

# FBC Accessibility 7<sup>th</sup> Edition (2020) Review Course Advance Building Code Course

## Presenters

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# Learning Objectives

- ◆ Review the “2010 ADA Standards for Accessible Design” and the 2012 Florida Accessibility Code updates as they apply to the field of landscape architecture in Florida – Florida Building Code, Accessibility 6<sup>th</sup> Edition (2017)
- ◆ Examine new accessible design standards for recreational facilities and guidelines for accessible outdoor developed areas
- ◆ Discover where borderline interpretations and common errors occur in the application of standards

# Accessibility Standards

- ◆ “2010 ADA Standards for Accessible Design” (March 15, 2012)
  - Title II (28 CFR 35.151) – state and local government facilities
  - Title III (28 CFR 36 Subpart D) – places of public accommodation and commercial facilities
  - accessibility standards (36 CFR Part 36, Appendices B and D) apply to both Title II and III facilities
  - based on 2004 ADA/ABAAG
  - **mandatory** March 15, 2012

[www.ada.gov/2010ADASTandards\\_index.htm](http://www.ada.gov/2010ADASTandards_index.htm)

- ◆ Check state accessibility codes for more restrictive requirements

# Accessibility Standards - FLORIDA

- ◆ “2012 Florida Accessibility Code for Building Construction”
    - based on the “2010 ADA Standards for Accessible Design”
- [www.floridabuilding.org/fbc/committees/accessibility/aac/Changes\\_to\\_Law/Florida\\_Accessibility\\_Code\\_2012\\_ICC\\_FINAL.pdf](http://www.floridabuilding.org/fbc/committees/accessibility/aac/Changes_to_Law/Florida_Accessibility_Code_2012_ICC_FINAL.pdf)
- ◆ Adopted pursuant to Section 553.503, Florida Statutes

# Guidelines

- ◆ “Guidelines” represent the “state-of-the-art” for accessible design, but are not enforceable
  - proposed “Accessibility Guidelines for Pedestrian Facilities in the Public Right of Way” (July 26, 2011)
  - “Accessibility Guidelines for Outdoor Developed Areas” (effective Nov. 25, 2013)
  - Shared Use Paths accessibility guidelines supplemental notice of proposed rulemaking (Feb.13, 2013)



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# Applicability

## Buildings and Facilities

### ◆ Temporary



### ◆ Permanent





# Applicability

## Historic Buildings and Facilities

- ◆ To the maximum extent feasible, with limited exceptions for:
  - accessible route
  - entrances
  - toilet facilities
  - in cases that would threaten or destroy the historical significance
- ◆ Consult with the State Historic Preservation Office (SHPO)



# Applicability

## Exemptions

- ◆ Churches



- ◆ Private clubs NOT exempt in Florida



# Applicability

Common General Exceptions (to the extent specified)

- ◆ Machinery Spaces



- ◆ Refereeing, Judging, Scoring



# Applicability

## Alterations

- ◆ Alteration –  
change to a building or  
“facility”...that  
affects...usability (except  
normal maintenance
- ◆ Facility –  
all or any portion of  
buildings, structures, site  
improvements, complexes,  
equipment, roads, walks,  
passageways, parking  
lots...located on a site



# Applicability

## Alteration Thresholds

- ◆ Title II  
Unless it would create a “fundamental alteration in nature of program or incur an undue financial or administrative burden”
- ◆ Title III  
“Readily Achievable” – easily accomplishable and able to be carried out without much difficulty or expense



# Applicability

## Alteration Thresholds

- ◆ **Title II**  
Unless it would create a “fundamental alteration in nature of program or incur an undue financial or administrative burden”
- ◆ **Title III**  
“Readily Achievable” – easily accomplishable and able to be carried out without much difficulty or expense



# Disproportionate Cost

- ◆ Alterations affecting the usability of or access to a primary function area shall ensure the path of travel to the altered area and... support facilities...are readily accessible unless cost is “disproportionate” (exceeds 20%) to the cost of alteration to the primary function area.



# Disproportionate Cost

- ◆ Priorities for accessible element improvement
  - accessible entry
  - accessible route to altered area
  - minimum of one accessible toilet room for each sex or a single unisex toilet room
  - accessible public telephones
  - accessible public drinking fountains
  - accessible elements such as parking





# Applicability

## Alteration Exception

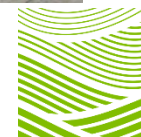
- ◆ “Technically Infeasible” (alteration)
  - little likelihood of being accomplished because of existing structural (or) site constraints that prohibit modification
  - still requires accessibility to the maximum extent feasible



# Applicability

## New Construction

- ◆ Newly designed or constructed buildings or facilities



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# Structural Impracticability

## New Construction

- ◆ Full compliance not required for demonstrated structural impracticability
  - only in rare circumstances due to unique characteristics of the terrain
  - accessibility to the extent possible



# Equivalent Facilitation

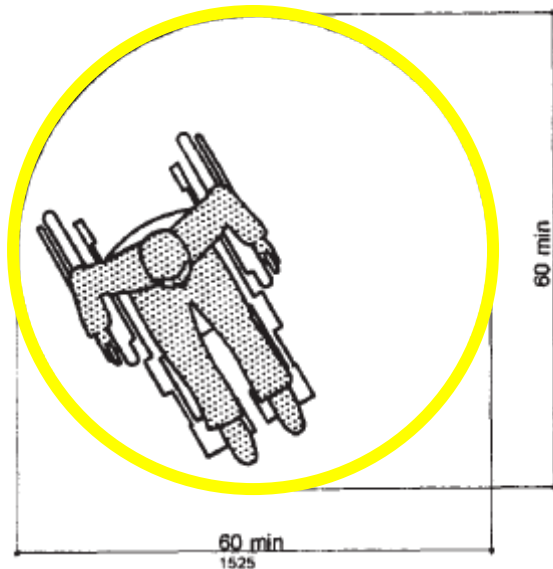
- ◆ Other designs and technologies are permitted if they provide substantially equivalent or greater access to and usability of the facility
- ◆ Burden of proof lies with the covered entity



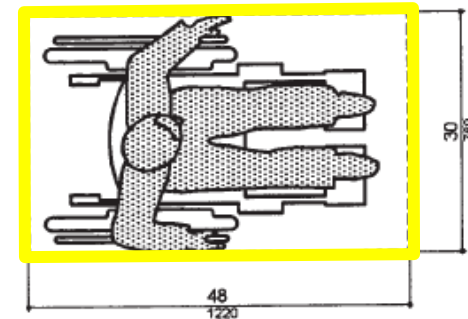
# Space Allowances

- ◆ Turning Space

- Circular
- T-Shaped (Figure 304.3.2)



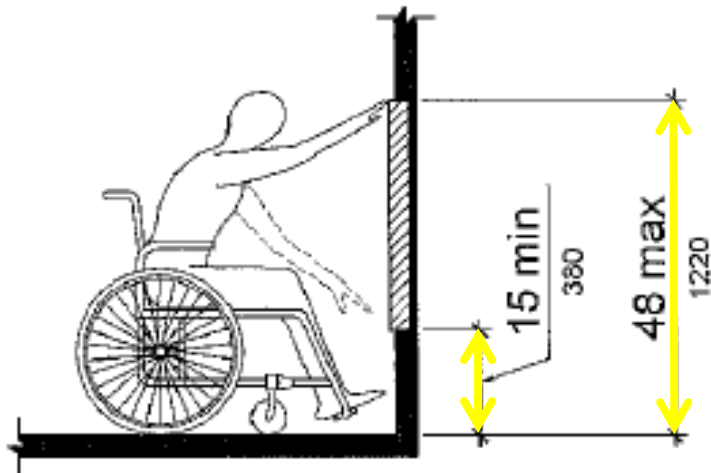
- ◆ Clear Floor or Ground Space



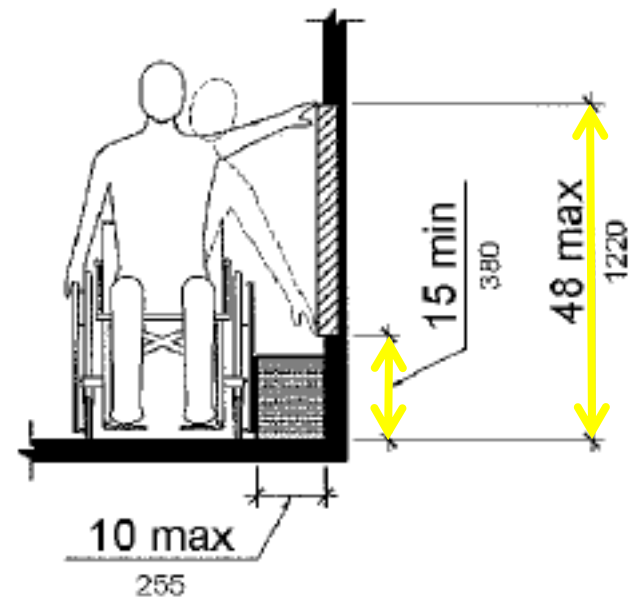
*[spaces permitted to include knee and toe clearances]*

# Reach Ranges

- ◆ Unobstructed forward reach



- ◆ Unobstructed side reach



# Accessible Site

- ◆ At least one accessible route within the boundary of the site shall be provided from each
  - public transportation stop, street or sidewalk
  - accessible parking and passenger loading zone



# Accessible Site

- ◆ At least one accessible route within the boundary of the site, coinciding with general circulation paths, shall connect facilities, elements and spaces
- ◆ At least 60% of all public entrances must be accessible.





# Accessible Site

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- ◆ At least 60% of all public entrances must be accessible.



# Accessible Site

## Exception

- ◆ Accessible route not required if only means of access is a vehicular way not “providing” pedestrian access
  - between site arrival points, including accessible parking spaces, and the building or facility entrance
  - within a site between accessible buildings and facilities



# Accessible Site

## When Exception Does Not Apply

- ◆ Access may include vehicular ways when provided specifically for pedestrian access such as within a shopping mall parking lot
- ◆ *This national ADA standard does not apply to Florida as an accessible path CANNOT pass behind parked cars*



# Bus Stop Boarding Area/Shelter

- ◆ On an accessible route
- ◆ Boarding area
  - within or outside of shelter
  - same slope as roadway side to side; 1:48 front to back
  - 60" wide x 96" deep space
- ◆ Shelter
  - 30" x 48" space



# Passenger Loading Zone

- ◆ One accessible passenger loading zone per 100' loading zone space
- ◆ Vehicle pull-up space 96" wide x 20' long min.
- ◆ Marked access aisle at same level as pull-up space, min. 60" wide x full length of space (20' min.) @ 1:48 slope in all directions



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# Accessible Parking Spaces

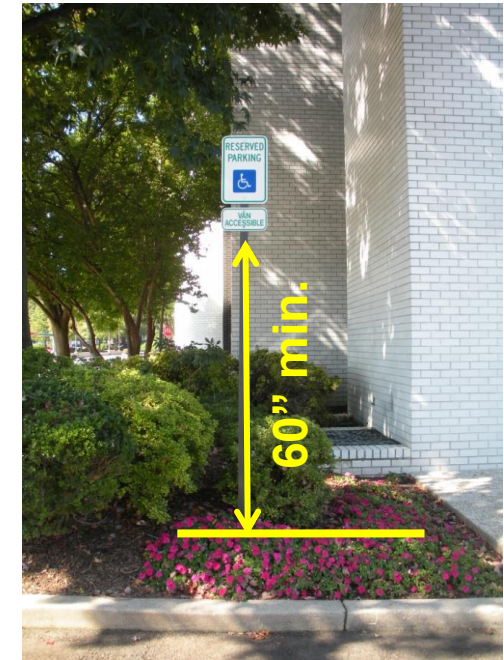
- ◆ Car (Van)
  - min. 12' wide space + 5' aisle
  - 2 spaces may share an aisle
  - aisle must be marked
  - space and aisle slope 1:48 max. in any direction
  - sign required for each space
  - (min. 98" vertical clearance)



# Accessible Parking Signs

- ◆ International symbol of accessibility
- ◆ “Parking by Disabled Permit Only”
- ◆ Must indicate the penalty for illegal use of the space.
- ◆ Mounting height 60” min. to bottom of sign
- ◆ “Van Accessible” where required (informative, not restrictive)

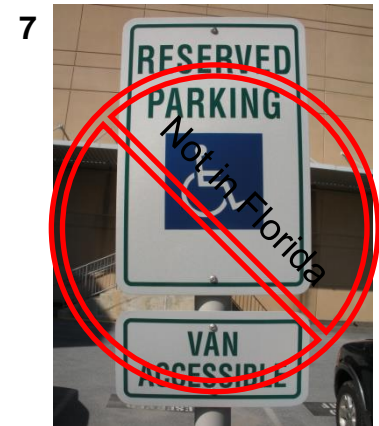
## Florida



*502.6.1 - The accessible parking space must be posted with a permanent above-grade sign of a color and design approved by the Department of Transportation, which is placed on or at least 60 inches above the finished floor or ground surface measured to the bottom of the sign and which bears the international symbol of accessibility and the caption "PARKING BY DISABLED PERMIT ONLY." Such a sign, erected after October 1, 1996, must indicate the penalty for illegal use of the space.*

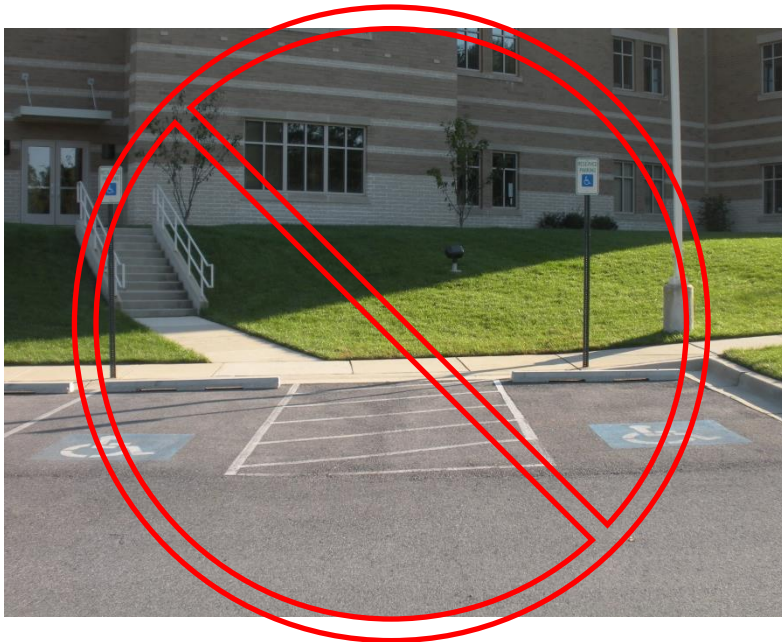


# Accessible Parking Signs



# Accessible Parking Spaces

Non-compliant



# Accessible Parking Spaces

- ◆ Summary of required quantities (round up)
  - 1 per 25 vehicles up to 100 (4 total), plus
  - 1 per 50 vehicles up to 200 (6 total), plus
  - 1 per 100 vehicles up to 500 (9 total)
  - 1 in 6 accessible spaces shall be van space when appropriate (In Florida van & vehicles the same **EXCEPT** for height)
  - special requirements for medical, theme parks, residential



# Location of Parking

- ◆ Accessible parking spaces serving a particular building shall be located on the shortest accessible route
- ◆ Spaces shall be located on an accessible route that must not compel the user to pass behind parked vehicles other than his or her own



# Accessible Route

- ◆ Min. 36-in. clear width
  - EXCEPT**
    - 44" from accessible parking (Florida only)
    - doorways (32")
- ◆ Passing space min. 60" clear not to exceed 200' apart
- ◆ 1:48 max. cross slope
- ◆ No stairs, steps or escalators



# Accessible Route

## ◆ Surface Texture

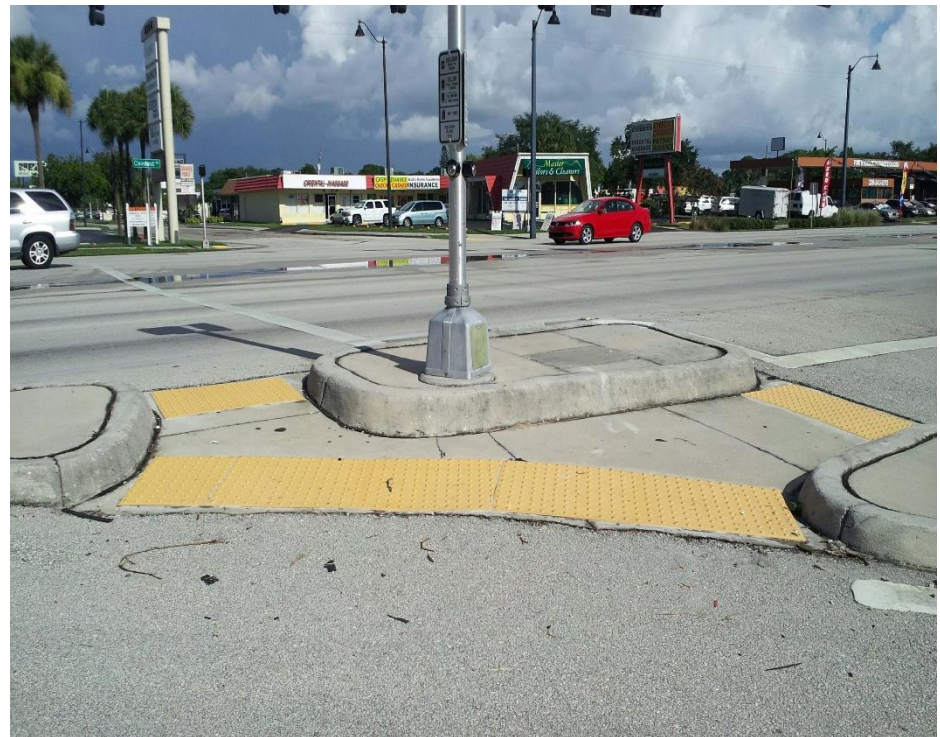
- stable – remains unchanged by contaminants or applied force
- firm – resists deformation
- slip resistant – frictional counterforce to the forces exerted while walking



# Accessible Route

## Raised Traffic Islands

- ◆ Cut through level with the street, OR...



# Accessible Route

## Raised Traffic Islands

- ◆ Curb ramps at both sides and a level area at least 48" long between the curb ramps





# Accessible Route

## Raised Traffic Islands

- ◆ Cut through level with the street,  
OR
- ◆ Curb ramps at both sides and a level area at least 48” long between the curb ramps



# Accessible Route

## Protruding Objects on Circulation Paths

- ◆ If leading edge 27"– 80" from ground surface, object may protrude max. 4"
- ◆ If leading edge 27"– 80" from ground surface, object may protrude max. 12" from post



# Accessible Route

## Protruding Objects and Headroom on Circulation Paths

- ◆ Between double posts  $> 12''$  apart, low edge  $27''$  max. from ground surface
- ◆ 80-in. min. clear headroom from single post or between double posts  $> 12''$  apart



# Gratings

## On an Accessible Route

- ◆ Spaces no greater than 1/2-in. wide in one direction
- ◆ Elongated openings placed so that the long dimension is perpendicular to the dominant direction of travel



# Curb Ramps

- ◆ 36-in. minimum width  
**EXCEPT**
  - on path from accessible parking must be min. 44" wide (Florida)



# Curb Ramps

- ◆ Must not project into the travel way



# Curb Ramps

- ◆ Located outside of disabled parking spaces and access aisles



# Curb Ramps

Non-compliant

- ◆ Located outside of disabled parking spaces and access aisles





# Curb Ramps

Non-compliant

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# Curb Ramps

## Transitions

- ◆ 36-in. deep x full width of ramp for landing size at top of curb ramp (new construction)



# Curb Ramps

## Transitions

- ◆ Maximum slope of flared sides shall be 1:10, or
- ◆ Alterations  
exception: if 36-in. top landing is unachievable, 1:12 is the maximum slope



# Curb Ramps

## Transitions

- ◆ In alterations only, when no room for landing above curb ramp
  - flared sides 1:12 max.
  - equivalent facilitation



# Detectible Warnings

Use

- ◆ Curb ramps (DOT only)



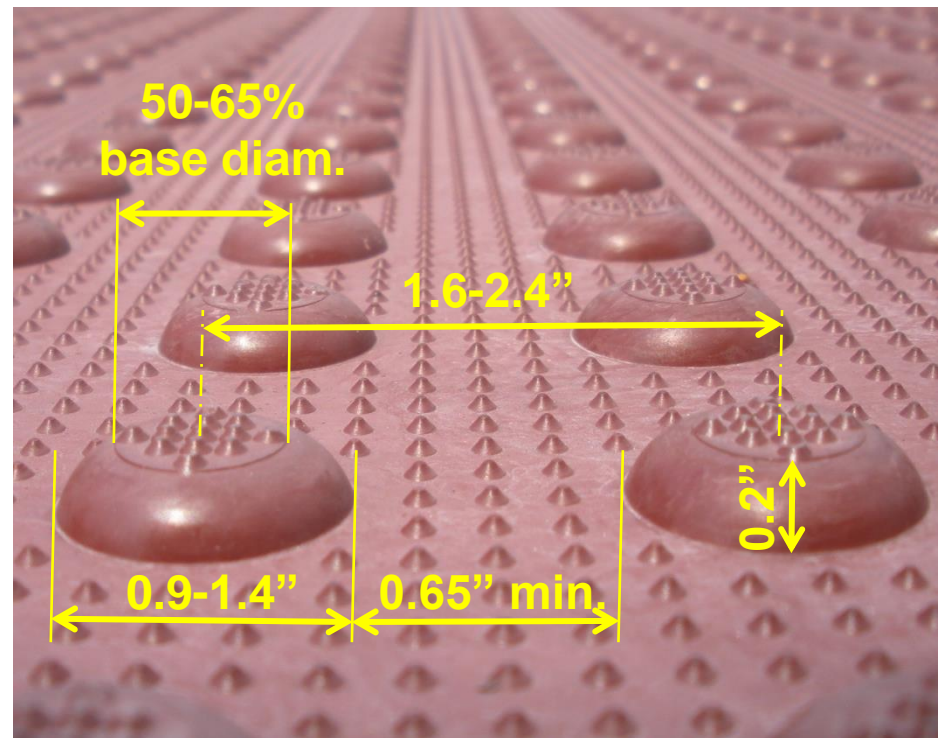
- ◆ Transit boarding platforms



# Detectable Warnings

## Dome Characteristics

- ◆ Truncated domes  
(ONLY)
  - strict dome size, height and spacing criteria



# Detectible Warnings

## Contrast, Size and Placement

- ◆ Curb Ramp (DOT)
  - contrast visually with adjacent walking surface
  - 24” deep or full depth of ramp
  - from back of curb
  - full width



# Detectible Warnings

## Contrast, Size and Placement

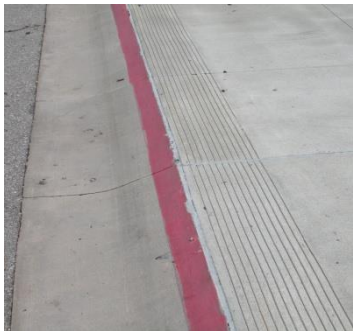
- ◆ Transit Boarding Platform (and proposed guidelines for boarding area at sidewalk level)
  - contrast visually with adjacent walking surface
  - 24" deep from back of platform (or sidewalk) edge
  - full length of public use area





# Detectible Warnings

Private Property – Standard not ADA required  
Some options below:



# Vertical Accessibility

## New Construction

- ◆ Platform lifts (limited application)
- ◆ Ramps
- ◆ Elevators



# Handrails

Ramps, Stairs and Level Walkways (if used)

## ◆ Characteristics

- 34 – 38” to top of rail
- 1-1/4 – 2” diameter, OR  
perimeter dimension 4 – 6-1/4”
- rounded, grippable cross-section
- 1-1/2” from side wall



# Handrails

Ramps, Stairs and Level Walkways (if used)

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- 34 – 38” to top of rail
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perimeter dimension 4 – 6-1/4”
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- **1-1/2” from side wall**



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# Ramps

## Application

- ◆ If vertical elevation change  $> \frac{1}{2}$ "
- ◆ If slope  $> 1:20$  (5%)
- ◆ 36" minimum width



# Ramps

## Slopes

- ◆ 1:12 to < 1:16 – max. rise 30”
  - exception for alterations but never steeper than 1:8
- ◆ 1:16 to < 1:20 – max. rise 30”



# Ramps

## Slopes & Landings



# Ramps

## Handrails

- ◆ Both sides of ramp runs if rise  $> 6''$   
(No handrail required if rise  $6''$  or less)
- ◆ Inside railing continuous at switchbacks





# Ramps

## Handrails

- ◆ Extend 12” from ends of ramp parallel to landing surface at top and bottom of ramp
- ◆ Handrail end must return to post, wall or landing



# Ramps

## Handrails

- ◆ Improper handrail design



# Ramps

## Landings

- ◆ Landing minimum 60" length and width if change of direction
- ◆ Less than 1:48 slope in any direction



# Ramps

## Landings

- ◆ Avoid compound slopes that exceed maximum standards



- ◆ Avoid landing slopes  $> 1:48$



# Ramps

## Edge Protection – Ramps and Landings

- ◆ Curb or barrier preventing passage of 4” diam. sphere, OR
- ◆ 12” extended width on sides beyond handrails



# Stairs

## When Part of a Required Means of Egress

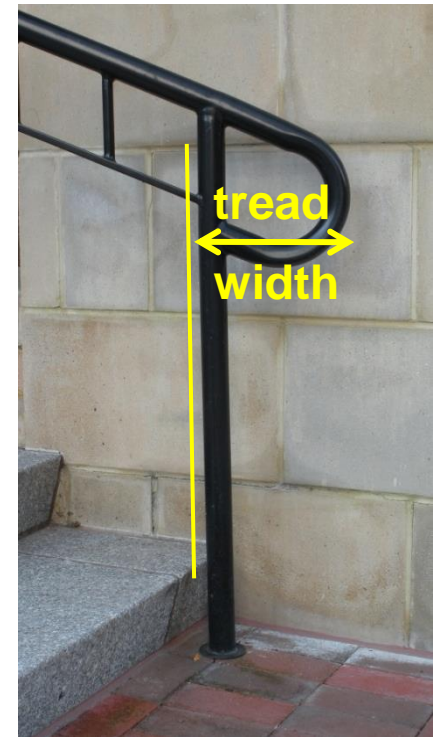
- ◆ Uniform rise and tread width
- ◆ Min. 11” tread
- ◆ No open risers
- ◆ Nosing
  - not abrupt
  - maximum 1/2” radius curvature



# Stairs

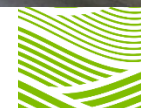
## Handrails

- ◆ 34 – 38” high to gripping surface, both sides of stairs
- ◆ 1-1/2” clear to wall
- ◆ Top extension horizontal, one tread width beyond top riser
- ◆ Bottom extension at slope, one tread width beyond bottom riser
- ◆ Handrail end must return to post, wall or landing



# Drinking Fountains

- ◆ 36” max. spout height for lower unit; 38 – 43” high for upper
- ◆ Clear floor space and knee space requirements





# Signs

## Accessible Entrance Identification

- ◆ Accessible entrances must be signed (unless all are accessible)
- ◆ Entrances not accessible shall have directional signage to nearest accessible entrance



# Doors

## Maneuvering Clearances

- ◆ Revolving doors or turnstiles cannot be the only access
- ◆ 32” minimum clear width
- ◆ Clear and level floor space approach requirements vary



# Doors

## Maneuvering Clearances

- ◆ Revolving doors or turnstiles cannot be the only access
- ◆ 32” minimum clear width
- ◆ Clear and level floor space approach requirements



# Doors

## Thresholds (Vertical Accessibility)

### ◆ Changes in level

- < 1/4 inch vertical
- 1/4 – 1/2 inch w/ bevel
- > 1/2 inch = ramp



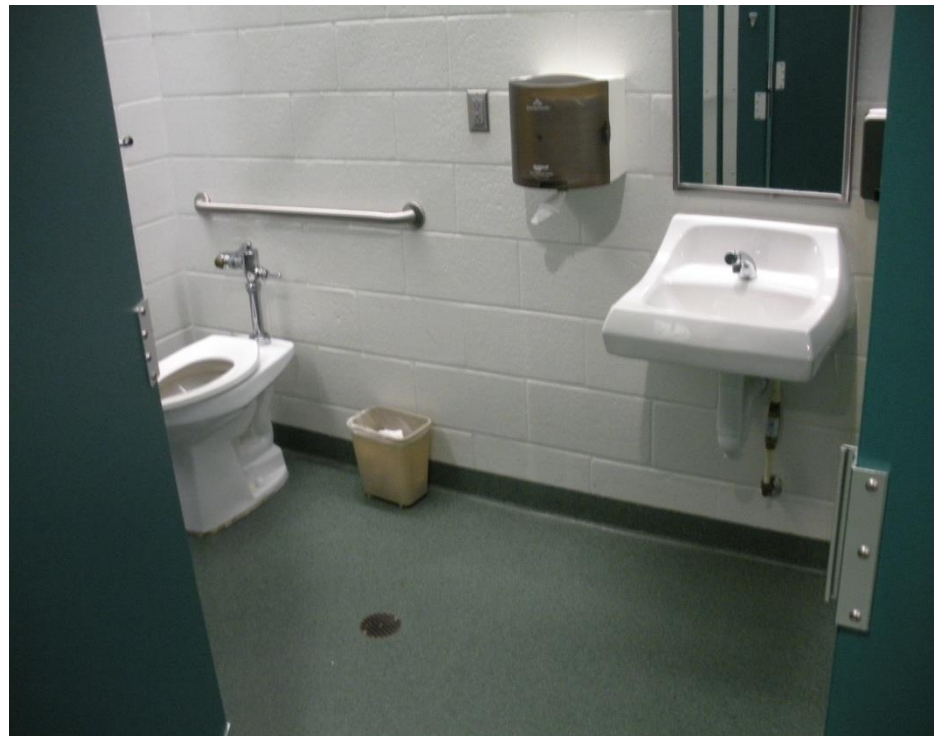
### ◆ Existing thresholds

- may be max. 3/4 inch high if beveled edge
- < 1:2 slope on each side



# Toilet Rooms

- ◆ If these elements are included in the toilet room, there must be at least one of each accessible:
  - stall
  - urinal (if more than one)
  - lavatory
  - mirror
  - controls, dispensers & receptacles



# Assembly Areas

## Wheelchair Locations

- ◆ 4 spaces for 150 seats, 5 spaces for 300 seats, 6 spaces for 500 seats, etc.
- ◆ Integral part of fixed seating plan
- ◆ At least one companion seat adjacent
- ◆ 36-in. x 48-in. minimum floor space front entry, (36” x 60” side entry); 33” wide per space if more than one at that location
- ◆ Detailed dispersion and sightline requirements



# Assembly Areas

## Wheelchair Locations

- ◆ Lawn seating shall connect to an accessible route



- ◆ Seating directly connected by accessible route to performance and performer-support areas



# Accessibility Standards for Recreation Facilities

- ◆ ADA standards specifically address:
  - recreational boating facilities
  - fishing piers and platforms
  - golf facilities
  - miniature golf facilities
  - play areas
  - public swimming pools, wading pools and spas
  - amusement rides
  - other recreational facilities
- ◆ Florida requires accessibility to all recreation facilities





# Recreational Boating Facilities

## Boat Slips

- ◆ Number of total slips based on average 1 slip per 40' of dock edge if not defined
- ◆ Min. 1 accessible slip for up to 25 total slips provided, 3 for 100 slips provided, etc.
- ◆ Disperse among different types of slips



# Recreational Boating Facilities

## Boat Slip Piers

- ◆ 60-in. clear width on pier
- ◆ 36-in. clear width permitted if:
  - obstruction is max. of 24” in length
  - one opening of 60-in. width is provided every 10’
- ◆ Edge protection not required



# Recreational Boating Facilities

## Boarding Piers at Boat Launch Ramps

- ◆ No less than one boarding pier must be accessible



# Recreational Boating Facilities

## Boarding Piers at Boat Launch Ramps

- ◆ Accessible parking requirements apply



# Fishing Piers & Platforms

- ◆ Specifically designed and constructed for fishing
- ◆ Clear seating and turning space
- ◆ Railings not required
- ◆ Where railings are used:
  - provide max. 34" height for 25% of railing
  - well dispersed
  - 12" extension beyond inner face of railing, OR 2" high min. edge protection



# Golf Facilities

## Accessible Elements

- ◆ Accessible route required to connect...
  - bag drop
  - cart rental area
- ◆ ...and onto...
  - teeing grounds
  - putting greens
  - weather shelters
- ◆ ...and onto at least 5% but no fewer than one of...
  - practice putting greens
  - driving range stations



# Golf Facilities

## Accessible Elements



# Miniature Golf Facilities

## General Course Considerations

- ◆ 50% holes accessible
- ◆ Accessible holes either consecutive, or with one break in sequence
- ◆ If break in sequence, 18th hole must be accessible
- ◆ If consecutive, last accessible hole must have accessible route to entrance or exit without traveling through another hole





# Play Areas

## Accessible Route and Ground Surfacing

- ◆ Accessibility to, into and within the play area



# Play Areas

## Essential Concepts

- ◆ Ground level component
  - approached and exited at ground level
  - accessible route to at least one of each component type
  - if 2 or more, they must be dispersed and integrated
  - number of accessible ground level components determined by number of elevated components



# Play Areas

## Essential Concepts

- ◆ Elevated component
  - approached above or below grade and part of a composite structure
  - at least 50% of elevated components must be accessible



# Play Areas

## Essential Concepts

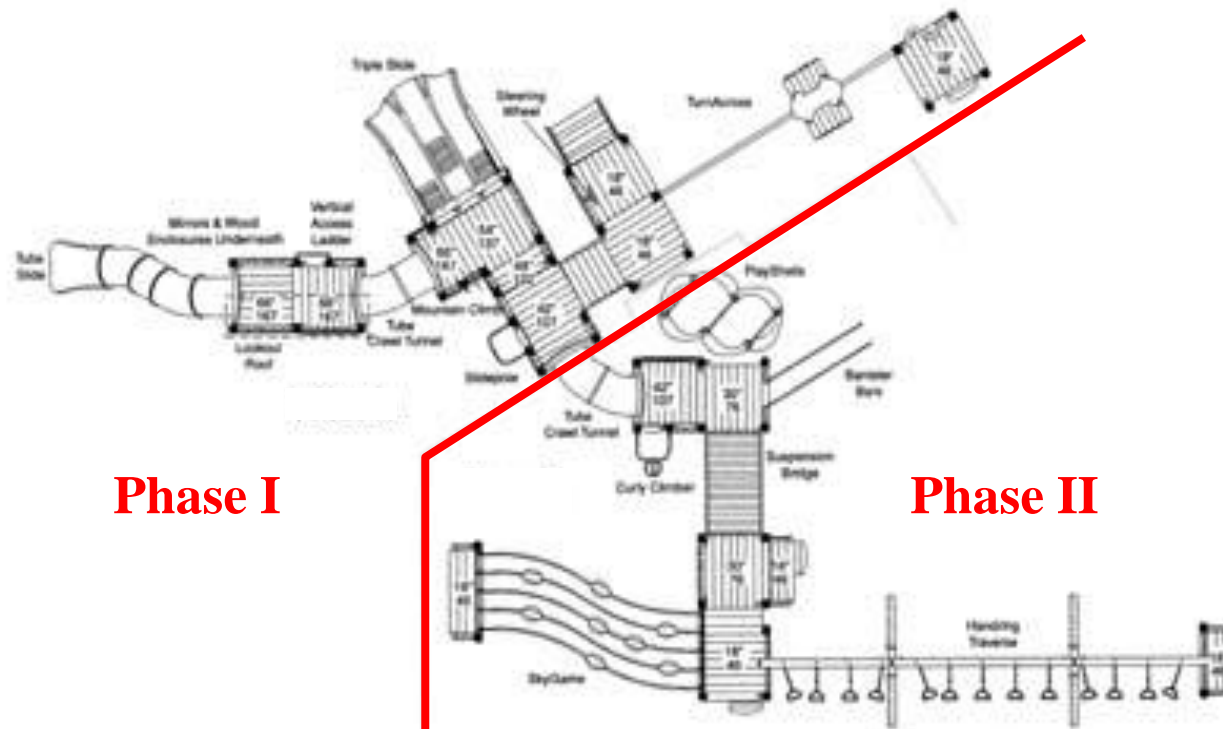
- ◆ Elevated component access
  - transfer system
  - ramp



# Play Areas

## Phased Construction

- ◆ Must meet play area accessibility standards in each phase



# Swimming Pools

## Access – Primary

- ◆ Two accessible means of entry unless:
  - < 300 l.f. perimeter pool wall
  - specialty pool
- ◆ One of which must be either:
  1. Lift
    - used in less than 48-in. water depth, OR...



# Swimming Pools

## Access – Primary

### 2. Sloped entry

- to 24” min. – 30” max. water depth
- 33 – 38” width between handrails
- no handrail extension required at bottom



# Swimming Pools

## Access – Secondary

- ◆ Secondary means of entry may include:
  3. Transfer wall
  4. Transfer system
  5. Stairs
    - 20 – 24” width between handrails (no extensions required)

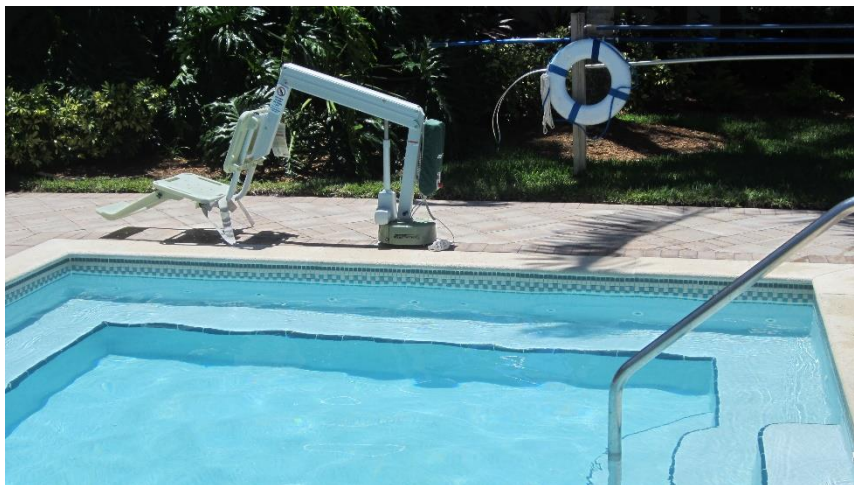




# Spas

## Access

- ◆ One entry required
- ◆ Permitted entry systems
  - transfer wall
  - transfer system
  - lift



# Other Recreation Facilities

Accessibility Required

## ◆ Field sports



## ◆ Court sports



# Other Recreation Facilities

## Accessibility Required

- ◆ Team or player, and spectator seating areas
- ◆ Florida requires accessibility to all recreation facilities. If not specifically noted, plan on minimum of one and up to 5% of quantity provided.



# Outdoor Developed Areas

## Scope (Guidelines)

**FINAL RULE** affecting  
only federally  
managed lands

◆ **Facilities**

- trails
- beach access routes
- picnicking
- camping
- viewing areas



# Outdoor Developed Areas

## Scope (Guidelines)

- ◆ Outdoor constructed features at facilities
  - picnic tables
  - fire rings and fireplaces
  - grills and wood stoves
  - trash and recycling containers
  - water spigots
  - utilities
  - rinsing showers
  - benches
  - telescopes and periscopes



# Outdoor Developed Areas

## Trails (Guidelines)

- ◆ Trails are “pedestrian” routes for outdoor recreation purpose
- ◆ Trailhead sign that describes trail characteristics
- ◆ Firm and stable surface
- ◆ Standards differ among paved, wood decking and other surfaces



# Outdoor Developed Areas

## Beach Access Routes (Guidelines)

- ◆ One accessible route per ½ mile of new beach access development
- ◆ Extend to high tide (MHW)
- ◆ Permanent or removable
- ◆ Firm and stable
- ◆ 60” min. width
- ◆ Dune crossovers require handrails and edge protection



# Outdoor Developed Areas

## Picnic Tables (Guidelines)

- ◆ 20% but no fewer than 2 tables, if more than 2 are provided
- ◆ Accessible - and on an accessible route
- ◆ Dimensional clearances





# Outdoor Developed Areas

## Grills and Trash Containers (Guidelines)

- ◆ 20% but no fewer than 2, if more than 2 are provided
- ◆ Cooking surface 15 – 34” off ground surface
- ◆ 48” x 48” on all useable sides



# Outdoor Developed Areas

## Benches (Guidelines)

- ◆ 20% but no fewer than 2, if more than 2 are provided
- ◆ 36" x 48" clear space at end





**Questions**