# ADA & Public Rights of Way

## Overview of Current and Up-coming Requirements

**FDOT Design Training Expo 2012 – Orlando, FL**

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*Office of Design, Production Support*

## Streets, Sidewalks & Everything In Between

- *How to ensure pedestrian facilities within our public rights of way are "**accessible to and useable by**" all people, including those with disabilities.*

- In this Session, we will review:
  - Current Standards & Proposed Guidelines
  - Pedestrian Access Routes & Sidewalk "Zone System"
  - Crossings, Curb Ramps & Detectable Warnings
  - Accessible Pedestrian Signals & Push-Buttons
  - Maintenance & Alternate Routes (Pedestrian MOT)
  - Outdoor developed areas: trails & shared use paths

# Standards & Guidelines

- ***ADA Standards for Accessible Design***
  - 1991/1994 & 2010
- ***ADA Standards for Transportation Facilities***
  - 2006
- ***Guidelines for Accessible Public Rights of Way***
  - Also known as ***Public Rights of Way Accessibility Guidelines*** (PROWAG)

# Public Rights of Way

- Access Board published proposed guidelines for public rights of way on July 26, 2011
- Proposal addresses sidewalks, curb cuts, street crossings, on-street parking, other elements not on a "site"
  - **NPRM – public comments - 11/23/11-02/02/12**
  - www.access-board.gov/prowac/nprm.htm
  - Access Board considering comments
  - Adoption in **late 2012 – early 2013** expected
- This presentation is based on PROWAG criteria

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# Pedestrian Access Route (PAR)
## R204 & R301

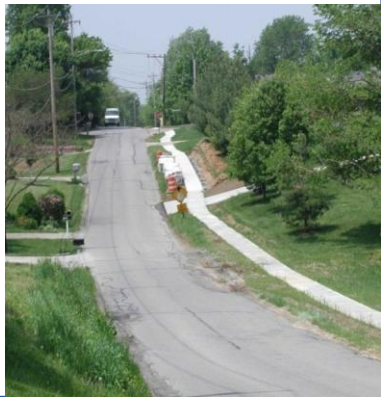
- PROW equivalent to "accessible route" for sites & facilities
- 48" clear width min. - no reduction in width
  - Exceptions for "existing physical constraints"
    - ROW limitations, adjacent facilities, underground structures, etc.
- 2% max. cross-slope
- May follow general grade of roadway
- "Supported slopes" must meet R407
  - Bridge approaches, bridge structures, etc.
  - Ramps: slopes, landings, handrails, etc.

# Pedestrian Access Route

Sidewalk grade – **ADAS** vs. **PROWAG**

- ADAS – 403.3 & 405.2: Provide accessible route
- PROWAG – R301.4.2: Match roadway grade

*ADAAG* *PROWAG*

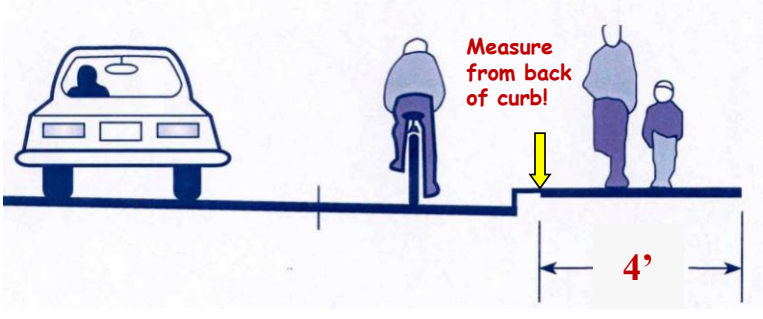


# Supported Slopes
## R204.4 & R407

- Bridge approaches, bridge structures, etc.
- Must meet Ramp requirements: If >5% slope…
  - Must have handrails on both sides
  - Must have level landings @ 30" rise
  - Must have 2% max. cross-slope
  - Typically, behind barrier
    - Crash-tested device

# Pedestrian Access Route (PAR)

- **R301.3.1 Continuous Width**
  - The minimum continuous and unobstructed clear width of a pedestrian access route shall be 4 ft, exclusive of the width of the curb

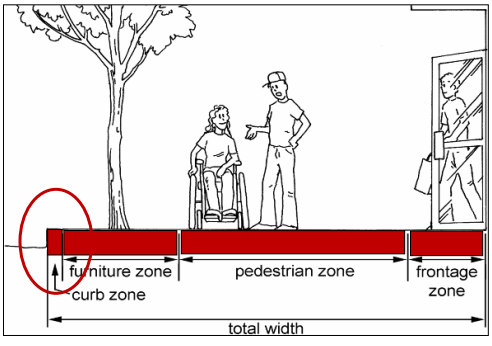


# Pedestrian Access Route

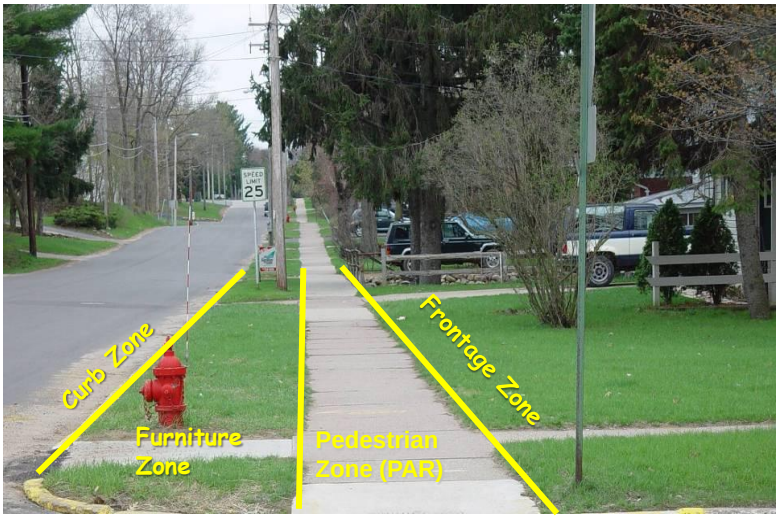
- **R202.3.1 Existing Physical Constraints**
  - Where existing physical constraints make it impracticable for altered elements, spaces, or facilities to fully comply with the requirements for new construction, compliance is required to the extent practicable within the scope of the project.
  - Existing physical constraints include, but are not limited to, underlying terrain, right-of-way availability, underground structures, adjacent developed facilities, drainage, or the presence of a notable natural or historic feature.

# The Sidewalk 'Zone' System

- Curb Zone
- Furniture Zone
- Pedestrian Zone (must meet PAR requirements)
- Frontage Zone



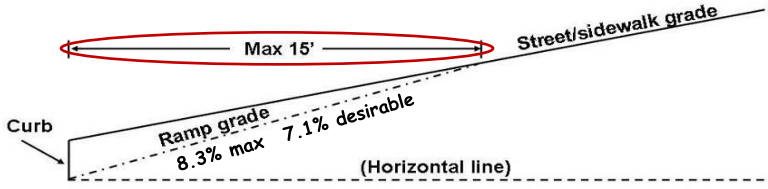
# Zone System: Residential




# Zone System: Commercial

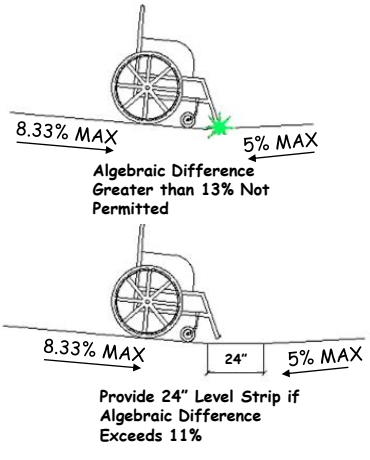
# Curb Ramps – Grade
## R303.2

- Maximum grade – 8.3%
- Least slope possible is preferred
- Recommended maximum grade to allow for construction tolerance – 7.1%
- When "chasing grade," ramp length need not exceed 15', but slope must be uniform




# Change of Grade (Counterslope)
## R303.3.5

- PROWAG allows 8.3% ramp and 5% grade at the adjacent street = 13.3%
- Recommendation:
  - 11% maximum
  - Provide 2' level area if greater than 11%



# Detectable Warnings
## R221 & R304

- "Truncated Domes" in aligned pattern
- Required where curb ramps, blended transitions or landings provide a flush pedestrian connection to the street
- Not required at residential driveways
- Recommended at commercial driveways with traffic control devices or which operate like public streets
  - Signals, etc.

# Blended Transitions
## R304.4




# Pedestrian Crossings R306

- Slope of crossing = cross-slope of roadway
- Cross-slope = running-slope of roadway
- Cross Slope:
  - '**STOP**'-controlled: 2% max.
  - Non - '**STOP**'-controlled: 5% max.
    - i.e., '**YIELD**', signal or no control
  - Mid-block: match grade of roadway

# Accessible Pedestrian Signals (APS) R209 & R307

- Provide pedestrian signal information in usable formats, both audible and vibrotactile
- Information in redundant format benefits all pedestrians
- Increase the efficiency of pedestrian timing (research shows reduction in vehicle delay)

# Speakers

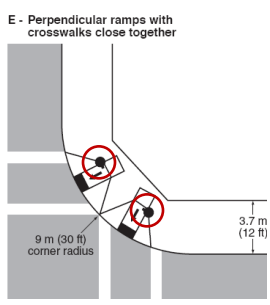

Tactile Arrows

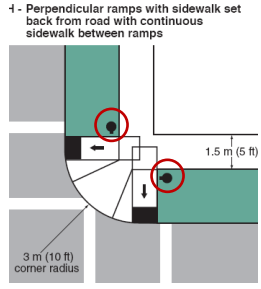
# Tactile/Vibrotactile Arrow

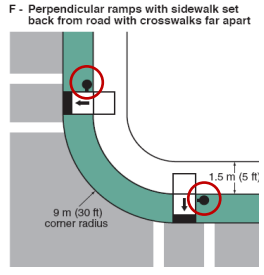
- Aligned with the direction of travel on crosswalk
- May be on pushbutton, or on part of device, or on sign above pushbutton

(PROWAG 306.4.1;
MUTCD 4E.11 & 4E.12)

# Pushbutton Locations
## 2009 MUTCD




- NOTE: It must be clear which button controls which crossing. (per MUTCD).
- If APSs cannot be placed at least 10 apart, they must 'speak' to you.

# APS Location

Good placement of APSs

Not-so-good placement

# Roundabouts
## R305.6

- Where pedestrian facilities are provided at roundabouts, they shall contain a pedestrian access route
- If walkways are curb-attached, there shall be a continuous and detectable edge treatment along the street wherever pedestrian crossing is not intended R305.6.1
- Multi-lane roundabouts shall provide pedestrian activated signals for each segment of each crosswalk, including splitter island R305.6.2
- Similar requirement for channelized turn lanes R305.7 (i.e., multi-lane 'slip lanes')

# APSs @ Roundabouts
## R207, R306.4 & R306.5

New!

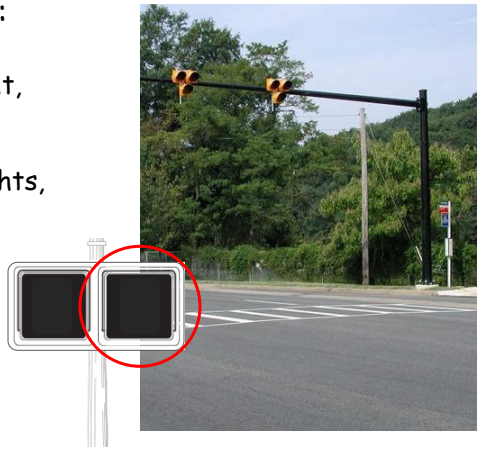
- PROWAG will require 'pedestrian-activated' signals/beacons for multi-lane pedestrian crossings at new roundabouts and channelized right-turn lanes.

# RRFB:
## Rectangular Rapidly Flashing Beacon

- Lights stay dark until activated by pedestrian, then:
- Strobe lights alternate to alert drivers

# HAWK
## Pedestrian Hybrid Beacon

- Stays dark for vehicles and solid 'hand' for pedestrians until activated, then:
- For vehicles:
  1. Flashing **Yellow** light,
  2. Solid **Yellow** light,
  3. Solid **Red** lights
  4. Alternating **Red** lights,
  5. Then dark
- For pedestrians:
  1. Solid **Hand**,
  2. Solid **Hand**,
  3. Solid **Walk**,
  4. Flashing **Hand**
  5. Solid **Hand**

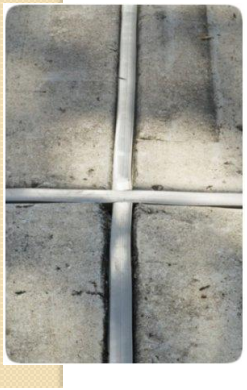


# Maintenance of PAR
## 28 CFR 35.133

- Title II of the ADA requires public entities to maintain equipment and features of facilities that are required to provide ready access to individuals with disabilities

# Potential Solutions

- Sidewalk Grinding
- Flexible Pavements
- Joint Materials



# Alternate Pedestrian Routes
## R205 & R303 & MUTCD 6D & 6G

- Pedestrian Maintenance of Traffic (MOT)
- Alternate Pedestrian Access Routes are required to the maximum extent feasible when an existing pedestrian access route is blocked by construction, alteration, maintenance, or other temporary condition.


# Alternate Pedestrian Access Route

- R205 specifies that the alternate pedestrian access route shall be:
  - Provided on the same side of the street as the disrupted route, to the maximum extent feasible
  - Where exposed to adjacent construction, traffic or other hazards, shall be protected with a *pedestrian barricade* or *channelization device*
    - Continuous, stable, non-flexible
    - Consist of features identified in the ***MUTCD*** Chapter 6F
      - ***Plastic tape is not acceptable!!!***
      - ***Rows of barrels and/or cones is not acceptable… unless they are connected by a continuous 'detectable' edge***

# Longitudinal Channelizing Devices (LCDs)

- Detectable edge @ 2"-8"
- Hand-trailing edge @ 32"-36"

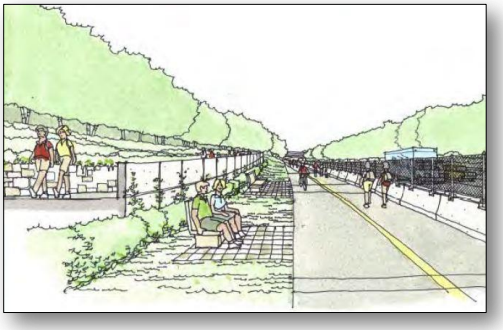
# Outdoor areas

- AGODA (Accessibility Guidelines for Outdoor Developed Areas)
- Draft guidelines published October 2009
- Once final, would be adopted and followed by federal agencies
- Access Board would start considering same topic for state/local governments, public accommodations
- Access Board starting guidelines on shared use paths

# Shared Use Paths

**Definition:**

A shared use path is a multi-use path designed for both transportation and recreation purposes.



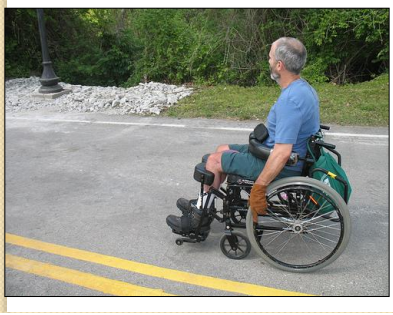
# Shared Use Paths

**Definition:**

Shared use paths typically are separated from motorized vehicular traffic by an open space or barrier, either within a highway right-of-way or within an independent right-of-way.

# Shared Use Paths

Shared use paths are a type of trail designed to be **part of a transportation system**, providing off-road routes for a variety of users. The **primary users** of shared use paths **are bicyclists and pedestrians**, including pedestrians using mobility devices such as **manual or motorized wheelchairs**.



# DOJ Resources

- Tool Kit for State and Local Gov'ts
  www.ada.gov/pcatoolkit/toolkitmain.htm
- See Chapter 6
  - Chapter 6, Curb Ramps and Pedestrian Crossings
  - Check list (addendum)
  - Survey instructions (appendix)
  - Survey Form (appendix)

## FHWA resources

- FHWA implements and enforces the federal requirements for public right-of-way
- Resources on FHWA web site
  - Questions and Answers About ADA/ Section 504, www.fhwa.dot.gov/civilrights/programs/ada_sect504qa.htm

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## FDOT Resources

- FDOT implements state and federal requirements for accessibility for our building facilities and for pedestrian facilities within state public rights of way
- Resources on FDOT Website
  - Designer tools, training, links, etc.
  - www.dot.state.fl.us/projectmanagementoffice/ADA/

# Contact US

- State
  - FDOT ADA Coordinator
  - FDOT District ADA Coordinators
  - City/County ADA Coordinators
- Federal
  - U.S. Access Board
  - U.S. Department of Transportation
  - U.S. Department of Justice

# ADA & PROWAG

QUESTIONS?

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2012 Design Training Expo

# Thank You!

Merci!

Todah Rabbah

Arigato!

Dhanya Vaad!

Xie Xie!

Gracias!

Shokran!

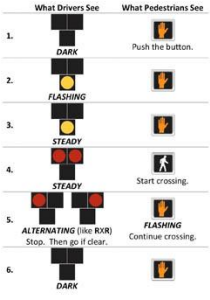
Danke!

LIVE LONG AND PROSPER!

# Possible Solutions for Roundabout Accessibility

- Audible/tactile cues at crossing locations
- Good sight distance
- Setback sidewalks
- Rumble strips at vehicle exits
- In Pavement lighting
- Pedestrian-activated signals/beacons

'HAWK' Beacon




http://www.youtube.com/watch?v=ReNk2T5ay1c