



www.access-board.gov



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”

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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>

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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



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Application and Administration

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

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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

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Alterations

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



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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.

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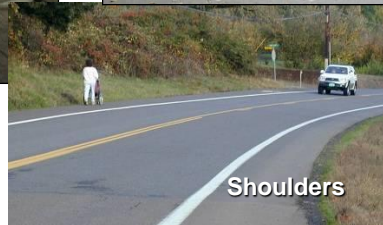
Types of Pedestrian Facilities Pedestrian Access Routes (PAR)



Sidewalks



Shared-use Paths

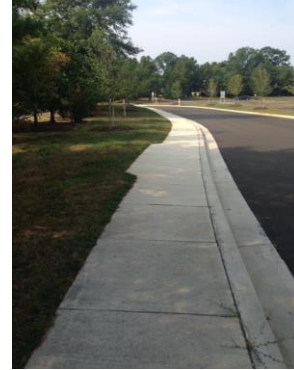


Shoulders

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Pedestrian Access Route Width



- ☐ 48" min continuous pedestrian access route (PAR)
- ☐ If <60" passing space at 200' intervals

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Shared Use Path Width



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

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Clear Width Around Obstructions



- ❑ **48" min clear width continued around obstructions**

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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.



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Pedestrian Access Route **Running Slope**

- ☐ Within pedestrian street crossings: 5% maximum



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Pedestrian Street Crossings



- ☐ PROWAG does not specify when to mark...
- ☐ Or how to mark (meet MUTCD requirements)

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Pedestrian Access Route **Cross Slope**

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



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Pedestrian Access Route **Cross Slope**

- ☐ Within Traffic Signalized Pedestrian Street Crossings: 5% max
- ☐ Within Yield or Stop Controlled Pedestrian Street Crossings: 2% max



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Pedestrian Access Route **Cross Slope**

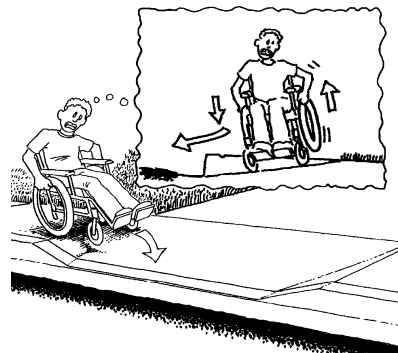
- ❑ Midblock Pedestrian Street Crossings: Street or highway grade



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Cross Slope at Driveways

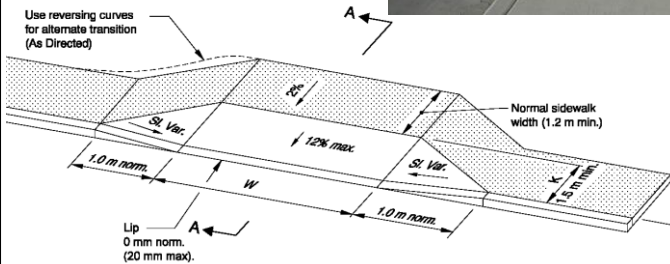


- ❑ Pedestrian design does not have to be an after thought

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Driveways



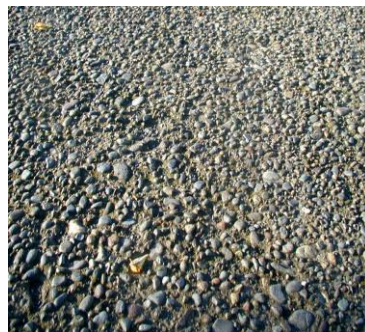
☐ If ROW is available...

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Surfaces

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



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Surfaces

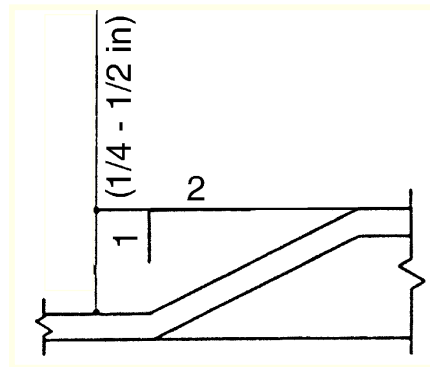
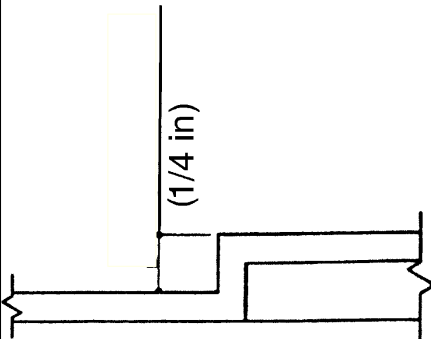


- ❑ Properly installed, and well maintained bricks and flagstone and paving stones can work.

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Changes in Level

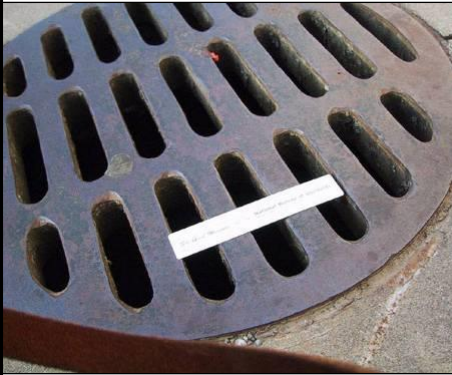


- ❑ Must be beveled if greater than $\frac{1}{4}$ inch.

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Horizontal Openings

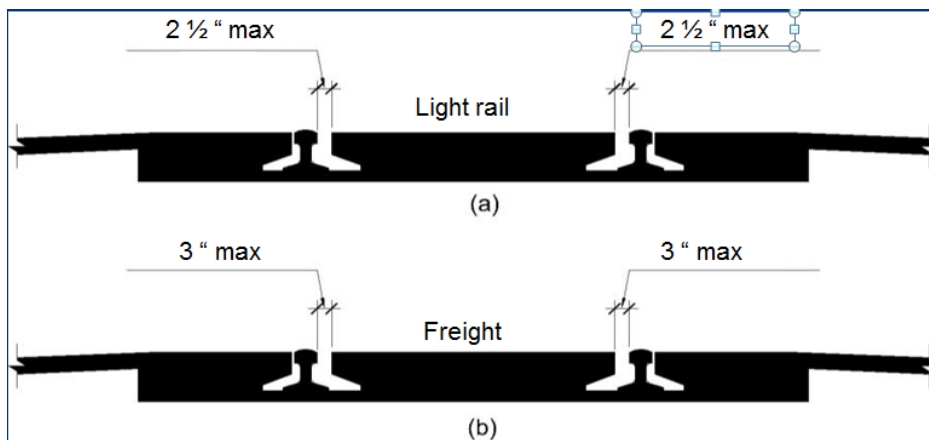


- ❑ No more than ½ inch opening in the direction of travel.

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Flange Way Gap



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Alternative Pedestrian Access Routes



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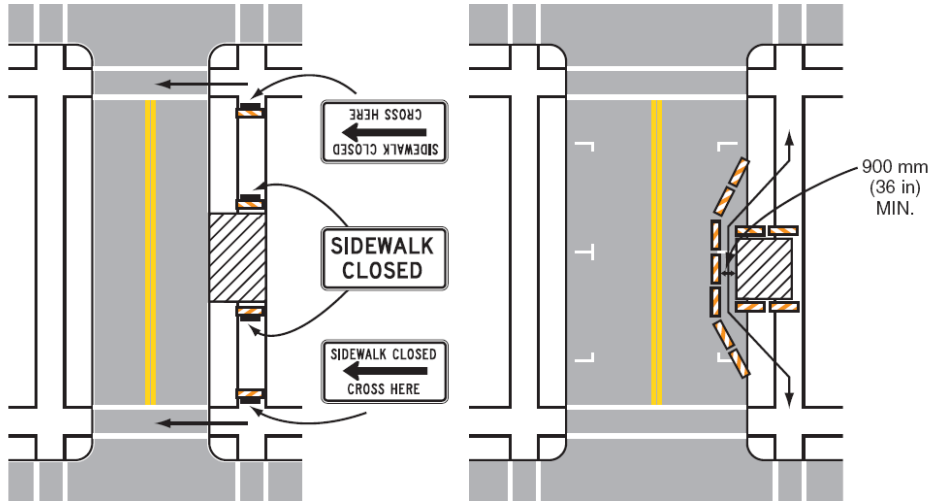
Temporary Route Basics

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

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Temporary Traffic Control



From Part 6 of MUTCD

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Temporary Traffic Control



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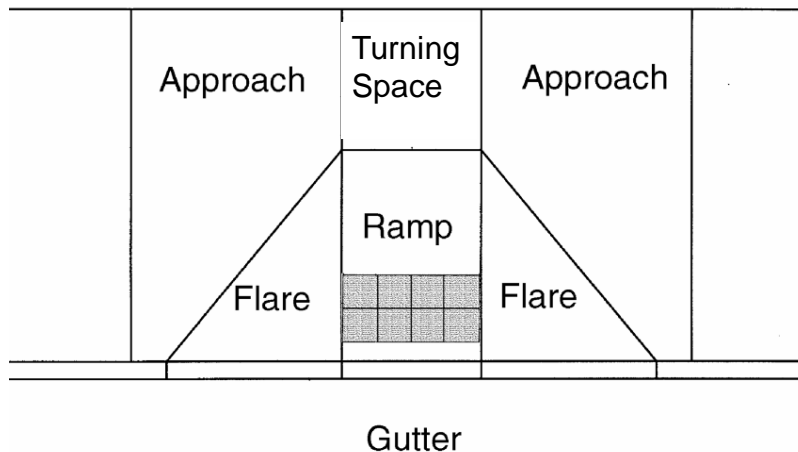
Curb Ramp Basics

- ☐ 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

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Curb Ramps

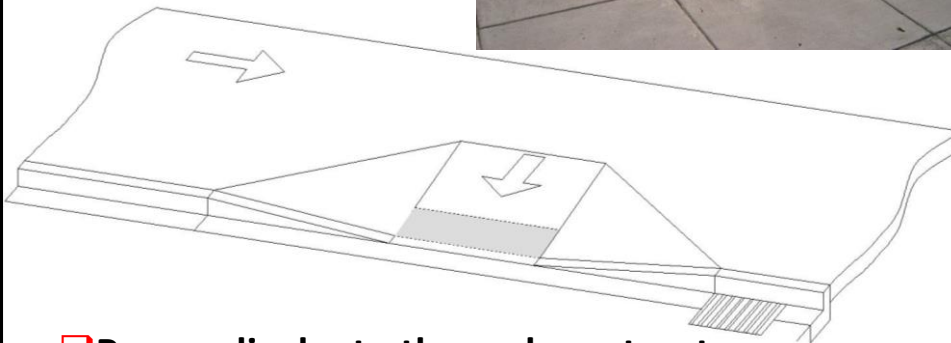


- ☐ The 'cookie cutter' curb ramp

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Perpendicular Curb Ramps

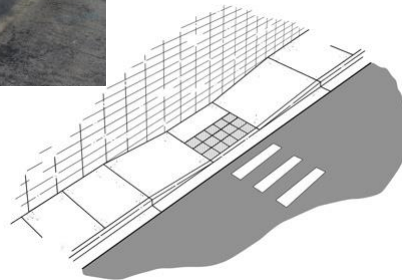
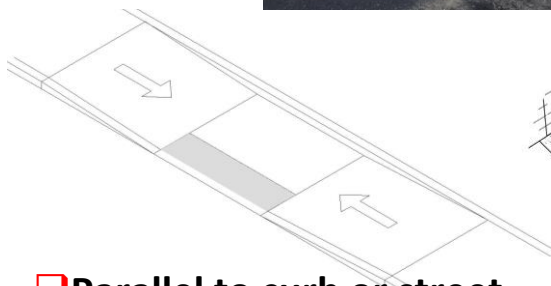


☐ Perpendicular to the curb or street

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Parallel Curb Ramps

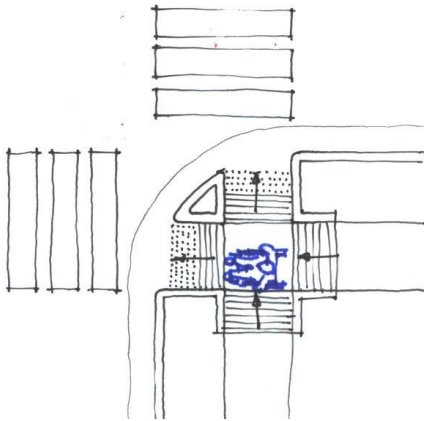


☐ Parallel to curb or street

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Types - Combination

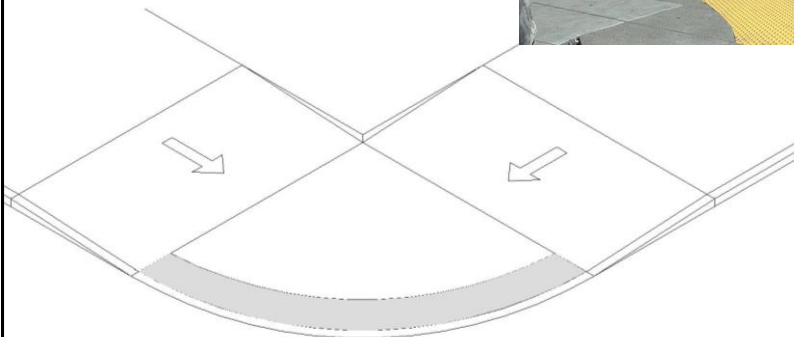


- ❑ Combination ramps slope the sidewalk down and can shorten the perpendicular run to the street

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Blended Transitions

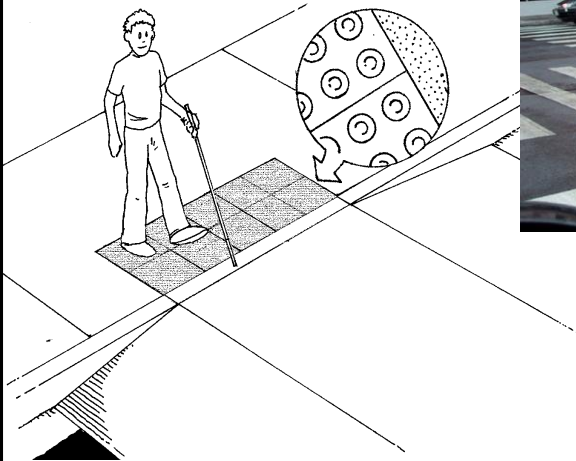


- ❑ Blended Transition (depressed corner)

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Blended Transition

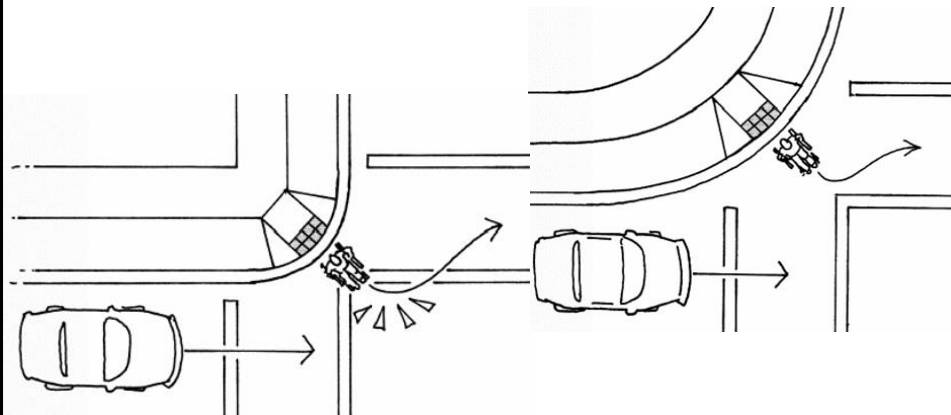


☐ Blended Transition (raised crossing)

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Diagonal Curb Ramps



☐ Diagonal/Apex can cause dangerous conflicts

☐ Only permitted in alterations as last option

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Street Crossing = Curb Ramp

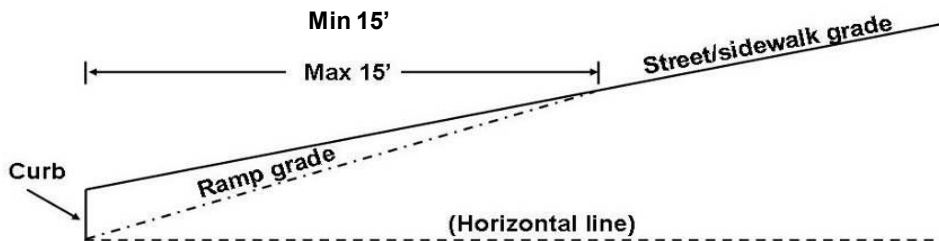


- ❑ Two ramps per corner

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Curb Ramp **Running Slope**



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

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Curb Ramp **Cross Slope**



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

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Curb Ramp **Width**



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

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Landings

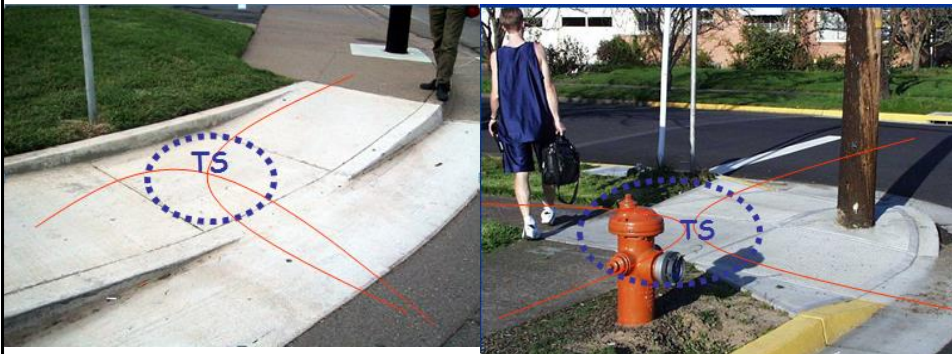


- ❑ Landings are required at the top of perpendicular curb ramps for change in direction of travel (4' x 4' min)

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Landings

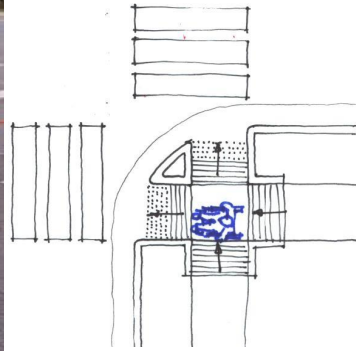


- ❑ Provide a level landing at the top of a perpendicular ramp, at the bottom of a parallel ramp

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Landings



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

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Grade Breaks

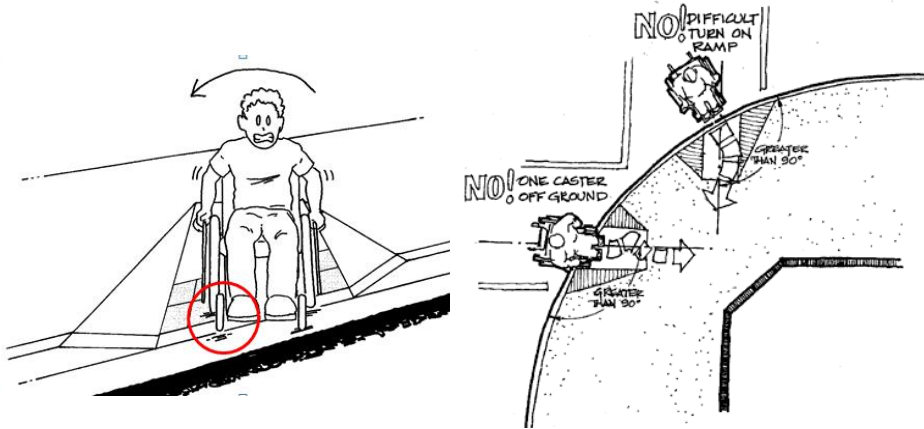


- ☐ Grade breaks must be perpendicular to direction of travel

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Perpendicular Grade Breaks

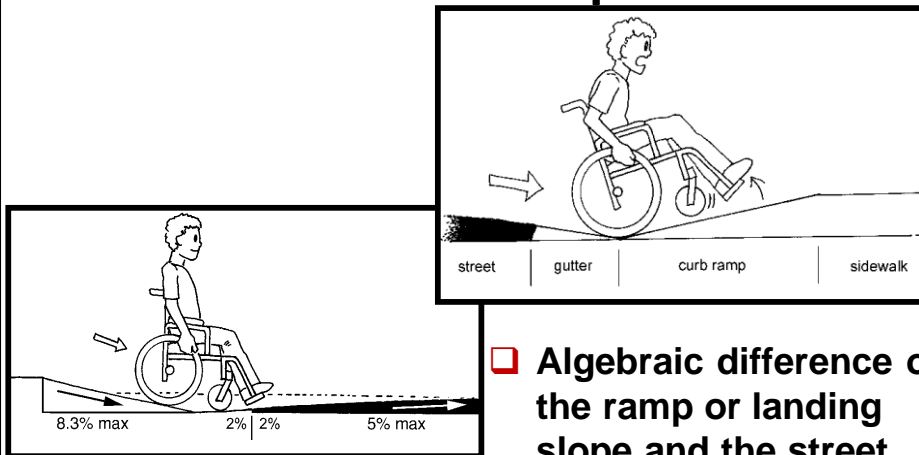


- ❑ Both wheels must hit the break at the same time for stability (especially manual wheelchairs)

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Counter Slope

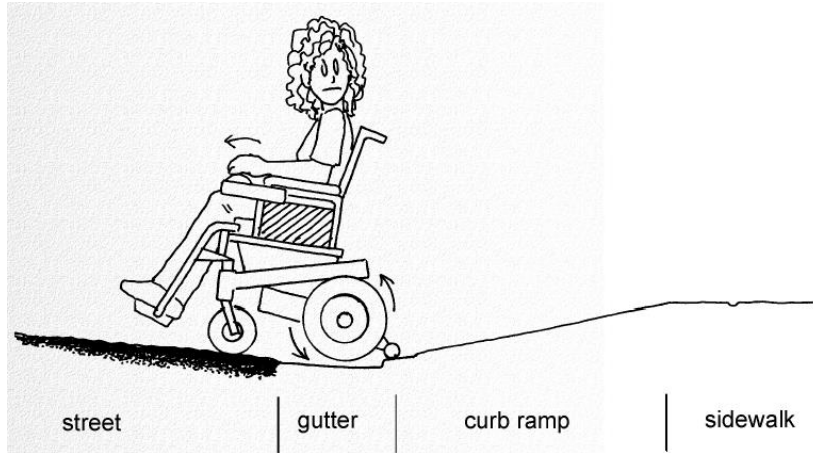


- ❑ Algebraic difference of the ramp or landing slope and the street crown 13% max

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Counter Slope



☐ Transition must be flush at all grade breaks

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Usable Curb Ramps?



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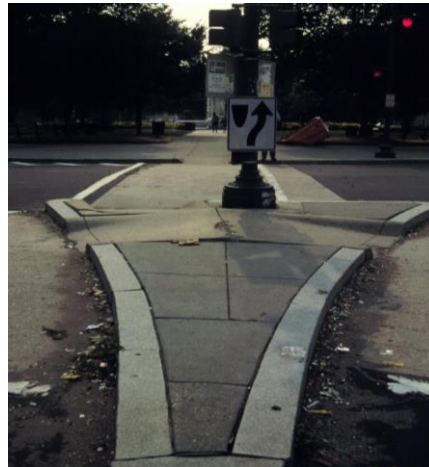
Usable Curb Ramps?



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Usable Curb Ramps?



☐ What is wrong with these?

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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



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Detectable Warnings

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



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Detectable Warnings



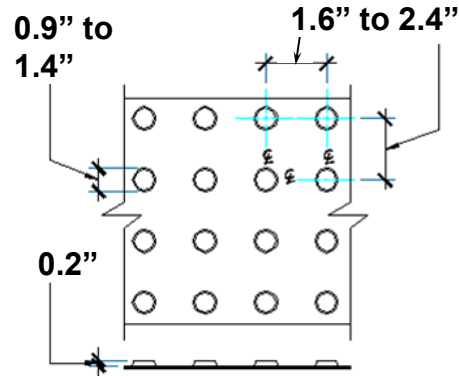
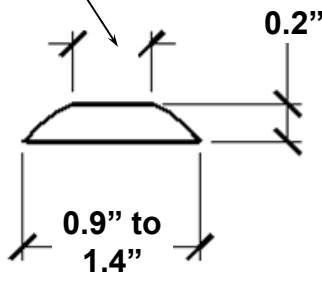
- ❑ All ramps and raised crossings must have detectable warnings to provide notice of the change from a pedestrian to a vehicular route.

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Detectable Warnings

50% to 65%
of base



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

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Detectable Warnings



ADAAG: Full depth and width of curb ramp



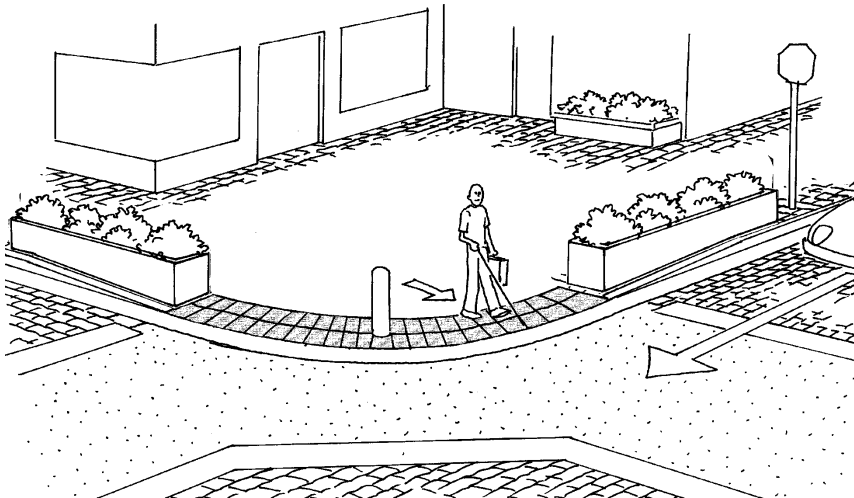
PROWAG: 24 inches and width of curb ramp

- ☐ Minimum 24" in the direction of travel

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Detectable Warnings



- ☐ DW needs to cover the entire flush edge

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Detectable Warning Location

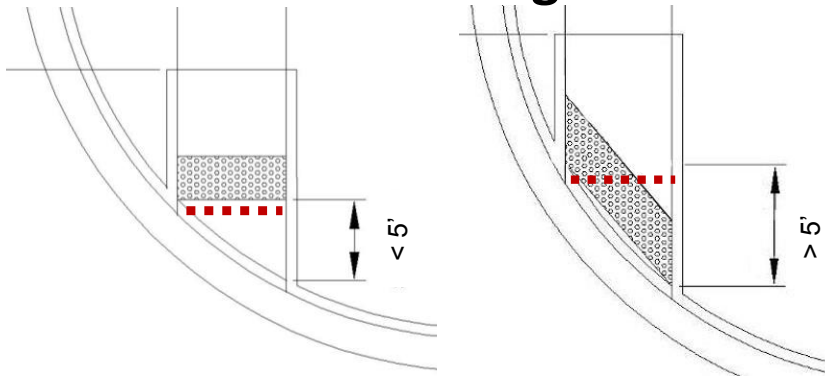


- ☐ DW is placed at back of curb or at grade break

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Detectable Warning Location

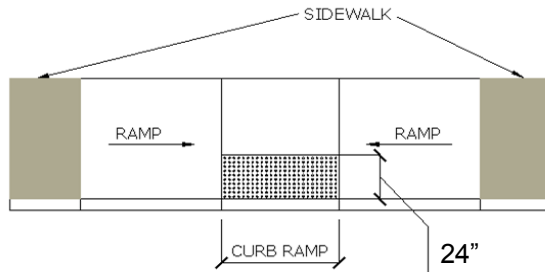


- ☐ Place DW on curb ramp at grade break if space at bottom of ramp is less than 5' deep
- ☐ Place DW on bottom behind the back of the curb if space is more than 5' deep at any point

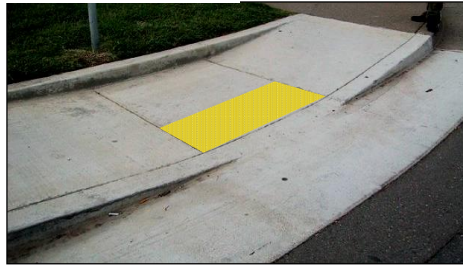
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Detectable Warning Location



☐ Place at back of curb on landing



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Detectable Warning Location

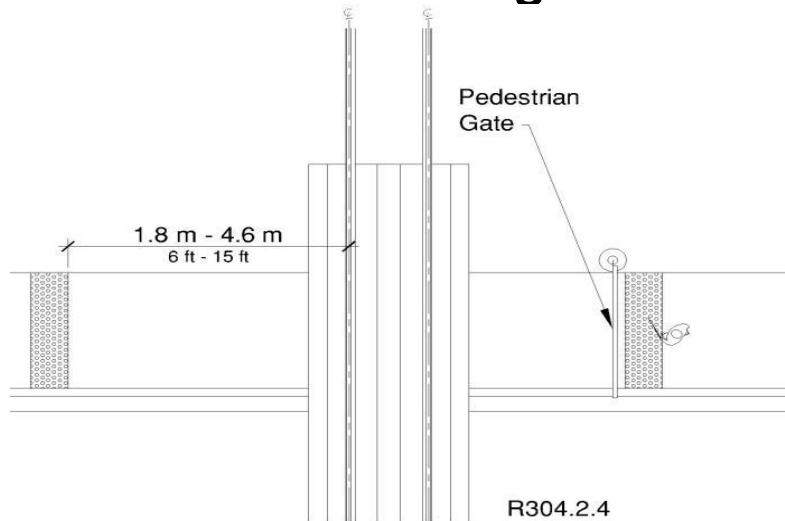


☐ Pedestrian refuge islands greater than 6 feet
- DWs placed at front edge of island

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Detectable Warning Location

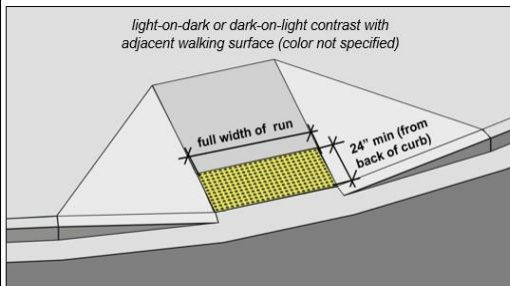


☐ Detectable warnings at pedestrian/rail crossings

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Detectable Warnings



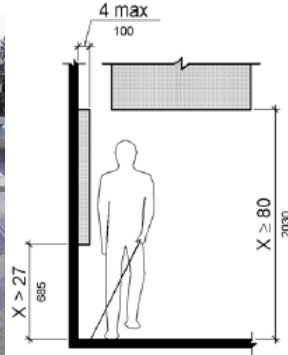
☐ DW shall have a visual contrast with the surrounding surfaces (light on dark or dark on light)

☐ No specific color required

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Protruding Objects

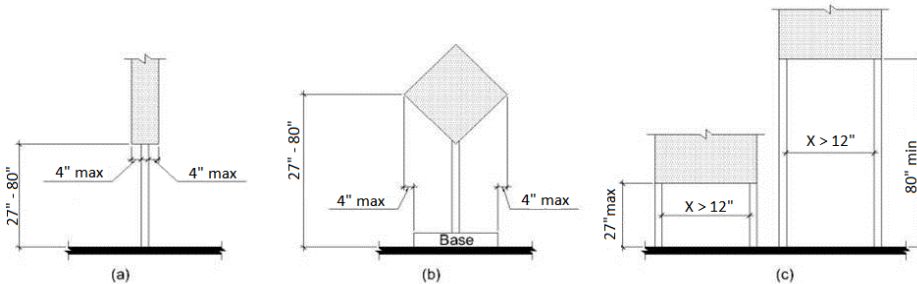


- ☐ Objects between 27" and 80" may not protrude more than 4".
- ☐ Entire pedestrian circulation route!

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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



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Ramps

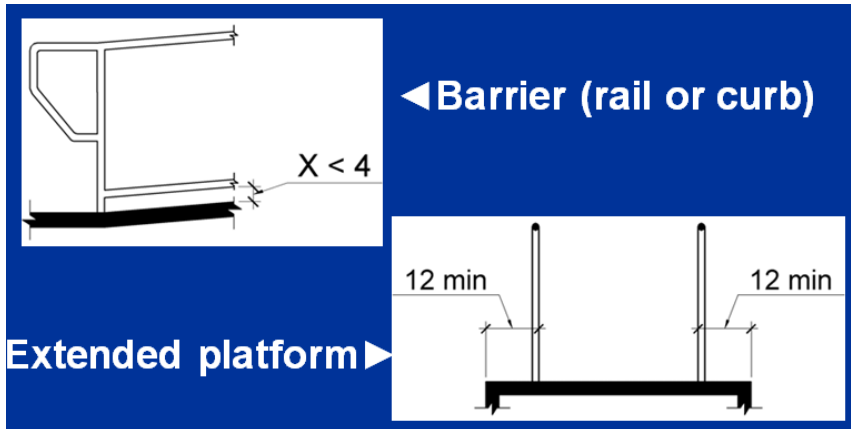
- ☐ Slope: 1:12 max
- ☐ Cross slope: 1:48 max
- ☐ Clear width: 36" min
- ☐ Rise for each run: 30" max
- ☐ Level landings
- ☐ Handrails (both sides)
- ☐ Edge protection



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Ramps



❑ > 6" elevation change requires edge protection

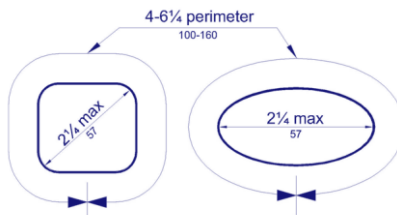
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Handrails

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



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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



WALKING SPEED AN ISSUE



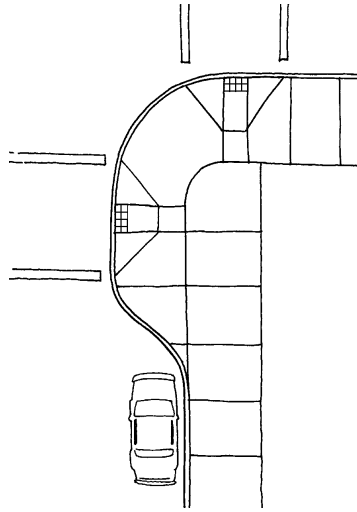
START-UP TIME AN ISSUE

- ☐ 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

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Pedestrian Street Crossings

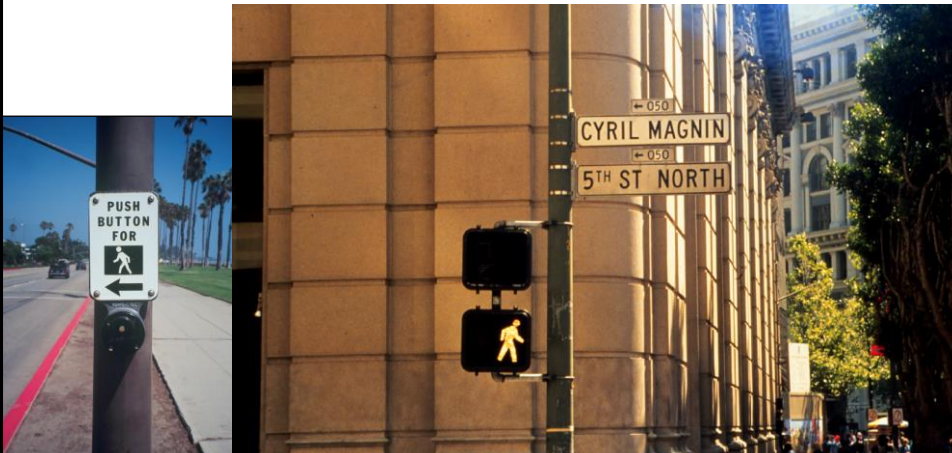


- ☐ Prohibiting crossings happens...
- ☐ Prohibit for ALL pedestrians

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Crossing Information



- ☐ Usable information about pedestrian street crossings

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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



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Accessible Pedestrian Signals (APS)



- ☐ Speakers are located on the device; at pedestrian level

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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



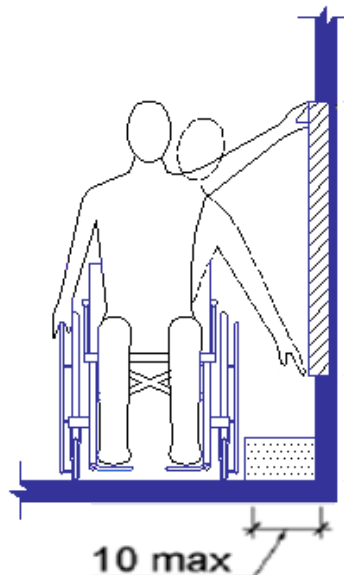
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Accessible Pedestrian Pushbuttons

Reach Ranges

- ❑ 48" max.
- ❑ 15" min.
- ❑ Side reach within 10"
- ❑ No obstruction permitted on forward reach



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Accessible Pedestrian Pushbuttons



☐ Usable with a closed fist

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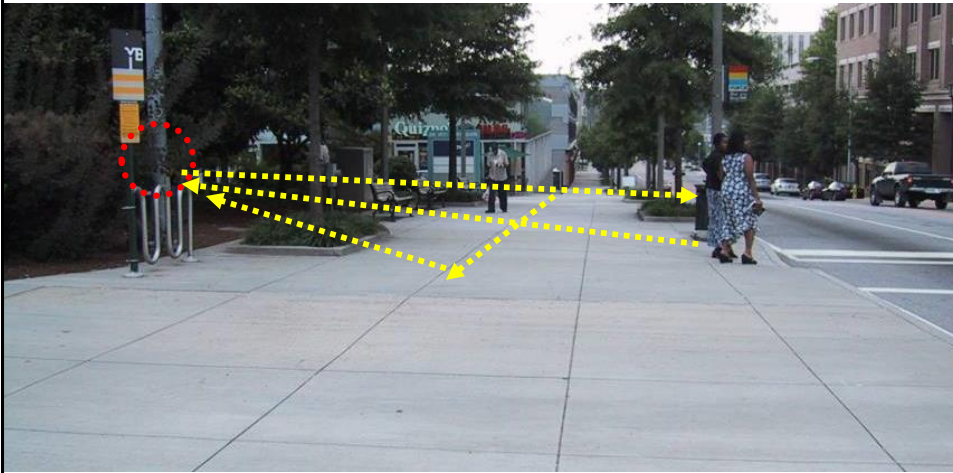
Tactile Arrow



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Pushbutton Location



☐ Find the pushbutton. Now line up to cross.

☐ Missed your chance? Do it again

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Pushbutton Location



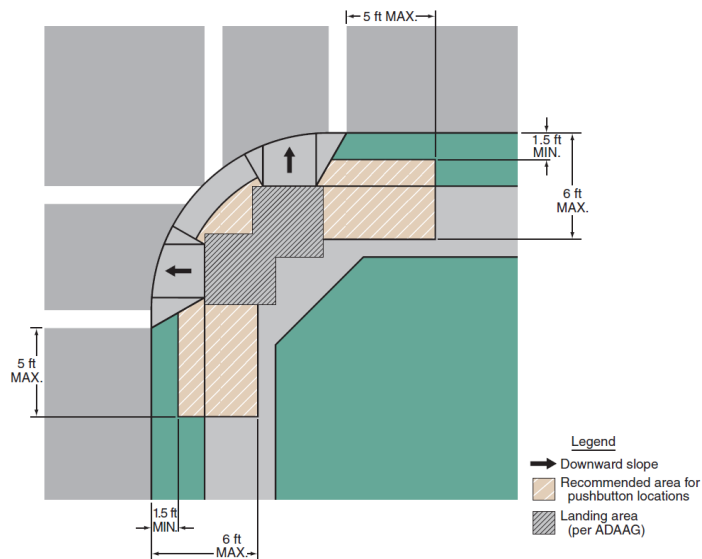
☐ Must be connected to a pedestrian access route

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Pushbutton Location

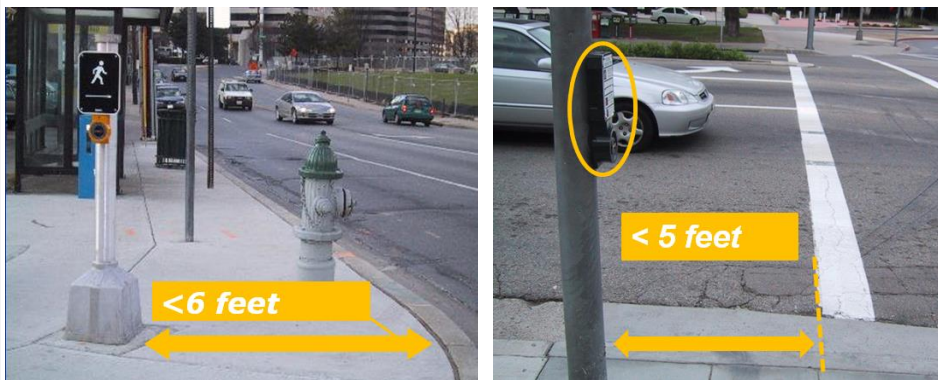
Figure 4E-3. Pushbutton Location Area



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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

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Pushbutton Location



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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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Roundabouts

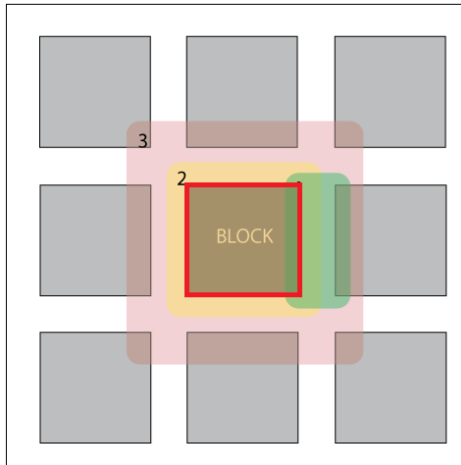


- ☐ Example of: Curb attached sidewalk and fencing to guide pedestrians to crossing location.

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On-Street Parking



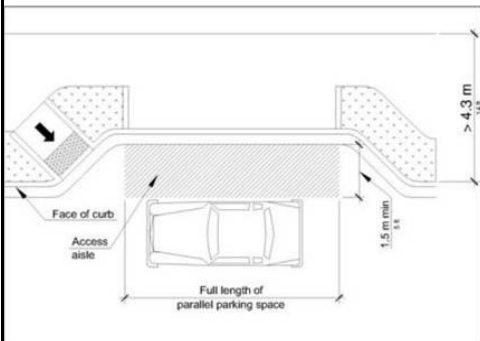
☐ Number of accessible spaces is based on total marked or metered spaces on a block perimeter

☐ Scoping Section Table R214

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On-Street Parking

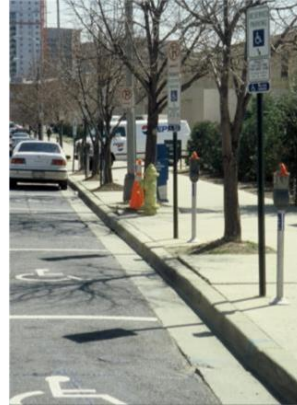
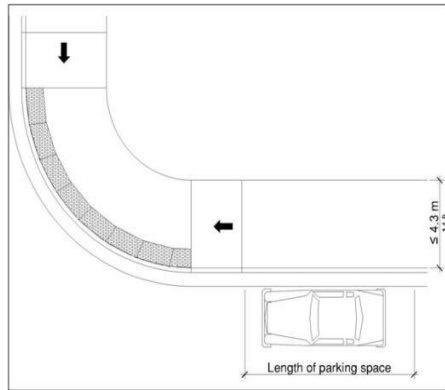


☐ Where the width of the adjacent sidewalk or available right-of-way exceeds 14 ft. an access aisle is required (new construction)

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On-Street Parking

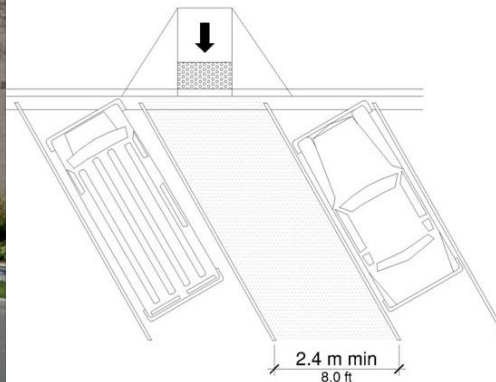


- ☐ Narrow sidewalks –access aisle not required
- ☐ Alterations – access aisle only required when scope of project involves curb and road work

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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

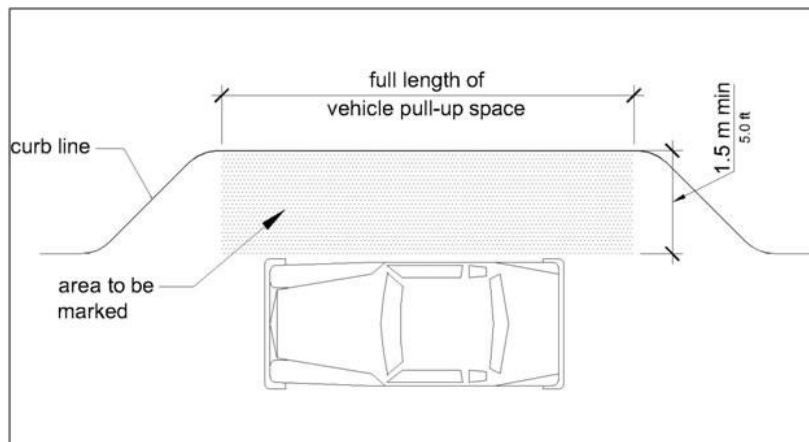


- ☐ Information must be visible from a point 3.3 ft. max above the center of the clear space
- ☐ Must meet operable parts requirements

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Passenger Loading Zones

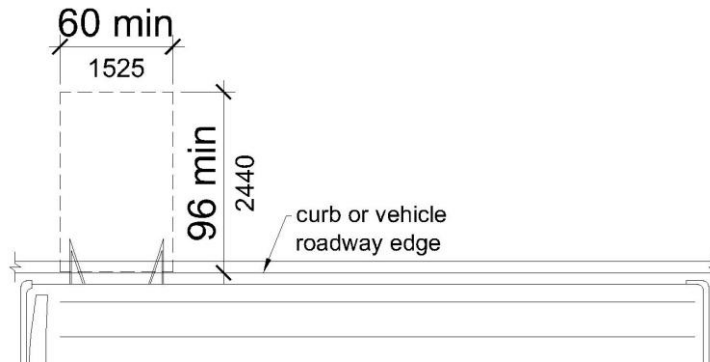


- ☐ The access aisle must be connected to the pedestrian access route

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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

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Bus Boarding and Alighting Areas

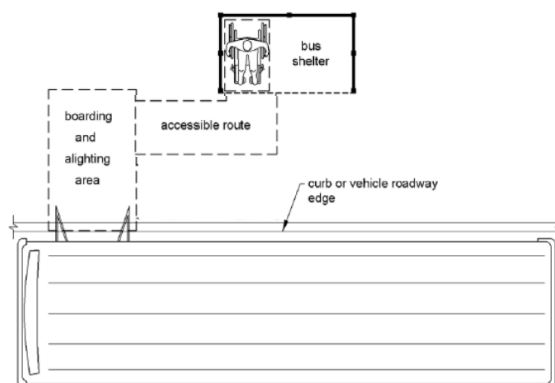


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Bus Shelters

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



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Questions?

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