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A collaborative program between the ADA National Network and the U.S. Access Board



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We will be testing sound quality periodically

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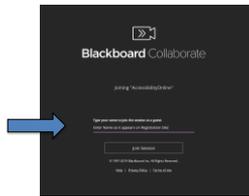
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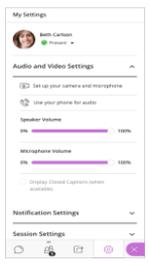
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 **Captioning, Continued** 

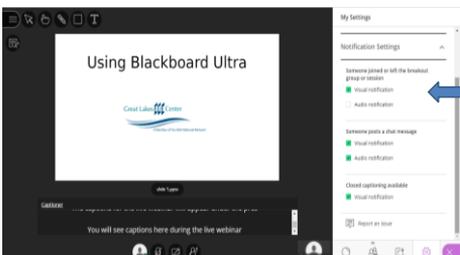
- Click here to enable if Closed Captions preferred



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1. Email webinars@adaconferences.org ; or
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Using the ADA & ABA Standards Series: Chapter 3 - Building Blocks

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Today's Presenters

U.S. Access Board



Juliet Shoultz, P.E



Bill Botten

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Session Agenda

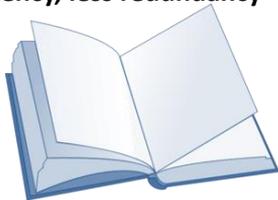
- Floor & Ground Surfaces
- Changes in Level
- Turning Space
- Clear Floor or Ground Space
- Knee & Toe Clearance
- Protruding Objects
- Operable Parts



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Chapter 3: Building Blocks

- Basic specifications widely referenced throughout Standards
- Organized in one chapter for greater consistency, less redundancy



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Chapter 3: Building Blocks

Example: clear floor space references



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Floor or Ground Surfaces §302

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Ground/ Floor Surfaces



Firm, stable, and “slip resistant”

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Slip Resistance

Slip resistance – minimum level (“coefficient of friction”) not specified



- Standard practices for minimizing slipperiness often suffice
- Specify according to likely conditions (e.g. exposure to moisture)

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Ground/ Floor Surfaces



Loose surface materials:

- Most do not comply unless properly treated (e.g., binders, consolidants, compaction, and grid forms)
- Repeated maintenance often required

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Surface Smoothness

Surface smoothness – changes in level

Recommendation: Avoid rough surfaces composed of cobblestones, Belgian blocks, etc. = difficult/painful to traverse



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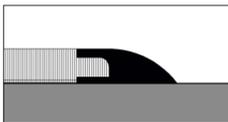
Carpet

- 1/2" max. pile height (measured to the backing, cushion, or pad)
- Texture: level or textured loop, level cut pile, or level cut/uncut pile
- Firm backing, cushions, pads (avoid cushions/ pads for greater firmness)
- firm securement, edging

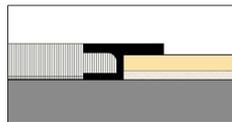
23

Carpet

Trim required along exposed edges – must be fastened to the floor to prevent curling and meet changes in level specifications.



1/2" max height,
1:2 max beveled edge



1/4" max high - vertical
edge permitted

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Carpet



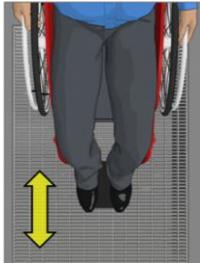
Securement/attachment to prevent rolling or buckling (which makes maneuvering difficult)

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Openings

½" max. in one dimension

Long dimension = perpendicular to travel direction



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Recreational/Play Area Surfaces

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Sports facilities

- Area of sport activity = That portion of a room or space where the play or practice of sport occurs
- Accessible route to each area of sport activity
- Exempt from firm, stable, and slip resistant surface provision



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Play area surface referenced standards



- **ASTM F 1487-01** - Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
- **ASTM F 1292- 99 or 04** - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment.
- **ASTM F 1951-99** - Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment
- Use of “Equivalent facilitation” for more recently published versions of these standards

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Longitudinal Study on Playground Surfaces

Surfacing the Accessible Playground

7 Things Every Playground Owner Should Know About the Accessibility of Their Playground Surfaces

2016 A publication of the U.S. Access Board and the National Center on Accessibility

Start with comprehensive planning and the basics.

Follow the accessibility standards for play areas.

Review the research findings about accessibility issues for play surfaces.

Address during the planning, installation and maintenance phases.

Complete the process.

Monitor the condition of the play surface system to help.

Commit to ongoing maintenance of accessible playground surfaces as a responsibility of ownership.

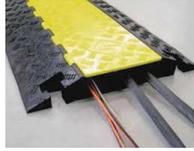
The U.S. Access Board, American Community Survey, CDC estimates that over 2.8 million children age 0-19 have disabilities. The Center for Disease Control and Prevention (CDC) estimates that one in every seven children in the United States has a disability, and community playgrounds are facilities a public's responsibility to provide for physical activity and recreation. More than 60 million children under the age of 18 live in the United States, and many of them are children with disabilities. Community playgrounds are places where children with disabilities can play with their friends and burn energy in the same way.

When the playground has barriers, participating children and adults with disabilities, the opportunity for play and physical activity is lost. Inaccessible surfaces are one barrier that children and adults with disabilities face when accessing the play area. Putting a textured and slip-resistant surface on the playground can help prevent injuries and ensure that the playground does not have an accessibility gap between the play area and the surrounding community.

Children with disabilities and playground owners are encouraged to consider the needs of children and adults with disabilities when planning and installing playground surfaces. The U.S. Access Board and the National Center on Accessibility have developed this guide to provide practical information about the accessibility of their playground surfaces.

Children with disabilities and adults with disabilities should be consulted and their input should be incorporated into the planning and design process. The U.S. Access Board and the National Center on Accessibility have developed this guide to provide practical information about the accessibility of their playground surfaces.

Temporary Facilities



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Changes in Level §303

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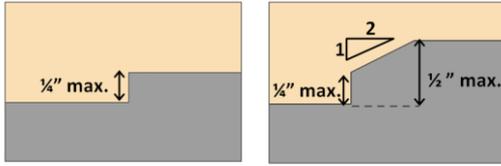
Changes in Level



Apply to all level changes along accessible routes, including thresholds

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Changes in Level



1/4" max. – no treatment

1/2" max. – 1:2 max. bevel

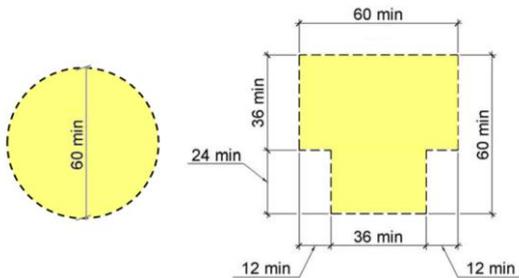
> 1/2" – treatment as ramp/ other means of vertical access

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Turning Space §304

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Turning Space



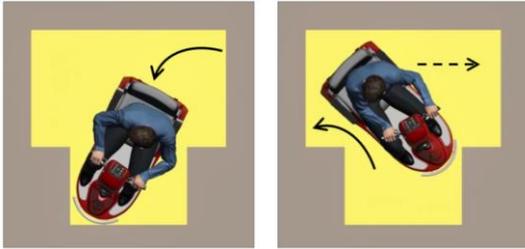
60" Diameter Circle

T-Shaped Space

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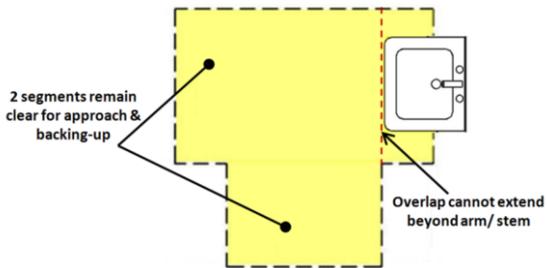
Turning Space

T-shaped space



37

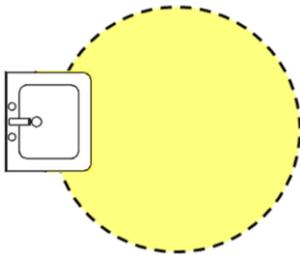
Overlap of Turning Space



Elements with knee/toe space can overlap either 1 arm or stem

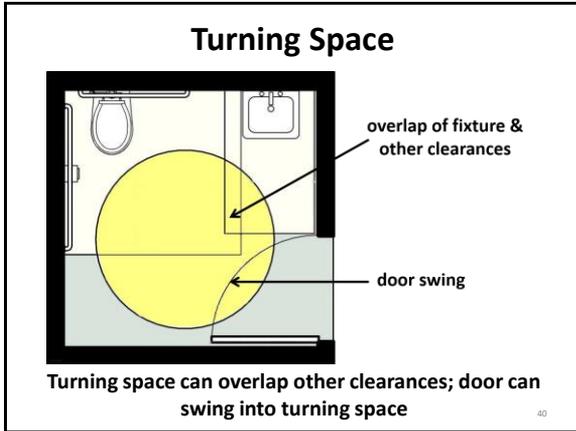
38

Overlap of Turning Space

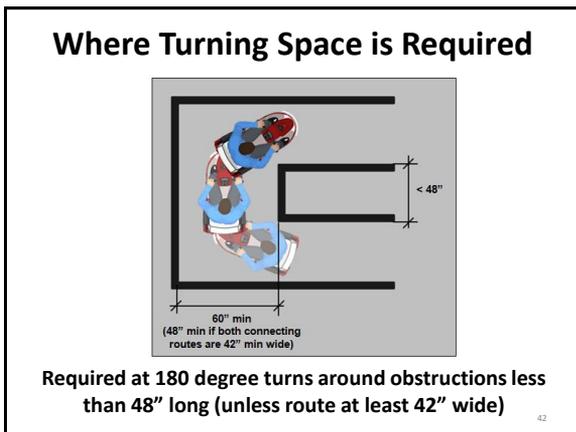


Overlap of circular space (25" max)
Recommended: avoid any overlap or limit to approximately 12" (wheelchair space remains clear)

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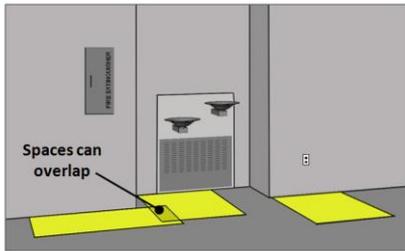
- ### Where Turning Space is Required
- Toilet/ bathing facilities
 - Dressing/ fitting/ locker rooms
 - Transient lodging guest rooms
 - Dwelling units (all rooms on accessible routes)
 - Patient bedrooms
 - Holding and housing cells
 - Saunas and steam rooms
 - Courtrooms (raised stations served by ramps)
 - Certain recreation spaces
-
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Clear Floor or Ground Space §305

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Clear Floor/ Ground Space



Clear floor space required at operable parts and other accessible elements (e.g., drinking fountains, lavatories and sinks, counters, dining/ work surfaces, etc)

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Clear Floor/ Ground Space



Forward Approach:

Required at dining/ work surfaces, DFs, lavatories, most sinks, urinals



Side Approach:

Specified/ usually provided at sales & service counters, beds, and most appliances

Either approach allowed at other elements

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Size/ Centering



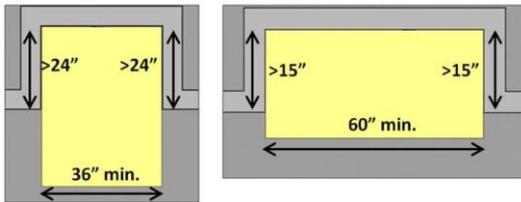
Minimum size:
30" x 48"
(unconfined)



Centering = required at only certain elements:
DFs, kitchen work surfaces, washers & dryers

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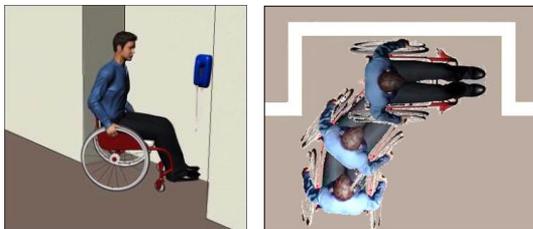
Size (Confined)



Additional clearance where space confined on 3 sides
(and more than half of space depth confined)

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Side Approach



Parallel approach to element in alcove

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Knee and Toe Clearance

§306

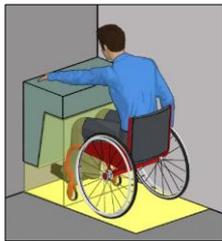
49

Knee & Toe Space

Elements providing knee/ toe clearance can overlap space; can help reduce reach to operable parts



Toe Space



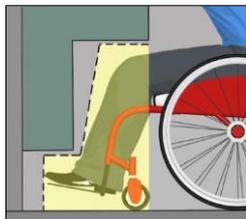
Knee & Toe Space

50

Knee & Toe Space

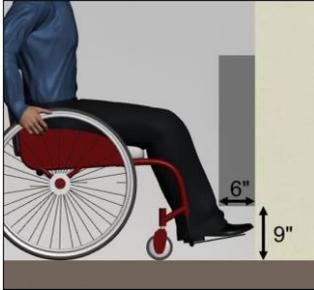
Required at :

- drinking fountains
- lavatories & most sinks
- dining/ work surfaces
- sales & service counters providing forward approach



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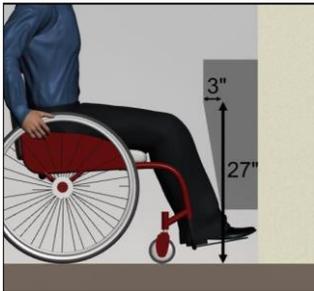
Knee & Toe Space



Toe space

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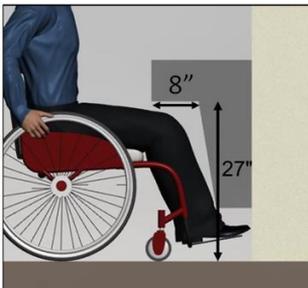
Knee & Toe Space



Beyond toe space, clearance increases from 9" to 27" min. high over 3" span (6:1 slope)

53

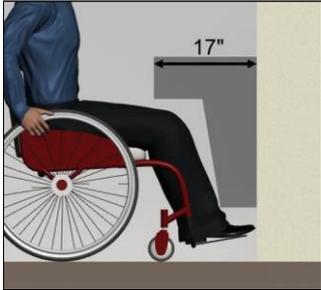
Knee & Toe Space



Knee Space (8" deep min. where knee space required)

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Knee & Toe Space



Required knee & toe space must be at least 17" deep

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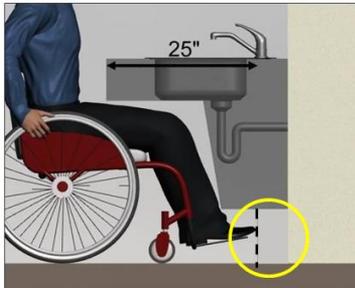
Knee & Toe Space



Additional depth must provide 27" min. clearance for knees

56

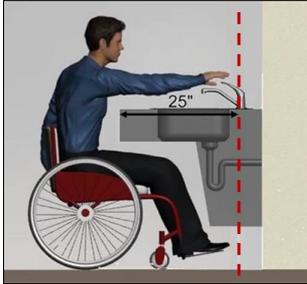
Knee & Toe Space



Space beyond 25" depth is not usable

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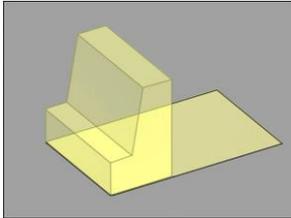
Knee & Toe Space



Obstructed reach cannot exceed depth of usable knee & toe space – also limited to 25" max 58

Knee & Toe Space

No protrusions allowed into minimum knee & toe space (other than dip of overflow at sinks)



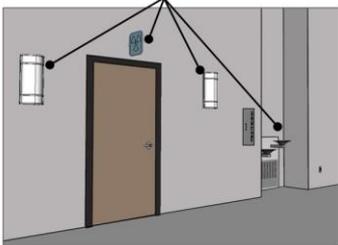
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Protruding Objects (§307)

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Protruding Objects

Examples of protruding objects

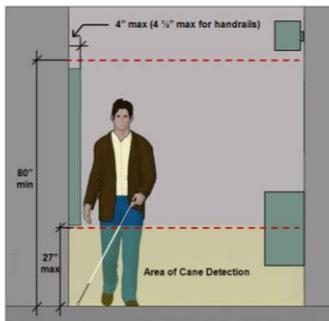


Protrusion limits apply to all areas of circulation
– not limited to accessible routes

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Protruding Objects

Apply to ALL circulation paths, not just ARs



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Protruding Objects

Drinking Fountains

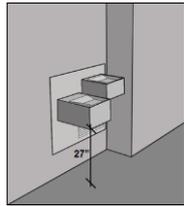
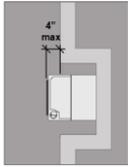


Elements often recessed to comply (e.g., drinking fountains at standard heights)

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Protruding Objects

Drinking fountains (leading edge above 27" AFF)



Recessed to limit projection to 4"

Wheelchair accessible unit (27" high absolute) can enclose one side of high units

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Protruding Objects

Post-mounted objects

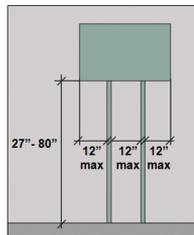
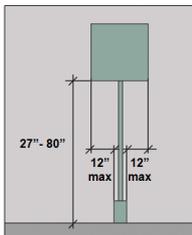


Protrusion limits also apply to objects mounted on posts

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Protruding Objects

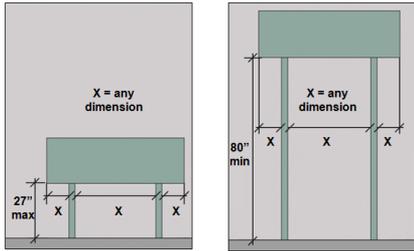
Objects with leading edges 27"- 80" high on posts/ pylons:
12" max. protrusion into circulation paths.



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Protruding Objects

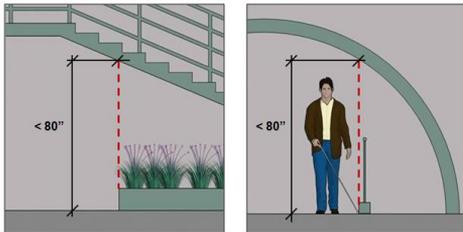
Post-mounted objects with leading edges 27" max or above 80" can protrude any amount



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Vertical Clearance

80" min. vertical clearance – guardrails or other barriers required where clearance < 80" (leading edge 27" high max.)



Reduced Clearance
Below Stairway

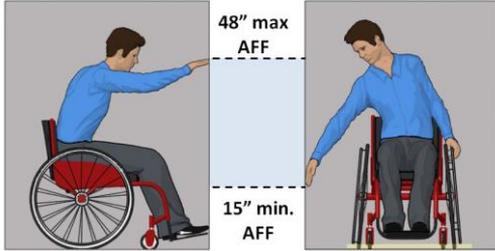
Clearance Reduced at
Curved (or Sloped Walls)

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Reach Ranges §308

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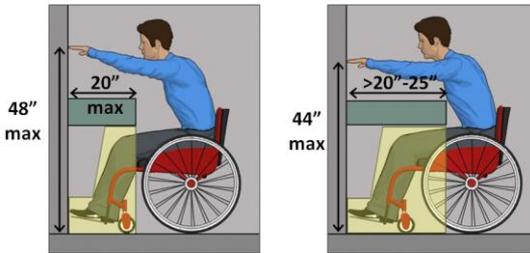
Reach Ranges



Unobstructed forward and side reaches

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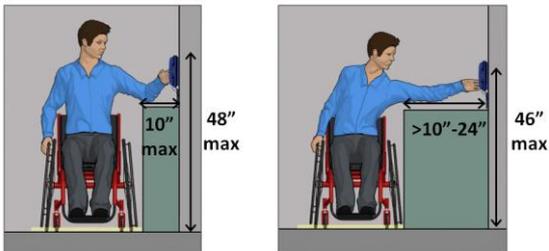
Forward Reach (Obstructed)



Obstructed reach: 44" max. if reach depth exceeds 20"

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Side Reach (Obstructed)

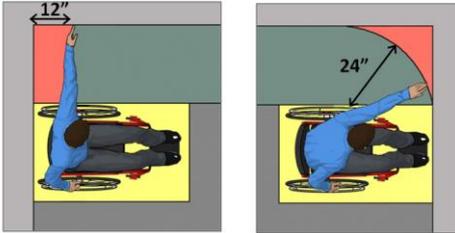


Obstructed reach: 46" max. if reach depth exceeds 10"

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Side Reach (Obstructed)

Recommendation: consider standard reach radius in locating operable parts accessed from side approach

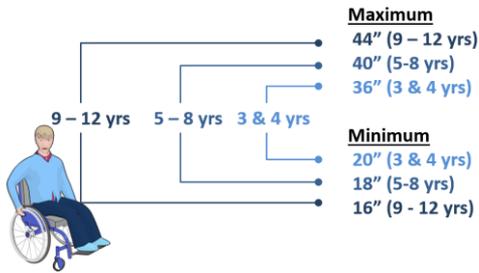


Elements in corners can be hard to reach from side approach

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Children's Reach Ranges

Advisory (non-mandatory): Forward & Side



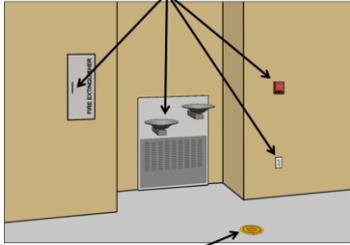
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Operable Parts §309

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Operable Parts (§205/ §F205)

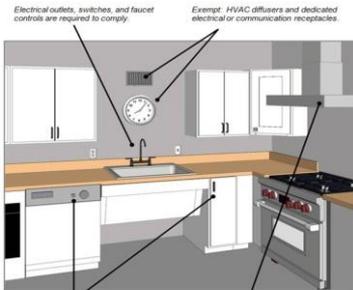
Examples



Exempt: floor receptacles & operable parts used only by service or maintenance personnel

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Operable Parts in Kitchens



Appliance controls and handles to accessible storage are also covered as operable parts.

Controls on elements outside reach range, such as range hoods, require provision of a second control. If redundant controls (other than light switches) are provided for an element, one control in each space is not required to comply.

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Operable Parts

- Operability
- Reach Range
- Accessible route
- Clear floor space



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Operability



- 1 hand operation
- No tight grasping, pinching, or twisting of wrist
- 5 lbf max.



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Operability

Recommended:

- Buttons - raised/flush (not recessed)
- No simultaneous action/ movement
- Hand or finger dexterity not required



Not required to comply: non-fixed portions
(e.g., keys, access cards)



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Technical Guides on the Standards

Available on the Board's website



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Questions?

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Continuing Education

AIA Provider Number: I017

AICP Provider Name: Great Lakes ADA Center

Course Title: Using the ADA and ABA Standards Series: Chapter 3: Building Blocks

Course Number: GL20200402

Date: April, 2014



Credits earned on completion of this course will be reported to **AIA CES** for AIA members. Certificates of Completion are available upon request.

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Questions will be addressed at the conclusion of this presentation.

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**Thank you for participating
in today's webinar**



**Next session:
May 7, 2020**



USING THE ADA AND ABA STANDARDS SERIES:

CHAPTER 4: ACCESSIBLE ROUTES

2:30 pm – 4:00 pm EST

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