? Do it again

Pushbutton Location - MUTCD

- Fencing guides pedestrians to crossing location.
- Provide pedestrian-activated signals at multiple lane crossings

Roundabouts
Scoping On-Street Parking

- Number of accessible spaces is based on total marked or metered spaces on a block perimeter
- Scoping Section Table R214

On-Street Parking

Where the width of the adjacent sidewalk or available right-of-way exceeds 14 ft. an access aisle is required (new construction)

On-Street Parking

- Narrow sidewalks – access aisle not required
- Alterations – access aisle only required when scope of project involves curb and road work

On-Street Parking

- Angled (or perpendicular) on-street parking; requires an 8ft access aisle

Passenger Loading Zones

- The access aisle must be connected to the pedestrian access route

Information must be visible from a point 3.3 ft. max above the center of the clear space
- Must meet operable parts requirements

Parking meter/pay station displays and information
Bus Boarding and Alighting Areas

- Clear space: 96” x 60”
- Perpendicular to road – 2% max slope;
- Parallel to the road can match grade of road

Bus Shelters

- Space for wheelchair entirely within shelter
- Pedestrian accessible route connection to boarding/alighting area

If a PAR is provided, it shall continue around street furniture or bus stops.

Bus Shelters

Better placement of Bus stop

Must comply with the requirements of visual characters found in R410

Schedules, timetables and maps are not required to comply with R410
Questions?

U.S. Access Board
(800) 872-2253 (voice)
(800) 993-2822 (TTY)
E-mail: row@access-board.gov
www.access-board.gov

Time For A Quiz?
I'M JUST IN IT
FOR THE PARKING

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