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

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)

- 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

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

Changes in Level

- Must be beveled if greater than ¼ inch.
Horizontal Openings

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

Flange Way Gap

- Light rail
- Freight

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

Temporary Traffic Control

- From Part 6 of MUTCD
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

Curb Ramps

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
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

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)

United States Access Board

Landings

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

United States Access Board

Landings

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

United States Access Board
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?

Usable Curb Ramps?
Usable Curb Ramps?

What is wrong with these?

Before

After

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

Detectable Warnings

- 50% to 65% of base
- 0.9" to 1.4"
- 0.2"

- 0.9" to 1.4"
- 1.6" to 2.4"

- ADAAG: Full depth and width of curb ramp

Minimum 24" in the direction of travel.

- PROWAG: 24 inches and width of curb ramp

- DW needs to cover the entire flush edge
Detectable Warning Location

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

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 Warning Location

- Place at back of curb on landing
Detectable Warning Location

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

Detectable Warning Location

- Detectable warnings at pedestrian/rail crossings

Detectable Warnings

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

1 2 3 4

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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

> 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 ¼” – 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 needs some type of pedestrian demand signalization

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Crossing Time

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

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Crossing Time

- Curb extensions can reduce crossing distance

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Pedestrian Street Crossings

- Refuge islands can be useful

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

**Accessible Pedestrian Signals (APS)**

- 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
Accessible Pedestrian Pushbuttons

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

Figure 4E-3. Pushbutton Location Area

UNITED STATES ACCESS BOARD
Between 1 1/2 ft and 6 ft from the edge of curb, shoulder or pavement
No more than five feet from crosswalk line

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Pushbutton Location

Face of pushbutton must be parallel to the crosswalk

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Roundabouts

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

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

United States Access Board

On-Street Parking

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

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

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

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

Passenger Loading Zones

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

Bus Boarding and Alighting Areas

- Clear space: 96”x60”
- Perpendicular to road – 1:48 max slope;
- Parallel to the road can match grade of road
Bus Boarding and Alighting Areas

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

Questions?

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