



# Florida Accessibility Code for Building Construction

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Accessibility Training Course

Florida Building Commission



## Introduction

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- Course will review the Florida Accessibility Code for Building Construction as contained within the Florida Building Code



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Instructor Note: The Florida Accessibility Code for Building Construction contains the ADA Accessibility Guidelines (ADAAG) and also a number of requirements that are more stringent. These code requirements provide the basis for an accessible built environment in Florida. Without the proper construction and enforcement of FACBC (Chapter 11 of FBC) requirements, people with disabilities experience exclusion from education, work, transportation, recreation, social interaction and other major life activities that others take for granted. This loss of independence and opportunity are discriminatory in nature. This presentation provides some information that will help you understand how the code benefits the disability community.



# Agenda

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## ■ Texts



- Florida Building Code (FBC) – Chapter 11 – Florida Accessibility Code for Building Construction (FACBC)
- Americans with Disabilities Act Accessibility Guidelines (ADAAG)

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Thoroughly explain texts to be used along with how the material will be covered. Instructor will go over each section of the course manual.

Time:



# Agenda

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- Overview of Chapter 11
  - Table of contents
  - Identify problematic areas

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## Overview

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- The Florida Accessibility Code for Building Construction (FACBC) Chapter 11 of the Florida Building Code (FBC) was certified by the Department of Justice effective October 1, 1997

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We want you to be aware that Florida has had an Accessibility Code since 1974 and it has been updated to the current version that you now see in Chapter 11 of the FBC.



## Terminology

- General terminology – Section 11-3.4 (FBC)
- Florida Building Code (FBC)  
[www.floridabuilding.org](http://www.floridabuilding.org)
- FACBC - Florida Accessibility Code for Building Construction – Chapter 11 of FBC
- ADAAG – Americans with Disabilities Act  
Accessibility Guidelines UFAS – Uniform  
Federal Accessibility Standards

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The vocabulary is very important when addressing accessible facility design, but it is assumed that everyone in class will already have a thorough knowledge of the appropriate vocabulary. Instructor to point out the section and ask the students to go over on their own and email in questions or concerns about the terminology.

Instructor to explain the difference between codes, guidelines and standards. Also, address the issue of accessible design in various states. At present, Florida and several other states have their own accessibility codes that are certified by the Department of Justice which allows those states to base their review and design of facilities on their codes and not the ADAAG. The key in getting certified is to have a code that is equal to or better than the ADAAG. When building in various states, counties and areas it is important to know what codes are in force.

Discuss the Fair Housing Accessibility Guidelines within the FBC, Chapter 11, Part B. Make students aware of the document and the impact on FACBC.

Time: 10 min.



## Terminology

- ANSI A-17.1, A-117.1 – American National Standards Institute
- Guidelines, standards and codes
- Florida Accessibility Code – all the highlighted areas within the code are specific to Florida and are not contained within the ADAAG
- Fair Housing Accessibility Guidelines – see Chapter 11 FBC, Part B
- American Society of Mechanical Engineers (ASME)

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## 11-4.1 Minimum Requirements

- It is important to fully understand scoping requirements before referring to other specific sections of the code implementing its requirements



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One of the most important and overlooked areas of the FACBC is Section 11-4.1. Within 11-4.1 are the minimum requirements for all areas in building design. Corresponding to the minimum requirements are the specific requirements within 11-4.2 to 11-4.35. In many instances people go immediately to the special application section and never look at the minimum requirements section.

Time: 5 min.





## Minimum Requirements

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- 11-4.1.1 Application
- 11-4.1.2 Accessible Site & Exterior Facilities: New Construction
- 11-4.1.3 Accessible Buildings: New Construction
- 11-4.1.5 Accessible Buildings: Additions

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Quick overview of sections



## Minimum Requirements


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- 11-4.1.6 Accessible Buildings: Alterations
- 11-4.1.7 Accessible Buildings: Historical Preservation
- 11-4.1.8 Accessible Buildings, Structures, and Facilities: Architectural Barrier Removal

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Quick overview of sections



## Section 11-2 General


- 11-2.2 Equivalent Facilitation
  - Departure from particular technical and scoping requirements of this code by the use of other designs and technologies are permitted where the alternative designs and technologies used will provide substantially equivalent or greater access to and usability of the facility

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Alternatives to specific requirements that provide equal or greater access are permitted. This provides flexibility for new technologies and innovative design solutions that may not have been taken into account when FBC was developed.

Example of equivalent facilitation: sensor operated lavatory hardware is equivalent to the lever type handles.



## Section 11-2 General

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### ■ 11-2.2 Equivalent Facilitation

- Departure from the explicit technical and scoping requirements of this code for any element voids any otherwise applicable presumption of rebuttable evidence that the element has been constructed or altered in accordance with the minimum accessibility requirements of the ADA



## Section 11-3 Miscellaneous

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- Graphic Conventions (11-3.1)
  - Dimensions that are not marked minimum or maximum are absolute, unless otherwise indicated in the text or captions
- Dimensional Tolerances (11-3.2)
  - All dimensions are subject to conventional building industry tolerances for field conditions

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FBC recognizes conventional industry tolerances for field conditions. This applies to the field work, not the design work. Information on specific tolerances may be available from industry or trade organizations, code groups, building officials, and published references. Recommendation: It is good practice to avoid specifying precisely to the maximum or minimum where possible so that achieved dimensions fall within FBC requirements.



## Section 11-4.2 Space Allowance and Reach Ranges

- Minimum clear width for wheelchair passage (32/36 inches)
- Forward reach maximums (48 inches high, 15 inches low) – changes when obstacles in way

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Side and forward reach is not always as simple as 54 inches side and 48 inches forward. The exercise presented will get that point across.

Exercise- what is the maximum height reach range for an object attached to a wall that is immediately over a counter that is 20-25 inches deep? (refer to figures 5a, 5b, 6b, 6c)

Answer (44 inches high maximum)

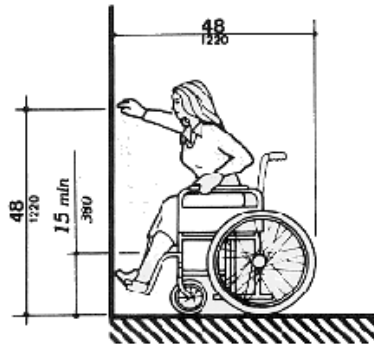
Time: 5 - 10 min.

# Reach Range



## Section 11-4.2 Space Allowance and Reach Ranges

Figure 5a



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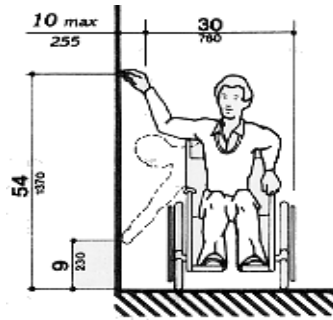
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## Section 11-4.2 Space Allowance and Reach Ranges

- Side Reach maximums (54 inches high, 9 inches low)

Figure 6b




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## Reach Range

The unit on the left does not meet the reach range requirements within 11-4.2.5 or 11-4.2.6 as it is above 54 inches. The unit on the right meets the reach range requirements.



## Section 11-4.3 Accessible Route

- At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking, and accessible passenger loading zones, and public streets or sidewalks to the accessible entrance they serve
- Accessible routes shall comply with 11-4.4.2 for head room (80 inches clear minimum)

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Accessible routes to and from a facility are extremely important. When constructing a facility the design team, contractor and owner need to understand that their responsibility to build a compliant facility does not stop inside the building but goes beyond that. They are responsible for the outside access as well. In the design, the design team must look at providing an accessible route to and from the bus routes, sidewalks, accessible parking and other facilities. This may mean they have to correct deficiencies in a parking lot or the path of travel from the bus stop.

Exercise – What is the only “Florida” exception in this section of the FACBC that is not part of the ADAAG? (Hint: Gray box text)

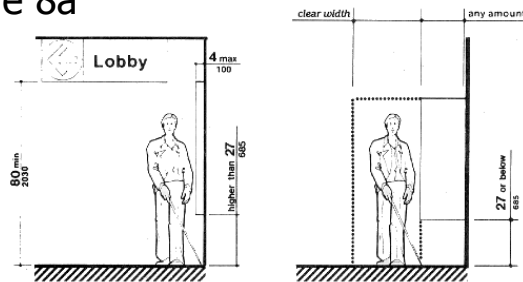
Answer (11-4.3.3 Exception)

Time: 5-10 min.

## Section 11-4.4 Protruding Objects

- Walks, halls, corridors, passageways, aisles, or other circulation spaces shall have 80 inches clear head room

Figure 8a



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Have the class imagine that they are visually impaired and they are walking along the interior of a facility and have them come up with possible obstructions in their path. Examples – fire call boxes, fire extinguisher boxes, hanging signs, etc.

Exercise – In order for a mounted wall object to protrude any amount what is the highest that object can be installed above the walking surface?

Answer (27 inches maximum, see 11-4.4.1 & Fig 8a/b)

Time: 5 min.



## Section 11-4.4 Protruding Objects

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- Objects projecting from walls with their leading edges between 27 inches and 80 inches above finished floor shall protrude no more than 4 inches into walks, halls, corridors, passageways, or aisles

Protruding Object

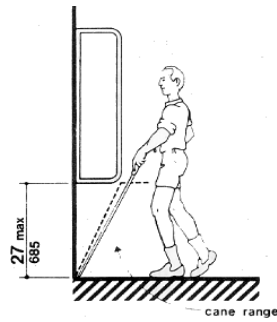


Protruding Object



# Section 11-4.4 Protruding Objects

Figure 8b



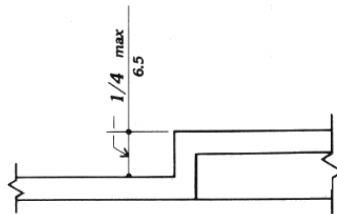
Walking Perpendicular to a Wall



## Section 11-4.5 Ground & Floor Surfaces

- Changes in Level
- Changes up to  $\frac{1}{4}$  inches may be vertical and without edge treatment

Figure 7c



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An often overlooked area are door sill treatments. Many details within building construction and design rely on what has been used in the past. The problem with that scenario is what has been done in the past may not be correct within the codes. In many areas marble sills are used at restrooms and those sills have an abrupt edge that is greater than  $\frac{1}{4}$  inch with no treatment. Complete exercise and ask for other examples of changes in level.

Example – marble sill at restroom

Review Section 11-4.1.6 (3) (a) (d) for exceptions to changes in level under alterations

Exercise – for a restroom sill with an edge that is  $\frac{1}{2}$  inches or greater how long would the ramp be?

Answer (6 inches minimum, see 11-4.8.2 & 11-4.3.8)

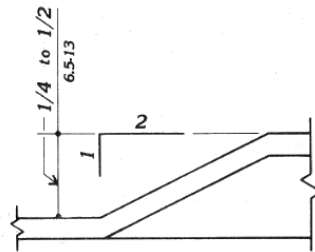
Just because it is a past practice and has been done that way for years doesn't mean it is correct.

Time: 5 min.

## Section 11-4.5 Ground & Floor Surfaces

- Changes between  $\frac{1}{4}$  inches and  $\frac{1}{2}$  inches shall be beveled with a slope no greater than 1:2

Figure 7d



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## Section 11-4.5 Ground & Floor Surfaces

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- Changes greater than  $\frac{1}{2}$  inches shall be accomplished by a ramp that complies with 11-4.7 or 11-4.8

# Parking & Passenger Loading Zones



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## Section 11-4.1.2(5) Parking & Passenger Loading Zones

### ■ Minimum number of spaces

- 1 to 25 = 1
- 26 to 50 = 2
- 51 to 75 = 3
- 76 to 100 = 4
- 501 to 1000 –2% of total
- 1001 and over, 20 plus 1 for each 100 over 1000



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In Florida, all accessible parking spaces are required to be 12 ft wide with an accompanying 5 ft. access aisle. Also, per the FACBC an accessible path of travel shall be provided from the parking space to the facility being served. Discuss the accessible path of travel.

Example – 1100 space lot = 21 Accessible spaces (Disabled = Accessible parking spaces)

Exercise – What is the required width of an accessible parking space within Florida Code (11-4.6.3)?  
Can spaces share an access aisle (11-4.6.3)?

Answers (12 ft. wide plus a 5 ft. access aisle; yes, any two spaces can share a common access aisle)

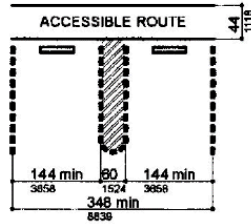
Review photos associated with slide and discuss observations.

Review striping design details.

Time: 5 min.

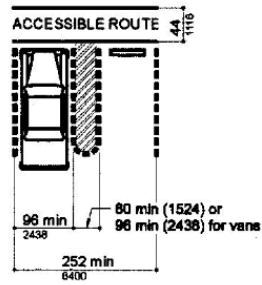
# Section 11-4.1.2(5) Parking & Passenger Loading Zones

Figure 9a



**FIGURE 9(A)  
STANDARDS PARKING SPACE DESIGN**

Figure 9b



**FIGURE 9(B)  
ALTERNATIVE PARKING SPACES FOR  
THEME PARK AND ENTERTAINMENT COMPLEX ONLY**

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Passenger Loading Zone



Parking spaces with 12 x 5 spaces in different applications (straight on and diagonal). Note signs (are they compliant). Also, the blue box and wheelchair on the ground isn't by code, but it is shown here as in most applications it will be present.

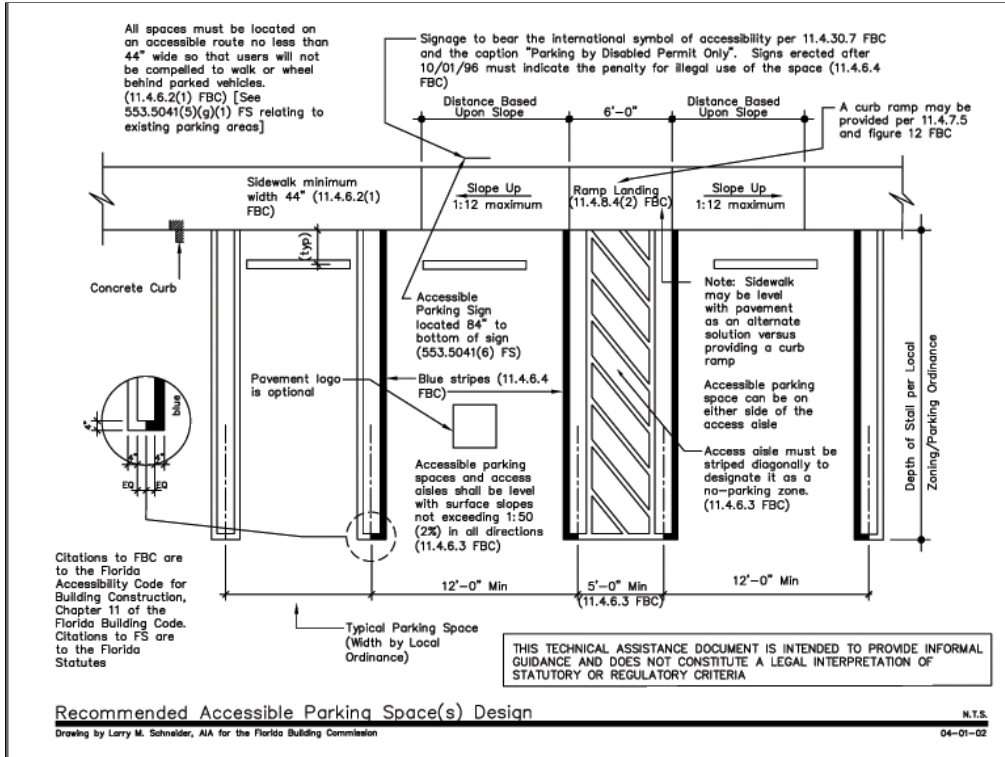
When measuring the width of the space and aisle where do you measure from?  
Review drawings on striping details.



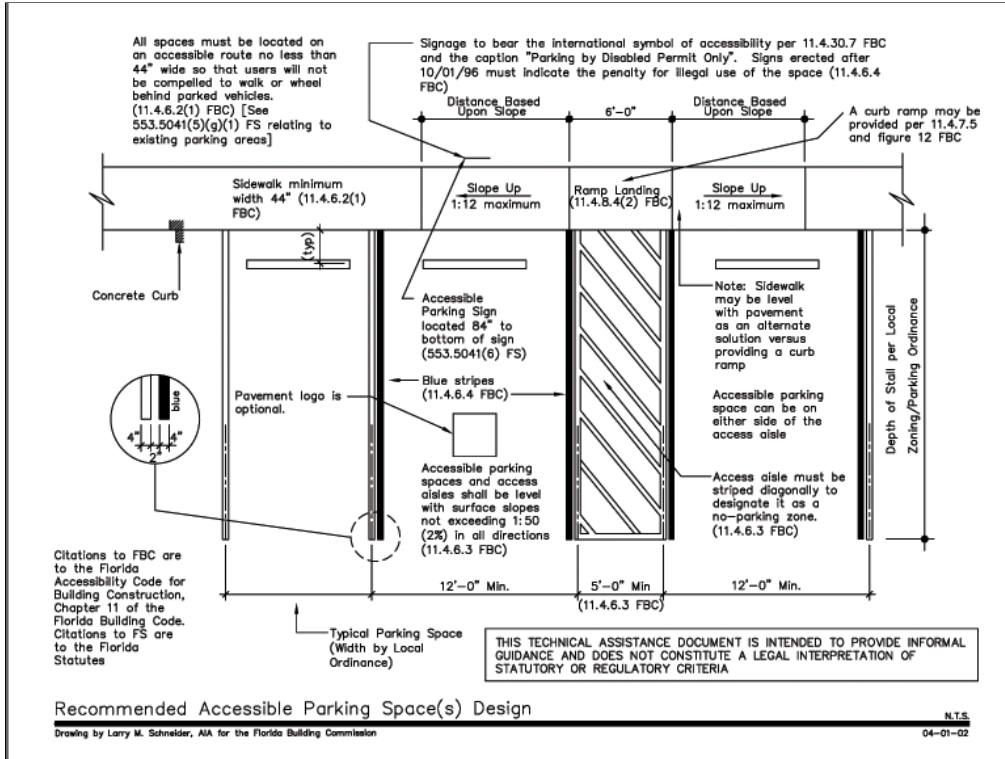


These parking spaces are non-compliant for the following reasons:

- Parking spaces are at an angle
- Accessible Parking Signs are posted too low
- No striping



Go over details of striping



Go over details of striping



## Section 11-4.7 Curb Ramps

- Curb ramps and parking spaces and access aisles
- Curb ramps must be located outside of accessible parking spaces and access aisles
- Maximum slope of flared sides shall be 1:12

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## Section 11-4.8 Ramps

- Any part of an accessible route with a slope greater than 1:20 shall be considered a ramp and shall comply with 11-4.8

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Discuss the “need” for design personnel to include ramps in any design – why can’t areas be built without ramps? Why do they have to design to the maximum of 1:12? Why can’t they design to 1:20 plus so it isn’t a ramp. The reason the ideal slope of any ramp is 1:20 + is at that point it isn’t a ramp and provides easier access.

Exercise – What would the ideal slope of any accessible route be?

Answer: (less than 1:20 – at that point it is not considered a ramp, see 11-4.8.1 & 11-4.8.2)

Do all ramps require handrails or edge treatment?

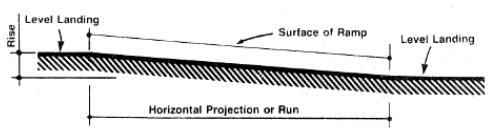
Answer: No

Time: 5 min.

# Section 11-4.8 Ramps

- The least possible slope shall be used for any ramp. The maximum slope of a ramp in new construction shall be 1:12

Figure 16

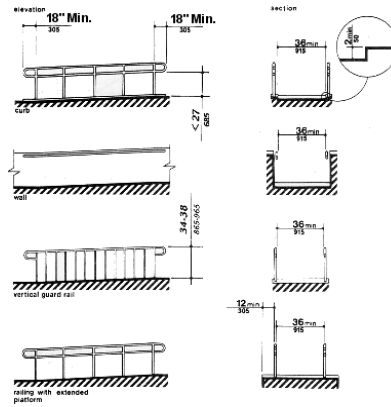


Slope	Maximum Rise		Maximum Horizontal Projection	
	in	mm	ft	m
1:12 to < 1:16	30	760	30	9
1:16 to < 1:20	30	760	40	12

## Section 11-4.8 Ramps

- Handrails – 34 inches to 38 inches (11-4.8.5) and shall extend 18 inches at top and bottom (11-4.8.2)

Figure 17



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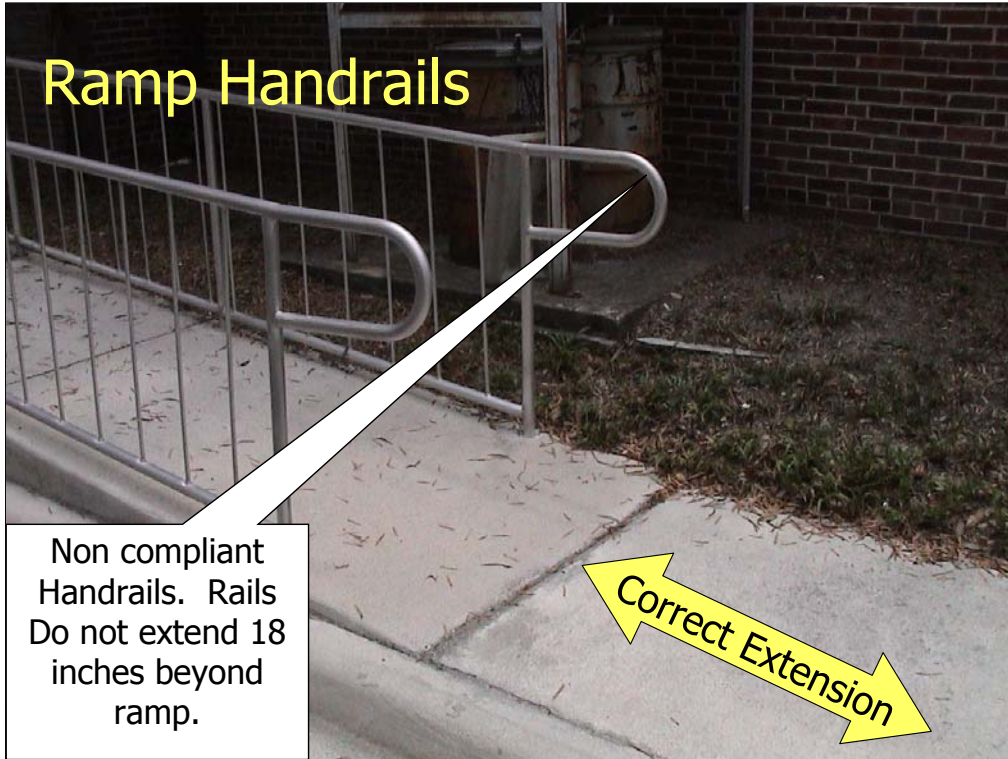


Ramp has noncompliant handrail for the following reasons:


Pipe outside diameter is greater than 1 ½ inches and there is no extension at the bottom of the sloped surface (11-4.8.5.2 and 11-4.8.5.3)



This handrail design does not meet the requirements for extension and has an open end (11-4.8.5.2 and 11-4.8.5.6)



The handrails installed in this project do not project out the required 18 inches beyond the ramp.



## Section 11-4.8 Ramps (Landings)


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- Landings shall be at least as wide as the ramp run leading to it
- All landings on ramps shall be not less than 60 inches clear, and the bottom of each ramp shall have not less than 72 inches of straight and level clearance.
  - Landings (60 x 60 inch min., 11-4.8.4.2)

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Refer to photos provided for examples of ramps and criteria for ramps.



## Section 11-4.8 Ramps (Landings)

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- If a doorway is located at a landing, then the area in front of the doorway shall comply with 11.4.13.6

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## Section 11-4.9 Stairs

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- All steps shall have uniform riser heights and uniform tread widths. Stair treads shall be no less than 11 inches wide and open risers are not permitted (11-4.9.2)
- Top of handrails – 34 inches to 38 inches (11-4.8.5)



## Section 11-4.9 Stairs

- Handrails shall extend 12 inches at top and 12 inches plus the width of the tread at the bottom (11-4.9.4.2)
- Interior and exterior stairs connecting levels that are not connected by an elevator, ramp, or other accessible means of vertical access shall comply with 11-4.9

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Stairs vs. Ramps – Discuss the use of sloped surfaces (ramps) instead of stairs. It will take a little more skill to design but in many cases may even be less expensive than monumental exterior stair systems.

Exercise – Handrails along the inside switchback of stairs are required to have continuous handrails?  
T or F

Answer (T, see 11-4.9.2.1 & fig. 19a/b)

Time: 5 min.



# Section 11-4.9 Stairs

Figure 19a

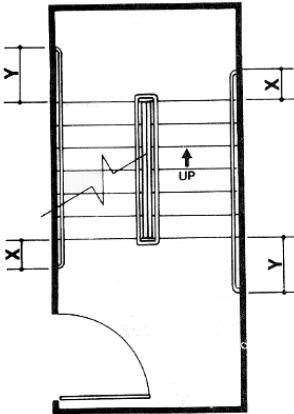
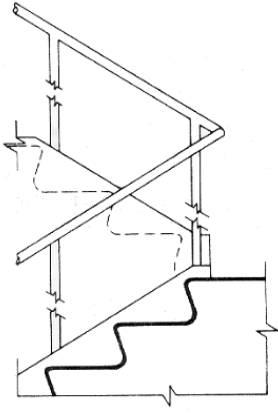


Figure 19b



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# Section 11-4.9 Stairs

Figure 19c

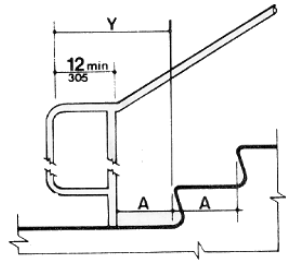
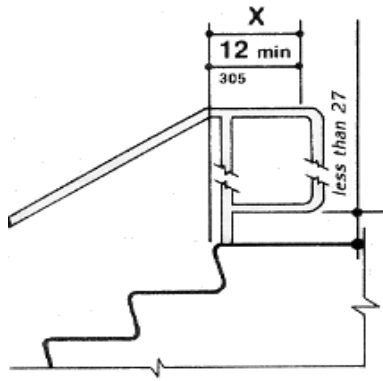


Figure 19d



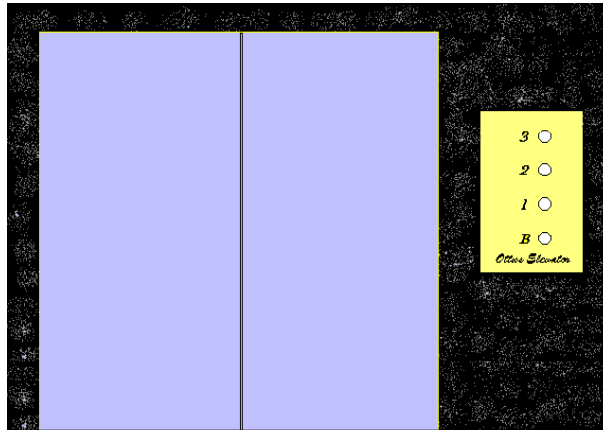
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Stairs with compliant handrails

# Vertical Accessibility



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## Vertical Accessibility

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Section 553.509, Florida Statutes,  
requires that all levels in buildings,  
structures or facilities shall be  
vertically accessible



## Vertical Accessibility

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### Examples of Vertical Accessibility:

Elevators

Inclined Lifts

Platform Lifts

LULAs

Ramps



## Vertical Accessibility

- Exceptions – Refer to 11-4.1.3
- Elevator pits, Lubrication pits, mechanical rooms
- Unoccupiable spaces
- Non-public occupiable spaces
- Non-public occupiable spaces with not more than 5 persons

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11-4.1.3(5) - Exception Number 1 is not applicable due to the requirements of s.553.509, Florida Statutes

### Section 11-4.1.3

Vertical accessibility shall be provided to all levels above and below the occupiable grade level, regardless of whether the code requires an elevator to be installed in such building, structure or facility, except for: (1) elevator pits, elevator penthouses, mechanical rooms, piping or equipment catwalks, and automobile lubrication and maintenance pits and platforms; (2) unoccupiable spaces, such as rooms, enclosed spaces, and storage spaces that are not designed for human occupancy, for public accommodations, or for work areas; and (3) occupiable spaces and rooms that are not open to the public and that house no more than five persons including, but not limited to, equipment control rooms and projection booths. However, as provided in s.553.509, Florida Statutes, buildings, structures, and facilities must, at a minimum, comply with the requirements of the Americans with Disabilities Act (ADA) Accessibility Guidelines. “Therefore, facilities subject to the ADA may be required to provide vertical access to areas otherwise exempt under 11-4.1.3(5)(3), of the code.”



## Section 11-4.10 Elevators

- Vertical accessibility shall be provided to all levels above and below occupiable grade level, regardless of whether the code requires an elevator to be installed in such buildings, structure or facility 11-4.1.3(5), unless the level meets one of the vertical accessibility exemptions

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Vertical access to all levels shall be provided in most areas within Florida code. Discuss elevators, ramps, stair lifts. Discuss what instances in Florida code vertical access might not be required.

Exercise – If elevators are not required how can vertical accessibility be provided?

Answer (Ramps, stair lifts, lifts, see 11-4.3.8, 11-4.1.3.5, 11-4.1.6.1.f)

Time: 5 min.



## Section 11-4.11 Platform Lifts

- If platform lifts are used, they shall comply with 11-4.2.4, 11-4.5 and 11-4.27
- 11-4.27.4 – controls and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist
- 11-4.11.3 – If platform lifts are used then they shall facilitate unassisted entry, operation, and exit from the lift

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Knowing the code is very important. Within the FACBC and ADAAG stair lifts shall provide unassisted entry. Discuss what happens when there are differences in the codes that govern (Health safety, fire code, etc):

Exercise – All lifts in Florida are required to be key operated? T or F

Answer (F, it was the elevator code previously, see 11-4.11.3)

(ASME A18.1.1999)

Time: 4 min.





# Accessible Doors

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## Section 11-4.13 Doors

- Doorways shall have a minimum clear opening of 32 inches (11-4.13.5)
- The minimum maneuvering clearances at doors shall be as shown in fig. 25 (11-4.13.6).– understand and know the approaches as shown

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One of the most important design features of any facility are the doors, both interior and exterior. All doors shall meet the opening force requirements specified. It is important that when picking a supplier of door closers or devices that you check the equipment and prior to taking ownership of the facility that a schedule is provided stating the opening force of each door with a closer or auto door opening device.

Be very familiar with the minimum maneuvering clearances at doors in figures 25.

Demonstrate how to measure the opening force of a door.

Time: 5 min.



## Section 11-4.13 Doors

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- Door opening force – exterior hinged doors shall be pushed or pulled open with a force not exceeding 8.5lbf. Interior hinged doors: 5lbf. (11-4.13.11.2)

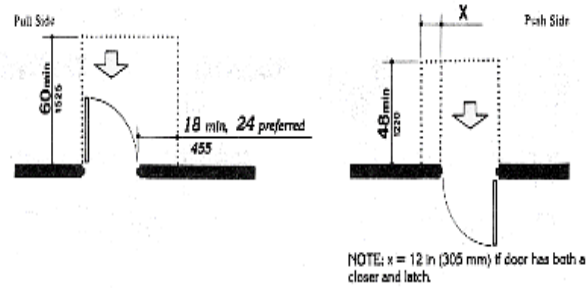
## Accessible Door





# Section 11-4.13 Doors

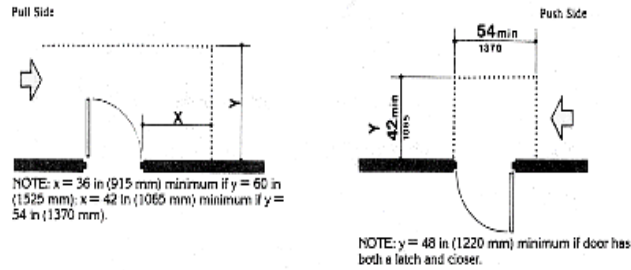
Figure 25a



(a)  
Front Approaches — Swinging Doors

# Section 11-4.13 Doors

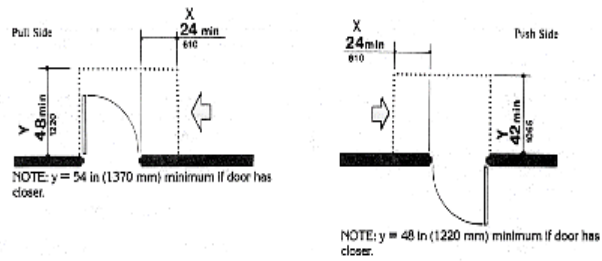
Figure 25b



(b)  
Hinge Side Approaches — Swinging Doors

# Section 11-4.13 Doors

Figure 25c



(c)  
**Latch Side Approaches — Swinging Doors**

NOTE: All doors in alcoves shall comply with the clearances for front approaches.



## Section 11-4.13 Doors

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- Fire doors – there are no accessibility requirements for fire door pressure

Note: Fire door pressure requirements are governed by the Florida Fire Prevention Code.



## Section 11-4.13 Doors

- Handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate



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## Section 11-4.14 Entrances

- At least 50% of all public entrances ... must be accessible. At least one must be a ground floor entrance (11-4.1.3.8.a.i)
- Entrances which are not accessible shall have directional signage ... which indicates the location of the nearest accessible entrance (11-4.1.3.8.d)

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Though only 50% of ground floor entrances are required to be accessible why not have all entrances accessible whenever possible. For those entrances that are not accessible appropriate directional signage shall be provided that provides directional information to patrons to the nearest accessible entrance.

Time: 5 min.



## Section 11-4.14 Entrances

- Entrances shall be connected by an accessible route to public transportation stops, to accessible parking and passenger loading zones, and to public streets or sidewalks (11-4.14.1)

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## Section 11-4.14 Entrances

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- If a door has a closer, then the sweep period of the closer shall be adjusted so that from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door

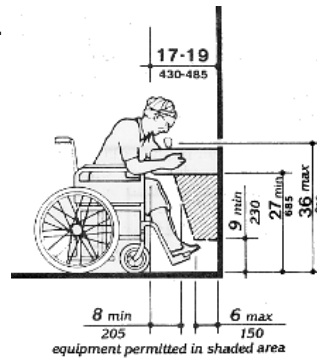


An example of entrance that is non accessible with the appropriate directional signage to the nearest accessible entrance.

## Section 11-4.15 Drinking Fountains & Water Coolers

- Spout height (36 inches maximum)  
11-4.15.2
- Leg clearance (27 inches minimum)  
11-4.15.5.1

Figure 27a



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There must be at least 27 inches of leg clearance and spout cannot be higher than 36 inches. Select a model that allows for easy installation to the two dimension criteria. How does the cooler with an apron height greater than 27 inches impact the protruding objects section?

Answer: It does not comply.

Exercise – Would it be an acceptable practice to install a paper cup dispenser at a water cooler with a spout height that doesn't meet code?

Answer (Yes, with existing conditions but not necessarily in a new facility and as long as the dispensers get refilled regularly – see 11-4.1.3(10)(a))

Time: 3 min.



## Section 11-4.15 Drinking Fountains & Water Coolers

- Drinking fountains and protruding objects – discuss 11-4.4.1 (look at leg clearances for coolers above 27 inches)

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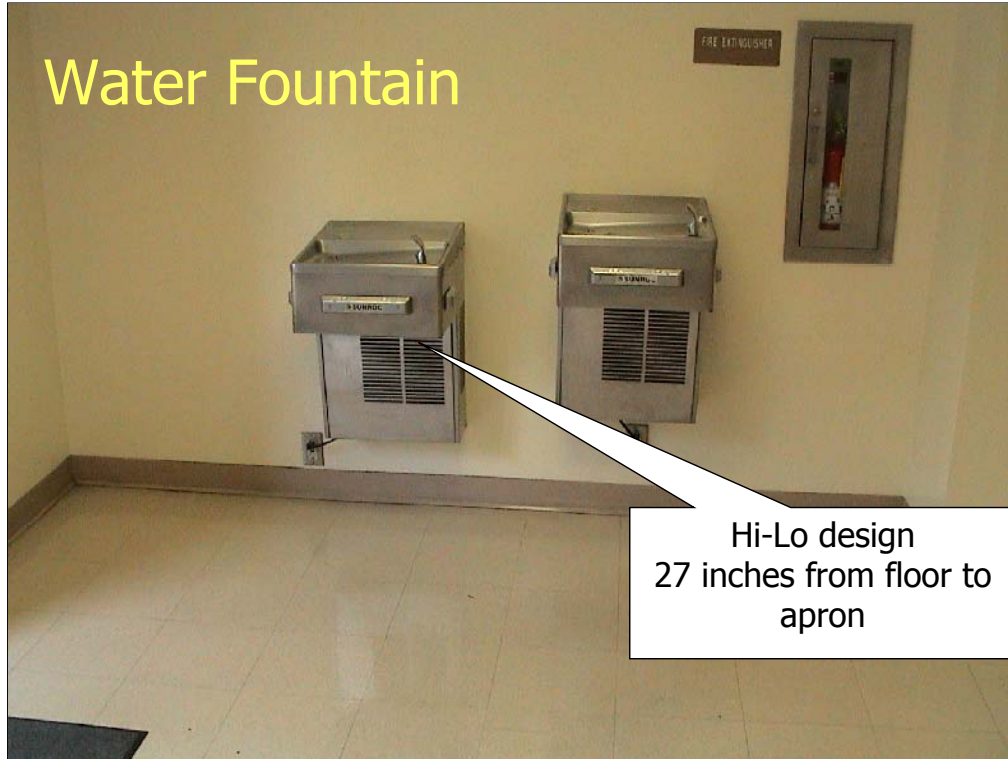
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Something as simple as a cooler installation can go wrong if the person doing the rough plumbing doesn't pay attention to the model being installed. When selecting a model to be installed look for something with a low profile apron. There must be at least 27 inches of leg clearance and spout cannot be higher than 36 inches. Select a model that allows for easy installation to the two dimension criteria. How does the cooler with an apron height greater than 27 inches impact the protruding objects section?

Exercise – Would it be an acceptable practice to install a paper cup dispenser at a water cooler with a spout height that doesn't meet code?

Answer (Yes, with existing conditions but not necessarily in a new facility and as long as the dispensers get refilled regularly – see 11-4.1.3(10)(a))

Time: 3 min.



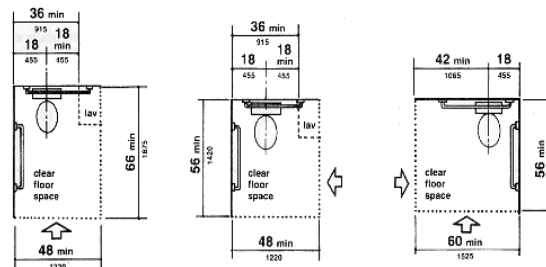
Discuss Hi/Lo water fountain.



## Section 11-4.16 Water Closets

- Clear floor space for accessible water closets not in stalls shall comply with Figure 28 (11-4.16.2)

Figure 28



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What are two of the most common design flaws and installation errors in restrooms?

- 1) Installing an accessible water closet above or below the minimum seat height guidelines of 17-19 inches.
- 2) Installing the door so that it swings into the clear floor space.

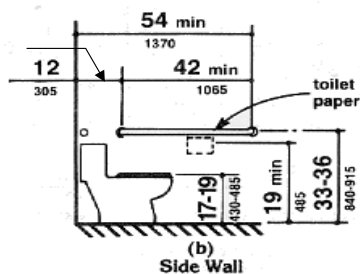
Get students familiar with clear floor spaces at the accessible water closet.

Time: 5 min.

## Section 11-4.16 Water Closets

- Height of accessible water closets shall be 17 inches to 19 inches measured to the top of the toilet seat (11-4.16.3)

Figure 29b



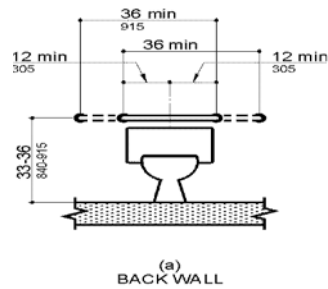
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## Section 11-4.16 Water Closets

- Flush valve is on wide side of the accessible water closet
- Grab bars are required per Section 11-4.16.4

Figure 29a



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# End of Session 1

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Break Time!

