Public Right-of Way Accessibility Guidelines (PROWAG)

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US Access Board
Standards vs. Guidelines

- Guidelines are developed by the Access Board but must be adopted by another responsible agency to become enforceable standards.
- Current enforceable standard is 2010 ADA Standards
- FHWA Memo 1/23/06
  PROWAG – “recommended best practices, and can be considered the state of the practice that could be followed for areas not fully addressed by the present ADA standards”

Rulemaking Update

- The Access Board’s regulatory plan anticipated completion of a final rule for public rights-of-way and shared use paths.
- Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs requires for every one new regulation issued, at least two prior regulations be identified for elimination.
- Updates on unified agenda
  [https://www.reginfo.gov/public/do/eAgendaMain](https://www.reginfo.gov/public/do/eAgendaMain)
Public Right of Way Accessibility Guidelines

- 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

Application and Administration

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

- ADA and ABA Facilities
- New construction and alterations to existing facilities
- Temporary facilities are also covered (street fairs, block parties, farmers’ markets, presidential inaugurations…)
- Existing facilities are covered by Standard setting agencies requirements

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

Pedestrian Access Routes (PAR)

- Shared-use Paths
- Sidewalks
- Shoulders
Pedestrian Access Route Width

- 48” min continuous pedestrian access route (PAR)
- If <60” passing space at 200’ intervals

Shared Use Path Width

- Width determined by use and not accessibility and NOT controlled by our guidelines
- Full width must meet PAR requirements
Clear Width Around Obstructions

- 48” min clear width continued around obstructions

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.

- Not Within Street or Highway Right-of-Way. The grade of pedestrian access routes shall be 5% maximum.
Pedestrian Access Route Running Slope

- Within pedestrian street crossings: 5% maximum

Pedestrian Street Crossings

- PROWAG does not specify when to mark...
- Or how to mark (meet MUTCD requirements)
Pedestrian Access Route Cross Slope

- 0% best for wheelchair users
- Some slope needed for drainage
- Max cross slope 2%
  - Exceptions for street crossings

Pedestrian Access Route Cross Slope

- Within Traffic Signalized Pedestrian Street Crossings: 5% max

- Within Yield or Stop Controlled Pedestrian Street Crossings: 2% max
Pedestrian Access Route Cross Slope

- Midblock Pedestrian Street Crossings: Street or highway grade

Cross Slope at Driveways

- Pedestrian design does not have to be an after thought
Driveways

- If ROW is available…

Surfaces

- Firm, stable, and slip-resistant
- No large openings or gaps
- *New* ASTM E17 Committee has added provision on walking surface roughness
Surfaces

- Properly installed, and well maintained bricks and flagstone and paving stones can work.

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Changes in Level

- Must be beveled if greater than ¼ inch.

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Horizontal Openings

- No more than ½ inch opening in the direction of travel.

Flange Way Gap

- Light rail: 2 ½” max
- Freight: 3” max

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Alternative Pedestrian Access Routes

Temporary Route Basics

- PROWAG references MUTCD (section 6)
- Maintain pedestrian usability
- Same-side alternate routes if feasible
- Consider APS if extra crossings required
- Cane-detectable barricades
From Part 6 of MUTCD

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Curb Ramp Basics

- 1:12 max running slope (with length limit as exception to slope limit)
- 1:48 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

The ‘cookie cutter’ curb ramp
Perpendicular Curb Ramps

- Perpendicular to the curb or street

Parallel Curb Ramps

- Parallel to curb or street
Types - Combination

- Combination ramps slope the sidewalk down and can shorten the perpendicular run to the street.

Blended Transitions

- Blended Transition (depressed corner)
Blended Transition

- Blended Transition (raised crossing)

Diagonal Curb Ramps

- Diagonal/Apex can cause dangerous conflicts
- Only permitted in alterations as last option
Street Crossing = Curb Ramp

- Two ramps per corner

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

- 1:48 max where crossing is stop or yield
- 1:20 max where crossing may be free flow

Curb Ramp Width

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

- Landings are required at the top of perpendicular curb ramps for change in direction of travel (4’ x 4’ min)

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Landings

- Provide a level landing at the top of a perpendicular ramp, at the bottom of a parallel ramp

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Landings

- The landing is at an intermediate level on a combination curb ramp.

Grade Breaks

- 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
Counter Slope

Transition must be flush at all grade breaks

Usable Curb Ramps?

YES...

NO...

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Usable Curb Ramps?

What is wrong with these?
Before

After

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Detectable Warnings

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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

- Contrasting in color

Detectable Warnings

- Required at boarding platforms

- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles
Detectable Warnings

- All ramps and raised crossings must have detectable warnings to provide notice of the change from a pedestrian to a vehicular route.

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Detectable Warnings

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

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Detectable Warnings

- Minimum 24” in the direction of travel

ADAAG: Full depth and width of curb ramp

PROWAG: 24 inches and width of curb ramp

Detectable Warnings

- DW needs to cover the entire flush edge

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Detectable Warning Location

- DW is placed at back of curb or at grade break

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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

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Detectable Warning Location

Place at back of curb on landing

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

- Detectable warnings at pedestrian/rail crossings

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Detectable Warnings

- DW shall have a visual contrast with the surrounding surfaces (light on dark or dark on light)

- No specific color required

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Protruding Objects

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

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Protruding Objects

- Post mounted objects must not protrude more than 4” beyond the base.
- Space greater than 12” between posts must be detectable.

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Detectable Warning Quiz

Ramps

- Slope: 1:12 max
- Cross slope: 1:48 max
- Clear width: 36” min
- Rise for each run: 30” max
- Level landings
- Handrails (both sides)
- Edge protection
Ramps

> 6” elevation change requires edge protection

Handrails

Required on ramps and stairs, if provided on walkways, not required on curb ramps

• Knuckle clearance: 1 ½” min
• Diameter: 1 ¾” – 2” (applies to outer diameter)
• Circular & noncircular cross sections
Pedestrian Street Crossings

- Pedestrian heads with visual and audible information provided (Accessible Pedestrian Signal)
- Adequate crossing time (3.5 feet/second (fps))
- Multi-lane roundabouts need some type of pedestrian demand signalization

Crossing Time

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

- Curb extensions can reduce crossing distance

**Pedestrian Street Crossings**

- Refuge islands can be useful
Pedestrian Street Crossings

- Prohibiting crossings happens...
- Prohibit for ALL pedestrians

Crossing Information

- Usable information about pedestrian street crossings
Accessible Pedestrian Signals (APS)

Communication Features
- Locator tone
- Audible and vibro-tactile detectors required
- Tactile arrow indicating direction
- 10 ft. separation, or speech indication
- Volume adjusts for ambient noise
- Speech walk criteria MUTCD 4E.11

Extended Press Features

 Speakers are located on the device; at pedestrian level
Accessible Pedestrian Pushbuttons

- **Button**
  - Face of button parallel to crosswalk
  - Mounted at 48” max (42” max used in MUTCD)
  - Max 5 lbs pressure needed to activate

- **Sign & Arrow**
  - Sign adjacent to button – explains purpose and use (MUTCD option)
  - Arrow must indicate crosswalk direction

**Reach Ranges**

- 48” max.
- 15” min.
- Side reach within 10”
- No obstruction permitted on forward reach
Accessible Pedestrian Pushbuttons

- Usable with a closed fist

Tactile Arrow
Pushbutton Location

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

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Pushbutton Location

- Must be connected to a pedestrian access route

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Pushbutton Location

- Between 1 1/2 ft and 6 ft from the edge of curb, shoulder or pavement
- No more than five feet from crosswalk line
Face of pushbutton must be parallel to the crosswalk
Roundabouts

- Sidewalks shall be separated for wayfinding.
- Where pedestrians cross more than one lane, pedestrian-activated signals shall be provided.

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Roundabouts

- Example of: Curb attached sidewalk and fencing to guide pedestrians to crossing location.

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On-Street Parking

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

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

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On-Street Parking

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

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On-Street Parking

Parking meter/pay station displays and information

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

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Passenger Loading Zones

- The access aisle must be connected to the pedestrian access route
Clear space: 96”x60”
Perpendicular to road – 1:48 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

Questions?

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