

BEYOND CODES AND REGULATIONS: WHATS WORKING IN ACCESSIBLE DESIGN.

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Kim Paarlberg, ICC

Jay Woodward, ICC

The US Access Board

The US Dept. of Justice

1

Dedicated To Our Dear Friend Chuck Graham 1965-2020



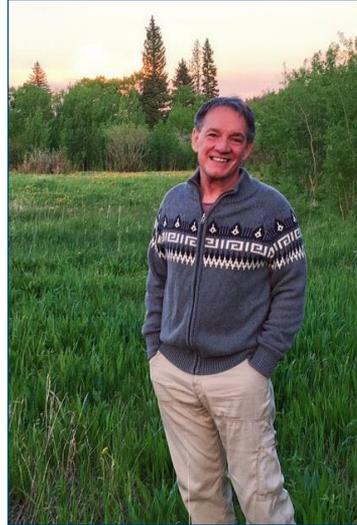
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2

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3

3

Abbreviations

- **A117.1 - ICC Accessible and Usable Buildings and Facilities Code**
- **ADA – Americans With Disabilities Act**
- **ADA Standards – DOJ 2010 ADA Standards for Accessible Design**
- **AIA - American Institute of Architects**
- **AMOE - Accessible Means of Egress**
- **AR – Accessible Route**
- **AT - Assistive Technology**
- **CFR – Code of Federal Regulations**
- **DOJ – US Department of Justice**
- **DWG’s – Drawings, graphics, blueprints**
- **EF – Equivalent Facilitation**
- **ECVS – Electric Vehicle Charging Stations**
- **HR – Human Resources**
- **IBC - International Building Code**
- **ICC- International Code Council**
- **ISA – Pictorial graphic of the International Symbol of Accessibility**
- **NCARB – National Council of Architectural Registration Boards**
- **OCR – Office of Civil Rights**
- **PWD – Person with a disability**
- **RA – Employment Reasonable Accommodations**
- **ROW- Right of Way of a public jurisdiction or utility**
- **TI – Technical Infeasibility**

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4

Fundamental ADA Objectives, Enforcement and Perspectives

As a Civil rights Law, the ADA is intended by Congress to be tested in the courts.

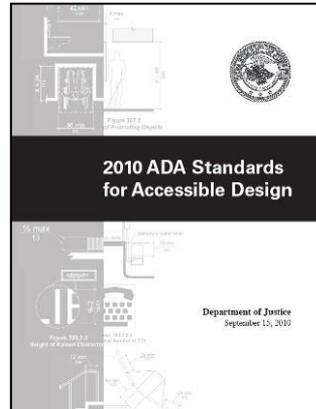
The Access Board refines the ADA regulations into graphic architectural standards.

With the exception of some Federal projects, the DOJ, OCR, EEOC interprets and enforces the intent and letter of these laws.

Justice Department and the US Access Board collaborate in developing and refining the design guidelines.

Most state and local Building Officials generally do not enforce the ADA itself.

State and local Human Rights Commissions etc., have some authority.



5

5

Take Home Message: *Thou Shalt Not Discriminate*

Regardless of whether a topic, characteristic, element or design is identified in the 2010 ADA Standards or in the ADA itself, the overarching principles of “*General Prohibitions Against Discrimination*” are the cornerstone of everything ADA.

Code of Federal Regulations CFR’s § 35.130 for Title II

‘No qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of a public entity, or be subjected to discrimination by any public entity.’

and § 36.201 for Title III

‘No individual shall be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of any place of public accommodation by any private entity who owns, leases (or leases to), or operates a place of public accommodation.’

6

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DOJ: Statement of Interest Lucky Brand Retail v. David New

http://www.ada.gov/briefs/lucky_brand%20_soi.docx

“...the absence of specific technical standards or regulatory provisions that directly address a public accommodations obligation to provide accessible POS devices in no way establishes that the accessibility of POS devices is outside the scope of title III, especially where current regulations incorporate specific obligations for effective communication. “

7

7

Access Board Guide to The ADA Standards Animations

US Access Board

Guide to the ADA Standards

- About this Guide [Single File Version](#)
- Chapter 1: Application and Administration
 - [Using the ADA Standards](#)
- Chapter 2: Scoping Requirements
 - New Construction
 - Alterations and Additions
- Chapter 3: Building Blocks
 - Floor and Ground Surfaces
 - Clear Floor or Ground Space and Turning Space
 - Operable Parts
 - Protruding Objects
- Chapter 4: Accessible Routes: **NEW**
 - Accessible Routes
 - Entrances, Doors, and Gates
 - Ramps and Curb Ramps
 - Elevators and Platform Lifts
 - Accessible Means of Egress

[UPCOMING: Guides covering Chapters 5 - 10]

Animations

- [Wheelchair Maneuvering](#)
- [Maneuvering at Doors](#)
- [Accessible Toilet Rooms](#)
- [Accessible Bathing Facilities](#)

ADA STANDARDS

- [About the ADA Standards](#)
- [ADA Standards](#)
- [Guide to the Standards](#)
- [About this Guide](#)
- [Chapter 1: Using the ADA Standards](#)
- [Chapter 2: New Construction](#)
- [Chapter 2: Alterations and Additions](#)
- [Chapter 3: Floor and Ground Surfaces](#)
- [Chapter 3: Clear Floor or Ground Space and Turning Space](#)
- [Chapter 3: Operable Parts](#)
- [Chapter 3: Protruding Objects](#)
- [Chapter 4: Accessible Routes](#)
- [Chapter 4: Entrances, Doors, and Gates](#)
- [Chapter 4: Ramps and Curb Ramps](#)
- [Chapter 4: Elevators and Platform Lifts](#)
- [Chapter 4: Accessible Means of Egress](#)
- [Single File Version](#)
- [Animations](#)

Backroom

Other Resources

11:22 PM 5/6/2015

8

Perspectives: Hunters Point Queens NY Library

A. Ideal Design

- Intent of the ADA
- New Construction
- The benefit of hindsight
- Informed and educated pwd and advocacy.
- 30 years of ADA designing

B. Real World Design & Construction

- Politics
- Budgets
- Allure of a project or designer.
- Emperor has new clothes
- Juggling federal v. building code
- Planning, design, construction processes.
- Few formal architectural programs or NCARB require the 2010 Standards to graduate



11

Perspectives: Hunters Point Queens NY Library

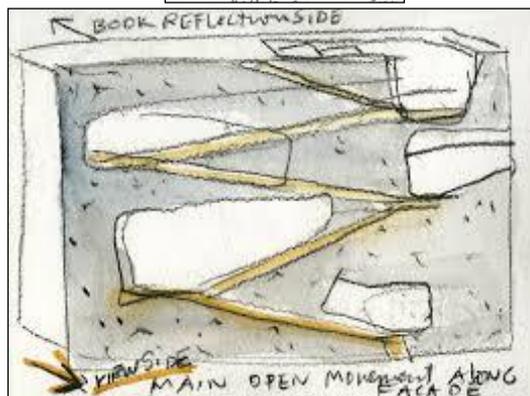
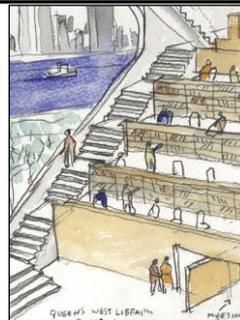
C. Enforcement

- Fox in the henhouse with AHJ: 84 Land Grant Institutions in USA are their own code authority = MU
- Texas, California processes
- How would DOJ, OCR, ICC or other agencies interpret?

- Inconsistent requirements within inspection industry and across jurisdictions.

D. End users, pwd, etc.

- Space planning
- Day to day use
- Known complaints, special needs



12

COVID 19 and Design

American Institute of Architects (AIA) developing strategies for:

- Reducing spread of pathogens in buildings
- Accommodating physical distancing practices
 - Promoting mental well-being
- Fulfilling alternative operational and functional expectations.

https://www.aia.org/resources/6299247-reopening-america-strategies-for-safer-bui/?utm_source=real-magnet&utm_medium=email&utm_campaign=aiamem20-covid-19-9-weekly-001members

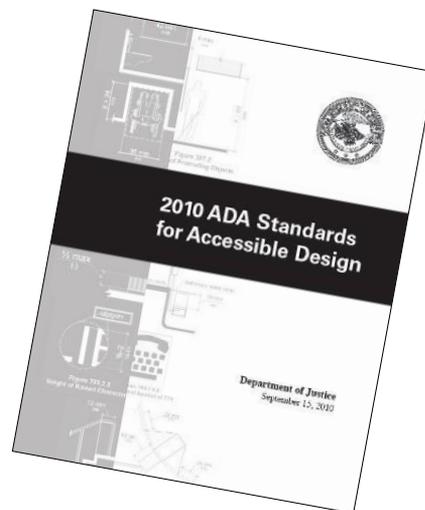
- Reports
 - [Download Reopening America: Strategies for Safer Building >](#)
 - [Download COVID-19 emerging research and public health data as of May 2020 >](#)
- Tools
 - [Risk Management Plan for Buildings >](#)
 - [Re-occupancy Assessment Tool >](#)
 - [COVID-19 Arch Map >](#)

13

13

2010 ADA Standards for Accessible Design

CHAPTER 1: Application and General Scoping



14

14

103 – Equivalent Facilitation

Nothing in 2010 Standards prevents the use of designs, products or technologies as alternatives.

Performance vs. prescriptive

Must result in substantially equivalent or greater:
“Accessibility and Usability”

103 is similar to IBC 104. 10 and 104.11

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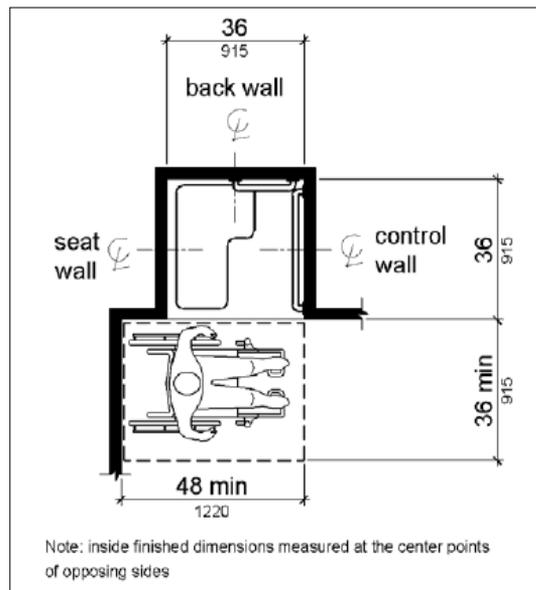
103 Equivalent Facilitation Usable by PWD. What is “Usable”?

Is a 48” by 48” transfer shower an ‘EF’?

A 48” lateral reach from a seated position is not an appropriate anthropometric dimension for a transfer.

48” is larger - and in that sense “equal to or greater than”.

But 48” is not “Usable”



16

16

106.2 Definitions: Accessible Means of Egress - AMOE

- A continuous and unobstructed way of egress travel from any point in a building that provides an accessible route to an area of refuge, a horizontal exit, or a public way.
- Referenced in 2010 ADA Standards = Section 1007 of the IBC.
- Only for newly constructed facilities.
- Based on several factors such as occupant load, configuration of walls and doors, two AMOE are often necessary.
- The new Queens NY Hunter Point Library has just one elevator.



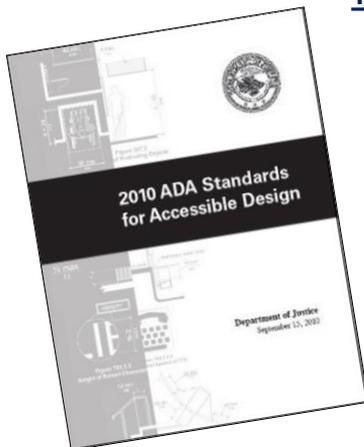
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IBC 1007 Accessible Means of Egress (AMOE)

2010 Standards Section 105.2.4 Reference s to the International Building Code (IBC) Section 1007 in order to meet Federal Reg's.

You must use both.



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Alteration - Definition

A **change** to a building or facility that affects or could affect the usability of the building or facility or portion thereof.



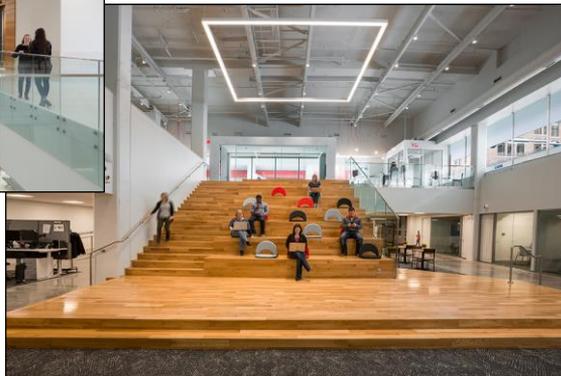
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Is replacing carpeting an alteration?

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106.2 Definitions: Circulation Path

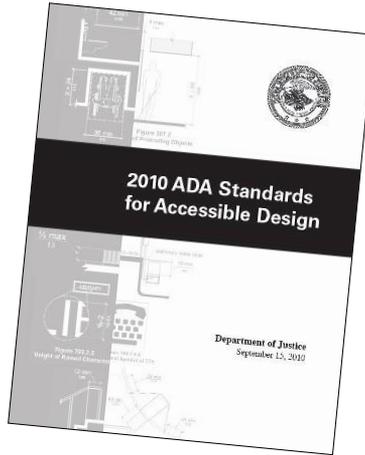
An exterior or interior way of passage provided for pedestrian travel, including but not limited to, walks, hallways, courtyards, elevators, platform lifts, ramps, stairways, and landings. This is pivotal in the harmonized requirement that the circulation path and accessible route coincide.



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Chapter 2 Scoping



21

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General Exceptions (203)

Exempt

- Construction sites
- Raised areas for security, life/fire safety
- Limited access spaces
- Machinery spaces
- Single occupant structures (e.g., toll booths)
- Certain common use spaces in detention and correction facilities and residential facilities
- **Employee work areas**
- Various spaces in recreation facilities
- Raised referee judging and scoring areas
- Water Slides
- Animal containment areas
- Raised boxing, wrestling rings
- Diving boards and platforms



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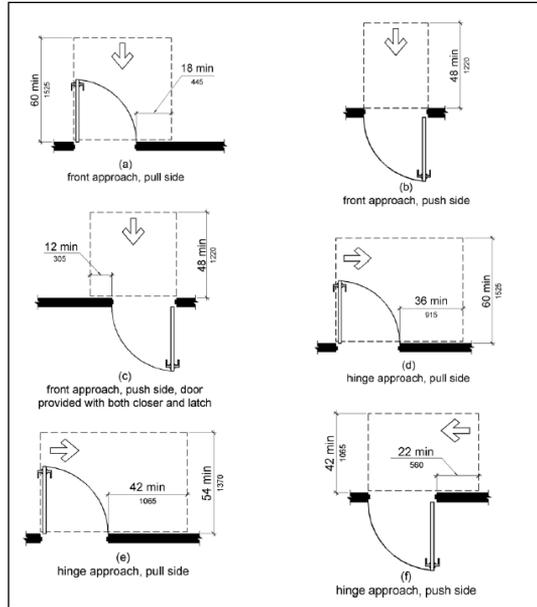
General Exception to Accessibility 203.9: Employee Work Areas

Approach, entry, & exit

Getting an employee into the area and out again are the significant principles for ADA Titles II and III in design and construction.

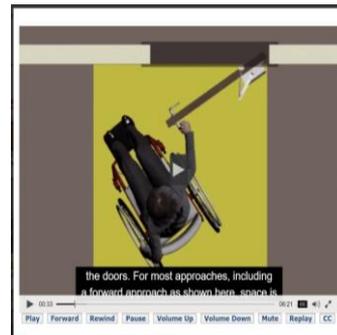
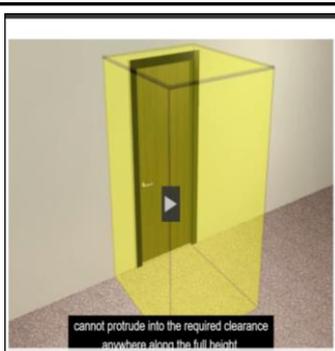
The disconnect from Title I creates a knowledge breach between designers, employers, human resources and pwd.

Because employee work areas are lightly regulated, the onus falls back onto the designers, employers and legal remedy

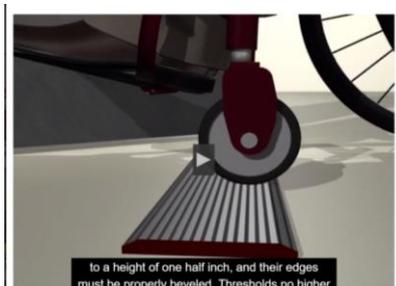
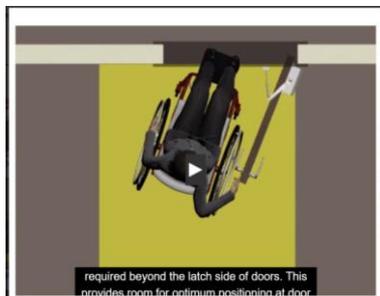


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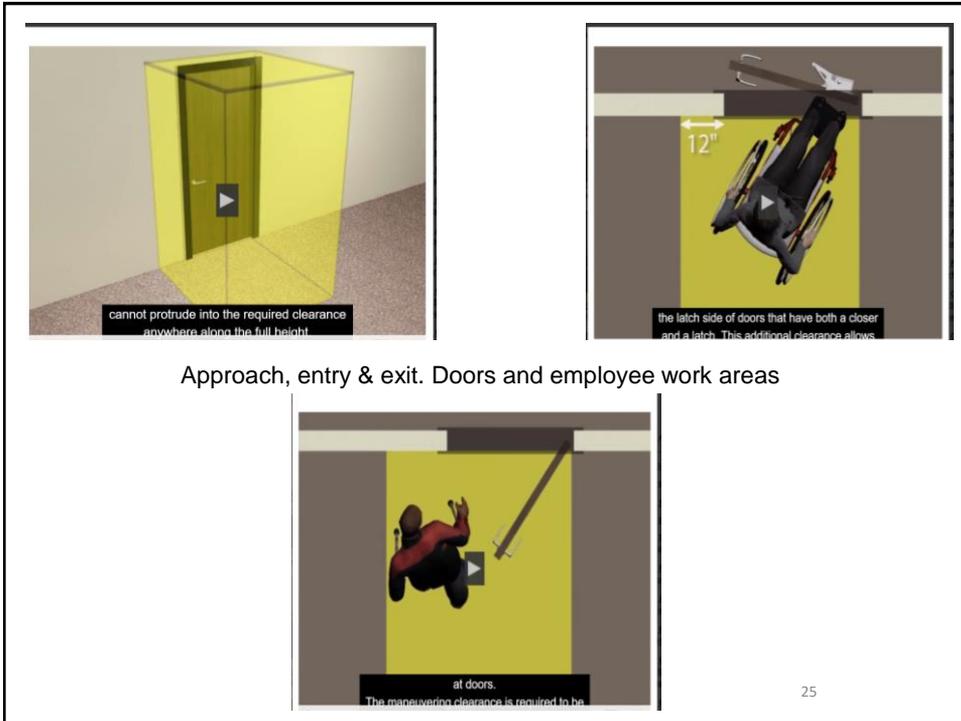


Approach, entry & exit. Doors and employee work areas



24

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25

Employee Work Areas

Q: Can the employee area behind a bar have a sunken floor or stairs?

A: Access Board verbal: Yes, depending on size; a general circulation route; and that approach, entry and exit is provided.

Because employee work areas are mostly exempt from accessibility, a resilient dissonance continues between ADA Title I and designing. Most designers and employers are not thinking proactively about RA or essential job duties except as responses after design, construction then occupancy and complaint.

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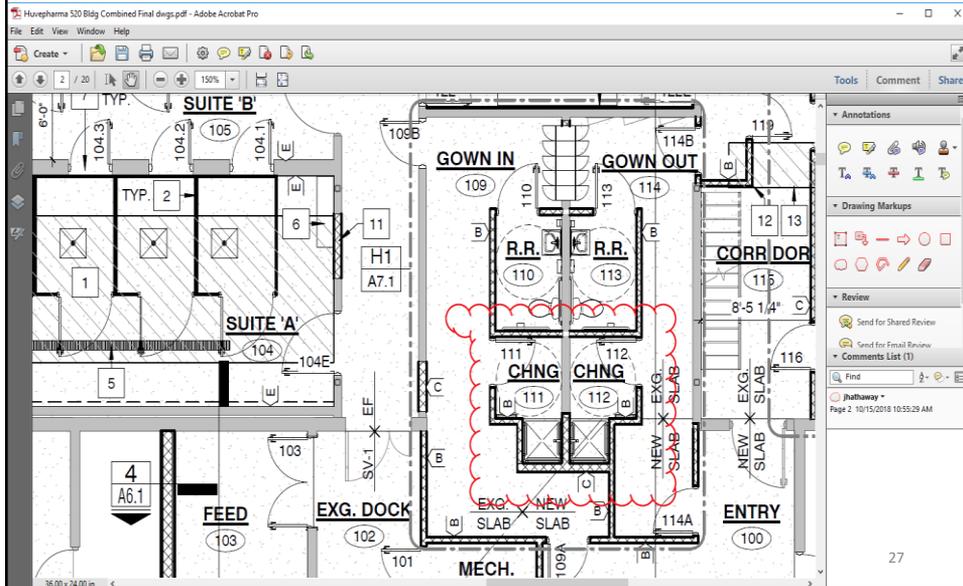
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Case Study: Research facility: Showers for employees to prevent cross contamination of animals.

1. Do the showers need to be accessible or is this a work area under 203.9?

2. Reasonable Accommodations or Technical Infeasibility later?

Initial design conformance for the potential researchers with mobility impairments is less costly



27



Does a Fire station need to be fully accessible?

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Even when employees must be able-bodied to perform the essential job functions, the ADA 2010 Standards apply. There are no provisions for ability in the 2010 Standards that negate a brick and mortar approach to accessible design.



29

29

What are the essential job functions of a fire fighter?

- ✓ Climb obstacles, ladders and stairs
- ✓ Lift and carry equipment and persons
- ✓ Grasp, swing, use axes and tools
- ✓ Run, jump, squat,
- ✓ Hearing?
- ✓ Seeing?
- ✓ Cooking, sleeping?
- ✓ Maintain equipment?

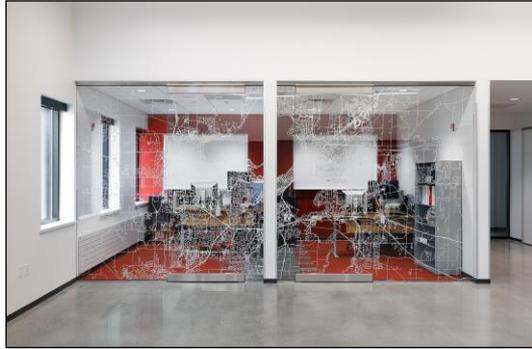


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Other users?

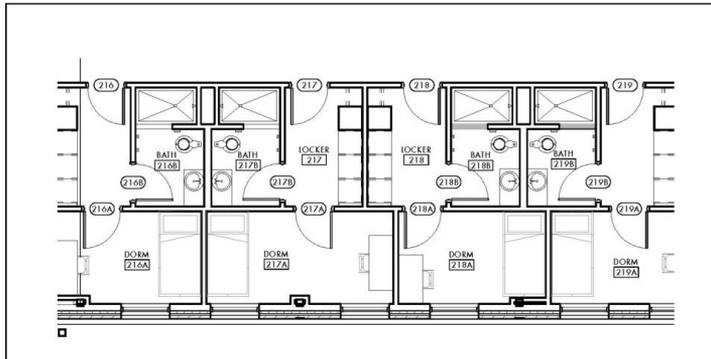
- ✓ Dispatcher, manager, office staff:
- ✓ Read
- ✓ Answer phones
- ✓ Type
- ✓ Handle administrative duties
- ✓ Need not be able-bodied
- ✓ Review documents
- ✓ Tours or open houses
- ✓ Smoke Detector awareness week
- ✓ Blood drives
- ✓ Retirement dinners
- ✓ Public allowed into these areas



31

31

Firehouse dorms, showers, bathrooms. Under both the ICC and 2010 Standards, all the showers in this firehouse must be accessible.

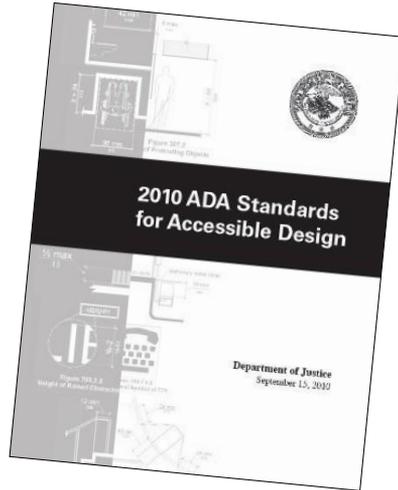


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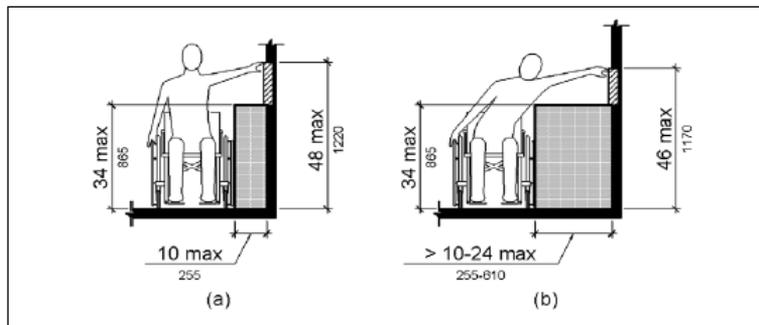
Chapter 3 - Building Blocks



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Easily Obstructed Reach Range: 24 inches for type B Dwelling Units

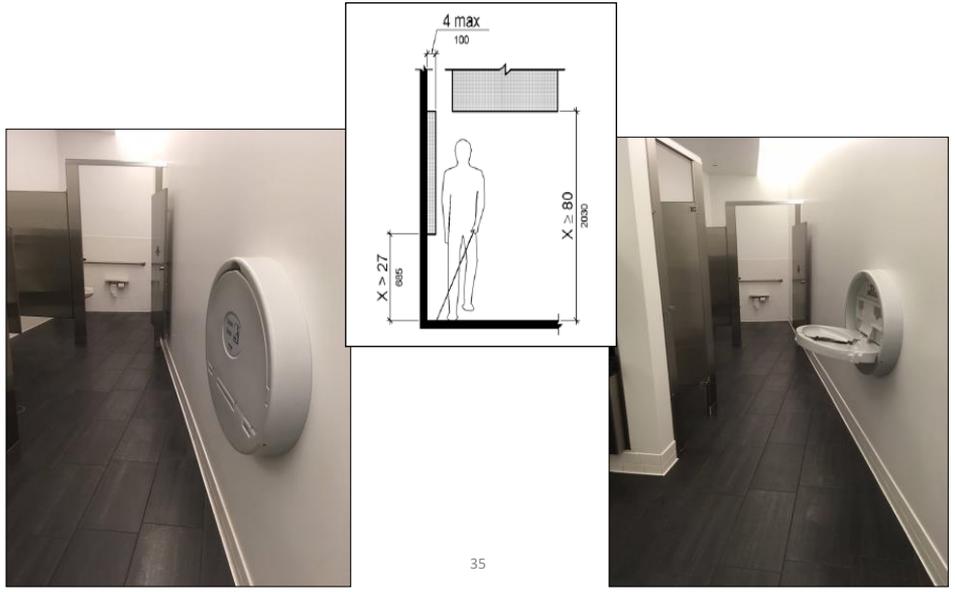


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307.2 Protrusion Limits.

Objects with leading edges more than 27 inches and not more than 80 inches AFF/AFG shall protrude 4 inches maximum horizontally into the circulation path.



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Circulation paths and no supports for cane detection



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Circulation path at end wall?

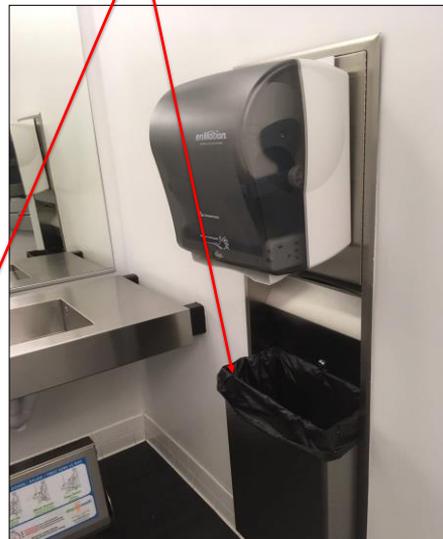


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Waste receptacles alert protruding towel dispensers?

Beyond the protruding sink is the toilet.



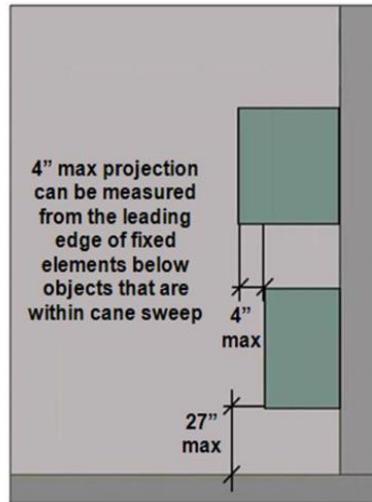
Flushometer impedes 1.5" grab bar clearance.

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Location Above Detectable Elements

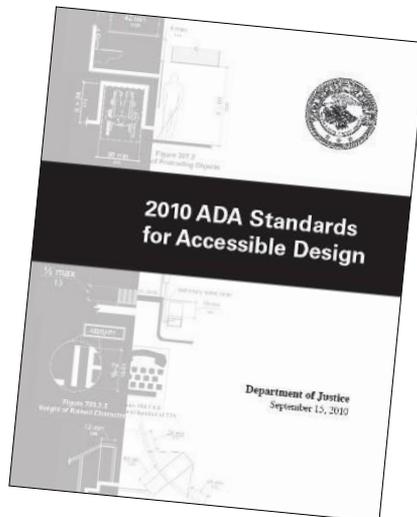
Objects located above elements that are within cane sweep can protrude 4" maximum from the leading edge of such elements provided that any required reach or clear floor space is not obstructed.



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Chapter 4 - Accessible Routes



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Accessible Route: The Box

Consider a large box as the wheelchair footprint of 30" X 48" by 84".

Start moving that box across the entire site, through each door, into bathrooms, sidewalks, parking lots.

Move the box vertically in multi-story buildings with/without elevators.

Ensure the box can use every single accessible element, fixture, space, furnishing, area, etc.



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Design, employment and pathogen spread

Re-consider installing doors when possible.

Plan for current and potential disabilities.

Enhanced mobility, sterility, sanitation and aesthetics.

Less touching for blind and deafblind

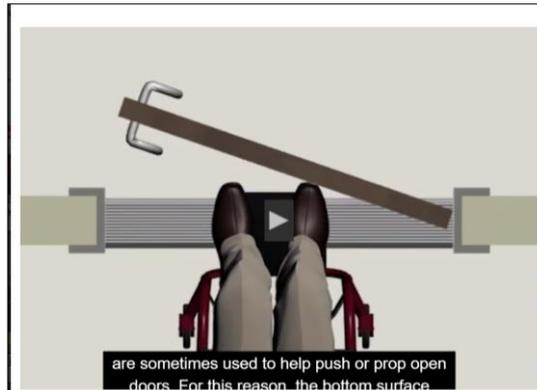
Cost savings on constant disinfecting, buying, maintaining and replacing hardware, openers, closers, doors, labor.



42

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404.2.10 Door Surfaces



- Push side only, bottom 10" smooth surface
- Accessible route doors only
- Required in new construction, or replaced or altered existing doors.
- Existing doors that met the 1991 ADAAG standards may remain.

43

43

404.2.10 - Door Surfaces. Protecting the feet and wheelchairs.
Maintenance should consider pathogen spread at door hardware.



Panic hardware coordinators OK?



Conforming smooth surface

44

44

Smooth door and gate Surfaces offer foot and chair protection

Diminish leaning/reaching forward to operate hardware.



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Coinciding AR and circulation paths at entrances - 206.4

- Gently sloping AR is better for all users, employees and employer
- Planning for RA in design phase is cleaner and cost efficient over remodeling.



46

46

Coinciding AR and Circulation Path Inside Facilities



Cedar Rapids Public Library, the stage and first row seating floor level are the same. Occupant load below 300; only access to the top and bottom rows of seats required. The IBC and 2010 Standards require a direct connection between performance areas and seating areas.

Elevated stages require a lift or ramp alongside steps.

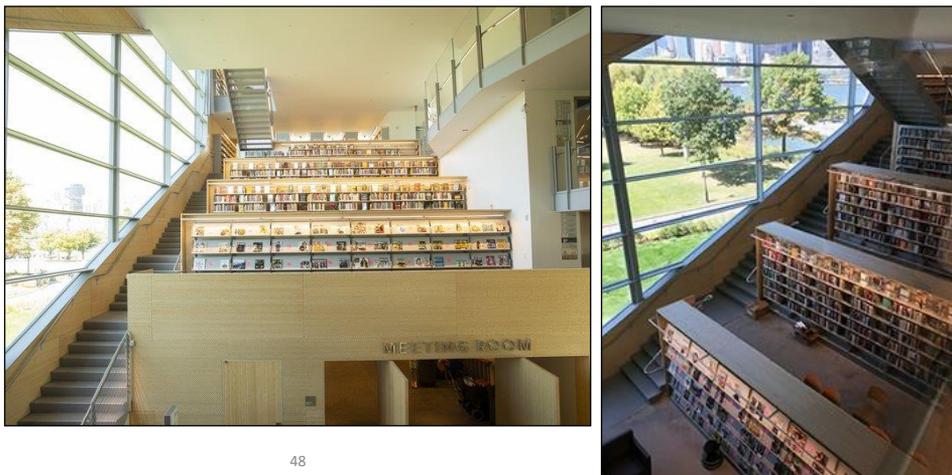
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Queens NY Hunters Point Public Library: No coordination of accessible route and general circulation path. Access to browse required?

The Library claimed Title II program access allows an attendant to retrieve a book.

2010 ADA Standards Section 101 requires all new construction to fully comply.



48

48

Coinciding AR and Circulation Path Inside Vertically



IBC 1104.5 Accessible route and general circulation path in the same space.

ADA Standards 206.3 coincide or be in the same area.

Texas, TAS regulations stipulate an elevator within this precise stair well area.

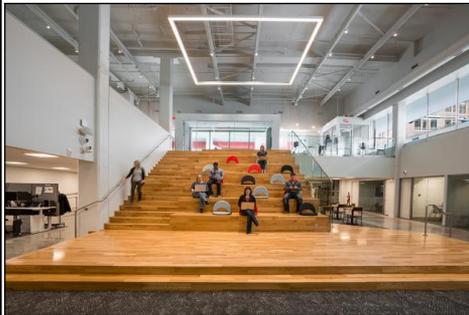
The sniff test is a common sense of propriety. I.E: Signage; distances; outdoors; segregating a group travelling together; the 20% alteration rule, etc.?

49

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Coinciding AR and circulation path at performing and seating areas - 206.2.6

What if social stairs are used for lectures, performances?



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Social Stairs

- If floor area; both IBC and ADA require accessibility to all levels of the platform.
- If fixed assembly seating; at least 5% - and depending on seating load - one and maybe more dispersed accessible areas, with companion spaces.
- If under 300 OL, access to top and bottom by accessible route, coinciding with general circulation path
- Edge protection: Color coding? Detectable warnings? Under 30" in elevation change?
- Means of Egress stairs, geometries, handrails?
- Benches? Not scoped per 903, but transfer spaces to platform similar to bleachers

51

51

Queens NY Public Library social stairs. Seating or Floor Area?
Access to mid and upper levels. Bleachers only require floor access.
While the 2010 Standards are silent on this element, discrimination can occur.



52

52

UD Plaza at Mizzou Arena

Planned with wide, tiered stairs, multiple landings and separate ramps from street to entrances.

Gently sloping plaza is better access for all users, employees and employer.

Facilitates RA, maintenance, remodeling, drainage, moving equipment.

Clean lines shift focus to building design



53

53

Disabilities, design and employment

Public vs. service/security entrances

Service and security entrances are exempt, but during initial construction accessible design is generally similar in cost and allows for movement of equipment and furnishings.

Essential job duties negate pwd?

Accessible entrances and discharge above the 60% minimum provide proactive RA to the employer and employees. Injuries; hiring, reassignment.

Unintended consequences: Additional accessible egress as now mandated by the Building Code

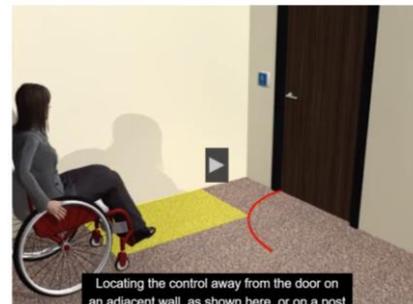
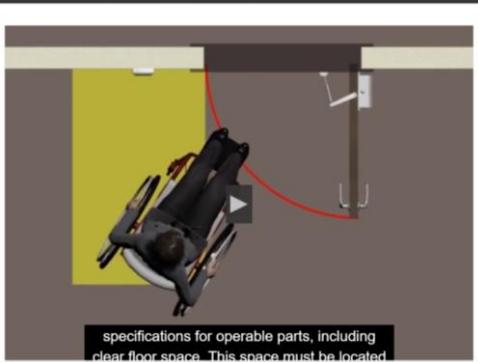


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Automated Doors - Entrances

- Footprint 30" X 48"
- Accessible Route



- Provide wheelchair space at controls outside door swing.

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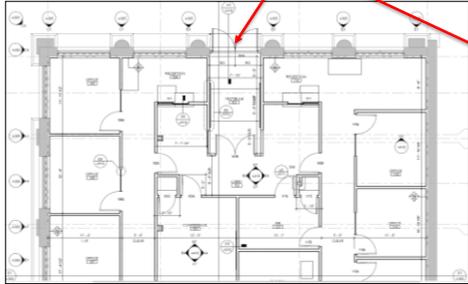
Ramps and rights of way - ROW

- ROW for many businesses in downtown districts are often at the storefront.
- Business owner may not have the space or legal right to install compliant ramps.
 - Signage offering assistance is not a long-term solution but helpful.
- ROW under sidewalks are often utility vaults or other buried infrastructure that cannot be easily altered.
- Many local governments have guidance for their community. EG: Patterson NJ
 - Existing sites: Ramps may be 1:10 to 1:8 slope ratio



56

Alterations for a vestibule or alcove may be beyond 'Readily Achievable'.



Drainage elevations, utility depth and location can be TI and often under ROW sidewalks



57

57

Ramps

- List of organizations state by state that offer free ramps.
<http://www.ramps.org/free-ramps.htm>
- In Halifax, 'Future Roots' comes to the site for the ramp, takes measurements and constructs custom ramps for free. They delivers portable ramps to business owners to put in place when needed.



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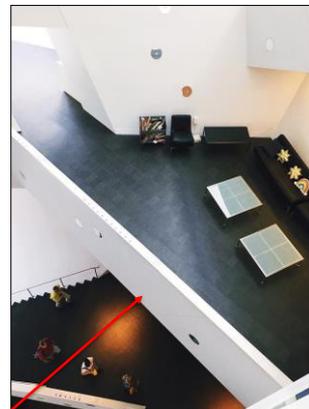
The Denver Art Museum: View of certain artworks and the interior are experienced on stairs and not on the AR. Elevators are in separate rooms and spaces.



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Viewscape as an amenity or program? Queens Hunter Point Library & Denver Art Museum
2010 Standards = fee is imposed for views of ocean or mountains at transient lodging.

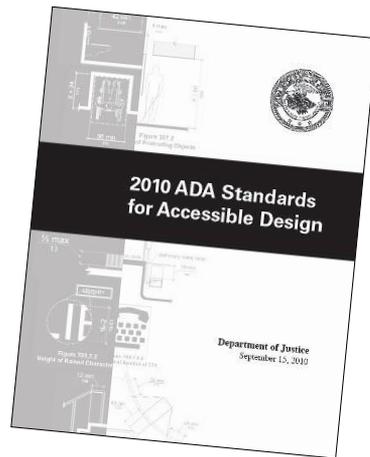


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Third floor balustrade is too high to view the open floors below. Conflict with IBC unless glass.

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Chapter 5: General Site & Building Elements



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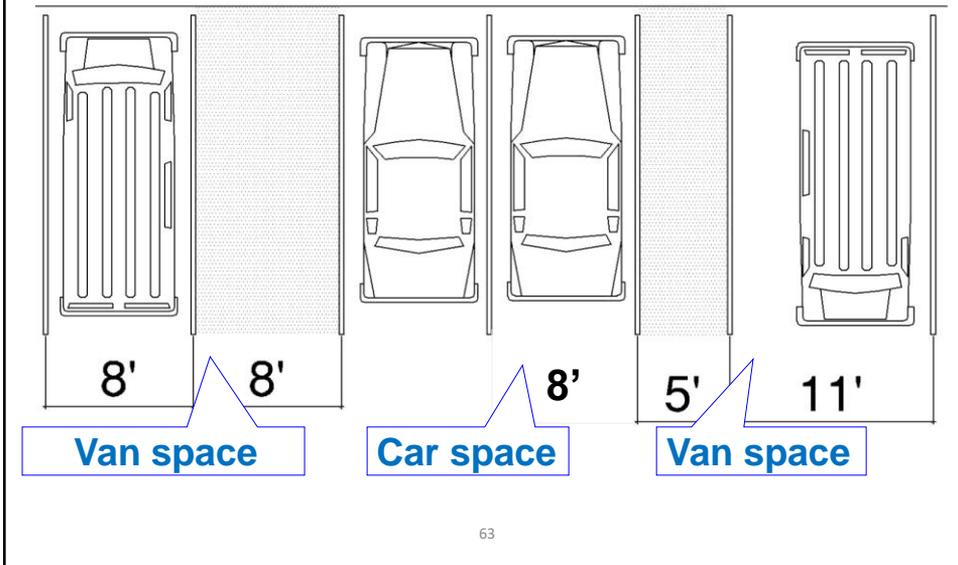
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Van Spaces (502)



63

Valet parking is a service, not a facility. Valet lots require accessible parking at the same ratio as other separated lots.

Valet drivers do not have skills to operate hand controls, or wheelchairs in place of auto seats.

If the service is eliminated, occupancy changed, etc., then a parking lot is left with no accessible spaces.



64



Signage can be mounted on a post, on a nearby forward-facing wall, or hung from a ceiling in front of the accessible parking.

ROCKY MOUNTAIN ADA CENTER



60" Minimum height AFG

Q: What is the maximum height?

A: US Access Board

Too high when obstructed by car design and when driver must make extra effort to find and see the sign.

No guidance on distances, sight-angles, sign size, or defining extra effort.



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There are no 2010 Standards regulations against two parking spaces being marked on one sign. Not a best practice. And the reversed ISA is non-conforming.




Consider wheelstops to keep clear width of adjacent accessible routes.

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66

Parking Spaces & Access Aisles

- 2010 Standards. Only advisory note to place accessible route outside of the vehicular path; not enforceable but a best practice.



- 2017 ICC A117.1 has requirements



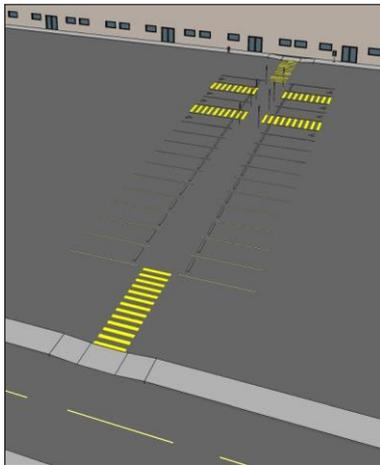
- Marked to discourage parking – Oregon Law

67

67

ICC A117.1 – Protected routes across parking lots

- Protected accessible route across parking lots
- Not when crossing drive aisles
- Simply marked



68



68

Publicly funded projects or roads may be within a jurisdiction but controlled by a state DOT.

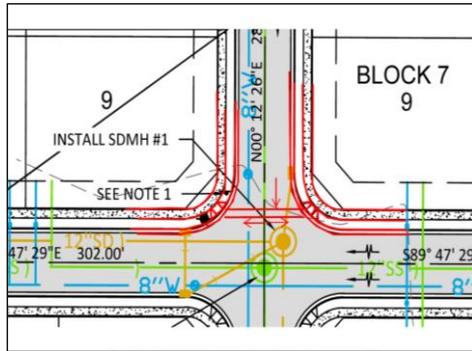
Local Public Works departments, contractors, designers and the levels of DOT all influence how sidewalks and curb ramps develop. The depth and accuracy of understanding or interpretation of the provisions varies across all these agencies.

The lack of a published Federal Guideline (PROWAG) adds to the misperceptions.

Site variables such as existing drainage or buried utility depths, multiple cross slopes all inform how the Pedestrian Access Routes (PAR) are developed.

The 10 ADA Centers and Access Board will assist in review to some extent.

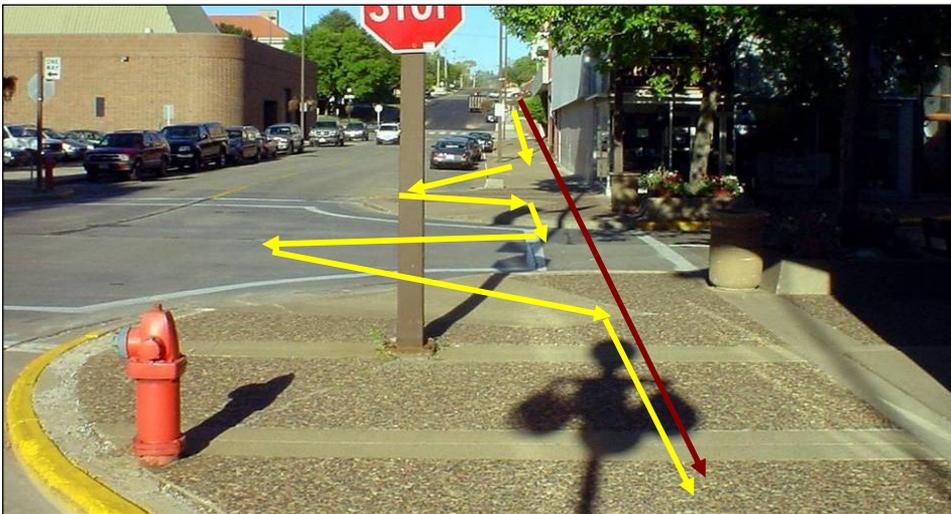
The DOJ and State DOT often enforce. Many of the Project Civic Access cases involve ROW and PAR's.



69

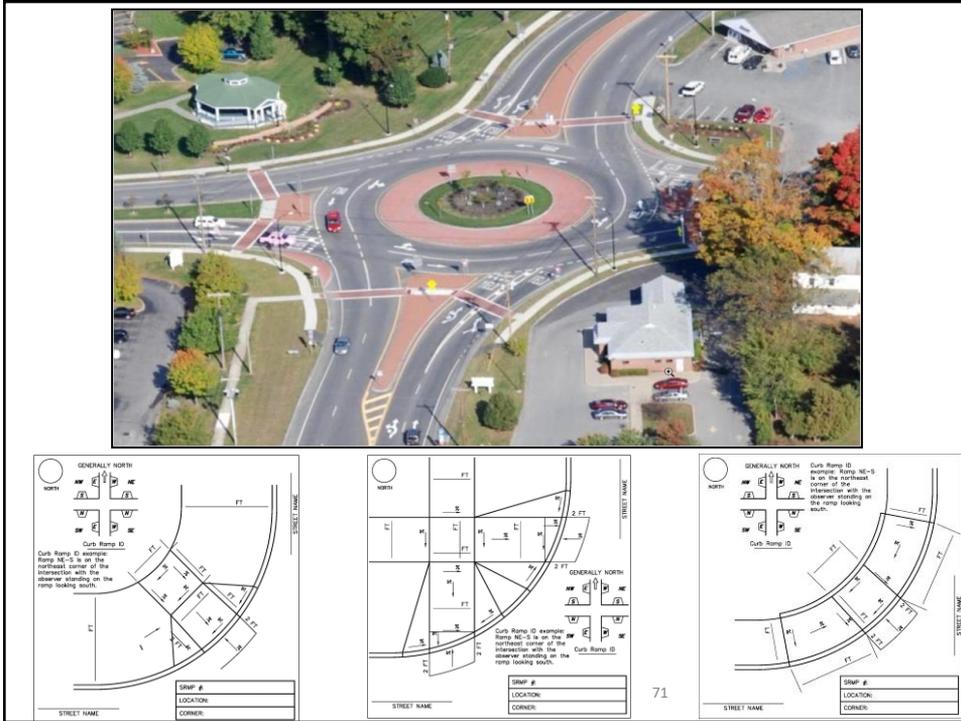
69

Many variables in Pedestrian Access Routes (PAR), curb ramps, sites



70

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71

Access Board support: 'Planning and Design for Alterations'

UNITED STATES ACCESS BOARD
Advancing Full Access and Inclusion for All

Search Alterations Guide
 Search entire site

The Board
Guidelines & Standards
Training
Enforcement
Research

Home > Guidelines and Standards > Streets & Sidewalks > Public Rights-of-Way > Guidance and Research > Planning and Design for Alterations

Planning and Design for Alterations

TABLE OF CONTENTS

[Abbreviations](#)

[Chapter 1—Introduction](#)

[Chapter 2—Alterations](#)

[Chapter 3—Design Process](#)

[Chapter 4—Design Solutions](#)

[Chapter 5—Model Sidewalks](#)

[Chapter 6—Curb Ramp Examples](#)

[Chapter 7—Resources](#)

Special Report: Accessible Public Rights-of-Way Planning and Design for Alterations

August 2007

This report and its recommendations are the work of a subcommittee of the Public Rights-of-Way Access Advisory Committee (PROWAAC) and are intended to provide technical assistance only. The report is not a rule and has no legal effect; it has not been endorsed by the U.S. Access Board, the Department of Justice, or the Federal Highway Administration of the Department of Transportation.

Public Rights-of-Way Access Advisory Committee (PROWAAC)

PUBLIC RIGHTS-OF-WAY

[About this Rulemaking](#)

[Proposed Guidelines \(2011\)](#)

[Guidance and Research](#)

[Background](#)

[Other Resources](#)

EMAIL UPDATES

Sign up for updates on Streets & Sidewalks:

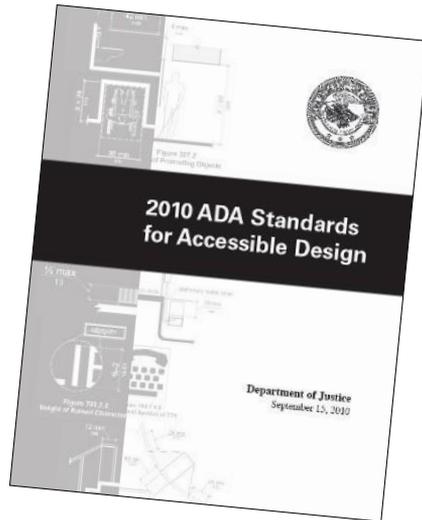
TECHNICAL ASSISTANCE:

(800) 872-2253

72

72

Chapter 6 - Plumbing Elements & Facilities



73

73

Bottle Filling Stations

Where provided, the bottle filler on an accessible route with clear floor space and accessible operable parts in the reach range.

Consider touchless fountains and paper cups to reduce pathogen spread.

But a bottle filler does not replace either side of hi-lo fountains.



74

74

213.2 Toilet Room Clustering

- 213.2 Toilet Rooms and Bathing Rooms. Where toilet rooms are provided, each toilet room shall comply with 603. Where bathing rooms are provided, each bathing room shall comply with 603.

EXC 4. Where multiple single user toilet rooms are clustered at a single location, no more than 50 percent of the single user toilet rooms for each use at each cluster shall be required to comply with 603.

Advisory 213.2 Toilet Rooms and Bathing Rooms Exceptions 3 and 4. A "cluster" is a group of toilet rooms proximate to one another. Generally, toilet rooms in a cluster are within sight of, or adjacent to, one another.

75

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Advisory: 213.2 Clustering

Q: Must the toilet rooms actually be within sight of and directly adjacent to one another?

A: Access Board verbal – It Depends

- Is the area a suite?
- Is the area under the control of one entity?
- Is the area within the same portion of a structure, served by the same entrance?

76

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213.2 Toilet Room Clustering

Not adjacent or within sight, but still considered "clustered"



77

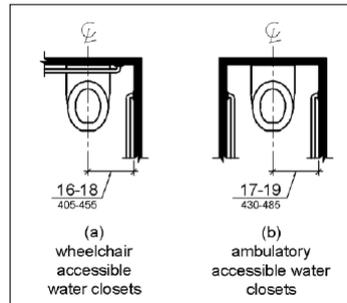
77

Water Closet Location (604.2)

The water closet positioned with a wall or partition to the rear and to one side.

Centerline of the water closet 16 inches minimum to 18 inches maximum from the side wall or partition.

Water closets shall be arranged for a left-hand or right-hand approach.



78

78

Fold Down Grab Bars: Equivalent Facilitation?



79

In some locations assisted transfer may be the norm.

No wall for forearm support during transfer.

Room on both sides for assistance.

Reliant on human performance v. brick and mortar element availability.

What happens when the building changes occupancies?

Can you apply 103 EF?

ICC A117 and IBC Provisions

79

Fold Down Grab Bars



80

Based on an Ohio study of therapists and patients using fold down bars, some states and other AHJ's are approving a standardized model, floor plan, etc.

The findings include decreased injuries for both patients and therapists/nurses. the IBC the issues are location and services, and percentages based on the use; 50% for nursing homes, 90% for assisted living; but with a 5% minimum standard accessible unit requirement.

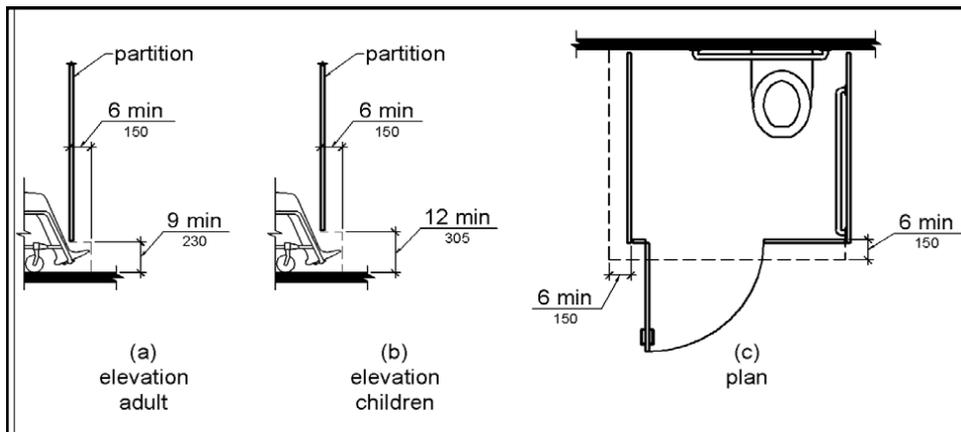
80

604.8.1.4 Toe Clearance



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Front partition & one side partition: Toe clearance 9 inches AFF and 6 inches deep minimum beyond the partition, exclusive of partition support members.

Children's use shall provide a toe clearance of 12 inches AFF.

Or increase entire stall: Front beyond 62" wall hung /65" floor mount by greater than 66" on the side

82

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The 2010 ADA Standards are silent on minimum or maximum sizes of partitions and support.

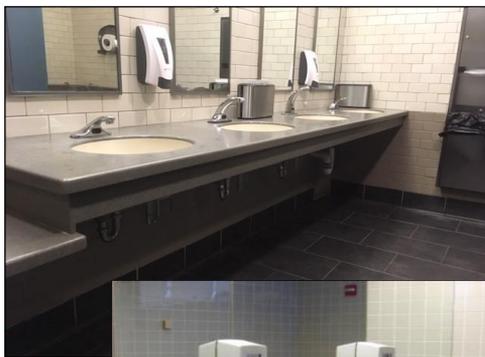
What is the purpose?



83

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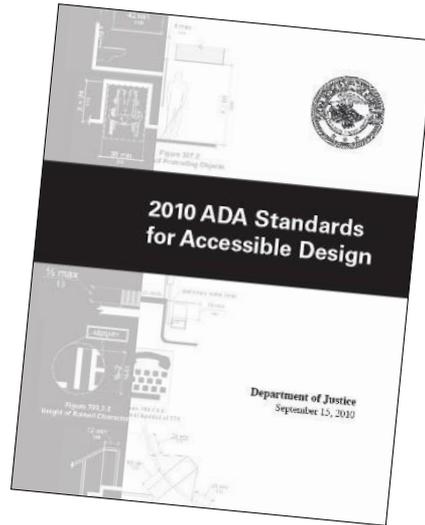
- Access to the accessible sink is obstructed by the waste and towel dispenser.
- Maneuvering against a wall for the clearances complicates sanitation.
- Some persons have physically stronger and more usable right and left sides.
- Consider mirror images of stacking mobility rooms per story, placing toilets, sinks, showers, etc. on the opposite side of the rooms and walls.



84

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Chapter 7 Communication Elements & Features

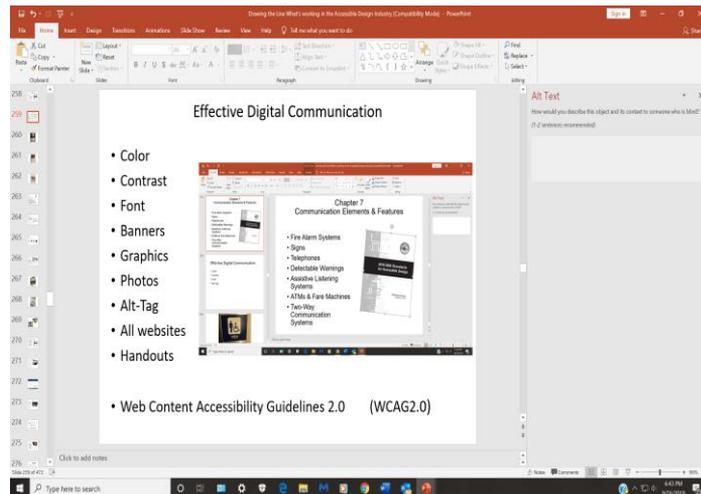


85

85

Effective Digital Communication Safe Access During COVID-19

Color
Contrast
Font
Banners
Graphics
Photos
Alt-Tag
All websites
Handouts
This Presentation



- Web Content Accessibility Guidelines 2.1 (WCAG 2.1)
- Dominoes Pizza v. Robles Title III
- The most equitable form of social distancing for pwd
- Programmatic access for Title II

86

86

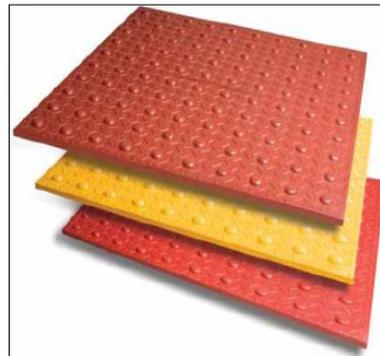
Vision and hearing impairments in the Time of Covid 19

- The blind and deafblind must touch surfaces to negotiate spaces.
- There are no universal systems, apps or other assistive technology that are consistent and usable across airports, hotels, rights of way and other public and business spaces.
- Speech activated elevators eliminate touching buttons.
- Motion activated doors or elimination of doors
- Motion activated or voice oriented toilets, soap, faucets, dryers in bathrooms.
- Tactile, audible and visual options for any digital application

87

87

Detectable warnings in floors for social distancing for vision impairments



- Alternative floor surfacing a distancing alert
- You are 'decider' under federal law
- Confusion with detectable warning intent?

88

88

Digital, touch screen signage in Title II courthouse. Audio, visual and tactile access is necessary for employees and public. Must be constantly sanitized to avoid pathogen spread. Possibly create more problems than solved.



89

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90

Blackberry/ DOJ speech recognition 2004 agreement led to thousands of legal actions over inaccessible technology for Titles II and III.

October 2019, Supreme Court upheld Robles v. Dominoes Pizza 9th Circuit Court. PWD can sue retailers if their websites are not accessible.

Project Civic Access has more than 220 agreements. The majority require '...communications with people with disabilities...are as effective as communications with others.' 28 C.F.R. § 35.160.

Regulating this technology is a process of complaint, enforcement and legal remedy. Steady development of assistive technology responses.

With Covid 19, technology may offer solutions for blind and deaf blind that result in yet more AT advances and resultant legal actions

90

DOJ Statement of Interest: Lucky Brand Retail Point of Sale Devices.
Not specified in the 2010 Standards



- http://www.ada.gov/briefs/lucky_brand%20_soi.docx

“...the absence of specific technical standards or regulatory provisions that directly address a public accommodations obligation to provide accessible POS devices in no way establishes that the accessibility of POS devices is outside the scope of title III, especially where current regulations incorporate specific obligations for effective communication.

91

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Denver Museum of Art.

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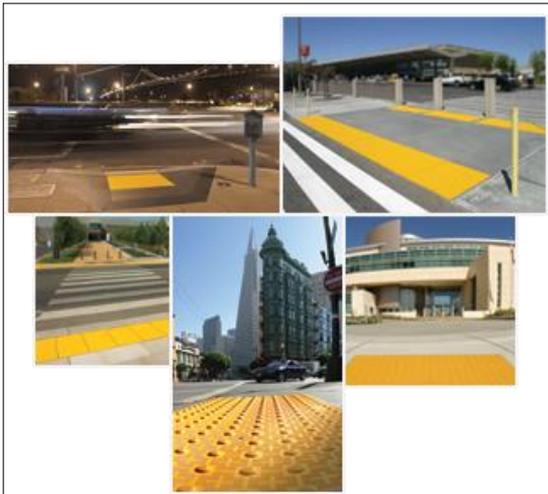


Denver Museum of Art.
UD bathrooms. Braille is under text but hard to find on frosted glass

93

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Detectable Warnings Truncated domes

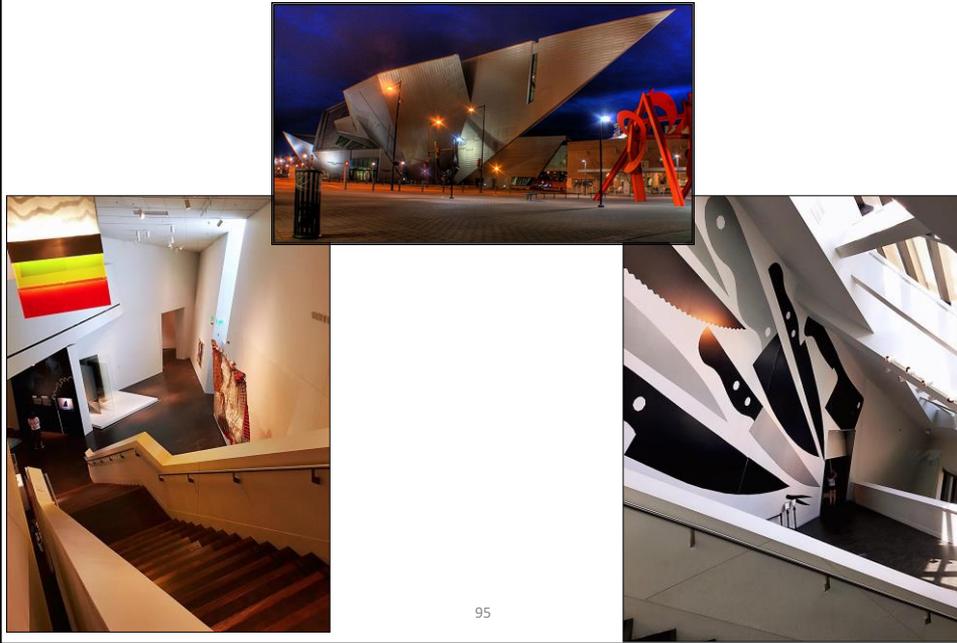


- Don't rely on PROWAG or DOT to publish or specify. Install at rights of way and anywhere where pedestrians and vehicles intersect.
- Consider on sites, shopping centers, access drives, etc.

94

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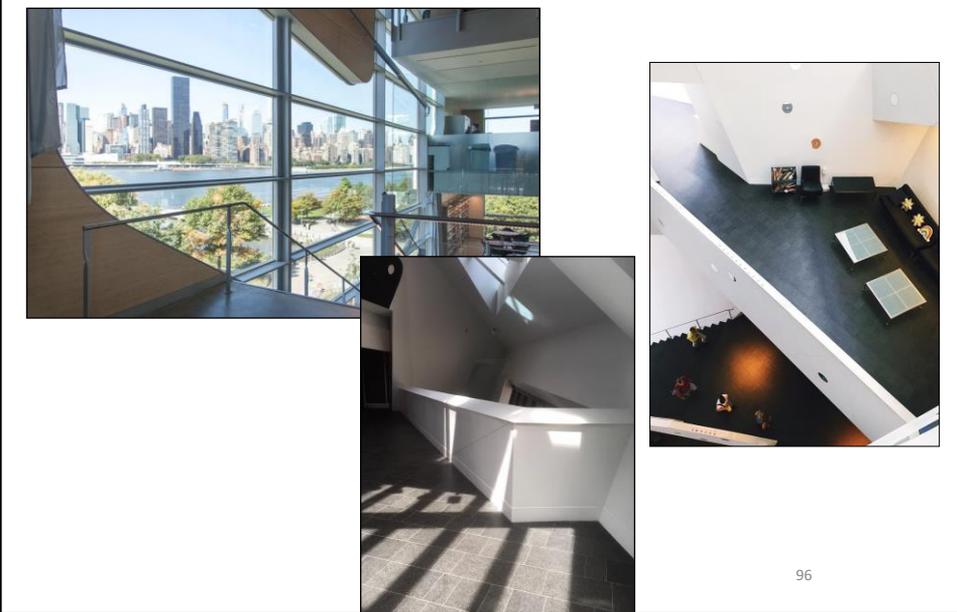
The Denver Art Museum: View of certain artwork is only experienced on stairs. Elevators are in separate rooms and spaces.



95

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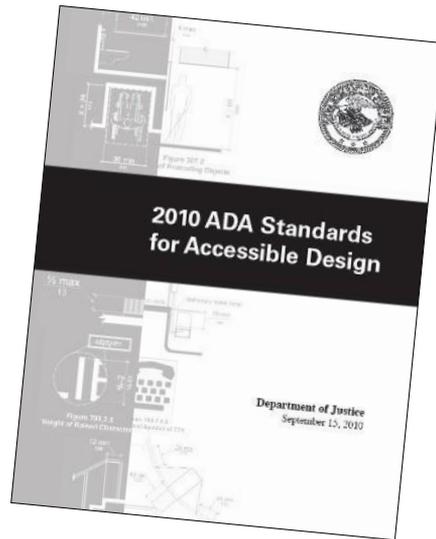
Viewscape as an amenity? Program access in the Denver Art Museum and Queens Hunter Point Library. 2010 Standards when an additional fee is imposed for views of the ocean or mountains at transient lodging.



96

96

Chapter 8 - Special Rooms, Spaces



97

97

Define Transient Lodging ‘...short term in nature...’



Q: If a long-term residence in a commercial setting, is it transient after 30 days?

A: Depends on how it's used. Even the branding implies long term...



98

98

Transient Lodging New Construction

- 32 inch clear doors (100%)
 - With Mobility Features
 - With/without roll-in shower
 - With Communication Features
 - Dispersion – types, number of beds, other amenities.
 - Five stories or more = AMOE
 - High Rise = Occupant Evacuation Elevators
- Q: Is an ocean view an amenity?

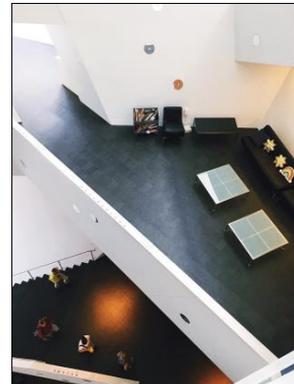


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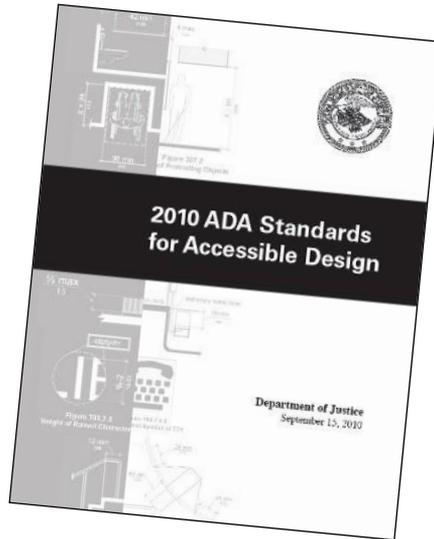
Viewscape as an amenity? When an additional fee for views at transient lodging.

Program access in the Denver Art Museum and Queens Hunter Point Library.



100

Chapter 9 - Built-In Elements



101

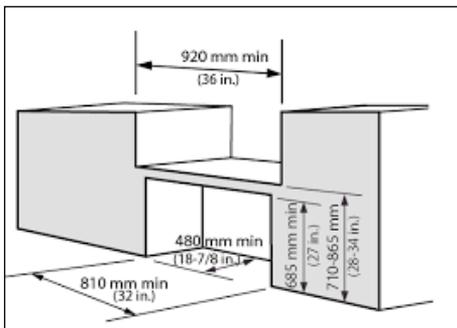
101

IBC 1108.2.9.1 and ADA 226.1

Where dining surfaces for the consumption of food or drink are provided, at least 5 percent, but not less than one seating and standing spaces.

Movable tables and chairs in the same area, room or space is often considered equivalent, including with the IBC.

Can a bartender as a chair user work behind this bar?



102

102

Accessibility, employment and pathogens

Think about the employee side of counters, etc., even when employee work areas are exempt.

Bartenders, cafeteria workers and job definitions.

Salad bars and cafeteria style serving not conducive to pathogen control



103

103

Disabilities, employment and pathogens

- Think both sides sales and service
- Knee and toe clearances both sides
- Dispersion of tiered counters vs. UD for all counters
- Physical, transparent barriers.
- Communication/hearing attenuation in pathogen barriers
- Floor stickers, stanchions to inform social distancing



104

104

Disabilities, employment and pathogens in the workplace

Common Use Areas:

- Fully accessible sinks
- Adjustable or tiered counters/ surfaces
- Sanitary surfaces and elements- the higher cost surfaces are more likely to sustain a pathogen longer, but easier to clean.
- Facility management include sterilization
- Socialization
- Idea sharing
- Advancement opportunity
- Equality in training, conferencing



105

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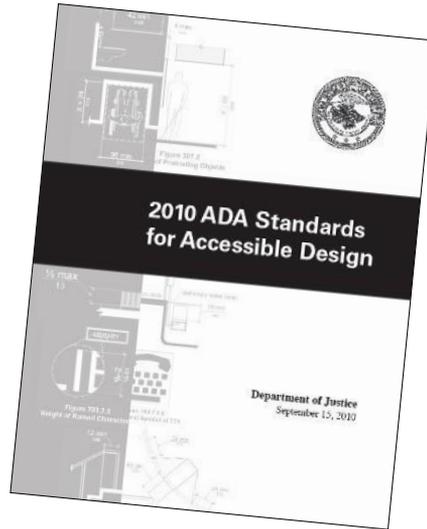
Open floor plans versus compartmentalization

- Open spaces and floor plans are being re-considered in the workspace. However for conferencing and training and relaxation they offer enhanced equity.
 - Distancing and community spread are controlled more consistently with doors and walls than reliance on human performance. However, mobility, sanitation and sightlines are affected.
- Eliminating common use doors is a strategy toward sanitation, facility management, cost controls and aesthetics. However, spread of disease is a potential with HVAC

106

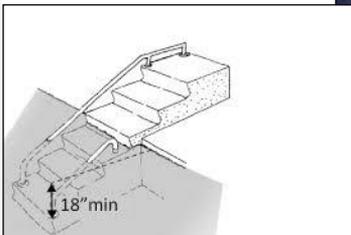
106

Chapter 10 - Recreation Facilities



107

Float spas offer pain, gravity and stress relief. Most float spas have no access. Transfer stairs and walls do not work with elevated water surfaces and shallow water depths. Lifts require 48" of water depth for buoyancy.



108



108

Wiggly Field Dog Parks



The newest route from parking was out of slope and cross slope. The closest route was not paved at all.

Most of the elements were not accessible due to manipulation, height, communication signage, non-connected elements, etc.

Is paving an AR a fundamental change in the nature of a dog park?

109

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One of each type or elements should be connected by an accessible route.



111

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Dog parks are recreation for pwd. Connecting elements with AR does not mean paving all the grass



112

112

Study on Anthropometry of Wheeled Mobility
State University of New York
Sponsored by the US Access Board

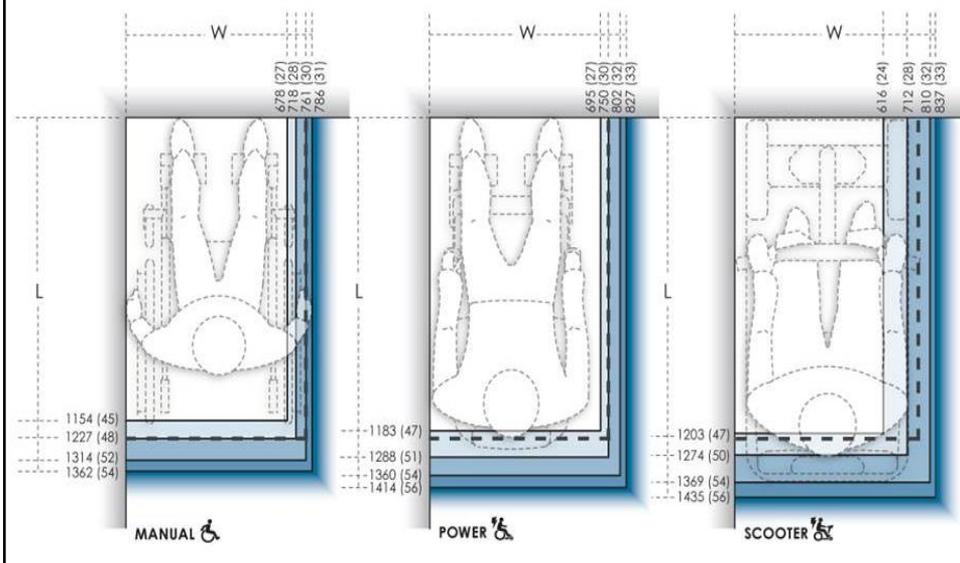
2017 ICC/A117.1 New Code provisions

www.udeworld.com/anthropometrics.html

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113

Human Factor Anthropometrics

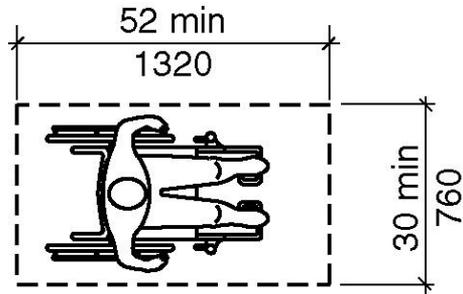
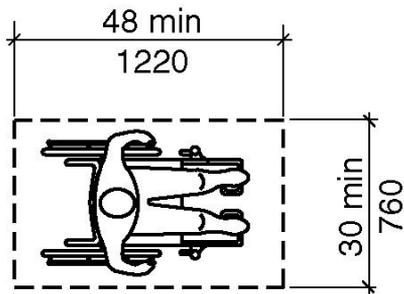


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Wheelchair space

Existing – 48"

New – 52"



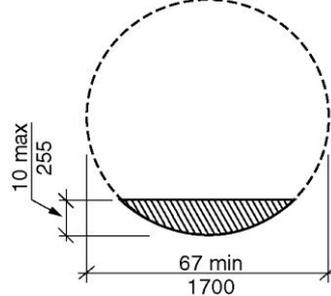
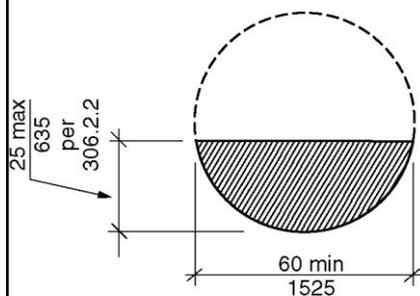
115

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Turning space. Note the increased size is coupled with a decrease in the allowable overlap area for knee and toe clearances. This effectively pushes the space further into the center of a room

Existing – 60"

New – 67"

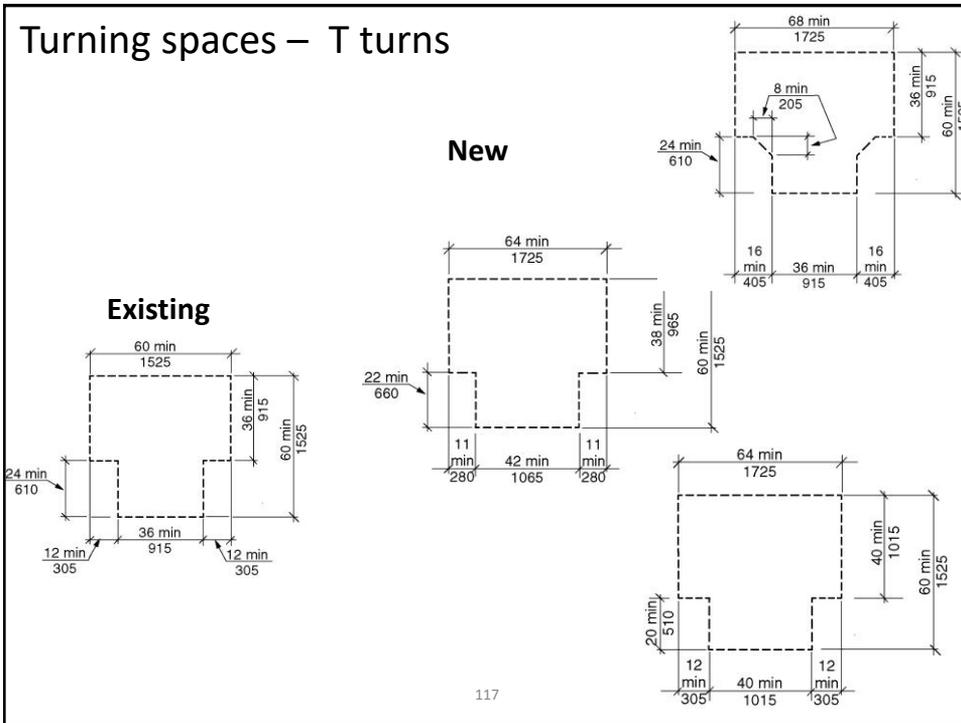


Overlap of knee and toe clearance

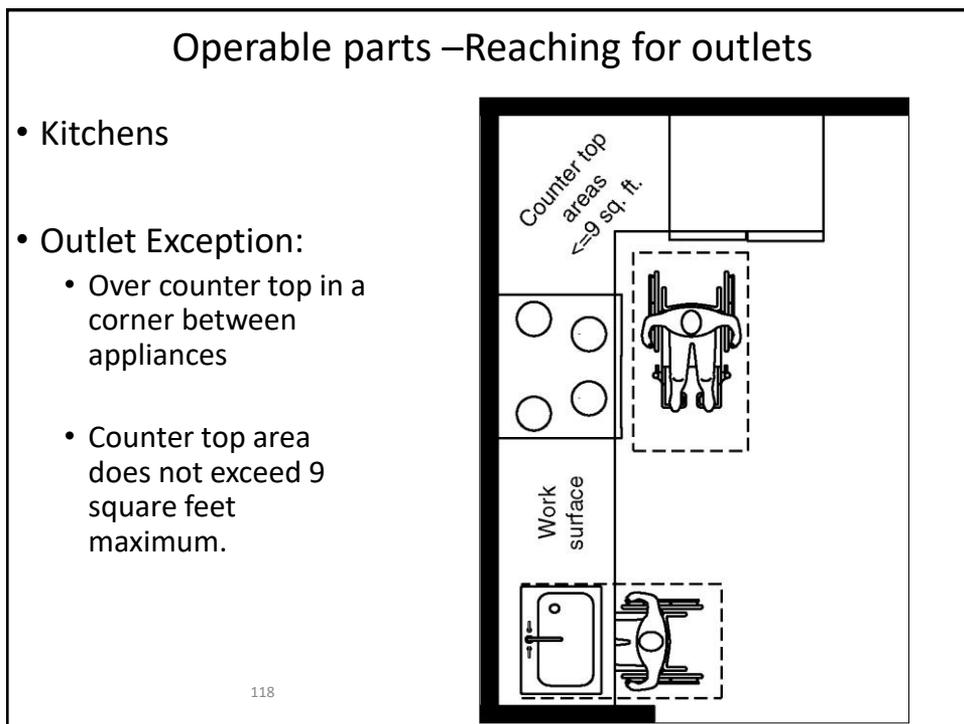
Overlap of knee and toe clearance

116

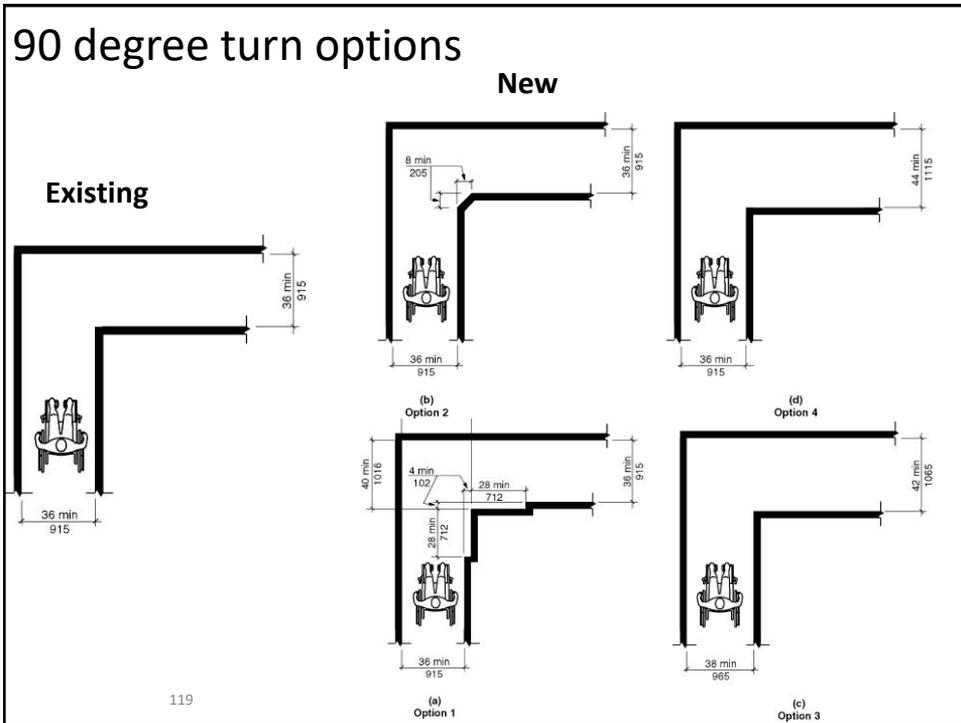
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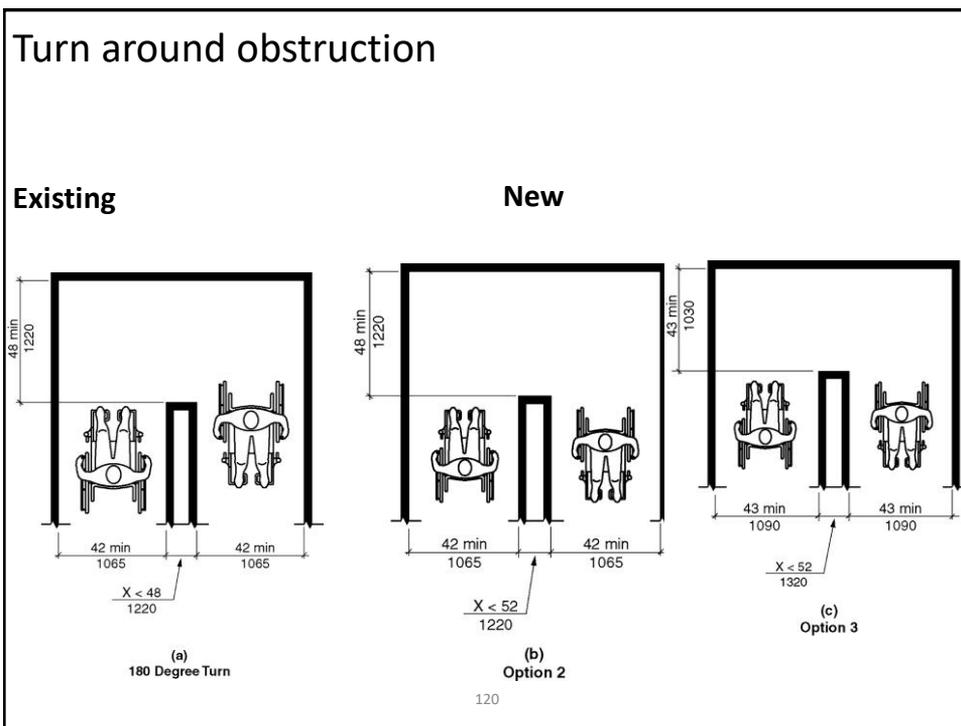
117



118



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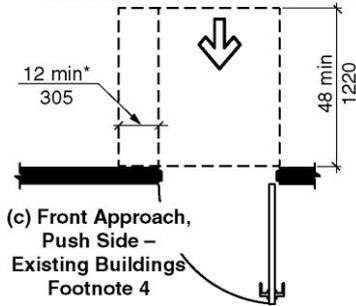


120

Door maneuvering size

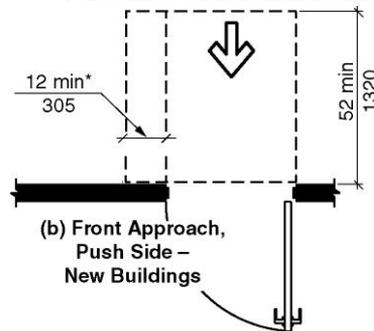
Existing – 48"

*If both closer and latch are provided



New – 52"

*If both closer and latch are provided



121

121

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"



122

122

Electric vehicle charging stations - ECVS

- While not specified in the 2010 Standards, EVCS are a facility and required to be fully accessible.
- ICC clear floor space Harmonized with 2010 Standards
- Harmonized reach ranges of 15" - 48"
- Harmonized operable parts of pinching, grasping, etc.
- AR not obstructed by cord or barriers

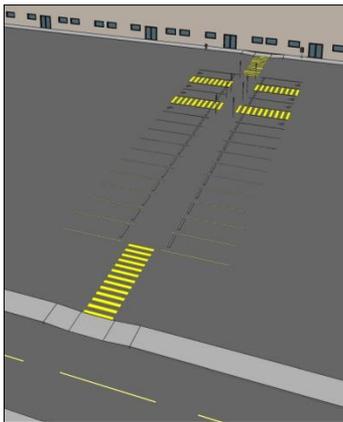


123

123

ROUTES ACROSS PARKING LOTS

- Protected accessible route across parking lots
- Not when crossing drive aisles
- Simply marked



124



124

Classrooms <20,000 cubic feet

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



125

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Charging stations; Mattress height

Charge a motorized wheelchair

Same space as transfer space next to bed in Accessible hotel or dorm rooms

Mattress height is uncompressed



126

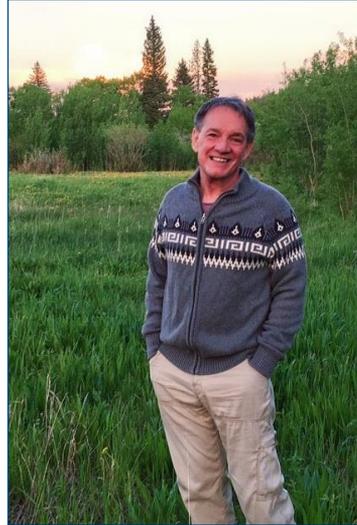
126

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Sternadorir@missouri.edu



127

127

QUESTIONS



128

128



Additional Sessions are scheduled for the
ADAOnline2020 Program through July 2020

View/register on-line at:
www.adaonline2020.org

129

129