

*Welcome to the*

# 2018 Annual Conference Educational Sessions

**Session: 2017 ICC A117.1 Update – Significant Changes**

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# 2017 ICC A117.1 Update – Significant Changes

Presenter: Kimberly Paarlberg, RA  
Senior Staff Architect, Code Development

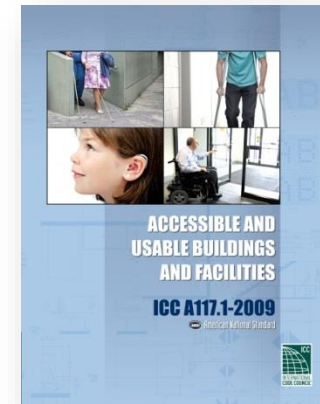
# Requirements

## Scoping :

- “What, Where and How Many”
- 2015 IBC and IEBC

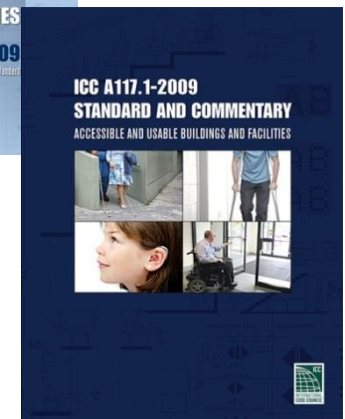
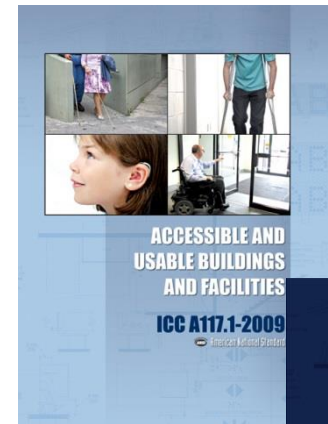
## Technical:

- “How”
- ICC/ANSI A117.1-2009



# ICC A117.1 Accessible and Usable Buildings and Facilities

- Standard & Commentaries.
- History, reasoning and examples
- Technical assistance via phone, email or letter.





# Role of the Code Official

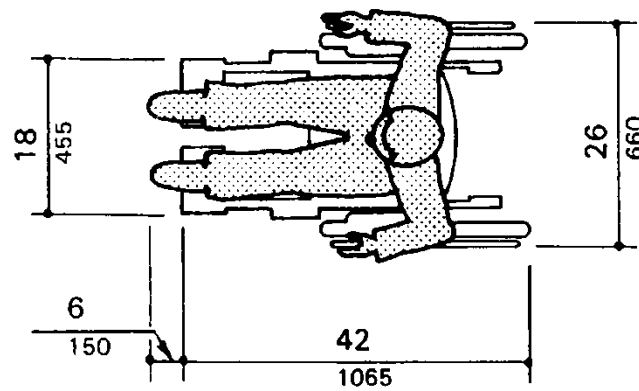
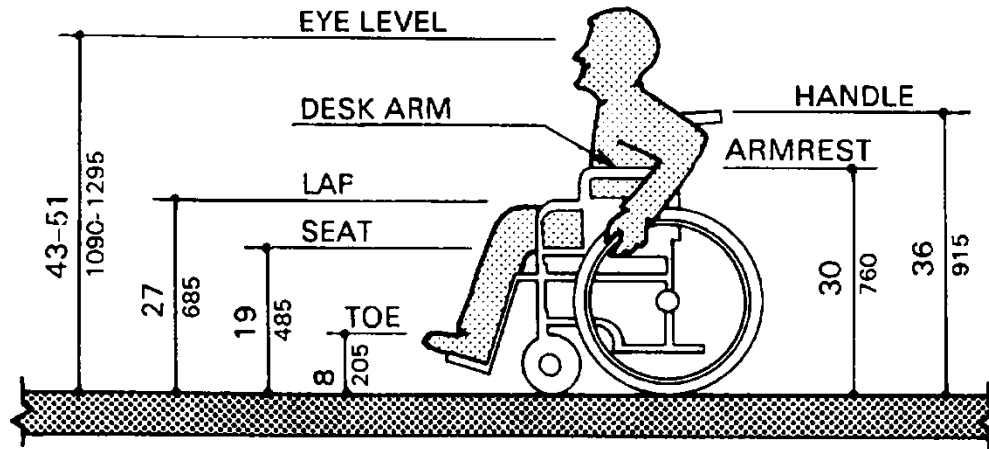
- Enforce the locally adopted building code and any local or state laws
- Does not enforce ADA or FHA.



# Human Factor Considerations

- Body Size
- Functional abilities

# Basis for A117.1 - Dimensions of Adult-Sized Wheelchair



# 2017 ICC A117.1

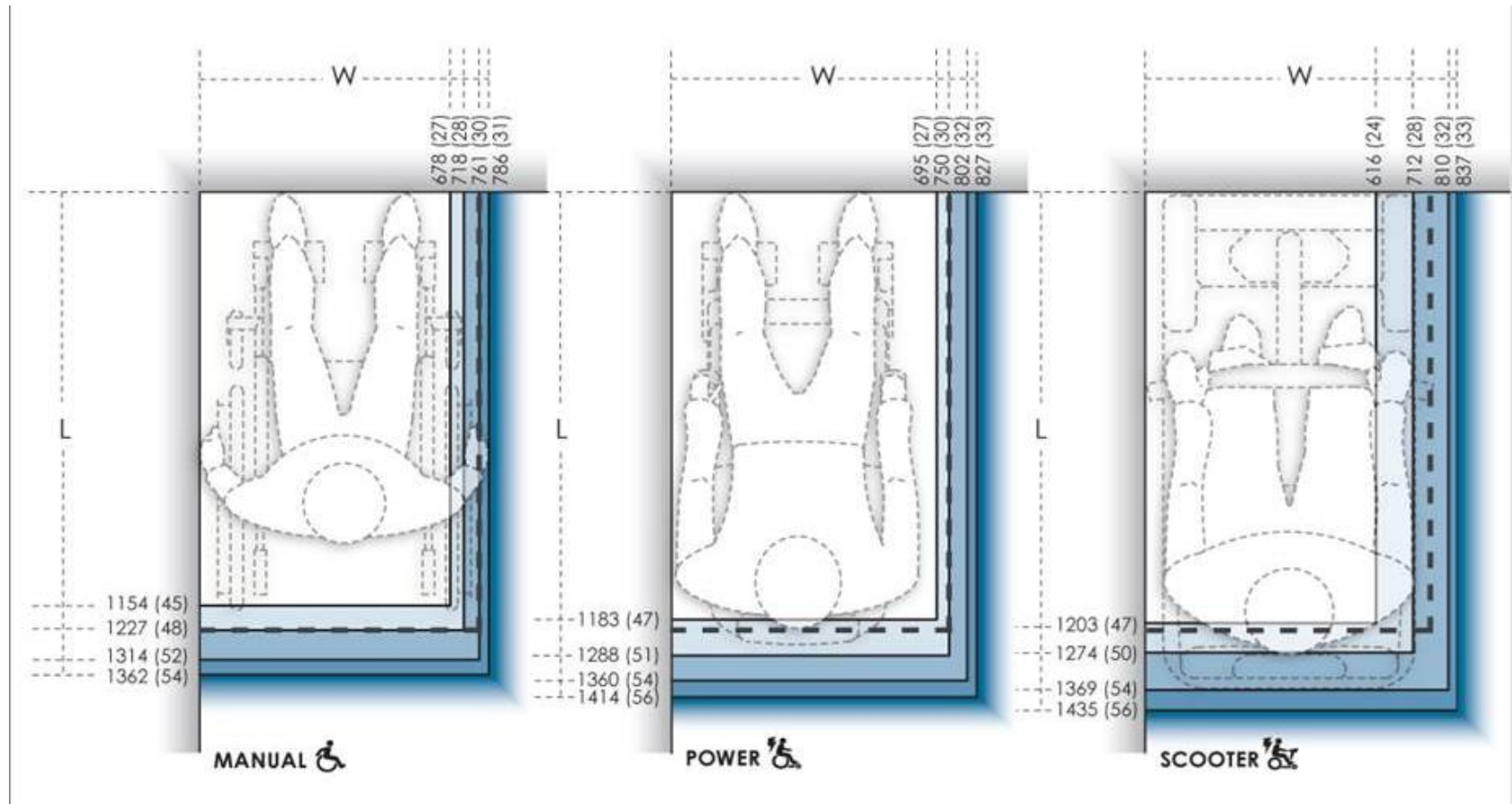
- Revisions
  - Study on Anthropometry of Wheeled Mobility
  - Sponsored by the US Access Board
  - Including persons using manual wheelchairs, motorized wheelchairs & scooters

- <http://www.udeworld.com/anthropometrics.html>





# Human Factor Anthropometrics



# Existing building and facilities

- New sizes will not apply to existing buildings or facilities
- Will apply to new construction and additions
- Definition:
  - **existing building.** A building erected prior to the date of adoption of this standard, or one for which a legal building permit has been issued.

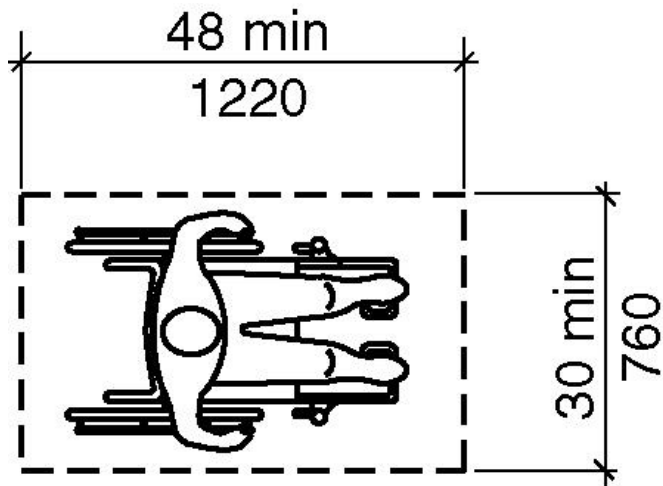


# Building Blocks

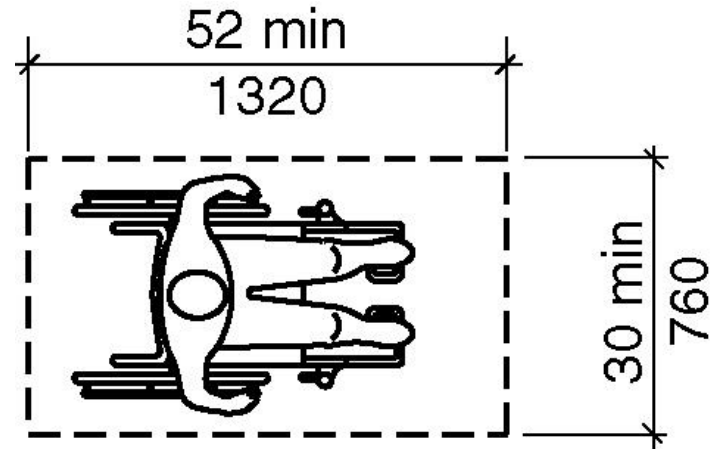
- Clear floor space
- Turning space

# Wheelchair space

Existing – 48”



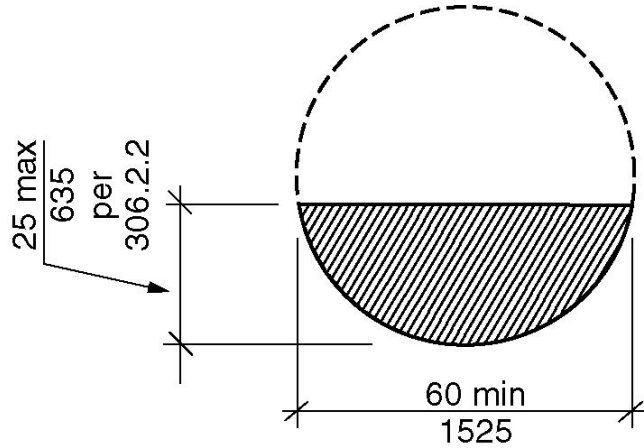
New – 52”





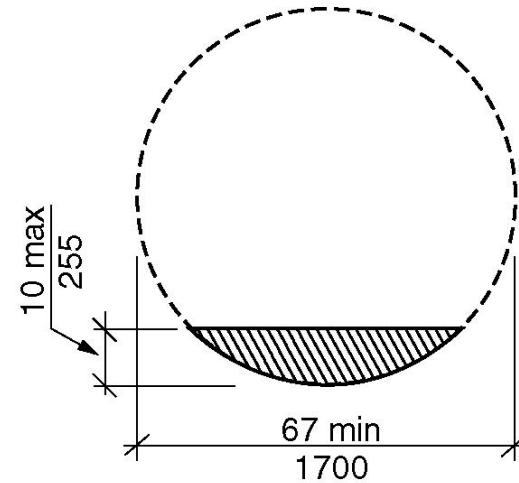
# Turning space

Existing – 60”



Overlap of knee and toe clearance

New – 67”

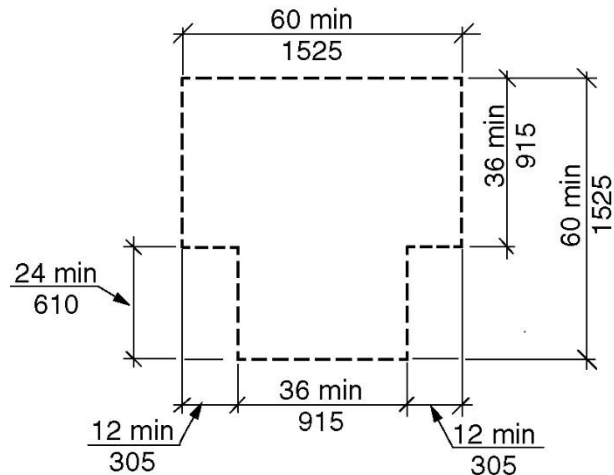


Overlap of knee and toe clearance

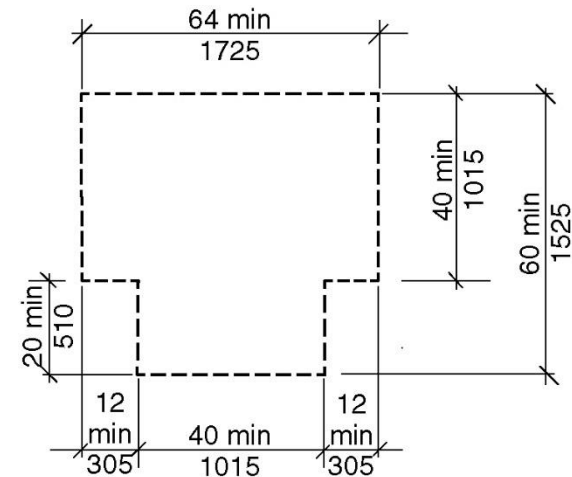
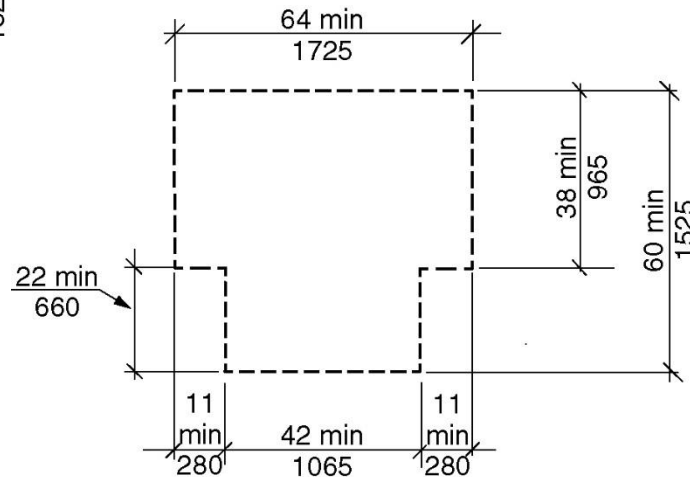
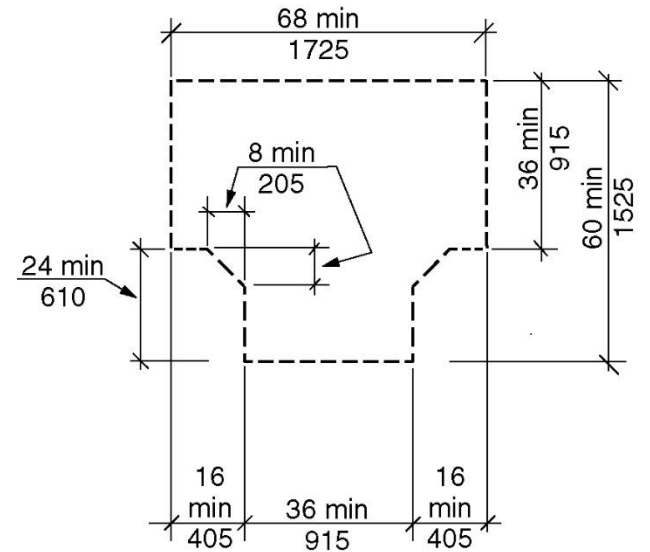


# Turning space

## Existing

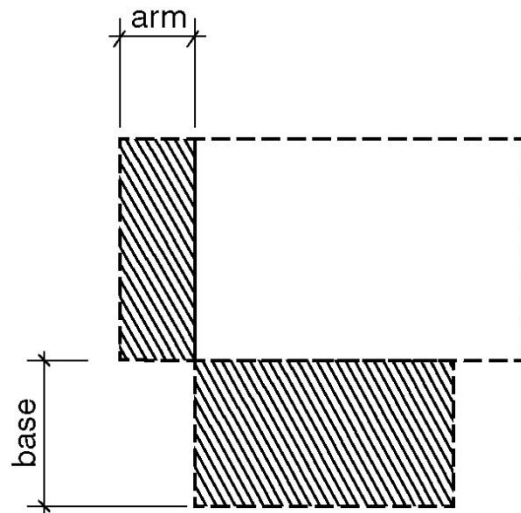


## New

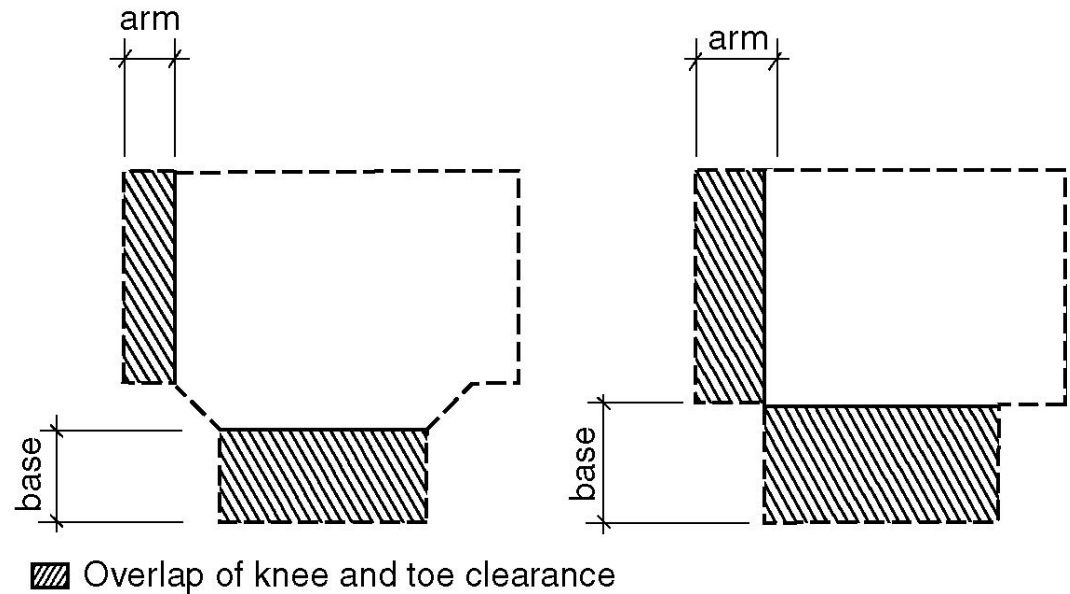


# Turning space overlap

Existing

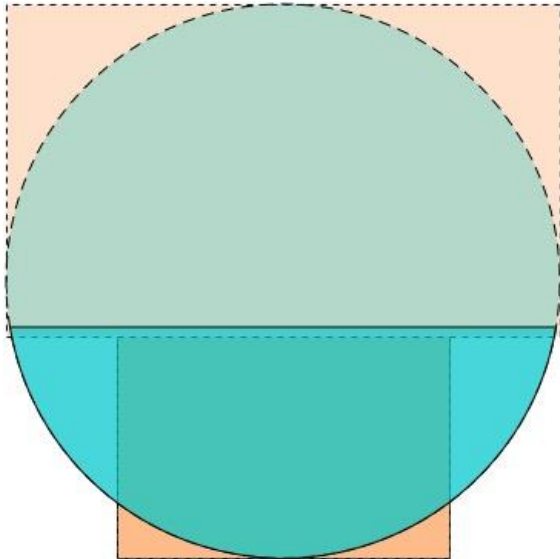


New

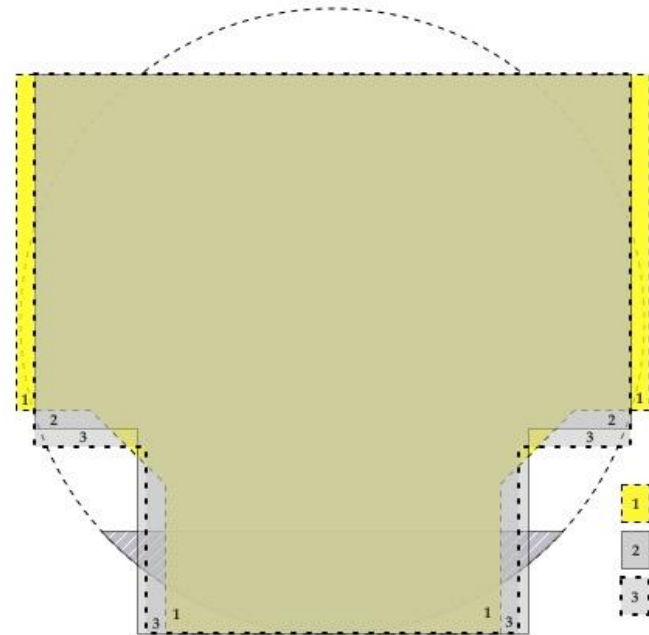


# Turn comparison

Existing



New



Base overlap of turns



ICC A117-1 2017

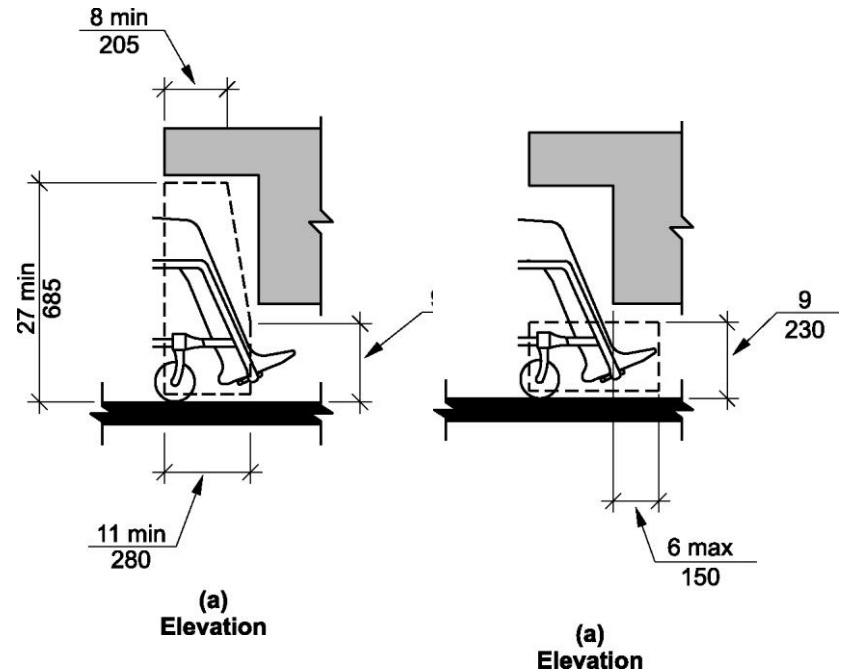
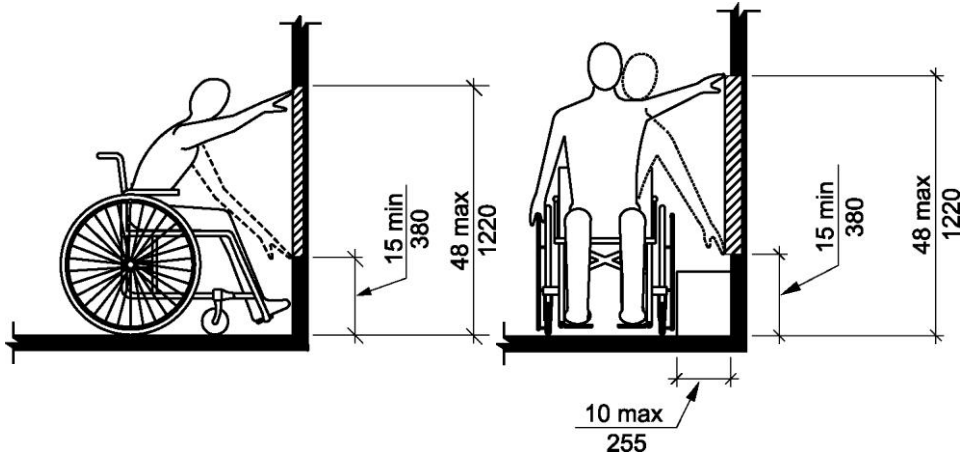
Standard for Accessible and Usable Buildings and Facilities

ICC



# No changes

- Reach range
- Knee and toe clearance

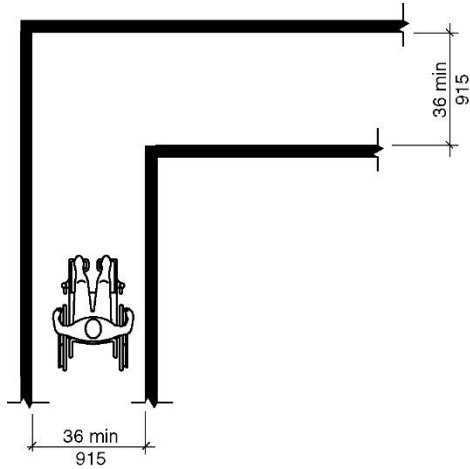


# Accessible Routes

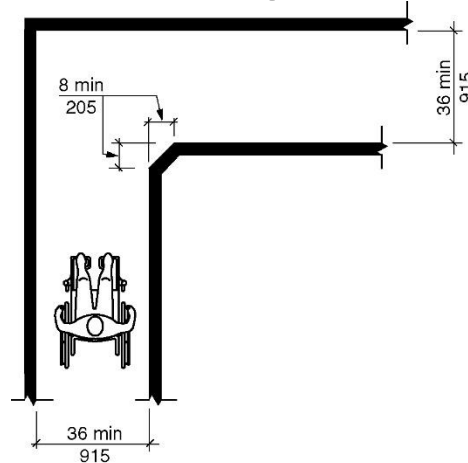
- 90 degree turn
- 180 degree turn
- Turning space
- Doors
- Exterior routes
- Platform lifts

# 90 degree turn

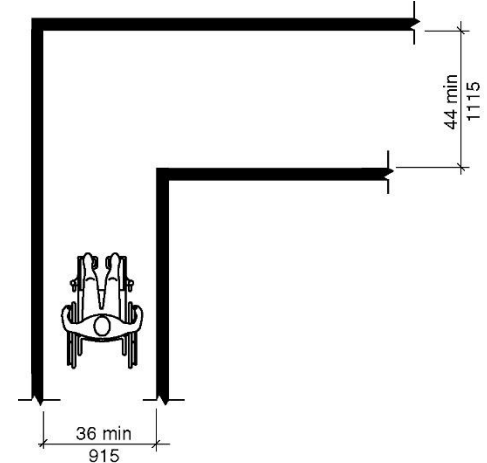
## Existing



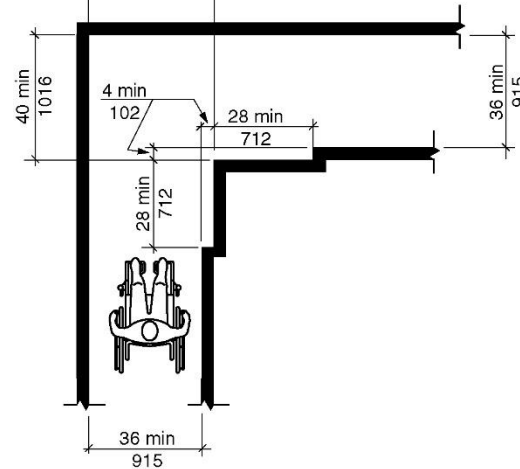
## New



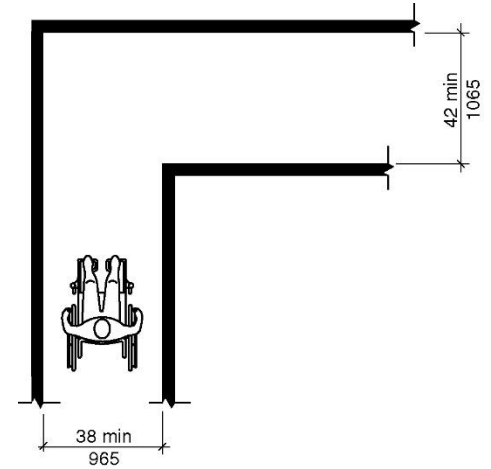
(b)  
Option 2



(d)  
Option 4



(a)  
Option 1

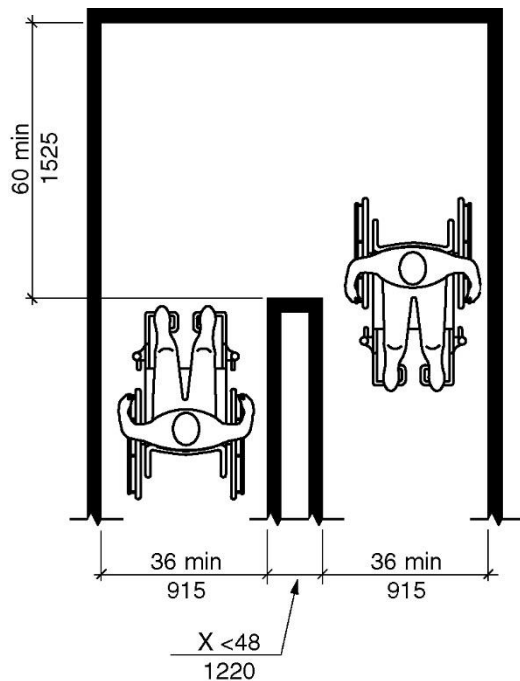


(c)  
Option 3



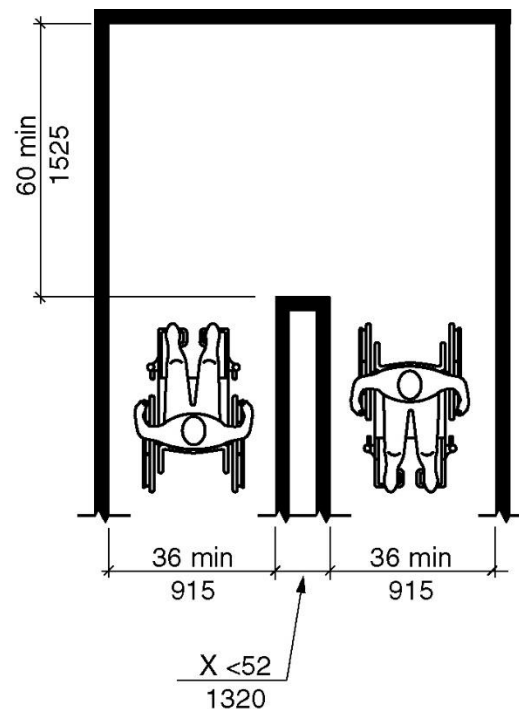
# Turn around obstruction

## Existing



(b)  
180 Degree Turn  
(Exception)

## New



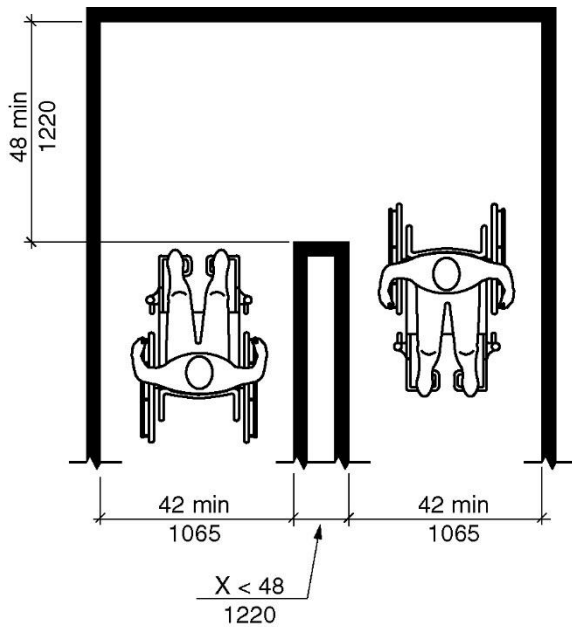
(a)  
Option 1





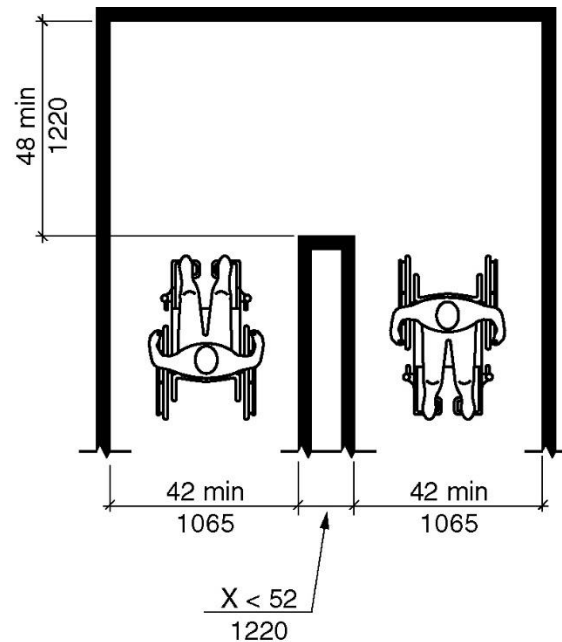
# Turn around obstruction

## Existing

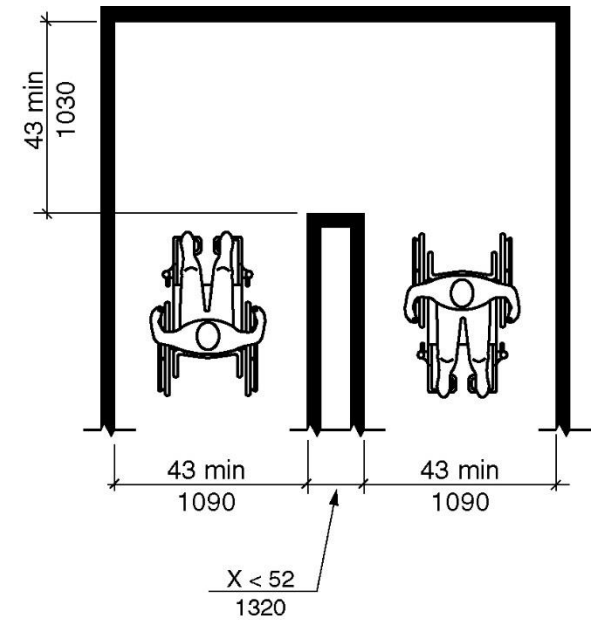


(a)  
180 Degree Turn

## New



(b)  
Option 2

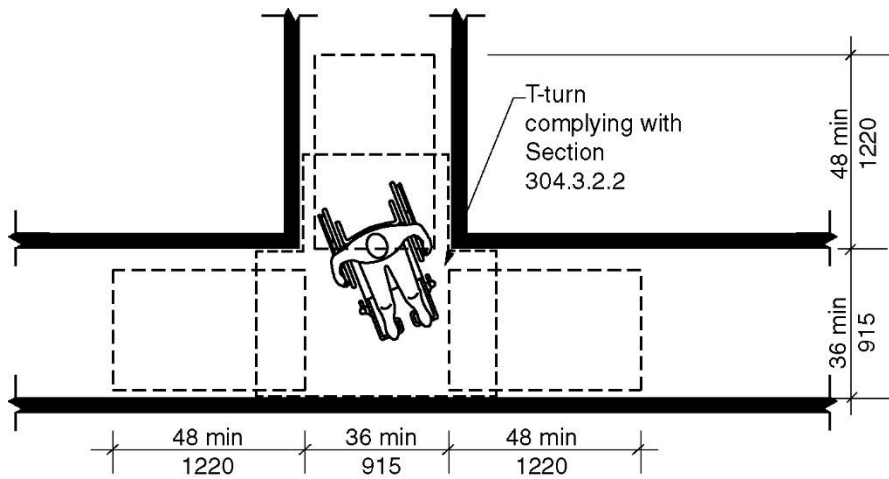


(c)  
Option 3

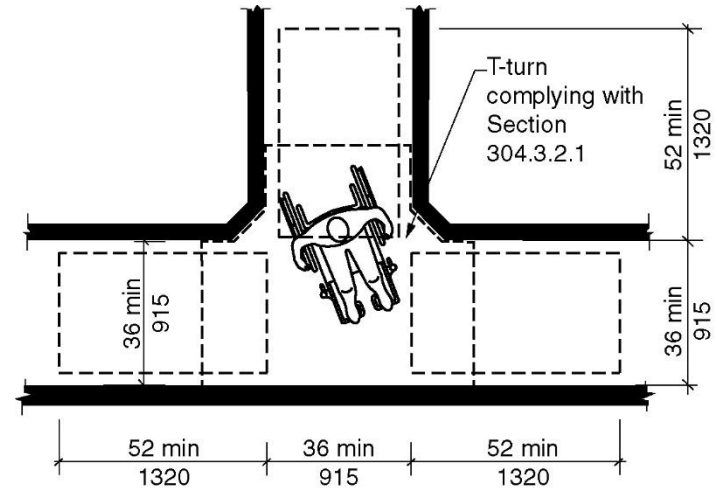


# Passing space

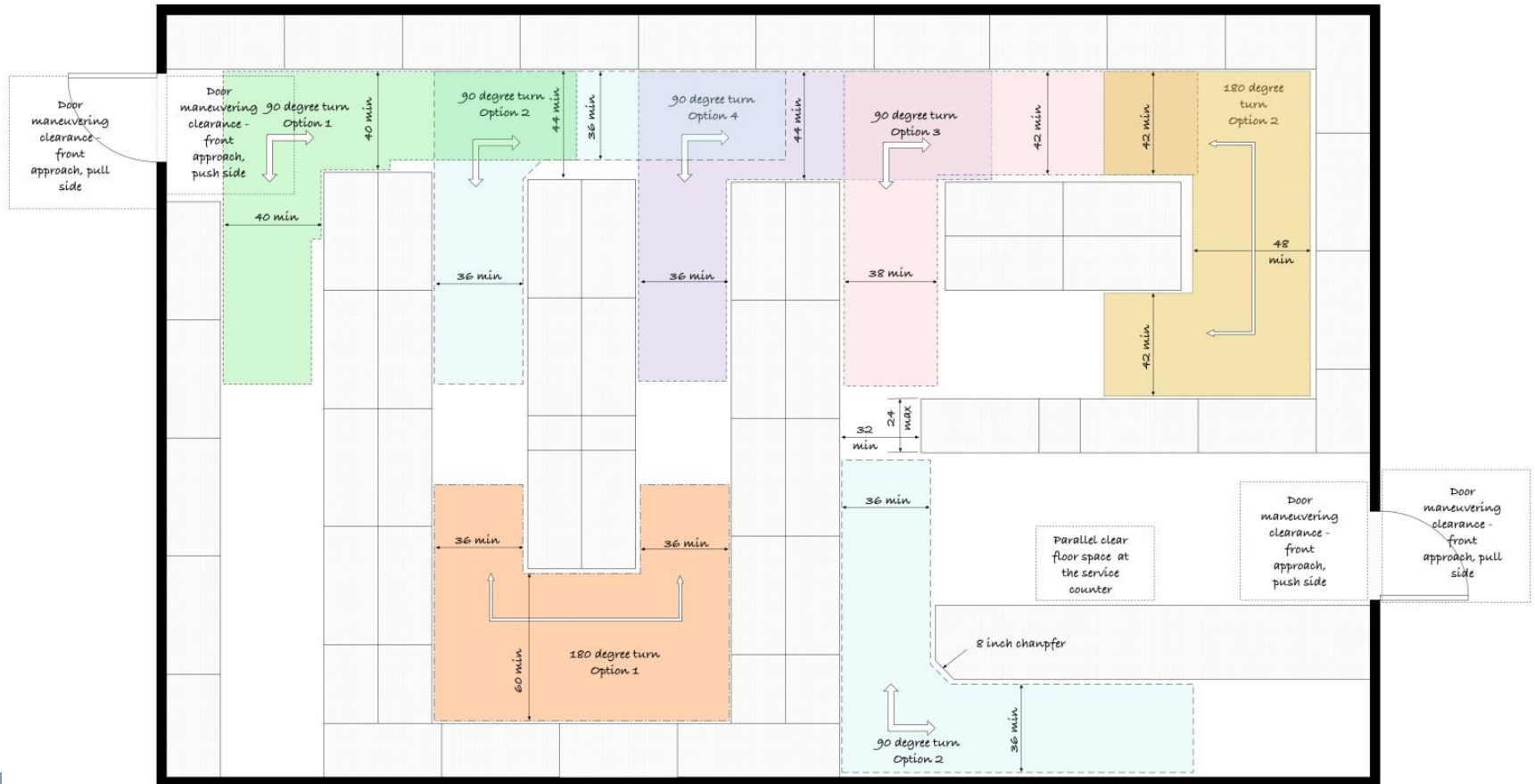
## Existing



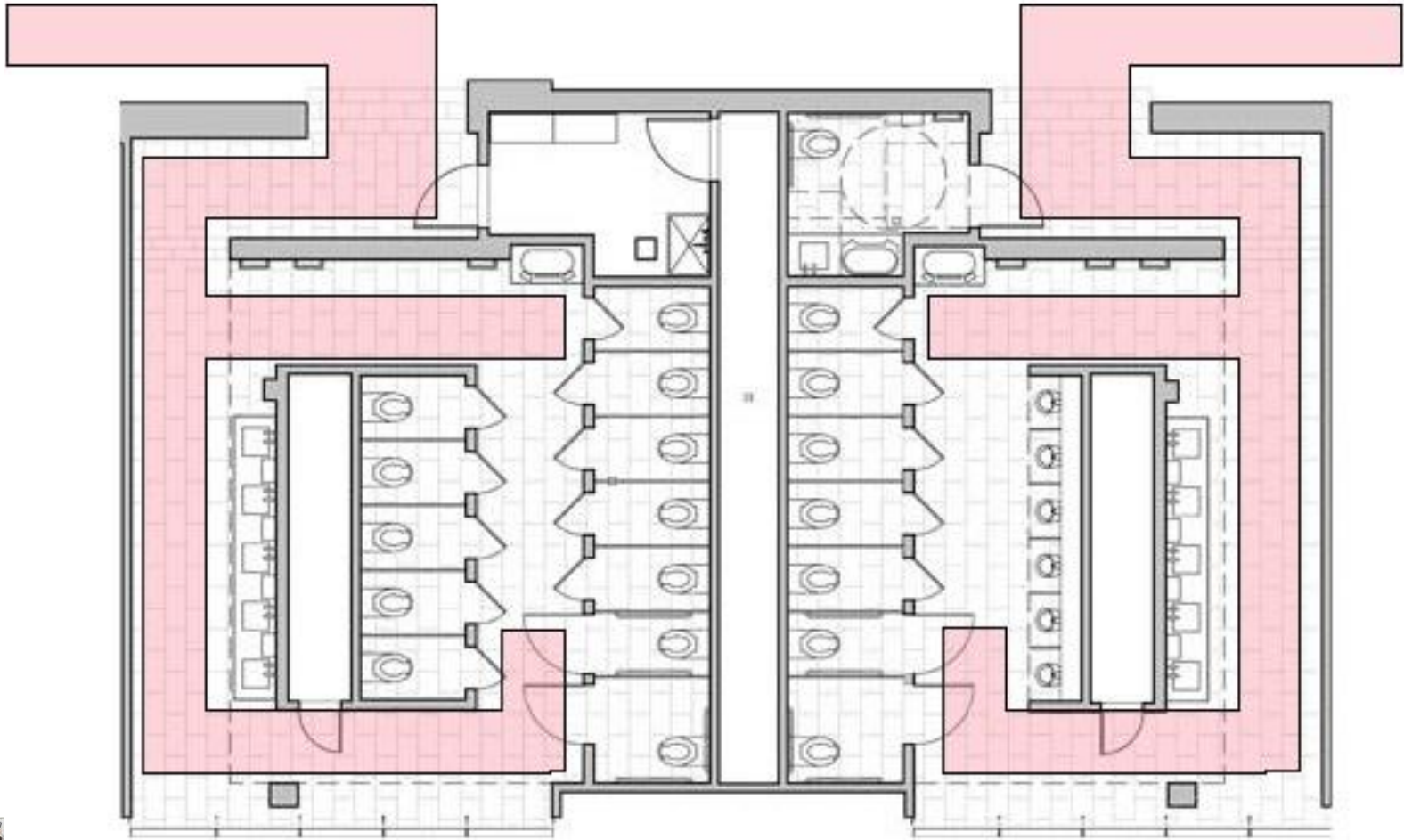
## New



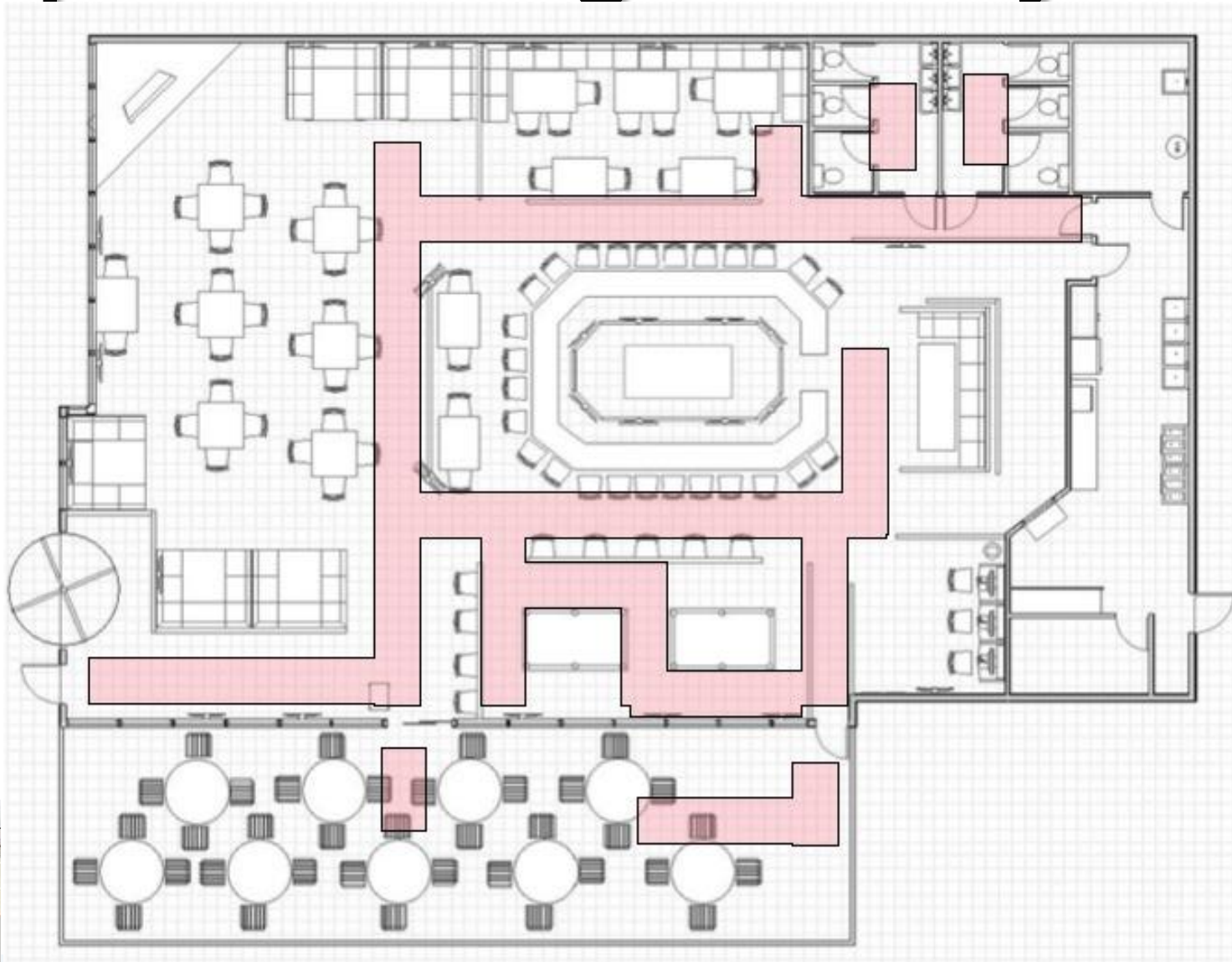
# Impact - Turns in a small store



# Impact - Multi-stall layout



# Impact - Dining room layout

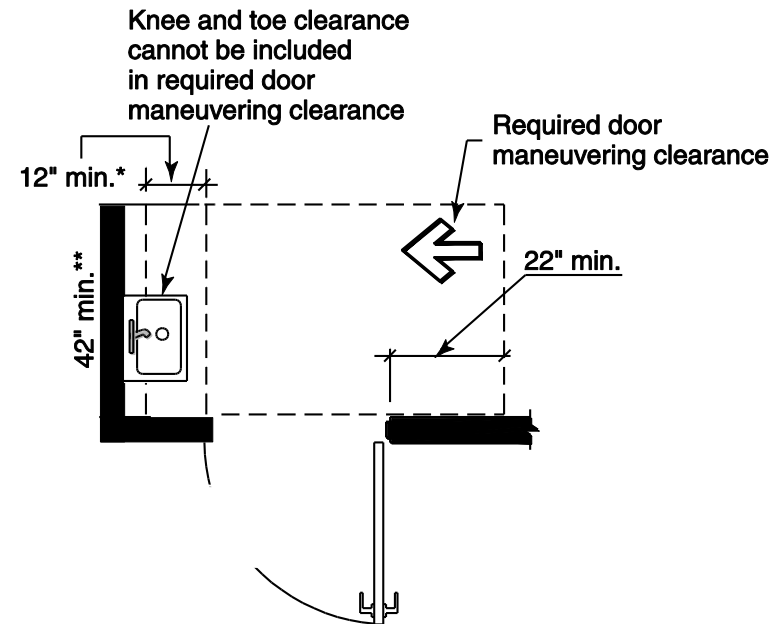




# Doors:

## 404.2.3 Obstructions to the Maneuvering Clearance

- Removed from 2017 A117.1
- Prohibits the use of knee and toe clearances (i.e., under sinks or counters) when overlapping maneuvering space at a door.
- The intent is that users do not need to reach over an obstruction to operate the hardware.



\* If both closer and latch are provided  
\*\* 48" min. (1220) if both closer and latch provided

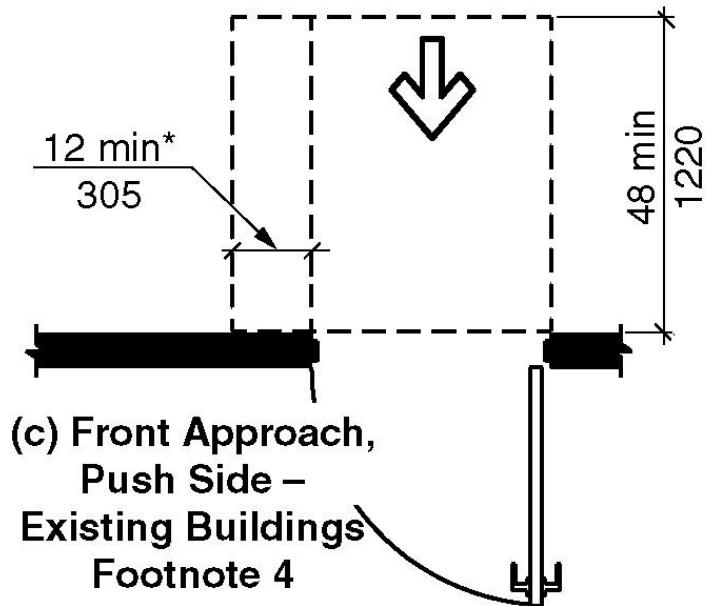
(e) Hinge Approach, Push Side



# Door maneuvering size

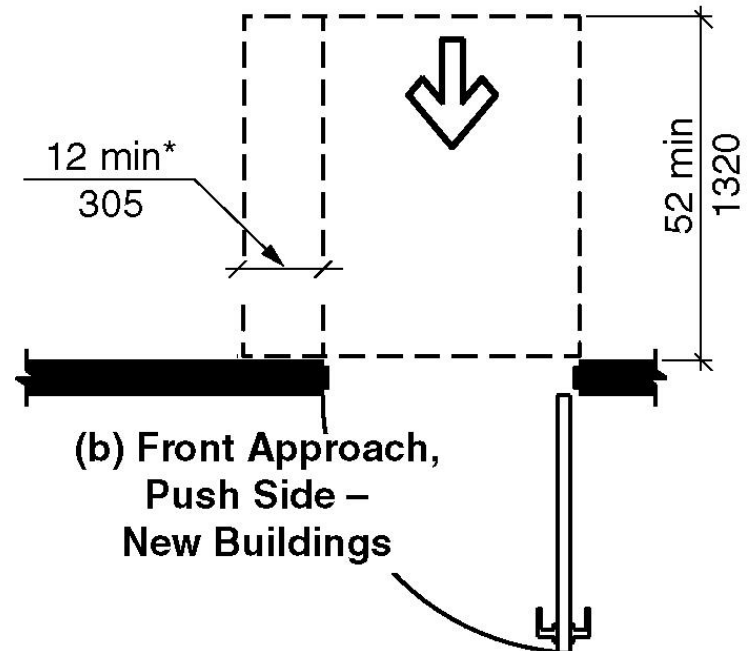
## Existing – 48”

\*If both closer and latch are provided



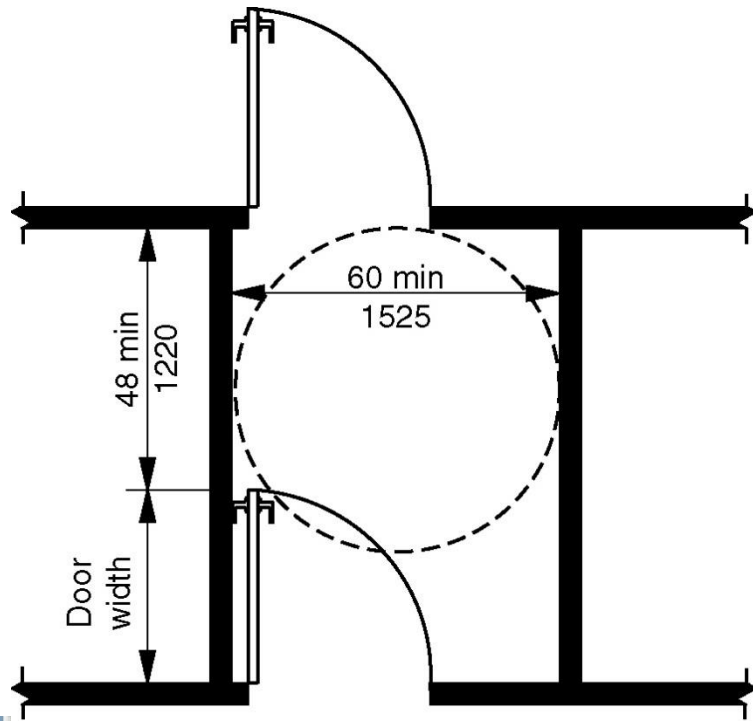
## New – 52”

\*If both closer and latch are provided



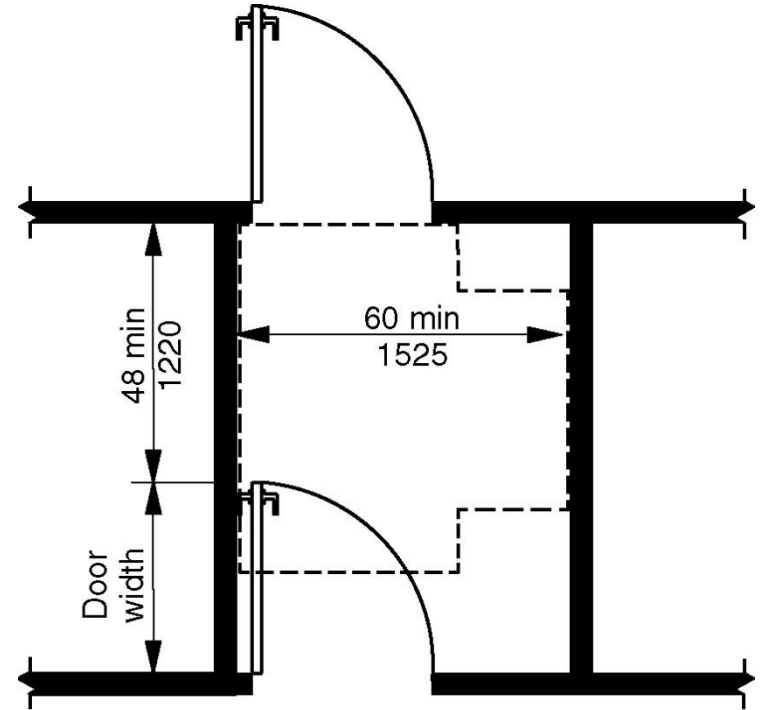
# Vestibules

## Existing



(f)

## New

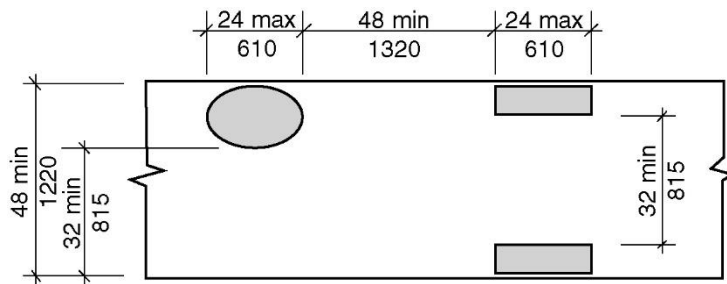


(c)

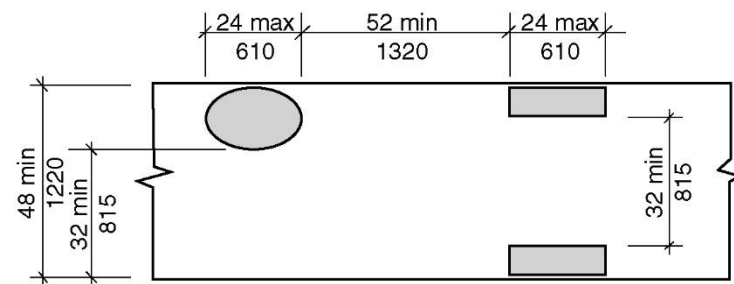


# Exterior route

## Existing

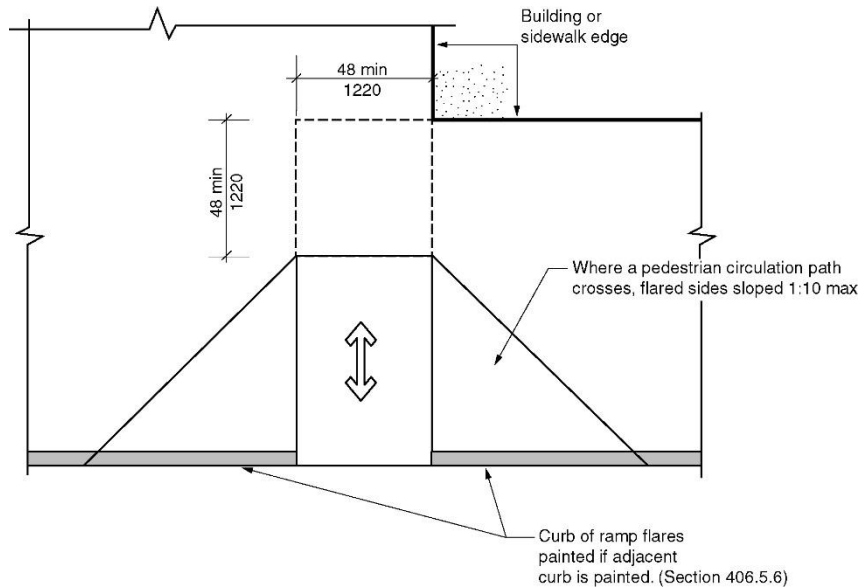


## New

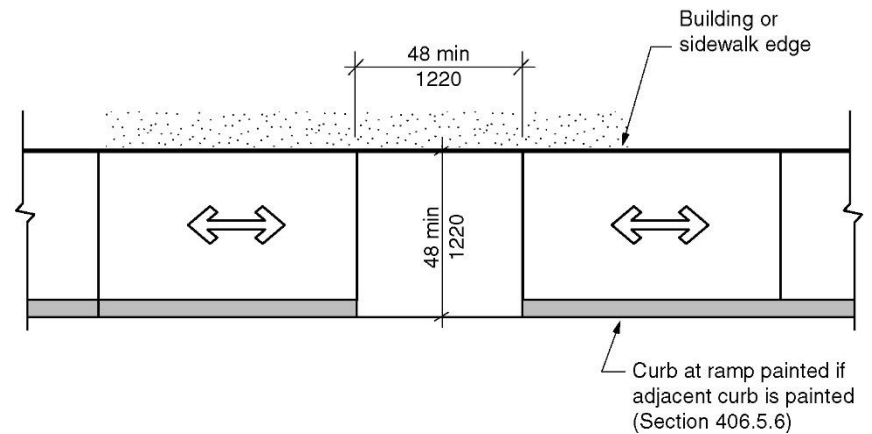


# Curb Ramps

## Perpendicular

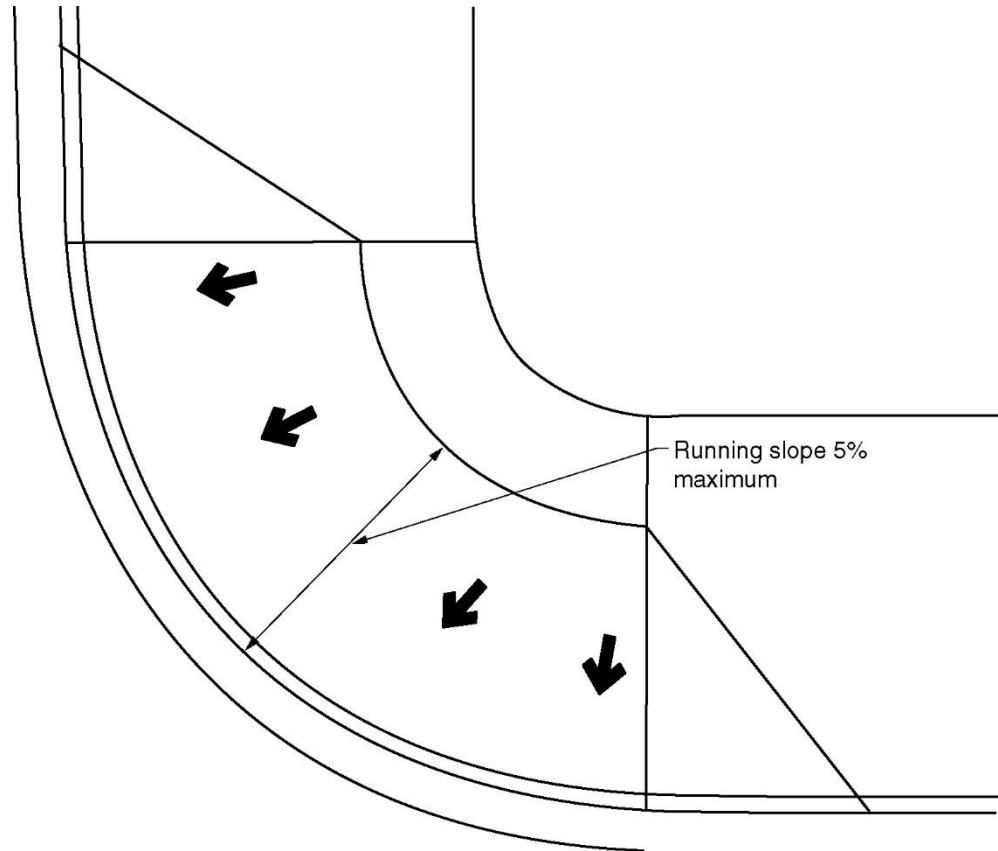


## Parallel





# Blended Transitions



# Platform Lifts

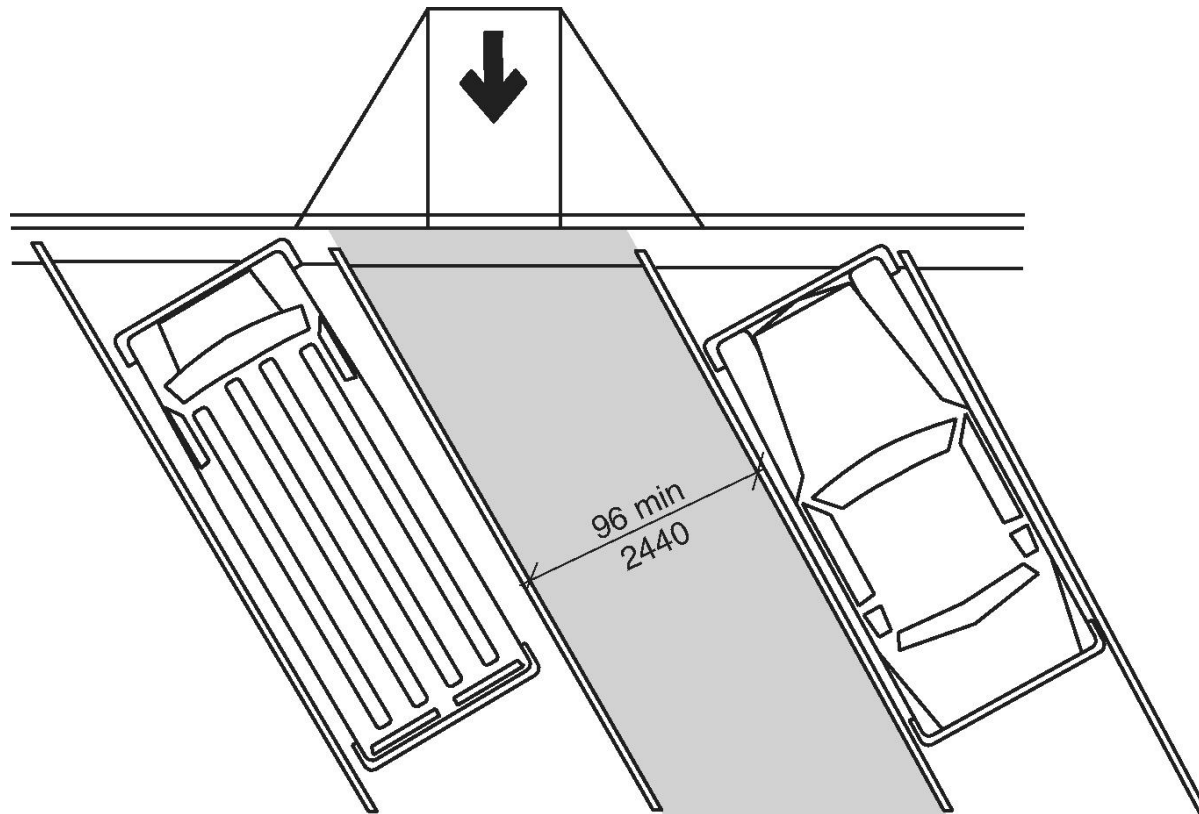
- Change in size for vertical platform lift for new clear floor space size – 36” x 52”
- Incline platform lift with barriers permitted to use 36” x 48”



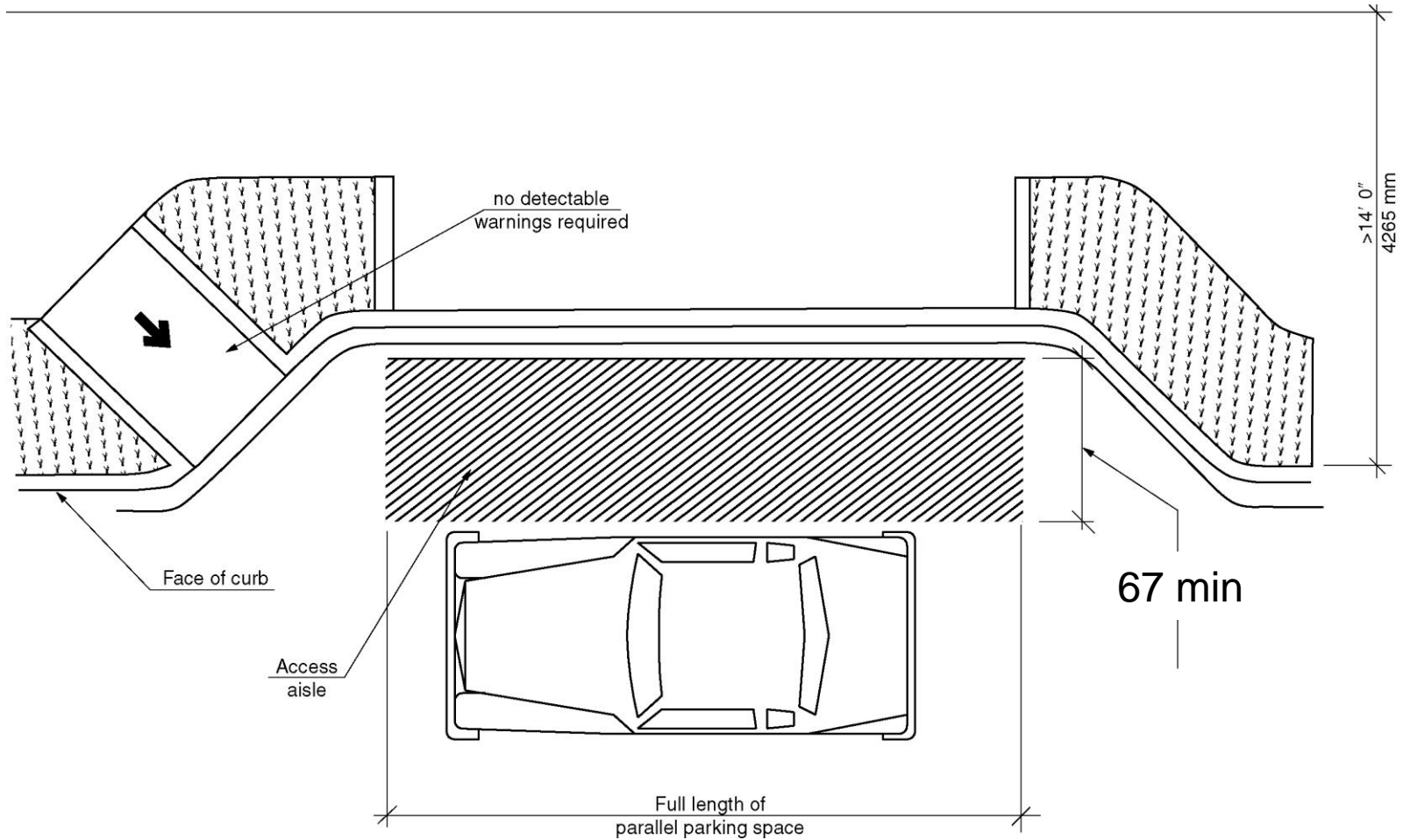
# General Site and Building Elements

- Parking
- Meters
- Electrical Charging Stations
- Route across parking lot
- Views

# Angled street parking



# Parallel street parking





# Parking meters and pay stations

- Clear floor space
- Reach range
- Operable parts
- Displays



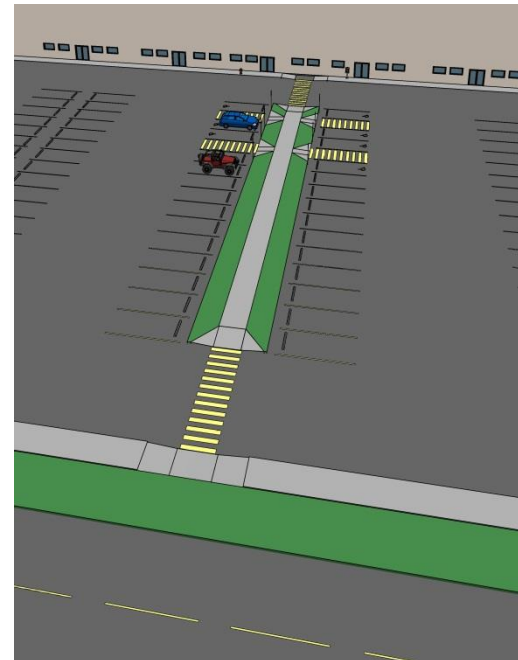
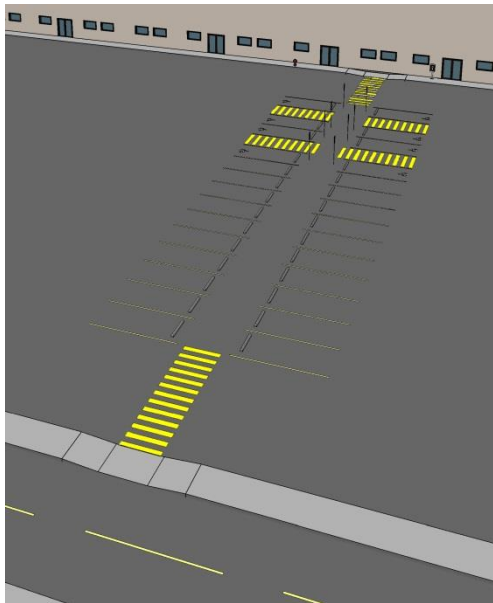
# Electric vehicle charging stations

- Clear floor space
- Reach ranges
- Operable parts
- Route not obstructed by cord or barriers



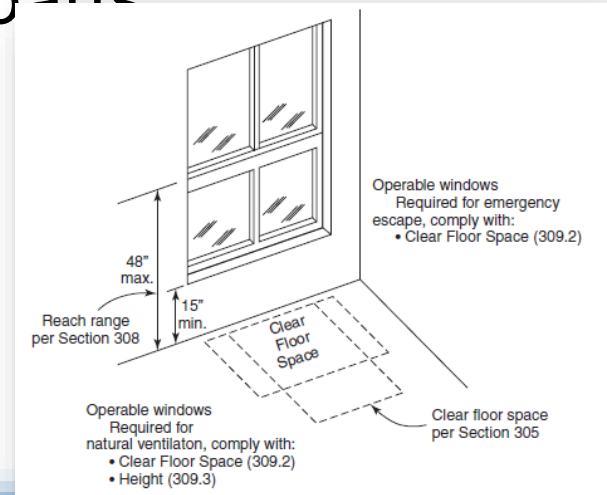
# Routes across parking lots

- Protected accessible route across parking lots



# Windows

- One window per room except kitchens and bathrooms
  - emergency escape and rescue
  - natural ventilation
- Four forces on a window – locking, unlocking, opening and closing
- Locking/unlocking are operable parts
- Opening/closing - *AAMA 513*



# Plumbing Elements and Facilities

- Water bottle filler
- Toilet stalls

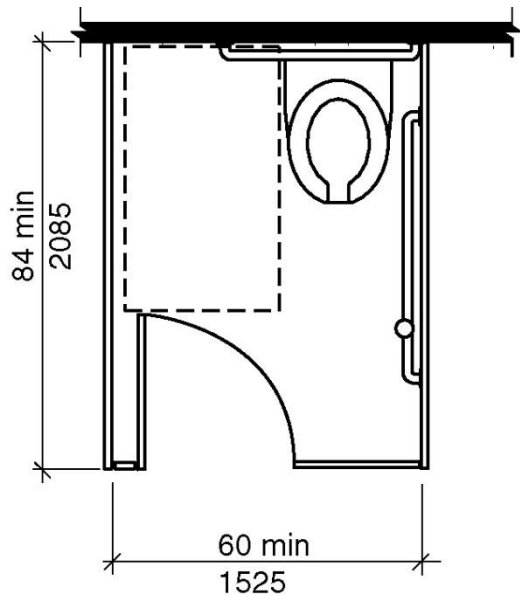


# Bottle filling stations

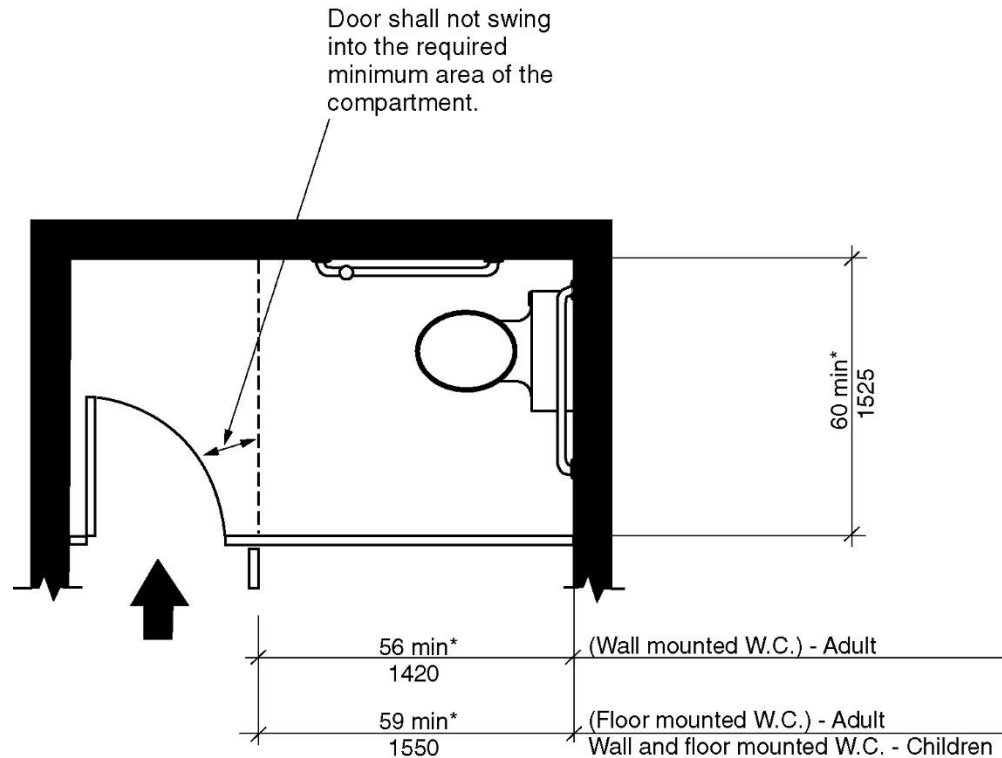


# Stall options

- End or row stall or new alternative stall



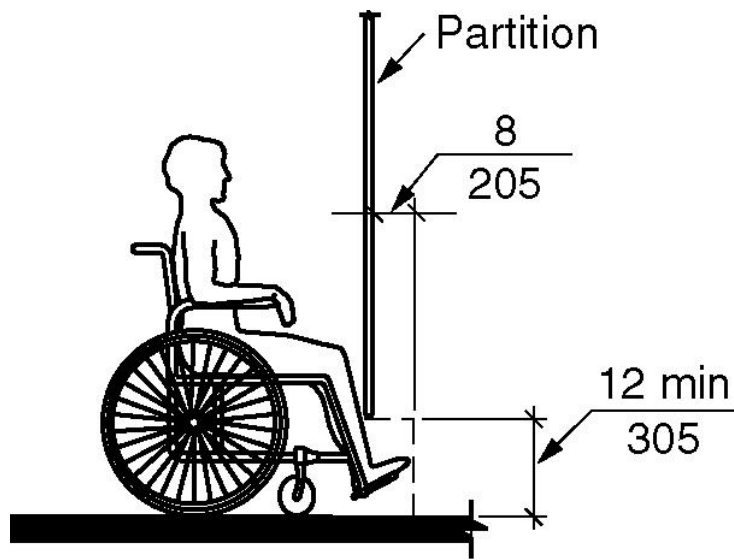
\* Toilet compartment size per Section 604.9.2.3



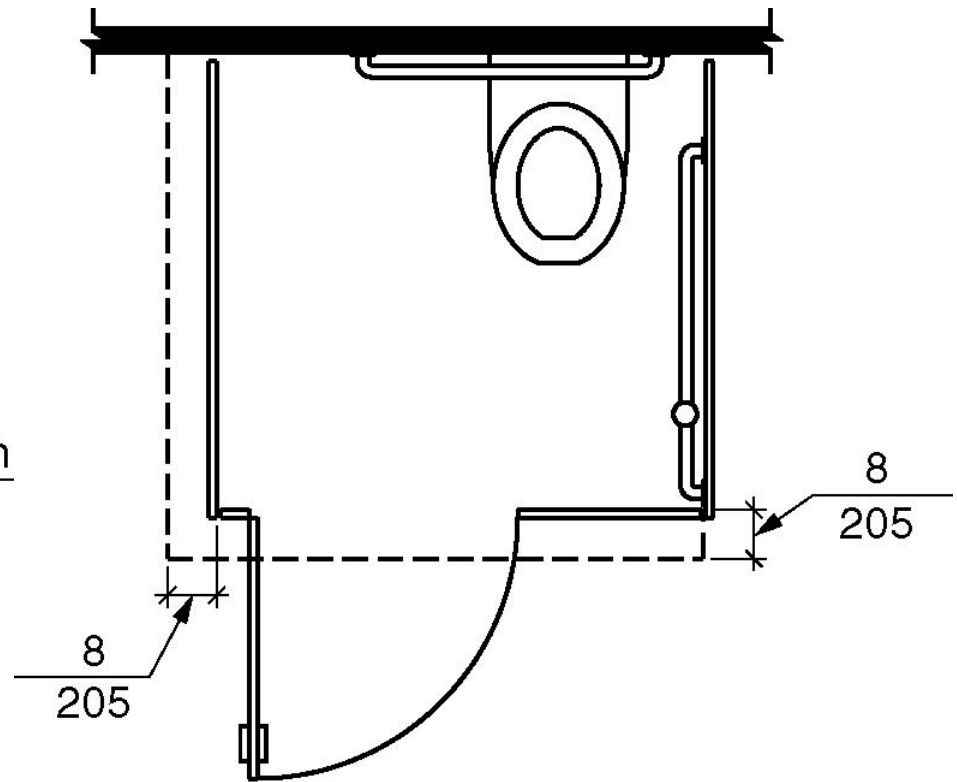
\* Toilet compartment size per Sections 604.9.2.1 and 604.9.2.2



# Partition



(a)  
Elevation



(b)  
Plan

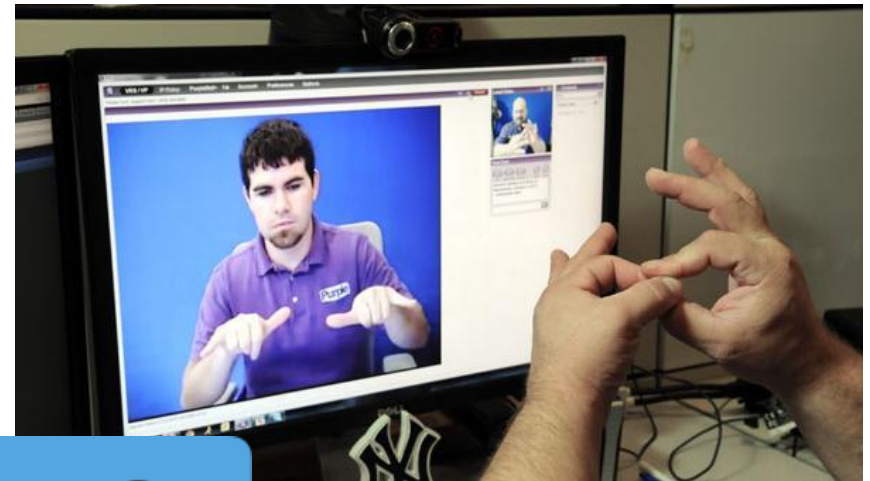


# Communication Elements and Features

- Visual relay service

# Visual relay service booth

- Seating
- Privacy enclosure
- Two-way video communication system
- Background



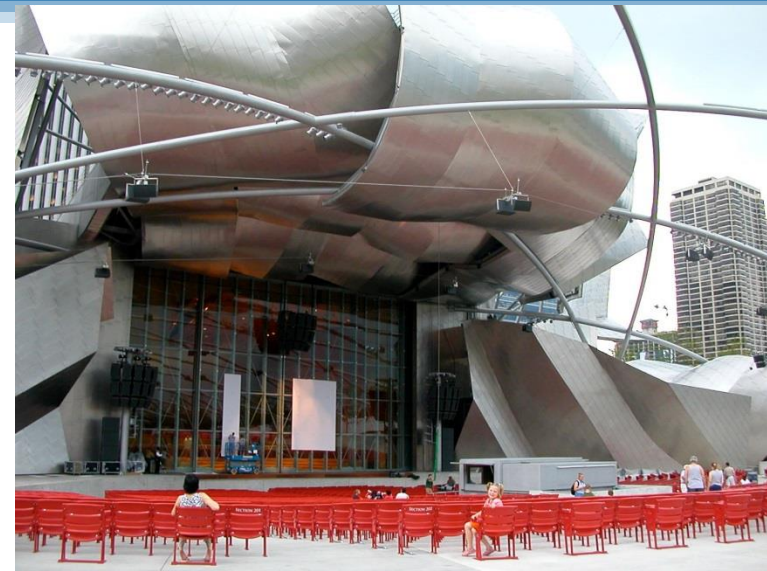


# Special Rooms and Spaces

- Assembly seating
- Sign language interpreter station
- Kitchens
- Classroom acoustics



# Assembly Areas: Definitions

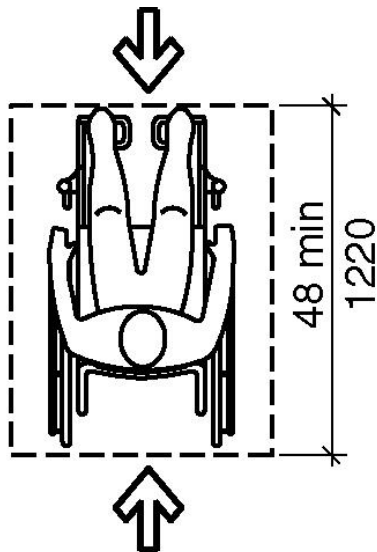


- **wheelchair space:** A space for a single wheelchair and its occupant.
- **wheelchair space locations:** A space for a minimum of a single wheelchair and the associated companion seating. Wheelchair space locations can contain multiple wheelchair spaces and associated companion seating.



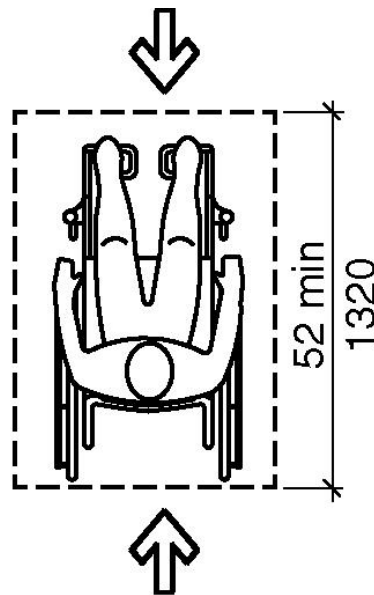
# Wheelchair space in assembly spaces

Existing

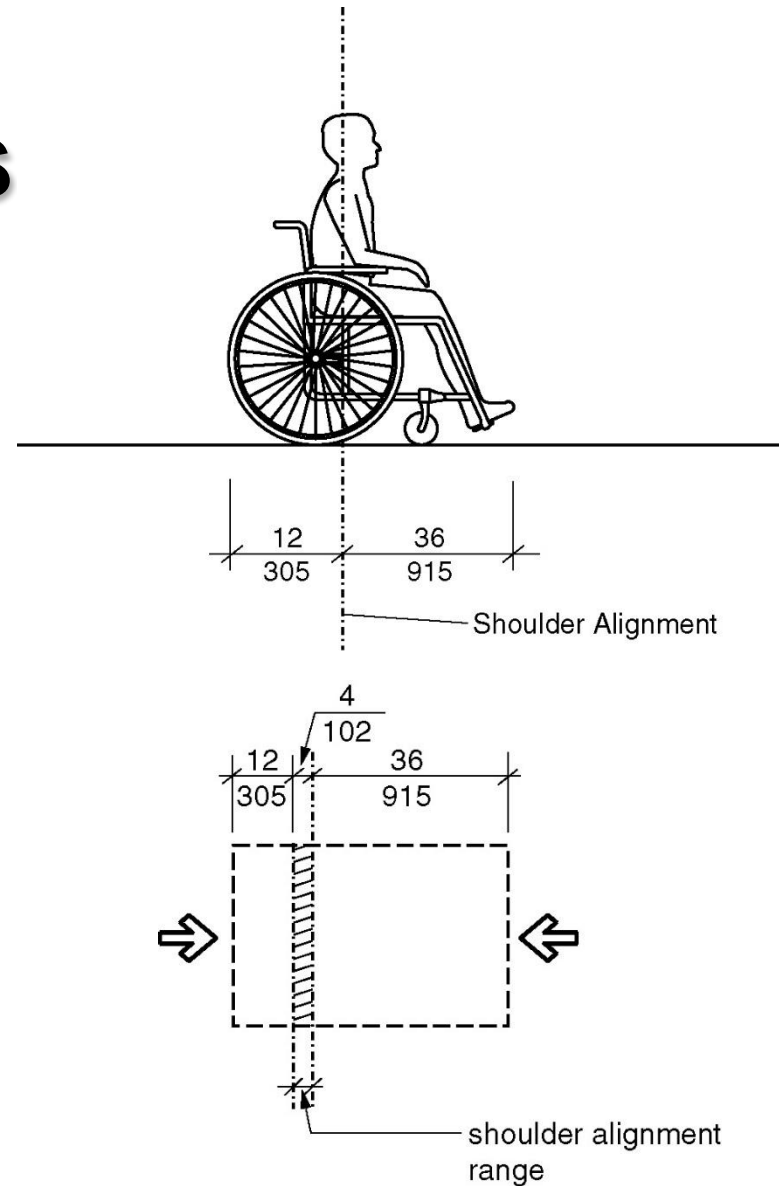


(b) Front or Rear Access Existing Building

New



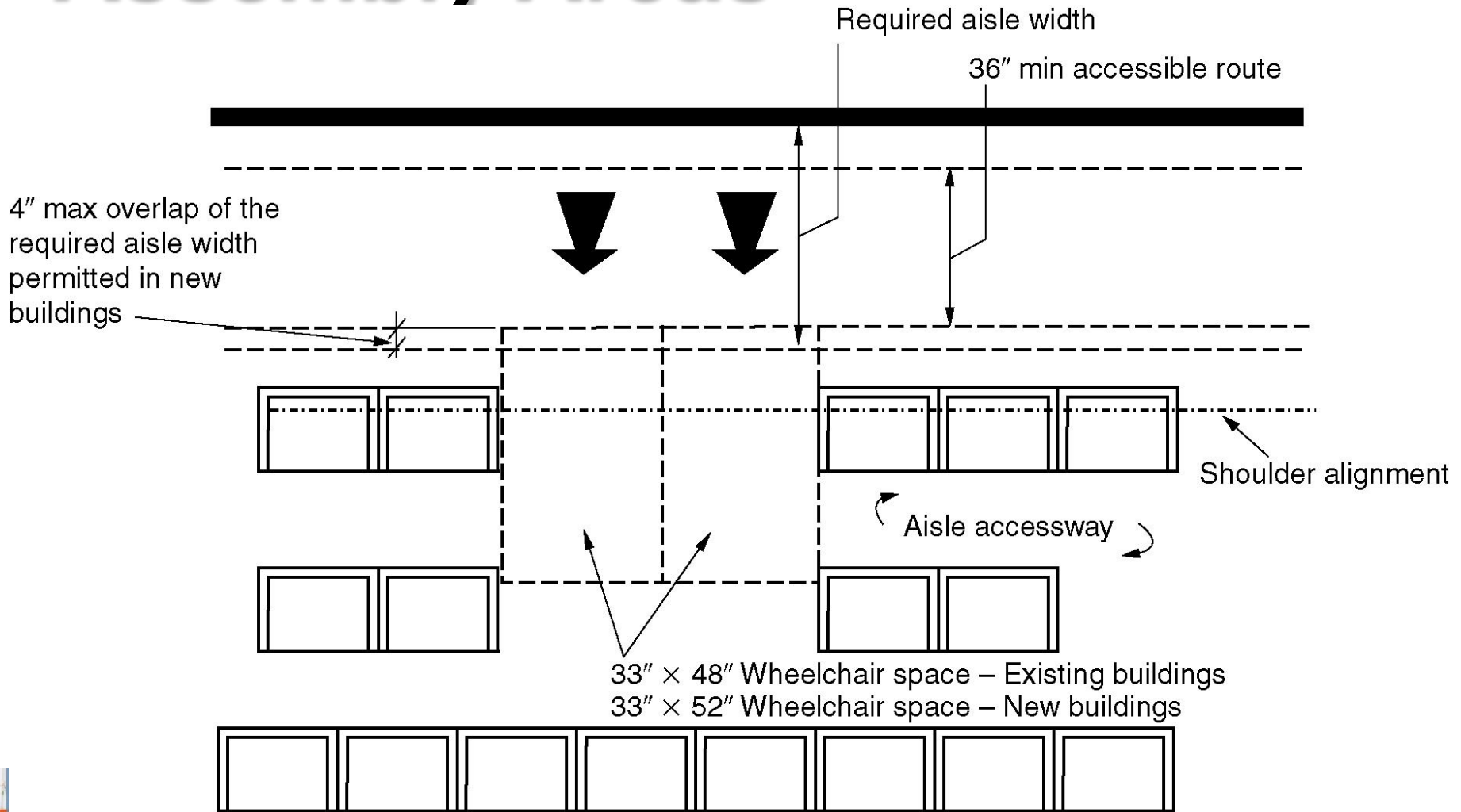
(a) Front or Rear Access New Buildings



(b) Front or Rear Approach New Buildings and Facilities



# Assembly Areas



(a) REAR APPROACH

# Dinner Theaters & Lecture Halls

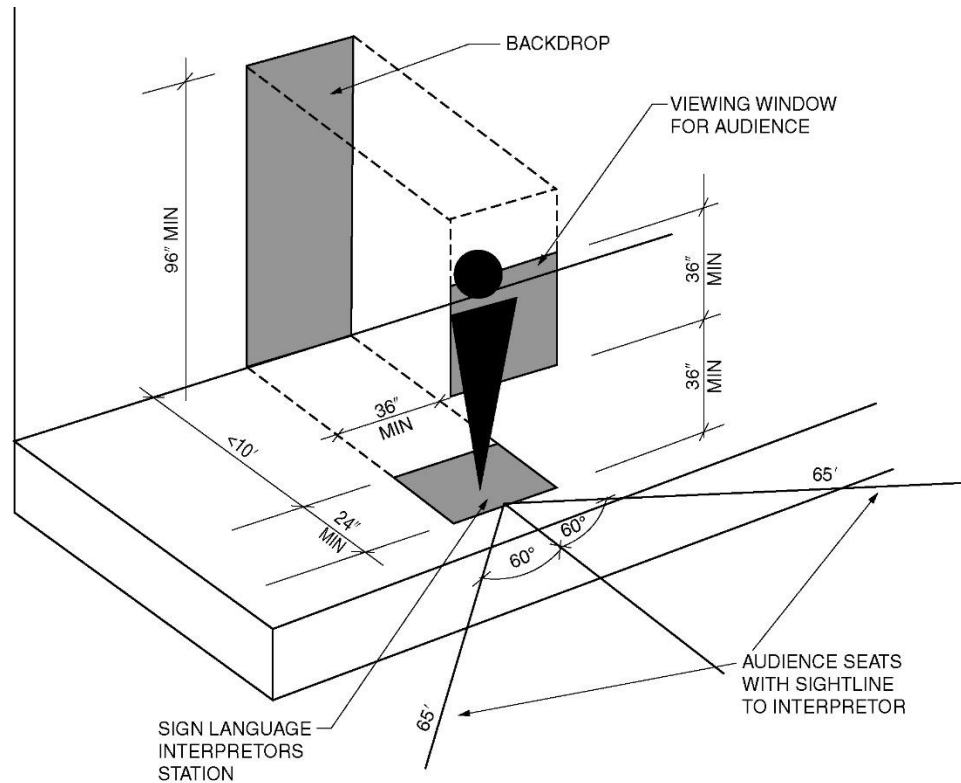


- Dispersion based on assembly seating to view an event
- Not work surface or dining room dispersion throughout

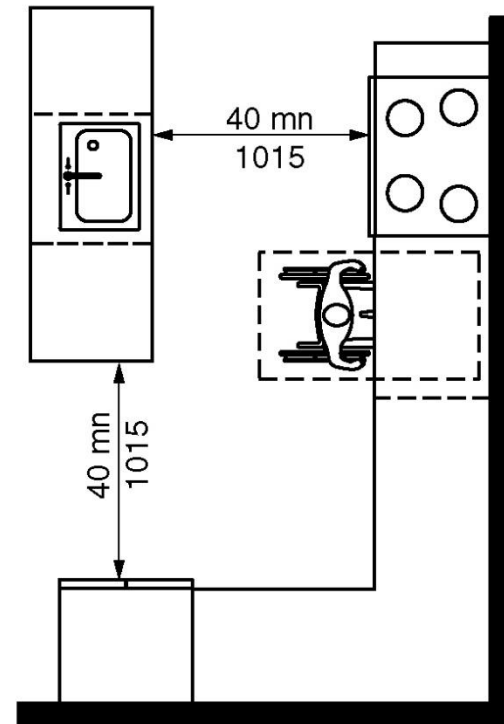
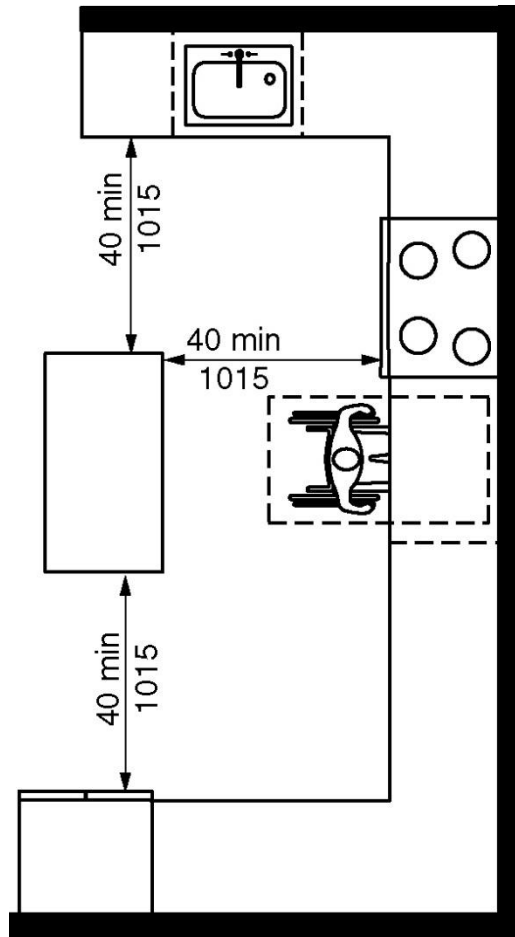


# Sign language interpreters stations

- Area to stand
- Viewing angle for audience
- Illumination
- Backdrop



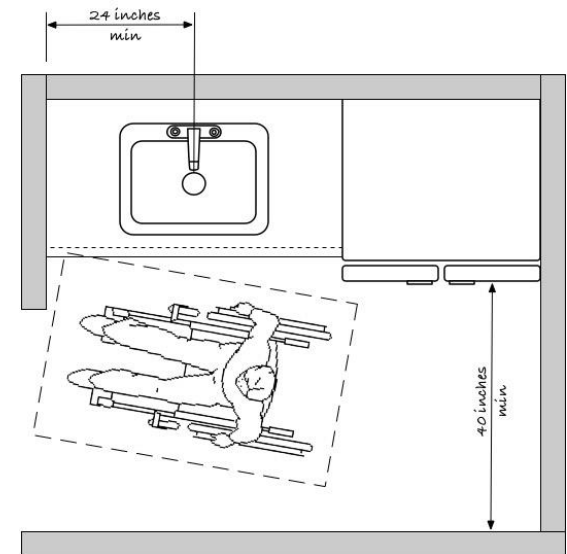
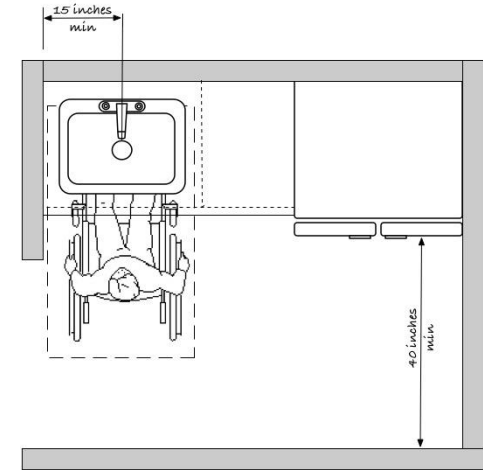
# Kitchen Island





# Kitchenettes

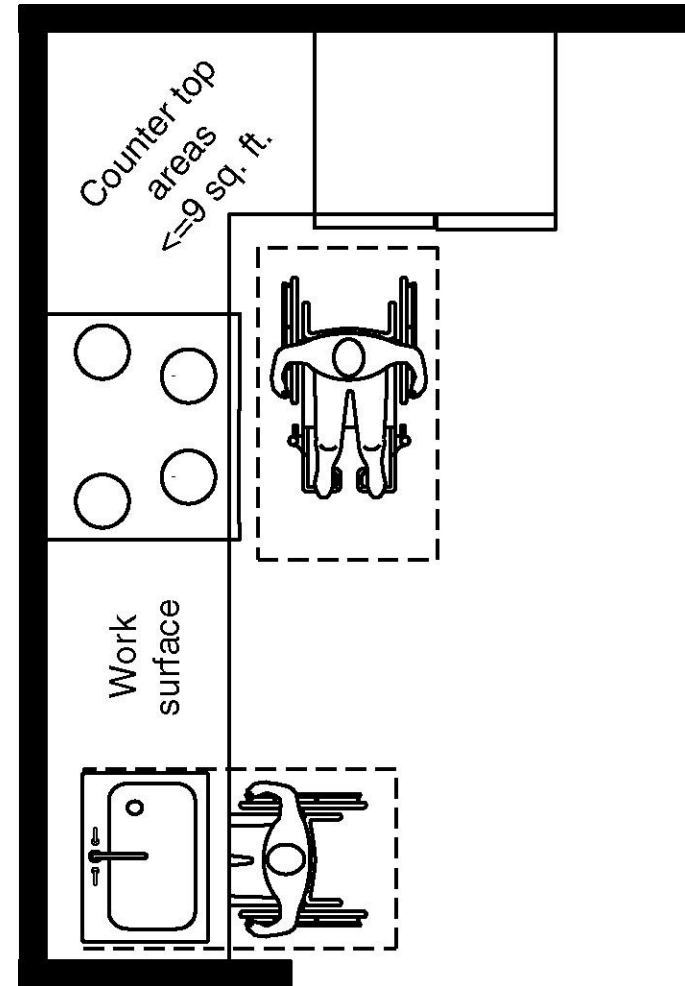
- Requires 40 inch minimum clearance between cabinets, appliance and any walls at kitchenettes.
- Pass thru not required for kitchenette.
- Work surface not required in kitchenette.
- Parallel approach at sink.
- Turning space in the room where within an Accessible or Type A unit (may not be inside the kitchenette).



# Operable parts

## Kitchen Outlet Exception:

- Over counter top in a corner between appliances
- Counter top area does not exceed 9 square feet maximum.



# Classroom acoustics

## Classrooms <20,000 cubic feet

### Classroom Acoustics Requirements

Learning Space	Greatest one hour average sound level of exterior source background noise	Greatest one hour average sound level of interior source background noise	Maximum reverberation times for sound pressure levels in octave bands with frequencies of 500, 1000 and 2000 Hz.
Classrooms with an enclosed volume of $\leq$ 10,000 cubic feet	35 dBA/55 dBC	35 dBA/55 dBC	0.6 seconds
Classrooms with an enclosed volume of $>$ 10,000 cubic feet and $\leq$ 20,000 cubic feet	35 dBA/55 dBC	35 dBA/55 dBC	0.7 seconds

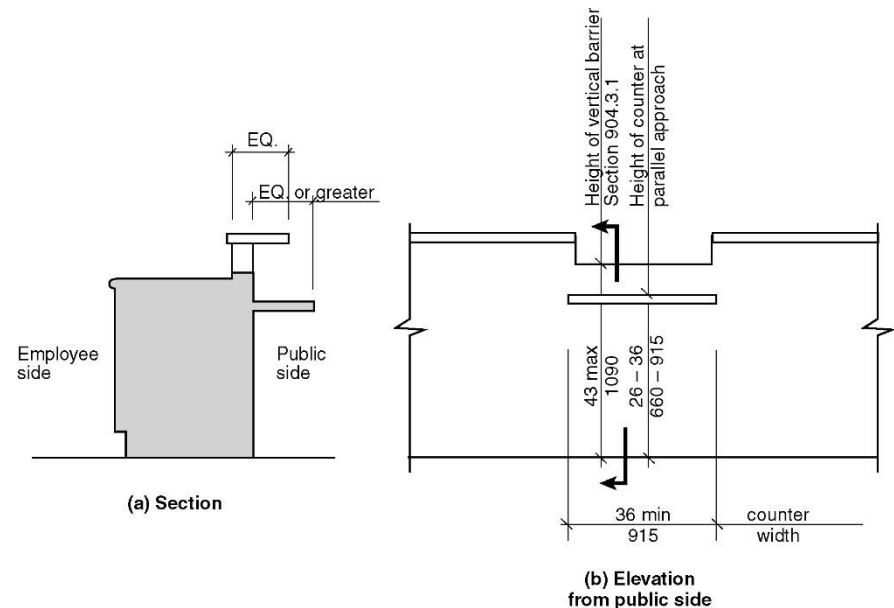
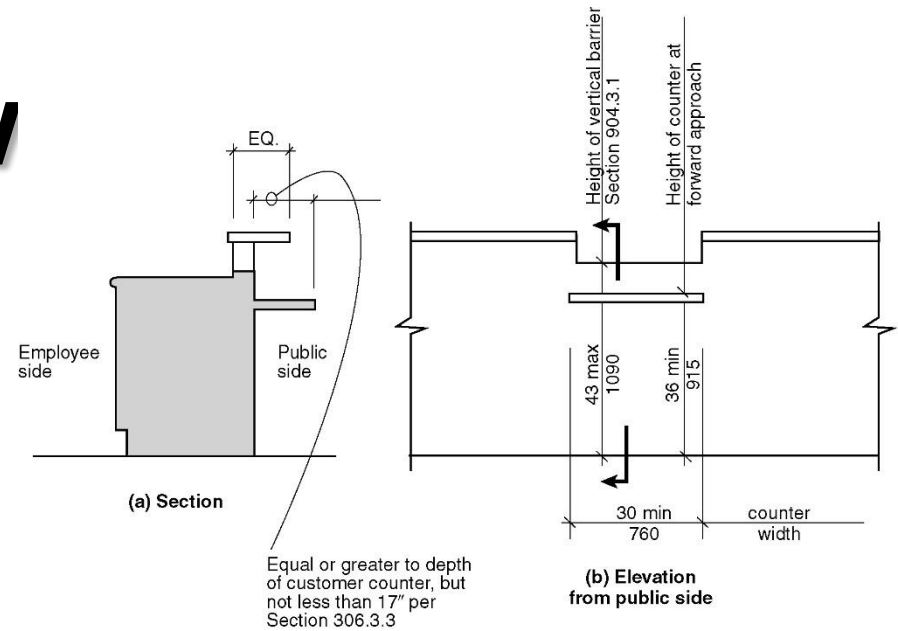


# Furnishings and Equipment

- Service windows
- Gaming machines and tables

# Service window

- Applicable to public side (not employee side)
- Side or front approach
- Equal customer counter
- Maximum barrier height to allow for face-to-face contact between employee and customer
- Allowance for security windows





# Service windows





# Gaming machines and tables

- Clear floor space next to gaming table or machine





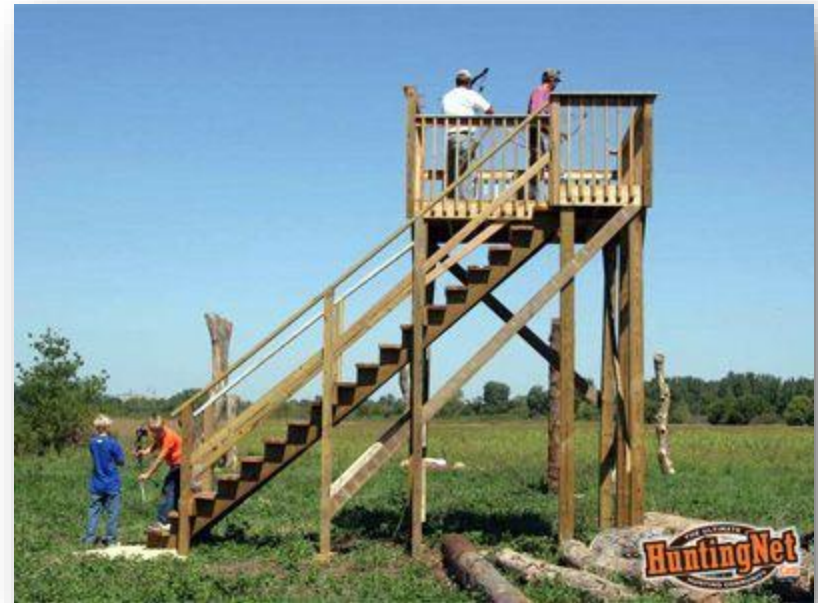
# Recreational Facilities

- Shooting facilities



# Elevated Shooting Platform

- Exception:
  - 500 sq.ft. maximum
  - Elevated over 12 feet

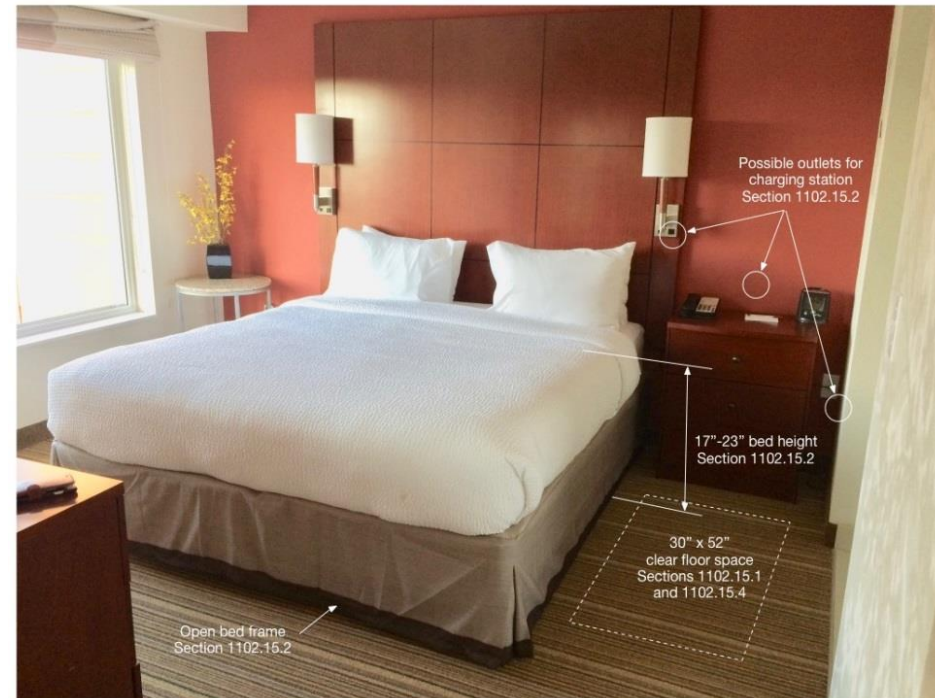


# Dwelling Units and Sleeping Units

- Accessible units
- Type B units

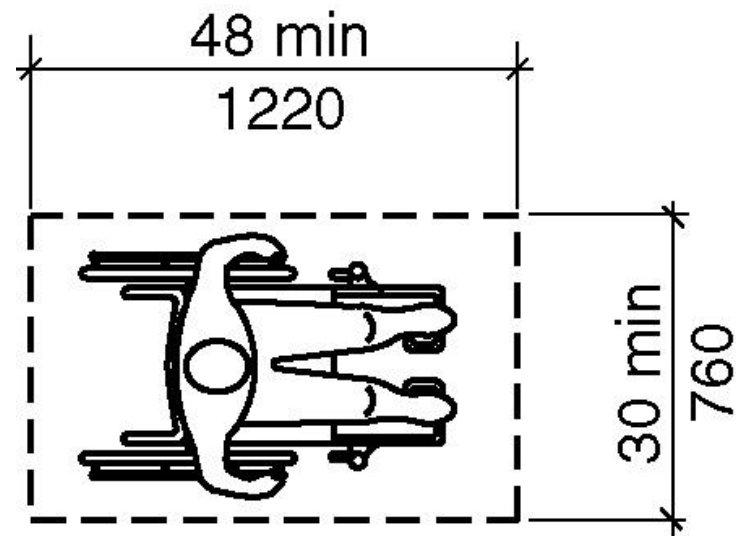
# Charging stations; Mattress height

- Charging Station:
  - Charge a motorized wheelchair
  - Option at assembly wheelchair space
  - Same space as transfer space next to bed in Accessible hotel or dorm rooms
- Mattress height



# Type B units

- Keep old size
- Match FHA





# Process for Change

- International Codes
- ICC A117.1

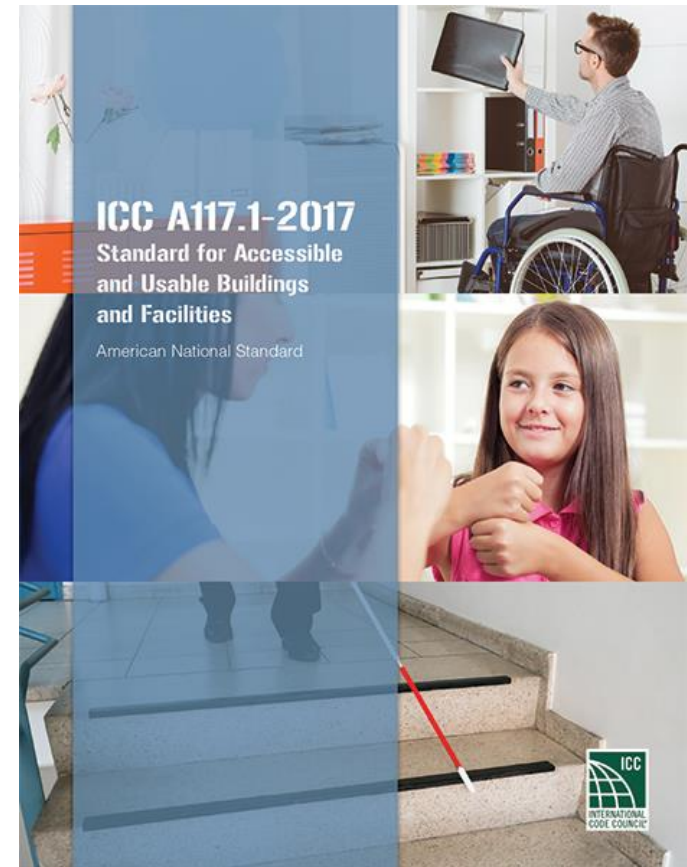
# International Codes – Code Change Process Logistics

- I-Code published every 3 years.
- 15 codes split into two groups: A, B.
- Single cycle for each group
  - Code Development
  - Final Action Hearings
- Repeat
- 2021 available in fall of 2020.



# A117.1 Standard: Change Process Logistics

- 5 year development cycle.
- One cycle of development between editions
  - Years 1 and 2: study groups
  - Years 3, 4 and 5: processing changes and publication.
- Repeat
- Latest edition is 2017
  - not referenced in 2018 I-Codes



# Questions?





# Thank You For Attending

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